

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Increase Residential Density

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Affordable Housing, Infill Development, Increase Mixed-Use and Development Density

REFERENCES

StanCOG 2026 Regional Transportation Plan/ Sustainable Communities Strategy, StanCOG Regional Housing Needs Allocation (RHNA), Stanislaus County and Local Agency Housing Elements

Description

Increasing the floor-to-area (FAR) ratio of a project and the number of allowable dwelling units per acre, particularly near transit corridors and job centers, reduces travel distances and promotes non-Single Occupancy Vehicle travel.

Implementation Actions

- Update zoning codes to allow for greater FAR, lot coverage, and units per acre for residential development within ½ mile of StanRTA bus corridors and regional active transportation segments in cities.
- Align zoning overlays and Specific Plans to support higher density around planned Bus Rapid Transit (BRT) or high-frequency transit infrastructure.
- Provide streamlined approval pathways for projects near transit corridors that exceed the average dwelling units/acre for the region.
- Update Housing Elements and General Plans to ensure consistency with Regional Housing Needs Allocation (RHNA) targets and regional Sustainable Communities Strategy growth goals.

Funding Sources

While increasing residential density can increase development costs associated with more complex projects, higher densities can improve land efficiency and development feasibility by allowing more housing units on a given site. Municipalities may incur staff and planning costs associated with zoning amendments, General Plan updates, development review, infrastructure coordination, and Housing Element implementation. State and federal resources can help offset planning and housing-production costs. Potential funding sources include California Department of Housing and Community Development programs, Regional Early Action Planning (REAP) grants where available, the Affordable Housing and Sustainable Communities Program, Low-Income Housing Tax Credits and multifamily housing financing, and federal Community Development Block Grant funds.

Equity Considerations

Increasing residential density can raise equity concerns such as displacement, gentrification, and uneven distribution of benefits—particularly when low-income or historically marginalized communities bear the brunt of change while wealthier areas resist zoning reforms. Ensure that zoning reforms and increased density projects are distributed across communities and that increased development is accompanied by increased investment in infrastructure and public facilities such as schools. Anti-displacement programs and tenant protection programs can also help to mitigate gentrification.

Case Study

Stanislaus County – Residential Density and Housing Development

Stanislaus County's 2023–2031 Housing Element provides a direct local example of how increased residential density is being used to accommodate housing needs. The County's housing policies support a range of residential densities and housing types, including moderate-density townhomes and higher-density apartments, condominiums, transit-oriented development, mixed-use development, and accessory dwelling units. The Housing Element also identifies locations where housing could become denser than it is today, particularly where sites have access to transit, essential services, and existing infrastructure.

<https://www.stancounty.com/planning/pl/housing-element.shtm>

Mitigation Potential

Increasing residential density places residences closer to destinations, which results in shorter and fewer Single Occupancy Vehicle trips. Further VMT reductions can occur with the increase of active transportation infrastructure.

For more details, see CALTRANS VMT Reduction Program, Land use – residential (density and affordability), pg. 17-21 and CAPCOA, T-1. Increase Residential Density, pg. 70-72 that shows VMT reductions in percentages and per household (assuming typical VMT), for various densities.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Increase Employment Density

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, Stanislaus County General Plan

Description

Vertical redevelopment and infill of underutilized employment land within designated economic development zones to co-locate jobs and housing reduces commute distances.

Implementation Actions

- Rezone key corridors to support mixed use as well as employment centers with transit access.
- Encourage vertical mixed use of underutilized commercial sites through upzoning and incentives for shared office/co-working hubs.
- Include density bonuses or floor area ratio (FAR) increases in zoning codes for projects combined with increases in residential density to co-locate employment and housing near transit nodes.
- Develop Economic Opportunity Zones in jurisdictions with low job density and high commuting outflows.

Funding Sources

While it costs more to build more square footage, increasing the density of a project generally yields a greater profit return. It costs municipality staff time to review projects with greater density and to update zoning codes. Grant resources from the state, such as the Regional Early Action Planning grants have funded zoning updates to allow for greater density and infill development. Other funding sources include the Community Development Block Grant (U.S Department of Housing and Urban Development), the Infill Infrastructure Grant Program (California Department of Housing and Community Development), the Multifamily Finance Super NOFA (California Department of Housing and Community Development), and the California Recycle Underutilized Sites Program (California Pollution Control Financing Authority).

Equity Considerations

Encourage job concentration in transit-accessible areas to expand employment options for transit-dependent communities. Ensure zoning reforms that increase job density also support workforce development programs and local hiring preferences. Support the retention of service, industrial, and light manufacturing zones that currently provide blue-collar job access, while ensuring environmental health and equity for nearby disadvantaged communities.

Case Study

Caltrans Smart Mobility Framework

Caltrans encourages job density increases in "Smart Mobility Zones," prioritizing redevelopment and mixed-use overlays near transit to reduce trip lengths and promote sustainable access

<https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/smf-handbook-062210-a-a11y.pdf>

Mitigation Potential

Increasing job density can lead to reductions in VMT, primarily by shortening commute distances and encouraging non-Single Occupancy Vehicle travel options.

For more details, see CALTRANS VMT Reduction Program, Land use – employment (density), pg. 25-27, and CAPCOA, T-2. Increase Job Density, pg. 73-75 which shows VMT reductions and density-to-VMT elasticity.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Transit-Oriented Development

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

California Air Pollution Control Officers Association (2024), SCAG Housing Element Best Practices, HCD Affordable Housing Guidebook, CVAG RTP/SCS

Description

Promoting mixed-use development near transit corridors, mobility hubs, and major transit facilities increases transit accessibility and supports walking, bicycling, and reduced vehicle travel.

Implementation Actions

- Develop TOD-specific Community Enhancement Zone (CEZ) Plans and zoning overlays near StanRTA's trunk routes and the BRT corridor.
- Encourage mixed-use development on publicly owned land or infill sites within walking distance of transportation centers and mobility hubs.
- Include TOD performance metrics in capital project evaluations and CEQA streamlining checklists (e.g., minimum floor area ratios, parking max thresholds, pedestrian shed).
- Adopt parking reform strategies that remove minimums and allow unbundled pricing within TOD zones to reduce auto dependence.
- Update Active Transportation Plans with an emphasis on first and last mile transit access particularly within ½ mile of high frequency transit corridors.

Funding Sources

While it costs the municipality staff time to review projects with greater density and to update zoning codes, grant resources from the state, such as the Regional Early Action Planning grants, have funded zoning updates to allow for greater density and infill housing. Other funding sources include the Pilot Program for TOD Planning (Federal Transit Administration), the Infill Infrastructure Grant Program (California Department of Housing and Community Development), the Buses and Bus Facilities Competitive Grants and the Low or No Emissions Bus Grants (Federal Transit Administration), the Sustainable Transportation Planning Grant Program – Sustainable Communities - Competitive and Technical (Caltrans), the Affordable Housing and Sustainable Communities Program (California Department of Housing and Community Development), the Multifamily Finance Super NOFA (California Department of Housing and Community Development), and the Transit and Intercity Rail Capital Program (Caltrans).

Equity Considerations

Prioritize TOD projects in disadvantaged areas by integrating affordable housing, public amenities, and accessible transit services. Ensure meaningful community engagement during planning phases to prevent displacement and support culturally relevant design. Pair TOD initiatives with tenant protections, inclusionary zoning, supportive housing services, and community land trusts to promote long-term affordability.

Case Study

Ceres ACE Station – Valley Rail Expansion

The future Ceres ACE Station will provide commuter rail service connecting Stanislaus County with the Bay Area, Sacramento, and future rail connections throughout the San Joaquin Valley. The station represents a significant transit investment that can support higher-density residential development, pedestrian-oriented design, mixed-use development, and enhanced local transit connections. The project provides a local example of how transit investments can serve as catalysts for transit-oriented development and coordinated land use planning.

https://calsta.ca.gov/-/media/calsta-media/documents/stanislaus_council_of_governments-a11y.pdf

Mitigation Potential

Transit-oriented development can significantly reduce VMT by concentrating housing, jobs, and services near high-quality transit. This measure improves the convenience, accessibility, and reliability of transit making it easier for people to shift from private vehicles to transit, walking, or biking.

For more details, see CALTRANS VMT Mitigation Program, Transit service improvement, pg. 30-32 and CAPCOA, T-3. Provide Transit-Oriented Development, pg. 76-79 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Affordable Housing

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Transit Oriented Development, Infill Development, Locate Project Near Bike Path / Bike Lane, Increase Mixed-Use and Development Density

REFERENCES

California Air Pollution Control Officers Association (2024), SCAG Housing Element Best Practices, HCD Affordable Housing Guidebook, CVAG RTP/SCS

Description

The California Department of Housing and Community Development (2021) defines lower income as 80 percent of area median income or below, and affordable housing as costing 30 percent of gross household income or less. Below-market-rate housing in infill areas expands opportunities for lower-income families to live near job centers and transit, helping to achieve a better jobs-housing balance. It also addresses the shortage of affordable housing that often pushes residents to live farther from work or school, resulting in longer commutes.

Implementation Actions

- Offer tiered density bonuses and reduced development fees for Below Market rate and Accessory Dwelling Units located within ½ mile of StanRTA routes or regional active transportation network access points.
- Create local inclusionary housing ordinances that link affordable housing production to proximity to transit and mobility hubs.
- Partner with housing developers and Community Development Financial Institutions (CDFIs) to identify financing tools for deeply affordable TODs.
- Integrate affordable housing goals into regional mobility and housing equity strategies and VMT reduction criteria.

Funding Sources

Affordable housing development can be supported through a combination of federal, state, regional, and local funding sources. California Department of Housing and Community Development programs provide significant resources for affordable housing construction, preservation, and associated transportation improvements. Federal resources include the HOME Investment Partnerships Program, Community Development Block Grant funds, and Low-Income Housing Tax Credits. Other potential funding sources include the Affordable Housing and Sustainable Communities Program (AHSC), Permanent Local Housing Allocation (PLHA), Local Housing Trust Fund programs, Multifamily Housing Program resources, the AB 130 VMT Mitigation Program, and other HCD housing programs. Local jurisdictions can also provide financial assistance, fee waivers or deferrals, land, development incentives, and other resources to support affordable housing projects. In Stanislaus County, the City of Modesto has successfully combined local CDBG, HOME, and PLHA funds with state AHSC funding to finance affordable housing and transportation improvements.

Equity Considerations

Promote housing policies that reduce displacement and improve access to transit-rich areas for low-income households. Ensure below market rate housing is located near frequent transit lines, jobs, and services. Include renter protections and affordability covenants to maintain long-term access. Support partnerships with community land trusts and affordable housing developers to retain neighborhood diversity.

Case Study

Caltrans Smart Mobility Framework

Caltrans encourages job density increases in "Smart Mobility Zones," prioritizing redevelopment and mixed-use overlays near transit to reduce trip lengths and promote sustainable access

<https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/smf-handbook-062210-a-a11y.pdf>

Mitigation Potential

Increasing job density can lead to reductions in VMT, primarily by shortening commute distances and encouraging non-Single Occupancy Vehicle travel options.

For more details, see CALTRANS VMT Reduction Program, Land use – employment (density), pg. 25-27, and CAPCOA, T-2. Increase Job Density, pg. 73-75 which shows VMT reductions and density-to-VMT elasticity.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Infill Development

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Increase Employment Density, Transit-Oriented Development, Affordable Housing, Increase Mixed-Use and Development Density

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, Stanislaus County General Plan, City of Modesto General Plan, City of Turlock General Plan, California Department of Housing and Community Development Infill Guidelines

Description

Infill development encourages building within existing urban areas to efficiently use land and infrastructure, reduce sprawl, and support sustainable transportation. Under CEQA, infill development generally refers to projects on vacant or underutilized land within an urbanized area where at least 75% of the surrounding land uses are considered “qualified urban uses”. These uses typically include residential, commercial, public institutional, and transportation facilities.

Implementation Actions

- Prioritize infill sites located near existing jobs, schools, transit, commercial areas, parks, and other major destinations where development can reduce travel distances and support multimodal transportation.
- Use accessibility and screening tools to prioritize projects with short travel distances and high walk/bike access potential.
- Align project siting with VMT thresholds and Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) indicators to reduce regional VMT.

Funding Sources

Local jurisdictions can support infill development through development incentives, reduced regulatory barriers, streamlined project review, fee reductions or deferrals, public land disposition, and infrastructure investments. Potential state and federal funding sources include the California Department of Housing and Community Development’s Infill Infrastructure Grant Program, Affordable Housing and Sustainable Communities Program, Permanent Local Housing Allocation, and other programs supporting infill housing and transportation improvements. Federal Community Development Block Grant and HOME Investment Partnerships Program funds may also support eligible infill and redevelopment projects. Local transportation agencies can additionally coordinate infrastructure investments to improve pedestrian, bicycle, transit, and roadway connections serving infill areas.

Equity Considerations

Equity-driven infill development should support affordable housing near job centers, schools, and transit corridors. Prioritize investments in areas with high need for mobility and access, while including anti-displacement policies and community benefits agreements to protect long-term residents from rising land values and gentrification pressures.

Case Study

City of Turlock – Downtown Infill and Redevelopment

Downtown Turlock provides an established urban area where additional development can occur without extending the City’s urban footprint. The City’s General Plan identifies downtown as a mixed-use activity center and emphasizes maintaining Downtown Turlock as a focal point for commercial, civic, cultural, and community activity. The area provides an opportunity to accommodate additional housing, employment, and services near existing infrastructure and transit rather than requiring development at the urban edge.

https://www.turlockca.gov/_pdf/files/generalplanch2.pdf

Mitigation Potential

Infill development places housing, jobs, and services closer together, reducing the distance between origins and destinations. Reduced distances can encourage walking, biking, and transit use.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Improve Street Connectivity

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Infill Development, Provide Bike Network / Facility Improvements, Provide Pedestrian Network / Facility Improvements

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, StanCOG Active Transportation Plan, Caltrans Complete Streets, NACTO Urban Street Design Guide



Description

Enhancing street connectivity through shorter blocks, interconnected street networks, pedestrian connections, and multiple route options can reduce travel distances and improve walkability.



Implementation Actions

- Encourage new developments in growth areas to provide short block lengths, 4-way intersections, and mid-block crossings that prioritize direct walking and biking access.
- Conduct a regional pedestrian connectivity audit to identify street gaps, cul-de-sacs, and physical barriers to active travel near schools, parks, and transit stops.
- Integrate new local streets or pathways standards into subdivision regulations, adopted plan line, standard specifications, and General Plan Mobility Elements to support fine-grain connectivity.
- Prioritize projects using the Regional Active Transportation Plan.



Funding Sources

Improving street connectivity can require significant upfront funding for new streets, intersections, sidewalks, bicycle facilities, crossings, and associated infrastructure, as well as ongoing maintenance and operations. Where new development creates additional transportation demand, improvements may be funded through development impact fees or other developer contributions, provided that the fees maintain an appropriate nexus and proportionality to the impacts of development. Other potential funding sources include the Federal Highway Administration's Surface Transportation Block Grant Program and Transportation Alternatives Program, the Congestion Mitigation and Air Quality Program, Caltrans Sustainable Communities grants, the Statewide Active Transportation Program, and local transportation and infrastructure programs. Regional and local agencies may also combine roadway, pedestrian, bicycle, and safe-routes-to-school funding to implement connectivity improvements.



Equity Considerations

This measure enhances walkability and access to destinations for residents without cars, especially in underserved neighborhoods with disconnected street grids. Improved connectivity can reduce travel distances and improve access to jobs, schools, and essential services. Prioritize infrastructure improvements in disadvantaged communities to close gaps in mobility access.



Case Study

StanCOG – Regional Active Transportation Planning

StanCOG's Regional Active Transportation Plan provides a countywide framework for identifying and improving bicycle and pedestrian connections between communities and major destinations. The regional planning process considers connectivity between existing and planned active transportation facilities and emphasizes the importance of creating a network rather than isolated facilities. This provides a basis for coordinating local street-network improvements with regional bicycle and pedestrian investments.

<https://www.stancog.org/184/Non-Motorized-Transportation-Plan>



Mitigation Potential

Improving street connectivity characterized by short blocks, frequent intersections, and multiple route choices allows for shorter, more direct trips. Improved connectivity enhances the effectiveness of bike and pedestrian infrastructure.

For more details, see CAPCOA, T-17. Improve Street Connectivity, pg. 130-132 and CALTRANS VMT Reduction Program, Local road networks/ connectivity, pg. 33-36 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Improve Destination Accessibility

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Increase Employment Density, Transit Oriented Development, Infill Development, Improve Street Connectivity, Increase Mixed-Use and Development Density, Provide Bike Network / Facility Improvements, Provide Pedestrian Network / Facility Improvements, Provide First and Last Mile Improvements and Incentives

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, StanCOG Active Transportation Plan, Stanislaus County Housing Element, Local General Plans

Description

Improving destination accessibility, particularly in underserved areas to key services (grocery, healthcare, education) can both improve equity-and reduce VMT by reducing the distance that people have to drive.

Implementation Actions

- Identify and map neighborhood level gaps in services and destinations, such as healthy food options, healthcare services, education, and retail.
- Develop mobility hubs and transit stop enhancements (e.g., benches, lighting, shade structures) at key community destinations such as libraries, clinics, and grocery stores.
- Incorporate accessibility scoring into regional grant programs and funding applications to elevate projects in underserved areas.

Funding Sources

Destination accessibility improvements can be supported through a combination of private development funding and public transportation, community development, and infrastructure programs. Local jurisdictions can provide financial incentives and prioritize public investments in areas where residents have limited access to jobs, schools, health care, grocery stores, parks, and other essential destinations. Potential funding sources include the Reconnecting Communities Pilot Program, Safe Streets and Roads for All, Transportation Alternatives, Community Development Block Grant funds, Caltrans Sustainable Transportation Planning grants, and other programs supporting multimodal transportation and community connectivity. Funding can also be combined with bicycle, pedestrian, transit, and first-/last-mile improvements to maximize the accessibility benefits of individual projects.

Equity Considerations

Improving access to key destinations in underserved areas supports mobility justice by connecting residents to jobs, education, healthcare, and groceries. Priority should be given to equity-priority neighborhoods identified in local definitions of disadvantaged communities or using tools such as CalEnviroScreen. Engagement with community-based organizations is essential to align improvements with local needs.

Case Study

Roger K. Fall Transit Center - Turlock

The Roger K. Fall Transit Center improves destination accessibility by connecting local and regional transit services in a single location. The facility provides access to jobs, education, healthcare, shopping, and community services throughout Turlock, Stanislaus County, and neighboring regions while facilitating transfers between multiple transit providers. Planned future connections to ACE rail service will further expand the range of destinations accessible by transit.

<https://sjvcogs.org/wp-content/uploads/2025/04/Stanislaus-County-Vision-Handout-March-2025-Approved.pdf>

Mitigation Potential

Improving destination accessibility allows for key destinations (e.g. jobs, supermarkets, or schools) to be located in closer proximity. Reduced time and distance between origins and destinations encourages people to walk or bike, reducing VMT.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Locate Project Near Bike Path / Bike Lane

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Infill Development, Improve Street Connectivity, Improve Destination Accessibility, Orient Project Toward Transit, Bicycle, or Pedestrian Facility

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Active Transportation Plan, StanCOG 2026 RTP/SCS, Local Bicycle and Pedestrian Plans



Description

Locating developments near bike infrastructure which encourages residents, employees, or visitors to choose biking over private vehicles



Implementation Actions

- Incentivize project siting within 1/4 mile of a Class I, Class II, or Class IV bike facility.
- Use StanCOG and local bicycle-network data to identify infill and redevelopment opportunities adjacent to existing or planned bicycle corridors.
- Encourage coordination between developers and public works departments to fill bikeway network gaps during new construction.



Funding Sources

Development projects can incorporate bicycle connections through private project funding and required frontage or site improvements. Local jurisdictions can also combine bicycle access improvements with Statewide Active Transportation Program, Caltrans Sustainable Transportation Planning, Safe Routes to School, federal Transportation Alternatives, and other bicycle and pedestrian funding sources. Coordinating bicycle improvements with development projects can reduce the cost of completing network gaps and improve access to existing bicycle facilities.



Equity Considerations

Locating projects near bike infrastructure in low-income areas helps increase mobility options for residents without cars. Equity considerations should include providing safe and connected bike facilities in areas that historically lacked them, and ensuring maintenance and lighting to support safe travel.



Case Study

Modesto – Crows Landing Road Corridor

The Crows Landing Road Corridor Study identified opportunities to improve bicycle and pedestrian mobility along an economically active corridor where basic infrastructure was lacking. The study specifically evaluated ways to improve multimodal access, safety, and connectivity while supporting infill development.

<https://permits.modestogov.com/769/Crows-Landing-Road-Corridor-Study>



Mitigation Potential

Developments located near bike infrastructure can encourage residents, employees, or visitors to choose biking over private vehicles. The impact of VMT will vary based on the coverage of the bicycle network and the distance to key destinations or high quality transit. While there are no direct quantification tools for estimating the impact there are various GIS accessibility methods and direct demand methods that can be used to quantify this strategy. Most of these methods require detailed count or travel survey data and may not be as efficient as using other linked strategies to quantify potential reductions.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Orient Project Toward Transit, Bicycle, or Pedestrian Facility

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Locate Project Near Bike Path / Bike Lane, Transit Oriented Development, Mobility Hubs

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, StanRTA transit planning, Local General Plans, NACTO Walkable Urban Design Guide



Description

Orienting development projects towards transit, bike, or pedestrian facilities enhances visibility and access, promoting the use of these modes over private vehicles.



Implementation Actions

- Orient primary building entrances toward public streets, sidewalks, transit stops, and active transportation facilities rather than parking lots.
- Provide direct pedestrian connections between building entrances and nearby transit stops, bicycle facilities, and sidewalks.
- Locate bicycle parking, micromobility parking, and pedestrian access routes near primary building entrances.
- Minimize barriers such as large parking fields, drive aisles, and indirect pedestrian routes between destinations and transportation facilities.
- Incorporate pedestrian-scale lighting, wayfinding, and ADA-accessible connections linking development sites to surrounding transportation facilities.



Funding Sources

Project design and site improvements can generally be incorporated into private development costs. Local jurisdictions can provide development incentives, reduced parking requirements, expedited review, or other benefits for projects that orient buildings and site entrances toward transit, bicycle, and pedestrian facilities. Public transportation and active transportation funding can be combined with private development improvements to complete sidewalks, bicycle connections, crossings, transit stops, and other access improvements.



Equity Considerations

Prioritizing active and transit-oriented access in project siting improves mobility for residents without access to private vehicles, especially in low-income and transit-dependent communities. Equity-focused planning should ensure that sidewalks, crossings, and bikeways near affordable housing and essential services are prioritized for upgrades.



Mitigation Potential

Developments oriented towards transit, bicycle, or pedestrian facilities make these modes more visible and accessible. The design choice will encourage walking, biking, or transit use rather than driving. The impact on VMT will vary based on the quality and coverage of active transportation modes. While there are no direct methods for quantifying this as of writing, other linked strategies related to bicycle facilities may be used for assessing VMT benefits of bicycle facilities.



Case Study

Stanislaus State Bicycle Master Plan - Turlock

Stanislaus State's Bicycle Master Plan establishes a framework for improving bicycle circulation, bicycle parking, wayfinding, and support facilities throughout the campus. The plan demonstrates how educational, employment, and activity centers can be intentionally designed and improved to support bicycle and pedestrian access as primary transportation options.

<https://csustan.sharepoint.com/sites/StanState-PublicDocs/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2FStanStatePublicDocs%2FShared%20Documents%2FCapital%20Planning%20%26%20Facilities%20Management%2FDocuments%2Fbicycle%5Fmaster%5Fplan%2Epdf&parent=%2Fsites%2FStanStatePublicDocs%2FShared%20Documents%2FCapital%20Planning%20%26%20Facilities%20Management%2FDocuments&p=true&ga=1>

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Increase Mixed-Use and Development Density

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Increase Employment Density, Transit-Oriented Development, Infill Development, Improve Destination Accessibility

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, Stanislaus County General Plan, City of Modesto General Plan, City of Turlock General Plan

Description

Mixed-use development places different land uses, such as residential, employment, retail, services, and recreation, within close proximity to one another. Increasing development density places more residents, workers, and destinations within a given area. Together, these strategies can reduce travel distances and make walking, bicycling, and transit more viable. Mixed-use and higher-density development are particularly effective when located in established centers, along transit corridors, and near major destinations.

