



# **SAN DIEGO AND IMPERIAL COUNTIES SUSTAINABLE FREIGHT IMPLEMENTATION STRATEGY**

## **SUMMARY FACT SHEETS FOR KEY STRATEGIES**

December 2023

The enclosed fact sheets summarize 11 key projects, programs, and policies recommended by the San Diego and Imperial Counties Sustainable Freight Implementation Strategy. They cover a broad range of potential improvements to the regional freight system, including multimodal infrastructure, the adoption of new technology, and incentives to reduce impacts and improve efficiency. The highlighted projects are representative examples of improvements recommended in several locations across the study area. The entire project list and evaluation results are available in the Final Benefits and Feasibility Scoring Memorandum.

## PROJECT FACT SHEET

# ZERO-EMISSION TRUCK CHARGING AND PARKING/ STAGING AREA: OTAY MESA PORT OF ENTRY

Adding zero-emission (ZE) truck charging and parking/staging facilities in strategic locations across the region, including around the Otay Mesa Port of Entry, will help modernize our goods movement system and create equitable benefits for the environment, our communities, and the economy.

## Benefits

- ZE charging provides cleaner power than diesel fuel to trucks and further incentivizes the adoption of ZE technology, reducing the emission of greenhouse gases and air pollutants, such as diesel particulate matter.
- New truck parking/staging areas serve a major unmet need by providing resting and waiting areas for truck drivers. Locating these facilities in industrial areas avoids attracting additional truck traffic toward the most vulnerable communities.



While the Otay Mesa Port of Entry area is a top candidate for this type of facility, the *San Diego and Imperial Counties Sustainable Freight Implementation Strategy* recommends that similar facilities be constructed strategically to support a regionwide network. To maximize benefits, this strategy should be deployed near all U.S./Mexico land ports of entry, near the Port of San Diego marine terminals, and along major goods movement corridors, including Interstates 5, 8, and 15 (I-5, I-8, and I-15), and State Routes 11, 78, 86, 111, and 905 (SR 11, SR 78, SR 86, SR 111, and SR 905).

## ESTIMATED COST & FUNDING

The estimated project cost is approximately \$5 to \$9 million, including design, construction, and permitting. The cost of ZE truck charging stations will vary depending on the number of chargers, the power level for the chargers, the power available at the site, and any service upgrades needed. This estimate

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

does not include right-of-way acquisition and assumes a charging station facility consisting of four chargers at either 150 kilowatts or 350 kilowatts depending on the location of the chargers and the duty cycle/requirements of the vehicles. The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- California SBI: Trade Corridor Enhancement Program
- Innovative Charging Solutions for Medium- and Heavy-duty Electric Vehicles
- Rebuilding American Infrastructure with Sustainability and Equity
- California Energy Commission: Charging and Refueling Infrastructure for Transport in California Provided Along Targeted Highway Segments (CRITICAL PATHS)
- Federal Highway Administration (FHWA): Charging and Fueling Infrastructure Discretionary Grant Program (CFI Program)
- Environmental Protection Agency: Clean Ports Program

## SAMPLE DEVELOPMENT SCHEDULE

The project will require three to five years for full implementation, including all required planning, design, permitting, and construction. The sample schedule below summarizes the major milestones in the project development process. For projects where power network updates are required, the implementation time will increase depending on the degree of upgrades needed.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Preliminary Design</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning and design activities
<i>Caltrans Project Study Report (PSR) or similar Conceptual Planning Study</i>	12-18 months following identification of project funding
<i>Preliminary Design</i>	12-18 months following the conceptual planning study
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA Review</i>	12-18 months, concurrent with preliminary design activities. NEPA required for federal funding/facilities
<i>Regulatory Approval of Draft Design, including Federal CBP/GSA, Caltrans, City of San Diego, Energy Utilities</i>	12-18 months, concurrent with preliminary design activities. Includes maintenance and liability agreements
<b>Final Design</b>	6-12 months following all planning, preliminary design, environmental and regulatory reviews
<b>Permit Issuance</b>	3-6 months following final design
<b>Construction</b>	12-24 months following permit issuance

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary satellite initiatives that can complement the core strategy, such as truck parking management systems and port of entry appointment systems. Additional strategies could be implemented focused on technology interfaces to communicate the availability of truck charging stations and parking spaces, notifying Customs and Border Protection of truck locations in advance of border crossing appointments. The integration of these auxiliary strategies holds the potential to enhance the overall efficiency and effectiveness of the transportation network.

The potential challenges of project implementation include:

- Initial capital cost
- Technical complexities of ZE power supply and integration, including upgrades to utility infrastructure to support vehicle charging
- Requirements for multi-stakeholder coordination, including federal agencies and energy utilities
- Identifying a viable model for ongoing operations and maintenance responsibilities in coordination with public agencies and potential private sector partners

The project's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities of planning and design. This includes special focus with local utilities to ensure the project site has sufficient power generation and/or delivery capacity.

## PROJECT FACT SHEET

# TRUCK REST AREA PARKING, AMENITIES, & ZERO-EMISSION CHARGING: SUNBEAM REST AREA

Revitalizing regional rest areas and adding amenities and ZE truck charging and parking facilities in strategic locations across the region, including the Sunbeam rest area, will help modernize our goods movement system and create benefits for the environment, safety, equity, and the economy.

## Benefits

- ZE charging provides cleaner power than diesel fuel to trucks. Further, it incentivizes the adoption of ZE technology, reducing the emission of greenhouse gases and air pollutants, such as diesel particulate matter.
- Truck parking areas serve a major need by providing resting areas for truck drivers. Locating these facilities in existing rest areas avoids attracting additional truck traffic toward the most vulnerable communities.
- New rest area amenities provide valuable health, safety, and wellbeing benefits to the freight vehicle operators that can improve safety, productivity, and enhance network efficiency.



