SUBREGIONAL SUSTAINABLE COMMUNITIES STRATEGIES APPENDIX

REGIONAL TRANSPORTATION PLAN
2012–2035
SUSTAINABLE COMMUNITIES STRATEGY
Towards a Sustainable Future
RTP

Southern California Association of Governments

ADOPTED APRIL 2012

SUBREGIONAL SUSTAINABLE COMMUNITIES STRATEGIES

Framework and Guidelines for Subregional Sustainable Communities Strategy

I. Introduction

SB 375 (Steinberg), also known as California's Sustainable Communities Strategy and Climate Protection Act, is a new state law which became effective January 1, 2009. SB 375 calls for the integration of transportation, land use, and housing planning, and also establishes the reduction of greenhouse gas (GHG) emissions as one of the main goals for regional planning. SCAG, working with the individual County Transportation Commissions (CTCs) and the subregional organizations within the SCAG region, is responsible for implementing SB 375 in the Southern California region. Success in this endeavor is dependent on collaboration with a range of public and private partners throughout the region.

Briefly summarized here, SB 375 requires SCAG as the Metropolitan Planning Organization to:

- Prepare a Sustainable Communities Strategy (SCS) as part of the 2012 Regional Transportation Plan (RTP). The SCS will meet a State-determined regional GHG emission reduction target, if it is feasible to do so.
- Prepare an Alternative Planning Strategy (APS) that is not part of the RTP if the SCS is unable to meet the regional target.
- Integrate SCAG planning processes, in particular assuring that the Regional Housing Needs Assessment (RHNA) is consistent with the SCS, at the jurisdiction level.
- Specific to SCAG only, allow for subregional SCS/APS development.
- Develop a substantial public participation process involving all stakeholders.

Unique to the SCAG region, SB 375 provides that "a subregional council of governments and the county transportation commission may work together to propose the sustainable communities strategy and an alternative planning strategy . . . for that subregional area." Govt. Code §65080(b)(2)(C). In addition, SB 375 authorizes that SCAG "may adopt a framework for a subregional SCS or a subregional APS to address the intraregional land use, transportation, economic, air quality, and climate policy relationships." Id. Finally, SB 375 requires SCAG to "develop overall guidelines, create public participation plans, ensure coordination, resolve conflicts, make sure that the overall plan complies with applicable legal requirements, and adopt the plan for the region." Id. The intent of this Framework and Guidelines for Subregional Sustainable Communities Strategy (also referred to herein as the "Framework and Guidelines" or the "Subregional Framework and Guidelines") is to offer the SCAG region's subregional agencies the highest degree of autonomy, flexibility and responsibility in developing a program and set of implementation strategies for their subregional areas. This will allow the subregional strategies to better reflect the issues, concerns, and future vision of the region's collective jurisdictions with the input of the fullest range of stakeholders. In order to achieve these objectives, it is necessary for SCAG to develop measures that assure equity, consistency and coordination, such that SCAG can incorporate the subregional SCSs in its regional SCS which will be adopted as part of the 2012 RTP pursuant to SB 375. For that reason, this Framework and Guidelines establishes standards for the subregion's work in preparing and submitting subregional strategies, while also laying out SCAG's role in facilitating and supporting the subregional effort with data, tools, and other assistance.

While the Framework and Guidelines are intended to facilitate the specific subregional option to develop the SCS (and APS if necessary) as described in SB 375, SCAG encourages the fullest possible participation from all subregional organizations. As SCAG undertakes implementation of SB 375 for the first time, SCAG has also designed a "collaborative" process, in cooperation with the subregions, that allows for robust subregional participation for subregions that choose not to exercise their statutory option.

II. Eligibility and Participation

SB 375 allows for subregional councils of governments in the SCAG region to have the option to develop the SCS (and the APS if necessary) for their area. SCAG interprets this option as being available to any subregional organization recognized by SCAG, regardless of whether the organization is formally established as a "subregional council of governments."

County Transportation Commissions (CTCs) play an important and necessary role in the development of a subregional SCS. Any subregion that chooses to develop a subregional strategy will need to work closely with the respective CTC in its subregional area in order to identify and integrate transportation projects and policies. Beyond working with CTCs, SCAG encourages partnership efforts in the development of subregional strategies, including partnerships between and among subregions.

Subregional agencies must formally indicate to SCAG, in writing, by December 31, 2009 if they intend to exercise this option to develop their own SCS. Subregions that choose to develop an SCS for their area must do so in a manner consistent with this Framework and Guidelines. The subregion's intent to exercise its statutory option to prepare the strategy for their area must be decided and communicated through formal action of the subregional agency's governing board. Subsequent to receipt of any subregion's intent to develop and adopt an SCS, SCAG will convene discussions regarding a formal written agreement between SCAG and the subregion, which may be revised if necessary, as the SCS process is implemented.

III. Framework

The Framework portion of this document covers regional objectives and policy considerations, and provides general direction to the subregions in preparing their own SCS, and APS if necessary.

A. SCAG'S PRELIMINARY GOALS FOR IMPLEMENTING SB 375 ARE AS FOLLOWS:

- Achieve the regional GHG emission reduction target for cars and light trucks through an SCS.
- Fully integrate SCAG's planning processes for transportation, growth, intergovernmental review, land use, housing, and the environment.
- Seek areas of cooperation that go beyond the procedural statutory requirements, but that also result in regional plans and strategies that are mutually supportive of a range of goals.
- Build trust by providing an interactive, participatory and collaborative process for all stakeholders. Provide, in particular, for the robust participation of local jurisdictions, subregions and CTCs in the development of the SCAG regional SCS and implementation of the subregional provisions of the law.
- Assure that the SCS adopted by SCAG and submitted to California Air Resources Board (ARB) is a reflection of the region's collective growth strategy and vision for the future.
- Develop strategies that incorporate and are respectful of local and subregional priorities, plans, and projects.

B. FLEXIBILITY

Subregions may develop any appropriate strategy to address the region's greenhouse gas reduction goals and the intent of SB 375. While subregions will be provided with SCAG data, and with a conceptual or preliminary scenario to use as a helpful starting point, they may employ any combination of land use policy change, transportation policy, and transportation investment, within the specific parameters described in the Guidelines.

C. OUTREACH EFFORT AND PRINCIPLES

Subregions are required to conduct an open and participatory process that includes the fullest possible range of stakeholders. As further discussed within the Guidelines, SCAG amended its existing Public Participation Plan (PPP) to describes SCAG's responsibilities in complying with the outreach requirements of SB 375 and other applicable laws and regulations. SCAG will fulfill its outreach requirements for the regional SCS/APS which will include outreach activities regarding the subregional SCS/APS. Subregions are also encouraged to design their own outreach process that meets each subregion's own needs and reinforces the spirit of openness and full participation. To the extent that subregions do establish their own outreach process, this process should be coordinated with SCAG's outreach process.

D. COMMUNICATION AND COORDINATION

Subregions developing their own SCS are strongly encouraged to maintain regular communication with SCAG staff, the respective CTC, their jurisdictions and other stakeholders, and other subregions if necessary, to review issues as they arise and to assure close coordination. Mechanisms for ongoing communication should be established in the early phases of strategy development.

E. PLANNING CONCEPTS

SCAG, its subregions, and member cities have established a successful track record on a range of land use and transportation planning approaches through the on-going SCAG Compass Blueprint Program, including approximately 60 local demonstration projects completed to date. Subregions are encouraged to capture, further develop and build off the concepts and approaches of the Compass Blueprint program. In brief, these include developing transit-oriented, mixed use, and walkable communities, and providing for a mix of housing and jobs.

IV. Guidelines

These Guidelines describe specific parameters for the subregional SCS/APS effort under SB 375, including process, deliverables, data, documentation, and timelines. As described above, the Guidelines are created to ensure that the region can successfully incorporate strategies developed by the subregions into the regional SCS, and that the region can comply with its own requirements under SB 375. Failure to proceed in a manner consistent with the Guidelines will result in SCAG not accepting a subregion's submitted strategy.

A. SUBREGIONAL PROCESS

(1) Subregional Sustainable Communities Strategy

Subregions that choose to exercise their optional role under SB 375 will develop and adopt a subregional Sustainable Communities Strategy. That strategy must contain all of the required elements, and follow all procedures, as described in SB 375. Subregions may choose to further develop an Alternative Planning Strategy (APS), according to the procedures and requirements described in SB 375. If subregions prepare an APS, they must prepare a Sustainable Communities Strategy first, in accordance with SB 375. A subregional APS is not "in lieu of" a subregional SCS, but in addition to the subregional SCS. In part, an APS must identify the principal impediments to achieving the targets within the SCS. The APS must show how the GHG emission targets would be achieved through alternative development patterns, infrastructure, and additional transportation measures or policies. SCAG encourages subregions to focus on feasible strategies that can be included in the SCS.

The subregional SCS must include all components of a regional SCS as described in SB 375, and outlined below:

1. identify the general location of uses, residential densities, and building intensities within the subregion;
2. identify areas within the subregion sufficient to house all the population of the subregion, including all economic segments of the population, over the course of the planning period of the RTP taking into account net migration into the region, population growth, household formation and employment growth;
3. identify areas within the subregion sufficient to house an eight-year projection of the regional housing need for the subregion pursuant to Section 65584;
4. identify a transportation network to service the transportation needs of the subregion;
5. gather and consider the best practically available scientific information regarding resource areas and farmland in the subregion as defined in subdivisions (a) and (b) of Section 65080.01;
6. consider the state housing goals specified in Sections 65580 and 65581;
7. set forth a forecasted development pattern for the subregion, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the ARB; and
8. allow the RTP to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506). See, Government Code §65080(b)(2)(B).

In preparing the subregional SCS, the subregion will consider feasible strategies, including local land use policies, transportation infrastructure investment (e.g., transportation projects), and other transportation policies such as Transportation Demand Management (TDM) strategies (which includes pricing), and Transportation System Management (TSM) strategies. Technological measures may be included if they exceed measures captured in other state and federal requirements (e.g., AB32).

As discussed further below (under "Documentation"), subregions need not constrain land use strategies considered for the SCS to current General Plans. In other words, the adopted strategy need not be fully consistent with local General Plans currently in place. However, should the adopted subregional strategy deviate from General Plans, subregions will need to demonstrate the feasibility of the strategy by documenting any affected jurisdictions' willingness to adopt the necessary General Plan changes.

The regional SCS shall be part of the 2012 RTP. Therefore, for transportation investments included in a subregional SCS to be valid, they must also be included in the 2012 RTP. Further, such projects need to be scheduled in the RTIP for construction completion by the target years (2020 and 2035) in order to demonstrate any benefits as part of the SCS. As such, subregions will need to collaborate with the respective CTC in their area to coordinate the subregional SCS with future transportation investments. It should also be noted that the California Transportation Commission is updating their RTP Guidelines. This topic is likely to be part of further discussion through the SCS process as well.

SCAG will accept and incorporate the subregional SCS, unless (a) it does not comply with SB 375, (b) it is does not comply with federal law, or (c) it is does not comply with SCAG's Subregional Framework and Guidelines. In the event that a compiled regional SCS, including subregional submissions, does not achieve the regional target, SCAG will initiate a process to develop and consider additional GHG emission reduction measures region-wide. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process. Furthermore, SCAG will compile and disseminate performance information on the preliminary regional SCS and its components in order to facilitate regional dialogue. The development of a subregional SCS does not exempt any subregion from further GHG emission reduction measures being included in the regional SCS. Further, all regional measures needed to meet the regional target will be subject to adoption by the Regional Council, and any additional subregional measures beyond the SCS submittal from subregions accepting delegation needed to meet the regional target must also be adopted by the subregional governing body.

(2) Subregional Alternative Planning Strategy (APS)

Subregions are encouraged to focus their efforts on feasible measures that can be included in an SCS. In the event that a subregion chooses to prepare an APS, the content of a subregional APS should be consistent with what is required by SB 375 (see, Government Code §65080(b)(2)(H)), as follows:

1. Shall identify the principal impediments to achieving the subregional SCS
2. May include an alternative development pattern for the subregion pursuant to subparagraphs (B) to (F), inclusive.
3. Shall describe how the alternative planning strategy would contribute to the regional greenhouse gas emission reduction target, and why the development pattern, measures, and policies in the alternative planning strategy are the most practicable choices for the subregion.
4. An alternative development pattern set forth in the alternative planning strategy shall comply with Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, except to the extent that compliance will prevent achievement of the regional greenhouse gas emission reduction targets approved by the ARB.
5. For purposes of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), an alternative planning strategy shall not constitute a land use plan, policy, or regulation, and the inconsistency of a project with an alternative planning strategy shall not be a consideration in determining whether a project may have an environmental effect.

Any precise timing or submission requirements for a subregional APS will be determined based on further discussions with subregional partners. As previously noted, a subregional APS is in addition to a subregional SCS.

(3) Outreach and Process

SCAG will fulfill all of its outreach requirements under SB 375 for the regional SCS/APS, which will include outreach regarding any subregional SCS/APS. SCAG staff has revised its Public Participation Plan to incorporate the outreach requirements of SB 375, and integrate the SB 375 process with the 2012 RTP development as part of SCAG's Public Participation Plan Amendment No. 2, adopted by SCAG's Regional Council on December 3, 2009. Subsequent to the adoption of the PPP Amendment No. 2, SCAG will continue to discuss with subregions and stakeholders the Subregional Framework & Guidelines, which further describe the Public Participation elements of SB 375.

Subregions that elect to prepare their own SCS or APS are encouraged to present their subregional SCS or APS, in coordination with SCAG, at all meetings, workshops and hearings held by SCAG in their respective counties. Additionally, the subregions would be asked to either provide SCAG with their mailing lists so that public notices and outreach materials may also be posted and sent out by SCAG, or SCAG will provide notices and outreach materials to the subregions for their distribution to stakeholders. The SCAG PPP Amendment No. 2 provides that additional outreach may be performed by subregions.

Subregions are strongly encouraged to design and adopt their own outreach processes that mimic the specific requirements imposed on the region under SB 375. Subregional outreach processes should reinforce the regional goal of full and open participation, and engagement of the broadest possible range of stakeholders.

(4) Subregional SCS Approval

It is recommended that the governing board of the subregional agency approve the subregional SCS prior to submission to SCAG. While the exact format is still subject to further discussion, SCAG recommends that there be a resolution from the governing board of the subregion with a finding that the land use strategies included in the subregional SCS are feasible and based upon consultation with the local jurisdictions in the respective subregion. Subregion should consult with their legal counsel as to compliance with the California Environmental Quality Act (CEQA). In SCAG's view, the subregional SCS is not a "project" for the purposes of CEQA; rather, the 2012 RTP which will include the regional SCS is the actual "project" which will be reviewed for environmental impacts pursuant to CEQA. As such, the regional SCS, which will include the subregional SCSs, willundergo a thorough CEQA review. Nevertheless, subregions approving subregional SCSs should consider issuing a notice of exemption under CEQA to notify the public of their "no project" determination and/or to invoke the "common sense" exemption pursuant to CEQA Guidelines §15061(b)(3).

Finally, in accordance with SB 375, subregions are strongly encouraged to work in partnership with the CTC in their area. SCAG can facilitate these arrangements if needed.

(5) Data Standards

SCAG is currently assessing the precise data standards anticipated for the regional and subregional SCS. In particular, SCAG is reviewing the potential use of parcel data and development types currently used for regional planning. At present, the following describes the anticipated data requirements for a subregional SCS.

1. Types of VariablesVariables are categorized into socio-economic variables and land use variables. The socioeconomic variables include population, households, housing units, and employment. The land use variables include land uses, residential densities, building intensities, etc, as described in SB 375.
2. Geographical Levels – SCAG is considering the collection and adoption of the data at a small-area level as optional for local agencies in order to make accessible the CEQA streamlining provisions under SB 375. The housing unit, employment, and the land use variables can be collected at a small-area level for those areas which under SB 375 qualify as containing a "transit priority project" (i.e. within halfmile of a major transit stop or high-quality transit corridor) for purposes of allowing jurisdictions to take advantage of the CEQA streamlining incentives in SB 375. For all other areas in the region, SCAG staff will collect the population, household, employment, and land use variables at the Census tract or Traffic Analysis Zone (TAZ) level.
3. Base Year and Forecast Years – The socio-economic and land use variables will be required for the base year of 2008, and the target years of 2020 and 2035.

(6) Documentation

Subregions are expected to maintain full and complete records related to the development of the subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board.

(7) Timing

An overview schedule of the major milestones of the subregional process and its relationship to the regional SCS/RTP is included below. Subregions must submit the subregional SCS to SCAG by the date prescribed. Further, SCAG will need a preliminary SCS from subregions for the purpose of preparing a project description for the 2012 RTP Program Environmental Impact Report. The precise content of this preliminary submission will be determined based on further discussions. The anticipated timing of this preliminary product is approximately February 2011.

(8) Relationship to Regional Housing Needs Assessment (RHNA) and Housing Element

Although SB 375 calls for an integrated process, subregions are not automatically required to take on RHNA delegation as described in State law if they prepare an SCS/APS. However, SCAG encourages subregions to undertake both processes due to their inherent connections.

SB 375 requires that the RHNA allocated housing units be consistent with the development pattern included in the SCS. See, Government Code §65584.04(i). Population and housing demand must also be proportional to employment growth. At the same time, in addition to the requirement that the RHNA be consistent with the development pattern in the SCS, the SCS must also identify areas that are sufficient to house the regional population by income group through the RTP planning period, and must identify areas to accommodate the region's housing need for the next local Housing Element eight year planning period update. The requirements of the statute are being further interpreted through the RTP guidelines process. Staff intends to monitor and participate in the guideline process, inform stakeholders regarding various material on these issues, and amend, if necessary, these Framework and Guidelines, pending its adoption.

SCAG will be adopting the RHNA and applying it to local jurisdictions at the jurisdiction boundary level. SCAG staff believes that consistency between the RHNA and the SCS may still be accomplished by aggregating the housing units contained in the smaller geographic levels noted in the SCS and including such as part of the total jurisdictional number for RHNA purpose. SCAG staff has concluded that there is no consistency requirement for RHNA purposes at sub-jurisdictional level, even though the SCS is adopted at the smaller geographic level for the opportunity areas.

The option to develop a subregional SCS is separate from the option for subregions to adopt a RHNA distribution, and subject to separate statutory requirements. Nevertheless, subregions that develop and adopt a subregional SCS should be aware that the SCS will form the basis for the allocation of housing need as part of the RHNA process. Further, SCS development requires integration of elements of the RHNA process, including assuring that areas are identified to accommodate the 8 year need for housing, and that housing not be constrained by certain types of local growth controls as described in State law.

SCAG will provide further guidance for subregions and a separate process description for the RHNA.

B. COUNTY TRANSPORTATION COMMISSIONS' ROLES AND RESPONSIBLITIES

Subregions that develop a subregional SCS will need to work closely with the CTCs in their area in order to coordinate and integrate transportation projects and policies as part of the subregional SCS. As discussed above (under "Subregional Sustainable Communities Strategy"), any transportationprojects identified in the subregional SCS must also be included in the 2012 RTP in order to be considered as a feasible strategy. SCAG can help to facilitate communication between subregions and CTCs.

C. SCAG ROLES AND RESPONSIBILITIES

SCAG's roles in supporting the subregional SCS development process are in the following areas:

(1) Preparing and adopting the Framework and Guidelines

SCAG will adopt these Framework and Guidelines in order to assure regional consistency and the region's compliance with law.

(2) Public Participation Plan

SCAG will assist the subregions by developing, adopting and implementing a Public Participation Plan and outreach process with stakeholders. This process includes consultation with congestion management agencies, transportation agencies, and transportation commissions; and SCAG will hold public workshops and hearings. SCAG will also conduct informational meetings in each county within the region for local elected officials (members of the board of supervisors and city councils), to present the draft SCS, and APS if necessary, and solicit and consider input and recommendations.

(3) Methodology

As required by SB 375, SCAG will adopt a methodology for measuring greenhouse gas emission reductions associated with the strategy.

(4) Incorporation/Modification

SCAG will accept and incorporate the subregional SCS unless it does not comply with SB 375, federal law, or the Subregional Framework and Guidelines. As SCAG intends the entire SCS development process to be iterative, SCAG will not amend a locally-submitted SCS. SCAG may provide additional guidance to subregions so that subregions may make amendments to its subregional SCS as part of the iterative process, or request a subregion to prepare an APS if necessary. Further, SCAG can propose additional regional strategies if feasible and necessary to achieve the regional emission reduction target with the regional SCS. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process.

(5) Modeling

SCAG currently uses a Trip-Based Regional Transportation Demand Model and ARB's EMFAC model for emissions purposes. In addition to regional modeling, SCAG is developing tools to evaluate the effects of strategies that are not fully accounted for in the regional model. SCAG is also developing two additional tools—a Land Use Model and an Activity Based Model—to assist in strategy development and measurement of outcomes under SB 375.

In addition to modeling tools which are used to measure results of completed scenarios, SCAG is developing a scenario planning tool for use in workshop settings as scenarios are being created with jurisdictions and stakeholders. The tool will be made available to subregions and local governments for their use in subregional strategy development.

(6) Adoption/Submission to State

After the incorporation of subregional strategies, SCAG will finalize and adopt the regional SCS as part of the 2012 RTP. SCAG will submit the SCS to ARB for review as required in SB 375.

(7) Conflict Resolution

While SB 375 requires SCAG to develop a process for resolving conflicts, it is unclear at this time the nature or purpose of a conflict resolution process as SCAG does not intend to amend a locallysubmitted SCS. As noted above, SCAG will accept the subregional SCS unless it is inconsistent with SB 375, federal law, or the Subregional Framework and Guidelines. SCAG will also request that a subregion prepare an APS if necessary. It is SCAG's intent that the process be iterative and that there be coordination among SCAG, subregions and their respective jurisdictions and CTCs. SCAG is open to further discussion on issues which may generate a need to establish a conflict resolution process as part of the written agreement between SCAG and the subregional organization.

(8) Funding

Funding for subregional activities is not available at this time, and any specific parameters for future funding are speculative. Should funding become available, SCAG anticipates providing a share of available resources to subregions. While there are no requirements associated with potential future funding at this time, it is advisable for subregions to track and record their expenses and activities associated with these efforts.

(9) Preliminary Scenario Planning

SCAG will work with each subregion to collect information and prompt dialogue with each local jurisdiction prior to the start of formal SCS development. This phase of the process is identified as "preliminary scenario planning" in the schedule below. The purpose of this process is to create a base of information to inform SCAG's recommendation of a regional target to ARB prior to June 2010. All subregions are encouraged to assist SCAG in facilitating this process.

(10) Data

SCAG is currently developing, and will provide each subregion with datasets for the following:

1. 2008 Base year;
2. General Plan/Growth projection & distribution;
3. Trend Baseline; and
4. Policy Forecast/SCS.

While the Trend Baseline is a technical projection that provides a best estimate of future growth based on past trends and assumes no general plan land use policy changes, the

Policy Forecast/ SCS is derived using local input through a bottom-up process, reflecting regional policies including transportation investments. Local input is collected from counties, subregions, and local jurisdictions.

Data/GIS maps will be provided to subregions and local jurisdiction for their review. This data and maps include the 2008 base year socioeconomic estimates and 2020 and 2035 socioeconomic forecast. Other GIS maps including the existing land use, the general plan land use, the resource areas, and other important areas identified in SB 375. It should be noted that none of the data/ maps provided were endorsed or adopted by SCAG's Community, Economic and Human Development Committee (CEHD). All data/maps provided are for the purpose of collecting input and comments from subregions and local jurisdictions. This is to initiate dialogue among stakeholders to address the requirements of SB 375 and its implementation.

The list of data/GIS maps include:

1. Existing land use
2. Zoning
3. General plan land use
4. Resource areas include:

a. all publicly owned parks and open space;
b. open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;
c. habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal Endangered Species Act (1973), the California Endangered Species Act, or Native Plant Protection Act;
d. lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;
e. areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;
f. areas containing biological resources as described in Appendix G of the CEQA Guidelines that may be significantly affected by the sustainable communities strategy or the alternative planning strategy; and
g. an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance.

5. Farmland
6. Sphere of influence
7. Transit priority areas
8. City/Census tract boundary with ID
9. City/TAZ boundary with ID

(11) Tools

SCAG is developing a Local Sustainability Planning Model (LSPM) for subregions/local jurisdictions to analyze land use impact. The use of this tool is not mandatory and is at the discretion of the Subregion. The LSPM is a web-based tool that can be used to analyze, visualize and calculate the impact of land use changes on auto ownership, mode use, vehicle miles of travel (VMT), and greenhouse gas emissions in real time. Users will be able to estimate transportation and emissions impacts by modifying land use designations within their community.

Other tools currently maintained by SCAG may be useful to the subregional SCS development effort, including the web-based CaLOTS application. SCAG will consider providing guidance and training on additional tools based on further discussions with subregional partners.

(12) Resources and Technical Assistance

SCAG will assist the subregions by making available technical tools for scenario development as described above. Further, SCAG will assign a staff liaison to each subregion, regardless of whether the subregion exercises its statutory option to prepare an SCS. SCAG staff can participate in subregional workshops, meetings, and other processes at the request of the subregion, and pending funding and availability. SCAG's legal staff will be available to assist with questions related to SB 375 or SCAG's implementation of SB 375. Further, SCAG will prepare materials for its own process in developing the regional SCS, and will make these materials available to subregions.

D. MILESTONES/SCHEDULE

- CARB issues Final Regional Targets – September 2010
- SCS development (preliminary scenario, draft, etc) – through early 2011
- Release Draft RTP/regional SCS for public review – November 2011
- Regional Council adopts RTP/SCS – April 2012

If other milestones are needed, they will be incorporated into the written agreement between SCAG and the Subregion.

Subregional Sustainable Communities Strategy – Gateway Cities Council of Governments (GCCOG) and Orange County Council of Governments (OCCOG)

The Orange County Council of Governments and the Gateway Cities Council of Governments chose to develop their own SCS, and entered into Memoranda of Understanding with SCAG specifying submission schedules and standards for each component of the subregional SCS. The following subregional SCSs have both been formally approved and adopted by their respective councils of government.

EXHIBIT 1 Gateway Cities COG Subregional SCS

MEMORANDUM OF UNDERSTANDING

BY AND BETWEEN

GATEWAY CITIES COUNCIL OF GOVERNMENTS

AND

THE SOUTHERN CALIFORNIA ASSOCATION OF GOVERNMENTS

FOR

GATEWAY CITIES SUSTAINABLE COMMUNITIES STRATEGY

THIS MEMORANDUM OF UNDERSTANDING (hereinafter referred to as "MOU") is entered by and between the Gateway Cities Council of Governments, (hereinafter referred to as "GCCOG"), and the Southern California Association of Governments, (hereinafter referred to as "SCAG"), collectively referred to as the "Parties."

RECITALS:

WHEREAS, Senate Bill 375 (Chapter 728, laws of 2008, "SB 375") requires SCAG to prepare a regional Sustainable Communities Strategy (hereinafter referred to as "SCS" or "Regional SCS") as part of SCAG's Regional Transportation Plan ("RTP") to achieve goals for the reduction of greenhouse gas emissions from automobiles and light trucks in the SCAG region which comprises the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura;

WHEREAS, SB 375 allows GCCOG, as a subregional council of governments for Southeast Los Angeles County, to develop and submit to SCAG a subregional SCS for its jurisdiction (hereinafter referred to as "Gateway Cities SCS");

WHEREAS, as part of its implementation of SB 375, SCAG has developed and adopted a certain "Framework and Guidelines for the Subregional Sustainable Communities Strategy" (hereinafter referred to as "Framework and Guidelines"), attached hereto as Exhibit "A" and incorporated herein by this reference.

WHEREAS, SCAG is required by SB 375 to include a subregional SCS in the regional SCS, to the extent consistent with state and federal law;

WHEREAS, GCCOG and SCAG desire to enter into this MOU to demonstrate mutual commitments to prepare the Gateway Cities SCS.

NOW, THEREFORE, the Parties enter into the following MOU with respect to the matters set forth herein:

1. This MOU establishes the roles, responsibilities, and requirements for GCCOG and SCAG that are necessary to develop a Gateway Cities SCS that shall be included in the regional SCS prepared by SCAG.

2. GCCOG shall prepare the Gateway Cities SCS consistent with SCAG's adopted Framework and Guidelines, as attached hereto, to ensure that the region can successfully incorporate strategies within the Gateway Cities SCS into the Regional SCS, and not inhibit the region from complying with SB 375.

3. GCCOG agrees to comply with the Milestones Schedule, attached hereto as Exhibit "B" and incorporated herein by this reference, and work with SCAG and the other subregions to ensure the successful delivery of a regional SCS by using the Deliverables Template, attached hereto as Exhibit "C" and incorporated by this reference as the primary template for developing a subregional SCS workplan. The Deliverables Template may be subject to change based on direction from the SCAG Regional Council or Community, Economic and Human Development Policy Committee, and approval by GCCOG.

4. GCCOG are encouraged by SCAG to conduct a public participation process in developing the Gateway Cities SCS, above and beyond the process required for the regional SCS required under Section 65080(b)(2)(D)-(E) of the California Government Code. Further, SCAG encourages GCCOG to develop a public participation plan, similar to SCAG's Public Participation Plan adopted in December 2009, for such purposes.

5. GCCOG agrees to participate in all publicly noticed meetings, workshops, hearings, and other outreach activities organized by SCAG within the GCCOG's jurisdiction, at which the regional SCS or Gateway Cities SCS is included on the agenda. All parties shall coordinate with one another during implementation of SCAG's public participation process in order to ensure broad public and stakeholder participation, and to avoid duplication of effort.

6. GCCOG shall retain and deliver to SCAG all documentation pertaining to the Gateway Cities SCS from publicly noticed meetings, workshops, and hearings at which the Gateway Cities SCS is included on the agenda. Such documentation shall include, but is not limited to, meeting notices, agendas, minutes, comments and responses to comments, sign-up sheets, hand-outs, and copies of power point presentations.

7. The Parties acknowledge that population, household, housing, and employment estimates are being prepared by GCCOG and/or its consultants (hereinafter referred to as "GCCOG Dataset"). SCAG agrees to use the GCCOG Dataset as reviewed and approved by

GCCOG, for the Regional SCS and the 2012 RTP; provided, that SCAG, in consultation with GCCOG, may make adjustments to the GCCOG Dataset in order to ensure consistency with SCAG's 2012 RTP growth forecast.

8. The Parties agree and acknowledge that population, household, housing, and employment data submitted to SCAG by GCCOG shall be accurately reflected in all documentation produced by SCAG that relates to the Gateway Cities SCS and the Regional SCS.

9. The Parties agree and acknowledge that RHNA responsibilities shall remain with SCAG, and that GCCOG shall not assume delegation responsibility for RHNA as part of the Gateway Cities SCS development. However, GCCOG is not precluded by this MOU from assuming delegation responsibility for RHNA as part of a subsequent, separate agreement.

10. SCAG agrees that in addition to preparation of the Gateway Cities SCS developed under this MOU, development of an Alternative Planning Strategy (APS) by GCCOG is optional. This understanding shall not preclude SCAG from preparing a regional APS pursuant to SB 375.

11. SCAG shall not develop SCS-related targets that are attributable to the subregions. Further, SCAG agrees that it will not impose a penalty on the Gateway Cities subregion if the greenhouse gas targets, as established by the California Air Resources Board, are not met by the Regional SCS.

12. SCAG shall accept the Gateway Cities SCS prepared in accordance with this MOU as the Gateway Cities subregion's input into the Regional SCS prepared by SCAG.

13. GCCOG and SCAG shall amend this MOU in writing or develop a separate, mutual funding agreement addressing Gateway Cities SCS costs should state or federal funding become available that can be applied toward preparation of the Gateway Cities SCS.

14. GCCOG and SCAG agree to work closely together throughout the Regional SCS process and Gateway Cities SCS process to provide technical input, applicable planning data, and constructive feedback with respect to all documents, products and deliverables developed and associated with the Gateway Cities SCS.

15. SCAG agrees to make good faith efforts to provide GCCOG with assistance, including tools and models in its possession, as requested by GCCOG in evaluating preliminary Gateway Cities SCS growth and green house gas ("GHG") estimates.

16. SCAG agrees to make good faith efforts to provide GCCOG with assistance with GIS services relating to the development of the Gateway Cities SCS, as requested by GCCOG.

17. GCCOG and SCAG agree to work together in good faith, using reasonable efforts to resolve any unforeseen issues and disputes arising out of the performance of this MOU.

18. GCCOG and SCAG agree in good faith to provide the resources necessary to implement the provisions of the MOU.

19. GCCOG and SCAG agree to defend, indemnify and hold harmless each other, including their officers, agents, elected officials, and employees, from all liability, claims, losses and demands, including defense costs and reasonable attorneys' fees, whether resulting from court action or otherwise, arising out of the acts or omissions of the defending party, its officers, agents, or employees, in the performance of this MOU. When acts or omissions of one party are directed by another party, the party directing the acts or omission shall owe this defense and indemnity obligation to the party following the directions. The provisions of this paragraph shall survive termination of this MOU.

20. This MOU shall be governed by all applicable federal, state, and local laws. The signatories warrant that in the performance of this MOU, each shall comply with all applicable federal, state and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated there under.

21. This MOU may only be modified or amended upon written mutual consent of all signatories. All modifications, amendments, changes and revisions of this MOU in whole or part, and from time to time, shall be binding upon the parties, so long as the same shall be in writing and executed by the signatories.

22. This MOU, including all exhibits and documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the term(s) and condition(s) of the agreement between the parties with respect to the subject matter herein and supersedes all prior representations, understandings and communications. The invalidity in whole or part of any term or condition of this MOU shall not affect the validity of the other term(s) or condition(s).

23. Any party may withdraw from this MOU upon 30 days' written notice to the other, until the due date set forth in Exhibit "B" for submittal to SCAG of the preliminary Gateway Cities SCS. After such due date, any party may withdraw from this MOU only upon mutual written agreement.

24. Each signatory shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any incident of fire, flood; acts of God; commandeering of material, produces, plants or facilities by federal, state or local government; national fuel shortage; or a material act or omission by any other party; when satisfactory evidence of such cause is presented to the other parties, and provided further such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.

25. Any notice sent by first class mail, postage paid, to the address and addressee, shall be deemed to have been given when in the ordinary course it would be delivered. The representatives of the parties who are primarily responsible for the administration of this MOU, and to whom notices, demands and communications shall be given are as detailed below. If there are any changes in the names and/or addresses listed below, the party desiring to make such changes shall give a written notice to the other respective parties within five (5) days of such change.

Gateway Cities Council of Governments
Attention: Richard Powers, Executive Director
16401 Paramount Blvd
Paramount, CA 90723

Southern California Association of Governments
Attention: Hasan Ikhrata, Executive Director
818 West Seventh Street, 12th Floor
Los Angeles, CA 90017-3435

26. This MOU shall continue in full force and effect from the Effective Date up to and until the date that the Regional SCS is adopted by SCAG's Regional Council, unless otherwise terminated earlier in accordance with section 23 of this MOU. The Effective Date of this MOU shall mean the date (last date indicated below) that all Parties have fully executed this MOU.

[Signature page to follow.]

IN WITNESS WHEREOF, the Parties hereto have caused this MOU to be executed by their duly authorized representatives.

GATEWAY CITIES COUNCIL OF GOVERNMENTS

Gateway Cities SCS MOU – Page 6 of 6

By: ______________________
Richard Powers, Executive Director

Date: ______________________

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

By: ______________________
Hasan Ikhrata, Executive Director

Date: 10/12/2010

Exhibit A: SCAG's Adopted Framework and Guidelines

Southern California Association of Governments

(Approved by Regional Council - April 1, 2010)

FRAMEWORK AND GUIDELINES for SUBREGIONAL SUSTAINABLE COMMUNITIES STRATEGY

I. INTRODUCTION

SB 375 (Steinberg), also known as California's Sustainable Communities Strategy and Climate Protection Act, is a new state law which became effective January 1, 2009. SB 375 calls for the integration of transportation, land use, and housing planning, and also establishes the reduction of greenhouse gas (GHG) emissions as one of the main goals for regional planning. SCAG, working with the individual County Transportation Commissions (CTCs) and the subregional organizations within the SCAG region, is responsible for implementing SB 375 in the Southern California region. Success in this endeavor is dependent on collaboration with a range of public and private partners throughout the region.

Briefly summarized here, SB 375 requires SCAG as the Metropolitan Planning Organization to:

- Prepare a Sustainable Communities Strategy (SCS) as part of the 2012 Regional Transportation Plan (RTP). The SCS will meet a State-determined regional GHG emission reduction target, if it is feasible to do so.
- Prepare an Alternative Planning Strategy (APS) that is not part of the RTP if the SCS is unable to meet the regional target.
- Integrate SCAG planning processes, in particular assuring that the Regional Housing Needs Assessment (RHNA) is consistent with the SCS, at the jurisdiction level.
- Specific to SCAG only, allow for subregional SCS/APS development.
- Develop a substantial public participation process involving all stakeholders.

Unique to the SCAG region, SB 375 provides that "a subregional council of governments and the county transportation commission may work together to propose the sustainable communities strategy and an alternative planning strategy . . . for that subregional area." Govt. Code §65080(b)(2)(C). In addition, SB 375 authorizes that SCAG "may adopt a framework for a subregional SCS or a subregional APS to address the intraregional land use, transportation, economic, air quality, and climate policy relationships." *Id.* Finally, SB 375 requires SCAG to "develop overall guidelines, create public participation plans, ensure coordination, resolve conflicts, make sure that the overall plan complies with applicable legal requirements, and adopt the plan for the region." *Id.*

The intent of this Framework and Guidelines for Subregional Sustainable Communities Strategy (also referred to herein as the "Framework and Guidelines" or the "Subregional Framework and Guidelines") is to offer the SCAG region's subregional agencies the highest degree of autonomy,

flexibility and responsibility in developing a program and set of implementation strategies for their subregional areas. This will allow the subregional strategies to better reflect the issues, concerns, and future vision of the region's collective jurisdictions with the input of the fullest range of stakeholders. In order to achieve these objectives, it is necessary for SCAG to develop measures that assure equity, consistency and coordination, such that SCAG can incorporate the subregional SCSs in its regional SCS which will be adopted as part of the 2012 RTP pursuant to SB 375. For that reason, this Framework and Guidelines establishes standards for the subregion's work in preparing and submitting subregional strategies, while also laying out SCAG's role in facilitating and supporting the subregional effort with data, tools, and other assistance.

While the Framework and Guidelines are intended to facilitate the specific subregional option to develop the SCS (and APS if necessary) as described in SB 375, SCAG encourages the fullest possible participation from all subregional organizations. As SCAG undertakes implementation of SB 375 for the first time, SCAG has also designed a "collaborative" process, in cooperation with the subregions, that allows for robust subregional participation for subregions that choose not to exercise their statutory option.

II. ELIGIBILITY AND PARTICIPATION

SB 375 allows for subregional councils of governments in the SCAG region to have the option to develop the SCS (and the APS if necessary) for their area. SCAG interprets this option as being available to any subregional organization recognized by SCAG, regardless of whether the organization is formally established as a "subregional council of governments."

County Transportation Commissions (CTCs) play an important and necessary role in the development of a subregional SCS. Any subregion that chooses to develop a subregional strategy will need to work closely with the respective CTC in its subregional area in order to identify and integrate transportation projects and policies. Beyond working with CTCs, SCAG encourages partnership efforts in the development of subregional strategies, including partnerships between and among subregions.

Subregional agencies must formally indicate to SCAG, in writing, by December 31, 2009 if they intend to exercise this option to develop their own SCS. Subregions that choose to develop an SCS for their area must do so in a manner consistent with this Framework and Guidelines. The subregion's intent to exercise its statutory option to prepare the strategy for their area must be decided and communicated through formal action of the subregional agency's governing board. Subsequent to receipt of any subregion's intent to develop and adopt an SCS, SCAG will convene discussions regarding a formal written agreement between SCAG and the subregion, which may be revised if necessary, as the SCS process is implemented.

III. FRAMEWORK

The Framework portion of this document covers regional objectives and policy considerations, and provides general direction to the subregions in preparing their own SCS, and APS if necessary.

A. SCAG's preliminary goals for implementing SB 375 are as follows:

- Achieve the regional GHG emission reduction target for cars and light trucks through an SCS.
- Fully integrate SCAG's planning processes for transportation, growth, intergovernmental review, land use, housing, and the environment.
- Seek areas of cooperation that go beyond the procedural statutory requirements, but that also result in regional plans and strategies that are mutually supportive of a range of goals.
- Build trust by providing an interactive, participatory and collaborative process for all stakeholders. Provide, in particular, for the robust participation of local jurisdictions, subregions and CTCs in the development of the SCAG regional SCS and implementation of the subregional provisions of the law.
- Assure that the SCS adopted by SCAG and submitted to California Air Resources Board (ARB) is a reflection of the region's collective growth strategy and vision for the future.
- Develop strategies that incorporate and are respectful of local and subregional priorities, plans, and projects.

B. Flexibility

Subregions may develop any appropriate strategy to address the region's greenhouse gas reduction goals and the intent of SB 375. While subregions will be provided with SCAG data, and with a conceptual or preliminary scenario to use as a helpful starting point, they may employ any combination of land use policy change, transportation policy, and transportation investment, within the specific parameters described in the Guidelines.

C. Outreach Effort and Principles

Subregions are required to conduct an open and participatory process that includes the fullest possible range of stakeholders. As further discussed within the Guidelines, SCAG amended its existing Public Participation Plan (PPP) to describes SCAG's responsibilities in complying with the outreach requirements of SB 375 and other applicable laws and regulations. SCAG will fulfill its outreach requirements for the regional SCS/APS which will include outreach activities regarding the subregional SCS/APS. Subregions are also encouraged to design their own outreach process that meets each subregion's own needs and reinforces the spirit of openness and full participation. To the extent that subregions do establish their own outreach process, this process should be coordinated with SCAG's outreach process.

D. Communication and Coordination

Subregions developing their own SCS are strongly encouraged to maintain regular communication with SCAG staff, the respective CTC, their jurisdictions and other stakeholders, and other subregions if necessary, to review issues as they arise and to assure close coordination. Mechanisms for on-going communication should be established in the early phases of strategy development.

E. Planning Concepts

SCAG, its subregions, and member cities have established a successful track record on a range of land use and transportation planning approaches through the on-going SCAG Compass Blueprint Program, including approximately 60 local demonstration projects completed to date. Subregions are

encouraged to capture, further develop and build off the concepts and approaches of the Compass Blueprint program. In brief, these include developing transit-oriented, mixed use, and walkable communities, and providing for a mix of housing and jobs.

IV. GUIDELINES

These Guidelines describe specific parameters for the subregional SCS/APS effort under SB 375, including process, deliverables, data, documentation, and timelines. As described above, the Guidelines are created to ensure that the region can successfully incorporate strategies developed by the subregions into the regional SCS, and that the region can comply with its own requirements under SB 375. Failure to proceed in a manner consistent with the Guidelines will result in SCAG not accepting a subregion's submitted strategy.

A. Subregional Process

(1) Subregional Sustainable Communities Strategy

Subregions that choose to exercise their optional role under SB 375 will develop and adopt a subregional Sustainable Communities Strategy. That strategy must contain all of the required elements, and follow all procedures, as described in SB 375. Subregions may choose to further develop an Alternative Planning Strategy (APS), according to the procedures and requirements described in SB 375. If subregions prepare an APS, they must prepare a Sustainable Communities Strategy first, in accordance with SB 375. A subregional APS is not "in lieu of" a subregional SCS, but in addition to the subregional SCS. In part, an APS must identify the principal impediments to achieving the targets within the SCS. The APS must show how the GHG emission targets would be achieved through alternative development patterns, infrastructure, and additional transportation measures or policies. SCAG encourages subregions to focus on feasible strategies that can be included in the SCS.

The subregional SCS must include all components of a regional SCS as described in SB 375, and outlined below:

(i.) identify the general location of uses, residential densities, and building intensities within the subregion;
(ii.) identify areas within the subregion sufficient to house all the population of the subregion, including all economic segments of the population, over the course of the planning period of the RTP taking into account net migration into the region, population growth, household formation and employment growth;
(iii.) identify areas within the subregion sufficient to house an eight-year projection of the regional housing need for the subregion pursuant to Section 65584;
(iv.) identify a transportation network to service the transportation needs of the subregion;
(v.) gather and consider the best practically available scientific information regarding resource areas and farmland in the subregion as defined in subdivisions (a) and (b) of Section 65080.01;
(vi.) consider the state housing goals specified in Sections 65580 and 65581;
(vii.) set forth a forecasted development pattern for the subregion, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the ARB; and

(viii.) allow the RTP to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506). See, Government Code §65080(b)(2)(B).

In preparing the subregional SCS, the subregion will consider feasible strategies, including local land use policies, transportation infrastructure investment (e.g., transportation projects), and other transportation policies such as Transportation Demand Management (TDM) strategies (which includes pricing), and Transportation System Management (TSM) strategies. Technological measures may be included if they exceed measures captured in other state and federal requirements (e.g., AB32).

As discussed further below (under "Documentation"), subregions need not constrain land use strategies considered for the SCS to current General Plans. In other words, the adopted strategy need not be fully consistent with local General Plans currently in place. However, should the adopted subregional strategy deviate from General Plans, subregions will need to demonstrate the feasibility of the strategy by documenting any affected jurisdictions' willingness to adopt the necessary General Plan changes.

The regional SCS shall be part of the 2012 RTP. Therefore, for transportation investments included in a subregional SCS to be valid, they must also be included in the 2012 RTP. Further, such projects need to be scheduled in the RTIP for construction completion by the target years (2020 and 2035) in order to demonstrate any benefits as part of the SCS. As such, subregions will need to collaborate with the respective CTC in their area to coordinate the subregional SCS with future transportation investments. It should also be noted that the California Transportation Commission is updating their RTP Guidelines. This topic is likely to be part of further discussion through the SCS process as well.

SCAG will accept and incorporate the subregional SCS, unless (a) it does not comply with SB 375, (b) it is does not comply with federal law, or (c) it is does not comply with SCAG's Subregional Framework and Guidelines. In the event that a compiled regional SCS, including subregional submissions, does not achieve the regional target, SCAG will initiate a process to develop and consider additional GHG emission reduction measures region-wide. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process. Furthermore, SCAG will compile and disseminate performance information on the preliminary regional SCS and its components in order to facilitate regional dialogue. The development of a subregional SCS does not exempt any subregion from further GHG emission reduction measures being included in the regional SCS. Further, all regional measures needed to meet the regional target will be subject to adoption by the Regional Council, and any additional subregional measures beyond the SCS submittal from subregions accepting delegation needed to meet the regional target must also be adopted by the subregional governing body.

(2) Subregional Alternative Planning Strategy (APS)

Subregions are encouraged to focus their efforts on feasible measures that can be included in an SCS. In the event that a subregion chooses to prepare an APS, the content of a subregional APS should be consistent with what is required by SB 375 (*see*, Government Code §65080(b)(2)(H)), as follows:

(i.) Shall identify the principal impediments to achieving the subregional SCS.

(ii.) May include an alternative development pattern for the subregion pursuant to subparagraphs (B) to (F), inclusive.
(iii.) Shall describe how the alternative planning strategy would contribute to the regional greenhouse gas emission reduction target, and why the development pattern, measures, and policies in the alternative planning strategy are the most practicable choices for the subregion.
(iv.) An alternative development pattern set forth in the alternative planning strategy shall comply with Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, except to the extent that compliance will prevent achievement of the regional greenhouse gas emission reduction targets approved by the ARB.
(v.) For purposes of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), an alternative planning strategy shall not constitute a land use plan, policy, or regulation, and the inconsistency of a project with an alternative planning strategy shall not be a consideration in determining whether a project may have an environmental effect.

Any precise timing or submission requirements for a subregional APS will be determined based on further discussions with subregional partners. As previously noted, a subregional APS is in addition to a subregional SCS.

(3) Outreach and Process

SCAG will fulfill all of its outreach requirements under SB 375 for the regional SCS/APS, which will include outreach regarding any subregional SCS/APS. SCAG staff has revised its Public Participation Plan to incorporate the outreach requirements of SB 375, and integrate the SB 375 process with the 2012 RTP development as part of SCAG's Public Participation Plan Amendment No. 2, adopted by SCAG's Regional Council on December 3, 2009. Subsequent to the adoption of the PPP Amendment No. 2, SCAG will continue to discuss with subregions and stakeholders the Subregional Framework & Guidelines, which further describe the Public Participation elements of SB 375.

Subregions that elect to prepare their own SCS or APS are encouraged to present their subregional SCS or APS, in coordination with SCAG, at all meetings, workshops and hearings held by SCAG in their respective counties. Additionally, the subregions would be asked to either provide SCAG with their mailing lists so that public notices and outreach materials may also be posted and sent out by SCAG, or SCAG will provide notices and outreach materials to the subregions for their distribution to stakeholders. The SCAG PPP Amendment No. 2 provides that additional outreach may be performed by subregions. Subregions are strongly encouraged to design and adopt their own outreach processes that mimic the specific requirements imposed on the region under SB 375. Subregional outreach processes should reinforce the regional goal of full and open participation, and engagement of the broadest possible range of stakeholders.

(4) Subregional SCS Approval

It is recommended that the governing board of the subregional agency approve the subregional SCS prior to submission to SCAG. While the exact format is still subject to further discussion, SCAG recommends that there be a resolution from the governing board of the subregion with a finding that the land use strategies included in the subregional SCS are feasible and based upon consultation with the local jurisdictions in the respective subregion. Subregion should consult with their legal counsel as to compliance with the California Environmental Quality Act (CEQA). In SCAG's view, the

subregional SCS is not a "project" for the purposes of CEQA; rather, the 2012 RTP which will include the regional SCS is the actual "project" which will be reviewed for environmental impacts pursuant to CEQA. As such, the regional SCS, which will include the subregional SCSs, will undergo a thorough CEQA review. Nevertheless, subregions approving subregional SCSs should consider issuing a notice of exemption under CEQA to notify the public of their "no project" determination and/or to invoke the "common sense" exemption pursuant to CEQA Guidelines § 15061(b)(3).

Finally, in accordance with SB 375, subregions are strongly encouraged to work in partnership with the CTC in their area. SCAG can facilitate these arrangements if needed.

(5) Data Standards

SCAG is currently assessing the precise data standards anticipated for the regional and subregional SCS. In particular, SCAG is reviewing the potential use of parcel data and development types currently used for regional planning. At present, the following describes the anticipated data requirements for a subregional SCS.

1. Types of Variables
   Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables include land uses, residential densities, building intensities, etc, as described in SB 375.

2. Geographical Levels
   SCAG is considering the collection and adoption of the data at a small-area level as optional for local agencies in order to make accessible the CEQA streamlining provisions under SB 375. The housing unit, employment, and the land use variables can be collected at a small-area level for those areas which under SB 375 qualify as containing a "transit priority project" (i.e. within half-mile of a major transit stop or high-quality transit corridor) for purposes of allowing jurisdictions to take advantage of the CEQA streamlining incentives in SB 375.

   For all other areas in the region, SCAG staff will collect the population, household, employment, and land use variables at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years
   The socio-economic and land use variables will be required for the base year of 2008, and the target years of 2020 and 2035.

(6) Documentation

Subregions are expected to maintain full and complete records related to the development of the subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board.

(7) Timing

An overview schedule of the major milestones of the subregional process and its relationship to the regional SCS/RTP is included below. Subregions must submit the subregional SCS to SCAG by the date prescribed. Further, SCAG will need a preliminary SCS from subregions for the purpose of preparing a project description for the 2012 RTP Program Environmental Impact Report. The precise content of this preliminary submission will be determined based on further discussions. The anticipated timing of this preliminary product is approximately February 2011.

(8) Relationship to Regional Housing Needs Assessment (RHNA) and Housing Element

Although SB 375 calls for an integrated process, subregions are not automatically required to take on RHNA delegation as described in State law if they prepare an SCS/APS. However, SCAG encourages subregions to undertake both processes due to their inherent connections.

SB 375 requires that the RHNA allocated housing units be consistent with the development pattern included in the SCS. *See*, Government Code §65584.04(i). Population and housing demand must also be proportional to employment growth. At the same time, in addition to the requirement that the RHNA be consistent with the development pattern in the SCS, the SCS must also identify areas that are sufficient to house the regional population by income group through the RTP planning period, and must identify areas to accommodate the region's housing need for the next local Housing Element eight year planning period update. The requirements of the statute are being further interpreted through the RTP guidelines process. Staff intends to monitor and participate in the guideline process, inform stakeholders regarding various material on these issues, and amend, if necessary, these Framework and Guidelines, pending its adoption.

SCAG will be adopting the RHNA and applying it to local jurisdictions at the jurisdiction boundary level. SCAG staff believes that consistency between the RHNA and the SCS may still be accomplished by aggregating the housing units contained in the smaller geographic levels noted in the SCS and including such as part of the total jurisdictional number for RHNA purpose. SCAG staff has concluded that there is no consistency requirement for RHNA purposes at sub-jurisdictional level, even though the SCS is adopted at the smaller geographic level for the opportunity areas.

The option to develop a subregional SCS is separate from the option for subregions to adopt a RHNA distribution, and subject to separate statutory requirements. Nevertheless, subregions that develop and adopt a subregional SCS should be aware that the SCS will form the basis for the allocation of housing need as part of the RHNA process. Further, SCS development requires integration of elements of the RHNA process, including assuring that areas are identified to accommodate the 8 year need for housing, and that housing not be constrained by certain types of local growth controls as described in State law.

SCAG will provide further guidance for subregions and a separate process description for the RHNA.

B. COUNTY TRANSPORTATION COMMISSIONS' ROLES AND RESPONSIBLITIES

Subregions that develop a subregional SCS will need to work closely with the CTCs in their area in order to coordinate and integrate transportation projects and policies as part of the subregional SCS. As discussed above (under "Subregional Sustainable Communities Strategy"), any transportation

projects identified in the subregional SCS must also be included in the 2012 RTP in order to be considered as a feasible strategy. SCAG can help to facilitate communication between subregions and CTCs.

C. SCAG ROLES AND RESPONSIBLITIES

SCAG's roles in supporting the subregional SCS development process are in the following areas:

(1) Preparing and adopting the Framework and Guidelines

SCAG will adopt these Framework and Guidelines in order to assure regional consistency and the region's compliance with law.

(2) Public Participation Plan

SCAG will assist the subregions by developing, adopting and implementing a Public Participation Plan and outreach process with stakeholders. This process includes consultation with congestion management agencies, transportation agencies, and transportation commissions; and SCAG will hold public workshops and hearings. SCAG will also conduct informational meetings in each county within the region for local elected officials (members of the board of supervisors and city councils), to present the draft SCS, and APS if necessary, and solicit and consider input and recommendations.

(3) Methodology

As required by SB 375, SCAG will adopt a methodology for measuring greenhouse gas emission reductions associated with the strategy.

(4) Incorporation/Modification

SCAG will accept and incorporate the subregional SCS unless it does not comply with SB 375, federal law, or the Subregional Framework and Guidelines. As SCAG intends the entire SCS development process to be iterative, SCAG will not amend a locally-submitted SCS. SCAG may provide additional guidance to subregions so that subregions may make amendments to its subregional SCS as part of the iterative process, or request a subregion to prepare an APS if necessary. Further, SCAG can propose additional regional strategies if feasible and necessary to achieve the regional emission reduction target with the regional SCS. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process.

(5) Modeling

SCAG currently uses a Trip-Based Regional Transportation Demand Model and ARB's EMFAC model for emissions purposes. In addition to regional modeling, SCAG is developing tools to evaluate the effects of strategies that are not fully accounted for in the regional model. SCAG is also developing two additional tools – a Land Use Model and an Activity Based Model – to assist in strategy development and measurement of outcomes under SB 375.

In addition to modeling tools which are used to measure results of completed scenarios, SCAG is developing a scenario planning tool for use in workshop settings as scenarios are being created with jurisdictions and stakeholders. The tool will be made available to subregions and local governments for their use in subregional strategy development.

(6) **Adoption/Submission to State**

After the incorporation of subregional strategies, SCAG will finalize and adopt the regional SCS as part of the 2012 RTP. SCAG will submit the SCS to ARB for review as required in SB 375.

(7) **Conflict Resolution**

While SB 375 requires SCAG to develop a process for resolving conflicts, it is unclear at this time the nature or purpose of a conflict resolution process as SCAG does not intend to amend a locally-submitted SCS. As noted above, SCAG will accept the subregional SCS unless it is inconsistent with SB 375, federal law, or the Subregional Framework and Guidelines. SCAG will also request that a subregion prepare an APS if necessary. It is SCAG's intent that the process be iterative and that there be coordination among SCAG, subregions and their respective jurisdictions and CTCs. SCAG is open to further discussion on issues which may generate a need to establish a conflict resolution process as part of the written agreement between SCAG and the subregional organization.

(8) **Funding**

Funding for subregional activities is not available at this time, and any specific parameters for future funding are speculative. Should funding become available, SCAG anticipates providing a share of available resources to subregions. While there are no requirements associated with potential future funding at this time, it is advisable for subregions to track and record their expenses and activities associated with these efforts.

(9) **Preliminary Scenario Planning**

SCAG will work with each subregion to collect information and prompt dialogue with each local jurisdiction prior to the start of formal SCS development. This phase of the process is identified as "preliminary scenario planning" in the schedule below. The purpose of this process is to create a base of information to inform SCAG's recommendation of a regional target to ARB prior to June 2010. All subregions are encouraged to assist SCAG in facilitating this process.

(10) **Data**

SCAG is currently developing, and will provide each subregion with datasets for the following:

(1) 2008 Base year;
(2) General Plan/Growth projection & distribution;
(3) Trend Baseline; and
(4) Policy Forecast/SCS.

While the Trend Baseline is a technical projection that provides a best estimate of future growth based on past trends and assumes no general plan land use policy changes, the Policy Forecast/ SCS is derived using local input through a bottom-up process, reflecting regional policies including transportation investments. Local input is collected from counties, subregions, and local jurisdictions.

Data/GIS maps will be provided to subregions and local jurisdiction for their review. This data and maps include the 2008 base year socioeconomic estimates and 2020 and 2035 socioeconomic forecast. Other GIS maps including the existing land use, the general plan land use, the resource areas, and other important areas identified in SB 375. It should be noted that none of the data/ maps provided were endorsed or adopted by SCAG's Community, Economic and Human Development Committee (CEHD). All data/maps provided are for the purpose of collecting input and comments from subregions and local jurisdictions. This is to initiate dialogue among stakeholders to address the requirements of SB 375 and its implementation.

The list of data/GIS maps include:

1. Existing land use
2. Zoning
3. General plan land use
4. Resource areas include:
   (a.) all publicly owned parks and open space;
   (b.) open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;
   (c.) habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal Endangered Species Act (1973), the California Endangered Species Act, or Native Plant Protection Act;
   (d.) lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;
   (e.) areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;
   (f.) areas containing biological resources as described in Appendix G of the CEQA Guidelines that may be significantly affected by the sustainable communities strategy or the alternative planning strategy; and
   (g.) an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance.
5. Farmland
6. Sphere of influence
7. Transit priority areas
8. City/Census tract boundary with ID
9. City/TAZ boundary with ID

(11) **Tools**

SCAG is developing a Local Sustainability Planning Model (LSPM) for subregions/local jurisdictions to analyze land use impact. The use of this tool is not mandatory and is at the discretion of the Subregion. The LSPM is a web-based tool that can be used to analyze, visualize and calculate the impact of land use changes on auto ownership, mode use, vehicle miles of travel (VMT), and greenhouse gas emissions in real time. Users will be able to estimate transportation and emissions impacts by modifying land use designations within their community.

Other tools currently maintained by SCAG may be useful to the subregional SCS development effort, including the web-based CaLOTS application. SCAG will consider providing guidance and training on additional tools based on further discussions with subregional partners.

(12) Resources and technical assistance

SCAG will assist the subregions by making available technical tools for scenario development as described above. Further, SCAG will assign a staff liaison to each subregion, regardless of whether the subregion exercises its statutory option to prepare an SCS. SCAG staff can participate in subregional workshops, meetings, and other processes at the request of the subregion, and pending funding and availability. SCAG's legal staff will be available to assist with questions related to SB 375 or SCAG's implementation of SB 375. Further, SCAG will prepare materials for its own process in developing the regional SCS, and will make these materials available to subregions.

D. MILESTONES/SCHEDULE

- CARB issues Final Regional Targets – September 2010
- SCS development (preliminary scenario, draft, etc) – through early 2011
- Release Draft RTP/regional SCS for public review – November 2011
- Regional Council adopts RTP/SCS – April 2012

If other milestones are needed, they will be incorporated into the written agreement between SCAG and the Subregion.

Exhibit B: Milestones Schedule

The key milestones and related schedule required as part of the development of the Gateway Cities COG Subregional SCS are as follows:

1. Status report on Preliminary Subregional SCS – Dec 2010
2. Adopted GCCOG Dataset/Delivery to SCAG – Jan 2011
3. Preliminary SCS / for purposes of preparing PEIR project description (intended to be narrative only project description that describes intended strategies or strategy options that are likely to be incorporated into the final Subregional SCS.) – Feb 2011
4. Status report on Draft Subregional SCS – Feb 2011
5. Draft Subregional SCS (containing all components described above) to be incorporated into draft Regional SCS – April 2011
6. Status report on final Subregional SCS – April 2011
7. Final Subregional SCS for incorporation into Regional SCS – June 2011
8. Iterative process, if necessary to meet target – June to November 2011
9. Gateway Cities COG to participate in regional outreach conducted in Orange County – June 2011 to February 2012
10. Regional SCS adoption – April 2012

Exhibit C: Deliverables Template

The Gateway Cities COG Subregional SCS will consist of the following components:

1. Database (GCCOG Dataset) that allocates population, housing, household, and employment to areas of the county. Geographic area should be the smallest level practicable for the COG to produce, preferably at the parcel level. The database must reflect the base year 2008 and each variable in the two GHG target years (2020 and 2035), in accordance with the Data Standards set forth below.
2. A map or series of maps that illustrates the growth distribution described above, and that further delineates uses, intensities, and residential densities, in accordance with the Data Standards set forth below.
3. A listing of transportation projects that are incorporated in the subregional SCS.
4. A listing and description of transportation policies (e.g. TDM, TSM and others) to be employed.
5. Documentation that establishes the process, including the public participation and outreach process used to develop the SCS, and demonstrates the affected jurisdictions willingness to consider general plan changes.
6. A narrative description of the strategies employed to reduce greenhouse gas emissions. A further description of any other strategies that were considered and not ultimately included.

DATA STANDARDS

The following data standards will be used in the development of a subregional SCS:

1. Types of Variables

Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables may include land uses designations, building densities, building intensities, and applicable policies.

2. Geographical Levels

Socio-economic and land-use variables should be provided to SCAG at the smallest geographical level practicable for OCCOG to produce, preferably at the parcel level. At a minimum, such variables will be provided at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years

The socio-economic data and land use variables will be required for the base year of 2008, and as feasible, for the target years of 2020 and 2035.

DOCUMENTATION

Subregions are expected to maintain full and complete records related to the development of the Subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board. Subregions shall include information regarding the status of the documentation as part of the required status reports to SCAG, and copies of the actual documentation shall be submitted to SCAG as part the final Subregional SCS.

CAMBRIDGE SYSTEMATICS

Gateway Cities Council of Governments
Subregional Sustainable Communities Strategy

In Accordance with California Senate Bill 375

final **report**

prepared for

Gateway Cities Council of Governments

prepared by

Cambridge Systematics, Inc.

with

Willdan Engineering
MIG, Inc.
ESTC

June 21, 2011

www.camsys.com

final report

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

In Accordance with California Senate Bill 375

prepared for

Gateway Cities Council of Governments

prepared by

Cambridge Systematics, Inc.
555 12th Street, Suite 1600
Oakland, CA 94607

date

June 21, 2011

Table of Contents

List of Tables

List of Figures

Executive Summary

The Gateway Cities subregion is one of 14 within the Southern California Association of Governments (SCAG). The California law Senate Bill (SB) 375 requires each of the 18 metropolitan planning organizations (MPO) in the State to prepare a Sustainable Communities Strategy (SCS).[1] The requirement applies as each MPO prepares its next update of its Regional Transportation Plan (RTP). Unique to the SCAG region, however, a subregional council of governments, such as the Gateway Cities Council of Governments (COG), and the county transportation commission (Los Angeles County Metropolitan Transportation Authority (LACMTA)) may work together to formulate the SCS for that subregional area. Two of the 14 subregions, Gateway Cities and Orange County, exercised this option. The remaining subregions elected to participate with SCAG in development of the regional SCS.

The Gateway Cities SCS was built first by each city selecting GHG strategies that work for their individual community. These local strategies are a blend of efforts that the Gateway COG and its communities have been pursuing over the last decade and future efforts that each jurisdiction plans to implement over about the next 25 years. The Gateway City communities then integrated these local strategy portfolios with subregional and regional transportation projects located within the subregion that are expected to be part of the 2012 SCAG RTP. The results are a Gateway SCS that will exceed the regional targets set by the California Air Resources Board (CARB).

This report provides the Gateway Cities subregional SCS, documenting the program the subregion's jurisdictions plan to implement to reduce greenhouse gases (GHG) by 2020 and 2035 using transportation and land use strategies throughout the Gateway Cities.

GHG Reduction Results from Gateway Cities

Gateway Cities COG worked with SCAG to obtain the information needed to generate the Gateway Cities subregional baseline emissions per capita in 2005, which is the base year specified by SB 375. This analysis applied the Adopted

[1] Set forth in amendments to the Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, and 65588, and added to Sections 14522.1, 14522.2, and 65080.01 and to amend the Public Resources Code Section 21061.3, add Section 21159.28, and add Chapter 4.2 (commencing with Section 21155) to Division 13 relating to environmental quality.

2008 RTP Growth Forecast and the Local Input/General Plan 2012 RTP Growth Forecast as the per capita denominator for the SB 375 target years of 2020 and 2035. The results of this analysis produced a daily GHG per capita estimate for 2005 of 16.64 lbs of carbon dioxide equivalent (CO_2e) for the Gateway Cities subregion compared to 21.2 lbs CO_2e for the SCAG region.[2] This difference is consistent with the differences between the Gateway Cities subregion and the SCAG region as a whole: higher land use density, lower car ownership per household, higher density and service levels for transit, and lower vehicle miles of travel (VMT) per household. The 16.64 lbs CO_2e per capita in 2005 for the Gateway Cities subregion was used as the benchmark for the Gateway Cities SCS attainment of the CARB targets for the SCAG region. The estimated GHG reductions relative to this benchmark are achieved with the following five bundles of strategies.

- **Transportation Strategies.** Cities and the County submitted approximately 340 strategies.[3] This portfolio generates a significant amount of reduction, the highest GHG reduction after the regional transportation projects. The interactive effects between these strategies and land use (smart growth policies) are accounted for in the land use analysis (described below).
- **Transportation Demand Management (TDM) Strategies.** The focus was on three main categories of TDM: compressed workweek schedules for city employees (12 cities), ridesharing programs for city employees (6 cities), and TDM or Trip Reduction Ordinances for new development (8 cities). This bundle also incorporates the interactive effects between TDM and land use and transit.[4]
- **Land Use.** Of the 26 participating cities, 11 cities chose to evaluate their 2008, 2020, and 2035 default scenarios in the Sustainability Tool (ST). These cities worked with SCAG to revise the 2008 scenario so it more accurately reflected the actual land use at that time. These cities also evaluated their 2020 and 2035 scenarios, which the ST contained as representations of each city's general plan.[5] After these evaluations, most cities made adjustments so the land use patterns in the ST more closely matched their general plan. None of

[2] The unincorporated areas of Gateway Cities subregion are included in the daily GHG per capita baseline.

[3] Approximately 50 additional strategies were either incomplete, did not have sufficient information for analysis, or were not relevant.

[4] The inventory of TDM strategies does not include activities being carried out by private businesses or institutions. Insufficient time and resources prevented a survey.

[5] The ST converts general plan information from each city into 5.5-acre grid cells, where each grid cell is assigned one of 26 possible types of land use. This assignment process provides a reasonable approximation of a city's aggregate land use, but may on occasion assign general plan land use designations to incorrect grid cell types.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

these cities adopted land use strategies for their 2020 or 2035 scenarios that will differ from their general plans. The remaining cities used the ST-equivalents of their adopted general plans (i.e., default scenarios in the ST), which is SCAG's best judgment of city general plans converted to grid cells. The ST has functionality that estimates the interactions between land use and proximity to bus and rail (i.e., fixed guideway) transit node.[6] These are included in the estimated GHG reductions from each city's 2020 and 2035 land use policies.

- **Regional Projects, including Measure R.** Regional transportation projects located within the Gateway Cities will reduce GHG within the subregion. Gateway Cities COG staff determined 17 projects that are included in the RTP, such as multimodal and intermodal facilities; and ramp and freeway improvements, such as carpool (high-occupancy vehicle (HOV)), high-occupancy toll (HOT), and toll lanes. The analysis of their estimated GHG reductions was derived from travel demand model output from LACMTA and SCAG.
- **Interactive Effects Between Land Use and Regional Transit Projects.** The long timeframe for implementation of the Measure R transit projects and the long lead time for redevelopment activities adjacent to new transit justify only attributing estimated GHG reductions resulting from the interaction between land use and Measure R transit projects in the Gateway Cities in 2035 and none in 2020.

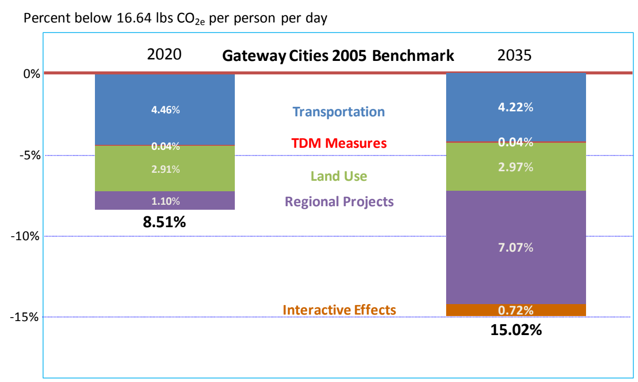
Combining the GHG reduction strategies from the five categories described above, the subregion, as a whole, is expected to reduce GHG per capita from the benchmark in 2005 by approximately 8.4 percent in 2020 and more than 15 percent in 2035. Table ES.1 and Figure ES.1 present these results.

[6] The influence of land use on travel behavior (i.e., mode choice and VMT) is often separated into four characteristics of the built environment: density, diversity (mix of land use types), design, destination (the 4Ds). The ST has a typology of 24 types of land use that incorporate the significant differences in density, diversity, and design, which is three of the four Ds.

Table ES.1 Summary GHG Reduction Results for Gateway Cities from 2005 Benchmark
In lbs CO2e per Person per Day

	Absolute Daily GHG Reduction per Capita		Percentage Daily GHG Reduction per Capita	
	2020	2035	2020	2035
Transportation	0.74	0.70	4.46%	4.22%
TDM	0.007	0.007	0.04%	0.04%
Land Use	0.48	0.49	2.91%	2.97%
Regional Projects	0.18	1.17	1.10%	7.07%
Interactive Effects	N/A	0.12	N/A	0.72%
Total	1.40	2.48	8.51%	15.02%
SCAG Targets			*8%*	*13%*

Figure ES.1 Percentage Daily GHG Reduction Per Capita in Gateway Cities
In lbs CO_2e per Person per day from 2005 Benchmark



1.0 Introduction

1.1 Gateway Cities COG

The Gateway Cities make up the area of Los Angeles County generally bordered by the City of Los Angeles on the west, Orange County on the east, the Pomona (SR 60) Freeway on the north, and extending south to the Cities of Long Beach and Avalon. The entire Gateway Cities region is home to about two million residents. The cities' collaboration dates back to their joint establishment of a regional authority, the Gateway Cities Council of Governments (or COG), in the mid-1990s.

The Gateway Cities COG is a California joint powers authority made up of 27 cities and the County of Los Angeles (three County supervisory districts which cover the unincorporated communities within the subregion), formed for the purpose of providing a vehicle for members to voluntarily engage in regional and cooperative planning and coordination of government services for the collective benefit of the residents of Southeast Los Angeles County. The goal and intent of the COG are to foster voluntary cooperation among cities and the County in the areas of transportation, air quality, housing, and economic development. The City of Montebello is a member of the Gateway Cities COG, but associates with the San Gabriel Valley COG, of which it is also a member, on housing policy and regulation. Montebello did not participate in this Sustainable Communities Strategy (SCS), leaving 26 participating cities.[7]

In addition to the member jurisdictions, the Gateway Cities COG includes the Port of Long Beach as an ex-officio member. In addition, other agencies that have an informal affiliation with Gateway Cities COG include the Los Angeles County Metropolitan Transportation Authority (LACMTA) and Los Angeles County.

1.2 Purpose of the SCS

In September 2008, the State passed Senate Bill 375 (SB 375), which became effective on January 1, 2009. SB 375 assigns each of California's 18 Metropolitan Planning Organizations (MPO) with targets to reduce greenhouse gas (GHG)

[7] The Los Angeles County Public Works Department provided intercity arterial improvement projects described in detail in Appendix G.

emissions from passenger and light-truck vehicle miles traveled (VMT).[8] These targets have been set for each MPO by the California Air Resources Board (CARB); and in accordance with SB 375, CARB formed the Regional Targets Advisory Committee (RTAC) to advise them on targets. CARB assigned the Southern California Association of Governments (SCAG) a target of 8 percent reduction in per capita GHG (i.e., carbon dioxide equivalent or CO_2e) from 2005 levels by the year 2020 and 13 percent from 2005 levels by 2035.

SB 375 requires each MPO to prepare an SCS as part of its Regional Transportation Plan (RTP) update that specifies how the region will attain the GHG reduction targets it was assigned. The SCS identifies the land use policies, transportation improvements, transportation demand management (TDM) strategies, and other measures that will in combination reduce GHG to achieve the CARB targets. The SCS may only account for estimated GHG reductions from changes in the emissions from the VMT of autos and light trucks. This narrow specification is difficult to fully understand, so we present the following example:

- Suppose a city launched a new transit service that uses hybrid buses, which emit 50 percent less GHG than buses powered by conventional diesel motors. Suppose this program attracted 1,000 new riders, all of whom were each previously driving single-occupant vehicles (SOV), 10 miles daily. The SCS could account for the difference in GHG between the GHG from the new hybrid buses and the 10,000 VMT eliminated from the mode shift of 1,000 SOVs to the new transit service. It could not include the GHG reduced from using hybrid buses instead of conventional diesel-powered buses. This latter reduction was from a technological source (hybrid power) and not from a transportation improvement (new transit service).
- Now, suppose the city also enacted a new smart growth plan that shifted future commercial development from three low-density business parks to high rises in its central business district (CBD). This compact, high-density development pattern shifted another 1,000 SOVs to use the new transit service that would have otherwise commuted five miles on average to the three business parks. The SCS could add this reduction in GHG from 5,000 VMT towards its target. Nevertheless, the SCS could not take credit for any reduction in GHG from the new high-rise office buildings in the CBD because they were built to green building standards (e.g., efficient heating and cooling, recycling, etc.). This latter reduction comes from a stationary source, which is credited under AB 32, but not SB 375.

[8] SB 375 is one part of a broader GHG reduction effort to meet the Assembly Bill 32 – Global Warming Solutions Act of 2006 (AB 32) target of reducing GHG emissions statewide to 1990 levels by 2020.

- Furthermore, suppose the city adopted a TDM ordinance that required all employers to provide discounted transit passes, bike lockers, and flex time schedules to all employees in the CBD. Suppose these TDM programs led to an additional reduction of 10,000 VMT compared to the VMT without such an ordinance. The SCS could add the reduction in GHG from another 10,000 VMT towards its target.

The overall goal of the SCS is to identify and implement land use policies, transportation improvements (including transit), and other supporting strategies that work in combination (i.e., interactions or synergies), which shift drivers from SOVs to transit, carpools, bicycle, or walking. And for those that still drive, the SCS provides strategies that reduce their VMT.

1.3 The SCS Development Process

SCAG is preparing the regional SCS in conjunction with its RTP, and CARB must approve the regional SCS. Unique to the SCAG region, however, a subregional COG, such as the Gateway Cities COG, and the county transportation commission (LACMTA) may work together to formulate the SCS for that subregional area. Two of the 14 subregional COGs, Gateway Cities and Orange County, exercised this option.[9] The remaining COGs elected to participate with SCAG in development of the regional SCS.

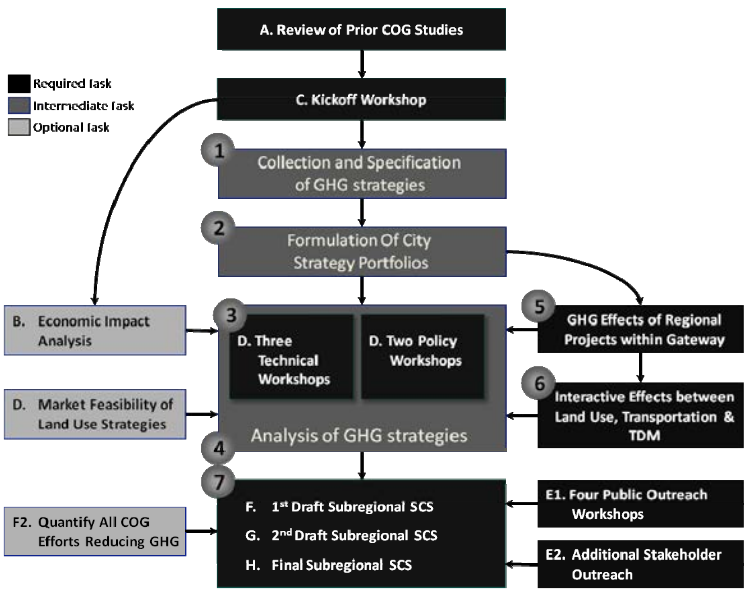
The Gateway Cities COG and its 26 participating member jurisdictions (the City of Montebello participates with the San Gabriel Valley COG) assessed themselves to retain a consulting team led by Cambridge Systematics, Inc. with Willdan Energy Solutions/Engineering, Eric Schreffler Transportation Consultant, and MIG, Inc. to prepare this SCS. The COG decided to develop a subregional SCS that would fulfill virtually all of the requirements set forth by CARB for the regional SCS. This included quantifying the expected GHG reductions in the two target years of 2020 and 2035 from strategies selected and agreed to by the 26 participating cities, Los Angeles County, and LACMTA. Appendix A provides the Memorandum of Understanding (MOU) between SCAG and Gateway Cities COG regarding the subregional SCS, which includes the SCAG Framework and Guidelines for Subregional Sustainable Communities Strategy as Exhibit A.

The consultant team and Gateway Cities COG staff started with a review of the white paper (*Addressing the Requirements of SB 375 at the Sub-Regional Level*, December 2009), which was prepared by Willdan in a prior phase of work; and a survey conducted by Willdan in 2009 of COG sustainability efforts to all member cities (see Figure 1.1). A summary of the white paper can be found in Appendix B.

[9] Gateway Cities COG formally notified SCAG after the COG Board voted on January 6, 2010.

This information was used to prepare a road map and conduct a gap analysis of what information and analysis would be needed to complete a subregional SCS. This road map and gap analysis were used to frame the contents of a kickoff workshop for Gateway Cities COG Board members, city managers, and planning directors, as well as SCAG staff and LACMTA staff. During this kickoff meeting, which took place in October 2010, Gateway Cities COG staff and consultant team worked with city staff and some stakeholders to refine the overall SCS process and a preliminary approach to estimating GHG reduction. This involved augmenting the task plan from that specified in the request for proposals (RFP). The primary augmentations were the addition of intermediate tasks shown in Figure 1.1 below.

Figure 1.1 The SCS Development Process



After the kickoff workshop, the SCS Steering Committee and COG staff acknowledged that no additional funding would be available for the optional tasks. The consultant team, therefore, proceeded with the following required and intermediate tasks:

1. Each of the 26 participating cities included in the Gateway Cities SCS plus the Los Angeles County Public Works Department identified and assisted with the specification of GHG reduction strategies that they would implement. This task constitutes the approach of local formulation of the SCS.
2. Each city conducted between two to five iterations of strategy selections, after which each city formulated a draft strategy portfolio composed of transportation projects (including transit), TDM measures, and land use scenarios.
3. These portfolios were reviewed and refined first by the consultant team, and then by city staff and elected officials during the four technical and two policy workshops. Significant attention was devoted to bundling strategies so that their interactions produce larger effects than if each strategy operated independently.
4. The consultant team refined existing analytical methods on evaluating the performance of GHG strategies to adapt to Gateway Cities' conditions; and applied these methods using sketch planning models, the SCAG Sustainability Tool, and the LACMTA iMpact Tool.[10]
5. In addition to the formulation of each city's portfolio, regional projects were added, and the interaction between these regional projects and land use and transportation improvements was estimated.
6. Once analysis of all city portfolios and regional projects was complete, a further round of analysis evaluated interactions and added these effects to the overall GHG reduction estimates.
7. During the preparation of the draft subregional SCS, the methods, strategies, and some preliminary performance evaluations were presented to the public at four public outreach meetings and a meeting with a group of interested business, housing, and environmental stakeholders.

[10] The iMpact Tool was developed by Cambridge Systematics for LACMTA to facilitate the preparation of a countywide Congestion Mitigation Fee (CMF). The tool is a web-based geographic information system (GIS) application that allows each of the 88 cities and the Los Angeles County to enter candidate CMF transportation projects, edit land use or socioeconomic forecasts, estimate total costs, forecast revenues, and calculate impact fee schedules by jurisdiction. Gateway Cities COG requested that supplemental functionality be added to the iMpact Tool that would calculate the GHG impacts of individual projects. This functionality was used to estimate the GHG of the 340 transportation projects selected by the participating jurisdictions included in this SCS.

8. The results were integrated into the first draft of the SCS, which was provided for review to the 26 participating jurisdictions, COG staff, SCAG, and other stakeholders. The final SCS was delivered to the Board on June 29, 2011.

1.4 Organization of SCS Document

The remainder of this document is organized into 12 sections (including appendices). This organization follows the format specified by CARB and in the MOU between the Gateway Cities COG and SCAG (see Appendix A).

2. **Situation Analysis.** This section is an overview of the demographic, transportation, and economic context for the Gateway subregion's SCS. It consists of the following four subsections:

   2.1 Growth Trends and Projections. The demographic setting for the SCS, including population, employment, household income, ethnicity, age, and land use density and its relevance to transportation planning and land use patterns.

   2.2. Transportation Trends. Existing transportation systems throughout the subregion: facilities, services, and travel patterns. This subsection also describes transportation performance in target years based on funded transportation projects and transportation policies (e.g., Traffic Demand Management (TDM), Transportation System Management (TSM), and others) included in the SCAG RTP and the LACMTA Long-Range Transportation Plan (LRTP).

   2.3. Economic and Fiscal Trends. Current real estate markets, employment trends, industry structure of subregion, and other salient business conditions. This subsection also summarizes economic development and current fiscal conditions of cities.

   2.4. 2005 GHG Performance for Gateway Cities. Presents the analysis used to calculate the 2005 base year GHG per capita baseline.

3. **Subregional SCS Development Process.** This section has three subsections that describe the process Gateway Cities COG followed to initiate and develop its SCS.

   3.1. SCS Delegation to Gateway describes the decision to develop a stand-alone SCS versus one that identified strategies at the jurisdictional and subregional levels. The former calculates the expected GHG reduction and compares the amount reduced to a 2005 benchmark calculated specifically for the subregion.

   3.2. Development of Strategy Portfolios describes the approach beginning with each jurisdiction developing its own portfolio, then integration with other jurisdictions, the Gateway subregion, LACMTA, and the SCAG region.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

   3.3. Stakeholder and public outreach describes the timeline and public outreach activities.

4. **Land Use Characteristics.** This section identifies the general location of uses, residential densities, and building intensities within the subregion. It presents SCAG and State Department of Finance projections for regional population and employment growth trends, and describes revisions made by member jurisdictions. It also summarizes existing general plans and housing elements from all 26 Gateway Cities participating in the SCS.

5. **Growth Accommodations.** This section identifies areas within the subregion sufficient to house all the population of the subregion, including economic segments of the population, over the course of the planning period of the RTP, taking into account net migration into the region, population growth, household formation, and employment growth. It also identifies areas within the Gateway subregion that are sufficient to accommodate the subregion's projected regional housing need for an eight-year period (pursuant to Section 65584 of the Government Code), and an inventory of surplus development capacity of housing sites by city for the current housing element planning period (2006 to 2014).

6. **Affordable Housing Accommodation.** The law (SB 375) requires this analysis show the ability of the land use patterns proposed in the subregional SCS to accommodate the development of housing to meet the Regional Housing Needs Assessment (RHNA) estimated needs of low-, very low-, and extremely low-income households. It also describes the default densities established in Section 65583.2 of the California Government Code, utilized by the State Department of Housing and Community Development, to determine certification of housing elements of the jurisdictions' general plans. This process, however, cannot be completed at this time because the State's RHNA housing allocations will not be provided to SCAG until the fall of 2011, which is some months past the submittal of this SCS to SCAG.

7. **Transportation Network.** This section describes the roadway, transit, TDM, and other strategies employed to reduce GHG emissions.

8. **Resource Areas and Farmland.** This section describes the resource areas and farmland in the subregion as defined in Subdivisions A and B of Government Code §65080.01. Resource areas within the Gateway Cities subregion include:

   a. Publicly-owned parks and open space;

   b. Significant wildlife habitat areas;

   c. Lands subject to conservation or other forms of open space easements; and

   d. Flood prone areas in which development would not meet the requirements of the National Flood Insurance Program.

9. **State Housing Goals.** This section is required to describe the consideration of the state housing goals specified in Government Code §65580 and §65581 and the distribution of SCAG's subregional RHNA allocation among the member jurisdictions. It will identify adequate appropriately zoned sites to accommodate the projected housing needs. The RHNA allocations, however, will not be available until after this SCS is completed, and thus these requirements will be fulfilled as part of the SCAG SCS.

10. **Integration of Development Pattern with the Transportation Network.** This section describes the integration of the forecasted development pattern for the subregion with the transportation network and other transportation measures and policies. It reports interactions or synergies between land use changes and the other transportation measures and policies. These synergies add significant magnitude to the reductions of GHG emissions from individual strategies.

11. **Compliance with Regional and Federal Requirements.** This section consists of three subsections that present the total reduction of GHG from all strategies (including land use).

    11.1 This subsection describes the SCS strategies, growth forecasts, land use, and housing accommodation; and how other elements of the subregional SCS conform to the SCAG RTP and SCS plans and assumptions.

    11.2 This subsection describes how the Gateway Cities Subregional SCS attains GHG per capita reduction relative to the 2005 GHG per capita benchmark specific for the Gateway subregion. It compares these reductions in 2020 and 2035 to the 2005 benchmark GHG per capita presented in Subsection 2.4. These results demonstrate how well the Gateway SCS achieves the GHG emission targets specified for the SCAG region by the CARB.

    11.3 This subsection describes how the Gateway Cities Subregional SCS complies with the Federal Clean Air Act, and specifically with Section 176 of the Federal Clean Air Act (42 U.S.C. Sec. 7506). See Government Code §65080(b)(2)(B). This Federal law forms the statutory basis for the transportation conformity process. While there is no State Implementation Plan (SIP) budget or National Ambient Air Quality Standards (NAAQS) for GHG emissions, current practice treats proposed controls as Transportation Control Measures (TCM) in the SIP and the controls become subject to the timely implementation requirements of the conformity rule.

12. **Financial and Fiscal Implementation**. This section considers the challenges of implementing the SCS strategies, especially those that would be funded by local jurisdictions.

13 **Appendices**. The following 10 appendices provide the underlying data, analytical methods, and other supporting materials for the results presented in this document:

    13.1 **Appendix A.** Process Document. Memorandum of Understanding (MOU) Between SCAG and Gateway Cities Council of Governments for the Gateway Cities Sustainable Communities Strategy, October 7, 2010.

    13.2 **Appendix B.** Prior Studies of the Gateway Cities Council of Governments Relevant to SB 375.

    13.3 **Appendix C.** Public Outreach Materials: Press Release, Stakeholder Invitation list, Workshop Flyer, Open House Looping Presentation, and Display Boards.

    13.4 **Appendix D.** List of Transportation Improvement Projects in the Gateway Cities and the list of Future (Post 2010) Project Costs and Funding.

    13.5 **Appendix E.** Analysis for Transportation Demand Management Strategies in the Gateway Cities.

    13.6 **Appendix F.** Land Use Scenario Strategies from Sustainability Tool (2008, 2020, and 2035).

    13.7 **Appendix G.** List of Regional Transportation Strategies in the Gateway Cities.

    13.8 **Appendix H.** Analysis of Interactive Effects Contributing to Further GHG Reduction in the Gateway Cities.

    13.9 **Appendix I.** CEQA Streamlining.

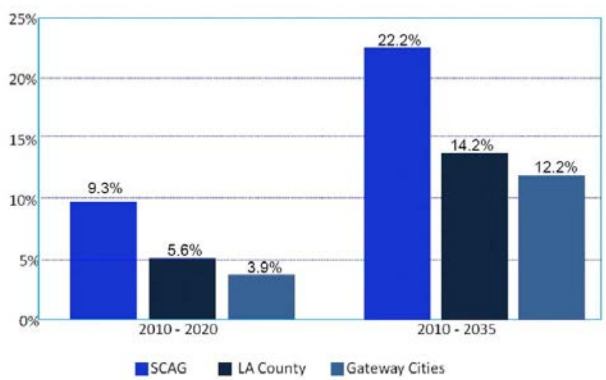
    13.10 **Appendix J.** Jurisdiction General Plans.

2.0 Situation Analysis

2.1 Overview of Growth

A comparison of data from SCAG's draft 2012 RTP Growth Forecast (i.e., the Integrated Growth Forecast) indicates that the Gateway Cities will have a lower rate of population growth over the next 10-year and 25-year periods than either the SCAG region or Los Angeles County. Projected population growth for the Gateway Cities subregion is approximately 3.9 percent for the period 2010 to 2020, as compared to 9.3 percent for the SCAG region and 5.6 percent for Los Angeles County for the same period. Similarly, as shown in Figure 2.1, the Gateway Cities subregion has a lower projected population growth at 12.2 percent for the period 2010 to 2035, as compared to 22.2 percent and 14.2 percent for the SCAG region and Los Angeles County, respectively.

Figure 2.1 Relative Population Growth of SCAG, Los Angeles County, and Gateway Cities from Draft 2012 RTP Forecasts

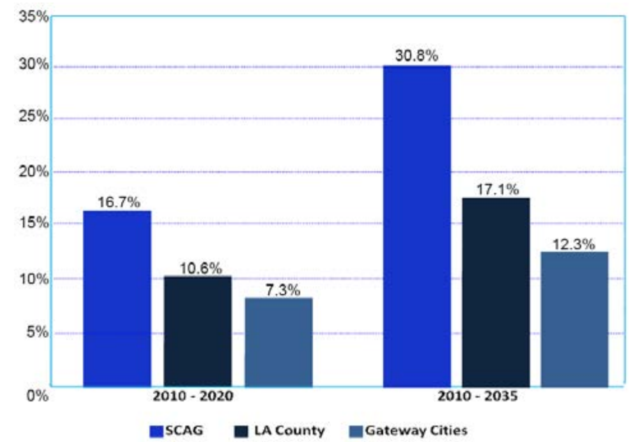


Source: SCAG RTP 2012 Integrated Growth Forecast.

Growth forecasts for employment show a similar trend over the 2010 to 2020 and 2010 to 2035 periods with the Gateway Cities subregion lagging behind higher employment growth rates for the SCAG region and Los Angeles County. Projected employment growth for the Gateway Cities is 7.3 percent for 2010 to 2020 and 12.3 percent for the period 2010 to 2035, as shown in Figure 2.2. By comparison, projected employment growth for the 2010 to 2020 period is 16.7 percent for the SCAG region and 10.6 percent for Los Angeles County; and 30.8 percent and 17.1 percent, respectively, for the SCAG region and Los Angeles County in the 2010 to 2035 period.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

Figure 2.2 Relative Employment Growth of SCAG, Los Angeles County and Gateway Cities from Draft 2012 RTP Forecasts



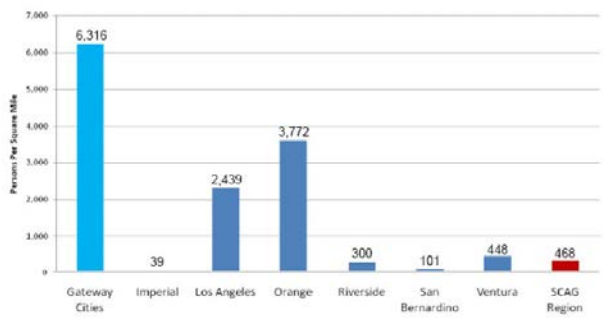
Source: SCAG RTP 2012 Integrated Growth Forecast.

With regard to growth in the number of households over the 2010 to 2020 and 2020 to 2035 periods, with a household representing the most basic unit of demand for housing, the projected household growth rate for Gateway Cities subregion is once again less than that for either the SCAG region or Los Angeles County. The projected household growth rate for the Gateway Cities is 4.2 percent for the 2010 to 2020 period and 11.1 percent for 2010 to 2035 period. By comparison, the household growth rate for the 2010 to 2020 period is 10.7 percent for the SCAG region and 8.0 percent for Los Angeles County; and 24.7 percent and 17.4 percent for the SCAG region and Los Angeles County, respectively, for the 2010 to 2035 period.

The lower rates for projected population, employment, and household growth in the Gateway Cities COG subregion relative to the SCAG region and Los Angeles County are largely attributable to a higher rate of land utilization or build-out in the Gateway Cities area, as measured by population and employment density. Since the Gateway Cities area is already highly built-out relative to the SCAG region overall, there is less growth opportunity in the Gateway Cities area.

Population density for the Gateway Cities COG subregion in 2010 is reported to be 6,316 persons per square mile, as illustrated in Figure 2.3. This compares with much lower population densities of 468 and 2,439 persons per square mile, respectively, for the SCAG region and Los Angeles County. Similarly, employment density within the Gateway Cities COG subregion is much higher than in the SCAG region and Los Angeles County. Employment density for the Gateway Cities COG subregion was reported at 2,209 employees per square mile. Considerably lower densities were reported for the SCAG region and Los Angeles County at 187 and 1,024 employees per square mile, respectively. Given the highly built-out nature of the Gateway Cities subregion, any major reductions in VMT and related GHG emissions within the subregion will more likely result from the transportation rather than the land use measures that are implemented by the Gateway Cities over the RTP planning period.

Figure 2.3 Population Density by Region – 2010



Source: SCAG and 2010 U.S. Census.

The Gateway Cities subregion is comprised of a lower income population, compared with the SCAG region as a whole and Los Angeles County. Household and per capita income data from the 2010 Census are not available at this time. The 2000 Census, however, reported a median household income of $38,354 for the Gateway Cities COG subregion. The median household income levels for SCAG and Los Angeles County are higher at $45,844 and $42,189, respectively. The average per capita income for the Gateway Cities subregion, according to the 2000 Census, also lags behind Los Angeles County and the State of California. The average per capita income for the Gateway Cities subregion is $16,206, as compared to $20,683 for Los Angeles County and $22,711 for the State of California.

Age further distinguish the population of the Gateway Cities COG subregion from that of Los Angeles County and the State of California. At 31.2 years of age, the median age (average for all cities) reported by the 2000 Census for the Gateway Cities subregion is slightly lower than the median age for Los Angeles County at 32.0 and the State of California at 33.3 years of age.[11] Within the Gateway Cities COG subregion, the median age ranges from a low of 23.8 for the Cities of Bell Gardens and Cudahy to a high of 42.4 for the City of La Habra Heights.

2.2 Transportation Trends

Although SB 375 does not include the analysis of heavy-duty trucks, the transportation trends and improvements in the Gateway Cities are shaped by its role as a goods movement hub. Within the Gateway Cities COG reside two million residents in close proximity to the Ports of Long Beach and Los Angeles, the largest port complex in the United States. Approximately 45 percent of the nation's containerized imports pass through these two ports, and the I-710 freeway, a primary truck route to service these ports that runs through the Gateway Cities, has the highest concentration of trucks in the country.

The Gateway Cities is also a densely populated residential and employment center with a high density of households and jobs that generates demand for high frequency transit and multimodal services, high quality freeways that can relieve congestion and improve regional travel, and initiatives toward transportation demand management to reduce future travel demand.

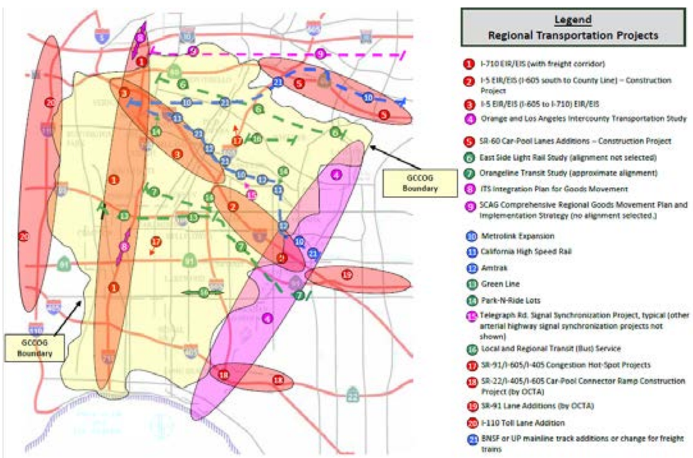
The Gateway Cities COG and its member cities have been engaged for the last 20 years in studies aimed at improving mobility, congestion, air quality, and other traffic reduction projects. As part of the I-710 Environmental Impact Report (EIR)/Environmental Impact Statement (EIS), a Multimodal Transportation Report (completed in 2009) reviewed bus and rail transit, park-and-ride facilities, HOV lanes, and goods movement by rail. Transportation Demand Management/Transportation System Management (TDM/TSM) projects were also evaluated along with Intelligent Transportation Systems (ITS), among other alternatives.[12] This report determined that the collective use of multimodal transportation improvements has the potential to reduce future travel demand and increase freeway capacity.

[11] As of this writing, the 2010 Census data on median age has not been published.

[12] I-710 Corridor Project EIR/EIS Technical Memorandum – Multimodal Review, prepared for LACMTA by URS, March 4, 2009, http://www.metro.net/projects_studies/I710/images/710_dr_mmr.pdf.

Figure 2.4 shows the inventory of projects being explored and potentially implemented in the Gateway Cities subregion. An analysis of a subset of these projects is conducted as part of this SCS in Section 10. Transportation performance in target years, based on funded RTP and LRTP transportation projects and transportation policies (e.g., TDM, TSM, and others), is analyzed using a "No Project" baseline with the LACMTA model in Section 10.0.

Figure 2.4 Regional Transportation Projects and Trends for the Gateway Cities



Source: Jerry Wood. Gateway Cities Transportation Project Brochures, 2011.

2.3 Economic and Fiscal Trends

An economic overview and forecast report completed by the Los Angeles County Economic Development Corporation (LAEDC) in January 2003 is useful in providing a summary of the economic structure of the North Gateway area (i.e., a major portion of the Gateway Cities COG subregion). The report identifies the North Gateway area as including 22 incorporated cities (excluding the Cities of Avalon, Hawaiian Gardens, Lakewood, Long Beach, and Signal Hill) and some unincorporated areas.

The North Gateway area is transected by major transportation lines, including being served by six freeways, the Alameda Corridor rail project, transited by the Burlington Northern Santa Fe and Union Pacific railroads, being served by Metrolink, Amtrak service, and MetroRail Green and Blue lines. The North

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

Gateway area is substantially built-out resulting in relatively low levels of new residential construction. Most development opportunities for housing are "in-fill" sites on small blocks of land. New residential development has generally been single-family development, but with an increasing shift toward multifamily development on in-fill and mixed-use sites. Some cities have development opportunities on recycled sites, such as brownfield sites, but generally with respect to residential, most activity involved the demolition and replacement of older smaller homes with new larger, single and multifamily structures. Compared to residential development, there have been more opportunities for industrial-commercial development, and there are opportunities for redevelopment efforts in older downtowns.

Even though the LAEDC report is somewhat dated and only focuses on a portion of the Gateway Cities subregion[13], the report identifies a number of forces that will impact the future economic health of the entire subregion and are still quite relevant, including:

- Importance of an educated population and the need for career connections for students;
- Need for improvements to the transportation infrastructure;
- Need for increased rail capacity;
- Need for upgrading aging infrastructure; and
- Need for the local economy to be considered in a global context.

These major issues must be addressed to maintain and grow economic activity in the entire Gateway area.

Economic development and affordable housing strategies implemented by cities in the Gateway Cities COG subregion over the past decade include:

- Transit-oriented development to relieve transportation pressures;
- Brownfield redevelopment as a source of land for economic development and new housing;
- Programs to encourage employers to locate or expand in the subregion to address jobs/housing balance and reduce VMT; and
- Promotion of infill development for housing and mixed-use development involving commercial and residential uses.

[13] This is the only report prepared by the LAEDC for the Gateway Cities subregion. There is no corresponding analysis of the southern portion of the Gateway Cities subregion.

2.4 2005 GHG Performance for Gateway Cities

Gateway Cities COG obtained the information needed to generate the Gateway Cities subregional baseline emissions per capita in 2005 from SCAG model data. A data request was sent on February 22, 2011, from Gateway Cities COG to SCAG, outlining the methodology and data needs to calculate a 2005 GHG per capita baseline benchmark for Gateway Cities. The information requested included:

- VMT within the SCAG region for all auto trips with a trip origin and/or destination inside of the Gateway Cities COG;
- The VMT not including any light heavy-duty, medium heavy-duty, or heavy heavy-duty VMT;
- Through trips not included in the estimate (i.e., trips that to not have either an origin or destination within the Gateway Cities);
- VMT estimates broken out by into the standard time periods that SCAG models (AM, mid-day, PM, evening, and overnight); and
- VMT provided by speed bin.

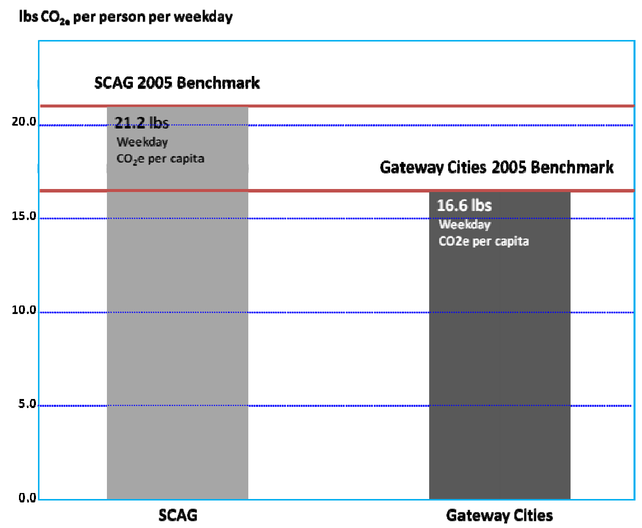
The Adopted 2008 RTP Growth Forecast and the Local Input/General Plan 2012 RTP Growth Forecast were used as the per capita denominator for the SB 375 target years of 2020 and 2035.

Table 2.1 Data Sources for Gateway Cities Population Estimates

Year	Gateway Cities Population	Source
2005	2,094,268	Adopted 2008 RTP Growth Forecast, by City (RTP07_CityLevel.xls)
2020	2,208,499	Local Input/General Plan Growth Forecast for 2012 RTP) (RTP2012_GROWTH-FORECAST.xls)
2035	2,380,833	Local Input/General Plan Growth Forecast for 2012 RTP) (RTP2012_GROWTH-FORECAST.xls)

Source: http://www.scag.ca.gov/forecast/index.htm.

Figure 2.5 Benchmarks for SCAG and Gateway Cities



3.0 Subregional SCS Development Process

3.1 SCS Policy Development Committee

The Gateway Cities COG established an SCS Policy Development Committee to oversee the SCS process and direct the work of the consultant team. The SCS Policy Development Committee is a subcommittee of the Gateway Cities City Managers' Steering Committee; and includes five city managers, eight planning directors from geographically representative cities, and one public works director. Three COG staff attended meetings and supported the Committee's work, including Richard Powers, the Executive Director of the Gateway Cities COG. The Committee membership consists of the following officials:

1. Mike Egan, City Manager of Bellflower;
2. Jorge Rifa, City Manager of Commerce;
3. Tom Modica, representing the City Manager of Long Beach;
4. Ron Bates, City Manager of Pico Rivera;
5. Ken Farfsing, City Manager of Signal Hill (Committee Chair);
6. Aldo Schindler, Bell Gardens Planning/Community Development Director;
7. Torrey Contreras, Cerritos Planning/Community Development Director;
8. Sonia Southwell, Lakewood Planning/Community Development Director;
9. Brian Saeki, Downey Planning/Community Development Director;
10. Reuben Arceo, La Mirada Planning/Community Development Director;
11. Wayne Morrell, Santa Fe Springs Planning/Community Development Director;
12. Sonia Shah, South Gate Planning/Community Development Director;
13. Don Dooley, Whittier Planning/Community Development Director;
14. Steve Forster, Chair, La Mirada and Liaison to the Gateway Cities Public Works Officers;
15. Richard Powers, Executive Director of Gateway Cities Council of Governments;
16. Jack Joseph, Gateway Cities Council of Governments Staff; and
17. Nancy Pfeffer, Gateway Cities Council of Governments Staff and Contract Project Manager.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

After the consultant team was selected, the Committee met seven times beginning on January 13, 2011 to review progress and provide guidance.

3.2 SCS Delegation to Gateway

The SCAG Regional Council approved the Framework and Guidelines for Subregional SCS on April 1, 2010. This 12-page document laid out the terms and conditions for any of the 14 subregions within SCAG to take delegation of their SCS. In October 2010, SCAG and the Gateway Cities COG signed an MOU officially delegating the preparation of the SCS for the Gateway Cities subregion to the Gateway Cities COG. While this six-page MOU incorporated the Framework and Guidelines, neither document anticipated all of the potential issues that could emerge as a result of SCS delegation. This document can be found in Appendix A.

The most significant issue came to light when the Gateway Cities COG and its member jurisdictions carefully considered the range or scale for their SCS. At the modest end of the spectrum, the subregion could compile a list of strategies, which it was prepared to implement. These would be submitted to SCAG for inclusion in the regional SCS. At the other end of this range would be a virtually stand-alone SCS. This would require a rigorous quantification of the estimated GHG reductions from all strategies implemented from 2005 to 2020 and from 2020 to 2035. Once the Gateway Cities SCS Steering Committee decided to pursue the stand-alone approach, it needed to determine the appropriate GHG (CO_{2e}) per capita benchmarks in 2005 for the Gateway Cities subregion in order to measure its attainment of the regional targets.

The regional targets, assigned to SCAG by CARB for a percent reduction in GHG per capita against the regional 2005 benchmark, do not apply to any individual subregion within the SCAG region. Nevertheless, the SCS Policy Development Committee decided to measure the total reduction in GHG from the bundle of strategies that make up the subregional SCS as a percentage against the 2005 benchmark estimated for the Gateway Cities subregion. Because SCAG had not calculated a 2005 GHG per capita for each subregion, the Gateway Cities SCS Policy Development Committee requested that SCAG provide the methodology it used to calculate the regional 2005 GHG per capita, and then applied this methodology to calculate the Gateway Cities' regional-specific 2005 inventory. The calculations produced the 2005 benchmark of 16.6 lbs of CO_2e per capita for the Gateway Cities region compared to 21.2 lbs of CO_2e per capita as a 2005 average for the entire SCAG region. This analysis was summarized in Section 2.4.

3.3 Development of Strategy Portfolios

The Gateway Cities COG held four technical workshops with the city planning and public works directors from all of the jurisdictions. These workshops were the interactive tools for cities to work with the consultant research and analysis, and develop portfolios of GHG reduction strategies for each jurisdiction. This approach started with each city assembling three broad categories of strategies that they would select and implement: transportation projects, TDM activities, and land use strategies. The planning directors and public works officers followed a three-step procedure for developing each city's program for contributing to the subregional SCS:

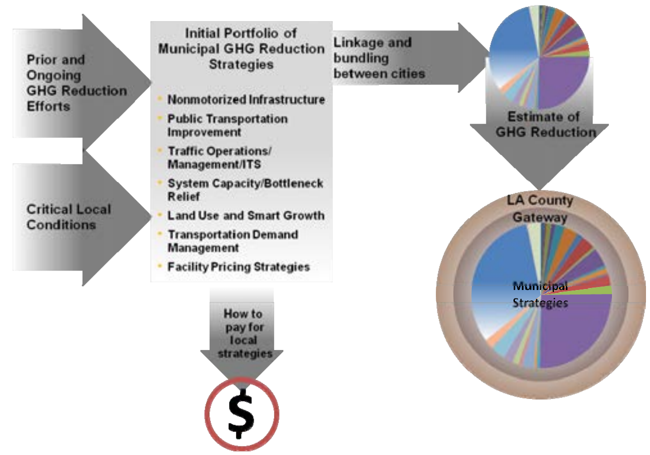
1. **Screening.** Each city would first select among the universe of GHG reduction strategies a subset that could be implemented at the subregional or jurisdictional level. They would then rank these selected strategies according to their fit with the pilot city's market conditions, transit infrastructure, land use characteristics, and other circumstances that would affect the cost effectiveness and political feasibility of each candidate strategy.
2. **Scaling and Measurement.** For each of the strategies that was screened and ranked, city staff considered appropriate levels of deployment for each strategy. This step included considering the following attributes of each strategy:
   a. Total amount of reduced GHG;
   b. Bundling with other strategies to achieve the most effective combination (i.e., interactive or synergistic effects);
   c. Performance over time (i.e., immediate to long term);
   d. Fiscal cost, including any potential to generate revenues;
   e. Cost effectiveness (cost per ton of CO_2); and
   f. Level(s) of government most appropriate to implement them.

   Once each city had assembled an initial portfolio, the consultant team entered the technical characteristics of each strategy into the LACMTA iMpact web-based software that measured GHG impacts of the strategies.[14]
3. **Bundling.** The consultant team worked with each jurisdiction to group strategies into bundles on three criteria: a) logical combinations of strategies that may have synergies, such as transit investment, land use, and nonmotorized travel; b) consideration of the cost effectiveness of various strategies (e.g., selecting only those strategies meeting a particular cost-effectiveness threshold); and c) each jurisdiction's political conditions. The consultants then reestimated the impacts of each bundle using the iMpact software tool that included GHG analysis.

[14] The iMpact Tool, developed by Cambridge Systematics for LACMTA, is a web-based GIS application that calculates the GHG impacts of individual transportation projects. This functionality was based on previous Federally-sponsored research conducted for the *Moving Cooler* study (http://www.movingcooler.info).

An illustration of this process and the linkages associated with the bundling is shown in Figure 3.1.

Figure 3.1 SCS and Strategy Portfolio Development Process



3.4 Stakeholder and Public Outreach

The SCS outreach program provided opportunities for Gateway Cities stakeholders and community members to learn about the SCS process and provide feedback.

In February 2011, a stakeholder briefing was convened to inform Gateway Cities stakeholders representing climate and environmental groups, chambers of commerce, and housing advocates about the SCS process and to address questions on related topics. Approximately 50 stakeholders were invited by the Gateway Cities COG to attend the two-hour session, which was held at the COG offices.

Public Information Open Houses were also held in four locations representative of the Gateway Cities subregion. These Open Houses were held in the Cities of Cerritos, Long Beach, Pico Rivera, and Commerce. The purpose of these public information events was to present basic information on the SCS process, what the SCS means to the community, and provide an opportunity for community members to have one-on-one dialogue with members of the project team, COG staff, and representatives from subregional cities. Participants were encouraged to attend exhibit areas, where project staff were available to answer questions and receive feedback from attendees.

Noticing for the public open houses included a series of information materials that were used to advertise the open houses by local media, the COG, and individual Gateway Cities.

- Press release,
- Open house flyer,
- HTML open house invitation, and
- SCS newsletter article.

The press release was distributed to all local media. The open house flyer was distributed to COG cities Planning Directors and Public Works Officers, made available at the COG offices, and mailed to stakeholders that were invited to the stakeholder briefing, with a request for further distribution. Noticing for the open houses was also posted to the Gateway Cities COG web site, as well as made available to the web sites of other Gateway Cities. In addition, information on the open houses and the SCS was packaged for use in local newsletters and other publications. Noticing materials were provided in Spanish as well as English.

The presentation materials that were used at the Public Information Open Houses included:

- Information regarding SB 375 and how the Gateway Cities subregion SCS adheres to the process;
- Display Boards with information on proposed strategies related to land use, transportation, and transportation demand management;
- Frequently Asked Questions information;
- Process Graphic Display Board demonstrating the timeline for the project and depicting the SCS process from start to finish; and
- PowerPoint presentation with background information.

Copies of the outreach materials are included in Appendix C.

All materials presented and utilized at the Public Information Open Houses were made available in English and Spanish. In addition, Spanish-speaking staff were on hand at each open house to answer questions in Spanish.

4.0 Land Use Characteristics

The 2005 land use pattern in the Gateway Cities subregion is shown on Figure 4.1, while the utilization of land within the subregion by acreage is presented in Table 4.1. As seen in Table 4.1, the predominant land use in the subregion is low-density residential, which occupies 43.3 percent of the subregion's land area, exclusive of streets. Industrial and commercial uses occupy approximately 15.1 percent and 10.1 percent of the subregion's land area, respectively. Over 11.5 percent of the subregion is devoted to open space, which primarily consists of the resource areas discussed in Section 8.0 of the SCS, but also includes a minor amount of vacant land available for development. Other substantial land uses include medium-density residential at nearly 8.5 percent and public facilities at 8.1 percent. Transportation uses include airports, rail yards, and transit facilities. The agriculture remaining in the area primarily consists of avocado and citrus orchards on large residentially-zoned lots in the northern portion of the subregion and equestrian uses existing at various locations across the subregion.