Implementation Actions

- Encourage mixed-use development along established transportation corridors and within existing downtown and neighborhood centers
- Provide density bonuses, reduced development fees, expedited permitting, or other incentives for projects that combine mixed-use development with affordable housing and multimodal transportation access.
- Prioritize mixed-use and higher-density development in locations served by existing or planned transit and active transportation facilities.

Funding Sources

Mixed-use and higher-density development can be supported through local development incentives, density bonuses, expedited permitting, reduced or deferred development fees, and public infrastructure investments. State and federal funding can support complementary affordable housing, transportation, and infrastructure improvements, including the Affordable Housing and Sustainable Communities Program, Infill Infrastructure Grant Program, Permanent Local Housing Allocation, Community Development Block Grant, HOME Investment Partnerships Program, and federal transit-oriented development planning resources. Local jurisdictions can also use zoning incentives and public-private partnerships to encourage mixed-use development in appropriate locations.

Equity Considerations

Equity-focused implementation should tie incentives to affordable housing requirements, particularly in high-opportunity transit areas. Prioritize TOD projects in historically excluded communities and ensure that incentives support displacement prevention, such as preserving existing affordable units or supporting community land trusts. Fast-tracked approvals should be paired with public engagement to reflect community needs.

Case Study

City of Modesto – Corridor Mixed-Use Infill

Modesto's housing and planning policies explicitly promote mixed-use infill development along major transportation corridors. The City's policies call for corridor studies, flexible development standards, density bonuses, and other incentives while emphasizing pedestrian-oriented building placement and public spaces. The City also encourages compact, multi-story residential infill along major transportation corridors.

<https://www.modestogov.com/DocumentCenter/View/26525/Prohousing-Program-DRAFT-Appendix-7-Supporting-Documentation>

Mitigation Potential

While mixed use refers to providing diversity of land uses within close proximity to each other, density refers to allowing for a greater concentration of buildings in a given area. Mixed-use development and density are often implemented together and quantification methods often focus on increasing density. These strategies reduce VMT by placing greater amounts of housing, jobs, shops, and services within close proximity of each other. This proximity allows people to complete daily trips without relying on a car, encouraging walking, cycling, or use of public transit.

For more details, see CAPCOA, T-1. Increase Residential Density, pg. 70-72, CAPCOA, T-2. Increase Job Density, pg. 73-75 and CALTRANS VMT Mitigation Program, Residential and Employment Density, pg. 17-21, 25-27 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Land Use

Develop a Zoning Toolkit

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Infill Development, Transit Oriented Development, Improve Street Connectivity, Increase Mixed-Use and Development Density

REFERENCES

StanCOG 2026 RTP/SCS, StanCOG SB 743/VMT planning resources, California Air Pollution Control Officers Association (2024), California Department of Housing and Community Development planning resources, Local General Plans and Zoning Codes

Description

Developing a toolkit with model zoning provisions that support VMT reduction supports sustainable urban development and saves local agencies time and effort researching best practices. A zoning toolkit could include model ordinances for density bonuses, reduced parking requirements, standardized bicycle parking and amenities, transit-oriented design standards, and complete streets standards, among others.

Implementation Actions

- Develop model zoning provisions addressing residential and employment density, mixed-use development, infill, transit-oriented development, bicycle and pedestrian access, street connectivity, parking, and affordable housing.
- Create model development standards and ordinance language that jurisdictions can adapt to their individual community contexts.
- Maintain a shared repository of locally relevant VMT-reduction zoning examples, development standards, GIS resources, funding opportunities, and implementation guidance.

Funding Sources

Developing a regional zoning toolkit would primarily require staff time, consultant support, stakeholder coordination, and technical assistance rather than major capital investment. Potential funding sources include Caltrans Sustainable Transportation Planning grants, California Department of Housing and Community Development planning grants, and other state or federal programs supporting housing, land-use planning, multimodal transportation, and climate planning. A regional toolkit could also leverage existing StanCOG technical resources and coordinate with local jurisdictions to reduce duplicative planning efforts.

Equity Considerations

Incorporate equity criteria into zoning guidance, such as density bonuses for affordable housing near transit and anti-displacement policies. Provide tailored technical assistance to small and under-resourced jurisdictions. Encourage anti-displacement policies alongside VMT reduction zoning reforms.

Case Study

StanCOG 2026 RTP/SCS – Regional Land Use and Transportation Coordination

The StanCOG 2026 RTP/SCS process and the REAP 2.0 projects are strong examples of the type of regional coordination envisioned by this strategy. StanCOG is developing the RTP/SCS, the Community Enhancement Zone (CEZ) Vision and Action Plan, the Regional Active Transportation Plan, and the VMT Mitigation Program in collaboration with the County and all nine cities in the Stanislaus region, with the plans intended to guide transportation investment and land-use coordination through 2049.

<https://www.stancog.org/187/Regional-Transportation-Plan-RTP>

Mitigation Potential

Updated zoning codes that shift land use toward VMT-efficient land use patterns begin to reduce VMT as new development is created. Land use is one of the biggest factors influencing VMT, and large scale change comes from addressing land use factors. While there is no quantification available for this strategy, it is closely linked to other land use strategies and may encourage or advance strategies that reduce VMT.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Wayfinding for Bicyclists and Pedestrians

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

StanCOG 2026 RTP/SCS, California Manual on Uniform Traffic Control Devices, California Air Pollution Control Officers Association (2024)

Description

Wayfinding upgrades improve navigation for pedestrians and cyclists through clear, consistent signage that provides travel distances and enhances route visibility. Implementing wayfinding on a regional scale could include providing consistently branded signage to direct people to bicycle facilities, conducting signage audits along bicycle and pedestrian routes to assess visibility, and upgrading wayfinding infrastructure.

Implementation Actions

- Conduct a signage and wayfinding audit along major bicycle and pedestrian routes to identify gaps in visibility, placement, consistency, and destination information.
- Work with StanCOG, local jurisdictions, StanRTA, schools, and other stakeholders to identify regional and local destinations that should be included in a coordinated wayfinding system.
- Develop consistent wayfinding standards for bicycle and pedestrian routes, including destination names, distances, travel times, directional arrows, icons, and accessibility requirements.
- Upgrade wayfinding infrastructure at major decision points and conflict locations along bicycle and pedestrian corridors.
- Prioritize wayfinding connections between bicycle and pedestrian facilities and transit stops, schools, parks, downtowns, commercial areas, and community facilities.
- Incorporate bilingual messaging where appropriate and use universally recognizable symbols and icons.
- Track wayfinding installations through local or regional GIS asset-management systems and coordinate long-term maintenance responsibilities with local public works departments.

Funding Sources

Funding varies depending on the extent of the wayfinding program, sign design and size, and whether Intelligent Transportation Systems (ITS) are incorporated. Wayfinding generally requires less funding than major transportation capital projects. Potential funding sources include the Statewide Active Transportation Program, Caltrans Sustainable Transportation Planning grants, local active transportation funds, and federal Transportation Alternatives funding. Wayfinding can also be incorporated into larger bicycle, pedestrian, transit, and safe-routes-to-school projects to reduce implementation costs.

Equity Considerations

Implement signage in neighborhoods with limited digital access. Ensure ADA-compliant and multilingual signs, especially in areas with non-English-speaking populations and aging residents.

Case Study

City of Modesto – Non-Motorized Transportation Plan

Modesto's Non-Motorized Transportation Plan provides a directly relevant local example of bicycle and pedestrian wayfinding. The plan identifies bicycle guide signs, directional pavement markings, destination signs, and other wayfinding elements as tools for improving navigation. It also identifies standards for bicycle and pedestrian signs and discusses combining standard MUTCD signs with local branding.

<https://www.modestogov.com/DocumentCenter/View/1722/Non-Motorized-Transportation-Plan-PDF?bidId=>

Mitigation Potential

Wayfinding upgrades can encourage bicycling, walking, and transit ridership, however the impact is difficult to quantify as there is not a lot of research on this strategy. Some cities and grant funding agencies require counts or stated preference surveys to determine the impacts of wayfinding before and after installing wayfinding.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Subsidized Bicycle Amenities

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

California Air Pollution Control Officers Association (2024), SCAG Housing Element Best Practices, HCD Affordable Housing Guidebook, CVAG RTP/SCS

Description

This strategy includes establishing a fund to subsidize the installation of bike parking, racks, and repair stations at civic centers, parks, businesses, campuses, and transit hubs. It requires the funding agency to work directly with businesses, municipalities, and educational institutions to coordinate the installation of bicycle amenities.

Implementation Actions

- Establish a regional fund to support bicycle amenities such as secure bike racks, bike corrals, and repair stations at civic centers, parks, and transit hubs.
- Prioritize grant allocations for areas with low existing infrastructure but high potential for active transportation uptake, including school zones and town centers.
- Coordinate with employers, property managers, schools, colleges, and local businesses to identify locations where bicycle amenities would have the greatest benefit.
- Leverage co-funding opportunities with community nonprofits, health organizations, and education districts.
- Encourage voluntary developer participation through partnerships, incentives, or other locally adopted funding mechanisms.

Funding Sources

This strategy primarily requires staff time to establish and administer a program, with relatively modest funding needed for individual bicycle amenities. Potential funding sources include Statewide Active Transportation Program grants, Caltrans Sustainable Transportation Planning grants, Transportation Alternatives funding, local active transportation programs, and VMT mitigation funds where eligible. Local jurisdictions and regional agencies can also provide matching funds or incentives to encourage employers, property owners, schools, and developers to install bicycle amenities.

Equity Considerations

Ensure fund allocation prioritizes DACs, communities with low vehicle ownership, and areas near affordable housing and schools. Offer matching grants or technical assistance to small cities and unincorporated communities with limited planning capacity. Design amenities to be ADA-accessible and include secure options for families and shift workers.

Case Study

StanRTA – Transit Center Bicycle Connections

StanRTA's transit system includes two transit centers and three transit hubs, creating several locations where bicycle amenities can support bicycle-to-transit trips. The Ceres multimodal hub project specifically includes space for first- and last-mile modes such as bicycles and scooters and the opportunity to include bicycle lockers in its planned amenities.

Transit Facts | StanRTA, CA

Mitigation Potential

Individual bicycle amenities will have a limited impact on VMT, but continued investment and installation can create a convenient and safe bicycle network.

For more details, see CAPCOA, T-10. Provide End-of-Trip Bicycle Facilities pg. 100-103 and CAPCOA, T-19-A. Construct or Improve Bike Facility pg. 137-141 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Neighborhood Electric Vehicles Facilities

VMT REDUCTION POTENTIAL



COST



TIMING

Long Term (10+ years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community,

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

California Air Pollution Control Officers Association (2024), SCAG Housing Element Best Practices, HCD Affordable Housing Guidebook, CVAG RTP/SCS

Description

Designating routes and facilities for low-speed electric vehicles in appropriate environments such as downtown districts, small communities, employment centers, and active adult communities may provide additional mobility options for short local trips.

Implementation Actions

- Coordinate plans for facilities at a regional scale to ensure connectivity and consistency.
- Install NEV signage, striping, and crossings using California Manual on Uniform Traffic Control Devices (MUTCD) guidelines.
- Consider integrating new developments to include NEV access in circulation plans.
- Launch NEV pilot programs focused on senior mobility or short-distance trips near resort communities and retail hubs.
- Implement multi-use path connections that allow NEVs to access transit facilities and employment centers.

Equity Considerations

Prioritize NEV connectivity in areas underserved by fixed-route transit, including senior communities and mobile home parks. Ensure NEV access routes are ADA-compliant and connect to essential destinations like grocery stores, clinics, and transit stops. Provide subsidies or incentives for low-income households to access NEVs or shared NEV services.

Funding Sources

NEV facilities can require substantial initial investment in dedicated or shared-use paths, crossings, signage, charging infrastructure, and maintenance. Potential funding sources include federal and state programs supporting alternative transportation, zero-emission transportation, and active transportation infrastructure. Local development projects may also contribute toward NEV facilities where improvements are directly related to development impacts. Because NEV facilities can serve both electric vehicles and active transportation users, projects may be eligible for funding through programs supporting bicycle and pedestrian infrastructure when designed and operated as shared facilities.

Case Study

City of Lincoln – Neighborhood Electric Vehicle Network

The City of Lincoln maintains designated neighborhood electric vehicle routes supported by an NEV and Golf Cart Master Plan. The plan addresses circulation requirements, proposed network improvements, parking standards, signage, and striping. Lincoln's program illustrates how a city can establish coordinated routes and design standards for low-speed vehicles connecting community destinations.

https://www.lincolncalifornia.gov/media/oscp11zf/kimberly-horn-2024-lincoln-nev-and-golf-cart-master-plan_11272024.pdf

Mitigation Potential

Constructing NEV paths can incentive more trips to be made by NEV rather than Single Occupancy Vehicle. The impact on VMT will depend on the location and proximity of NEV paths to key destinations. While NEVs arguably do not reduce VMT as they still involve the use of small vehicles, NEV facilities may be used by bicyclists and help to build out the active transportation network. Additionally, the use of electric vehicles is in keeping with the state's larger goals of reducing greenhouse gas emissions due to transportation.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Dedicate Land for Trails and Off-Street Multi-Use Facilities

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Provide Bike Network / Facility Improvements,
Provide Pedestrian Network / Facility Improvements,
Locate Near Bike Path / Bike Lane, Orient Project
Towards Transit, Bicycle, or Pedestrian Facility

REFERENCES

California Air Pollution Control Officers Association
(2024), Stanislaus County Non-Motorized
Transportation Plan, StanCOG Active Transportation
Planning, City of Modesto Non-Motorized
Transportation Plan

Description

Dedicating land for future construction of trails and multiuse facilities enhances connectivity and provides more attractive and safer facilities for active transportation. Regional entities can help plan a regional network and incorporate programming within regional plans, whereas municipalities can incorporate the network into General Plans and request the land dedication from developers as the required parcels are developed or redeveloped.

Implementation Actions

- Identify priority regional and local trail corridors where preserving right-of-way would help close important bicycle and pedestrian network gaps.
- Incorporate planned trail alignments into General Plans, Active Transportation Plans, Specific Plans, and subdivision regulations.
- Require or incentivize appropriate new subdivisions and development projects to dedicate trail easements or construct planned trail segments when there is a clear connection to the regional or local network.
- Coordinate trail alignments with existing utility corridors, irrigation district facilities, flood-control facilities, waterways, parks, and other linear corridors where feasible.
- Prioritize trail connections that link residential neighborhoods to schools, employment centers, transit stops, downtowns, parks, and other major destinations.
- Coordinate land dedication with future construction funding so that preserved rights-of-way can eventually be converted into usable bicycle and pedestrian facilities.

Funding Sources

Trail and multi-use facility construction can require significant initial investment as well as ongoing maintenance. Potential funding sources include the Statewide Active Transportation Program, Recreational Trails Program, Caltrans Sustainable Transportation Planning grants, Transportation Alternatives funding, local park and transportation funds, and other competitive active transportation grants. Developers may also dedicate trail easements or construct trail segments as part of subdivision or development approvals when the improvement is appropriately related to the development.

Equity Considerations

Dedicating land for Class I bike trails enhances low-stress transportation options for residents without vehicles and improves regional connectivity for historically underserved neighborhoods. Prioritizing trail development in communities lacking safe bicycle infrastructure helps reduce mobility barriers, particularly for youth and seniors. Trail design should ensure ADA compliance and safe access points from surrounding areas.

Case Study

Stanislaus County – Trail and Right-of-Way Requirements

Stanislaus County planning documents demonstrate the use of trail right-of-way reservations as part of development planning. One project included a multi-purpose trail along a Turlock Irrigation District lateral and reserved trail right-of-way on the project site to accommodate the community-plan requirement.

https://www.stancounty.com/planning/agenda/2016/11-17-16/VII_A.pdf

Mitigation Potential

Land dedication itself is not directly quantifiable as a VMT-reduction strategy because it does not necessarily result in construction of a transportation facility. However, preserving rights-of-way can be a necessary step toward constructing bicycle and pedestrian facilities that can reduce VMT. The eventual VMT benefit will depend on the location, quality, connectivity, and destinations served by the completed trail network.

For more details, see CAPCOA, T-19-A. Construct or Improve Bike Facility, pg. 137–141, CAPCOA, T-19-B. Construct or Improve Bike Boulevard, pg. 142–145 and CAPCOA, T-20. Expand Bikeway Network, pg. 146–149 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Mobility Hubs

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Transit-Oriented Development, Infill Development, Improve Destination Accessibility, Provide First and Last Mile Improvements and Incentives, Transit Facilities and Amenities, Park-and-Ride Lots

REFERENCES

Victoria Transport Policy Institute Online TDM Encyclopedia, StanRTA Transit Center and Mobility Hub Planning, StanCOG 2026 RTP/SCS, Caltrans Sustainable Transportation Planning

Description

Developing multimodal mobility hubs co-locates multiple non-Single Occupancy Vehicle transportation options such as bicycle amenities, shared micromobility, park and ride, and curbside access, to facilitate seamless travel transitions which makes using transit and other non-single occupancy vehicle modes of transportation more convenient.

Implementation Actions

- Prioritize mobility hub improvements at existing StanRTA transit centers and hubs, including the Modesto Transit Center, Turlock Transit Center, Ceres, Patterson, and Vintage Faire Mall.
- Implement the Community Enhancement Zone (CEZ) Vision and Action Plan for a mobility hub on Paradise Road.
- Coordinate future CEZ plans and mobility hub planning with StanRTA, StanCOG, local jurisdictions, and other transportation partners.
- Provide amenities such as sheltered seating, lighting, bicycle parking, bicycle lockers, scooter facilities where appropriate, passenger information, wayfinding, and safe pedestrian connections.
- Improve first- and last-mile connections between mobility hubs and surrounding residential, employment, commercial, educational, and civic destinations.
- Incorporate mobility hub considerations into multimodal corridor, downtown, infill, and transit-oriented development planning.
- Coordinate mobility hub improvements with development projects where appropriate to encourage housing, employment, and services near major transportation connections.

Funding Sources

Mobility hubs require initial capital funding for transit facilities, shelters, lighting, bicycle and scooter facilities, signage, passenger information, and other amenities, as well as ongoing operations and maintenance. Potential funding sources include the Transit and Intercity Rail Capital Program, Caltrans Sustainable Transportation Planning grants, Federal Transit Administration programs, Reconnecting Communities, Statewide Active Transportation Program, and other transit and active transportation funding sources. Development partnerships can also contribute improvements where mobility hubs are integrated into new mixed-use, residential, or employment projects.

Equity Considerations

Mobility hubs promote transportation equity by integrating multiple travel options in one accessible location. Locating hubs in underserved areas can improve mobility for residents without personal vehicles. Ensuring that hubs are designed for universal access, including safe crossings, shade, real-time info, and multilingual signage, helps reduce barriers for low-income and disabled riders.

Case Study

Ceres Multimodal Hub

The Ceres Multimodal Hub is the strongest Stanislaus-specific example for this strategy. StanRTA initiated the project following its Comprehensive Operational Analysis, which identified a Ceres mobility hub as a priority investment. The proposed facility includes 6–8 bus bays, passenger shelters, a transit center, bicycle and scooter facilities, bicycle lockers, and first-/last-mile connections.

<https://www.stanrta.org/AgendaCenter/ViewFile/Item/156?fileID=2481>

Mitigation Potential

Mobility hubs can increase accessibility to transit, walking, biking, ridesharing, bike sharing, and carpooling. When coordinated, mobility hubs can offer a convenient mobility alternative to private vehicles, reducing VMT.

For more details, see Victoria Transport Policy Institute – Mobility Hubs for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Nonmotorized Facility Management

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, School Districts

LINKED STRATEGIES

Provide Bike Network / Facility Improvements,
Provide Pedestrian Network / Facility Improvements

REFERENCES

Victoria Transport Institute Online TDM Encyclopedia, NACTO Urban Bikeway Design Guide, StanCOG Regional Active Transportation Plan



Description

Effective management of non-motorized facilities ensures their usability and safety by establishing maintenance protocols and allocating resources for upkeep.



Implementation Actions

- Develop interagency agreements for maintenance responsibilities for regional trails, bikeways, and pedestrian facilities that cross multiple jurisdictions.
- Establish a trail and active transportation maintenance fund and coordination mechanism to manage trash pickup, vegetation, surface repairs, signage, lighting, and other routine maintenance needs.
- Integrate bicycle and pedestrian facilities into regional and local asset management systems for budgeting, monitoring, and maintenance scheduling.
- Establish consistent maintenance standards for priority regional bicycle and pedestrian facilities.
- Include performance metrics for maintenance and facility condition in active transportation funding evaluations and grant scoring.



Funding Sources

Likely to require additional funding for staffing, equipment, and ongoing maintenance. Costs may be shared among municipalities or other regional partners. Potential funding sources include the Statewide Active Transportation Program, Sustainable Transportation Planning Grants, Surface Transportation Block Grant Program, Congestion Mitigation and Air Quality funding, and other bicycle and pedestrian infrastructure programs.



Equity Considerations

Coordinated governance of regional and interjurisdictional trails ensures long-term access and quality for all users, especially those in communities that have fewer recreational or low-cost travel options. Equitable management should include community input and ensure that trail access is maintained near disadvantaged communities and schools. Agreements should fund basic operations such as lighting, maintenance, and shade structures to ensure equitable usability.



Case Study

City of Turlock Active Transportation Plan

The City of Turlock's Active Transportation Plan provides a framework for implementing and supporting bicycle and pedestrian facilities throughout the city. The plan is accompanied by an implementation plan and supporting resources that guide active transportation improvements. Turlock also administers ongoing street, sidewalk, and street-tree maintenance programs, illustrating how bicycle and pedestrian facilities can be incorporated into broader municipal infrastructure management activities.

<https://ci.turlock.ca.us/buildinginturlock/planninglandusepermitting/masterspecificplansdesignguidelines/activetransportationplan.asp>



Mitigation Potential

Maintenance and management of nonmotorized facilities offer a comfortable and reliable mode of transportation that does not rely on private vehicles.

For more details, see Victoria Transport Policy Institute – Nonmotorized Facility Management for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Provide Bike Network / Facility Improvements

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Provide Bike Parking, Provide Pedestrian Network / Facility Improvements, Micromobility / New Mobility Programs, Road Diets and Traffic Calming Improvements

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Regional Active Transportation Plan, Caltrans Bikeway Design Manual



Description

Constructing and enhancing bike facilities that provide safe and convenient infrastructure makes cycling a more attractive mode of transportation. Caltrans defines four classes of bicycle facilities: Class I paths are fully separated bikeways, Class II are striped bike lanes on streets, Class III are shared routes with signage, and Class IV are separated bikeways protected by barriers or curbs. Class IV facilities provide the greatest safety benefits because physical separation reduces conflicts with vehicles, lowering the risk of crashes and improving comfort for a wider range of riders. Combining Class IV facilities with lighting can increase the safety and security of the facility.



Implementation Actions

- Implement Class I, II, III, and IV bikeways consistent with the StanCOG Regional Active Transportation Plan and local active transportation plans, with a near-term focus on filling network gaps.
- Upgrade existing bike lanes with green paint, buffers, and intersection treatments to meet best practices for safety.
- Prioritize school zones, downtown commercial districts, and transit access points using a low-stress network approach.
- Coordinate project funding through StanCOG's regional transportation planning and active transportation programs, local transportation sales tax programs, and Caltrans funding opportunities.



Funding Sources

Likely requires significant initial funding to construct, plus continued funding for maintenance and operations. Developers can contribute to network expansion or improvements where there is an appropriate nexus. Funding sources include the Statewide Active Transportation Program, Sustainable Transportation Planning Grants, Surface Transportation Block Grant Program, Congestion Mitigation and Air Quality funding, and Affordable Housing and Sustainable Communities Program.



Equity Considerations

Expanding the bikeway network offers low-cost mobility options to residents who cannot afford a car. Prioritize bikeway expansion in historically disinvested neighborhoods and ensure facilities connect to jobs, transit, and schools. Include engagement with communities of color and youth to co-design safe and accessible routes.



Case Study

StanCOG Regional Active Transportation Plan

StanCOG's countywide Regional Active Transportation Plan identifies a regional bicycle and pedestrian network, priority routes, existing barriers, and opportunities for improving connections throughout Stanislaus County. The plan provides a regional framework for prioritizing bicycle facility investments and coordinating projects between jurisdictions.

<https://www.stancog.org/184/Non-Motorized-Transportation-Plan>



Mitigation Potential

Bicycle infrastructure improvements increase safety, comfort, and convenience of biking, making biking a more attractive alternative to Single Occupancy Vehicles. Impacts on VMT will vary based on the location and connection of the bicycle networks to local/regional networks and transit stops.