While the Sunbeam rest area is a top candidate for this type of facility, the *San Diego and Imperial Counties Sustainable Freight Implementation Strategy* recommends that similar facilities be constructed strategically to support a regionwide network. To maximize benefits, this strategy should be deployed at existing rest areas that could feasibly accommodate ZE charging infrastructure, especially those located along major goods movement corridors, including I-5, I-8, and I-15, and SR 11, SR 78, SR 86, SR 111, and SR 905.

## ESTIMATED COST & FUNDING

The estimated project cost is approximately \$5 to \$15 million, including design, construction, and permitting. The cost of ZE truck charging stations will vary depending on the number of chargers, the power level for the chargers, the power available at the site, and any service upgrades

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>

needed.-This estimate does not include right-of-way acquisition. The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- Department of Energy: Low Greenhouse Gas Vehicle Technologies
- EPA: Clean Heavy-duty Vehicle Program
- FHWA: CFI Program

## SAMPLE DEVELOPMENT SCHEDULE

The project will require three to five years for full implementation, including all the necessary planning, design, permitting, and construction. The sample schedule below summarizes the major milestones in the project development process. For projects requiring power network updates, the implementation time will increase depending on the degree of upgrades needed.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Preliminary Design</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning and design activities
<i>Caltrans Project Study Report (PSR) or similar Conceptual Planning Study</i>	12-18 months following identification of project funding
<i>Preliminary Design and Caltrans Project Report, Design Engineering Evaluation Report, or similar Preliminary Engineering and Project Approval document</i>	12-18 months following the conceptual planning study
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA Review and Document</i>	12-18 months, concurrent with preliminary design activities. NEPA required for federal funding/facilities
<i>Regulatory Approval of Draft Design, including Federal FHWA, Caltrans, City of San Diego, Imperial County, Energy Utilities</i>	12-18 months, concurrent with preliminary design activities. Includes maintenance and liability agreements
<b>Final Design</b>	9-18 months following all planning, preliminary design, environmental and regulatory reviews
<b>Permit Issuance</b>	3-6 months following final design
<b>Construction</b>	12-24 months following permit issuance

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider incorporating complementary satellite initiatives that can complement the core strategy, such as advance signage and outreach to inform drivers of available charging infrastructure and amenities, and deceleration and acceleration lanes to and from the rest area to enhance safe merge and diverge movements on the highway. The integration of these auxiliary strategies holds the potential to enhance the overall efficiency and effectiveness of the transportation network.

The potential challenges of project implementation include:

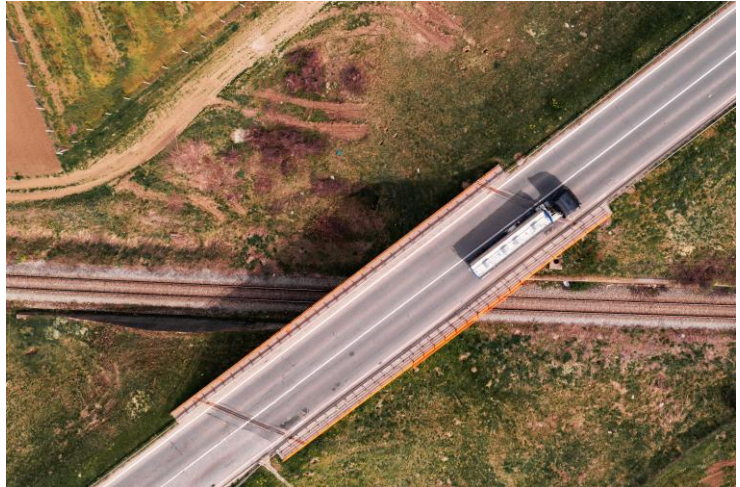
- Initial capital cost
- Technical complexities of ZE power supply and integration
- Identifying anticipated usage of the site to determine if additional paving and parking is needed
- Requirements for multi-stakeholder coordination, including federal agencies, California Department of Transportation (Caltrans), local service providers, such as for janitorial services, and energy utilities
- Identifying a viable model for ongoing operations and maintenance responsibilities in coordination with public agencies and potential private sector partners

The project's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities of planning and design. This includes special focus with local utilities to ensure the project site has sufficient power generation and/or delivery capacity.

## PROJECT FACT SHEET

# RAILROAD-ROADWAY GRADE SEPARATION: STATE ROUTE 98 IN CALEXICO

The strategic implementation of railroad-roadway grade separations in critical freight locations across the region, including at the SR 98 intersection in Calexico, will help modernize and advance the efficiency of our goods movement system and create benefits for the environment, safety, equity, and economy.



## Benefits

- Improves traffic flow and reduces congestion near the railroad-roadway intersection, which will increase transportation efficiency.
- Reduces and mitigates the environmental impacts of railroad and roadway transportation modes through a reduction of emissions.
- Enhances the safety for all railroad and roadway users by preventing any potential collisions.
- Contributes to a higher quality of life for nearby residents through a reduction in noise and traffic pollution.
- Improves efficiency of goods movement and supports the economy, in areas of high truck traffic.

While the SR 98 railroad-roadway intersection is a top candidate for this type of facility, the *San Diego and Imperial Counties Sustainable Freight Implementation Strategy* recommends that similar facilities be constructed strategically to support a regionwide network. To maximize benefits, this strategy should be deployed at all railroad-roadway intersections along and adjacent to major goods movement corridors, including I-5, I-8, and I-15, and SR 11, SR 78, SR 86, SR 111, and SR 905.