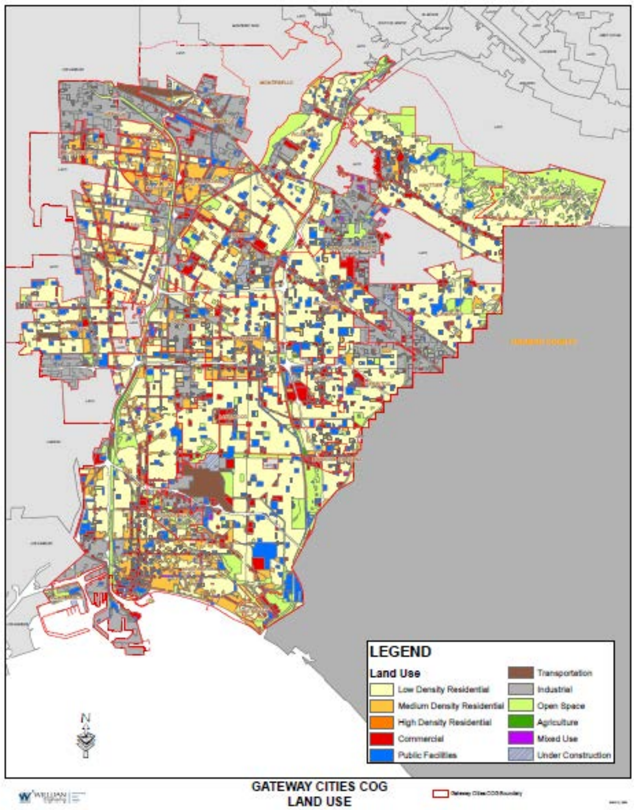
Table 4.1 Gateway Cities Subregion Existing Land Use – 2005[1]

Land Use Category	Acreage[2]	Percentage
Low Density Residential	66,287.51	43.27
Medium Density Residential	13,002.30	8.49
High Density Residential	501.70	0.33
Commercial	15,493.00	10.11
Mixed Use	342.23	0.22
Industrial	23,186.75	15.14
Public Facilities	12,358.25	8.07
Transportation	3,138.27	2.05
Open Space[3]	17,684.84	11.55
Agriculture	442.49	0.29
Under Construction	741.56	0.48
Total	153,178.90	100.00

1. No summary data is available for the 2020 and 2035 target years.
2. Exclusive of streets.
3. Includes vacant land available for development.

Source Acreages tabulated by Willdan Engineering based on 2005 Existing Land Use Map generated by SCAG.

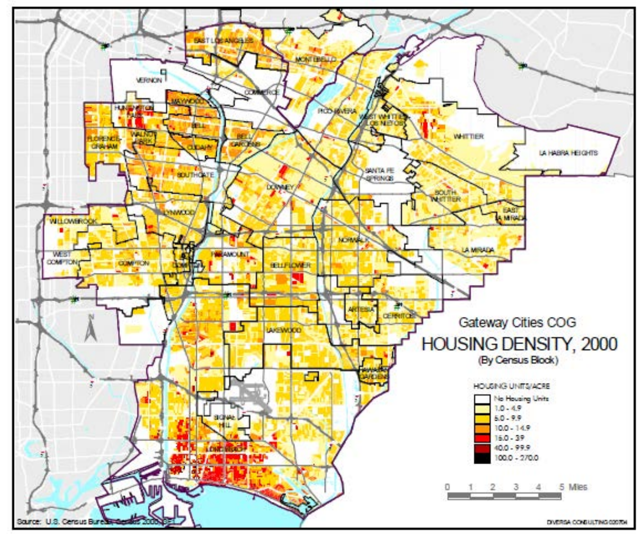
Figure 4.1 Existing Land Use 2005



While the predominant land use in the subregion is low-density residential, the Gateway Cities have provided for a wide range of housing types and densities through their general plans and zoning ordinances, capable of accommodating all economic segments of the subregion's population. This is graphically illustrated on Figure 4.2, which shows 2000 census data for housing density by census block. As seen in this figure, existing housing densities range from large

lot, semi-rural and traditional single-family densities (i.e., from 1 to 5 units per acre) to low-medium density of 6 to 14 units per acre to medium residential densities of 15 to 39 units per acre up to high densities of 40 units, to well in excess of 100 units per acre.

Figure 4.2 Housing Density, 2000



In preparing the SCS, the COG compiled an inventory of the general plans of each of the 26 participating cities. The general plan maps for the Gateway Cities are contained in Appendix J. Collectively, they constitute the land use component of the SCS.

The COG also inventoried the status of the land use, circulation, and housing elements of each city's general plan. The resulting inventory is presented in Table 4.2, which includes the most recent adoption and horizon dates for each element, as well as any pertinent comments regarding the status of these elements. As seen in this table, only one city has a general plan that extends the course of the planning period for the RTP (i.e., 2035), while 12 cities currently have general plans with horizon dates ranging from 2020 to 2030. As the Gateway Cities continue to update their general plans, most, if not all, of the COG's members will eventually have general plans with horizon dates that coincide with the RTP planning period. However, the financial condition of cities across the SCAG region and State poses a constraint to the future updating of general plans.

Table 4.2 Gateway Cities Subregion General Plan Adoption and Horizon Dates

City	Plan Element	Adoption Date	Horizon Date	Comments
Artesia	Land Use Element	2010	2030	
	Circulation Element	2010	2030	
	Housing Element	2008	2014	
Avalon	Land Use Element	1972	–	Recently contracted with consultant to update City's General Plan and Housing Element.
	Circulation Element	1972	–	
	Housing Element	Due		
Bell	Land Use Element	1996	2011	City working on General Plan update with completion expected in 2011. Housing Element being drafted.
	Circulation Element	1996	2011	
	Housing Element	Due	–	
Bellflower	Land Use Element	1997	2010	City staff, working with consultant, is preparing the Housing Element update.
	Circulation Element	1997	2010	
	Housing Element	Due		
Bell Gardens	Land Use Element	1995	2010	The City would like to complete a General Plan update, but is limited by financial constraints until late 2011 or 2012. Working on draft Housing Element to submit to HCD.
	Circulation Element	1995	2010	
	Housing Element	Due	2008	
Cerritos	Land Use Element	2004	2020	
	Circulation	2004	2020	
	Housing Element	2008	2014	
Commerce	Land Use Element	2008	2020	
	Circulation Element	2008	2020	
	Housing Element	2008	2014	
Compton	Land Use Element	2011	2030	General Plan expected to be adopted in May 2011. Housing Element submitted to HCD, waiting for comments.
	Circulation Element	2011	2030	
	Housing Element	2008	2014	
Cudahy	Land Use Element	2010	2025	The City updated the General Plan in 2010, including the Housing Element for the period 2008-2014.
	Circulation Element	2010	2025	
	Housing Element	2008	2014	

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

City	Plan Element	Adoption Date	Horizon Date	Comments
Downey	Land Use Element	2005	2030	
	Circulation Element	2005	2030	
	Housing Element	2008	2014	
Hawaiian Gardens	Land Use Element	2010	10-15 yrs	
	Circulation Element	2010	10-15 yrs	
	Housing Element	2008	2014	
Huntington Park	Land Use Element	1991	2010	
	Circulation Element	1991	2010	
	Housing Element	2008	2014	
La Habra Heights	Land Use Element	2004	20 years	General Plan horizon date not clearly specified, but rather assumed to be 20 years. Draft of Housing Element submitted to HCD for review.
	Circulation Element	2004	20 years	
	Housing Element	2008	2014	
La Mirada	Land Use Element	2003	2020	
	Circulation Element	2003	2020	
	Housing Element	2008	2014	
Lakewood	Land Use Element	1996	2026	
	Circulation Element	1996	2026	
	Housing Element	2008	2014	
Long Beach	Land Use Element	1989	2000	General Plan update underway to plan for 2030.
	Transportation Element	1991	2010	
	Housing Element	2008	2014	
Lynwood	Land Use Element	2003	2020	Housing Element certified by HCD.
	Circulation Element	2003	2020	
	Housing Element	2008	2014	
Maywood	Land Use Element	2007	–	City responding to first round of HCD comments on the Housing Element.
	Circulation Element	2007	–	
	Housing Element	2008	2014	
Norwalk	Land Use Element	1996	2010	Horizon date only formally noted in Circulation Element. City responding to HCD comments on Housing Element.
	Circulation Element	1996	2010	
	Housing Element	2008	2014	

City	Plan Element	Adoption Date	Horizon Date	Comments
Paramount	Land Use Element	2007	10 years	No formal General Plan horizon date but it is anticipated to be updated in about 2017. Updated Housing Element in negotiations with HCD.
	Circulation Element	2007	10 years	
	Housing Element	Out	2008	
Pico Rivera	Land Use Element	1993	10-15 yrs.	The 2006-2014 Housing Element was certified by HCD in January 2010.
	Circulation Element	1993	10-15 yrs	
	Housing Element	2008	2014	
Santa Fe Springs	Land Use Element	1993	21st Century	General reference to horizon date in Land Use Element as guiding development into the 21st century.
	Circulation Element	1994	21st Century	
	Housing Element	2008	2014	
Signal Hill	Land Use Element	2001	2015	City has submitted 2008-2014 Housing Element update, but is still in negotiations with HCD for certification.
	Circulation Element	2010	2025	
	Housing Element	2008	2014	
South Gate	Land Use Element	2009	2035	
	Circulation Element	2009	2035	
	Housing Element	2010	2014	
Vernon	Land Use Element	2007	2030	
	Circulation Element	2007	2030	
	Housing Element	2008	2014	
Whittier	Land Use Element	1993	2010	General reference made to horizon date in introduction to General Plan. Noncomprehensive updates of General Plan in 2006
	Circulation Element	1993	2010	
	Housing Element	2008	2014	

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

5.0 Growth Accommodations

The SCS must identify areas within the subregion sufficient to house an eight-year projection of the regional housing need for the subregion pursuant to California Government Code §65584. The SCS must further identify areas within the subregion sufficient to house all of the population of the subregion, including all economic segments of the population, over the course of the planning period of the RTP, taking into account net migration into the region, population growth, household formation, and employment growth. Regarding the first requirement, Government Code §65584 involves the RHNA component of housing element law and the eight-year period referred to is the 2013 to 2021 planning period for the initial RHNA to be generated under SB 375. In allocating sufficient areas to accommodate the subregion's estimated housing need for this time period, the Gateway Cities COG is also expected to determine that the SCS is consistent with the RHNA for this period. However, it is technically impossible to make this determination due to the timing of these parallel planning efforts.

The Gateway Cities COG must submit its final subregional SCS to SCAG by June 2011. SCAG, in turn, must approve the final regional SCS by April 2012. SCAG will also release the draft RHNA in April 2012, and is tentatively scheduled to adopt the final RHNA when the SCAG RTP and SCS are approved in June 2012. Therefore, neither the Gateway Cities COG nor SCAG will have the ability to determine that the subregional and regional SCSs, respectively, are consistent with the RHNA prior to their finalization. Instead, SCAG will need to determine whether the regional SCS is consistent with the RHNA, upon the release of the RHNA, and amend the regional SCS to achieve consistency, if needed.

Despite the inability to determine consistency between the SCS and RHNA, the SCS must identify areas sufficient to accommodate the subregion's projected housing need for the 2013 to 2021 period; and addressing the second requirement of SB 375, further identify areas sufficient to house the subregion's projected population to the end of the RTP planning period in 2035. In reviewing and commenting on SCAG's preliminary Integrated Growth Forecast for the 2012 RTP, the Gateway Cities have indicated what they believe are realistic estimates for household and population growth in each of their jurisdictions to 2020 and 2035. These estimates were based on past and current growth trends, as well as the capacity of the Gateway Cities general plans to support additional residential development. Since these growth estimates reflect the housing development capacity of local general plans, it can be concluded that the Gateway Cities general plans, as presented in Appendix J, allocate adequate land at appropriate densities to house the subregion's projected population to 2020 and 2035.

The Gateway Cities expect that the subregional housing need eventually identified for the Gateway Cities COG in the 2013 to 2021 RHNA will be consistent with the Integrated Growth Forecast that is the underpinning of the subregional SCS. Each of the Gateway Cities has provided SCAG with 2020 and 2035 household and population growth projections. The subregion's jurisdictions estimate 21,903 additional households from 2010 to 2020. SCAG initially estimated 25,014 additional households, but released their estimate in May 2011 of 23,980 households over a 2011 to 2021 period, which most closely corresponds with the next RHNA planning period, taking into consideration the local input received and 2010 Census data. As of this date, SCAG and the Gateway COG are still reviewing the projections, and Gateway COG is expecting further adjustments to bring the two projections into convergence.

6.0 Affordable Housing Accommodation

The Gateway Cities' 2020 and 2035 allocations of residential land use are designated in their general plans (Appendix J). These residential land use designations specify allowable density ranges at and well above the default densities established in California Government Code §65583.2 that are applicable to the Gateway Cities. These default densities, which are 20 or 30 dwelling units per acre depending upon city population, are the densities at which the State Department of Housing and Community Development has determined that the development of lower-income housing becomes financially feasible.

Within the Gateway Cities' general plans, the housing elements allocate sufficient land at appropriate densities to accommodate the projected housing needs. In addition, the general plans identify programs for expanding the supply of affordable housing in the subregion to low- and moderate-income households. These programs include:

- Offering incentives to encourage in-fill development on vacant and underutilized residentially zoned land;
- Rezoning to increase the permitted intensity of development on vacant and underutilized residentially zoned land;
- Offering density bonuses and other incentives to encourage the development of housing affordable to low- and moderate-income households;
- Utilizing redevelopment and brownfield development to generate new affordable housing for low- and moderate-income households;
- Facilitating mixed-use development that incorporates high-density housing along major arterial streets and in downtown areas served by mass transit;
- Pursuing and utilizing state and Federal funding sources to expand the supply of housing affordable to low- and moderate-income households;
- Partnering with private developers and nonprofit housing sponsors to promote the development of housing affordable to low- and moderate-income households; and
- Utilizing housing overlay zones to provide options for the development of special needs and other affordable housing in areas otherwise designated for nonresidential uses.

7.0 Transportation Network

This section describes the roadway, transit, TDM, and other strategies employed to reduce GHG.

7.1 Transportation Improvement Projects

Inefficient transportation networks are a key contributor to transportation-related GHG emissions. Transportation improvement projects that improve traffic flow, reduce vehicle idling and delay, and/or reduce overall VMT can significantly decrease per capita emissions on congested networks.

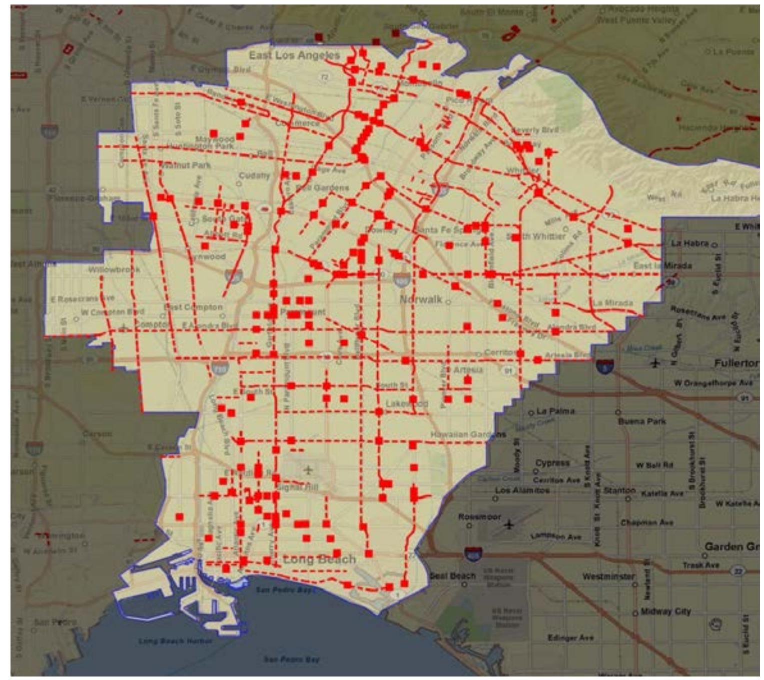
Gateway Cities jurisdictions submitted 340 revenue-constrained transportation improvement projects, which together have the potential to considerably reduce per capita GHG emissions from the transportation sector.

Figure 7.1 shows the locational extent of these transportation improvement projects in the Gateway Cities using the LACMTA iMpact Tool. Figure 7.2 shows the numerical distribution of submitted transportation projects. These projects fall under six categories:

1. Roadway Capacity Improvements (e.g., new lanes, bottleneck relief);
2. Intersection Improvements (e.g., new signals, new signal phases, new intersection approach capacity);
3. System Operations Improvements (e.g., intersection delay improvements, corridor-wide signal timing, ITS, adaptive traffic control systems, arterial management);
4. Railroad Grade Separations;
5. Nonmotorized Transportation Improvements (e.g., new bicycle and pedestrian facilities); and
6. Park-and-Ride Facilities.

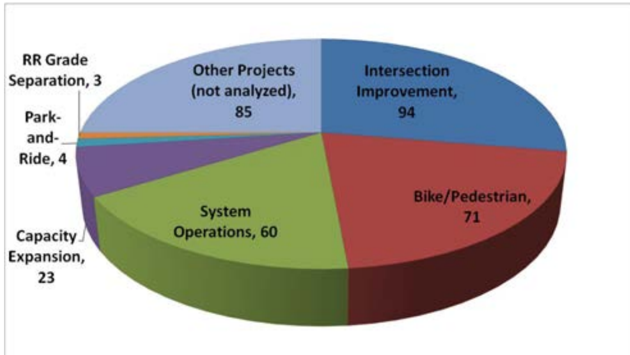
Appendix D provides a list of all submitted strategies within these categories.

Figure 7.1 Submitted Transportation Project Locations



Note: All red squares and dashed lines denote transportation projects.

Figure 7.2 Distribution of the Submitted Transportation Projects



Each transportation improvement strategy offers unique potential for reducing per capita GHG emissions, and requires a different methodology to estimate potential emissions reductions. To estimate these potential project-level benefits, a series of sketch planning methodologies was developed for each project type, using algorithms developed in the *Moving Cooler* Report, the Transportation Research Board (TRB) *Highway Capacity Manual* (2000), Federal Highway Administration (FHWA) *Traffic Signal Timing Manual* (2008), and other sources.[15]

The resulting estimated total GHG reduction per capita per day amounts to 0.74 lbs CO_2e per capita per day in 2020 and 0.70 lbs CO_2e per capita per day in 2035.

Each transportation improvement project category is described below, along with a brief note on the project-specific inputs that were required to make sketch planning estimates of potential GHG impacts. (See Appendix K for descriptions of the methodologies used to make these calculations.

[15] *Moving Cooler* was an extensive research and documentation commissioned in 2010 by a wide range of agencies and interest groups to obtain objective information about the potential contributions of transportation strategies to GHG reduction goals. *Moving Cooler* measures the effectiveness and costs of almost 50 types of strategies and combinations of strategies (http://www.movingcooler.info). (See Appendix K).

7.1.1 Roadway Capacity Improvements

Roadway capacity projects are those that either 1) widen an existing facility, or 2) build or extend a new roadway. Roadway capacity improvements have the potential to reduce excess GHG caused by delay at critical bottlenecks and chokepoints on heavily congested roadways. Emission reductions from these projects are derived from increased average vehicle speeds due to capacity expansion and improved traffic flow rates resulting from decreased congestion.[16] Emission reductions vary by the type of facility under expansion and the location of the facility.

At a large network scale, benefits gained from initial improved traffic flow rates on congested major highways are often offset to some degree by induced traffic (i.e., pent-up demand for travel) over the long term, resulting in lower emissions reductions than initially obtained. All of the local transportation projects included in the subregional SCS, however, are small and mostly isolated improvements. Their small scale and scope make it unlikely that their initial benefits would induce a significant amount of additional travel.

Roadway capacity GHG reduction estimates are a function of several inputs, including project length, number of new lanes, corridor traffic volumes, facility type, and land use conditions. Speed and capacity information by facility type and area types were obtained from the LACMTA travel demand model. Travel speed changes on the facility after capacity expansion was calculated by sketch planning tools developed by Cambridge Systematics based on peer-reviewed methodologies (see Appendix K). These tools used speed-flow curves from the travel demand model. Travel speeds were calculated for peak periods and only during weekdays, since it is conservatively assumed that the speed variations during the off-peak periods and weekends are marginal.

7.1.2 Intersection Improvements

Intersection improvements have the potential to reduce excess GHG emissions caused by idling and delay at single intersections. In general, these improvements fall under three categories:

1. **New Signal.** An unsignalized intersection approaching failure due to intolerable levels of delays is improved to a signalized intersection with an acceptable auto level of service.

[16] The estimation of GHG impacts from local transportation projects were made using sketch planning models to estimate changes in speed, vehicle hours of delay, and vehicle miles of travel. These outputs were then used as inputs for the EMission FACtors (EMFAC) model, which calculates CO_2 emissions for 2020 and 2035. The EMFAC model incorporates future year emission factors that account for the lower emissions from future vehicles (see http://www.arb.ca.gov/msei/msei.htm).

2. **New Turning Phase.** A new specific turn or movement is enabled at the intersection, or a permissive turn is made into a protected turn by changing the signal phasing and/or timing.
3. **Improved Intersection Capacity.** Physical improvements are made to the signalized intersection that positively impact level of service, including improvements to geometry, approach redesign, or new lanes.

The GHG reduction methodologies used to evaluate each intersection improvement type vary slightly, but estimates are generally a function of factors, such as approach capacities (i.e., number of lanes); peak-hour traffic volumes; facility types; cycle lengths; and land use densities. Since detailed delay and level of service (LOS) calculations were not available for this analysis, traffic volumes and delay were generally approximated using travel model output. Signal cycle lengths either were specified by jurisdictions or approximated using the FHWA *Traffic Signal Timing Manual* (2008). In each case, emissions reduction benefits were estimated by approximating the average reduction in delay per vehicle due to the improvement.

7.1.3 System Operations Improvements

System operations projects impact GHG emissions by improving traffic flows and reducing vehicle delay along key corridors involving multiple intersections. Examples include arterial management strategies such as corridor signalization and synchronization improvements, and ITS such as Advanced Traffic Management System (ATMS) implementation. Travel timesavings at each intersection along the corridor are calculated and aggregated by applying a delay reduction factor. Los Angeles County Public Works Department, for example, provided 14 traffic signal synchronization projects and ITS projects on primary arterials through both incorporated and unincorporated areas.

System operations project benefits are a function of inputs, such as corridor length, number of intersections affected, number of lanes, traffic volumes, and existing travel times and cycle lengths. These details were provided by jurisdictions or approximated using travel demand model output; the SCAG Highway Inventory[17] (a TransCAD database recently compiled); and sources such as the Caltrans Traffic Light Synchronization Program and the TRB *Highway Capacity Manual* (2000).

[17] The SCAG Modeling/GIS section undertook an inventory of major streets within the six counties comprising the SCAG region. The inventory contains information pertaining to existing LOSs, as well as planned highway improvements. Its primary purpose is to define the highway network for the RTP transportation demand model, but it will also support other programs, such as the Highway Performance Monitoring System. It includes LOS attributes for more than 7,000 streets and highways. It houses attributes such as posted speed, number of lanes, and median type.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

7.1.4 Railroad Grade Separations

Separating at-grade railroad crossings reduces vehicle delay and associated GHG emissions caused by railroad facility conflicts. Grade separation project GHG benefits are a function of roadway average daily traffic, existing and improved average speeds, and average gate down time on the affected rail corridor. Average gate down time is used as a proxy for intersection delay prior to the grade separation improvement. Inputs for the sketch analysis were provided by jurisdictions or approximated using travel demand model output, the SCAG Highway Inventory, and documentation and research prepared by local agencies.

7.1.5 Nonmotorized Transportation Improvements

The implementation of bicycle and pedestrian facilities can reduce GHG emissions to the extent that auto trips are replaced by walking or biking, or by transit trips accessed by walking or biking. Generally, bicycle lanes and pedestrian facilities that offer access to transit have greater potential for GHG emissions reduction.

While such improvements typically have a positive impact on reducing auto use, the magnitude of that impact is difficult to estimate. Due to the scarcity of methodologies for accurately estimating the VMT impacts of nonmotorized transportation improvements at the project level, bicycle and pedestrian improvements were approximated using citywide factors based on research by Dill and Carr (2003).[18] Ultimately, the planned bike lanes in Long Beach contributed an estimated 38,000 annual tons of CO_2e reduced per bike lane mile.

7.1.6 Park-and-Ride Facilities

Increasing parking capacity at rail transit stations and major transit hubs reduces emissions by encouraging SOV drivers to shift to transit for a proportion of their commute trip. Both new facilities and expansions of existing parking facilities have the potential to reduce per capita GHG. A park-and-ride lot's potential for reducing GHG is a function of a number of inputs, including number of spaces; average parking lot utilization; average auto trip commute lengths; and the type of transit being served (e.g., urban rail, commuter rail, bus rapid transit (BRT)/ express bus, etc.). Project-specific inputs were provided by jurisdictions. Regional inputs, such as parking lot utilization and commute length, were

[18] Dill, Jennifer, and Theresa Carr, 2003, *Bicycle Commuting and Facilities at Major U.S. Cities: If You Build Them, Commuters Will Use Them*, TRB Annual Meeting, 2003. Based on surveys collected in 35 major U.S. cities with at least 250,000 population; each additional mile of Type 2 bike lanes per square mile is associated with a 1-percent increase in bike commuting. Note that this research differs from the methodology presented in Appendix K for quantifying GHG impacts from bicycle improvements.

approximated using local documents, such as the LACMTA *Gold Line Phase II Draft EIR* (2004).[19]

7.2 Travel Demand Management Strategies

7.2.1 TDM Strategies Employed to Reduce GHG Emissions

As stated above, the SCS analysis also included consideration of TDM strategies being employed by Gateway Cities and an assessment of their GHG emission reduction impacts in 2020 and 2035. The analysis keyed on three distinct strategies being implemented by many of the Gateway Cities, including:

1. Compressed work week schedules for city employees,
2. Ridesharing programs for city employees, and
3. TDM or Trip Reduction Ordinances for new development.

Compressed work weeks are generally in the form of city offices closing one day every two weeks, or offering employees 9/80 or 4/40 work schedules. Some cities also utilize 3/36 schedules for safety officers. As shown in Appendix E, 11 cities reported utilizing compressed work week schedules, with more than 3,200 employees participating.[20] It was estimated that, on average, 14 percent of a participating city's workers were off on any given day. Six cities reported having ridesharing programs for their employees, with various incentives and promotions for the use of alternative commute modes. Several of the cities reported that their Average Vehicle Ridership (AVR) was about 1.3 as a result of their ridesharing programs. This rate is a rise from pre-program levels of between 1.21 to 1.23. It was estimated that about 700 city employees subregion-wide were participating in ridesharing programs.

Finally, the last strategy, TDM ordinances, is reinforced by the LACMTA's Congestion Management Program and model TDM ordinance. TDM or Trip Reduction Ordinances have been adopted by many Los Angeles County cities in response to the LACMTA Congestion Management Plan, which includes developer-based TDM programs as one strategy for reducing congestion. Seven cities reported having TDM ordinances that apply to new or expanded commercial development (mainly office) of 25,000 square feet or more. One city reported that 30 percent to 40 percent of all its new commercial developments are subject to its TDM ordinance. Conservatively, estimating that these TDM ordinances result in a 10-percent reduction in vehicle trips (many studies show

[19] LACMTA, 2004, *Gold Line Phase II – Pasadena to Montclair – Foothill Extension DEIS/DEIR*, pp. 3-15-87.

[20] Appendix E provides the cost effectiveness of funded projects using published results of past evaluation studies, including many from the South Coast Air Basin.

reductions of 20 percent or more[21]) and applying this travel behavior impact to 30 percent of the anticipated office growth in these 7 cities, it was possible to estimate the potential GHG reduction from applying TDM ordinance requirements to this new growth.

Table 7.1 provides an estimate of the annual estimated GHG reductions (stated as metric tons of CO2 reduced) for 2020 and 2035 for each of the three TDM strategies described above.

Table 7.1 Estimated Annual GHG Reduction from TDM Strategies for 2020 and 2035
In Metric Tons

TDM Strategy	Annual GHG Emission Reduction 2020	Annual GHG Emission Reduction 2035
Compressed work weeks[1]	607.5	530
Ridesharing program[2]	682.5	597.5
TDM ordinance**	415	607.5
Total TDM Reduction	1,705	1,735

[1]For city employees.

[2]Applied to new office development.

7.2.2 Other TDM Strategies Considered

The TDM analysis also sought to quantify the impact of several other travel-reducing strategies being employed in some Gateway Cities, but available data did not allow for more than a qualitative assessment. TDM strategies that likely would contribute to GHG reduction and that are being implemented in many cities include:

1. Participation in the Los Angeles County Bike to Work day (among city and private employees, estimated to reduce 4.36 ton of GHG on Bike to Work day within the Gateway Cities);
2. Promotion and sales of transit passes to residents and others within the city (the U-Pass program at Long Beach State is estimated to reduce more than 2,000 metric tons of GHG per year);
3. Safe Routes to School projects being implemented in many cities, which can lead to travel behavior change (and reduced idling); and
4. Distance learning at local colleges and universities through on-line courses, which reduces the need for some to drive to campus.

[21] Spack Consulting, "TDM: An Analysis of the Effectiveness of TDM Plans in Reducing Traffic and Parking in the Minneapolis/St. Paul Metropolitan Area," January 2010.

While some evidence exists in the form of the self-reported results provided above, insufficient data was available from which to estimate the GHG potential impacts across a broader set of implementing cities and private entities. The possible participation of private businesses and institutions presents significant potential for TDM strategies. To the degree that there is widespread TDM activities among these private entities, the GHG reduction from TDM may be much larger than estimated for this SCS. Unfortunately, the schedule and resources were insufficient to launch a comprehensive survey of Gateway Cities major employers.[22]

7.2.3 Interactive Effects Between TDM and Land Use/Transit Improvements

The analyses of TDM, transportation, and land use strategies, when considered independently, did not factor in the potential interactive effects between these complementary GHG reduction measures. Smart land use policies and transit service improvements can serve to enhance the effectiveness of TDM strategies, especially when focused on employment at new developments that would benefit from the same land use policies and transit enhancements. Therefore, an additional TDM analysis was undertaken to estimate the multiplicative effects of land use and transit improvements on TDM program effectiveness.

This analysis focused on the TDM Ordinance element of the TDM analysis summarized in Section 7.2.1. The TDM Ordinances are the avenue in which to condition developments to support vehicle trip reduction (and therefore GHG reduction) strategies. These same developments may occur in areas that will benefit from smart land use policies (increased density, mixed uses, etc.) and transit improvements (such as increased coverage, frequency, type of service, fare policies, transit marketing enhancements, etc.). Therefore, the interactive impact analysis of these three measures (TDM, transit, and land use) involved the application of a 13-percent trip reduction to new office development space as analyzed in Section 7.2.1. That analysis assumed an 8-percent vehicle trip reduction (VTR) based on a conservative estimate of TDM program effectiveness at new developments subject to TDM requirements. The higher effectiveness factor (13 percent vs. 8 percent VTR) is based on studies conducted in Utah[23] and Virginia.[24] In Fairfax County, Virginia, the research estimated the VTR impacts

[22] Participating cities were unable to provide sufficient detailed information regarding any business-related TDM strategies needed to calculate GHG emissions.

[23] Cambridge Systematics, *TDM Best Practices*, prepared for the Utah TravelWise Program, Utah DOT, Draft Report, submitted January 13, 2009.

[24] Cambridge Systematics, *Increasing the Integration of TDM into the Land Use and Development Process: Findings and Recommendations*, Draft Final Report, prepared for the Fairfax County DOT, submitted May 12, 2010.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

of various TDM programs as implemented at new developments under various transit "intensity" assumptions. The results of that analysis are shown in Table 7.2.

Table 7.2 National Evidence on TDM Program Impacts
Vehicle Trip Reduction from Background Conditions

TDM Program or Strategy	High Transit	Moderate Transit	Low Transit
Support, Promotion, Information	3-5%	1-3%	<1%
Alternative Commute Services	5-10%	*5-10%*	1-3%
Financial Incentives	10-20%	5-15%	1-5%
Combined Strategies			
With Free Parking	*15-20%*	10-15%	3-7%
With Paid Parking	25-30%	15-20%	N/A[a]

Source: Cambridge Systematics, Inc., UrbanTrans, and ESTC for Fairfax County DOT, 2010.

This table was used to derive the projected vehicle trip reduction impacts for the application of the eight cities' TDM ordinances to the new development projected for each city (8 percent) and for enhanced transit and land use policies as reflected in higher transit availability (13 percent). Thirteen percent is a low estimate, as compared to the 15 to 20 percent cited in the table, given the lower base levels of transit availability in the Los Angeles Basin and the somewhat unproven relationship between land use, transit, and TDM effectiveness.

As shown in Table 7.3, the application of a 13-percent vehicle trip reduction to the eight cities with TDM ordinances and their projected growth in office development, the estimated GHG reduction (as compared to TDM ordinance effectiveness without interactive effects or an 8-percent VTR) results in the following estimated impacts.

Table 7.3 Estimated Annual GHG Reduction from TDM Strategies for 2020 and 2035 with and Without Interactive Effects
In Metric Tons

TDM Ordinance Impacts	Annual GHG Emission Reduction 2020	Annual GHG Emission Reduction 2035
Without Interactive Effects	415.0	607.5
With Interactive Effects	652.5	957.5

7.3 Other Transportation Strategies Not Included in the Gateway Cities Subregional SCS

7.3.1 Strategies Submitted but not Analyzed

Several transportation and transportation demand management strategies were submitted by Gateway Cities jurisdictions for analysis, but were either incomplete, did not have sufficient information for analysis, or were not relevant. Appendix D provides a list of these strategies under "Gateway Cities Submitted Other Projects that Were Not Analyzed." These projects were not analyzed for the SCS due to several overarching reasons:

- **ITS Applications such as Traffic Management Centers and Traffic Control Systems.** These are important systems operations improvements that could relieve congestion and reduce bottlenecks in the corridor. Many of these investments are providing infrastructure for coordinated signal systems; however, based on the information provided by cities, a rigorous analysis could not be performed without more information. These systems could be examined in the future for possible GHG reduction potential. Table 7.4 shows the range of annual GHG reduction that could be achieved with different ITS applications.
- **Transit Amenities on a Micro Scale, such as Bus Stops and Shelters**. There is no peer-reviewed literature on the analysis of GHG reduction due only to transit amenities at the micro scale. Even with improvements at a handful of select bus stops, the change in ridership and GHGs is likely to be minimal. There are studies that show that comprehensive improvements in "customer service orientation," including much more than just bus stops, can lead to a significant ridership increase; however, these strategies would move beyond the amenities submitted.
- **Transit Electric Vehicle Connection.** The Gateway Cities, along with the rest of Southern California, are encouraging electric vehicle usage by installing electric vehicle charging stations at key transit nodes. To date, the research concerning GHG reduction due to mode shift has not been conclusive and there is not yet enough evidence on GHG reduction potential due to electric vehicles as a connection to transit. In the upcoming year, more studies will be conducted, including one by Southern California Edison on Electric Vehicle Readiness.

Table 7.4 GHG Reduction from ITS Applications from *Moving Cooler*

	Moving Cooler Range of Percentage Annual GHG Reduction from Nationwide Baseline[2]		*Moving Cooler* Reduction per Cost (Metric Tons Reduced per 2008 Dollars Implementation Cost)[3]	
ITS Application[1]	Min	Max	Min	Max
Ramp Metering	0.01%	0.44%	0.011	0.025
Variable Message Signs	0.00%	0.01%	0.001	0.003
Active Traffic Management	0.01%	0.42%	0.003	0.004
Integrated Corridor Management	0.01%	0.42%	0.004	0.031
Incident Management	0.00%	0.45%	0.006	0.026
Road Weather Management	0.00%	0.00%	0.000	0.001
Signal Control Management	0.00%	0.15%	0.001	0.003
Traveler Information	0.00%	0.15%	0.002	0.006
Vehicle Infrastructure Integration	0.01%	0.37%	0.000	0.002

1. Further definitions and assumptions on levels of deployment can be found in *Moving Cooler*, Appendix A, page A-14.
2. *Moving Cooler*, Appendix D, Tables D.3 and D.4. Note that percentage reductions are compared to a nationwide baseline, and ITS strategies are only applied in locations with certain levels of congestion. Therefore percentage reductions for urban areas may be higher than national numbers because they have a higher share of congested roadways than the whole nation.
3. Calculated from *Moving Cooler* Main Report, Table 4.1.

7.3.2 Possible Strategies to Consider for the Gateway Cities

Beyond the strategies selected for analysis in the Gateway Cities subregional SCS, there are several additional strategies that could be explored further in future SCS development. The *Moving Cooler* report analyzed nearly 50 strategies; some of which were included in the SCS, some of which do not apply to SB 375, and some of which cannot be implemented at the local or regional level.

There are, however, three categories of strategies that could be explored further in future SCS development.

- **TDM or Trip Reduction Ordinances**. Within this SCS, we have analyzed the GHG reduction for eight cities in the Gateway Cities reporting having TDM ordinances.[25] Based on an understanding of the LACMTA's Congestion Management Program and model TDM ordinance, it is assumed that many

[25] TDM or Trip Reduction Ordinances have been adopted by many Los Angeles County cities in response to the LACMTA Congestion Management Plan, which includes developer-based TDM programs as one strategy for reducing congestion.

cities – if not all of the cities within the Gateway Cities – have adopted a TDM ordinance within the Gateway Cities. Further assessment of which cities in the Gateway Cities have adopted and implemented TDM ordinances could provide more GHG reduction within the subregion.

- **Pricing strategies (congestion, parking, VMT, etc.).** Despite the political challenges associated with implementing pricing strategies, this category can be both cost effective and provide significant GHG reductions. This category of strategies focuses on raising the costs associated with use of the transportation system by autos and especially by SOVs, both in terms of the cost of VMT and fuel consumption. The revenues generated from pricing strategies can be reinvested in transportation infrastructure, potentially covering the costs of implementing GHG reduction strategies.
- **Regulatory strategies (urban nonmotorized zones, urban parking restrictions, etc.).** This category includes various regulatory measures to moderate vehicle travel and encourage more efficient driving.

For the Gateway Cities, parking pricing merits particular attention. Parking fees could be implemented and charged for parking in CBDs in shopping districts and downtown areas, employment areas, and retail centers to encourage "park once" behavior or reduce single-occupant trips. Other approaches include the introduction of taxes or higher fees on otherwise free private parking lots and parking management approaches, including requirements for residential parking permits, as well as permits for delivery and service vehicles and for visitors.

In terms of regulatory strategies, nonmotorized zones could be established in CBDs and regional employment and retail centers, transforming these areas to transit malls, linear parks, or other nonmotorized zones. Parking restrictions could be imposed in urban areas, capping the absolute number of commuter spaces in a CBD and other regional employment and retail centers, with potential exception for carpools.

8.0 Resource Areas and Farmland

In preparing the SCS, the Gateway Cities COG was required to gather and consider the best practically available information regarding resource areas and farmland in the Gateway Cities subregion. As defined in Government Code §65080.01, resource areas include:

1. All publicly owned parks and open space;
2. Open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;
3. Habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or Federal agencies or protected by the Federal Endangered Species Act of 1973, the California Endangered Species Act, or the Native Plant Protection Act;
4. Lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;
5. Areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;
6. Areas containing biological resources as described in Appendix G of the California Environmental Quality Act Guidelines that may be significantly affected by the SCS or the alternative planning strategy; and
7. An area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program, or where the area is subject to more protective provisions of state law or local ordinance.

Farmland, as defined in Government Code §65080.01, means farmland that is outside of all existing city spheres of influence or city limits as of January 1, 2008; and is classified as prime or unique farmland or farmland of statewide importance.

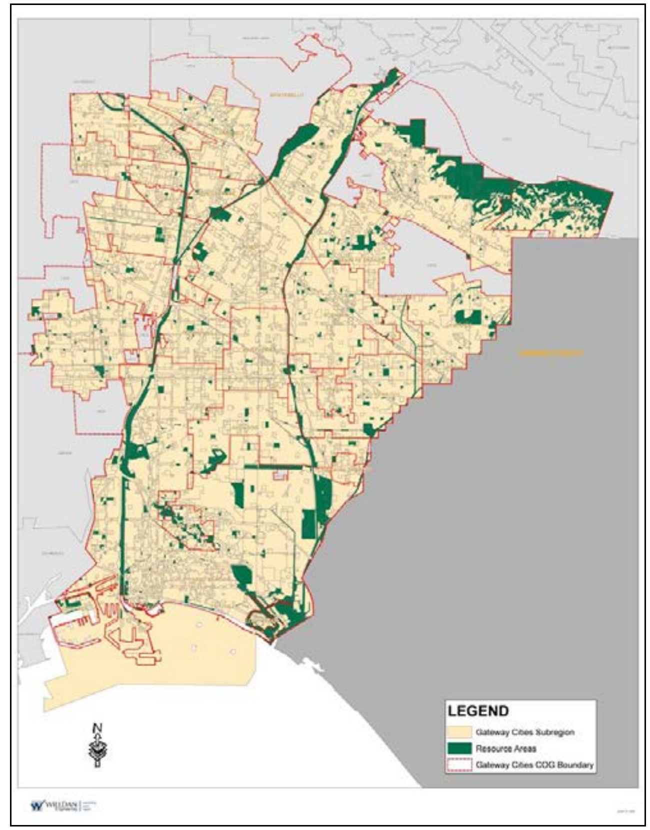
There is no farmland as defined above in the Gateway Cities subregion. Given the absence of farmland, there are no lands under Williamson Act contracts. Likewise, there are no areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code. Nevertheless, there are a variety of other resource areas in the subregion, as defined in Government Code §65080.01.

The existing resource areas within the Gateway Cities subregion are shown on Figure 8.1. These resource areas are an integral part of the planned urban development pattern for the subregion as depicted on the general plans of the Gateway cities. These resource areas contribute to the sustainability of the subregion by the various functions they perform, which include:

- Meeting the recreational needs of the subregion's residents, and thereby contributing to their health and well being through the provision of parks, golf courses, and other recreational facilities;
- Serving as aquifer recharge areas that allow for the replenishment of the groundwater basins beneath the subregion on which the Gateway Cities rely for a major portion of their water supply;
- Preserving significant habitat and other ecologically important areas that are critical to maintaining the biodiversity of the subregion;
- Protecting residents and property within the subregion from the hazard of flooding through an integrated system of flood control facilities; and
- Supporting the production of energy resources by accommodating oil recovery operations.

Recognizing the importance of these areas to the sustainability of the subregion, the majority of these areas have been designated in the Gateway Cities general plans and zoned as open space or public facilities. In doing so, the Gateway Cities have clearly expressed their intent that these areas be preserved in perpetuity as open space/publicly-held land. The one major exception is the areas devoted to oil production. However, the preservation of these areas as open space is not essential to the continued production of oil in these areas. Through the consolidation of wells at strategically located drill sites and the use of slant drilling and other recovery techniques, oil production operations can continue within the oilfields existing across the subregion for years to come while releasing surface areas for other forms of urban in-fill development.

Figure 8.1 Resource Areas



9.0 State Housing Goals

The SCS must consider the state housing goals set forth in Government Code §65580 and §65581. In establishing state housing policy, the California Legislature finds and declares in Government Code §65580 that:

- The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every Californian, including farm workers, is a priority of the highest order.
- The early attainment of this goal requires the cooperative participation of government and the private sector in an effort to expand housing opportunities and accommodate the housing needs of Californians of all economic levels.
- The provision of housing affordable to low- and moderate-income households requires the cooperation of all levels of government.
- Local and state governments have a responsibility to use the powers vested in them to facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community.
- The Legislature recognizes that in carrying out this responsibility, each local government also has the responsibility to consider economic, environmental, and fiscal factors and community goals set forth in the general plan; and to cooperate with other local governments and the State in addressing regional housing needs.

In Government Code §65581 the Legislature further states that, in enacting the requirement that each general plan must contain a housing element, it is their intent:

- To assure that counties and cities recognize their responsibilities in contributing to the attainment of the state housing goal;
- To assure that counties and cities will prepare and implement housing elements that, along with Federal and state programs, will move toward attainment of the state housing goal;
- To recognize that each locality is best capable of determining what efforts are required by it to contribute to the attainment of the state housing goal, provided such a determination is compatible with the state housing goal and regional housing needs; and
- To ensure that each local government cooperates with other local governments in order to address regional housing needs.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

These state housing goals were considered and fully taken into account during the formulation of this SCS. The general plans of the COG's member cities, which collectively constitute the land use component of the SCS, allocate adequate land at appropriate densities for residential development to meet the projected housing needs of the Gateway Cities subregion. The goals and policies found in the housing elements of these general plans are consistent with the state housing goals, and the housing programs being implemented by the Gateway Cities contribute to the attainment of the state housing goals. Some of the more widely implemented programs being deployed by the Gateway Cities to expand the supply of housing in the subregion that is affordable to low- and moderate-income households, while also contributing to a more sustainable development pattern within the subregion, have already been identified in Section 6.0 of this SCS. Additional measures that have been taken by the Gateway Cities to address the housing needs of all economic segments of the subregion's population include:

- Utilizing zoning and property rehabilitation programs to preserve well-established residential neighborhoods and existing housing affordable to low- and moderate-income households;
- Utilizing zoning and other land use controls to accommodate the housing needs of the elderly, disabled, homeless, and other special needs households;
- Providing rental assistance to lower-income households; and
- Offering first-time homebuyer assistance to low- and moderate-income households.

10.0 Integration of Development Pattern with the Transportation Network

This section describes the methodology used to integrate future land development patterns for the subregion with the transportation network and the travel demand the network accommodates. The SCAG Sustainability Tool is used to analyze 2020 and 2035 land use scenarios for each of the 26 participating cities. Additionally, the subregional transportation network and other transportation measures and policies are layered on top of the locally significant projects listed in Section 7.0 and their combined impacts are assessed. This section also reports interactions or synergies between land use changes and the transportation strategies and policies. These synergies add significant magnitude to the reductions of GHG emissions from individual strategies in 2035.

10.1 Land Use Analysis Using the Sustainability Tool

SCAG has expended significant effort and conducted extensive one-on-one outreach efforts to develop the Sustainability Tool (ST). For the subregional SCS, Gateway Cities has used the ST as the primary method of assessing GHG impacts of future land use scenarios from individual jurisdictions (i.e., the 26 participating Gateway Cities). By using the tool developed by SCAG, the Gateway Cities have been able to estimate GHG reductions from land use strategies, and provide the underlying GIS and Excel datasets to SCAG in order for SCAG to include the analysis in the regional SCS.

One of the primary goals of SB 375 involves motivating local governments to implement aggressive smart growth land use strategies, and integrate these with systematic transit and nonmotorized transportation investments. The consultant team and SCS Policy Development Committee advocated for this goal. Consultants, COG staff, and Committee members encouraged city staffs to consider aggressive land use reforms during the four technical workshops and numerous communications with individual cities throughout the SCS development process. Some cities had already incorporated significant smart growth policies during the most recent update to their general plans. Other cities considered pushing density and clustering of mixed-use development beyond what was specified in their general plans. Long Beach, for example, experimented with some extremely dense development throughout their transit

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

corridors and CBDs. At the end of this process, however, no city adopted land use policies for this SCS that significantly vary from those in their adopted general plans. This outcome probably came about for four reasons:

1. Some cities have already adopted aggressive smart growth policies in their general plans. As an almost universal fact of local governments, cities will protect their authority over land use planning zealously.
2. All cities are currently facing significant slumps in development and may be concerned that aggressive land use regulation may discourage new development.
3. Just about all Gateway Cities are built out and are expecting modest amounts of in-fill development, which provides only modest opportunities to increase density and envision "place making" development opportunities.
4. High quality transit nodes require high quality transit service to attract riders. Current funding for such services has been reduced and service quality has suffered. Meanwhile, little or no incentives (e.g., parking charges, congestion pricing, carbon tax, etc.) have been seriously proposed, let alone implemented, to encourage less driving and more use of transit, biking, and walking. Most transportation analysts are adamant that until pricing policies are used to discourage driving, auto travel will dominate other modes of travel almost regardless of land use policy.

Of the 26 participating cities, 11 cities evaluated the land use data loaded as default scenarios into the ST, and these cities worked with SCAG to develop a modified 2008 land use scenario, as well as apply smart growth policies in 2020 and 2035 scenarios.[26] The remaining cities used the ST equivalents of their adopted general plans (i.e., default scenarios in the ST), which is SCAG's best judgment of city general plans converted to 5.5-acre grid cells. The ST has functionality that estimates the interactions between land use (expressed as one of 24 types of land use) and proximity to a transit node. The ST specifies proximity as one-quarter mile from a bus stop and one-half mile from a passenger rail station. These interactions are included in the estimated GHG reductions from each city's 2020 and 2035 land use policies.

The resulting GHG reduction amounts to 0.47 lbs CO_2e per capita per day in 2020 and 0.49 lbs CO_2e per capita per day in 2035. Individual city scenarios can be found in Appendix F.

[26]The ST converts general plan information from each city into 5.5-acre grid cells, where each grid cell is assigned 1 of 26 possible types of land use. This assignment process provides a reasonable approximation of a city's aggregate land use, but may on occasion assign general plan land use designations to incorrect grid cell types.

10.2 Regionally Significant Transit and Transportation Improvement Projects

Planned regional transportation projects located within or near the Gateway Cities (e.g., HOT lanes on I-110, Green Line extension to LAX, Regional Connector) will impact GHG within the subregion. Gateway Cities COG staff determined 17 such projects are included in the RTP. These include Measure R projects, such as multimodal and intermodal facilities; and ramp and freeway improvements, such as HOV, HOT and toll lanes.[27] The list of projects is shown in Table 10.1.

Table 10.1 Key Regional Projects Included in the Gateway Cities SCS

2020 Regional Project List	Anticipated Completion	Fully Funded/ Part of RTP	Partially Funded/Potentially Likely to Proceed
I-5 (between I-605 to countyline)	2020	✓	
I-110 Harbor Transitway HOV lane conversion to HOT lanes	2012	✓	
I-710 Arterial Hwy Improvements	2020	✓	
I-710 TSM/TDM	2020	✓	
BNSF Grade Separation	2035	✓	
California High-Speed Rail	2035		✓
Goldline Eastside Extension	2035		✓
Green Line Extension to LAX	2035		✓
I-5 (between I-605 to I-710)	2035		✓
I-5 Arterial Highway Improvements	2035		✓
I-605 Hot Spots	2035		✓
I-710 Freight Corridor	2025		✓
ITS Integration Plan	2025		✓
Orangeline Development Authority – OLDA Project	2035		✓
Regional Connector	2025		✓
Signal Synchronization of Major Arterials (re: I-710)	2025		✓
SR 91/I-605/I-405 Arterial Highway Improvements	2035	✓	

[27] Measure R is a one-half-cent, 30-year sales tax dedicated to specific transportation improvements throughout Los Angeles County. Appendix G lists the specific projects located within the Gateway Cities region.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

The analysis of their estimated GHG reductions requires using the travel demand model output from LACMTA and SCAG. As shown in the second column of Table 10.1, the anticipated dates of completion for all but one of these projects (I-5 between I-605 to county line) occur after 2020. Most of their estimated GHG impacts, therefore, are accounted for in the second target period from 2021 to 2035. The results of LACMTA and SCAG modeling of these 17 projects were input into EMFAC emission model, which estimated a 7.0 percent reduction in daily CO_2 in 2035, compared to the 2005 benchmark, because of increases in network speed; and a 1.1-percent reduction because of reduced VMT (i.e., mode shift). When these two are combined, the estimated total daily CO_2 reduction is 7.07 percent (the two are combined by multiplying rather than adding).[28] Appendix G explains the methodology and analysis for the quantification of GHG reduction due to regional transportation projects.

10.3 Land Use – Regional Transit Capacity Expansion Interaction

10.3.1 Overview

The ST estimates the interaction between new development and redevelopment in Gateway Cities and regional public transportation projects funded under Measure R with the same methodology as applied for a local bus or local rail transit service. This interaction, however, may be more substantial for regional transit projects that will serve travel across the subregion, the county, and the region. This higher level of mobility from regional transit produces larger interactive impacts when station areas are developed as higher-density transit-oriented developments (TOD).

10.3.2 Assessment Process in Gateway Cities SCS

There are two primary components to the land use-regional transit capacity expansion interaction under consideration in the SCS:

1. **Regional Transit Walk Access.** There are two potential interactions to consider:
   a. Residential and commercial development and redevelopment identified in the Gateway Cities adjacent to existing and planned transit stations will on average generate less VMT per household than households not adjacent to transit. This interaction is accounted for in the ST.

[28] The relative change in CO_2 emissions based on build/no-build comparisons from Metro's modeling for the 2009 LRTP was used to estimate the emission reductions for the 17 identified projects. This assumes that the benefits of the 2009 LRTP are distributed equitably across Los Angeles County.

b. The improvement of transit access to regional destinations outside the Gateway Cities and new high capacity and frequent regional transit service in Gateway Cities improves the level of service and utility of the transit mode leading to mode shift from vehicle-based trips.

2. **TOD Opportunity.** New or improved transit stations may attract new TOD, as long as the appropriate combinations of higher-density, mixed-use zoning, parking policies, urban design guidelines, and redevelopment investments are implemented. This type of high density and mixed residential and commercial development should facilitate attracting residents and workers with higher propensities for transit trips.

10.3.3 Regional Transit Walk Access

The ST has functionality that estimates the interactions between land use (expressed as the trip generation characteristics and mode shares of the 24 types of land use) and proximity to a fixed-guideway transit node (defined as within one-half mile) or a bus stop (defined as within one-quarter mile). The ST subdivides the growth forecasts from the cities into 5.5-acre grid cells, overlays the data with existing and planned transit facilities (planned transit facilities include all projects in the fiscally constrained RTP), and flags all cells within a one-half mile of rail stations and one-quarter mile of bus stops.

In the ST, regional transit walk access is the most significant environmental predictor of household transit trips, with an average elasticity of 0.25 (meaning that for every 10-percent increase in households flagged with regional transit walk access, there is an estimated 2.5-percent increase in transit trips.). Another way to view this interaction is that for every 100 new trips generated within one-half mile of regional transit, 25 of them will be on transit (a 25-percent mode share).

The GHG reduction estimates developed through the ST reflect the benefit of both the growth and land use changes within the Gateway Cities through 2035 and the added accessibility to regional destinations through new transit access in the RTP.

What the ST does not presently consider is the additional VMT reduction that could occur in the Gateway Cities as a result of long-range implementation of Measure R projects that are partially funded and not included in the current fiscally-constrained RTP. Projects in the Measure R plan, anticipated to be completed by 2035 impacting travel in Gateway Cities, include the Gold Line Eastside Extension, the Orange Line Development Authority (OLDA) grade-separated regional transit project, the Regional Connector project linking the Blue Line to other lines in Downtown Los Angeles, and the Green Line extension to Los Angeles International Airport (LAX). These projects will positively affect transit ridership in the Gateway Cities in two ways: 1) the projects will improve regional access to attractions, employment, and services for Gateway Cities

households, and 2) the projects will provide a new fixed guideway transit alternative to private vehicle or bus transit trips.

Fixed guideway transit (i.e., commuter or light rail) tends to be more attractive than bus transit to discretionary travelers (people who have the option of driving), including commuters, visitors, and people traveling to major sport and cultural events if they are located along transit lines. To reflect the transition from bus to fixed-guideway transit access, an assumption that the regional transit walk access elasticity increases from 0.17 for bus to 0.33 for rail is reasonable for these discretionary trips. In other words, travelers with existing access to bus transit would be 1.5 to as much as 2 times as likely to choose transit if they had access to rail transit (while controlling for socioeconomic variables). This increase in transit mode share makes the regional rail projects that transect the Gateway Cities subregion more effective at reducing GHG than existing bus service, and even more effective when rail station areas are developed as TODs.

10.3.4 TOD Opportunity

In expanding transit corridors in California and elsewhere, the presence of new, high capacity, high level of service public transportation options has been shown to be a catalyst for new or redevelopment. Through zoning codes and development regulations, cities may support development of these areas through reduced parking requirements, tax increment financing, and other incentives to maximize the opportunity for development and capitalize on their investment in transit.

It is uncertain how much the opportunity for rezoning and eventual redevelopment of land uses near planned transit stations is incorporated into city general plans. OLDA is the only transit project in the Measure R plan anticipated to be completed by 2035 within the Gateway Cities. This project, which could facilitate TOD in Gateway Cities, would provide access to Vernon, Maywood, Bell, Huntington Park, Cudahy, Downey, South Gate, Paramount, Artesia, Bellflower, and Cerritos.

In addition, other regional transit projects that increase the level of service and accessibility to attractions outside the Gateway Cities (for example, such as new Green Line access to LAX) could also, to a lesser degree than above, facilitate TOD at existing transit stations in the Gateway Cities. It is likely that the benefits from TOD at these locations would occur sooner than TOD associated with the OLDA project given that the transit infrastructure is already in place.

The level to which growth in the Gateway Cities could intensify or be redistributed to focus in areas adjacent to new fixed-guideway transit stations is dependent on available development capacity, supporting infrastructure, zoning and development regulations, and future economic and market conditions. The example analysis of this interaction considers the effect of TOD in areas within one-half mile of Orange Line transit stations.

10.3.5 Results of Interactions

The data summarized in Table 10.2 reflects the range of potential benefits resulting from the interaction between land use and Measure R transit projects in the Gateway Cities in 2035. Given the anticipated long timeframe for implementation of the Measure R transit projects, as well as the long lead time for redevelopment activities adjacent to new transit, the resulting estimated GHG reductions associated with this interaction are only considered for 2035.

Table 10.2 Gateway Cities SCS – GHG Reduction from Land Use and Regional Transit Interactions

Gateway Cities – Land Use and Regional Transit Interaction	2035
Interaction 1 – Regional Walk Access	
Improved Access to Regional Destinations	
• Average Daily VMT per Household in Gateway Cities	42.5
• Total Daily GHG Reduction (lbs GHG per capita)	0.041-0.062
New Access to Fixed Guideway Transit	
• Total Households within 1/2 mile of possible future station location for potential OLDA project[1]	40,075
• Total Daily GHG Reduction (lbs GHG per capita)	0.021-0.042
Interaction 2 – TOD	
• Target Density Range in TOD Station Areas (TOD defined as ½ mile of station)[2]	23.7-60.7 dwelling units/acre
• Total Households in TOD Station Areas	8,186-20,966
• Total Daily GHG Reduction (lbs GHG per capita)	0.058-0.073
Total Daily GHG Reduction (lbs GHG per capita)	0.120-0.177

Notes:

1. Assumes constant residential density across each city based on 2035 forecasts.

2. Change characteristics of range from *Town Residential Low Mix* to *Town Residential High Mix* for TOD station areas, as defined in the ST.

Further explanation on interactive effects between transit and land use can be found in Appendix H.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

11.0 Compliance with Regional and Federal Requirements

11.1 Compliance with SCAG SCS/RTP

At the time of this subregional SCS submittal, the SCAG RTP is still under development; thus, Gateway Cities COG cannot determine if the SCS strategies, growth forecasts, land use, housing accommodation, and other elements of this subregional SCS conform with the SCAG RTP and regional SCS plans and assumptions. Nevertheless, the transportation investments included in this subregional SCS must also be included in the 2012 RTP, and must be scheduled in the Regional Transportation Improvement Plan (RTIP) for construction completion by the target years (2020 and 2035) in order to demonstrate any benefits as part of the SCS. Gateway Cities COG has collaborated with LACMTA to coordinate the subregional SCS with future transportation investments.

Gateway Cities COG expects SCAG to accept and incorporate this subregional SCS because 1) it complies with SB 375, 2) it complies with Federal law, and 3) it complies with SCAG's Subregional Framework and Guidelines. Furthermore, the compiled Gateway Cities subregional SCS achieves the regional targets set for SCAG by CARB. Gateway Cities have adhered to a process and timeline; whereby, the draft subregional SCS was delivered to SCAG for its review and comment, so that SCAG could identify any inconsistencies and resolve these prior to the final SCS being completed.

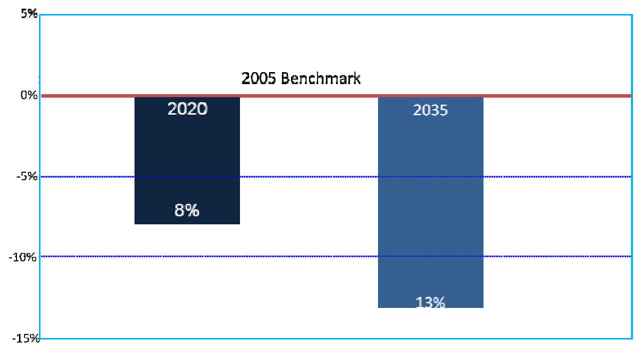
While completion of this subregional SCS does not exempt the subregion from further GHG emission reduction measures being included in the regional SCS, the clear intent and purpose of this subregional SCS is to occupy the field. Thus, the Gateway Cities COG does not expect to be compelled to adopt additional regional measures needed to meet the regional targets.

In addition, this SCS does work with SCAG to take advantage of the California Environmental Quality Act (CEQA) streamlining provisions of SB 375. To help Gateway Cities COG jurisdictions take advantage of the CEQA streamlining, SCAG will include maps in the regional 2012 RTP/SCS in order to show the uses, densities, intensities, and locations for future development; and in order to facilitate subsequent project consistency findings. More on this subject can be found in Appendix I.

11.2 Compliance with CARB Regional Targets

According to CARB, the SCAG region is to comply with the regional targets set forth through the Regional Targets Advisory Committee target-setting exercise.[29] For the SCAG region, the proposed targets are 8 percent per capita GHG reduction from passenger vehicles and light trucks for 2020 relative to 2005 and 13 percent in 2035 (Figure 11.1).

Figure 11.1 CARB GHG Emissions Target for SCAG Region (Emission Reduction Based on 2005 per Capita CO_2e)



Although the regional targets are not applicable at the subregional level, the Gateway Cities wished to compare the performance of their SCS with the regional targets. Thus, the Gateway Cities worked with SCAG to obtain the information needed to generate the Gateway Cities subregional baseline emissions per capita in 2005. This analysis applied the Adopted 2008 RTP Growth Forecast and the Local Input/General Plan 2012 RTP Growth Forecast as the per capita denominator for the SB 375 target years of 2020 and 2035. The results of this analysis produced an estimated daily GHG per capita for 2005 of 16.64 lbs CO_2e for the Gateway Cities subregion, compared to 21.2 lbs CO_2e for the SCAG region.[30] This difference is consistent with the following differences between the Gateway Cities subregion and the SCAG region as a whole: higher

[29] CARB, Staff Report, *Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375*, September 23, 2010.

[30] The unincorporated areas of Gateway Cities subregion are included in the total GHG per capita baseline.

land use density, lower car ownership per household, higher density and service levels for transit, and lower VMT per household. The 16.64 lbs CO_2e per capita in 2005 for the Gateway Cities subregion serves as the benchmark for the Gateway Cities SCS attainment of the CARB targets for the SCAG region. The estimated GHG reductions relative to this benchmark are achieved with the following five bundles of strategies.

1. **Transportation Strategies.** Participating cities submitted approximately 340 strategies; of these, a subset of strategies was either incomplete, did not have sufficient information for analysis, or was not relevant. (See Section 7.3.1, Strategies Submitted but not Analyzed, and Appendix D for detailed descriptions of these projects.) This portfolio generates a significant amount of reduction, the highest GHG reduction after the regional transportation projects. The interactive effects between these strategies and land use (smart growth policies) are accounted for in the land use analysis.
2. **TDM Strategies.** The focus was on three main categories of TDM: compressed work week schedules for city employees (12 cities), ridesharing programs for city employees (6 cities), and TDM or Trip Reduction Ordinances for new development (8 cities). This bundle also incorporates the interactive effects between TDM and land use and transit.
3. **Land Use.** Of the 26 participating cities, 11 cities chose to modify their land use in the ST. These cities worked with SCAG to develop a modified 2008 scenario that more closely approximated their current land use, as well as to apply smart growth policies in 2020 and 2035 scenarios. The remaining cities used the ST-equivalents of their adopted general plans (i.e., default scenarios in the ST), which is SCAG's best judgment of city general plans converted to grid cells. The ST has functionality that estimates the interactions between each of its 24 types of land use and proximity to a transit node.[31] These are included in the estimated GHG reductions from each city's 2020 and 2035 land use policies.
4. **Regional Projects, including Measure R.** Regional transportation projects located within or near to the Gateway Cities will reduce GHG within the subregion. Gateway Cities COG staff determined 17 projects that are included in the RTP, such as multimodal and intermodal facilities; and ramp and freeway improvements, such as HOV, HOT, and toll lanes. The analysis of their estimated GHG reductions was derived from travel demand model output from LACMTA and SCAG.
5. **Interactive Effects Between Land Use and Regional Transit Projects.** The long timeframe for implementation of the Measure R transit projects and the long lead time for redevelopment activities adjacent to new transit justify

[31] Proximity is defined as one-half mile from a rail station and one-quarter mile from a bus stop.

only attributing estimated GHG reductions resulting from the interaction between land use and Measure R transit projects in the Gateway Cities in 2035 and none in 2020.

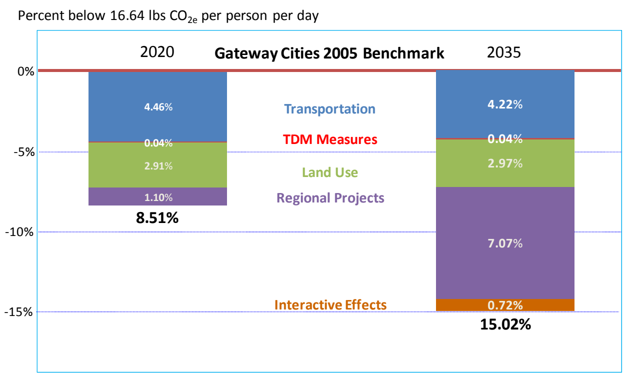
Combining the GHG reduction strategies from the five categories described above, the subregion as a whole is expected to reduce GHG per capita from the benchmark in 2005 by approximately 8.5 percent in 2020 and just over 15 percent in 2035. Table 11.1 and Figure 11.2 present these results.

Table 11.1 Summary GHG Reduction Results for Gateway Cities from 2005 Benchmark
In lbs CO2e per Person per Day

	Absolute Daily GHG Reduction per Capita		Percentage Daily GHG Reduction Per Capita	
	2020	2035	2020	2035
Transportation	0.74	0.70	4.46%	4.22%
TDM	0.007	0.007	0.04%	0.04%
Land Use	0.48	0.49	2.91%	2.97%
Regional Projects	0.18	1.17	1.10%	7.07%
Interactive Effects	N/A	0.12	N/A	0.72%
Total	1.40	2.48	8.51%	15.02%
SCAG Targets			*8%*	*13%*

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy

Figure 11.2 Percentage Daily GHG Reduction Per Capita in Gateway Cities
In lbs CO2e per Person per Day



11.3 Compliance with the Federal Clean Air Act

Under California Government Code §65080(b)(2)(B), the SCS prepared by SCAG is subject to the requirement that it allow the regional transportation plan to comply with Section 176 of the Federal Clean Air Act (42 U.S.C. Sec. 7506). Section 176 is the portion of Title I, Subpart D, Subpart 1 of the 1990 Clean Air Amendments that establishes the statutory authority for the Transportation Conformity rule and the General Conformity rule. While there is no State Implementation Plan (SIP) budget or National Ambient Air Quality Standards (NAAQS) for GHG emissions, the policies and projects included in the SCS are likely to also affect the criteria pollutant and their precursor emissions, which are subject to conformity.

What are the Requirements?

Transportation Conformity and General Conformity requires that Federal actions (including transportation plans and programs) conform to the region's State Implementation Plan [42 U.S.C. Sec. 7506(c)(1)]. Activities cannot:

- cause or contribute to any new violation of any standard in any area;
- increase the frequency or severity of any existing violation of any standard in any area; or
- delay timely attainment of any standard or any required interim emission reductions or other milestones in any area [42 U.S.C. Sec. 7506(c)(1)(B)].

The Transportation Conformity rule specifies procedures for use in the evaluation of transportation plans and programs. Generally, these include an emissions budget test, timely implementation of all SIP traffic control measures (TCM), and use of the latest planning assumptions.

General conformity applies to all Federal actions (e.g., funding, licensing, permitting or approving) that do not include the FHWA/Federal Transit Administration (FTA) projects. In an area with a SIP, General Conformity can be demonstrated in one of four ways:

1. By showing that the emission increases caused by an action are included in the SIP;
2. By demonstrating that the State agrees to include the emission increases in the SIP;
3. Through offsetting the action's emissions in the same or nearby area; or
4. Through mitigation to reduce the emission increase.

Gateway Cities SCS

The emission budget tests are applicable to both Transportation Conformity and General Conformity, but are applicable to the South Coast Air Basin as a whole, rather than the Gateway Cities subregion. The strategies covered in the Gateway Cities SCS are expected to reduce the emissions of criteria pollutants and their precursors and, therefore, are consistent with the emission budget tests that SCAG will be required to meet for the next RTP. Many of the regional projects are already included in conforming SCAG RTP and RTIP.

Transportation conformity requires timely implementation of all transportation control measures from the applicable state implementation plan. The 2007 Air Quality Management Plan (AQMP)/SIP includes the following three Transportation Control Measures (TCM) project categories:

1. HOV measures,
2. Transit and systems management measures, and
3. Information-based transportation strategies.

The TCM project categories in Appendix IV-C of the Regional Transportation Strategy and Control Measures of the 2007 Ozone AQMP/SIP are consistent with those of TCM01 specified in the 1994 and subsequent Ozone SIPs, and consist of the projects as specified in the fiscally-constrained portion, or the first two of the years (i.e., fiscal year (FY) 2010/2011 to 2011/2012) of SCAG's 2011 FTIP, adopted September 2, 2010.

SCAG's 2011 FTIP incorporates LACMTA's 2009 LRTP, which was the basis of the regional projects incorporated into the SCS. Therefore, the SCS incorporates all applicable transportation control measures from the 2007 SIP, and is

consistent with the transportation conformity rule's timely TCM implementation requirement.

Future Implementation

Experience in the Bay Area and San Joaquin Valley has shown that assumptions and proposed controls in the RTP can be treated by U.S. Environmental Protection Agency (EPA) as TCM during SIP revisions. When selecting strategies, the implications of the SCS strategies and land use assumptions becoming SIP TCMs, subject to timely implementation requirements, should be considered.

12.0 Financial and Fiscal Implementation

This section considers the fiscal challenges of implementing the SCS strategies, especially those that would be funded by local jurisdictions. The fiscal challenges are large, including the need for approximately $156 million in project funding, even though the plan provides over $215 million in committed funding (see Table 12.2). The cities and MPOs throughout the State have consistently commented that the success of GHG reductions at the local level relies on the State assisting Cities in developing predictable and stable funding sources in order to implement the SCS. The existing predictable and stable funding sources have been eviscerated at the State and local level as result of the impacts of the severe economic recession of 2008 to 2010 and the slow economic recovery. These include drops in sales tax revenues that support local transportation projects, as well as deferrals of local revenues collected by the State. This unpredictability makes it very difficult to plan the major statewide and regional projects that are necessary for GHG reductions.

In many ways, this has been the most severe economic recession since the Great Depression of the 1930s. The impacts of the current recession have been felt especially in the Gateway Cities in terms of persistent high unemployment. Unemployment in the Gateway Cities totaled 13.2 percent in April of this year. Six of the Gateway Cities have unemployment above 15 percent, while 11 of the local communities have unemployment above 13 percent. The City of Long Beach has an unemployment rate of 12.9 percent, with 30,700 persons out of work. Local municipal budgets have been severely reduced by the impacts of the recession, and the State has proposed the elimination of redevelopment, which up to now has been a successful tool at promoting sustainable communities and transit-oriented development in the Gateway Cities subregion. California's housing market and construction industry has borne the brunt of the recession. The State has the highest number of housing foreclosures in the nation, and the bottom of the housing market has not yet been reached. Building permit activity in the region is at historic lows.

The communities in the Gateway Cities have been proactive in funding this Subregional SCS, and will continue to be proactive in developing and securing the necessary funds to implement the strategy. The voters in Los Angeles County have supported three "self-help" sales tax increases over the last 25 years in order to implement transportation measures, the most recent being Measure R. A small number of the Gateway Cities have traffic mitigation fees, and the LACMTA is working on a pilot program for several of the cities. However, there is great concern in many of the communities that an impact fee will adversely impact a fragile and tentative economic recovery. The success of the Gateway

Cities SCS depends in good part in financial assistance from both the State and Federal government, recognizing that there is only so much local funding that is realistic and available.

12.1 Project Costs and Funding Status

All 26 participating cities plus the Los Angeles County Public Works Department submitted transportation projects totaling 340 projects. Of that total, about 240 were funded and became functional between 2005 and 2011. The remaining 100 are planned to become functional between 2011 and 2035 (see Table 12.1), and are estimated to cost a total of roughly $371 million. These future projects are distributed among 16 of the 27 participating jurisdictions (including Los Angeles County).

The 16 jurisdictions have identified about $206 million in funding, which leaves about $156 million more of required additional funding. Table 12.2 below shows the total costs, number of projects, and the funded and unfunded portions.

The $206 million of available funding comes from a broad range of local, county, regional, state, and Federal sources. Appendix D provides details of each project's funding assumptions.

The estimates for each project's total costs were either provided by the city staff submitting the project, or were generated by the consultant team. The consultant estimates were made by comparing each project to similar projects with established costs. When multiple projects were available for comparison, an average cost was devised and then applied to the project of unknown cost. In the case of those projects where length was a factor, the average cost per mile was established and then multiplied by the length of the project of unknown cost.

The consultant team has also made estimates for the funded and unfunded portions when city staff were unable to provide funding information. Future revisions and refinements to these estimates are expected.

Table 12.1 Types of Transportation Strategies by Jurisdiction to be Implemented from 2011 through 2035

City	Roadway Capacity	Intersection Improvements[1] New Signal	New Phase	Intersection Capacity	System Ops-ITS	Grade Separation	Nonmotorized Transportation	Park and Ride	Total
Bell Gardens				2					2
Bellflower				1				1	2
Commerce	1								1
Compton								1	1
Downey	5	2	4	2	4				17
La Mirada						1			1
LACDPW[2]					14				14
Long Beach	1	4	3	4	4		19		35
Lynwood							1		1
Norwalk	1	1					1		3
Pico Rivera		1	1			1			3
Santa Fe Springs		1					1		2
Signal Hill	2	2	2		1		1		8
South Gate	1								1
Vernon	1			1					2
Whittier		1	3				3		7
Total	12	12	13	10	23	2	26	2	100

1. Intersection improvements are divided into three types: new signals, new phase, and new capacity.
2. Los Angeles County Public Works Department projects are all almost all traffic signal synchronization projects and a few ITS projects on primary arterials through both incorporated and unincorporated areas.

Source: Cambridge Systematics, Inc.

Table 12.2 Estimated Total Costs and Funding for Future Transportation Strategies from 2011 through 2035
2011 Current Dollars

	Number of Projects	Total Cost	Funded Portion	Unfunded Portion
Bell Gardens	2	$300,000	$195,000	$105,000
Bellflower	2	$4,020,000	$3,010,000	$1,010,000
Commerce	1	$23,008,000	$15,582,000	$7,426,000
Compton	1	$12,000,000	$8,000,000	$4,000,000
Downey	16	$87,555,000	$42,301,000	$45,254,000
La Mirada	1	$75,000,000	$37,000,000	$38,000,000
LAPW	14	$24,672,350	$22,451,839	$2,220,512
Long Beach	35	$49,740,000	$35,755,000	$14,045,000
Lynwood	1	$100,000	$0	$100,000
Norwalk	3	$5,497,351	$2,517,881	$2,979,470
Pico Rivera	3	$44,400,000	$22,200,000	$22,200,000
Santa Fe Springs	2	$490,000	$320,000	$170,000
Signal Hill	8	$9,119,000	$7,023,000	$2,096,000
South Gate	1	$14,721,000	$9,424,000	$5,297,000
Vernon	2	$17,202,000	$7,002,000	$10,200,000
Whittier	7	$3,484,000	$2,515,000	$969,000
All Projects	100	$371,308,701	$215,296,720	$156,071,982

Source: Cambridge Systematics, Inc.

The remaining $156 million in unfunded costs presents a challenge for the subregion's goal of demonstrating a feasible and implementable SCS. The terms laid out in the MOU between SCAG and Gateway Cities COG are silent on the necessity that the subregional SCS conform with the same financial constraint requirement that applies to the SCAG RTP/SCS.[32] If the RTP financial constraint requirement flows down from the regional SCS to a subregional SCS, then this subregional SCS must identify likely revenue sources sufficient to cover the $156 million in unfunded costs.

Gateway Cities will investigate the feasibility of using an assortment of local, regional, state, and Federal sources over the next 24 years. The potential sources

[32]This financial constraint requirement provides the basis for the assumption that the 17 regional projects, which are included in the 2008 RTP, are funded and thus may be included in this subregional SCS.

include local gas tax revenues, redevelopment tax increment, local assessment districts, LACMTA Call for Projects, and state and Federal revenues. Some of these sources will require a local match, or by having a local match put a jurisdiction in a stronger competitive position.

One of the few remaining untapped sources for local funding involves developer impact fees. LACMTA has proposed a countywide Congestion Mitigation Fee (CMF) as a replacement to the debit/credit system previously required (and now temporarily suspended) to conform with the state-mandated Congestion Mitigation Program (CMP). A countywide CMF would collect development impact fees to fund local projects with regional significance. These projects would be selected by each local jurisdiction, but must conform with state requirements for development impact fees (Government Code §66000 *et seq*.). Two of these requirements are the most applicable for qualifying SCS strategies for funding with a CMF:

1. **Nexus test.** An SCS strategy must be shown to mitigate the impact of new development on future congestion in rough proportion to the amount of impact. This means the aggregate benefits of the SCS strategies that are funded with CMF revenues cannot exceed the impacts of new development, and thus remedy existing deficiencies.
2. **Capital investments**. Only capital costs are eligible for CMF funding. The operating costs of SCS strategies must be funded with other revenue sources.

The CMF funds collected from new development remain under the control of each local jurisdiction. The LACMTA's role is limited to providing technical assistance in the nexus studies required to adopt a CMF, and monitoring and auditing the CMF programs once each jurisdiction implements them.

LACMTA has initiated pilot studies with all seven other subregions in the County, but none of these pilot studies obligates a subregional COG or any of its member jurisdictions to adopt a CMF. Each jurisdiction's council (or Board of Supervisors for the unincorporated areas) may decide to adopt a CMF after the LACMTA Board has formally adopted the CMF as the method of complying with the CMP.

Some Gateway Cities jurisdictions have agreed individually to undertake pilot studies for a CMF. The Gateway Cities COG, however, has not formally approved proceeding with a subregional pilot study, so at this point wider participation remains uncertain. This leaves this subregional SCS financially unconstrained. While there is no clear legal guidance from CARB or SCAG, the Gateway Cities COG legal counsel advised the SCS Policy Development Committee (March 11, 2011) that further progress on identifying likely local funding sources may continue after the Gateway Cities COG Board approves and submits this subregional SCS to SCAG. As implementation proceeds, cities may identify additional funding sources and be able to implement all of their strategies.

Appendix A.

Process Document

- Memorandum of Understanding (MOU) Between SCAG and Gateway Cities Council of Governments for the Gateway Cities Sustainable Communities Strategy, October 7, 2010

  Exhibit A. SCAG Framework and Guidelines for Subregional Sustainable Communities Strategy, April 1, 2010

Southern California Association of Governments

(Approved by Regional Council - April 1, 2010)

FRAMEWORK AND GUIDELINES
for
SUBREGIONAL SUSTAINABLE COMMUNITIES STRATEGY

I. INTRODUCTION

SB 375 (Steinberg), also known as California's Sustainable Communities Strategy and Climate Protection Act, is a new state law which became effective January 1, 2009. SB 375 calls for the integration of transportation, land use, and housing planning, and also establishes the reduction of greenhouse gas (GHG) emissions as one of the main goals for regional planning. SCAG, working with the individual County Transportation Commissions (CTCs) and the subregional organizations within the SCAG region, is responsible for implementing SB 375 in the Southern California region. Success in this endeavor is dependent on collaboration with a range of public and private partners throughout the region.

Briefly summarized here, SB 375 requires SCAG as the Metropolitan Planning Organization to:

- Prepare a Sustainable Communities Strategy (SCS) as part of the 2012 Regional Transportation Plan (RTP). The SCS will meet a State-determined regional GHG emission reduction target, if it is feasible to do so.
- Prepare an Alternative Planning Strategy (APS) that is not part of the RTP if the SCS is unable to meet the regional target.
- Integrate SCAG planning processes, in particular assuring that the Regional Housing Needs Assessment (RHNA) is consistent with the SCS, at the jurisdiction level.
- Specific to SCAG only, allow for subregional SCS/APS development.
- Develop a substantial public participation process involving all stakeholders.

Unique to the SCAG region, SB 375 provides that "a subregional council of governments and the county transportation commission may work together to propose the sustainable communities strategy and an alternative planning strategy . . . for that subregional area." Govt. Code §65080(b)(2)(C). In addition, SB 375 authorizes that SCAG "may adopt a framework for a subregional SCS or a subregional APS to address the intraregional land use, transportation, economic, air quality, and climate policy relationships." *Id.* Finally, SB 375 requires SCAG to "develop overall guidelines, create public participation plans, ensure coordination, resolve conflicts, make sure that the overall plan complies with applicable legal requirements, and adopt the plan for the region." *Id.*

The intent of this Framework and Guidelines for Subregional Sustainable Communities Strategy (also referred to herein as the "Framework and Guidelines" or the "Subregional Framework and Guidelines") is to offer the SCAG region's subregional agencies the highest degree of autonomy, flexibility and responsibility in developing a program and set of implementation strategies for their subregional areas. This will allow the subregional strategies to better reflect the issues, concerns, and future vision of the region's collective jurisdictions with the input of the fullest range of stakeholders. In order to achieve these objectives, it is necessary for SCAG to develop measures that assure equity, consistency and coordination, such that SCAG can incorporate the subregional SCSs in its regional SCS which will be adopted as part of the 2012 RTP pursuant to SB 375. For that reason, this Framework and Guidelines establishes standards for the subregion's work in preparing and submitting subregional strategies, while also laying out SCAG's role in facilitating and supporting the subregional effort with data, tools, and other assistance.

While the Framework and Guidelines are intended to facilitate the specific subregional option to develop the SCS (and APS if necessary) as described in SB 375, SCAG encourages the fullest possible participation from all subregional organizations. As SCAG undertakes implementation of SB 375 for the first time, SCAG has also designed a "collaborative" process, in cooperation with the subregions, that allows for robust subregional participation for subregions that choose not to exercise their statutory option.

II. ELIGIBILITY AND PARTICIPATION

SB 375 allows for subregional councils of governments in the SCAG region to have the option to develop the SCS (and the APS if necessary) for their area. SCAG interprets this option as being available to any subregional organization recognized by SCAG, regardless of whether the organization is formally established as a "subregional council of governments."

County Transportation Commissions (CTCs) play an important and necessary role in the development of a subregional SCS. Any subregion that chooses to develop a subregional strategy will need to work closely with the respective CTC in its subregional area in order to identify and integrate transportation projects and policies. Beyond working with CTCs, SCAG encourages partnership efforts in the development of subregional strategies, including partnerships between and among subregions.

Subregional agencies must formally indicate to SCAG, in writing, by December 31, 2009 if they intend to exercise this option to develop their own SCS. Subregions that choose to develop an SCS for their area must do so in a manner consistent with this Framework and Guidelines. The subregion's intent to exercise its statutory option to prepare the strategy for their area must be decided and communicated through formal action of the subregional agency's governing board. Subsequent to receipt of any subregion's intent to develop and adopt an SCS, SCAG will convene discussions regarding a formal written agreement between SCAG and the subregion, which may be revised if necessary, as the SCS process is implemented.

III. FRAMEWORK

The Framework portion of this document covers regional objectives and policy considerations, and provides general direction to the subregions in preparing their own SCS, and APS if necessary.

A. SCAG's preliminary goals for implementing SB 375 are as follows:

- Achieve the regional GHG emission reduction target for cars and light trucks through an SCS.
- Fully integrate SCAG's planning processes for transportation, growth, intergovernmental review, land use, housing, and the environment.
- Seek areas of cooperation that go beyond the procedural statutory requirements, but that also result in regional plans and strategies that are mutually supportive of a range of goals.
- Build trust by providing an interactive, participatory and collaborative process for all stakeholders. Provide, in particular, for the robust participation of local jurisdictions, subregions and CTCs in the development of the SCAG regional SCS and implementation of the subregional provisions of the law.
- Assure that the SCS adopted by SCAG and submitted to California Air Resources Board (ARB) is a reflection of the region's collective growth strategy and vision for the future.
- Develop strategies that incorporate and are respectful of local and subregional priorities, plans, and projects.

B. Flexibility

Subregions may develop any appropriate strategy to address the region's greenhouse gas reduction goals and the intent of SB 375. While subregions will be provided with SCAG data, and with a conceptual or preliminary scenario to use as a helpful starting point, they may employ any combination of land use policy change, transportation policy, and transportation investment, within the specific parameters described in the Guidelines.

C. Outreach Effort and Principles

Subregions are required to conduct an open and participatory process that includes the fullest possible range of stakeholders. As further discussed within the Guidelines, SCAG amended its existing Public Participation Plan (PPP) to describes SCAG's responsibilities in complying with the outreach requirements of SB 375 and other applicable laws and regulations. SCAG will fulfill its outreach requirements for the regional SCS/APS which will include outreach activities regarding the subregional SCS/APS. Subregions are also encouraged to design their own outreach process that meets each subregion's own needs and reinforces the spirit of openness and full participation. To the extent that subregions do establish their own outreach process, this process should be coordinated with SCAG's outreach process.

D. Communication and Coordination

Subregions developing their own SCS are strongly encouraged to maintain regular communication with SCAG staff, the respective CTC, their jurisdictions and other stakeholders, and other subregions if necessary, to review issues as they arise and to assure close coordination. Mechanisms for on-going communication should be established in the early phases of strategy development.

E. Planning Concepts

SCAG, its subregions, and member cities have established a successful track record on a range of land use and transportation planning approaches through the on-going SCAG Compass Blueprint Program, including approximately 60 local demonstration projects completed to date. Subregions are

encouraged to capture, further develop and build off the concepts and approaches of the Compass Blueprint program. In brief, these include developing transit-oriented, mixed use, and walkable communities, and providing for a mix of housing and jobs.

IV. GUIDELINES

These Guidelines describe specific parameters for the subregional SCS/APS effort under SB 375, including process, deliverables, data, documentation, and timelines. As described above, the Guidelines are created to ensure that the region can successfully incorporate strategies developed by the subregions into the regional SCS, and that the region can comply with its own requirements under SB 375. Failure to proceed in a manner consistent with the Guidelines will result in SCAG not accepting a subregion's submitted strategy.

A. Subregional Process

(1) <u>Subregional Sustainable Communities Strategy</u>

Subregions that choose to exercise their optional role under SB 375 will develop and adopt a subregional Sustainable Communities Strategy. That strategy must contain all of the required elements, and follow all procedures, as described in SB 375. Subregions may choose to further develop an Alternative Planning Strategy (APS), according to the procedures and requirements described in SB 375. If subregions prepare an APS, they must prepare a Sustainable Communities Strategy first, in accordance with SB 375. A subregional APS is not "in lieu of" a subregional SCS, but in addition to the subregional SCS. In part, an APS must identify the principal impediments to achieving the targets within the SCS. The APS must show how the GHG emission targets would be achieved through alternative development patterns, infrastructure, and additional transportation measures or policies. SCAG encourages subregions to focus on feasible strategies that can be included in the SCS.

The subregional SCS must include all components of a regional SCS as described in SB 375, and outlined below:

(i.) identify the general location of uses, residential densities, and building intensities within the subregion;
(ii.) identify areas within the subregion sufficient to house all the population of the subregion, including all economic segments of the population, over the course of the planning period of the RTP taking into account net migration into the region, population growth, household formation and employment growth;
(iii.) identify areas within the subregion sufficient to house an eight-year projection of the regional housing need for the subregion pursuant to Section 65584;
(iv.) identify a transportation network to service the transportation needs of the subregion;
(v.) gather and consider the best practically available scientific information regarding resource areas and farmland in the subregion as defined in subdivisions (a) and (b) of Section 65080.01;
(vi.) consider the state housing goals specified in Sections 65580 and 65581;
(vii.) set forth a forecasted development pattern for the subregion, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the ARB; and

(viii.) allow the RTP to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506). See, Government Code §65080(b)(2)(B).

In preparing the subregional SCS, the subregion will consider feasible strategies, including local land use policies, transportation infrastructure investment (e.g., transportation projects), and other transportation policies such as Transportation Demand Management (TDM) strategies (which includes pricing), and Transportation System Management (TSM) strategies. Technological measures may be included if they exceed measures captured in other state and federal requirements (e.g., AB32).

As discussed further below (under "Documentation"), subregions need not constrain land use strategies considered for the SCS to current General Plans. In other words, the adopted strategy need not be fully consistent with local General Plans currently in place. However, should the adopted subregional strategy deviate from General Plans, subregions will need to demonstrate the feasibility of the strategy by documenting any affected jurisdictions' willingness to adopt the necessary General Plan changes.

The regional SCS shall be part of the 2012 RTP. Therefore, for transportation investments included in a subregional SCS to be valid, they must also be included in the 2012 RTP. Further, such projects need to be scheduled in the RTIP for construction completion by the target years (2020 and 2035) in order to demonstrate any benefits as part of the SCS. As such, subregions will need to collaborate with the respective CTC in their area to coordinate the subregional SCS with future transportation investments. It should also be noted that the California Transportation Commission is updating their RTP Guidelines. This topic is likely to be part of further discussion through the SCS process as well.

SCAG will accept and incorporate the subregional SCS, unless (a) it does not comply with SB 375, (b) it is does not comply with federal law, or (c) it is does not comply with SCAG's Subregional Framework and Guidelines. In the event that a compiled regional SCS, including subregional submissions, does not achieve the regional target, SCAG will initiate a process to develop and consider additional GHG emission reduction measures region-wide. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process. Furthermore, SCAG will compile and disseminate performance information on the preliminary regional SCS and its components in order to facilitate regional dialogue. The development of a subregional SCS does not exempt any subregion from further GHG emission reduction measures being included in the regional SCS. Further, all regional measures needed to meet the regional target will be subject to adoption by the Regional Council, and any additional subregional measures beyond the SCS submittal from subregions accepting delegation needed to meet the regional target must also be adopted by the subregional governing body.

(2) <u>Subregional Alternative Planning Strategy (APS)</u>

Subregions are encouraged to focus their efforts on feasible measures that can be included in an SCS. In the event that a subregion chooses to prepare an APS, the content of a subregional APS should be consistent with what is required by SB 375 (*see*, Government Code §65080(b)(2)(H)), as follows:

(i.) Shall identify the principal impediments to achieving the subregional SCS.

(ii.) May include an alternative development pattern for the subregion pursuant to subparagraphs (B) to (F), inclusive.
(iii.) Shall describe how the alternative planning strategy would contribute to the regional greenhouse gas emission reduction target, and why the development pattern, measures, and policies in the alternative planning strategy are the most practicable choices for the subregion.
(iv.) An alternative development pattern set forth in the alternative planning strategy shall comply with Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, except to the extent that compliance will prevent achievement of the regional greenhouse gas emission reduction targets approved by the ARB.
(v.) For purposes of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), an alternative planning strategy shall not constitute a land use plan, policy, or regulation, and the inconsistency of a project with an alternative planning strategy shall not be a consideration in determining whether a project may have an environmental effect.

Any precise timing or submission requirements for a subregional APS will be determined based on further discussions with subregional partners. As previously noted, a subregional APS is in addition to a subregional SCS.

(3) <u>Outreach and Process</u>

SCAG will fulfill all of its outreach requirements under SB 375 for the regional SCS/APS, which will include outreach regarding any subregional SCS/APS. SCAG staff has revised its Public Participation Plan to incorporate the outreach requirements of SB 375, and integrate the SB 375 process with the 2012 RTP development as part of SCAG's Public Participation Plan Amendment No. 2, adopted by SCAG's Regional Council on December 3, 2009. Subsequent to the adoption of the PPP Amendment No. 2, SCAG will continue to discuss with subregions and stakeholders the Subregional Framework & Guidelines, which further describe the Public Participation elements of SB 375.

Subregions that elect to prepare their own SCS or APS are encouraged to present their subregional SCS or APS, in coordination with SCAG, at all meetings, workshops and hearings held by SCAG in their respective counties. Additionally, the subregions would be asked to either provide SCAG with their mailing lists so that public notices and outreach materials may also be posted and sent out by SCAG, or SCAG will provide notices and outreach materials to the subregions for their distribution to stakeholders. The SCAG PPP Amendment No. 2 provides that additional outreach may be performed by subregions. Subregions are strongly encouraged to design and adopt their own outreach processes that mimic the specific requirements imposed on the region under SB 375. Subregional outreach processes should reinforce the regional goal of full and open participation, and engagement of the broadest possible range of stakeholders.

(4) <u>Subregional SCS Approval</u>

It is recommended that the governing board of the subregional agency approve the subregional SCS prior to submission to SCAG. While the exact format is still subject to further discussion, SCAG recommends that there be a resolution from the governing board of the subregion with a finding that the land use strategies included in the subregional SCS are feasible and based upon consultation with the local jurisdictions in the respective subregion. Subregion should consult with their legal counsel as to compliance with the California Environmental Quality Act (CEQA). In SCAG's view, the subregional SCS is not a "project" for the purposes of CEQA; rather, the 2012 RTP which will include the regional SCS is the actual "project" which will be reviewed for environmental impacts pursuant to CEQA. As such, the regional SCS, which will include the subregional SCSs, will undergo a thorough CEQA review. Nevertheless, subregions approving subregional SCSs should consider issuing a notice of exemption under CEQA to notify the public of their "no project" determination and/or to invoke the "common sense" exemption pursuant to CEQA Guidelines § 15061(b)(3).

Finally, in accordance with SB 375, subregions are strongly encouraged to work in partnership with the CTC in their area. SCAG can facilitate these arrangements if needed.

(5) <u>Data Standards</u>

SCAG is currently assessing the precise data standards anticipated for the regional and subregional SCS. In particular, SCAG is reviewing the potential use of parcel data and development types currently used for regional planning. At present, the following describes the anticipated data requirements for a subregional SCS.

1. Types of Variables
   Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables include land uses, residential densities, building intensities, etc, as described in SB 375.

2. Geographical Levels
   SCAG is considering the collection and adoption of the data at a small-area level as optional for local agencies in order to make accessible the CEQA streamlining provisions under SB 375. The housing unit, employment, and the land use variables can be collected at a small-area level for those areas which under SB 375 qualify as containing a "transit priority project" (i.e. within half-mile of a major transit stop or high-quality transit corridor) for purposes of allowing jurisdictions to take advantage of the CEQA streamlining incentives in SB 375.

   For all other areas in the region, SCAG staff will collect the population, household, employment, and land use variables at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years
   The socio-economic and land use variables will be required for the base year of 2008, and the target years of 2020 and 2035.

(6) <u>Documentation</u>

Subregions are expected to maintain full and complete records related to the development of the subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board.

(7) <u>Timing</u>

An overview schedule of the major milestones of the subregional process and its relationship to the regional SCS/RTP is included below. Subregions must submit the subregional SCS to SCAG by the date prescribed. Further, SCAG will need a preliminary SCS from subregions for the purpose of preparing a project description for the 2012 RTP Program Environmental Impact Report. The precise content of this preliminary submission will be determined based on further discussions. The anticipated timing of this preliminary product is approximately February 2011.

(8) <u>Relationship to Regional Housing Needs Assessment (RHNA) and Housing Element</u>

Although SB 375 calls for an integrated process, subregions are not automatically required to take on RHNA delegation as described in State law if they prepare an SCS/APS. However, SCAG encourages subregions to undertake both processes due to their inherent connections.

SB 375 requires that the RHNA allocated housing units be consistent with the development pattern included in the SCS. *See*, Government Code §65584.04(i). Population and housing demand must also be proportional to employment growth. At the same time, in addition to the requirement that the RHNA be consistent with the development pattern in the SCS, the SCS must also identify areas that are sufficient to house the regional population by income group through the RTP planning period, and must identify areas to accommodate the region's housing need for the next local Housing Element eight year planning period update. The requirements of the statute are being further interpreted through the RTP guidelines process. Staff intends to monitor and participate in the guideline process, inform stakeholders regarding various material on these issues, and amend, if necessary, these Framework and Guidelines, pending its adoption.

SCAG will be adopting the RHNA and applying it to local jurisdictions at the jurisdiction boundary level. SCAG staff believes that consistency between the RHNA and the SCS may still be accomplished by aggregating the housing units contained in the smaller geographic levels noted in the SCS and including such as part of the total jurisdictional number for RHNA purpose. SCAG staff has concluded that there is no consistency requirement for RHNA purposes at sub-jurisdictional level, even though the SCS is adopted at the smaller geographic level for the opportunity areas.

The option to develop a subregional SCS is separate from the option for subregions to adopt a RHNA distribution, and subject to separate statutory requirements. Nevertheless, subregions that develop and adopt a subregional SCS should be aware that the SCS will form the basis for the allocation of housing need as part of the RHNA process. Further, SCS development requires integration of elements of the RHNA process, including assuring that areas are identified to accommodate the 8 year need for housing, and that housing not be constrained by certain types of local growth controls as described in State law.

SCAG will provide further guidance for subregions and a separate process description for the RHNA.

B. COUNTY TRANSPORTATION COMMISSIONS' ROLES AND RESPONSIBLITIES

Subregions that develop a subregional SCS will need to work closely with the CTCs in their area in order to coordinate and integrate transportation projects and policies as part of the subregional SCS. As discussed above (under "Subregional Sustainable Communities Strategy"), any transportation projects identified in the subregional SCS must also be included in the 2012 RTP in order to be considered as a feasible strategy. SCAG can help to facilitate communication between subregions and CTCs.

C. SCAG ROLES AND RESPONSIBLITIES

SCAG's roles in supporting the subregional SCS development process are in the following areas:

(1) <u>Preparing and adopting the Framework and Guidelines</u>

SCAG will adopt these Framework and Guidelines in order to assure regional consistency and the region's compliance with law.

(2) <u>Public Participation Plan</u>

SCAG will assist the subregions by developing, adopting and implementing a Public Participation Plan and outreach process with stakeholders. This process includes consultation with congestion management agencies, transportation agencies, and transportation commissions; and SCAG will hold public workshops and hearings. SCAG will also conduct informational meetings in each county within the region for local elected officials (members of the board of supervisors and city councils), to present the draft SCS, and APS if necessary, and solicit and consider input and recommendations.

(3) <u>Methodology</u>

As required by SB 375, SCAG will adopt a methodology for measuring greenhouse gas emission reductions associated with the strategy.

(4) <u>Incorporation/Modification</u>

SCAG will accept and incorporate the subregional SCS unless it does not comply with SB 375, federal law, or the Subregional Framework and Guidelines. As SCAG intends the entire SCS development process to be iterative, SCAG will not amend a locally-submitted SCS. SCAG may provide additional guidance to subregions so that subregions may make amendments to its subregional SCS as part of the iterative process, or request a subregion to prepare an APS if necessary. Further, SCAG can propose additional regional strategies if feasible and necessary to achieve the regional emission reduction target with the regional SCS. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process.

(5) <u>Modeling</u>

SCAG currently uses a Trip-Based Regional Transportation Demand Model and ARB's EMFAC model for emissions purposes. In addition to regional modeling, SCAG is developing tools to evaluate the effects of strategies that are not fully accounted for in the regional model. SCAG is also developing two additional tools – a Land Use Model and an Activity Based Model – to assist in strategy development and measurement of outcomes under SB 375.

In addition to modeling tools which are used to measure results of completed scenarios, SCAG is developing a scenario planning tool for use in workshop settings as scenarios are being created with jurisdictions and stakeholders. The tool will be made available to subregions and local governments for their use in subregional strategy development.

(6) <u>Adoption/Submission to State</u>

After the incorporation of subregional strategies, SCAG will finalize and adopt the regional SCS as part of the 2012 RTP. SCAG will submit the SCS to ARB for review as required in SB 375.

(7) <u>Conflict Resolution</u>

While SB 375 requires SCAG to develop a process for resolving conflicts, it is unclear at this time the nature or purpose of a conflict resolution process as SCAG does not intend to amend a locally-submitted SCS. As noted above, SCAG will accept the subregional SCS unless it is inconsistent with SB 375, federal law, or the Subregional Framework and Guidelines. SCAG will also request that a subregion prepare an APS if necessary. It is SCAG's intent that the process be iterative and that there be coordination among SCAG, subregions and their respective jurisdictions and CTCs. SCAG is open to further discussion on issues which may generate a need to establish a conflict resolution process as part of the written agreement between SCAG and the subregional organization.

(8) <u>Funding</u>

Funding for subregional activities is not available at this time, and any specific parameters for future funding are speculative. Should funding become available, SCAG anticipates providing a share of available resources to subregions. While there are no requirements associated with potential future funding at this time, it is advisable for subregions to track and record their expenses and activities associated with these efforts.

(9) <u>Preliminary Scenario Planning</u>

SCAG will work with each subregion to collect information and prompt dialogue with each local jurisdiction prior to the start of formal SCS development. This phase of the process is identified as "preliminary scenario planning" in the schedule below. The purpose of this process is to create a base of information to inform SCAG's recommendation of a regional target to ARB prior to June 2010. All subregions are encouraged to assist SCAG in facilitating this process.

(10) <u>Data</u>

SCAG is currently developing, and will provide each subregion with datasets for the following:

(1) 2008 Base year;
(2) General Plan/Growth projection & distribution;
(3) Trend Baseline; and
(4) Policy Forecast/SCS.

While the Trend Baseline is a technical projection that provides a best estimate of future growth based on past trends and assumes no general plan land use policy changes, the Policy Forecast/ SCS is derived using local input through a bottom-up process, reflecting regional policies including transportation investments. Local input is collected from counties, subregions, and local jurisdictions.

Data/GIS maps will be provided to subregions and local jurisdiction for their review. This data and maps include the 2008 base year socioeconomic estimates and 2020 and 2035 socioeconomic forecast. Other GIS maps including the existing land use, the general plan land use, the resource areas, and other important areas identified in SB 375. It should be noted that none of the data/ maps provided were endorsed or adopted by SCAG's Community, Economic and Human Development Committee (CEHD). All data/maps provided are for the purpose of collecting input and comments from subregions and local jurisdictions. This is to initiate dialogue among stakeholders to address the requirements of SB 375 and its implementation.

The list of data/GIS maps include:

1. Existing land use
2. Zoning
3. General plan land use
4. Resource areas include:
   (a.) all publicly owned parks and open space;
   (b.) open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;
   (c.) habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal Endangered Species Act (1973), the California Endangered Species Act, or Native Plant Protection Act;
   (d.) lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;
   (e.) areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;
   (f.) areas containing biological resources as described in Appendix G of the CEQA Guidelines that may be significantly affected by the sustainable communities strategy or the alternative planning strategy; and
   (g.) an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance.
5. Farmland
6. Sphere of influence
7. Transit priority areas
8. City/Census tract boundary with ID
9. City/TAZ boundary with ID

(11) <u>Tools</u>

SCAG is developing a Local Sustainability Planning Model (LSPM) for subregions/local jurisdictions to analyze land use impact. The use of this tool is not mandatory and is at the discretion of the Subregion. The LSPM is a web-based tool that can be used to analyze, visualize and calculate the impact of land use changes on auto ownership, mode use, vehicle miles of travel (VMT), and greenhouse gas emissions in real time. Users will be able to estimate transportation and emissions impacts by modifying land use designations within their community.

Other tools currently maintained by SCAG may be useful to the subregional SCS development effort, including the web-based CaLOTS application. SCAG will consider providing guidance and training on additional tools based on further discussions with subregional partners.

(12) <u>Resources and technical assistance</u>

SCAG will assist the subregions by making available technical tools for scenario development as described above. Further, SCAG will assign a staff liaison to each subregion, regardless of whether the subregion exercises its statutory option to prepare an SCS. SCAG staff can participate in subregional workshops, meetings, and other processes at the request of the subregion, and pending funding and availability. SCAG's legal staff will be available to assist with questions related to SB 375 or SCAG's implementation of SB 375. Further, SCAG will prepare materials for its own process in developing the regional SCS, and will make these materials available to subregions.

D. MILESTONES/SCHEDULE

- CARB issues Final Regional Targets – September 2010
- SCS development (preliminary scenario, draft, etc) – through early 2011
- Release Draft RTP/regional SCS for public review – November 2011
- Regional Council adopts RTP/SCS – April 2012

If other milestones are needed, they will be incorporated into the written agreement between SCAG and the Subregion.

REPORT

AGENDA ITEM # 7

DATE: October 7, 2010

TO: Executive/Administration Committee
Regional Council

FROM: Joann Africa, Chief Counsel, (213)-236-1928, africa@scag.ca.gov

SUBJECT: Memorandum of Understanding (MOU) between SCAG and Gateway Cities Council of Governments for Gateway Cities Sustainable Communities Strategy

EXECUTIVE DIRECTOR'S APPROVAL:

RECOMMENDED ACTION:

Approve the attached MOU between SCAG and Gateway Cities Council of Governments (COG) for Gateway Cities Sustainable Communities Strategy, and authorize the SCAG Executive Director or his designee to execute the MOU.

EXECUTIVE SUMMARY:

SCAG and Gateway Cities COG have worked out an agreement concerning the development of the Gateway Cities subregional sustainable communities strategy (SCS). Similar to the Regional Council's action last July related to the OCCOG/OCTA MOU, SCAG staff seeks approval by the EAC and Regional Council of the attached MOU, and authority for the Executive Director or his designee to execute the MOU.

STRATEGIC PLAN:

This item supports the following goal and objective of the Strategic Plan:
Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies.
Objective a: Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans

BACKGROUND:

The attached, proposed MOU between SCAG and Gateway Cities COG sets forth the roles, responsibilities, and requirements for each party regarding the development of the Gateway Cities subregional SCS (Gateway Cities SCS), which will be included in the regional SCS prepared by SCAG, in accordance with Senate Bill 375 (Chapter 728, laws of 2008, "SB 375"). The terms of the attached MOU are identical to the agreement approved by the Regional Council at its July 2010 meeting, for the Orange County subregional SCS entered into by SCAG, the Orange County Transportation Authority and the Orange County Council of Governments.

The MOU includes requirements for preparation of the Gateway Cities SCS consistent with SCAG's adopted Framework and Guidelines; a Milestones Schedule for submittal of deliverables to SCAG by Gateway Cities COG; and Deliverables Template for utilization by Gateway Cities COG in developing their

REPORT

subregional SCS workplan. This attached MOU was previously approved by Gateway Cities COG Board in the summer. In order to finalize the agreement, staff seeks approval by the EAC and Regional Council, and authority for the Executive Director or his designee to execute the MOU.

FISCAL IMPACT:

Funding is not provided to any parties under this MOU. However, in the event that state or federal funding becomes available for preparation of the Gateway Cities SCS, the MOU may be amended or a separate, mutual funding agreement developed to address Gateway Cities SCS costs. SCAG staff time necessary to implement this MOU and coordinate with subregions as part of SB 375 implementation activities, will be charged to work element 055.SCG00934.01.

ATTACHMENT:

"Memorandum of Understanding by and between Gateway Cities Council of Governments and the Southern California Association of Governments for Gateway Cities Sustainable Communities Strategy," with Exhibits A-C attached.

Reviewed by: *Department Director*

Reviewed by: *Chief Financial Officer*

MEMORANDUM OF UNDERSTANDING

BY AND BETWEEN

GATEWAY CITIES COUNCIL OF GOVERNMENTS

AND

THE SOUTHERN CALIFORNIA ASSOCATION OF GOVERNMENTS

FOR

GATEWAY CITIES SUSTAINABLE COMMUNITIES STRATEGY

THIS MEMORANDUM OF UNDERSTANDING (hereinafter referred to as "MOU") is entered by and between the Gateway Cities Council of Governments, (hereinafter referred to as "GCCOG"), and the Southern California Association of Governments, (hereinafter referred to as "SCAG"), collectively referred to as the "Parties."

RECITALS:

WHEREAS, Senate Bill 375 (Chapter 728, laws of 2008, "SB 375") requires SCAG to prepare a regional Sustainable Communities Strategy (hereinafter referred to as "SCS" or "Regional SCS") as part of SCAG's Regional Transportation Plan ("RTP") to achieve goals for the reduction of greenhouse gas emissions from automobiles and light trucks in the SCAG region which comprises the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura;

WHEREAS, SB 375 allows GCCOG, as a subregional council of governments for Southeast Los Angeles County, to develop and submit to SCAG a subregional SCS for its jurisdiction (hereinafter referred to as "Gateway Cities SCS");

WHEREAS, as part of its implementation of SB 375, SCAG has developed and adopted a certain "Framework and Guidelines for the Subregional Sustainable Communities Strategy" (hereinafter referred to as "Framework and Guidelines"), attached hereto as Exhibit "A" and incorporated herein by this reference.

WHEREAS, SCAG is required by SB 375 to include a subregional SCS in the regional SCS, to the extent consistent with state and federal law;

WHEREAS, GCCOG and SCAG desire to enter into this MOU to demonstrate mutual commitments to prepare the Gateway Cities SCS.

NOW, THEREFORE, the Parties enter into the following MOU with respect to the matters set forth herein:

1. This MOU establishes the roles, responsibilities, and requirements for GCCOG and SCAG that are necessary to develop a Gateway Cities SCS that shall be included in the regional SCS prepared by SCAG.

2. GCCOG shall prepare the Gateway Cities SCS consistent with SCAG's adopted Framework and Guidelines, as attached hereto, to ensure that the region can successfully incorporate strategies within the Gateway Cities SCS into the Regional SCS, and not inhibit the region from complying with SB 375.

3. GCCOG agrees to comply with the Milestones Schedule, attached hereto as Exhibit "B" and incorporated herein by this reference, and work with SCAG and the other subregions to ensure the successful delivery of a regional SCS by using the Deliverables Template, attached hereto as Exhibit "C" and incorporated by this reference as the primary template for developing a subregional SCS workplan. The Deliverables Template may be subject to change based on direction from the SCAG Regional Council or Community, Economic and Human Development Policy Committee, and approval by GCCOG.

4. GCCOG are encouraged by SCAG to conduct a public participation process in developing the Gateway Cities SCS, above and beyond the process required for the regional SCS required under Section 65080(b)(2)(D)-(E) of the California Government Code. Further, SCAG encourages GCCOG to develop a public participation plan, similar to SCAG's Public Participation Plan adopted in December 2009, for such purposes.

5. GCCOG agrees to participate in all publicly noticed meetings, workshops, hearings, and other outreach activities organized by SCAG within the GCCOG's jurisdiction, at which the regional SCS or Gateway Cities SCS is included on the agenda. All parties shall coordinate with one another during implementation of SCAG's public participation process in order to ensure broad public and stakeholder participation, and to avoid duplication of effort.

6. GCCOG shall retain and deliver to SCAG all documentation pertaining to the Gateway Cities SCS from publicly noticed meetings, workshops, and hearings at which the Gateway Cities SCS is included on the agenda. Such documentation shall include, but is not limited to, meeting notices, agendas, minutes, comments and responses to comments, sign-up sheets, hand-outs, and copies of power point presentations.

7. The Parties acknowledge that population, household, housing, and employment estimates are being prepared by GCCOG and/or its consultants (hereinafter referred to as "GCCOG Dataset"). SCAG agrees to use the GCCOG Dataset as reviewed and approved by

GCCOG, for the Regional SCS and the 2012 RTP; provided, that SCAG, in consultation with GCCOG, may make adjustments to the GCCOG Dataset in order to ensure consistency with SCAG's 2012 RTP growth forecast.

8. The Parties agree and acknowledge that population, household, housing, and employment data submitted to SCAG by GCCOG shall be accurately reflected in all documentation produced by SCAG that relates to the Gateway Cities SCS and the Regional SCS.

9. The Parties agree and acknowledge that RHNA responsibilities shall remain with SCAG, and that GCCOG shall not assume delegation responsibility for RHNA as part of the Gateway Cities SCS development. However, GCCOG is not precluded by this MOU from assuming delegation responsibility for RHNA as part of a subsequent, separate agreement.

10. SCAG agrees that in addition to preparation of the Gateway Cities SCS developed under this MOU, development of an Alternative Planning Strategy (APS) by GCCOG is optional. This understanding shall not preclude SCAG from preparing a regional APS pursuant to SB 375.

11. SCAG shall not develop SCS-related targets that are attributable to the subregions. Further, SCAG agrees that it will not impose a penalty on the Gateway Cities subregion if the greenhouse gas targets, as established by the California Air Resources Board, are not met by the Regional SCS.

12. SCAG shall accept the Gateway Cities SCS prepared in accordance with this MOU as the Gateway Cities subregion's input into the Regional SCS prepared by SCAG.

13. GCCOG and SCAG shall amend this MOU in writing or develop a separate, mutual funding agreement addressing Gateway Cities SCS costs should state or federal funding become available that can be applied toward preparation of the Gateway Cities SCS.

14. GCCOG and SCAG agree to work closely together throughout the Regional SCS process and Gateway Cities SCS process to provide technical input, applicable planning data, and constructive feedback with respect to all documents, products and deliverables developed and associated with the Gateway Cities SCS.

15. SCAG agrees to make good faith efforts to provide GCCOG with assistance, including tools and models in its possession, as requested by GCCOG in evaluating preliminary Gateway Cities SCS growth and green house gas ("GHG") estimates.

16. SCAG agrees to make good faith efforts to provide GCCOG with assistance with GIS services relating to the development of the Gateway Cities SCS, as requested by GCCOG.

17. GCCOG and SCAG agree to work together in good faith, using reasonable efforts to resolve any unforeseen issues and disputes arising out of the performance of this MOU.

18. GCCOG and SCAG agree in good faith to provide the resources necessary to implement the provisions of the MOU.

19. GCCOG and SCAG agree to defend, indemnify and hold harmless each other, including their officers, agents, elected officials, and employees, from all liability, claims, losses and demands, including defense costs and reasonable attorneys' fees, whether resulting from court action or otherwise, arising out of the acts or omissions of the defending party, its officers, agents, or employees, in the performance of this MOU. When acts or omissions of one party are directed by another party, the party directing the acts or omission shall owe this defense and indemnity obligation to the party following the directions. The provisions of this paragraph shall survive termination of this MOU.

20. This MOU shall be governed by all applicable federal, state, and local laws. The signatories warrant that in the performance of this MOU, each shall comply with all applicable federal, state and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated there under.

21. This MOU may only be modified or amended upon written mutual consent of all signatories. All modifications, amendments, changes and revisions of this MOU in whole or part, and from time to time, shall be binding upon the parties, so long as the same shall be in writing and executed by the signatories.

22. This MOU, including all exhibits and documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the term(s) and condition(s) of the agreement between the parties with respect to the subject matter herein and supersedes all prior representations, understandings and communications. The invalidity in whole or part of any term or condition of this MOU shall not affect the validity of the other term(s) or condition(s).

23. Any party may withdraw from this MOU upon 30 days' written notice to the other, until the due date set forth in Exhibit "B" for submittal to SCAG of the preliminary Gateway Cities SCS. After such due date, any party may withdraw from this MOU only upon mutual written agreement.