For more details, see the resources listed below for VMT reduction quantification:

- CAPCOA, T-10. Provide End-of-Trip Bicycle Facilities, pg. 100-103
- CAPCOA, T-19-A. Construct or Improve Bike Facility, pg. 137-141
- CAPCOA, T-19-B. Construct or Improve Bike Boulevard, pg. 142-145
- CAPCOA, T-20. Expand Bikeway Network, pg. 146-149

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Provide Bike Parking

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

*IProvide Bike Network / Facility Improvements,
Provide End-of-Trip Bicycle Facilities*

REFERENCES

California Air Pollution Control Officers Association (2024), CalGreen Bicycle Parking Requirements, StanCOG Regional Active Transportation Plan

Description

Providing bike parking aims to improve amenities for cyclists by installing convenient and secure parking options. Local agencies can require bicycle parking minimums as part of their parking standards code and even offer incentives for converting 1 or 2 vehicle parking spaces to bicycle parking. Regional agencies can provide grants to cities and property owners to retrofit existing vehicle parking or other areas to house bicycle parking. This strategy encourages more people to choose biking as a reliable mode of transportation by ensuring secure and convenient bike parking options.

Implementation Actions

- Require Class II or III bicycle parking as a parking standard for new multifamily, commercial, and institutional developments.
- Install bike racks, lockers, or other secure bicycle parking at high-demand locations such as libraries, parks, schools, downtowns, transit centers, and other public facilities
- Include incentives for retrofitting older buildings through local parking code updates or sustainability grants.
- Consider including bike parking standards that incorporate non-intrusive design.

Funding Sources

Private funding sources may be developed as part of individual project applications. Local municipalities may require funding for initial purchase and installation. Bicycle parking can also be combined with other active transportation, transit, or streetscape improvements to leverage available funding.

Equity Considerations

Secure and visible bike parking near schools, transit stops, and shopping centers benefits those who rely on bicycles for daily travel. Equity considerations include providing free or low-cost parking options in low-income areas, ensuring ADA-compliant access, and designing facilities to reduce theft risk in neighborhoods with limited bike infrastructure.

Case Study

City of Davis – Bicycle Parking Requirements

The City of Davis incorporates bicycle parking requirements into its development regulations to ensure that new development supports bicycling as a practical transportation choice. The standards require bicycle parking for a variety of land uses and establish requirements for location, accessibility, and design. By integrating bicycle parking into local development standards, Davis demonstrates how municipalities can support bicycling through land use and site design requirements.

<https://cyclesafe.com/wp-content/uploads/2024/11/DAVIS-BICYCLE-PARKING-STANDARDS.pdf>

Mitigation Potential

Secure bicycle parking improves the convenience and reliability of bicycling by reducing theft concerns and supporting bicycle use as an alternative to single-occupancy vehicle travel.

For more details, see CAPCOA, T-10. Provide End-of-Trip Bicycle Facilities, pg. 100-103 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Provide Pedestrian Network / Facility Improvements

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Dedicate Land for Trails and Off-Street Multi-Use Facilities, Pedways: Indoor Pedestrian Facility Connections, Road Diets and Traffic Calming Measures, Create Pedestrian Priority Zones, Improve Lighting and Security, Provide First and Last Mile Improvements and Incentives

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Regional Active Transportation Plan

Description

Expanding and improving pedestrian infrastructure such as sidewalks, crosswalks, trails, paths, and pedestrian-scale lighting increases safety and accessibility.

Implementation Actions

- Implement pedestrian improvements identified through the StanCOG Regional Active Transportation Plan and local active transportation plans, with a near-term focus on filling network gaps.
- Coordinate shading studies with local municipalities and develop tree planting and shading guidelines.
- Prioritize pedestrian upgrades in school zones, transit-adjacent neighborhoods, and DACs.
- Install sidewalks, crosswalks, curb ramps, median refuges, and pedestrian-scale lighting as part of ADA Transition Plans and Active Transportation Plan (ATP) grant implementation.
- Coordinate improvements with Safe Routes to School programs and complete streets initiatives.

Funding Sources

Likely requires significant initial funding to construct, plus continued funding for maintenance and operations. Potential funding sources include the Statewide Active Transportation Program, Sustainable Transportation Planning Grants, Surface Transportation Block Grant Program, Congestion Mitigation and Air Quality funding, and other bicycle and pedestrian programs.

Equity Considerations

Improves safety and comfort for pedestrians, especially in areas where low-income residents, seniors, or youth rely on walking as a primary mode. Incorporate street lighting, shade, and ADA-compliant elements to address barriers faced by vulnerable populations. Coordinate improvements near schools, community centers, and affordable housing developments.

Case Study

City of Ceres – Central Avenue and Hackett Road Pedestrian Safety Corridor

The City of Ceres is advancing pedestrian and bicycle safety improvements along Central Avenue and Hackett Road. The project includes sidewalk infill, Class II bicycle lanes, ADA-compliant curb ramps, curb extensions, speed-feedback signs, safety lighting, and relocation or removal of utility poles to improve accessibility. The project demonstrates how a coordinated set of improvements can address pedestrian network gaps and improve safety and accessibility along an existing corridor.

https://www.stancog.org/DocumentCenter/View/2489/01-ActiveTransportation_2026-03-26

Mitigation Potential

Pedestrian improvements increase safety, comfort, and convenience of walking, making walking a more attractive alternative to Single Occupancy Vehicle. Impacts on VMT will vary based on the location and connection of the pedestrian networks to local/regional networks.

For more details, see CAPCOA, T-18. Provide Pedestrian Network Improvement, pg. 133-136 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Pedways: Indoor Pedestrian Facility Connections

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Provide Pedestrian Network / Facility Improvements, Create Pedestrian Priority Zones, Improve Lighting and Security, Provide First and Last Mile Improvements and Incentives

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, City of Modesto Downtown Master Plan



Description

Develop pedways to connect buildings and transportation terminals which create indoor urban walking networks that offer a protected environment during hot summer months and cold winters.



Implementation Actions

- Identify candidate sites for covered walkways in high foot-traffic areas.
- Coordinate with anchor institutions (e.g., hospitals, universities, malls) to create weather-protected pedestrian corridors linked to transit stops.
- Provide Traffic Demand Management (TDM) credits or development bonuses for large projects that implement indoor or covered walkways improving nonmotorized access.
- Incorporate pedways into specific plans and update design guidelines to ensure ADA accessibility and year-round usability.



Funding Sources

Primarily private funding associated with development projects. These facilities may require significant initial investment. Public funding could potentially be combined with pedestrian, transit, downtown revitalization, or multimodal transportation programs where the facility provides a broader public transportation benefit.



Equity Considerations

Covered or climate-protected pedestrian connections can improve comfort and accessibility for older adults, people with disabilities, transit riders, and other pedestrians. Prioritizing these improvements near medical centers, educational campuses, civic facilities, and major transit destinations can help reduce barriers to walking and improve access to key community destinations year-round.



Case Study

Sacramento International Airport Pedestrian Walkway

Sacramento International Airport is constructing a new elevated pedestrian walkway connecting Terminal B and Concourse B. The project includes enclosed pedestrian connections, moving walkways, elevators, escalators, and ADA-accessible facilities that provide an alternative to the airport's automated people mover system. The project demonstrates how grade-separated pedestrian infrastructure can improve connectivity between major destinations while enhancing accessibility and user convenience.

<https://flysmf.gov/smforward>



Mitigation Potential

Indoor pedways that connect buildings and transportation terminals increase safety, comfort, and convenience of walking, especially during extreme weather conditions. Impacts on VMT will vary based on the location and connection of the pedestrian networks to local/regional networks.

For more details, see Victoria Transport Policy Institute – Pedways and CAPCOA, T-18. Provide Pedestrian Network Improvement, pg. 133-136 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Implement Carshare Program

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Educational Institutions, Property Managers, Employers

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Mobility Hubs, Guaranteed Ride Home Programs, Promote and Expand Voluntary TDM Programs, Employer Commute Trip Reduction Programs, Preferential Parking for Rideshare, Provide Ridesharing and Shuttles

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, StanisCruise Program

Description

Partnering with carshare providers to launch or expand service in downtown areas, major activity centers, educational campuses, and near transit facilities offers dedicated parking and discounted membership fees, promoting shared mobility and reducing the need for private vehicle ownership.

Implementation Actions

- Launch carshare hubs at multifamily housing, major employment centers, educational institutions, downtown areas, and major transit locations where sufficient demand exists.
- Develop parking cash-out policies and discounted membership programs in partnership with mobility providers.
- Pilot flexible carshare models in Disadvantaged Communities and transit-poor areas to improve regional mobility and reduce household vehicle ownership.

Funding Sources

Requires staff time to coordinate with carshare providers and identify appropriate parking locations. Potential funding sources include the Clean Mobility Options Voucher Pilot Program and other state and regional clean transportation programs. Partnerships with employers, universities, housing providers, and local governments could also support implementation and operating costs.

Equity Considerations

To support equitable access, carshare services should be located in areas with low vehicle ownership, especially near affordable housing and underserved transit zones. Discounted memberships for income-qualified users and multilingual enrollment options can help reduce barriers. Partnerships with local housing developers and nonprofits can ensure outreach and station siting meet the needs of residents lacking private vehicle access.

Case Study

Modesto Multimodal Transportation Planning

The City of Modesto is developing a Downtown Multimodal Transportation Network and Land Use Compatibility Action Plan that will integrate future ACE passenger rail service with the existing transportation network. This work provides a local planning context in which shared mobility, transit, bicycle, and pedestrian services could potentially be coordinated as part of a broader multimodal transportation system.

https://media.governmentnavigator.com/media/bid/1769635355_Downtown_Modesto_Multimodal_Transportation_Network_and_Land_Use_Compatibility_Action_Plan.pdf

Mitigation Potential

Carshare programs provide users with access to a vehicle without the need to own one. Carshare programs encourage users to consolidate trips and reduce unnecessary trips, reducing VMT.

For more details, see CAPCOA, T-21-A. Implement Conventional Carshare Program, pg. 150-152 and CAPCOA, T-21-B. Implement Electric Carshare Program, pg. 154-158 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Micromobility/New Mobility Programs

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/ Transportation Management Organizations (TMOs), Educational Institutions, Property Managers, Employers, Developers (Residential), Developers (Employment), Private Mobility Providers such as Uber, Byrd

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Improve Destination Accessibility, Mobility Hubs, Provide Bike Network / Facility Improvements, Road Diets and Traffic Calming Measures, Provide First and Last Mile Improvements and Incentives, Mobility Wallets

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 RTP/SCS, Caltrans Active Transportation Program Guidelines, StanCOG Regional Active Transportation Plan, StanCOG Active Transportation Toolkit



Description

These programs promote the use of dockless e-scooters, e-bikes, and other shared mobility services to address first and last mile challenges. These services can complement transit, reduce short automobile trips, and improve access to employment centers, schools, and major destinations.



Implementation Actions

- Develop pilot micromobility programs in Modesto, Turlock, and other communities with sufficient density and short-trip demand.
- Prioritize station placement in areas with high walk scores and underserved populations.
- Coordinate micromobility hubs with planned active transportation and first/last-mile projects identified through StanCOG planning.
- Establish micromobility parking zones and geofencing boundaries in commercial centers.
- Leverage Clean Mobility Options (CMO) funding to subsidize micromobility rides for low-income communities.
- Require helmet use, rider education, and liability waivers through vendor permitting for events.
- Create employer-based micromobility fleets at hospitals, universities, and the mall to reduce Single Occupancy Vehicle trips.



Funding Sources

May require initial funding for program development, equipment, operations, and vendor contracting. Potential funding sources include the California Active Transportation Program, Caltrans Sustainable Transportation Planning Grants, Clean Mobility Options, Congestion Mitigation and Air Quality (CMAQ) funding, Surface Transportation Block Grant (STBG) funding where eligible, and local transportation funds. StanCOG administers regional transportation funding programs and the Regional ATP provides funding opportunities for projects and plans serving the StanCOG region.



Equity Considerations

Expand service to underserved areas with limited transit access, and ensure equitable device distribution, particularly in low-income neighborhoods and communities of color. Provide non-smartphone options and cash payment systems. Reduce cost barriers by offering discounts for low-income riders and partnerships with public housing agencies. Address safety concerns with multilingual outreach, helmet giveaways, and rider education events.



Case Study

City of Sacramento – Shared Micromobility Program

The City of Sacramento permits shared micromobility operators to provide rental devices such as electric scooters. The city regulates program operations and uses anonymized bicycle and scooter data to support planning for parking and bikeway needs, monitor device deployment, and evaluate compliance with equity requirements. Sacramento's program demonstrates how local agencies can manage shared micromobility through operator permitting, safety regulations, data monitoring, and designated parking practices

<https://www.cityofsacramento.gov/public-works/mobility-and-sustainability/mobility--parking--and-curb-management/-shared-rideables>



Mitigation Potential

Dockless/Micromobility/New Mobility Programs offer alternative options for Single Occupancy Vehicles for the first/last mile challenges.

For more details, see the resources listed below for VMT reduction quantification:

- CAPCOA, T-22-A. Implement Pedal (Non-Electric) Bikeshare Program, pg. 159-162
- CAPCOA, T-22-B. Implement Electric Bikeshare Program, pp. 163-166
- CAPCOA, T-22-C. Implement Scootershare Program, pp. 167-170
- CAPCOA, T-22-D. Transition Conventional to Electric Bikeshare, pp. 171-175
- CALTRANS VMT Mitigation Program, Micro-mobility, pg. 37-38

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Road Diets and Traffic Calming Measures

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Infill Development, Wayfinding for Bicyclists and Pedestrians, Provide Bike Network / Facility Improvements, Provide Pedestrian Network / Facility Improvements, Create Pedestrian Priority Zones

REFERENCES

California Air Pollution Control Officers Association (2024), FHWA Traffic Calming ePrimer, StanCOG Regional Active Transportation Plan, StanCOG Active Transportation Toolkit

Description

Traffic calming measures include roadway improvements that slow vehicles and enhance safety. There are numerous types of treatments; the more common ones are listed below. Road diets, which reduce the number of vehicle lanes on a roadway to provide more space for landscaping, bicyclists and pedestrians, are also a form of traffic calming.

- Speed humps, bumps and tables
- Chicanes, chokers and neckdowns
- Roundabouts and traffic circles
- Lane narrowing and/or landscaping
- Raised intersections
- Bollards
- Rumble strips
- Lane markings and signage
- Road diets

Implementation Actions

- Install infrastructure such as speed humps, raised crosswalks, curb extensions, and traffic circles in high-collision zones and school areas.
- Use traffic safety audits and local collision maps to prioritize locations for calming treatments.
- Coordinate with city public works departments to embed traffic calming into pavement management plans and Safe Routes to School programs.
- Consider road diets in downtowns and central business districts, where businesses are more likely to attract foot traffic.

Funding Sources

Funding can include the Active Transportation Program, Highway Safety Improvement Program, Surface Transportation Block Grant Program, Congestion Mitigation and Air Quality funding, Safe Streets and Roads for All, and local transportation sales tax revenues. StanCOG's current programming includes active transportation projects incorporating pedestrian safety, bicycle facilities, traffic-calming features, and street lighting.

Equity Considerations

Traffic calming improves safety for pedestrians and cyclists, especially in neighborhoods where residents are more likely to walk or bike. Implementation should prioritize areas with a history of collisions or near schools and parks in environmental justice communities. Inclusive engagement is key to ensuring measures align with local mobility patterns.

Case Study

City of Ceres – Central Avenue and Hackett Road Pedestrian Safety Corridor

The project includes sidewalk infill, Class II bicycle lanes, curb-ramp improvements, bulb-outs, traffic-speed radar signs, and safety street lighting. The project demonstrates how multiple traffic-calming and pedestrian-safety treatments can be combined within a single Stanislaus County corridor.

https://www.stancog.org/DocumentCenter/View/2088/1-ActiveTransportation_6-4-2025?bidld

Mitigation Potential

Traffic calming measures reduce vehicle volumes and speeds, reducing the level of stress and perceived danger for bicyclist and pedestrians. The increased safety encourages people to walk, bike, and use transit, reducing VMT.

For more details, see CALTRANS VMT Mitigation Program, Road Diets, pg. 39-40 and CAPCOA (2019), Traffic Calming Improvements, pg. 24 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Create Pedestrian Priority Zones

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies, Transit Agencies

LINKED STRATEGIES

Improve Destination Accessibility, Orient Project Toward Transit, Bicycle, or Pedestrian Facility, Provide Pedestrian Network / Facility Improvements, Road Diets and Traffic Calming Measures, Improve Lighting and Security, Provide First and Last Mile Improvements and Incentives

REFERENCES

California Air Pollution Control Officers Association (2024), NACTO Urban Street Design Guide, StanCOG Regional Active Transportation Plan, StanCOG Active Transportation Toolkit

Description

Creating urban non-motorized zones designates pedestrian-only or limited-motor-access areas in downtowns, civic plazas, or event corridors, promoting walking and cycling. This strategy can be used as a temporary measure or a long term solution.

Implementation Actions

- Establish pedestrian-priority zones in downtown cores to promote walkable tourism, outdoor dining, and public events.
- Implement temporary weekend street closures using removable bollards, signage, and wayfinding in target areas with high foot traffic.
- Pilot pop-up activations with vendors, music, and art to test car-free configurations before permanent conversion. Include traffic circulation plans and business access accommodations.
- Coordinate with local planning departments to adopt flexible zoning overlays that support mixed-use and low-speed streetscape design.

Funding Sources

Funding sources include the Active Transportation Program, Surface Transportation Block Grant Program, CMAQ, local transportation funds, and grants supporting complete streets and pedestrian improvements. StanCOG's active transportation funding framework supports projects that improve walking and bicycling and increase access to community destinations.

Equity Considerations

Establishing pedestrian-priority zones can improve safety, air quality, and access to community destinations in underserved neighborhoods. Equitable implementation should provide accessible routes, multilingual signage, and meaningful community engagement while ensuring improvements benefit existing residents and businesses.

Case Study

City of Modesto – Pedestrian Priority Areas

The City of Modesto's Non-Motorized Transportation Plan identifies pedestrian priority areas around key destinations including Downtown Modesto, schools, colleges, hospitals, shopping centers, and the Amtrak station. The plan uses these priority areas to focus pedestrian improvements where walking activity and connections to important destinations are greatest.

<https://modestogov.com/DocumentCenter/View/1722/Non-Motorized-Transportation-Plan-PDF?bidId=>

Mitigation Potential

While zone restrictions for private vehicles can be implemented immediately, active transportation infrastructure within those zones will require continued investment and installations. VMT impacts will be incremental as pedestrian priority zones develop. There are not clear methods for quantifying the reduction due to this strategy, however linked strategies to improve the pedestrian network may be considered as a proxy quantification method.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Improve Lighting and Security

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies, School Districts

LINKED STRATEGIES

Dedicate Land for Trails and Off-Street Multi-Use Facilities, Provide Pedestrian Network / Facility Improvements, Pedways: Indoor Pedestrian Facility Connections, Road Diets and Traffic Calming Measures, Create Pedestrian Priority Zones, Provide First and Last Mile Improvements and Incentives, Active Transportation and Safe Routes to Schools,

REFERENCES

StanCOG Regional Active Transportation Plan; Modesto Downtown Master Plan; CPTED principles

Description

Addressing security concerns at transportation nodes and non-motorized pathways enhances the safety and attractiveness of alternative transportation modes in comparison to driving. Security can be enhanced through a combination of design and safety features. Adequate lighting and clear sightlines improve visibility and discourage crime, while landscaping and walls should be designed to maintain sightlines and allow for natural surveillance. Creating active, well-used spaces with seating or shops adds “eyes on the street,” and emergency features like call boxes or cameras provide an extra layer of reassurance.

Implementation Actions

- Prioritize pedestrian-scale lighting, CCTV cameras, and emergency call boxes along high-traffic nonmotorized corridor.
- Retrofit transit stations and bus shelters with CPTED-aligned features such as transparent enclosures, clear sightlines, and low landscaping.
- Establish a regional Safe Transit Ambassador Program, to deploy trained community staff at major transit hubs during peak hours.
- Partner with local law enforcement and community-based organizations to conduct safety audits of pedestrian routes and transit stops in priority equity areas or StanCOG disadvantaged communities.
- Apply for Proposition 1 grant funding or Caltrans Sustainable Communities grants to finance capital and staffing components of safety improvements.

Funding Sources

Likely to require additional funding for staffing. Active Transportation Program, Highway Safety Improvement Program, Safe Streets and Roads for All, local transportation funds, Safe Routes to School, and transit facility improvement programs.

Equity Considerations

Improving security at mobility nodes disproportionately benefits communities historically impacted by underinvestment and safety concerns. Investing in lighting, staffing, and design that enhances safety (e.g., CPTED principles) can encourage more women, youth, and seniors to use sustainable transportation modes. Prioritizing equity-priority neighborhoods for safety audits ensures that resources go where fear or risk of crime is a known barrier to walking or transit use.

Case Study

Virginia Corridor Trailway – Modesto

The current Virginia Corridor Trailway Phase 7 project includes a Class I path, landscaping, benches, lighting, site amenities, and a bicycle/pedestrian bridge. This demonstrates how lighting can be incorporated directly into trail construction rather than treated as a separate project.

<https://modestogov.com/2608/Virginia-Corridor-Trailway-Phase-7-Proje>

Mitigation Potential

Safety and security concerns can discourage walking, cycling, and transit use. Addressing security concerns can improve comfort and encourage non-Single Occupancy Vehicle modes as a safe alternative.

For more details, see CAPCOA, T-10. Provide End-of-Trip Bicycle Facilities, pg. 100-103 and Victoria Transport Policy Institute – Address Security Concerns for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Provide First and Last Mile Improvements and Incentives

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Transportation Network Companies (TNCs),
Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Improve Destination Accessibility, Dedicate Land for Trails and Off-Street Multi-Use Facilities, Mobility Hubs, Provide Bike Network / Facility Improvements, Provide Pedestrian Network / Facility Improvements, Micromobility / New Mobility Programs, Create Pedestrian Priority Zones, Active Transportation and Safe Routes to Schools

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Active Transportation Toolkit, Stanislaus County Non-Motorized Transportation Plan

Description

Providing first and last mile infrastructure improves access to transit and makes it a more attractive mode of transportation. First and last mile infrastructure can include closing gaps in sidewalks and bicycle facilities or even subsidizing access through the use of TNCs such as Uber and Lyft.

Implementation Actions

- Prioritize infrastructure improvements that close gaps to transit hubs or high quality transit services.
- Plan for and implement shared micromobility services within denser areas and/or around transit services.
- Partner with TNCs to provide subsidies or promo codes for short rides to and from transit stops, prioritizing service to employment hubs and schools, especially during off-peak or nighttime hours.
- Launch pilot programs in areas with limited active transportation infrastructure, to improve first/last mile connectivity.
- Implement geofenced pick-up/drop-off zones at high-ridership transit centers to streamline transfers and reduce conflicts with other modes.
- Use survey and ridership data to adapt incentive structure and eligibility criteria for low-income residents, youth, and seniors.

Funding Sources

Funding sources include the Active Transportation Program, transit grants, Clean Mobility Options, local transportation funds, and mobility-on-demand programs.

Equity Considerations

Providing improved transit access through bicycle and pedestrian infrastructure increases the safety and ease of access for transit dependent persons. Subsidizing TNC (Transportation Network Company) and shared micromobility services for first/last mile trips can fill mobility gaps for low-income residents, seniors, and persons with disabilities who live far from transit stops. Equity-focused design should ensure fare discounts apply to accessible ride options and prioritize service to historically underserved areas. Data privacy and multilingual app access should be considered to avoid technological exclusion.

Case Study

Stockton Mobility Collective

The Stockton Mobility Collective implemented a coordinated set of shared transportation services, including electric carsharing, electric bikesharing, mobility incentives, and an expanded Vamos Mobility platform. The project included approximately 100 electric bicycles at about 12 stations specifically intended to improve first- and last-mile access to transit. The platform was also expanded to support transit ticketing and shared-mobility reservations and payments. This project demonstrates how shared mobility services, incentives, and integrated trip-planning technology can improve connections to transit.