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

## ESTIMATED COST & FUNDING

The estimated project cost is approximately \$150 to \$200 million, including design, construction, and permitting.

The cost for railroad-roadway grade separations will vary depending on the roadway size and alignment, number of tracks, topography, and any service or safety upgrades needed. This estimate



does not include right-of-way acquisition. The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- Federal Railroad Administration (FRA): Consolidated Rail Infrastructure and Safety Improvements
- Section 190 Grade Separation Program
- FRA: Railroad Crossing Elimination Program

## SAMPLE DEVELOPMENT SCHEDULE

The project will require 7 to 10 years for full implementation, including all required planning, design, permitting, and construction. The sample schedule below summarizes the major milestones in the project development process. Rail grade crossing project will require coordination with the railroad throughout design and construction, which is reflected in the durations, below, and further detailed in implementation considerations section.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Preliminary Design</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning and design activities
<i>Caltrans Project Study Report PSR or similar Conceptual Planning Study</i>	12-18 months following identification of project funding
<i>Preliminary Design and Caltrans Project Report or similar Preliminary Engineering and Project Approval document</i>	18-24 months following the conceptual planning study, including time to enter into a review agreement with Union Pacific Railroad (UPRR) and review of 30% design
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA Review and Document</i>	24-30 months, concurrent with preliminary design activities. NEPA required for federal funding/facilities
<i>Regulatory Approval of Draft Design, including Federal FRA, Caltrans, City of San Diego, California Public Utilities Commission</i>	12-18 months, concurrent with preliminary design activities. Includes maintenance and liability agreements
<b>Final Design</b>	18-24 months following all planning, preliminary design, environmental and regulatory reviews, including 2-3 months for UPRR review after each of 60, 90, and 100% design and entry into a construction and maintenance agreement after 100% design plans are approved
<b>Permit Issuance</b>	6-9 months following final design
<b>Construction</b>	18-36 months following permit issuance, depending on construction windows allowed by railroad

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary satellite initiatives that can complement the core strategy, such as corridor plans with a significant focus on freight, clean freight corridors, truck only lanes, and freight signal prioritization. The integration of these auxiliary strategies holds the potential to enhance the overall efficiency and effectiveness of the transportation network.

The potential challenges of project implementation include:

- Initial capital cost
- Technical complexities of engineering design and construction, including achieving consensus on the grade separation alignment
- Impacts to adjacent properties and local roads, particularly with a roadway realignment strategy
- Long lead-time coordination for permanent and temporary utility relocations (e.g., overhead electrical lines)
- Potential disruptions of railroad and roadway traffic and/or complex construction staging and temporary facilities to minimize disruptions
- Potential increase to the project environmental study and impact area due to temporary facilities (e.g., temporary track or roadway alignment)
- Requirements for multi-stakeholder coordination, including federal agencies, Caltrans, energy utilities, and particularly railroads. In this case, the highway crosses the UPRR. Coordination with UPRR should start at conceptual design.
- Complementary features may be added to the scope of the project, which increase roadway capacity on State Route 98, such as a new dedicated truck-only lane or additional general-purpose capacity. If so, early coordination with Caltrans is needed to determine if the improvements can be exempted from the State of California CEQA requirements for analyzing and mitigating Vehicle Miles Traveled. If not exempted, these improvements may need to be phased to avoid delays to the grade separation improvements
- The identification of a viable model for ongoing operations and maintenance responsibilities in coordination with public agencies and potential private sector partners

The project's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help guide all parties through the complexities of planning and design.

## PROJECT FACT SHEET

# WIRELESS INDUCTIVE CHARGING FOR TRUCKS IN QUEUE: OTAY MESA EAST PORT OF ENTRY

Adding wireless inductive or in-road charging for trucks in queue at locations across the region, including at the Otay Mesa Port East of Entry, will help modernize the goods movement system and create benefits for the environment, equity, and the economy.

## Benefits

- Wireless inductive charging improves operational efficiency by reducing the total time electric vehicles need to stop at charging locations, offers potential economic savings, and enhances the reliability of electric fleet vehicles.
- Wireless inductive charging has the potential to provide benefits beyond standard electric charging (reduction in emissions, noise pollution, reliance on traditional fueling methods) such as extended range, reduced battery size, adaptability to traffic conditions, and ease of use. Locating these facilities in industrial areas and along already highly congested roadways avoids attracting additional truck traffic toward the most vulnerable communities.



While the Otay Mesa Port of Entry area is a top candidate for this type of facility, the *San Diego and Imperial Counties Sustainable Freight Implementation Strategy* recommends that similar facilities be constructed strategically in areas of high truck traffic. To maximize benefits, this strategy should be deployed near all U.S./Mexico land ports of entry and near the Port of San Diego marine terminals.

## ESTIMATED COST & FUNDING

The estimated project cost is approximately \$5 to \$9 million, including design, construction, and permitting. The cost of wireless inductive charging facilities will vary depending on the number of chargers, the power level for the chargers, the power grid capacity, and any service upgrades needed. This estimate does not include right-of-way acquisition and assumes a charging station facility consisting of four 250-kilowatt chargers. The project team evaluated potential

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- Advanced Vehicle Technologies
- Vehicle Technologies Office
- Advanced Technology Demonstration and Pilot Projects
- FHWA: Advanced Transportation Technologies and Innovative Mobility Deployment
- FHWA: Strengthening Mobility and Revolutionizing Transportation Grants Program
- FHWA: Charging and Fueling Infrastructure Program
- Maritime Administration: Port Infrastructure Development Program