24. Each signatory shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any incident of fire, flood; acts of God; commandeering of material, produces, plants or facilities by federal, state or local government; national fuel shortage; or a material act or omission by any other party; when satisfactory evidence of such cause is presented to the other parties, and provided further such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.

25. Any notice sent by first class mail, postage paid, to the address and addressee, shall be deemed to have been given when in the ordinary course it would be delivered. The representatives of the parties who are primarily responsible for the administration of this MOU, and to whom notices, demands and communications shall be given are as detailed below. If there are any changes in the names and/or addresses listed below, the party desiring to make such changes shall give a written notice to the other respective parties within five (5) days of such change.

Gateway Cities Council of Governments
Attention: Richard Powers, Executive Director
16401 Paramount Blvd
Paramount, CA 90723

Southern California Association of Governments
Attention: Hasan Ikhrata, Executive Director
818 West Seventh Street, 12th Floor
Los Angeles, CA 90017-3435

26. This MOU shall continue in full force and effect from the Effective Date up to and until the date that the Regional SCS is adopted by SCAG's Regional Council, unless otherwise terminated earlier in accordance with section 23 of this MOU. The Effective Date of this MOU shall mean the date (last date indicated below) that all Parties have fully executed this MOU.

[Signature page to follow.]

IN WITNESS WHEREOF, the Parties hereto have caused this MOU to be executed by their duly authorized representatives.

GATEWAY CITIES COUNCIL OF GOVERNMENTS

By: ______________________
Richard Powers, Executive Director

Date: ______________________

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

By: ______________________
Hasan Ikhrata, Executive Director

Date: ______________________

Exhibit A: SCAG's Adopted Framework and Guidelines

Southern California Association of Governments

(Approved by Regional Council - April 1, 2010)

FRAMEWORK AND GUIDELINES
for
SUBREGIONAL SUSTAINABLE COMMUNITIES STRATEGY

I. INTRODUCTION

SB 375 (Steinberg), also known as California's Sustainable Communities Strategy and Climate Protection Act, is a new state law which became effective January 1, 2009. SB 375 calls for the integration of transportation, land use, and housing planning, and also establishes the reduction of greenhouse gas (GHG) emissions as one of the main goals for regional planning. SCAG, working with the individual County Transportation Commissions (CTCs) and the subregional organizations within the SCAG region, is responsible for implementing SB 375 in the Southern California region. Success in this endeavor is dependent on collaboration with a range of public and private partners throughout the region.

Briefly summarized here, SB 375 requires SCAG as the Metropolitan Planning Organization to:

- Prepare a Sustainable Communities Strategy (SCS) as part of the 2012 Regional Transportation Plan (RTP). The SCS will meet a State-determined regional GHG emission reduction target, if it is feasible to do so.
- Prepare an Alternative Planning Strategy (APS) that is not part of the RTP if the SCS is unable to meet the regional target.
- Integrate SCAG planning processes, in particular assuring that the Regional Housing Needs Assessment (RHNA) is consistent with the SCS, at the jurisdiction level.
- Specific to SCAG only, allow for subregional SCS/APS development.
- Develop a substantial public participation process involving all stakeholders.

Unique to the SCAG region, SB 375 provides that "a subregional council of governments and the county transportation commission may work together to propose the sustainable communities strategy and an alternative planning strategy . . . for that subregional area." Govt. Code §65080(b)(2)(C). In addition, SB 375 authorizes that SCAG "may adopt a framework for a subregional SCS or a subregional APS to address the intraregional land use, transportation, economic, air quality, and climate policy relationships." *Id.* Finally, SB 375 requires SCAG to "develop overall guidelines, create public participation plans, ensure coordination, resolve conflicts, make sure that the overall plan complies with applicable legal requirements, and adopt the plan for the region." *Id.*

The intent of this Framework and Guidelines for Subregional Sustainable Communities Strategy (also referred to herein as the "Framework and Guidelines" or the "Subregional Framework and Guidelines") is to offer the SCAG region's subregional agencies the highest degree of autonomy,

flexibility and responsibility in developing a program and set of implementation strategies for their subregional areas. This will allow the subregional strategies to better reflect the issues, concerns, and future vision of the region's collective jurisdictions with the input of the fullest range of stakeholders. In order to achieve these objectives, it is necessary for SCAG to develop measures that assure equity, consistency and coordination, such that SCAG can incorporate the subregional SCSs in its regional SCS which will be adopted as part of the 2012 RTP pursuant to SB 375. For that reason, this Framework and Guidelines establishes standards for the subregion's work in preparing and submitting subregional strategies, while also laying out SCAG's role in facilitating and supporting the subregional effort with data, tools, and other assistance.

While the Framework and Guidelines are intended to facilitate the specific subregional option to develop the SCS (and APS if necessary) as described in SB 375, SCAG encourages the fullest possible participation from all subregional organizations. As SCAG undertakes implementation of SB 375 for the first time, SCAG has also designed a "collaborative" process, in cooperation with the subregions, that allows for robust subregional participation for subregions that choose not to exercise their statutory option.

II. ELIGIBILITY AND PARTICIPATION

SB 375 allows for subregional councils of governments in the SCAG region to have the option to develop the SCS (and the APS if necessary) for their area. SCAG interprets this option as being available to any subregional organization recognized by SCAG, regardless of whether the organization is formally established as a "subregional council of governments."

County Transportation Commissions (CTCs) play an important and necessary role in the development of a subregional SCS. Any subregion that chooses to develop a subregional strategy will need to work closely with the respective CTC in its subregional area in order to identify and integrate transportation projects and policies. Beyond working with CTCs, SCAG encourages partnership efforts in the development of subregional strategies, including partnerships between and among subregions.

Subregional agencies must formally indicate to SCAG, in writing, by December 31, 2009 if they intend to exercise this option to develop their own SCS. Subregions that choose to develop an SCS for their area must do so in a manner consistent with this Framework and Guidelines. The subregion's intent to exercise its statutory option to prepare the strategy for their area must be decided and communicated through formal action of the subregional agency's governing board. Subsequent to receipt of any subregion's intent to develop and adopt an SCS, SCAG will convene discussions regarding a formal written agreement between SCAG and the subregion, which may be revised if necessary, as the SCS process is implemented.

III. FRAMEWORK

The Framework portion of this document covers regional objectives and policy considerations, and provides general direction to the subregions in preparing their own SCS, and APS if necessary.

A. SCAG's preliminary goals for implementing SB 375 are as follows:

- Achieve the regional GHG emission reduction target for cars and light trucks through an SCS.
- Fully integrate SCAG's planning processes for transportation, growth, intergovernmental review, land use, housing, and the environment.
- Seek areas of cooperation that go beyond the procedural statutory requirements, but that also result in regional plans and strategies that are mutually supportive of a range of goals.
- Build trust by providing an interactive, participatory and collaborative process for all stakeholders. Provide, in particular, for the robust participation of local jurisdictions, subregions and CTCs in the development of the SCAG regional SCS and implementation of the subregional provisions of the law.
- Assure that the SCS adopted by SCAG and submitted to California Air Resources Board (ARB) is a reflection of the region's collective growth strategy and vision for the future.
- Develop strategies that incorporate and are respectful of local and subregional priorities, plans, and projects.

B. Flexibility

Subregions may develop any appropriate strategy to address the region's greenhouse gas reduction goals and the intent of SB 375. While subregions will be provided with SCAG data, and with a conceptual or preliminary scenario to use as a helpful starting point, they may employ any combination of land use policy change, transportation policy, and transportation investment, within the specific parameters described in the Guidelines.

C. Outreach Effort and Principles

Subregions are required to conduct an open and participatory process that includes the fullest possible range of stakeholders. As further discussed within the Guidelines, SCAG amended its existing Public Participation Plan (PPP) to describes SCAG's responsibilities in complying with the outreach requirements of SB 375 and other applicable laws and regulations. SCAG will fulfill its outreach requirements for the regional SCS/APS which will include outreach activities regarding the subregional SCS/APS. Subregions are also encouraged to design their own outreach process that meets each subregion's own needs and reinforces the spirit of openness and full participation. To the extent that subregions do establish their own outreach process, this process should be coordinated with SCAG's outreach process.

D. Communication and Coordination

Subregions developing their own SCS are strongly encouraged to maintain regular communication with SCAG staff, the respective CTC, their jurisdictions and other stakeholders, and other subregions if necessary, to review issues as they arise and to assure close coordination. Mechanisms for on-going communication should be established in the early phases of strategy development.

E. Planning Concepts

SCAG, its subregions, and member cities have established a successful track record on a range of land use and transportation planning approaches through the on-going SCAG Compass Blueprint Program, including approximately 60 local demonstration projects completed to date. Subregions are

encouraged to capture, further develop and build off the concepts and approaches of the Compass Blueprint program. In brief, these include developing transit-oriented, mixed use, and walkable communities, and providing for a mix of housing and jobs.

IV. GUIDELINES

These Guidelines describe specific parameters for the subregional SCS/APS effort under SB 375, including process, deliverables, data, documentation, and timelines. As described above, the Guidelines are created to ensure that the region can successfully incorporate strategies developed by the subregions into the regional SCS, and that the region can comply with its own requirements under SB 375. Failure to proceed in a manner consistent with the Guidelines will result in SCAG not accepting a subregion's submitted strategy.

A. Subregional Process

(1) Subregional Sustainable Communities Strategy

Subregions that choose to exercise their optional role under SB 375 will develop and adopt a subregional Sustainable Communities Strategy. That strategy must contain all of the required elements, and follow all procedures, as described in SB 375. Subregions may choose to further develop an Alternative Planning Strategy (APS), according to the procedures and requirements described in SB 375. If subregions prepare an APS, they must prepare a Sustainable Communities Strategy first, in accordance with SB 375. A subregional APS is not "in lieu of" a subregional SCS, but in addition to the subregional SCS. In part, an APS must identify the principal impediments to achieving the targets within the SCS. The APS must show how the GHG emission targets would be achieved through alternative development patterns, infrastructure, and additional transportation measures or policies. SCAG encourages subregions to focus on feasible strategies that can be included in the SCS.

The subregional SCS must include all components of a regional SCS as described in SB 375, and outlined below:

(i.) identify the general location of uses, residential densities, and building intensities within the subregion;
(ii.) identify areas within the subregion sufficient to house all the population of the subregion, including all economic segments of the population, over the course of the planning period of the RTP taking into account net migration into the region, population growth, household formation and employment growth;
(iii.) identify areas within the subregion sufficient to house an eight-year projection of the regional housing need for the subregion pursuant to Section 65584;
(iv.) identify a transportation network to service the transportation needs of the subregion;
(v.) gather and consider the best practically available scientific information regarding resource areas and farmland in the subregion as defined in subdivisions (a) and (b) of Section 65080.01;
(vi.) consider the state housing goals specified in Sections 65580 and 65581;
(vii.) set forth a forecasted development pattern for the subregion, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the ARB; and

(viii.) allow the RTP to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506). See, Government Code §65080(b)(2)(B).

In preparing the subregional SCS, the subregion will consider feasible strategies, including local land use policies, transportation infrastructure investment (e.g., transportation projects), and other transportation policies such as Transportation Demand Management (TDM) strategies (which includes pricing), and Transportation System Management (TSM) strategies. Technological measures may be included if they exceed measures captured in other state and federal requirements (e.g., AB32).

As discussed further below (under "Documentation"), subregions need not constrain land use strategies considered for the SCS to current General Plans. In other words, the adopted strategy need not be fully consistent with local General Plans currently in place. However, should the adopted subregional strategy deviate from General Plans, subregions will need to demonstrate the feasibility of the strategy by documenting any affected jurisdictions' willingness to adopt the necessary General Plan changes.

The regional SCS shall be part of the 2012 RTP. Therefore, for transportation investments included in a subregional SCS to be valid, they must also be included in the 2012 RTP. Further, such projects need to be scheduled in the RTIP for construction completion by the target years (2020 and 2035) in order to demonstrate any benefits as part of the SCS. As such, subregions will need to collaborate with the respective CTC in their area to coordinate the subregional SCS with future transportation investments. It should also be noted that the California Transportation Commission is updating their RTP Guidelines. This topic is likely to be part of further discussion through the SCS process as well.

SCAG will accept and incorporate the subregional SCS, unless (a) it does not comply with SB 375, (b) it is does not comply with federal law, or (c) it is does not comply with SCAG's Subregional Framework and Guidelines. In the event that a compiled regional SCS, including subregional submissions, does not achieve the regional target, SCAG will initiate a process to develop and consider additional GHG emission reduction measures region-wide. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process. Furthermore, SCAG will compile and disseminate performance information on the preliminary regional SCS and its components in order to facilitate regional dialogue. The development of a subregional SCS does not exempt any subregion from further GHG emission reduction measures being included in the regional SCS. Further, all regional measures needed to meet the regional target will be subject to adoption by the Regional Council, and any additional subregional measures beyond the SCS submittal from subregions accepting delegation needed to meet the regional target must also be adopted by the subregional governing body.

(2) Subregional Alternative Planning Strategy (APS)

Subregions are encouraged to focus their efforts on feasible measures that can be included in an SCS. In the event that a subregion chooses to prepare an APS, the content of a subregional APS should be consistent with what is required by SB 375 (*see*, Government Code §65080(b)(2)(H)), as follows:

(i.) Shall identify the principal impediments to achieving the subregional SCS.

(ii.) May include an alternative development pattern for the subregion pursuant to subparagraphs (B) to (F), inclusive.
(iii.) Shall describe how the alternative planning strategy would contribute to the regional greenhouse gas emission reduction target, and why the development pattern, measures, and policies in the alternative planning strategy are the most practicable choices for the subregion.
(iv.) An alternative development pattern set forth in the alternative planning strategy shall comply with Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, except to the extent that compliance will prevent achievement of the regional greenhouse gas emission reduction targets approved by the ARB.
(v.) For purposes of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), an alternative planning strategy shall not constitute a land use plan, policy, or regulation, and the inconsistency of a project with an alternative planning strategy shall not be a consideration in determining whether a project may have an environmental effect.

Any precise timing or submission requirements for a subregional APS will be determined based on further discussions with subregional partners. As previously noted, a subregional APS is in addition to a subregional SCS.

(3) **Outreach and Process**

SCAG will fulfill all of its outreach requirements under SB 375 for the regional SCS/APS, which will include outreach regarding any subregional SCS/APS. SCAG staff has revised its Public Participation Plan to incorporate the outreach requirements of SB 375, and integrate the SB 375 process with the 2012 RTP development as part of SCAG's Public Participation Plan Amendment No. 2, adopted by SCAG's Regional Council on December 3, 2009. Subsequent to the adoption of the PPP Amendment No. 2, SCAG will continue to discuss with subregions and stakeholders the Subregional Framework & Guidelines, which further describe the Public Participation elements of SB 375.

Subregions that elect to prepare their own SCS or APS are encouraged to present their subregional SCS or APS, in coordination with SCAG, at all meetings, workshops and hearings held by SCAG in their respective counties. Additionally, the subregions would be asked to either provide SCAG with their mailing lists so that public notices and outreach materials may also be posted and sent out by SCAG, or SCAG will provide notices and outreach materials to the subregions for their distribution to stakeholders. The SCAG PPP Amendment No. 2 provides that additional outreach may be performed by subregions. Subregions are strongly encouraged to design and adopt their own outreach processes that mimic the specific requirements imposed on the region under SB 375. Subregional outreach processes should reinforce the regional goal of full and open participation, and engagement of the broadest possible range of stakeholders.

(4) **Subregional SCS Approval**

It is recommended that the governing board of the subregional agency approve the subregional SCS prior to submission to SCAG. While the exact format is still subject to further discussion, SCAG recommends that there be a resolution from the governing board of the subregion with a finding that the land use strategies included in the subregional SCS are feasible and based upon consultation with the local jurisdictions in the respective subregion. Subregion should consult with their legal counsel as to compliance with the California Environmental Quality Act (CEQA). In SCAG's view, the subregional SCS is not a "project" for the purposes of CEQA; rather, the 2012 RTP which will include the regional SCS is the actual "project" which will be reviewed for environmental impacts pursuant to CEQA. As such, the regional SCS, which will include the subregional SCSs, will undergo a thorough CEQA review. Nevertheless, subregions approving subregional SCSs should consider issuing a notice of exemption under CEQA to notify the public of their "no project" determination and/or to invoke the "common sense" exemption pursuant to CEQA Guidelines § 15061(b)(3).

Finally, in accordance with SB 375, subregions are strongly encouraged to work in partnership with the CTC in their area. SCAG can facilitate these arrangements if needed.

(5) **Data Standards**

SCAG is currently assessing the precise data standards anticipated for the regional and subregional SCS. In particular, SCAG is reviewing the potential use of parcel data and development types currently used for regional planning. At present, the following describes the anticipated data requirements for a subregional SCS.

1. Types of Variables
   Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables include land uses, residential densities, building intensities, etc, as described in SB 375.

2. Geographical Levels
   SCAG is considering the collection and adoption of the data at a small-area level as optional for local agencies in order to make accessible the CEQA streamlining provisions under SB 375. The housing unit, employment, and the land use variables can be collected at a small-area level for those areas which under SB 375 qualify as containing a "transit priority project" (i.e. within half-mile of a major transit stop or high-quality transit corridor) for purposes of allowing jurisdictions to take advantage of the CEQA streamlining incentives in SB 375.

   For all other areas in the region, SCAG staff will collect the population, household, employment, and land use variables at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years
   The socio-economic and land use variables will be required for the base year of 2008, and the target years of 2020 and 2035.

(6) **Documentation**

Subregions are expected to maintain full and complete records related to the development of the subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board.

(7) Timing

An overview schedule of the major milestones of the subregional process and its relationship to the regional SCS/RTP is included below. Subregions must submit the subregional SCS to SCAG by the date prescribed. Further, SCAG will need a preliminary SCS from subregions for the purpose of preparing a project description for the 2012 RTP Program Environmental Impact Report. The precise content of this preliminary submission will be determined based on further discussions. The anticipated timing of this preliminary product is approximately February 2011.

(8) Relationship to Regional Housing Needs Assessment (RHNA) and Housing Element

Although SB 375 calls for an integrated process, subregions are not automatically required to take on RHNA delegation as described in State law if they prepare an SCS/APS. However, SCAG encourages subregions to undertake both processes due to their inherent connections.

SB 375 requires that the RHNA allocated housing units be consistent with the development pattern included in the SCS. *See*, Government Code §65584.04(i). Population and housing demand must also be proportional to employment growth. At the same time, in addition to the requirement that the RHNA be consistent with the development pattern in the SCS, the SCS must also identify areas that are sufficient to house the regional population by income group through the RTP planning period, and must identify areas to accommodate the region's housing need for the next local Housing Element eight year planning period update. The requirements of the statute are being further interpreted through the RTP guidelines process. Staff intends to monitor and participate in the guideline process, inform stakeholders regarding various material on these issues, and amend, if necessary, these Framework and Guidelines, pending its adoption.

SCAG will be adopting the RHNA and applying it to local jurisdictions at the jurisdiction boundary level. SCAG staff believes that consistency between the RHNA and the SCS may still be accomplished by aggregating the housing units contained in the smaller geographic levels noted in the SCS and including such as part of the total jurisdictional number for RHNA purpose. SCAG staff has concluded that there is no consistency requirement for RHNA purposes at sub-jurisdictional level, even though the SCS is adopted at the smaller geographic level for the opportunity areas.

The option to develop a subregional SCS is separate from the option for subregions to adopt a RHNA distribution, and subject to separate statutory requirements. Nevertheless, subregions that develop and adopt a subregional SCS should be aware that the SCS will form the basis for the allocation of housing need as part of the RHNA process. Further, SCS development requires integration of elements of the RHNA process, including assuring that areas are identified to accommodate the 8 year need for housing, and that housing not be constrained by certain types of local growth controls as described in State law.

SCAG will provide further guidance for subregions and a separate process description for the RHNA.

B. COUNTY TRANSPORTATION COMMISSIONS' ROLES AND RESPONSIBLITIES

Subregions that develop a subregional SCS will need to work closely with the CTCs in their area in order to coordinate and integrate transportation projects and policies as part of the subregional SCS. As discussed above (under "Subregional Sustainable Communities Strategy"), any transportation

projects identified in the subregional SCS must also be included in the 2012 RTP in order to be considered as a feasible strategy. SCAG can help to facilitate communication between subregions and CTCs.

C. SCAG ROLES AND RESPONSIBLITIES

SCAG's roles in supporting the subregional SCS development process are in the following areas:

(1) Preparing and adopting the Framework and Guidelines

SCAG will adopt these Framework and Guidelines in order to assure regional consistency and the region's compliance with law.

(2) Public Participation Plan

SCAG will assist the subregions by developing, adopting and implementing a Public Participation Plan and outreach process with stakeholders. This process includes consultation with congestion management agencies, transportation agencies, and transportation commissions; and SCAG will hold public workshops and hearings. SCAG will also conduct informational meetings in each county within the region for local elected officials (members of the board of supervisors and city councils), to present the draft SCS, and APS if necessary, and solicit and consider input and recommendations.

(3) Methodology

As required by SB 375, SCAG will adopt a methodology for measuring greenhouse gas emission reductions associated with the strategy.

(4) Incorporation/Modification

SCAG will accept and incorporate the subregional SCS unless it does not comply with SB 375, federal law, or the Subregional Framework and Guidelines. As SCAG intends the entire SCS development process to be iterative, SCAG will not amend a locally-submitted SCS. SCAG may provide additional guidance to subregions so that subregions may make amendments to its subregional SCS as part of the iterative process, or request a subregion to prepare an APS if necessary. Further, SCAG can propose additional regional strategies if feasible and necessary to achieve the regional emission reduction target with the regional SCS. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process.

(5) Modeling

SCAG currently uses a Trip-Based Regional Transportation Demand Model and ARB's EMFAC model for emissions purposes. In addition to regional modeling, SCAG is developing tools to evaluate the effects of strategies that are not fully accounted for in the regional model. SCAG is also developing two additional tools – a Land Use Model and an Activity Based Model – to assist in strategy development and measurement of outcomes under SB 375.

In addition to modeling tools which are used to measure results of completed scenarios, SCAG is developing a scenario planning tool for use in workshop settings as scenarios are being created with jurisdictions and stakeholders. The tool will be made available to subregions and local governments for their use in subregional strategy development.

(6) Adoption/Submission to State

After the incorporation of subregional strategies, SCAG will finalize and adopt the regional SCS as part of the 2012 RTP. SCAG will submit the SCS to ARB for review as required in SB 375.

(7) Conflict Resolution

While SB 375 requires SCAG to develop a process for resolving conflicts, it is unclear at this time the nature or purpose of a conflict resolution process as SCAG does not intend to amend a locally-submitted SCS. As noted above, SCAG will accept the subregional SCS unless it is inconsistent with SB 375, federal law, or the Subregional Framework and Guidelines. SCAG will also request that a subregion prepare an APS if necessary. It is SCAG's intent that the process be iterative and that there be coordination among SCAG, subregions and their respective jurisdictions and CTCs. SCAG is open to further discussion on issues which may generate a need to establish a conflict resolution process as part of the written agreement between SCAG and the subregional organization.

(8) Funding

Funding for subregional activities is not available at this time, and any specific parameters for future funding are speculative. Should funding become available, SCAG anticipates providing a share of available resources to subregions. While there are no requirements associated with potential future funding at this time, it is advisable for subregions to track and record their expenses and activities associated with these efforts.

(9) Preliminary Scenario Planning

SCAG will work with each subregion to collect information and prompt dialogue with each local jurisdiction prior to the start of formal SCS development. This phase of the process is identified as "preliminary scenario planning" in the schedule below. The purpose of this process is to create a base of information to inform SCAG's recommendation of a regional target to ARB prior to June 2010. All subregions are encouraged to assist SCAG in facilitating this process.

(10) Data

SCAG is currently developing, and will provide each subregion with datasets for the following:

(1) 2008 Base year;
(2) General Plan/Growth projection & distribution;
(3) Trend Baseline; and
(4) Policy Forecast/SCS.

While the Trend Baseline is a technical projection that provides a best estimate of future growth based on past trends and assumes no general plan land use policy changes, the Policy Forecast/ SCS is derived using local input through a bottom-up process, reflecting regional policies including transportation investments. Local input is collected from counties, subregions, and local jurisdictions.

Data/GIS maps will be provided to subregions and local jurisdiction for their review. This data and maps include the 2008 base year socioeconomic estimates and 2020 and 2035 socioeconomic forecast. Other GIS maps including the existing land use, the general plan land use, the resource areas, and other important areas identified in SB 375. It should be noted that none of the data/ maps provided were endorsed or adopted by SCAG's Community, Economic and Human Development Committee (CEHD). All data/maps provided are for the purpose of collecting input and comments from subregions and local jurisdictions. This is to initiate dialogue among stakeholders to address the requirements of SB 375 and its implementation.

The list of data/GIS maps include:

1. Existing land use
2. Zoning
3. General plan land use
4. Resource areas include:
   (a.) all publicly owned parks and open space;
   (b.) open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;
   (c.) habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal Endangered Species Act (1973), the California Endangered Species Act, or Native Plant Protection Act;
   (d.) lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;
   (e.) areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;
   (f.) areas containing biological resources as described in Appendix G of the CEQA Guidelines that may be significantly affected by the sustainable communities strategy or the alternative planning strategy; and
   (g.) an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance.
5. Farmland
6. Sphere of influence
7. Transit priority areas
8. City/Census tract boundary with ID
9. City/TAZ boundary with ID

(11) Tools

SCAG is developing a Local Sustainability Planning Model (LSPM) for subregions/local jurisdictions to analyze land use impact. The use of this tool is not mandatory and is at the discretion of the Subregion. The LSPM is a web-based tool that can be used to analyze, visualize and calculate the impact of land use changes on auto ownership, mode use, vehicle miles of travel (VMT), and greenhouse gas emissions in real time. Users will be able to estimate transportation and emissions impacts by modifying land use designations within their community.

Other tools currently maintained by SCAG may be useful to the subregional SCS development effort, including the web-based CaLOTS application. SCAG will consider providing guidance and training on additional tools based on further discussions with subregional partners.

(12) Resources and technical assistance

SCAG will assist the subregions by making available technical tools for scenario development as described above. Further, SCAG will assign a staff liaison to each subregion, regardless of whether the subregion exercises its statutory option to prepare an SCS. SCAG staff can participate in subregional workshops, meetings, and other processes at the request of the subregion, and pending funding and availability. SCAG's legal staff will be available to assist with questions related to SB 375 or SCAG's implementation of SB 375. Further, SCAG will prepare materials for its own process in developing the regional SCS, and will make these materials available to subregions.

D. MILESTONES/SCHEDULE

- CARB issues Final Regional Targets – September 2010
- SCS development (preliminary scenario, draft, etc) – through early 2011
- Release Draft RTP/regional SCS for public review – November 2011
- Regional Council adopts RTP/SCS – April 2012

If other milestones are needed, they will be incorporated into the written agreement between SCAG and the Subregion.

Exhibit B: Milestones Schedule

The key milestones and related schedule required as part of the development of the Gateway Cities COG Subregional SCS are as follows:

1. Status report on Preliminary Subregional SCS – Dec 2010
2. Adopted GCCOG Dataset/Delivery to SCAG – Jan 2011
3. Preliminary SCS / for purposes of preparing PEIR project description (intended to be narrative only project description that describes intended strategies or strategy options that are likely to be incorporated into the final Subregional SCS.) – Feb 2011
4. Status report on Draft Subregional SCS – Feb 2011
5. Draft Subregional SCS (containing all components described above) to be incorporated into draft Regional SCS – April 2011
6. Status report on final Subregional SCS – April 2011
7. Final Subregional SCS for incorporation into Regional SCS – June 2011
8. Iterative process, if necessary to meet target – June to November 2011
9. Gateway Cities COG to participate in regional outreach conducted in Orange County – June 2011 to February 2012
10. Regional SCS adoption – April 2012

Exhibit C: Deliverables Template

The Gateway Cities COG Subregional SCS will consist of the following components:

1. Database (GCCOG Dataset) that allocates population, housing, household, and employment to areas of the county. Geographic area should be the smallest level practicable for the COG to produce, preferably at the parcel level. The database must reflect the base year 2008 and each variable in the two GHG target years (2020 and 2035), in accordance with the Data Standards set forth below.
2. A map or series of maps that illustrates the growth distribution described above, and that further delineates uses, intensities, and residential densities, in accordance with the Data Standards set forth below.
3. A listing of transportation projects that are incorporated in the subregional SCS.
4. A listing and description of transportation policies (e.g. TDM, TSM and others) to be employed.
5. Documentation that establishes the process, including the public participation and outreach process used to develop the SCS, and demonstrates the affected jurisdictions willingness to consider general plan changes.
6. A narrative description of the strategies employed to reduce greenhouse gas emissions. A further description of any other strategies that were considered and not ultimately included.

DATA STANDARDS

The following data standards will be used in the development of a subregional SCS:

1. Types of Variables

Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables may include land uses designations, building densities, building intensities, and applicable policies.

2. Geographical Levels

Socio-economic and land-use variables should be provided to SCAG at the smallest geographical level practicable for OCCOG to produce, preferably at the parcel level. At a minimum, such variables will be provided at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years

The socio-economic data and land use variables will be required for the base year of 2008, and as feasible, for the target years of 2020 and 2035.

DOCUMENTATION

Subregions are expected to maintain full and complete records related to the development of the Subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by

the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board. Subregions shall include information regarding the status of the documentation as part of the required status reports to SCAG, and copies of the actual documentation shall be submitted to SCAG as part the final Subregional SCS.

Appendix B.

Prior Studies of the Gateway Cities Council of Governments Relevant to SB 375

SB 375

GATEWAY CITIES

**PRIOR STUDIES
OF THE
GATEWAY CITIES COUNCIL OF GOVERNMENTS
RELEVANT TO SB375**

SB 375

GATEWAY CITIES

Table of Contents

SB 375

GATEWAY CITIES

BACKGROUND/INTRODUCTION

In mid-2010, the Gateway Cities Council of Governments (COG) retained a Cambridge Systematics led team to assist the COG with the development of a Sustainable Communites Strategy (SCS) for the Gateway Cities sub-region, in accordance with the requirements of SB 375. One of the initial tasks of the work program for the development of the SCS involved the review of prior COG studies. The purpose of this task was to review prior studies to identify Vehicle Miles Traveled/ Greenhouse Gas (VMT/GHG) reduction measures contained in these studies that could be included in SCS Strategy portfolios to be prepared for each city by Cambridge Systematics. Team member Willdan Engineering was charged with this task of compiling and reviewing the prior COG studies.

Being proactive in addressing issues facing its sub-region, the Gateway Cities COG has generated a number of studies since its inception. The COG has conducted 37 studies since 1996, exclusive of addendums and supplements, and of these, 25 are germane to SB 375 and the development of the sub-regional SCS and/or Regional Housing Needs Assessment. On the pages that follow, the 16 reports that contained the most relevant measures or other information with regard to VMT/GHG reductions are discussed in the chronological order in which they were prepared. Each report is briefly summarized and any key findings/recommendations relevant to VMT/GHG reductions are listed.

SB 375

GATEWAY CITIES

Report: Community Link 21: Southern California Association of Governments (SCAG's) Draft Regional Transportation Plan

Date: February 1998

Summary: This report reviews SCAG's draft Regional Transportation Plan (RTP) (Community Link 21), explains its significance for the Gateway Cities Sub-region, and makes recommendations as to what position the Gateway Cities COG should take with respect to these issues.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- Gateway Cities Goods Movement Network, a system of intersections and connecting arterials, should be accorded programmatic status by SCAG, similar to the Alameda Corridor East, and properly budgeted with regional funding;
- endorse truck lanes on I-710 in concept only, subject to further review and clarification;
- request SCAG to allocate funding in the RTP for grade crossing improvements in the Gateway Cities;
- Gateway Cities COG should participate in any regional bus restructuring and smart shuttles studies to have adequate local control over route and service decisions;
- LAX expansion should be subject to the Metropolitan Transportation Authority's (MTA's) Congestion Management Plan requirements;
- Intelligent Transportation System technologies should be identified as a means to improve the efficient and safe movement of people and goods; and
- Gateway Cities COG should request a reconfiguration of the RTP to support infrastructure improvements in the industrial core as opposed to funding for spread out development that increases the burden on meeting air quality requirements in increasing vehicle miles traveled.

SB 375

GATEWAY CITIES

Report: Livable Cities Case Studies

Date: 2001

Summary: Three case studies are presented in this report to demonstrate the possibilities of creating a livable community through strategies of downtown revitalization, reuse of industrial lands, and streetscape improvements to arterial corridors. Alternatives and recommendations presented in each case study are intended to provide lessons that can be utilized by all member cities facing similar challenges. Alternatives and recommendations by city include:

1. The case study for the City of Artesia focused on revitalizing an existing downtown by incorporating a healthy mix of uses, utilizing building form, architectural details and design guidelines to showcase the unique qualities of the city. In addition, the case study showed how to utilize the current assets of the city to focus their redevelopment energy and use the vitality of the downtown to strengthen the structure of the city as a whole.
2. The case study for the City of Paramount focused on the redevelopment of underutilized industrial land to achieve a city structure based on a series of walk-able, mixed-use districts serving local residents. In addition, the case study addressed how to link these districts through the use of public transit and streetscape design.
3. The case study for the City of Pico Rivera focused on the revitalization of a commercial arterial through the use of streetscape enhancements and urban design recommendations. More specifically, the case study addressed how to handle the transformation of a large thoroughfare historically dominated by industrial truck traffic into a mixed-use boulevard that contributes to the overall structure and vitality of the city.

One of the greatest issues facing the case study cities of Artesia, Paramount and Pico Rivera, and of relevance to all of the Gateway Cities, is the shift in land use caused by the changing regional economy. As large-scale manufacturing becomes less relevant to local economies, the conversion of post-industrial land becomes a key opportunity for these otherwise built-out metropolitan areas. Study and analysis of regional trends, as well as an understanding of what is important to the community, can help to direct the reuse of this land. New uses should support current and anticipated future trends in both the economics of land use and allocation, and support the retail, civic, and residential structure necessary to create “livable cities”.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- Increase utilization of underutilized industrial land to create mixed-use activity areas that are linked through public transportation;
- Improve the vitality of the downtown by incorporating a mix of uses and through the use of building form, architectural details and design guidelines; and
- Transform a traffic-ridden thoroughfare into a more pedestrian-friendly, mixed-use boulevard.

Report: OrangeLine Feasibility Study

Date: 2002

Summary: The OrangeLine feasibility study is a financial, engineering and environmental assessment of an advanced technology, 30-33 mile high-speed transportation system operating along the former Pacific Electric “Red Car” land and adjoining corridors. This corridor extends from downtown Los Angeles to central Orange County. Results indicate that the OrangeLine transportation system can provide the required transportation improvements to support current and future development, and that it could be successfully built and operated without the need for significant government subsidies.

It is anticipated that additional housing, office and retail development projects completed along the OrangeLine corridor by 2025 will accommodate an increased population of 8,000 people within a quarter mile of station areas and tens of thousands more in the surrounding area, as well as up to 125,000 additional jobs. This growth in population and employment will result in added trips per day in the corridor. In addition to providing a very high quality, non-polluting transportation service to over 46,000 daily riders by 2025, the OrangeLine will also divert an estimated number of daily riders to other transit modes, thus significantly reducing the traffic impacts of future growth. The OrangeLine is projected to reduce auto trips in the corridor compared to travel patterns that would exist if the OrangeLine were not built.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- reduce auto trips by providing an advanced technology high-speed transportation system along a transportation corridor linking Los Angeles with central Orange County; and

- provide for higher intensity housing, office and retail development projects along this public transit corridor.

Report: Supplemental Southeast Area Bus Restructuring Study

Date: 2003

Summary: The purpose of this study was to identify and evaluate opportunities to improve existing local and regional fixed-route bus transit services, transit facilities, and community-level transit and Para transit systems serving the Southeast study area. This study builds on the Southeast Area Bus Restructuring Study, completed in August 2000, with an increased focus on community-based services in the Southeast area. The study presented concrete recommendations for improving transit service within the Southeast study area.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- County should conduct a more detailed review and analysis of passenger trip-making patterns to determine whether current service area designations effectively match reasonable trip requests from County residents (i.e., review the destinations commonly served or commonly requested to identify destination-rich areas and to determine what fit or misfit may exist with current service area designation);
- cross-jurisdictional trips should be provided when needed to enhance services and provide services more cost-effectively;
- cities within the study area should view the gradual implementation and development of both city-specific and coordinated multi-jurisdictional transit projects as wholly interrelated and necessary to develop a cohesive transportation network in the Southeast; and
- cities in the study area should establish a formalized institutional arrangement that is easy to administer and consistent with MTA current plans for the Southeast area and other transit funding plans (i.e., programming of projects). The recommended option is a cooperative agreement based on an MOU among all parties, with the City of Norwalk designated as the lead agency as recommended by the Technical Advisory Committee for this study. This option is recommended for several reasons: simplicity; ease of implementation; flexibility; effectiveness in achieving its goal; and ability to encompass the MTA Sector as an accepted partner.

SB 375
GATEWAY CITIES

Report: The Gateway Cities Council of Governments Sub-Regional Housing Implementation Strategy

Date: July 2003

Summary: The Gateway Cities COG is mandated by the State to assist in developing housing policy, and as a result, is required to go through a series of processes to identify housing issues and needs. The objective of this study was to identify ways that the Gateway Cities COG, as a coalition of twenty-seven cities, can play a beneficial role in solving the regional housing shortage. Particular emphasis was placed on identifying potential financing mechanisms available to local governments that could be effectively used by the Gateway Cities COG to make new housing more feasible.
The study identifies a number of strategies for promoting the sub-region and affordable housing.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- transit-oriented development relieving transportation pressures;
- brownfield redevelopment as a source of available land for economic development and new housing;
- initiate programs to promote manufacturing-based sustainable economic development, educational programs and employee training programs to help encourage new employers to locate or expand in the sub-region to address the jobs/housing balance and reduce VMT; and
- promote infill development for housing.

Report: Gateway Cities Infrastructure Needs Assessment

Date: September 2003

Summary: This report summarizes the finding and recommendations from the Gateway Cities Infrastructure Needs Assessment project SCAG. The Gateway Cities sub-region is located in a major goods transportation corridor connected to the Port of Los Angeles and the Port of Long Beach, which generates high concentrations of heavy truck traffic passing through the sub-region. In a recent study by SCAG, the Gateway Cities Trucking Study identified pavement deterioration resulting from heavy truck traffic as the number one concern of Gateway Cities Public Works staff. The primary purpose of the study was to conduct an inventory of current pavement management and rehabilitation practices, an assessment of pavement conditions of the study area through selective

SB 375
GATEWAY CITIES

sampling of representative streets, and an assessment of the current under-funded needs of each Gateway City. The study also reviewed the latest pavement maintenance and rehabilitation practices of each Gateway City. The study concluded that a significant shortfall exists between the total annual maintenance and rehabilitation budget for the Gateway Cities region and the projected annual maintenance and rehabilitation costs. Most cities will be faced with a significant maintenance and rehabilitation shortfall for their streets.

Report: I-710 Tier 2 Community Advisory Committee Final Report

Date: August 2004

Summary: A broad-based committee, known as the Tier 2 Committee, was appointed by the I-710 Oversight Policy Committee (OPC) to study the current congestion and design of the I-710 Freeway. The I-710 Corridor impacts homes, businesses, schools, parks and lives of the communities in the immediate area. The committee's recommendations were made in the areas of health, jobs and economic development, safety, noise, congestion and mobility, community enhancements, design concepts and environmental justice.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- implement local alternative fuels/electrification and/or hydrogen policies and programs to reduce diesel emissions;
- implement port-specific air quality improvement strategies;
- position the I-710 corridor and Gateway communities for a post-oil economy;
- separate trucks and cars;
- conduct a study to assess how truck traffic from extended gate hours will impact communities, and assess what mitigations may be appropriate;
- maximize use of existing infrastructure;
- implement expanded public transit solutions;
- provide a comprehensive bicycle and pedestrian network with connectivity throughout the area;
- support cooperative planning among all ports along the West Coast;
- preserve existing parks, open spaces, and natural areas;
- provide programs to minimize construction impacts;
- use of new truck lanes; and
- redesign unsafe and congested I-710 interchanges.

SB 375
GATEWAY CITIES

Report: I-710 Oversight Policy Committee Adopted Locally Preferred Strategy

Date: November 2004

Summary: The I-710 Oversight Policy Committee (OPC) is advised by a Technical Advisory Committee (TAC) and several Community Advisory Committees (Tier 1 Committee and Tier 2 Committee). The TAC was directed by the OPC in May 2003 to develop a hybrid design alternative to the 5 alternative designs presented in the I-710 Major Corridor Study.

Working from the following guiding principles:

1. Minimize ROW acquisitions to preserve existing houses, businesses and open space.
2. Identify and minimize exposure to air toxics and pollution through diesel emissions reduction programs, use of alternative fuels, and project planning and design.
3. Improve safety through truck safety inspection facilities, reduced truck/car conflicts and improved roadway design.
4. Relieve congestion and reduce traffic by employing a comprehensive regional systems approach adding needed capacity and deploying Transportation Systems Management (TSM) and Transportation Demand Management (TDM) to make full use of freeway, roadway, rail and transit systems.
5. Facilitate effective public participation.

The OPC adopted the Locally Preferred Strategy developed in close cooperation with the TAC, Tier 1 and Tier 2 Committees:

- The hybrid design concept consists of 10 mixed flow lanes, specified interchange improvements, and 4 truck lanes between inter-modal rail yards in Vernon/Commerce and Ocean Boulevard in Long Beach.
- Implementation of Alternative B TSM/TDM measures.
- Improvement of arterial highways within the I-710 Corridor.
- Construction of truck inspection facilities to be integrated with the selected overall design.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- Interchange improvements;
- Coordination of truck and inter-modal rail yards; and
- Transportation Systems Management and Transportation Demand Management.

SB 375
GATEWAY CITIES

Report: Gateway Cities COG – Summary of the Proceedings of the Joint Housing Summit "Strategies and Tactics for Infill Development Success"

Date: November 2004

Summary: This joint housing summit by the Gateway Cities and the South Bay Cities Councils of Governments discussed federal and state initiatives to promote affordable housing and home ownership. The President's initiative: America's Affordable Communities Initiative: Bringing Homes Within Reach Through Regulatory Reform emphasizes that government regulation contributes to the high cost of housing and regulatory reform may serve to increase the affordability of housing. The initiative is supported by research conferences, awards programs, incentives in competitive grants and HUD internal screening of housing programs and regulations that create barriers for affordable housing. The State supports the availability of housing as a key factor to promote a prosperous economy, a quality environment and social equity. Anticipated State initiatives will promote program changes to support affordable housing and seek funding sources to help house low and very low income persons.

Report: SR-91 / I-605 Needs Assessment Study

Date: September 2005

- **Summary:** The freeways in Southern California are continuing to become increasingly congested due to the region's expanding population. In addition, the freeways in Southeast Los Angeles County are also affected by the continuing growth of the Ports of Long Beach and Los Angeles. The impetus to prepare the SR-91 and I-605 Needs Assessment is, in large part, the result of the effect on these two freeways by the truck traffic volumes from the two ports, as well as the additional truck volumes in the future from continued port growth. The report analyzed projections for continued traffic growth that would affect these two freeways and examined improvements needed to accommodate this increasing traffic. Intelligent Transportation Systems (ITS) were also examined as a technology to increase mobility and improve safety for people and freight to complete end-to-end trips as efficiently as possible.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- additional freeway lanes for general purpose traffic;

SB 375
GATEWAY CITIES

- upgrade and improve the I-405/I-605, the SR-91/I-605 and the I05/I-605 interchanges;
- analysis of possible carpool-to-carpool interchanges at major freeway interchanges;
- further study the possibility of adding truck lanes to SR-91, I-105 and I-605;
- add additional lanes to at least one arterial highway that parallels each freeway, including signal synchronization and consideration/ evaluation of removal and replacement of on-street parking (as needed) along freeway corridors;
- all arterial bridges over the San Gabriel River next to the I-605 freeway need to be widened by one lane in each direction;
- signal synchronization of most of the nearby arterial highways that border the SR-91 and I-605 corridors as part of an ITS strategy;
- develop an ITS master plan for the COG region and establish traffic management centers as needed within the region; and
- air quality and quality of life issues and concerns should be addressed as part of any additional studies.

Report: The Gateway Cities & Surrounding Areas Intelligent Transportation System (ITS) Research and Strategies For Transportation and Goods Movement Study

Date: December 2005

ITS is the application of technology to the highway systems. Many Gateway Cities are in the process of implementing a variety of ITS programs. This study was initiated to research the ITS planning, design, deployment and operations that are being planned or implemented by other agencies for traffic and for goods movement strategies to reduce traffic congestion, increase safety, reduce pavement/roadway damage and improve real time traveler information sharing for the freeways in the Gateway Cities COG area. The increasing cargo shipments in the ports, expected to double over the next 15 years and possibly triple over the next 20 years, will increase diesel emissions affecting regional air quality and increase traffic along routes to and from the ports. Improving the goods movement systems and infrastructure can serve to reduce environmental impacts and relieve congestion on freeways and increase mobility in the area. The application of ITS technology includes:

- automatic collection and transmission of "real time" traffic information;
- commercial vehicle operations;

SB 375
GATEWAY CITIES

- electronic tolling and collection;
- traffic management centers;
- arterial highway traffic signal synchronization;
- development of a 511 Traveler Information System;
- development of telecommunications systems providing "real time" traffic information to the driver;
- incident management alerts for drivers and the California Highway Patrol; and
- incident reduction systems.

This study identifies a number of ITS projects adopted by various agencies in the region.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- ramp metering;
- signal coordination with ramp metering;
- incident management;
- real-time traveler information;
- arterial signal management;
- isolated traffic actuated signals;
- actuated corridor signal coordination;
- central control signal coordination;
- automatic transit vehicle location and scheduling;
- transit vehicle signal priority;
- traffic management center;
- traffic signal synchronization;
- clean air program; and
- shuttle train pilot program.

Report: SR-91 / I-605 / I-405 Proposal for Major Corridor Study and RSTIS Peer Review Presented by Gateway Cities COG

Date: October 2006

Summary: On January 27, 2005, the Board of Directors of the Los Angeles County Metropolitan Transportation Authority (Metro) adopted the Draft Final Report on the I-710 Major Corridor Study. As a result of the I-710 Major Corridor Study (MCS), it was apparent that existing and future port-related truck traffic impacting the I-710 freeway would also impact the other freeways in Southeast Los Angeles County east of the I-710 freeway. These freeways include the SR-91, I-605, I-405 and I-105. The results of a needs assessment study showed that these freeways will be overwhelmed with general purpose, car-pool and heavy-duty truck traffic in the future, clearly identifying a need for further analysis and mitigation. In order to proceed with a Major Corridor Study, federal funding is required. Therefore, Regionally Significant Transportation Investment Studies (RSTIS) requirements needed to be followed. Based on the preceding, the Gateway Cities COG requested a RSTIS Peer Review for these freeway corridors.

Report: Draft (Revised) Technical Scope of Work Southeast Los Angeles County SR-91 / I-605 / I-405 Freeway Corridors Major Corridor Study (MCS)

Date: May 2007

Summary: This Scope of Work addresses the transportation issues to be addressed through the preparation of a Major Corridor Study for the SR-91 / I-605 / I-405 Corridors, as required for the Regionally Significant Transportation Investment Study (RSTIS) by SCAG. The purpose of the study is to conduct a comprehensive evaluation of the overall transportation system, the results of which will be assembled into a Corridor Analysis Report and will include a Preferred Alternative assuming a built-out environment for all alternatives considering existing houses and businesses.

Report: Development of the Air Quality Action Plan for the I-710 Corridor

Date: May 2007

Summary: A study assessing the options and costs associated with widening the freeway to expand the capacity of the Interstate 710 Freeway (I-710) from the ports (Ocean Boulevard) to SR-60 freeway began in 2001. As part of the study, feedback was obtained from the communities in the I-710 corridor and determined that the main concerns about expanding the freeway were related to issues of air quality in the region. The Gateway Cities COG was asked by stakeholders in the I-710 Corridor planning process to prepare an Air Quality Action Plan (AQAP) to address the air quality concerns associated with expanding the freeway. This report was a preliminary step in the development of the AQAP. This report summarizes the process that resulted in the

creation of the AQAP and the expectations that stakeholders have for the document. It also reviews the primary emission reduction measures from diesel fueled engines and the goods movement sector that have been proposed or which are being implemented and should improve air quality in the I-710 Corridor communities.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

Provided below is a listing of emission reduction policies and programs from various agencies that should have a direct impact on GHG emissions.

California Air Resources Board Goods Movement/Diesel Risk Reduction Measures

- stricter PM and NOx emissions standards for new and in-use cargo handling equipment (CHE) at California's ports and inter-modal rail yards;
- limit the amount of time 2008 and newer sleeper berth equipped trucks can operate at idle;
- measure to reduce emissions from diesel-powered trucks in port service;
- measure to reduce emissions from in-use heavy-duty diesel powered vehicles by requiring in-use controls such as verified diesel emission controls to ensure engines operate as cleanly as possible;
- railroads commitment to studying and reducing pollution risks at 17 designated rail yards in and around Los Angeles County;
- require public agency and utility vehicle owners to reduce diesel PM emissions from their affected vehicles through the application of best available control technologies (BACT);
- manufacturer-run heavy-duty diesel engine in-use compliance program on 2007 and newer heavy-duty engines;
- measure to reduce emissions from in-use off-road vehicles requiring each fleet to meet fleet average requirements by March 1 of each year or demonstrate that BACT technology be applied;
- requires the use of low-sulfur fuel in the main engine of ocean-going vessels (OGVs);
- requires ships entering California's ports to use 0.5 percent sulfur content Marine Diesel Oil by January 1, 2007, or Marine Gas Oil for auxiliary diesel engines within 24 nautical miles of the California coast;
- regulation to reduce emissions from commercial harbor craft such as tugs, tows, ferries and fishing vessels through engine retrofits and re-powers, as well as regulations on fuel type;
- requires OGVs use shore power (connecting to electrical power at the dock) in lieu of auxiliary engines while hotelling; and

- assess the emission reduction results from the other OGV measures.

San Pedro Bay Ports Clean Air Action Plan Measures

- requirement to meet or be cleaner than the EPA 2007 on-road PM emissions standards and the cleanest available NOx at the time of replacement or retrofit for all trucks frequently or semi-frequently calling at ports by the end of 2011;
- measure providing for the development of an alternative fuel refueling and central maintenance facility, jointly owned by both ports, and located on Terminal Island;
- compliance with the vehicle speed reduction requirement 20 nautical miles (nm) from Point Fermin, with the prospect of expanding the measure to 40 nm from Point Fermin;
- mandates the use of shore power to reduce hotelling emissions at container terminals, cruise terminals, container terminals and one crude oil terminal and exploration of alternative emission reduction technologies for hotelling OGVs;
- measure establishing a fuel standard for fuel used in on-board auxiliary power units of ≤0.2 percent sulfur distillate or Marine Gas Oil equivalent reduction;
- establishes a fuel standard for fuel used when ships are arriving or departing San Pedro Bay of ≤0.2 percent sulfur distillate or Marine Gas Oil equivalent reduction;
- measure provides research money for the development of new technologies that reduce emissions from both auxiliary power units (APUs) and main engines;
- requirement that, beginning in 2007, all cargo handling equipment (CHE) purchases will be required to have either the cleanest available NOx alternative fueled engine or the cleanest available NOx diesel fueled engine;
- San Pedro Bay Ports (SPBP) harbor craft will meet EPA standards within specified timeframes and eventually all previously re-powered harbor craft will be retrofitted with the most effective NOx and PM emission reduction devices;
- require that, by 2008, all existing switch engines in the ports be replaced with cleaner engines and use emulsified fuels as available or other equivalently clean alternative diesel fuels. Additionally, new switch engines acquired after the initial replacement must meet even cleaner standards;
- require, by 2011, all diesel-powered Class 1 switcher and helper locomotives entering port facilities be 90 percent controlled for PM and NOx and have 15-minute idle restriction devices installed. After January 1, 2007, all locomotives

will be required to use ultra low sulfur diesel fuel. Additional cleaner standards are required by 2012; and
- require the cleanest available technology for switcher, helper and long haul locomotives for new or redeveloped rail yards on SPBP's property and require "green-container" transport systems, idling shut off devices, idling exhaust hoods, ultra-low sulfur diesel or alternative fuels and clean CHE and heavy-duty vehicles.

Tier 2 Committee Report Measures

- establish a baseline of current levels of pollution, identify level of air quality impacts from increasing truck, rail and shipping and determine costs of health care that can be traced to pollution encountered by corridor communities as a result of construction; and
- require the increased use of enforcement and inspections to control emissions from on-road heavy-duty vehicles.

Report: SR-91 / I-605 / I-405 Initial Corridors Studies

Date: April 2008

Summary: This report is a follow-up to the 2005 SR-91 / I-605 Needs Assessment which projected growth in ports-related goods movement will significantly increase truck traffic on all the freeways in the Gateway Cities area. This follow-up report reflects a new SCAG Regional Model with 2035 projections (previously 2030 projections), applying the same assumptions for port operations and adding results for three additional links including I-605 north of I-405, I-405 between I-110 and I-710 as well as I-405 between I-710 and I-605. The projected increase in truck traffic has resulted in the freeway study evolving to include an assessment of regional goods movement through the area without total reliance on the traditional port-to-truck-to-freeway-to-destination option. The report's adopted guiding principles are provided below:

1. Confine new freeway construction to existing State right-of-way in order to preserve and enhance local economies and environments.
2. Address freeway operational deficiencies, relieve freeway congestion "hot-spots" and decease the impact of truck bypass traffic on communities.
3. Secure funding for major corridor studies and improvements.
4. Support a separate freight movement corridor provided it is evaluated

SB 375

GATEWAY CITIES

and constructed along non-freeway (e.g., rail or utility) alignments using minimally or non-polluting technologies.

5. Implement additional Intelligent Transportation Systems (ITS) improvements in the SR-91 / I-605 / I-405 Corridor and advocate a broader regional approach.
6. Continue collaborative planning efforts.
7. Advocate to preserve and enhance health and quality of life in the corridor.

The report identifies a number of needs and recommendations for improvements.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- Gateway Cities COG and its communities will support a separate freight movement corridor constructed along non-freeway alignments using minimally or non-polluting transportation technologies;
- ITS Integration Plan demonstrates the computer technology providing real-time traveler information can be used to have a significant benefit for both the private and public sectors for goods movement and should be implemented;
- freeway operational deficiencies should be addressed as mainline freeway improvements including local freeway interchanges;
- one additional lane in each direction added to freeways (with some local property impacts) may be sufficient to meet projected general traffic demands if a successful and reliable freight movement corridor can be implemented; and
- HOV direct connectors may be feasible at some freeway-to-freeway interchanges.

SB 375

GATEWAY CITIES

Report: White Paper – Addressing the Requirements of SB 375 at the Sub-regional Level

Date: December 2009

Summary: This report discusses in detail the month's long process undertaken by the Gateway Cities COG during 2009 to determine its response to the requirements of SB 375 and the formulation of a Sustainable Communities Strategy. The COG initially engaged the MTA as a co-partner in the SB 375 process and then its member jurisdictions assessed themselves to retain a consulting team to provide technical support in responding to this complex and evolving legislation.

Over an 8-month period, the consultant team conducted an on-line survey of COG sustainability efforts; compared the general plans of COG jurisdictions to SCAG growth assumptions; evaluated the current efforts of COG members as compared to the efforts that may be needed, based on a Best Management Practices list and weighting factors, in order to attain the desired level of GHG emissions reductions; monitored and reported on the SB 375 process and related meetings; organized and conducted a series of SB 375 workshops for COG representatives; and presented the results of these efforts in a final comprehensive report to the COG. Based on the recommendations presented in this report, the COG Board elected to assume responsibility from SCAG for preparing the SB 375 required Sustainable Communities Strategies (SCS) for the Gateway Cities sub-region.

Findings/Recommendations Relevant to GHG and VMT Reductions include:

- the web-based survey documented that COG member cities have already initiated or are planning to undertake various measures that have/will reduce VMT and GHG emissions;
- the Gateway cities demonstrate a strong institutional capacity for strategies that are the foundation for complying with SB 375 and SCS requirements;
- current and planned policies and improvements could achieve $\pm$15% of a hypothetical sub-regional target of 4% GHG reduction by 2020;
- in order to meet the hypothetical target, 80% of COG members would need to adopt various land use and transportation policies; and
- the COG should assume responsibility from SCAG for developing the sub-regional SCS and Regional Housing Needs Assessment (RHNA) as allowed by SB 375.

,

Appendix C.

Public Outreach Materials

Stakeholder Organizations
Included in Gateway Cities SCS Outreach During 2011

1. American Lung Association
2. Artesia Chamber of Commerce
3. Avalon Chamber of Commerce
4. Bell Chamber of Commerce
5. Bell Gardens Chamber of Commerce
6. Bellflower Chamber of Commerce
7. Breathe California of LA County
8. Building Industry Association of Southern California
9. California Air Resources Board
10. California Conference for Equality & Justice
11. California Department of Transportation - District 7
12. Center for Law in the Public Interest
13. Cerritos Chamber of Commerce
14. ClimatePlan
15. Coalition for Clean Air
16. Commerce Chamber of Commerce
17. Communities for a Better Environment
18. Community Development Commission of the County of Los Angeles
19. Compton Chamber of Commerce
20. Cudahy Chamber of Commerce
21. Downey Chamber of Commerce
22. East Yard Communities for Environmental Justice
23. Environment Now
24. Fair Housing Foundation of Long Beach
25. Hawaiian Gardens Chamber of Commerce
26. Huntington Park Chamber of Commerce
27. ICLEI
28. International Longshore Warehouse Union
29. Jamboree Housing Corporation
30. LA County Department of Public Health, PLACE Program
31. La Habra Heights Chamber of Commerce
32. La Mirada Chamber of Commerce
33. Lakewood Chamber of Commerce
34. LINC Housing
35. Long Beach Chamber of Commerce
36. Long Beach Cyclists
37. Long Beach Diabetes Collaborative and Long Beach Alliance for Food & Fitness
38. Long Beach Housing Development Company
39. Long Beach Transit
40. Los Angeles County Economic Development Corporation
41. Los Angeles County Metropolitan Transportation Authority
42. Los Angeles County Public Health
43. Lynwood Chamber of Commerce
44. Maywood Chamber of Commerce

45. Metropolitan Water District
46. Montebello Chamber of Commerce
47. Move LA
48. NAACP
49. National Safe Routes to School Partnership
50. Natural Resources Defense Council
51. Norwalk Chamber of Commerce
52. Orange County Transportation Authority
53. Paramount Chamber of Commerce
54. Pedal Movement
55. Pico Rivera Chamber of Commerce
56. Port of Long Beach
57. Santa Fe Springs Chamber of Commerce
58. Signal Hill Chamber of Commerce
59. South Coast Air Quality Management District
60. South Gate Chamber of Commerce
61. Southeast Water Coalition
62. Southern California Association of Non-Profit Housing
63. TELACU
64. The HUB Pedal Movement
65. U.S. Green Building Council
66. ULI LA Chapter
67. Vernon Chamber of Commerce
68. Water Replenishment District
69. We Love Long Beach
70. Whittier Chamber of Commerce

GATEWAY CITIES
COUNCIL OF GOVERNMENTS

For Immediate Release **April 12, 2011**

SOUTHEAST AREA CITIES TO ADOPT PLAN TO REDUCE GREENHOUSE GASES

Twenty-six cities in southeastern Los Angeles County, located in the area called the Gateway Cities, are working together to develop an unprecedented plan to reduce greenhouse gas emissions from cars and light trucks by changing land use and transportation patterns. The plan, called a Sustainable Communities Strategy or SCS, is a new requirement of state law adopted in 2008 known as SB 375.

The Gateway Cities SCS is under development and is expected to be finalized in June. The plan compiles city, county, and regional strategies in three categories. The first category, transportation projects, includes bicycle and pedestrian improvements, such as separated bike lanes, intersection improvements, and traffic signal synchronization, among many others that will help reduce auto usage and emissions. For example, in 2009 the City of Bellflower reclaimed a bike and pedestrian path from an unused rail right-of-way.

The second category, land use changes, involves denser development near existing or planned transit stations. Examples can be seen on Long Beach Boulevard in Long Beach, along the Metro Blue Line.

The third category is known to planners as TDM, or travel demand management. This refers to programs like shortened work weeks and employer-sponsored ride sharing, which enable commuters to use their personal cars less often while still getting to and from work. The City of Commerce, for one, makes extensive use of this strategy.

The projects and strategies comprising the Gateway Cities SCS are expected to be implemented by one of two target years: 2020, or 2035. The California Air Resources Board has set regional emission reduction targets for each of these years. The targets must be collectively met by six Southern California counties that comprise the Southern California Association of Governments, or SCAG.

The Gateway Cities make up the area of Los Angeles County generally bordered by the City of Los Angeles on the west, Orange County on the east, and the Pomona (SR-60) Freeway on the north, and extending south to the cities of Long Beach and Avalon. The entire Gateway Cities region is home to about 2 million residents. The cities' collaboration dates back to their joint establishment of a regional authority, the Gateway Cities Council of Governments (or COG) in the mid-1990's.

With SB 375, the Gateway Cities had a choice: to prepare their own plan, or allow the regional authority, SCAG, to prepare it on their behalf. According to Gil Hurtado, President of the COG's Board of Directors and Council Member from the City of South Gate, "The Gateway Cities have a long history of working together to address our unique situation: high density, built-out cities, and very diverse residents. The Gateway Cities wanted to create our own vision of a cleaner, lower-emissions future."

According to SCAG Executive Director Hasan Ikhrata, "As a regional partner, SCAG is pleased that Gateway Cities is undertaking its own SCS. Their ability to work directly with their member jurisdictions will ensure an inclusive, bottoms-up approach. We look forward to including the Gateway Cities' strategies as a key component of a successful Regional SCS."

To learn more about the Gateway Cities SCS, please visit the COG web site at www.gatewaycog.org/sb375.html. Additionally, four public information sessions about the SCS will be offered in late April and early May at various locations around the Gateway Cities as follows:

- Tuesday, April 26: Cerritos – Cerritos Library, Skyline Room, 6:30 – 8:30 p.m.
- Tuesday, May 3: Long Beach – Mark Twain Library, 6:30 – 8:30 p.m.
- Monday, May 9: Pico Rivera – Golf Course - Banquet Room, 6:30 – 8:30 p.m.
- Thursday, May 12: Commerce – Senior Center, 6:30 – 8:30 p.m.

The Gateway Cities Council of Governments is a California joint powers authority made up of twenty-seven cities and the County of Los Angeles, formed for the purpose of providing a vehicle for the members to voluntarily engage in regional and cooperative planning and coordination of government services for the collective benefit of the residents of Southeast Los Angeles County. The goal and intent of the COG is one of voluntary cooperation among cities and the County in the areas of transportation, air quality, housing, and economic development. For further information, please contact Richard Powers, Executive Director, 562-663-6850 or richardpowers@gatewaycog.org.

# # #

Page 2

Gateway Cities Council of Governments Sustainable Communities Strategy

SB 375

GATEWAY CITIES

The Gateway Cities Council of Governments (COG) is leading a process to develop a plan that includes strategies to reduce greenhouse gas emissions from cars and light trucks in the sub-region. The Sustainable Communities Strategy (SCS) is required by California law in order to achieve the State's greenhouse gas reduction goals.

Please join us for a public open house!

To learn more about the SCS drop in on one of these information sessions!

Tuesday, April 26, 6:30 - 8:30 p.m.
Cerritos - Cerritos Library, Skyline Room, 18025 Bloomfield Avenue, Cerritos, CA 90703

Tuesday, May 3, 6:30 - 8:30 p.m.
Long Beach - Mark Twain Library, 1401 East Anaheim Street, Long Beach, CA 90813

Monday, May 9, 6:30 - 8:30 p.m.
Pico Rivera - Golf Course, Banquet Room, 3260 Fairway Drive, Pico Rivera, CA 90660

• ursday, May 12, 6:30 - 8:30 p.m.
Commerce - Senior Center, 2555 Commerce Way, Commerce, CA 90040

Representatives from the COG's member cities have been working with the COG staff and consultants to identify specific strategies to include in the plan for the Southeast Los Angeles County sub-region.

Come and learn more about:

- SCS process and schedule
- Relationship of the SCS to local planning efforts
- Types of transportation and land use strategies included in the SCS
- How the SCS will affect you
- Opportunities to stay involved in process

GATEWAY CITIES
COUNCIL OF GOVERNMENTS

For additional information please visit the COG website at:

www.gatewaycog.org/sb375.html

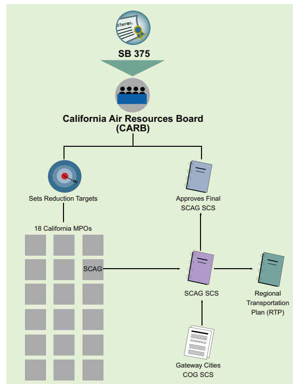
What is a Sustainable Communities Strategy?

Senate Bill 375 Basics

California State legislation that prompts California regions to work together to reduce greenhouse gas (GHG) emissions from *cars* and *light trucks*.

This law directs the California Air Resources Board (CARB) to set greenhouse gas reduction targets for regions of the state and work with California's 18 metropolitan planning organizations (MPOs) to align each region's transportation, housing, and land-use plans with greenhouse gas reductions in mind.

In Southern California, the sub-regions have an option to create their own SCS. The Gateway Cities have accepted delegation in creating their own sub-regional SCS that will be incorporated into the regional SCS that the Southern California Association of Governments (SCAG) is developing. The final adopted regional SCS is then incorporated into a federally required Regional Transportation Plan (RTP) for the Southern California Region.



Land Use/*Uso del Suelo*

Proposed Strategies
Estrategias Propuestas

- Mix of Uses
  Usos Mixtos
- Pedestrian Oriented Design
  Diseño Orientado a Peatones
- Transit Oriented Development
  Desarollo Orientado al Transito
- Improved Connections Between Uses
  Mejoramiento de Conexiones entre Usos
- Urban Design
  Diseño Urbano

Gateway Cities Council of Governments
Sustainable Communities Strategy
SB 375

Transportation/*Transportación*



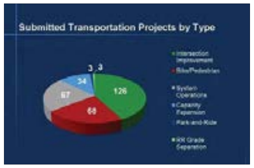

Proposed Strategies
Estrategias Propuestas

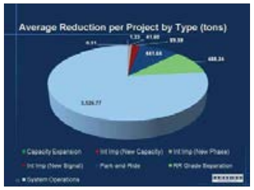
- Street Improvements
  Mejoras de Calle
- Sidewalk Improvements
  Mejoras de Acera
- Bike and Pedestrian Amenities
  Amenidades de bicicleta y peatón
- Expansion of Transit
  Expansión de transito
- Park & Ride Lots
  Lotes para estacionar y transitar

Gateway Cities Council of Governments
Sustainable Communities Strategy
SB 375

Transportation/*Transportación*

Submitted Transportation Projects
Proyectos de transporte sometidos





Gateway Cities Council of Governments
Sustainable Communities Strategy
SB 375

Transportation Demand Management (TDM)/*Manejo de Demanda Para Transporte*

Proposed Strategies
Estrategias Propuestas

- Shuttles
  Mini autobús
- Bus Pass Program
  Programa de pase de autobús
- Transit Marketing
  Comercialización de transito
- Ridesharing Programs
  Programa para compartir el viaje
  - Employee Trip Reduction Program
    Programa para reducir viajes de empleados
  - Preferential Parking to Vanpools
    Estacionamiento preferencial para vehículos de viaje compartido
  - Carpool and Vanpool Loading Areas
    Áreas para abordar vehículos de viaje compartido

Gateway Cities Council of Governments
Sustainable Communities Strategy
SB 375

Transportation Demand Management (TDM)/*Manejo de Demanda Para Transporte*

Proposed Strategies
Estrategias Propuestas

- Safe Routes to School
  Rutas seguras para caminar a la escuela
- Parking Structures
  Estacionamiento
- Bike Initiatives
  Iniciativas para transitar en bicicleta
  - Bike Stations
    Estacionamiento para bicicletas
  - Bike Safety and Awareness
    Conocimiento y seguridad sobre andar en bicicleta
  - Bike Friendly Districts
    Distritos orientados hacia bicicleta
  - Bike Racks
    Porta bicicletas

Gateway Cities Council of Governments
Sustainable Communities Strategy
SB 375

Frequently Asked Questions

1. What is SB 375?

SB 375 is California state legislation that became law effective January 1, 2009. It prompts California regions to work together to reduce greenhouse gas (GHG) emissions from cars and light trucks. This new law requires the integration of planning processes for transportation, land-use and housing. The plans emerging from this process will lead to more efficient communities that provide residents with alternatives to driving alone.

2. What is the Gateway Cities COG?

The Gateway Cities COG is a joint powers authority compose of city and county governments in southeastern Los Angeles County. The COG provides regional leadership and focuses on priorities such as reducing traffic congestion, improving air quality, addressing housing needs, and strengthening the economy.

3. Will this affect my utility bills?

The Sustainable Communities Strategy (SCS) seeks to reduce greenhouse gas emissions from cars and light trucks through concentrated planning efforts. It is not related to home energy usage.

4. Will there be rebates for home improvements?

SB 375 is not related to home energy usage.

5. Will this make my community more "dense"?

It could increase densities consistent with a City's Land Use Element of their General Plan. These plans are sensitive to the history and character of the existing community.

6. What if our community does not meet the Southern California Association of Governments (SCAG) targets?

The Gateway Cities SCS by itself is not required to meet the SCAG targets. SCAG, as the metropolitan planning organization (MPO), is required to demonstrate how the region will meet the greenhouse gas emission targets by including a "Sustainable Communities Strategy" (SCS) in the regional transportation plan. If the regional SCS falls short of meeting the targets, SCAG must prepare an "alternative planning strategy" that, if implemented, would meet the targets. The Gateway Cities, together or individually, are not required to prepare an alternative planning strategy.

7. How does my business fit into this strategy?

Cities can include strategies to incentivize businesses and employees to participate.

Gateway Cities Council of Governments
Sustainable Communities Strategy
SB 375

Preguntas Frecuentes

1. ¿Qué es la Ley SB 375?

La Ley SB 375, es parte de la legislación estatal de California que se entro en vigor partir del 1º. de enero del 2009. Esta ley indica las regiones que deben de trabajar en conjunto para reducir las emisiones de gases con efecto invernadero (GHG) emitidas por autos y camiones de carga ligera. Esta nueva ley requiere la integración de procesos de planeación para transporte, uso de suelo y vivienda. Estos planes son el resultado de procesos que llevarán a las comunidades a ser más eficientes y a proveer a los residentes de alternativas para los que manejan solos en sus autos.

2. ¿Qué es el COG de las Ciudades Gateway?

El COG de las Ciudades Gateway es un conjunto de poderes de autoridades que se compone de ciudades y gobiernos del condado en el suroeste del Condado de Los Angeles. El COG provee liderazgo regional y se enfoca en prioridades tales como la reducción del congestionamiento de tránsito, mejorar la calidad del aire, atender las necesidades de vivienda y fortalecer la economía.

3. ¿Afectará el costo de los servicios públicos?

La Estrategia para Comunidades Sustentables (SCS) busca reducir la emisión de gases con efecto invernadero generados por autos y camiones de carga ligera por medio de esfuerzos conjuntos de planeación. No tiene nada que ver con el uso de energía en casa.

4. ¿Habrá reembolsos para mejoras en el hogar?

La SB 375 no tiene nada que ver con el uso de energía en casa.

5. ¿Qué es lo que hace a mi comunidad más "densa"?

Las estrategias de la SCS que están relacionadas con la vivienda o el desarrollo urbano, reflejan lo que ya se ha desarrollado en las comunidades de manera individual. Estas estrategias son sensibles a los antecedentes históricos y al carácter de la comunidad ya existente.

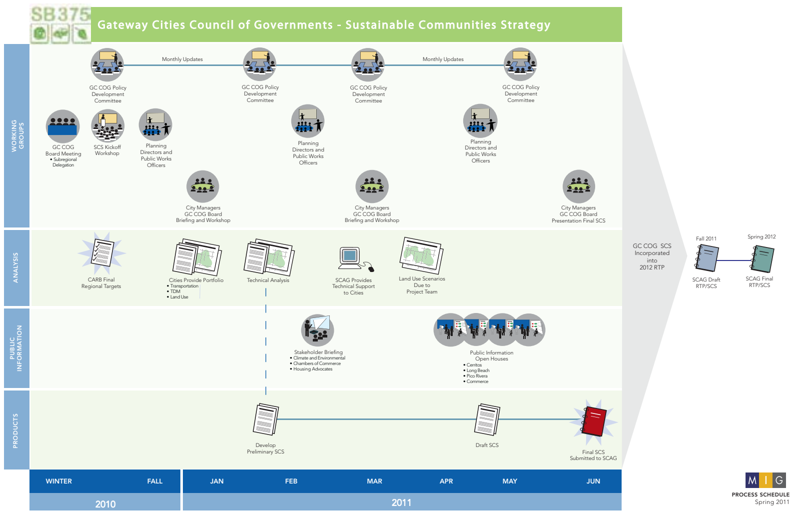
6. ¿Qué pasa si nuestra comunidad no cumple con las metas de La Asociación de Gobiernos del Sur de California (SCAG)?

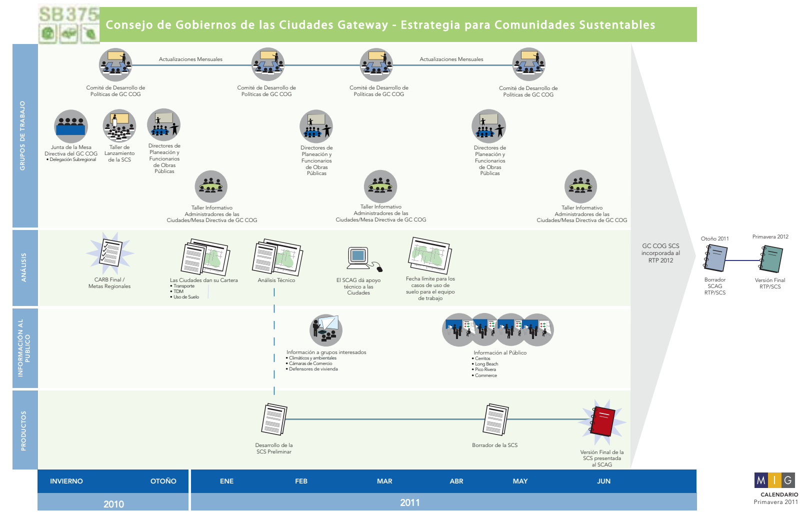
La SCS de las Ciudades Gateway no está obligada por si misma a cumplir con las metas del SCAG. El SCAG como organismo de planeación metropolitano (MPO) está obligado a demostrar cómo la región cumplirá con las metas para la reducción de emisión de gases con efecto invernadero al incluír la "Estrategia para Comunidades Sustentables" (SCS) en el plan regional de transporte. Si la SCS regional se queda corta para alcanzar las metas, el SCAG deberá preparar una "estrategia de planeación alternativa" que al implementarse, deberá cumplir con las metas establecidas. Las Ciudades Gateway, en conjunto o de manera individual, no están obligadas a preparar una estrategia de planeación alternativa.

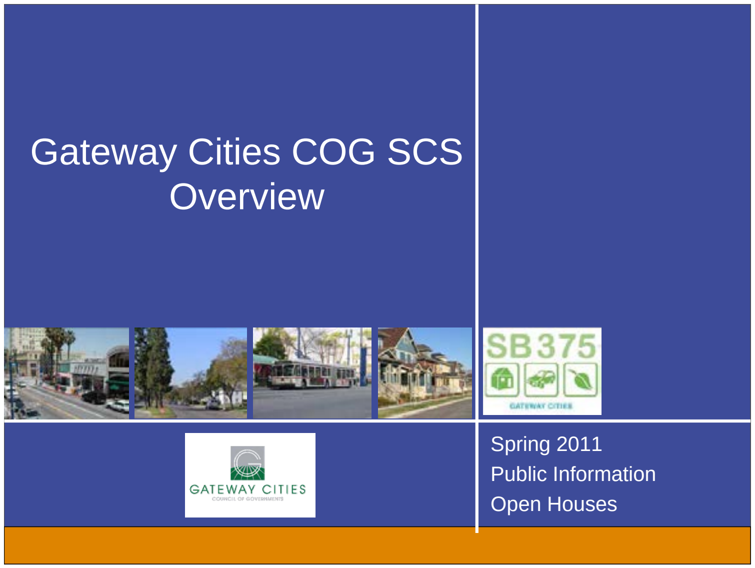
7. ¿Cómo encaja mi negocio en esta estrategia?

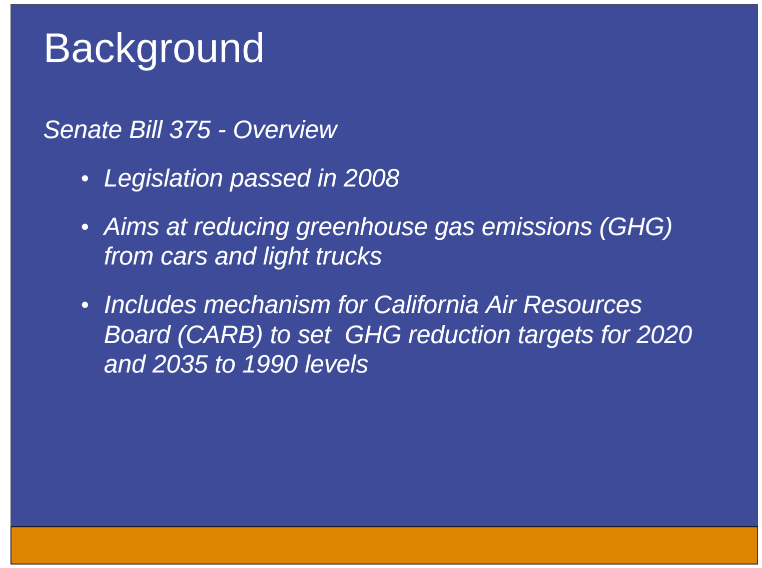
Las ciudades pueden incluír estrategias para motivar a que los comercios y sus empleados participen.

Gateway Cities Council of Governments
Sustainable Communities Strategy
SB 375


SB375
Gateway Cities Council of Governments - Sustainable Communities Strategy
2010
2011


SB375
Consejo de Gobiernos de las Ciudades Gateway - Estrategia para Comunidades Sustentables
2010
2011


Gateway Cities COG SCS Overview
SB 375
GATEWAY CITIES
Spring 2011
Public Information
Open Houses


Background
Senate Bill 375 - Overview
• Legislation passed in 2008
• Aims at reducing greenhouse gas emissions (GHG) from cars and light trucks
• Includes mechanism for California Air Resources Board (CARB) to set GHG reduction targets for 2020 and 2035 to 1990 levels

Background

Senate Bill 375 - Approach

- *Metropolitan Planning Organizations (MPOs) produce Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP)*
- *The Southern California Association of Governments (SCAG) - MPO for Southern California - will update its RTP by 2012*

Background

Senate Bill 375 - Sustainable Communities Strategy (SCS)

- *Is a regional GHG plan that links transportation, housing and land use to reduce GHG emissions from cars and light trucks*
- *Achieves GHG reduction targets set by the California Air Resources Board*

Gateway Cities Sub-regional SCS

Gateway Cities Process

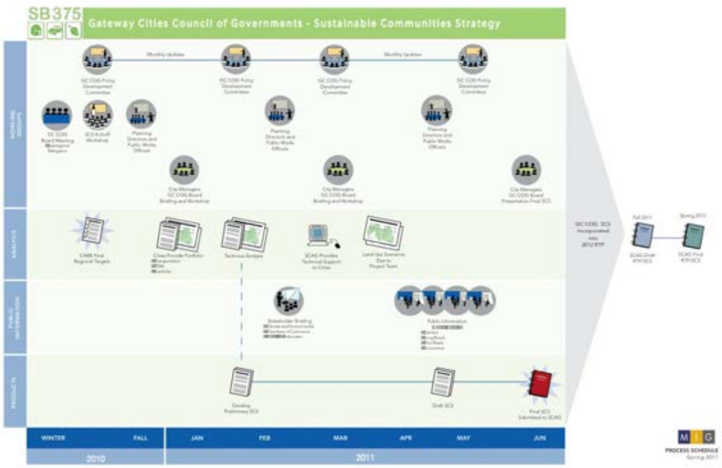
- *Council of Governments (COG) have option to prepare SCS for sub-region*
  - *Gateway Cities COG provides regional leadership for southeast Los Angeles County cities*
- *Gateway Cities COG Board chose SCS delegation in January 2010*
- ***First effort of its type!***

Gateway Cities Sub-regional SCS

Gateway Cities Approach

- *Focus on three strategy categories for GHG Reduction*
  - *Travel Demand Management*
  - *Land Use*
  - *Transportation projects*
- *Work with city staff to provide inputs*
- *Develop strategies consistent with cities' plans*

Process Schedule



Findings

Preliminary results indicate GHG reductions in Gateway sub-region meet the CARB regional targets

- *Strategies contributing to reductions*
  - *Local transportation projects*
  - *Local land use projects*
  - *Travel Demand Management*
  - *Regional transportation projects*

Lessons Learned

Some strategies result in greater reductions than others

  - *Regional transportation projects*
  - *Local transportation projects*

- *Need to refine tools and models*
- *These lessons will assist in future 4-year planning cycles*

Public Engagement

- *Attend Public Information Open Houses*
  - *Cerritos*
  - *Long Beach*
  - *Pico Rivera*
  - *Commerce*
- *Attend Gateway Cities COG Board meeting*
  - *May – Draft SCS*
  - *June – Final SCS*

Next Steps

- *Final Gateway Cities SCS approval by Gateway Cities COG Board - June, 2011*
- *Submit Final Gateway Cities SCS to SCAG - June, 2011*
- *SCAG Incorporates Gateway Cities SCS into regional SCS and RTP - Summer 2011*
- *SCAG completes draft Regional SCS - Fall 2011*
- *SCAG submits final Regional SCS to CARB - Spring 2012*

For additional information please visit the COG website at:

GATEWAY CITIES

www.gatewaycog.org/sb375.html

COG SCS CIUDADES GATEWAY GENERALIDADES

Primavera 2011
Difusión Social
Juntas Informativas

Antecedentes

Ley del Senado 375 - Generalidades

- *Se aprobó la legislación en 2008*
- *Trata de reducir la emisión de gases con efecto invernadero (GHG) producidos por autos y camiones de carga ligera*
- *Incluye mecanismos de la Junta de Recursos Atmosféricos de California (CARB) para establecer metas para la reducción de GHG en el 2020 y 2035 a los niveles de 1990*

Antecedentes

Ley del Senado 375 - Enfoque

- *Las Organizaciones Metropolitanas de Planeación (MPOs) diseñaron la Estrategia para Comunidades Sustentables (SCS) como parte del Plan Regional de Transporte (RTP)*
- *La Asociación de Gobiernos del Sur de California (SCAG)-MPO para el Sur de California, actualizará su RTP para el 2012*

Antecedentes

Ley del Senado 375 – Estrategia para Comunidades Sustentables (SCS)

- *Es un plan regional de GHG que relaciona el transporte, la vivienda y el uso de suelo para la reducción en la emisión de GHG producidos por autos y camiones de carga ligera*
- *Alcanza las metas de reducción de GHG establecidos por la Junta de Recursos Atmosféricos de California*

La SCS Subregional, Ciudades Gateway

Proceso de las Ciudades Gateway

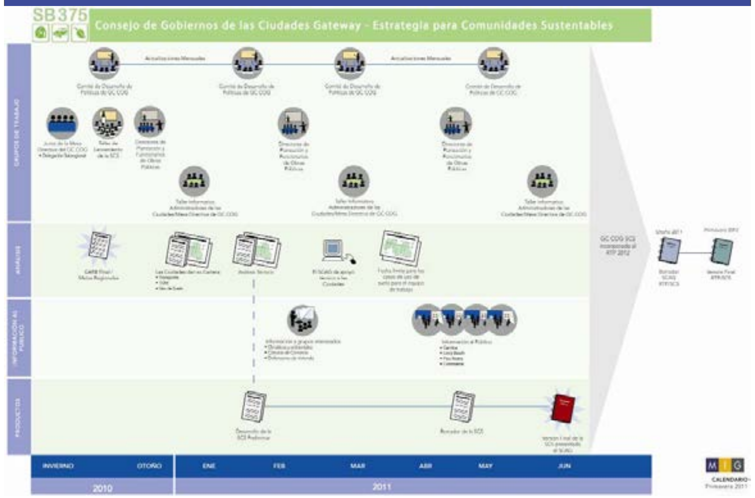
- *El Consejo de Gobiernos (COG) tiene la opción de preparar la SCS para la sub-región*
  - *El COG de las Ciudades Gateway provee liderazgo regional para las ciudades del sureste del Condado de Los Angeles*
- *La Mesa Directiva del COG de las Ciudades Gateway optó por la delegar la SCS en enero del 2010*
- ***¡Son los primeros trabajos de este tipo!***

La SCS Subregional, Ciudades Gateway

Enfoque de las Ciudades Gateway

- *Enfoque en tres categorias para estrategias de reducción de GHG*
  - *Gestión para la Demanda del Transporte*
  - *Uso de Suelo*
  - *Proyectos para transporte*
- *Trabajar con el personal de la ciudad para la retroalimentación de información*
- *Desarrollar estrategias que sean consistentes con los planes de la ciudad*

Calendario del Proceso



Resultados

Los resultados preliminares indican que la reducción de GHG en la sub-región Gateway, cumplirá con las metas regionales establecidas por CARB

- *Estrategias que contribuyen a la reducción*
  - *Proyectos locales para el transporte*
  - *Proyectos locales para uso de suelo*
  - *Gestión de la demanda de transporte*
  - *Proyectos regionales de transporte*

Lecciones Aprendidas

Algunas estrategias resultan en una mayor reducción que otras

- *Proyectos regionales de transporte*
- *Proyectos locales de transporte*

- *Se necesita afinar los modelos y herramientas*
- *Estas lecciones ayudarán a futuro en los ciclos de planeación de 4 años*

Participación Pública

- *Asistir a las Juntas Informativas Abiertas al Público*
  - *Cerritos*
  - *Long Beach*
  - *Pico Rivera*
  - *Commerce*
- *Asistir a las Juntas de la Mesa Directiva del COG de las Ciudades Gateway*
  - *Mayo – Borrador de la SCS*
  - *Junio – Versión Final de la SCS*

Pasos a seguir

- *Aprobación de la versión final de la SCS de las Ciudades Gateway por la Mesa Directiva del COG de las Ciudades Gateway - Junio 2011*
- *Presentación de la versión final de la SCS de las Ciudades Gateway al SCAG Junio 2011*
- *El SCAG incorpora la SCS de las Ciudades Gateway en la SCS regional y el RTP - Verano 2011*
- *El SCAG finalizará el borrador de la SCS regional Otoño 2011*
- *El SCAG presenta la versión final de la SCS regional a la CARB – Primavera 2012*

Para obtener información adicional por favor visite el sitio Web de COG en:

GATEWAY CITIES

www.gatewaycog.org/sb375.html

Appendix D.

List of Transportation Improvement Projects in the Gateway Cities

Gateway Cities Submitted Roadway Capacity Projects

City	Project Name	Project Description	Location	Length of Project (miles)	Facility Type	Area Type	No. of Lanes (Pre-Project)	No. of Lanes (Post-Project)	ADT (weekday)	ADT (18.4% growth in VMT)
Bell Gardens	Eastern Avenue Widening	The Street was widened by 5 feet to create better flow of traffic	Eastern Avenue from Muller to Florence	1.5	Primary Arterial	Urban	4	6	14,351	16,992
Commerce	Washington Blvd Reconsttuction	Reconstruct pavement in concrete, add 1 lane, traffic signals, landscape & hardscape improvements, ADA ramps, RxR crossing, street lights, etc.	Washington Blvd from I-5 Fwy to westerly City limit (west of Arrowmill)	2	Primary Arterial	CBD	2	3	26,788	31,717
Downey	LAKEWOOD BLVD IMPROVEMENT - Phase 2	Minor widening to provide three continuous travel lanes, additional turn lanes, wider lanes and larger turning radii to decrease congestion and accommodate truck traffic. Rehab pavement, construct curb, gutter, and sidewalk, block wall(s), center landscaped medians, street and ornamental pedestrian lighting systems. Upgrade to traffic signal at Gardendale St and Lakewood Bl.	On Lakewood Bl between Dalen Street and Gardendale Street	0.44	Primary Arterial	Urban	2	3	26,233	31,060
Downey	PARAMOUNT MEDIAN	Construction of raised medians, installation of landscaping and irrigation system, construction of stamped concrete paving, installation of accent tree lighting fixtures, and replacement of traffic striping and pavement markings. Added to this contract was the installation of a midblock traffic signal in front of Fire Station No. 3.	On Paramount Bl between Florence Avenue and Lubec Street	0.27	Primary Arterial	Urban	2	2	35,332	41,833
Downey	LAKEWOOD BLVD IMPROVEMENTS PHASE 3	Minor widening to provide three 12-foot travel lanes, minor widening of intersections, traffic signal system upgrades, drainage improvements, reduction of cross-slopes, pavement removal and resurfacing, construction of curb, gutter and sidewalk, raised medians with landscaping, parkways with landscaping, install pedestrian and street lighting system.	On Lakewood Bl from Florence Ave to Telegraph Road	1.01	Primary Arterial	Urban	2	3	45,921	54,370
Downey	LAKEWOOD BLVD IMPR PHASE 3A 5TH TO FLORENCE	Minor widening to provide three 12-foot travel lanes, center LS medians, installation of decorative street lighting, construction of a recycled water main, resurfacing of existing asphalt concrete, and repair of miscellaneous concrete.	On Lakewood Bl between Fifth St and Florence Ave	0.64	Primary Arterial	Urban	2	3	20,101	23,800
Downey	IMPERIAL LANDSCAPED MEDIAN	Construction of raised LS medians, sidewalk, curb ramps, street trees, solar-powered irrigation systems, striping and signage modifications. Construct new midblock traffic signal at school at La Reina Ave, upgrade to the traffic signal at the intersection of Imperial Highway at Downey Avenue.	On Imperial Hwy between Paramount Bl and Bellflower Bl	1.9	Primary Arterial	Urban	3	3	29,512	34,942
Downey	IMPERIAL MEDIAN, SAFETY & REHAB IMPROV PH 2	Minor widening to provide 11-foot travel lanes, minor widening at intersections, construction of new raised landscaped median islands, rehabilitation of the existing pavement, reclaimed water irrigation system, traffic signal improvements and modifications, sound walls, sidewalk, curb ramps, and signing and striping modifications.	On Imperial Hwy between Old River School Rd and Paramount Bl and between Bellflower Bl and Woodruff Avenue	1.44	Primary Arterial	Urban	3	3	29,602	35,048

Gateway Cities Submitted Roadway Capacity Projects

City	Project Name	Project Description	Location	Length of Project (miles)	Facility Type	Area Type	No. of Lanes (Pre-Project)	No. of Lanes (Post-Project)	ADT (weekday)	ADT (18.4% growth in VMT)
Downey	LAKEWOOD BLVD IMPR FROM IMP HWY TO S & G	Constructing AC pavement; resurfacing with a variable AC overlay; cold planning; curb and gutter, driveway approach; curb ramps and sidewalk; local depressions and cross gutters; curb opening catch basins; masonry walls; reclaimed water main and potable water improvements; traffic signal upgrades, ornamental street and pedestrian lights, irrigation and landscaping; and traffic striping.	On Lakewood Bl from Imperial Hwy to Stewart & Gray Rd	0.9	Primary Arterial	Urban	2	3	23,112	27,364
Downey	TELEGRAPH RD TRFIC THRPUT & SFTY ENHCMTS PHS 1	Construction of raised landscaped median islands	On Telegraph Rd between the Passons Bl and E City Limit	0.5	Primary Arterial	Urban	2	3	48,039	56,879
La Mirada	Additional Lane on Artesia	Restriping to add an additional lane	Artesia from Knott and Valley View	1	Primary Arterial	Urban	2	3	17,355	20,548
Long Beach	Spring Street Transporation Improvement Project	Roadway geometrics were modified to convert a 4 lane highway into a six lane highway.	Spring Street between Cherry Avenue and Redondo Avenue		Primary Arterial	Urban	4	6	21,890	25,918
Long Beach	Lakewood Bouevard Transporation Improvement Project	Parking was removed and roadway geometrics were modified to convert this regional highway from 4 lanes to 6 lanes. Traffic signals were modernized to facilitate traffic flow.	Lakewood Bouevard between Willow Street and PCH.		Primary Arterial	Urban	4	6	14,711	17,418
Long Beach	PCH & Cherry	Cities of Long Beach & Signal Hill are working collectively to acquire property to widen Cherry Avenue to add a second travel lane in Long Beach from the Signal Hill boarder to south of PCH.	Cherry Avenue between 19th Street and 15th Street		Primary Arterial	Urban	3.5	4.5	12,142	14,376
Norwalk	Firestone Bridge	Extend 3rd WB lane.	Firestone Bridge over SG River	0.5	Primary Arterial	Urban	2	3	61,490	72,804
Signal Hill	786 Cherry Ave	Additional lanes	19th St to PCH	0.04	Primary Arterial	Urban	2	4	17,882	21,172
Signal Hill	800 Crescent Heights Street Improvement	Reconstruction of Crescent Street	Cherry Ave to Gardena	0.1	Secondary	Urban	2	4	8,899	10,536
Signal Hill	California Avenue	Reconstruction	Patterson St to Willow Avenue	0.1	Secondary	Urban	2	2	8,899	10,536
South Gate	424-ST Kauffman and Dorothy Ave Street Widenings	Removal of existing improvement and widening on Kauffman Ave and Dorothy Ave and construction and landscaping of median island in Firestone Blvd	Kauffman and Dorothy Avenues between Firestone Blvd and Southern Ave	0.4	Secondary	Urban	2	2	7,811	9,249
South Gate	409-ST Willow Place Widening	Removal of existing improvement and widening on Willow place	Willow Pl between Santa Fe Ave and Long Beach Blvd	0.3	Secondary	Urban	2	2	7,811	9,249
South Gate	I-710/Rio Hondo Bridge Widening Project	Widen both sides of Firestone Boulevard Bridge over the Rio Hondo channel to provide a seven-lane structure, three through lanes in each direction with a median/turning lane.	Firestone Boulevard over Rio Hondo Channel	0.2	Primary Arterial	Urban	2	3	42,018	49,749
South Gate	I-710/Firestone Blvd Interchange	This project involves widening south side of the Firestone Boulevard Bridge over the Los Angles River to provide three through lanes in each direction with a center raised median from Rayo Ave to I-710 freeway.	Firestone Boulevard over LA River	0.2	Primary Arterial	Urban	2	3	58,662	69,455
Vernon	26th Street - Widening & Storm Drain	Widen 26th Street, added new C&G, shoulder, and middle lane. Installation of storm drain system. New Traffic Signal System Installation.	Project extended from 2500 feet west of Indiana to west of Atlantic Boulevard. New traffic signal on 26th Street at Bonnie Beach Place ("T" Intersection)	2.1	Secondary	Urban	2	2.5	7,811	9,249

Gateway Cities Submitted Roadway Capacity Projects

City	Project Name	Project Description	Location	Length of Project (miles)	Facility Type	Area Type	No. of Lanes (Pre-Project)	No. of Lanes (Post-Project)	ADT (weekday)	ADT (18.4% growth in VMT)
Vernon	Atlantic Blvd. Bridge over the LA River	The City of Vernon proposes to widen Atlantic Blvd. bridge over the Los Angeles River. Project will enhance the safety and operational use of Atlantic Blvd. bridge over the Los Angeles River and improve the intersection performance at District Blvd. The project involves widening Atlantic Blvd. for approximately 1,300 linear feet to provide traffic shoulders, standard sidewalks and extending the right-turn lane over to the Atlantic Blvd. Bridge. The proposed roadway configuration includes six 11-foot through traffic lanes, one northbound 11-foot right turn lane, 4-foot minimum shoulders, 5' sidewalks, and a center median. The adjacent intersection of Atlantic Blvd. and District Blvd. will be reconfigured and the traffic timing optimized.	Project limits are from Atlantic Blvd. north of the Los Angeles River to 800 feet south of the intersection with District Blvd. The proposed project is located approximately 0.25 miles (mi) southwest of the Long Beach Freeway (1-710) in the City of Vernon.		Primary Arterial	Urban	6	6.5	57,528	68,114

Gateway Cities Submitted Intersection Improvements - New Signal

City	Project Name	Project Description	Location	Area Type	Facility Type -	Total Number	Facility Type -	Total Number of	ADT - Street 1	ADT - Street 2	Peak Hour Volume - Street	Peak Hour Volume - Street	Proposed Intersecti	Peak Hour
Artesia	Norwalk Blvd/186th St	Replace obsolete signal controllers, install new traffic signal, improve vehicle detection to reduce traffic congestion	Norwalk Blvd/186th St	Suburban	Primary	4.5	Primary	4	12618	325	1262	33	60	50
Bell Gardens	Signal at Fire Station 39	New Signal was installed at the Fire Station 39 to facilitate movement of Fire Trucks in and out of Station as as well as to be used by Pedestrian to cross Garfield from City Hall to Post Office and DMV across the Street	Garfield Avenue at Fire Station 39	Suburban	Primary	4.5	Secondary	1	24396	7645	2440	765	90	50
Cerritos	Beach Street @ Carmenita Avenue, Project No. 75072	New traffic signal	Beach Street and Carmenita Avenue	Suburban	Secondary	2.5	Primary	5	7645	18076	765	1808	60	50
Cerritos	Dumont Avenue @ Artesia Boulevard, Project No. 45071	New traffic signal	Dumont Avenue and Artesia Boulevard	Suburban	Primary	4.5	Secondary	1	20620	7645	2062	765	60	50
Commerce	Garfield @ Slauson	Reconstruct intersection in concrete, new traffic signal, enhance turning radius, ADA ramps, concrete repair (sidewalk, curb & gutter), etc.	Garfield & Slauson	Suburban	Primary	5	Primary	6	34173	21065	3417	2107	90	50
Commerce	Telegraph @ Slauson	Reconstruct intersection in concrete, new traffic signal, enhance turning radius, ADA ramps, concrete reparis (sidewalk, curb & gutter).	Telegraph & Slauson	Urban	Primary	6	Primary	6	41635	44326	4163	4433	90	50
Downey	WOODRUFF/VIA AMORITA TRAFFIC SIGNAL	Installation of a new vehicle and pedestrian-actuated traffic signal, video detection, countdown pedestrian signals, provide fiber optic communication to the intersection to enable remote traffic management and surveillance	Woodruff Ave, Via Amorita	Suburban	Primary	2	Secondary	1	7297	7645	730	765	60	50
Downey	FLORENCE AVE / ARRINGTON AVE TRAFFIC SIGNAL	The installation of traffic signals at the intersection of Florence Avenue and Arrington Avenue, modifications to the traffic signals at the intersection of Florence Avenue and Lakewood Boulevard, and the purchasing of equipment required for the application of thermoplastic pavement markings to be installed.	Florence Ave, Lakewood Bl, Arrington Ave	Urban	Primary	7	Secondary	2	47055	7645	4706	765	60	50
Downey	IMPERIAL Improvements, La Reina Ave	Construct new midblock traffic signal at school at La Reina Ave	At Imperial Hwy and La Reina Ave	Suburban	Primary	7	Secondary	1	25863	16036	2586	1604	60	50
Long Beach	Walnut Avenue Transportation Enhancement Project	Reconfigure two separate intersections into a single intersection and provide new signalized pedestrian crossings at a location that serves four grade schools and adults accessing LBCC.	Walnut Avenue & Alamitos/20th Street	Suburban	Primary	2	Secondary	2	13615	7645	1362	765	60	50

Gateway Cities Submitted Intersection Improvements - New Signal

City	Project Name	Project Description	Location	Area Type	Facility Type -	Total Number	Facility Type -	Total Number of	ADT - Street 1	ADT - Street 2	Peak Hour Volume - Street	Peak Hour Volume - Street	Proposed Intersecti	Peak Hour
Long Beach	LCD Traffic Enhancement Project	Reconfigure the LCD (LOS COYOTES DIAGONAL) & Studebaker Road/Parkcrest intersection into two separate intersections to improve traffic opeations and capacity while improving access to a new high school currently underconstruction. Project also includes reconfigeration of the lanes and traffic signal operations at LCD & Carson Street to address peak period congestion issues.	LCD (LOS COYOTES DIAGONAL) between Studebaker & Carson Street	Suburban	Primary	4.5	Primary	6	27215	16292	2721	1629	60	50
Long Beach	Del Amo & Locust Interse	Signalize intersection to provide improved neighborhood connectivity and access to tranist and park facilities	Del Amo Boulevard & Locust Avenue	Suburban	Primary	7	Secondary	2	37129	7645	3713	765	60	50
Long Beach	Park Avenue & Anahiem S	Installation of a new traffic signal to adress access and traffic congestion related to Wilson High School and events at Recreation Park.	Park Avenue & Anahiem Street	Suburban	Primary	2.5	Primary	5	25546	19562	2555	1956	60	50
Long Beach	2nd Street & Pomona Ave	Construction of a new traffic signal to facilitate traffic flow during the peak period while also providing a new signalized pedestrian crossing in a dense retail shopping center.	2nd Street & Pomona Avenue	CBD	Primary	4.5	Secondary	1	25546	7645	2555	765	60	50
Maywood	Slauson @ Loma Vista	Traffic Signal	Slauson @ Loma Vista	urban	Primary	5	Secondary	2	30740	2673	3074	267	60	50
Norwalk	Project 7209	New traffic signal	Rosecrans Avenue/Greenstone Avenue	urban	Primary	5.5	Secondary	2	49351	7645	4935	765	120	50
Norwalk	Project 7219	New traffic signal	Shoemaker Avenue/Excelsior Drive	urban	Primary	4	Secondary	2.5	16933	5050	1693	505	90	50
Norwalk	Project 7214	New traffic signal	Norwalk Boulevard/Cheshire Street	Urban	Primary	4	Secondary	2	14662	7645	1466	765	90	50
Norwalk	Project 7215	New traffic signal	Imperial Highway/Fairford Avenue	Urban	Primary	6.5	Secondary	2	56291	7645	5629	765	90	50
Norwalk	Project 7211	New traffic signal	Firestone Boulevard/Paddison Avenue	Urban	Primary	4.5	Secondary	2	28621	7645	2862	765	90	50
Paramount	Downey and Madison	Installation of new traffic signal		Urban	Primary	4.5	Secondary	2	15572	7645	1557	765	60	50
Paramount	Orange and Jackson	Installation of new traffic signal		Urban	Primary	4.5	Secondary	2	11804	619	1180	62	60	50
Paramount	Somerset and El Camino	Installation of new traffic signal		Urban	Primary	4.5	Secondary	2	15979	7645	1598	765	60	50
Paramount	Garfield and Peterson	Installation of new traffic signal		Urban	Primary	4.5	Secondary	2	35355	7645	3536	765	60	50
Paramount	Garfield and Howery	Installation of new traffic signal		Urban	Primary	4.5	Secondary	2	17623	7645	1762	765	60	50
Paramount	Garfield and Exeter	Installation of new traffic signal		Urban	Primary	4.5	Secondary	2	22934	7645	2293	765	60	50
Pico Rivera	Beverly Boulevard Median Rehabilitiaon Project	Installation of new signalized intersection	Beverly Boulevard and Sandoval Avenue/Pico Park	Urban	Primary	6.5	Secondary	2	65675	7645	6568	765	120	50

Gateway Cities Submitted Intersection Improvements - New Signal

City	Project Name	Project Description	Location	Area Type	Facility Type -	Total Number	Facility Type -	Total Number of	ADT - Street 1	ADT - Street 2	Peak Hour Volume - Street	Peak Hour Volume - Street	Proposed Intersecti	Peak Hour
Pico Rivera	Traffic Signal Plan	Installation of new signalized intersection	Washington Boulevard and Loch Alene Avenue	Urban	Primary	6.5	Secondary	2	14409	535	1441	54	120	50
Pico Rivera	Traffic Signal Plan	Installation of new signalized intersection	Rosemead Boulevard and L.A. Fitness Driveway	Urban	Primary	5	Secondary	2	28976	11721	2898	1172	120	50
SantaFe Springs	Traffic signal; Norwalk at Mora/Heritatge Springs Drive	Installation of new traffic signal. Installation of right turn only pocket for NB traffic	Norwalk Blvd. & Mora Dr.	Suburban	Primary	4.5	Secondary	2	19236	14289	1924	1429	60	50
SantaFe Springs	Traffic signal; Bloomfield at Heritage Springs Dr. East	Installation of new traffic signal. Installation of right turn only pocket for SB traffic.	Bloomfield & Heritage Springs Dr. East	Suburban	Primary	4.5	Secondary	2.5	16159	7645	1616	765	60	50
SantaFe Springs	Traffic Signal; Florence at Laurel (LA County)	Installation of new traffic signal at intersection of Florence at Laurel	Florence Ave. & Laurel Ave.	Urban	Primary	4.5	Secondary	2.5	31564	7645	3156	765	60	50
SantaFe Springs	Traffic Signal Installation at Bloomfield at Corral	Installation of new traffic signal at intersection of Bloomfield at Corral	Bloomfield Ave. & Corral Pl.	Urban	Primary	4.5	Secondary	2	24544	7645	2454	765	60	50
SantaFe Springs	Traffic signal; Telegraph at Villages Dr.	Installation of new traffic signal. Installation of right turn only pocket for EB traffic	Telegraph Rd. & Villages Drive, (new road between Bloomfield and Norwalk)	Urban	Primary	5.5	Primary	2	35845	7645	3584	765	60	50
Signal Hill	746 Traffic Signal Cherry & 20th Street	New traffic signal (no signal or stop sign currently)	Cherry Ave/ 20th St	Suburban	Primary	4.5	Secondary	2	17882	7645	1788	765	60	50
Signal Hill	Orizaba & PCH Traffic Signal	New traffic signal	Orizaba & PCH intersection	Urban	Secondary	2	Primary	6.5	7645	54215	765	5421	60	50
South Gate	357-TRF Traffic Signal at Tweedy & Alameda	Installation/modification of traffic signals, lighting, electrical systems, tree removals, and concrete curb and sidewalk work.	Tweedy Blvd, Alameda St	Urban	Primary	4.5	Primary	6.5	13258	30990	1326	3099	60	50
Vernon	New Traffic Signal 26th at Bonnie Beach Pl	Widen 26th Street, added new C&G, shoulder, and middle lane. Installation of storm drain system. New Traffic Signal System Installation.	Project extended from 2500 feet west of Indiana to west of Atlantic Boulevard. New traffic signal on 26th Street at Bonnie Beach Place ("T" Intersection)	Suburban	Secondary	2.5	Secondary	2.5	7645	7645	765	765	60	50

Gateway Cities Submitted Intersection Improvements - New Signal

City	Project Name	Project Description	Location	Area Type	Facility Type -	Total Number	Facility Type -	Total Number of	ADT - Street 1	ADT - Street 2	Peak Hour Volume - Street	Peak Hour Volume - Street	Proposed Intersecti	Peak Hour
Whittier	Santa Gertrudes Avenue at Starbuck Street	Installation of new traffic signal	Santa Gertrudes Avenue and Starbuck Street	Suburban	Primary	4.5	Secondary	2.5	8703	7645	870	765	60	50
Whittier	Philadelphia Street at Whittier Greenway Trail/Gregory Avenue	Installation of new traffic signal	Philadelphia Street at Whittier Greenway Trail/Gregory Avenue	Urban	Primary	4	Secondary	2	4539	7645	454	765	60	50
Whittier	Pickering Avenue at Bailey Street	Installation of new traffic signal	Pickering Avenue at Bailey Street	Suburban	Secondary	2.5	Secondary	2	7645	7645	765	765	60	50
Whittier	Hadley Street at Whittier Avenue	Installation of new traffic signal	Hadley Street at Whittier Avenue	Urban	Primary	4.5	Primary	4.5	16832	5993	1683	599	60	50

Gateway Cities Submitted Intersection Improvements - New Phase

City	Project Name	Project Description	Location	Intersection Improvement Type	Type of Turn with New Phase	Proposed Intersection Signal Cycle Length (sec)	Number of lanes for which the movement is being enabled
Cerritos	Traffic Signal Modifications at 195th Street and Norwalk Boulevard, Project No. 75041	Added left turn phasing	195th Street and Norwalk Boulevard	Added left turn phasing	Left	120	4
Cerritos	Traffic Signal Modifications at Marquardt Avenue and Artesia Boulevard, Project No. 75042	Added left turn phasing	Marquardt Avenue and Artesia Boulevard	Added left turn phasing	Left	120	4
Cerritos	Traffic Signal Modifications at 195th Street and Pioneer Boulevard, Project No. 75044	Added left turn phasing	195th Street and Pioneer Boulevard	Added left turn phasing	Left	120	4
Cerritos	Traffic Signal Modifications at 195th Street and Studebaker Road, Project No. 75044	Added left turn phasing	195th Street and Studebaker Road	Added left turn phasing	Left	120	4
Downey	PARAMOUNT/GALLATIN T.S. UPGRADE	Traffic signal upgrades including E-W left-turn phasing, implementation of vehicle video detection system, signal communication system.	Paramount Bl. Gallatin Rd	Improved phasing for left or right turns only	Left	120	2
Downey	PARAMOUNT/TELEGRAPH T.S. UPGRADE	Traffic signal upgrades including E-W left-turn phasing, implementation of vehicle video detection system, signal communication system, emergency vehicle pre-emption system.	Paramount Bl, Telegraph Rd	Improved phasing for left or right turns only	Left	120	2
Downey	WOODRUFF / WASHBURN TRAFFIC SIGNAL	Upgrade of the existing traffic signal, including the installation of accessible audible pedestrian devices to accommodate the disabled	Woodruff Ave, Washburn Road	Improved phasing for left or right turns only	Left	90	4
Downey	IMPERIAL HWY/COLUMBIA WY TRAFFIC SIGNAL	Traffic signal upgrades, curb ramps.	Imperial Hwy, Columbia Way	Improved phasing for left or right turns only	Left	90	4
La Mirada	Alondra and Valley View Int. Improvement	Extend westbound left turn lane	Alondra and Valley View	Signal phasing improvement with LT lanes	Left	90	1
Long Beach	7th Street & Park Avenue	Reconfigure medians & add left-turn phasing	7th Street & Park Avenue		left	100	4
Long Beach	Carson Street & Woodruff Avenue Intersection Improvement Project	Modernize traffic signal control and provide improved left-turn phasing to improve safety and operations	Carson Street & Woodruff Avenue		left	100	4
Long Beach	Paramount & South Street Intersection Enhancement Project	Modernize traffic signal to provide left-turn phasing, countdown pedestrain indications, and improved lighting to address elevated accident rate and severe peak period congestion	Paramount Boulevard & South Street		left	100	4
Long Beach	Atlantic Avenue & Carson Street	Reconfigure travel lanes and install westbound left-turn arrows to improve safety and improve traffic operations	Atlantic Avenue & Carson Street		left	100	1
Long Beach	Spring Street & Woodruff Avenue Intersection Improvement Project	Modernize traffic signal to provide left-turn phasing in two directions and improved pedestrian crossings to address safety and congestion issues.	Spring Street & Woodruff Avenue		left	100	2

Gateway Cities Submitted Intersection Improvements - New Phase

City	Project Name	Project Description	Location	Intersection Improvement Type	Type of Turn with New Phase	Proposed Intersection Signal Cycle Length (sec)	Number of lanes for which the movement is being enabled
Long Beach	Willow Street & Woodruff Avenue Intersection Improvement Project	Moderrnize traffic signal to provide left-turn phasing and improved pedestrian crossings to address congestion issues at this intersection that provides access to and from the I-405 freeway ramps	Willow Street & Woodruff Avenue		left	100	4
Long Beach	Magnolia & Willow	Add Left-turn phasing to improve access to freeway and reduce congestion	Magnolia Avenue & Willow Street		left	100	4
Long Beach	Pine & Ocean Transporation Enhancement Project	Modernization of an existing traffic signal to provide adaptive control and left-turn phasing to address congestion arrising from brisk pedestrian and vehcile demand related to special events and other evening activity.	Pine Avenue & Ocean Boulevard		left	100	4
Long Beach	Studebaker & Willow Intersection Improvement	Project to modernize the traffic signal to provide left-turn phasing, countdown pedestrian indications, and modification of landscaped medians to address congestion issues and facilitate the safe and orderly movement of left-turn vehicles.	Studebaker Road & Willow Street.		left	100	4
Long Beach	Studebaker Road & Wardlow Road Intersection Improvement	Project to modernize the traffic signal to provide left-turn phasing, countdown pedestrian indications, and modification of landscaped medians to address congestion issues and facilitate the safe and orderly movement of left-turn vehicles.	Studebaker Road & Wardlow Road		left	100	4
Long Beach	PCH & Cherry	Caltrans modernized the traffic signal to provide adaptive control and left-turn phasing to address congestion issues.	PCH & Cherry Avenue		left	100	4
Long Beach	Bellflower Boulevard & Anahiem Road Traffic Signal Upgrade	The signalized intersection was modernized and left-turn phasing was installed to improve traffic operations, reduce congestion, and improve safety.	Bellflower Boulevard & Anaheim Road		Left	100	4
Paramount	Flower and Downey	N/S bound protective Left turn phasing			Left	90	2
Pico Rivera	Beverly Boulevard Rehabilitaion Project	Part of the improvements Is the signal modification at Beverly Boulevard and Durfee Avenue	Beverly Boulevard and Durfee Avanue	Improved phasing for left or right turns only	Left	120	4
Signal Hill	Willow & Walnut Traffic Signal	Left-turn phasing traffic signal	Willow & Walnut intersection	New signal or signal phasing improvement impacting all approaches	Left	90	4
Signal Hill	Willow & Orange Traffic Signal	Left-turn phasing traffic signal	Orange and Willow intersection	New signal or signal phasing improvement impacting all approaches	Left	90	4
South Gate	343-TRF Traffic Signal Upgrade at Tweedy Blvd and Hildreth	Modify traffic signal and construct handicap access ramps	Tweedy Blvd, Hildreth Ave	New signal or signal phasing improvement impacting all approaches	Left	90	4