<https://www2.arb.ca.gov/stockton-mobility-collective>

Mitigation Potential

This strategy encourages transit use by improving access between origins and transit services. While there are limited direct quantification methods available, improvements to bicycle and pedestrian access can often be used as a proxy for estimating potential benefits. Because transit trips are often longer than active transportation trips, these proxy methods may underestimate the full VMT reduction potential.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Establish Active Transportation Stakeholder Groups

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Design Guidelines, Develop a Zoning Toolkit, Marketing Campaigns and Educational Events, Air District Coordination, Regional Transportation Management Association, TDM Ordinance and Policy Development, Promote and Expand Voluntary TDM Programs

REFERENCES

StanCOG Bicycle/Pedestrian Advisory Committee; StanCOG Active Transportation Toolkit; StanCOG Walk and Roll Stanislaus campaign

Description

Establishing active transportation stakeholder groups that have input on the design and programming of active transportation projects within the region creates a platform for collaboration and feedback among community members, planners, and local authorities, improving engagement and stakeholder buy-in for projects.

Implementation Actions

- Strengthen and expand StanCOG's existing Bicycle/Pedestrian Advisory Committee as a regional stakeholder forum.
- Convene regular meetings involving jurisdictions, schools, transit agencies, public health organizations, and community advocates.
- Use the group to prioritize active transportation projects, identify barriers to VMT reduction, and shape equity-centered implementation actions.
- Offer stipends or transportation reimbursements to ensure participation from low-income, youth, and senior stakeholders.

Funding Sources

Unlikely to require additional funding, but will require dedicated staff time for coordination.

Equity Considerations

Actively include representatives from historically excluded groups such as low-income residents, youth, seniors, and persons with disabilities. Offer stipends or travel reimbursements to support participation. Hosting meetings in various cities, especially in underserved areas, ensures geographic equity and local input. Prioritizing safety and access concerns from these communities can build trust and improve outcomes.

Case Study

StanCOG Bicycle/Pedestrian Advisory Committee

StanCOG already maintains a Bicycle/Pedestrian Advisory Committee as part of its regional bicycle and pedestrian program. The committee provides an existing institutional framework that could be expanded to support broader active transportation stakeholder coordination.

<https://www.stancog.org/165/Bicycle-Pedestrian>

Mitigation Potential

Establishing active transportation stakeholder groups can influence policy and planning, build community support, and identify barriers to reduce VMT within the community. The collaboration and cross-agency communication encourages municipalities to provide non-Single Occupancy Vehicle options, reducing the reliance on personal vehicles. While there are no quantification methods for this strategy, it is often a first step in effectively achieving other strategies in this toolbox.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Neighborhood Design

Design Guidelines

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Establish Active Transportation Stakeholder Groups, Develop a Zoning Toolkit, TDM Ordinance and Policy Development

REFERENCES

California Complete Streets Act of 2008 (AB 1358); California Governor's Office of Planning and Research General Plan Guidelines; Caltrans Complete Streets resources and design guidance; NACTO Urban Street Design Guide; NACTO Urban Bikeway Design Guide; NACTO Transit Street Design Guide

Description

Providing design guidelines for developers and planning staff to improve transit, active transportation access, and complete streets which promotes the use of non-single occupancy vehicle modes. Providing guidance and best practices for developers means the shift will be incremental as the region grows. Design guidelines can also be used in coordination with General Plans and Active Transportation Plans for obtaining grant funding to make roadway improvements at a corridor level.

Implementation Actions

- Develop a regional Design Toolkit for developers and planning staff that outlines minimum infrastructure requirements for transit facilities, sidewalks, crosswalks, bicycle facilities, bicycle parking, landscaping and storm water facilities.
- Use the Design Guidelines to comply with Complete Streets requirements for General Plans and local agencies.
- Include sample cross sections showing how to incorporate Class II/IV bikeways, protected intersections, mid-block crossings, and multi-use trail linkages into housing and commercial developments.
- Align new development review procedures with Caltrans Active Transportation Design Guidelines to ensure consistency across jurisdictions.
- Require all Specific Plans and major developments (e.g., over 100 units or 10,000 sq ft commercial) to be consistent with Design Guidelines during entitlement phases.
- Offer technical assistance or pre-application review support to local planning departments, prioritizing infill projects in places where pedestrian network gaps are most severe.

Funding Sources

Primarily staff time and planning resources. Potential funding includes Sustainable Transportation Planning Grants, Safe Streets and Roads for All planning funds, Active Transportation planning grants, and local planning budgets.

Equity Considerations

Ensure design standards prioritize safe and accessible infrastructure in low-income and underserved areas. Require ADA-compliant curb ramps, crosswalks, and sidewalks in areas with high transit dependency and senior populations. Incorporate multilingual community engagement when shaping pedestrian improvements to address local needs and safety concerns.

Case Study

City of Sacramento – Street Design Standards

The City of Sacramento's Street Design Standards provide technical requirements for street design and development. The standards address pedestrian-friendly streets, traffic calming, street classifications, lane widths, bicycle lanes, sidewalks, intersections, and other roadway design considerations. The document demonstrates how a city can translate broader transportation and Complete Streets policies into standards used during project design and development review.

<https://www.cityofsacramento.gov/content/dam/portal/pw/Publications/Engineering/Development-Engineering/Design-Procedures-Manual/section15-street-design-standards.pdf>

Mitigation Potential

Design guidance supports the implementation of safe and effective infrastructure making sustainable modes of transportation more attractive. While this strategy cannot be quantified it can help expedite the process of land use changes at the local level by removing barriers to implementation.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

School Mobility

Youth School Pools and Education

VTM REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Educational Institutions

IMPLEMENTORS-PUBLIC

School Districts, Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Improve Destination Accessibility, Road Diets and Traffic Calming Measures, Marketing Campaigns and Educational Events, Promote and Expand Voluntary TDM Programs, Microtransit, Preferential Parking for Rideshare, Parking Curbside Management

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Bicyclist and Pedestrian Safety and Education Campaign Final Report, StanCOG Active Transportation Toolkit, California Active Transportation Program, Safe Routes to School National Partnership



Description

School programs provide ride-matching services, active transportation resources, messaging, and education to increase usage of buses, carpooling, bicycling and walking. School carpool programs are often managed by the school but can also be implemented and managed by regional agencies using software for carpool matching based on school district that puts parents in communication with each other behind a login screen. Educational resources can be tailored to youth through hands on classes about active transportation safety or even teaching kids how to ride bicycles.



Implementation Actions

- Coordinate with school districts throughout Stanislaus County to identify schools with high automobile trip generation and opportunities for school-pool programs.
- Work with StanRTA, school districts, municipalities, and other regional partners to evaluate a countywide school carpool and ride-matching program that could be implemented through the StanisCruise program.
- Develop school-specific outreach materials in English and Spanish to promote carpooling, walking, biking, transit, and school bus use.
- Expand youth bicycle education, bike rodeos, walking audits, Walk to School events, and Bike to School events in partnership with school districts and community organizations.
- Provide helmets, scooters, and bicycles through city-run raffles, donor programs, or grant-funded Safe Routes to School (SRTS) campaigns.



Funding Sources

Programs can be supported through California's Active Transportation Program (ATP), which consolidates state and federal funding for projects and programs that increase walking and bicycling and improve safety and mobility for non-motorized users. StanCOG can also support regional coordination and grant development for school-based programs, while local school districts, cities, and community organizations can pursue ATP funding for eligible Safe Routes to School infrastructure and program components. Additional opportunities may include local air-quality and public-health funding, school district resources, and partnerships with community-based organizations.



Equity Considerations

Ensure programs prioritize low-income neighborhoods and students with limited transportation options. Use multilingual materials, and partner with Title I schools and community-based organizations to address barriers to walking and biking.



Case Study

Safe Routes to School and Youth Bicycle Education – Stanislaus County

StanCOG's Bicyclist and Pedestrian Safety and Education Campaign documented Safe Routes to School activities throughout Stanislaus County and highlighted the work of Safe Kids Stanislaus. Local initiatives included International Walk to School Day, Safe Routes to School, and National Bike to School Day, with more than 1,400 helmets provided to children through these efforts. StanCOG also coordinated bicycle instructor training intended to expand the number of local instructors capable of teaching bicycle skills to elementary school-aged children.

<https://www.stancog.org/DocumentCenter/View/806/February-2021-Final-Bicycle-and-Pedestrian-Safety-and-Education-Campaign-Summary-Report---PDF?bidId=>



Mitigation Potential

School programs target how students travel to school. VMT is reduced by improving awareness, education, and access to non-Single Occupancy Vehicle modes, thereby making alternative modes more attractive to parents and youth.

For more details, see CAPCOA (2019), School Carpool Program, pg. 20 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

School Mobility

School Buses

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Site

IMPLEMENTORS-PRIVATE

Educational Institutions

IMPLEMENTORS-PUBLIC

School Districts, Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

California Air Pollution Control Officers Association (2024), California Air Resources Board School Bus Programs, California Energy Commission Zero Emission School Bus and Infrastructure Program, U.S. Environmental Protection Agency Clean School Bus Program, Stanislaus County Office of Education Transportation Safety Plan



Description

School buses allow children to safely get to school without parental supervision and reduce the number of vehicle trips attracted to schools. School bus service can be expanded to non-traditional forms such as through partnership with the transit agency.



Implementation Actions

- Coordinate with school districts to identify schools where additional or expanded bus service could replace parent drop-off and pick-up trips.
- Evaluate opportunities to optimize existing school bus routes and increase utilization through improved routing, registration, and communication.
- Coordinate with StanRTA to evaluate opportunities for transit-based school trips or supplemental service where traditional school bus service is not cost-effective.



Funding Sources

School bus programs can be supported through school district transportation budgets as well as state and federal clean school bus and fleet-replacement programs. California's Zero-Emission School Bus and Infrastructure (ZESBI) program supports eligible local educational agencies in replacing internal-combustion school buses and installing associated charging infrastructure. The California Energy Commission also provides funding opportunities for electric school bus charging infrastructure through the Clean Transportation Program. Federal opportunities include the EPA Clean School Bus Program, which is being updated for a new funding opportunity in 2026. Other potential sources include CARB's Lower-Emission School Bus Program, Diesel Emissions Reduction Act (DERA) funding, and local air-district incentive programs.



Equity Considerations

Ensure programs prioritize low-income neighborhoods and students with limited transportation options. Use multilingual materials, and partner with Title I schools and community-based organizations to address barriers to walking and biking.



Case Study

Modesto City Schools Transportation Program – Modesto, California

Modesto City Schools operates a dedicated student transportation program and is implementing a new transportation registration and routing process for the 2026–2027 school year. The district is using registration information to better align routes with student eligibility, school boundaries, program needs, and available capacity. The district also uses StopFinder for parent-facing bus tracking and transportation information. This provides a local example of using improved transportation management and routing to maintain and potentially improve school bus utilization.

<https://www.mcs4kids.com/o/mcs/page/bus-schedules-revised>



Mitigation Potential

Increased school buses change how students travel to school and reduce VMT by reducing the vehicle trips associated with schools.

For more details, see CAPCOA, T-40. Establish a School Bus Program, pg. 215-219 for VMT reduction quantification

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

School Mobility

Active Transportation Infrastructure and Safe Routes to Schools

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Educational Institutions

IMPLEMENTORS-PUBLIC

School Districts, Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Improve Destination Accessibility, Wayfinding for Bicyclists and Pedestrians, Dedicate Land for Trails and Off-Street Multi-Use Facilities, Provide Bike Network / Facility Improvements, Provide Bike parking, Provide Pedestrian Network / Facility Connections, Road Diets and Traffic Calming Measures, Improve Lighting and Security, Provide First and Last Mile Improvements and Incentives, Youth School Pools and Education

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Bicyclist and Pedestrian Safety and Education Campaign Final Report, StanCOG Regional Active Transportation Master Plan, California Active Transportation Resource Center, California Active Transportation Program, Safe Routes Partnership



Description

Infrastructure improvements that improve the safety and security of active modes of transportation for youth aim to increase walking, biking, and “rolling” to schools, parks, and after-school activities. The implementation of Safe Routes to School (SRTS) plans involves coordinating with local school districts to implement safety projects such as crossing guards, signage, bicycle and pedestrian facilities as well as incorporating messaging about the benefits of active transportation into school curricula.



Implementation Actions

- Coordinate with school districts and municipalities to identify schools with gaps in sidewalks, crossings, bicycle facilities, and connections to surrounding neighborhoods through a comprehensive Safe Routes to School plan.
- Prioritize SRTS improvements within communities identified as disadvantaged or with documented pedestrian and bicycle safety concerns.
- Develop joint applications with member jurisdictions and school districts for ATP and other active transportation funding.
- Integrate Safe Routes to School projects with local Active Transportation Plans, General Plans, and capital improvement programs.
- Coordinate with StanRTA and local jurisdictions to improve first- and last-mile connections between schools, transit stops, and surrounding neighborhoods.
- Implement enhanced crosswalks, pedestrian refuge islands, sidewalk connections, bicycle facilities, traffic calming, and other safety improvements near priority schools.
- Use education and encouragement programs alongside infrastructure investments to increase the effectiveness of SRTS improvements.



Funding Sources

Eligible projects can be funded through California’s Active Transportation Program, which combines state and federal resources to increase walking and bicycling and improve safety and mobility for non-motorized users. Other potential sources include Safe Streets and Roads for All (SS4A), Highway Safety Improvement Program (HSIP), Transportation Alternatives, Congestion Mitigation and Air Quality (CMAQ) where eligible, local transportation funds, and local or regional active transportation programs. StanCOG can assist member agencies with regional coordination and programming of eligible transportation investments. ATP Cycle 7 includes approximately \$568 million for projects spanning FY 2025/26 through FY 2028/29.



Equity Considerations

Active transportation programs targeted toward youth should prioritize Safe Routes to Schools in underserved areas. Ensuring equitable access includes culturally relevant outreach, provision of safety gear, and collaboration with schools serving low-income families. Programs should address barriers such as lack of infrastructure or unsafe crossings near public schools in DACs.



Case Study

Safe Routes to School – Ceres, California

Ceres has implemented multiple Safe Routes to School projects, including improvements along the Morgan Road corridor. The project included sidewalk connectivity, Class II bicycle lanes, enhanced crossings with pedestrian refuge islands, striped crossings, and traffic signage. The project was supported through state transportation funding, and StanCOG participated in the project.

<https://dot.ca.gov/news-releases/news-release-2021-036>



Mitigation Potential

Active modes of transportation for youth improve travel options for how students make trips to and from school. VMT is impacted by improving access and safety for alternative modes of transportation, such as biking, walking, scooters and skateboards.

For more details, see CAPCOA, T-56. Active Modes of Transportation for Youth, pg. 228-231 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

School Mobility

Campus Transportation Management

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Educational Institutions

IMPLEMENTORS-PUBLIC

School Districts, Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

Victoria Transport Policy Institute TDM Encyclopedia, Association for Commuter Transportation Campus TDM Toolkit, California State University Transportation Demand Management Manual, Stanislaus State Transportation and Parking Forum, Stanislaus State Bicycle Master Plan, Modesto Junior College transportation resources, StanCOG 2026 RTP/SCS

Description

School campus programs addresses the unique commuting needs of students and integrate Traffic Demand Management (TDM) solutions into campus sustainability initiatives. The types of programs and improvements implemented on a commuter college campus include but are not limited to:

- Building more affordable housing for students and professors near the schools.
- Increasing active transportation infrastructure such as paths, protected facilities, bike share, scooter share, secure bicycle parking, and pedestrian amenities.
- Manage parking supply with parking permit and pricing systems.
- Marketing and educational events to promote use of non-single occupancy vehicle modes.
- Coordination with regional agencies for use of existing Mobility as a Service (MaaS) ride matching service particularly for faculty and staff.

Implementation Actions

- Partner with Stanislaus State, Modesto Junior College, and other educational institutions to develop campus-specific TDM programs.
- Coordinate with Stanislaus State on implementation of its Bicycle Master Plan, including bicycle-network connections, bicycle parking, wayfinding, education, and encouragement activities.
- Integrate plans for affordable housing near the campus into Housing Elements.
- Develop bicycle and pedestrian connections between campuses, surrounding neighborhoods, transit stops, and regional active transportation facilities.
- Subsidize campus based service and fare for students, faculty, and staff.
- Integrate travel surveys into major annual contact points such as beginning of year or semester registrations to measure the impact of TDM programs.

Funding Sources

Funding varies depending on the specific transportation demand management measures implemented. Active transportation improvements may be eligible for California Active Transportation Program funding, while planning and TDM program development can potentially be supported through Caltrans Sustainable Transportation Planning grants and other state or federal transportation planning programs. Transit improvements may be supported through local transit agency resources and applicable federal transit funding. Campus-specific programs can also use university or college transportation, parking, sustainability, and student-services budgets. StanCOG can support regional coordination, planning, and integration of campus TDM programs with the broader regional transportation system.

Equity Considerations

Campus-based TDM supports equity by offering alternatives to car ownership for students, especially low income youth who may not have access to a personal vehicle. Programs that include free or subsidized transit passes and safe travel routes support access to education, particularly in communities where campuses are farther from residential centers. Partnering with schools can also support broader community buy in for sustainable travel.

Case Study

California State University, Stanislaus – Turlock, California

California State University, Stanislaus has actively evaluated transportation demand management as part of campus transportation and parking planning. The university conducted a campus TDM survey addressing transportation, mobility, and parking for students, faculty, and staff. Subsequent transportation and parking planning evaluated TDM as an alternative to additional parking investment, including alternative transportation investments and promotion. This provides a direct Stanislaus County example of integrating TDM into campus transportation and parking planning.

<https://www.csustan.edu/events/transportation-demand-management>

Mitigation Potential

Campus transportation management programs are efforts to reduce VMT that are tailored to colleges, universities, and other education facilities. Given the unique trip making characteristics of colleges and universities, campus specific programs can be more effective for educational institutions compared to broader community efforts. For example, messaging may incorporate branding and campus specific resources and incentives such as discounts on school services or tickets to campus hosted events. The level of effectiveness and VMT reduction will vary depending on the mix of strategies employed by the school. Quantification and effectiveness of these programs is often measured through the use of travel surveys conducted by the school.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Marketing Campaigns and Educational Events

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs),
Educational Institutions, Property Managers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies,
School Districts

LINKED STRATEGIES

Establish Active Transportation Working Groups,
Youth School Pools and Education, Campus
Transportation Management, Traveler Information
(511), Promote and Expand Voluntary TDM
Programs, Employer Commute Reduction Programs

REFERENCES

California Air Pollution Control Officers Association
(2024), StanCOG 2026 RTP/SCS, StanCOG
StanisCruise Program, StanCOG Bicyclist and
Pedestrian Safety and Education Campaign,
California Active Transportation Program

Description

These programs raise awareness of multimodal mobility options and encourage behavior change through marketing campaigns, gamification (competitions), and educational events, aiming to promote mode shift. Activities such as "Bike Month," employer-to-employer competitions, and "Clean Air Day(s)" promote awareness and participation in alternative modes of transportation. Messaging during these campaigns often relates to making sustainable and healthy choices and can also include communications relating to safety.

Implementation Actions

- Develop a StanCOG-branded regional TDM marketing campaign that promotes StanisCruise, transit, carpooling, vanpooling, walking, bicycling, and telework.
- Coordinate annual outreach around Bike Month, Clean Air Day, Walk and Roll to School events, and other regional transportation campaigns.
- Develop regionally branded multilingual education materials, including transit information, ride-matching resources, safety materials, and QR codes linking residents to StanisCruise and StanRTA services.
- Partner with employers, schools, colleges, property managers, chambers of commerce, and community-based organizations to distribute TDM information through established community networks.
- Use social media, libraries, community centers, schools, transit facilities, and community events to reach residents who may not otherwise encounter regional transportation information.
- Develop employer-to-employer or community transportation challenges that reward increases in carpooling, transit, bicycling, walking, and telework.
- Coordinate educational campaigns with StanCOG's existing bicycle and pedestrian safety efforts and local active transportation programs.
- Track campaign participation, website activity, program enrollment, event attendance, and reported mode changes to evaluate effectiveness.

Funding Sources

Marketing and education programs require staff resources and ongoing funding but are generally less costly than capital improvements. StanCOG can use regional transportation funding to support TDM outreach, including CMAQ funding where eligible. StanCOG has already programmed CMAQ funding for the StanisCruise TDM program and StanRTA TDM rideshare activities. Other potential sources include State Transportation Planning grants, Active Transportation Program funding for eligible education and encouragement components, local agency transportation funds, transit agency resources, and partnerships with employers, schools, and community-based organizations.

Equity Considerations

Use culturally competent messaging and community-driven media. Engage trusted messengers to ensure campaigns resonate with historically marginalized groups. Prioritize outreach in areas with lower active transportation rates.

Case Study

StanCOG Bicyclist and Pedestrian Safety and Education Campaign – Stanislaus County

StanCOG implemented a countywide bicyclist and pedestrian safety and education campaign that included community outreach, bicycle education, helmet distribution, and Safe Routes to School activities. The campaign provides a direct local example of using education, events, and partnerships to influence transportation behavior and improve awareness of active transportation.

<https://www.stancog.org/DocumentCenter/View/806/February-2021-Final-Bicycle-and-Pedestrian-Safety-and-Education-Campaign-Summary-Report---PDF?bidId=>

Mitigation Potential

Increasing awareness of transportation alternatives and providing trip-planning resources can encourage greater use of transit, ridesharing, bicycling, walking, and telework. Educational campaigns are most effective when paired with incentives, supportive infrastructure, and transportation services that make mode shift practical for users.

For more details, see CAPCOA, T-7. Implement Commute Trip Reduction Marketing, pg. 89-91 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Mobility Wallets

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Educational Institutions, Property Managers, Employers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Increase Residential Density, Infill Development, Increase Mixed-Use and Development Density, Mobility Wallets, Transit Frequency and Coverage

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG StanisCruise Program, StanRTA Fare Program, StanCOG 2026 RTP/SCS

Description

This measure provides financial incentives or subsidies to reduce the cost of non- Single Occupancy Vehicles travel modes such as transit, micromobility services (e-bikes, e-scooters), and bike-sharing programs through the use of "mobility wallets," or preloaded cards that allow access to transit and micromobility programs.

Implementation Actions

- Develop a pilot mobility wallet focused on low-income residents, students, workers, and households with limited vehicle access.
- Coordinate with StanRTA to allow mobility wallet funds to be used for eligible transit fares and passes.
- Explore integration with StanisCruise to allow incentives to support carpooling and vanpooling.
- Partner with educational institutions, employers, housing providers, and community-based organizations to distribute transportation benefits.
- Evaluate opportunities to include bicycle, e-bike, or other shared mobility expenses where services are available.
- Target initial pilots toward communities with limited transportation options or high transportation cost burdens.
- Establish participant eligibility, spending limits, and reporting requirements to ensure funds are directed toward transportation purposes.
- Track participation, trips, transportation expenditures, and reported changes in vehicle travel to evaluate VMT reduction.

Funding Sources

Developing a regional mobility wallet would require initial funding and an ongoing revenue source. Potential funding sources include the Low Carbon Transit Operations Program (LCTOP), Transit and Intercity Rail Capital Program (TIRCP), Clean Mobility Options, California State Transportation Agency and Caltrans transportation planning programs, local transit agency resources, and partnerships with employers and educational institutions. StanCOG has already programmed TDM funding through CMAQ for StanisCruise and StanRTA TDM, providing an existing regional framework that could potentially support components of a broader incentive program.

Equity Considerations

Prioritize funding for low-income households and communities with low vehicle ownership rates. Ensure incentives support access to affordable and reliable multimodal options such as transit, biking, and walking. Monitor equity outcomes using disaggregated data on program usage by income and geography.

Case Study

StanRTA Reduced and Free Fare Programs – Stanislaus County

StanRTA provides several reduced or free fare opportunities that demonstrate how transportation subsidies can be used locally to reduce financial barriers to transit. Youth ages 0–18, veterans and active military members, and MJC students with valid identification can ride free, while seniors, people with disabilities, and Medicare cardholders receive reduced fares. StanRTA also supports mobile fare payment through Token Transit.

<https://www.stancog.org/DocumentCenter/View/2298/Final-FY-25-26-UTN-Report-Adopted>

Mitigation Potential

Providing monetary incentives to use alternative modes of transportation reduces vehicle trips and therefore VMT. One survey showed that monetary incentives led to a 10-20% vehicle trip reduction in high transit areas and 1-5% vehicle trip reduction in low transit areas.

For more details, see CAPCOA, T-29. Reduce Transit Fares, pg. 204-207 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Monetary Rewards and Supplies for Active Transportation

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Educational Institutions, Property Managers, Employers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Mobility Wallet, Campus Transportation Management, Vanpool Subsidies, Promote and Expand Voluntary TDM Programs, Employer Commute Reduction Programs

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Bicyclist and Pedestrian Safety and Education Campaign Final Report, California Active Transportation Program, California E-Bike Incentive Project

Description

This measure provides financial incentives, equipment, and supportive resources that reduce barriers to active transportation. Examples include bicycle distribution programs, helmets, lights, locks, safety equipment, and other supplies that encourage walking and bicycling. These programs are most effective when paired with education, outreach, and encouragement campaigns.