## SAMPLE DEVELOPMENT SCHEDULE

The project will require three to five years for full implementation, including all required planning, design, permitting, and construction. The sample schedule below summarizes the major milestones in the project development process. For projects where power network updates are required, the implementation time will increase depending on the degree of upgrades needed.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Preliminary Design</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning and design activities
<i>Caltrans Project Study Report (PSR) or similar Conceptual Planning Study</i>	12-18 months following identification of project funding
<i>Preliminary Design</i>	12-18 months following the conceptual planning study
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA Review</i>	12-18 months, concurrent with preliminary design activities. NEPA required for federal funding/facilities
<i>Regulatory Approval of Draft Design, including Federal CBP/GSA, Caltrans, City of San Diego, Energy Utilities</i>	12-18 months, concurrent with preliminary design activities. Includes maintenance and liability agreements
<b>Final Design</b>	6-12 months following all planning, preliminary design, environmental and regulatory reviews
<b>Permit Issuance</b>	6-12 months following final design
<b>Construction</b>	12-24 months following permit issuance

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary satellite initiatives that can complement the core strategy, such as reservation systems, truck parking, truck-only lanes, and freight signal prioritization. The integration of these auxiliary strategies holds the potential to enhance the overall efficiency and effectiveness of the transportation network.

The potential challenges of project implementation include:

- Initial capital cost
- Technical complexities of wireless inductive power supply and integration, as well as standardization and compatibility issues
- Requirements for multi-stakeholder coordination, including federal agencies and energy utility providers
- Identifying a viable model for ongoing operations and maintenance responsibilities in coordination with public agencies and potential private sector partners

The project's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities of planning and design. This includes special focus with local utilities to ensure the project site has sufficient power-generation and/or delivery capacity.

## PROJECT FACT SHEET

# TRUCK-ONLY LANES: I-5 & SR 905 BETWEEN PORT OF SAN DIEGO & OTAY MESA EAST PORT OF ENTRY

Incorporating truck-only lanes in strategic locations across the region, including on I-5 and SR 905 between the port of San Diego and Otay Mesa East Port of Entry, will benefit freight operations and advance the efficiency of our goods movement system and create benefits for the environment, safety, equity, and economy.



## Benefits

- Designated truck-only lanes can enhance freight network efficiency and safety by separating heavy cargo from regular passenger vehicles, helping to alleviate congestion, and improve traffic flow, facilitating a better supply chain by decreasing the total time to deliver goods.
- Reduced wear and tear on general-purpose lane roadway infrastructure by concentrating stress and strain to specific areas, leading to cost savings and roadway longevity.
- Enhanced safety for roadway users by minimizing weaving movements between trucks and passenger vehicles, reducing the potential for conflicts.
- Reduced emissions and fuel consumption through streamlined freight movement and a reduction stop-and-go travel.

## ESTIMATED COST & FUNDING

The estimated project cost is approximately \$80 to \$100 million, including design, construction, and permitting. The cost for truck-only lanes will vary depending on the total length of the lane, topography, specific infrastructure requirements, and any service upgrades needed. This estimate does not include right-of-way acquisition. While these lanes are anticipated to be conversions of existing general-purpose lanes, some right-of-way additions may be needed to accommodate safe merging and transitions. The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

The **San Diego and Imperial Counties Sustainable Freight Implementation Strategy** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

- California SBI: Solutions for Congested Corridors
- FHWA: Local Highway Safety Improvement Program
- California SBI: Trade Corridor Enhancement Program
- FHWA: Multimodal Project Discretionary Grant Program

## SAMPLE DEVELOPMENT SCHEDULE

The project will require 5 to 10 years for full implementation, including all required planning, design, permitting, and construction. The sample schedule below summarizes the major milestones in the project development process. For projects where power network updates are required, the implementation time will increase depending on the degree of upgrades needed.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Preliminary Design</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning and design activities
<i>Caltrans Project Study Report (PSR) or similar Conceptual Planning Study</i>	12-18 months following identification of project funding
<i>Preliminary Design and Caltrans Project Report or similar Preliminary Engineering and Project Approval document</i>	18-24 months following the conceptual planning study
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA Review and Document</i>	36+ months, concurrent with preliminary design activities. NEPA required for federal funding/facilities
<i>Regulatory Approval of Draft Design Including Federal CBP/GSA, Caltrans, City of San Diego, Energy Utilities</i>	36+ months, concurrent with preliminary design activities. Includes maintenance and liability agreements
<b>Final Design</b>	24-30 months following all planning, preliminary design, environmental and regulatory reviews
Right-of-Way & Utilities	12-24 months
<b>Permit Issuance</b>	3-6 months following final design
<b>Construction</b>	12-36 months following permit issuance

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary satellite initiatives that can complement the core strategy, such as Port of Entry efforts that address freight movement, such as truck information and reservation systems, truck-only lanes, clean freight corridors, and truck parking projects. The integration of these auxiliary strategies holds the potential to enhance the overall efficiency and effectiveness of the transportation network.

The potential challenges of project implementation include:

- Caltrans requires Vehicle Miles Traveled (VMT) analysis and mitigation for any capacity-enhancing projects on state facilities. A Statement of Overriding Considerations would require approval through the Caltrans Director to allow public circulation of a draft environmental document that includes alternatives that do not fully mitigate for added VMT. Although the truck-only lanes are proposed to be conversions of existing general-purpose lanes, the project is still expected to complete the VMT analysis, as well as a freeway operations analysis, to evaluate the resulting impacts to operations from the lane conversion. If the freeway operations are projected to fail or cause significant impacts, those will be considered carefully in the context of other regional improvements planned to alleviate congestion or minimize VMT, and the project might have difficulty obtaining approval to move forward
- Public comment period during circulation of the environmental document may be challenging due to the proposal to convert existing lanes to truck-only lanes
- Initial capital cost
- Technical complexities of engineering design and construction, including identifying logical begin and end points of truck-only lanes, providing truck passing lanes if determined to be needed, safely accommodating interchange entrance and exit ramp movements, developing advanced signage to safely transition passenger vehicles and trucks into and out of their dedicated lanes, and transitioning to port of entry infrastructure and technology
- Right-of-way acquisition and potential disruptions of roadway traffic
- Long-term enforcement of truck-only lanes to prevent passenger vehicles from impeding truck traffic throughput and safe maneuverability
- Requirements for multi-stakeholder coordination, including federal agencies, Caltrans, local agencies, and energy utilities

The project's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities of planning and design.