Gateway Cities Submitted Intersection Improvements - New Phase

City	Project Name	Project Description	Location	Intersection Improvement Type	Type of Turn with New Phase	Proposed Intersection Signal Cycle Length (sec)	Number of lanes for which the movement is being enabled
Whittier	Painter Avenue at Philadelphia Street	Traffic Signal Modification	Painter Avenue at Philadelphia Street	Improved phasing for left or right turns only	Left	90	4
Whittier	Lambert Road at Santa Gertrudes Avenue	Traffic Signal Modification	Lambert Road at Santa Gertrudes Avenue. Includes installation of median island to separate traffic on Santa Gertrudes Avenue at adjacent railroad grade crossing.	Improved phasing for left or right turns only	Left	90	4
Whittier	Lambert Road at Painter Avenue	Traffic Signal Modification	Lambert Road at Painter Avenue	Improved phasing for left or right turns only	Left	120	4
Whittier	Lambert Road at Mills Avenue	Traffic Signal Modification	Lambert Road at Mills Avenue. Joint juridictional project with Los Angeles County. City 25% share of project cost.	Improved phasing for left or right turns only	Left	120	4

Gateway Cities Submitted Intersection Improvements - Capacity

City	Project Name	Project Description	Location	Area Type	Facility Type - Street 1	Existing Number of Lanes - Street 1	Facility Type - Street 2	Existing Number of Lanes - Street 2	Total Lanes After Imp. - Street 1	Total Lanes After Imp. - Street 2	ADT Volume - Street 1	ADT Volume - Street 2	Peak Hour Volume - Street 1	Peak Hour Volume - Street 2	Intersection Existing Signal Cycle Length (sec)
Bell Gardens	Truck Impacted Intersection	The intersection is being re-constructeded to provided exclusive Left Turn Pockets in the Noth and South Direction to alocate more time to the east/west direction to create better flow of traffic in that direction.	Florence Avenue and Jaboneria Street	Urban	Primary	6.5	Secondary	2	6.5	2.5	46593	6456	4659	646	120
Bell Gardens	Truck Impacted Intersection	The intersection is being re-constructeded to provided exclusive Left Turn Pockets in the Noth and South Direction to alocate more time to the east/west direction to create better flow of traffic in that direction.	Florence Avenue and Ajax Street	Urban	Primary	6.5	Secondary	2	6.5	2.5	45777	7645	4578	765	120
Bellflower	Clark/Flower	Restriping to create left turn pockets for eastbound and westbound Flower Street at 3-phase (split phase) signalized intersection	Clark Avenue at Flower Street	Suburban	Secondary	4	Primary	4	4	4.5	16925	2150	1693	215	90
Downey	IMPERIAL Improvements, Downey Ave	upgrade to the traffic signal at the intersection of Imperial Highway at Downey Avenue.	At Imperial Hwy and Downey Ave	Urban							33095	45133	3309	4513	120
Downey	PARAMOUNT/FLORENCE TRUCK IMP INST	Intersection widening at NW and SE corners, installation of right-turn only lanes in N-S direction, signal modification, relocation of existing street lighting, construction of new curb ramps, incidental pavement striping, markings, and signage.	Paramount Bl, Florence Ave	Urban	Primary	4.5	Primary	6.5	5	6.5	20844	25546	2084	2555	120
Downey	LAKEWOOD/FIRESTONE INTERSECTION	Widening at SW corner, providing one thru and one right-turn only lane in east bound direction, installation of pedestrian safety lighting, decorative sw, bollards, curb ramp, asphalt paving, parkway and median trees and LS, irrigation system, potable water main, curb, gutter, striping and pavement markings.	Firestone Bl, Lakewood Bl	Urban		6	Primary	7	7.5	7	25863	16036	2586	1604	120
Downey	BELLFLOWER/IMPERIAL INTERSECTION IMP	Construction of double left-turn pockets in the northbound and southbound directions on Bellflower Boulevard and right-turn pockets in the southbound, eastbound and northbound directions, the reconstruction of all four curb returns to provide 50-foot radii, modification of the existing traffic signal and incidental utility relocations and lane restriping	Bellflower Bl, Imperial Hwy	Urban	Primary	4.5	Primary	6.5	5.5	7	15340	22951	1534	2295	120
Downey	PARAMOUNT BLVD AT FIRESTONE BLVD IMPRVMTS	Construction of a right-turn pocket in the eastbound direction, widening of all four curb returns to provide 50-foot radii, modification of the traffic signal, incidental utility relocations, curb ramps, sw, AC pavement, striping, and signage modifications	Paramount Bl, Firestone Bl	Urban	Primary	6	Primary	6.5	6	7	14202	38785	1420	3878	120
Lakewood	Carwood West	Add Right Turn Lane	Woodruff s/b @ Carson	Urban	Primary	6	Primary	6.5	6.5	6.5	20642	17238	2064	1724	120
Lakewood	Douglas Park	Add Right Turn Lane	Paramount n/b @ Carson	Urban	Primary	5	Primary	6.5	5.5	6.5	4662	33534	466	3353	120
Lakewood	Douglas Park	Add two Left turn Lanes	Cover w/b @ Cherry	Urban	Secondary	2	Primary	6.5	2.5	6.5	7645	27281	765	2728	90
Lakewood	Lakewood Collection	Add Left and right Turn Lanes	Clark @ Candlewood	Urban	Primary	4	Primary	4.5	5	4.5	10512	8846	1051	885	120
Lakewood	Lakewood Collection	Add Through only lane	Candlewood @ Lakewood	Urban	Primary	4	Primary	7.5	4.5	7.5	17138	27170	1714	2717	120
Lakewood	Lakewood Collection	Add through and right turn lanes	South St and Lakewood Blvd	Urban	Primary	4.5	Primary	6.5	6	6.5	16141	26320	1614	2632	120
Long Beach	Redondo & Anaheim Intersection Improvement	Widen Southbound Redondo Avenue to provide for right-turn lane	Redondo & Anaheim	Urban	Primary	4	Primary	4.5	4.5	4.5	18148	28084	1815	2808	90
Long Beach	PCH & 2nd Street Improvement Project	Widen Southbound PCH to provide for 2nd left-turn lane and right-turn lane	PCH & 2nd Street	Urban	Primary	6	Primary	7	7.5	7	45505	47920	4551	4792	120
Long Beach	PCH & Atlantic Avenue Intersection Improvement	Widen Northbound Atlantic Avenue to provide for right-turn lane and traffic signal overlap phase	PCH & Atlantic Avenue	Urban	Primary	6.5	Primary	4.5	6.5	5	46648	8102	4665	810	120

Gateway Cities Submitted Intersection Improvements - Capacity

City	Project Name	Project Description	Location	Area Type	Facility Type - Street 1	Existing Number of Lanes - Street 1	Facility Type - Street 2	Existing Number of Lanes - Street 2	Total Lanes After Imp. - Street 1	Total Lanes After Imp. - Street 2	ADT Volume - Street 1	ADT Volume - Street 2	Peak Hour Volume - Street 1	Peak Hour Volume - Street 2	Intersection Existing Signal Cycle Length (sec)
Long Beach	Los Alamitos Traffic Circle Improvement Project	Cooperative Project with Caltrans to implement changes to the traffic characteristics of the facility to improve capacity and reduce accidents	PCH, Lakewood Boulevard, LCD	Urban	Primary		Primary				48154	11196	4815	1120	
Long Beach	2nd Street & Studebaker Intersection Improvement Project	Reconfigure intersection geometrics through the removal of a median to add a third westbound travel lane	2nd Street & Studebaker Road	Suburban	Primary	5.5	Primary	5.5	6.5	5.5	39559	29293	3956	2929	90
Long Beach	Wardlow Road & Cherry Avenue Intersection Improvement Project	Roadway geometrics were modified to provide a third southbound through lane and a northbound right-turn lane. Traffic signal was modernized to provide adaptive control to address varring traffic demands.	Wardlow Road & Cherry Avenue	Urban	Primary	4.5	Primary	5.5	5.5	5.5	2431	28873	243	2887	90
Long Beach	Wardlow Road & Orange Avenue Intersection Improvement Project	Wardlow Road was widened to provide left-turn pockets and the trafic signal was modernized to provide left-turn phasing improving access to and from the freeway and airport industrial areas.	Wardlow Road & Orange Avenue	Urban	Primary	4	Primary	4.5	4.5	4.5	9792	17622	979	1762	90
Norwalk	McDonalds	Install a WB right turn only lane.	WB Imperial Highway at Norwalk Boulevard	Urban	Primary	6	Primary	7	6.5	7	56291	21959	5629	2196	120
Santa Fe Springs	RTO for WB Telegraph at SFS Rd.	Installation of right turn only pocket for WB traffic at the intersection of Telegraph at Santa Fe Springs Rd	Telegraph Road & Santa Fe Springs Rd.	Suburban	Primary	6.5	Secondary	4.5	7	4.5	35845	13833	3584	1383	120
South Gate	303-ST Firestone Blvd and Garfield Ave Intersection Improvements	Widen the west side of Garfield Ave, install right turn lanes, construct PCC concrete pavement approaches on three legs, asphalt pavement, modification of medians, construction of catch basin and connector pipe, traffic signal modifications, street light relocations, ADA ramps, curb, gutter, sidwalk, and landscape restoration	Firestone Blvd, Garfield Ave	Urban	Primary	7.5	Primary	6	7.5	6.5	61950	39694	6195	3969	90
Vernon	Atlantic Blvd. And District Blvd Intersection Improvement	The City of Vernon proposes to widen Atlantic Blvd. bridge over the Los Angeles River. Project will enhance the safety and operational use of Atlantic Blvd. bridge over the Los Angeles River and improve the intersection performance at District Blvd. The project involves widening Atlantic Blvd. for approximately 1,300 linear feet to provide traffic shoulders, standard sidewalks and extending the right-turn lane over to the Atlantic Blvd. Bridge. The proposed roadway configuration includes six 11-foot through traffic lanes, one northbound 11-foot right turn lane, 4-foot minimum shoulders, 5' sidewalks, and a center median. The adjacent intersection of Atlantic Blvd. and District Blvd. will be reconfigured and the traffic timing optimized.	Project limits are from Atlantic Blvd. north of the Los Angeles River to 800 feet south of the intersection with District Blvd. The proposed project is located approximately 0.25 miles (mi) southwest of the Long Beach Freeway (1-710) in the City of Vernon.	Urban	Primary	6.5	Primary	4.5	7	4.5	50661	26266	5066	2627	120

Gateway Cities Submitted System Operations/ Signal Sync / ITS

City	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Total # of Lanes	# of Signalized Intersections Affected	ADT Volume	Peak hour Traffic Volume	Existing Peak Hour Travel Time	Existing Average Cycle Length (secs)
Artesia	Air Quaility Management District	Traffic signal synchronization	South Street	0.9	5	6	8848	885	3.5	100
Bellflower	Artesia Blvd	Signal synch	City limit to City limit	2.6	5	8	10413	1,041	4.5	100
Bellflower	Alondra Blvd	Signal synch	City limit to City limit	2.3	4.5	9	15295	1,530	4.5	100
Bellflower	Bellflower Blvd	Signal synch	City limit to City limit	2.8	4.5	15	13727	1,373	6.0	100
Bellflower	Boeing project mitigation	Signal communication	Bellflower portion: Bellflower Blvd: SCL to 91 fwy	0.5	4.5	5	15922	1,592	1.5	100
Downey	PARAMOUNT BLVD F.O. SYSTEM, Phase I	Installation of fiber-optic conduit/cable along Paramount Bl, interconnection to existing signal comm network at Telegraph, traffic signal upgrades, vehicle video detection system	On Paramount Bl between Telegraph Rd and Lubec St	1.0	5.5	6	24577	2,458	3.3	120
Downey	FLORENCE AVENUE TRAFFIC SIGNAL COMM SYS	Installation of fiber-optic conduit/cable along the length of Florence Ave, interconnection to existing signal comm network at Lakewood Bl, traffic signal upgrades, vehicle video detection, incidental utility relocation, signage.	On Florence Ave between Old River School Rd and the E City Limit	3.2	7	13	26763	2,676	6.8	100
Downey	IMPERIAL HWY TRAFFIC SIGNAL COMM SYSTEM	Installation of fiber-optic conduit/cable along the length of Imperial Hwy, interconnection to existing signal comm network at Paramount Bl, Lakewood Bl, traffic signal upgrades, vehicle video detection, incidental utility relocation, signage.	On Imperial Hwy between Rives Ave and Woodruff Ave	2.5	7	10	17903	1,790	4.9	120
Downey	PARAMOUNT BLVD TRAFFIC IMP-FIRESTONE TO IMPERIAL	Installation of fiber-optic conduit/cable along Paramount Bl, traffic signal upgrades, coodinated timing along corridor, comm network modifications at TMC	On Paramount Bl between Firestone Bl and Imperial Hwy	1.5	5.5	6	8807	881	3.2	120
Downey	PARAMOUNT BLVD TRAFFIC IMP-FIRESTONE TO FLORENCE	Installation of fiber-optic conduit/cable along Paramount Bl, traffic signal upgrades, coodinated timing along corridor, comm network modifications at TMC	On Paramount Bl between Firestone Bl and Florence Ave	0.9	5.5	5	8224	822	1.8	120
Lakewood	ATCS Cherry Ave/Del Amo to Candlewood	LADOT's Adaptive Traffic Control System installed		0.5	6.5	2	15456	1,546	1.1	120
Lakewood	ATCS Lakewood Blvd/Del Amo to Ashworth	LADOT's Adaptive Traffic Control System installed		1.5	6.5	5	16105	1,610	3.0	100
Lakewood	ATCS Bellflower Blvd/Del Amo to Ashworth	LADOT's Adaptive Traffic Control System installed		1.5	6.5	4	11437	1,144	3.2	100
Lakewood	ATCS Carson St/Paramount to Lakewood Dr	LADOT's Adaptive Traffic Control System installed		1.0	7	5	21093	2,109	2.8	100
Lakewood	ATCS Carson St/San Gabriel River to Pioneer	LADOT's Adaptive Traffic Control System installed		0.7	7	4	31576	3,158	1.7	100
Lakewood	ATCS Del Amo/Cherry Ave to I-605	LADOT's Adaptive Traffic Control System installed		4.4	6.5	11	16495	1,650	9.7	120
LAPW	Alondra Blvd Traffic Signal Synchronization Project (TSSP)	Traffic Signal Syncronization improvements. Including Providing additional vehicle detection to enable operation of each signal as a fully traffic actuated signal, and installing the appropriate components to enable each signal to be capable of time-based coordination	Figueroa Street to La Mirada Bl	16.0	6	62	15295	1,530	29.1	100
LAPW	Pacific /Long Beach Blvd TSSP	Traffic Signal Syncronization improvements, additional vehicle detection, traffic actuated signals, and time-based coordination.	Florence Av to Greenleaf Blvd	15.0	4	30	18243	1,824	27.0	90

Gateway Cities Submitted System Operations/ Signal Sync / ITS

City	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Total # of Lanes	# of Signalized Intersections Affected	ADT Volume	Peak hour Traffic Volume	Existing Peak Hour Travel Time	Existing Average Cycle Length (secs)
LAPW	Bellflower Blvd TSSP	See above.	Lakewood Bl to PCH	7.0	6	47	13727	1,373	25.3	90
LAPW	Eastern/Garfield/Cherry Av TSSP	See above.	Atlantic to PCH	15.0	4.5	61	13955	1,396	31.5	100
LAPW	Artesia Bl TSSP	See above.	Alameda St to Valley View Av	11.0	6	34	10413	1,041	25.2	100
LAPW	Central Av TSSP	See above.	El Segundo Bl to Victoria St	6.0	4.5	13	10720	1,072	14.0	100
LAPW	Gage Av TSSP	See above.	Central Av to Slauson Av	8.0	4.5	40	11074	1,107	18.0	100
LAPW	Whittier Av TSSP	See above.	Paramount Bl to Valley Home Av	9.0	4.5	34	21920	2,192	20.4	100
LAPW	Wilmington Av TSSP	See above.	Imperial Hwy to Sepulveda Bl	6.0	4.5	37	11782	1,178	20.1	100
LAPW	Carson St TSSP	See above.	Long Beach Bl to Bloomfield Av	7.3	6	28	17604	1,760	16.6	100
LAPW	Bandini/37th St St/8th St TSSP	See above.	Alameda St to Garfield Ave	6.0	6	17	13445	1,345	14.6	100
LAPW	Colima Rd/Lamirada Bl TSSP	See above.	Mar Vista Bl to Alondra Bl	5.5	6	19	17753	1,775	14.5	100
LAPW	Garfield Av	See above.	Olympic Bl to Eastern Av	4.5	5	19	20731	2,073	13.4	100
LAPW	Painter Av / Carmenita Rd TSSP	See above.	Hadley St to South St	9.0	4	30	12287	1,229	20.4	100
LAPW	Studebaker Rd TSSP	See above.	Florence Av to Del Amo Bl	6.0	4.5	25	12256	1,226	15.8	100
LAPW	Alameda St TSSP	See above.	Nadeau St to Auto Dr South	6.0	5	24	10425	1,043	21.2	100
LAPW	Woodruff Av TSSP	See above.	Firestone Av to Willow St	9.0	5	26	10117	1,012	21.4	100
LAPW	Leffingwell Rd TSSP	See above.	Imperial Hwy to Valley Home Av	4.5	5	14	16724	1,672	11.6	100
LAPW	Beverly Bl TSSP	See above.	Pomona Bl to Pickering Av	7.5	5	34	20847	2,085	18.3	100
LAPW	South St TSSP	See above.	Atlantic Bl to Studebaker Rd	5.0	5	13	9303	930	10.8	100
LAPW	Washington Bl TSSP	See above.	Atlantic Av to Whittier Bl	8.0	6	29	24287	2,429	22.8	100
LAPW	Lambert Rd TSSP	See above.	Washington Bl to Grayling Av	5.0	5	17	14445	1,444	11.8	100
LAPW	I-710/Atlantic Corridor ITS Project	See above.	Alameda St from Randolph Ave to Industry Wy	4.5	4.5	13	18971	1,897	10.3	100
LAPW	I-5/Telegraph Corridor ITS Project	Installation of fiber optic equipment and closed circuit television cameras, the modification of traffic signals, and the performance of other appurtenant work.	Telegraph Rd from Parmount Bl to Carmenita Rd; Carmenita Rd from Telegraph Rd to Imperial Hwy; Bloomfield Ave from Telegraph Rd to Emmens Wy; Emmens Wy from Bloomfield Ave to Santa Fe Springs Yard	4.6	7	20	48156	4,816	15.5	100

Gateway Cities Submitted System Operations/ Signal Sync / ITS

City	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Total # of Lanes	# of Signalized Intersections Affected	ADT Volume	Peak hour Traffic Volume	Existing Peak Hour Travel Time	Existing Average Cycle Length (secs)
LAPW	I-105 Corridor ITS Project	See above.	Firestone Bl from Stewart & Gray Rd to Imperial Hwy; Imperial Hwy from Firestone Bl to Carmenita Rd; Imperial Hwy from Paramount Bl to Bellflower Bl.	1.6	6.5	7	73006	7,301	3.6	100
LAPW	I-5 ATMS Integration Project	See above.	Imperial Hwy from Carmenita Rd to Valley View Ave; Valley View Ave from Imperial Hwy to Rosecrans Ave	1.0	6.5	4	11782	1,178	2.5	100
Long Beach	Ocean Boulevard Transportation Enhancement Project	Interconnect and modernize traffic signals along Ocean Boulevard Corridor and add two new traffic signals to improve safety and traffic operations	Ocean Boulevard between Alamitos & Livingston/2nd Street	2.6	4	16	20069	2,007	7.2	100
Long Beach	Atlantic Avenue Transportation Enhancement Project	Interconnect and modernize traffic signals along Atlantic Avenue to improve operations and traffic safety	Atlantic Avenue between Ocean Boulevard & Wardlow Road	3.6	4	27	5593	559	9.0	100
Long Beach	Studebaker Road ATCS and Communictions Enhancement Project	Construction of an eastside communications backbone to support trafic signal control and motorist information systems, conversion of traffic signal control from fixed time to adaptive control.	Studebaker Road between Spring Street and 2nd Street	3.6	4	12	13175	1,318	7.0	100
Long Beach	Bellflower Boulevard Traffic Signal Syncronization Project	Operational and timing improvements to traffic signals along the Bellflower corridor throughout the City.	Bellflower Boulevard between 7th Street & Del Amo Boulevard	5.0	6	20	349049	34,905	11.2	100
Long Beach	Artesia Boulevard Traffic Signal Syncronization Project	Operational and timing improvements to traffic signals along the Artesia Boulevard corridor throughout the City.	Artesia Boulevard between Long Beach Boulevard and Downey Road	3.0	4	11	9144	914	6.5	100
Long Beach	Wardlow Road Traffic Signal Syncronization Project	Operational and timing improvements to traffic signals along the Wardlow Road corridor in the western part of the City.	Wardlow Road between Santa Fe & the western City limit	0.5	4	3	18316	1,832	3.5	100
Long Beach	Atlantic Avenue Cooridor Improvement Project	Modernization of existing traffic signals, construction of a new traffic signal, installation of left-turn phasing, installation of medians to reduce/eliminate vehicle conflicts, along a retail corridor that is being renovated to improve safety and faciliate traffic movement	Atlantic Avenue between 55th Street & 61st Street	0.6	4	4	10162	1,016	2.0	100
Lynwood	Long Beach Blvd. Synchronization Project	Synchronization of 10 Traffic Signals in Lynwood. Part of the County's synchronization progam.	Long Beach Blvd. from south city limit to north city limit.	2.0	4	10	17534	1,753	4.0	100
Lynwood	Atlantic Avenue Synchronization Project	Synchronization of 10 Traffic Signals in Lynwood. Part of the County's synchronization program which includes the installation of KITS for the City.	Atlantic Avenue from south city limit to north city limit	3.0	4	10	14736	1,474	6.0	100
Norwalk	Project 7166	LA County TSSP	Alondra Boulevard	1.5	4	4	15295	1,530	3.2	100
Norwalk	Project 7155	LA County TSSP	Studebaker Road	3.5	4	14	12256	1,226	7.0	100
Norwalk	Project 7157	LA County TSSP	Firestone Boulevard	1.0	5	4	21307	2,131	4.6	100
SantaFe Springs	Painter-Carmenita Rd. Signal synchronization project (LA County)		Painter/Carmenita Road	3.8	5	16	12287	1,229	6.0	105
SantaFe Springs	I-5/Telegraph Rd. ITS Project (LA County)		I-5/Telegraph Road	3.0	5	13	25032	2,503	5.0	105
Signal Hill	673 Orange Ave Signal Upgrades	Replace traffic signals	32nd and 33rd Streets @ Orange Ave	0.1	2	2	5085	509	0.9	100
Signal Hill	Boeing ATCS	Synchronize traffic signals	Cherry Avenue corridor (Long Beach and Signal Hill)	1.4	7	7	15456	1,546	3.4	100

Gateway Cities Submitted System Operations/ Signal Sync / ITS

City	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Total # of Lanes	# of Signalized Intersections Affected	ADT Volume	Peak hour Traffic Volume	Existing Peak Hour Travel Time	Existing Average Cycle Length (secs)
Signal Hill	Orange Avenue Corridor Traffic Signal Synchronization	Synchronize traffic signals	Spring Street to Hill Street	1.0	3	5	4460	446	2.9	100
South Gate	355-ST Otis Street Rehabilitation	Remove and replace pavement, grind and overlay asphalt rubber hot mix, make sidewalk, curb, and gutter repairs, reconstruct new ADA ramps, convert street lighting to LED, install signal interconnect conduit between Firestone and Southern Ave, make traffic signal upgrades	Otis St from North City Limit to South City Limit	1.8	4	6	8602	860	4.2	100
South Gate	358-ST Atlantic Avenue Improvements	Roadway pavement rehabilitation with asphalt rubber hot mix, construction landscaped median island , sidewalk, curb, and gutter repairs, reconstruction of curb ramps to meet Americans with Disabilities Act standards, signal interconnect between Tweedy Boulevard and Michigan Avenue and traffic signal upgrades, and peripheral improvements	Atlantic Avenue from Firestone Boulevard to South City Limit	1.2	4.5	4	13718	1,372	2.6	100

Gateway Cities Submitted Railroad Grade Separation Projects

City	Project Name	Detailed Description	Detailed Location	Daily # of Trains Using Corridor	Average Gate Down Time (mins)	ADT	Avg Vehicle RR Xing Speed	Posted Speed Limit (after project)
Downey	Firestone Bl at Old River School Rd Grade Separation Study	Either an undercrossing or overcrossing of the RR with roadway; yet to be determined.	Firestone Bl at Old River School Rd and Burns Ave	50	3.6	61490	25	40
Pico Rivera	Passons Grade Separation Project	Construction of a grade separtion at Passons Boulevard	Passons Boulevard at Rivera Road	50	3.6	48039	25	25
La Mirada	Valley View Ave to go under BNSF lines at Stage Road	Valley View Ave to go under BNSF lines at Stage Road	Valley View Ave and Stage Road	50	3.6	25000	25	45

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Artesia	American Recovery and Re-Investment Act	Landscaped median, sidewalk/handicapped ramp improvements,street pavement reconstruction with recycled rubberized asphalt	South Street	0.5	Bike + Ped	N	Y		<3	<3
Artesia	Safe Routes to School Program (State 5th Cycle)	Landscape Norwalk Blvd frontage road and install sidewalk for students walking to school	Norwalk Blvd	0.1	Bike + Ped	N	Y	N	<3	<3
Bellflower	West Branch Greenway Multi-modal Transportation Corridor aka Bellflower Bike Trail	Class 1 bike and ped path	Former PE ROW Lakewood Blvd. to Caruthers Park	2.4	Bike + Ped	Y	Y	N	>6	>6
Downey	PEDESTRIAN IMPROVEMENTS - FY05/06/07 (Blodgett)	Construct new sw, wc ramps.	On Blodgett Ave from Alameda St to Mory St; On Mory St from Blodgett Ave to Lakewood Bl; on Donovan St between Birchdale Avenue and Lakewood Bl; 8500 block of Orange St; 7700 block of Arnett St; 7700 block of Phlox St	0.9	Ped Only	N	N	N	<3	<3
Downey	3RD STREET SIDEWALKS-NEW TO LA REINA	Construct tree wells, PCC, install parkway trees	On Second, Third, and Fourth St from New St to La Reina Ave; on New St and La Reina Ave from Firestone Bl to Fourth St	0.62	Ped Only	N	Y	N	4-6	3
Downey	SAFE ROUTE TO SCHOOL-OLD RIVER SCHOOL RD	Construct new sw, wc ramps, modify traffic signal at Old River School Rd at Stewart & Gray Rd, remove exist SCE street lighting	On Old River School Rd from Laura St to Florence Ave	1.7	Ped Only	N	Y	N	4-6	3

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
La Mirada	Beach Blvd Bike Path	Path along flood control channel	Hillsborough Dr to Imperial highway	0.5	Bike Only	Y	Y	N	>6	>6
Lakewood	Douglas Park	Add Class I Bike Path	north side of Cover from Paramount 0.25 mile east to City Limit		Bike Only	Y	Y	N	>6	>6
Lakewood	Safe Routes to School	Pedestrian improvements constructed to facilitate routes.	16 schools - 275 miles of safe routes		Ped Only	N	Y	N	>6	>6
Lakewood	Douglas Park Bike Path	Bike-Ped	north side of Cover from Paramount 0.25 mile east to City Limit							
Long Beach	9th Street Pedestrian Enhancement Project	Signalize two intersections and provide an all-way stop at a third to provide improved connectivity for pedestrians and cyclists traveling along 9th Street to access schools, medical faclities, park facilities, and shopping.	9th Street between Pacific Avenue and Long Beach Boulevard							
Long Beach	Linberg Middle School Transporation Enhancement Project	Upgrade of school zone traffic controls including the installation of a new pedestrian traffic signal to provide enhanced access to the campus	Market Street & Lewis Avenue							
Long Beach	Market Street Transporation Enhancement Project	Reconfigure the roadway to provide improved pedestrian facilities (widen sidewalks, enhanced pedestrian crossings) and access to key destinations (post office, transit stops, fire station, schools, shopping) for pedestrians, cylists, and motorists.	Market Street between Long Beach Boulevard and Atlantic Avenue							

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Long Beach	4th Street & Lime Avenue	Construction of a new traffic signal to address traffic congestion and pedestrian access issues to schools and transit stops	4th Street & Lime Avenue							
Long Beach	Santa Fe Avenue & 20th Street	Installation of a new traffic signal to provide primary access to Cabrillo High School, Admiral Kidd Park, and transit stops	Santa Fe Avenue & 20th Street							
Long Beach	Orange Avenue Transportation Improvement Project	Traffic Calming project to narrow the roadway via striping to reduce vehicle speeds along this residential collector street and to add a traffic signal midway to improve neighborhood connectivity and access to transit stops.	Orange Avenue between Wardlow Road & Bixby Road							
Long Beach	Long Beach Boulevard & 51st Street	Installation of a new traffic signal at a newly constructed elementry school to provide a signalized pedestrian crossing to connect the campus to the residential areas it serves.	Long Beach Boulevard & 51st Street							
Long Beach	Walnut Avenue & 4th Street Intersection Improvement	Modernize the traffic signal to provide enhanced pedestrian access to bus stops and relocation of signal and electrical equipment to improve pedestrian access to bus stops.	Walnut Avenue & 4th Street							

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Long Beach	3rd Street & Lime Avenue Intersection Improvement	Construction of a new traffic signal in downtown to improve pedestrian access to a nearby grocery market, schools, and transit stops.	3rd Street & Lime Avenue							
Long Beach	Belmont Shore Green Lane and Sharrows	Installed green painted bike lanes with sharrows on 2nd Street in Belmont Shore along with modified "Share the Road" signs. The results include a 29% increase in bicycle usage, about 400 more cyclists over the 3-day count period, about the same as the increase in the number of cyclists riding on the green lane.	2nd Street in Belmont Shore, between Livingston Dr. and Bay Shore Ave.	0		N			>6	>6
Long Beach	Bicycle Boxes	Installed bike boxes on the left-hand turn lane to safely guide cyclists into the green shared lanes when heavy traffic makes merging from the striped bike lane to the shared lane more challenging.	Marina to 2nd Street and 2nd Street at Bayshore Avenue							
Long Beach	Bicycle Lanes to California State University, Long Beach	Implemented Class II bicycle lanes as a safe passage for cyclists to travel to the campus from nearby housing or from longer distances with a connection to the regional San Gabriel River bike path.	East and West streets adjacent to the campus on Atherton Street and on 7th Street.			Y				
Long Beach	Naples Road Diet	Replaced one automobile lane with a Class II bicycle lane.	Eastbound on 2nd Street between Bayshore Bridge and Marina Drive	1.02		Y			>6	>6

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Long Beach	Willow Street Pedestrian Improvement	This project provides pedestrian-oriented improvements to Willow St including medians, pedestrian lighting, landscaping, signage and crosswalk treatments.	Willow Street from Los Angeles River to Atlantic Avenue.	1.2		Y			>6	>6
Long Beach	I-710 Improvements	Funded by the SAFETEA-LU Demo Project, the project improves bicycle, pedestrian, and streetscape on major thoroughfares.	On Broadway, 3rd Street, 6th Street, and 7th Street from Shoreline Drive to Alamitos.			Y				
Long Beach	Pacific Electric Right-of-Way	Funded by the MTA, the project improves bikeway and pedestrian access along a former railroad right-of-way.	The Pacific Electric ROW in Long Beach (South of Willow Street and North of 4th Street)							

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Long Beach	South Waterfront Bike Path Connection	The South Waterfront Bike Path Connection (SWBPC) project is the construction of a new Class I bike path segment that closes an existing gap in the area. The project will include a mid-block crossing and wayfinding. The SWBPC links two primary segments of an existing pathway system in the south waterfront area to one of Downtown Long Beach's primary pedestrian and bikeway networks. This proposed path closes a vital gap between the existing Class I path across Queensway Bridge and the existing Class I bike and pedestrian path along the south waterfront, connecting the Greater Downtown with the hotels and commercial centers located across the harbor. This proposed bike path creates a safe and much needed segment that connects two existing systems and provides what will be both an alternate	The proposed South Waterfront Bike Path starts at the north end of the Queensway Bridge at the existing terminus of the Class I path. The proposed alignment follows the north side of Queensway Drive within the City right-of-way as a Class I bike path to the Special Events Park existing Class I path. Total proposed bike path ditance in miles: 0.3.	0.3		N			4-6	3

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Long Beach	3rd Separated Bikeway	Dedicated bike lanes on Broadway and 3rd in downtown Long Beach will encourage residents, families, and visitors to participate in a more bike friendly downtown. Initially, the pilot will include a painted island to separate the bike lane. One traffic lane will be lost to preserve parking on both sides of the street.	3rd from Alamitos and Golden Avenue	1.16		Y			>6	>6
Long Beach	Broadway Separated Bikeway	See above	Broadway from Alamitos and Golden Avenue	1.15		Y			>6	>6
Long Beach	Third Street Street Bike Lanes	Bike lanes (Class II) along Third Street between Alamitos/Junipero and Bike lane on Third Street b/w Alamitos/Junipero	Third Street between Alamitos/Junipero	1		Y			>6	>6

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Long Beach	Vista Bike Boulevard	In an effort to provide sustainable transportation alternatives to the community, as well as a safe route to several neighborhood schools, the City of Long Beach is installing a "bike boulevard" on Vista Street, extending from Temple Avenue to Nieto Avenue. The bike boulevard on Vista Street will provide a safe route to school for students at Lowell Elementary and Rogers Middle School on the east, and Horace Mann Elementary on the west end of Vista Street. More broadly, the bike boulevard will provide a convenient, direct cycling option for families with young children, students, commuters, and recreational cyclists.	Vista Street, from Temple Ave to Nieto Ave	1.5		N			>6	>6
Long Beach	Daisy Street - Bike Boulevard	Bike boulevard will provide North-South Class III bicycle facility (running the length of the City- from downtown to 70th).	running the length of the City- from downtown to 70th	8.73		Y			>6	>6
Long Beach	Sixth Street - Bike Boulevard	Bike boulevard will provide East-West Class III bicycle facility (running from Junipero to Park).	6th St from Junipero to Park	1.53		Y			>6	>6

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Long Beach	Long Beach Blvd. Pedestrian Improvement Project	Project provides pedestrian-oriented improvements to Long Beach Boulevard including pedestrian lighting, street trees, and crosswalk treatments.	Long Beach Blvd b/t Willow Ave & I-405	0		Y			>6	>6
Long Beach	Atherton Street Enhancement Project	Rehabilitating the landscaped median to enhance the experience of over 37,000 pedestrians, bicyclists, transit users and autos daily.	Bellflower & Los Cerritos Channel							
Long Beach	Willow Street Pedestrian Improvement Project	This project provides pedestrian-oriented improvements to Willow St including medians, pedestrian lighting, landscaping, signage and crosswalk treatments.	Willow St B/t LA River & Atlantic							
Long Beach	San Gabriel River Bike Path Closure at Willow Street	Creation of off-street bicycle path to achieve bicycle route gap closure on Willow Street from the San Gabriel River Bike Path west to Studebaker Road	Willow St, at San Gabriel River & Studebaker	0		Y			<3	<3
Long Beach	Carson Street Bike Improvement Project	Add Bike Lanes on Carson Street between Atlantic & Long Beach Boulevard	Carson Street between Atlantic & Long Beach Boulevard	0		N			>6	>6
Long Beach	Atlantic Avenue Bike Lane Project	Provide new bike lanes connecting facilities on San Antonio and those on Del Amo	Atlantic Avenue north of Bixby Knolls	0		N			>6	>6
Long Beach	Harding Street Traffic Calming Project	Reconfigure roadway stripping to install bike lanes and new pedestrian crossings	Harding Street between Atlantic Avenue and Cherry Avenue	0		Y			>6	>6

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Lynwood	Abbott Road Improvement Project	Roadway improvement project that includes upgrading existing sidewalk and new sidewalk and curb ramp installation.	Abbott Road (Martin Luther King Jr. Blvd. to East City Limit)	1.46	Ped Only	N	Y	N	>6	>6
Lynwood	Sidewalk Improvement Project FY 09-10	Reconstructed damaged sidewalk and install new sidewalk.	Various locations City Wide (Major work Martin Luther King Jr Blvd. and Clark Avenue)	0.25	Ped Only	Y	Y	N	>6	>6
Lynwood	Annual Sidewalk Improvement Project FY 10-11	Reconstructed damaged sidewalk and install new sidewalk.	Various locations citywide.		Ped Only	N	Y	N	<3	<3

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Norwalk	Norwalk/Santa Fe SpringsTransportation Center-Metrolink Park and Ride - Pedestrian Plaza Upgrade	Upgrade of existing passenger amenities for the Pedestrian Plaza at the regional inter-modal Norwalk/Santa Fe Springs - Metrolink Transportation Center. The projec includes construction of a pedestrian plaza with pathways for bicycles and pedestrians, a passenger car pick-up/drop-off area to encourage access to the buses and trains as alternative modes of transportation, seating areas,security lighting, signage, electronic bus schedule information, decorative paving and landscaping. The project also includes widening of the approach into the Transportation Center and modifications to the entrance to improve access and visibility, as well as signage improvements to the transit center, bus layover areas and park and ride lot. The project is intended to improve pedestrian and vehicular	The project is located at the Norwalk-Santa Fe SpringsIMetrolink Transportation Centerand Park and Ride at 12700 E.Imperial Highway, Norwalk, CA 90650. The transportation center serves all of Los Angeles, Orange and San Bernardino Counties. This project is totally enclosed within the Norwalk/Santa Fe Springs Transportation Center - Metrolink Park and Ride.	< 1	Bike + Ped	N	Y	Y	4-6	<3

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Pico Rivera	Safe Route to School Program	New sidewalk	Loch Alene Avenue Balfour Street, Catherne Street, Lidsey Avenue, Havenwood Drive, Kilgarry Aveneu, Lemoran Avenue, Reichling Lane, Coffman Pico Road, Crossway Drive, Shade Lane, Sideview Drive, Sunglow Street, Roma Street, Clarinda Avenue	2.5	Ped Only	N	Y	N	>6	>6
Pico Rivera	CDBG-R Sidewalk Curb and Gutter Improvemtents	Sidewalk Curb and Gutter Improvemtents	Loch Alene Avenue	0.25	Ped Only	N	Y	N	<3	<3
SantaFe Springs	Sorensen Avenue Sidewalk Improvements		Sorensen Avenue		Bike + Ped	N	Y	N	<3	<3
SantaFe Springs	New Bike Lanes and Bike Lockers	Bike lanes connecting Coyote Creek to Metrolink Transportation Center and to San Gabriel River Path; and Bike lockers (total of 20 bike lockers) at Metrolink station	Foster Rd. to Carmenita Rd. to Orden Dr. west, Leffingwell Rd. north, to Adler Dr. west, to Shoemaker Av. north, to Imperial Hwy. west, to Transit Center, then to Bloomfield Ave. north, to Los Nietos Rd. west, to the San	6	Bike Only	Y	Y	Y	>6	>6
Signal Hill	674 Coronado Sidewalk	new sidewalk	PCH and Coronado	0.02	Ped Only	Y	Y	N	>6	>6
Signal Hill	743 Illuminated Crosswalk 19th & Cherry	Crosswalk upgrade	19th St and Cherry Ave	0.01	Ped Only	Y	Y	N	>6	>6
Signal Hill	629 Willow Street ADA Improvements	ADA Ramps, new sidewalk	Willow Street, between California and Orange	0.1	Ped Only	Y	Y	N	>6	>6
Signal Hill	675 21st Street & Stanley Sidewalk	new sidewalk	Stanley and 21st Street	0.01	Ped Only	Y	N	N	<3	<3

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Signal Hill	602 ADA Access Improvements	Sidewalk improvements	Orange and Willow	0.01	Ped Only	Y	Y	N	>6	>6
Signal Hill	606 Las Brisas St Phase 2	Sidewalk improvements	California Ave Las Brisas area	0.02	Ped Only	Y	Y	N	>6	>6
Signal Hill	Crescent Heights Street Sidewalk Improvements	Sidewalk improvements	Gardena Street to Cherry Ave	0.01	Ped Only	Y	Y	N	>6	>6
Signal Hill	Citywide ADA Sidewalk Improvements	Sidewalk improvements	Citywide	1	Ped Only	Y	Y	N	>6	>6
Signal Hill	612 25th Street Improvement	Resurface street & construct sidewalks, ADA ramps, curb&gutter etc	Between Lewis and Orange Avenues	0.2	Bike + Ped					
South Gate	Safe Route to Schools Cycle 1	Construct a traffic signal, countdown pedestrian signals, flashing beacons/in-pavement crosswalk light, install speed awareness signs, and widen the sidewalk adjacent to a new school location	Pinehurst Ave between Tweedy and Southern	0.5	Ped Only	N	N	N	4-6	4-6
South Gate	Safe Route to Schools Cycle 2	Hold two educational community workshops to the benefits of walking/biking, hiring a coordinating consultant, developing site specific education materials, and conducting education and encouragement campaigns	Near 16 Primary schools within South gate		Ped Only	Y	Y	N	>6	>6

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
South Gate	Safe Route to Schools Cycle 8	Construct 1.5 mi. Class I bike path along Southern Ave and 2000 ft. sidewalk along Tweedy Boulevard, install 98 ped heads, 17 driver speed awareness signs, 6 speed humps, 1 new flashing beacon/in-pavement light system	Various locations near 14 schools. Bike path on Southern Ave. between State St and Burke Ave; Sidewalk on Tweedy Blvd from Pinehurst Ave to Hildreth Ave	1.5	Bike + Ped	Y	Y	N	>6	>6
South Gate	Safe Route to Schools Cycle 9	Construct 1.2 miles of Class II bike lanes and 1,500 feet of raised center traffic calming medians with related encouragement activities	Alexander Ave between Firestone Blvd and Abbot Rd (bike lane); and Southern Ave between Vossler Ave and Pinehurst Ave (medians)	1.2	Bike + Ped	N	N	N	<3	<3
South Gate	Los Angeles River Trail Head Improvements	Make improvements on existing facilities at two locations along the Los Angeles River Bicycle Trail. At Hollydale Park existing restroom facilities and landscaping and at Southern Avenue improvements to the existing Los Angeles River Bicycle Trail entrance.	Los Angeles River Trail Heads located at Southern Ave (east end) and Hollydale Park.		Bike + Ped	N	N	N	<3	<3
Whittier	Whittier Greenway Trail	Class I Bike and Pedestrian trail	Along abandon UPRR ROW from Pioneer Blvd. to Mills Ave.	5.2	Bike + Ped	Y	Y	N	>6	>6

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Whittier	Pio Pico Bikeway Connection	Bikeway connection from San Gabriel River Bike Path to the Pio Pico State Histrocial Park	Adjacent to Whittier Boulevard from San Gabriel River Bike Path to Pio Pico State Historical Park	0.4	Bike + Ped	N	Y	N	<3	3
Whittier	Greenleaf Avenue Class II Bike Lanes	Installation of Class II Bike Lanes and Two-Way Left-Turn Lane. Road Diet from 4 lane to 2 lane.	La Cuarta Street to South of Mulberry Drive	1	Bike Only	Y	Y	N	>6	>6
Whittier	Pioneer Blvd. Class II Bike Lane	Installation of Class II Northbound Bike Lane and Southbound Sharrow Lane on Pioneer Blvd. from Whittier Greenway Trail to Beverly Blvd.	Pioneer Blvd. from Whittier Greenway Trail to Beverly Blvd.	0.38	Bike Only	N	Y	N	<3	<3
Whittier	Philadelphia Street Class II Bike Lanes	Installation of Class II Bike Lanes adjactent to Whittier College	Philadelphia Street from Painter Avenue to Bryn Mawr Way	0.25	Bike Only	Y	Y	N	>6	>6
Whittier	Beverly Boulevard Class II Bike Lanes	Installation of Class II Bike Lanes, Median Islands, Safety Lighting and Bus Shelters	Beverly Blvd. from 605 Freeway to Norwalk Blvd./Workman Mill Road.	0.59	Bike + Ped	N	Y	N	>6	>6
Whittier	Mills Avenue Sidewalks	Installation of Sidewalks and Wheelchair Access Ramps	Mills Avenue from Whittier Blvd. to Lambert Road	0.65	Ped Only	N	Y	N	4-6	3
Whittier	Laurel Avenue Bike Lanes	Installation of Class II Bike Lanes	Laurel Avenue from Whittier Blvd. to Carnell Street	0.2	Bike Only	Y	Y	N	>6	4-6
Compton	Safe Routes to School	Construction of pedestrian safety devices:lighted crosswalks and hardscape improvements in school vicinties	Longfellow Elementary (Reeve St at Central Av), Washington Elementary (Rosecrans Av at Kemp Av), Mayo Elementary (Chester Av at Rosecrans Av), and Roosevelt Middle (Alondra Bl at Sloan Av)		Bike + Ped	Y	N	N	4-6	>6

Gateway Cities Submitted Non-motorized Transportation Improvements (Bicycle/Pedestrian)

Location	Project Name	Detailed Description	Detailed Location	Length of Project (mi)	Bike, Ped or Bike + Ped?	Within 2 mi of University or College?	Access to Transit?	Access to Rail Transit?	# of Activity Centers within 1/2 mi of project	# of Activity Centers within 1/4 mi of project
Compton	Blue Line Enhancement	Along Artesia Station pathway various enhancements, including construction of medians, monuments, irrigation, walls, provision of landscaping, signage and striping	Artesia Boulevard and Acacia Avenue in vicinity of Artesia Blueline Station		Bike + Ped	Y	Y	Y	<3	4-6

Gateway Cities Submitted Park-and-Ride Lots

City	Project Name	Project Description	Location	Implementation Date	Estimated Cost	Funding Source	Total New Parking Spaces	Type of Transit Served	Average Auto Trip Length	Parking Lot Utilization	Average Auto Access Trip Length	Days of use/year
Bellflower	New Bellflower Town Center Transit Center	Planned Transit Center. Will provide bus layover; inter-operator bus connections; park'n'ride; bike'n'ride; shuttle service to/from Green Line; add'l rail in future per outcome of SCAG PE ROW Alternatives Analysis	16307 Bellflower Blvd	2011 - 2020	4000000	Actively applying for various grant funds	134	Transit Center	20	60%	5	250
Compton	Public Parking Structure	The structure will be approximately 192 feet x 300 feet in size. 4-level parking structure with 600 spaces	Adjacent to the MLK Transit Center, 301 N. Willowbrook Ave.	2011 - 2020	$12 million	Community Redevelopment Agency	600	Urban Rail	20	95%	5	250
Long Beach	Blue Line Park & Ride	Large parking structure (920 parking spaces) at the Metro Blue Line Willow Station.	Metro Blue Line Willow Station				920	Urban Rail	20	95%	5	250
Santa Fe Springs	Expansion of existing park and ride facility	Imperial Highway		2006 - 2010	896000	MTA	277	Commuter Rail	20	77%	5	250

Gateway Cities Submitted Other Projects that Were Not Analyzed

City	Project Name	Detailed Description	Detailed Location
Artesia	Economic Development Administration	Install landscaped median and traffic signal interconnect on Pioneer Boulevard to mitigate traffic congestion	Pioneer Boulevard
Artesia	Air Quaility Management District/Prop C	Install master signal computer for traffic signal synchronization	City-Wide
Artesia	183rd/South St	Install signal interconnect system	183rd/South St
Bell Gardens	Signal at Fire Station 39	Existing Signal at Eastern and Village Center was upgraded to provide East/West split phases to enhance safety and better traffic flow.	Eastern and Village Center
Bellflower	Belmont Court	Land Use: Increased Density & Reduced Distance or Need for Travel/Belmont Village Overlay Zone (pending); 30-unit residential condo with 6,000 sqft of commercial (approved 10-25-10); Density - 50 units per acre	SE Corner of Belmont and Bellflower
Bellflower	Mixed Use Overlay Zone	Land Use: Increased Density & Reduced Distance or Need for Travel/Adjaceny to completed Greenway Trail and potential Orange Line; Mixed Use Overlay Zone (pending); Study Sessions underway at Planning Commission	Intersection of Alondra and Bellflower and south on Bellflower to Greenway Trail
Bellflower	The Village	Land Use: Increased Density & Reduced Distance or Need for Travel/The Village; Completed July 2010; 20 units per acre	9815 Walnut
Cerritos	Cerritos College Bus Stop	The City of Cerritos/Redevelopment Agency constructed a new bus stop at Cerritos College to accommodate the new larger fixed route buses and the increased demand for the service. In spring 2009, there were 24,334 students enrolled at the college. These students have access to the COW bus stop on the south campus.	New Falcon Way and Studebaker Road
Commerce	Traffic Synchronization	Procurement and installation of new Traffic Signal Control System consistent with Gateway Cities Regional Traffic Signal Forum's Intelligent Transportation System.	All signalized location in City of Commerce
Compton	Traffic Signal Upgrade	Upgrading the traffic signal control system and installation of a Traffic Management and Operations Center	Citywide
Compton MLK Transit Center Expansion – Multi-Modal Transportation Building	The new Transit Center will include a 10,000 square foot building to house the Regional Traffic Management and Operations Center, Renaissance Bus Transit System, Dial-a-Ride Service, Dial-a-Taxi Service, Park and Ride, and Bus Lay-over Facilities.	301 North Willowbrook Avenue, Compton CA 90220-2430	.5 miles
Downey	MULLER/ORSR TRAFFIC SIGNAL	Construction of traffic signal opposite main entrance to City golf course and dining facility; removal of existing street lighting, construction of new curb ramps, incidental pavement striping, markings, and signage.	Old River School Road, Muller Street
Downey	BELLFLOWER/STEVE HORN WAY INTERSECTION	Traffic signal modifications, vehicle video detection system, construction of west approach to intersection, new stiping, signage, curb ramps	Bellflower Bl, Steve Horn Way
Downey	LAKEWOOD I-5 INTERSECTION (JPA)	I-5 interchange at Lakewood Bl	Lakewood Bl, Vista Del Rio Ave, Brookshire Ave, Vista Del Rosa St, Lindell Ave
Downey	LAKEWOOD AT COLUMBIA INTERSECTION IMP	Removal of existing center median island, landscaping and irrigation within the intersection; construction of AC pavement, new median nose and flare, replacement of existing overhead street lighting with new street and ped lighting, modification of traffic signal on Lakewood Boulevard at Downey Studios, installation of incidental pavement striping, markings and signage.	Lakewood Bl, Columbia Way
Downey	LAKEWOOD/IMPERIAL INTERSECTION	Minor widening, traffic signal modifications, installation of countdown ped heads, decorative crosswalks in pavement, bollards, curb ramps	Lakewood Bl, Imperial Hwy
Downey	LAKEWOOD/STEWART & GRAY INTERSECTION	Traffic signal modifications, decorative crosswalks in pavement, bollards, curb ramps	Lakewood Bl, Stewart & Gray Rd
Downey	LAKEWOOD/BELLFLOWER INTERSECTION	Minor widening, traffic signal modifications, curb ramps	Lakewood Bl, Bellflower Bl
Downey	BELLFLOWER/STEWART & GRAY INTER.	Installation of fiber-optic cable into existing conduits along both Bellflower Bl and Stewart & Gray Rd to connect to both the City's Water Yard and Public Works Yard with the City's communication network	Bellflower Bl, Stewart & Gray Rd
Downey	SIGNAL SYSTEM INTEGRATION	Initial construction of ethernet based communication network utilizing fiber optic cable to transmit real time data from field equipment back to central system in City Hall.	Firestone Corridor, from Ryerson Ave to Stewart & Gray Rd
Downey	CENTRALIZED TRAFFIC MANG'T CENTER	Construction of Traffic Management Center in City Hall, video wall software acquisition and licensure	Citywide
Downey	T.S. CONTROL SYSTEM	Implementation of i2 Traffic Signal Management System software, acceptance testing, training, maintenance Contract	Citywide
Downey	CITYWIDE TRAFFIC SIGNAL COMM SYSTEM EXP	Upgrade to County regional communcation (video distribution) system, new servers and software, interfaced with City system and field equipment (CCTV network), training	Citywide

Gateway Cities Submitted Other Projects that Were Not Analyzed

City	Project Name	Detailed Description	Detailed Location
Downey	DOWNEY ADVANCED TRAFFIC CONTROL SYSTEM	Upgrade to County regional Information Exchange Network (IEN), new server and software, interfaced with City i2 software and traffic signal management system, interfacing with field equipment (controllers, switches, video cameras), training	Citywide
La Mirada	La Mirada Signal Sync	Signal Syncronization	Rosecrans Ave, La Mirada Blvd, Imperial highway, Telegraph rd
Lakewood	Housing Element	Increase maximum residential density from 27 du/acre to 30 du/acre	Citywide (multi-family zones)
Lakewood	ATCS	Adaptive Traffic Control System installed on Five (5) Corridors in Lakewood. LADOT is the system installed.	
Lakewood	Bus PAX Shelters	18 Passenger Bus Shelters added with solar lighting, benches and litter receptacles at various transit stops.	Various transit stops.
Long Beach	I-405 & Orange Avenue	Reconfigure off-ramp and signalize to improve safety and capacity	I-405 & Orange Avenue
Long Beach	I-405 & Cherry Avenue	Reconfigure on-ramp to improve safety and capacity	I-405 & Cherry Avenue
Long Beach	Anaheim Street & Oregon Avenue	Reconfigure southbound intersection approach to reduce conflicts and modernize traffic signal to improve peak traffic flow.	Anahiem Street & Oregon Avenue
Long Beach	Millikan High School Transporation Improvement Project	Modernize a traffic signal to address ADA issues, traffic congestion, and an ackward intersection jog, thereby improving traffic operations and safety for residents and students.	Spring Street & Snowden Avenue
Long Beach	Pacific Avenue & Spring Street Intersection Enhancement Project	Intersection provides primary access across Blue Line tracks, to an adjacent park, and nearby hospital. Improvements include pedestrian countdown signals, lighting improvements, and adaptive control elements to address varrying traffic and emergency vheicle demands while providing traffic calming elements off peak.	Pacific Avenue & Spring Street
Long Beach	Orange Avenue/Alamitos Avenue Traffic Improvement Project	Reconfigured a schewed roadway alignment to eliminate conflicts, concentrate pedestrian movements, and provide traffic signal control.	Alamitos Avenue between 17th Street & 15th Street
Long Beach	Virgina Village Transportation Enhancement Project	Construct median, install two new traffic signals, convert cross streets to one-way to reduce conflicting traffic movements, enhance capacity, and improve safety	Long Beach Boulevard between Del Amo Boulevard and 55th Street
Long Beach	Wardlow Road Transportation Improvement Project	Complete gaps in sidewalks and modernize traffic signals to facilitate peak period traffic flow and safety	Wardlow Road between Cherry Avenue & Long Beach Boulevard
Long Beach	Atherton Transportation Improvement Project	Modernize one traffic signal to provide left-turn phasing and adaptive control and install a new traffic signal to improve access for vehciles and pedestrians to improve traffic opeations between freeway connections and CSULB.	Atherton Street between Studebaker Road & Bellflower Boulevard
Long Beach	Iron Triangle Transporation Improvement Project	Project to provide grade separation of a number of traffic movements at the primary access point between freeways and the southeast area of the City	7th Street, Bellflower, & PCH triangle of intersections.
Long Beach	Shoreline Adpative Traffic Signal Project	Implement an Adaptive Traffic Signal Control system, including CCTV, CMS, and other motorist information systems in downtown Long Beach to address peak period congestion and special events.	Downtown Long Beach
Long Beach	Long Beach Traffic Management Center	Construciton of a new regional TMC to operate traffic signals and motorist information systems for the Cities of Long Beach, Lakewood, Signal Hill, Bellflower, Hawaiian Gardens, and some State owned traffic signals/faclities	Long Beach City Hall
Long Beach	Douglas Park ATCS Expansion Project	Expansion of the recently completed 160 traffic signal Long Beach TLSP project to include approximately 120 additonal traffic signals into the new system	8 Square Mile area comprising multiple jursdictions in the area bounded by I-405, I-605, CA-91, I-710
Long Beach	Orange Avenue Transportation Improvement Project	A project to reduce conflicts and traffic operations adjacent to a new grocery market and fire station underconstruction. Project involves a number of improvements to an existing traffic signal and the installation of a new traffic signal.	Orange Avenue between CA-91 and Artesia Boulevard
Lynwood	Imperial Hwy and Martin Luther King Blvd. Intersection Improvement Project	Truck impacted instersection. County project to widen curb returns, PCC intersection, traffic signal improvements and sidewalk improvements.	Imperial Hwy and Martin Luther King Jr, Blvd.
Lynwood	Long Beach Blvd Improvement Project	Street improvement project including realignment and improve intersection geometry of Long Beach Blvd., State Street and Tenaya Avenue.	Long Beach Blvd., State Street and Tenaya Avenue.
maywood	Slauson @ Atlantic	Intersection widening and concrete lanes	Slauson @ Atlantic
Multiple		install wireless communications for traffic signal system	City of South Gate, Lynwood, Huntington Park, La Mirada, Commerce,
Multiple		install wireless communications for traffic signal system	City of Bell, Bell Gardens, Santa Fe Springs, Cudahy, Maywood, Pico Rivera, Paramount
Norwalk	Project 7212	Replaced signal cabinet and upgraded traffic signal controller assembly, conduits, cables, and electrical service	Pioneer Boulevard/Lakeland Road
Norwalk	Firestone Boulevard Rehabilitation	Extend 3rd WB lane.	WB Firestone Boulevard at Target Driveway (west of I-605 Freeway)
Norwalk	Traffic Control System	Installation of a traffic control system	Citywide
Norwalk	Traffic Control System	Upgrade and expand traffic control system	Citywide

Gateway Cities Submitted Other Projects that Were Not Analyzed

City	Project Name	Detailed Description	Detailed Location
Parmount	Rosecrans and Anderson	Vehicle video detection	
Parmount	Rosecrans and Bianchi Way	Vehicle video detection	
Parmount	Somerset and Texaco	Vehicle video detection	
Parmount	Somerset and Garfield	Vehicle video detection	
Parmount	Somerset and Paramount	Vehicle video detection	
Parmount	Somerset and Orizaba	Vehicle video detection	
Parmount	Somerset and Downey	Vehicle video detection	
Parmount	Downey and Gardendale	Vehicle video detection	
Parmount	Rosecrans and Downey	Vehicle video detection	
Regionwide	Charging Stations at Key Test Stations (Norwalk, Long Beach)	VMT Reduction from Mode Shift at Stations that have EV Station Cars or Charging Stations. Research to estimate mode shift for drivers of EV vehicles?	Region-wide
Santa Fe Springs	RTO for EB Telegraph at Bloomfield Ave.	Installation of right turn only pocket for EB traffic at the intersection of Telegraph at Bloomfield	Telegraph Rd. & Bloomfield Ave.
Santa Fe Springs	Traffic Control System	Installation of a traffic control system	Citywide
Signal Hill	Orange & Hill Street Bridge Overpass Removal	Demo the bridge overpass at Hill & Orange intersection and remove existing grade separation	Orange Ave & Hill Street
Signal Hill	Cherry Ave and I-405 Ramp Interchange	Ramp Interchange improvement	Cherry Ave & I-405 interchange
Signal Hill	800 Crescent Heights Street Improvement	Reconstruction of Gardena St	Burnett to Crescent Heights Streets
Signal Hill	613 Nevada Street	Reconstruct	Orange to Cerritos
Signal Hill	Patterson Street	New Street segment	California to Olive
Signal Hill	Olive Street	New Street segment	Patterson to 27th
Signal Hill	28th Street	New Street segment	California to Olive
Signal Hill	Olive Street	New Street segment	28th to Patterson
Signal Hill	673 Orange Ave Signal Upgrades	Replace traffic signals	32nd and 33rd Streets @ Orange Ave
Signal Hill	Citywide bus stop improvements	Install newly designed bus stops	Citywide
South Gate	329-ST Truck impacted intersection Phase II Imperial Highway and Garfield Ave	This project will benift the city by improving the traffic flow conditions on Imperial Highway and Garfield Avenue. The construction consists of widening the intersection that includes new curbs, gutters, sidewalk and drainage system as well as upgrades of traffic signals.	Imperial Hwy, Garfield Ave
South Gate	365-ST Atlantic Ave & Firestone Blvd Intersection Improvements	Three thru lanes in each direction and a left turn lane is designated for arterial roadways. The proposed improvements will be consistent with the General Plan. Provide a wider typical section in order to realign the intersection.	Firestone Blvd, Atlantic Ave
South Gate	358-ST Atlantic Ave Improvement Project	Roadway pavement rehabilitation with asphalt rubber hot mix, construction landscaped median island , sidewalk, curb, and gutter repairs, reconstruction of curb ramps to meet Americans with Disabilities Act standards, signal interconnect between Tweedy Boulevard and Michigan Avenue and traffic signal upgrades, and peripheral improvements.	Atlantic Ave and Tweedy Blvd, Atlantic and Michigan Ave.
South Gate	448-TRF Traffic Signal Left Turn Phasing on Firestone Blvd at Santa Fe, Long Beach, California, Otis	design protected left turns for the 4 intersections, provide compliance with ADA as it relates to access ramps at the 4 intersections, and synchronize the modified signals with the Firestone corridor	Firestone Blvd at Santa Fe Ave, Long Beach Blvd, California Ave, Otis St
South Gate	Traffic Management Center	Remodeling and upgrade space at the City Yard with work stations, TCS software, computers, video display. Upon completion the TMC will contribute traffic data to the Information Exchange Network, integrate traffic signals into the Traffic Control System, and develop coordination plans from information gathered.	TMC construction at the City Yard, upgrades to approx. 40 intersections throught the City
South Gate	358-ST Atlantic Ave Improvement Project	Roadway pavement rehabilitation with asphalt rubber hot mix, construction landscaped median island , sidewalk, curb, and gutter repairs, reconstruction of curb ramps to meet Americans with Disabilities Act standards, signal interconnect between Tweedy Boulevard and Michigan Avenue and traffic signal upgrades, and peripheral improvements.	Atlantic Ave and Tweedy Blvd, Atlantic and Michigan Ave.
South Gate	448-TRF Traffic Signal Left Turn Phasing on Firestone Blvd at Santa Fe, Long Beach, California, Otis	design protected left turns for the 4 intersections, provide compliance with ADA as it relates to access ramps at the 4 intersections, and synchronize the modified signals with the Firestone corridor	Firestone Blvd at Santa Fe Ave, Long Beach Blvd, California Ave, Otis St
South Gate	Traffic Control System	Installation of a traffic control system and Traffic Management Center	Citywide

Gateway Cities Submitted Other Projects that Were Not Analyzed

City	Project Name	Detailed Description	Detailed Location
Vernon	26th St Bridge and Street Improvement Street Bridge	Extend 26th Street by constructing a bridge over Atlantic Blvd. and construct a new street (Pennington Way) from the bridge to Bandini Blvd. Installation of a new traffic. New street and bridge provides an alternative roadway route to commuters to and from the City, as well as easing the traffic congestion throughout the City, especially at the adjacent intersection of Atlantic Blvd. and Bandini Blvd.	Project is located at the east end of the Vernon. New traffic signal installed at the newly constructed intersection of Pennington Way and Bandini Blvd.
Vernon	Traffic Control System Project	Installation of a Traffic Control System in the City of Vernon to facilitate the synchronization of traffic signals, integrate ITS systems and exchange real-time data among ITS systems located across jurisdictional boundaries.	Signalized intersections citywide.
Vernon	37th/Bandini Blvd. Traffic Signal Synchronization Project	Synchronization and upgrade of traffic signals along 37th/Bandini Blvd. corridor.	37th St./Bandini Blvd. from Alameda to Pennington Way
Whittier	Painter Avenue at Whittier Greenway Trail	Installation of new Pedestrian signal	Painter Aveue at Whittier Greenway Trail
Whittier	Hadley Street at Whittier Greenway Trail/City Yard	Installation of new traffic signal	Hadley Street at Whittier Greenway Trail/City Yard

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
Bell Gardens	Truck Impacted Intersection	The intersection is being re-constructeded to provided exclusive Left Turn Pockets in the Noth and South Direction to alocate more time to the east/west direction to create better flow of traffic in that direction.	Florence Avenue and Jaboneria Street	2011 - 2020	$150,000	$97,500	$52,500	65% COG and 35% Local Funds
Bell Gardens	Truck Impacted Intersection	The intersection is being re-constructeded to provided exclusive Left Turn Pockets in the Noth and South Direction to alocate more time to the east/west direction to create better flow of traffic in that direction.	Florence Avenue and Ajax Street	2011 - 2020	$150,000	$97,500	$52,500	65% COG and 35% Local Funds
Bellflower	Clark/Flower	Restriping to create left turn pockets for eastbound and westbound Flower Street at 3-phase (split phase) signalized	Clark Avenue at Flower Street	2011 - 2020	$20,000	$10,000	$10,000	HES
Bellflower	New Bellflower Town Center Transit Center	Planned Transit Center. Will provide bus layover; inter-operator bus connections; park'n'ride; bike'n'ride; shuttle service to/from Green Line; add'l rail in future per outcome of SCAG PE ROW Alternatives Analysis	16307 Bellflower Blvd	2011 - 2020	$4,000,000	$3,000,000	$1,000,000	Actively applying for various grant funds
Commerce	Washington Blvd Reconsttuction	Reconstruct pavement in concrete, add 1 lane, traffic signals, landscape & hardscape improvements, ADA ramps, RxR crossing, street lights, etc.	Washington Blvd from I-5 Fwy to westerly City limit (west of Arrowmill)	2011 - 2020	$23,008,000	$15,582,000	$7,426,000	LAMTA - $13.6 mil; TCIF - $5.8 mil; SafeTEALU - $2.2 mil; City -$10.4
Compton	Public Parking Structure	The structure will be approximately 192 feet x 300 feet in size. 4-level parking structure with 600 spaces	Adjacent to the MLK Transit Center, 301 N. Willowbrook Ave.	2011 - 2020	$12,000,000	$8,000,000	$4,000,000	Community Redevelopment Agency
Downey	LAKEWOOD BLVD IMPROVEMENTS PHASE 3	Minor widening to provide three 12-foot travel lanes, minor widening of intersections, traffic signal system upgrades, drainage improvements, reduction of cross-slopes, pavement removal and resurfacing, construction of curb, gutter and sidewalk, raised medians with landscaping, parkways with landscaping, install pedestrian and street lighting system.	On Lakewood Bl from Florence Ave to Telegraph Road	2011 - 2020	$7,778,000	$3,943,000	$3,835,000	TBD
Downey	LAKEWOOD BLVD IMPR PHASE 3A 5TH TO FLORENCE	Minor widening to provide three 12-foot travel lanes, center LS medians, installation of decorative street lighting, construction of a recycled water main, resurfacing of existing asphalt concrete, and repair of miscellaneous concrete.	On Lakewood Bl between Fifth St and Florence Ave	2011 - 2020	$5,600,000	$2,000,000	$3,600,000	Federal ARRA Tier I, SAFETEA-LU, local gas tax
Downey	IMPERIAL MEDIAN, SAFETY & REHAB IMPROV PH 2	Minor widening to provide 11-foot travel lanes, minor widening at intersections, construction of new raised landscaped median islands, rehabilitation of the existing pavement, reclaimed water irrigation system, traffic signal improvements and modifications, sound walls, sidewalk, curb ramps, and signing and striping modifications.	On Imperial Hwy between Old River School Rd and Paramount Bl and between Bellflower Bl and Woodruff Avenue	2011 - 2020	$3,000,000	$1,000,000	$2,000,000	Federal Transportation Enhancements Grant, Proposition 1B, local Prop "C", gas tax
Downey	TELEGRAPH RD TRFIC THRPUT & SFTY ENHCMTS PHS 1	Construction of raised landscaped median islands	On Telegraph Rd between the Passons Bl and E City Limit	2011 - 2020	$2,000,000	$1,000,000	$1,000,000	SAFETEA-LU, HSIP grant, Prop "C", and gas tax
Downey	FLORENCE AVE / ARRINGTON AVE TRAFFIC SIGNAL	The installation of traffic signals at the intersection of Florence Avenue and Arrington Avenue, modifications to the traffic signals at the intersection of Florence Avenue and Lakewood Boulevard, and the purchasing of equipment required for the application of thermoplastic pavement markings to be installed.	Florence Ave, Lakewood Bl, Arrington Ave	2011 - 2020	$215,000	$100,000	$115,000	SAFETEA-LU, gas tax
Downey	PARAMOUNT/GALLATIN T.S. UPGRADE	Traffic signal upgrades including E-W left-turn phasing, implementation of vehicle video detection system, signal communication system.	Paramount Bl. Gallatin Rd	2011 - 2020	$100,000	$0	$100,000	Local gas tax

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
Downey	PARAMOUNT/TELEGRAPH T.S. UPGRADE	Traffic signal upgrades including E-W left-turn phasing, implementation of vehicle video detection system, signal communication system, emergency vehicle pre-emption system.	Paramount Bl, Telegraph Rd	2011 - 2020	$120,000	$60,000	$60,000	Local gas tax
Downey	WOODRUFF / WASHBURN TRAFFIC SIGNAL	Upgrade of the existing traffic signal, including the installation of accessible audible pedestrian devices to accommodate the disabled	Woodruff Ave, Washburn Road	2011 - 2020	$150,000	$75,000	$75,000	SAFETEA-LU, gas tax
Downey	IMPERIAL Improvements, Downey Ave	upgrade to the traffic signal at the intersection of Imperial Highway at Downey Avenue.	At Imperial Hwy and Downey Ave		$150,000	$0	$150,000	
Downey	IMPERIAL HWY/COLUMBIA WY TRAFFIC SIGNAL	Traffic signal upgrades, curb ramps.	Imperial Hwy, Columbia Way	2011 - 2020	$125,000	$0	$125,000	Local gas tax
Downey	BELLFLOWER/IMPERIAL INTERSECTION IMP	Construction of double left-turn pockets in the northbound and southbound directions on Bellflower Boulevard and right-turn pockets in the southbound, eastbound and northbound directions, the reconstruction of all four curb returns to provide 50-foot radii, modification of the existing traffic signal and incidental utility relocations and lane restriping	Bellflower Bl, Imperial Hwy	2011 - 2020	$210,000	$105,000	$105,000	Local (NASA Develp fund), gas tax
Downey	PARAMOUNT BLVD AT FIRESTONE BLVD IMPRVMTS	Construction of a right-turn pocket in the eastbound direction, widening of all four curb returns to provide 50-foot radii, modification of the traffic signal, incidental utility relocations, curb ramps, sw, AC pavement, striping, and signage modifications	Paramount Bl, Firestone Bl	2011 - 2020	$3,019,000	$1,822,000	$1,197,000	Prop "C" (Metro 2007 Call f Projects, Local Return), gas tax
Downey	PARAMOUNT BLVD F.O. SYSTEM, Phase I	Installation of fiber-optic conduit/cable along Paramount Bl, interconnection to existing signal comm network at Telegraph, traffic signal upgrades, vehicle video detection system	On Paramount Bl between Telegraph Rd and Lubec St	2011 - 2020	$1,150,000	$230,000	$920,000	Proposition C Local Return, Measure R and Gas Tax
Downey	FLORENCE AVENUE TRAFFIC SIGNAL COMM SYS	Installation of fiber-optic conduit/cable along the length of Florence Ave, interconnection to existing signal comm network at Lakewood Bl, traffic signal upgrades, vehicle video detection, incidental utility relocation, signage.	On Florence Ave between Old River School Rd and the E City Limit	2011 - 2020	$1,798,000	$1,438,000	$360,000	Proposition "C" (2007 Metro Call for Projects, Local Return funds)
Downey	PARAMOUNT BLVD TRAFFIC IMP-FIRESTONE TO IMPERIAL	Installation of fiber-optic conduit/cable along Paramount Bl, traffic signal upgrades, coodinated timing along corridor, comm network modifications at TMC	On Paramount Bl between Firestone Bl and Imperial Hwy	2011 - 2020	$1,670,000	$334,000	$1,336,000	TEA 21, transit fund
Downey	PARAMOUNT BLVD TRAFFIC IMP-FIRESTONE TO FLORENCE	Installation of fiber-optic conduit/cable along Paramount Bl, traffic signal upgrades, coodinated timing along corridor, comm network modifications at TMC	On Paramount Bl between Firestone Bl and Florence Ave	2011 - 2020	$970,000	$194,000	$776,000	TEA 21, transit fund
Downey	Firestone Bl at Old River School Rd Grade Separation Study	Either an undercrossing or overcrossing of the RR with roadway; yet to be determined.	Firestone Bl at Old River School Rd and Burns Ave	2021 - 2035	$59,500,000	$30,000,000	$29,500,000	PUC Section 190 Grant, gas tax
La Mirada	Valley View Ave to go under BNSF lines at Stage Road	Valley View Ave to go under BNSF lines at Stage Road	Valley View Ave and Stage Road	2011 - 2020	$75,000,000	$37,000,000	$38,000,000	Federal and State
LAPW	Bandini/37th St St/8th St TSSP	Traffic Signal Syncronization improvements, additional vehicle detection, traffic actuated signals, and time-based coordination.	Alameda St to Garfield Ave	2011 - 2020	$844,000	$768,040	$75,960	MTA Prop C with LA County Prop C local money as match
LAPW	Colima Rd/Lamirada Bl TSSP	See above.	Mar Vista Bl to Alondra Bl	2011 - 2020	$877,000	$798,070	$78,930	See above.
LAPW	Garfield Av	See above.	Olympic Bl to Eastern Av	2011 - 2020	$776,000	$706,160	$69,840	See above.
LAPW	Painter Av / Carmenita Rd TSSP	See above.	Hadley St to South St	2011 - 2020	$2,027,000	$1,844,570	$182,430	See above.
LAPW	Studebaker Rd TSSP	See above.	Florence Av to Del Amo Bl	2011 - 2020	$1,226,000	$1,115,660	$110,340	See above.
LAPW	Alameda St TSSP	See above.	Nadeau St to Auto Dr South	2011 - 2020	$2,130,000	$1,938,300	$191,700	MTA Prop C with LA County Prop C local

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
LAPW	Woodruff Av TSSP	See above.	Firestone Av to Willow St	2011 - 2020	$2,491,350	$2,267,129	$224,222	See above.
LAPW	Leffingwell Rd TSSP	See above.	Imperial Hwy to Valley Home Av	2011 - 2020	$929,000	$845,390	$83,610	See above.
LAPW	Beverly Bl TSSP	See above.	Pomona Bl to Pickering Av	2011 - 2020	$2,393,000	$2,177,630	$215,370	See above.
LAPW	South St TSSP	See above.	Atlantic Bl to Studebaker Rd	2011 - 2020	$1,485,000	$1,351,350	$133,650	See above.
LAPW	Washington Bl TSSP	See above.	Atlantic Av to Whittier Bl	2011 - 2020	$2,341,000	$2,130,310	$210,690	See above.
LAPW	Lambert Rd TSSP	See above.	Washington Bl to Grayling Av	2011 - 2020	$2,626,000	$2,389,660	$236,340	See above.
LAPW	I-710/Atlantic Corridor ITS Project	See above.	Alameda St from Randolph Ave to Industry Wy	2011 - 2020	$3,226,000	$2,935,660	$290,340	See above.
LAPW	I-5 ATMS Integration Project	See above.	Imperial Hwy from Carmenita Rd to Valley View Ave; Valley View Ave from Imperial Hwy to Rosecrans Ave	2011 - 2020	$1,301,000	$1,183,910	$117,090	ISTEA DEMO and Prop C local money as match
Long Beach	PCH & Cherry	Cities of Long Beach & Signal Hill are working collectively to acquire property to widen Cherry Avenue to add a second travel lane in Long Beach from the Signal Hill boarder to south of PCH.	Cherry Avenue between 19th Street and 15th	2011 - 2020	$6,721,000	$5,921,000	$800,000	
Long Beach	Walnut Avenue Transportation Enhancement Project	Reconfigure two separate intersections into a single intersection and provide new signalized pedestrian crossings at a location that serves four grade schools and adults accessing LBCC.	Walnut Avenue & Alamitos/20th Street	2011 - 2020	$1,200,000	$800,000	$400,000	TMP/ SC25
Long Beach	LCD Traffic Enhancement Project	Reconfigure the LCD (LOS COYOTES DIAGONAL) & Studebaker Road/Parkcrest intersection into two separate intersections to improve traffic opeations and capacity while improving access to a new high school currently underconstruction. Project also includes reconfigeration of the lanes and traffic signal operations at LCD & Carson Street to address peak period congestion issues.	LCD (LOS COYOTES DIAGONAL) between Studebaker & Carson Street	2011 - 2020	$2,500,000	$1,600,000	$900,000	TMP
Long Beach	Del Amo & Locust Intersectio	Signalize intersection to provide improved neighborhood connectivity and access to tranist and park facilities	Del Amo Boulevard & Locust Avenue	2011 - 2020	$200,000	$0	$200,000	Gas tax
Long Beach	2nd Street & Pomona Avenu	Construction of a new traffic signal to facilitate traffic flow during the peak period while also providing a new signalized pedestrian crossing in a dense retail shopping center.	2nd Street & Pomona Avenue	2011 - 2020	$50,000	$0	$50,000	Parking meter revenue
Long Beach	Carson Street & Woodruff Avenue Intersection Improvement Project	Modernize traffic signal control and provide improved left-turn phasing to improve safety and operations	Carson Street & Woodruff Avenue	2011 - 2020	$35,000	$0	$35,000	TMP
Long Beach	Spring Street & Woodruff Avenue Intersection Improvement Project	Modernize traffic signal to provide left-turn phasing in two directions and improved pedestrian crossings to address safety and congestion issues.	Spring Street & Woodruff Avenue	2011 - 2020	$175,000	$0	$175,000	Gas tax
Long Beach	PCH & Cherry	Caltrans modernized the traffic signal to provide adaptive control and left-turn phasing to address congestion issues.	PCH & Cherry Avenue	2011 - 2020	$5,000,000	$3,000,000	$2,000,000	RDA / grant (sh)
Long Beach	Redondo & Anahiem Intersection Improvement	Widen Southbound Redondo Avenue to provide for right-turn lane	Redondo & Anaheim	2011 - 2020	$40,000	$26,000	$14,000	TMP
Long Beach	PCH & 2nd Street Improvement Project	Widen Southbound PCH to provide for 2nd left-turn lane and right-turn lane	PCH & 2nd Street	2011 - 2020	$3,000,000	$2,000,000	$1,000,000	TMP
Long Beach	Los Alamitos Traffic Circle Improvement Project	Cooperative Project with Caltrans to implement changes to the traffic characteristics of the facility to improve capacity and reduce accidents	PCH, Lakewood Boulevard, LCD	2011 - 2020	$2,000,000	$1,300,000	$700,000	state funds

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
Long Beach	2nd Street & Studebaker Intersection Improvement Project	Reconfigure intersection geometrics through the removal of a median to add a third westbound travel lane	2nd Street & Studebaker Road	2011 - 2020	$400,000	$260,000	$140,000	TMP
Long Beach	Ocean Boulevard Transportation Enhancement Project	Interconnect and modernize traffic signals along Ocean Boulevard Corridor and add two new traffic signals to improve safety and traffic operations	Ocean Boulevard between Alamitos & Livingston/2nd	2011 - 2020	$1,280,000	$256,000	$1,024,000	
Long Beach	Atlantic Avenue Transportation Enhancement Project	Interconnect and modernize traffic signals along Atlantic Avenue to improve operations and traffic safety	Atlantic Avenue between Ocean Boulevard & Wardlow Road	2011 - 2020	$1,080,000	$216,000	$864,000	
Long Beach	Studebaker Road ATCS and Communictions Enhancement Project	Construction of an eastside communications backbone to support trafic signal control and motorist information systems, conversion of traffic signal control from fixed time to adaptive control.	Studebaker Road between Spring Street and 2nd	2011 - 2020	$1,080,000	$216,000	$864,000	
Long Beach	Wardlow Road Traffic Signal Syncronization Project	Operational and timing improvements to traffic signals along the Wardlow Road corridor in the western part of the City.	Wardlow Road between Santa Fe & the western City	2011 - 2020	$159,000	$31,000	$128,000	
Long Beach	9th Street Pedestrian Enhancement Project	Signalize two intersections and provide an all-way stop at a third to provide improved connectivity for pedestrians and cyclists traveling along 9th Street to access schools, medical faclities, park facilities, and shopping.	9th Street between Pacific Avenue and Long Beach Boulevard	2011 - 2020	$500,000	$385,000	$115,000	
Long Beach	Orange Avenue Transportation Improvement Project	Traffic Calming project to narrow the roadway via striping to reduce vehicle speeds along this residential collector street and to add a traffic signal midway to improve neighborhood connectivity and access to transit stops.	Orange Avenue between Wardlow Road & Bixby Road	2011 - 2020	$350,000	$385,000	$115,000	
Long Beach	Walnut Avenue & 4th Street Intersection Improvement	Modernize the traffic signal to provide enhanced pedestrian access to bus stops and relocation of signal and electrical equipment to improve pedestrian access to bus stops.	Walnut Avenue & 4th Street	2011 - 2020	$150,000	$112,500	$27,500	
Long Beach	3rd Street & Lime Avenue Intersection Improvement	Construction of a new traffic signal in downtown to improve pedestrain access to a nearby grocery market, schools, and transit stops.	3rd Street & Lime Avenue	2011 - 2020	$175,000	$131,000	$44,000	
Long Beach	Naples Road Diet	Replaced one automobile lane with a Class II bicycle lane.	Eastbound on 2nd Street between Bayshore Bridge and Marina Drive	2011 - 2020	$45,000	$34,000	$11,000	
Long Beach	Willow Street Pedestrian Improvement	This project provides pedestrian-oriented improvements to Willow St including medians, pedestrian lighting, landscaping, signage and crosswalk treatments.	Willow Street from Los Angeles River to Atlantic Avenue.	2011 - 2020	$3,097,000	$2,180,000	$917,000	CMAQ Local

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
Long Beach	South Waterfront Bike Path Connection	SWBPC project is the construction of a new Class I bike path segment that closes an existing gap in the area. The project will include a mid-block crossing and wayfinding. This proposed path closes a vital gap between the existing Class I path across Queensway Bridge and the existing Class I bike and pedestrian path along the south waterfront, connecting the Greater Downtown with the hotels and commercial centers located across the harbor.	The proposed South Waterfront Bike Path starts at the north end of the Queensway Bridge at the existing terminus of the Class I path. The proposed alignment follows the north side of Queensway Drive within the City right-of-way as a Class I bike path to the Special Events Park existing Class I	2011 - 2020	$1,500,000	$1,313,000	$187,000	CMAQ Local
Long Beach	3rd Separated Bikeway	Dedicated bike lanes on Broadway and 3rd will include a painted island to separate the bike lane. One traffic lane will be lost to preserve parking on both sides of the street.	3rd from Alamitos and Golden Avenue		$940,000	$705,000	$195,000	
Long Beach	Broadway Separated Bikeway	See above	Broadway from Alamitos and Golden Avenue		$940,000	$705,000	$195,000	
Long Beach	Third Street Street Bike Lanes	Bike lanes (Class II) along Third Street between Alamitos/Junipero and Bike lane on Third Street b/w Alamitos/Junipero	Third Street between	2011 - 2020	$50,000	$37,500	$12,500	
Long Beach	Daisy Street - Bike Boulevard	Bike boulevard will provide North-South Class III bicycle facility (running the length of the City- from downtown to 70th).	running the length of the City- from downtown to 70th	2011 - 2020	$2,200,000	$1,980,000	$220,000	CMAQ SRTS
Long Beach	Sixth Street - Bike Boulevard	Bike boulevard will provide East-West Class III bicycle facility (running from Junipero to Park).	6th St from Junipero to Park	2011 - 2020	$630,000	$567,000	$63,000	CMAQ SRTS
Long Beach	Market Street Transporation Enhancement Project	Reconfigure the roadway to provide improved pedestrian facilities (widen sidewalks, enhanced pedestrian crossings) and access to key destinations (post office, transit stops, fire station, schools, shopping) for pedestrians, cylists, and motorists.	Market Street between Long Beach Boulevard and Atlantic Avenue	2011 - 2020	$5,000,000	$4,500,000	$500,000	
Long Beach	Long Beach Blvd. Pedestrian Improvement Project	Project provides pedestrian-oriented improvements to Long Beach Boulevard including pedestrian lighting, street trees, and crosswalk treatments.	Long Beach Blvd b/t Willow Ave & I-405	2011 - 2020	$2,521,000	$1,722,000	$799,000	CMAQ Local
Long Beach	Atherton Street Enhancement Project	Rehabilitating the landscaped median to enhance the experience of over 37,000 pedestrians, bicyclists, transit users and autos	Bellflower & Los Cerritos Channel	2011 - 2020	$1,322,000	$1,322,000	$0	CMAQ Prop C
Long Beach	San Gabriel River Bike Path Closure at Willow Street	Creation of off-street bicycle path to achieve bicycle route gap closure on Willow Street from the San Gabriel River Bike Path west to Studebaker Road	Willow St, at San Gabriel River & Studebaker	2011 - 2020	$200,000	$150,000	$50,000	CMAQ Local
Long Beach	Harding Street Traffic Calming Project	Reconfigure roadway stripping to install bike lanes and new pedestrian crossings	Harding Street between Atlantic Avenue and Cherry Avenue	2011 - 2020	$1,200,000	$900,000	$300,000	
Long Beach	I-710 Improvements	Funded by the SAFETEA-LU Demo Project, the project improves bicycle, pedestrian, and streetscape on major thoroughfares.	On Broadway, 3rd Street, 6th Street, and 7th Street from Shoreline Drive to Alamitos.	2011 - 2020	$2,000,000	$1,500,000	$500,000	

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
Long Beach	Pacific Electric Right-of-Way	Funded by the MTA, the project improves bikeway and pedestrian access along a former railroad right-of-way.	The Pacific Electric ROW in Long Beach (South of Willow Street and North of 4th Street)	2021 - 2035	$2,000,000	$1,500,000	$500,000	
Lynwood	Annual Sidewalk Improvement Project FY 10-11	Reconstructed damaged sidewalk and install new sidewalk.	Various locations citywide.	2011 - 2020	$100,000		$100,000	CDBG
Norwalk	Firestone Bridge	Extend 3rd WB lane.	Firestone Bridge over SG River	2011 - 2020	$4,331,000	$1,580,000	$2,751,000	MTA & LA County grant, HBRR
Norwalk	Project 7219	New traffic signal	Shoemaker Avenue/Excelsior Drive	2011 - 2020	$200,000	$100,000	$100,000	MTA, Prop C
Norwalk	Norwalk/Santa Fe SpringsTransportation Center-Metrolink Park and Ride - Pedestrian Plaza Upgrade	Upgrade of existing passenger amenities for the Pedestrian Plaza at the regional inter-modal Norwalk/Santa Fe Springs - Metrolink Transportation Center. The projec includes construction of a pedestrian plaza with pathways for bicycles and pedestrians, a passenger car pick-up/drop-off area to encourage access to the buses and trains as alternative modes of transportation, seating areas,security lighting, signage, electronic bus schedule information, decorative paving and landscaping. The project also includes widening of the approach into the Transportation Center and modifications to the entrance to improve access and visibility, as well as signage improvements to the transit center, bus layover areas and park and ride lot. The project is intended to improve pedestrian and vehicular access, safety, and functionality of the inter-modal Norwalk/SantaFe Springs - Metrolink Transportation Center.	The project is located at the Norwalk-Santa Fe SpringsIMetrolink Transportation Centerand Park and Ride at 12700 E.Imperial Highway, Norwalk, CA 90650. The transportation center serves all of Los Angeles, Orange and San Bernardino Counties. This project is totally enclosed within the Norwalk/Santa Fe Springs Transportation Center - Metrolink Park and Ride.	2011 - 2020	$966,351	$837,881	$128,470	Federal - $612,881 local total $128,470 inkind $48,318
Pico Rivera	Beverly Boulevard Median Rehabilitiaon Project	Installation of new signalized intersection	Beverly Boulevard and Sandoval Avenue/Pico Park	2011 - 2020	$225,000	$75,000	$150,000	Measure R, Prop C and Prop 42
Pico Rivera	Beverly Boulevard Rehabilitaion Project	Part of the improvements Is the signal modification at Beverly Boulevard and Durfee Avenue	Beverly Boulevard and Durfee Avanue	2011 - 2020	$175,000	$125,000	$50,000	ARRA Money
Pico Rivera	Passons Grade Separation Project	Construction of a grade separtion at Passons Boulevard	Passons Boulevard at Rivera Road	2011 - 2020	$44,000,000	$22,000,000	$22,000,000	TCRP, SAFETEA-LU, STIP, Prop C, BNSF and PUC
SantaFe Springs	Traffic Signal Installation at Bloomfield at Corral	Installation of new traffic signal at intersection of Bloomfield at Corral	Bloomfield Ave. & Corral Pl.	2011 - 2020	$90,000	$0	$90,000	Developer

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
SantaFe Springs	New Bike Lanes and Bike Lockers	Bike lanes connecting Coyote Creek to Metrolink Transportation Center and to San Gabriel River Path; and Bike lockers (total of 20 bike lockers) at Metrolink station	Foster Rd. to Carmenita Rd. to Orden Dr. west, Leffingwell Rd. north, to Adler Dr. west, to Shoemaker Av. north, to Imperial Hwy. west, to Transit Center, then to Bloomfield Ave. north, to Los Nietos Rd. west, to the San Gabriel River bike path.	2011 - 2020	$400,000	$320,000	$80,000	Federal Grant
Signal Hill	786 Cherry Ave	Additional lanes	19th St to PCH	2011 - 2020	$6,721,000	$5,921,000	$800,000	Traffic Impact Fees, demo TE-LU, MTA
Signal Hill	California Avenue	Reconstruction	Patterson St to Willow Avenue	2011 - 2020	$508,000		$508,000	
Signal Hill	746 Traffic Signal Cherry & 20th Street	New traffic signal (no signal or stop sign currently)	Cherry Ave/ 20th St	2011 - 2020	$750,000	$500,000	$250,000	Safe Routes to School & Federal Funds (HSIP)
Signal Hill	Orizaba & PCH Traffic Signal	New traffic signal	Orizaba & PCH intersection	2011 - 2020	$250,000	$125,000	$125,000	Various Sources
Signal Hill	Willow & Walnut Traffic Signal	Left-turn phasing traffic signal	Willow & Walnut intersection	2011 - 2020	$120,000	$80,000	$40,000	Truck Impacted Intersections South Bay COG (MTA Grants)
Signal Hill	Willow & Orange Traffic Signal	Left-turn phasing traffic signal	Orange and Willow intersection	2011 - 2020	$370,000	$260,000	$110,000	Truck Impacted Intersections South Bay COG (MTA Grants)
Signal Hill	Orange Avenue Corridor Traffic Signal Synchronization	Synchronize traffic signals	Spring Street to Hill Street		$300,000	$60,000	$240,000	Gateway Cities Traffic Forum
Signal Hill	Citywide ADA Sidewalk Improvements	Sidewalk improvements	Citywide	2011 - 2020	$100,000	$77,000	$23,000	CDBG
South Gate	I-710/Firestone Blvd Interchange	This project involves widening south side of the Firestone Boulevard Bridge over the Los Angles River to provide three through lanes in each direction with a center raised median from Rayo Ave to I-710 freeway.	Firestone Boulevard over LA River	2011 - 2020	$14,721,000	$9,424,000	$5,297,000	Federal, Prop C

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
Vernon	Atlantic Blvd. Bridge over the LA River	The City of Vernon proposes to widen Atlantic Blvd. bridge over the Los Angeles River. Project will enhance the safety and operational use of Atlantic Blvd. bridge over the Los Angeles River and improve the intersection performance at District Blvd. The project involves widening Atlantic Blvd. for approximately 1,300 linear feet to provide traffic shoulders, standard sidewalks and extending the right-turn lane over to the Atlantic Blvd. Bridge. The proposed roadway configuration includes six 11-foot through traffic lanes, one northbound 11-foot right turn lane, 4-foot minimum shoulders, 5' sidewalks, and a center median. The adjacent intersection of Atlantic Blvd. and District Blvd. will be reconfigured and the traffic timing optimized.	Project limits are from Atlantic Blvd. north of the Los Angeles River to 800 feet south of the intersection with District Blvd. The proposed project is located approximately 0.25 miles (mi) southwest of the Long Beach Freeway (1-710) in the City of Vernon	2011 - 2020	$10,402,000	$3,602,000	$6,800,000	City Local and MTA Funds
Vernon	Atlantic Blvd. And District Blvd Intersection Improvement	The City of Vernon proposes to widen Atlantic Blvd. bridge over the Los Angeles River. Project will enhance the safety and operational use of Atlantic Blvd. bridge over the Los Angeles River and improve the intersection performance at District Blvd. The project involves widening Atlantic Blvd. for approximately 1,300 linear feet to provide traffic shoulders, standard sidewalks and extending the right-turn lane over to the Atlantic Blvd. Bridge. The proposed roadway configuration includes six 11-foot through traffic lanes, one northbound 11-foot right turn lane, 4-foot minimum shoulders, 5' sidewalks, and a center median. The adjacent intersection of Atlantic Blvd. and District Blvd. will be reconfigured and the traffic timing optimized.	Project limits are from Atlantic Blvd. north of the Los Angeles River to 800 feet south of the intersection with District Blvd. The proposed project is located approximately 0.25 miles (mi) southwest of the Long Beach Freeway (1-710) in the City of Vernon	2011 - 2020	$6,800,000	$3,400,000	$3,400,000	City Local and MTA Funds
Whittier	Hadley Street at Whittier Avenue	Installation of new traffic signal	Hadley Street at Whittier Avenue	2011 - 2020	$240,000	$120,000	$120,000	STPLG and Gas Tax B
Whittier	Lambert Road at Santa Gertrudes Avenue	Traffic Signal Modification	Lambert Road at Santa Gertrudes Avenue. Includes installation of median island to separate traffic on Santa Gertrudes Avenue at adjacent railroad grade crossing.	2011 - 2020	$535,000	$340,000	$195,000	HSIP Grant and Proposition 1B
Whittier	Lambert Road at Painter Avenue	Traffic Signal Modification	Lambert Road at Painter Avenue	2011 - 2020	$240,000	$120,000	$120,000	STPLG and Gas Tax B
Whittier	Lambert Road at Mills Avenue	Traffic Signal Modification	Lambert Road at Mills Avenue. Joint juridictional project with Los Angeles County. City 25% share of project cost.	2011 - 2020	$131,500	$65,000	$66,500	STPLG

Gateway Cities Future (Post 2010) Project Costs and Funding

City	Project Name	Project Description	Location	Implementation Date	Total Cost	Funded Portion	Unfunded Portion	Funding Source
Whittier	Pio Pico Bikeway Connection	Bikeway connection from San Gabriel River Bike Path to the Pio Pico State Histrocial Park	Adjacent to Whittier Boulevard from San Gabriel River Bike Path to Pio Pico State Historical Park	2011 - 2020	$670,000	$536,000	$134,000	Rivers and Mountains Conservancy
Whittier	Laurel Avenue Bike Lanes	Installation of Class II Bike Lanes	Laurel Avenue from Whittier Blvd. to Carnell Street	2006 - 2010	$20,000			ARRA
Whittier	Beverly Boulevard Class II Bike Lanes	Installation of Class II Bike Lanes, Median Islands, Safety Lighting and Bus Shelters	Beverly Blvd. from 605 Freeway to Norwalk Blvd/Workman Mill Road.	2011 - 2020	$1,242,500	$994,000	$248,500	HSIP and Propostion 1B
Whittier	Mills Avenue Sidewalks	Installation of Sidewalks and Wheelchair Access Ramps	Mills Avenue from Whittier Blvd. to Lambert Road	2011 - 2020	$425,000	$340,000	$85,000	SR2S and Gas Tax B
TOTAL					**$371,328,701**	**$215,296,720**	**$156,071,982**	

Note: Blue cells contain estimated costs. Orange cells contain per project cost averages devised from the FTIP in the case where multiple projects were funded as a single entity. Please see text for description of estimate methodology.

Appendix E.

Analysis for Transportation Demand Management Strategies in the Gateway Cities

E. Analysis for Travel Demand Management Strategies in the Gateway Cities

The TDM analysis, the impacts of which were summarized in Section 7, was based on information provided by the Gateways cities. Two inquiries were made of the cities to elicit information on if and what TDM strategies the cities employed or were present in the cities. Not surprisingly, most of the strategies reported were those under the control of the city as employer and land use regulator.

The results of this inquiry are summarized in Table E.1. Although cities reported activities in some eight categories of TDM strategies, participation (mode shift) data was available for only two strategies (Compressed Work Weeks and City Employee Rideshare Programs). Additionally, for those cities who reported having active TDM ordinances, trip reduction estimates were made based on growth in office development in each of these cities. Clearly, additional trip and emission reduction impacts are being produced by all eight types of TDM strategies, such as on-line course offerings at local colleges, shuttle services, safe routes to school projects, and bicycle programs, such as the Long Beach Bike Station.

Table E.1 TDM Strategies by Gateway City

City	Compressed Work Schedule	City Employee Rideshare Program	Bus Pass Sales	Higher Education TDM Initiatives	Shuttles	Bike/Ped Initiatives	Safe Routes to School	TDM Ordinance
Artesia							X	
Cerritos		X	X	X	X	X		
Commerce	X	X	X					X
Downey	X	X	X				X	
Hawaiian Gardens	X	X					X	X
Huntington Park	X							
Lakewood	X							

City	Compressed Work Schedule	City Employee Rideshare Program	Bus Pass Sales	Higher Education TDM Initiatives	Shuttles	Bike/Ped Initiatives	Safe Routes to School	TDM Ordinance
La Mirada	X		X					
Long Beach	X		X	X	X	X	X	X
Lynwood	X							X
Pico Rivera	X		X			X	X	X
Santa Fe Springs	X		X					
Signal Hill	X							
Southgate	X	X	X				X	X
Vernon	X	X						X
Whittier	X	X	X				X	X

The calculation of impacts for each of the three TDM strategies, for which mode shift or related data existed, is summarized below.

Compressed Work Weeks

Some 14 cities reported using compressed work week schedules for some or all of municipal employees. This is a very common strategy among South Coast Air Basin cities. While most cities used a 9/80 schedule, closing nonessential city office every other Friday, other cities employed 4/40 and 3/36 schedules.

In total, 3,309 employees are using a CWW schedule in the Gateway Cities. Most of these programs were implemented after 2005. The number of participants is not expected to grow in the planning years of 2020 and 2035. The calculation of GHG emission reduction impacts (in metric tons) is as follows:

- Participating employees — 3,309 (a)
- Vehicle trip reduction (a x 80% prior SOV) — 2,647 (b)
- VMT reduction (b x 20 mile commute) — 52,944 (c)
- 2020 GHG reduction (c x 327.36 g/mi) — 17.3 tons per CWW day off (d)
- 2035 GHG reduction (c x 286.13 g/mi) — 15.15 tons per CWW day off (e)

- 2020 GHG daily reduction (d x 14% of days are CWW days off) — 2.43 tons per day (f)
- 2035 GHG daily reduction (e x 14%) — 2.12 tons per day (g)
- 2020 GHG annual reduction (f x 250 commute days) — 607.5 tons per year
- 2035 GHG annual reduction (g x 250 commute days) — 530 tons per year

City Employee Ridesharing Program

Six cities reported having employee ridesharing programs for municipal workers. These cities reported that approximately 700 employees participated in the programs. Two of the cities reported an average vehicle ridership (AVR) of 1.29 and 1.31. Therefore, an AVR of 1.3 was applied to this employment and exemplary mode shares developed to equate to 1.3. This equated to a vehicle trip reduction of 418 trips. Assuming a 20-mile round trip commute, this equated to a VMT reduction of 8,360 miles. Applying the same emission factors cited above for CWW, this VMT reduction equates to a GHG emission reduction of 2.73 tons per day (2020) and 2.39 tons per day (2035). Annual reductions equate to 682.5 tons (2020) and 597.5 tons (2035). The diminishing reductions are due to lower emission factors in 2035 as California cars being cleaner and more efficient. City employee ridesharing participation was not expected to grow in future years.

TDM Ordinance

Eight cities reported having active TDM ordinances, seeking trip reduction mitigation at new commercial developments. While other cities presumably have TDM ordinances, they may not have reported due to inactivity of commercial development or with the ordinance application itself. The TDM ordinance analysis was different from that for Compressed Work Weeks and Employee Ridesharing, which had reported participation statistics. The known information related to this area was the existence of an ordinance and amount of estimated future office development in each city for 2020 and 2035 (from the SCAG Sustainability Tool).

First, trip reduction impacts were derived for new employment based on three scenarios: 1) a typical baseline mode split at office worksites, 2) an expected trip reduction of 8 percent due to the implementation of TDM strategies at new office developments (with the expected range of impacts from the most recent TDM literature – see Section 7), and 3) an expected trip reduction of 13 percent due to the interactive effects of TDM implemented at new developments, which are located in cities with aggressive smart growth and transit improvement policies and programs (see Section 10). These forecasted impacts were applied to a hypothetical group of 1,000 office workers and resulting mode splits were derived.

- The vehicle trip reduction impacts estimated for the second scenario (TDM ordinance alone) was calculated to be 80 trips per 1,000 employees or 2,400 miles (for a 30-mile round trip commute).
- The 2020 emission reduction impacts were estimated to be 0.79 tons per 1,000 office employee or 0.031 tons per 10,000 sq. ft. of office space.
- The 2035 emission reduction impacts were estimated to be 0.69 tons per 1,000 workers and 0.027 tons per 10,000 sq. ft.
- The vehicle trip reduction impacts estimated for the third scenario (interactive effects) was calculated to be 126 trips per 1,000 employees or 3,780 miles (for a 30-mile round trip commute).
- The 2020 emission reduction impacts were estimated to be 1.24 tons per 1,000 office employee or 0.0495 tons per 10,000 sq. ft. of office space.
- The 2035 emission reduction impacts were estimated to be 1.08 tons per 1,000 workers and 0.043 tons per 10,000 square feet.

The emission reduction estimates per 10,000 square feet of office development were then applied to the forecasted growth in such development in each city. The estimated 2020 growth in office development in the eight TDM ordinance cities is 1,759, 380 square feet of office space. In 2035, this number is expected to grow to 2,945,340. However, TDM ordinance provisions only apply to developments of a certain size (generally 25,000 square feet or larger). Therefore, trip and emission reduction impacts were only applied to 30 percent of new office space growth (as per one cities estimate).

The resulting emission estimates, using the same emission factors, were calculated to be:

- 1.66 tons per day or 415 tons per year for 2020 due to TDM ordinance application;
- 2.43 tons per day or 607.5 tons per year in 2035 due to TDM ordinance application;
- 2.61 tons per day or 652.5 tons per year in 2020 due to interactive effects of smart growth and transit; and
- 3.83 tons per day or 957.5 tons per year in 2035 due to interactive effects.

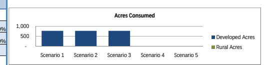
Appendix F.

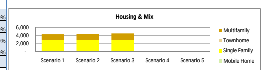
Land Use Scenario Strategies from Sustainability Tool (2008, 2020, and 2035)

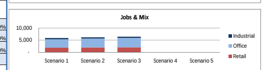
Artesia

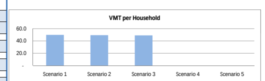
Artesia	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	-	0%	-	0%	-	0%	-	0%	-	0%
Developed Acres	778	100%	778	100%	778	100%	-	0%	-	0%
Total	***778***		***778***		***778***		-		-	
Housing Mix										
Single Family	2,923	68%	2,979	67%	2,981	66%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	1,404	32%	1,440	33%	1,562	34%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***4,327***		***4,419***		***4,543***		-		-	
Employment Mix										
Retail	1,877	32%	1,952	32%	2,016	31%	-	0%	-	0%
Office	3,497	59%	3,722	60%	3,926	61%	-	0%	-	0%
Industrial	517	9%	521	8%	518	8%	-	0%	-	0%
Total	***5,891***		***6,195***		***6,460***		-		-	
Density										
Housing Unit	5.6		5.7		5.8		-		-	
Employment	7.6		8.0		8.3		-		-	
Jobs/Housing Balance	1.4		1.4		1.4		-		-	
Vehicle Ownership per Household	2.2		2.2		2.2		-		-	
Vehicle Miles Traveled per Household	49.8		49.4		49.0		-		-	
Travel Mode Split										
Drive Alone Trip	57.6%		57.7%		57.7%		0.0%		0.0%	
Auto-Passenger Trip	29.0%		29.0%		28.9%		0.0%		0.0%	
Transit Trip	4.1%		4.0%		4.0%		0.0%		0.0%	
Non-Auto Trip	9.4%		9.4%		9.4%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0222		0.0217		0.0218		-		-	

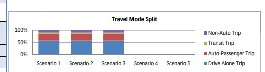
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).







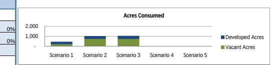


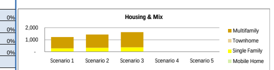


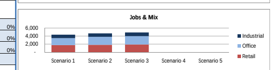
Avalon

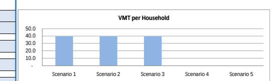
Avalon	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008 Existing		YR 2035 Base		YR2003 ALT1					
Acres										
Vacant Acres	187	42%	726	70%	729	69%	-	0%	-	0%
Developed Acres	261	58%	305	30%	323	31%	-	0%	-	0%
Total	***449***		***1,031***		***1,052***		-		-	
Housing Mix										
Single Family	302	24%	349	24%	384	23%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	937	76%	1,095	76%	1,260	77%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***1,239***		***1,444***		***1,644***		-		-	
Employment Mix										
Retail	1,773	41%	1,842	39%	1,931	39%	-	0%	-	0%
Office	1,747	40%	1,997	43%	2,092	43%	-	0%	-	0%
Industrial	857	20%	857	18%	898	18%	-	0%	-	0%
Total	***4,377***		***4,696***		***4,921***		-		-	
Density										
Housing Unit	2.8		1.4		1.6		-		-	
Employment	9.8		4.6		4.7		-		-	
Jobs/Housing Balance	3.5		3.3		3.0		-		-	
Vehicle Ownership per Household	1.6		1.6		1.6		-		-	
Vehicle Miles Traveled per Household	39.6		39.5		39.5		-		-	
Travel Mode Split										
Drive Alone Trip	54.5%		54.6%		54.3%		0.0%		0.0%	
Auto-Passenger Trip	26.2%		26.2%		26.2%		0.0%		0.0%	
Transit Trip	4.6%		4.6%		4.7%		0.0%		0.0%	
Non-Auto Trip	14.6%		14.6%		14.9%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0177		0.0176		0.0176		-		-	

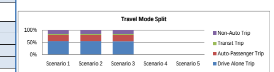
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).







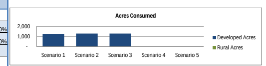


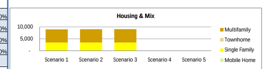


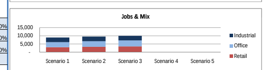
Bell

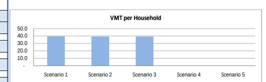
Bell	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	2	0%	3	0%	3	0%	-	0%	-	0%
Developed Acres	1,266	100%	1,283	100%	1,283	100%	-	0%	-	0%
Total	***1,267***		***1,286***		***1,286***		-		-	
Housing Mix										
Single Family	3,502	39%	3,502	39%	3,502	38%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	5,489	61%	5,540	61%	5,595	62%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***8,991***		***9,042***		***9,097***		-		-	
Employment Mix										
Retail	3,010	34%	3,267	34%	3,475	35%	-	0%	-	0%
Office	3,103	35%	3,427	36%	3,716	37%	-	0%	-	0%
Industrial	2,856	32%	2,821	30%	2,773	28%	-	0%	-	0%
Total	***8,969***		***9,515***		***9,964***		-		-	
Density										
Housing Unit	7.1		7.0		7.1		-		-	
Employment	7.1		7.4		7.7		-		-	
Jobs/Housing Balance	1.0		1.1		1.1		-		-	
Vehicle Ownership per Household	1.9		1.9		1.9		-		-	
Vehicle Miles Traveled per Household	39.6		39.2		39.2		-		-	
Travel Mode Split										
Drive Alone Trip	46.2%		46.2%		46.2%		0.0%		0.0%	
Auto-Passenger Trip	32.0%		32.0%		32.0%		0.0%		0.0%	
Transit Trip	6.1%		6.0%		6.0%		0.0%		0.0%	
Non-Auto Trip	15.7%		15.7%		15.7%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0177		0.0172		0.0174		-		-	

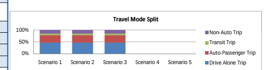
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).







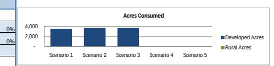


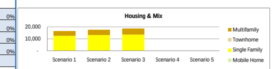


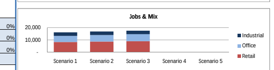
Bellflower

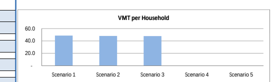
Bellflower	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	29	1%	63	2%	63	2%	-	0%	-	0%
Developed Acres	3,511	99%	3,633	98%	3,633	98%	-	0%	-	0%
Total	***3,541***		***3,696***		***3,696***		-		-	
Housing Mix										
Single Family	12,547	76%	13,220	75%	13,567	72%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	4,068	24%	4,460	25%	5,177	28%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***16,615***		***17,680***		***18,744***		-		-	
Employment Mix										
Retail	8,245	51%	8,645	51%	8,936	51%	-	0%	-	0%
Office	4,965	31%	5,311	32%	5,689	33%	-	0%	-	0%
Industrial	2,922	18%	2,893	17%	2,875	16%	-	0%	-	0%
Total	***16,132***		***16,849***		***17,500***		-		-	
Density										
Housing Unit	4.7		4.8		5.1		-		-	
Employment	4.6		4.6		4.7		-		-	
Jobs/Housing Balance	1.0		1.0		0.9		-		-	
Vehicle Ownership per Household	2.2		2.2		2.2		-		-	
Vehicle Miles Traveled per Household	48.6		48.1		47.8		-		-	
Travel Mode Split										
Drive Alone Trip	54.8%		54.8%		54.7%		0.0%		0.0%	
Auto-Passenger Trip	30.4%		30.5%		30.5%		0.0%		0.0%	
Transit Trip	4.2%		4.2%		4.2%		0.0%		0.0%	
Non-Auto Trip	10.5%		10.5%		10.6%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0217		0.0211		0.0213		-		-	

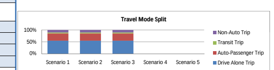
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).