Implementation Actions

- Partner with nonprofits, school districts, and youth programs to identify eligible recipients in priority equity zones.
- Procure bicycles and accessories (e.g., locks, helmets, lights) through joint purchasing or sponsorships with bike shops and safety coalitions.
- Include a registration system to collect data on distribution, user demographics, and travel habits, and provide follow-up support or maintenance workshops.
- Evaluate the program's impact on youth mobility and travel behavior using pre/post surveys and school travel tallies.
- Coordinate give-aways with employer TDM campaigns to maximize effectiveness of employer programs.
- Provide give-aways as part of larger regional campaigns such as bike to work day and clean air day.

Funding Sources

Funding can include Active Transportation Program grants for eligible education and encouragement activities, Clean Mobility Options funding, local transportation and public-health funds, employer contributions, nonprofit partnerships, and sponsorships from bicycle shops or other businesses. Programs can also be incorporated into broader regional TDM campaigns supported through StanCOG CMAQ programming. StanCOG has already used regional funding to support TDM and active transportation activities, providing an opportunity to integrate incentives and equipment distribution into larger programs.

Equity Considerations

Prioritize funding for low-income households and communities with low vehicle ownership rates. Ensure incentives support access to affordable and reliable multimodal options such as transit, biking, and walking. Monitor equity outcomes using disaggregated data on program usage by income and geography.

Case Study

California E-Bike Incentive Program

The project, launched by the California Air Resources Board (CARB), offers up to \$2,000 in voucher incentives for the purchase of new e-bikes. This program prioritizes low-income Californians and those living in disadvantaged and low-income communities.

<https://ww2.arb.ca.gov/resources/fact-sheets/california-e-bike-incentive-project#:~:text=Additionally%2C%20consumers%20who%20have%20a,in%20communities%20that%20need%20it.>

Mitigation Potential

Providing bicycles and active transportation equipment can reduce financial barriers to bicycling and encourage mode shift among residents who may not otherwise have access to these resources. While standardized VMT quantification methods are limited, agencies can evaluate effectiveness using participant surveys, travel behavior data, and follow-up program monitoring.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Vanpool Subsidies

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Educational Institutions, Property Managers, Employers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Monetary Rewards and Supplies for Active Transportation, Mobility Wallets, Employer Commute Reduction Programs

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG StanisCruise Program, StanCOG Transportation Funding, StanCOG Federal Transportation Improvement Program

Description

This measure provides financial incentives or subsidies that reduce the cost of vanpool participation. Subsidies may be provided during vanpool startup periods to encourage ridership growth or may be maintained long term for populations with limited transportation options and long commute distances.

Implementation Actions

- Expand outreach for StanisCruise to major employers, agricultural businesses, healthcare facilities, educational institutions, and other employment centers.
- Target vanpool recruitment toward workers with long commutes, nontraditional work schedules, or limited access to fixed-route transit.
- Coordinate with employers to identify groups of employees who could form new vanpools.
- Provide introductory subsidies or incentives to help new vanpools establish stable ridership.
- Develop targeted outreach for agricultural, logistics, manufacturing, healthcare, and other sectors with large concentrations of workers.
- Coordinate StanisCruise with employer TDM programs and commute reduction plans.
- Track vanpool formation, ridership, commute distance, and vehicle trips replaced to evaluate VMT reduction.

Funding Sources

Vanpool subsidies can be supported through CMAQ, Caltrans Sustainable Transportation Planning grants for eligible planning activities, local employer contributions, transit agency resources, and other state and federal TDM funding sources. StanCOG has already programmed CMAQ funding for StanisCruise, its regional vanpool/TDM program, making this strategy directly connected to an existing regional investment. StanCOG's current programming includes \$4 million for StanisCruise and additional CMAQ funding for StanRTA TDM rideshare activities.

Equity Considerations

Prioritize funding for low-income households and communities with low vehicle ownership rates. Ensure incentives support access to affordable and reliable multimodal options such as transit, biking, and walking. Monitor equity outcomes using disaggregated data on program usage by income and geography.

Case Study

CalVans Farmworker Vanpool Program

The California Vanpool Authority operates the CalVans Farmworker Vanpool Program in Stanislaus County and other participating regions. The program provides qualified agricultural workers with vans that they can use to travel together to agricultural job sites. Rider fares support vehicle maintenance, insurance, and replacement, while volunteer drivers operate the vanpools. The program provides a local option for workers whose job locations, schedules, or commute patterns may not be well served by fixed-route transit.

<https://stancog.org/216/California-Vanpool-Authority-CalVans>

Mitigation Potential

Vanpools can substantially reduce commute-related VMT by replacing multiple single-occupancy vehicle trips with a single shared vehicle trip. Subsidies increase participation by lowering the cost barrier for riders and helping new vanpools achieve sustainable ridership levels.

Related quantification methods for vanpools include CAPCOA, T-11. Provide Employer-Sponsored Vanpool, pg. 104-108.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Guaranteed Ride Home Programs

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs),
Educational Institutions, Property Managers,
Employers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Marketing Campaigns and Educational Events,
Vanpool Subsidies, Promote and Expand Voluntary
TDM Programs, Employer Commute Reduction
Programs

REFERENCES

California Air Pollution Control Officers Association
(2024), StanCOG StanisCruise Program, StanCOG
Federal Transportation Improvement Program

Description

Guaranteed Ride Home (GRH) programs provide a free or reimbursed emergency ride to commuters who regularly use alternative transportation and unexpectedly need to get home. Eligible users can include transit riders, vanpoolers, carpoolers, bicyclists, and pedestrians. A GRH program can complement StanCOG's existing StanisCruise program by addressing a common concern among potential rideshare participants: how to get home if an emergency, unexpected overtime, or other qualifying event prevents them from using their normal shared commute.

Implementation Actions

- Evaluate development of a regional Guaranteed Ride Home pilot through StanCOG's existing TDM program.
- Integrate GRH information into StanisCruise enrollment and outreach materials.
- Establish eligibility requirements for registered carpool, vanpool, transit, bicycling, and walking commuters.
- Partner with TNCs, taxi companies, rental car providers, or transit agencies to provide emergency trips.
- Target initial participation toward major employment centers and employers with large numbers of shift workers.
- Consider employer participation as a funding or cost-sharing mechanism.
- Establish annual or quarterly trip limits and reimbursement caps to control program costs.

Funding Sources

A Guaranteed Ride Home program requires initial funding and ongoing operating resources to reimburse eligible emergency trips. Funding could potentially be incorporated into StanCOG's existing regional TDM programming, including CMAQ-supported StanisCruise activities, or supported through employer contributions and partnerships with transportation network companies, taxi providers, rental car companies, or transit agencies. StanCOG currently programs CMAQ funding for StanisCruise and StanRTA TDM rideshare activities, providing an existing regional TDM funding structure that could potentially support a GRH pilot.

Equity Considerations

Ensure eligibility includes part-time, shift, and lower-wage workers who may have less predictable schedules. Program enrollment should not depend exclusively on smartphone access, and alternative reimbursement methods should be available. Outreach should prioritize large employment sectors in Stanislaus County where workers may have limited transportation options.

Case Study

Guaranteed Ride Home – Metropolitan Transportation Commission

The Bay Area's regional 511 program provides Guaranteed Ride Home assistance to eligible commuters who use alternative transportation and experience qualifying emergencies. The program provides a comparable regional model for establishing eligibility, trip reimbursement, and employer/commuter outreach.

Guaranteed and Emergency Ride Home | 511.org

Mitigation Potential

Guaranteed Ride Home programs offer commuters confidence in non-Single Occupancy Vehicle modes of transportation by always having an easy and quick option to get home in the case of emergencies. This assurance of being able to get home when needed encourages non-Single Occupancy Vehicle trips, reducing VMT.

For more details, see Victoria Transport Policy Institute – Guaranteed Ride Home for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Air District Coordination

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Establish Active Transportation Working Groups, TDM Ordinance and Policy Development, Promote and Expand Voluntary TDM Programs, Employer Commute Reduction Programs

REFERENCES

StanCOG Air Quality Planning, StanCOG 2026 RTP/SCS, San Joaquin Valley Air Pollution Control District, California Air Pollution Control Officers Association (2024)



Description

Collaborate with the San Joaquin Valley Air Pollution Control District and other regional partners to access available transportation and air-quality information and identify opportunities for targeted Transportation Demand Management strategies. Because Stanislaus County is within the San Joaquin Valley air basin, coordination between transportation planning and air-quality programs can help identify employers, industries, and geographic areas where commute-reduction strategies may have the greatest potential.



Implementation Actions

- Coordinate with the San Joaquin Valley Air Pollution Control District to identify available employer commute, air-quality, and transportation data relevant to Stanislaus County.
- Identify opportunities to use existing employer or transportation surveys to establish baseline commute mode shares.
- Analyze available data by industry, geography, commute distance, and transportation mode to identify opportunities for TDM outreach.
- Share aggregate findings with StanCOG member agencies and employers to support targeted TDM implementation.
- Coordinate air-quality outreach with StanCOG's StanisCruise program and other regional transportation initiatives.
- Integrate available transportation and air-quality data into regional TDM monitoring and performance tracking.
- Use findings to identify industries where vanpooling, carpooling, transit, or telework may provide the greatest opportunity for VMT reduction.



Funding Sources

This strategy is unlikely to require substantial additional funding but will require staff time for coordination, data analysis, and outreach. Existing StanCOG transportation planning, air-quality conformity, and TDM resources can support coordination. Where additional analysis or planning is necessary, eligible CMAQ, STBG, or transportation planning resources may be considered. StanCOG is responsible for regional transportation conformity and air-quality planning, creating an existing institutional connection between transportation and air-quality programs.



Equity Considerations

Ensure outreach includes industries that employ large numbers of low-wage workers, such as hospitality, healthcare, and logistics. Data disaggregation by geography and income level can help tailor VMT-reduction outreach to underserved communities. Equity-focused metrics should be embedded in monitoring to guide investments toward areas with high need and limited mobility options.



Case Study

San Joaquin Valley Air Pollution Control District – Employer and Transportation Coordination

The San Joaquin Valley Air Pollution Control District provides regional air-quality programs and resources applicable to employers and communities throughout the San Joaquin Valley, including Stanislaus County. Coordination with the District can provide an avenue for aligning employer outreach, air-quality messaging, and transportation demand reduction activities.

<https://ww2.valleyair.org/>



Mitigation Potential

Air district coordination does not directly reduce VMT, but it can improve the effectiveness of transportation demand management programs by helping agencies identify high-priority employers, industries, travel patterns, and geographic areas where VMT-reduction strategies are likely to have the greatest impact.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Coordination with Hospitality and Event Venues

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Hospitality Businesses, Event / Entertainment Venues

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Transit Frequency and Coverage, Special Event Transportation, Private Ridesharing and Shuttles, Circulators and Short Run Shuttles

REFERENCES

StanCOG StanisCruise Program, StanRTA Transit Services, StanCOG 2026 RTP/SCS



Description

Collaborate with the hotels, event venues, and event planners to provide free shuttles, information, and other resources to visitors and employees to reduce single occupancy vehicle trips.



Implementation Actions

- Develop a regional event TDM checklist for major events receiving permits or public support.
- Coordinate with StanRTA to identify transit routes, stops, schedules, and potential supplemental service for major events.
- Encourage event organizers to provide transportation information on event websites, tickets, social media, and confirmation emails.
- Encourage event organizers to promote carpooling and StanisCruise where appropriate.
- Evaluate temporary shuttle services between transit centers, park-and-ride locations, hotels, and major event venues.
- Develop partnerships with hotels and event venues to distribute transit and shared-ride information to visitors.
- Encourage bicycle parking, bike valet, pedestrian connections, and other active transportation amenities at major events.
- Track attendance, transportation mode, shuttle ridership, and parking utilization at major events to estimate transportation impacts.



Funding Sources

This strategy generally requires limited capital funding but requires staff time and coordination between regional agencies, local jurisdictions, event organizers, hotels, venues, and transit providers. Funding could include event organizer contributions, venue sponsorships, local tourism or economic-development resources, transit agency resources, and eligible transportation planning or TDM funding. Existing StanCOG TDM resources could also support development of a regional event transportation framework.



Equity Considerations

Event transportation programs should provide transportation options for workers and visitors who may not have access to private vehicles. Coordination with transit agencies can improve access for low-income residents, youth, seniors, and individuals with disabilities attending community events. Outreach materials should be available in multiple languages and transportation services should be accessible and affordable.



Case Study

StanRTA Event Shuttle – Hughson, California

StanRTA provided a shuttle for Hughson's 2026 National Night Out event, connecting Samaritan Village with Lebright Park so seniors could access the community event without needing to drive. This provides a local example of coordinating transit/shuttle service with a community event and demonstrates how event transportation can be tailored to populations that may face mobility barriers.

<https://www.stanrta.org/m/newsflash?cat=1>



Mitigation Potential

Event transportation programs can reduce VMT by providing convenient alternatives to driving directly to event venues. Shuttles, transit services, and ridesharing programs can reduce parking demand, congestion, and vehicle trips associated with large gatherings. Although standardized quantification methods are limited, traveler surveys and attendance-based transportation monitoring can be used to evaluate effectiveness.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Traveler Information (511)

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Wayfinding for Bicyclists and Pedestrians, Mobility as a Service and Payment Technology, Promote and Expand Voluntary TDM Programs, Employer Commute Reduction Programs, Provide Real-Time Transit Information,

REFERENCES

California Department of Transportation (Caltrans) 511 Real-Time Traveler Information, StanCOG Congestion Management Process, StanCOG Regional Transportation Plan and Sustainable Communities Strategy

Description

The 511 traveler information system provides real-time traffic, transit, rideshare, and road closure information, enhancing trip planning and reducing travel uncertainty.

Implementation Actions

- Develop a StanCOG regional traveler-information webpage or portal that connects users to StanRTA, Turlock Transit, StanisCruise, Amtrak San Joaquins, ACE, and other regional transportation services.
- Integrate StanisCruise trip-planning and rideshare information into StanCOG and member-agency websites, social media, and community outreach materials.
- Coordinate with Caltrans District 10 to promote existing 511 traveler information and roadway incident resources to Stanislaus County travelers.
- Install informational signage, QR codes, or digital displays at major transit centers, park-and-ride locations, schools, employment centers, and other high-activity locations.
- Provide multilingual traveler-information materials at transit centers, libraries, community centers, schools, and major employment sites.
- Promote traveler-information tools during major regional events, construction projects, and roadway closures to help travelers identify transit, carpool, vanpool, and alternate-route options.

Funding Sources

Traveler information programs primarily require staff time for coordination, outreach, and maintenance. Potential funding sources include Congestion Mitigation and Air Quality (CMAQ) funds, which StanCOG uses to support rideshare, vanpool, transit, and other transportation demand management programs; Surface Transportation Block Grant (STBG) funds; and California Sustainable Transportation Planning Grants. StanCOG currently allocates CMAQ funding to transportation demand management activities, including StanisCruise, creating an existing regional funding pathway for traveler information and trip-planning services.

Equity Considerations

511 access campaigns should prioritize low-income and non-English-speaking communities that may lack real-time transit apps or digital tools. Use signage and printed materials in multiple languages at key transit locations, schools, and community hubs. Ensure kiosk placement and marketing campaigns are equitable and consider internet access disparities.

Case Study

Caltrans 511 Real-Time Traveler Information

Caltrans' statewide 511 program provides a framework for region-specific traveler information, including traffic conditions, transit information, ridesharing, multimodal trip planning, and mobile applications. Caltrans currently identifies regional 511 services throughout California, demonstrating a model that StanCOG could build upon or connect to for Stanislaus County traveler information.

<https://dot.ca.gov/programs/traffic-operations/traveler-information/511>

Mitigation Potential

Traveler information programs reduce uncertainty and improve awareness of available transportation options. By making it easier for travelers to identify transit, carpool, vanpool, bicycle, and multimodal travel opportunities, these tools can support mode shift away from driving alone and improve use of existing transportation services.

For more details, see CAPCOA, T-23. Provide Community-Based Travel Planning, pg. 176-178 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Mobility as a Service (MaaS) and Payment Technology

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

Transportation Network Companies (TNCs), Software companies such as Love to Ride, Ride Amigos, and others

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Traveler Information (511), Promote and Expand Voluntary TDM Programs, Employer Commute Reduction Programs, Mobility Wallets

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Congestion Management Process, StanCOG Regional Transportation Plan and Sustainable Communities Strategy, StanRTA, Vamos Mobility

Description

Mobility as a Service (MaaS) integrates transportation services into a single platform, allowing users to plan, compare, and potentially pay for multimodal trips. MaaS platforms can combine fixed-route transit, demand-response services, carpooling, vanpooling, bikeshare, and rail services. StanCOG is already implementing elements of MaaS through StanisCruise, while the broader San Joaquin Valley/San Joaquin County region provides an example through Vamos Mobility, which integrates trip planning and fare payment for multiple transit systems and transportation services.

Implementation Actions

- Continue development of StanCOG's StanisCruise platform as a regional multimodal trip-planning and TDM platform.
- Integrate StanRTA, Turlock Transit, StanisCruise, Amtrak San Joaquins, ACE connections, and vanpool services into a common trip-planning interface.
- Coordinate with StanRTA and other transit providers to expand mobile fare-payment and account-based fare technologies.
- Explore integration of transit fare payment, vanpool incentives, mobility wallets, and TDM rewards into the StanisCruise platform.
- Provide trip-planning and payment options that do not require a smartphone, including web, telephone, and in-person alternatives.
- Use anonymized trip-planning and program participation data to monitor mode shift and identify locations where additional transit, vanpool, bicycle, or pedestrian connections are needed.

Funding Sources

Funding for MaaS technology varies depending on the scope of the platform. Potential sources include CMAQ, which StanCOG currently uses for transportation demand management and vanpool programs; Transit and Intercity Rail Capital Program (TIRCP); Zero-Emission Transit Capital Program (ZETCP); Surface Transportation Block Grant (STBG); and Caltrans Sustainable Transportation Planning Grants. StanCOG's existing investment in StanisCruise provides an established foundation for expanding regional trip-planning and mobility technology.

Equity Considerations

Design Mobility as a Service (MaaS) platforms with multilingual interfaces and non-smartphone access (e.g., call-in or kiosk-based options) for digitally underserved populations. Incorporate low-income fare programs and mobility wallets into the platform to reduce cost burdens. Ensure first/last-mile options connect to transit in rural communities and unincorporated areas of Stanislaus County.

Case Study

StanCOG StanisCruise

StanisCruise is StanCOG's regional TDM platform and provides multimodal trip planning for transit, carpool, and vanpool trips. StanCOG is currently pursuing enhancements that include transit trip planning, rideshare matching, bicycling and walking integration, trip logging, incentives, real-time commuter information, and performance tracking.

https://www.stancog.org/DocumentCenter/View/2067/StanCOG_2024-CMP-Report_Final_2024-11-26?bldd=

Mitigation Potential

Mobility as a Service (MaaS) and payment technologies provide users with increased convenience making alternative modes of transportation more attractive and increasing usage of these modes. While there are not specific quantification methods for this strategy, implementing agencies often conduct surveys to estimate the realized benefits and VMT reduction.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Regional Transportation Management Association (TMA)

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years))

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Establish Active Transportation Stakeholder Groups, Marketing Campaigns and Educational Events, Air District Coordination, TDM Ordinance and Policy Development, Promote and Expand Voluntary TDM Programs, Employer Commute Reduction Programs

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG Congestion Management Process, StanCOG Regional Active Transportation Plan, Victoria Transport Policy Institute – Transportation Management Associations

Description

TMAs/TMOs are typically non-profit, member-controlled organizations that are fundamentally public-private partnerships, bringing together businesses, local government, and sometimes residents and other organizations to manage transportation demand within a specific area. Providing an area-wide basis for TDM planning improves messaging, communications, and efficacy of TDM implementation in the broader community. A TMA can both assist employers and conduct community-based planning customizing mobility education and outreach for specific groups to promote non-driving options like transit, biking, and walking.

Implementation Actions

- Evaluate opportunities to establish a regional or subregional TMA/TMO focused on major employment centers and activity areas in Modesto, Turlock, Ceres, and other Stanislaus communities.
- Use StanisCruise as a shared platform for employer commute planning, rideshare matching, and employee incentives.
- Develop employer-specific commute plans and provide technical assistance to businesses interested in implementing TDM measures.
- Partner with chambers of commerce, major employers, educational institutions, and property managers to identify transportation barriers and develop targeted programs.
- Provide multilingual travel-planning materials and individualized trip-planning assistance to employees and residents.
- Focus initial TMA activities around major employment centers, industrial areas, educational campuses, and transit corridors.
- Develop customized travel education campaigns with employers, school districts, senior centers, and local nonprofits.

Funding Sources

Development of a TMA/TMO would primarily require staff and organizational resources. Potential funding sources include Caltrans Sustainable Transportation Planning Grants and CMAQ funds. StanCOG already funds and administers regional TDM activities through StanisCruise, and CMAQ funding is specifically available for transportation demand management, rideshare, and vanpool programs.

Equity Considerations

Equity-focused travel planning should be tailored to the specific needs of each community, using multilingual materials, culturally relevant outreach, and partnerships with trusted local organizations. Strategies should prioritize low-income neighborhoods, rural communities, and historically underserved groups by offering personalized mobility support, including route planning, transit training, and bicycle education.

Case Study

50 Corridor Transportation Management Association – Sacramento Region

The 50 Corridor Transportation Management Association is a nonprofit organization serving workplaces and residential communities in the Sacramento region. The TMA works with employers and community members to encourage walking, bicycling, carpooling, vanpooling, and transit use. Its services include carpool matching, free transit passes, personalized trip-planning assistance, guaranteed rides, bicycle events, and workplace membership programs. This provides an example of a regional public-private organization coordinating transportation demand management services across multiple employers and communities.

Mitigation Potential

TMAs help coordinate transportation demand management activities across multiple employers, property owners, and organizations. By providing centralized trip planning, education, incentives, and rideshare support, TMAs can increase participation in transportation programs that reduce single-occupancy vehicle travel.

For more details, see CAPCOA, T-23. Provide Community-Based Travel Planning, pg. 176-178 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

TDM Ordinance and Policy Development

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

Developers, Employers, Property Managers

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Establish Active Transportation Stakeholder Groups, Design Guidelines, Employer Commute Reduction Programs

REFERENCES

California Air Pollution Control Officers Association (2024), Caltrans VMT Mitigation Program, StanCOG Regional Transportation Plan and Sustainable Communities Strategy, StanCOG Congestion Management Process



Description

Update TDM ordinances and policies to account for regional efforts, such as the Air District's employer requirements, and incorporate TDM measures and accountability into the development review process.



Implementation Actions

- Develop a model regional TDM ordinance that StanCOG member jurisdictions can adapt for local adoption.
- Establish thresholds for when TDM requirements should apply based on project size, land use, employment, residential units, or proximity to transit.
- Include a menu of measures such as transit subsidies, rideshare programs, vanpooling, bicycle facilities, telework, parking management, and commuter information.
- Develop standardized TDM monitoring and reporting requirements that can be applied across participating jurisdictions.
- Provide technical assistance to smaller jurisdictions that may not have dedicated TDM staff.
- Coordinate TDM requirements with CEQA/VMT analysis and existing local general plan and development review processes.



Funding Sources

TDM policy development primarily requires staff time for ordinance development, stakeholder coordination, legal review, and implementation guidance. Potential funding sources include Caltrans Sustainable Transportation Planning Grants and StanCOG planning resources. CMAQ funds may support eligible transportation demand management programs implemented after policies are established.



Equity Considerations

Policies should require developer-funded TDM programs in high-opportunity areas to reduce displacement risks. Include provisions for affordable housing tenants and equitable TDM access in density bonus programs.



Case Study

San Joaquin Valley Air Pollution Control District – eTRIP Program

The San Joaquin Valley Air Pollution Control District's Rule 9410 requires applicable employers to prepare and implement an Employer Trip Reduction Implementation Plan, known as an eTRIP. Each participating employer selects commute-reduction measures intended to encourage employees to use ridesharing and alternative transportation for work trips. Eligible measures are assigned point values, and employer plans must achieve the targets established by the rule. The program provides a directly relevant San Joaquin Valley example of requiring larger employers to formalize and implement transportation demand management measures.