## PROGRAM FACT SHEET

# INCENTIVES FOR BUSINESSES TO PURCHASE CARGO BIKES

Encouraging businesses to adopt eco-friendly cargo bikes for delivery and transportation needs can provide many benefits to urban and high-density areas. A study to explore incentives and address regulatory barriers for using cargo and electric cargo bikes in denser urban areas for the first-/last-mile delivery, as well as supportive infrastructure, can advance the sustainability and efficiency of delivery and transportation services and promote local development.



## Benefits

- Mitigate freight network effects on the environment by reducing the emission of greenhouse gases and air pollutants, such as diesel particulate matter. It is estimated that a single cargo bike can save 13 tons of CO2 emissions per year.
- Alleviate urban traffic congestion. Cargo bikes can offer increased route flexibility compared to large delivery trucks by using vehicle and bicycle infrastructure.
- Decrease operating costs for businesses.

The study for this program will address elements required for implementation, including incentives, infrastructure needs, emissions and congestion evaluation, program guidelines, and local stakeholder outreach to encourage program adoption.

## ESTIMATED COST & FUNDING

The cost for a regional study to implement incentives for businesses to purchase cargo bikes is estimated to be between \$300,00 to \$400,000 and will vary depending on the size of the study and types of incentives considered (Transportation Demand Management Plan, providing loading/curb space, curb management tools, on-street charging, and secured parking etc.). Similar pilots include:

- Boston Transportation Department: 18-month program subsidizing delivery costs for eight businesses and providing e-bikes for \$345,000

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

- Colorado Energy Office: solicitating proposals to develop and implement eCargo bike deployment projects that replace commercial delivery vehicles for \$240,000

The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- Caltrans: Active Transportation Program
- FHWA: Active Transportation Infrastructure Investment Program
- FHWA: Carbon Reduction Program

## SAMPLE DEVELOPMENT SCHEDULE

The study will require two to three years for full implementation, including all required procurement, planning, and stakeholder coordination. The sample schedule below summarizes the major milestones in the planning process.

Milestone	Estimated Schedule
<b>Identification of Study Funding</b>	Ongoing
<b>Study Development</b>	
<i>Define program guidelines (Vehicle Specifications, Safe operation, Data Sharing, Loading/Unloading, Education and Enforcement)</i>	3-6 months
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout study activities
<i>Caltrans Project Study Report (PSR) or Pilot Program Recommendations</i>	12-18 months following identification of project funding and procurement
<i>Evaluation Report/Findings</i>	6-12 months following pilot program implementation
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA Review</i>	Exempt

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

To move forward and implement recommendations from the study, it is essential to consider incorporating satellite initiatives to complement the core strategy, such as the expansion of bike-ped infrastructure and low-emission zone policies.

Considerations for the implementation of a cargo bike program include:

- Working with the private sector to identify barriers to the wider adoption of cargo bikes and work to lower infrastructure or regulatory barriers
- Working with the private sector to disseminate information on cargo bikes and establish peer knowledge exchanges

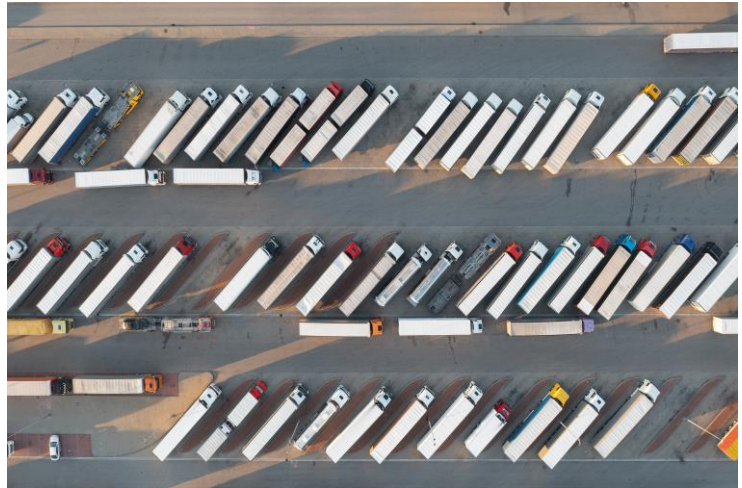
The potential challenges of program implementation include:

- Initial capital cost of acquiring cargo bikes and necessary infrastructure for storage, charging, cargo bike parking, maintenance
- Business hesitation and concerns about delivery efficiency and capacity limitations
- Legal context and local regulations for cargo bikes
- Program monitoring and reporting
- Staff time to manage cargo bike pilot and operator permit program for businesses
- Potential policy hurdles. For example, updating e-bike definition to adjust maximum width limits and needing to create “Cargo Bike Loading Only” curb regulation

## PROGRAM FACT SHEET

# SUPPORT FOR PRIVATE TRUCK PARKING SITE DEVELOPMENT

The development of additional truck parking facilities is an essential aspect of the framework that improves overall freight network efficiency. Designated truck parking sites help to facilitate the electrification of truck fleets, improve fluidity and operations, reduce impacts from vulnerable communities, and increase economic competitiveness and opportunities. More parking locations would also reduce driver fatigue and provide drivers with a place to wait in advance of completing their trip.