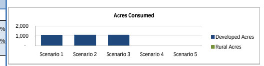


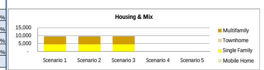


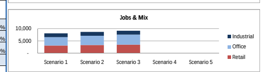


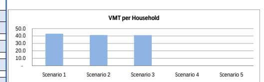
Bell Gardens

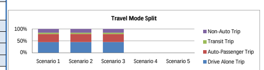
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	25	2%	26	2%	26	2%	-	0%	-	0%
Developed Acres	1,057	98%	1,093	98%	1,093	98%	-	0%	-	0%
Total	***1,081***		***1,119***		***1,119***		-		-	
Housing Mix										
Single Family	4,488	47%	4,488	47%	4,488	46%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	5,110	53%	5,154	53%	5,201	54%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***9,598***		***9,642***		***9,689***		-		-	
Employment Mix										
Retail	3,087	38%	3,297	38%	3,463	38%	-	0%	-	0%
Office	3,428	42%	3,786	44%	4,111	45%	-	0%	-	0%
Industrial	1,564	19%	1,566	18%	1,567	17%	-	0%	-	0%
Total	***8,079***		***8,650***		***9,141***		-		-	
Density										
Housing Unit	8.9		8.6		8.7		-		-	
Employment	7.5		7.7		8.2		-		-	
Jobs/Housing Balance	0.8		0.9		0.9		-		-	
Vehicle Ownership per Household	2.0		2.0		2.0		-		-	
Vehicle Miles Traveled per Household	43.0		41.3		41.2		-		-	
Travel Mode Split										
Drive Alone Trip	44.6%		44.7%		44.7%		0.0%		0.0%	
Auto-Passenger Trip	33.9%		34.0%		33.9%		0.0%		0.0%	
Transit Trip	5.9%		5.7%		5.7%		0.0%		0.0%	
Non-Auto Trip	15.7%		15.7%		15.7%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0192		0.0181		0.0183		-		-	







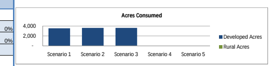


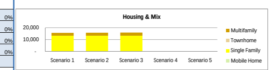


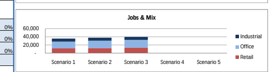
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

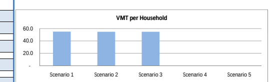
Cerritos

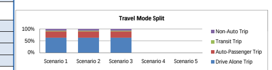
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	18	1%	40	1%	40	1%	-	0%	-	0%
Developed Acres	3,519	99%	3,579	99%	3,579	99%	-	0%	-	0%
Total	***3,537***		***3,619***		***3,619***		-		-	
Housing Mix										
Single Family	13,272	84%	13,272	84%	13,272	83%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	2,452	16%	2,554	16%	2,663	17%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***15,725***		***15,827***		***15,936***		-		-	
Employment Mix										
Retail	11,638	33%	12,426	33%	13,057	33%	-	0%	-	0%
Office	16,601	47%	18,076	48%	19,442	49%	-	0%	-	0%
Industrial	7,371	21%	7,271	19%	7,153	18%	-	0%	-	0%
Total	***35,610***		***37,773***		***39,652***		-		-	
Density										
Housing Unit	4.4		4.4		4.4		-		-	
Employment	10.1		10.4		11.0		-		-	
Jobs/Housing Balance	2.3		2.4		2.5		-		-	
Vehicle Ownership per Household	2.4		2.4		2.4		-		-	
Vehicle Miles Traveled per Household	55.1		54.9		54.8		-		-	
Travel Mode Split										
Drive Alone Trip	63.0%		63.1%		63.0%		0.0%		0.0%	
Auto-Passenger Trip	26.7%		26.7%		26.7%		0.0%		0.0%	
Transit Trip	3.0%		3.0%		3.0%		0.0%		0.0%	
Non-Auto Trip	7.3%		7.3%		7.3%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0246		0.0241		0.0244		-		-	







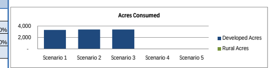


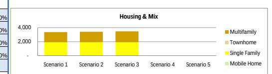


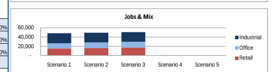
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

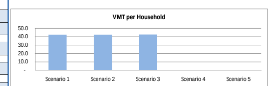
Commerce

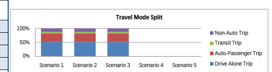
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	17	1%	51	2%	51	2%	-	0%	-	0%
Developed Acres	3,296	99%	3,330	98%	3,330	98%	-	0%	-	0%
Total	***3,313***		***3,381***		***3,381***		-		-	
Housing Mix										
Single Family	1,921	57%	1,921	57%	1,921	55%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	1,435	43%	1,479	43%	1,542	45%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***3,356***		***3,400***		***3,463***		-		-	
Employment Mix										
Retail	15,285	32%	16,347	33%	17,229	34%	-	0%	-	0%
Office	11,265	23%	12,018	24%	12,775	25%	-	0%	-	0%
Industrial	21,648	45%	21,041	43%	20,627	41%	-	0%	-	0%
Total	***48,198***		***49,406***		***50,631***		-		-	
Density										
Housing Unit	1.0		1.0		1.0		-		-	
Employment	14.5		14.6		15.0		-		-	
Jobs/Housing Balance	14.4		14.5		14.6		-		-	
Vehicle Ownership per Household	2.0		2.0		2.0		-		-	
Vehicle Miles Traveled per Household	42.5		42.6		42.6		-		-	
Travel Mode Split										
Drive Alone Trip	51.1%		51.1%		51.1%		0.0%		0.0%	
Auto-Passenger Trip	31.1%		31.1%		31.1%		0.0%		0.0%	
Transit Trip	5.0%		5.0%		5.0%		0.0%		0.0%	
Non-Auto Trip	12.8%		12.8%		12.7%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0190		0.0187		0.0189		-		-	







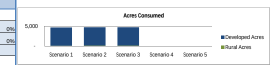


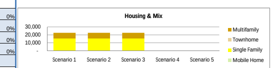


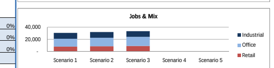
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

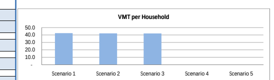
Compton

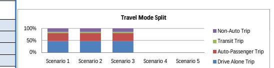
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	80	2%	112	2%	112	2%	-	0%	-	0%
Developed Acres	4,604	98%	4,631	98%	4,631	98%	-	0%	-	0%
Total	***4,683***		***4,744***		***4,744***		-		-	
Housing Mix										
Single Family	15,498	68%	15,498	68%	15,498	68%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	7,154	32%	7,169	32%	7,184	32%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***22,652***		***22,667***		***22,682***		-		-	
Employment Mix										
Retail	7,933	26%	8,512	27%	8,982	27%	-	0%	-	0%
Office	12,937	42%	14,078	44%	15,169	45%	-	0%	-	0%
Industrial	9,700	32%	9,468	30%	9,293	28%	-	0%	-	0%
Total	***30,570***		***32,058***		***33,444***		-		-	
Density										
Housing Unit	4.8		4.8		4.8		-		-	
Employment	6.5		6.8		7.1		-		-	
Jobs/Housing Balance	1.3		1.4		1.5		-		-	
Vehicle Ownership per Household	2.0		2.0		2.0		-		-	
Vehicle Miles Traveled per Household	42.5		42.2		42.1		-		-	
Travel Mode Split										
Drive Alone Trip	47.6%		47.6%		47.6%		0.0%		0.0%	
Auto-Passenger Trip	33.1%		33.2%		33.2%		0.0%		0.0%	
Transit Trip	5.4%		5.3%		5.3%		0.0%		0.0%	
Non-Auto Trip	13.9%		13.9%		13.9%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0190		0.0185		0.0188		-		-	







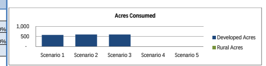


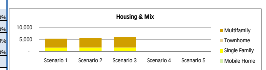


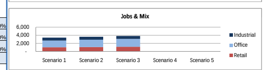
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

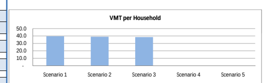
Cudahy

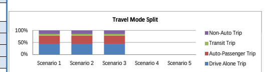
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	-	0%	-	0%	-	0%	-	0%	-	0%
Developed Acres	576	100%	597	100%	597	100%	-	0%	-	0%
Total	***576***		***597***		***597***		-		-	
Housing Mix										
Single Family	1,665	31%	1,696	30%	1,717	28%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	3,760	69%	4,046	70%	4,404	72%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***5,425***		***5,742***		***6,121***		-		-	
Employment Mix										
Retail	1,015	30%	1,084	30%	1,144	30%	-	0%	-	0%
Office	1,674	49%	1,827	50%	1,961	51%	-	0%	-	0%
Industrial	736	21%	727	20%	721	19%	-	0%	-	0%
Total	***3,425***		***3,638***		***3,826***		-		-	
Density										
Housing Unit	9.4		9.6		10.2		-		-	
Employment	5.9		6.1		6.4		-		-	
Jobs/Housing Balance	0.6		0.6		0.6		-		-	
Vehicle Ownership per Household	1.9		1.9		1.9		-		-	
Vehicle Miles Traveled per Household	39.7		39.0		38.6		-		-	
Travel Mode Split										
Drive Alone Trip	44.0%		44.0%		44.0%		0.0%		0.0%	
Auto-Passenger Trip	34.2%		34.2%		34.2%		0.0%		0.0%	
Transit Trip	6.2%		6.1%		6.1%		0.0%		0.0%	
Non-Auto Trip	15.6%		15.6%		15.7%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0177		0.0171		0.0172		-		-	







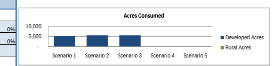


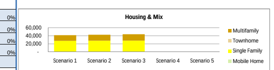


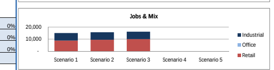
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

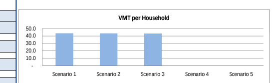
Downey

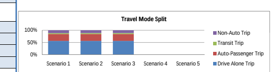
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	12	0%	20	0%	20	0%	-	0%	-	0%
Developed Acres	5,378	100%	5,583	100%	5,583	100%	-	0%	-	0%
Total	***5,390***		***5,602***		***5,602***		-		-	
Housing Mix										
Single Family	27,600	66%	28,037	65%	28,057	64%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	14,109	34%	14,770	35%	15,952	36%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***41,709***		***42,807***		***44,009***		-		-	
Employment Mix										
Retail	8,862	59%	9,542	60%	10,059	62%	-	0%	-	0%
Office	-	0%	-	0%	-	0%	-	0%	-	0%
Industrial	6,243	41%	6,242	40%	6,181	38%	-	0%	-	0%
Total	***15,105***		***15,784***		***16,240***		-		-	
Density										
Housing Unit	7.7		7.6		7.9		-		-	
Employment	2.8		2.8		2.9		-		-	
Jobs/Housing Balance	0.4		0.4		0.4		-		-	
Vehicle Ownership per Household	2.0		2.0		2.0		-		-	
Vehicle Miles Traveled per Household	43.8		43.6		43.4		-		-	
Travel Mode Split										
Drive Alone Trip	56.3%		56.3%		56.3%		0.0%		0.0%	
Auto-Passenger Trip	27.9%		28.0%		28.0%		0.0%		0.0%	
Transit Trip	4.0%		4.0%		4.0%		0.0%		0.0%	
Non-Auto Trip	11.8%		11.7%		11.7%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0195		0.0191		0.0193		-		-	







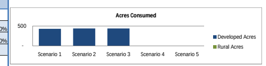


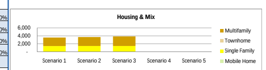


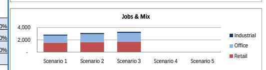
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

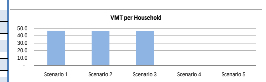
Hawaiian Gardens

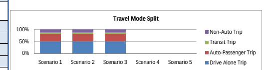
Hawaiian Gardens	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	-	0%	-	0%	-	0%	-	0%	-	0%
Developed Acres	429	100%	438	100%	438	100%	-	0%	-	0%
Total	***429***		***438***		***438***		-		-	
Housing Mix										
Single Family	1,456	41%	1,468	40%	1,472	38%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	2,139	59%	2,248	60%	2,403	62%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***3,595***		***3,716***		***3,875***		-		-	
Employment Mix										
Retail	1,539	54%	1,633	52%	1,696	51%	-	0%	-	0%
Office	1,158	41%	1,312	42%	1,454	44%	-	0%	-	0%
Industrial	162	6%	171	5%	175	5%	-	0%	-	0%
Total	***2,859***		***3,116***		***3,325***		-		-	
Density										
Housing Unit	8.4		8.5		8.8		-		-	
Employment	6.7		7.1		7.6		-		-	
Jobs/Housing Balance	0.8		0.8		0.9		-		-	
Vehicle Ownership per Household	2.1		2.1		2.1		-		-	
Vehicle Miles Traveled per Household	46.8		46.5		46.5		-		-	
Travel Mode Split										
Drive Alone Trip	49.9%		49.9%		49.9%		0.0%		0.0%	
Auto-Passenger Trip	31.6%		31.7%		31.7%		0.0%		0.0%	
Transit Trip	5.0%		5.0%		5.0%		0.0%		0.0%	
Non-Auto Trip	13.5%		13.4%		13.4%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0209		0.0204		0.0207		-		-	







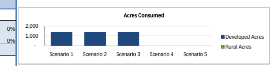


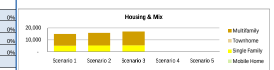


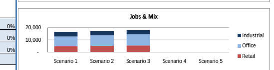
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

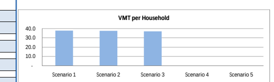
Huntington Park

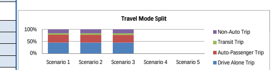
Huntington Park	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	1	0%	1	0%	1	0%	-	0%	-	0%
Developed Acres	1,400	100%	1,400	100%	1,400	100%	-	0%	-	0%
Total	***1,401***		***1,401***		***1,401***		-		-	
Housing Mix										
Single Family	5,172	35%	5,351	34%	5,473	32%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	9,797	65%	10,561	66%	11,531	68%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***14,969***		***15,912***		***17,004***		-		-	
Employment Mix										
Retail	4,846	30%	5,141	30%	5,404	30%	-	0%	-	0%
Office	7,934	48%	8,543	50%	9,103	51%	-	0%	-	0%
Industrial	3,614	22%	3,515	20%	3,435	19%	-	0%	-	0%
Total	***16,394***		***17,199***		***17,942***		-		-	
Density										
Housing Unit	10.7		11.4		12.1		-		-	
Employment	11.7		12.3		12.8		-		-	
Jobs/Housing Balance	1.1		1.1		1.1		-		-	
Vehicle Ownership per Household	1.9		1.8		1.8		-		-	
Vehicle Miles Traveled per Household	37.8		37.6		37.1		-		-	
Travel Mode Split										
Drive Alone Trip	45.2%		45.1%		44.9%		0.0%		0.0%	
Auto-Passenger Trip	32.3%		32.3%		32.2%		0.0%		0.0%	
Transit Trip	6.5%		6.5%		6.6%		0.0%		0.0%	
Non-Auto Trip	16.0%		16.1%		16.3%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0169		0.0165		0.0165		-		-	







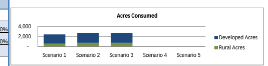


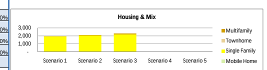


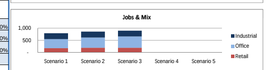
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

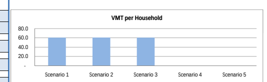
La Habra Heights

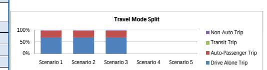
La Habra Heights	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	550	23%	728	27%	728	27%	-	0%	-	0%
Developed Acres	1,852	77%	1,959	73%	1,959	73%	-	0%	-	0%
Total	***2,402***		***2,687***		***2,687***		-		-	
Housing Mix										
Single Family	1,929	98%	2,052	97%	2,179	94%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	32	2%	55	3%	132	6%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***1,961***		***2,107***		***2,311***		-		-	
Employment Mix										
Retail	173	22%	190	22%	191	21%	-	0%	-	0%
Office	375	47%	423	49%	468	52%	-	0%	-	0%
Industrial	244	31%	248	29%	239	27%	-	0%	-	0%
Total	***793***		***861***		***898***		-		-	
Density										
Housing Unit	0.8		0.8		0.9		-		-	
Employment	0.3		0.3		0.3		-		-	
Jobs/Housing Balance	0.4		0.4		0.4		-		-	
Vehicle Ownership per Household	2.5		2.5		2.5		-		-	
Vehicle Miles Traveled per Household	60.6		60.6		60.6		-		-	
Travel Mode Split										
Drive Alone Trip	69.9%		69.9%		69.8%		0.0%		0.0%	
Auto-Passenger Trip	26.6%		26.6%		26.6%		0.0%		0.0%	
Transit Trip	2.1%		2.1%		2.2%		0.0%		0.0%	
Non-Auto Trip	1.4%		1.4%		1.5%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0270		0.0266		0.0270		-		-	







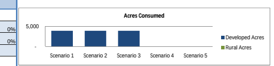


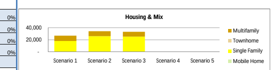


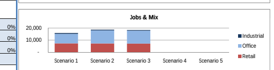
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

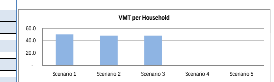
Lakewood

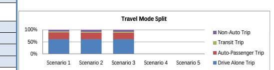
Lakewood	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	46	1%	46	1%	46	1%	-	0%	-	0%
Developed Acres	3,916	99%	3,916	99%	3,916	99%	-	0%	-	0%
Total	***3,962***		***3,962***		***3,962***		-		-	
Housing Mix										
Single Family	18,126	67%	26,201	76%	25,447	76%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	8,877	33%	8,205	24%	7,993	24%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***27,002***		***34,406***		***33,440***		-		-	
Employment Mix										
Retail	7,306	46%	7,246	39%	7,143	39%	-	0%	-	0%
Office	7,933	50%	10,903	58%	10,771	58%	-	0%	-	0%
Industrial	683	4%	590	3%	523	3%	-	0%	-	0%
Total	***15,923***		***18,738***		***18,438***		-		-	
Density										
Housing Unit	6.8		8.7		8.4		-		-	
Employment	4.0		4.7		4.7		-		-	
Jobs/Housing Balance	0.6		0.5		0.6		-		-	
Vehicle Ownership per Household	2.1		2.1		2.1		-		-	
Vehicle Miles Traveled per Household	50.2		48.2		48.3		-		-	
Travel Mode Split										
Drive Alone Trip	60.9%		60.9%		60.9%		0.0%		0.0%	
Auto-Passenger Trip	28.5%		27.3%		27.3%		0.0%		0.0%	
Transit Trip	3.4%		3.3%		3.3%		0.0%		0.0%	
Non-Auto Trip	7.2%		8.4%		8.4%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0224		0.0212		0.0215		-		-	









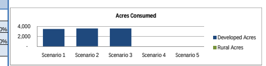


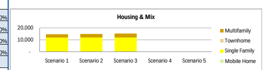
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

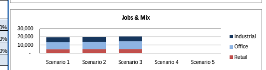
La Mirada

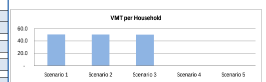
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	24	1%	43	1%	43	1%	-	0%	-	0%
Developed Acres	3,460	99%	3,555	99%	3,555	99%	-	0%	-	0%
Total	***3,484***		***3,597***		***3,597***		-		-	
Housing Mix										
Single Family	11,939	81%	12,049	80%	12,049	78%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	2,781	19%	2,958	20%	3,317	22%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***14,720***		***15,007***		***15,366***		-		-	
Employment Mix										
Retail	4,588	24%	4,789	24%	4,955	24%	-	0%	-	0%
Office	8,690	45%	9,076	46%	9,470	47%	-	0%	-	0%
Industrial	6,070	31%	5,973	30%	5,929	29%	-	0%	-	0%
Total	***19,348***		***19,838***		***20,354***		-		-	
Density										
Housing Unit	4.2		4.2		4.3		-		-	
Employment	5.6		5.5		5.7		-		-	
Jobs/Housing Balance	1.3		1.3		1.3		-		-	
Vehicle Ownership per Household	2.2		2.2		2.2		-		-	
Vehicle Miles Traveled per Household	50.5		50.4		50.2		-		-	
Travel Mode Split										
Drive Alone Trip	61.5%		61.6%		61.5%		0.0%		0.0%	
Auto-Passenger Trip	27.7%		27.7%		27.7%		0.0%		0.0%	
Transit Trip	3.1%		3.1%		3.1%		0.0%		0.0%	
Non-Auto Trip	7.6%		7.6%		7.7%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0225		0.0221		0.0224		-		-	

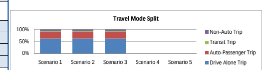
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).









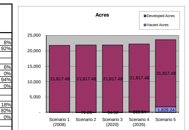


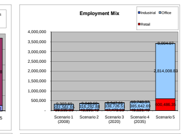
Long Beach

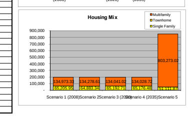
	Scenario 1 (2008)		Scenario 2		Scenario 3 (2020)		Scenario 4 (2035)		Scenario 5	
Acres										
Vacant Acres	-	0%	72.28	0%	94.52	0%	383.64	2%	1,829.24	8%
Developed Acres	21,817.48	100%	21,817.48	100%	21,817.48	100%	21,817.48	98%	21,817.48	92%
Housing Mix										
Single Family	65,205.95	33%	64,883.34	33%	65,192.71	33%	65,176.48	33%	51,111.87	6%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	134,973.33	67%	134,278.61	67%	134,041.02	67%	134,028.72	67%	803,273.02	94%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
	200,179.29		***199,161.95***		***199,233.72***		***199,205.20***		***854,384.89***	
Employment Mix										
Retail	39,535.31	12%	43,895.43	12%	47,473.53	12%	49,121.46	11%	600,486.35	18%
Office	281,561.65	85%	316,292.88	86%	338,726.51	86%	385,642.69	87%	2,814,008.83	82%
Industrial	9,303.69	3%	9,048.60	2%	8,947.61	2%	10,748.37	2%	8,004.07	0%
	330,400.65		***369,236.92***		***395,147.65***		***445,512.52***		***3,422,499.25***	
Density										
Housing Unit	9.18		9.10		9.09		8.97		36.13	
Employment	15.14		16.87		18.03		20.07		144.73	
Jobs/Housing Balance	1.65		1.85		1.98		2.24		4.01	
Vehicle Ownership per Household	1.57		1.57		1.57		1.57		1.40	
Vehicle Miles Traveled per Household	32.77		32.01		32.01		32.01		27.12	
Travel Mode Split										
Drive Alone Trip	54.2%		54.2%		54.3%		54.3%		49.5%	
Auto-Passenger Trip	26.8%		26.9%		26.9%		26.9%		26.0%	
Transit Trip	4.9%		4.7%		4.7%		4.7%		5.3%	
Non-Auto Trip	14.1%		14.1%		14.1%		14.1%		19.2%	
Greenhouse Gas Emissions (Tons/Day)	3,201.33		3,110.83		3,112.10		3,111.68		11,308.26	
Greenhouse Gas Emissions (Tons/Household)	0.01599229374		0.01561958158		0.01562037241		0.01562047180		0.01323556088	

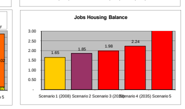
2008 Total Population	491273.00				
2008 Total Household	166363.00				
2008 Average Household Size	2.95				
GHG per Capita	0.0054	0.0053	0.0053	0.0053	0.0045

*Based on April 4 discussion with Ira Brown, the Scenarios are defined as above (2008, 2020 and 2035)





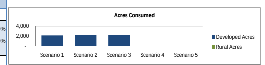


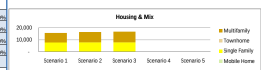


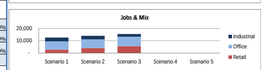
Lynwood

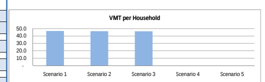
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	3	0%	7	0%	7	0%	-	0%	-	0%
Developed Acres	2,124	100%	2,185	100%	2,185	100%	-	0%	-	0%
Total	***2,127***		***2,191***		***2,191***		-		-	
Housing Mix										
Single Family	7,803	49%	7,973	48%	7,973	47%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	7,974	51%	8,564	52%	8,839	53%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***15,776***		***16,538***		***16,812***		-		-	
Employment Mix										
Retail	2,742	22%	4,041	29%	5,564	36%	-	0%	-	0%
Office	6,770	54%	7,141	51%	7,740	50%	-	0%	-	0%
Industrial	3,081	24%	2,862	20%	2,227	14%	-	0%	-	0%
Total	***12,593***		***14,044***		***15,531***		-		-	
Density										
Housing Unit	7.4		7.5		7.7		-		-	
Employment	5.9		6.4		7.1		-		-	
Jobs/Housing Balance	0.8		0.8		0.9		-		-	
Vehicle Ownership per Household	2.2		2.2		2.2		-		-	
Vehicle Miles Traveled per Household	46.8		46.6		46.5		-		-	
Travel Mode Split										
Drive Alone Trip	46.5%		46.5%		46.5%		0.0%		0.0%	
Auto-Passenger Trip	33.9%		33.9%		33.9%		0.0%		0.0%	
Transit Trip	5.4%		5.4%		5.4%		0.0%		0.0%	
Non-Auto Trip	14.2%		14.2%		14.2%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0209		0.0204		0.0207		-		-	

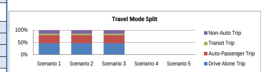
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).







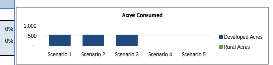


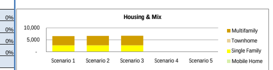


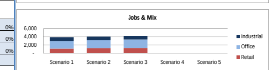
Maywood

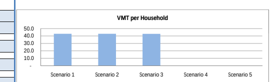
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	3	1%	3	1%	3	1%	-	0%	-	0%
Developed Acres	556	99%	556	99%	556	99%	-	0%	-	0%
Total	***559***		***559***		***559***		-		-	
Housing Mix										
Single Family	2,730	41%	2,730	41%	2,730	40%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	3,864	59%	3,931	59%	4,013	60%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***6,594***		***6,661***		***6,743***		-		-	
Employment Mix										
Retail	1,108	29%	1,194	29%	1,254	30%	-	0%	-	0%
Office	1,832	47%	1,964	48%	2,079	49%	-	0%	-	0%
Industrial	921	24%	903	22%	885	21%	-	0%	-	0%
Total	***3,861***		***4,060***		***4,218***		-		-	
Density										
Housing Unit	11.8		11.9		12.1		-		-	
Employment	6.9		7.3		7.5		-		-	
Jobs/Housing Balance	0.6		0.6		0.6		-		-	
Vehicle Ownership per Household	2.0		2.0		2.0		-		-	
Vehicle Miles Traveled per Household	43.0		42.9		42.9		-		-	
Travel Mode Split										
Drive Alone Trip	45.9%		45.9%		45.9%		0.0%		0.0%	
Auto-Passenger Trip	32.9%		32.9%		32.9%		0.0%		0.0%	
Transit Trip	6.1%		6.1%		6.1%		0.0%		0.0%	
Non-Auto Trip	15.1%		15.1%		15.1%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0192		0.0189		0.0191		-		-	

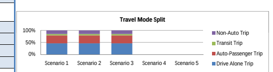
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).







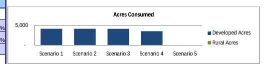


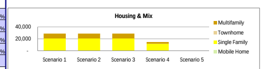


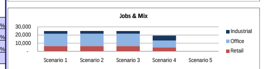
Norwalk

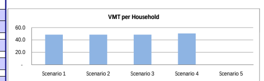
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035		blank		blank	
Acres										
Rural Acres	24	1%	28	1%	28	1%	24	1%	-	0%
Developed Acres	4,086	99%	4,087	99%	4,063	99%	3,460	99%	-	0%
Total	***4,110***		***4,115***		***4,091***		***3,484***		-	
Housing Mix										
Single Family	20,297	70%	20,297	70%	20,286	70%	11,939	81%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	8,196	28%	8,196	28%	8,194	28%	2,781	19%	-	0%
Mobile Home	423	1%	423	1%	423	1%	-	0%	-	0%
Total	***28,494***		***28,494***		***28,481***		***14,720***		-	
Employment Mix										
Retail	6,339	25%	6,342	25%	6,350	26%	4,588	24%	-	0%
Office	15,154	61%	15,251	61%	15,277	61%	8,690	45%	-	0%
Industrial	3,375	14%	3,375	14%	3,244	13%	6,070	31%	-	0%
Total	***24,868***		***24,969***		***24,871***		***19,348***		-	
Density										
Housing Unit	7.0		7.0		7.1		4.2		-	
Employment	6.1		6.1		6.1		5.6		-	
Jobs/Housing Balance	0.9		0.9		0.9		1.3		-	
Vehicle Ownership per Household	2.2		2.2		2.2		2.2		-	
Vehicle Miles Traveled per Household	48.5		48.6		48.5		50.5		-	
Travel Mode Split										
Drive Alone Trip	54.2%		54.2%		54.2%		61.5%		0.0%	
Auto-Passenger Trip	30.5%		30.5%		30.5%		27.7%		0.0%	
Transit Trip	4.3%		4.3%		4.3%		3.1%		0.0%	
Non-Auto Trip	11.0%		11.0%		11.0%		7.6%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0216		0.0213		0.0216		0.0225		-	

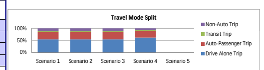
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).







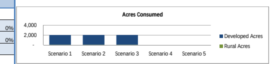


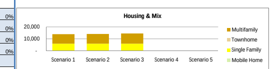


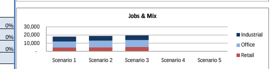
Paramount

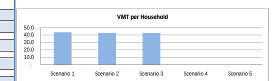
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	68	3%	73	4%	73	4%	-	0%	-	0%
Developed Acres	1,951	97%	1,970	96%	1,970	96%	-	0%	-	0%
Total	***2,019***		***2,043***		***2,043***		-		-	
Housing Mix										
Single Family	5,972	43%	6,000	42%	6,000	41%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	8,004	57%	8,156	58%	8,532	59%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***13,976***		***14,156***		***14,532***		-		-	
Employment Mix										
Retail	4,708	26%	5,028	27%	5,304	27%	-	0%	-	0%
Office	7,368	41%	7,941	42%	8,471	43%	-	0%	-	0%
Industrial	6,009	33%	5,907	31%	5,829	30%	-	0%	-	0%
Total	***18,085***		***18,876***		***19,604***		-		-	
Density										
Housing Unit	6.9		6.9		7.1		-		-	
Employment	9.0		9.2		9.6		-		-	
Jobs/Housing Balance	1.3		1.3		1.3		-		-	
Vehicle Ownership per Household	2.0		2.0		2.0		-		-	
Vehicle Miles Traveled per Household	43.7		42.8		42.6		-		-	
Travel Mode Split										
Drive Alone Trip	49.2%		49.3%		49.3%		0.0%		0.0%	
Auto-Passenger Trip	32.0%		32.2%		32.1%		0.0%		0.0%	
Transit Trip	5.0%		4.9%		4.9%		0.0%		0.0%	
Non-Auto Trip	13.7%		13.7%		13.7%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0195		0.0188		0.0190		-		-	

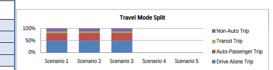
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).





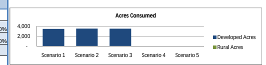


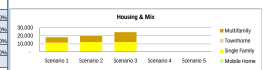


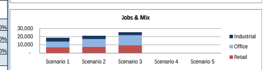


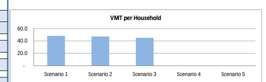
Pico Rivera

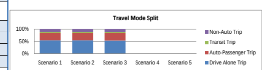
Pico Rivera	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	30	1%	39	1%	39	1%	-	0%	-	0%
Developed Acres	3,469	99%	3,522	99%	3,505	99%	-	0%	-	0%
Total	***3,500***		***3,561***		***3,544***		-		-	
Housing Mix										
Single Family	11,686	64%	12,261	61%	12,291	50%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	6,592	36%	7,722	39%	12,304	50%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***18,278***		***19,983***		***24,594***		-		-	
Employment Mix										
Retail	6,889	37%	7,711	36%	9,476	37%	-	0%	-	0%
Office	7,022	37%	9,300	44%	12,411	49%	-	0%	-	0%
Industrial	4,828	26%	4,118	19%	3,648	14%	-	0%	-	0%
Total	***18,739***		***21,129***		***25,535***		-		-	
Density										
Housing Unit	5.2		5.6		6.9		-		-	
Employment	5.4		5.9		7.2		-		-	
Jobs/Housing Balance	1.0		1.1		1.0		-		-	
Vehicle Ownership per Household	2.2		2.2		2.1		-		-	
Vehicle Miles Traveled per Household	48.2		47.2		45.0		-		-	
Travel Mode Split										
Drive Alone Trip	54.3%		54.2%		53.5%		0.0%		0.0%	
Auto-Passenger Trip	30.3%		30.3%		30.2%		0.0%		0.0%	
Transit Trip	4.4%		4.4%		4.4%		0.0%		0.0%	
Non-Auto Trip	11.0%		11.1%		11.9%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0215		0.0207		0.0200		-		-	







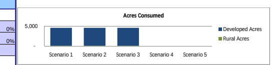


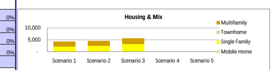


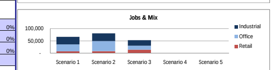
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

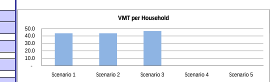
Santa Fe Springs

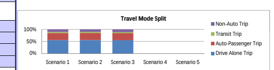
Santa Fe Springs	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	83	2%	83	2%	83	2%	-	0%	-	0%
Developed Acres	4,521	98%	4,521	98%	4,516	98%	-	0%	-	0%
Total	***4,604***		***4,604***		***4,599***		-		-	
Housing Mix										
Single Family	2,179	50%	2,478	54%	3,233	56%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	2,152	50%	2,106	46%	2,492	44%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***4,331***		***4,584***		***5,725***		-		-	
Employment Mix										
Retail	7,310	11%	7,790	10%	14,174	27%	-	0%	-	0%
Office	28,370	43%	41,512	52%	16,081	30%	-	0%	-	0%
Industrial	30,900	46%	31,251	39%	22,662	43%	-	0%	-	0%
Total	***66,580***		***80,554***		***52,917***		-		-	
Density										
Housing Unit	0.9		1.0		1.2		-		-	
Employment	14.5		17.5		11.5		-		-	
Jobs/Housing Balance	15.4		17.6		9.2		-		-	
Vehicle Ownership per Household	1.9		1.9		2.1		-		-	
Vehicle Miles Traveled per Household	43.7		43.7		46.6		-		-	
Travel Mode Split										
Drive Alone Trip	55.4%		55.7%		54.8%		0.0%		0.0%	
Auto-Passenger Trip	29.6%		29.5%		29.1%		0.0%		0.0%	
Transit Trip	4.3%		4.3%		4.5%		0.0%		0.0%	
Non-Auto Trip	10.7%		10.4%		11.6%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0195		0.0192		0.0208		-		-	







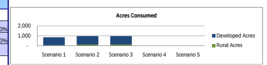


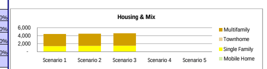


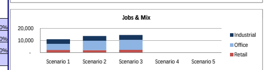
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

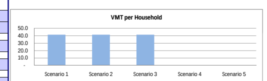
Signal Hill

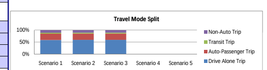
Signal Hill	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	52	6%	124	13%	124	13%	-	0%	-	0%
Developed Acres	811	94%	849	87%	849	87%	-	0%	-	0%
Total	***863***		***973***		***973***		-		-	
Housing Mix										
Single Family	1,367	31%	1,447	32%	1,482	32%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	3,046	69%	3,045	68%	3,119	68%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***4,413***		***4,492***		***4,601***		-		-	
Employment Mix										
Retail	2,382	21%	2,198	16%	2,435	17%	-	0%	-	0%
Office	4,979	45%	7,691	56%	8,200	56%	-	0%	-	0%
Industrial	3,755	34%	3,873	28%	3,932	27%	-	0%	-	0%
Total	***11,116***		***13,762***		***14,567***		-		-	
Density										
Housing Unit	5.1		4.6		4.7		-		-	
Employment	12.9		14.1		15.0		-		-	
Jobs/Housing Balance	2.5		3.1		3.2		-		-	
Vehicle Ownership per Household	1.7		1.7		1.7		-		-	
Vehicle Miles Traveled per Household	41.4		41.4		41.4		-		-	
Travel Mode Split										
Drive Alone Trip	59.0%		59.4%		59.4%		0.0%		0.0%	
Auto-Passenger Trip	25.9%		25.9%		25.9%		0.0%		0.0%	
Transit Trip	4.2%		4.1%		4.1%		0.0%		0.0%	
Non-Auto Trip	10.9%		10.6%		10.5%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0185		0.0182		0.0184		-		-	







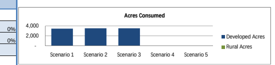


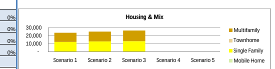


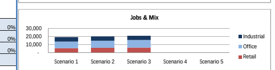
** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

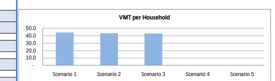
South Gate

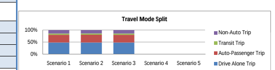
South Gate	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	17	0%	28	1%	28	1%	-	0%	-	0%
Developed Acres	3,452	100%	3,508	99%	3,508	99%	-	0%	-	0%
Total	***3,469***		***3,536***		***3,536***		-		-	
Housing Mix										
Single Family	12,159	51%	12,784	51%	13,027	49%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	11,476	49%	12,346	49%	13,437	51%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***23,635***		***25,130***		***26,464***		-		-	
Employment Mix										
Retail	5,744	30%	6,137	30%	6,454	31%	-	0%	-	0%
Office	8,099	42%	8,697	43%	9,273	44%	-	0%	-	0%
Industrial	5,513	28%	5,323	26%	5,175	25%	-	0%	-	0%
Total	***19,356***		***20,157***		***20,902***		-		-	
Density										
Housing Unit	6.8		7.1		7.5		-		-	
Employment	5.6		5.7		5.9		-		-	
Jobs/Housing Balance	0.8		0.8		0.8		-		-	
Vehicle Ownership per Household	2.0		2.0		2.0		-		-	
Vehicle Miles Traveled per Household	44.2		43.4		43.1		-		-	
Travel Mode Split										
Drive Alone Trip	48.4%		48.5%		48.4%		0.0%		0.0%	
Auto-Passenger Trip	31.9%		32.0%		32.0%		0.0%		0.0%	
Transit Trip	5.5%		5.4%		5.4%		0.0%		0.0%	
Non-Auto Trip	14.2%		14.1%		14.2%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0197		0.0191		0.0192		-		-	







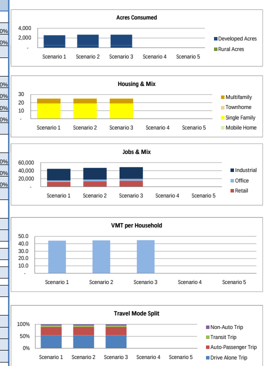




** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

Vernon

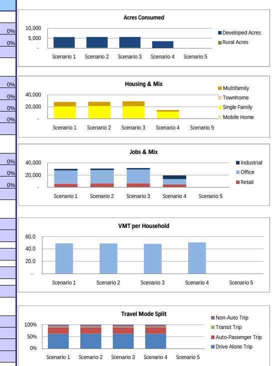
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035					
Acres										
Rural Acres	42	2%	86	3%	86	3%	-	0%	-	0%
Developed Acres	2,523	98%	2,593	97%	2,593	97%	-	0%	-	0%
Total	***2,565***		***2,679***		***2,679***		**-**		**-**	
Housing Mix										
Single Family	19	76%	19	76%	19	76%	-	0%	-	0%
Townhome	-	0%	-	0%	-	0%	-	0%	-	0%
Multifamily	6	24%	6	24%	6	24%	-	0%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***25***		***25***		***25***		**-**		**-**	
Employment Mix										
Retail	12,240	27%	13,899	30%	15,264	31%	-	0%	-	0%
Office	3,634	8%	4,095	9%	4,531	9%	-	0%	-	0%
Industrial	28,727	64%	28,852	62%	28,928	59%	-	0%	-	0%
Total	***44,601***		***46,846***		***48,723***		**-**		**-**	
Density										
Housing Unit	0.0		0.0		0.0		-		-	
Employment	17.4		17.5		18.2		-		-	
Jobs/Housing Balance	1,784.0		1,873.9		1,948.9		-		-	
Vehicle Ownership per Household	2.2		2.2		2.2		-		-	
Vehicle Miles Traveled per Household	44.2		44.6		44.8		-		-	
Travel Mode Split										
Drive Alone Trip	55.0%		55.0%		55.0%		0.0%		0.0%	
Auto-Passenger Trip	34.0%		33.9%		33.8%		0.0%		0.0%	
Transit Trip	5.3%		5.4%		5.5%		0.0%		0.0%	
Non-Auto Trip	5.7%		5.7%		5.8%		0.0%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0197		0.0196		0.0200		-		-	



** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

Whittier

	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
	YR 2008		YR 2020		YR 2035		blank		blank	
Acres										
Rural Acres	165	3%	165	3%	165	3%	24	1%	-	0%
Developed Acres	5,386	97%	5,452	97%	5,452	97%	3,460	99%	-	0%
Total	***5,551***		***5,617***		***5,617***		***3,484***		**-**	
Housing Mix										
Single Family	20,508	73%	21,525	75%	20,851	71%	11,939	81%	-	0%
Townhome	296	1%	-	0%	315	1%	-	0%	-	0%
Multifamily	7,479	26%	7,028	25%	8,204	28%	2,781	19%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Total	***28,282***		***28,554***		***29,371***		***14,720***		**-**	
Employment Mix										
Retail	5,750	19%	6,153	20%	6,256	20%	4,588	24%	-	0%
Office	21,939	72%	22,113	72%	23,049	73%	8,690	45%	-	0%
Industrial	2,603	9%	2,492	8%	2,288	7%	6,070	31%	-	0%
Total	***30,292***		***30,758***		***31,592***		***19,348***		**-**	
Density										
Housing Unit	5.1		5.1		5.2		4.2		-	
Employment	5.5		5.5		5.6		5.6		-	
Jobs/Housing Balance	1.1		1.1		1.1		1.3		-	
Vehicle Ownership per Household	2.1		2.1		2.0		2.2		-	
Vehicle Miles Traveled per Household	49.0		49.0		48.2		50.5		-	
Travel Mode Split										
Drive Alone Trip	61.7%		61.8%		61.5%		61.5%		0.0%	
Auto-Passenger Trip	27.4%		27.4%		27.3%		27.7%		0.0%	
Transit Trip	3.5%		3.4%		3.5%		3.1%		0.0%	
Non-Auto Trip	7.4%		7.4%		7.7%		7.6%		0.0%	
Greenhouse Gas Emissions per Household (Tons)	0.0219		0.0215		0.0215		0.0225		-	



** GHG emissions per Household is calculated by dividing GHG emissions total (total VMT X Emission Factor) by the total number of households.*
The below Emission Factors are for light- and medium-duty vehicles only (excluding motorcycles), calculated with EMFACT model output based on 2008 RTP Amendment #3:
Year 2008: 0.000446 tons per vmt
Year 2020: 0.000439 tons per vmt
Year 2035: 0.000445 tons per vmt
By default, emission factors for the years 2008, 2020, and 2035 are applied to calculate GHG emissions per Household values for Scenario 1~3 respectively (row 37 under columns B, D, F).

Appendix G.

List of Regional Transportation Strategies in the Gateway Cities, including Analysis

CAMBRIDGE SYSTEMATICS
Transportation leadership you can trust.

Memorandum

TO: Gateway Cities COG

FROM: Cambridge Systematics, Inc.

DATE: April 25, 2011

RE: Gateway Cities GHG Emission Reduction Benefits from Regional Projects

This memorandum documents the regional greenhouse gas (GHG) emission reduction estimates provided for Gateway Cities Sustainable Communities Strategy (SCS). Those reductions were:

- Daily CO_2 reduction due to changes in network speed = 7 percent;
- Daily CO_2 reduction due to reduced VMT (i.e., mode shift) = 1.1 percent; and
- Packaging is multiplicative: so the combined benefit is 7.07 percent.

GHG emission reduction estimates from regional actions are based on the expected carbon dioxide (CO_2) reductions from the Los Angeles County Metropolitan Transportation Authority (LAMTA) 2009 to 2040 Long-Range Transportation Plan (LRPT)[1]. The 2009 LRTP project lists confirmed that the Gateway Cities 17 key projects (see Table 1) had been included in LRTP modeling. The 2040 no-build and 2040 plan model summaries for Los Angeles County were obtained from LAMTA. (Gateway Cities specific results were not available.) The datasets are provided as Attachment 1 and Attachment 2, respectively. Calculations were done to reflect the vehicle miles traveled (VMT) reduction and changes in speed distributions.

VMT Reductions

VMT reductions result in a proportional reduction in CO_2 emissions. The 2009 LRTP resulted in a 1.1 percent (i.e., 0.011) reduction in VMT for 2040. This 1.1 percent reduction is used for the 2035 horizon year of the SCS.

[1] *2009 Long-Range Transportation Plan*, Technical Document (2009) Los Angeles County Metropolitan Transportation Authority, available online at: http://www.metro.net/projects_studies/images/final-2009-LRTP.pdf, last accessed April 25, 2011.

555 12th Street, Suite 1600
Oakland, CA 94607
tel 510-873-8700 www.camsys.com fax 510-873-8701

Table 1. List of Key Regional Projects

Regional Project List	Anticipated Completion
2020	
I-5 (between I-605 to county line)	2020
I-110 Harbor Transitway HOV lane conversion to HOT lanes	2012
I-710 Arterial Hwy Improvements	2020
I-710 TSM / TDM	2020
2035	
BNSF Grade Separation	2035
California High-Speed Rail	2035
Goldline Eastside Extension	2035
Green Line Extension to LAX	2035
I-5 (between I-605 to I-710)	2035
I-5 Arterial Highway Improvements	2035
I-605 Hot Spots	2035
I-710 Freight Corridor	2025
ITS Integration Plan	2025
OLDA Project	2035
Regional Connector	2025
Signal Synchronization of Major Arterials (Re: I-710)	2025
SR 91 / I-605 / I-405 Arterial Highway Improvements	2035

Speed Distributions Changes

The 2009 LRTP projects alter the average network speeds by targeting bottlenecks. The resulting change in speeds yields a net reduction in CO^2 emissions. This emissions benefit was estimated based on the ratio of the Unified cycle correction factor (Equation 1)[2], applied by EMFAC2007 to account for the variation in emissions as a function of average trip speed.

[2] On-Road Emission Model Methodology Documentation Section 6.2, available on-line at http://www.arb.ca.gov/msei/onroad/doctable_test.htm, last accessed on April 25, 2011.

$$CCF = e^{-[-0.026423\,(S-27.4)\,+\,0.000744\,(S-27.4)2]} \qquad \text{Equation 1}$$

Where:

CCF = CO_2 Cycle Correction Factor for light- and medium-duty fuel injected vehicles given speed "S".

For example, the CCF at 18.1 mph is 1.364 and the CCF at 20.9 mph is 1.225; and the emission reduction is therefore 1-1.23/1.36 or 10.1 percent. The calculation for each period modeled for the 2009 LRTP is shown in Table 2 below.

Table2. Unified Cycle Correction Factors Calculations for No-Build and Plan Network Speeds

Period	2040 Plan VMT	2040 No-Build Average Speed	2040 Plan Average Speed	CO2 Reduction	VMT Weighted CO2 reduction
AM Peak	49,433,206	18.1	20.9	10.1%	2.2%
Mid Day	65,659,326	33.3	35.2	3.0%	0.9%
PM Peak	76,791,120	16.1	19	11.2%	3.8%
Night time	35,186,868	46.4	45.2	0.1%	0.0%
Total	**227,070,520**				**7%**

Packaging

The emission reduction based on reduced VMT and the emission reduction based on network speed changes are not additive. The factors can be combined as multiplicative adjustments rather than additive adjustments. The combined benefit is therefore 7.07 percent.

Attachment 1. 2040 Plan Model Summery from 2009 LRTP

Daily Los Angeles County Highway Person Trips	
HBW Drive Alone	5,399,611
HBW 2 Person Carpool	844,321
HBW 3 Person Carpool	454,525
HBO Drive Alone	5,729,347
HBO 2 Person Carpool	5,397,498
HBO 3 Person Carpool	7,027,722
NHB Drive Alone	6,843,996
NHB 2 Person Carpool	2,868,070
NHB 3 Person Carpool	2,460,488

Daily Los Angeles County Highway Vehicle Trips	
HBW	5,959,493
HBO	10,557,496
NHB	9,023,559

Daily Los Angeles County Transit Person Trips	
HBW	851,296
HBO	505,698
NHB	149,232

Los Angeles AM 3 Hour	Free-Flow VHT	Congested VHT	VMT	SPEED	DELAY
Freeway(1,9)	246,232	794,078	17,680,811	22.3	547,845
HOV(5,8)	56,467	157,337	4,059,612	25.8	100,870
Arterials(2,3,4)	674,870	1,216,892	22,578,946	18.6	542,022
Total(1-5,7-9)	1,001,005	2,196,123	45,248,548	20.6	1,195,118

Los Angeles AM 1 Hour	Free-Flow VHT	Congested VHT	VMT	SPEED	DELAY
Freeway(1,9)	98,901	560,411	7,102,449	12.7	461,510
HOV(5,8)	22,568	110,812	1,622,459	14.6	88,244
Arterials(2,3,4)	307,116	857,868	10,217,198	11.9	550,752
Total(1-5,7-9)	439,432	1,545,531	19,372,152	12.5	1,106,099

Los Angeles Daily	Free-Flow VHT	Congested VHT	VMT	SPEED	DELAY
AM	1,169,292	2,364,409	49,433,206	20.9	1,195,118
MD	1,466,445	1,865,362	65,659,326	35.2	398,917
PM	1,855,418	4,035,464	76,791,120	19.0	2,180,047
NT	724,945	779,122	35,186,868	45.2	54,177
Total	5,216,099	9,044,358	227,070,520	25.1	3,828,258

Attachment 2. 2040 No-Build Model Summary from 2009 LRTP

Daily Los Angeles County Highway Person Trips	
HBW Drive Alone	5,440,219
HBW 2 Person Carpool	844,219
HBW 3 Person Carpool	458,703
HBO Drive Alone	5,733,554
HBO 2 Person Carpool	5,402,991
HBO 3 Person Carpool	7,044,461
NHB Drive Alone	6,855,621
NHB 2 Person Carpool	2,870,124
NHB 3 Person Carpool	2,460,100

Daily Los Angeles County Highway Vehicle Trips	
HBW	6,001,315
HBO	10,569,521
NHB	9,036,093

Daily Los Angeles County Transit Person Trips	
HBW	781,466
HBO	465,556
NHB	130,569

Los Angeles AM 3 Hour	Free-Flow VHT	Congested VHT	VMT	SPEED	DELAY
Freeway(1,9)	250,374	974,193	17,978,524	18.5	723,819
HOV(5,8)	41,057	111,516	2,951,382	26.5	70,459
Arterials(2,3,4)	725,109	1,494,804	24,129,851	16.1	769,696
Total(1-5,7-9)	1,041,414	2,611,819	46,046,055	17.6	1,570,405

Los Angeles AM 1 Hour	Free-Flow VHT	Congested VHT	VMT	SPEED	DELAY
Freeway(1,9)	100,554	683,446	7,221,179	10.6	582,892
HOV(5,8)	16,304	77,542	1,172,001	15.1	61,238
Arterials(2,3,4)	327,764	1,103,914	10,864,077	9.8	776,151
Total(1-5,7-9)	456,380	1,886,573	19,723,507	10.5	1,430,193

Los Angeles Daily	Free-Flow VHT	Congested VHT	VMT	SPEED	DELAY
AM	1,211,452	2,781,857	50,267,789	18.1	1,570,405
MD	1,500,572	1,980,730	65,927,142	33.3	480,158
PM	1,922,297	4,842,504	78,201,854	16.1	2,920,207
NT	730,867	768,483	35,681,328	46.4	37,616
Total	5,365,189	10,373,575	230,078,112	22.2	5,008,386

Appendix H.

Analysis of Interactive Effects Contributing to Further GHG Reduction in the Gateway Cities

H. Land Use – Regional Transit Capacity Expansion Interaction

Overview

The interaction between new development and redevelopment in Gateway Cities as modeled through the Sustainability Tool (ST) and regional public transportation projects funded under Measure R is a critical component of estimating GHG emission reductions in 2020 and 2035. This interaction is assumed to represent all components of the 4D concept – that households in communities featuring high density development, a diverse and balanced mix of uses, a high quality pedestrian environment, and superior access to regional opportunities via transit are much less auto dependent.

The element of the 4Ds under more careful consideration in the Gateway Cities SCS analysis is with regard to change in transit access and level of service. The reason for this additional attention is the recognition of the significant role that regional transit projects in the RTP and funded under Measure R will play in future development patterns and travel choices in the Gateway Cities.

Assessment Process in Gateway Cities SCS

There are two primary components to the land use-regional transit capacity expansion interaction under consideration in the SCS:

1. **Regional Transit Walk Access –** There are two potential interactions to consider:
   a. Residential and commercial development and redevelopment identified in the Gateway Cities adjacent to existing transit stations will on average generate less VMT per household than households not adjacent to transit. This interaction is accounted for in the ST.
   b. The improvement of transit access to regional destinations outside the Gateway Cities and new high capacity and frequent regional transit service in Gateway Cities as identified in the RTP and Measure R project list improves the level of service and utility of the transit mode leading to mode shift from vehicle-based trips.
2. **Transit-Oriented Development (TOD) Opportunity –** New or improved transit stations attract new TOD, consisting of high-density, mixed residential and commercial development with a higher propensity for transit trips.

Regional Transit Walk Access

The Sustainability Tool has functionality that estimates the interactions between land use (expressed as the 4Ds: density, diversity, design, destination) and proximity to a fixed-guideway transit node (defined as within ½ mile). The ST subdivides the growth forecasts from the cities into 5.5-acre grid cells, overlays the data with existing transit facilities, and flags all cells within a one-half mile of transit station locations and one-quarter mile of bus transit routes.

In the ST, regional transit walk access is an environmental (nondemographic based) predictor of household transit trips, with an average reported elasticity of 0.25 (meaning that for every 10-percent increase in households flagged with regional transit walk access, there is a 2.5-percent increase in transit trips).

The GHG reduction estimates developed through the ST reflects the benefit of growth and land use change within the Gateway Cities through 2035 overlaid on the existing regional transit network.

The ST does not consider the additional VMT reduction that could occur in the Gateway Cities as a result of long-range implementation of Measure R transit projects. Projects in the Measure R plan anticipated to be completed by 2035 that will affect travel in Gateway Cities includes:

1. The Gold Line Eastside Extension,
2. The Orange Line Development Authority (OLDA) grade-separated regional transit project,
3. The Regional Connector project linking the Blue Line to other MTA facilities in Downtown Los Angeles, and
4. The Green Line extension to LAX.

These projects will positively affect transit ridership in the Gateway Cities in two ways: 1) the projects will improve regional access to attractions, employment, and services for Gateway Cities households; and 2) the projects will provide a new fixed guideway transit alternative to private vehicle or bus transit trips.

Inside Gateway Cities, the primary project of interest is the OLDA project. It is likely that most, if not all, of the households adjacent to this project already have access to transit. The ST currently applies the same regional transit walk access approach for the households in these grid cells, however, uses a one-quarter-mile access buffer.

Fixed guideway transit tends to be more attractive than bus transit to discretionary travelers (people who have the option of driving), including commuters, visitors, and people traveling to major sporting and cultural events if they are located along transit lines. To reflect the transition from bus to fixed-guideway transit access, an assumption that the regional transit walk access elasticity increases from 0.17 for bus to 0.33 for rail is reasonable for these discretionary trips. Essentially, travelers with existing access to bus transit, which will in the future have access to rail transit, will be 1.5 to 2 times as likely to choose transit than before (while controlling for socioeconomic variables). Results from travel demand modeling activities completed for these regional transit projects will effectively demonstrate the benefit of this interaction as well.

TOD Opportunity

In expanding transit corridors in California and elsewhere, the presence of new, high capacity, high level of service public transportation options has been shown to be a catalyst for new or redevelopment. Through zoning codes and development regulations, cities may support development of these areas through reduced parking requirements, tax increment financing, and other incentives to maximize the opportunity for development and capitalize on their investment in transit.

It is uncertain how much the opportunity for rezoning and eventual redevelopment of land uses near planned transit stations is incorporated into city general plans. The only project in the Measure R plan anticipated to be completed by 2035 that could facilitate TOD in Gateway Cities is the Orange Line Development Authority grade-separated high-speed regional transit project planned to provide access to Vernon, Maywood, Bell, Huntington Park, Cudahy, Downey, South Gate, Paramount, Artesia, Bellflower, and Cerritos.

In addition, other regional transit projects which increase the level of service and accessibility to attractions outside the Gateway Cities (for example such as new Green Line access to LAX) could also, to a lesser degree than above, facilitate TOD at existing transit stations in the Gateway Cities. It is likely, that the benefits from TOD at these locations would occur sooner than TOD associated with the OLDA project given that the transit infrastructure is already in place.

The level to which growth in the Gateway Cities could intensify or be redistributed to focus in areas adjacent to new fixed-guideway transit stations is dependent on available development capacity, supporting infrastructure, zoning and development regulations, and future economic and market conditions. The example analysis of this interaction considers the affect of TOD in areas within one-eighth mile of Orange Line transit stations.

Results

The data summarized in Table H.1 reflects the range of potential benefits resulting from the interaction between land use and Measure R transit projects in the Gateway Cities in 2035. Given the anticipated long timeframe for implementation of the Measure R transit projects, as well as the long lead time for redevelopment activities adjacent to new transit, the resulting GHG reductions associated with this interaction is only considered for 2035.

Table H.1 Gateway Cities SCS – GHG Reduction from Land Use and Regional Transit Interactions

Gateway Cities – Land Use and Regional Transit Interaction	2035
Interaction 1 – Regional Walk Access	
Improved Access to Regional Destinations	
• Average Daily VMT per Household in Gateway Cities	42.5
• Total Daily GHG Reduction (lbs GHG per capita)	0.041-0.062
New Access to Fixed Guideway Transit	
• Total Households within 1/2 mile of "Orange Line" Station Locations [1]	40,075
• Total Daily GHG Reduction (lbs GHG per capita)	0.021-0.042
Interaction 2 – TOD	
• Target Density Range in TOD Station Areas (TOD defined as 1/8 mile of station)[2]	23.7-60.7 hu/acre
• Total Households in TOD Station Areas	8,186-20,966
• Total Daily GHG Reduction (lbs GHG per capita)	0.058-0.073
Total Daily GHG Reduction (lbs GHG per capita)	0.120-0.177

Notes:

1. Assumes constant household density within each city based on 2035 forecasts.
2. Apply characteristics of range "Town Residential High Mix to Town Residential Low Mix" to TOD station areas.

Appendix I.

CEQA Streamlining

I. CEQA Streamlining: Existing Land Use, Density, and Building Intensity Data

SB 375 provides incentives in the form of CEQA streamlining to support community designs that help reduce GHG emissions. To take advantage of these CEQA streamlining provisions in SB 375, projects must prequalify based on two criteria:

1. A project must be consistent with the land use designation, density, building intensity, and applicable policies in an approved SCS or Alternative Planning Strategy[1]; and
2. A project must be considered a Transit Priority Project (TPP) or a Residential/Mixed Use Residential Project (as defined in SB 375).

To help Gateway Cities Council of Governments (GCCOG) jurisdictions take advantage of the CEQA streamlining provisions in SB 375, SCAG will include maps in the regional 2012 RTP/SCS in order to show the uses, densities, intensities, and locations for future development; and in order to facilitate subsequent project consistency findings. These maps will use the GCCOG dataset as reviewed and approved by GCCOG. SCAG, in consultation with GCCOG and their jurisdictions, may provide more detail to allow interested jurisdictions to take advantage of the CEQA streamlining provisions in SB 375. SCAG will only show more land use detail, where a jurisdiction has acknowledged that the land use information is based on their input and approved of its being displayed in the adopted plan.

To facilitate SB 375 CEQA Streamlining, individual GCCOG jurisdictions are asked to provide detailed land use information (uses, densities, intensities at a defined geographic level) to SCAG. These data are called out in the SCAG Framework and Guidelines and the legislation specific to the streamlining

[1] CARB will review the regional SCS to accept or reject SCAG's determination whether or not the implementation of the SCS would achieve the GHG emission reduction targets for the region. If the regional targets cannot be achieved by the regional SCS, then SCAG must prepare an Alternative Planning Strategy (APS). An APS is a separate document from the RTP and describes how the targets could be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Gateway Cities Council of Governments Subregional Sustainable Communities Strategy
Appendix

provisions. Additionally, or in lieu of detailed land use information, jurisdictions may work with SCAG in designating the appropriate regional "development type" in locations for potential future projects. Jurisdictions themselves will determine whether a particular project meets the CEQA streamlining qualifications, including making the consistency finding. If a jurisdiction does not participate in the SCS data collection effort for existing land use, density, and building intensity, there is no direct adverse consequence due to not providing input.

In order to provide the most accurate data possible for the GCCOG subregion, and to preserve individual jurisdictions' general plan and existing data accuracy, detail, and integrity, and to meet the requirements under SB 375 for purposes of CEQA streamlining, SCAG prepared and provided GCCOG local jurisdictions with a set of data/GIS maps of detailed land use information, including General Plan, zoning, and existing general land use designation, density and building intensity data and maps, all for the jurisdictions' review and comment. The data was provided in the format of the Sustainability Tool by January 31, 2011. GCCOG consultants helped to extract the data for review during the February 16 workshop at the GCCOG offices in Paramount, California.

The information contained in the data packets document was developed and/or collected by the staff in the Data and GIS group in the Department of Research, Analysis, and Information Services (RAIS) under the Land Use and Environmental Planning (LUEP) Division at SCAG. The SCAG Data/Map Guide included information on the sources, methodologies, and contents of each dataset. These data/GIS maps are identified in SB 375 as required to be considered in the SCS development to address the requirements of SB 375 and its implementation for purposes of CEQA streamlining. Comments and corrections from subregions and local jurisdictions are due to SCAG as part of the Gateway SCS process by April 29, 2011. The list of data/GIS maps included in the SCAG map and data packets, along with the review requested of GCCOG jurisdictions, appears as Table I.1 below.

Table I.1 Contents of the SCAG Map and Data from the Sustainability Tool

Category	GIS Shapefile Available?
Land Use	
General Plan	Yes
Zoning	Yes
Existing Land Use of 2008	Yes
Geographical Boundaries	
Jurisdictional Boundary and Sphere of Influence	Yes
Census Tract Boundary	Yes
TAZ Boundary	Yes
Transit Priority Projects	
Major Stops & High Quality Transit Corridors	Yes
Resource Areas & Farmland	
Endangered Species and Plants	Yes
Flood Areas	Yes
Natural Areas	Yes
Open Space and Parks	Yes
Farmland	Yes

Background: Existing Land Use, Density, and Building Intensity

In 2008 and early 2009, SCAG began to collect the general plan and zoning information from local jurisdictions, with year adopted ranging from 1971 to 2009 by jurisdiction. The general plan and zoning documents, maps, and/or GIS shapefiles collected were coded into GIS shapefiles at parcel level. Parcel data were acquired from Digital Map Product for Gateway Cities COG. Beginning in July 2009, SCAG communicated with local jurisdictions, and revised the general plan and zoning data based on the results of the local review. Through a process of collecting general plan and zoning documents and receiving comments from local jurisdictions, information included in the data packets reflected the local inputs received by January 31, 2010. SCAG continues to receive local input, and will incorporate them into the database. General Plan data are shown at a parcel level; in many areas, they depict a local agency's adopted documents accurately. However, the data shown in some areas may be generalized or inaccurate for many reasons, a primary reason because the parcel-level database representing general plan does not support multiple uses or designations on a single parcel (either splitting the parcel or representing overlays). Additionally, data on building size, existing use, and other specific parcel-related information that SCAG collected from other original data sources, such as the Gateway Cities

County Assessor's Office, may have been in error and/or not up to date. Due to these inaccuracies and limitations, if site-specific data is necessary, users should always reference a local agency's adopted documents or field surveys to determine actual land use designations.

At the jurisdiction level, both general plan land use and zoning maps are prepared with the land use or zoning codes used in each local jurisdiction. General Plan land use maps are also available at larger geographic levels, such as subregion, county, or the entire SCAG region with SCAG's standardized General Plan codes. For detailed information on the standardized codes, please refer to SCAG's General Plan Code Table.

SCAG prepared three sets of land use maps (General Plan Land Use, Zoning and 2008 Existing Land Use) at parcel level. The three land use maps were originally provided to local jurisdictions in September/October 2009. Based on one-on-one meetings and communication with local jurisdictions throughout the first round outreach (July 2009 to January 2010) the Data/Map packets of existing land use, density, and building intensity data transmitted to Gateway Cities COG jurisdictions in February 2011 reflect the local inputs received by January 31, 2010.

Gateway Cities Jurisdiction Review Process

GCCOG distributed the electronic files and hard copies to Gateway cities for review. They were asked to review and submit updates and comments for purposes of SB 375 CEQA streamlining and with regard to the land use strategies developed for GHG reduction in SB 375. All GCCOG jurisdictions received the SCAG datasets in both electronic and hard copy format. Most, but not all, GCCGOG jurisdictions reviewed the data for purposes of SB 375.

SCAG staff presented a data orientation and review session to the GCCOG on February 16, 2011, at a technical workshop held at the Gateway COG. Additionally, SCAG staff was available and conducted one-on-one meetings with cities who were interested in modifying and/or reviewing their land use during the last week of March 2011 to provide technical data and GIS assistance to GCCOG jurisdictions with limited data/GIS capability that needed assistance in the Data/Map review.

Based upon parcel level data originally provided by SCAG, GCCOG jurisdictions reviewed the data to various degrees for purposes of CEQA streamlining.

Results

The results of that process have been provided electronically to SCAG through the Sustainability Tool. For a select number of cities, modifications were made in conjunction with SCAG staff. For the remainder, default scenarios were used, which were part of the SCAG original dataset.

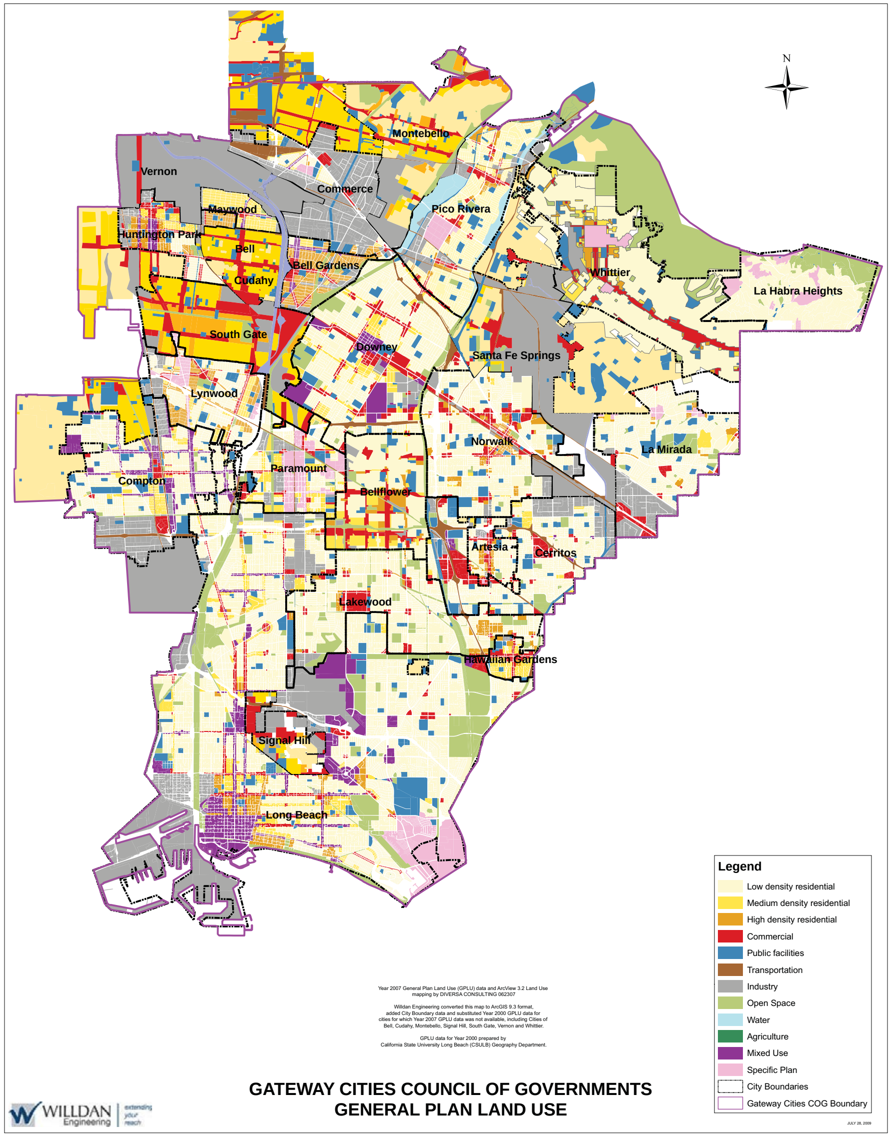
In Appendix J, individual jurisdiction General Plans are presented along with web address links to individual jurisdictions' General Plans. Individual jurisdiction General Plans are always considered the final and ultimate authority on land use and zoning, especially for those jurisdictions that opted not to review the SCAG data.

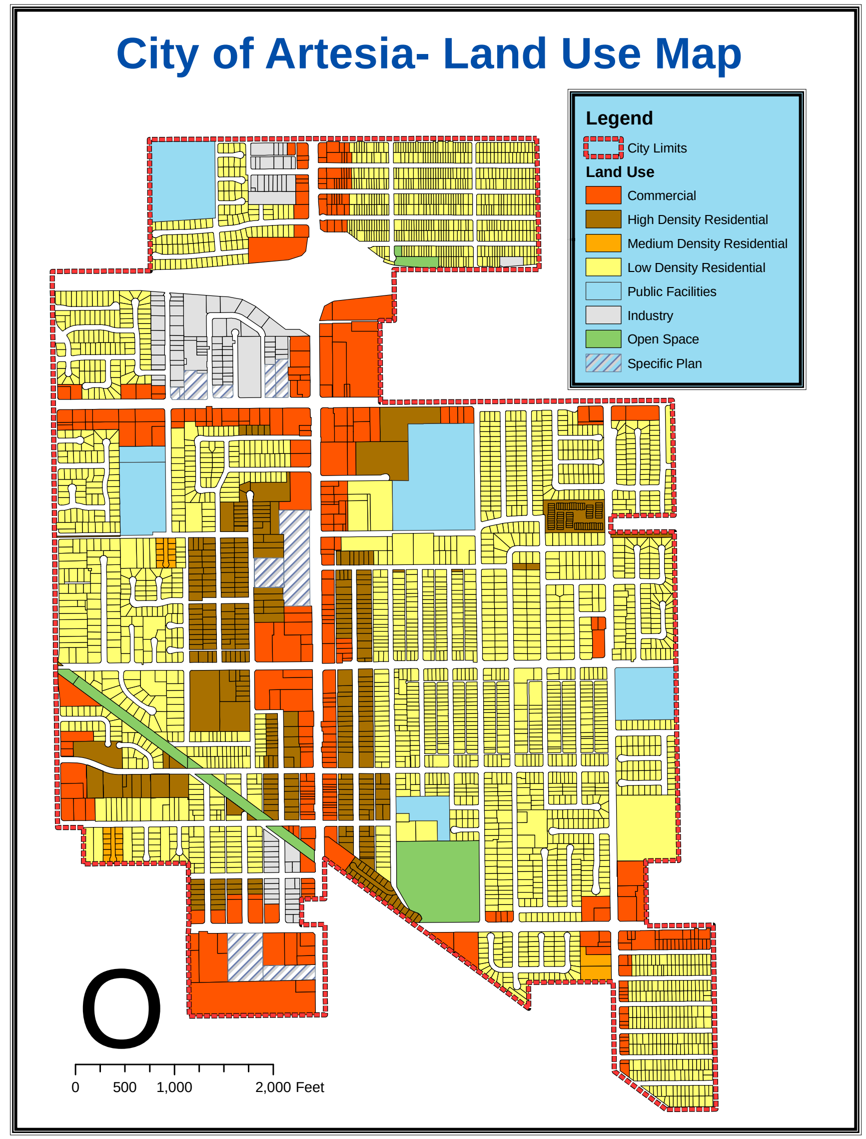
For those jurisdictions that did not fully review, there are some limitations, conditions, and caveats to the existing land use, density, and building intensity data. Data provided by SCAG on land use is in some areas inaccurate and/or generalized. Because the parcel-level database representing existing land use, general plan, and zoning data does not support multiple uses or designations on a single parcel (either splitting the parcel or representing overlays, such as zoning overlays), the data ultimately shown may generalize the data and thus not accurately depict a local government's adopted general plan or zoning or the existing land use on the site (including land use designated through a development or other legal agreement).

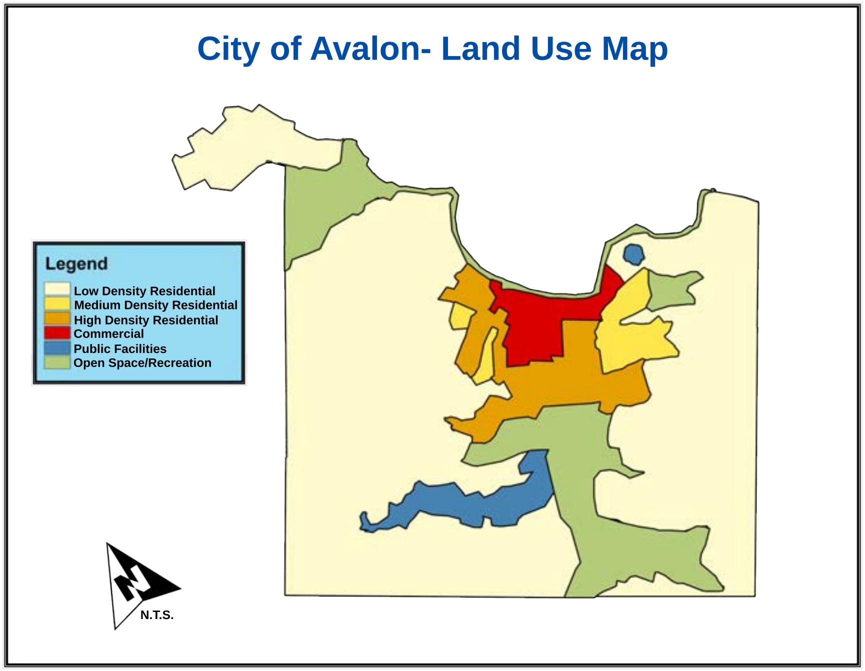
Due to these caveats and limitation, if site-specific data is necessary, users should always reference and rely on individual Gateway Cities jurisdiction general plans as the final authority. A local agency's adopted documents are always the final say on allowable land use designations and zoning, and actual site visits or field surveys to determine densities and building intensities should be undertaken.

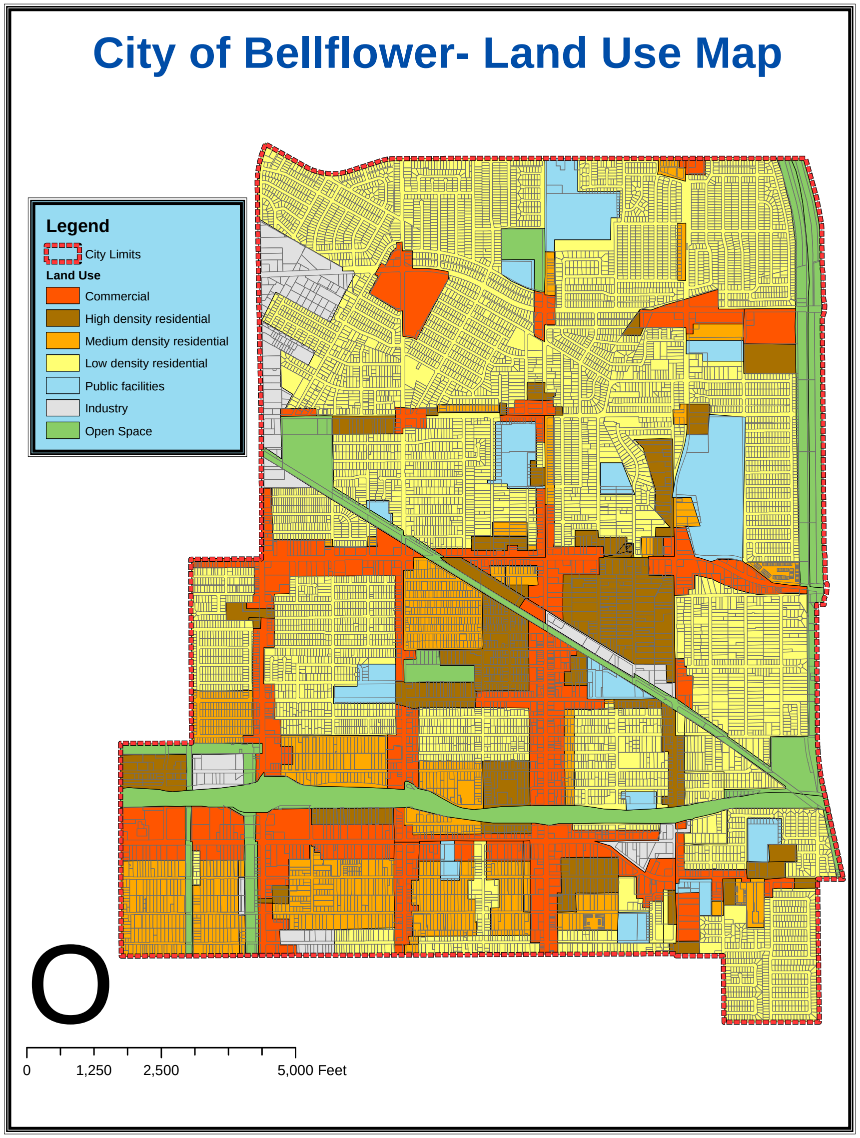
Appendix J.

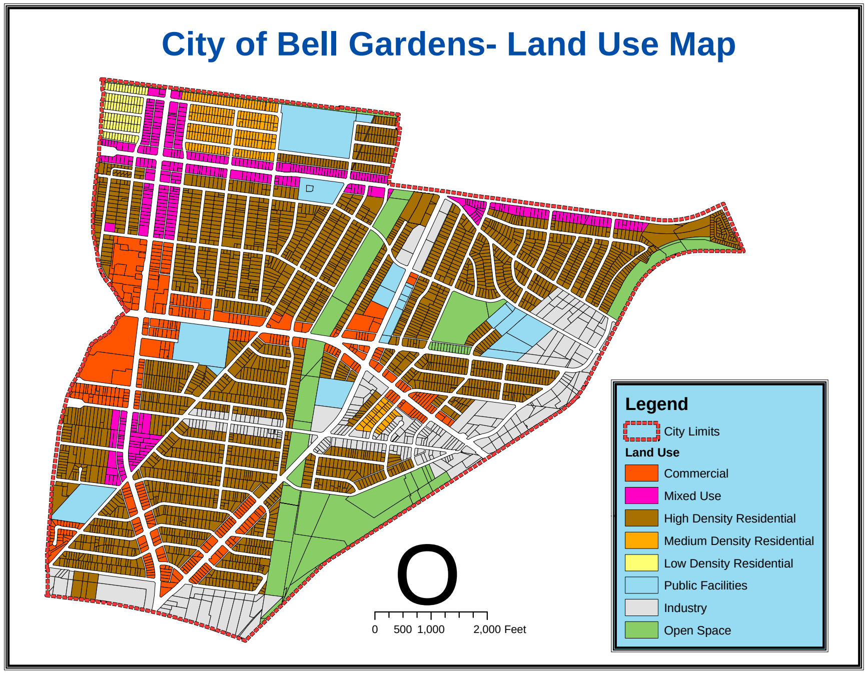
Jurisdiction General Plans

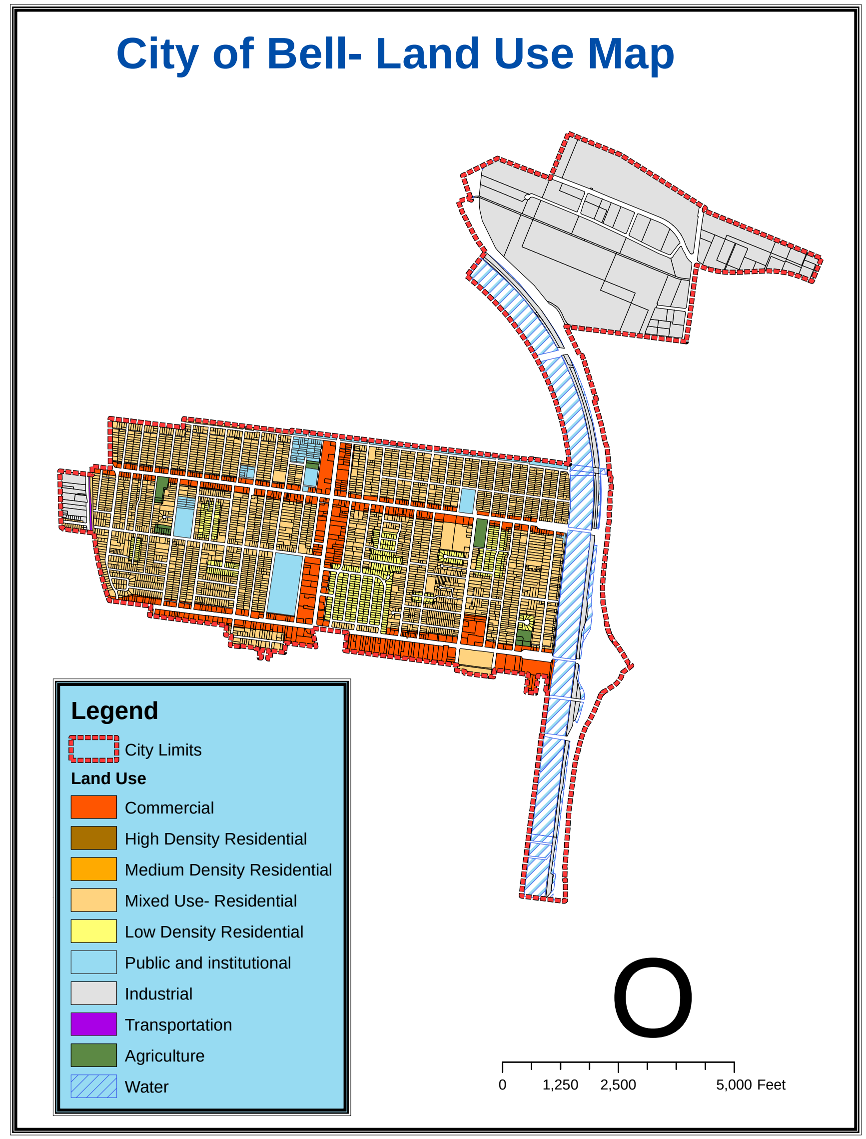

N
Montebello
Vernon
Commerce
Maywood
Pico Rivera
Huntington Park
Bell
Bell Gardens
Cudahy
Whittier
La Habra Heights
South Gate
Downey
Santa Fe Springs
Lynwood
Norwalk
La Mirada
Compton
Paramount
Bellflower
Artesia
Cerritos
Lakewood
Hawaiian Gardens
Signal Hill
Long Beach
Legend
Low density residential
Medium density residential
High density residential
Commercial
Public facilities
Transportation
Industry
Open Space
Water
Agriculture
Mixed Use
Specific Plan
City Boundaries
Gateway Cities COG Boundary
Year 2007 General Plan Land Use (GPLU) data and ArcView 3.2 Land Use mapping by DIVERSA CONSULTING 062307
Willdan Engineering converted this map to ArcGIS 9.3 format, added City Boundary data and substituted Year 2000 GPLU data for cities for which Year 2007 GPLU data was not available, including Cities of Bell, Cudahy, Montebello, Signal Hill, South Gate, Vernon and Whittier.
GPLU data for Year 2000 prepared by California State University Long Beach (CSULB) Geography Department.
GATEWAY CITIES COUNCIL OF GOVERNMENTS
GENERAL PLAN LAND USE
WILLDAN Engineering
JULY 28, 2009

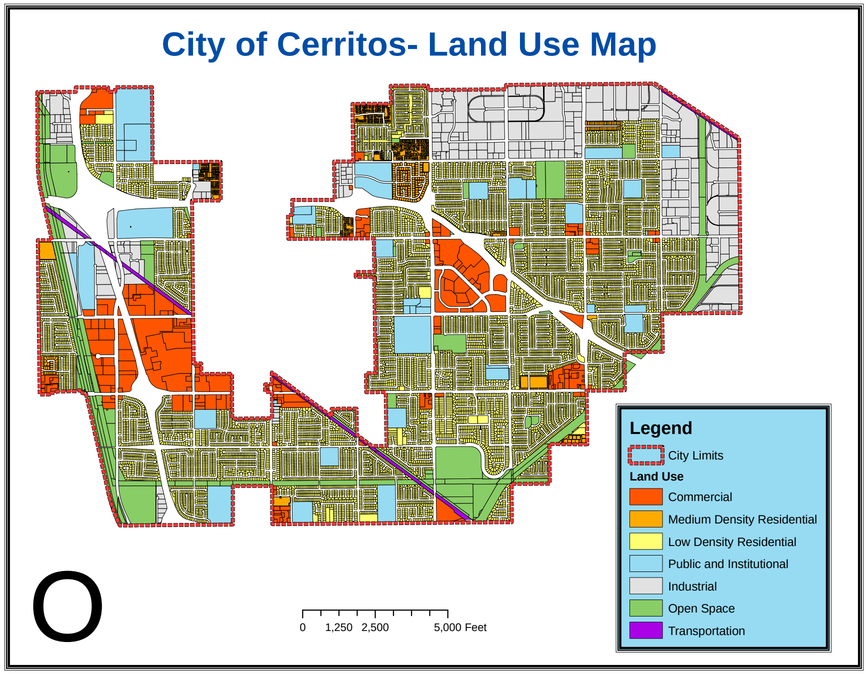

City of Artesia- Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industry
Open Space
Specific Plan
0 500 1,000 2,000 Feet

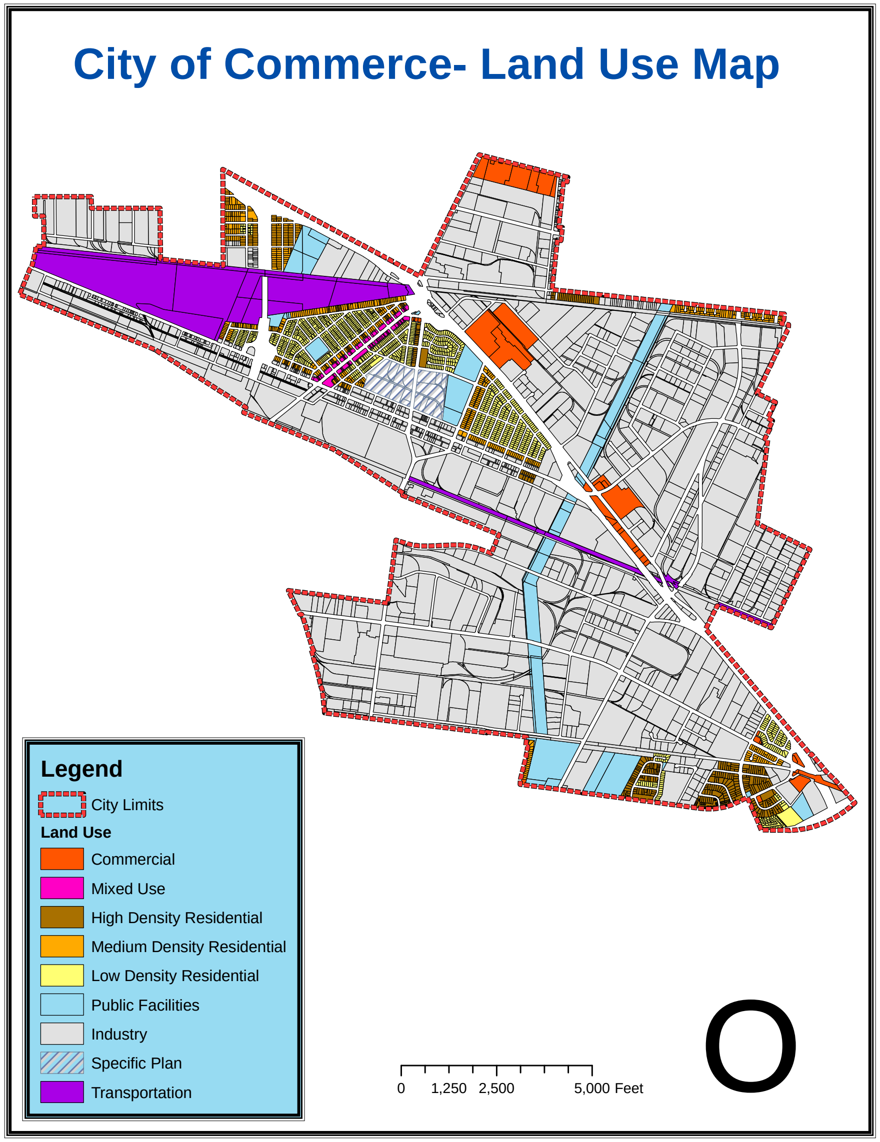

City of Avalon- Land Use Map
Legend
Low Density Residential
Medium Density Residential
High Density Residential
Commercial
Public Facilities
Open Space/Recreation
N.T.S.

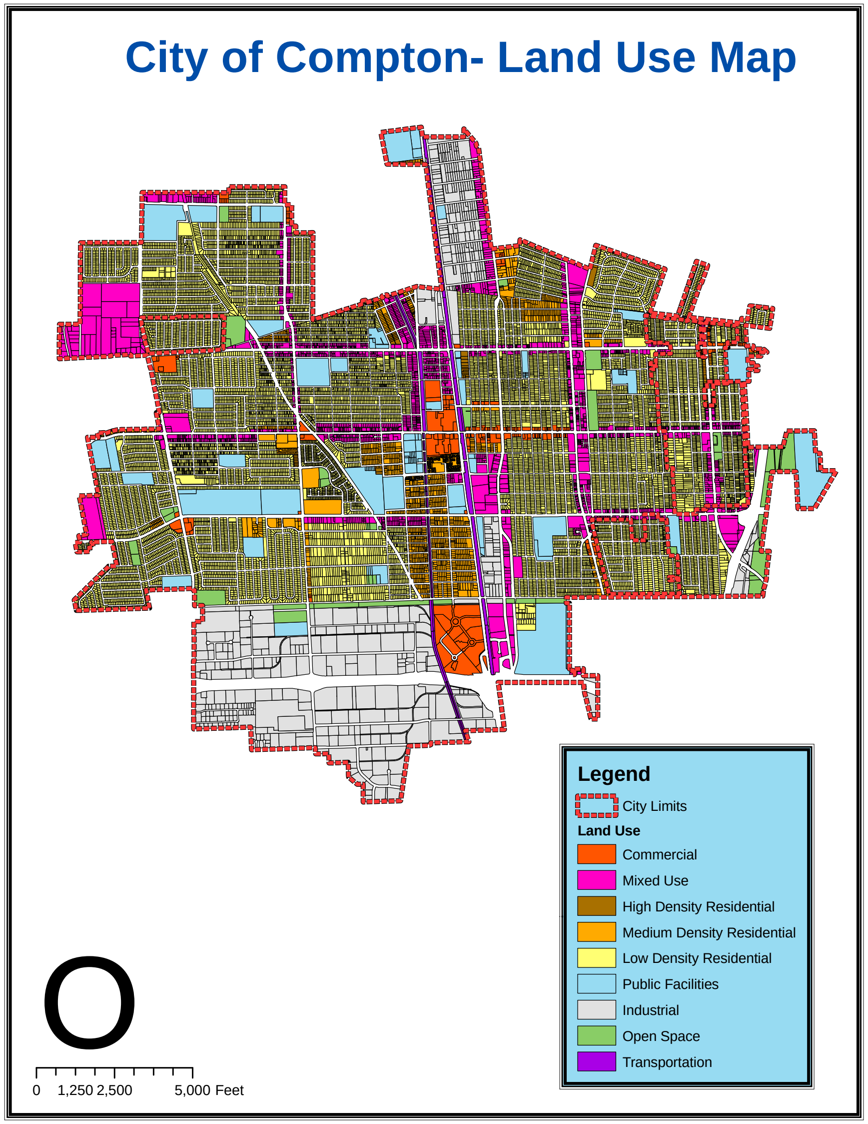

City of Bellflower- Land Use Map
Legend
City Limits
Land Use
Commercial
High density residential
Medium density residential
Low density residential
Public facilities
Industry
Open Space
0
1,250
2,500
5,000 Feet


City of Bell Gardens- Land Use Map
Legend
City Limits
Land Use
Commercial
Mixed Use
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industry
Open Space
0 500 1,000 2,000 Feet

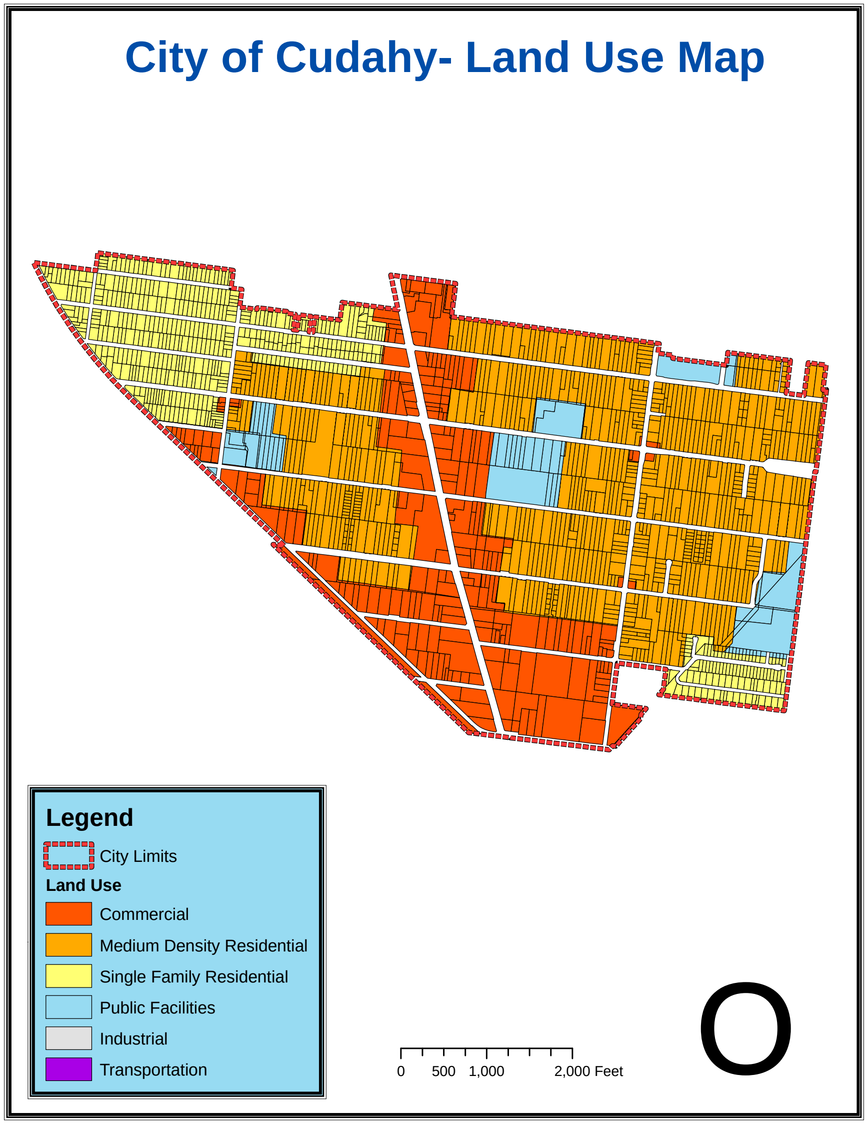

City of Bell- Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Mixed Use- Residential
Low Density Residential
Public and institutional
Industrial
Transportation
Agriculture
Water
0 1,250 2,500 5,000 Feet


City of Cerritos- Land Use Map
Legend
City Limits
Land Use
Commercial
Medium Density Residential
Low Density Residential
Public and Institutional
Industrial
Open Space
Transportation
0 1,250 2,500 5,000 Feet

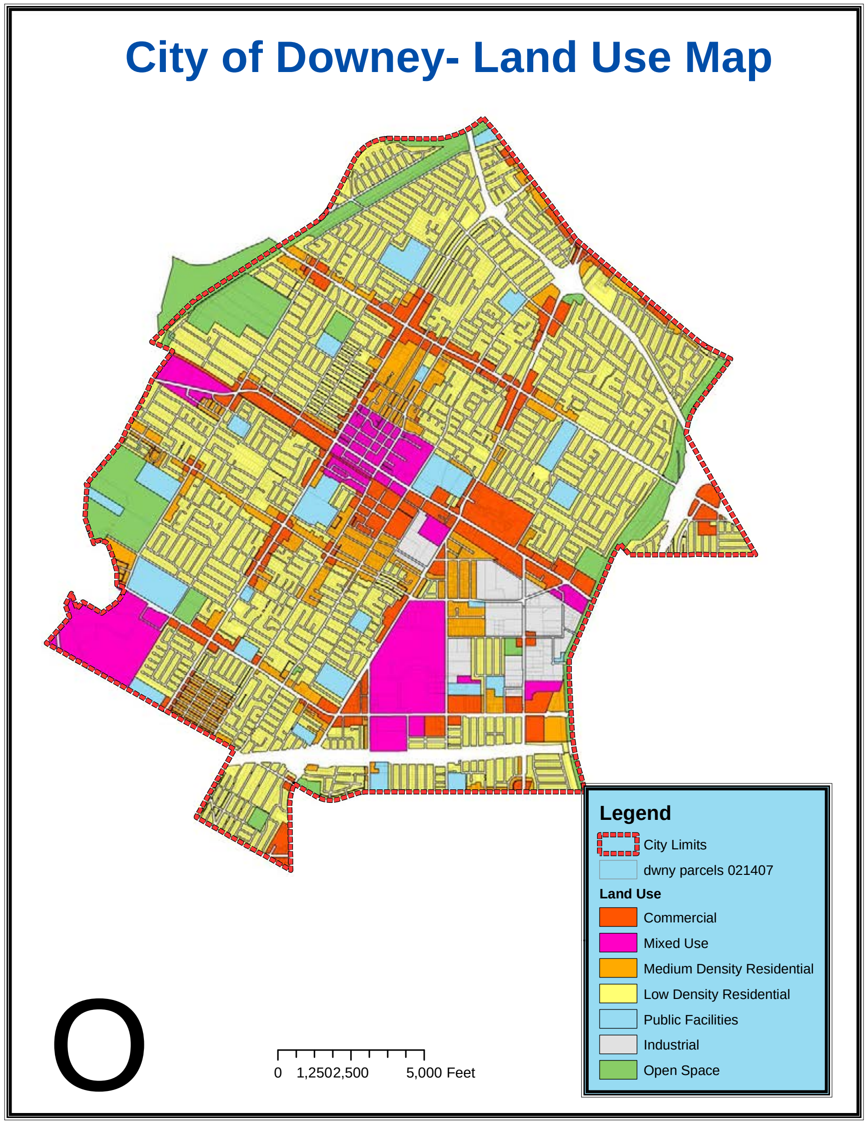

City of Commerce- Land Use Map
Legend
City Limits
Land Use
Commercial
Mixed Use
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industry
Specific Plan
Transportation
0 1,250 2,500 5,000 Feet

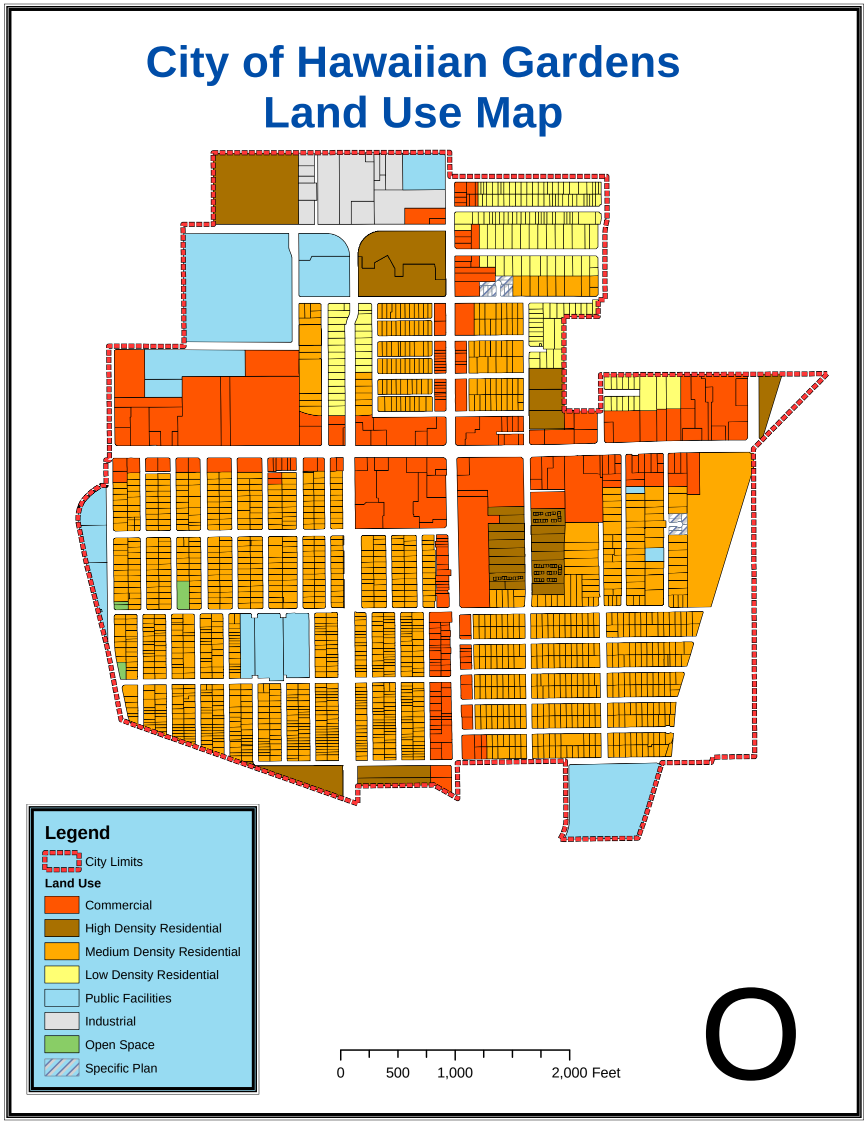


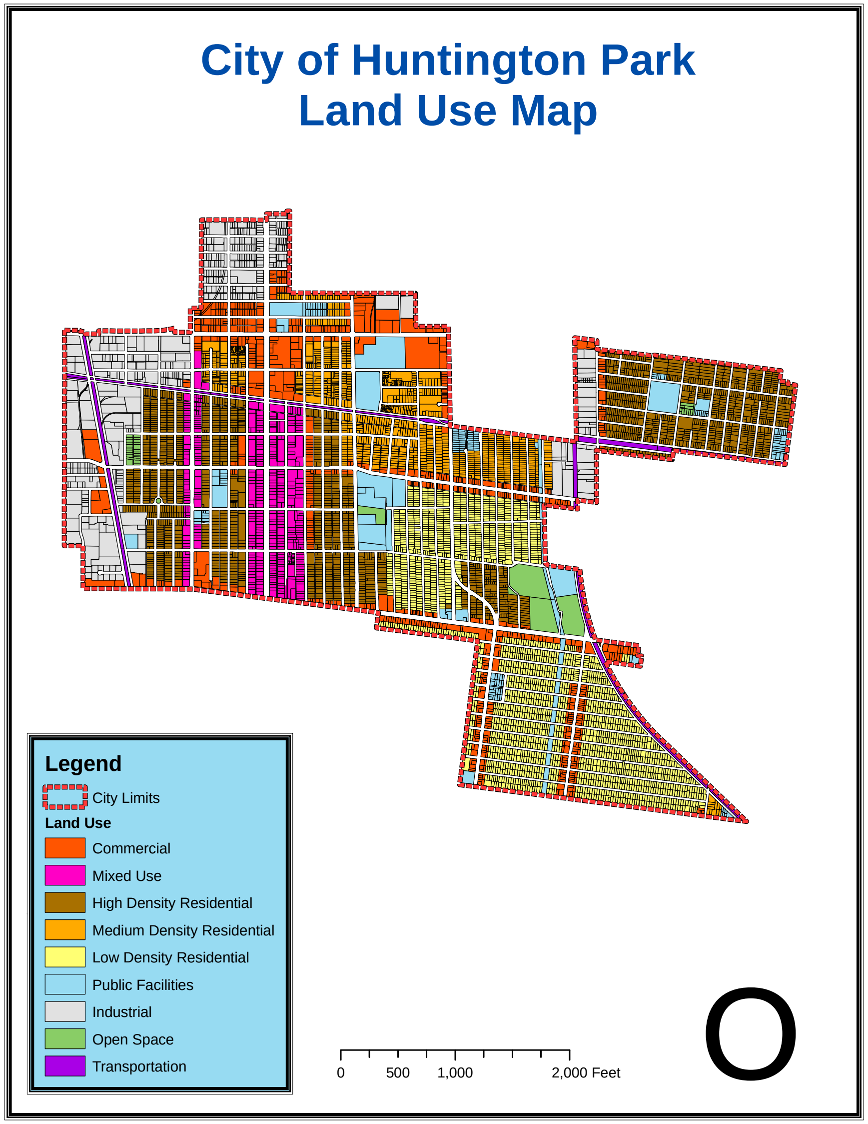
City of Compton- Land Use Map
Legend
City Limits
Land Use
Commercial
Mixed Use
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
Transportation
0 1,250 2,500 5,000 Feet

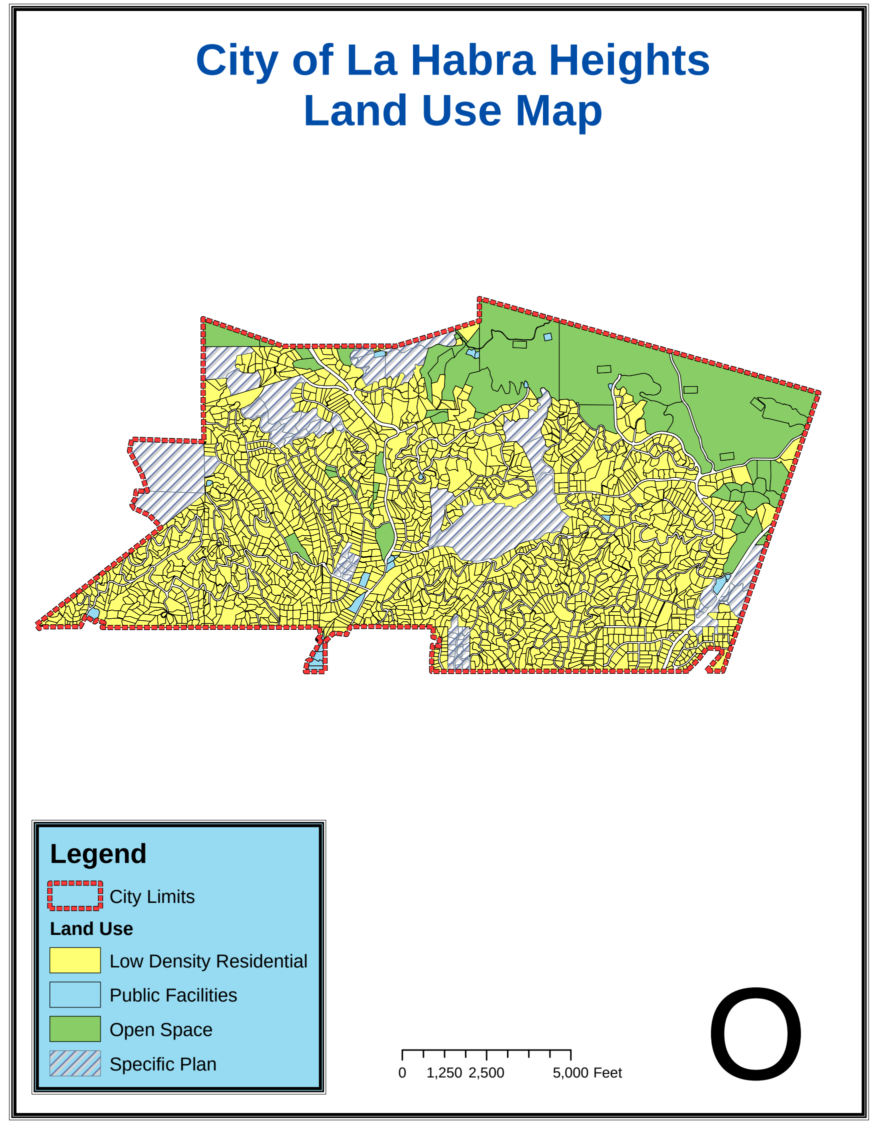


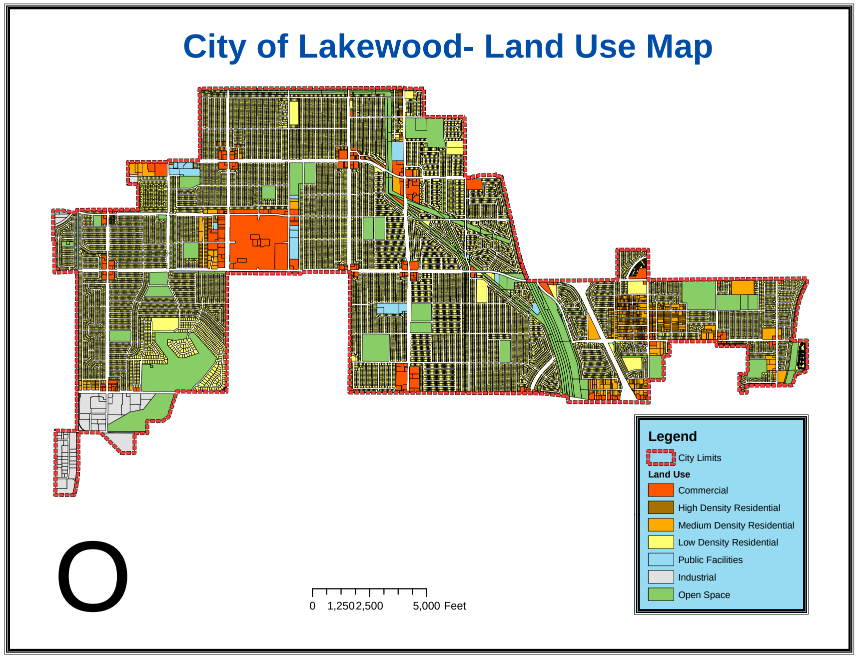
City of Cudahy- Land Use Map
Legend
City Limits
Land Use
Commercial
Medium Density Residential
Single Family Residential
Public Facilities
Industrial
Transportation
0 500 1,000 2,000 Feet

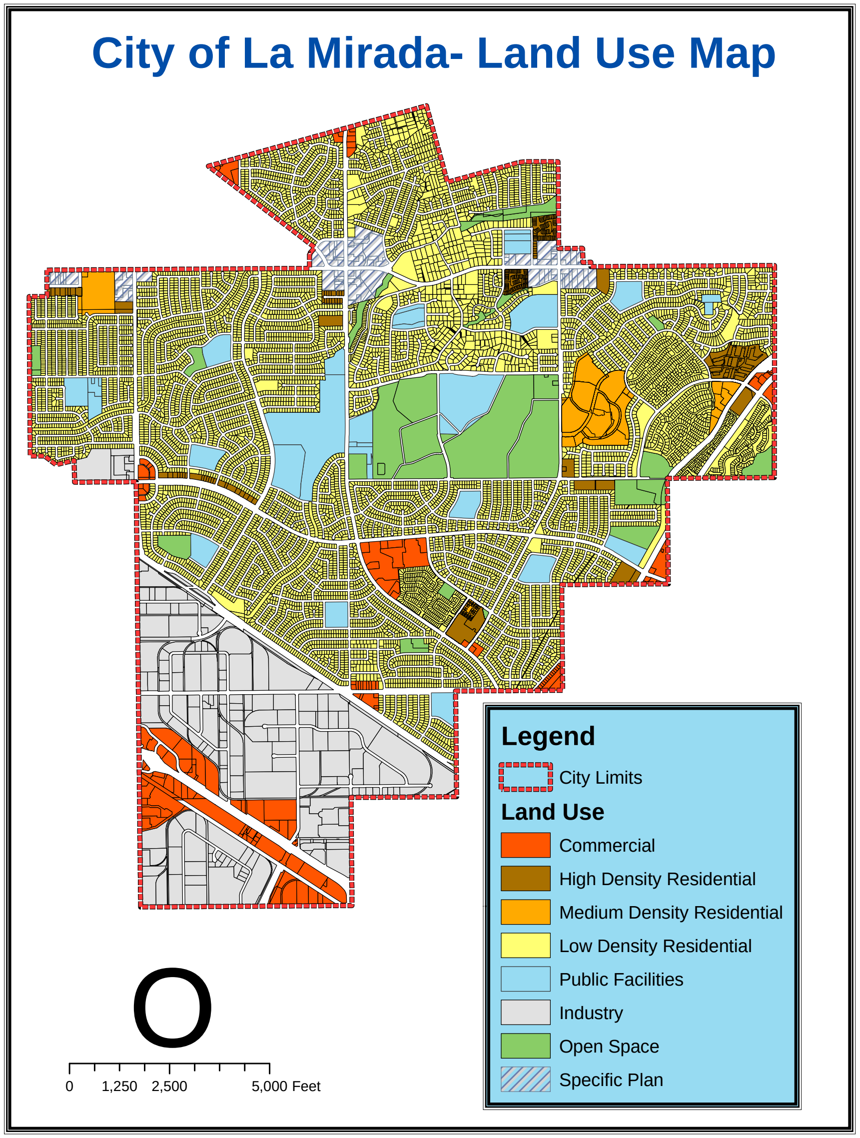

City of Downey- Land Use Map
Legend
City Limits
dwny parcels 021407
Land Use
Commercial
Mixed Use
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
0 1,2502,500 5,000 Feet

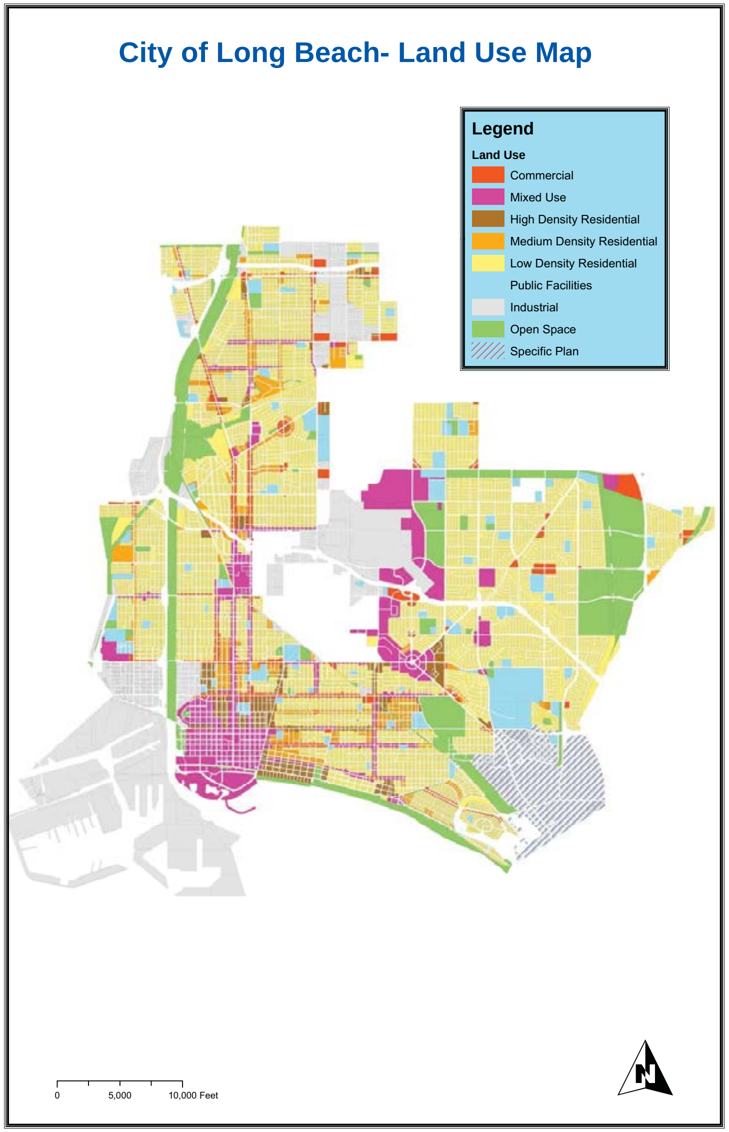

City of Hawaiian Gardens
Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
Specific Plan
0 500 1,000 2,000 Feet

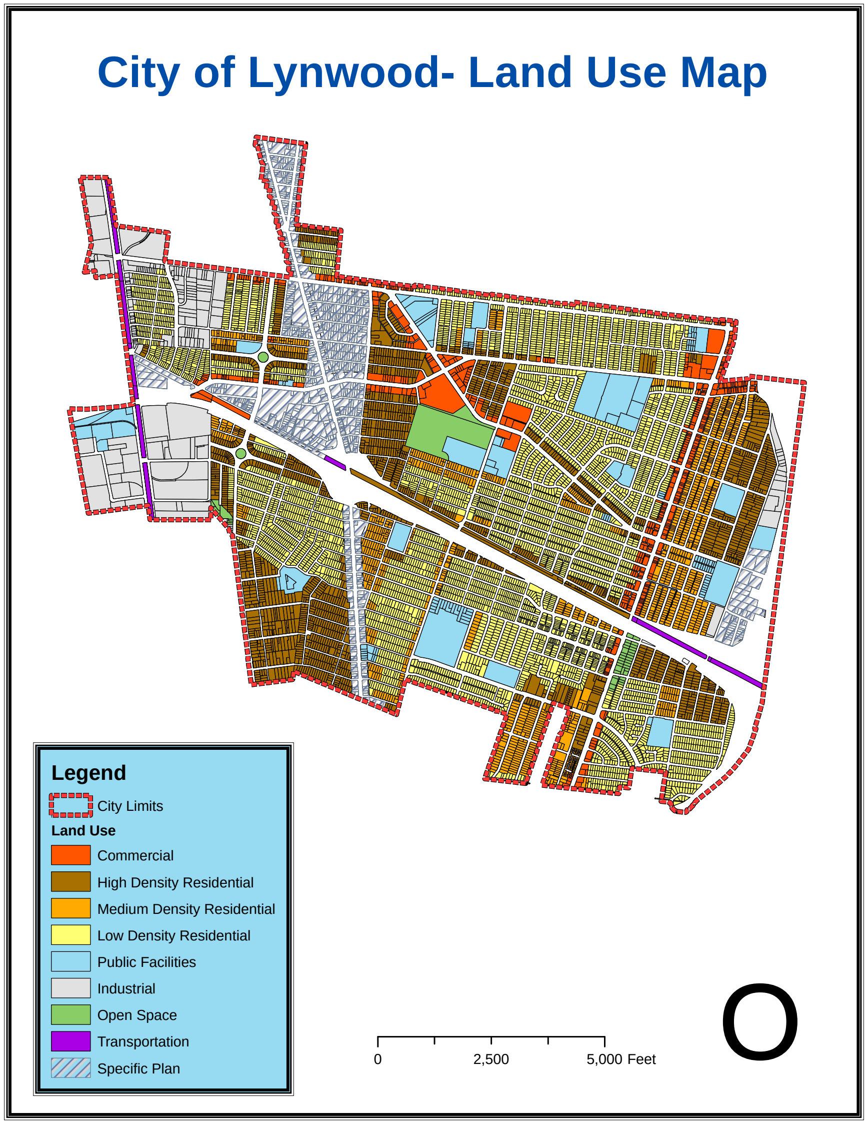

City of Huntington Park
Land Use Map
Legend
City Limits
Land Use
Commercial
Mixed Use
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
Transportation
0 500 1,000 2,000 Feet