<https://www.valleyair.org/media/1cekii54/etripmeasuresguidancepii.pdf>



Mitigation Potential

A new ordinance or set of policies would only apply to future or upcoming developments, meaning the shift will be incremental as the region grows. Depending on how widespread implementation is, the TDM policies included may provide significant impact for individual developments (especially major developments such as corporate campuses) which will aggregate to a wider impact on a regional scale.

For more details, see CALTRANS VMT Mitigation Program, Transportation Demand Management (TDM), pg. 28-29 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Promote and Expand Voluntary TDM Programs

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional,

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Marketing Campaigns and Educational Events,
Monetary Rewards and Supplies for Active
Transportation, Guaranteed Ride Home Programs, Air
District Coordination, Coordination with Hospitality and
Event Venues, Traveler Information (511), Regional
Transportation Management Association (TMA)

REFERENCES

California Air Pollution Control Officers Association
(2024), StanCOG Congestion Management
Process, StanisCruise, StanCOG Regional Active
Transportation Plan

Description

Promote and expand voluntary TDM programs among employers and property managers by providing toolkits, templates, and outreach materials to increase participation in TDM programs.

Implementation Actions

- Conduct a regional inventory of voluntary or employer-based TDM measures at businesses, institutions, and property developments.
- Create a shared online toolkit with implementation templates, policy guides, and multilingual outreach materials.
- Coordinate an annual regional outreach campaign with transit operators and business improvement districts to increase TDM program adoption.

Funding Sources

Funding is needed for staff resources, employer outreach, program administration, marketing, incentives, and monitoring. StanCOG has an established funding pathway through CMAQ for transportation demand management, rideshare, and vanpooling programs. Additional funding may be available through Caltrans Sustainable Transportation Planning Grants and other federal transportation programs.

Equity Considerations

Provide technical assistance to employers and multifamily property managers in underserved communities. Translate outreach materials into multiple languages and use culturally responsive engagement strategies. Encourage partnerships with community-based organizations to reach workers with non-traditional schedules and locations.

Case Study

StanCOG StanisCruise

StanisCruise provides a locally operated platform for regional TDM and supports sustainable travel options including transit, carpooling, and vanpooling. StanCOG is continuing to enhance the program to provide additional trip-planning, incentive, reporting, and performance-monitoring capabilities.

https://www.stancog.org/DocumentCenter/View/2067/StanCOG_2024-CMP-Report_Final_2024-11-26?bidId=

Mitigation Potential

Research shows that expanding marketing and promotion of existing TDM strategies can reduce VMT at participating sites up to 4%. This impact would be compounded if the promotion is coupled with expanded programs and targeting new audiences.

For more details, see CAPCOA, T-5. Implement Commute Trip Reduction Program (Voluntary), pg. 83-85 and CAPCOA, pg. 89-91: T-7. Implement Commute Trip Reduction Marketing for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Employer Commute Reduction Programs

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs),
Educational Institutions, Property Managers,
Employers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Marketing Campaigns and Educational Events,
Vanpool Subsidies, Guaranteed Ride Home
Programs, Regional Transportation Management
Association (TMA), TDM Ordinance and Policy
Development, Provide End-of-Trip Bicycle Facilities

REFERENCES

California Air Pollution Control Officers Association
(2024), StanCOG Congestion Management Process,
StanCOG StanisCruise Program, StanCOG RTP/SCS

Description

Employer commute reduction programs encourage employees to reduce Single Occupancy Vehicle (SOV) travel through active transportation, carpooling, vanpooling, transit use, telework, and alternative work schedules. Common employer TDM strategies include commuter incentives, rideshare matching, priority parking for carpools, cash-out parking programs, transit and bicycle benefits, telework policies, compressed workweeks, on-site amenities, end-of-trip bicycle facilities, and commute surveys to better align programs with employee needs.

Implementation Actions

- Conduct targeted outreach to major employers and employment centers throughout Modesto, Turlock, Ceres, Patterson, and other Stanislaus communities.
- Use StanisCruise to provide employer-specific carpool and vanpool matching and multimodal trip-planning services.
- Develop standardized employer commute surveys to establish baseline commute mode share and identify employee transportation needs.
- Promote transit subsidies, vanpool incentives, bicycle benefits, telework, and compressed work schedules through employer TDM programs.
- Partner with chambers of commerce and major employers to establish regional commuter challenges and recognition programs.
- Prioritize vanpool and rideshare services for large employment centers and shift-based industries where conventional transit service may not align with work schedules.
- Provide employers with standardized tools for tracking participation, mode shift, and estimated VMT reductions.
- Work with local agencies to adopt TDM ordinances that require large employers to participate in a TDM program.

Funding Sources

Employer commute programs require staff resources for program development, outreach, incentives, and monitoring. StanCOG's CMAQ program provides an established funding source for rideshare, vanpool, and TDM activities. Additional funding may be available through Caltrans Sustainable Transportation Planning Grants and employer contributions.

Equity Considerations

Include incentives for workers without access to private vehicles, and prioritize vanpool programs for warehouse, agricultural, and service industry staff.

Case Study

Bay Area Commuter Benefits Program

The Bay Area Commuter Benefits Program requires employers with 50 or more full-time employees within the Bay Area Air District's nine-county jurisdiction to register and offer employees at least one qualifying commuter benefit. Options include a pre-tax transit or vanpool benefit, an employer-provided transit or vanpool subsidy, employer-provided shuttle or vanpool service, an alternative commuter benefit that reduces single-occupancy vehicle trips, or a company-wide telework policy for eligible employees. Employers must designate a program coordinator, notify employees of the available benefits, maintain implementation records, and update their registration annually.

<https://511.org/employers/commuter-benefit-program>

Mitigation Potential

Employer commute reduction programs aim to reduce Single Occupancy Vehicle commutes by incentivizing other modes of transportation. The impact on VMT will vary depending on the number of strategies utilized and how consistently they are promoted.

For more details, see the following resources for VMT reduction quantification, CAPCOA, T-5. pg. 83-85, CAPCOA, T-6. pg. 86-88, CAPCOA, T-8. pg. 92-94, CAPCOA, T-10. pg. 100-103, CAPCOA, T-11. pg. 104-108, CAPCOA, T-12. pg. 109-112, CAPCOA, T-13. pg. 113-115, CALTRANS VMT Mitigation Program, Telecommuting, pg. 56-57, and CALTRANS VMT Mitigation Program, Schedule-shifting, pg. 58

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Provide End-of-Trip Bicycle Facilities

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Property Managers, Employers, Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Subsidized Bicycle Amenities, Mobility Hubs, Provide Bike Network / Facility Improvements, Provide Bike Parking, Micromobility / New Mobility Programs, Provide First and Last Mile Improvements and Incentives, Employer Commute Reduction Programs

REFERENCES

California Air Pollution Control Officers Association (2024), CalGreen Nonresidential Bicycle Facility Standards, StanCOG 2021 Non-Motorized Transportation Plan, City of Modesto Non-Motorized Transportation Plan

Description

Requiring end-of-trip amenities like secure bike racks, lockers, and showers in new residential and commercial developments supports commuting using active transportation modes.

Implementation Actions

- Develop StanCOG regional guidance for secure bicycle parking, lockers, showers, repair stations, and other end-of-trip amenities.
- Encourage member jurisdictions to incorporate bicycle parking and end-of-trip facilities into development standards and site-plan review.
- Prioritize facilities at major employment centers, transit hubs, educational campuses, government facilities, and commercial districts.
- Provide technical assistance to employers and property managers seeking to retrofit existing buildings with secure bicycle parking.
- Coordinate bicycle parking improvements with StanCOG's non-motorized transportation network and transit access improvements.
- Encourage employers participating in StanCOG TDM programs to provide secure bicycle parking and other end-of-trip amenities.

Funding Sources

End-of-trip facilities are generally funded through private development, employer investment, or local capital improvement programs. Potential public funding sources include the Active Transportation Program (ATP), Safe Streets and Roads for All (SS4A), CMAQ, TDA bicycle and pedestrian funds, and Measure L. StanCOG's CMAQ program supports eligible active transportation projects, while Measure L provides funding for pedestrian and bicycle infrastructure throughout Stanislaus County.

Equity Considerations

Ensure secure bike parking and locker access is provided to employees in low-wage sectors or service industries. Promote equitable employer participation by supporting small businesses with subsidies or technical assistance. Ensure location of facilities aligns with employment centers that serve low-income or frontline workers.

Case Study

Mountain House – Bicycle Parking and End-of-Trip Requirements

The Mountain House Development Title requires commercial and industrial sites to provide secure bicycle facilities, such as bicycle racks or lockers, free of charge to employees. Larger office developments must also provide showers and lockers, while secure bicycle storage is required at park-and-ride lots and the Transit Center. These standards demonstrate how a local jurisdiction can incorporate bicycle parking and end-of-trip facilities into development requirements and transit-supportive infrastructure.

<https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/APD%20Documents/PA-2000221/Conditions%20of%20Approval.pdf>

Mitigation Potential

End-of-trip bicycle facilities offer amenities to improve the common deterrents of biking commutes. Facilities make commuting via biking more practical and comfortable, encouraging a mode shift from private vehicles.

For more details, see CAPCOA, T-10. Provide End-of-Trip Bicycle Facilities, pg. 100-103 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Transit Facilities and Amenities

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Transit-Oriented Development, Orient Project Toward Transit, Bicycle, or Pedestrian Facility, Mobility Hubs, Provide First and Last Mile Improvements and Incentives, Mobility Wallets, Transit Supportive Roadway Treatments

REFERENCES

California Air Pollution Control Officers Association (2024), StanRTA Transit Amenities Policy, StanCOG Regional Transportation Plan/Sustainable Communities Strategy, StanRTA Title VI Program

Description

Enhancing transit facilities through shelters, seating, lighting, bicycle parking, passenger information, and improved pedestrian access makes transit safer, more comfortable, and more convenient for users.

Implementation Actions

- Develop a StanCOG/StanRTA regional transit-stop improvement program that identifies priority locations based on ridership, transit dependency, safety, ADA accessibility, and gaps in existing amenities.
- Prioritize shelter, shade, seating, lighting, bicycle parking, and real-time information at high-ridership stops and major transfer locations.
- Coordinate with cities and developers to improve pedestrian connections between transit stops and surrounding neighborhoods, employment centers, schools, and commercial areas.
- Expand bicycle parking and bike-on-bus facilities at major transit centers and high-ridership stops to strengthen bicycle-to-transit connections.
- Establish minimum transit-stop design standards that can be incorporated into local development review and roadway improvement projects.
- Use State of Good Repair funding to rehabilitate existing stops while pursuing additional capital funding for new shelters and amenities.
- Implement actions from the StanRTA BRT Study with funding identified in the RTP.

Funding Sources

Requires capital funding for construction and ongoing funding for maintenance. Potential sources include the State of Good Repair Program, Federal Transit Administration (FTA) Section 5307 and 5339 programs, California State Transportation Improvement Program (STIP), Low Carbon Transit Operations Program (LCTOP), Affordable Housing and Sustainable Communities (AHSC) Program, Active Transportation Program (ATP), and local transportation funding. StanRTA is already pursuing State of Good Repair funding to maintain and rehabilitate approximately 926 bus stops, including shelters, benches, signage, lighting, and related amenities.

Equity Considerations

Prioritize investments in transit shelters, bike racks, and shade structures in communities with high percentages of zero-vehicle households, seniors, and youth populations. Ensure ADA accessibility and include culturally relevant wayfinding or art. Coordinate with community-based organizations to identify gaps in comfort, safety, and accessibility, especially at stops in mobile home parks and rural unincorporated areas.

Case Study

StanRTA – Bus Stop and Shelter Improvement Program

StanRTA provides a particularly relevant local example. The agency is maintaining and rehabilitating approximately 926 bus stops, including cleaning and repairing shelters and pads and replacing or installing benches, shelters, signs, lighting, and other amenities. StanRTA also recently completed a new shelter at Hatch Road and Moffett Road in Ceres through a partnership with the City of Ceres and Turlock Irrigation District.

<https://www.stanrta.org/AgendaCenter/ViewFile/Item/188?fileID=2562>

Mitigation Potential

Improving transit facilities and amenities can increase transit ridership by making transit more comfortable, accessible, and reliable. Improvements such as shelters, lighting, passenger information, bicycle parking, and pedestrian access reduce barriers to transit use and encourage travelers to choose transit instead of driving alone.

For more details, see CAPCOA, T-46. Provide Transit Shelters, pg. 220-223 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Transit Frequency and Coverage

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Transit-Oriented Development, Mobility Hubs, Provide First and Last Mile Improvements and Incentives, Mobility Wallets, Transit Supportive Roadway Treatments, Microtransit, Circulators and Short Run Shuttles

REFERENCES

California Air Pollution Control Officers Association (2024), StanRTA Comprehensive Operational Analysis/Vision 2032, StanRTA Short Range Transit Plan, StanCOG Regional Transportation Plan/ Sustainable Communities Strategy

Description

Transit service enhancements include extending transit network coverage or hours, increasing service frequency, and improving the reliability and appeal of public transportation.

Implementation Actions

- Use StanCOG travel-demand, demographic, and transit data to identify areas with inadequate transit coverage and high potential demand.
- Prioritize increased frequency on corridors connecting Modesto, Ceres, Turlock, Riverbank, Patterson, and other major population and employment centers.
- Evaluate transit service improvements based on employment density, population density, transit dependency, schools, major destinations, and existing ridership.
- Expand evening and weekend service where demand and transit dependency justify additional operating hours.
- Coordinate transit service planning with new housing and employment growth to avoid creating areas that are difficult to serve by transit.
- Evaluate limited-stop and express services on major regional corridors where existing routes experience long travel times.

Funding Sources

requires significant ongoing operating funding. Potential sources include FTA Section 5307, 5311, 5339, and 5309 programs; State Transit Assistance (STA); Transportation Development Act (TDA) funds; Low Carbon Transit Operations Program (LCTOP); California State Transportation Improvement Program (STIP); Congestion Mitigation and Air Quality (CMAQ); and local sales tax and transportation revenues.

Equity Considerations

Transit expansion should prioritize areas with high concentrations of transit-dependent populations, including low-income residents, seniors, and essential workers. Late-night and weekend service is critical for shift workers. Equity goals should include minimizing headways in underserved areas and ensuring accessible transit for riders with disabilities through ADA-compliant infrastructure and real-time info tools.

Case Study

StanRTA – Connecting Communities on The S

StanRTA's 2023 system redesign provides a highly relevant example for StanCOG. Following its Comprehensive Operational Analysis, StanRTA added more than 200 bus stops, partially redesigned most routes, added Sunday service, introduced 60-minute service, created new routes, and established the Ceres mobility hub. The changes were specifically intended to improve transit equity across the service area.

<https://www.stanrta.org/646/Ride-The-S-News--Fall-2025>

Mitigation Potential

Increasing transit frequency, service coverage, and operating hours can substantially reduce VMT by improving the convenience and competitiveness of transit. More frequent and reliable service decreases wait times and expands the number of trips that can reasonably be completed by transit instead of driving alone.

For more details, see CAPCOA, T-25. Extend Transit Network Coverage or Hours, pg. 183-186 and CAPCOA, T-26. Increase Transit Service Frequency, pg. 187-192 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Bus Rapid Transit

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Transit Oriented Development, Improve Destination Accessibility, Mobility Hubs, Transit Facilities and Amenities, Transit Frequency and Coverage, Bus on Shoulder, Transit Supportive Roadway Treatments

REFERENCES

California Air Pollution Control Officers Association (2024), StanRTA Vision 2032, StanRTA Short Range Transit Plan/BRT Analysis, StanCOG Regional Transportation Plan

Description

Bus Rapid Transit (BRT) is a high-quality bus-based transit system that provides greater capacity and speed. It typically includes features like dedicated bus lanes, off-board fare collection, and signal priority to reduce delays and improve reliability.

Implementation Actions

- Complete StanRTA's BRT feasibility and master-planning process and identify the highest-potential corridor based on ridership, population, employment, travel time, and development potential.
- Evaluate major Modesto corridors for BRT or BRT-lite improvements, including transit signal priority, enhanced stops, frequent service, and limited stops.
- Coordinate BRT planning with StanCOG's RTP/SCS and local general plans to encourage transit-supportive development along the corridor.
- Prioritize transit signal priority and queue-jump treatments where full dedicated lanes are not feasible.
- Develop enhanced stations with shelters, real-time information, bicycle facilities, ADA accessibility, and improved pedestrian connections
- Apply for grant funding and pursue RTP allocated funds for BRT Study implementation.

Funding Sources

Requires significant capital and operating funding. Potential sources include the FTA Capital Investment Grants, Buses and Bus Facilities Program, Low or No Emission Vehicle Program, State Transportation Improvement Program, Transit and Intercity Rail Capital Program, CMAQ, and local transportation funding. StanCOG is already providing \$700,000 in REAP 2.0 funding to StanRTA for implementation study and concept development for a new BRT service in Modesto, making this strategy particularly relevant to the StanCOG region.

Equity Considerations

Transit expansion should prioritize areas with high concentrations of transit-dependent populations, including low-income residents, seniors, and essential workers. Late-night and weekend service is critical for shift workers. Equity goals should include minimizing headways in underserved areas and ensuring accessible transit for riders with disabilities through ADA-compliant infrastructure and real-time info tools.

Case Study

San Joaquin RTD – BRT Express

San Joaquin RTD operates BRT Express corridors using higher-frequency service, limited stops, improved shelters and boarding areas, prepaid fare equipment, and connections at major transit centers. The system provides a particularly relevant peer example because it operates in a Central Valley region with similar suburban, agricultural, and urban development patterns.

<https://sanjoaquinrtd.com/services/>

Mitigation Potential

Bus Rapid Transit can substantially reduce VMT by providing faster, more reliable, and more frequent transit service that is competitive with driving. Features such as transit priority treatments, enhanced stations, and reduced travel times can encourage transit use and shift trips away from single-occupancy vehicles.

For more details, see CAPCOA, T-28. Provide Bus Rapid Transit, pg. 197-203 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Bus on Shoulder

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Caltrans, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Transit Oriented Development, Improve Destination Accessibility, Mobility Hubs, Transit Facilities and Amenities, Transit Frequency and Coverage, Bus Rapid Transit, Transit Supportive Roadway Treatments

REFERENCES

California Air Pollution Control Officers Association (2024), Caltrans, SANDAG Part-Time Transit-Only Lanes

Description

Bus on shoulder allows transit buses to use designated shoulders of highways or arterials during periods of congestion, enabling them to bypass traffic and maintain schedule reliability. This cost-effective strategy improves transit speed and performance without requiring major roadway expansions.

Implementation Actions

- Consider conducting a feasibility screening of freeway corridors in Stanislaus County where transit experiences recurring congestion and operates frequent or express service.
- Coordinate with Caltrans, StanRTA, CHP, and StanCOG to evaluate safety, pavement, shoulder width, access, and operating requirements.
- Consider bus-on-shoulder as a component of a broader transit-priority strategy rather than a standalone investment.
- Evaluate whether existing shoulders, auxiliary lanes, or managed lanes could provide transit priority without major roadway expansion.

Funding Sources

Requires planning, engineering, safety, enforcement, and potentially shoulder improvements. Potential funding sources include FTA bus and transit programs, Caltrans State Transportation Improvement Program funding, CMAQ, Solutions for Congested Corridors Program, Transit and Intercity Rail Capital Program, and local transportation funds.

Equity Considerations

Transit improvements should prioritize areas with high concentrations of transit-dependent populations, including low-income residents, seniors, and essential workers. Late-night and weekend service is critical for shift workers. Equity goals should include minimizing headways in underserved areas and ensuring accessible transit for riders with disabilities through ADA-compliant infrastructure and real-time info tools.

Case Study

Monterey Bay Area Feasibility Study of Bus on Shoulder Operations on State Route 1 and the Monterey Branch Line

This project evaluated the potential of utilizing highway shoulders and the branch line for bus operations to improve public transit efficiency in the region. This study is part of the broader initiative included in the Association of Monterey Bay Area Governments' Metropolitan Transportation Plan (MTP) and its Sustainable Communities Strategy (SCS).

https://mtc.ca.gov/sites/default/files/documents/2021-09/Transit_Action_Plan_1.pdf

Mitigation Potential

Improving transit service reliability and speed will subsequently improve the convenience of transit and encourage people to rely less on private vehicles. The impact on VMT will vary on the methods of improvement. While there is no direct quantification method for this strategy as it is relatively new, linked transit strategies may be used if this strategy is paired with new transit service. Quantification for increasing transit service frequency may be used if this strategy allows for reduced headways and therefore increased service.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Transit Marketing and Subsidization

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs),
Educational Institutions, Property Managers,
Employers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Marketing Campaigns and Educational Events,
Mobility Wallets, Guaranteed Ride Home Programs,
Traveler Information, Mobility as a Service (MaaS)
and Payment Technology, Promote and Expand
Voluntary TDM Programs, Employer Commute
Reduction Programs

REFERENCES

California Air Pollution Control Officers Association
(2024), StanRTA Free Fare Programs, StanRTA rider
surveys, California State Auditor transit ridership
initiatives



Description

This strategy increases transit ridership through targeted marketing campaigns, promotional programs, and rider incentives. Similar to mobility wallets, transit marketing and subsidization reduce barriers to transit use by increasing awareness of available services and providing incentives that encourage riders to try transit and continue using it.



Implementation Actions

- Establish recurring "Try Transit" campaigns targeting students, new employees, seniors, and residents in areas with low transit usage.
- Coordinate regional marketing campaigns among StanCOG, StanRTA, Turlock Transit, employers, schools, and colleges.
- Expand free-fare and discounted-fare promotions during major community events and targeted outreach periods.
- Provide multilingual materials, particularly English and Spanish, through schools, employers, community organizations, and transit centers.
- Use rider surveys and fare-payment data to measure whether promotional riders continue using transit after incentives end.



Funding Sources

Relatively low capital requirements but requires ongoing funding for outreach, fare subsidies, promotional materials, and program administration. Potential sources include LCTOP, FTA Section 5307, CMAQ, State Transit Assistance, TDA, Clean Mobility Options, and local agency funding.



Equity Considerations

Target promotions toward transit-dependent populations and residents of Disadvantaged Communities (DACs). Use free or discounted fare programs to reduce cost barriers for youth, seniors, and low-income individuals. Include community feedback loops to evaluate whether campaigns effectively reach equity-priority groups.



Case Study

StanRTA – Free Fare Promotions

StanRTA has implemented several free and reduced-fare programs to reduce financial barriers to transit and encourage ridership among key user groups. Youth ages 0-18 ride free systemwide, while veterans, active military members, and Modesto Junior College students with valid identification also receive free transit service. Additional reduced-fare options are available for seniors, individuals with disabilities, and Medicare cardholders. These programs demonstrate how targeted fare subsidies can expand access to transportation, support transit-dependent populations, and attract new riders who may continue using transit after experiencing the service. StanRTA complements these efforts with modern fare payment options, including mobile ticketing through Token Transit, making transit more convenient and accessible for existing and potential riders.

<https://www.stanrta.org/641/Ride-The-S-News--Summer-2025>



Mitigation Potential

Transit marketing and subsidy programs can reduce VMT by increasing transit ridership and reducing financial barriers to using public transportation. Promotional fares, free-fare programs, and targeted outreach can encourage new riders to try transit and increase ongoing transit use in place of single-occupancy vehicle trips.

For more details, see CAPCOA, T-9. Implement Subsidized or Discounted Transit Program, pg. 95-99 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Microtransit

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

*D*Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs),
Educational Institutions, Employers, Transportation
Network Companies (TNCs), Private Transportation
Providers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

*Transit Frequency and Coverage, Transit Marketing
and Subsidization, School Buses*

REFERENCES

*California Air Pollution Control Officers Association
(2024), California Air Resources Board Clean Mobility
Options Program, StanCOG Regional Transportation
Plan/Sustainable Communities Strategy*

Description

Expanding and improving microtransit services to address first/last mile gaps and provide flexible, on-demand public transportation increases the convenience and overall usage of transit.

Implementation Actions

- Identify transit deserts and low-density areas where fixed-route service has limited coverage or frequency.
- Evaluate microtransit pilots connecting smaller communities to StanRTA transfer centers and major employment, education, healthcare, and commercial destinations.
- Consider first/last-mile microtransit connections to StanRTA routes, ACE stations, and other regional transportation services.
- Provide both app-based and telephone booking to avoid excluding residents without smartphones.
- Evaluate partnerships with TNCs or microtransit technology providers for scheduling, dispatch, and vehicle tracking.
- Monitor trips, passengers per vehicle hour, cost per passenger, trip purpose, and automobile trips replaced to determine whether service should be expanded.