Private truck parking facilities provide 92 percent of all parking spaces in the state of California. While the private sector will continue to play an integral role in developing parking facilities, there are actions the public sector can take to facilitate and leverage more private investment. Building on initial studies carried out by Caltrans 2022 California Statewide Truck Parking Study (including the Appendix F: Public-Private Partnership Action Plan: Partnership Screening Tool and Scenario Analysis) and Washington State Department of Transportation 2021 Washington State Truck Parking Action Plan, a regional program would consist of a study to look at opportunities for encouraging private truck parking site development. A few potential private partnership incentive ideas that can be considered under this program include:

- Potential commercial tax incentives and/or permitting and zoning incentives for property owners to provide truck parking
- Agreement and tax incentive structures with businesses and facilities that have large existing parking facilities used only on a periodic or seasonal basis, such as a stadium, to be used for truck parking when not in use for its intended purposes
- Collaboration with private developers and investors of electric vehicle charging facilities and private truck parking facilities
- Usage of federal and other state grants to expand truck parking as a way to partner and incentivize with private investors and developers
- Usage and promotion of mobile applications to allow property owners to market their available space and truck drivers and companies to identify, reserve, and pay for parking at available locations, expanding the pool of inventory and providing a financial incentive for participating property owners

## Benefits

- A decrease in unauthorized truck parking in non-designated areas can provide benefits to vulnerable communities near industrial areas. When parked in designated parking sites, trucks do not have to idle, thus reducing emissions.
- Truck parking sites provide enhanced driver health through on-site amenities and driver safety by removing on-street parking incidents.
- Developed and modernized truck parking sites offer a base to apply EV and ZE technology.
- An improvement in freight network facilities has the potential to attract additional economic and financial opportunities.

Recent studies in California and numerous states around the country, as well as the FHWA Truck Parking Development describe the difficulties that truck drivers have finding parking, particularly in and near urban areas. This program is aimed at addressing the critical need for secure and accessible parking facilities for these freight drivers. Under this program, a study would be conducted to provide insight into the demand, logistics, incentives, and regulatory factors that can determine best practices to support the development of truck parking sites and in turn, improve the efficiency of the freight network.

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

## ESTIMATED COST & FUNDING

The cost for this study is estimated to be between \$400,000 to \$600,000.

The project team evaluated potential funding opportunities and identified discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- FHWA: CFI Program

## SAMPLE DEVELOPMENT SCHEDULE

The study will require two to three years for completion, including all required data gathering, analysis, planning, and stakeholder engagement. The sample schedule below summarizes the major milestones in the program development process.

<b>Milestone</b>	<b>Estimated Schedule</b>
<b>Identification of Plan Funding</b>	Ongoing
<b>Planning and Policy Study</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning activities
<i>Data Gathering and Analysis</i>	6-8 months following identification of study funding
<i>Technical Study and Recommendations</i>	18-24 months following data gathering and analysis
<b>Program Development</b>	6-12 months following completion of the study, including jurisdictional reviews and approvals.
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA Review</i>	Exempt

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary initiatives that can supplement the core strategy, such as electric vehicle truck corridors and truck-only lanes. These additional strategies would provide compound benefits to the freight network and have multiplier effects for sustainability benefits.

The potential challenges of program implementation include:

- Identifying appropriate funding sources and obtaining approvals for incentives that will fund development on private sites
- Obtaining the necessary data from private companies to understand current parking dynamics
- Obtaining local jurisdictional support for a program that sites truck parking facilities
- Addressing regulatory and zoning requirements, such as maintaining long-term viability and safety
- Coordinating efforts among private entities, government agencies, and logistics companies

The program's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies to help lead all parties through the complexities of planning and design. Key stakeholders include local jurisdictions, private trucking companies, and parking operators.

## PROGRAM FACT SHEET

# DYNAMIC CURB REGULATION

Analyzing curb space management practices through dynamic or real-time management systems in urban areas can help to alleviate issues along heavily congested corridors. This approach uses technology and data to dynamically allocate curb space for various purposes based on current needs and demand.

## Benefits

- Optimized parking: Dynamic curb regulation allows for real-time monitoring and adjustment of parking and freight loading availability.
- Increased accessibility to delivery points and improved freight movement efficiency.
- Reduced traffic congestion: Efficient curb management can enhance curb space utilization and reduce overall congestion by preventing unnecessary circling for parking. When drivers have real-time information about parking and loading availability, they can more quickly make deliveries and avoid double parking.
- Streamlined truck operations can minimize environmental impacts by reducing emissions during first- and last-mile deliveries.



A study on dynamic curb regulation should identify congested, dense urban locations for a pilot program. The study should seek pilot locations and analyze the potential impacts of dynamic curb regulation on increased revenue generation, enhanced accessibility, improved freight and delivery operations, reduced traffic congestion, flexible use of curb space, and using data to make decisions.

In the planning of this project, it is essential to consider the incorporation of complementary initiatives that can complement the core strategy, such as Smart Loading Zones, which allow delivery operators to enroll for Smart Loading permits that can share vehicle location data to seamlessly pay for their use of curbsides on a per-minute basis. Smart Zones can also allow authorized drivers to reserve a space for a limited amount of time through a smartphone app or other mechanism, which can encourage more orderly curbs.

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>

## ESTIMATED COST & FUNDING

The cost for this study is estimated to be between \$500,000 to \$750,000 and will vary depending on the size and whether it recommends a pilot or broader implementation.