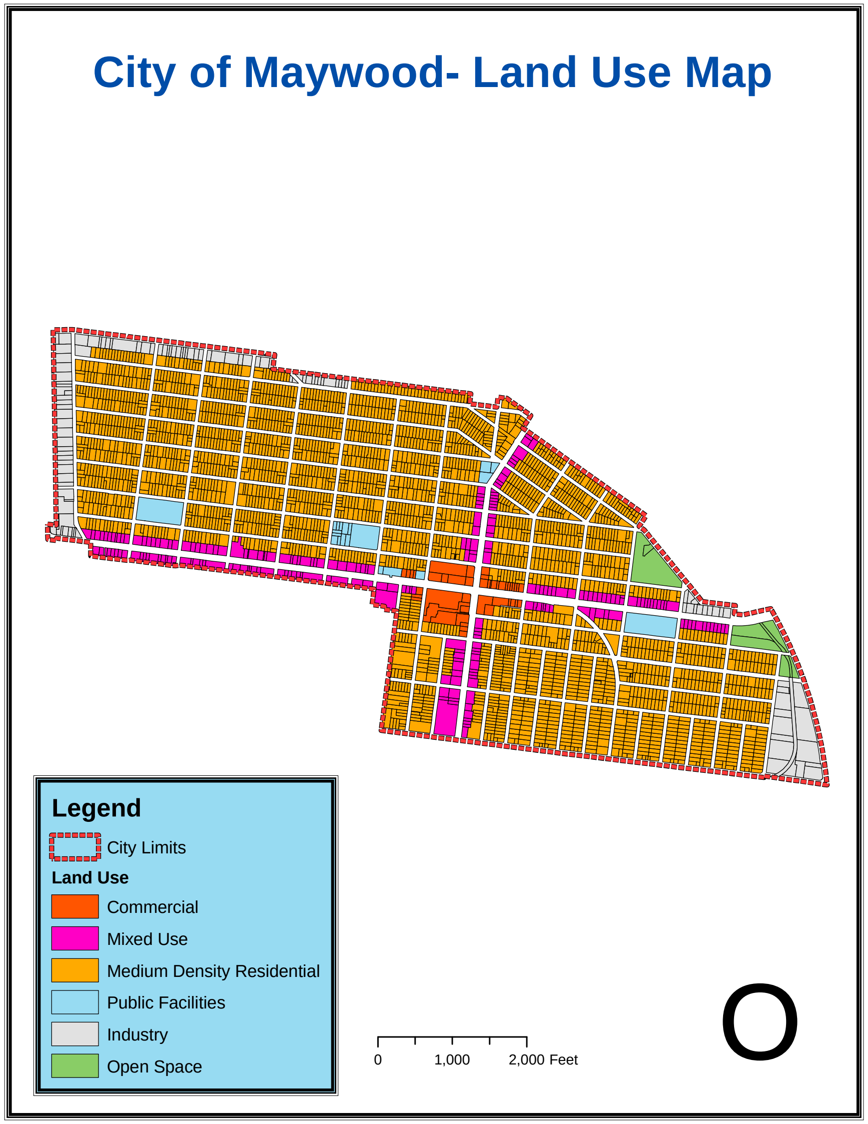

City of La Habra Heights
Land Use Map
Legend
City Limits
Land Use
Low Density Residential
Public Facilities
Open Space
Specific Plan
0 1,250 2,500 5,000 Feet

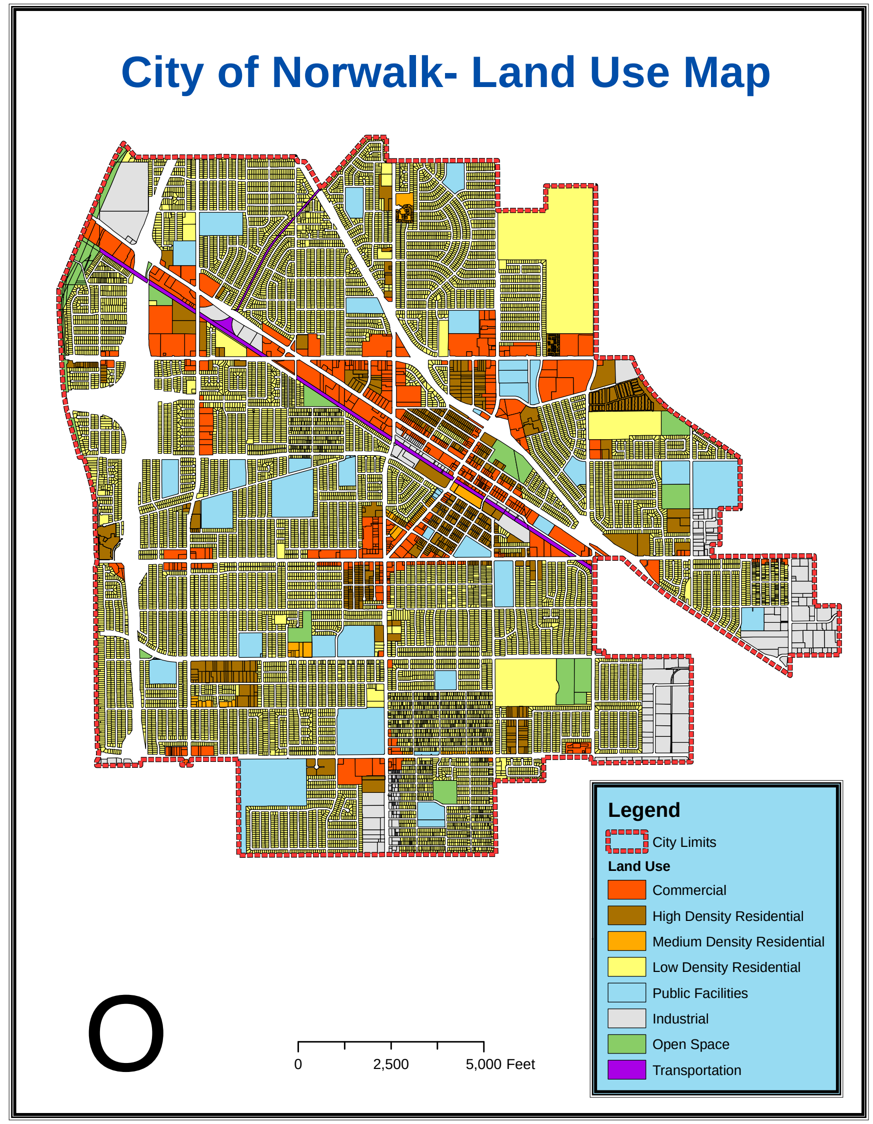

City of Lakewood- Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
0 1,250 2,500 5,000 Feet

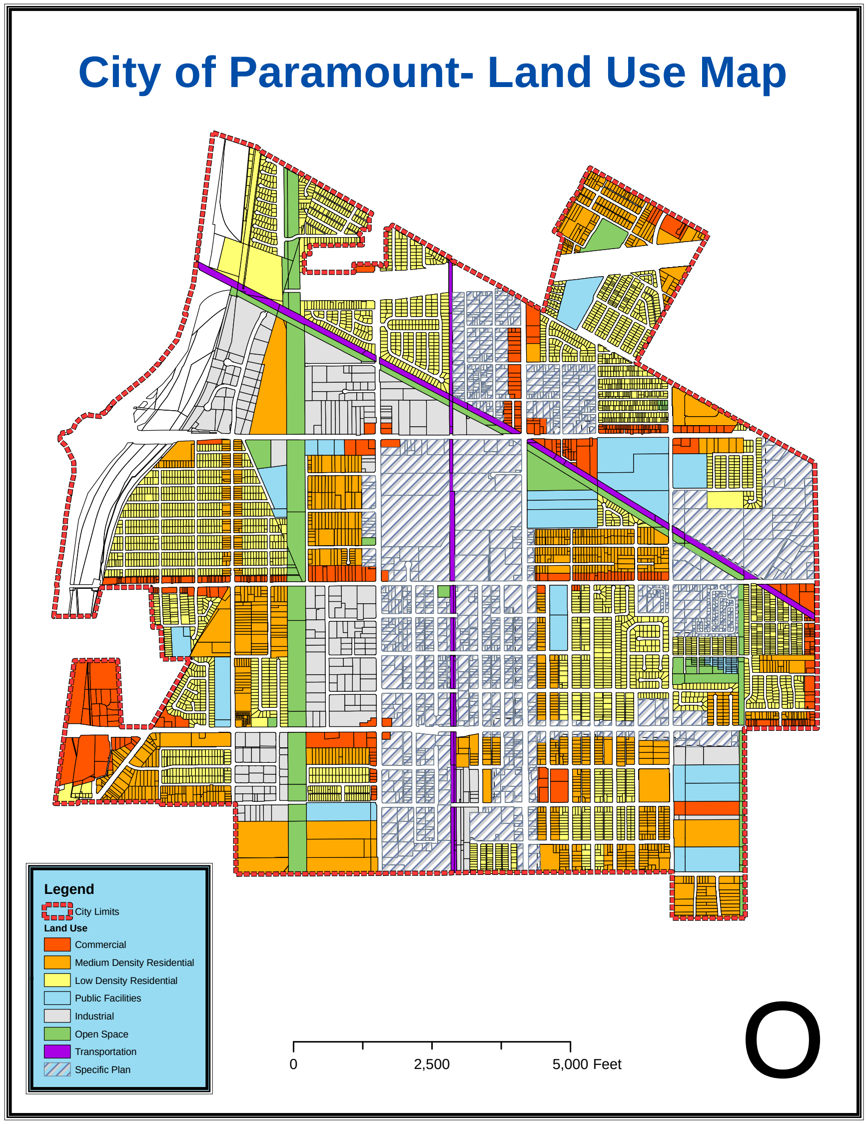

City of La Mirada- Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industry
Open Space
Specific Plan
0 1,250 2,500 5,000 Feet

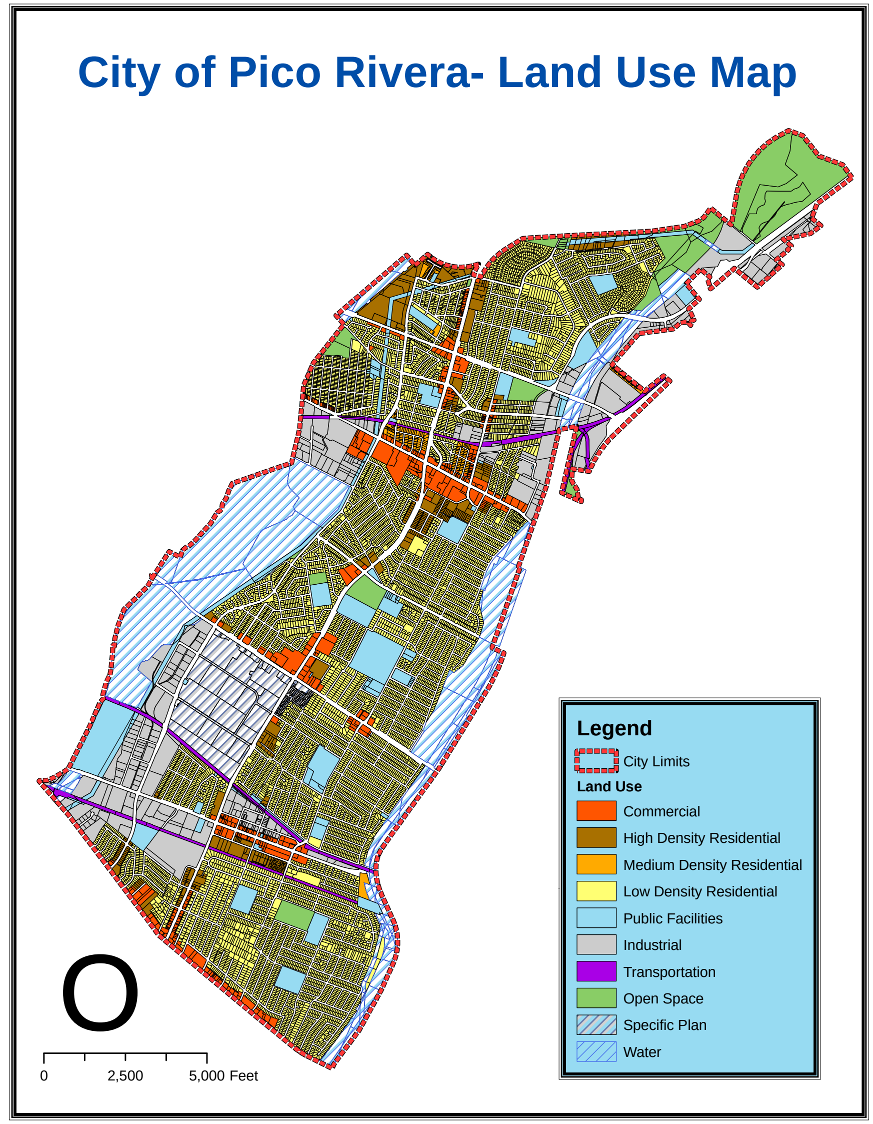

City of Long Beach- Land Use Map
Legend
Land Use
Commercial
Mixed Use
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
Specific Plan
0
5,000
10,000 Feet
N

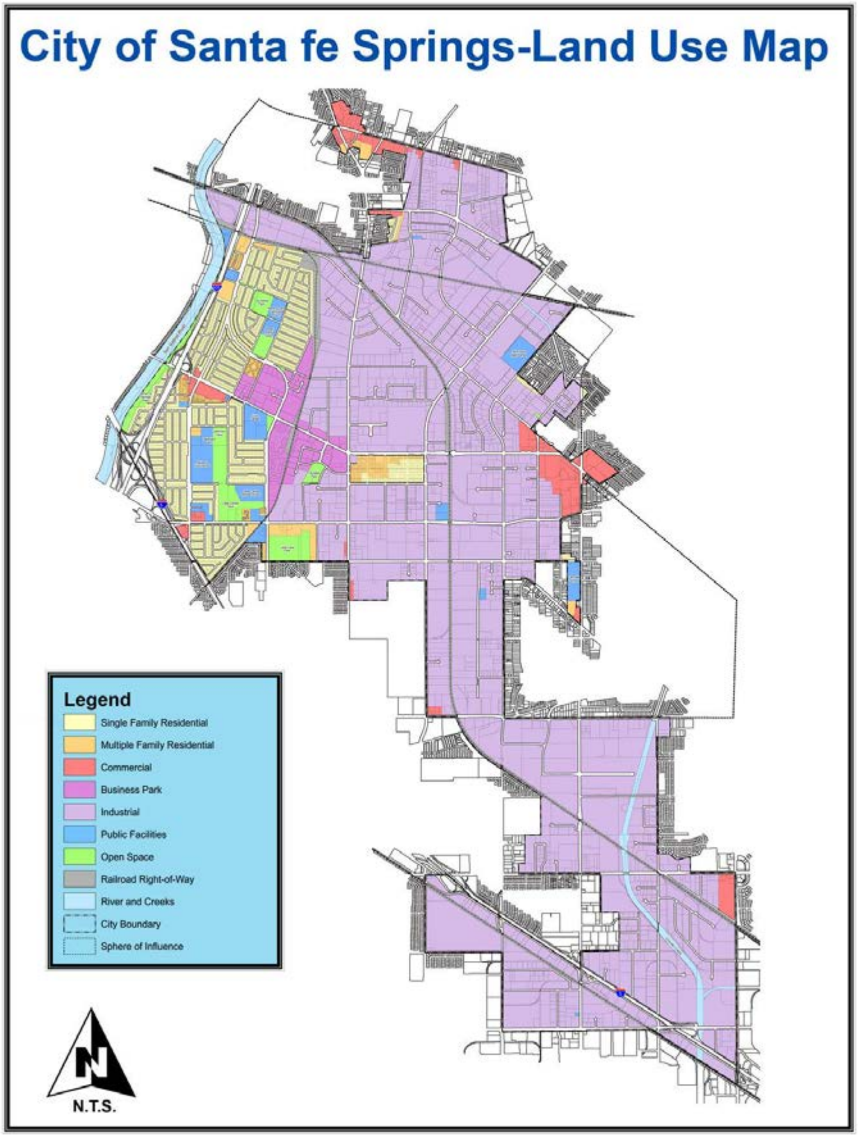

City of Lynwood- Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
Transportation
Specific Plan
0
2,500
5,000 Feet

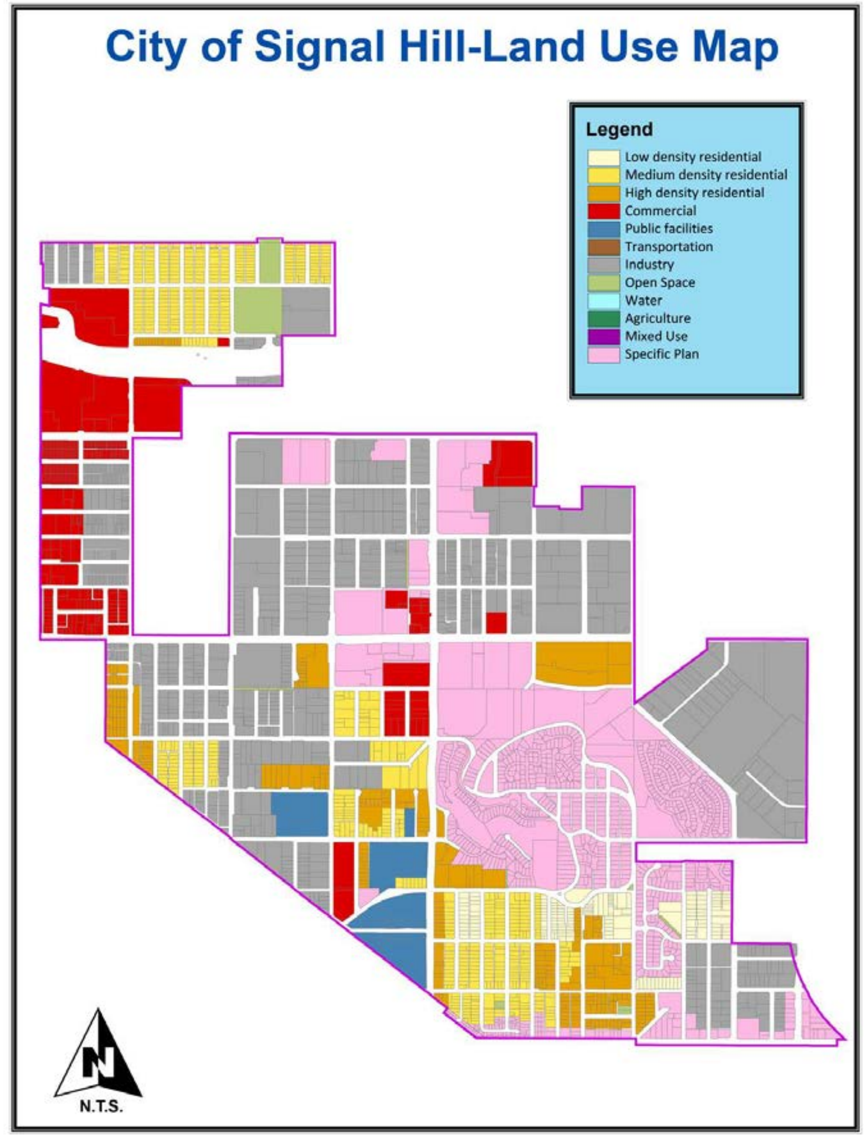

City of Maywood- Land Use Map
Legend
City Limits
Land Use
Commercial
Mixed Use
Medium Density Residential
Public Facilities
Industry
Open Space
0
1,000
2,000 Feet

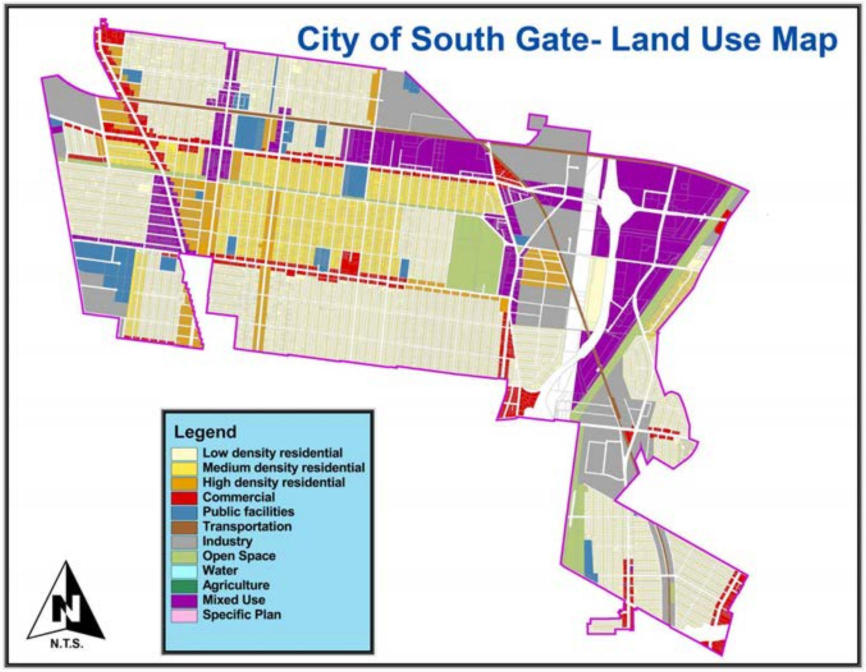

City of Norwalk- Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
Transportation
0
2,500
5,000 Feet

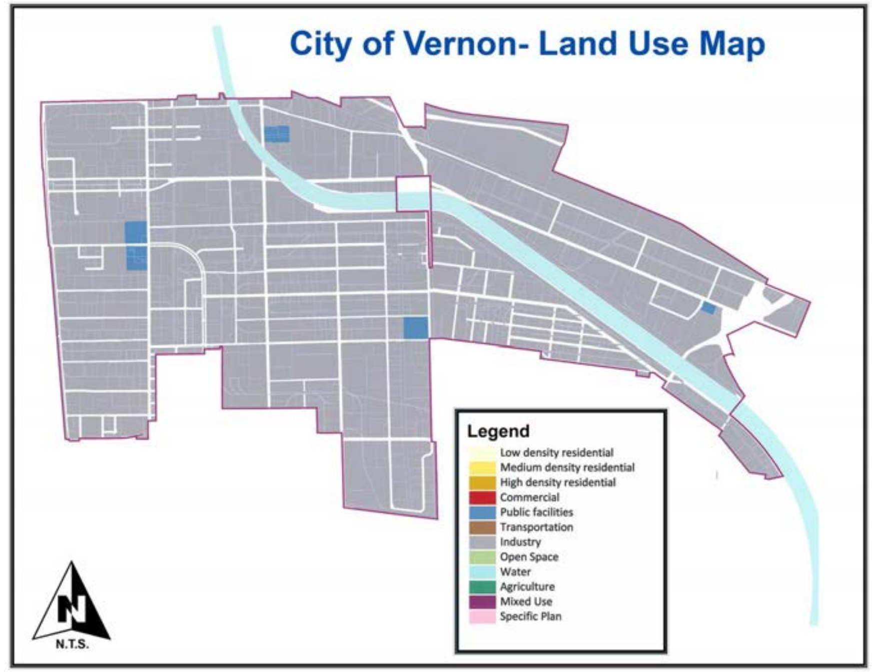

City of Paramount- Land Use Map
Legend
City Limits
Land Use
Commercial
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Open Space
Transportation
Specific Plan
0
2,500
5,000 Feet

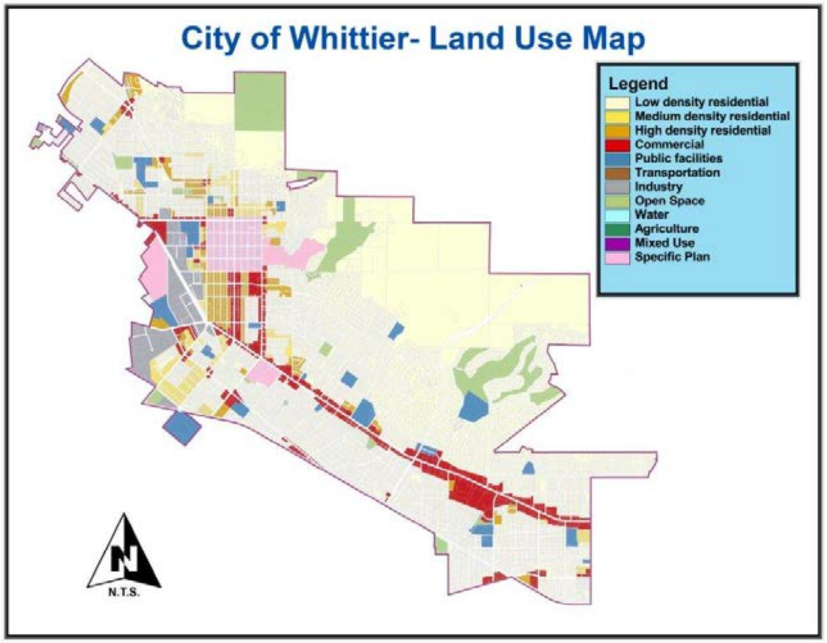

City of Pico Rivera- Land Use Map
Legend
City Limits
Land Use
Commercial
High Density Residential
Medium Density Residential
Low Density Residential
Public Facilities
Industrial
Transportation
Open Space
Specific Plan
Water
0
2,500
5,000 Feet


City of Santa fe Springs-Land Use Map
Legend
Single Family Residential
Multiple Family Residential
Commercial
Business Park
Industrial
Public Facilities
Open Space
Railroad Right-of-Way
River and Creeks
City Boundary
Sphere of Influence
N
N.T.S.


City of Signal Hill-Land Use Map
Legend
Low density residential
Medium density residential
High density residential
Commercial
Public facilities
Transportation
Industry
Open Space
Water
Agriculture
Mixed Use
Specific Plan
N
N.T.S.


City of South Gate- Land Use Map
Legend
Low density residential
Medium density residential
High density residential
Commercial
Public facilities
Transportation
Industry
Open Space
Water
Agriculture
Mixed Use
Specific Plan
N
N.T.S.


City of Vernon- Land Use Map
Legend
Low density residential
Medium density residential
High density residential
Commercial
Public facilities
Transportation
Industry
Open Space
Water
Agriculture
Mixed Use
Specific Plan
N
N.T.S.



Appendix K.

LA MTA Congestion Mitigation Fee Tool – GHG Emissions Calculator

CAMBRIDGE SYSTEMATICS

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

Draft Methodology Documentation

technical

memorandum

prepared for

Los Angeles County Metropolitan Transportation Authority

prepared by

Cambridge Systematics, Inc.

September 27, 2010

www.camsys.com

technical memorandum

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

Draft Methodology Documentation

prepared for

Los Angeles County Metropolitan Transportation Authority

prepared by

Cambridge Systematics, Inc.
555 12th Street, Suite 1600
Oakland, CA 94607

date

September 27, 2010

Table of Contents

List of Tables

1.0 Introduction

At the behest of the Los Angeles County Metropolitan Transportation Authority (MTA), Cambridge Systematics (CS) developed a set of sketch-planning tools designed to estimate the potential greenhouse gas (GHG) reduction benefits of congestion mitigation fee (CMF) candidate projects included in the web-based *Fee Revenue and Growth Forecast Calculator*.

A diverse range of national, state, and regional tools and research were referenced to support the development of the tool, including CS' *Moving Cooler* report and the U.S. Department of Transportation (U.S. DOT) Report to Congress, *Transportation's Role in Reducing U.S. GHG Emissions*. Significant adaptations and refinements were made to these existing tools and research findings in order to ensure these methodologies are context sensitive to MTA regional features and produce the most reasonable results possible. CS used the following four-step process to adapt these various tools and research into an analytical tool for use in Los Angeles County:

1. **Define the context of the MTA region.** The accurate GHG analysis of any individual project or set of projects relies on a relationship to the location context in which these projects are deployed. This step also involved analyzing and categorizing projects included in the *Fee Revenue and Growth Forecast Calculator* to ensure that methodologies were available for the vast majority of projects that might be included in a Los Angeles County CMF program.
2. **Adapt the *Moving Cooler* tools to regional analysis.** The *Moving Cooler* methodology evaluates the efficacy of more than 50 transportation and land use strategies, and estimated synergies between individual strategies when bundled. The methods rely on empirical data and experience from research projects. CS updated these methods to pivot off the *Moving Cooler* analysis while applying region-specific data. As appropriate, additional region-and/or state-specific tools were incorporated into the analysis. These data and resources were applied to the preliminary list of CMF-eligible projects, and 10 separate project methodologies were identified for development.
3. **Develop and test a draft analytical tool.** CS developed and tested an interactive sketch-planning model in Excel spreadsheet format, allowing for on-the-fly individual project GHG emission reduction analysis, pursuant to a set of user-defined inputs.
4. **Develop and test a web-based GHG analysis tool**. CS adapted the spreadsheet-based sketch-planning tools into a user-friendly, web-based module to be used within the *Fee Revenue and Growth Forecast Calculator's* Geographic Information System (GIS) tool. The finished tool allows cities and subregions to test individual GHG reduction scenarios for one or more

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

CMF projects specified by Los Angeles County jurisdictions. The spreadsheets and web-based tool tested five identical sets of inputs by project type to validate consistency between the spreadsheet and web-based coded methodologies.

Each of the 10 project types available for analysis within the web tool are subject to specific user-defined inputs, constraints, and calculations, as detailed in Section 2.0 of this technical memorandum. While the 10 project type methodologies are able to analyze the GHG impacts of the vast majority of preliminary projects entered in the CMF web tool, some unique projects may not be suitable for these analyses. However, for the vast majority of eligible projects, the tool provides a common platform to estimate GHG reduction benefits and compare results within and across different geographic and political boundaries. Section 3.0 details two project types not included in this version of the web tool. Section 4.0 outlines the approach for developing carbon dioxide (CO_2) emission factors via the California Air Resources Board's (CARB) Emissions Factors (EMFAC) model; and the process for applying emissions factors in combination with estimates of changes in travel behavior (e.g., vehicle miles traveled (VMT), speed, and delay) to determine CO_2 emission reductions. Section 5.0 provides a summary of the major limitations of the tool as currently designed, and identifies next steps for expanding the tool's calculation abilities.

The references are provided in Appendix A. Appendices B, C, and D provide additional details regarding factors used in the calculation of GHG emission reductions for each project type. Appendix B presents a map of SCAG-defined area types; Appendix C includes the LA MTA model free-flow speed and capacity lookup table; and Appendix D presents all constants and assumptions, along with the citation and justification for their use in the project calculations.

2.0 Technical Documentation by Project Type

This section presents the project type objective, evaluation constraints, inputs, assumptions, and methodologies supporting the calculation of GHG emission reduction benefits of 10 unique types of CMF projects:

1. Roadway capacity,
2. Interchange capacity,
3. Intersection improvement,
4. System operations,
5. Grade separation,
6. Bike / pedestrian,
7. Bike / pedestrian and transit,
8. Transit expansion,
9. Park-and-ride, and
10. Managed lanes.

Sketch-planning tools are used to calculate emission reductions for all projects within each project type. It is important to note that there are some travel model and microsimulation-based approaches not included here that are considered extremely effective for simulating and calculating emission reductions on a project-by-project basis. The web-based platform is currently unable to accommodate this precision of detail at the project level without performing many costly and time consuming model runs. Nevertheless, these project-type methodologies offer a reasonable approximation of GHG impacts given the limited details provided by CMF project descriptions.

The design of the equations, lookup tables, and overall calculation process is transparent, while maintaining technical validity. The critical lookup tables and background information supporting the calculations and their location in this document are listed below:

1. **Roadway Capacity**
   a. SCAG area type map (Appendix b)
   b. LA MTA model speed and capacity lookup table (Appendix C)
   c. LA MTA model speed-flow curve equations (Section 2.1)
   d. EMFAC emission factors (Section 4.0)
2. **Interchange Capacity**
   a. LA MTA model speed and capacity lookup table (Appendix C)
   b. LA MTA model speed-flow curve equations (Section 2.1)
   c. EMFAC emission factors (Section 4.0)

3. **Intersection Improvement**
   a. LA MTA model speed and capacity lookup table (Appendix C)
   b. EMFAC emission factors (Section 4.0)
4. **Systems Operations**
   a. California DOT's (Caltrans) Traffic Light Synchronization Program (TLSP) evaluation algorithms (Section 2.4)
   b. EMFAC emission factors (Section 4.0)
5. **Grade Separation**
   a. EMFAC emission factors (Section 4.0)
6. **Bike/Pedestrian**
   a. ADT adjustment factor lookup table (Appendix D, Section 2.6)
   b. Activity center credits (Appendix D)
   c. EMFAC emission factors (Section 4.0)
7. **Bike/Pedestrian and Transit**
   a. ADT adjustment factor lookup table (see Appendix D, Section 2.6)
   b. Activity center credits (Appendix D)
   c. Increase in transit trips by area type and transit mode (Section 2.7)
   d. VMT per capita by area type (Section 2.7)
   e. SCAG area type map (Appendix B)
   f. EMFAC emission factors (Section 4.0)
8. **Transit Expansion**
   a. Increase in transit trips by area type and transit mode (Section 2.7)
   b. VMT per capita by area type (Section 2.7)
   c. SCAG area type map (Appendix B)
   d. EMFAC emission factors (Section 4.0)
9. **Park-and-Ride**
   a. Average weekday parking utilization (Table 2.12)
   b. EMFAC emission factors (Section 4.0)
10. **Managed Lanes**
   a. LA MTA model speed-flow curve equations (Section 2.1)
   b. EMFAC emission factors (Section 4.0)

Each existing CMF project-type calculation was first developed and tested in a spreadsheet format. Five unique test cases were evaluated for each project type in the spreadsheets, and then retested in the web-based platform in order to validate the calculations.

All project-level calculations are first estimated at the daily level, and then annualized based on a factor of 250 days.[1] All emission factors and calculations are presented in Section 4.0.

2.1 ROADWAY CAPACITY

Overview and Project Types

This project type evaluates those roadway capacity projects that add new capacity by widening an existing facility, or by building or extending a new roadway. The evaluation requires the user to specify a facility type, which defines the physical characteristics of the facility under improvement; and an area type, which describes the area where the facility is located. Emission reductions from these projects are derived from increased average vehicle speeds due to capacity expansion and improved traffic flow rates resulting from decreased congestion. Emission reductions vary by the type of facility under expansion and the location of the facility.

Methodology Limitations

This approach is used for projects involving capacity expansion through the addition of additional travel lanes. Construction of new access lanes or connecting facilities can only be evaluated using this method if the existing average speed on alternative routes is known; and the anticipated traffic volume due to the construction of the proposed facility can be estimated from a study, modeling exercise, or analysis based on valid assumptions. Turning lanes, center-turn lanes, and capacity additions at intersections cannot be evaluated using this method. Emission reductions benefits are calculated for the peak period, and it is assumed that benefits are negligible during off-peak hours.

This approach does not account for the impact of diverted traffic resulting from the capacity expansion. Enhanced capacity in one corridor may act to move trips from a parallel corridor with higher congestion. It is assumed that, at a regional level, the impact of diverted traffic results in no net change in GHG emissions.

It is further assumed that the potential impact of induced travel is negligible due to the minor impact of these projects on cumulative regional travel.

[1] There are approximately 250 workdays in a year.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

User-Defined Inputs

The methodology requires a set of project-specific, user-defined inputs presented in Table 2.1.

Table 2.1 Roadway Capacity Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
Average Annual Weekday Traffic (AAWT) Volume		• Enter total daily weekday traffic on the corridor
Facility type		• Select from Interstate, Expressway, Primary, or Secondary arterial type • Definitions inherited from the Southern California Association of Governments (SCAG) travel demand model
Area type		• Select from Central Business District (CBD), Urban, Suburban, Mountain, and Rural area types • Definitions based on traffic analysis zone attributes and inherited from the SCAG travel demand model (see Appendix A)
Total number of lanes (existing, in 2010)		• Enter total number of lanes before improvement in one direction in case of a divided facility, and in both directions in case of an undivided facility • Intersection turn pockets are represented by ½ lanes
Total number of lanes (proposed, by 2020)		• Enter total number of lanes after improvement in one direction in case of a divided facility, and in both directions in case of an undivided facility
Project Length (miles)		• Enter total length of the project
Truck percentage		• Enter share of trucks as a fraction of total corridor traffic

Methodology

Emission reductions due to capacity expansion projects are a result of improved traffic flow as a result of added capacity. The extent of improvement is based on the type of facility being improved and area characteristics representing travel intensity. Speed and capacity information by facility type and area types have been obtained from the MTA's travel demand model (see Appendix B). Travel speeds on the facility's before-and-after capacity expansion are calculated using speed-flow curves from the MTA's travel demand model. Speed flow equations used in the MTA travel demand model are as follows:

S = s0/(1+1.5 (x)^6) for Freeways, high-occupancy vehicle (HOV), and Toll Facilities

S = s0/(1+0.15 (x)^5) for Other Facility Types

Where:

s0 = Free-flow speed; and

x = Volume to capacity ratio.

Travel speeds are calculated for peak periods and only during weekdays, since it is conservatively assumed that the speed variations during the off-peak periods and weekends are marginal. The methodology calculates separate emissions reduction rates for trucks and cars, pursuant to a user-defined estimate of the average share of trucks relative to total traffic on the segment.

2.2 Interchange Capacity

Overview and Project Types

Interchange capacity projects are those that improve capacity through existing interchange and ramp improvements, either by adding lanes to existing ramps, or by improving traffic flow conditions by improving vehicle delay at off-ramps serviced by a downstream-signalized intersection. The evaluation methodology incorporates emissions reductions due to improvements in traffic flow for both on-ramps and off-ramps.

Methodology Limitations

In order to accommodate as many types of interchanges as possible, the methodology addresses improvements by classifying them for on-ramps and off-ramps. Otherwise, the project input will be dependent on the type of intersection; opening the door to a number of possibilities, which makes the data input complex for a sketch-planning approach. New ramp access connections cannot be evaluated using this method.

User-Defined Inputs

The methodology requires the set of project-specific, user-defined inputs presented in Table 2.2.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

Table 2.2 Interchange Capacity Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
On-ramp 1 AAWT		• Enter average annual weekday traffic on the first on-ramp
On-ramp 2 AAWT		• Enter average annual weekday traffic on the second on-ramp
On-ramp 1 existing number of lanes		• Enter total number of lanes before improvement on the on-ramp (2010) • Intersection turn pockets are represented by ½ lane
On-Ramp 2 existing number of lanes		• Enter total number of lanes before improvement on the off-ramp
On-ramp 1 capacity enhancement (added # of lanes by 2020)		• Enter total number of lanes after improvement on the first on-ramp
On-ramp 2 Capacity Enhancement (added # of lanes by 2020)		• Enter total number of lanes after improvement on the second on-ramp

Methodology

Emission reductions from interchange improvements can be classified from two different types of improvements: 1) adding capacity to existing ramps to improve traffic flow, and thereby improve speeds and reduce emissions; and 2) reducing delay on interchange off-ramps due to traffic control (such as a signalized intersection) downstream of the off-ramp.

Emission reductions from improvements to interchanges are achieved through providing improved access to arterial streets or other connecting highway facilities through ramp improvements. Turn lanes at the traffic signal downstream of the off-ramp from the interchange are considered to be one-half the capacity of a single lane. Generalized ramp capacity and average speeds are obtained from LA MTA's travel demand model output.

The methodology is similar to providing additional capacity, resulting in improved speed and level of service (LOS). Speed-flow curves equations from MTA's travel demand model are used for calculating the travel time taken to navigate the ramps before and after the improvement.

TC = T0 * (1 + 1.50*(X)^6)

Where:

TC = Congested travel time;

T0 = Free-flow travel time; and

X = Volume to capacity ratio.

Travel time before and after the improvement is translated to average speed. Emission factor lookups are applied based on the before-and-after improvement speeds and ramp VMT to estimate total change in emissions.

Improvements downstream of an off-ramp may include changes to signal timing and phasing, or adding turn pockets and right-turn phases to reduce intersection delay. Control delay per vehicle can be calculated by an intersection delay study, or by estimation on the basis of traffic arrival patterns and progression criteria. Table 2.3 provides guidance for determining intersection LOS and control delay per vehicle.

The estimate of total delay savings as a result of an intersection improvement at the ramp termini uses the Section following formula:

$$d_1 = \frac{0.5C\left(1 - \frac{g}{C}\right)^2}{1 - \left[\min(1, X)\frac{g}{C}\right]}$$

Where *C* = is the cycle length, *g/C* = is the green time to cycle ratio = 0.5 (for simplicity) and X is the highest volume to capacity ratio of any turning movement or a lane group at the intersection. This approach is consistent with the calculation for intersection project type #3 as presented in Section 2.3.

The improvement in delay experienced per vehicle due to a change in capacity at the intersection is transformed into total delay in vehicle hours and thereby used for estimation of emission reductions.

Ultimately, total emission savings for this project type is a product of both the savings from improving ramp capacity and the savings from reduced intersection delay at ramp termini.

2.3 INTERSECTION IMPROVEMENT

Overview and Project Types

The model is designed to evaluate at-grade intersection improvement projects. CO_2 emission reductions due to intersection improvements are a result of the reduced delay navigating the intersection– – either due to idling at the red light, or due to deceleration and queuing that occurs at the intersection. The methodology to estimate the reduction in greenhouse gas emissions includes three types of intersection improvements leading to emission reductions:

- **Type 1.** New Signal. An unsignalized intersection approaching failure due to intolerable levels of delays is improved to a signalized intersection with an acceptable level of service.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

- **Type 2.** New Turning Phase. Enabling a specific turn or movement at the intersection that was non-existent or making a permissive turn into a protected turn by changing the signal phasing and / or timing.
- **Type 3.** Improved Intersection Capacity. Changes to the signalized intersection positively impacting level of service, including improvements to geometry, approach redesign, or new lanes.

In each case, average reduction in delay per vehicle due to the improvement is estimated to determine the emission reduction benefits as a result of the improvement. Intersection delay can be measured by conducting intersection delay studies or by estimation with input data like signal cycle length and effective green times for critical movements.

This methodology strives to hit the middle-ground between conducting a full intersection delay analysis for determining delay before and after improvement, and conducting a field study for obtaining delay parameters. To achieve this, the methodology makes some key assumptions. Typically, agencies perform delay and LOS calculations as part of an intersection delay study or intersection LOS analysis. In the absence of such detailed data, delay can be estimated by arrival patterns and LOS data. Some of this data is already available from intersection studies and corridor studies, or might be maintained by the traffic or public works departments charged with maintaining the signals.

A major overarching assumption is that the design methodology considers the signals as pre-timed, given the difficulty of accounting for the dynamics of changes to signal times and phases under an actuated setting.

Methodology Limitations

The intersection improvement methodology calculates delay at a single intersection level, and is not equipped to estimate improvement benefits for multiple intersections or systemwide improvements. Intersection delay studies are the best source for delay measurements, if available. In the absence of observed intersection delay information, guidance to estimate delay is provided based on arrival types or LOS, as presented in Table 2.3. This methodology is not applicable in case of a staggered (five-legged or more) intersection.

In the absence of accurate delay data, estimation through vehicle approach and progression should be made as accurately as possible. LOS corresponding to delay windows may only be used to approximate control delay due to the difference in lower and upper bounds of each LOS (for example, LOS F corresponds to a delay between 55 to 80 seconds per vehicle, which might not be precise enough to provide an accurate estimation of emission reduction benefits).

User-defined input data like peak hour volumes, cycle length, and approach capacity are the minimum required to support the calculation of intersection improvement emission reduction benefits. Available traffic data and signal operating plans from a traffic management data center or a public works/transportation department is recommended. If unavailable, observed delay or intersection LOS can be used as an approximation. In order to calculate delay reduction benefits, a number of key assumptions are required to simplify the calculations so that the number of inputs is manageable.

Note: The web-based version of the GHG Emissions Calculator allows users to assign one or more of the intersection improvement project types listed above. In project definitions where both a new phase and added capacity are included (i.e., a mix of project type 2 and 3), the following approach is recommended:

1. For projects adding only turn-lane capacity and new turn phasing, only apply the project type 2 approach, entering the new number of turn lanes as an input.
2. For projects adding both turn-lane and through-lane capacity, apply both the project type 2 and project type 3 approach separately.

User-Defined Inputs

The three unique intersection project approaches require the set of project-specific, user-defined inputs presented in Table 2.3.

Table 2.3 Intersection Improvement Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
1. Unsignalized (2-way of 4-way stop) to Signalized Intersection		
Area Type		Five options are available (CBD, Urban, Suburban, Mountain, Rural)
Peak Hour Volume (Approach Street 1 and 2)		Enter the average weekday peak hour volume for each intersection approach[2]
Total number of lanes (Street 1 and Street 2)		Note: Each turn lane, auxiliary lane or reversible lane equals 1/2 lane. Input total lanes for both approaches of the street.
Facility Type (Street 1 and Street 2)		Four options are available (Interstate, Expressway, Primary, Secondary)
Proposed Signalized Intersection Cycle Length (sec)	60 – 120	Guidance based on FHWA signal timing manual (see Table 2.4)
Peak Hour Intersection Delay before Improvement (s/veh)	50	50 sec. per vehicle is the default assumption for LOS F at unsignalized intersections. Higher values may be entered if supported by a recent study.
2. New or Protected Turn Phasing at Existing Signalized Intersection		
Type of Turn Affected by Project		Input the turn movement (left or right) enabled by the new phase. Project approach can measure the benefit of adding a single phase only.
Proposed Total Cycle Length (sec) (including impact from new or extended turn phases)	60 – 120	Guidance based on FHWA signal timing manual (See Table 2.4)
Total number of turn lanes on improved turn movements		The total number of turn lanes for all of the improved turn movements. For example, if 2 left turns at the intersection are being improved, each with 1 turn lane, the user should enter 2.
3. Improvement in Overall Intersection Capacity		
Area Type		Five options are available (CBD, Urban, Suburban, Mountain, Rural)
Facility Type (Street 1 and Street 2)		Four options are available (Interstate, Expressway, Primary, Secondary)
Total number of lanes (Street 1 and Street 2)		Note: Each turn lane, auxiliary lane or reversible lane equals 1/2 lane. Input total lanes for both approaches of the street.
Total number of lanes after improvement (Street 1 and Street 2)		Note: Each turn lane, auxiliary lane or reversible lane equals 1/2 lane. Input total added lanes for both approaches of the street.
Peak Hour Volume (Approach Street 1 and 2)		Enter the average weekday peak hour volume for each intersection approach
Existing Cycle Length (sec)	60-120	See signal complexity guidance from FHWA Signal Timing Manual (see Table 2.4)

[2] If only average daily traffic is known, peak-hour volumes can be approximated by applying a factor of 0.1 (regional average).

Table 2.4 FHWA Signal Timing Manual Reference

Signal Complexity	Commonly Assumed Cycle Lengths
Permissive left turns on both streets	60 seconds
Protected left turns, protected-permissive left turns, or split phasing on one street	90 seconds
Protected left turns, protected-permissive left turns, or split phasing on both street	120 seconds

Source: FHWA Traffic Signal Timing Manual, 2008.

Methodology

Intersection improvements that provide additional turn lanes, better geometric design, improved signal timing and phasing can reduce vehicle delay in navigating the intersection. This delay reduction results in lower vehicle emissions due to less vehicle time spent decelerating, accelerating, or idling. Existing vehicle hours of delay for each intersecting street (by each approach) must be estimated separately, either via an intersection delay study or data from a traffic management center. Alternatively, estimation through vehicle approach and progression should be instrumental in estimating the average delay for each approach, and thereby for intersecting streets.

Delay at the intersection is calculated given the delays for individual approaches and flow rates as follows:

$$\frac{\sum_{i=1}^{n}\left(v_i \cdot d_i\right)}{\sum_{i=1}^{n} v_i}$$

Where:

d = Delay for the approach;

v = Approach flow rate (vehicles per hour); and

n = Number of approaches to the intersection.

This reduction in average delay per vehicle approaching the intersection equates to less time spent idling, where CO_2 emission rates are highest. Since control delay takes into consideration the time elapsed for deceleration, queuing, and idling, the difference in travel speeds for noncongested conditions before-and-after improvements are not included in the GHG reduction calculation. The total change in vehicle hours of delay at the intersection, before and after the improvement, is calculated as follows:

$$\Delta D_{int} = D_{intnb} - - D_{intb}$$

Where:

D_{intnb} = Total delay at the intersection for the no-build condition; and

D_{intb} = Total delay at the intersection for the build condition.

The change in delay (ΔD_{int}) is multiplied by the idle CO_2 emissions factor (g / hr) to estimate emission reductions.

Project Type #1– – New Signal

For estimating the delay at a planned signalized intersection, short of obtaining basic design parameters of the intersection including turning movements and the

lane configuration changes, the user is prompted to provide peak hour volumes for intersecting streets, respective capacity at the intersection and the total signal cycle length at the intersection. Delay at the intersection is calculated using the following formula (this formula is used within each project type approach):

$$d_1 = \frac{0.5C\left(1-\frac{g}{C}\right)^2}{1-\left[\min(1,X)\frac{g}{C}\right]}$$

Where C = is the cycle length, g/C = is the green time to cycle ratio = 0.5 (for simplicity) and X is the highest volume to capacity ratio of any turning movement or a lane group at the intersection.

The improvement in delay experienced per vehicle due to signalization is transformed into total delay in vehicle hours and thereby used for estimation of emission reductions.

Estimated delay in this methodology is assumed to be uniform delay resulting due to uniform arrival of traffic at the intersection, which is an ideal assumption. In the absence of detailed turning movement data and proposed signal timing and phasing details, green time to cycle ratio is assumed to be 0.5. It should be recognized that the mid-block capacity of a street is different from the capacity at the intersection due to turning traffic and effects of signal controls.

Project Type #2- New Turn Phase

Intersection delay can be reduced by enabling a specific turn or movement at the intersection that was non-existent or permissive before into a protected turn by providing a new phase, or by including the movement in an existing phase by changing the time allocated to the phase. If the movement is not allowed at the intersection in the existing set-up, the existing delay is assumed to reflect a level of service F or more, which translates into a delay of 80 seconds or more. By providing protected phase to this movement, we are not only changing the signal timing plan, but also potentially adding to the cycle length. Because the delay at the intersection will be reduced for this movement, due to the provision of a green time to serve this movement, delay can be calculated based on the new cycle time and the effective green time for that movement.

The same formula presented in Project Type 1 is used to calculate before and after intersection delay. This methodology relies on assuming several constants for estimation of delay at the intersection for the turning lane group. Saturation flow rate is adjusted to area type and based on the type of turn. Saturation flow rate in CBDs and urban areas is assumed to be 1,700 veh/hr/lane[3]. Further, this saturation rate needs to be adjusted for the type of turn, which is lower for right and left turns compared to the through movement. For right turns, the adjustment factor is 0.85 and for left turns, it is 0.95. The default v/c ratio for the turning movement is 0.9.[4]

Project Type #3– – Improved Intersection Capacity

Physical changes to the intersection for increasing capacity or geometric design, including provision of new through or turn lanes can reduce delay-related emissions at congested intersections under certain conditions. These changes to capacity result in an easing of capacity restrictions due to changes caused by the improvement. Volume is considered constant for practical purposes, since it is hard to estimate the quantity of traffic that is re-routed from other facilities due to improvement in delay at the intersection. Given the added capacity and geometric redesign resulting in delay reduction, a comparative analysis of intersection configuration before and after the improvement can be conducted to estimate the reduction in greenhouse gas emissions due to physical intersection design changes.

The same formula presented in Project Type 1 is used to calculate before and after intersection delay. Effective green to cycle ratio is assumed to be 0.5 for simplification in absence of turning movement and signal timing data to calculate it. Traffic is assumed to arrive in a uniform fashion at the intersection and improvement in uniform delay is estimated for calculating reductions in total greenhouse gas emissions as a result of improved geometric design and approach changes.

2.4 System Operations

Overview and Project Types

Projects that can be evaluated using this methodology include corridor signalization and synchronization improvements and intelligent transportation systems (ITS)/Advanced Traffic Management System (ATMS) implementation. Travel timesavings at each intersection along the corridor are calculated and aggregated by applying a delay reduction factor.

[3] Highway Capacity Manual (HCM 2000), Chapter 16-11, Adjustments for Saturation Flow Rate Chapter.

[4] HCM 2000, Chapter 16-99, Signalized Intersections, Design Strategies for Signal Timing Plan Design for Pre-timed Control.

Methodology Limitations

This method specifically evaluates arterial management strategies, such as corridor signalization, and cannot estimate systemwide or areawide improvements. However, areawide improvements can be estimated by testing individual corridors separately and summing their unique impacts. The length of the corridors and the signals being improved for synchronization should be reasonably spaced to achieve a meaningful reduction in travel savings. For example, travel time savings will be minimal for two signals spaced a mile apart compared to seven signals in a one-mile corridor.

User-Defined Inputs

The methodology requires the set of project-specific, user-defined inputs presented in Table 2.5.

Table 2.5 System Operations Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
Length of the signalized corridor (miles)		• Enter length of corridor targeted for signal synchronization
Existing number of signalized intersections		• Enter number of signalized intersections in the corridor
Existing number of lanes		• Enter number of through lanes that serve the highest directional flow of the peak-hour traffic in the corridor • Intersection turn pockets are represented by ½ lane
Peak-hour traffic volume		• Enter highest one-hour directional volume of the day in the corridor for the highest volume segment in the corridor
Existing peak-hour travel time (minutes)		• Enter time it currently takes for a vehicle to travel the length of the corridor during the peak hour in the peak direction
Existing average cycle length (seconds)		• Enter average cycle length of all the signalized intersections in the corridor

Methodology

This methodology uses California DOT's (Caltrans) Traffic Light Synchronization Program (TLSP)[5] evaluation algorithms to calculate delay at each intersection along a defined corridor. The TLSP offers an established method of calculating various benefits of corridor traffic signal synchronization in California, and is consistent with the evaluation and calculation of fuel savings from signal synchronization projects in the State of California. Travel timesavings due to the synchronization are estimated by calculating average delay at each intersection in the corridor. The travel timesavings formula is based on the Highway Capacity Manual (HCM) equation for delay (Equation 16-11 Chapter 16). When signals are synchronized, it is assumed that delay is reduced by a factor of 0.55.[6]

$$d_1 = \frac{0.5C\left(1-\frac{g}{C}\right)^2}{1-\left[\min(1,X)\frac{g}{C}\right]}$$

Where:

C = Cycle length; and

g/C = Green time to cycle ratio.[7]

The travel timesaving is the difference in seconds per vehicle per signal. It is multiplied by the number of signals and divided by 60 to return the benefit in minutes per vehicle for the total length of the arterial. Finally, the approach multiplies this by the volume to estimate total savings in minutes.

2.5 GRADE SEPARATION

Overview and Project Types

This approach evaluates projects that improve the roadway capacity and safety of current at-grade railroad crossings. Potential improvements include grade

[5] Caltrans (2008), *Traffic Light Synchronization Program (TLSP) Evaluation and Scoring Methodology*, California Department of Transportation, available on-line at: http://www.catc.ca.gov/programs/tlsp.htm.

[6] HCM (2000), *Highway Capacity Manual*, Transportation Research Board (TRB), Exhibit 16-12.

[7] To avoid users having to enter time-to-cycle ratios for each intersection, g/C is assumed to be 0.5 for the corridor. This is a recommended practice per HCM (2000).

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

separation of at-grade railroad crossings, which reduces delay caused by at-grade railroad facility conflicts.

This method is applicable for projects that facilitate uninterrupted movement for vehicles along a roadway and reduce delay at the crossing. Average gate down time is used as a proxy for intersection delay prior to the grade separation improvement. Gate down time varies between freight rail and passenger rail, and should be adjusted in accordance with the type and number of trains operating along the rail corridor.

Methodology Limitations

This approach should only be used to analyze projects that remove at-grade crossings of active rail corridors. Installing a grade-separated interchange at an existing at-grade intersection is not accommodated through this project approach. Improvements to at-grade rail crossings that do not include a full grade separation can be analyzed as long as future average crossing speed can be estimated, and the total daily delay resulting from queues when gates are down does not change.

User-Defined Inputs

The methodology requires the set of project-specific, user-defined inputs presented in Table 2.6.

Table 2.6 Grade Separation Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
Daily number of trains using rail corridor		• Enter average number of weekday trains passing through the at-grade crossing
Average gate down time for each train (minutes)		• Enter average length of time during which the gate at the crossing remains down for each train
Roadway average daily traffic		• Enter total daily weekday traffic on the highway facility
Average vehicle railroad crossing speed (mph)	25 mph	• Enter average speed of vehicles negotiating the crossing when gate is not down • According to the California Department of Motor Vehicle (DMV), speed limits are to be 15 mph within 100 feet of a railroad crossing without gates; it is assumed that most urban locations have gates, and hence have a default crossing speed of 25 mph
Improved roadway posted speed limit (mph)		• Enter improved speed due to the construction of a grade-separation or other alternative that eliminates at-grade conflicts

Methodology

The duration of conflict of movement between roadway and railroad modes can be calculated by assuming an average gate down time for trains passing through the crossing, which is a proxy for existing intersection delay. Once there is a grade separation, the intersection delay is avoided completely, resulting in fuel savings, and thereby emission reductions.[8]

This methodology assumes that railroads are afforded preference of movement (right-of-way) at the intersection, thereby eliminating any delays to the rail services due to roadway traffic (Extreme circumstances like passage of emergency vehicles is not considered to occur frequently enough to affect rail services substantially.). Three types of vehicle delays result from an at-grade crossing: 1) stopping, 2) deceleration, and 3) queuing. Since stopping delay accounts for the vast majority of delay experienced by vehicles at an at-grade crossing, it is considered a reasonable and conservative proxy for total at-grade delay.

Because data on the length and type of trains passing through the grade crossing may be difficult for most users to specify accurately, an average gate down time is used to approximate vehicle delay. Gate down time and total vehicles delayed are estimated as follows:

Gate Down Time = Length of the Train / Train Speed

Total Vehicles Delayed (Daily) = Total Gate Down Time (Daily hrs) / 24 x Annual Average Daily Traffic (AADT)

The approach assumes that the total vehicular traffic impacted by delay caused by gate down time is equal to the total daily share of gate down time.

[8] ICC (2002-2003), *Motorist Delay at Public Highway– – Rail Grade Crossings in Northeastern Illinois*, Research and Analysis Section Transportation Division, Illinois Commerce Commission, Working Paper.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

Table 2.7 Bike/Pedestrian Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
ADT on the parallel arterial		• Enter average weekday passenger vehicle traffic on nearest parallel roadway
Length of project (miles)		• Enter total length of the bike/pedestrian project
Within 2 miles of a university or college (Y/N)?		• Select "Y" if any segment of project is within 2 miles of a university or college
Average length of bicycle trips (miles)	1.8	• Enter estimated average length of bicycle trips in the area; leave blank if a pedestrian project only • Default value (1.8 mi) is based on National Household Travel Survey (NHTS) statistics, excluding purely recreational trips.
Average length of pedestrian trips (miles)	0.5	• Enter estimated average length of pedestrian trips in the area; leave blank if bike project only • Default value (0.5 mi) is based on NHTS statistics, excluding purely recreational trips
Number of activity centers within ½ mile and ¼ mile of project		• Select the number of activity centers within ½ mile (bike) and ¼ mile (pedestrian) of the project • Activity center examples include banks, churches, hospitals, park-and-ride, office parks, library, shopping, and schools; credit is only given for 3 or more centers

Methodology

The bike project approach is consistent with *Methods to Find the Cost-Effectiveness of Funding Air Quality Projects*, a handbook prepared by the CARB in 2005. The CARB handbook describes how to evaluate Motor Vehicle Registration Fee Projects and Congestion Mitigation and Air Quality Improvement (CMAQ) projects, and is the basis for determining the amount of GHG reductions from bicycle facility projects.

The 2009 report *Methodologies for Evaluating Congestion Mitigation and Air Quality Improvement Projects*, developed for the Maricopa Association of Governments (MAG), is the basis for determining GHG reductions resulting from auto trips replaced by pedestrian trips. The MAG document adapted the methodology for calculating the impact of pedestrian improvements from the 2005 CARB handbook.

The approaches for bike and pedestrian projects are consistent. Within the general CARB approach, two primary factors drive the calculation of reduced auto trips: 1) the number of activity centers adjacent to the project, and 2) the project location with respect to a nearby university or college.[9] These factors are presented in Appendix C.

The number of activity centers within one-quarter mile of a pedestrian project and one-half mile of a bike project feed into a lookup table of factors generating percent auto trip reductions. The university/college location factor increases average trip lengths on the assumption that willingness to bike or walk, and the average distances for these trips are greater for college students.

Auto trip reductions are translated into VMT based on average bike and walk trip lengths. These average trip lengths default to 2001 National Household Travel Survey (NHTS) data, but the user interface allows users to override these figures with local-specific data.

Calculations for auto trips reduced as a result of increased bike and pedestrian trips generated by the project are listed below. Trips are then equated to VMT savings based on average bike and walk trip lengths. The VMT reductions are calculated separately for bike and pedestrian on a daily scale, then summed together and annualized (assumes a factor of 250 days, since commute benefits are assumed only to accrue during workdays). The GHG emissions calculation approach is included in Section 4.0.

$$\text{Daily auto trips reduced}_{\text{(bike)}} = \text{AWT} * 0.091 * (\text{A}_{\text{½ mile}} + \text{C})$$

$$\text{Daily auto trips reduced}_{\text{(walk)}} = \text{AWT} * 0.091 * (\text{A}_{\text{¼ mile}} + \text{C})$$

Where:

AWT = Average weekday traffic on the adjacent or nearest parallel arterial.

0.91 = Factor to convert average weekday traffic to AADT.

---

[9] Per CARB documentation, adjustment factors were derived from a limited set of bicycle commute mode split data for cities and university towns in the southern and western United States (Source: U.S. DOT (1992), *National Bicycling And Walking Study––Transportation Choices for a Changing America*). This data was then averaged and multiplied by 0.7 to estimate potential auto travel diverted to bikes. On average, about 70 percent of all person trips are taken by auto driving (Source: Caltrans (2002), *2000-2001 California Statewide Travel Survey*), and it is these trips that can be considered as possible auto trips reduced. Finally, this number was multiplied by 0.65 to estimate the growth in bicycle trips from construction of the bike facility. Sixty-five percent represent the average growth in bike trips from a new bike facility, as observed in before and after data for bike projects (Source: U.S. DOT (1994), *A Compendium of Available Bicycle and Pedestrian Trip Generation Data in the United States*). Benefits are scaled to reflect differences in project structure, length, traffic intensity, community size, and proximity of activity centers. The scale has been adapted from a method developed by Dave Burch of the Bay Area Air Quality Management District (BAAQMD).

A = Adjustment factor for ADT (auto trips replaced by bike or pedestrian trips). The adjustment factor is based on a lookup table of project length and AADT.

C = Credit for number of activity centers within one-quarter mile of the pedestrian project and one-half mile of the bike project.

2.6 Bike/Pedestrian and Transit

Overview and Project Types

This approach evaluates all bike and pedestrian infrastructure improvements that provide increased nonmotorized accessibility to transit. Projects can be evaluated individually for bike or pedestrian facilities, or combined. The approach and rules for inputs are similar to those used in the bike/pedestrian project-type methodology, but also include additional factors to estimate the effect of the interaction of nonmotorized infrastructure improvements with existing transit facilities.

Pedestrian and bicycle facilities can reduce GHG emissions when auto trips are replaced by walking and biking to transit stations. The methodology estimates the annual number of vehicle trips reduced, and the annual auto VMT reduced to approximate the GHG reduction associated with pedestrian and bike improvements at and around transit stations.

Methodology Limitations

The approach does not completely account for all elements of pedestrian bridges or multiuse facilities/greenways in exclusive ROW; however, these can be tested with careful consideration of inputs. In these cases, the total travel demand between the facility start point and end point, or an estimate of total walk or bike access trips to the transit stop or station can be entered in lieu of ADT.

The approach does not test potential mode shifts to nonmotorized and transit modes as a result of complete street elements (e.g., benches, lighting, improved buffers); traffic-calming strategies; transit station design elements, such as a bike station; employer-based strategies (e.g., bike lockers, showers); or improved transit amenities.

User-Defined Inputs

The methodology requires the set of project-specific, user-defined inputs presented in Table 2.8.

Table 2.8 Bike/Pedestrian and Transit Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
Project Type		• Select from bike, pedestrian, or bike + pedestrian.
ADT on the parallel arterial		• Enter average weekday passenger vehicle traffic on nearest parallel roadway.
Length of project (miles)		• Enter total length of the bike/pedestrian project.
Average length of bicycle trips (miles)	1.8	• Enter estimated average length of bicycle trips in the area; leave blank if a pedestrian project only. • Default value (1.8 mi) is based on 2001 NHTS statistics, excluding purely recreational trips.
Average length of pedestrian trips (miles)	0.5	• Enter estimated average length of pedestrian trips in the area; leave blank if bike project only. • Default value (0.5 mi) is based on 2001 NHTS statistics, excluding purely recreational trips
Average length of transit trips (miles)	5.2	• Enter estimated average length of transit trips in the area. • Default value based on the American Public Transportation Association (APTA) 2009 Factbook,[10] Table 7 (Bus = 3.9 mi; Commuter Rail = 24.3 mi; Heavy Rail = 4.7 mi; Average = 5.2 mi).
Number of activity centers within ½ mile of project		• Select appropriate number of activity centers. • Activity center examples include banks, churches, hospitals, park-and-ride, office parks, library, shopping, and schools.
Within 2 miles of a university or college (Y/N)?		• Select "Y" if any segment of project is within 2 miles of a university or college.
Area type		• Select from CBD, Urban, Suburban, Mountain, and Rural area types. • Definitions based on traffic analysis zone attributes and inherited from the SCAG travel demand model (see Appendix A).
Does project provide direct access to transit?		• Answer "Y" if any segment of project provides direct access to transit (station or bus stop).
Existing daily transit boardings		• Enter estimated total weekday boardings for all transit access points along project corridor.
Provides access to fixed guideway transit?		• Select "Y" if the segment provides direct access to fixed guideway transit.

[10] APTA (2009), *Public Transportation Factbook, 60th Edition*, American Public Transportation Association, accessed at http://www.apta.com/gap/policyresearch/Documents/APTA_2009_Fact_Book.pdf.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

Methodology

The bike and pedestrian project approach follows the same procedures outlined in Section 2.6. The additional transit access element within this project approach is addressed through a lookup table quantifying the increase in transit trips, based on type of access and area type (two percent for improved access to bus; four percent for improved access to fixed guideway).

The source for increases in transit trips is the Transit Cooperative Research Program (TCRP) Report 95, *Traveler Response to Transportation System Changes, Chapter 17 – Transit-Oriented Development (TOD)*, which summarizes travel mode shifts of residents upon relocation into TODs. The TCRP report specifically references California results based upon a 2003 study by Lund, Cervero, and Willson.[11] The shift to transit was larger for residents along the Bay Area Rapid Transit District (BART) heavy-rail system (4.2 percent) than for TOD survey respondents statewide (1.8 percent). These results indicated a reasonable estimate for percent increases as a result of improved accessibility: two percent for bus trips and four percent for fixed guideway trips. Results from the *TCRP Report 95* sources are assumed to approximate responses in high-density areas. Increase percentages in suburban, mountain, and rural areas are based on VMT per capita relationships by population density from the 2001 NHTS (see Tables 2.9 and 2.10).

Table 2.9 Increase in Transit Trips by Area Type and Transit Mode

Area Type	Bus	Fixed Guideway
CBD/Core	2.0%	4.0%
Urban	2.0%	4.0%
Suburban	1.6%	3.2%
Mountain	1.4%	2.8%
Rural	1.4%	2.8%

Source: NHTS (2001).

[11] H. Lund, R. Cervero, and R. Willson (2003), *Travel Characteristics of Transit-Oriented Development in California*, accessed at: http://www.csupomona.edu/~rwwillson/tod/Pictures/TOD2.pdf.

Table 2.10 VMT per Capita by Area Type

Area Type	Population Density People per Square Mile (ppsm)	Annual VMT Per Capita
Mountain/Rural	0– – 499	11,818
Suburban	500 -1,999	10,435
Urban	2,000– – 3,999	9,678
Urban	4,000– – 9,999	8,285
CBD/Core	10,000+	4,639

Source: 2001 NHTS.

Auto trips reduced by bike, walk, and transit modes are translated into VMT based on average bike, walk, and transit trip lengths. The methodology uses default average trip lengths based on the NHTS and APTA *2009 Factbook* data, but can be replaced with user-defined, local-specific data.

For a description of the methodology for calculating reduced auto trips resulting from the project, see Section 2.6.4. The calculation for transit trips is detailed below. Trip reductions are equated to VMT savings based on average bike, walk, and transit trip lengths. VMT reductions are calculated separately for all modes on a daily scale, and then summed together and annualized (assuming a factor of 250 days). For the GHG emissions calculation approach, see Section 4.0.

$$\text{Daily auto trips reduced}_{\text{(transit)}} = B_{\text{(project corridor)}} * I_{\text{(area type \& mode)}}$$

B = Daily transit boarding for all transit access points along bike/pedestrian project corridor; and

I = Percent increase in transit trips as presented in Table 2.9.

2.7 TRANSIT EXPANSION

Overview and Project Types

Transit expansion projects can cause shifts from auto travel, resulting in reductions in VMT and thus GHG emissions. The methodology assumes that, per passenger mile, all modes of transit, including buses, emit less CO_2 than an average occupancy light-duty vehicle trip.

This methodology estimates the emission reduction benefits of transit amenities, such as real-time transit arrival information or decreased out-of-vehicle travel times due to increased frequency of service (or reducing headways) and fleet expansions.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

Methodology Limitations

This method is not applicable to new transit routes in areas without existing transit services. The evaluation design is tailored to "typical" CMF-eligible projects (e.g., purchasing new buses, headways, stop amenities, traveler info). Improvements such as service extensions; new corridors; new stations; general enhancement of transit amenities (stops, sidewalks, benches); transit signal priority; queue jumper lanes; or bus rapid transit (BRT) are beyond the scope of this analysis.

User-Defined Inputs

The methodology requires the set of project-specific, user-defined inputs presented in Table 2.11.

Table 2.11 Transit Expansion Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
Average peak-period headway before improvements (mins)		• Enter average peak-period headway (minutes) before the project (2010)
Average peak-period headway after improvements (mins)		• Enter average peak-period headway (minutes) after the project (2020)
Does project include real-time arrival information?		• Select "Y" if project involves real-time arrival information
Existing (2010) project corridor transit travel time (mins)		• Enter average time it takes transit to travel the affected corridor (average can be for one route or across multiple routes)
Average peak-period transit ridership (2010) affected by improvements		• Enter average peak-period transit ridership affected by improvements (2010)

Methodology

The approach calculates the increase in transit ridership resulting from a change in headways using elasticities reported in the TCRP Report 95.[12] The methodology applies an average headway elasticity of +0.5. In other words, for each 1-percent decrease in headways, a corresponding 0.5-percent increase in

[12] TCRP 95c9 (2004), *TCRP Report 95, Chapter 9– – Transit Scheduling and Frequency*, Transportation Research Board, on-line at: http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_95c9.pdf.

ridership occurs. This elasticity is derived from an average effect observed on multiple bus transit systems in urban areas across the U.S. CS performed a validation using coefficients in SCAG's mode choice model, and arrived at a comparable elasticity for changes in headways in Southern California.

The TCRP Report 95 references case studies for Santa Clarita Transit in the mid-1990s and Santa Monica Municipal Bus Lines in 1998 that suggest the region-specific headway elasticity may be higher– – from +0.8 to +1.1. However, the current calculation framework maintains the more conservative +0.5 elasticity assumption.

The equation to calculate the change in ridership and resulting decrease in weekday light-duty VMT is as follows:

$$VMT = \frac{(\Delta H \times e_h \times R)}{AVO} \times TL$$

Where:

VMT = Reduction in daily light-duty VMT;

ΔH = Percent change in headways due to improvement;

e_h = Headway elasticity (-0.5);

R = Existing ridership impacted improvement;

AVO = Average passenger vehicle occupancy; and

TL = Average passenger vehicle trip length.

The methodology also accounts for the impact of real-time transit arrival information, which is based on an average travel time reduction as a result of real-time transit information. The 1995 NHTS indicated that transit wait times represent 22 percent of total transit trip time (or 10 minutes) on average (This was also validated through evaluation of the 2001 NHTS.).[13] The methodology assumes that the presence of real-time transit arrival information allows users to reduce average wait times by approximately 50 percent, resulting in a 10-percent reduction of overall travel time.

$$VMT = \frac{(\Delta T \times e_t \times R)}{AVO} \times TL$$

Where:

VMT = Reduction in daily light-duty VMT;

ΔT = Percent change in travel time due to real-time arrival info (10 percent);

[13]CUTR (1998), Public Transit in America: Findings from the 1995 Nationwide Personal Transportation Survey, Center for Urban Transportation Research, Table 4-13.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

et = Travel time elasticity (+0.23);[14]

R = Existing ridership impacted improvement;

AVO = Average passenger vehicle occupancy; and

TL = Average passenger vehicle trip length

The reduction in GHG caused by shorter headways is offset somewhat by the addition of transit revenue miles that generate CO_2 emissions. The increase in total corridor transit revenue miles is estimated via the change in total number of daily buses multiplied by transit corridor length.

2.8 Park-and-Ride

Overview and Project Types

Increasing parking capacity at transit stations reduces emissions by encouraging single-occupant vehicle drivers to shift to transit for a proportion of their commute trip.

This method is applicable for new or existing parking lots providing park-and-ride access to transit. The projects can include both expansions of existing parking facilities adjacent to transit. The user-defined type of transit station (urban rail, commuter rail, BRT/express bus, or transit center) determines the share of additional parking lot users that are new transit riders. This factor is combined with a parking lot utilization factor to estimate reduced vehicle trips as a result of the parking expansion.

Methodology Limitations

This methodology is not designed to estimate the impact of a new parking facility associated with a new transit station. The station must be existing with some level of existing parking available, but any type of existing parking (public, private, or shared) or type of transit station can be accommodated.

User-Defined Inputs

The methodology requires the set of project-specific, user-defined inputs presented in Table 2.12.

[14]VTPI (2010), *Transportation Elasticities: How Prices and Other Factors Affect Travel Behavior*. Victoria Transport Policy Institute, May 3, 2010.

Table 2.12 Park-and-Ride Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
Transit station type		• Select from urban rail, commuter rail, BRT/express bus, transit center, or other.
Additional parking added by 2020		• Enter number of new parking spaces (by expansion of an existing lot or a new lot).
Average auto trip length (miles)	15	• Enter average commute distance traveled by autos in the area. • 15 miles is the default option, based on 2009 NHTS data for the Los Angeles-Riverside-Orange County MSA.[15]
Average weekday parking lot utilization	95%	• Enter post-parking expansion expected average weekday utilization expected • Default value, 95% parking occupancy, is the assumed utilization in MTA's Gold Line Draft Environmental Impact Statement (DEIS)[16]; • Other input guidance by transit station type: 77% for Metrolink (the midpoint of the 70-85% range for commuter rail reported in TCRP 95, Ch.3), 65% for BRT/Express Bus; and 50-60% for urban bus systems/shared use facilities.[17]
Average auto access trip length (miles)	5	• Enter the average distance traveled by vehicles accessing the park-and-ride lot. • 5 miles is the default option. As a reference, per TCRP Report 95 (2004), 80% of trips to a park-and-ride facility travel less than 10 miles. Given the density of transit service in LA County, an average drive to park-and ride of less than 10 miles is reasonable for this application.
Parking lot usage	Weekdays	• Select from weekdays (250 days per year) and everyday (365 days per year)

Methodology

The approach calculates the CO_2 emissions reductions from added parking capacity at transit stations as a result of new transit riders shifting from the

[15] NHTS (2009), *National Household Travel* Survey, data available at: http://nhts.ornl.gov/tools.shtml,

[16] MTA (2004), *Gold Line Phase II– – Pasadena to Montclair– – Foothill Extension DEIS/DEIR*, Los Angeles County Metropolitan Transportation Authority, pp. 3-15-87.

[17] TCRP 95c3 (2004), *TCRP 95, Chapter 3– – Park and Ride/Pool*, Transportation Research Board, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_95c9.pdf.

private vehicle mode. The calculation of the VMT reduction is tied to a combination of user-defined inputs, as presented in Table 2.12. In addition, the percentage of new transit riders utilizing park-and-ride lots is assumed to be 37 percent, pursuant to data collected for the Metro Gold Line Foothill Extension environmental documents.[18]

The calculated VMT reduction is only applied to the portion of the trip length that shifts from auto to transit. Default average auto commute trip lengths and auto access to park-and-ride trip lengths are assumed to be 15 and 5 miles, respectively (see Table 2.12 for references). However, users may substitute unique corridor- or subregion-specific average auto trip length and auto access to parking trip lengths.

The volume of new transit riders utilizing the expanded park-and-ride lot capacity is estimated by multiplying the new parking spaces by the parking lot utilization, and by the percent of new riders using the park-and-ride lots (37 percent).[19] This new rider estimate is multiplied by the average round trip distance, excluding auto access, to obtain a daily VMT reduction for the project. The daily VMT reduction is calculated as follows:

$$VMT = \frac{(TL_1 - TL_2)}{2} \times (P \times U * NR_m)$$

Where:

VMT = Reduction in daily light-duty VMT;

TL_1 = Average auto trip length;

TL_2 = Average auto access to PNR trip length;

P = Total added parking spaces;

U = Average parking lot utilization; and

NR_m = Percentage of new transit riders using park and ride lot (37 percent).

2.9 MANAGED LANES

Overview and Project Types

The emissions reduction for transit managed lanes projects is calculated based on the benefit of: 1) decreased travel time on ridership, and 2) increased bus transit speed on GHG emissions per mile.

[18] FTA (2003), *Metro Gold Line East Side Extension, Pending Full-Funding Grant Agreement*, Federal Transit Administration. www.fta.dot.gov/documents/LA_Metro1AA.doc.

[19] Per TCRP 95c3 (2004), the percent of new riders using park-and-ride lots varies from 20 to 75 percent nationwide. Per FTA (2003), 37 percent of ridership are new riders.

The El Monte busway project assumes new ramp access to an existing managed lane facility. This project approach evaluates the benefit of switching a portion of an existing bus transit corridor operating in general purpose lane traffic to a managed lane as a result of new ramp access points.

Methodology Limitations

The methodology does not consider any inputs or emission impacts regarding change in corridor transit service (headways or route alignment), any mode shifts from single-occupancy vehicle (SOV) to HOV as a result of new managed lane capacity, or a general reduction in corridor delay resulting from overall improved flow. While there are expected GHG emission impacts resulting from these outcomes of managed lane projects, at this point, the benefit to existing transit is the only outcome considered per the currently proposed list of CMF projects.

User-Defined Inputs

The methodology requires the set of project-specific, user-defined inputs presented in Table 2.13.

Methodology

The user-defined inputs presented in Table 2.13 describe characteristics of the managed lane (restrictions, AADT, and number of lanes) and the corridor transit service (travel time, total length, length on managed lane, peak and off-peak number of buses, and existing daily ridership).

These inputs are combined with default transit-related factors, such as the elasticity of transit ridership with respect to travel time. Managed lane capacity and free-flow speed assumptions come from the same speed and capacity lookup table used in the roadway capacity methodology.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

Table 2.13 Managed Lane Project User-Defined Inputs

User-Defined Input	Default Values	Input Guidance
Managed lane restrictions		• Select the appropriate managed lane restriction: 1) bus only, 2) HOV, or 3) HOV + high-occupancy toll (HOT)
Managed lane annual average daily traffic		• Enter the existing average daily traffic on the managed lane facility. • If restriction = 1, AADT = total daily buses; if 2, AADT = buses + HOV; if 3, AADT = buses + HOV + tolled SOV
Managed lane # of lanes (one-way)		• Enter number of managed lanes in a single direction (peak direction, if reversible lanes are in place)
Corridor total average travel time (min) (existing)		• Existing average travel time for the transit corridor (route start point to end point)
Total transit corridor length (mi)		• Enter transit corridor length (route start point to end point)
Corridor length on managed lane (mi)		• Enter total mileage of transit corridor proposed for operation on the managed lane
Daily # of peak buses (6:00-9:00 a.m., 3:00-:00 p.m.)		• Enter total number of peak-period buses
Daily # of off-peak buses		• Enter total number of off-peak-period buses
Daily corridor transit ridership affected by improvements		• Enter existing transit ridership in the affected transit corridor

Existing average speed on the transit corridor is calculated based on user-defined corridor length and travel time. Managed lane average peak speeds are estimated based on MTA model speed-volume curve equations, while off-peak speeds are assumed to represent free-flow conditions. Calculated speeds are reduced by 10 percent to reflect slightly slower transit vehicle operating speeds.

$$S_m = S0 / (1+1.5X^6)$$

Where:

S_m = Managed lane average peak transit speed

$S0$ = Managed lane free-flow speed (70 mph) * 0.9 (adjustment for transit vehicles); and

X = Peak-period volume / capacity.

Based on the changes in average speed and corridor distance on and off the managed lanes, improved total peak and off-peak travel times are calculated. The difference in travel time is applied to the transit ridership with respect to travel time elasticity (+0.23) to obtain an estimate of the increase in transit trips. Transit trips are converted to VMT savings based on average trip lengths and average vehicle occupancy.

$$VMT = \frac{(\Delta T \times e_t \times R)}{AVO} \times TL$$

Where:

VMT = Reduction in daily light-duty VMT;

ΔT = Percent change in travel time resulting from change in route alignment to managed lane;

e_t = Travel time elasticity (+0.23);[20]

R = Existing ridership impacted improvement;

AVO = Average passenger vehicle occupancy; and

TL = Average passenger vehicle trip length.

In addition, the change in average transit corridor travel speed is input into CO_2 emission factor lookup tables to estimate emission reductions resulting from more efficient travel conditions.

[20]VTPI (2010).

3.0 Other Project Types

Two project types entered in the July 2010 CMF project list were considered for inclusion within the tool, but were removed from the tool development process due to insignificant GHG reduction potential and questionable adherence to AB 1600 nexus requirements.

3.1 Corridor Improvement/Streetscape

These projects involve the installation of medians, new landscaping, street lighting, signage or pedestrian amenities (i.e., benches, trash cans). It is not clear how median installation would positively affect speed or travel time in a way that substantially impacts GHG emissions. Conventionally, installation of a median reduces speeds and reduces truck traffic in urban settings– – commonly due to the difficulty in navigating around the barriers. While the other elements within this project category may lead to increased walking, biking, or transit research, the literature is not conclusive on the level of impact. Benefits of improved bike, pedestrian, and transit infrastructure are included in other project types within the tool.

3.2 Roadway Upgrade

A national comparison of speed study results for individual resurfacing sites found that the differences in mean speed before and after resurfacing ranged from an increase of 7 mph to a decrease of 4 mph, with an average of 1 mph increase. The differences in 85th percentile speed ranged from an increase of 6 mph to a decrease of 4 mph; also with an average difference of 1 mph.[21] These findings suggest negligible potential for reducing regional GHG emissions through resurfacing.

[21] NCHRP (2003), *NCHRP Report 486: Systemwide Impact of Safety and Traffic Operations – Design Decisions for 3R Projects*, National Cooperative Highway Research Program.

4.0 GHG Emission Calculations

4.1 EMFAC CO_2 Emission Factor Lookup Tables

The CARB's EMFAC model was used to calculate CO_2 emission factors by speed and vehicle type. EMFAC is the official emissions model for California, and is currently being used by SCAG for SB 375 analysis. Since EMFAC does not consider the recently implemented Pavley I clean car standards or the Low Carbon Fuel Standard (LCFS) in California, adjustments were made after the EMFAC runs were completed.[22] CARB has created a post-processor for EMFAC that adjusts for these new standards, but it does not accept emission factors by speed. Therefore, the adjustments were made manually in an Excel sheet.

The following steps summarize the assumptions supporting the EMFAC runs and the outputs post-processed to provide CO_2 emission factors by speed and vehicle type:

1. Run EMFAC using the following parameters:
   a. Los Angeles County;
   b. Calculation Method: Use Average;
   c. Calendar Years: 2010, 2020, and 2030;
   d. All model years;
   e. All vehicle classes;
   f. Default I/M program schedule;
   g. Burden Inventory Output;
   h. Detailed Planning Inventories (CSV);
   i. Provide detail for model years, tech groups, and speed; and
   j. Speed Categories: 5 mph.
2. Summarize CO_2 running emissions inventory by calendar year, vehicle type, tech group (selecting only total for each speed category), and model year.
3. Summarize VMT by calendar year, vehicle type, tech group (selecting only total for each speed category), and model year.

[22] The regional per capita emissions reduction targets set by CARB do not include emissions reductions resulting from Pavley I or LCFS.

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator

4. Divide each CO_2 inventory number by each VMT number to obtain CO_2 emission factors. Multiply by 907,184.74 grams per ton to convert from tons per mile to grams per mile.
5. Apply Pavley reduction factors to appropriate vehicle types and model years, as specified in CARB's User's Guide for the Pavley I + LCFS Post-Processor.[23]
6. Calculate composite emission factor for all model years by using a VMT-weighted average.
7. Apply an adjustment factor for the LCFS to the composite emission factor using the reduction factors found in CARB's User's Guide for the Pavley I + LCFS Post-Processor.[24]
8. Final CO_2 emission factors are provided in grams per mile by speed and vehicle type.

Since EMFAC does not provide idling emission rates in grams per hour, these were approximated by using emission rates for 3 mph. These were calculated in EMFAC using the same method, as described above; however, at the end the gram per mile emission rates are multiplied by 3 miles per hour to convert to grams per hour.

All metric units were subsequently converted to pounds (lbs).

Table 4.1 presents the lookup tables used in the emissions calculator tool. Results by vehicle type are aggregated into three primary vehicle types for the emissions calculation lookups by project type. The aggregation of emissions factors are based on a weighting by VMT by speed by vehicle type. The aggregation process by vehicle type combines the following vehicle types:

- Light-duty passenger cars: LDA, LDT1, LDT2, and MCY; and
- All trucks: HHD, LHD1, LHD2, MDV, and MHD.

The aggregation process works the same for 2010, 2020, and 2030. Ultimately, the 2020 emissions factors are applied in the emission reduction calculations in the tool. The 2020 emission factors are presented in Table 4.1 by 5 mpg speed increments (the emission reduction calculations use each 1 mph increments).

[23] CARB (2010), *Pavley I + Low Carbon Fuel Standard Postprocessor, Version 1.0 User's Guide*, California Air Resources Board, http://www.arb.ca.gov/cc/sb375/tools/pavleylcfs-userguide.pdf, Table 1.

[24] Ibid., Table 2.

Table 4.1 2020 CO_2 Emission Factors by Vehicle Type and Speed

	Vehicle Type		
	Light-Duty	Truck	Urban Bus
Speed	CO_2 grams/mile		
Idle (grams/hour)	2,724.96	5,197.15	7,081.33
5 mph	908.32	1,732.38	2,360.44
10 mph	675.38	1,383.41	2,217.43
15 mph	520.03	1,092.16	2,024.59
20 mph	415.75	896.14	1,908.85
25 mph	345.56	785.96	1,837.53
30 mph	297.38	718.25	1,793.02
35 mph	265.70	676.46	1,765.58
40 mph	247.89	680.79	1,749.82
45 mph	239.65	691.13	1,742.88
50 mph	239.63	676.64	1,743.56
55 mph	248.70	695.19	1,751.97
60 mph	266.66	744.09	1,769.58
65 mph	296.33	882.24	-
70 mph	310.31	919.65	-
Average VMT Weighted Speed	327.36	807.25	1,826.77

Note: All emission factors by speed are grams CO_2 per mile, except for idling, which is grams CO_2 per hour.

4.2 CO_2 Emission Reduction Calculation

Each project calculates a change in vehicle speed, delay, or VMT; and equates these results to a reduction in CO_2. Table 4.2 presents the output for each project type and a summary of the emissions calculation.

Table 4.2 CO_2 Emission Reduction Calculations by Project Type

Project Type	Project Performance Outputs	CO_2 Emissions Calculation
Roadway capacity	Change in peak-hour speed by vehicle type for project limit VMT	Emission factors (g/mi) for pre- and post-improvement speeds are multiplied by total VMT.
Interchange capacity	Change in average peak-hour speed by vehicle type for all ramp VMT, change in intersection hours of delay.	Emission factors (g/mi) for pre- and post-improvement speeds s multiplied by total VMT; and idle emission factor is multiplied by pre- and post-improvement intersection hours of delay by vehicle type.
Grade separation	Change in speed by vehicle type for project limit VMT, total reduction in delay resulting from removing queues at existing at-grade intersection.	Emission factors (g/mi) for pre- and post-improvement speeds is multiplied by total VMT; and idle emission factor is multiplied by pre- and post-improvement intersection hours of delay.
Intersection improvement	Change in average seconds of delay per vehicle by intersection approach	Idle emission factor is multiplied by pre- and post-improvement intersection hours of delay.
System operations	Change in corridor average speed resulting from decreased travel time	Emission factors (g/mi) for pre- and post-improvement speeds (average speed for entire corridor, including idling at signalized intersections) is multiplied by total VMT.
Bike/pedestrian	Reduction in VMT	Total reduction in VMT is multiplied by average VMT weighted speed light-duty vehicle emissions factor.
Bike/pedestrian and transit	Reduction in VMT	Total reduction in VMT is multiplied by average VMT weighted speed light-duty vehicle emissions factor. No additional emissions from transit are assumed (no change in service provision).
Transit expansion	Reduction in VMT	Total reduction in VMT is multiplied by average VMT weighted speed light-duty vehicle emissions factor; and additional transit revenue miles are multiplied by average urban bus VMT weighted speed emission factor.
Park-and-ride	Reduction in VMT	Total reduction in VMT is multiplied by average VMT weighted speed light-duty vehicle emissions factor. No additional emissions from transit are assumed (no change in service provision).
Managed lanes	Reduction in VMT, improvement in transit speeds	Total reduction in VMT is multiplied by average VMT weighted speed light-duty vehicle emissions factor; and emission factors (g/mi) for pre- and post-improvement urban bus speeds are multiplied by total transit miles.

5.0 Next Steps

Depending on the next steps in the evolution of the congestion mitigation fee program, there are a range of potential updates and enhancements to the web tool calculation methodologies as currently defined. The three most critical near term enhancements are:

1. **Expansion of the transit expansion project type.** The current approach is designed only to assess benefits of a combination of average corridor transit frequency adjustment or the deployment of real-time arrival information at transit stops. The scope of potential other transit improvements included within the CMF program suggests that a number of other options may be appropriate. These additional modules within the transit approach may include transit priority corridors/signal priority, new routes or circulator systems, transit vehicle replacements (i.e., diesel replaced with hybrid or other low emission technologies).
2. **Expansion of the system operations project type.** The current approach is constrained to assessing the benefits of corridor-specific signal synchronization projects. It does not represent the full scope of traditional system management projects/programs, particular corridor, subarea, or citywide ITS and ATMS applications, as currently defined in the congestion mitigation fee program list. An enhancement to this tool, or a completely new, separate approach, is a near-term priority in order to fill in this project gap.
3. **Expansion of the managed lanes project benefits calculation.** The current approach focuses exclusively on the GHG emission reductions resulting from rerouting a portion of a bus route onto an existing managed lane via construction of new access. As more information becomes available about this project type, it is possible that inclusion of an assessment of how new managed lane access points improve HOV access to new developments and results in mode shifts and potential travel timesavings should be considered. In addition, the existing tool could also be adjusted or combined with the transit tool to assess the benefits of bus-only lanes or BRT on major arterials.

In addition, the methodologies as currently constructed can report other project-related outputs, such as reduction in VMT and reduction in delay or vehicle hours of travel. These outputs could be reported through the web tool interface; or serve as the starting point for other critical project calculations, such as project-level cost-benefit assessments and reductions in criteria pollutant emissions.

A. References

APTA (2009), *Public Transportation Factbook, 60th Edition*, American Public Transportation Association.

Caltrans (2002), *2000-2001 California Statewide Travel Survey– – Final Report*, California Department of Transportation.

Caltrans (2008), Traffic Light Synchronization Program (TLSP) Evaluation Criteria and Scoring Methodology, California Department of Transportation.

CARB (2005), *Methods to Find the Cost-Effectiveness of Funding Air Quality Projects*, California Air Resources Board.

CARB (2010), *Pavley I + Low Carbon Fuel Standard Postprocessor*, Version 1.0 User's Guide, California Air Resources Board.

Cambridge Systematics, Inc. (2009), *Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions*.

CUTR (1998), *Public Transit in America: Findings from the 1995 Nationwide Personal Transportation Survey*, Center for Urban Transportation Research.

FTA (2003), *Metro Gold Line East Side Extension, Pending Full-Funding Grant Agreement*, Federal Transit Administration.

HCM (2000), *Highway Capacity Manual*. Transportation Research Board.

ICC (2003), *Motorist Delay at Public Highway– – Rail Grade Crossings In Northeastern Illinois*, Research and Analysis Section Transportation Division, Illinois Commerce Commission. Working Paper.

Lund, H., R. Cervero, and R. Willson (2003), *Travel Characteristics of Transit-Oriented Development in California*.

MAG (2009), *Methodologies for Evaluating Congestion Mitigation and Air Quality Improvement Projects*, Maricopa Association of Governments.

MTA (2004), *Gold Line Phase II– – Pasadena to Montclair– – Foothill Extension Draft Environmental Impact Statement (DEIS)/Draft Environmental Impact Report (DEIR)*, Los Angeles County Metropolitan Transportation Authority.

NCHRP (2003), *NCHRP Report 486: Systemwide Impact of Safety and Traffic Operations– – Design Decisions for 3R Projects*, National Cooperative Highway Research Program, Transportation Research Board.

NHTS (2001), *National Household Travel Survey*, U.S. Department of Transportation.

NHTS (2009), *National Household Travel Survey*, U.S. Department of Transportation.

TCRP 95c3 (2004), *TCRP Report 95, Chapter 3–– Park and Ride/Pool*, Transit Cooperative Research Program, Transportation Research Board.

TCRP 95c9 (2004), *TCRP Report 95 Traveler Response to Transportation System Changes, Chapter 9–– Transit Scheduling and Frequency*, Transit Cooperative Research Program, Transportation Research Board.

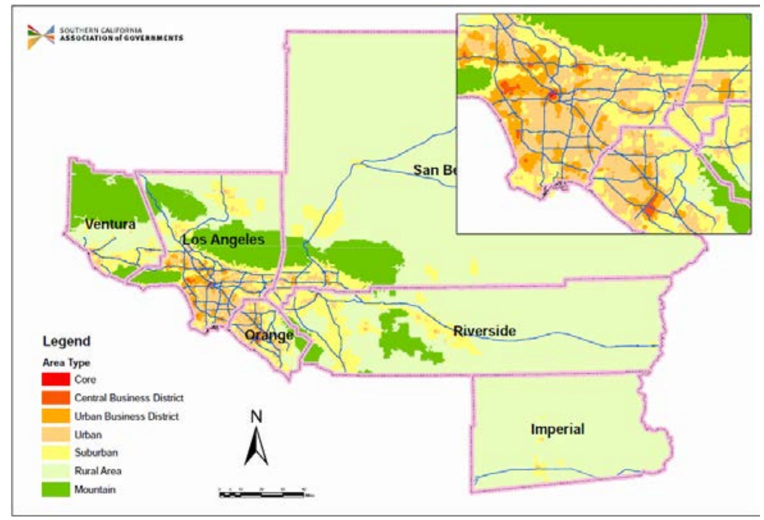
TCRP 95c17 (2004), *TCRP Report 95: Traveler Response to Transportation System Changes, Chapter 17–– Transit-Oriented Development*, Transit Cooperative Research Program, Transportation Research Board.

U.S. DOT (1994), *A Compendium of Available Bicycle and Pedestrian Trip Generation Data in the United States*, Federal Highway Administration, U.S. Department of Transportation.

U.S. DOT (1994), *The National Bicycling and Walking Study–– Transportation Choices for a Changing America*, Federal Highway Administration, U.S. Department of Transportation.

VTPI (2010), *Transportation Elasticities: How Prices and Other Factors Affect Travel Behavior*, Victoria Transport Policy Institute.

B. SCAG Area Type Map



Source: http://www.scag.ca.gov/modeling/pdf/MVS03/MVS03_Chap04.pdf.

C. LA MTA Model Speed and Capacity Lookup Table

Facility Type	Area Type	Number of Lanes	Capacity Per Hour, Per Lane	Free-Flow Speed (mph)
1	1	1	1,950	70
1	2	1	1,950	70
1	3	1	1,950	70
1	4	1	1,950	70
1	5	1	1,950	70
2	1	1	625	35
2	2	1	650	40
2	3	1	675	45
2	4	1	800	50
2	5	1	1,250	55
3	1	1	575	35
3	2	1	600	40
3	3	1	625	45
3	4	1	800	50
3	5	1	900	55
4	1	1	500	35
4	2	1	525	40
4	3	1	550	45
4	4	1	800	50
4	5	1	900	55
Multilane Specific				
2	1	>1	800	35
2	2	>1	850	40
2	3	>1	900	45
2	4	>1	1,000	50
2	5	>1	1,500	55
3	1	>1	650	35

LA MTA Congestion Mitigation Fee Tool - GHG Emissions Calculator
Appendix

Facility Type	Area Type	Number of Lanes	Capacity Per Hour, Per Lane	Free-Flow Speed (mph)
3	2	>1	750	40
3	3	>1	750	45
3	4	>1	900	50
3	5	>1	1,000	55
4	1	>1	550	35
4	2	>1	600	40
4	3	>1	625	45
4	4	>1	900	50
4	5	>1	1,000	55

D. GHG Emissions Calculator Constants and Assumptions

Project Type	Constant	Value	Citation/Explanation
Roadway Capacity	Number of week days/year	250	Assumes delay reduction benefits on holidays and weekends are marginal.
	Peak-period factor	32%	SCAG 2003 trip assignment model documentation.
	Hours in peak period	4	SCAG 2003 trip assignment model documentation.
	Auto occupancy (persons/vehicle)	1.7	NHTS (2009), Los Angeles-Riverside-Orange County MSA.
Interchange Capacity [1]	Ramp Capacity (per hour per lane)	1950	LA MTA Model Documentation– – Speed Volume Curve Equations.
	Ramp Free-Flow Speed (mph)	25	LA MTA Model Documentation– – Speed Volume Curve Equations.
	Peak hour to daily conversion	10	LA MTA Model Documentation.
Intersection Improvement	Proposed Signalized Intersection Cycle Length (sec)	60-120	FHWA Traffic Signal Timing Manual (2008)
System Operations[1]	% Turns from Exclusive Lanes from the Peak Direction	10%	HCM (2000), Intersection Turning Movements, Default Values in Absence of Turning Movement Data.
Transit Expansion	Headway Elasticity to Ridership Increase	-0.50	TCRP 95c9 (2004).
	Share of Wait Time as a portion of the Total Travel Time	22%	CUTR (1998), Table 4-13.
	Travel Time Reduction Due to Real Time Arrival	20%	TCRP 95c9 (2004).
	Elasticity of Transit Ridership WRT Transit Travel Time	-0.23	VTPI (2010).
	Average Trip Length (mi)	9	NHTS (2009) Los Angeles-Riverside-Orange County MSA (all trip types).
Park-and-Ride	Percentage of New Riders Utilizing Park-and-Ride Lots	37%	TCRP 95c18 (2004). Per FTA (2003), 37% of ridership are new riders.
Managed Lanes[1]	Elasticity of Transit Ridership WRT Transit Travel Time	-0.23	VTPI (2010).
	Managed Lane Capacity (per hour per lane)	1950	LA MTA Model Documentation– – Speed Volume Curve Equations.
	Managed Lane Free-Flow Speed (mph)	70	LA MTA Model Documentation– – Speed Volume Curve Equations.

[1] Number of week days/year, peak period factor, hours in peak period and auto occupancy use same values as roadway capacity approach.

ADT Adjustment Factor Lookup Table (Adopted from CARB (2005))

	Non-University Area Project Length (mi)				University Area Project Length (mi)		
Max ADT	< 1	1– – 2	> 2	Max ADT	< 1	1– – 2	> 2
12,000	0.0019	0.0029	0.0038	12,000	0.0104	0.0155	0.0207
24,000	0.0014	0.0020	0.0027	24,000	0.0073	0.0109	0.0145
30,000	0.0010	0.0014	0.0019	30,000	0.0052	0.0078	0.0104

Activity Center Credits (Bike)

Activity center examples: Banks, churches, hospitals, park-and-ride, office parks, library, shopping, schools).

Centers	One-Half Mile
At least 3	0.0005
4 to 6	0.001
> 6	0.0015

Activity Center Credits (Pedestrian)

Activity center examples: Banks, churches, hospitals, park-and-ride, office parks, library, shopping, schools).

Centers	One-Quarter Mile
At least 3	0.001
4 to 6	0.002
> 6	0.003

EXHIBIT 2 Orange County COG Subregional SCS

OCTA

September 22, 2010

Ms. Justine Block
Deputy Counsel
Southern California Association of Governments
818 W. 7th St., 12th Floor
Los Angeles, CA 90017

Subject: **Memorandum of Understanding C-0-1712**

Dear Ms. Block:

Enclosed please find one fully executed original copy of Memorandum of Understanding No. C-0-1712 between the Orange County Transportation Authority, Orange County Council of Governments, and The Southern California Association of Governments for your file.

If you should you have any questions, please contact me at (714) 560-5615.

Sincerely,

Carolina Coppolo

Carolina Coppolo
Manager, Contracts and Procurement
Contracts Administration
and Materials Management

Enclosure

MEMORANDUM OF UNDERSTANDING NO. C-0-1712

BY AND BETWEEN

ORANGE COUNTY TRANSPORTATION AUTHORITY

AND

ORANGE COUNTY COUNCIL OF GOVERNMENTS

AND

THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

FOR ORANGE COUNTY SUSTAINABLE COMMUNITIES STRATEGY

THIS MEMORANDUM OF UNDERSTANDING (hereinafter referred to as "MOU") is entered by and between the Orange County Transportation Authority, (hereinafter referred to as "AUTHORITY"), the Orange County Council of Governments, (hereinafter referred to as "OCCOG"), and the Southern California Association of Governments, (hereinafter referred to as "SCAG"), collectively referred to as the "Parties."

RECITALS:

WHEREAS, Senate Bill 375 (Chapter 728, laws of 2008, "SB 375") requires SCAG to prepare a regional Sustainable Communities Strategy (hereinafter referred to as "SCS" or "Regional SCS") as part of SCAG's Regional Transportation Plan (RTP) to achieve goals for the reduction of greenhouse gas emissions from automobiles and light trucks in the SCAG region which comprises the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura;

WHEREAS, SB 375 allows AUTHORITY, as the county transportation commission for Orange County, and OCCOG, as a subregional council of governments for Orange County, to develop and submit to SCAG a subregional SCS for Orange County (hereinafter referred to as "Orange County SCS");

WHEREAS, as part of its implementation of SB 375, SCAG has developed and adopted a certain "Framework and Guidelines for the Subregional Sustainable Communities Strategy" (hereinafter

MEMORANDUM OF UNDERSTANDING NO. C-0-1712

referred to as "Framework and Guidelines"), attached hereto as Exhibit "A" and incorporated herein by this reference.

WHEREAS, SCAG is required by SB 375 to include a subregional SCS in the regional SCS, to the extent consistent with state and federal law, including the SCS conducted by Orange County; and

WHEREAS, AUTHORITY, OCCOG and SCAG desire to enter into this MOU to demonstrate mutual commitments to prepare the Orange County SCS.

NOW, THEREFORE, the Parties enter into the following MOU with respect to the matters set forth herein:

1. This MOU establishes the roles, responsibilities, and requirements for AUTHORITY, OCCOG, and SCAG that are necessary to develop an Orange County SCS that shall be included in the regional SCS prepared by SCAG.

2. AUTHORITY and OCCOG shall prepare the Orange County SCS consistent with SCAG's adopted Framework and Guidelines, as attached hereto, to ensure that the region can successfully incorporate strategies within the Orange County SCS into the Regional SCS, and not inhibit the region from complying with SB 375.

3. AUTHORITY and OCCOG agree to comply with the Milestones Schedule, attached hereto as Exhibit "B" and incorporated by this reference, and work with SCAG and the other subregions to ensure the successful delivery of a regional SCS by using the Deliverables Template, attached hereto as Exhibit "C" and incorporated herein by this reference as the primary template for developing a subregional SCS workplan. The Deliverables Template may be subject to change, based on direction from the SCAG Regional Council or Community, Economic and Human Development Policy Committee, and approval by OCCOG.

4. AUTHORITY shall prepare the transportation element of the Orange County SCS through AUTHORITY'S Long-Range Transportation Plan (LRTP). Such transportation element shall, at a minimum, identify a transportation network (i.e., list of transportation projects) to service the

MEMORANDUM OF UNDERSTANDING NO. C-0-1712

transportation needs of Orange County, and describe transportation policies (e.g., Transportation Demand Management and Transportation System Management strategies).

5. OCCOG shall prepare the Orange County SCS, and use AUTHORITY'S LRTP as the transportation element of the Orange County SCS.

6. OCCOG and AUTHORITY are encouraged by SCAG to conduct a public participation process in developing the Orange County SCS, above and beyond the process required for the regional SCS required under Section 65080(b)(2)(D)-(E) of the California Government Code. Further, SCAG encourages OCCOG to develop a public participation plan, similar to SCAG's Public Participation Plan adopted in December 2009, for such purposes.

7. OCCOG and AUTHORITY agree to participate in all publicly noticed meetings, workshops, hearings, and other outreach activities organized in Orange County by SCAG at which the regional SCS or Orange County SCS is included on the agenda. All parties shall coordinate with one another during implementation of SCAG's public participation process in order to ensure broad public and stakeholder participation, and to avoid duplication of effort.

8. OCCOG and AUTHORITY shall retain and deliver to SCAG all documentation pertaining to the Orange County SCS from publicly noticed meetings, workshops, and hearings at which the Orange County SCS is included on the agenda. Such documentation shall include but is not limited to meeting notices, agendas, minutes, comments and responses to comments, sign-up sheets, handouts, and copies of power point presentations.

9. AUTHORITY, OCCOG, and SCAG acknowledge that population, housing, and employment estimates are being prepared by the Center for Demographic Research at California State University Fullerton through the Orange County Projection process and the 2012 RTP growth forecasting process (hereinafter referred to as the "OCP dataset"). SCAG agrees to use the OCP dataset as reviewed and approved by OCCOG, for the Regional SCS and the 2012 RTP; provided, that SCAG, in consultation with OCCOG, may make adjustments to the OCP dataset in order to ensure consistency with SCAG's 2012 RTP growth forecast.

10. AUTHORITY and Orange County local agencies shall provide SCAG with population, employment, and housing estimates in transportation analysis zone (TAZ) format consistent with the Orange County Transportation Analysis Model (OCTAM).

11. AUTHORITY agrees to incorporate new land use-transportation interactions into OCTAM, and these shall include, at a minimum, net residential and employment densities, jobs/housing diversity, design characteristics, and destination accessibility.

12. The Parties agree and acknowledge that population, housing, and employment data submitted to SCAG by OCCOG and AUTHORITY shall be accurately reflected in all documentation produced by SCAG that relates to the Orange County SCS and Regional SCS.

13. The Parties agree and acknowledge that RHNA responsibilities shall remain with SCAG, and neither AUTHORITY nor OCCOG shall assume delegation responsibility for RHNA as part of the Orange County SCS development. However, neither AUTHORITY nor OCCOG is precluded by this MOU from assuming delegation responsibility for RHNA as part of a subsequent, separate agreement.

14. SCAG agrees to accept AUTHORITY's LRTP as Orange County's program of transportation projects as input for the 2012 Regional Transportation Plan.

15. SCAG agrees to acknowledge that the Renewed Measure M program is exempt from SB 375 requirements, to the extent consistent with SB 375 and the final, adopted California Transportation Commission RTP guidelines.

16. SCAG agrees that in addition to preparation of the Orange County SCS developed under this MOU, development of an Alternative Planning Strategy (APS) by AUTHORITY and OCCOG is optional. This understanding shall not preclude SCAG from preparing a regional APS pursuant to SB 375.

17. SCAG shall not develop SCS related targets that are attributable to the subregions.

18. SCAG agrees that it will not impose a penalty on the Orange County subregion if the greenhouse gas targets, as established by the California Air Resources Board, are not met by the Regional SCS.

19. SCAG shall accept the Orange County SCS prepared in accordance with this MOU, as the Orange County subregion's input into the Regional SCS prepared by SCAG.

20. AUTHORITY, OCCOG, and SCAG shall separately amend this MOU in writing or develop a separate, mutual funding agreement addressing Orange County SCS costs should state or federal funding become available that can be applied toward preparation of the Orange County SCS.

21. AUTHORITY, OCCOG, and SCAG agree to work closely together throughout the regional SCS process and Orange County SCS process to provide technical input, applicable planning data, and constructive feedback with respect to all documents, products and deliverables developed and associated with the Orange County SCS.

22. The AUTHORITY, OCCOG, and SCAG agree to work together in good faith, using reasonable efforts to resolve any unforeseen issues and disputes arising out of the performance of this MOU.

23. The Parties agree in good faith to provide the resources necessary to implement the provisions of the MOU.

24. AUTHORITY, OCCOG, and SCAG agree to defend, indemnify and hold harmless the other parties, their Officers, agents, elected officials, and employees, from all liability, claims, losses and demands, including defense costs and reasonable attorneys' fees, whether resulting from court action or otherwise, arising out of the acts or omissions of the defending party, its officers, agents, or employees, in the performance of the MOU. When acts or omissions of one party are directed by another party, the party directing the acts or omission shall owe this defense and indemnity obligation to the agencies following the directions. The provisions of this paragraph shall survive termination of this MOU.

25. This MOU shall be governed by all applicable federal, state, and local laws. The signatories warrant that in the performance of this MOU, each shall comply with all applicable federal, state and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated there under.

26. This MOU may only be modified or amended upon written mutual consent of all signatories. All modifications, amendments, changes and revisions of this MOU in whole or part, and from time to time, shall be binding upon the parties, so long as the same shall be in writing and executed by the signatories.

27. This MOU, including all exhibits and documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the term(s) and condition(s) of the agreement between the parties and it supersedes all prior representations, understandings and communications. The invalidity in whole or part of any term or condition of this MOU shall not affect the validity of the other term(s) or condition(s).

28. Any party may withdraw from this MOU upon 30 days written notice to the other, until the due date set forth in Exhibit "B" for submittal to SCAG of the preliminary Orange County SCS. After such due date, any party may withdraw from this MOU only upon mutual written agreement by all Parties.

29. Each signatory shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any incident of fire, flood; acts of God; commandeering of material, produces, plants or facilities by federal, state or local government; national fuel shortage; or a material act or omission by any other party; when satisfactory evidence of such cause is presented to the other parties, and provided further such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.

30. Any notice sent by first class mail, postage paid, to the address and addressee, shall be deemed to have been given when in the ordinary course it would be delivered. The representatives of the parties who are primarily responsible for the administration of this MOU, and to whom notices, demands and communications shall be given are as detailed in Exhibit "D". If there are any changes in the names and/or addresses listed in Exhibit "D", the party desiring to make such changes shall give a written notice to the other respective parties within five (5) days of such change.

31. This MOU shall continue in full force and effect from the Effective Date up to and until the date that the Regional SCS is adopted by SCAG's Regional Council, unless otherwise terminated earlier in accordance with section 28 of this MOU. The Effective Date of this MOU shall mean the date (last date indicated below) that all parties have fully executed this MOU.

[Signature Page to follow.]

MEMORANDUM OF UNDERSTANDING NO. C-0-1712

IN WITNESS WHEREOF, the Parties hereto have caused this MOU No. C-0-1712 to be executed by their duly authorized representatives.

ORANGE COUNTY TRANSPORTATION AUTHORITY ("Authority")

By ____________________ Date: 9/21/10
Will Kempton, Chief Executive Officer

ORANGE COUNTY COUNCIL OF GOVERNMENTS ("OCCOG")

By ____________________ Date: 9/20/10
Kristine Murray, Executive Director

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS ("SCAG")

By ____________________ Date: 9/15/2010
Hasan Ikhrata, Executive Director

Page 8 of 8

Exhibit A: SCAG's Adopted Framework and Guidelines

Southern California Association of Governments

(Approved by Regional Council - April 1, 2010)

FRAMEWORK AND GUIDELINES for SUBREGIONAL SUSTAINABLE COMMUNITIES STRATEGY

I. INTRODUCTION

SB 375 (Steinberg), also known as California's Sustainable Communities Strategy and Climate Protection Act, is a new state law which became effective January 1, 2009. SB 375 calls for the integration of transportation, land use, and housing planning, and also establishes the reduction of greenhouse gas (GHG) emissions as one of the main goals for regional planning. SCAG, working with the individual County Transportation Commissions (CTCs) and the subregional organizations within the SCAG region, is responsible for implementing SB 375 in the Southern California region. Success in this endeavor is dependent on collaboration with a range of public and private partners throughout the region.