Funding Sources

Requires initial technology and vehicle investments as well as ongoing operating funding. Potential sources include the California Air Resources Board Clean Mobility Options Voucher Pilot Program, LCTOP, FTA Section 5310, FTA Section 5311, FTA Section 5307, CMAQ, and local transportation funding.

Equity Considerations

Target microtransit expansion in transit-poor rural areas, tribal lands, and farmworker communities. Ensure low fares or fare-free access for seniors, youth, and low-income riders through voucher programs. Incorporate multilingual app access and cash-based booking options to reduce digital and financial barriers. Include accessible vehicles in fleet for riders with disabilities.

Case Study

Placer County Microtransit

Placer County launched a microtransit program offering dial-a-ride services to fill transit gaps in low-density areas with flexible, on-demand

<https://calact.org/wp-content/uploads/2023/04/Microtransit-Technology-Implementation-State-of-the-Practice-Jaime-Wright.pdf>

Mitigation Potential

Microtransit programs offer alternative options for Single Occupancy Vehicles for the first/last mile challenges. Reducing the reliance on Single Occupancy Vehicle to make the first/last mile challenges by offering a convenient and reliable option will impact VMT. While there are not currently quantification methods specific to microtransit, surveys can be used to gauge the effectiveness of this service.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Transit-Supportive Roadway Treatments

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Transit Oriented Development, Improve Destination Accessibility, Mobility Hubs, Transit Facilities and Amenities, Transit Frequency and Coverage, Bus on Shoulder, Bus Rapid Transit

REFERENCES

California Air Pollution Control Officers Association (2024), Caltrans Complete Streets Implementation Guide, StanCOG 2026 RTP/SCS, Federal Transit Administration Transit Signal Priority resources

Description

Implementing transit-supportive roadway treatments improves transit speed and reliability. Examples include level boarding, transit signal prioritization and queue jumps, bus only lanes, and signage.

Implementation Actions

- Identify high-ridership and high-delay StanRTA corridors where transit signal priority, queue jumps, bus lanes, or other transit-priority treatments could improve travel-time reliability.
- Coordinate with StanRTA and local jurisdictions to evaluate transit-priority treatments along major urban corridors in Modesto, Turlock, Ceres, and other communities with established transit service.
- Incorporate transit signal priority into new or upgraded traffic signal systems where feasible.
- Evaluate queue jumps and short bus-priority lanes at intersections with recurring congestion and significant transit delay.
- Coordinate with Caltrans where transit-priority treatments could be incorporated along state highways or at state-highway intersections.
- Prioritize treatments that improve access to major employment centers, schools, colleges, medical facilities, downtown areas, and transit transfer points.

Funding Sources

Requires initial funding for roadway, signal, and transit infrastructure improvements, with ongoing funding for operations and maintenance. Potential funding sources include the Federal Transit Administration's Buses and Bus Facilities and Low or No Emission Bus programs, the Transit and Intercity Rail Capital Program (Caltrans), Solutions for Congested Corridors Program (California Transportation Commission), Surface Transportation Block Grant and Congestion Mitigation and Air Quality programs, Affordable Housing and Sustainable Communities Program (California Department of Housing and Community Development), and local transportation sales tax or local roadway funding sources.

Equity Considerations

Transit-priority improvements should focus on corridors with high ridership potential in disadvantaged communities. Measures such as bus-only lanes and signal priority reduce travel time for transit users, many of whom lack access to a car. Careful community engagement is needed to avoid unintended displacement due to improved access and infrastructure investment.

Case Study

StanCOG 2026 RTP/SCS – Transit Signal Priority and Queue Jump Projects

StanCOG's 2026 RTP/SCS specifically identifies transit signal priority as part of the planned SR 99 Standiford Avenue Bus Rapid Transit project. StanCOG's broader RTP also identifies transit signal priority and queue jumps as strategies for improving transit travel-time reliability. This makes the RTP/SCS itself a particularly relevant local example of how transit-supportive roadway treatments can be incorporated into Stanislaus County transportation investments.

https://www.stancog.org/DocumentCenter/View/2545/Draft-RTP_SCS-2026?bidId=

Mitigation Potential

Continued investments in transit will improve travel time, reliability, convenience to make it an attractive option for daily travel. This can encourage more users to shift from Single Occupancy Vehicle, which reduces VMT.

For more details, see CAPCOA, T-27. Implement Transit-Supportive Roadway Treatments, pg. 193-196 and CALTRANS VMT Mitigation Program, Transit service improvement, pg. 30-32 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Trip Reduction Programs

Special Event Transportation

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

Hospitality Businesses, Event / Entertainment Venues

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Air District Coordination, Coordination with Hospitality and Event Venues, Regional Transportation Management Association (TMA), Promote and Expand Voluntary TDM Programs, Transit Marketing and Subsidization

REFERENCES

Victoria Transport Policy Institute – TDM Encyclopedia, FHWA Event Traffic Management Guidelines

Description

Providing shuttles has a large impact on trips generated by events or entertainment venues, which alleviates the need for parking at the venue, reduces congestion, and can make the experience much smoother. This strategy is most effective when regional agency staff time is provided to coordinate with venues and ensure resources are in place to maintain the shuttle service. Typically shuttle service for private venues are operated by private vendors rather than public transit providers as public agencies must provide services that are open to the public. However, subsidized microtransit services to large hospitality or tourist venues can also provide employees with additional options for mobility other than single occupancy vehicles.

Implementation Actions

- Develop event transportation plans for major festivals, concerts, fairs, sporting events, and civic gatherings.
- Coordinate with StanRTA, event organizers, municipalities, law enforcement, and private shuttle operators to identify appropriate transit and shuttle services.
- Establish remote park-and-ride locations where appropriate and connect them to event venues using shuttles or transit.
- Encourage event organizers to provide information about transit, ridesharing, bicycling, and walking during ticket purchase and event registration.
- Establish temporary passenger loading zones and transit stops near major event venues.
- Use real-time information and social media to communicate parking availability, shuttle schedules, transit options, and roadway conditions before and during events.

Funding Sources

Primarily requires staff coordination and private-sector participation. Event organizers, venues, hotels, and businesses can contribute toward shuttle operations, while public funding may support transportation planning, temporary traffic management, transit service, or park-and-ride facilities. Potential sources include local transportation funds, transit agency operating resources, event-generated revenues, and eligible state or federal transportation grants.

Equity Considerations

Ensure multilingual digital materials and pre-registration tools are accessible to non-English speakers and users without smartphones. Partnering with community-based organizations ensures outreach reaches marginalized groups. Providing shuttle access and bike valet to off-site lots can improve access for people without cars or with mobility constraints, especially during high-attendance events.

Case Study

Sacramento Regional Transit – Golden 1 Center Event Transportation

SacRT provides dedicated transit access to Golden 1 Center, Sacramento's major sports and entertainment venue. The agency promotes bus and light rail as convenient transportation options for games, concerts, and other events, demonstrating how transit agencies can integrate major event destinations into regular transit planning and rider information.

<https://www.sacrt.com/transit-services/>

Mitigation Potential

Special event transportation can reduce a large number of vehicle trips over a short period by providing alternatives to driving directly to event venues. The greatest VMT reduction potential occurs when shuttle service is frequent, convenient, clearly marketed, and connected to remote parking or transit hubs.

For more details, see Victoria Transport Policy Institute – Special Event Transport Management for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Provide Real-Time Transit Information

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Traveler Information (511), Mobility as a Service (MaaS) and Payment Technology

REFERENCES

California Air Pollution Control Officers Association (2024), Cal-ITP Transit Data Guidelines, StanRTA System Information and Rider Tools



Description

Providing real-time transit information improves convenience and reliability for transit users by offering real-time data sources.



Implementation Actions

- Expand real-time arrival displays at major StanRTA transfer centers and high-ridership stops.
- Continue integration of StanRTA GTFS and GTFS-Realtime data into regional trip-planning and mobility applications.
- Provide QR codes and text-based arrival information at stops where electronic displays are not cost-effective.
- Ensure real-time information is available in Spanish and accessible formats.
- Integrate transit service alerts with regional traveler-information and mobility platforms.
- Use real-time transit data to monitor service reliability and identify corridors where schedule or infrastructure improvements are needed.



Funding Sources

Requires relatively modest technology and ongoing maintenance costs compared with major transit infrastructure projects. Potential funding sources include the Advanced Transportation Technologies and Innovative Mobility Deployment program, Surface Transportation Block Grant and Congestion Mitigation and Air Quality programs, Solutions for Congested Corridors Program, Low Carbon Transit Operations Program, and local transit agency technology or passenger-amenity funds



Equity Considerations

Real-time transit data enhances trip reliability, particularly for people with limited access to smartphones or flexible work hours. Transit agencies should install real-time signage in multiple languages and ensure ADA-accessible formats for users with visual or cognitive disabilities. Equitable access also means targeting high-ridership and lower-income areas where riders depend more heavily on transit and need greater trip certainty.



Case Study

StanRTA Real-Time Bus Tracker and Rider Alerts

StanRTA currently provides an online real-time bus tracker showing bus locations and estimated arrival times, along with rider alerts and text/email notifications. StanRTA also provides GTFS data and a trip planner, making this an especially relevant local example for expanding real-time transit information in Stanislaus County.

<https://www.stanrta.org/35/Rider-Tools>



Mitigation Potential

Providing real time information for transit in the form of websites, mobile apps, electronic message signs or displays at stops makes transit more reliable and convenient. This can encourage more users to shift from Single Occupancy Vehicle, reducing VMT. While no specific quantification methods are common at this time, agencies often use ridership counts from before and after implementation as a method of measuring efficacy.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Private Ridesharing and Shuttles

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/ Transportation Management Organizations (TMOs), Educational Institutions, Property Managers, Employers, Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Vanpool Subsidies, Coordination with Hospitality and Event Venues, Employer Commute Reduction Programs, Special Event Transportation, Circulators and Short Run Shuttles

REFERENCES

California Air Pollution Control Officers Association (2024), Valley Air District transportation programs

Description

Private shuttles provide shared transportation services for employment centers, commercial areas, and large residential developments, addressing first/last mile challenges and reducing Single Occupancy Vehicle trips.

Implementation Actions

- Develop shared shuttle agreements among employers located within major employment centers.
- Coordinate private shuttle services with StanRTA routes and schedules to avoid duplicating existing fixed-route service.
- Encourage large employers, colleges, hospitals, and residential developments to provide shared transportation connections to transit.
- Evaluate shuttle connections between major employment areas and regional transit hubs.
- Establish designated shuttle loading areas at major developments and transit centers.
- Provide ADA-accessible vehicles and ensure service information is available through both digital and non-digital channels.

Funding Sources

Operations would generally be funded by participating employers, property owners, institutions, event venues, or TMA/TMO organizations. Public agencies can support planning, coordination, or pilot programs through transportation demand management and clean transportation funding. Potential sources include the Valley Air District's transportation incentive programs, Low Carbon Transit Operations Program, CMAQ, STBG, and local transportation funding. The Valley Air District currently provides funding opportunities for qualifying shuttle services and park-and-ride facilities in its district.

Equity Considerations

Shuttles serving tribal lands, farmworker housing, or unincorporated communities can fill key access gaps where fixed-route transit is infeasible. Equity outcomes depend on low-cost fares, ADA compliance, and partnerships with community organizations

Case Study

San Joaquin Valley Air District – Transportation Subsidy and Shuttle Programs

The Valley Air District offers transportation funding that can support qualifying shuttle services and park-and-ride facilities. The program provides up to \$6,000 per qualifying shuttle and is available to eligible public and private organizations within the district. Because Stanislaus County is within the Valley Air District, this provides a particularly relevant funding and implementation model.

<https://www.valleyair.org/grants/public-transportation-subsidy-and-park-ride-lots/>

Mitigation Potential

Private shared transportation/shuttles provide connections to and from commercial, office, or retail destinations. The measure directly addresses the first and last mile connectivity issue, incentivizing a shift from private Single Occupancy Vehicles, which reduces VMT. CAPCOA recommends private shuttle programs to serve employment centers or regional nodes, especially where fixed-route transit is infeasible. These services can support ADA accessibility and reduce commute VMT.

For more details, see CAPCOA, T-8. Provide Ridesharing Program, pg. 92-94 and CAPCOA, T-11. Provide Employer-Sponsored Vanpool, pg. 104-108 which shows VMT reductions.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Transit

Circulators and Short Run Shuttles

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Transportation Management Associations (TMAs)/
Transportation Management Organizations (TMOs),
Property Managers

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies

LINKED STRATEGIES

Coordination with Hospitality and Event Venues,
Regional Transportation Management Association
(TMA), Private Ridesharing and Shuttles

REFERENCES

StanRTA, Valley Air District transportation programs



Description

A circulator transit service is a short, frequent route that loops through a concentrated area—such as a downtown, tourist district, or campus—connecting key destinations without long waits. It's designed to make short trips easier without needing a car, often linking to fixed route transit.



Implementation Actions

- Evaluate potential circulator service in Downtown Modesto and other concentrated commercial or employment districts.
- Coordinate with StanRTA to determine whether existing routes can be modified or supplemented to provide short-distance circulation.
- Evaluate circulator connections between major employment centers, downtown districts, transit centers, and nearby residential areas.
- Coordinate with local businesses and property owners that could benefit from improved access and increased pedestrian activity.
- Consider fare-free or low-cost circulators where the primary objective is reducing short automobile trips and supporting downtown economic activity.
- Evaluate electric shuttle vehicles where appropriate to reduce operating emissions and support local climate goals.



Funding Sources

Circulator services generally require ongoing operating funding, which may be provided by cities, transit agencies, property owners, business improvement districts, major employers, or partnerships among multiple stakeholders. Potential public funding sources include local transportation funds, transit operating funds, Low Carbon Transit Operations Program, Valley Air District transportation programs, and applicable state and federal transit grants.



Equity Considerations

Circulator transit services can improve equity by offering free, convenient mobility for people who may not have access to a car, including downtown service workers. For those service workers that do have a car, ensuring that the circulator connects to parking areas makes it easier for workers to travel within the district and access jobs without added transportation costs.



Case Study

San Joaquin RTD – Metro Hopper

TSan Joaquin RTD operates Metro Hopper services that provide shorter local connections within Stockton. The system demonstrates how shorter-distance transit services can complement regional and express routes by providing circulation within individual communities and connecting riders to major transit centers.

<https://now.sjrtd.com/map>



Mitigation Potential

Circulator services can reduce VMT by replacing short intra-district car trips and reducing the need for repeated parking searches, especially in dense downtowns or tourist areas. The strategy can be quantified by measuring changes in mode share and average trip length before and after implementation, using tools such as intercept surveys, ridership counts, parking utilization studies, or mobile device/GPS data to estimate reductions in vehicle trips and total miles driven.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Affordable Housing

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Property Managers, Employers, Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Youth School Pools and Education, Campus Transportation Management, Vanpool Subsidies, TDM Ordinance and Policy Development, Employer Commute Reduction Programs, Parking Curbside Management

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2024 Congestion Management Process, StanCOG StanisCruise Program

Description

This measure involves updating parking facility design to prioritize ridesharing vehicles by placing carpool and vanpool parking spaces near front entrances and more convenient locations. CAPCOA encourages this strategy to prioritize shared vehicle users while discouraging Single Occupancy Vehicle parking near congested areas

Implementation Actions

- Require or encourage preferential parking spaces for carpools and vanpools at major employment centers and large new developments.
- Work with employers participating in StanCOG's StanisCruise program to identify opportunities to designate high-quality parking spaces for registered carpool and vanpool vehicles.
- Prioritize preferential parking near building entrances, employee entrances, and other convenient locations while maintaining required ADA parking and loading areas.
- Develop standard signage and striping guidelines that municipalities and employers can use to identify shared-ride spaces.
- Incorporate preferential parking requirements into transportation demand management conditions for major employment and residential developments.

Funding Sources

Operations and enforcement will most likely be managed by employers or property managers. StanCOG's Measure L program can provide local transportation funding for eligible transportation improvements, while federal CMAQ funding administered through StanCOG has historically included rideshare/vanpool and telework projects. Employers can also implement preferential parking as a relatively low-cost component of broader commute programs without requiring major capital funding.

Equity Considerations

Preferential parking programs should be structured to avoid overburdening delivery drivers and service workers while reducing reliance on Single Occupancy Vehicle trips. Cities should avoid displacing loading and unloading zones or ADA parking spaces.

Case Study

StanCOG StanisCruise Vanpool Program

StanisCruise provides an established regional rideshare and vanpool program serving Stanislaus County. StanCOG's 2024 CMP identifies preferential parking for shared-commute vehicles as an employer incentive that can be paired with StanisCruise's commute programs. In 2025, the program supported an average of 95 active vanpools and approximately 16,500 passengers per month, demonstrating an existing local market for shared commuting.

<https://www.stancog.org/179/Congestion-Management-Process-CMP>

Mitigation Potential

Preferential treatment, free/reduced parking fees, priority parking, or parking located in convenient locations encourages ridesharing, which reduces VMT. The measure's impact on VMT will vary on existing travel patterns and current parking inventory. While there are not quantification methods for measuring the impact of this strategy alone, this strategy is often provided as part of a package of strategies in Employer Sponsored TDM programs.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Parking Curbside Management

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Micromobility / New Mobility Programs, Create Pedestrian Priority Zones, Campus Transportation Management, Employer Commute Reduction Programs, Park Once Implementation

REFERENCES

StanCOG 2024 Congestion Management Process, StanCOG Measure L Expenditure Plan



Description

This measure involves updating parking facility design and curbside management policies to prioritize non- Single Occupancy Vehicle travel and manage parking demand through dynamic pricing, preferential parking, and other strategies.



Implementation Actions

- Conduct curb-use inventories in downtown Modesto, Turlock, and other activity centers to identify opportunities to reallocate space among parking, loading, transit, bicycle, and passenger pick-up uses.
- Reclaim underutilized curb space for transit stops, carpools/vanpools, bicycle parking, micromobility, and passenger loading.
- Establish designated pick-up/drop-off areas near major employment centers, schools, civic facilities, and downtown destinations.
- Coordinate curbside policies with StanRTA to ensure transit stops and passenger loading areas are not obstructed by general parking.
- Use time-of-day restrictions to accommodate deliveries and commercial activity while prioritizing multimodal transportation during peak travel periods.



Funding Sources

Implementation can be supported through local transportation funds, including Measure L allocations for traffic management and bicycle/pedestrian improvements. StanCOG also administers federal CMAQ and STBG funding opportunities that may support eligible multimodal and congestion-management improvements. Active transportation components of curbside projects may also be eligible for the California Active Transportation Program.



Equity Considerations

Avoid replacing parking or curbside zones that service workers use such as delivery drivers, janitorial and maintenance staff, or other building support services.



Case Study

Metropolitan Transportation Commission – Parking and Curb Management

The Metropolitan Transportation Commission provides technical assistance, planning resources, and grants to help Bay Area jurisdictions update parking and curb policies. Its program supports balancing parking with other curb and street needs, including transit, bicycle lanes, goods delivery, housing, and parklets. The program demonstrates how a regional agency can help local governments evaluate competing curb uses and implement parking and curb-management policies that support broader transportation and community objectives.

<https://mtc.ca.gov/planning/transportation/driving-congestion-environment/parking-curb-management>



Mitigation Potential

Curbside management reduces VMT by prioritizing space for high-occupancy and low-emission modes, facilitating efficient passenger pick-up/drop-off, minimizing vehicle circulation, and supporting first-mile/last-mile connections. While no clear quantification methods exist, this measure is often most effective when implemented with other strategies such as micromobility, prioritized parking, mobility hubs, or other strategies that are quantifiable.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Park Once Implementation

VMT REDUCTION POTENTIAL



COST



TIMING

Mid-Term (3-10 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Create Pedestrian Priority Zones, Campus Transportation Management, Employer Commute Reduction Programs, Parking Curbside Management

REFERENCES

City of Modesto Downtown Master Plan, StanCOG Measure L, California Active Transportation Program

Description

Develop pedestrian scaled zones or campuses with parking facilities on the periphery where drivers can park once and rely on active or shared modes to complete trips within the area. This creates a walkable environment that is attractive to businesses and pedestrians.

Implementation Actions

- Establish shared-use parking arrangements near downtown districts and major activity centers.
- Develop coordinated wayfinding directing drivers from parking facilities to multiple destinations.
- Improve pedestrian connections between parking facilities and surrounding businesses, civic destinations, and transit stops.
- Integrate Park Once areas with StanRTA stops, bicycle facilities, and regional active transportation networks.
- Pilot Park Once strategies in downtown Modesto and other established commercial districts where multiple destinations are located within walking distance.
- Pair shared parking with sidewalk, crossing, shade, lighting, and bicycle improvements to make walking between destinations comfortable and accessible.

Funding Sources

Implementation requires primarily planning, parking management, wayfinding, and pedestrian improvements. Potential funding sources include Measure L, particularly its bicycle/pedestrian and traffic-management components, StanCOG-administered CMAQ/STBG funding where eligible, and the California Active Transportation Program for qualifying walking and bicycling improvements. Measure L provides local transportation funding for bicycle/pedestrian improvements and can be used to leverage state and federal transportation grants.

Equity Considerations

Ensure areas are accessible via ADA-compliant paths and transit. Locate shared lots near civic destinations and services used by households with limited vehicle access. Prioritize sidewalk repair, lighting, and crossing improvements in surrounding areas. Provide real-time information and wayfinding in multiple languages.

Case Study

Downtown Modesto – “Park Once and Walk”

The City of Modesto's Downtown Master Plan directly identifies a “Park Once and Walk” strategy. The plan illustrates shared parking facilities on the periphery of downtown connected to multiple destinations by pedestrian desire lines. The plan also recommends integrated parking wayfinding and real-time information to help drivers find available parking without unnecessary circulation.

<https://www.modestogov.com/2404/Downtown-Master-Plan>

Mitigation Potential

This reduces VMT by encouraging people to walk rather than drive to each destination within denser infill environments. While not easy to quantify as its own strategy, demonstration projects with before and after counts are often used to temporarily test strategies such as these prior to full scale implementation.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Priced Parking

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Transit-Oriented Development, Campus Transportation Management, TDM Ordinance and Policy Development, Mobility as a Service (MaaS) and Payment Technology, Demand Based Parking Pricing, Unbundled Parking

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2024 Congestion Management Process, City of Modesto Parking Services

Description

Parking pricing (meters) for on-street parking is typically implemented in transitional neighborhoods - near commercial corridors, universities, or entertainment districts—where demand is high and land use is mixed. It reduces vehicle circulation for parking, encourages turn over, and encourages people to consider other modes.

Implementation Actions

- Evaluate parking demand and occupancy in downtown Modesto, Turlock, and other high-demand activity centers.
- Establish or expand priced parking where demand consistently exceeds available supply.
- Provide cashless payment options and clear signage to make payment convenient.
- Use parking revenues to support parking operations and, where feasible, multimodal improvements within the district.
- Coordinate parking pricing with transit and active transportation improvements so travelers have viable alternatives to driving.

Funding Sources

Initial funding is needed to establish payment systems, signage, enforcement, and parking-management technology, with ongoing funding for enforcement and administration. Local agencies can use parking revenues to support parking operations and potentially reinvest revenues into downtown transportation improvements. Measure L and StanCOG-administered transportation funding may support complementary multimodal improvements associated with priced parking, such as bicycle and pedestrian facilities, while CMAQ/STBG may support eligible transportation improvements.

Equity Considerations

To avoid placing cost burdens on low-income drivers, pricing strategies should include exemptions or discounts for residents in disadvantaged communities. Revenues from priced parking should be reinvested in local multimodal improvements, such as sidewalks, bike infrastructure, and first-last mile transit access. Transparent community engagement is critical to ensure buy-in and equitable outcomes.

Case Study

City of Modesto – Downtown Paid Parking

The City of Modesto operates paid parking facilities in and around downtown. Current pay-by-space facilities charge \$1.25 per hour, while City parking garages and lots use paid parking with daily maximums. This provides a direct Stanislaus County example of priced parking in an established downtown environment.

<https://permits.modestogov.com/341/Pay-by-Space-Parking-Lots>

Mitigation Potential

Implementing parking pricing increases the cost of driving to a location. Pricing parking disincentivizes the use of Single Occupancy Vehicle and encourages alternative forms of transportation, reducing VMT.