The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- Caltrans: Sustainable Transportation Planning Grants
- FHWA: Carbon Reduction Program

## SAMPLE DEVELOPMENT SCHEDULE

The program will require three to five years for full implementation, including all required study, program, and policy development and pilot design. The sample schedule below summarizes the major milestones in the program development process.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Program Development</b>	
<i>Project initiation: Regulatory Policy Framework and Compliance, Technology Assessment, Pilot program design</i>	6-12 months
<i>Community &amp; Stakeholder Outreach and engagement</i>	Ongoing throughout planning and program development activities
<i>Planning and Policy Development</i>	18-24 months following identification of study funding
<i>Program or Pilot implementation, including infrastructure preparation, data collection and analysis, evaluation, and adjustment</i>	18-36 months following the planning study
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA review</i>	Exempt

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary initiatives that can complement the core strategy, such as Smart Loading Zones, which allow delivery operators to enroll for Smart Loading permits that can share vehicle location data to seamlessly pay for their use of curbsides on a per-minute basis. Smart Zones can also allow authorized drivers to reserve a space for a limited amount of time through a smartphone app or other mechanism, which can encourage more orderly curbs.



The potential challenges of program implementation include:

- Jurisdictional coordination
- Creating responsive regulations that adapt to changing conditions and ensure equitable access for various users like vehicles, pedestrians, and cyclists
- Lack of availability of real-time data inputs collected from sensors, cameras, and other technologies.
- Cities have encountered implementation challenges, including local business pushback, technical challenges, and regulatory barriers.

The program's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities of planning and design.

## POLICY FACT SHEET

# OVERWEIGHT TRUCK ROUTE PLANNING

Increasing weight limits along corridors is a strategic way to improve the efficiency of the goods movement system and has the potential to advance the electrification of the freight transportation network.

## Benefits

- Allows for heavier electric freight vehicles to travel along corridors that previously had weight restrictions.
- Removing weight restrictions has potential to advance planning and development of electrification projects along transportation corridors.



Study the potential for increasing weight limits for battery electric medium- and heavy-duty vehicles on Clean Freight Corridors and other truck routes, and policy support for legislative changes. Potential corridors include I-5, I-15, I-8, I-805, SR 905, and SR 11. The result of this study could include recommendations for policy and infrastructure changes to support electric truck operations on these and other routes.

## ESTIMATED COST & FUNDING

A study to develop the policy and evaluate its potential implementation is estimated to cost \$400,000 to \$800,000 depending on the number and degree of detail of corridors studied. It is envisioned that this study would detail the potential policy and regulatory changes needed to enable battery electric vehicles to operate on San Diego and Imperial County highways, including an assessment of the vehicles available in the market that would be deployed in this area. That assessment would enable policymakers to understand what type of wear and tear would be expected on the roadway system and what, if any, infrastructure improvements should be anticipated based on the anticipated reduced lifecycle of roads and bridges.

The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

- Caltrans: Sustainable Transportation Planning Grants
- FHWA: Carbon Reduction Program
- FHWA: Multimodal Project Discretionary Grant Program

## SAMPLE DEVELOPMENT SCHEDULE

The study to develop and evaluate the policy will require two to three years to complete, including all required planning, evaluation, and stakeholder engagement. The sample schedule below summarizes the major milestones in the policy development process.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning and Policy Study</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning and policy development activities
<i>Data Gathering and Analysis</i>	6-8 months following identification of study funding
<i>Technical Study and Recommendations</i>	18-24 months following data gathering and analysis
<b>Policy Development</b>	6-12 months following completion of study, including jurisdictional reviews and approvals
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA review</i>	Exempt

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary satellite initiatives that can enhance the core strategy, such as truck parking, electric truck charging, and truck-only lanes. These additional strategies would provide compound benefits to the freight network and have multiplier effects for sustainability benefits.

The potential challenges of policy implementation include:

- The definition and enforcement of appropriate weight limits
- The additional impacts to infrastructure and a potential increase in wear on routes with increased weight limits, including possible preventive maintenance
- Economic impacts from an increase or decrease in truck volume along roadways
- Public acceptance both at the community and jurisdictional level

The program's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities of planning, policy development, and potential implementation.

## POLICY FACT SHEET

# LOW-EMISSIONS ZONES

Creating defined areas where the use of emitting freight vehicles is regulated can directly influence the vehicle fleet composition on public roadways to help advance the sustainability of our goods movement system and create benefits for the environment and equity. Identifying strategic locations across the region to pilot Low-Emission Zones (LEZs) with location-specific regulations will benefit the health of these communities and provide a framework for region-wide implementation.



## Benefits

- Reduction of air pollution, improvement of public health, lowering of greenhouse gas emissions, and enhancement of quality of life for residents.
- Reduction of congestion from freight traffic and increased efficiency.
- Stimulus for the adoption of cleaner transportation technologies.

Establishing an LEZ in dense urban areas will enhance quality of life for residents and improve equity and health for disadvantaged communities. An LEZ could also catalyze investments in adoption of cleaner transportation technologies by signaling a demand for ZE freight vehicles.

LEZ initiatives can be introduced through regulations and sustainability directives or financial incentives. This study would examine examples nationally and internationally to identify the type of program and incentives that would be most appropriate for Southern California. The study would also consider locations within the region that would be most appropriate to implement a pilot LEZ program.

Similar studies include:

- London LEZ: The zone, which includes most of Greater London, enforces an emissions standard based charge to non-compliant commercial vehicles. With implementation of the LEZ, the zone observed a 44 percent reduction of NO<sub>2</sub> emissions between 2017 and 2020
- City of Santa Monica, Zero Emission Delivery Zone Pilot: In partnership with the Los Angeles Cleantech Incubator, the City deployed a pilot voluntary Zero Emission Delivery Zone. The zone encompasses a 1-square-mile area in the commercial activity core of Santa Monica and prioritizes ZE last-mile delivery. One of the City's goals for the pilot is to provide a blueprint for cities to adopt ZE delivery zones and provide best practices for other ZE zones.