Briefly summarized here, SB 375 requires SCAG as the Metropolitan Planning Organization to:

- Prepare a Sustainable Communities Strategy (SCS) as part of the 2012 Regional Transportation Plan (RTP). The SCS will meet a State-determined regional GHG emission reduction target, if it is feasible to do so.
- Prepare an Alternative Planning Strategy (APS) that is not part of the RTP if the SCS is unable to meet the regional target.
- Integrate SCAG planning processes, in particular assuring that the Regional Housing Needs Assessment (RHNA) is consistent with the SCS, at the jurisdiction level.
- Specific to SCAG only, allow for subregional SCS/APS development.
- Develop a substantial public participation process involving all stakeholders.

Unique to the SCAG region, SB 375 provides that "a subregional council of governments and the county transportation commission may work together to propose the sustainable communities strategy and an alternative planning strategy . . . for that subregional area." Govt. Code §65080(b)(2)(C). In addition, SB 375 authorizes that SCAG "may adopt a framework for a subregional SCS or a subregional APS to address the intraregional land use, transportation, economic, air quality, and climate policy relationships." *Id.* Finally, SB 375 requires SCAG to "develop overall guidelines, create public participation plans, ensure coordination, resolve conflicts, make sure that the overall plan complies with applicable legal requirements, and adopt the plan for the region." *Id.*

The intent of this Framework and Guidelines for Subregional Sustainable Communities Strategy (also referred to herein as the "Framework and Guidelines" or the "Subregional Framework and Guidelines") is to offer the SCAG region's subregional agencies the highest degree of autonomy,

A. SCAG's preliminary goals for implementing SB 375 are as follows:

- Achieve the regional GHG emission reduction target for cars and light trucks through an SCS.
- Fully integrate SCAG's planning processes for transportation, growth, intergovernmental review, land use, housing, and the environment.
- Seek areas of cooperation that go beyond the procedural statutory requirements, but that also result in regional plans and strategies that are mutually supportive of a range of goals.
- Build trust by providing an interactive, participatory and collaborative process for all stakeholders. Provide, in particular, for the robust participation of local jurisdictions, subregions and CTCs in the development of the SCAG regional SCS and implementation of the subregional provisions of the law.
- Assure that the SCS adopted by SCAG and submitted to California Air Resources Board (ARB) is a reflection of the region's collective growth strategy and vision for the future.
- Develop strategies that incorporate and are respectful of local and subregional priorities, plans, and projects.

B. Flexibility

Subregions may develop any appropriate strategy to address the region's greenhouse gas reduction goals and the intent of SB 375. While subregions will be provided with SCAG data, and with a conceptual or preliminary scenario to use as a helpful starting point, they may employ any combination of land use policy change, transportation policy, and transportation investment, within the specific parameters described in the Guidelines.

C. Outreach Effort and Principles

Subregions are required to conduct an open and participatory process that includes the fullest possible range of stakeholders. As further discussed within the Guidelines, SCAG amended its existing Public Participation Plan (PPP) to describes SCAG's responsibilities in complying with the outreach requirements of SB 375 and other applicable laws and regulations. SCAG will fulfill its outreach requirements for the regional SCS/APS which will include outreach activities regarding the subregional SCS/APS. Subregions are also encouraged to design their own outreach process that meets each subregion's own needs and reinforces the spirit of openness and full participation. To the extent that subregions do establish their own outreach process, this process should be coordinated with SCAG's outreach process.

D. Communication and Coordination

Subregions developing their own SCS are strongly encouraged to maintain regular communication with SCAG staff, the respective CTC, their jurisdictions and other stakeholders, and other subregions if necessary, to review issues as they arise and to assure close coordination. Mechanisms for on-going communication should be established in the early phases of strategy development.

E. Planning Concepts

SCAG, its subregions, and member cities have established a successful track record on a range of land use and transportation planning approaches through the on-going SCAG Compass Blueprint Program, including approximately 60 local demonstration projects completed to date. Subregions are

(viii.) allow the RTP to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506). See, Government Code §65080(b)(2)(B).

In preparing the subregional SCS, the subregion will consider feasible strategies, including local land use policies, transportation infrastructure investment (e.g., transportation projects), and other transportation policies such as Transportation Demand Management (TDM) strategies (which includes pricing), and Transportation System Management (TSM) strategies. Technological measures may be included if they exceed measures captured in other state and federal requirements (e.g., AB32).

As discussed further below (under "Documentation"), subregions need not constrain land use strategies considered for the SCS to current General Plans. In other words, the adopted strategy need not be fully consistent with local General Plans currently in place. However, should the adopted subregional strategy deviate from General Plans, subregions will need to demonstrate the feasibility of the strategy by documenting any affected jurisdictions' willingness to adopt the necessary General Plan changes.

The regional SCS shall be part of the 2012 RTP. Therefore, for transportation investments included in a subregional SCS to be valid, they must also be included in the 2012 RTP. Further, such projects need to be scheduled in the RTIP for construction completion by the target years (2020 and 2035) in order to demonstrate any benefits as part of the SCS. As such, subregions will need to collaborate with the respective CTC in their area to coordinate the subregional SCS with future transportation investments. It should also be noted that the California Transportation Commission is updating their RTP Guidelines. This topic is likely to be part of further discussion through the SCS process as well.

SCAG will accept and incorporate the subregional SCS, unless (a) it does not comply with SB 375, (b) it is does not comply with federal law, or (c) it is does not comply with SCAG's Subregional Framework and Guidelines. In the event that a compiled regional SCS, including subregional submissions, does not achieve the regional target, SCAG will initiate a process to develop and consider additional GHG emission reduction measures region-wide. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process. Furthermore, SCAG will compile and disseminate performance information on the preliminary regional SCS and its components in order to facilitate regional dialogue. The development of a subregional SCS does not exempt any subregion from further GHG emission reduction measures being included in the regional SCS. Further, all regional measures needed to meet the regional target will be subject to adoption by the Regional Council, and any additional subregional measures beyond the SCS submittal from subregions accepting delegation needed to meet the regional target must also be adopted by the subregional governing body.

(2) <u>Subregional Alternative Planning Strategy (APS)</u>

Subregions are encouraged to focus their efforts on feasible measures that can be included in an SCS. In the event that a subregion chooses to prepare an APS, the content of a subregional APS should be consistent with what is required by SB 375 (*see*, Government Code §65080(b)(2)(H)), as follows:

(i.) Shall identify the principal impediments to achieving the subregional SCS.

subregional SCS is not a "project" for the purposes of CEQA; rather, the 2012 RTP which will include the regional SCS is the actual "project" which will be reviewed for environmental impacts pursuant to CEQA. As such, the regional SCS, which will include the subregional SCSs, will undergo a thorough CEQA review. Nevertheless, subregions approving subregional SCSs should consider issuing a notice of exemption under CEQA to notify the public of their "no project" determination and/or to invoke the "common sense" exemption pursuant to CEQA Guidelines § 15061(b)(3).

Finally, in accordance with SB 375, subregions are strongly encouraged to work in partnership with the CTC in their area. SCAG can facilitate these arrangements if needed.

(5) <u>Data Standards</u>

SCAG is currently assessing the precise data standards anticipated for the regional and subregional SCS. In particular, SCAG is reviewing the potential use of parcel data and development types currently used for regional planning. At present, the following describes the anticipated data requirements for a subregional SCS.

1. Types of Variables
   Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables include land uses, residential densities, building intensities, etc, as described in SB 375.

2. Geographical Levels
   SCAG is considering the collection and adoption of the data at a small-area level as optional for local agencies in order to make accessible the CEQA streamlining provisions under SB 375. The housing unit, employment, and the land use variables can be collected at a small-area level for those areas which under SB 375 qualify as containing a "transit priority project" (i.e. within half-mile of a major transit stop or high-quality transit corridor) for purposes of allowing jurisdictions to take advantage of the CEQA streamlining incentives in SB 375.

   For all other areas in the region, SCAG staff will collect the population, household, employment, and land use variables at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years
   The socio-economic and land use variables will be required for the base year of 2008, and the target years of 2020 and 2035.

(6) <u>Documentation</u>

Subregions are expected to maintain full and complete records related to the development of the subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board.

projects identified in the subregional SCS must also be included in the 2012 RTP in order to be considered as a feasible strategy. SCAG can help to facilitate communication between subregions and CTCs.

C. SCAG ROLES AND RESPONSIBLITIES

SCAG's roles in supporting the subregional SCS development process are in the following areas:

(1) <u>Preparing and adopting the Framework and Guidelines</u>

SCAG will adopt these Framework and Guidelines in order to assure regional consistency and the region's compliance with law.

(2) <u>Public Participation Plan</u>

SCAG will assist the subregions by developing, adopting and implementing a Public Participation Plan and outreach process with stakeholders. This process includes consultation with congestion management agencies, transportation agencies, and transportation commissions; and SCAG will hold public workshops and hearings. SCAG will also conduct informational meetings in each county within the region for local elected officials (members of the board of supervisors and city councils), to present the draft SCS, and APS if necessary, and solicit and consider input and recommendations.

(3) <u>Methodology</u>

As required by SB 375, SCAG will adopt a methodology for measuring greenhouse gas emission reductions associated with the strategy.

(4) <u>Incorporation/Modification</u>

SCAG will accept and incorporate the subregional SCS unless it does not comply with SB 375, federal law, or the Subregional Framework and Guidelines. As SCAG intends the entire SCS development process to be iterative, SCAG will not amend a locally-submitted SCS. SCAG may provide additional guidance to subregions so that subregions may make amendments to its subregional SCS as part of the iterative process, or request a subregion to prepare an APS if necessary. Further, SCAG can propose additional regional strategies if feasible and necessary to achieve the regional emission reduction target with the regional SCS. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process.

(5) <u>Modeling</u>

SCAG currently uses a Trip-Based Regional Transportation Demand Model and ARB's EMFAC model for emissions purposes. In addition to regional modeling, SCAG is developing tools to evaluate the effects of strategies that are not fully accounted for in the regional model. SCAG is also developing two additional tools – a Land Use Model and an Activity Based Model – to assist in strategy development and measurement of outcomes under SB 375.

Data/GIS maps will be provided to subregions and local jurisdiction for their review. This data and maps include the 2008 base year socioeconomic estimates and 2020 and 2035 socioeconomic forecast. Other GIS maps including the existing land use, the general plan land use, the resource areas, and other important areas identified in SB 375. It should be noted that none of the data/ maps provided were endorsed or adopted by SCAG's Community, Economic and Human Development Committee (CEHD). All data/maps provided are for the purpose of collecting input and comments from subregions and local jurisdictions. This is to initiate dialogue among stakeholders to address the requirements of SB 375 and its implementation.

The list of data/GIS maps include:
1. Existing land use
2. Zoning
3. General plan land use
4. Resource areas include:
   (a.) all publicly owned parks and open space;
   (b.) open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;
   (c.) habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal Endangered Species Act (1973), the California Endangered Species Act, or Native Plant Protection Act;
   (d.) lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;
   (e.) areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;
   (f.) areas containing biological resources as described in Appendix G of the CEQA Guidelines that may be significantly affected by the sustainable communities strategy or the alternative planning strategy; and
   (g.) an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance.
5. Farmland
6. Sphere of influence
7. Transit priority areas
8. City/Census tract boundary with ID
9. City/TAZ boundary with ID

(11) Tools

SCAG is developing a Local Sustainability Planning Model (LSPM) for subregions/local jurisdictions to analyze land use impact. The use of this tool is not mandatory and is at the discretion of the Subregion. The LSPM is a web-based tool that can be used to analyze, visualize and calculate the impact of land use changes on auto ownership, mode use, vehicle miles of travel (VMT), and greenhouse gas emissions in real time. Users will be able to estimate transportation and emissions impacts by modifying land use designations within their community.

Exhibit B: Milestones Schedule

The key milestones and related schedule required as part of the development of the Orange County Subregional SCS are as follows:

1. Status report on Preliminary Subregional SCS – Dec 2010
2. Adopted OCP 2010/Delivery to SCAG – Jan 2011
3. Preliminary SCS / for purposes of preparing PEIR project description (intended to be narrative only project description that describes intended strategies or strategy options that are likely to be incorporated into the final Subregional SCS.) –Feb 2011
4. Status report on Draft Subregional SCS – Feb 2011
5. Draft Subregional SCS (containing all components described above) to be incorporated into draft Regional SCS – April 2011
6. Status report on final Subregional SCS – April 2011
7. Final Subregional SCS for incorporation into Regional SCS – June 2011
8. Iterative process, if necessary to meet target – June to November 2011
9. OCCOG to participate in regional outreach conducted in Orange County – June 2011 to February 2012
10. Regional SCS adoption – April 2012

Exhibit C: Deliverables Template

The Orange County Subregional SCS will consist of the following components:

1. Database (OCP dataset) that allocates population, housing, household, and employment to areas of the county. Geographic area should be the smallest level practicable for the COG to produce, preferably at the parcel level. The database must reflect the base year 2008 and each variable in the two GHG target years (2020 and 2035), in accordance with the Data Standards set forth below.
2. A map or series of maps that illustrates the growth distribution described above, and that further delineates uses, intensities, and residential densities, in accordance with the Data Standards set forth below.
3. A listing of transportation projects that are incorporated in the subregional SCS.
4. A listing and description of transportation policies (e.g. TDM, TSM and others) to be employed.
5. Documentation that establishes the process, including the public participation and outreach process used to develop the SCS, and demonstrates the affected jurisdictions willingness to consider general plan changes.
6. A narrative description of the strategies employed to reduce greenhouse gas emissions. A further description of any other strategies that were considered and not ultimately included.

DATA STANDARDS

The following data standards will be used in the development of a subregional SCS:

1. Types of Variables

Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables may include land uses designations, building densities, building intensities, and applicable policies.

2. Geographical Levels

Socio-economic and land-use variables should be provided to SCAG at the smallest geographical level practicable for OCCOG to produce, preferably at the parcel level. At a minimum, such variables will be provided at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years

The socio-economic data and land use variables will be required for the base year of 2008, and as feasible, for the target years of 2020 and 2035.

DOCUMENTATION

Subregions are expected to maintain full and complete records related to the development of the Subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board. Subregions shall include information regarding the status of the documentation as part of the required status reports to SCAG, and copies of the actual documentation shall be submitted to SCAG as part the final Subregional SCS.

Exhibit D: Notices

Notices, demands and communications between the Parties related to this MOU shall be provided to the following persons:

<u>To Authority/OCCOG</u>:

Kris L. Murray
Executive Director, Government Relations Orange County Transportation Authority
Executive Director Orange County Council of Governments
550 S. Main Street
Orange, CA 92863
Tel: 714-560-5908
Fax: 714-560-5796
Email: kmurray@octa.net

<u>To SCAG</u>:

Huasha Liu
Director, Land Use & Environmental Planning
Southern California Association of Governments
818 W. 7th St., 12th Fl.
Los Angeles, CA 90017
Tel: (213) 236-1836
Fax: (213) 236-9689
Email: Liu@scag.ca.gov

Orange County
Sustainable Communities Strategy (SCS)

Prepared for

Orange County Transportation Authority
Orange County Council of Governments

Prepared by

BURKE CONSULTING

LSA
LSA ASSOCIATES, INC.

ORANGE COUNTY
BUSINESS COUNCIL

June 14, 2011

Sustainable Communities Strategy
Orange County

ACKNOWLEDGEMENTS

In early 2010, a joint committee with equal representation from the Orange County Council of Governments (OCCOG) and the Orange County Transportation Authority (OCTA) was formed to develop the Orange County Sustainable Communities Strategy (OC SCS). The OCCOG/OCTA SCS Joint Working Committee led overall efforts to develop a subregional OC SCS to meet the requirements of SB 375 and the mutual agreements with the Southern California Association of Governments (SCAG) with a plan that all local jurisdictions in Orange County could support. The SCS Joint Working Committee provided a forum for stakeholders to engage in the process along with direction and recommendations to the full OCCOG Board of Directors as the OC SCS was being developed.

The SCS Joint Working Committee was advised at a technical level by Orange County jurisdictions through the OCCOG Technical Advisory Committee (OCCOG TAC) comprised of staff from all OCCOG member agencies. In addition, David Simpson, OCCOG Executive Director, provided direction and support to the full board, the OCCOG/OCTA Joint SCS Working Committee, consultants and community stakeholders throughout the development of the OC SCS.

As a result of this collaborative effort, the OC SCS was adopted unanimously by the OCTA and OCCOG Boards of Directors in June of 2011.

The following OC SCS Joint Committee Members are recognized for their significant contributions in the development of the OC SCS:

OCCOG/OCTA SCS Joint Working Committee

Kris Murray, Chairwoman, Anaheim City Council Member, OCCOG Board Member

Carolyn Cavecche, Vice Chairwoman, Mayor of Orange, OCTA Director

Patricia Bates, Orange County Supervisor, OCTA Chairwoman

Peter Herzog, Mayor of Lake Forest, OCTA Director and OCCOG Chairman

Brett Murdock, Brea City Council Member, OCCOG Board Member

Sharon Quirk Silva, Fullerton City Council Member, OCCOG Board Member

Orange County Sustainable Communities Strategy

Former Joint SCS Working Committee Members

Cheryl Brothers, Fountain Valley City Council Member, OCCOG Board Member

Peter Buffa, OCTA Director and past Chairman

Richard Dixon, former Lake Forest City Council Member, OCTA Director and OCCOG Board Member

Paul Glaab, City of Laguna Niguel Council Member, OCTA Director

OCCOG TAC Leadership

Marika Modugno, Chair, City of Irvine

Greg Nord, Vice Chair, OCTA

Tracy Sato, City of Anaheim

Deborah Diep, Center for Demographic Research, CSU Fullerton

Gail Shiomoto-Lohr, City of Mission Viejo

Art Bashmakian, City of Westminster

Jay Saltzberg, City of Buena Park

TABLE OF CONTENTS

Orange County Sustainable Communities Strategy

FIGURES

TABLES

APPENDICES

LIST OF ACRONYMS

ADA	Americans with Disabilities Act
APS	Alternative Planning Strategy
ARC	Anaheim Rapid Connection
ARTIC	Anaheim Regional Transportation Intermodal Center
BRT	Bus Rapid Transit
Caltrans	California Department of Transportation
CAP	Capital Action Plan
CARB	California Air Resources Board
CBSP	Commuter Bikeways Strategic Plan
CDFG	California Department of Fish and Game
CDR	Center for Demographic Research
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
County	Orange County
CPAD	California Protected Areas Database
CSMP	Corridor System Management Plan
FEMA	Federal Emergency Management Agency
FMMP	Farmland Monitoring and Mapping Program
GHG	greenhouse gas
HOV	high-occupancy vehicle
I	Interstate
JPA	Joint Powers Authority
LOS	Level of Service
LRTP	Long Range Transportation Plan
m	meter
M2	Measure M2
MATIS	Motorist Aid and Traveler's Information System
MIS	Major Investment Studies
MOU	Memorandum of Understanding
MPAH	Master Plan of Arterial Highways
MRPP	Mitigation and Resource Protection Program
MPO	Metropolitan Planning Organization
MSEP	Metrolink Service Expansion Program
NCCP/HCP	Natural Community Conservation Plan/Habitat Conservation Plan
NFHL	National Flood Hazard Layer
OCCOG	Orange County Council of Governments
OCP-2010	2010 Orange County Projections
OC SCS	Orange County Sustainable Communities Strategy
OCTA	Orange County Transportation Authority
OCTAM	Orange County Transportation Analysis Model
OCTAP	Orange County Taxi Administration Program
PCH	Pacific Coast Highway
PHE	Population, Housing, and Employment

RHNA	Regional Housing Needs Assessment
RTP	Regional Transportation Plan
SB	Senate Bill
SB 375	Senate Bill 375 (Senator Steinberg)
SCAG	Southern California Association of Governments
SCAQMD	Southern California Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SCS	Sustainable Communities Strategy
SR	State Route
TAZ	Traffic Analysis Zone
TDM	Transportation Demand Management
TOD	Transit Oriented Development
TSM	Transportation System Management
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
VMT	vehicle mile(s) traveled

EXECUTIVE SUMMARY

In 2008, California State Senate Bill 375 (SB 375) was enacted to reduce greenhouse gas (GHG) emissions from automobiles and light trucks through integrated transportation, land use, housing and environmental planning. To achieve the goal of reduced GHG emissions, the legislation requires Metropolitan Planning Organizations (MPOs) throughout the state to include a new element in their Regional Transportation Plans (RTPs) called a Sustainable Communities Strategy (SCS).

The Southern California Association of Governments (SCAG) is the MPO encompassing the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. They prepare the RTP for the SCAG region, with input from each of the counties and county transportation commissions. SCAG is also responsible for developing the Sustainable Communities Strategy for the SCAG Region, known as the SCAG Regional SCS.

However, in the SCAG region, SB 375 also allows for a subregional council of governments and county transportation commission to work together to propose a subregional SCS. As one of these subregions, Orange County has availed itself of this opportunity to prepare its own *subregional* SCS (OC SCS). As long as the OC SCS follows the requirements of SB 375, SCAG will incorporate it into the SCAG Regional SCS.

The following document constitutes the OC SCS. It was prepared by the Orange County Council of Governments (OCCOG) and the Orange County Transportation Authority (OCTA), in collaboration with multiple Orange County stakeholders including city agencies, the County of Orange, County special districts, OCTA, the Center for Demographic Research (CDR), the California Department of Transportation (Caltrans), Transportation Corridor Agencies, and many community organizations and the public.

The OC SCS begins with the setting of current population, housing, and employment in Orange County, and then describes projected long-term trends for these socio-economic variables. The resulting assessment is this: a majority of Orange County's projected growth of population, housing, and employment will occur near existing and future job centers, which will positively impact transportation patterns and therefore be beneficial to GHG emission reductions.

The projected growth in Orange County housing units will be sufficient to house the anticipated population growth in the subregion. Further, Orange County will create housing to accommodate employment growth during this period.

Because there is an indisputable interconnectedness between Orange County's population, housing and employment and the transportation systems that support them, the OC SCS also delineates the foundational transportation systems that currently exist in Orange County. Transportation systems described include freeways, arterial streets and local roads, rail and bus transit, bikeways, and demand responsive services and transportation demand management.

Central to the OC SCS are the strategies identified to reduce GHG emissions. These strategies illustrate that there is already a collective effort by many Orange County jurisdictions, agencies, and groups to link transportation and land uses through a variety of processes and an array of progressive measures. The strategies outlined in the OC SCS and summarized below are collectively called sustainability strategies, and include both land use-related strategies and transportation system improvements.

Sustainability Strategies

✓	Support transit-oriented development.
✓	Support infill housing development and redevelopment.
✓	Support mixed-use development and thereby improve walkabilty of communities.
✓	Increase regional accessibility in order to reduce vehicle miles traveled.
✓	Improve jobs-to-housing ratio.
✓	Promote land use patterns that encourage the use of alternatives to single-occupant automobile use.
✓	Support retention and/or development of affordable housing.
✓	Support natural land restoration and conservation and/or protection offering significant carbon mitigation potential via both sequestration and avoidance of increased emissions due to land conversion.
✓	Eliminate bottlenecks and reduce delay on freeways, toll roads, and arterials.
✓	Apply Transportation System Management and Complete Street practices to arterials and freeways to maximize efficiency.
✓	Improve modes through enhanced service, frequency, convenience, and choices.
✓	Expand and enhance Transportation Demand Management practices to reduce barriers to alternative travel modes and attract commuters away from single occupant vehicle travel.
✓	Continue existing, and explore expansion of, highway pricing strategies.
✓	Implement near-term (Transportation Improvement Program and Measure M2 Early Capital Action Plan) and long-term (LRTP 2035 Preferred Plan) transportation improvements to provide mobility choices and sustainable transportation options.
✓	Acknowledge current sustainability strategies practiced by Orange County jurisdictions and continue to implement strategies that will result in or support the reduction of GHG emissions.

In summary, Orange County is engaged in a collective effort to link transportation and land uses. This effort includes a variety of progressive measures undertaken by Orange

Orange County Sustainable Communities Strategy

County jurisdictions, agencies, and groups that lead to changes in the use of automobiles and light duty trucks, resulting in reductions in GHG. The scope of current and planned strategies is broad and encompasses significant investment by both the public and private sectors to implement them. They include the following:

- Promoting a land use pattern that accommodates future employment and housing needs.
- Using land in ways that make developments more compact and improves linkages among jobs, housing and major activity centers.
- Protecting natural habitats and resource areas.
- Implementing a transportation network of public transit, managed lanes and highways, local streets, bikeways, and walkways built and maintained with available funds.
- Managing demands on the transportation system (TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand.
- Managing the transportation system (TSM) through measures that maximize the efficiency of the transportation network.
- Utilizing innovative pricing policies to reduce vehicle miles traveled and traffic congestion during peak periods of demand.

These strategies and actions are Orange County's contribution to the region's efforts to achieve both 2020 and 2035 GHG thresholds established by CARB.

INTRODUCTION

BACKGROUND

SB 375 was enacted in 2008 to reduce greenhouse gas (GHG) emissions from automobiles and light trucks through integrated transportation, land use, housing and environmental planning. To achieve the goal of reduced GHG emissions, the legislation requires MPOs throughout the state to include a new element in their RTPs called an SCS. Specific to the SCAG region, SB 375 also allows for a subregional council of governments and county transportation commission to work together to propose a subregional SCS.

When SB 375 was enacted, it set in motion several activities related to regional and local planning for transportation and land use. The legislation focused attention on the relationship that land use and transportation have on one another relative to how people choose to move around the region, which in turn affects GHG emissions that result from those choices. SB 375 established new processes and procedures for land use and transportation planning that are intended to ensure that opportunities for the synergy between land use and transportation will result in a reduction of GHG emissions from passenger cars and light duty trucks.

THE REGIONAL TRANSPORTATION PLAN

Each urbanized area in California with a population of 50,000 or more has a designated regional planning organization called an MPO. MPOs prepare and regularly update an RTP, a long-range planning document that details the transportation plans, policies, projects, and related funding necessary to address the transportation needs of the region.

SCAG is the MPO encompassing the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG region appears in Figure 1. SCAG prepares the RTP for the SCAG region, with input from each of the counties and county transportation commissions. OCTA prepares a county-level Long Range Transportation Plan (LRTP) that offers input into SCAG's RTP. Like the RTP, the LRTP analyzes the trends in Orange County related to population, housing, employment, and transportation, and sets forth a comprehensive plan for transportation projects and programs to meet the

Orange County Sustainable Communities Strategy

County's transportation needs. SB 375 requires that the RTP for each region include a new planning element, the SCS, to be developed by the region's MPO.

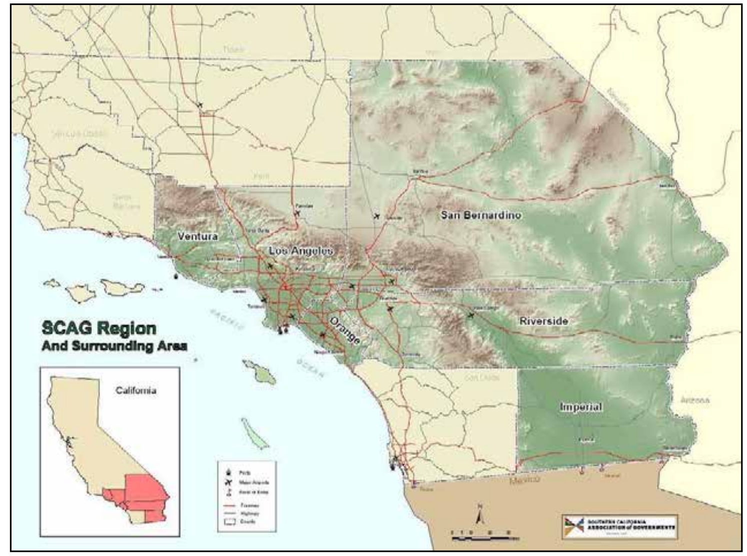


Figure 1: SCAG Region and Surrounding Area

SUSTAINABLE COMMUNITIES STRATEGY

As mentioned earlier, one of the key items established by SB 375 is a new planning element, the SCS, to be developed for inclusion in each region's RTP by its MPO, with input from the counties and county transportation commissions in each region. Each SCS must outline the strategies being undertaken in order to reduce GHG emissions from automobiles and light trucks in the region.

SB 375 outlines the elements that must be included in the SCS document. The SCS must do the following:

- Identify the general location of uses, residential densities, and building intensities within the region
- Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth
- Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to state law (Government Code Section 65584)
- Identify a transportation network to service the transportation needs of the region
- Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in state law (Government Code subdivisions (a) and (b) of Section 65080.01)
- Consider the state housing goals specified in state law (Government Code Sections 65580 and 65581)
- Set forth a forecast development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state board
- Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506)

THE REGIONAL SCS

As the MPO for the region, SCAG is tasked with preparing the regional SCS element of the RTP. This element, referred to as the SCAG Regional SCS, includes the strategies proposed to reduce GHG emissions in the SCAG region, along with analysis documenting the amount of reduction that can be achieved through the plans, programs, and projects in the regional SCS.

SB 375 requires the California Air Resources Board (CARB) to provide each affected MPO/region with GHG emission reduction targets for 2020 and 2035. In September 2010, CARB approved the following GHG emissions reductions targets for the SCAG region, expressed as a percentage reduction of per capita GHG emissions produced by cars and light duty trucks, and using 2005 as the baseline:

Orange County Sustainable Communities Strategy

- 2020—8 percent reduction
- 2035—13 percent reduction, conditioned on discussions with the MPO (See Appendix A for SCAG's letter to CARB dated September 20, 2010, which outlines conditions.)

No subregional GHG emissions reduction targets were set by CARB or SCAG. GHG emissions reduction targets, and the GHG emissions reductions achieved by the regional SCS, are only calculated at the regional level.

Although the base year set by federal agencies for the RTP is 2008, CARB has identified 2005 as the initial year for calculating GHG emissions reduction. In other words, the amount of GHG reduction achieved through the region's collective sustainable communities' strategy will be measured by comparing projected GHG emissions for 2020 and 2035 against GHG emissions that occurred in 2005. All projects, programs, and policies put into place after 2005 to help reduce GHG emissions will be included in the analysis of the region's GHG emissions reductions.

THE SUBREGIONAL SCS

Unique to the SCAG region, SB 375 provides for a subregional council of governments and county transportation commission to work together to propose the SCS for a subregional area. Orange County is one of these subregional areas. As allowed, OCCOG and OCTA have agreed to prepare the OC SCS.

Orange County's subregional effort aims to ensure an accurate reflection of existing and planned local land uses, conditions, and activities. Additionally, the OC SCS demonstrates that the subregion is already undertaking strategies to reduce GHG emissions through existing and planned transportation projects and programs; showcases Orange County's longstanding history of integrating land use and transportation planning; and facilitates and supports the ongoing leadership and innovation occurring in Orange County towards sustainable land use and transportation practices.

To reiterate, no subregional GHG emissions reduction targets were set by CARB or SCAG. GHG emission reduction targets are only calculated at the regional level.

A Memorandum of Understanding (MOU) among SCAG, OCCOG, and OCTA formalized the roles and responsibilities of each party related to the preparation and acceptance of the Orange County subregional SCS as it relates to the SCAG Regional SCS. In summary, SCAG is required to prepare the regional SCS, and OCCOG and OCTA are tasked with preparing the OC SCS consistent with SCAG's adopted Framework and Guidelines. SCAG must include the OC SCS in the SCAG Regional SCS and RTP as long as the OC SCS meets the requirements set in statute and in SCAG's Subregional SCS Framework and Guidelines. The MOU and SCAG Framework and Guidelines are in Appendix B. The Framework and Guidelines requires documentation of affected jurisdictions' willingness to adopt the necessary General Plan changes if necessary. For this OC SCS, the jurisdictions General Plan policies actively support GHG emissions reduction; therefore, no General Plan changes are necessary. This documentation is provided in Appendix C.

PUBLIC PARTICIPATION IN THE SCS

SCAG is leading the public participation process for the SCAG Regional SCS. As part of their public outreach effort, SCAG will hold informational meetings, workshops, and public hearings on the draft SCS including some in Orange County, in order to solicit input and recommendations. Additionally, the OCCOG will augment the regional public participation effort with local outreach for the OC SCS.

WHO'S WHO IN THE ORANGE COUNTY SUSTAINABLE COMMUNITIES STRATEGY

Multiple organizations and stakeholders are involved in the implementation of SB 375 and the creation of an Orange County Sustainable Communities Strategy: municipal agencies, the County of Orange, County special districts, OCTA, CDR, Caltrans, Transportation Corridor Agencies, and many community organizations.

Orange County Stakeholders: SB 375 mandates public participation in the development of a sustainable communities strategy. SCAG is the lead for public participation in the development of the SCAG Regional SCS, with support from OCCOG in Orange County. OCCOG augmented SCAG's regional public outreach efforts, engaging the public in the SCS development process via a web tool, public meetings, and local workshops. This process allows for revisions and clarifications to ensure stakeholder and public participation in creation of the OC SCS.

Collectively, Orange County local jurisdictions, transportation agencies, interested organizations, and the public participated in identifying ongoing and planned projects, programs and policies for reducing GHG emissions.

Orange County Council of Governments (OCCOG): OCCOG is a Joint Powers Authority whose board is comprised of elected representatives from Orange County public agencies, including local jurisdictions, transportation agencies, and special districts. Non-voting ex officio members represent the business community, private sector, universities, healthcare, and nonprofit housing communities.

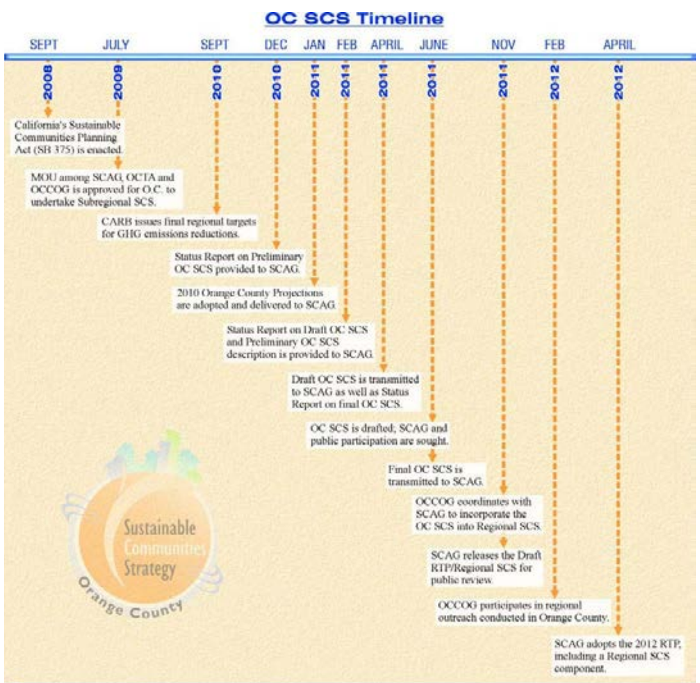
In conjunction with the Orange County Transportation Authority, the OCCOG is tasked with preparing the OC SCS. In addition to the Board, the OCCOG has a Technical Advisory Committee that is comprised of technical staff from each of the member agencies. This Committee provides technical review and input for relevant issues taken up by the Board and affecting Orange County agencies, including the OC SCS.

Orange County Transportation Authority (OCTA): OCTA is Orange County's transportation commission. It serves Orange County residents and travelers by providing countywide bus and paratransit service; Metrolink rail service; the SR-91 Express Lanes; freeway, street and road improvement projects; individual and company commuting solutions; motorist aid services; and taxi operation regulation. The Authority is governed by an 18-member Board of Directors consisting of five county supervisors, 10 city members, two public members, and the Director of Caltrans District 12 as a non-voting member. As the Countywide transportation planning agency, OCTA prepares the County-level LRTP that offers input into SCAG's RTP and is incorporated into the OC SCS, which in turn is incorporated into the RTP/Regional SCS. This incorporation ensures consistency among the subregional and regional transportation planning documents.

Center for Demographic Research (CDR): Since 1996, the CDR at California State University, Fullerton, has undertaken a consistent and collaborative effort to collect and compile data, and to generate socio-economic projections that accurately represent all 35 local jurisdictions in Orange County. The CDR maintains a centralized data source of Orange County demographic characteristics, including population, housing, and employment. These data are used by public and private agencies and individuals. Sponsors of the CDR include the County of Orange, Orange County Transportation Authority, Orange County Council of Governments, Orange County Sanitation District, Transportation Corridor Agencies, Municipal Water District of Orange County, Orange County Water District, and the Orange County Local Agency Formation Commission. The socioeconomic data and growth forecasts for the OC SCS process and document were developed through the Orange County Projections process, involving extensive data collection, analysis, outreach, and review directed and managed by the CDR.

Southern California Association of Governments (SCAG): SCAG is the MPO that encompasses the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As the MPO, SCAG prepares the RTP, setting forth forecast development patterns for the region, the future transportation network, and strategies to reduce greenhouse gas emissions from cars and light duty trucks. Once the SCAG RTP is adopted, SCAG submits the SCS element to the CARB (see below) for review. Included in this submittal is the quantification of GHG emissions reductions achieved by the Regional SCS.

California Air Resources Board (CARB): At the state level, CARB is responsible for setting GHG emissions reduction targets for each region of the State. These targets are scheduled to be updated every eight years. However, CARB has the option to revisit the targets every four years. CARB also comments on the methodology to be used by each MPO for measuring GHG emissions. SCAG submits the adopted Regional SCS to CARB for review. CARB cannot modify the Regional SCS and is limited in its action either to accept or to reject the MPO's determination that the SCS will achieve the targets if implemented.



Orange County Sustainable Communities Strategy

CHAPTER 1: POPULATION, HOUSING, AND EMPLOYMENT

INTRODUCTION

This chapter describes the 2008 base year conditions for key socio-economic variables required in the subregional SCS, including Orange County population, housing, and employment. SB 375 designates two future dates for which GHG emissions reductions targets are set: 2020 and 2035. Therefore, this chapter also describes projected conditions for these socio-economic variables and gives a synopsis of countywide trends.

The socio-economic variables of population, housing, and employment are reported for geographic areas known as Traffic Analysis Zones (TAZs), units of geography most commonly used for transportation planning models. In order to be consistent with the regional SCS, SCAG TAZs were used in this analysis. One SCAG TAZ is generally made up of three Orange County TAZs that nest into one SCAG TAZ and covers an average of 767 acres; an OC TAZ, in comparison, covers an average of 294 acres and does not follow jurisdictional boundaries. Thus, any given TAZ can be made up of areas that span one or more jurisdictions and include aggregated socio-economic information from the multiple jurisdictions within it. The TAZs represent the same geographic unit for population, employment and housing; they do not change from variable to variable.

A few important things to note when reviewing the maps in this chapter:

- Not all acreage within each TAZ is slated for development. For example, acreage within any TAZ that is protected open space, forests, land preserve, etc., is not factored for future development. The growth reported by TAZ is only for the developed and developable land within each TAZ. However, due to data limitations, the density analyses require using acreage of the full TAZ.
- The transit networks that are shown on the maps are included for illustrative purposes to highlight the connections current and planned land uses will have to potential high-quality transit corridors. These corridors reflect transit improvements discussed in the OCTA Long-Range Transportation Plan that may take place between 2021 and 2035. Further, these transit improvements are

subject to change based on future action by the OCTA Board of Directors regarding the ongoing Transit System Study.

- There are currently 34 incorporated cities and several unincorporated areas within Orange County (see Figure 2).

The following tables summarize the base year and projected data for population, housing, and employment in Orange County from the approved 2010 Orange County Projections. A description of the demographic data projections and development process conducted by CDR to produce the forecast data is provided in Appendix D.

Table A: 2010 Orange County Projections for Population, Housing, and Employment 2008, 2020 and 2035

	2008	2020	2035
Population	3,123,058	3,430,505	3,582,266
Housing Units	1,035,005	1,100,260	1,174,912
Employment	1,624,061	1,646,437	1,799,477

Table B: 2010 Orange County Projections for Population, Housing, and Employment Growth 2008—2035

	2008-2020 Growth		2020-2035 Growth		2008-2035 Growth	
	Numeric	Percent	Numeric	Percent	Numeric	Percent
Population	307,447	9.84%	151,761	4.42%	459,208	14.70%
Housing Units	65,255	6.30%	74,652	6.78%	139,907	13.50%
Employment	22,376	1.38%	153,040	9.30%	175,416	10.80%

Figure 2 **Orange County Jurisdictional Boundaries**

Orange County Projections and the 2010 Census

The OCP-2010 dataset (population, housing and employment) referenced in the OC SCS was approved by the OCCOG Board on January 27, 2011. OCP-2010 is based on the approved OCP update and revision process which took place during 2009-2010; it does not include the 2010 Census data for California released on March 8, 2011.

SCAG policy committee actions have directed SCAG staff to revise the draft growth forecast dataset for the Regional SCS and RTP to include the 2010 Census data and the 2010 State Employment Development Department (EDD) employment benchmark. The CDR is coordinating with SCAG on this update process, and is evaluating the timeline and process to revise OCP-2010 to include the new data and be consistent with the growth forecast update effort being undertaken by SCAG.

Consistent with SCAG's process, any update to the growth forecast dataset will be to the 2010 totals for population, housing, and employment, and the growth increments from 2010 to 2035 will remain the same and be applied to the revised 2010 totals. If a revision is made to the OCP-2010, this effort will be completed after the June 2011 submittal deadline of the final OC SCS to SCAG. Further, the updated dataset will be provided to SCAG through a data amendment process and the full OC SCS document will not be revised.

POPULATION

In 2008, Orange County's population was 3,123,058 persons (see Figure 3). Though the majority of residents live in the northern regions of the County, the southern region also holds a sizeable portion of the population, with increasingly even population distribution occurring throughout the County. Figure 4 shows that the majority of people are concentrated mostly in the mature, northern and central cities—areas established as bedroom communities for Los Angeles prior to the 1970s. U.S. Census and other demographic information sources reveal that Orange County is no longer a suburb. In fact, it is one of the most densely populated areas in the United States, and according to the 2010 U.S. Census, as Table C shows, Orange County is the most densely populated county in the SCAG region and has the highest residential density per square mile.

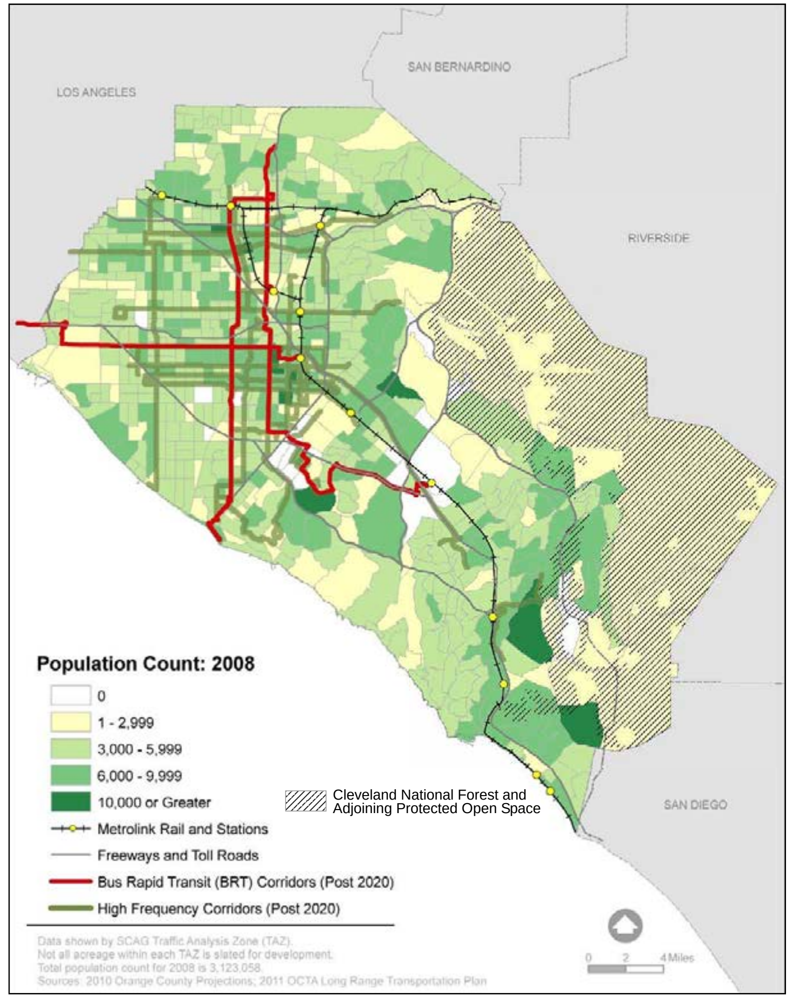


Figure 3 **Existing (2008) Orange County Population**

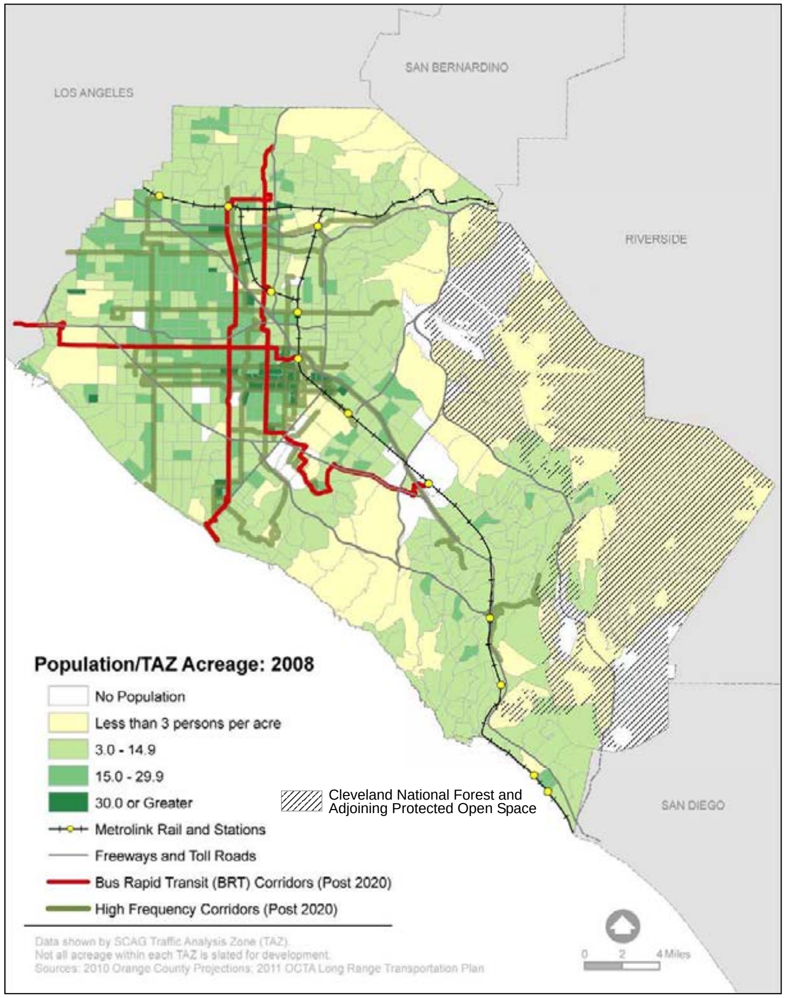


Figure 4 **Existing (2008) Orange County Population Density**

Orange County Sustainable Communities Strategy

Table C: Comparative Population Density for Counties within SCAG Region, 2010 Census

County	Population Density per Square Mile	Housing Units per Square Mile
Orange	3,813	1,329
Los Angeles	2,405	848
Ventura	446	153
Riverside	304	111
San Bernardino	101	35
Imperial	42	13

Source: U.S. Census Bureau, 2010 Census.
Note: The above densities reflect total square miles of land, without distinguishing between developable or undevelopable land.

Between 2008 and 2020, Orange County's total population is projected to increase by 307,447 persons to a total of 3,430,505 (Figure 5). The number of sparsely populated TAZs is projected to shrink, along with the number of "zero population TAZs" in the southern portion of the County. Jurisdictions projected to experience the most population growth during this time include Anaheim, Brea, Tustin, Irvine, and areas within the unincorporated County. There is also significant growth in the number of TAZs with populations of 6,000 to 9,999 residents, and 10,000+ residents, occurring in central and south county (Figures 6 and 7).

Orange County's population density in 2020 (Figure 8) is projected to mirror the population changes forecast to occur between 2008 and 2020 (see Figure 9). In short, the County will become more densely populated. While population growth will occur in the remaining vacant areas planned for growth, increased density will also be prevalent in the established urban cores due to infill, reuse, and mixed-use developments. This increased density of development will result in more efficient residential land use. Efficient land use, as discussed in this document, is a land use or pattern of land uses anticipated to reduce regional GHG emissions from automobiles or light duty trucks. The land uses and patterns of use will foster efficient usage of transportation resources and infrastructure such that people will have options other than a single-occupant vehicle for travel. The projected population of Orange County in 2035 totals 3,582,266 (see Figure 10), an increase of 151,761 or 4.4% between 2020 and 2035, and an increase of 459,208 or 14.7% from 2008 to 2035. Figures 11 and 12 demonstrate that population growth will continue throughout the County.

By 2035, Orange County's population density (Figure 13) is projected to have increased along with population totals throughout the County. This increase in density is anticipated to be most prevalent in the urban core of the County, as the result of increased infill development, reuse of land, and increased creation of mixed-use developments, providing housing, employment, recreational, and leisure opportunities (Figure 14).

POPULATION CONCLUSION

Compared to 2008 conditions, Orange County's population is projected to grow 10% by 2020 and 15% by 2035. A majority of this forecast growth will occur in areas with approved entitlements for large residential developments such as La Floresta and Canyon Crest in Brea, the Great Park in Irvine (formerly Marine Corps Air Station, El Toro), the Platinum Triangle in the City of Anaheim, the East Orange planned community in the City of Orange and unincorporated County, and the Rancho Mission Viejo planned community known as The Ranch Plan, also located in unincorporated County territory. It is important to note that population growth is forecast to occur throughout the County, within the built environment and in areas with new development. This will result in increased infill development in housing and demand for support services (i.e., employment, recreation, education, etc.). The County's population density will increase, most markedly in the established urban core.

Population growth in Orange County will be served by a robust transportation system offering mobility choices other than passenger car travel. The existing and future transportation infrastructure of Orange County includes freeways, arterial highways, a priced transportation network, fixed bus routes, High Frequency Corridors (corridors with 15-minute or better transit headways), and Metrolink rail service.

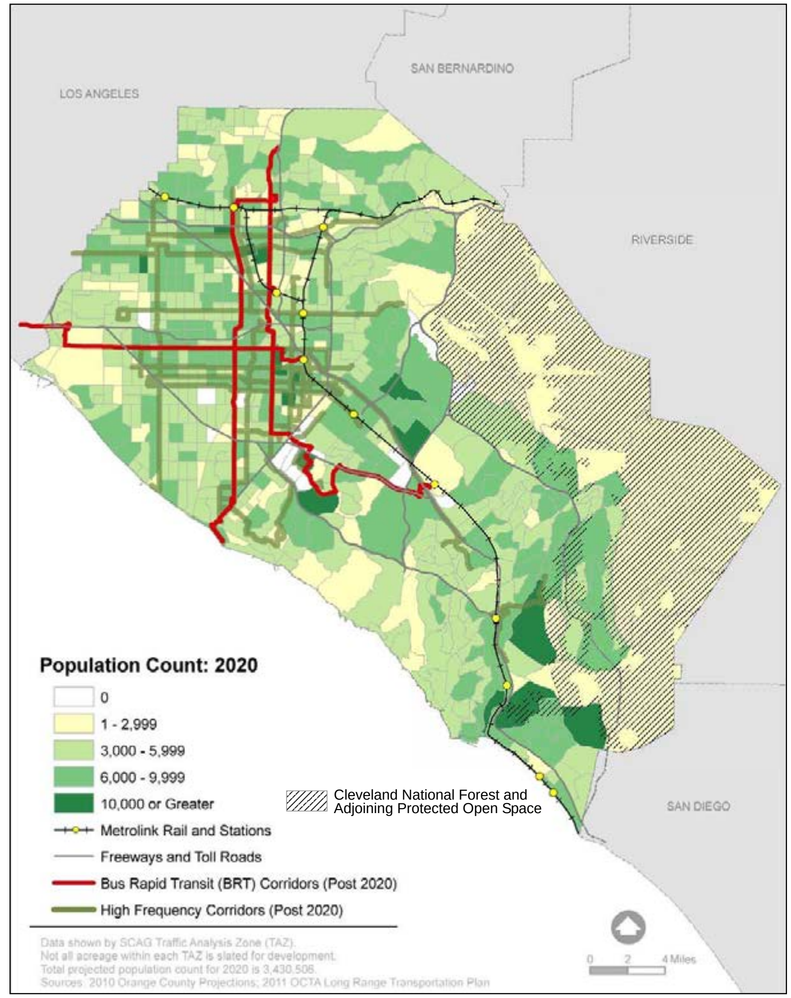


Figure 5 Year 2020 Orange County Population

Orange County Sustainable Communities Strategy

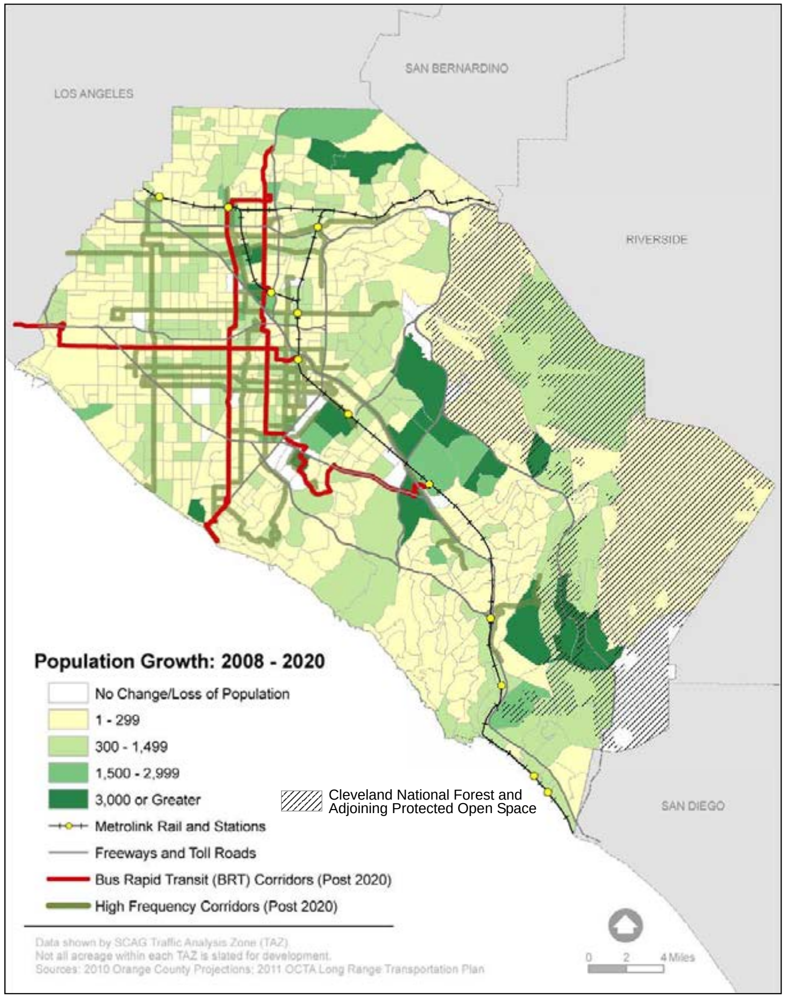


Figure 6 **Orange County Population Growth 2008 - 2020**

Orange County Sustainable Communities Strategy

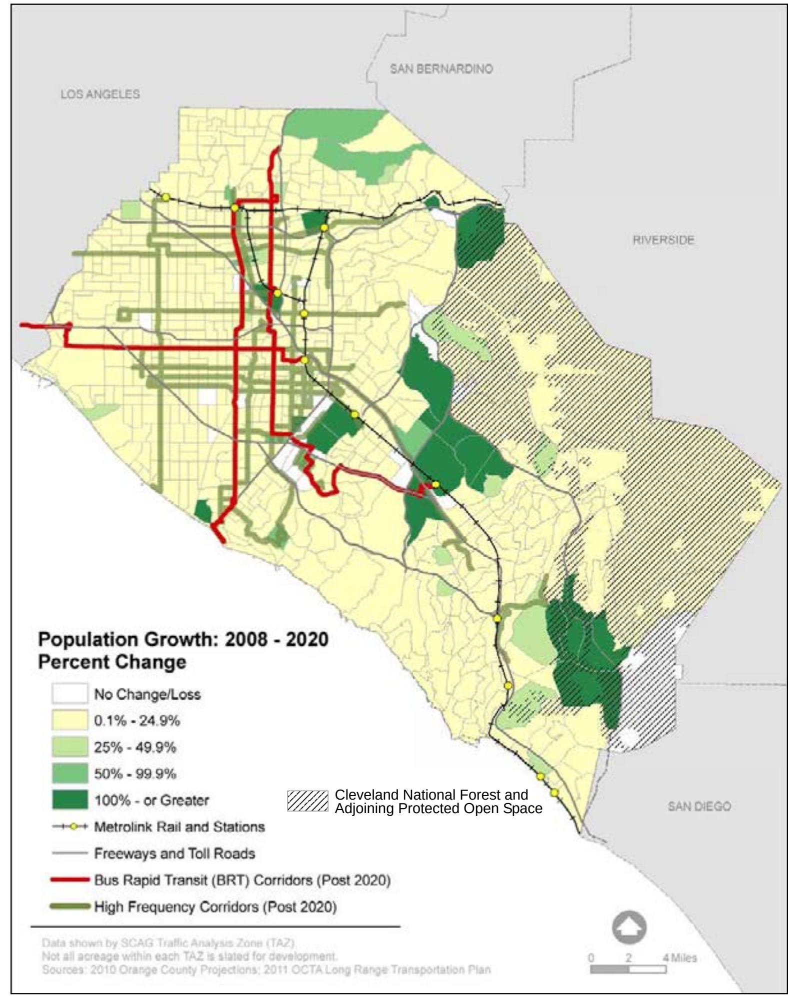


Figure 7 **Orange County Percent Change Population Growth 2008 - 2020**

Orange County Sustainable Communities Strategy

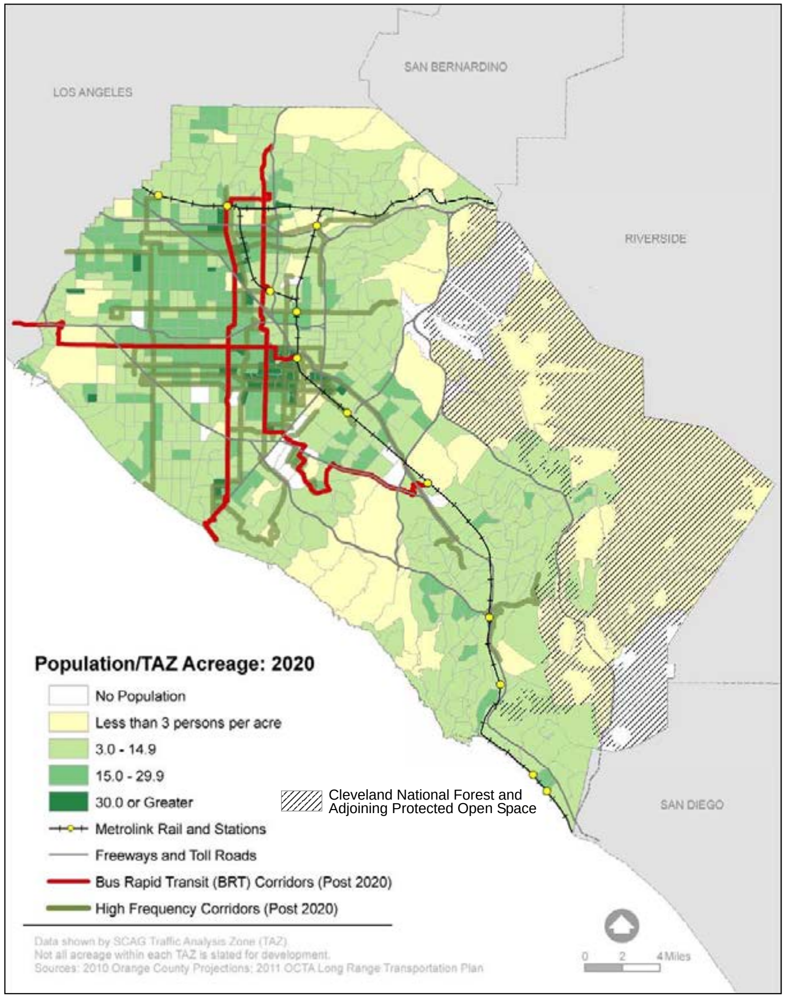


Figure 8 — Year 2020 Orange County Population Density

Orange County Sustainable Communities Strategy

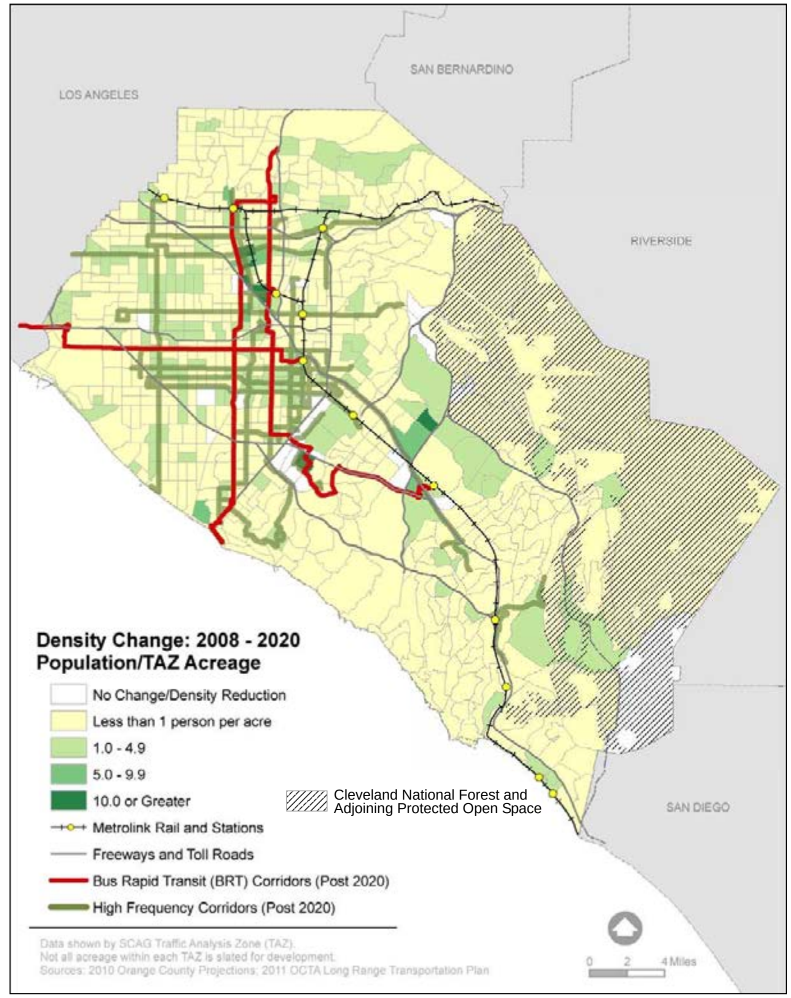


Figure 9 — Orange County Population Density Change 2008 - 2020

Orange County Sustainable Communities Strategy

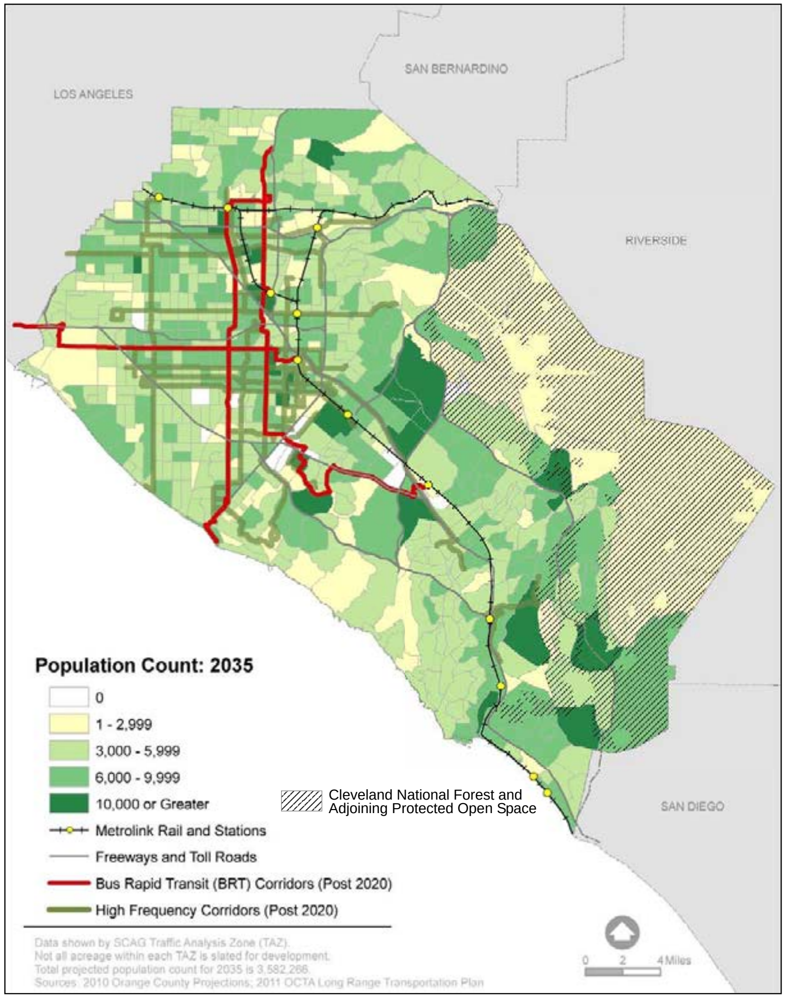


Figure 10 **Year 2035 Orange County Population**

Orange County Sustainable Communities Strategy

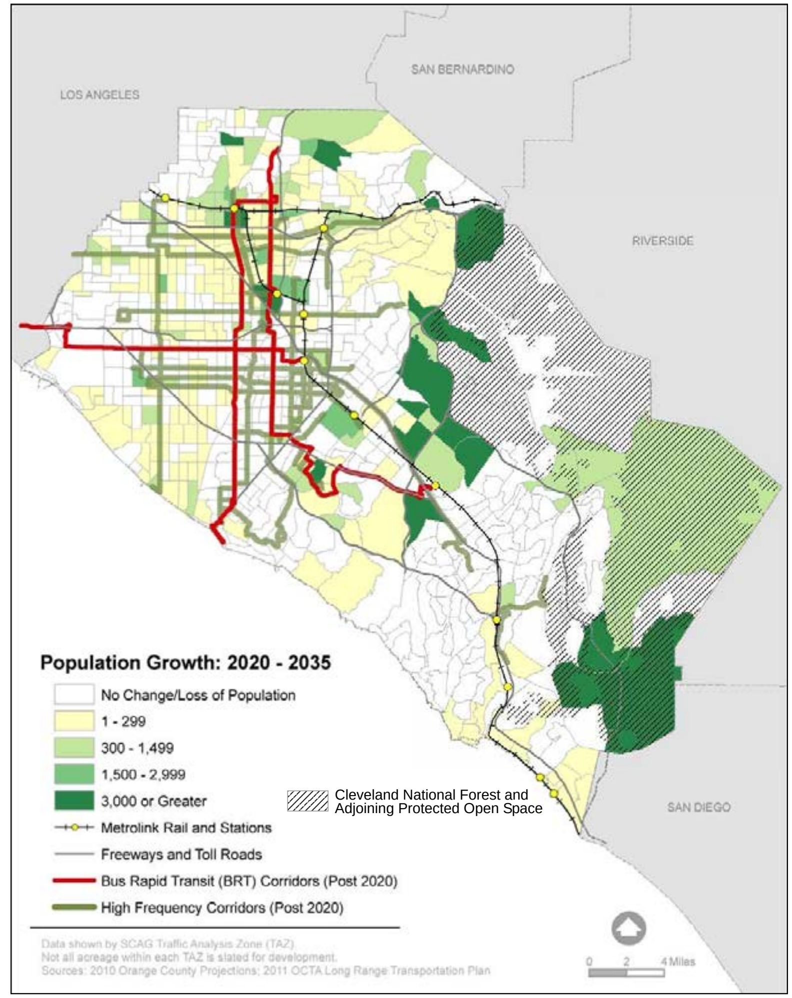


Figure 11 **Orange County Population Growth 2020 - 2035**

Orange County Sustainable Communities Strategy

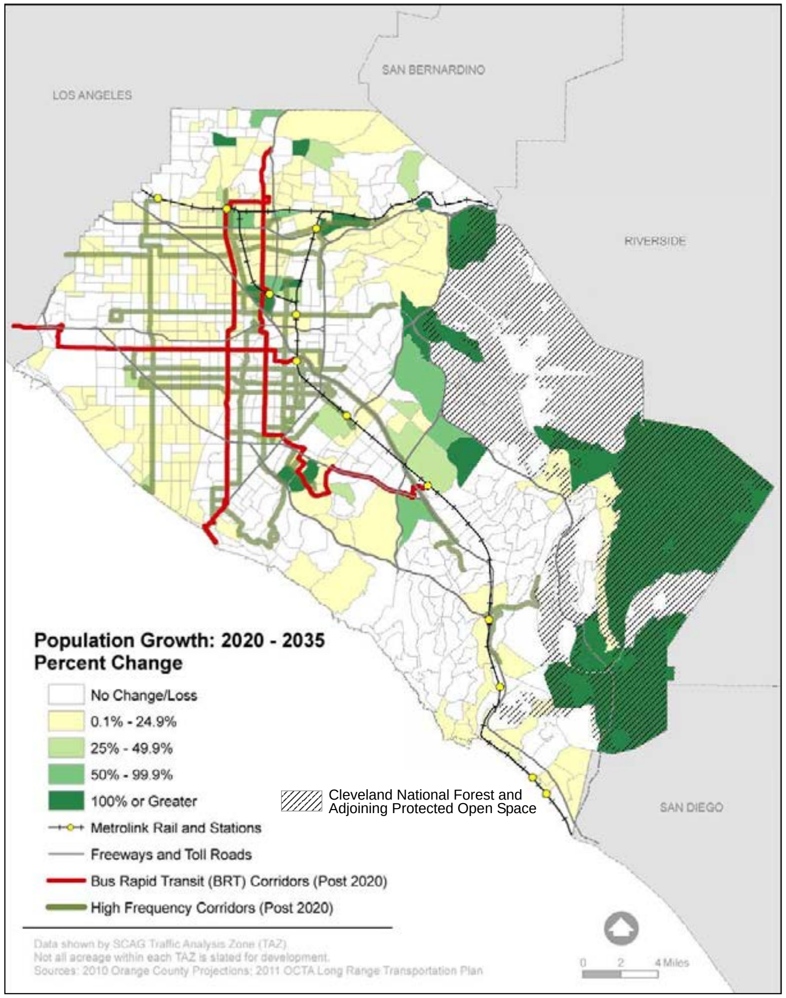


Figure 12 **Orange County Percent Change Population Growth 2020 - 2035**

23

Orange County Sustainable Communities Strategy

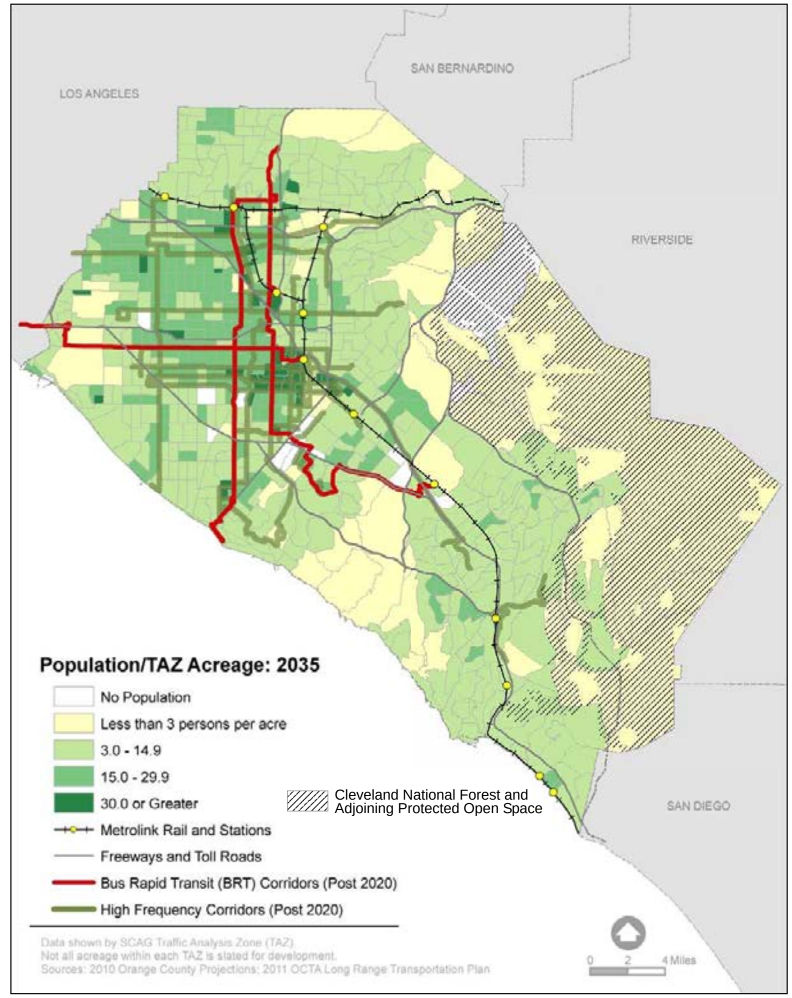


Figure 13 **Year 2035 Orange County Population Density**

24

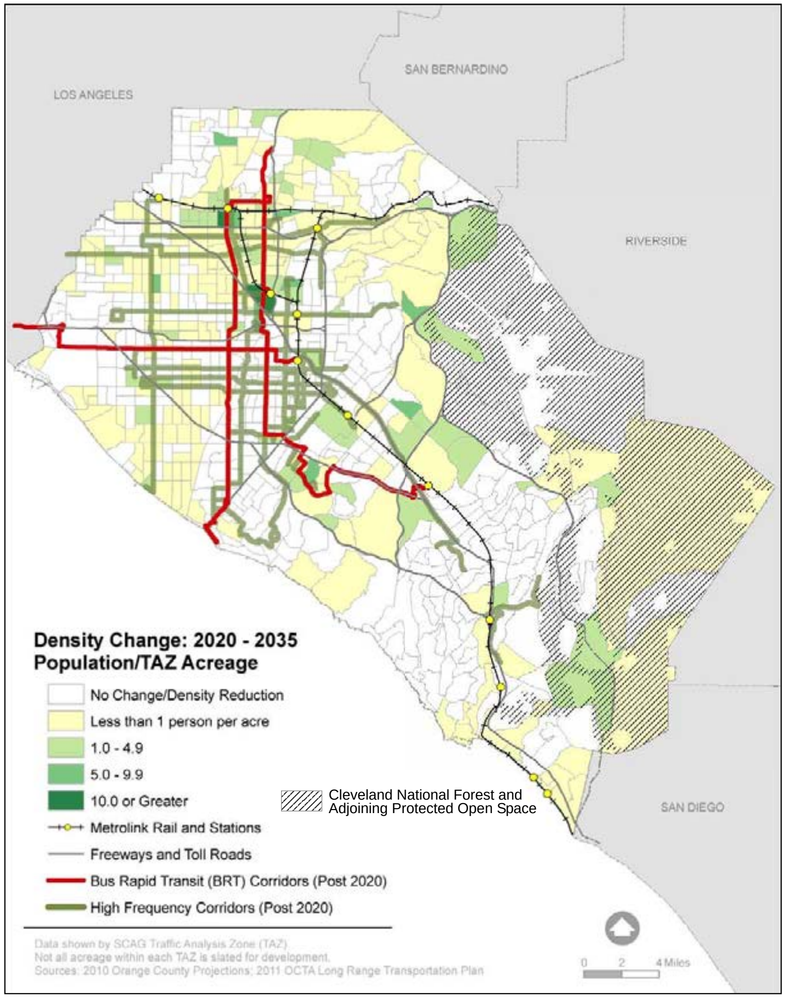


Figure 14 **Orange County Population Density Change 2020 - 2035**

Orange County Sustainable Communities Strategy

HOUSING

In 2008, Orange County had 1,035,005 housing units (Figure 15). Taking population and employment into account, this equates to one housing unit per 3.02 Orange County residents, and one housing unit for every 1.57 jobs. Due to the large influx of population from the 1950s to the 1980s, most housing units in Orange County were built during that time. Table D shows housing construction from 1950 to 2005 and later, as reported by the 2008 American Community Survey.

Figure 16 shows that between 2005 and 2008, housing construction clearly outweighed housing demolitions. The largest pockets of housing construction occurred in the coastal and southern regions of Orange County, while the majority of housing demolitions occurred in the mature central and northern portions of the County. This concentration of demolitions may point to the projected transition near the urban cores, tending to increase residential density in these areas.

Table D: 2008 American Community Survey Orange County Homes by Decade

Year Built	Number	Percent
2005 or later	20,677	2%
2000 to 2004	60,876	5.9%
1990 to 1999	112,207	10.8%
1980 to 1989	164,819	15.9%
1970 to 1979	268,535	25.9%
1960 to 1969	213,269	20.6%
1950 to 1959	142,282	13.7%
Before 1950	52,545	5.3%
Total	1,035,210	100.0%

Source: 2008 American Community Survey 1-Year Estimate, Housing Data Profile

Orange County Sustainable Communities Strategy

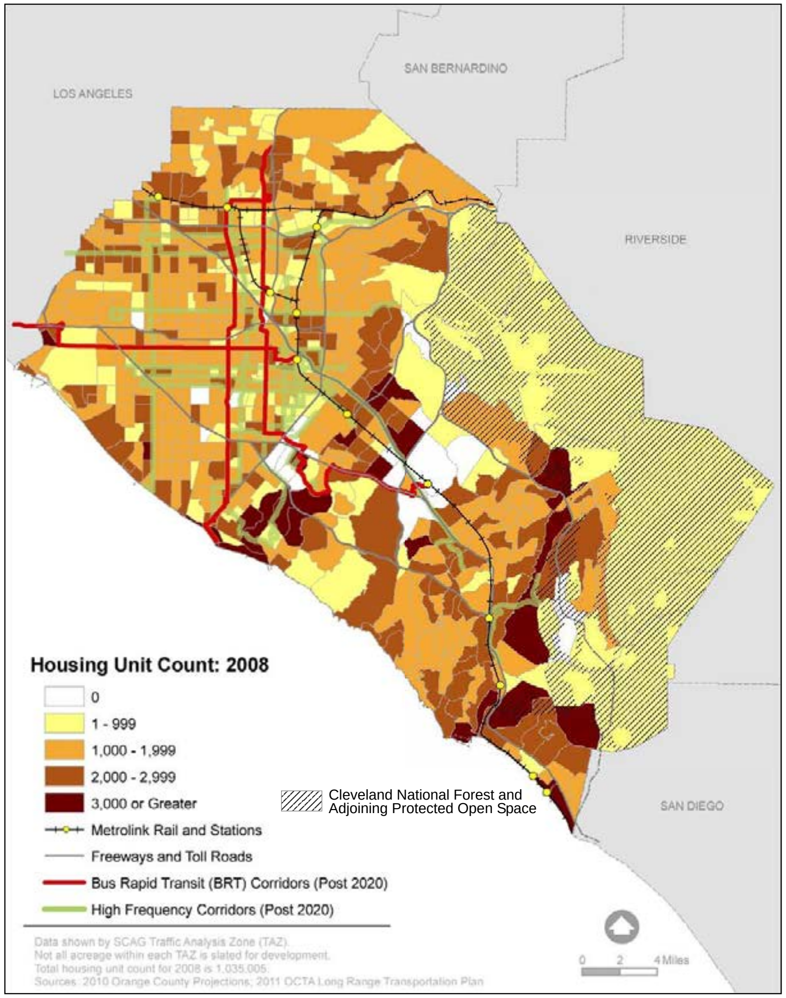


Figure 15 **Existing (2008) Orange County Housing Units**

Orange County Sustainable Communities Strategy

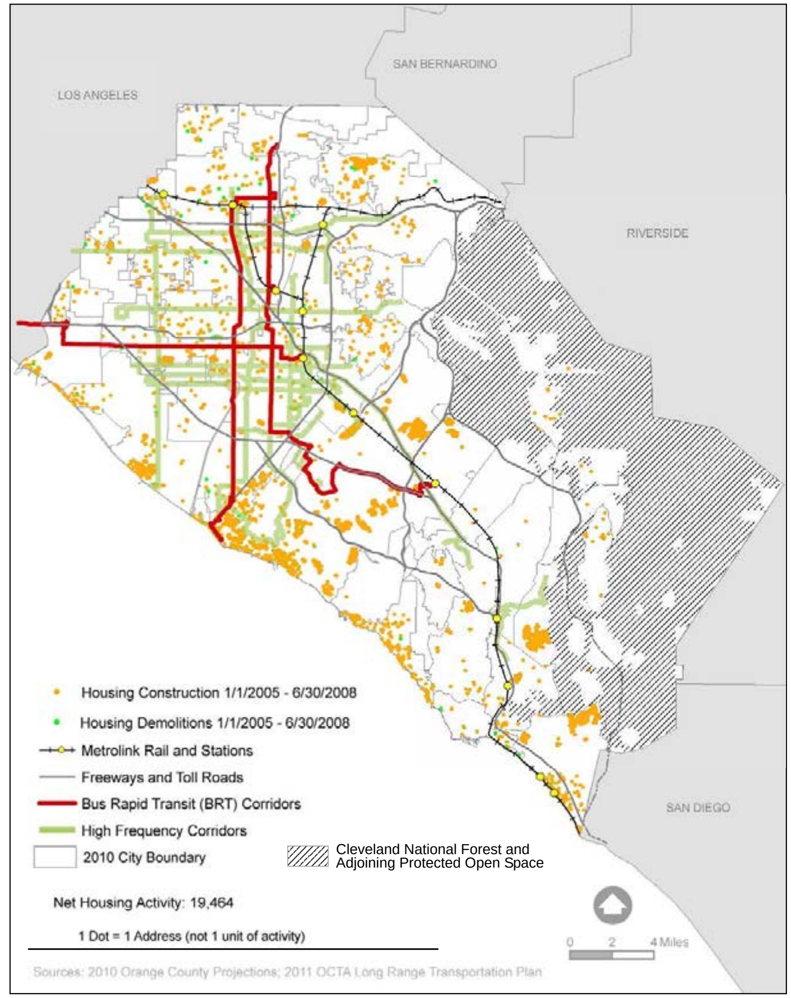


Figure 16 **Orange County Housing Activity 2005 - 2008**

Table E shows that just over half of Orange County's housing (51.6%) is comprised of one-unit, detached structures. The second most common housing is 20-unit or more structures, which make up 12.6% of housing in the County, followed by one-unit, attached housing at 11.7%.

Table E: 2008 American Community Survey Orange County Homes by Type

Type of Structure	Number of Units in Structures	Percent of Total
1-Unit, Detached	533,218	51.6%
1-Unit, Attached	121,432	11.7%
2 Units	16,471	1.6%
3 or 4 Units	73,948	7.1%
5 to 9 Units	69,788	6.7%
10 to 19 Units	56,357	5.4%
20 Units or More	130,209	12.6%
Mobile Home	33,254	3.2%
Boat, RV, Van, Etc.	533	0.1%
Total	1,035,210	100.0%

Source: 2008 American Community Survey 1-Year Estimate, Housing Data Profile

Between 2008 and 2035, Orange County is projected to experience a net gain of 139,907 housing units, based upon the input of the Orange County jurisdictions, with about a third of these units (36.9% or 51,663 housing units) planned on raw land within the hashmarked areas on Figure 17A.[1] Raw land for the purpose of developing Figure 17A was defined as land not previously developed or land that is a decommissioned military base and is not a protected, open space or habitat area. Figure 17B illustrates permanently protected open space areas, consolidated from several categories.[2] The remaining two thirds of projected housing units, (88,244 units or 63.1%), will be infill or redevelopment projects. Of the total, 38,821 (27.7%) are projected to be single-family detached units and 101,086 (72.3%) are projected to be attached units.

[1] Figure 17A was first developed in 2002 by CDR to look at future housing development on raw land in Orange County. This map is updated over time and has been updated with the OCP-2010 housing projections data, which was reviewed and approved by jurisdictions in Orange County. This map first identifies areas not available for development including national forest, land or habitat preserves, major parks and open space, military installations, and landfills. Because of the scale of the map, smaller parks and open space areas are not displayed. The areas identified in red, most prevalent in the eastern and southern portions of the County, have slopes of 30% or greater on which it is typically cost-prohibitive to build. An aerial photo was reviewed to identify large areas in the county that looked vacant. Those areas were bounded and then each jurisdiction with an identified area was contacted about any residential development planned for the area. Although some of the project areas are large, not all of the land within the project areas will be developed for residential or employment uses. Much of the land within those project areas will be left as open space.

[2] Though certain elements of open space are illustrated in Figure 17B, Chapter 5 provides a comprehensive inventory of the resource areas and farmlands located within the County.

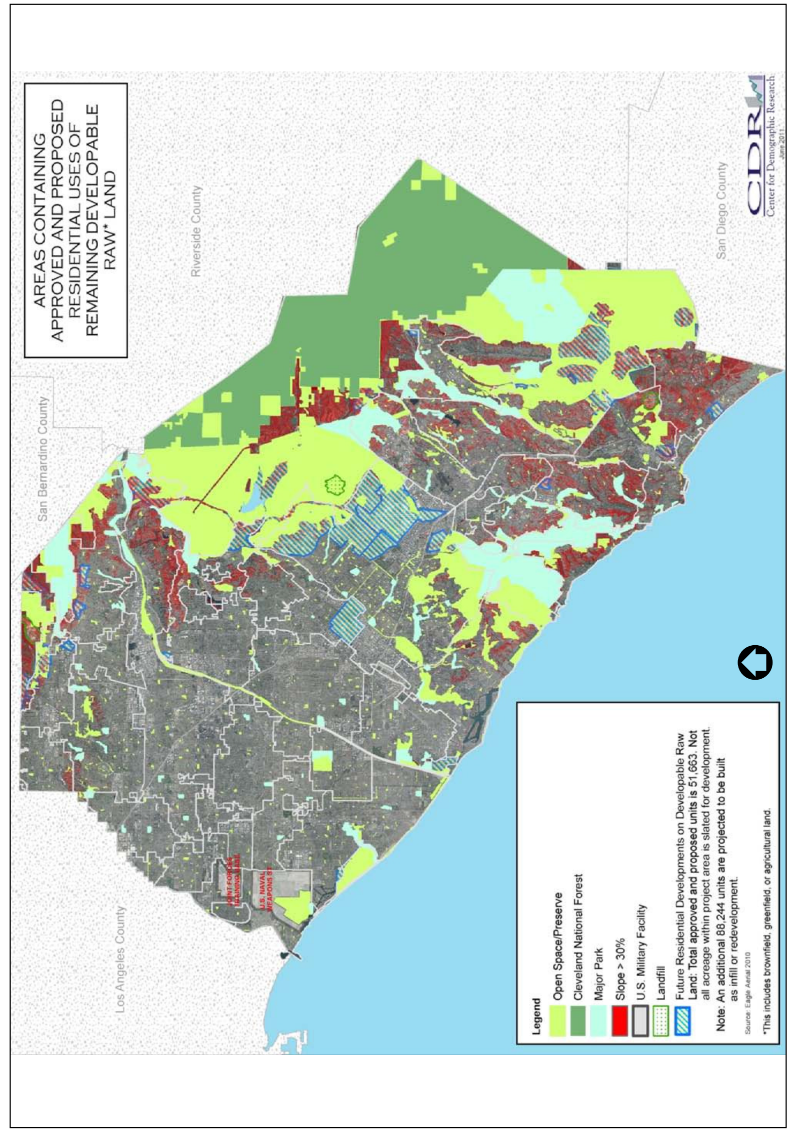


Figure 17A Areas Containing Approved and Proposed Residential Uses of Developable Raw* Land

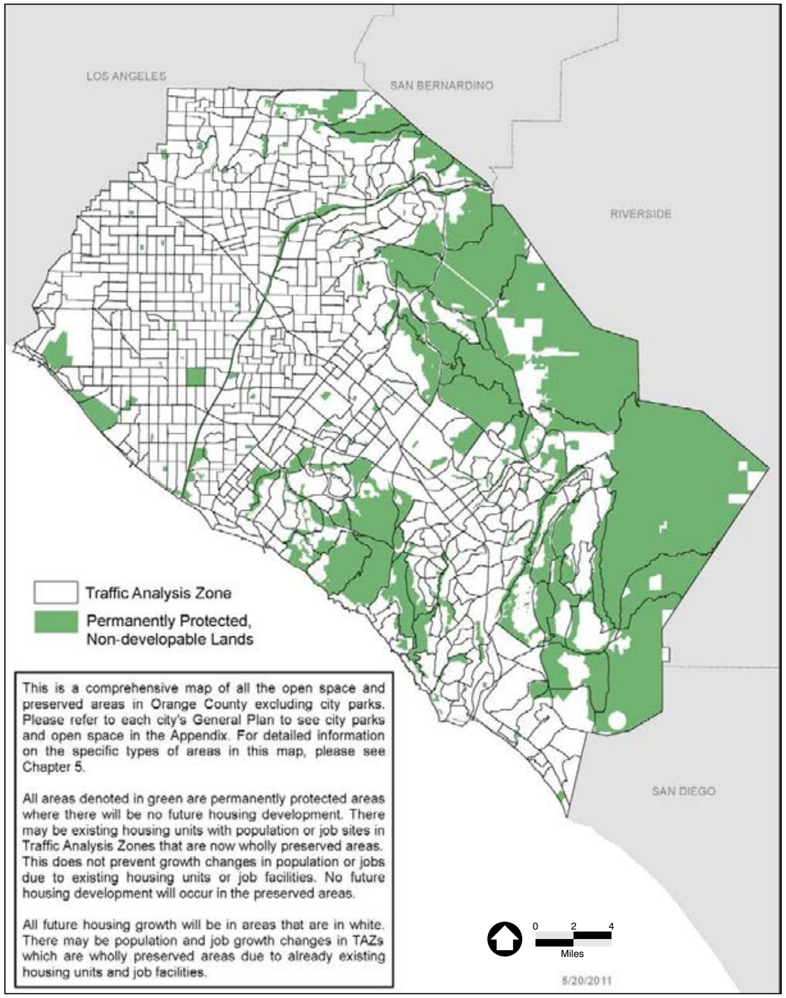


Figure 17B **Orange County Comprehensive Permanently Protected Areas**

To summarize, about three of every four units to be built between 2008 and 2035 are projected to be attached residential, such as a condominium, townhome, or apartment.

In 2008, the majority of TAZs in the County have housing densities of one to under five housing units per TAZ acre. The use of the term "housing density" for a TAZ refers to the housing density of the total TAZ acreage, not the density of any specific housing development within the TAZ. The concentration of TAZs with high densities of housing in the central region of the county follows the trend established in the population density analysis. In other words, the urban cores are experiencing increased infill, reuse of land, and increased developments of multi-unit housing structures to support the growing populations in these regions (see Figure 18).

By 2020, the total number of housing units in Orange County is projected to increase by 65,255, from 1,035,005 to 1,100,260 (see Figure 19). A growing population requires approximately one housing unit per 3.28 residents or 1.5 jobs.[3] The projected housing production by 2020 will continue to satisfy the growing population. Given the forecast growth in population, this projected growth in housing is sufficient to house all the population of Orange County by 2020.

This housing growth will occur throughout the County and there will be fewer large areas without housing. The largest concentration of housing growth between 2008 and 2020 will occur in Brea; the middle section of the County straddling the I-5 Freeway in Irvine; Tustin's Legacy development; and Rancho Mission Viejo in unincorporated South County. Additionally, TAZs with 3,000 or greater housing units are expected to grow in numbers, signaling increased densification (see Figure 20).

Overall, the County is projected to experience an even spread of housing unit growth between 2008 and 2020. During this time, the majority of TAZs will experience an increase of between 1-99 housing units. Figure 21 does show many TAZs that will experience no growth or loss of units that can be explained by the fact that much of Orange County's developable land has already been built on and, therefore, is limited in the number of units that can be added. This is especially true where the housing stock is newer and/or within planned communities. Future developments will be more dense to offset the limited land supply. As previously mentioned, 75 percent of the future housing growth will be an attached or some form of attached unit.

[3] Cervero, Robert. 1991. "Jobs/Housing Balance as Public Policy." Urban Land 50, no.10:10-14; Ewing, Reid. 1996. Best Development Practices: Doing the Right Thing and Making Money at the Same Time. Chicago: Planners Press; Weitz, Jerry. 2003. "Jobs-Housing Balance." Planning Advisory Service Report 516. Michigan: American Planning Association.

Orange County Sustainable Communities Strategy

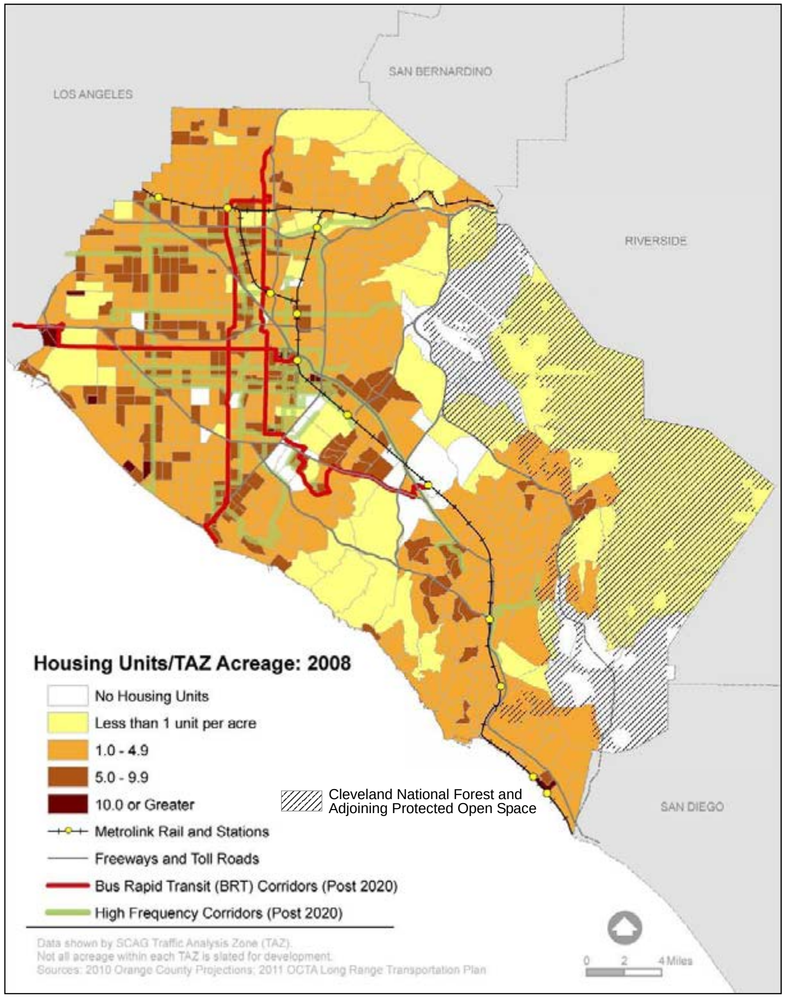


Figure 18 **Existing (2008) Orange County Housing Density**

Orange County Sustainable Communities Strategy

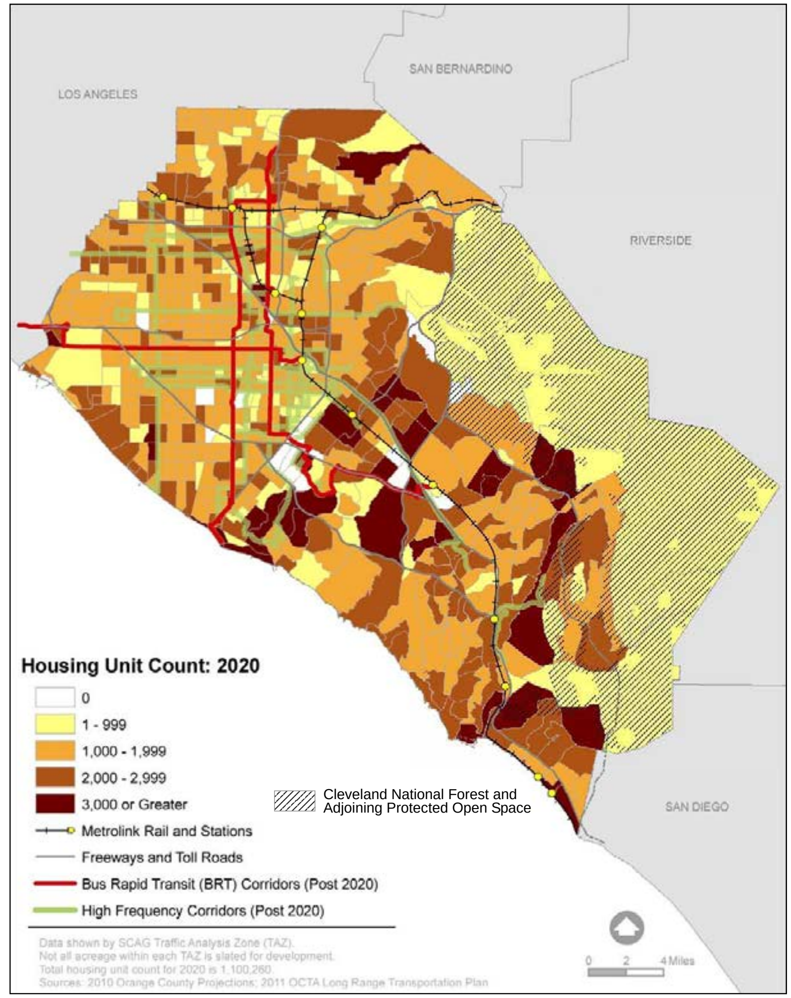


Figure 19 **Year 2020 Orange County Housing Units**

Orange County Sustainable Communities Strategy

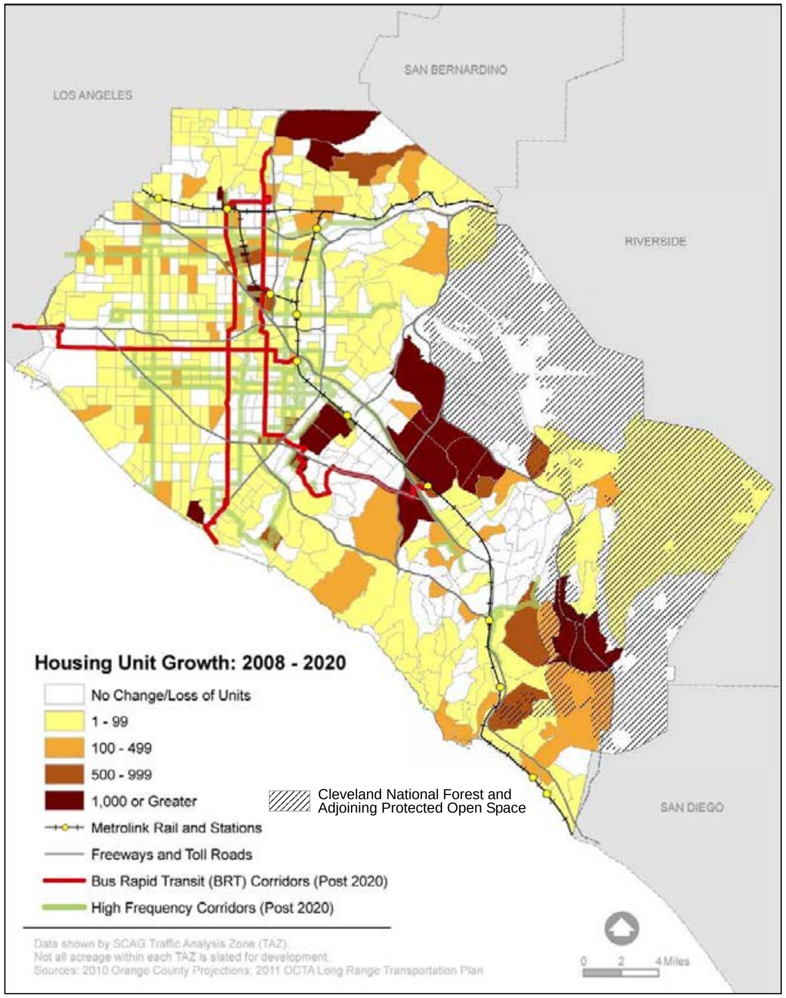


Figure 20 **Orange County Housing Growth 2008 - 2020**

Orange County Sustainable Communities Strategy

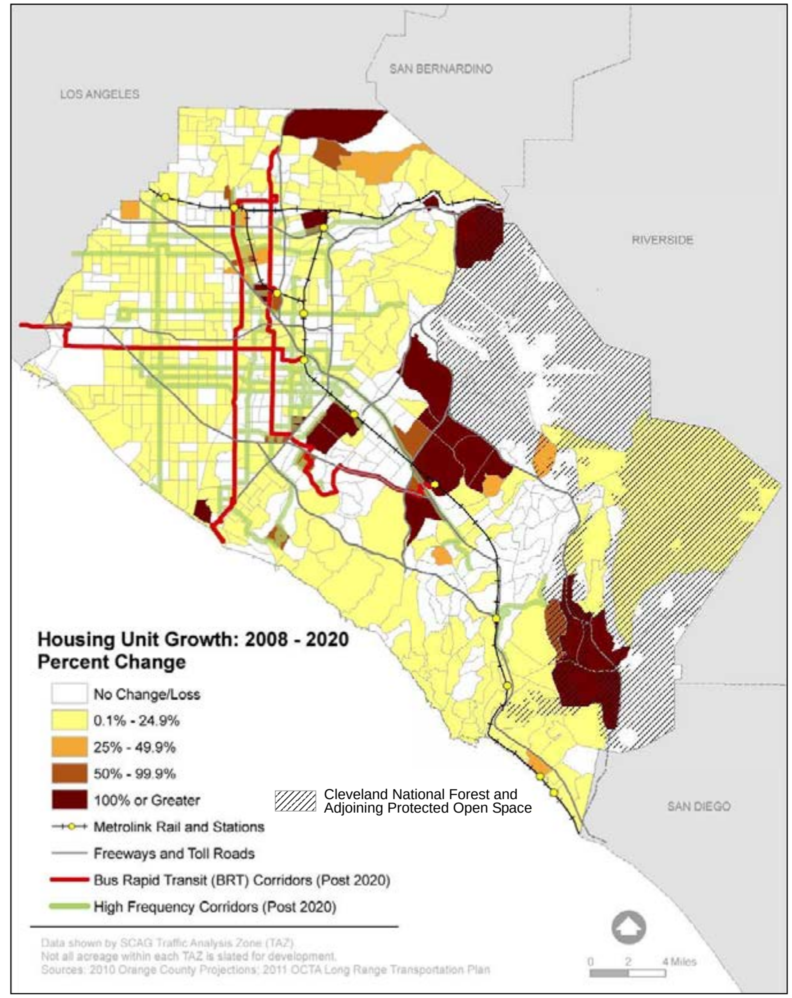


Figure 21 **Orange County Percent Change Housing Unit Growth 2008 - 2020**

Orange County housing unit density in 2020, measured in units per TAZ acre, shows pockets of increasing densification adjacent to transit options, especially around the Metrolink rail line (see Figures 22 and 23).

By 2035, housing totals in Orange County are projected to grow to 1,174,912. This constitutes an increase of 74,652 units between 2020 and 2035. This equates to one housing unit for every 3.02 Orange County residents and one housing unit for every 1.53 jobs.

In 2035, the only TAZs with no housing units are areas of permanently dedicated open space and parkland. The densest TAZs, holding 3,000 housing units or more, become much more prevalent in 2035 and are most notably found in Brea, Fullerton, Anaheim, Tustin, Irvine, Lake Forest, Newport Beach, San Juan Capistrano, Yorba Linda, and unincorporated south county communities of Ladera Ranch and Rancho Mission Viejo (Figure 24).

As shown in Figures 25 and 26, from 2020 to 2035, the majority of high-growth TAZs that grow by 1,000 units or more, and by 100% or more, effectively double the housing units in those areas. These include TAZs in Anaheim, La Habra, Orange, Fullerton, Irvine, Tustin, and the future Rancho Mission Viejo community in unincorporated South County.

In 2035, the continued trend of housing unit densification is clearly seen. Many of the most housing-dense TAZs are concentrated in the centralized urban cores of Orange County, along the commuter rail lines, and the proposed bus rapid transit and high frequency bus routes (Figures 27 and 28).

In summary, from 2008 to 2035, the County is projected to add 139,907 housing units, an increase of 13.5%, of which 75% will be attached units. The projected evolution of the County is for housing unit growth and housing unit density to increase throughout the County, with growth concentrated in the traditional urban cores. The majority of future residential developments on raw land are projected to occur in the central cities of Irvine and Tustin, and the southern region encompassing Rancho Mission Viejo in the unincorporated portion of the County east of San Clemente.

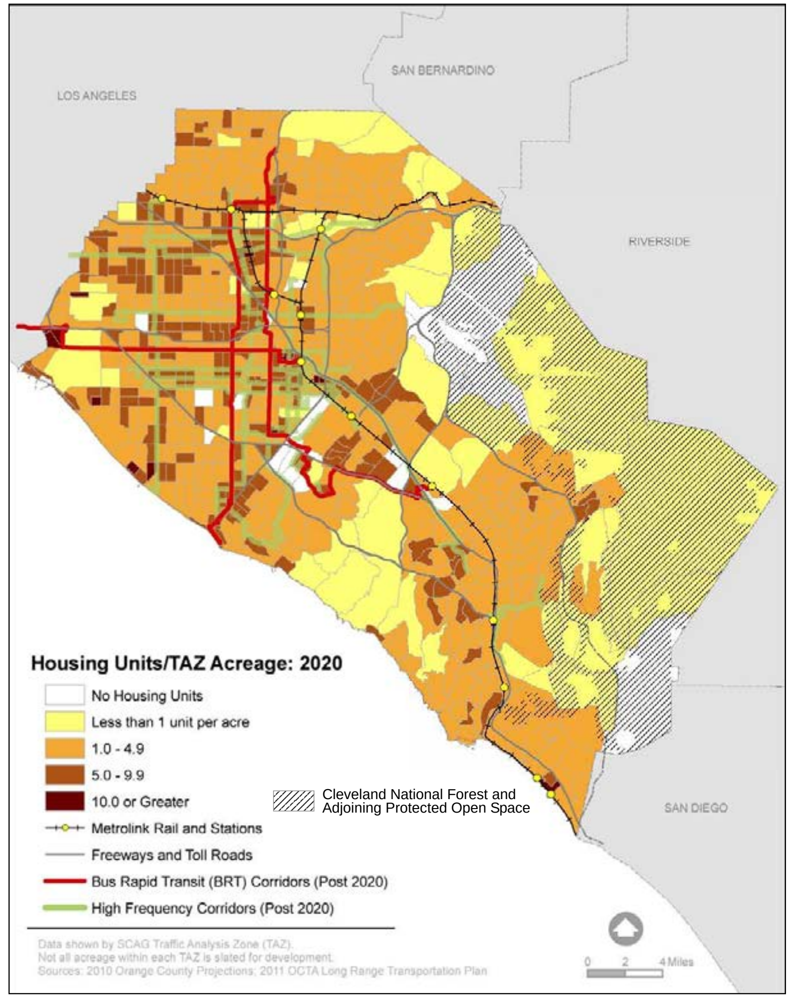


Figure 22

Year 2020
Orange County Housing Density

Orange County Sustainable Communities Strategy

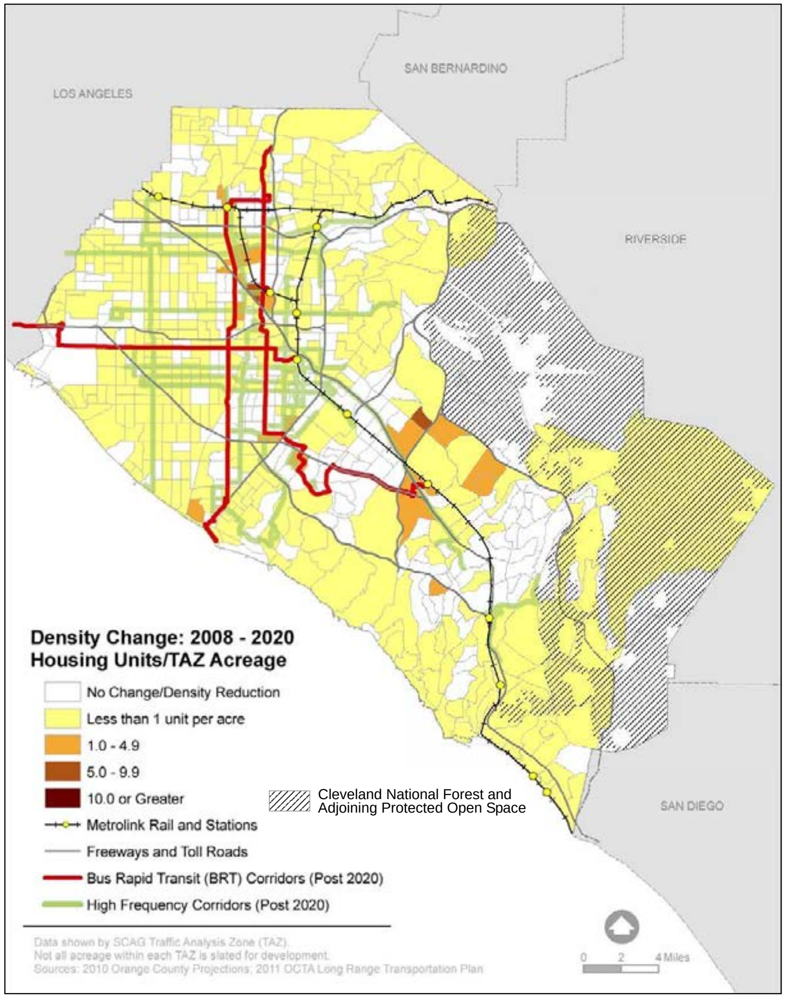


Figure 23 **Orange County Housing Density Change 2008 - 2020**

Orange County Sustainable Communities Strategy

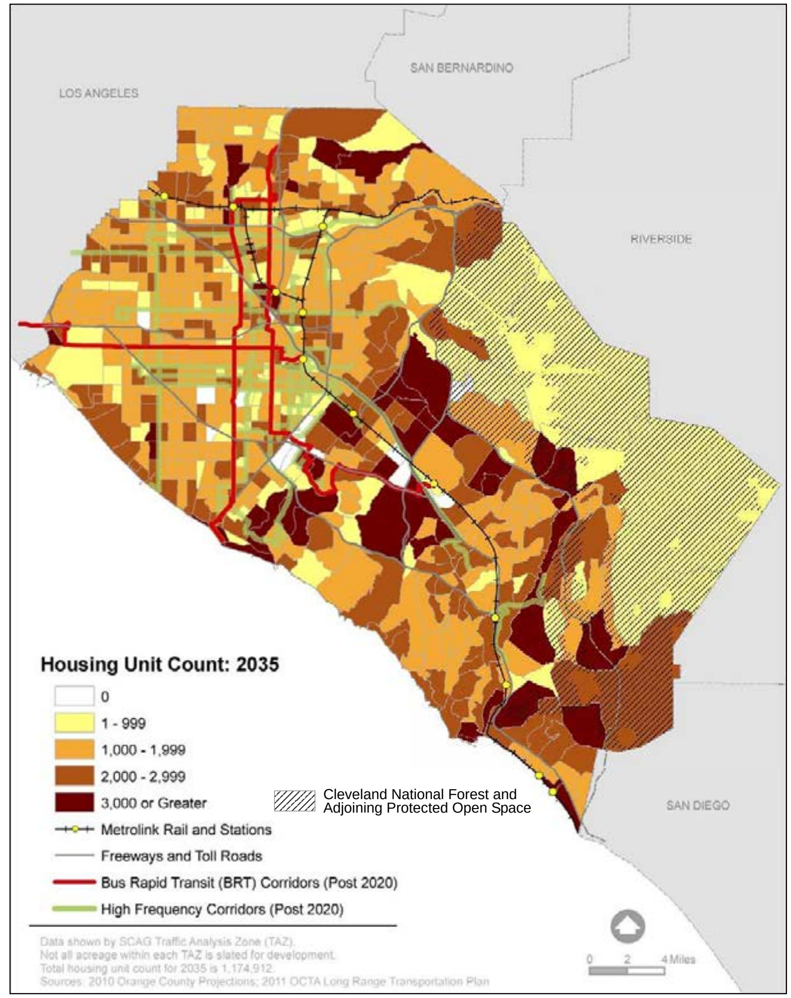


Figure 24 **Year 2035 Orange County Housing Units**

Orange County Sustainable Communities Strategy

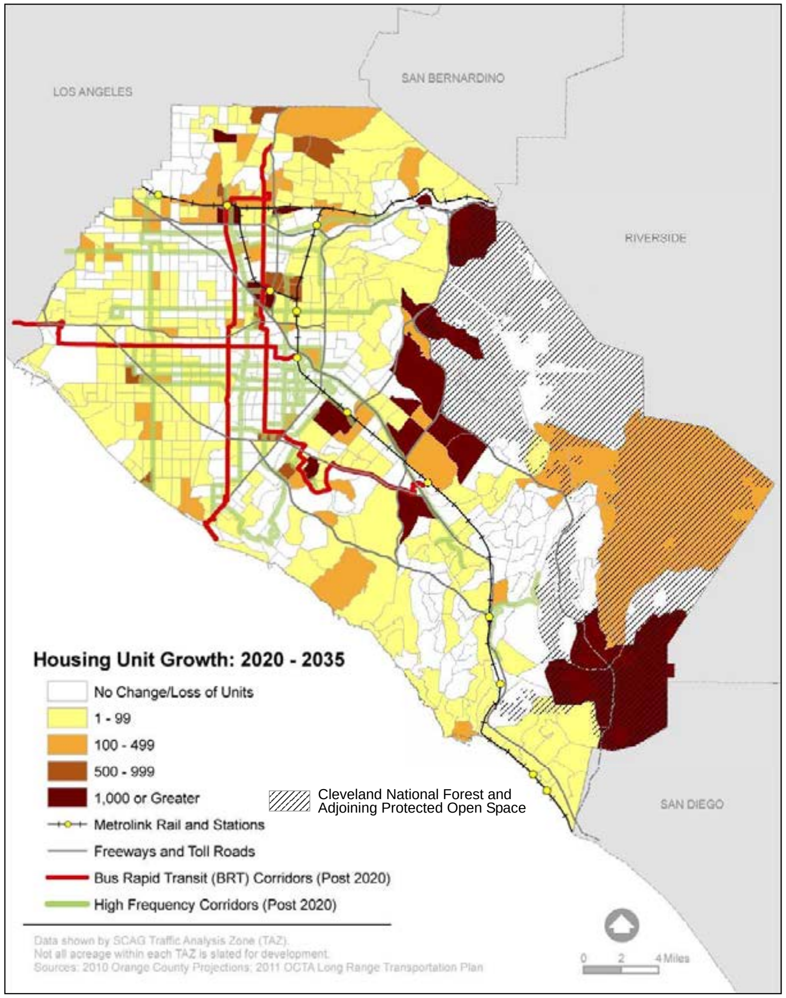


Figure 25

Orange County
Housing Unit Growth 2020 - 2035

41

Orange County Sustainable Communities Strategy

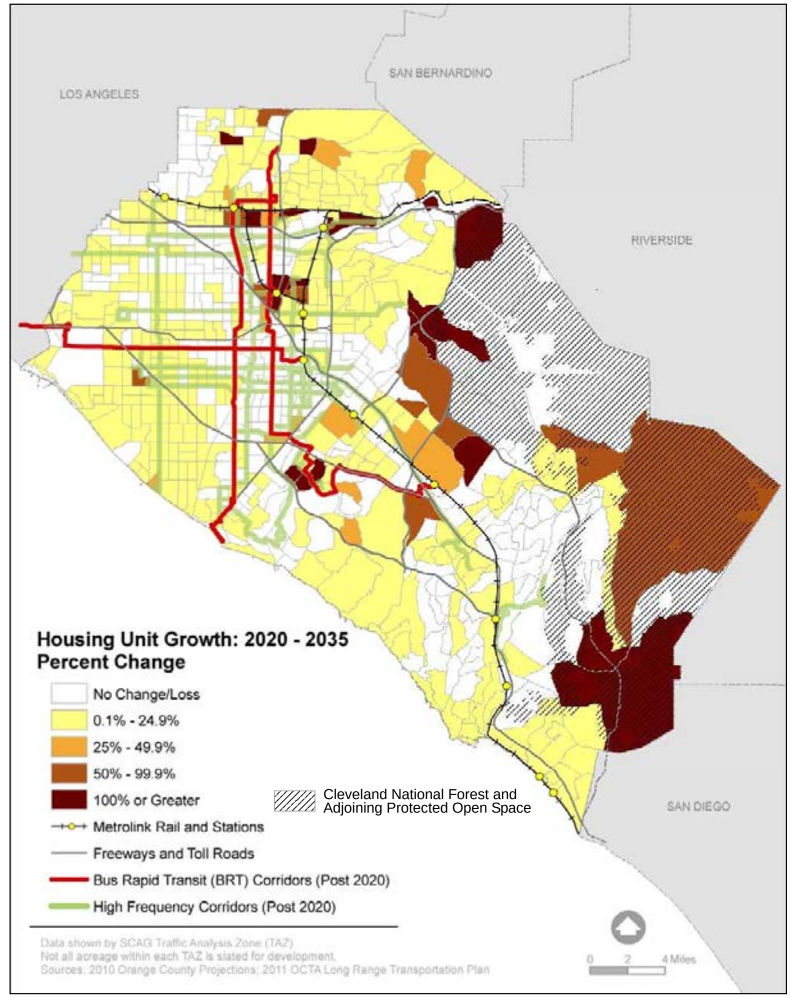


Figure 26

Orange County Percent Change
Housing Unit Growth 2020 - 2035

42

Orange County Sustainable Communities Strategy

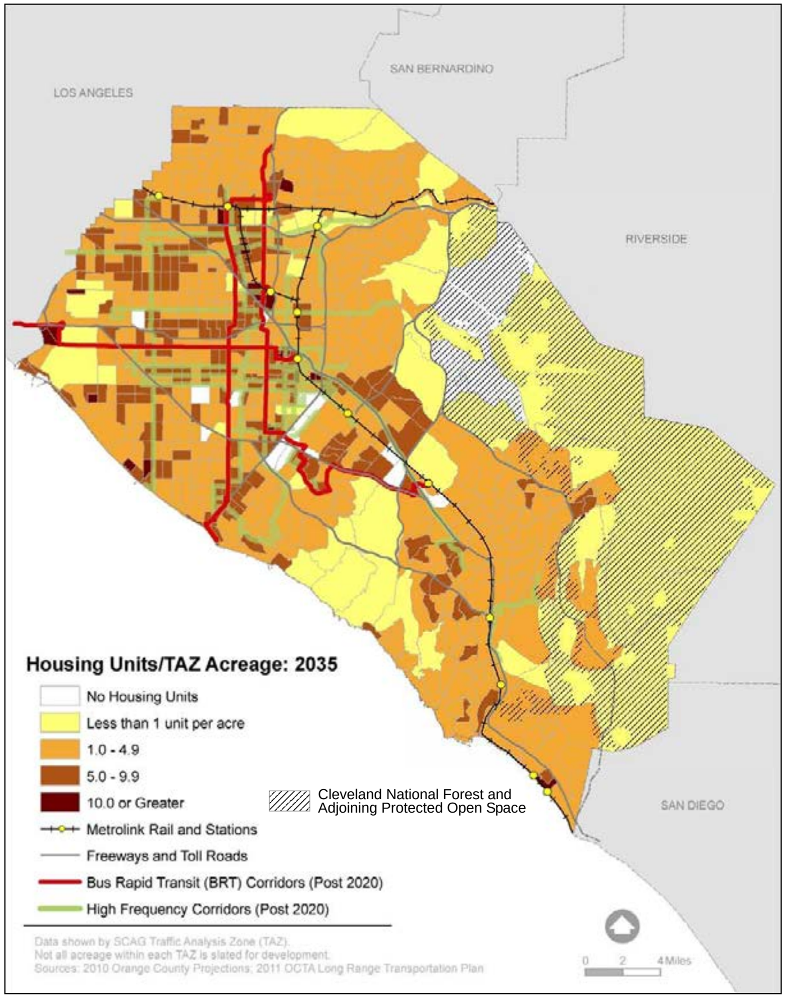


Figure 27

Year 2035
Orange County Housing Density

Orange County Sustainable Communities Strategy

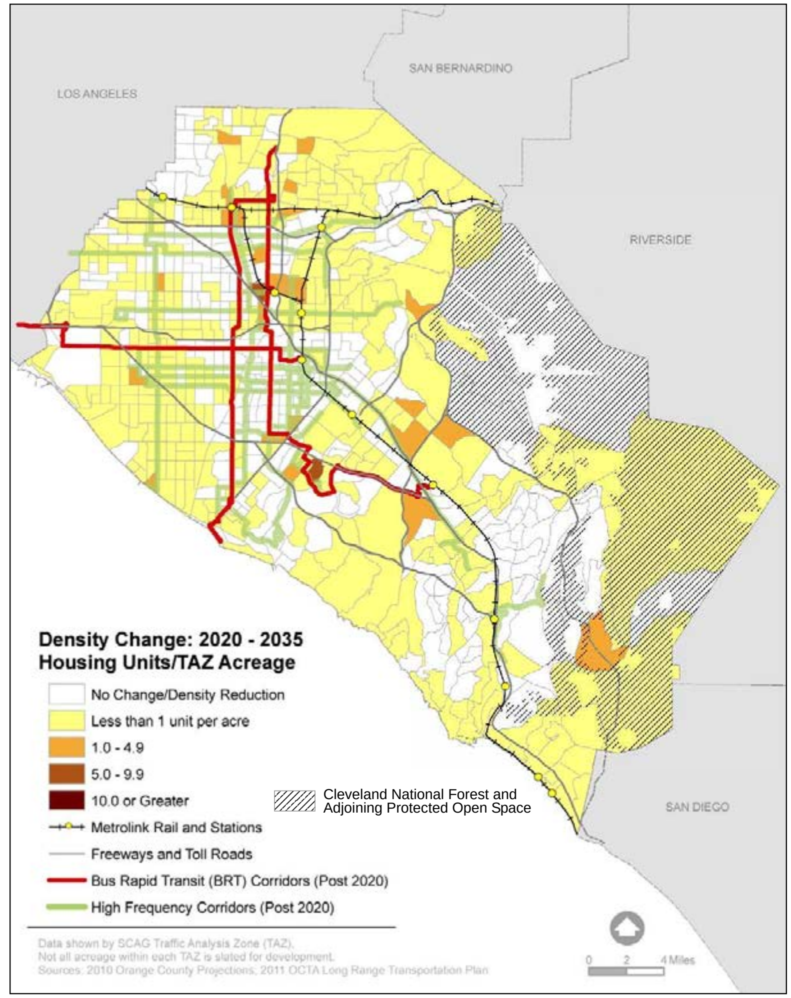


Figure 28

Orange County Housing
Density Change 2020 - 2035

HOUSING CONCLUSION

Orange County's existing (2008) housing stock includes a variety of densities, and only about half of the housing inventory is single-family detached structures. Approximately three out of every four housing units projected to be built between 2008 and 2035 will be some type of attached unit. The result will be denser housing developments and a future housing stock whose makeup will have a majority of attached units instead of a housing stock with a majority of single-family detached structures.