For more details, see CAPCOA, T-24. Implement Market Price Public Parking, pg. 179-182 and CALTRANS VMT Mitigation Program, Parking, pg. 45-47 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Demand Based Parking Pricing

VMT REDUCTION POTENTIAL



COST



TIMING

Short-Term (1-3 Years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Employers

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Transit-Oriented Development, Campus Transportation Management, TDM Ordinance and Policy Development, Mobility as a Service (MaaS) and Payment Technology, Parking Pricing

REFERENCES

California Air Pollution Control Officers Association (2024), City of Modesto Downtown Master Plan, StanCOG Measure L

Description

Implementing market price public parking uses demand-based pricing strategies to adjust on-street parking rates according to occupancy, deterring long-term parking and encouraging turnover.

Implementation Actions

- Conduct parking occupancy studies in downtown Modesto and other high-demand commercial districts.
- Pilot demand-responsive parking rates in locations where parking is consistently near capacity.
- Use parking meters or digital payment systems capable of collecting occupancy and utilization data.
- Establish target occupancy ranges and adjust rates periodically based on observed demand.
- Reinvest a portion of parking revenue into pedestrian, bicycle, transit, and streetscape improvements within the area where pricing is implemented.
- Coordinate parking pricing with major events and seasonal demand to minimize congestion and parking-related vehicle circulation.

Funding Sources

Initial funding would be needed for parking occupancy monitoring, payment technology, signage, and enforcement, with ongoing funding for parking-management operations. Local parking revenues can support implementation and ongoing operations. Measure L and StanCOG-administered CMAQ/STBG funding can potentially support complementary multimodal improvements associated with parking-management programs, subject to program eligibility.

Equity Considerations

To avoid placing cost burdens on low-income drivers, pricing strategies should include exemptions or discounts for residents in disadvantaged communities. Revenues from market-priced parking should be reinvested in local multimodal improvements, such as sidewalks, bike infrastructure, and first-last mile transit access. Transparent community engagement is critical to ensure buy-in and equitable outcomes.

Case Study

San Francisco – Demand-Responsive Parking Pricing

The San Francisco Municipal Transportation Agency uses demand-responsive pricing to manage metered on-street parking and off-street parking facilities. Parking rates are adjusted using parking-demand data, with prices varying by location, time of day, and day of the week. The program is intended to maintain parking availability, reduce the time drivers spend searching for spaces, and encourage the use of transit, walking, and bicycling. SFMTA uses a consistent, data-driven process for setting and periodically adjusting parking rates.

https://www.sfmta.com/sites/default/files/reports-and-documents/2018/02/sfmta_parking_pricing_policies.pdf

Mitigation Potential

Implementing market price public parking increases the cost of driving to a location. Pricing parking disincentivizes the use of Single Occupancy Vehicle and encourages alternative forms of transportation, reducing VMT.

For more details, see CAPCOA, T-24. Implement Market Price Public Parking, pg. 179-182 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Residential Permits and Priced Parking

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Transit-Oriented Development, Campus Transportation Management, TDM Ordinance and Policy Development, Mobility as a Service (MaaS) and Payment Technology, Priced Parking, Unbundled Parking

REFERENCES

California Air Pollution Control Officers Association (2024), UCLA Institute of Transportation Studies Parking Pricing Guide, StanCOG Measure L, City of Modesto Parking Services

Description

Residential permit parking programs in conjunction with parking pricing (meters) for on-street parking is typically implemented in transitional neighborhoods - near commercial corridors, universities, or entertainment districts—where demand is high and land use is mixed. It reduces vehicle circulation for parking, encourages turn over, and encourages people to consider other modes.

Implementation Actions

- Identify residential neighborhoods experiencing parking spillover from downtowns, commercial districts, campuses, or major activity centers.
- Conduct parking occupancy studies before establishing residential permit zones.
- Establish clearly defined permit areas with signage and simple resident registration procedures.
- Coordinate residential permit programs with nearby priced parking to avoid shifting parking demand from commercial areas into residential streets.
- Provide visitor, service-provider, and short-term permits to maintain access for residents and necessary service trips.
- Evaluate permit zones periodically and adjust boundaries or pricing based on parking demand.

Funding Sources

Initial costs include parking studies, signage, permit-management systems, enforcement, and public outreach. Ongoing implementation would primarily be supported through municipal parking-management revenues and local transportation funds. Measure L can provide local funding for eligible transportation improvements, while StanCOG-administered CMAQ/STBG funds may support complementary transportation improvements where eligible.

Equity Considerations

To avoid placing cost burdens on low-income drivers or residents, pricing strategies should include a streamlined permit system for residents. Transparent community engagement is critical to ensure buy-in and equitable outcomes.

Case Study

Downtown Modesto Residential Parking Spillover Opportunity

Modesto's Downtown Master Plan identifies a comprehensive downtown parking-management approach that includes managing parking supply, improving parking wayfinding, and evaluating the relationship between downtown parking facilities and surrounding neighborhoods. The plan provides a local planning framework for considering residential permit parking where downtown parking demand creates spillover into adjacent neighborhoods.

<https://www.modestogov.com/2404/Downtown-Master-Plan>

Mitigation Potential

Implementing parking pricing in conjunction with residential permit parking increases the cost of driving to a location and reduces parking spillover into residential areas. Pricing parking disincentivizes the use of Single Occupancy Vehicle and encourages alternative forms of transportation, reducing VMT.

For more details, see CALTRANS VMT Mitigation Program, Parking, pg. 45-47 and CAPCOA (2019), Residential Area Parking Permits, pg. 8 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Daily Versus Monthly Parking

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Property Managers, Employers, Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Transit-Oriented Development, Campus Transportation Management, TDM Ordinance and Policy Development, Mobility as a Service (MaaS) and Payment Technology, Demand Based Parking Pricing, Unbundled Parking

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 Regional Transportation Plan/Sustainable Communities Strategy, City of Modesto Downtown Master Plan, City of Turlock Downtown Parking Plan

Description

Offering parking at a daily rather than monthly rate reduces the financial incentive to drive daily by making parking costs more variable.

Implementation Actions

- Encourage local jurisdictions to adopt parking pricing ordinances that prohibit discounted monthly permits in civic centers and downtowns, especially in areas with significant event-based parking demand.
- Implement mobile payment systems and dynamic pricing strategies in public lots, using demand-based rates to discourage long-term car storage in non-residential garages.
- Partner with employers to offer commuter benefits and cash-out options that incentivize giving up monthly parking passes.

Funding Sources

Unlikely to require substantial capital funding, but implementation will require staff time for parking policy development, pricing administration, enforcement, and public outreach. Local jurisdictions may use existing parking revenues to support implementation and management. Planning and TDM activities may also be supported through StanCOG's Transportation Demand Management program, which is funded through SB 1 Sustainable Communities Formula funds and supports employer outreach, local jurisdiction coordination, and development of TDM programs. Federal and state transportation planning funds may also be applicable depending on the project.

Equity Considerations

Shifting to daily pricing improves fairness by ensuring that occasional drivers, including low-income residents, do not subsidize the costs of parking for wealthier monthly permit holders. It supports transit use among workers with variable schedules and reduces economic barriers for those without the ability to prepay. Programs should also support cash-based payment options for unbanked individuals.

Case Study

State of California Employment: The State of California's DGS-OFAM Parking Policy

The State of California's Department of General Services (DGS) Office of Fleet and Asset Management (OFAM) oversees comprehensive parking policies for state employees, agencies, and departments. OFAM provides both monthly and daily parking options through DGS-managed facilities located near key landmarks such as the California State Capital, Golden 1 Center, Capitol Mall, and various museums in Sacramento.

<https://www.dgs.ca.gov/-/media/Divisions/OFAM/Parking-Administration/DGS-Parking-Policy.pdf>

Mitigation Potential

Providing parking at a monthly rate means there is no additional cost of driving each day, encouraging commuters to drive when not required. Implementing parking at a daily rate increases the daily cost of driving and incentivizes alternative modes, reducing VMT. Similar linked strategies related to parking pricing may be used to quantify this strategy when appropriate, however care must be used in using these methods as land use can also heavily influence the viability of strategies such as these and market based parking pricing may be more effective than a daily strategy depending on the context of implementation.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Shared Parking

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Property Managers, Developers (Residential),
Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

Transit-Oriented Development, Infill Development,
TDM Ordinance and Policy Development, Right
Sizing Parking Supply

REFERENCES

California Air Pollution Control Officers Association
(2024), StanCOG 2026 Regional Transportation Plan/
Sustainable Communities Strategy, City of Modesto
Zoning Ordinance, City of Turlock Zoning Code

Description

Updating zoning codes to allow for shared parking amongst adjacent developments reduces the amount of land dedicated to parking and allows for denser infill development.

Implementation Actions

- Expand opportunities for shared parking agreements between adjacent commercial, residential, civic, and employment uses.
- Incorporate shared parking provisions into specific plans and mixed-use development standards in downtown and transit-oriented areas.
- Require parking demand studies when shared parking is proposed to demonstrate that peak demand periods do not substantially overlap.
- Encourage shared parking near transit corridors and activity centers where excess parking supply can be converted to development, pedestrian, bicycle, or public-space uses.
- Update municipal codes to allow for shared parking provisions.

Funding Sources

Requires primarily staff time for zoning updates, parking studies, development review, and agreements between property owners. Local jurisdictions may incorporate shared parking requirements into development codes and specific plans without substantial capital funding. StanCOG planning and TDM resources may support related planning, outreach, and coordination activities. Additional funding may be available through state and federal sustainable transportation planning programs when shared parking is incorporated into broader multimodal or infill planning efforts.

Equity Considerations

Encouraging reduced parking supply helps lower construction costs, which can benefit affordable housing developers and mixed use developments. Prioritize implementation in high-transit areas to reduce car dependency among low-income households. Include community outreach to ensure understanding of trade-offs, especially in areas where car ownership is a necessity. Pair with mobility benefits (e.g., subsidized transit passes, shared mobility access) for tenants in under-resourced communities.

Case Study

City of Turlock Shared Parking Regulations

Turlock's zoning code allows multiple uses to share parking when they operate during substantially different days or hours or when one use has surplus parking. The City requires documentation demonstrating that the uses have compatible parking demand patterns and allows recorded agreements to maintain shared parking arrangements.

<https://ecode360.com/46973477>

Mitigation Potential

Limiting the amount of land dedicated to parking allows for denser development and more space for bicycle and pedestrian amenities which makes non-drive modes more attractive and reduces VMT.

For more details, see Victoria Transport Policy Institute – Shared Parking for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Right Sizing Parking Supply

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community, Site

IMPLEMENTORS-PRIVATE

Developers (Residential), Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Transit-Oriented Development, Infill Development, Provide Bike Parking, Road Diets and Traffic Calming Measures, Create Pedestrian Priority Zones, TDM Ordinance and Policy Development, Priced Parking, Shared Parking, Unbundled Parking

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 Regional Transportation Plan/Sustainable Communities Strategy, City of Modesto Downtown Master Plan, City of Modesto Zoning Ordinance, California Government Code Section 65863.2 / AB 2097

Description

Updating zoning codes to reduce or eliminate minimum residential parking requirements, particularly near transit, discourages vehicle reliance, allows for denser development, and allows for more land that would otherwise be dedicated to parking to be provided to active transportation. Note that AB 2097 eliminates parking minimums for certain project types within ½ mile of a major transit stop.

Implementation Actions

- Evaluate parking requirements in downtown Modesto, Turlock, Ceres, and other compact activity centers based on observed parking demand rather than conventional minimum ratios.
- Establish reduced parking requirements for developments near major transit stops and high-frequency transit corridors.
- Allow parking reductions through shared parking, transportation demand management plans, and demonstrated parking demand.
- Align local development standards with statewide parking reforms, including AB 2097 where applicable.

Funding Sources

Requires primarily staff time to update development standards, review parking demand studies, and establish appropriate parking requirements. StanCOG's planning and TDM programs can support local jurisdiction coordination and policy development. State and federal planning funds may also support parking reform when incorporated into broader sustainable communities, infill, or multimodal planning efforts.

Equity Considerations

Encouraging reduced parking supply helps lower housing construction costs, which can benefit affordable housing developers. Prioritize implementation in high-transit areas to reduce car dependency among low-income households. Include community outreach to ensure understanding of trade-offs, especially in areas where car ownership is a necessity. Pair with mobility benefits (e.g., subsidized transit passes, shared mobility access) for tenants in under-resourced communities.

Case Study

City of Modesto Zoning Code – Reduced Parking

Modesto's zoning code allows parking reductions for certain developments, including reduced parking ratios associated with density bonus projects near major transit stops. The code also allows discretionary approval of reduced and shared parking arrangements, providing an existing regulatory mechanism for right-sizing parking supply.

https://library.municode.com/ca/modesto/codes/code_of_ordinances?nodeId=TIT10ZORE_CH70TZO_ART3SPPLSPZO

Mitigation Potential

Limiting parking supply increases the time, cost, and effort to own a car, decreasing the convenience of driving as well as allows for land to be dedicated to other uses such as active transportation modes. This encourages alternative modes such as biking, walking, or transit, reducing VMT.

For more details, see CAPCOA, T-15. Limit Residential Parking Supply, pg. 122-125 and CALTRANS VMT Mitigation Program, Parking, pg. 45-47 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Unbundled Parking

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Community, Site

IMPLEMENTORS-PRIVATE

Property Managers, Developers (Residential),
Developers (Employment)

IMPLEMENTORS-PUBLIC

Municipalities

LINKED STRATEGIES

Transit-Oriented Development, Campus
Transportation Management, TDM Ordinance and
Policy Development, Priced Parking, Residential
Permits and Priced Parking, Daily Versus Monthly
Parking

REFERENCES

California Air Pollution Control Officers Association
(2024), StanCOG 2026 Regional Transportation
Plan/Sustainable Communities Strategy, California
Assembly Bill 1317

Description

Requiring developers to separate parking costs from rent or the purchase price in multifamily projects incentivizes residents to opt out of paying for parking if they don't own a vehicle.

Implementation Actions

- Encourage or require parking costs to be separately identified from rent in new multifamily developments where appropriate.
- Incorporate parking unbundling into specific plans and development agreements near transit and major activity centers.
- Provide incentives or streamlined permitting for projects that combine unbundled parking with car-free housing and transportation benefits.
- Pair unbundled parking with secure bicycle parking, transit information, and mobility services.

Funding Sources

Requires primarily staff time for ordinance development, development review, outreach, and monitoring. Local jurisdictions can incorporate parking unbundling requirements into development approvals and specific plans. StanCOG planning and TDM resources may support policy development and coordination with local jurisdictions. State requirements, including AB 1317, may also provide a framework for implementation in qualifying multifamily developments.

Equity Considerations

Allows renters without cars, often lower-income residents, to avoid subsidizing parking they don't use. Supports housing affordability by reducing bundled rent or mortgage costs. Ensure that developments that unbundle parking also provide equitable mobility alternatives (e.g., secure bike storage, transit access). Educate tenants and landlords about tenant rights and cost savings to prevent exploitation or confusion.

Case Study

California AB 1317 – Unbundled Parking Requirements

California Assembly Bill 1317 requires qualifying new multifamily rental properties to separate the cost of off-street parking from residential rent. The requirements apply to properties with 16 or more units that receive a certificate of occupancy on or after January 1, 2025, within specified counties, including Fresno and San Joaquin counties. Tenants receive the right of first refusal for parking associated with their property, while spaces declined by tenants may be leased separately. The law provides a San Joaquin Valley-relevant example of implementing residential parking unbundling through a regulatory requirement.

https://sjud.senate.ca.gov/sites/sjud.senate.ca.gov/files/ab_1317_sjud_analysis.pdf

Mitigation Potential

Unbundling residential parking from property costs requires residents to pay only if they choose to own a vehicle. Unbundling residential parking incentivizes low or no car ownership and encourages alternative modes such as biking, walking, or transit, reducing VMT.

For more details, see CAPCOA, T-16. Unbundle Residential Parking Costs from Property Cost, pg. 126-129 and CALTRANS VMT Mitigation Program, Parking, pg. 45-47 for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Park-and-Ride Lots

VMT REDUCTION POTENTIAL



COST



TIMING

Short Term (1-3 years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional, Community

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Transit Agencies, Regional Agencies

LINKED STRATEGIES

Transit-Oriented Development, Mobility Hubs, Transit Facilities and Amenities

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 Regional Transportation Plan/Sustainable Communities Strategy, StanCOG Congestion Management Process, StanCOG Transportation Demand Management Program, Caltrans Park-and-Ride Program

Description

Developing park-and-ride lots offers designated areas for commuters to park and transfer to transit or carpool services, reducing private vehicle usage.

Implementation Actions

- Identify underutilized public and private parcels near major transit routes, freeway interchanges, and ACE stations for potential park-and-ride use.
- Prioritize locations that can support transit, carpool, vanpool, bicycle, and first/last-mile connections.
- Coordinate park-and-ride investments with ACE stations in Ceres and Modesto-area commuter markets.
- Include lighting, accessible pedestrian connections, bicycle parking, shade, security, and transit information.
- Develop shared-use agreements with schools, employers, commercial centers, and other property owners to reduce land acquisition costs.

Funding Sources

Funding may include StanCOG-administered transportation funds, Local Transportation Funds, State Transportation Assistance, CMAQ, SB 1 programs, and federal transit funding, depending on the facility and project sponsor. StanCOG's TDM program also directly supports park-and-ride programs and related outreach. Partnerships with schools, employers, transit agencies, and private property owners can reduce land acquisition and operating costs.

Equity Considerations

Equity considerations for park-and-ride facilities include ensuring access in rural and disadvantaged communities that lack frequent transit service. Lots should be placed to benefit lower-income commuters, and partnerships with tribal governments and schools can increase access for residents without nearby transit. Design elements such as bike parking and lighting also enhance safety and access for non-drivers.

Case Study

Ceres ACE Station and Park-and-Ride Projects

StanCOG's transportation programming includes surface parking and overflow parking improvements associated with the Ceres ACE station, as well as proposed lighted park-and-ride facilities near the Whitmore Avenue overpass and near the freeway/ACE station. These projects provide a direct Stanislaus County example of using parking facilities to support transit and regional commuting.

<https://www.stancog.org/DocumentCenter/View/2032/Final-StanCOG-2025-Air-Quality-Conformity-Analysis-for-2025-FTIP-and-2022-RTP-Amendment-1?bidld=>

Mitigation Potential

Park-and-ride lots increase the availability of non-Single Occupancy Vehicle options for commuters. Either through transit or carpooling, VMT can be reduced from the mode shift. While not the same strategy, park and ride lots are now more commonly planned for as part of mobility hubs, which is a more efficient use of land and more effective at reducing VMT.

For more details, see Victoria Transport Policy Institute – Mobility Hubs for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

Alternative Roadway Pricing Strategies

VMT REDUCTION POTENTIAL



COST



TIMING

Long-term (10+ years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Municipalities, Regional Agencies

LINKED STRATEGIES

TDM Ordinance and Policy Development, Priced Parking

REFERENCES

California Air Pollution Control Officers Association (2024), StanCOG 2026 Regional Transportation Plan/Sustainable Communities Strategy, San Joaquin Council of Governments I-205 Managed Lanes Project



Description

Implementing dynamic or usage-based pricing strategies for roadways, such as congestion pricing or VMT based pricing, discourages unnecessary Single Occupancy Vehicles trips and generates revenue for sustainable transportation investments. Implementation strategies include conducting audits using roadway pricing frameworks to evaluate equity impacts and fee structures, studying VMT -based road pricing on high-traffic regional arterials, and promoting graduated per-mile charges during peak hours.



Implementation Actions

- Conduct feasibility studies before considering roadway pricing on high-congestion corridors in Stanislaus County.
- Evaluate mileage-based and congestion-based pricing as potential long-term alternatives to traditional roadway funding mechanisms.
- Analyze impacts on rural residents, lower-income households, freight, and travelers with limited alternatives to driving
- Explore reinvesting revenues into transit, carpool/vanpool programs, bicycle and pedestrian infrastructure, and first/last-mile connections.
- Coordinate with neighboring COGs and Caltrans to evaluate pricing strategies on corridors that cross regional boundaries.



Funding Sources

Roadway pricing studies and pilot programs would require planning, technology, public engagement, and potentially significant implementation funding. Potential sources include federal discretionary programs, Congestion Mitigation and Air Quality funding, Caltrans planning and implementation programs, and regional transportation funds. Any future pricing program would also need to evaluate revenue requirements, administrative costs, equity impacts, and legal requirements.



Equity Considerations

Ensure pricing structures are income-adjusted or paired with subsidies for low-income households. Avoid disproportionately burdening rural or transit-inaccessible areas by offering travel alternatives or exemptions. Use revenue from pricing programs to reinvest in affordable transportation services in disadvantaged communities.



Case Study

San Joaquin Council of Governments – I-205 Managed Lanes

SJCOG is evaluating managed lanes on I-205 through the Tracy area, including potential HOV and toll lanes as well as transit hubs and park-and-ride facilities. The project is particularly relevant to StanCOG because it represents a San Joaquin Valley approach to managed lanes and pricing on a major Central Valley commuter corridor.

<https://www.sjcog.org/737/Future-Planning>



Mitigation Potential

Roadway pricing discourages the use on Single Occupancy Vehicle trips or non-essential trips. 2006 Minnesota pilot program found a weekday VMT decrease of 6.6% (8.1% on weekends). An Oregon pilot study found a 12% decrease for drivers paying a per-mile fee. Reduction is likely to vary based on the fee structure and implementation technology

For more details, see Victoria Transport Policy Institute – Road Pricing for VMT reduction quantification.

Land Use

Neighborhood Design/Active Transportation

School Mobility

Regional Trip Reduction Programs

Transit

Parking Management and Roadway Pricing

Parking or Road Pricing/Management

High Occupancy Toll Lanes

VMT REDUCTION POTENTIAL



COST



TIMING

Long-term (10+ years)

RETURN ON INVESTMENT



STANCOG RELEVANCY



TRIP TYPE



LAND USE CONTEXT



SCALE

Regional

IMPLEMENTORS-PRIVATE

None

IMPLEMENTORS-PUBLIC

Caltrans, Regional Agencies

LINKED STRATEGIES

TDM Ordinance and Policy Development,
Alternative Roadway Pricing Strategy

REFERENCES

Caltrans Express Lane Policy Guidance, Federal Highway Administration Managed Lanes Resources, StanCOG 2026 Regional Transportation Plan/Sustainable Communities Strategy, San Joaquin Council of Governments I-205 Managed Lanes Project

Description

High occupancy toll lanes offer variable toll rates to manage congestion and encourage carpooling by providing faster travel times for high-occupancy vehicles and toll-paying motorists.

Implementation Actions

- Coordinate with Caltrans and neighboring regional agencies to evaluate the feasibility of managed or HOT lanes on major regional corridors serving Stanislaus County.
- Conduct corridor-level studies to determine whether HOV, HOT, transit-priority, or other managed-lane treatments are appropriate.
- Evaluate connections between HOT lanes and existing regional transit and commuter services.
- Consider toll discounts or exemptions for carpools, vanpools, transit, and income-qualified users.
- Dedicate a portion of future toll revenues, where legally permissible, to transit, first/last-mile connections, and transportation improvements serving disadvantaged communities.

Funding Sources

HOT lane projects require substantial capital investment for lane construction or conversion, tolling technology, enforcement, communications systems, and ongoing operations. Potential funding sources include federal Infrastructure for Rebuilding America (INFRA), MEGA, CMAQ, state transportation programs, Caltrans funding, and regional transportation revenues. Toll revenue may provide a long-term source for operations and transportation improvements, subject to state and federal requirements.

Equity Considerations

To ensure HOT lanes do not worsen mobility inequities, programs can offer toll discounts or exemptions for income-eligible users, especially in areas with limited transit access. Equitable design includes multilingual outreach, simplified eligibility verification, and integrated fare platforms for carpools using transit or other shared modes.

Case Study

San Joaquin Council of Governments – I-205 Managed Lanes

The I-205 Managed Lanes Project in the Tracy area is one of the most directly relevant examples for StanCOG. The project is evaluating managed lanes that could include HOV and toll lanes, along with transit hubs and park-and-ride facilities. The project is intended to address heavy commuter and truck congestion on I-205 and improve connections between the Central Valley and the Bay Area.

<https://dot.ca.gov/caltrans-near-me/district-10/district-10-current-projects/10-1h170>

Mitigation Potential

HOT lanes increase the cost to drive, discouraging unnecessary trips. Pricing can encourage sustainable mode alternatives, such as carpooling or ridesharing. Impacts on VMT will vary depending on the length, locations, and restrictions deployed. The effectiveness of tolls depends on origin and destination patterns.