## ESTIMATED COST & FUNDING

The study to evaluate the potential implementation of this policy is estimated to cost \$250,000 to \$500,000 depending on the range of locations and regulations considered.

The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- FHWA: Strengthening Mobility and Revolutionizing Transportation Program
- Caltrans: Sustainable Transportation Planning Grants
- FHWA: Carbon Reduction Program

The **San Diego and Imperial Counties Sustainable Freight Implementation Strategy** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

## SAMPLE DEVELOPMENT SCHEDULE

The policy will require two to four years for completion, including all required planning and public engagement. The sample schedule below summarizes the major milestones in the policy development process.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Policy Study</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning activities
<i>Data Gathering and Analysis</i>	6-8 months following identification of study funding
<i>Pilot or Program Development and Recommendations</i>	12-18 months following data gathering and analysis
<b>Pilot or Program Implementation</b>	12-24 months following completion of pilot or program development, including jurisdictional reviews
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA review</i>	Exempt

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this project, it is essential to consider the incorporation of complementary satellite initiatives that can complement the core strategy, such as cargo bikes, ZE truck charging, and curb regulations.

The potential challenges of policy implementation include:

- Identifying appropriate incentive funding sources

- Ensuring that freight delivery companies have access to clean fuel technology vehicles and charging infrastructure
- Establishing clear and enforceable emission standards and restrictions, along with defining the boundaries of LEZs
- Ensuring widespread compliance and enforcement mechanisms to identify and penalize high-emission vehicles, if regulatory approach is taken
- Obtaining appropriate approvals if regulatory approach is taken

Impacting businesses and considering alternative transportation options for affected businesses and individuals The program's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities of planning and design.

## POLICY FACT SHEET

# RECOMMENDATIONS ON LAND USE COMPATIBILITY

Land use strategies related to freight can support freight operations while minimizing adverse impacts on local residents and the environment. A study to identify recommendations on land use compatibility will support the creation of benefits for the environment, safety, and equity, while meeting freight operational needs.

## Benefits

- More efficient land utilization and decreased land-use disputes.
- Increased community cohesion, improved quality of life for residents, and enhanced safety.
- Minimized noise and visual impacts on residents.
- Improved freight capacity while reducing congestion.
- Improved accessibility to the freight transportation network for communities and businesses.

Freight generating land uses can bring benefits to a region by providing jobs, tax dollars, and proximity of goods to growing populations and businesses. However, negative impacts associated with freight and industrial land uses include congestion, air quality and greenhouse gas emissions, noise, and safety. Vulnerable communities often receive significant environmental impacts from freight generating land uses. Developing recommendations on land use compatibility for freight will allow freight operations to provide benefits to the region while identifying opportunities to minimize adverse impacts.

Recommendations on land use compatibility will consider truck parking, warehouses, and industrial uses, as well as increasing buffer zones near residential, schools, and other sensitive uses. Adequate and strategically located authorized truck parking can increase efficiency, safety, and environmental benefits by reducing the need for driver circulation and conflicts with sensitive land uses by parking in unauthorized locations. Recommendations will consider appropriate areas to maintain or add truck parking and industrial land use availability.



The ***San Diego and Imperial Counties Sustainable Freight Implementation Strategy*** is reviewing and evaluating a wide range of projects, programs, policies, and workplace development strategies to help improve San Diego's regional goods movement system. For more details, please visit: <https://www.sandag.org/projects-and-programs/goods-movement-planning/>.

## ESTIMATED COST & FUNDING

The study to evaluate recommendations on land use compatibility is estimated to cost \$400,000 to \$600,000 depending on the scope of stakeholder and community engagement and if design guidelines are included.

The project team evaluated potential funding opportunities and identified several discretionary funding programs for which this strategy may be eligible. The most promising funding opportunities include:

- Caltrans: Sustainable Transportation Planning Grants
- FHWA: Carbon Reduction Program

## SAMPLE DEVELOPMENT SCHEDULE

The policy will require one to two years for completion, including all required planning and public engagement. The sample schedule below summarizes the major milestones in the policy development process.

Milestone	Estimated Schedule
<b>Identification of Project Funding</b>	Ongoing
<b>Planning &amp; Policy Study</b>	
<i>Community &amp; Stakeholder Outreach</i>	Ongoing throughout planning activities
<i>Data Gathering and Analysis</i>	2 months following identification of study funding
<i>Recommendations</i>	10-22 months following data gathering and analysis
<b>Environmental &amp; Regulatory Review</b>	
<i>CEQA/NEPA review</i>	Exempt

## IMPLEMENTATION CONSIDERATIONS & CHALLENGES

In the planning of this study, it is essential to consider the incorporation of complementary satellite initiatives that can enhance the core strategy, including LEZs, truck charging and staging areas, and truck parking site development. The integration of these auxiliary strategies holds the potential to enhance the overall efficiency and effectiveness of the transportation network.

The potential challenges of policy implementation include:

- Extensive research and analysis to ensure that land use recommendations align with community needs, environmental considerations, and economic development goals
- Gaining buy-in and cooperation from various stakeholders, including property owners, local governments, and developers



- Navigating zoning regulations, land use planning, and community input while striving for optimal land use compatibility demands effective communication, collaboration, and a fine-tuned policy framework

The program's lead agencies can mitigate these challenges through early coordination with stakeholders and regulatory agencies, to help lead all parties through the complexities implementing this planning policy.