The number of new housing units is forecast to grow sufficiently to house all the population of the subregion. By 2020, the total number of housing units in Orange County is projected to increase by 65,255 units, resulting in an average of 3.12 Orange County residents per housing unit by 2020 and one housing unit per 1.50 jobs (one housing unit created for every 0.34 jobs created between 2008 and 2020). Between 2008 and 2035, Orange County is projected to create one housing unit for every 1.25 new jobs and one housing unit for every 3.28 new residents, resulting in a 2035 total of one housing unit for every 3.02 Orange County residents and one housing unit for every 1.53 jobs. The standard "healthy" ratio of jobs to housing is 1.50 jobs to 1.0 housing unit.[4]

Because available land is scarce, housing will grow primarily in terms of density. Increased housing density affords greater variety in housing type (i.e., multi-family, flat, apartment, condominium, high-rise, etc.) and increased supply contributes to housing affordability. Increasing the supply of affordable housing within Orange County may result in workers living closer to their jobs, thereby reducing vehicle miles traveled and urban sprawl. The densification of housing is forecast to accommodate population growth and locate proximate to major transportation routes and the priced transportation network, including the High Frequency Corridors and Metrolink stations.

Housing growth is projected to occur in and adjacent to areas that are forecast for increased employment growth. This adjacency will create opportunities to link housing and jobs at a human scale and afford pedestrian, cycling and transit choices for home/work travel.

Additionally, intensification of both employment and housing will enhance the built environment for mixed uses, transit-oriented and transit-adjacent developments, and multi-use projects along pedestrian and bicycle facilities.

[4] Cervero, Robert. 1991. "Jobs/Housing Balance as Public Policy." ***Urban Land*** 50, no.10:10-14; Ewing, Reid. 1996. ***Best Development Practices: Doing the Right Thing and Making Money at the Same Time***. Chicago: Planners Press; Weitz, Jerry. 2003. "Jobs-Housing Balance." ***Planning Advisory Service Report*** 516. Michigan: American Planning Association.

EMPLOYMENT

Orange County's estimated total job market was 1,624,061 jobs in 2008 (see Figure 29). The preponderance of TAZs host fewer than 5,000 jobs in 2008. Only three TAZs hold no employment, and these are located in areas comprised predominantly of parkland. TAZs with 5,000-9,999 employed workers are spread throughout the northern, central, and southern portions of the County along major transportation routes, as are TAZs holding 10,000-14,999 workers. The three largest employment TAZs—those holding 15,000-24,999, or 25,000 or more jobs—are located in the Irvine Business Complex, the Canyon industrial and business area north of the 91 Freeway located in Anaheim.

Figure 30 illustrates Orange County's employment density by jobs per acre in 2008. The northern and central portions of the County contain the majority of TAZs with mid- and high-level employment density.

By 2020, Orange County's total job count is projected to increase to 1,646,437, an increase of 22,376 jobs between 2008 and 2020 (see Figure 31). Employment growth between 2008 and 2020 is apparent near the Irvine Spectrum, Irvine Business Complex, Tustin Legacy, and in and around the Orange County Great Park—most likely developments of mixed-use structures and high-rise structures to offset the scarcity of developable land in the area (see Figures 32 and 33).

In 2020, TAZs with less than five jobs per TAZ acre are projected to make up the majority of TAZs in the County. High-density employment will continue in The Canyon, Anaheim Resort, and Irvine Business Complex. This high density of employment will also be expanded to additional areas including the Santa Ana Civic Center, the Irvine Spectrum, and other areas surrounding these locations (see Figures 34 and 35).

Orange County's net job growth from 2008 to 2020 includes the significant job losses incurred during the latest recession, starting in 2006 and lasting through 2009. The large decrease in overall employment, coupled with the slower-than-average past annual job growth, translates to a slow recovery of the County's employment landscape.

Consistent with employment growth trend projections by the UCLA Anderson School, Chapman University, Cal State Fullerton, and Cal State Long Beach, the estimated recovery of Orange County's employment level—back to its prior peak employment—is anticipated sometime between 2016 and 2020.

Orange County Sustainable Communities Strategy

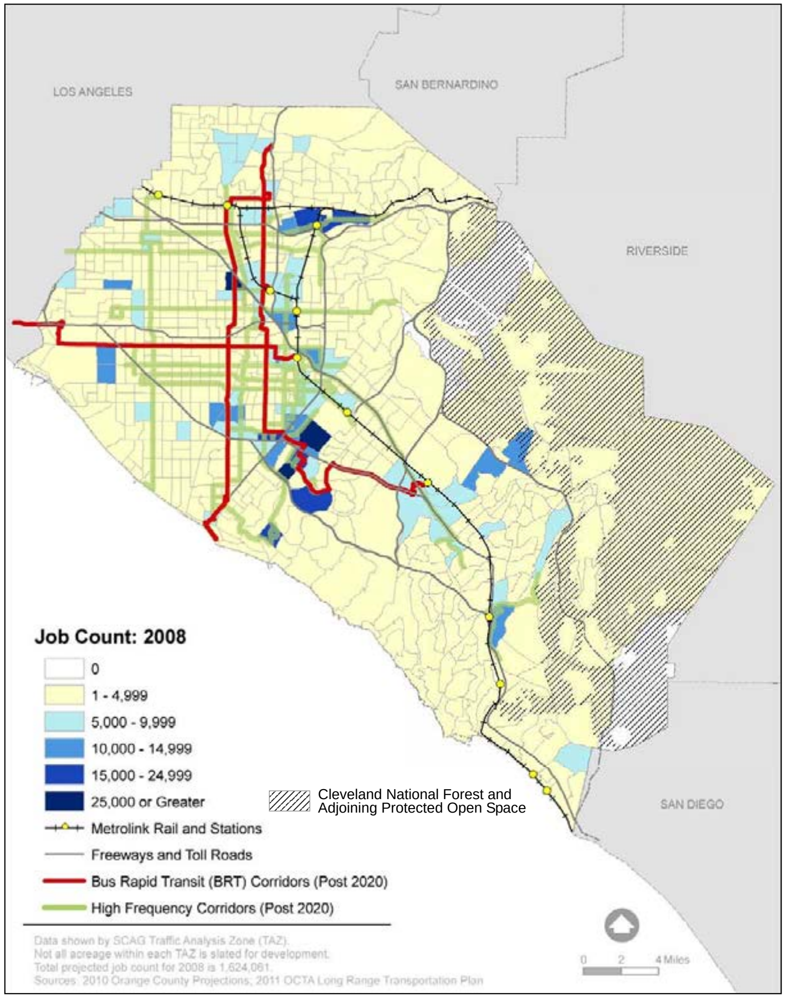


Figure 29

Existing (2008)
Orange County Employment

Orange County Sustainable Communities Strategy

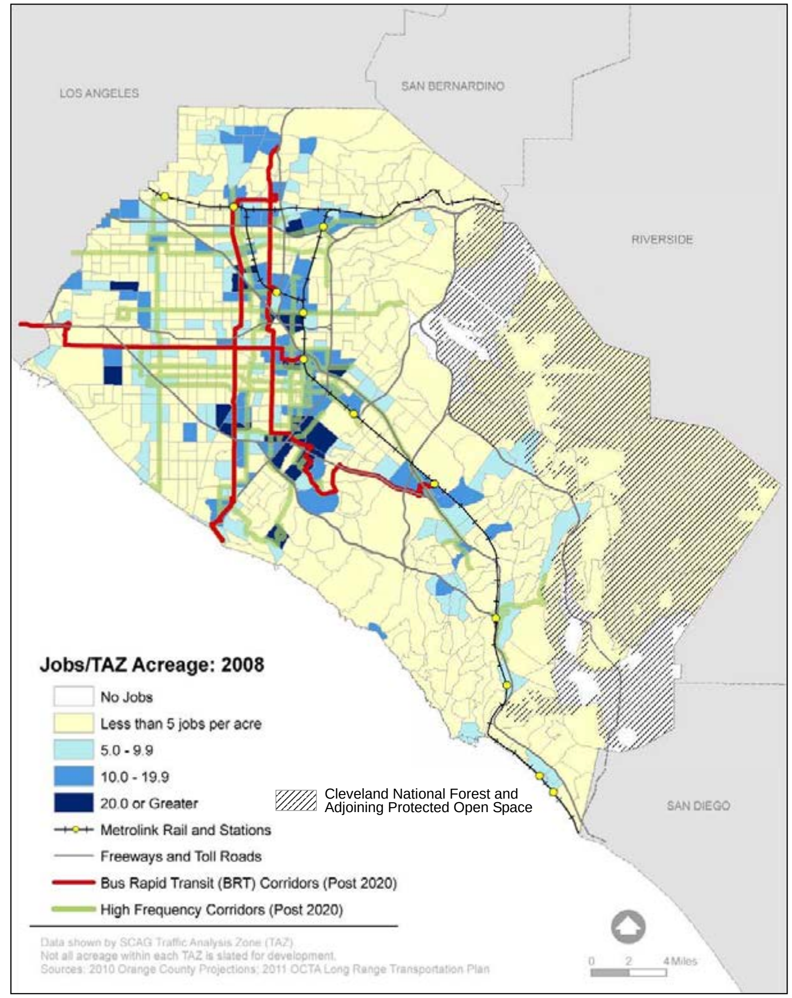


Figure 30

Existing (2008)
Orange County Employment Density

Orange County Sustainable Communities Strategy

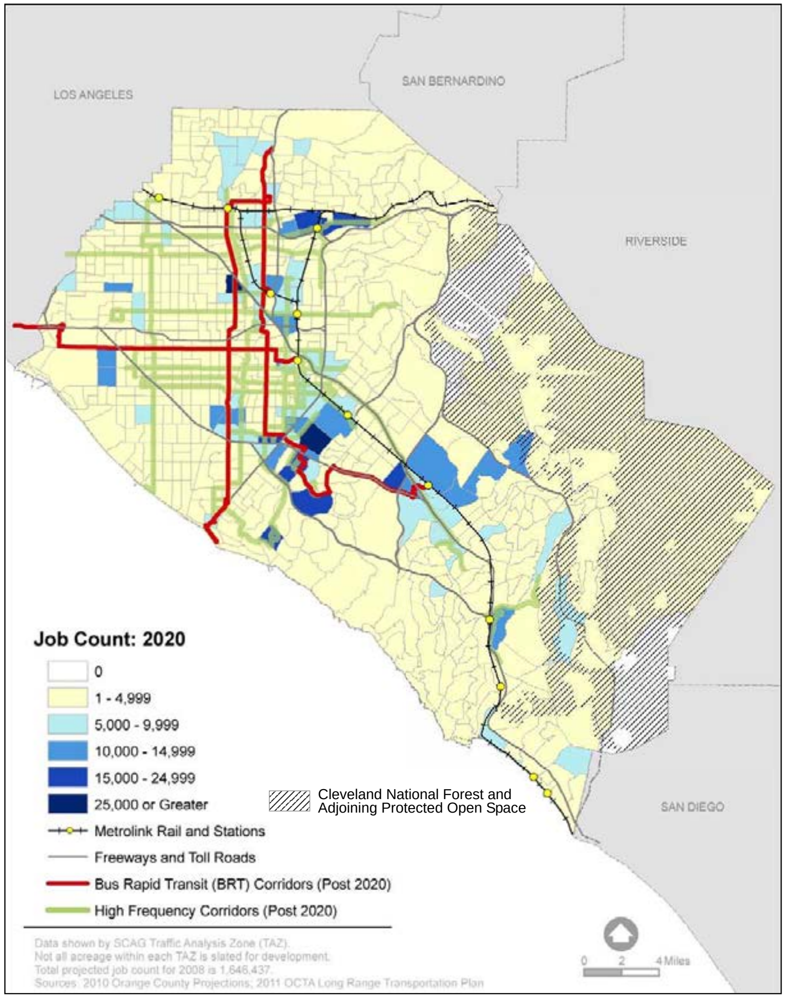


Figure 31 — **Year 2020 Orange County Employment**

Orange County Sustainable Communities Strategy

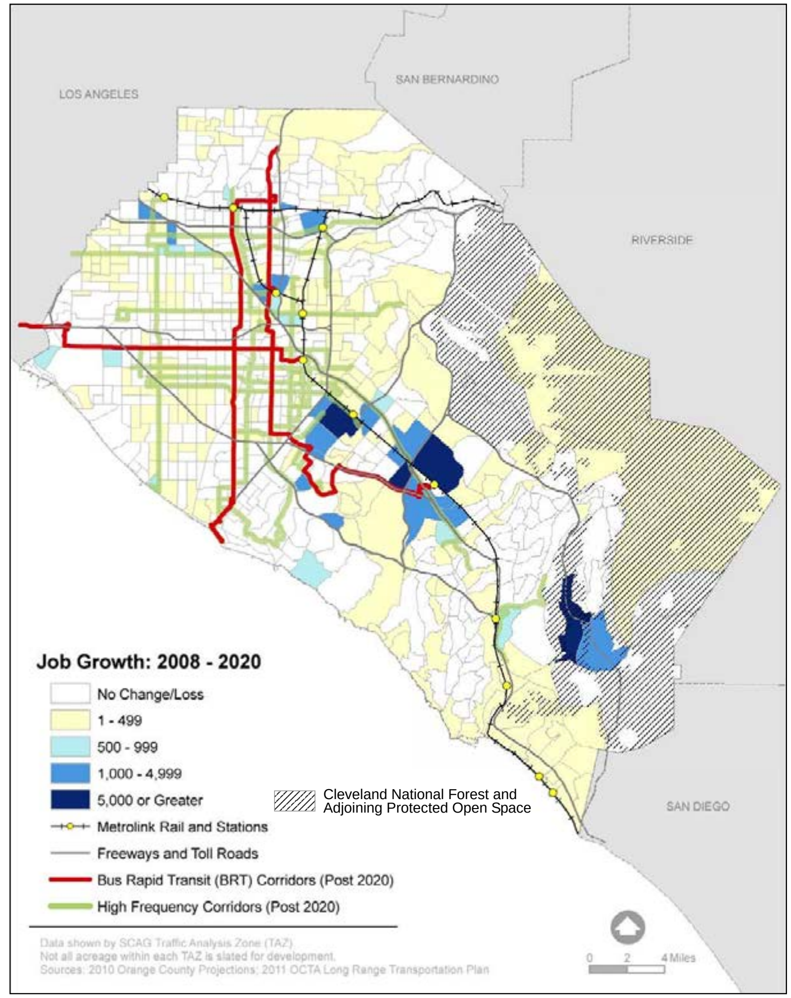


Figure 32 — **Orange County Employment Growth 2008 - 2020**

Orange County Sustainable Communities Strategy

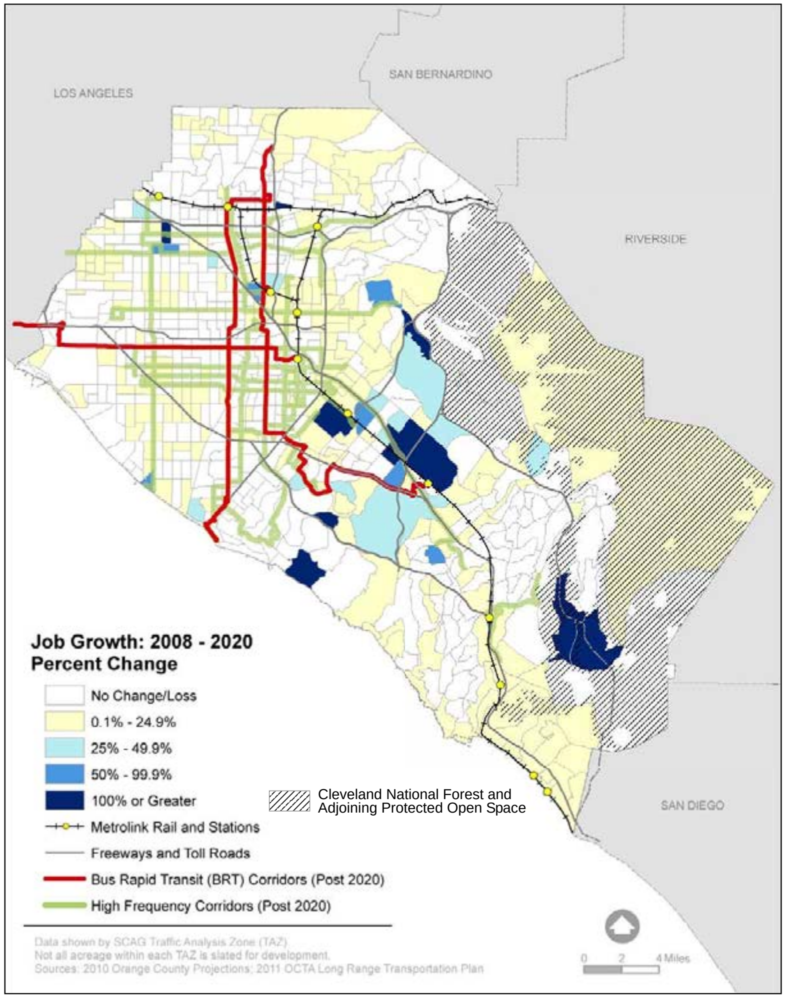


Figure 33 **Orange County Percent Change Employment Growth 2008 - 2020**

51

Orange County Sustainable Communities Strategy

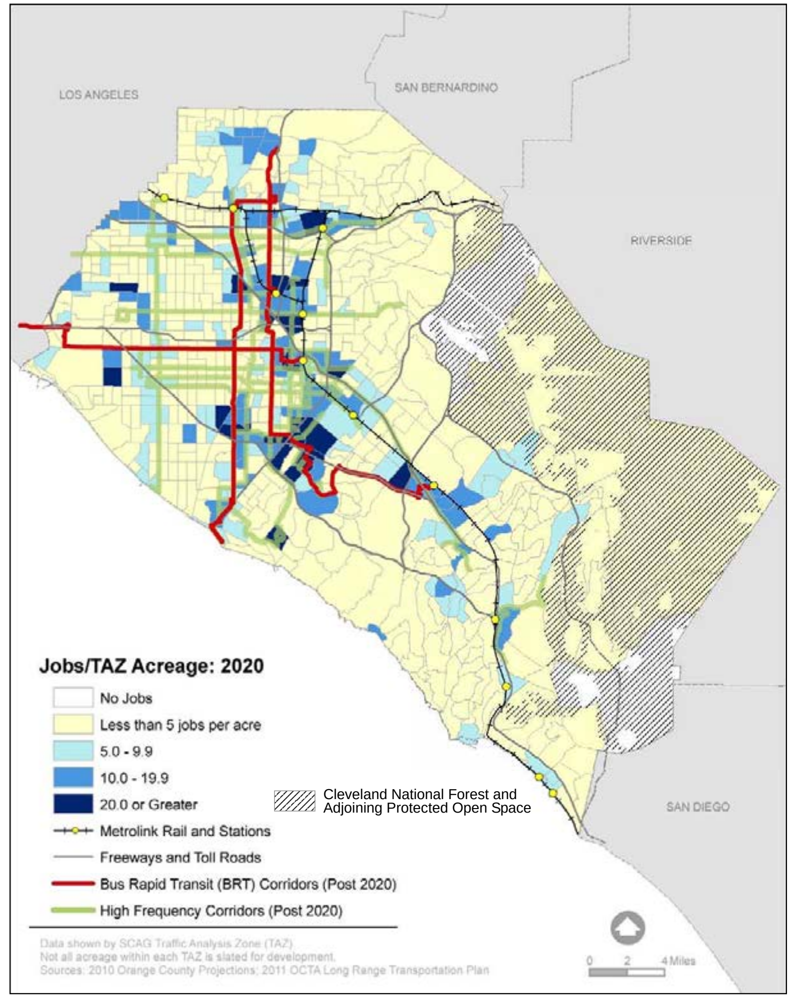


Figure 34 **Year 2020 Orange County Employment Density**

52

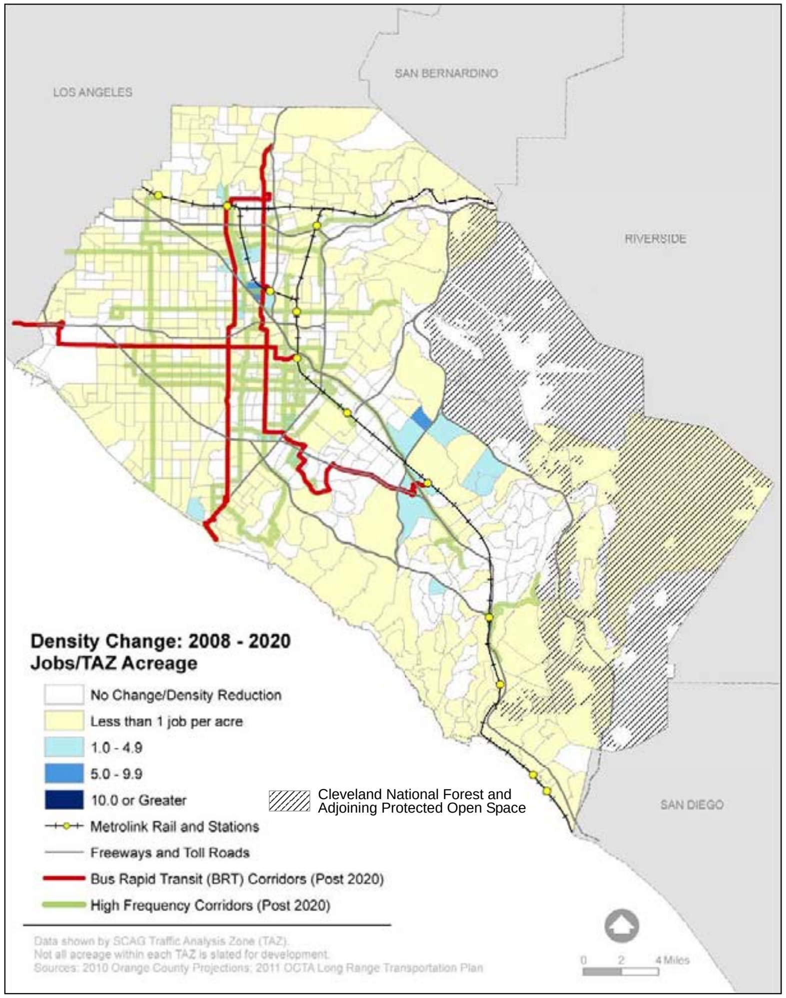


Figure 35 **Orange County Employment Density Change 2008 - 2020**

By 2035, Orange County is projected to have 1,799,477 jobs, an increase of 153,040 jobs between 2020 and 2035 (see Figure 36). This represents an increase of 9.3% from 2020, and equates to 130,664 jobs or almost seven times more jobs than are projected to be added between 2008 and 2020. The large difference between the numbers of jobs added between these two time periods is attributed to initial job losses in the early phases of the time period and then slow economic recovery leading to sluggish employment growth expected between 2008 and 2020.

The TAZs projected to experience the largest employment growth—additions of 5,000 jobs or more—are primarily located in the cities of Irvine, Anaheim, Tustin, and Orange, all existing employment centers, which are projected to continue to grow as major employment centers (see Figures 37 and 38).

Orange County employment density in 2035 (jobs per acre) is projected to increase throughout the County (see Figure 39). Between 2008 and 2035, Orange County is projected to add 175,416 jobs, the majority of which will be added between 2020 and 2035. While southern regions of Orange County are projected to increase employment and experience employment densification, this will be comparatively small relative to those increases projected to occur in the northern and central regions of the County. Significant employment growth is projected to occur predominantly in the cities of Anaheim and Irvine (see Figure 40). Mixed-use and single-use, higher-density developments will continue to play a large role as population levels increase with employment opportunities.

Orange County Sustainable Communities Strategy

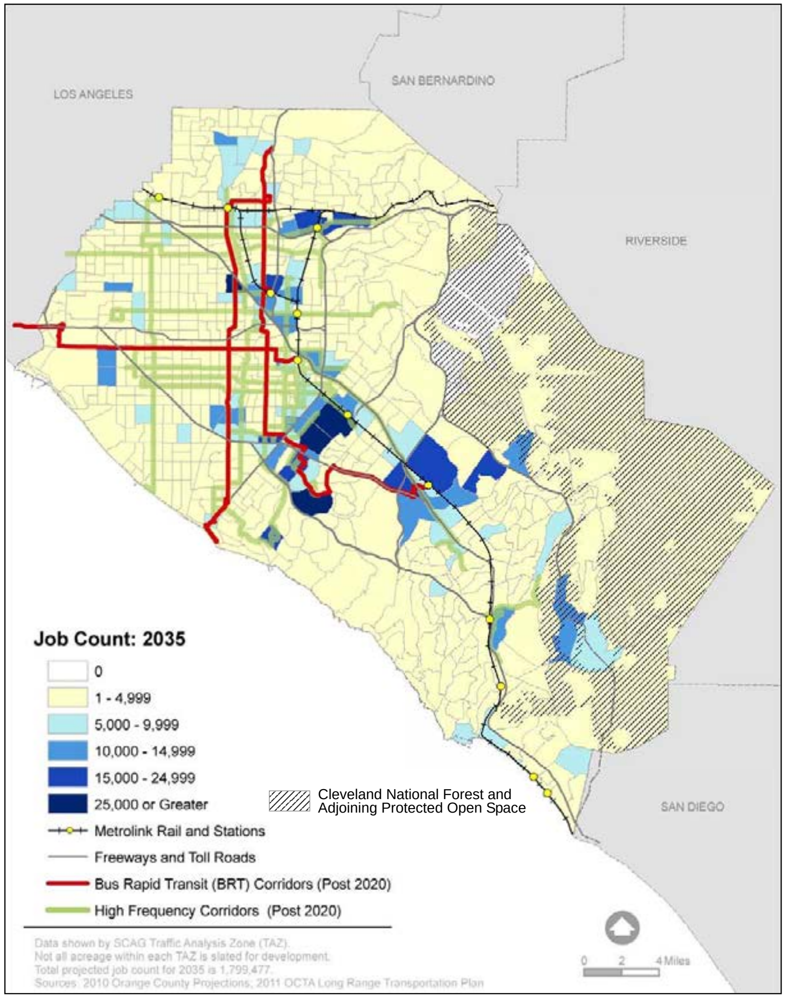


Figure 36 **Year 2035 Orange County Employment**

55

Orange County Sustainable Communities Strategy

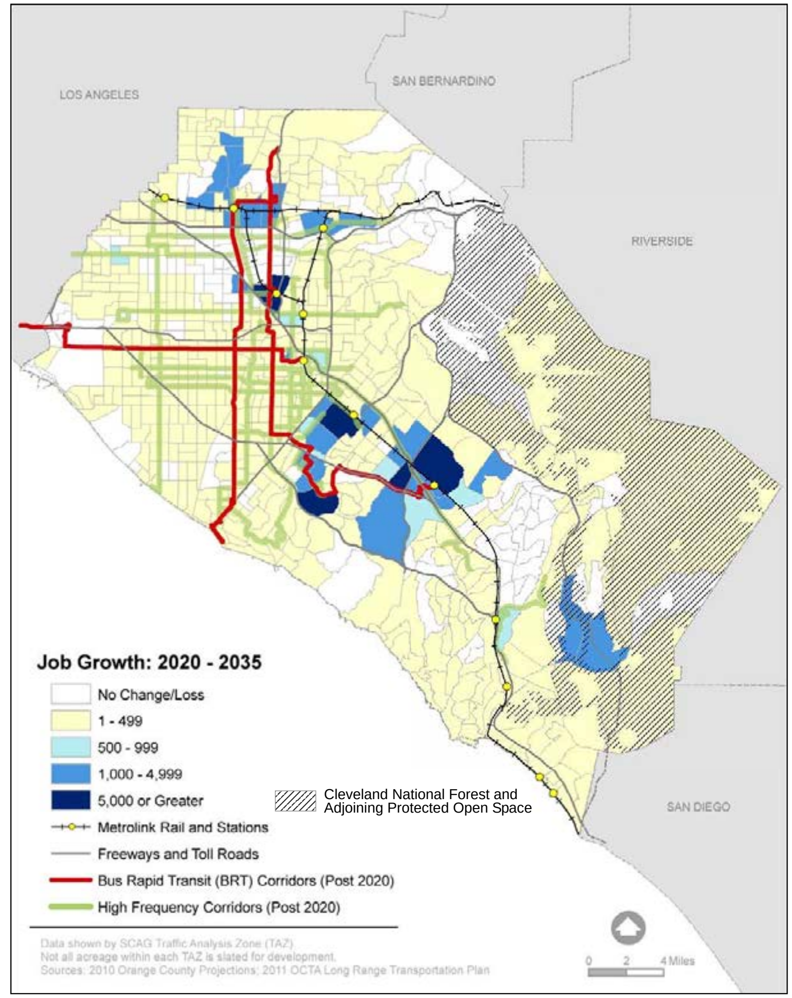


Figure 37 **Orange County Employment Growth 2020 - 2035**

56

Orange County Sustainable Communities Strategy

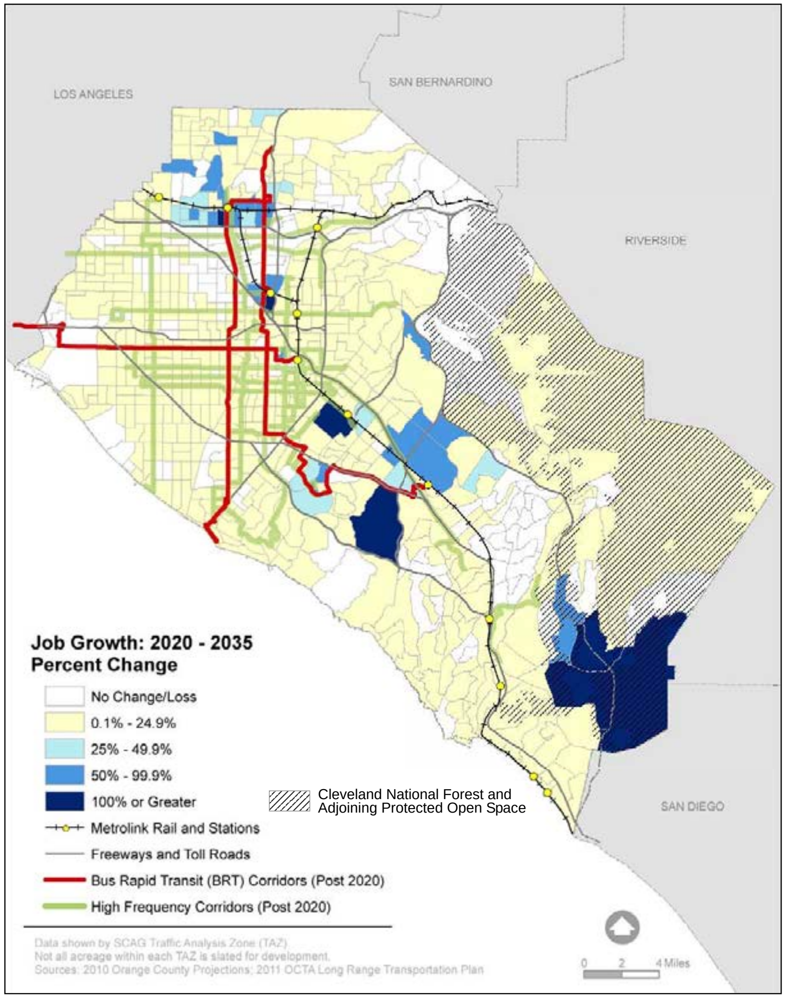


Figure 38 **Orange County Percent Change Employment Growth 2020 - 2035**

Orange County Sustainable Communities Strategy

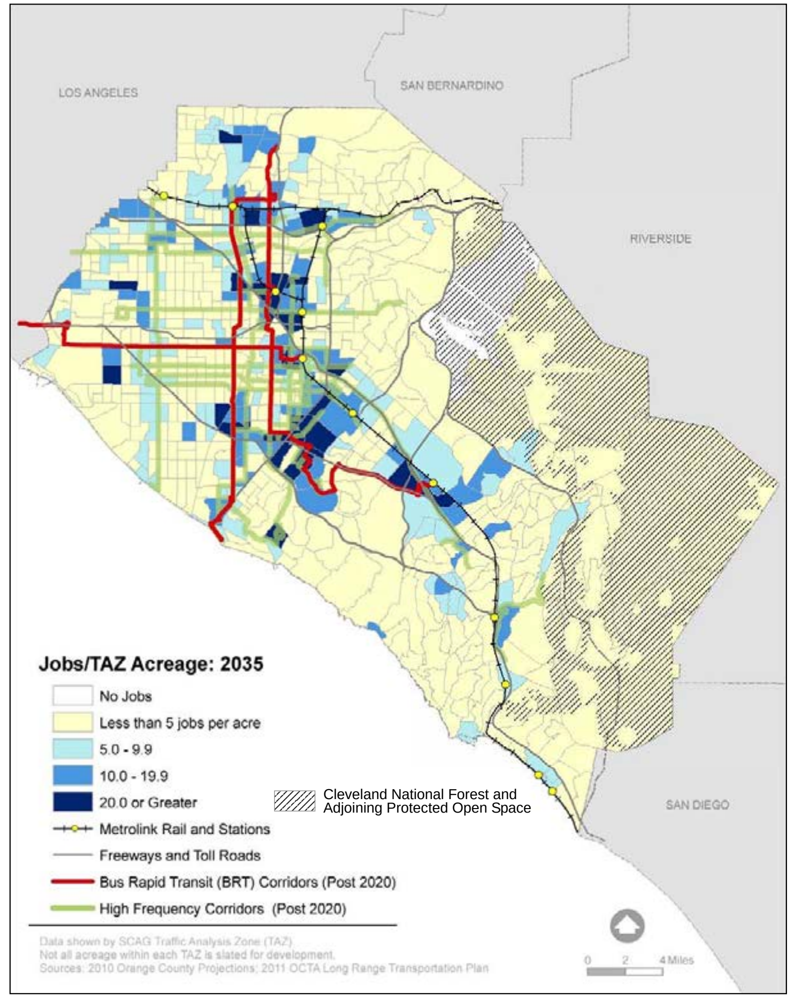


Figure 39 **Year 2035 Orange County Employment Density**

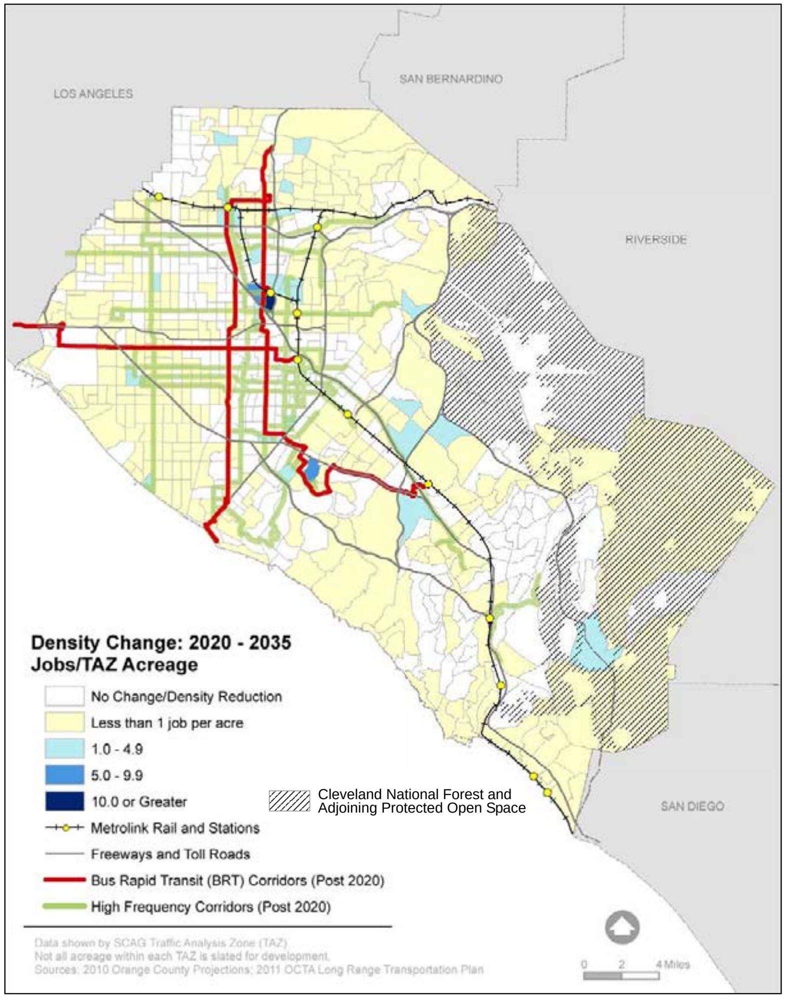


Figure 40 **Orange County Employment Density Change 2020 - 2035**

EMPLOYMENT CONCLUSION

Existing (2008) employment centers are located near major transportation nodes and routes, as commerce requires transportation infrastructure to thrive. Most Orange County employment is aggregated around the major highways (I-5, I-405, SR-22, SR-55, SR-57, and SR-91 freeways).

In more recent developments, job centers have tended to locate near transit stations or areas served by bus service and other transit options. The same trend is expected to occur for projected developments. Major growth in employment is projected to occur near Fullerton, Buena Park, Tustin, and around the Irvine Spectrum and the Anaheim Canyon, all near Metrolink stations. Toll roads also provide access to and from Anaheim and Irvine, both major receptors of future job growth and workers. Growth in employment will continue in these centers. This intensification will result in more of the working population proximate to High Frequency Corridors for rubber tire transit, as well as the Orange County Metrolink stops.

Intensification of employment centers also means increased density of land uses and the creation of synergies and opportunities to mix uses to satisfy a variety of needs. As mixed uses are developed within intense employment nodes, opportunities for pedestrian scale mobility are enhanced. Social and commercial needs, once satisfied only by passenger car due to distance, will be met by walking, cycling, or transit options.

CONCLUSION

Orange County's current and projected growth of population, housing, and employment near existing and future job centers will influence transportation patterns and therefore have the potential to be beneficial to GHG emission reductions.

Higher density vertical developments are being built in many Orange County jurisdictions, such as Anaheim's Platinum Triangle project. The construction of residential towers in Irvine, Anaheim, and Santa Ana illustrates that Orange County is indeed building "up." Such towers are part of a larger set of new developments built inside existing urban areas and known as infill developments. Infill developments may be anything from single-family homes to high-density residential complexes; the key is that they are built within existing urbanized areas, not on the periphery. Even before the start of these high-rise residential developments, many County jurisdictions experienced substantial increases in population density between 1990 and 2005. Gains in density can be attributed in part to jurisdictions' efforts to increase multi-unit housing, and/or to rezoning for higher and more efficient uses (referring to land uses or patterns that will reduce regional GHG emissions from automobiles or trucks by fostering efficient usage of transportation resources and infrastructure).

Additionally, many Orange County jurisdictions have already begun the process of more strategic growth, with higher densities and housing development concentrated around employment centers, transportation nodes, and transit options. Of the projected net gain of 139,907 housing units in the County between 2008 and 2035, about two out of every three units to be built will be infill/redevelopment that will use and be supported by existing infrastructure. An estimated 51,663 units are planned to be built on raw land (36.9%), but the remaining 88,244 units (63.1%), will be infill or redevelopment projects, demonstrating Orange County's increasingly strategic growth. Further, 38,821 units (27.7%) of the 2008-2035 new housing total will be single-family detached units, while 101,086 (72.3%) will be attached units which tend to be more affordable to a wider range of the regional income spectrum.

Infill development will likely prove an asset for the already-prominent Orange County economy. Young professionals to retirees alike are turning from suburbs to urban areas to find ease of movement and access to services offered by dense, vibrant mixed-use areas. The County already has most of the infrastructure of an urban metropolis, and as revealed by the OCP-2010 data and analysis, the County also has tremendous potential for providing compact, mixed-use development.

In terms of employment, between 2008 and 2020, Orange County is projected to generate 22,376 jobs. Research by Dr. John Landis, Chair of the City and Regional Planning Department at UC Berkeley, and other housing experts and planners, finds that a healthy ratio of housing to jobs is one housing unit for every 1.5 jobs. This ratio is also affirmed as a benchmark by Workforce Housing Scorecards created for Orange County, San Diego County, and Los Angeles County. Workforce housing is housing supply, type, and affordability sufficient to adequately house the broad spectrum of workforce employed in the region. Orange County is expected to create approximately one new housing unit for every 0.34 jobs, which is greater than the projected employment growth that will be required between 2008 and 2020. Between 2008 and 2035, Orange County is projected to create one housing unit for every 1.25 new jobs, resulting in a 2035 total of one housing unit for every 1.53 jobs, nearly matching the standard healthy ratio of 1.0 housing unit for every 1.5 jobs.

Orange County Sustainable Communities Strategy

MEETING ORANGE COUNTY'S HOUSING NEEDS

The projected growth in Orange County housing units between 2008 and 2035 is sufficient to house the anticipated population growth in the subregion. In fact, Orange County will create more housing units than employment growth will require: one housing unit per 3.12 Orange County residents by 2020 and one housing unit per 1.50 jobs (one housing unit created for every 0.34 jobs created between 2008 and 2020).

The same is true for housing growth between 2008 and 2035. During this time period, Orange County is projected to create one housing unit for every 1.25 new jobs and one housing unit for every 3.28 new residents, resulting in a 2035 total of one housing unit for every 3.02 Orange County residents and one housing unit for every 1.53 jobs.

Of the new housing units created between 2008 and 2035, fully 63% will be created through infill or redevelopment projects. Further, 72% of the total housing units will be attached units, which tend to be more affordable to a wider range of the regional income spectrum.

Based upon Orange County's projected population and job growth, Orange County's projected housing unit supply growth is more than sufficient to meet the subregion's 8-year projected growth. Additionally, it is anticipated the mix and type of units identified through the OCP process will be ample to meet the needs of all income segments of Orange County's population.

Housing growth envisioned in the OC SCS is intended to be consistent with the SCAG region's Regional Housing Needs Assessment (RHNA). However, because the draft RHNA for the SCAG region will not be released until August 2011, it is not possible to address the RHNA or its context with the State housing goals in the OC SCS that is due to SCAG in June 2011. Therefore, it is anticipated that the RHNA and State housing goals will be addressed in SCAG's Regional SCS.

CHAPTER 2: EXISTING TRANSPORTATION SYSTEMS

INTRODUCTION

Orange County's population, housing, employment, and the transportation systems that support them are intricately connected. This chapter describes the transportation systems in place as of 2008, which are both foundational and influential to the socio-economic trends described in the previous chapter.

SB 375 requires the regional SCS to be included in the RTP. The base year for the 2012 RTP is 2008. For consistency, this year—2008—is also the base year for the subregional and regional SCSs. As outlined in the MOU between SCAG, OCCOG and OCTA, the OC SCS uses OCTA's LRTP to define the 2008 base year transportation system.

FREEWAY SYSTEM

Orange County's (County) travel network is anchored by an extensive freeway system that includes toll roads, express lanes, and the most comprehensive HOV network in the nation. As of 2008, the freeway system consisted of 1,100 lane miles of general-purpose travel lanes and 230 lane miles of HOV lanes. The system also included over 280 lane miles of toll roads and 40 lane miles of express lanes. Over 19 percent of the County's freeway system is comprised of priced facilities, the most sophisticated priced transportation network in California. Figure 41 illustrates the existing 2008 freeway system, which totals approximately 1,650 lane miles. The existing freeway system experiences high levels of congestion and delay during peak hours. According to the Orange County Long Range Transportation Plan, only half of the freeway system operates at the minimum acceptable level of service (LOS D), while the other half operates at or above capacity (14 percent at LOS E and 33 percent at LOS F), where speeds and travel times are highly impacted.

Orange County Sustainable Communities Strategy

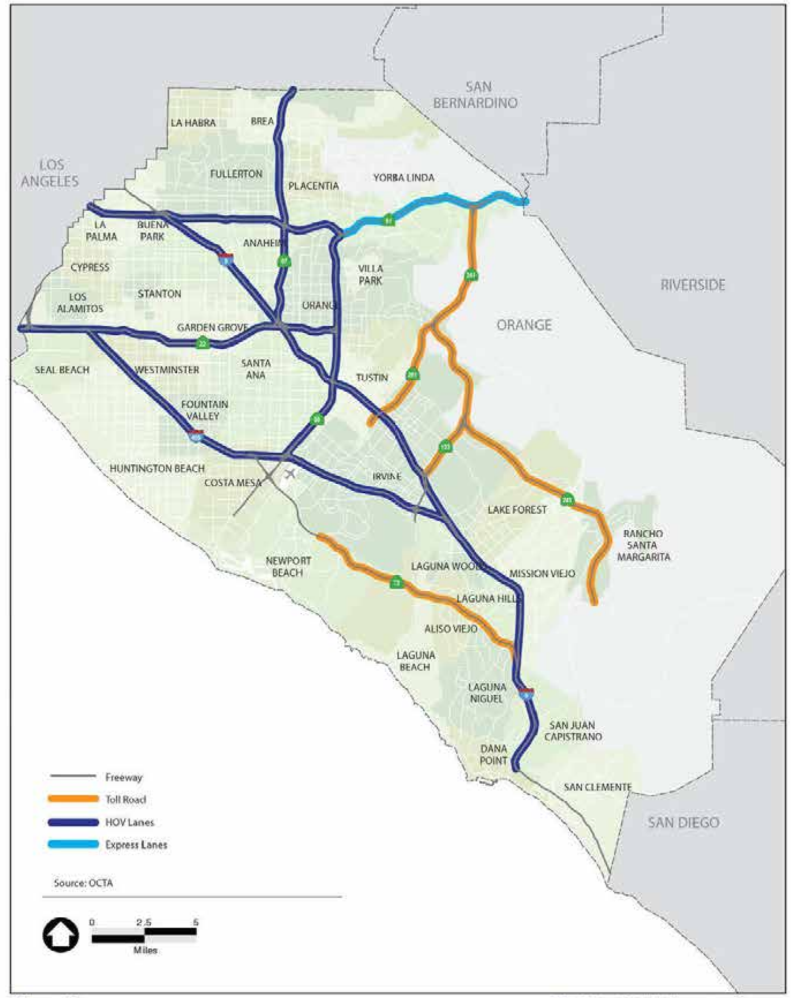


Figure 41 Existing (2008) Freeway System

ARTERIALS AND LOCAL ROADS

The freeway system is complemented by an arterial roadway system that serves both regional and local travel. Since 1956, the Orange County Master Plan of Arterial Highways (MPAH) has served as the guiding plan for future roadway improvements. The existing 2008 number of lanes over the MPAH is illustrated in Figures 42A and B. Today, the arterial roadway system carries approximately one-half of the daily vehicle miles traveled in the County.

The arterial roadway system also experiences congestion during peak periods. About 10 percent of the system operates at or near capacity. The performance of the countywide system is also affected by the condition of the streets and roads. Potholes and damaged roadway infrastructure can reduce the operational capacity of roads, slow traffic, and contribute to traffic incidents. Local jurisdictions monitor the pavement conditions through a Pavement Management Plan, which is adopted and updated on a biennial basis.

RAIL AND BUS TRANSIT

The County is served by a commuter rail network (Metrolink) that provides both north-south and east-west service on three routes extending past the County's boundaries (Figure 43). The Southern California Regional Rail Authority (SCRRA) is the regional commuter rail agency for Southern California, and operates Metrolink commuter rail service as a joint powers authority (JPA) comprised of the transportation agencies in Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. Metrolink and Amtrak services connect Orange County to San Diego, Los Angeles, Riverside, Ventura and San Bernardino Counties. Amtrak's Pacific Surfliner inter-city rail service and Thruway Bus also operates in Orange County, serving stations in Fullerton, Anaheim, Orange, Santa Ana, Irvine, Laguna Niguel/Mission Viejo, San Juan Capistrano, and San Clemente, and has instituted limited stop service to improve cross-regional travel time. The California Department of Transportation Division of Rail manages and coordinates the intercity Amtrak rail passenger services in the region.

OCTA and local bus transit providers offer over 80 bus routes serving commuters that begin or end their trip within the County, as well as travelers within the County that need local and express bus services. OCTA operates 40 local fixed routes, 14 community and shuttle routes, five intra-county express routes, 13 StationLink Metrolink rail feeder routes and five inter-county express routes. In some cities, such as Anaheim, Brea, Buena Park, Irvine, Laguna Beach, and Laguna Woods, OCTA bus service is complemented by service provided locally, expanding the transit options available to County residents and commuters. Additionally, private providers of bus service and shared ride shuttles such as Greyhound, Disneyland Resort Express, and Airport Shuttle operate in Orange County. Public transit agencies serving adjacent counties also provide limited service into Orange

Orange County Sustainable Communities Strategy

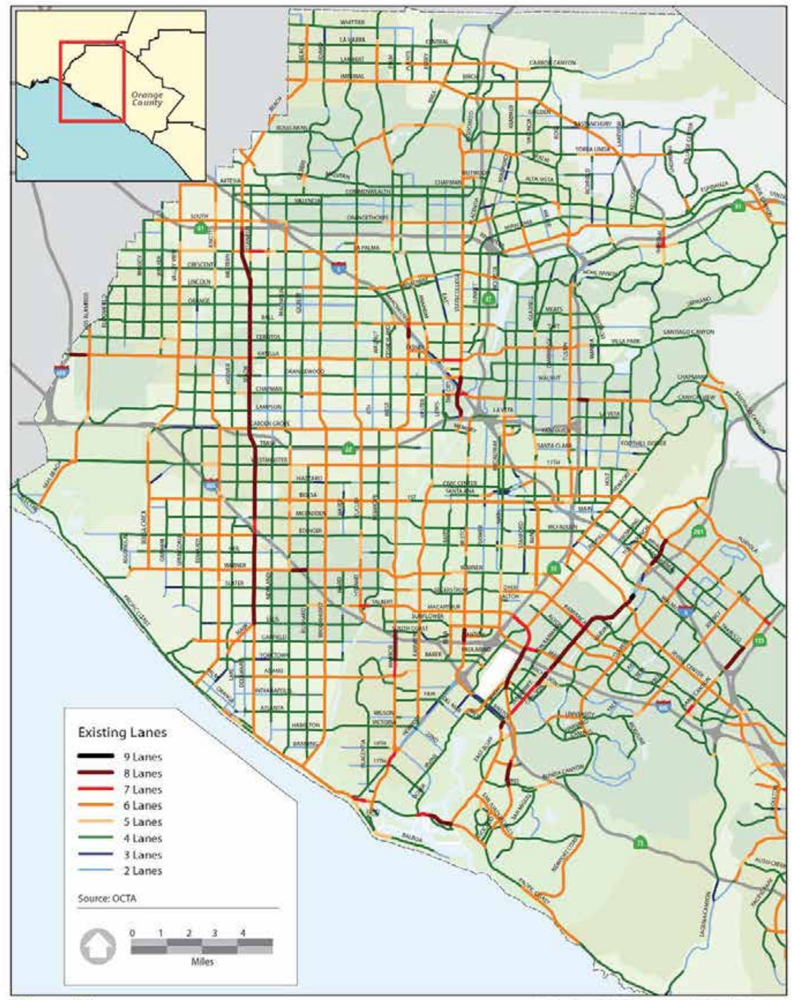


Figure 42A Existing (2008) Arterial Highways (North County)

Orange County Sustainable Communities Strategy

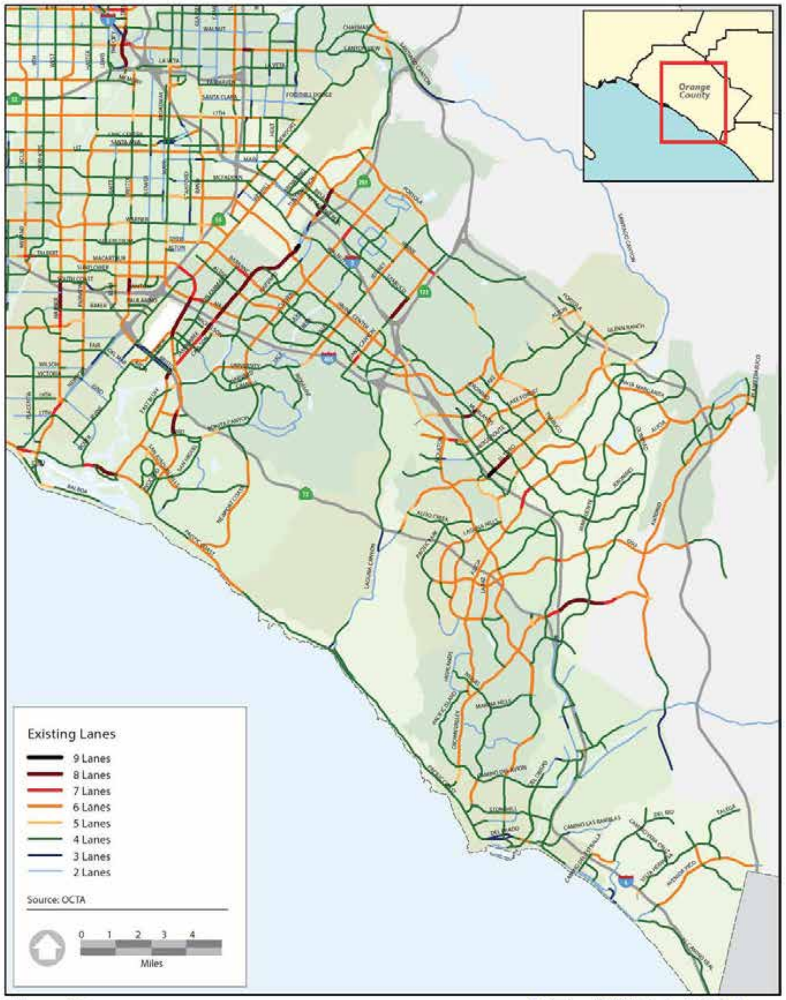


Figure 42B

Existing (2008) Arterial Highways (South County)

Orange County Sustainable Communities Strategy

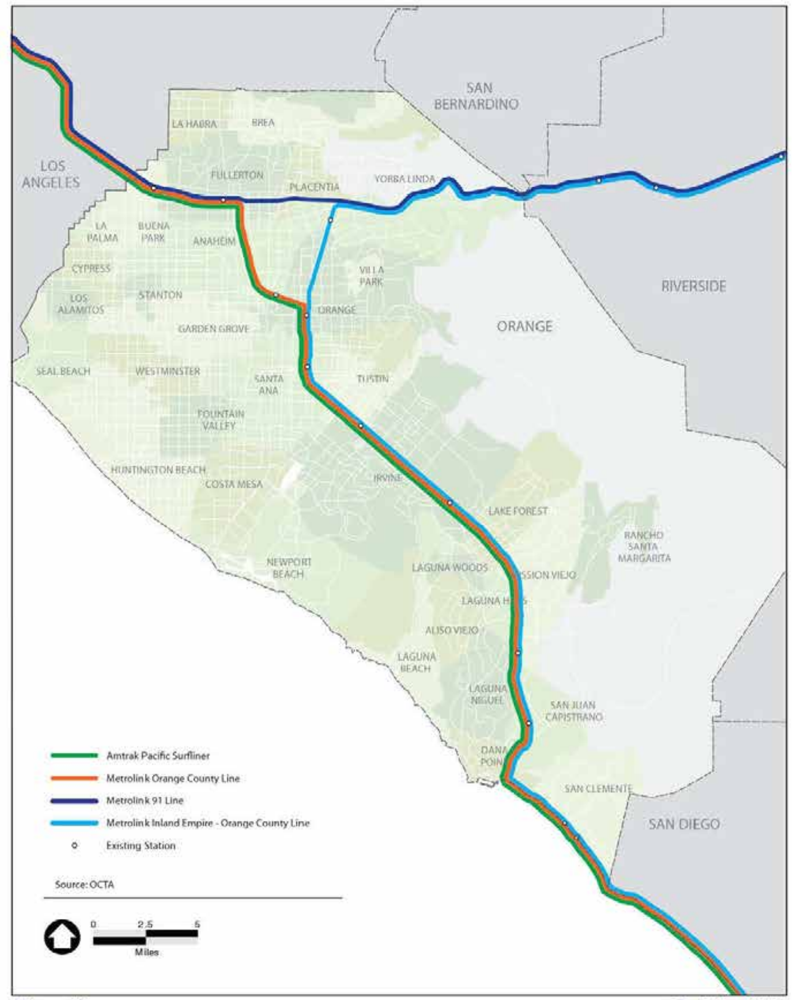


Figure 43

Existing (2008) Commuter Rail Network

County including Los Angeles Metro, Long Beach Transit, Norwalk Transit System, Foothill Transit, Riverside Transit Agency, and North County Transit District.

While there have been extensive investments in commuter rail and transit bus services within Orange County, ridership on public transit has declined during the recent economic crisis. The losses in sales tax and state funding revenues dedicated to transit operations, when combined with the decrease in fare revenue, created a need to reduce bus service levels by about 20 percent between 2008 and 2010.

BIKEWAYS

Orange County's transportation system includes over 1,000 miles of bikeways linking residential communities to employment and activity centers, and to transfer points to other types of transportation (Figures 44A and B). There are three classes of bikeways with different levels of infrastructure complexity. Class I bikeways are off-street paved bike paths which may be shared with pedestrians. Nine percent of the Orange County bicycle network are Class I bikeways. Class II bike lanes are on-road striped and signed bicycle lanes. Class II bike lanes comprise 65 percent of the Orange County bicycle network. Class III bike routes are on-road signed bicycle routes shared with automobiles. Class III bike routes represent 26 percent of the Orange County bicycle network. The bikeway network is denser in the coastal cities and in South Orange County. Bikeways connect business centers to residential areas in some jurisdictions including Irvine, Costa Mesa, and Newport Beach, and provide several good connections to Metrolink stations south of State Route 55 (SR-55).

All OCTA buses are equipped with bicycle racks, located at the front of the vehicle, with capacity to carry two bicycles at a time, expanding the number of potential destinations that can be reached by bicycle. Additionally, all iShuttle buses – which serve the Tustin Metrolink station - have bike racks. Bicycle lockers at Metrolink stations and bicycle racks on Metrolink trains provide safe and secure storage and transport of bicycles for train riders using a bicycle as an access mode to transit. These amenities encourage bicycle use by commuters.

PEDESTRIAN PROGRAMS

Pedestrian friendly environments improve the efficiency and connectivity of other modes of transportation, such as transit. A safe and attractive walking environment also furthers the goals of environmental sustainability by supporting reduced automobile dependence.

While not all public thoroughfares have sidewalks, there are many miles of sidewalks and walkways throughout Orange County that allow pedestrians to complete their trips without the use of motorized vehicles. Progress is being made in adding sidewalks to

Orange County Sustainable Communities Strategy

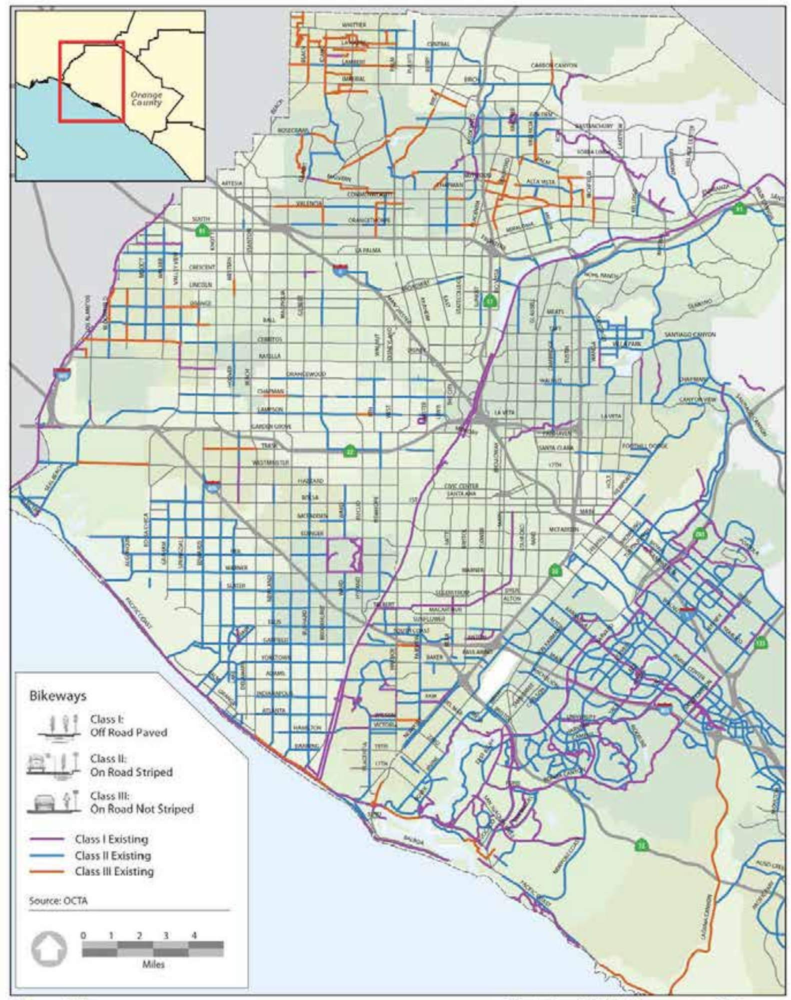


Figure 44A

Existing (2008) Commuter Bikeways (North County)

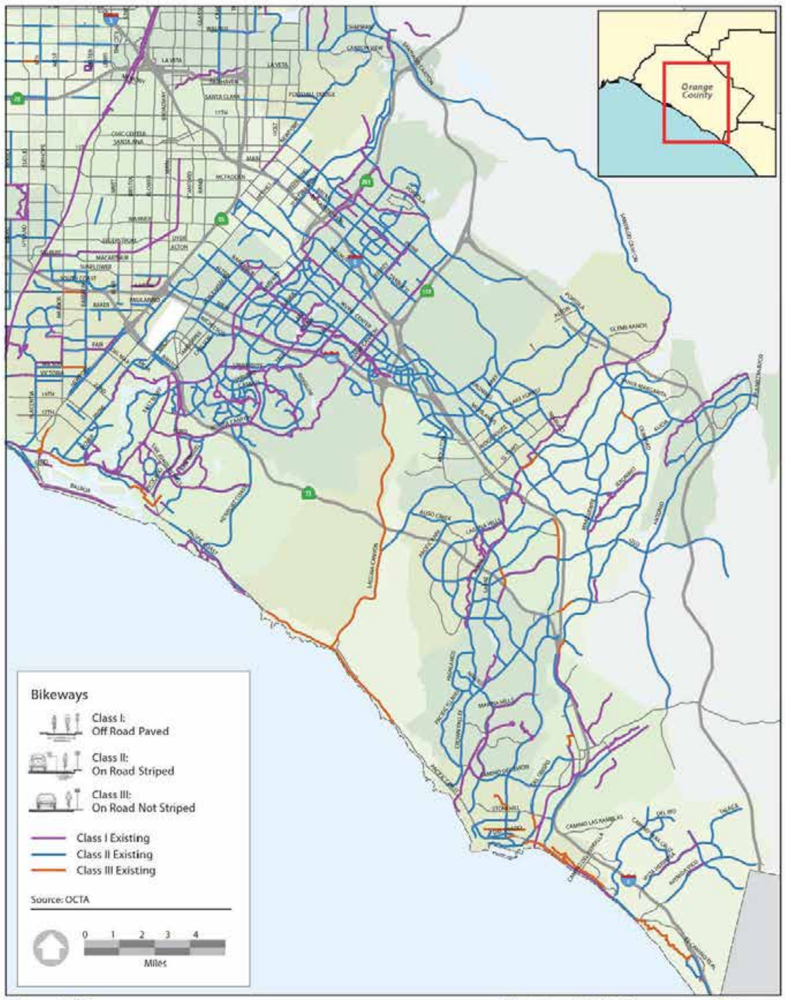


Figure 44B

Existing (2008) Commuter Bikeways (South County)

Orange County Sustainable Communities Strategy

commercial areas that lack them, and in removing obstacles to pedestrian travel where they exist.

OCTA recently incorporated the requirements of the Complete Streets Act into the MPAH guidelines for roadway design and cross sections. This Act requires that jurisdictions' general plan circulation elements and transportation plans meet the needs of all roadway users, including pedestrians, bicyclists and transit users. These requirements will be reflected in the buildout of the MPAH proposed as part of the LRTP Year 2035 Preferred Plan.

DEMAND-RESPONSIVE SERVICES AND TRANSPORTATION DEMAND MANAGEMENT

The County's multi-modal transportation system includes other transportation-related services and programs that reduce demand for auto travel, increase the efficiency of the system, meet legal requirements, and mitigate impacts of freeways on adjacent communities:

- **Paratransit Service:** Demand-responsive transit services are provided for seniors, disabled, and other populations through ACCESS Services. This includes curb-to-curb service (standard), door-to-door service, and same-day taxi service, and meets the requirements of the Americans with Disabilities Act (ADA).
- **Taxi Operations:** The Orange County Taxi Administration Program (OCTAP) is responsible for issuing permits, controlling the number of providers, performing security checks, and monitoring insurance compliance for taxi companies in Orange County. The countywide system in 2010 consists of 25 companies and over 820 taxicabs.
- **Park-and-Ride Services:** Park-and-ride facilities encourage ridesharing, vanpooling, and transit use by providing transit users with a convenient centralized location to meet and connect with various transportation services. Park-and-ride facilities are located throughout Orange County. Park-and-ride facilities are publicly owned either by Caltrans, OCTA, or a local jurisdiction. Many of these facilities are located adjacent to a transit center or Metrolink station, expanding access to alternative transportation modes. Other sites are located on private property, typically in a parking lot owned by a religious institution or other use with low parking demands on weekdays, and leased by a public agency.
- **Rideshare Services:** OCTA participates in regional programs that provide support for carpools, vanpools, and other services that encourage ridesharing. This includes customer call centers, cross-county databases that link individuals

to carpools and vanpools, and support material (e.g., marketing, promotions, and training). A 2007 vanpool program has resulted in the creation of over 300 vanpools that have served over 230 destinations in the County.

- **Southern California 511 Motorist Aid and Traveler's Information System:** The Southern California 511 Motorist Aid and Traveler's Information System (MATIS) is a free traveler information service and provides traffic, transit, and commuter service information via toll-free number or website. The system was launched in Southern California in June 2010.
- **Freeway Call Boxes/Motorist Aid:** OCTA helps fund a network of freeway services to assist motorists in distress. Its call boxes, situated on freeway shoulders at intervals of a quarter mile, provide stranded motorists with the ability to access emergency services. In addition, OCTA funds a network of freeway service patrol tow trucks that monitor freeways to remove stalled vehicles from freeways and minimize the traffic jams that can severely hamper the functioning of the freeway system.

Orange County Sustainable Communities Strategy

CHAPTER 3: STRATEGIES TO REDUCE GREENHOUSE GAS EMISSIONS

INTRODUCTION

The OC SCS coordinates transportation and land use planning in order to contribute to the reduction of GHG emissions in the SCAG region. This chapter begins with a brief review of practices already occurring in Orange County that integrate land use and transportation elements, or that are known to reduce or avoid the creation of GHG emissions. This is followed by the proposed strategies, collectively called sustainability strategies, set forth by this OC SCS to reduce GHG emissions.

A HISTORY OF INTEGRATING LAND USE AND TRANSPORTATION AND IMPLEMENTING ACTIVITIES

The integration of land use and transportation is not new to Orange County. Examples of integrated planning and community development efforts in Orange County abound; several are described below. On one hand, significant development-related planning has occurred tying a broad range of infrastructure—including transportation—to development. On the other hand, significant transportation-related planning has also occurred whereby land uses are developed and created to maximize the use of transportation systems, such as transit-oriented development near Metrolink routes and development of housing and employment centers along major arterials.

Planned Communities

A significant portion of Orange County was developed as part of master planned communities, where—on a large-scale basis—specific attention was given to the relationship between the planned land uses and the infrastructure needed to support those uses, from transportation to water and waste, to recreation and open space. Examples of planned communities in Orange County that integrated transportation and land use planning include the City of Aliso Viejo, City of Irvine, City of Mission Viejo, City of Rancho Santa Margarita, and the communities of Anaheim Hills, Coto de Caza, Tustin

Ranch, Talega, and Ladera Ranch. Within these communities the integration of transportation into the overall plan was an explicit planning objective. The linkage of transportation and land use minimizes the effects of vehicle travel within these communities.

Traditional Neighborhoods

Many of the older neighborhoods of Orange County were built before car travel was common. Most Orange County cities with historic downtowns still retain patterns of compact development, grid-pattern streets, live-work mixed uses, pedestrian access to local services and neighborhood grocery stores, and most are served by rail or bus service.

Master Plan of Arterial Highways

The MPAH was established in 1956 and is continuously updated to reflect changing development and traffic patterns throughout the County. The MPAH defines a network of surface roadways, showing both built and planned arterial streets that are necessary to serve existing and planned land uses in the County. OCTA is responsible for administering the MPAH, including the review and approval of amendments requested by local agencies. In order to be eligible to receive Measure M2 (M2) funds, cities and the County must ensure their local circulation elements are consistent with the MPAH.

In response to the State of California's recent passage of the Complete Streets Act, OCTA recently amended the MPAH guidelines to encourage local jurisdictions to consider and evaluate all mobility needs when requesting modifications to the MPAH.

Congestion Management Program

With the passage of the Proposition 111 gas tax increase, in 1990, came the requirement for urbanized areas in California to adopt a Congestion Management Program (CMP). The Orange County CMP is regularly updated every two years by OCTA to address and monitor transportation system performance issues. The CMP includes elements developed in coordination with local jurisdictions, the California Department of Transportation, and the South Coast Air Quality Management District. These elements aim to effectively manage traffic congestion and improve regional mobility and air quality. They include the following:

- Traffic LOS Standards
- Transit Service Performance Measures
- Promotion of Transportation Demand Management
- A Capital Improvement Program

Orange County Sustainable Communities Strategy

- A Land Use Impact Analysis Program
- Deficiency Plan Procedures

Every two years, OCTA monitors local conformance with the CMP. In 2009, OCTA found that all local jurisdictions were in conformance with the CMP. To ensure consistency among CMPs within the SCAG region, OCTA submits each biennial update to SCAG. As the regional planning agency, SCAG evaluates consistency with the Regional Transportation Plan and with the CMPs of adjoining counties, and incorporates the program into the Federal Transportation Improvement Program, once consistency is determined.

OCTA's Mitigation and Resource Protection Program (MRPP)

M2 includes a comprehensive Environmental Mitigation Program that provides landscape-level mitigation to offset environmental impacts for the 13 freeway improvement projects using five percent of M2 freeway program revenue. OCTA is implementing the mitigation program through a collaborative partnership with CDFG, USFWS, Caltrans, and the environmental community.

The M2 mitigation program was among a handful of projects identified by the OCTA Board of Directors that allowed for early planning, advance funding, and implementation. Approximately $42 million has been authorized for the acquisition and long-term management of natural lands as part of the M2 Environmental Mitigation Program. As of June 2011, OCTA has purchased four properties totaling approximately 900 acres through this program (Saddle Creek South ≈ 84 acres, Hayashi ≈ 296 acres, O'Neill Oaks ≈ 119 acres, and Ferber Ranch ≈ 399 acres).

Additional funds are anticipated to be available in the future; the specific amount of funds available will be dependent on the revenue stream from the sale tax measure. A suite of the most biologically valuable properties and those that most closely align with the freeway impacts are under consideration and/or negotiation. This program is conducted through a voluntary process, similar to private open market transactions. Offers have been made to a number of properties and it is conceivable that the initial funding allocation could yield over a thousand acres of acquired open space properties throughout Orange County. OCTA will receive streamlined permits from the resource agencies for its freeway projects.

These protected open space areas provide GHG emissions reduction benefits, by promoting densification of urban areas and impeding sprawl. More compact development encourages fewer, shorter trips, which also help reduce greenhouse gas emissions associated with passenger vehicles.

TCA's Open Space Mitigation Programs

The TCA has an existing 2,200-acre open space mitigation program that is integral to the development of the 67-mile public toll road network. This open space mitigation program includes the Live Oak Preservation Area, Chiquita Canyon, Bonita Creek and portions of Limestone Canyon.

In 1996, TCA placed a conservation easement over a 1,182 acre area, known as Upper Chiquita Canyon. The conservation area was originally planned for development as a golf course and residential area. The TCA has been actively managing the site since 1996 and increasing its habitat values. In 2005, TCA acquired the Live Oak Preservation Area, a 23.2-acre site that sits east of the 241 Toll Road at El Toro Road and Live Oak Canyon. The Bonita Creek Mitigation Site comprises approximately 40 acres of wetland and coastal sage scrub, and is the main wildlife link from Upper Newport Bay to the San Joaquin Hills. The Cactus Wren Habitat Linkage and Restoration Project includes planting cactus in a habitat corridor used by the federally threatened California gnatcatcher bird along the wildlife linkage area that parallels the 73 Toll Road from Upper Newport Bay south through Bonita Channel to Coyote Canyon.
These protected open space areas provide GHG emissions reduction benefits from carbon sequestration. As described above, extensive protected open space contributes to a more compact development form for Orange County, which encourages infill development and fewer, shorter trips, which also help reduce greenhouse gas emissions associated with passenger vehicles.

SUSTAINABILITY STRATEGIES

Particular to the development of the OC SCS, local jurisdictions throughout Orange County were polled about the strategies and policies employed within their cities or the unincorporated areas of the County of Orange. Collectively, they used over 30 different tiered measures tied to reducing greenhouse gas emissions. Many of these measures relate to reducing vehicle miles traveled, such as approving compact building designs with a mix of uses, improving the accessibility of housing to transit, and increasing housing densities within or adjacent to employment. Other measures promote green building and efficiencies, such as developing model green development and green building laws or enhancing energy efficient code enforcement.

Key sustainability strategies related to land use and transportation employed within Orange County are provided below. A listing of Sustainability Strategies being practiced in Orange County is provided in Appendix F. Existing and planned land uses for all

Orange County Sustainable Communities Strategy

jurisdictions comprising Orange County are provided in the General Plans for jurisdictions, included as Appendix I.

OC SCS Sustainability Strategy A:
Support Transit-Oriented Development.

Creating development around a transit hub can increase people's access to and use of transit. This may shift trips from cars to transit leading to reduced vehicle trips, vehicle miles traveled and greenhouse gas emissions. Several land use actions can support transit-oriented development, including mixed-use development within walking distance of transit facilities, increasing housing density near transit, increasing employment density near transit, and providing transit-oriented amenities. Further, transit agencies may provide new or increased service to a transit hub, positively compounding the use of transit and reduction in vehicle trips. (Sources: ***Draft Policy Brief on the Impacts of Transit Access***, Gil Tal and Susan Handy, UC Davis and Marlon G. Boarnet, UC, Irvine for California Air Resources Board, 2010; and ***Driving Change: Reducing Vehicle Miles Traveled in California***, Louise Bedsworth, Ellen Hanak, Jed Koiko, Public Policy Institute of California, 2011.)

The Metrolink Service Expansion Program (MSEP) will increase the frequency of mid-day rail service through the core of Orange County. This program is expected to begin implementation in 2011. The Measure M2 Go Local Program (M2) (described in greater detail below) will address increases in demand induced by the rail improvements through development of feeder services between rail stations and key destinations. OCTA is also undergoing the Transit System Study to determine where and how to increase public transportation service oriented to existing and future land use and maximizing ridership.

In Orange County, seven jurisdictions report having implemented transit-oriented development policies. New development has already occurred adjacent to, and taking advantage of, transit infrastructure in many jurisdictions. Examples include the following:

- Founders Walk in Buena Park
- SoCo Walk in Fullerton
- The Platinum Triangle in Anaheim
- Depot Walk in Orange
- The Transit Zoning Code in Santa Ana

OC SCS Sustainability Strategy B:
Support infill housing development and redevelopment.

Developing new housing in existing urbanized areas—also known as "infill development"—helps to avoid urban sprawl. Because the majority of Orange County is already developed, and there is limited vacant, buildable land, when infill housing development occurs, it creates an overall increase in housing density throughout the County. As recently as 2004, almost 50% of new residential development in Orange County was infill housing, primarily multiple-family dwelling units. This trend is expected to continue in the future, with 63% of housing units projected from infill or redevelopment between 2008 and 2035.

Infill development can help reduce the number of miles residents have to travel between home and work or other activities, which in turn reduces freeway and arterial congestion and related GHG emissions. Increased housing density has been linked to reduced vehicle travel and related GHG. Policies that support increased housing infill development and residential density therefore support reduced vehicle miles traveled (VMT) and reduced GHG.

Jurisdictions may promote higher residential densities through combinations of infrastructure, zoning, or public finance policies that encourage higher densities—for example, relaxing minimum lot size requirements, increasing the density of allowed development, or focusing development around transit stations. (Source: ***Draft Policy Brief on the Impacts of Residential Density***, Susan Handy, UC Davis and Marlon G Boarnet, UC, Irvine for California Air Resources Board, 2010)

In Orange County, several jurisdictions have adopted land use policies that support infill development and increased housing densities. Seven jurisdictions have reported General Plan policies to add new housing and jobs within a half mile of existing or planned transit stations. Twelve cities have General Plan policies that allow increased residential or commercial density near transit. And twelve cities have General Plan policies that promote accessibility of housing to transit.

OC SCS Sustainability Strategy C:
Support mixed-use development and thereby improve walkabilty of communities.

Jointly developing different types of land uses together within a building, a set of buildings or a specific area is referred to as "mixed use" development. Locating land

uses such as housing, essential neighborhood-serving retail, and employment together may result in shorter distances between individuals' destinations. This facilitates both lower VMT and the use of non-motorized transportation such as walking and biking. (Source: ***Draft Policy Brief on the Impacts of Land Use Mix***, Steve Spears and Marlon G. Boarnet, UC Irvine and Susan Handy, UC, Davis for California Air Resources Board, 2010.)

Nineteen Orange County jurisdictions have developed or planned mixed use communities with housing, employment, retail and recreational facilities co-located. A total of 20 jurisdictions have General Plan policies supporting horizontal or vertical mixed use. Some jurisdictions have created "walkable communities" designed specifically to promote pedestrian use as an alternative to automobile travel. Nineteen jurisdictions have General Plan policies to improve the pedestrian environment through either beautification or facilities construction. Projects to improve the pedestrian environment are ongoing in 25 Orange County jurisdictions.

OC SCS Sustainability Strategy D:
Increase regional accessibility in order to reduce vehicle miles traveled.

Regional accessibility is the ease with which destinations can be reached throughout a region; it encompasses both the proximity of housing to potential destinations like employment, shopping and recreation, and the transportation links to those destinations. Higher regional accessibility results in shorter travel distances on roadways to potential destinations, thereby reducing VMT. When there is higher regional accessibility via a transit system, residents may choose transit or another mode over using an automobile. On the other hand, higher regional accessibility can increase trips, so this may lead to more vehicle miles traveled. In short, the significance of the impact of regional accessibility on VMT depends on the combination of these different effects. (Source: ***Draft Policy Brief on the Impacts of Regional Accessibility***, Susan Handy and Gil Tal, UC Davis and Marlon G. Boarnet, UC Irvine for California Air Resources Board, 2010).

An example of regional accessibility is seen in the Coto de Caza General Store. This store, which has been in existence for over 20 years, serves the community as a local grocery store and deli. While this may seem a commonplace element of any number of neighborhoods in Orange County, it illustrates the importance of the proximity of housing (in the neighborhoods close to the general store) to potential destinations (the grocery/eatery) thereby reducing the need for vehicle trips for residents to pick up household essentials. Regional accessibility is influenced by historical land use and transportation patterns, which may be preserved and enhanced through land use and transportation policies.

OC SCS Sustainability Strategy E:
Improve jobs to housing ratio.

The concept of creating an improved ratio of jobs to housing suggests that when residence and work locations are closer together, people's travel distance to and from work will be reduced. This, in turn, will reduce vehicle-related greenhouse gas emissions. Policies related to an improved jobs-housing ratio are intended to shorten commute distances (this strategy focuses on work travel as opposed to shortening all travel as described in the regional accessibility strategy described above). Fourteen Orange County jurisdictions have General Plan policies to increase housing density near employment areas. Factors influencing jobs-housing ratio include the necessary match between worker skills and type of jobs, as well as other amenities that might attract residents to a specific area. However, studies show an association between an improved ratio of jobs to housing and reduced VMT. (Source: ***Draft Policy Brief, Impact of Jobs-Housing Balance on Passenger Vehicle Use***, Marlon G. Boarnet and Hsin-Ping Hsu, UC Irvine and Susan Handy, UC Davis for California Air Resources Board, 2011.)

OC SCS Sustainability Strategy F:
Promote land use patterns that encourage the use of alternatives to single-occupant automobile use.

This strategy covers multiple activities undertaken by local jurisdictions. Strategies range from constructing pedestrian and bicycle facilities and improving linkages between these facilities to implementing site planning and design strategies that promote alternative transportation, to parking preferences for rideshare vehicles to support of transit facilities and amenities.

Because a large number of practices fall within this strategy, a few have been selected to highlight parking strategies and bikeway/pedestrian facilities:

- Expansion of parking facilities at all Metrolink stations as part of Metrolink Service Expansion Program.
- Incentivizing affordable housing projects through reductions in parking requirements in Anaheim.

Orange County Sustainable Communities Strategy

- Preferential parking for alternative fuel vehicles in Huntington Beach.
- Completion of sidewalk system in the Irvine Business Complex as part of developer fee program.
- Promotion of bicycle sharing project in Garden Grove.
- Development of bicycle facilities plan in Newport Beach.
- Review of Downtown Specific Plan for human scale activity in Fullerton.

OC SCS Sustainability Strategy G:
Support retention and/or development of affordable housing.

Because available land is scarce in Orange County, housing will grow primarily in terms of increasing density. Increased housing density affords greater variety in housing type (i.e., multi-family, flat, apartment, condominium, high-rise, etc.) and increased supply contributes to housing affordability. Increasing the supply of affordable housing within Orange County may result in workers living closer to their jobs, thereby reducing vehicle miles traveled and urban sprawl. The densification of housing is forecast to accommodate population growth and locate residents proximate to employment centers, shopping and recreation opportunities and major transportation routes, including the High Frequency Corridors and Metrolink stations.

One of the sustainability strategies identified for reducing GHG emissions is a land use strategy for local jurisdictions to provide affordable as well as market rate housing. Among the jurisdictions that responded to the survey of sustainability strategies, 12 indicated they have completed projects within Orange County employing this land use strategy, and 18 additional jurisdictions report ongoing projects. There are 14 planned future projects that provide affordable housing and 20 local jurisdictions report General Plan policies that promote this strategy.

OC SCS Sustainability Strategy H:
Support natural land restoration and conservation and/or protection offering significant carbon mitigation potential via both sequestration and avoidance of increased emissions due to land conversion.

Leverage existing regional conservation efforts that lead to reduced carbon emissions. Superior resource management, restoration, and resource land protection are emerging means of emissions avoidance or reductions. This conservation or protection may occur through the purchase of natural resource lands. There are a multitude of benefits and co-benefits for this strategy including decreased need for future infrastructure in less developed regions of the county; avoidance of construction, household, and infrastructure emissions; and avoidance of VMTs that would have been generated if the land was converted.

The OC SCS, by leveraging existing conservation efforts such as Renewed Measure M's Mitigation Program, can lead the way for strategic open space/resource protection as a means of reducing the County's carbon footprint and meeting the goals of SB 375. Through this strategy, local jurisdictions and other organizations may align their planning priorities and land use decisions together with funds necessary to purchase and preserve natural lands. Jurisdictions and organizations have the option to invest early in this open space strategy which offers both near-term and long-term GHG emissions avoidance benefits.

Another example of protected natural lands is the TCA's open space mitigation program described above, which includes the following protected natural lands:

- Cactus Wren Habitat Linkage and Restoration Project (Completed)
- Bonita Creek Mitigation Site (Completed)
- Chiquita Canyon Conservation Area (Partially Completed)
- Live Oak Preservation Area (Planned)

OC SCS Sustainability Strategy I:
Eliminate bottlenecks and reduce delay on freeways, toll roads, and arterials.

Freeway Vision

The freeway vision provides guidance for prioritizing freeway projects within the financially constrained Preferred Plan for the Orange County LRTP.

In order for the freeway vision to serve its intended purpose, and to make certain it contributes toward meeting the OC SCS goals and objectives, the following guiding elements are identified:

- Deliver committed projects, including M2
- Expand access for high-occupancy vehicles
- Improve freeway system operations
- Consider recent transportation studies
- Promote environmental sustainability
- Seek additional funding opportunities

Deliver Committed Projects, including M2

As of 2008, the Orange County freeway network has about 1,650 lane miles in operation, including HOV lanes and toll facilities. The voter-approved M2 program plans for numerous improvements to Orange County freeways, adding roughly 155 lane miles to the system.

Additionally, a number of freeway projects are not part of M2 but have funding commitments within the Federal Transportation Improvement Program. These committed projects will also enhance freeway accessibility and add about 100 lane miles to existing toll facilities and about 90 lane miles of new toll facilities. These improvements (Figure 45) will benefit every mode of travel on Orange County freeways, from single-occupant commuters to commercial truckers.

Expand Access for High-Occupancy Vehicles (HOV)

The continuous access HOV project on the Garden Grove (SR-22) Freeway opened to the public in May 2007, and was the first of its kind in Southern California. Since then, continuous access was expanded on the portion of the Costa Mesa (SR-55) Freeway, between the Riverside (SR-91) Freeway and the Santa Ana (I-5) Freeway. Figure 46 highlights the expansion of the continuous access HOV program. Additionally, through the committed improvements identified in the LRTP, OCTA plans to expand the HOV network by roughly 20 lane miles.

Priced Transportation Travel Options

The Orange County toll road and express lane network currently consists of the San Joaquin Hills Transportation Corridor (SR-73), portions of the Laguna Freeway (SR-133), the Foothill Transportation Corridor (SR-241), and the Eastern Transportation Corridor (SR-261), managed by the Transportation Corridor Agencies, as well as the OCTA-operated 91 Express Lanes on the Riverside (SR-91) Freeway. These facilities total about 325 lane miles and allow the traveling public the option to pay a fee in order to use a more direct and/or less congested route.

The committed improvements contained in the Orange County LRTP and the OC SCS will expand the toll network to roughly 520 lane miles. To leverage these committed investments, priority was given to projects that enhance connectivity between toll facilities in an effort to provide a seamless free-flowing network throughout the County.

Consider Recent Transportation Studies

In recent years, several major investment studies (MISs) have been completed for some of Orange County's most heavily-traveled corridors. MISs study multimodal corridors, collect input from elected officials and the public, and find consensus on a locally

Orange County Sustainable Communities Strategy

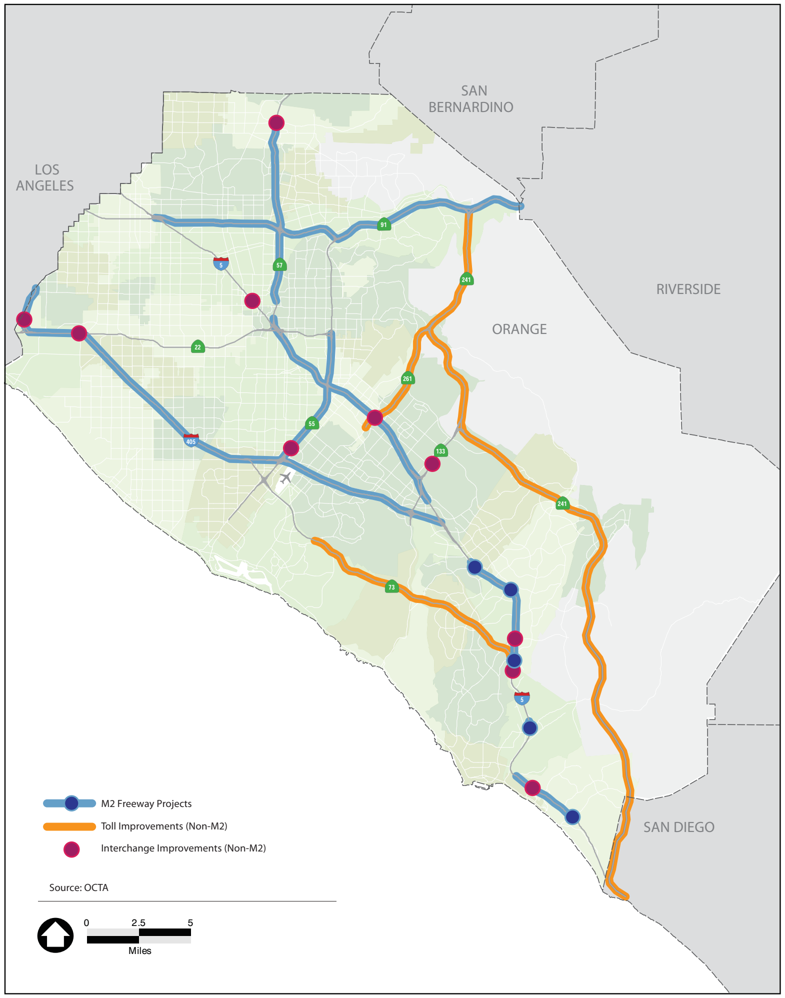


Figure 45 Orange County Committed Freeway Improvements

Orange County Sustainable Communities Strategy

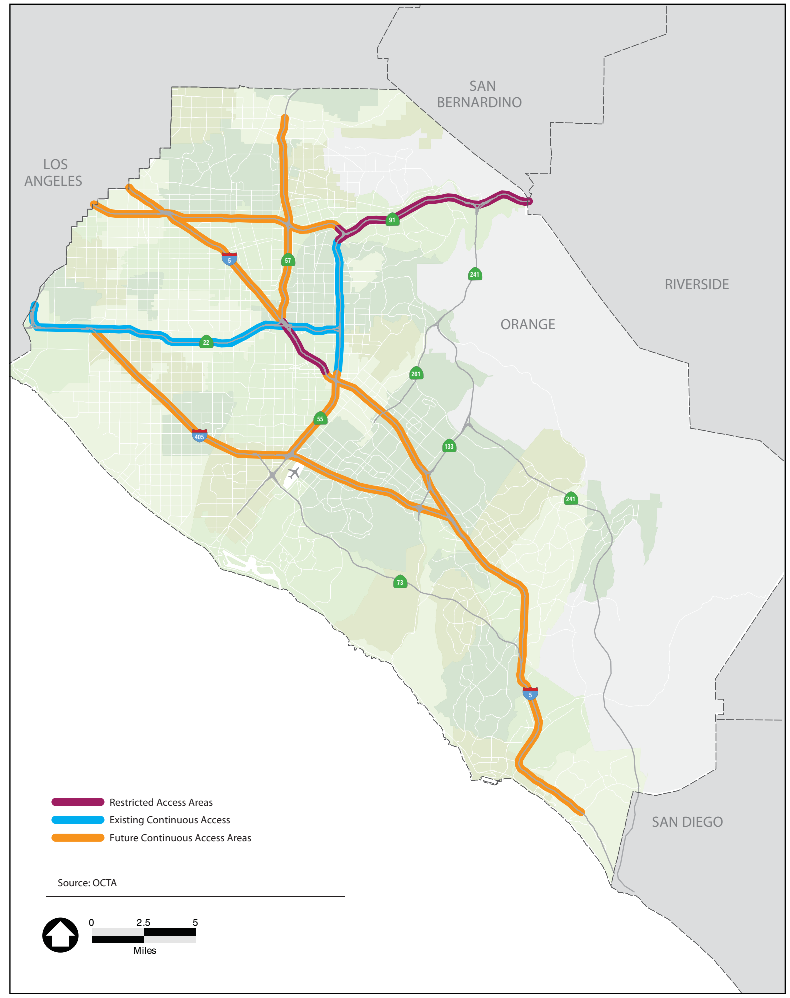


Figure 46 Orange County Continuous Access HOV Program

preferred alternative that identifies the best projects for Orange County. In addition, Caltrans is currently completing a series of Corridor System Management Plans (CSMPs).

As a result of these studies, Caltrans and OCTA are cooperatively considering augmenting many freeway/tollway-related Transportation System Management (TSM)/Transportation Demand Management (TDM) investments. These investments could include, but are not limited to, increased support for park-and-ride lots, directional lanes, enhanced use of electronic message boards, and improved incident and event management strategies. The Orange County LRTP and OC SCS incorporate selected locally preferred alternatives from the OCTA MISs into the preferred and unconstrained plans. OCTA will also coordinate with Caltrans and consider the proposed improvements from the CSMPs.

Promote Environmental Sustainability

New state requirements for greenhouse gas emissions brought on by SB 375, along with previously existing air quality requirements, have brought environmental concerns to the forefront of planning. Pricing and other TDM and TSM methods will need to be looked at more closely in order for Orange County to contribute toward improving air quality. As previously mentioned, the M2 Mitigation and Resource Protection Program is providing for coordinated environmental benefits on a regional scale rather than a piecemeal project-by-project approach. The mitigation program is currently being implemented under an agreement among OCTA and state and federal resource agencies.

OC SCS Sustainability Strategy J:
Apply Transportation System Management and Complete Street practices to arterials and freeways to maximize efficiency.

Arterial Roadways

Streets and roads form the foundation of Orange County's transportation system. This transportation infrastructure provides residents and commuters with access to the County's freeway network, the OCTA bus system, and it connects residential neighborhoods to jobs, schools, and services.

Master Plan of Arterial Highways

The MPAH was established in 1956 to provide a roadmap for the implementation of a countywide network of roadways that follow consistent standards and design guidelines. Recently, OCTA completed the Regional Capacity Needs Assessment study, which

Orange County Sustainable Communities Strategy

identifies priority street improvement projects that would be eligible for funding under M2 programs. M2, passed by Orange County voters in 2006, ensures the continuation of an important local funding source for the continued implementation of the MPAH.

The current MPAH reflects the existing roadway plans for the 34 Orange County cities and the County of Orange (Figures 47A and B). Implementation of the MPAH is essential to ensuring the mobility of Orange County residents and commuters into the future. Implementation of the MPAH, along with the complementary elements of the County-wide transportation network, results in a system that operates with improved levels of service when compared to 2008 conditions.

Complete Streets

In 2007 the State of California passed the Complete Streets Act. This act requires local jurisdictions to consider and evaluate the needs of all users of the roadway, including pedestrians, bicyclists, users of public transit, motorists, children, the elderly, and the disabled when they update their General Plans. Orange County cities will comply with the state law when updating the Circulation Elements of their General Plans. Some cities such as Santa Ana, Irvine, and Huntington Beach report they have already begun to adopt and implement a complete streets policy. In addition, OCTA recently amended the MPAH Guidelines to encourage local jurisdictions to consider and evaluate all mobility needs when requesting modifications to the MPAH.

Traffic Light Synchronization Master Plan

In the past, the traffic signals on individual roadways could be coordinated within the boundaries of a particular city, but not necessarily across city limits to the neighboring city. OCTA and local jurisdictions have initiated the Traffic Light Synchronization Master Plan, targeting key roadway corridors throughout Orange County for the implementation of a regional traffic signal synchronization program.

OCTA recently conducted two traffic signal synchronization demonstration projects to examine the potential benefits of regional traffic signal synchronization. Oso Parkway in South County and Euclid Avenue in North County were designated as the demonstration corridors for this program. Both projects showed substantial improvements to travel time and congestion levels within the individual corridors. The success of these demonstration projects led to the development of the Traffic Light Synchronization Master Plan and the identification of a County-wide network of synchronized corridors, allowing for more efficient travel across multiple jurisdictions.

Further, all Orange County jurisdictions adopted a local signal synchronization plan identifying traffic signal system routing consistent with the Regional Traffic Signal Synchronization Master Plan. The implementation of this plan begins with 10 regional corridors. Eventually, signal synchronization will be implemented along 750 miles of roadways and at over 2,000 intersections (Figure 48). Completion of the traffic signal synchronization projects is a key element of the LRTP and these improvements are funded by M2, local match requirement, and Proposition 1B.

Roadway Pavement Management Plan

Ongoing roadway maintenance is an important element to ensuring that roadways operate at peak efficiency and service levels, and that travelers can move safely and conveniently. As a condition for receiving M2 funds, each city and the County must have a certified Pavement Management Plan, which includes an inventory of pavement conditions, identification of needed pavement rehabilitation or replacement, and a budget to complete the required maintenance.

Transportation System Management. While expansion of the transportation system is vital to responding to the growing needs of Orange County, making the existing system operate as efficiently as possible is critical. TSM strategies are designed to maintain and preserve the transportation system and ensure that it functions at an optimal level. OCTA is activity participating in or exploring several TSM strategies.

Caltrans already incorporates TSM and TDM strategies on many of their facilities, such as metered ramps, traffic monitoring technologies, and park and ride lots, which contribute to improved freeway performance. However, if further investments are made cooperatively with OCTA, there is potential to increase the efficiency of Orange County's facilities. These investments could include, but are not limited to, increased support for park and ride lots, directional lanes, enhanced use of electronic message boards, and improved incident and event management strategies. Augmenting these TSM strategies from the LRTP are sustainability strategies employed by jurisdictions in Orange County, such as improving circulation efficiency through signage, and implementing operational improvements to relieve bottlenecks.

ITS. Technology has long played a role in transportation, from communication and scheduling systems for buses and rail services to vehicle detection sensors under the pavement that control traffic signals. More and more agencies are using technology and applying it regionally so that freeways, roadways, and transit vehicles operate more cohesively and carry more people without needing more lanes or transit vehicles. Intelligent Transportation Systems (ITS) are used to improve the operational efficiency, effectiveness, and safety of ground transportation. ITS technology includes ramp metering, bus fleet management and signal priority, and computerized traffic signal systems. Examples of these systems include the following:

Orange County Sustainable Communities Strategy

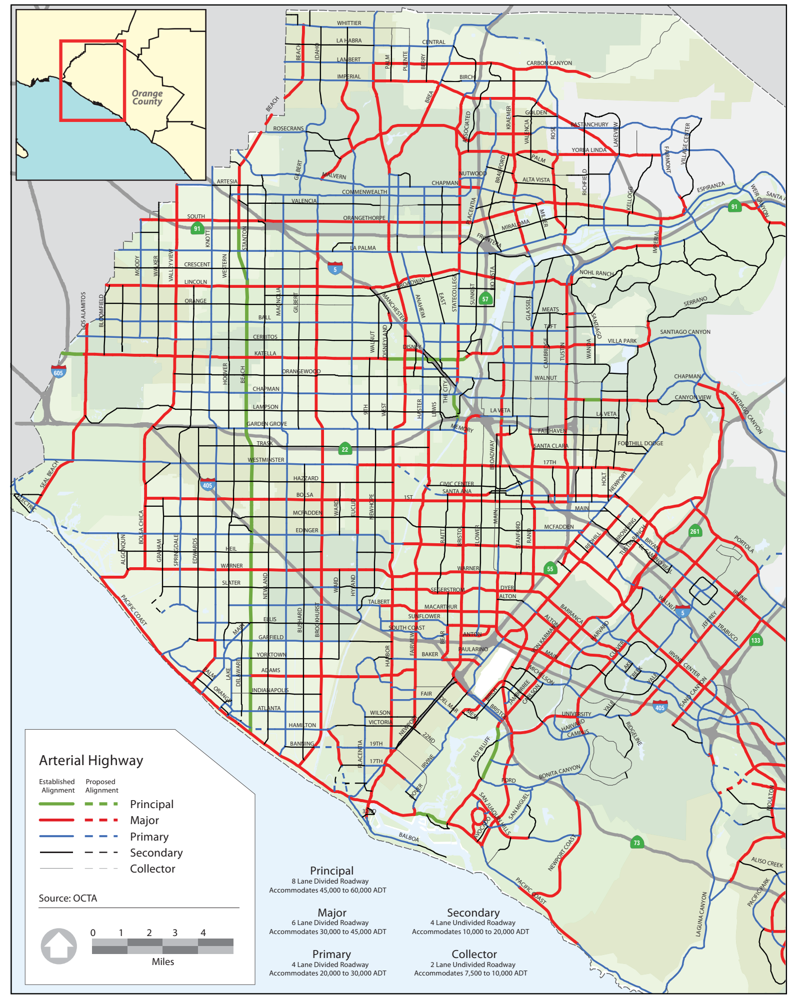


Figure 47A — Orange County Master Plan of Arterial Highways (North County)

Orange County Sustainable Communities Strategy

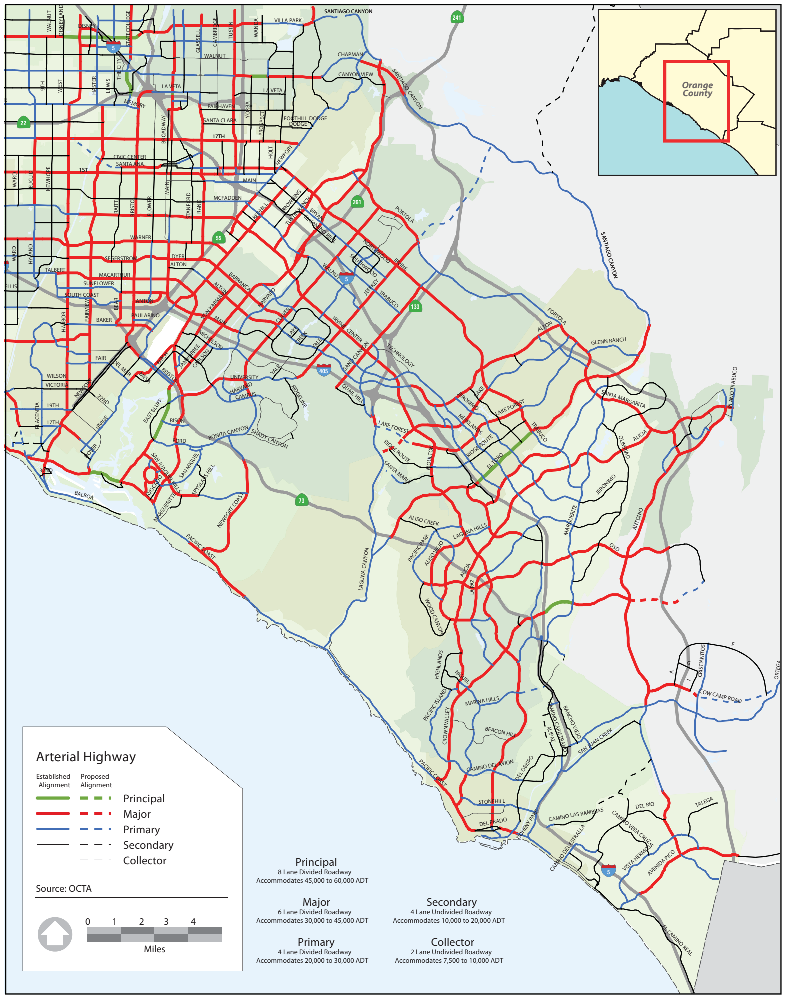


Figure 47B Orange County Master Plan of Arterial Highways (South County)

Orange County Sustainable Communities Strategy

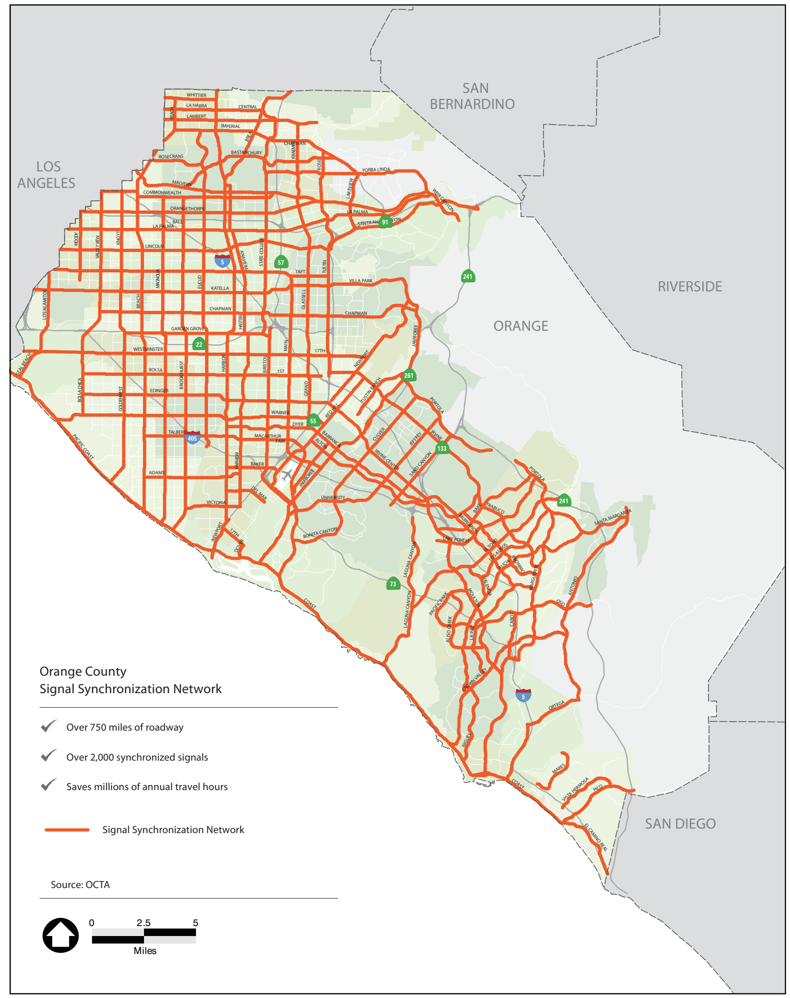


Figure 48 Orange County Signal Synchronization Plan

- Arterial management (traffic control, surveillance, information dissemination, parking management, and travel information systems)
- Freeway management (lane management, ramp control, surveillance, information dissemination, special event management, and travel information)
- Crash prevention and safety (warning systems)
- Transit management (operations and fleet management, information dissemination, transportation demand management, and safety and security management systems)
- Electronic payment and pricing (toll collection, pricing, transit fee, parking fee and multi-use payment systems)
- Commercial vehicle operations (credential administration, safety assurance, electronic screening, carrier operations/fleet management, and security operations systems)
- Intermodal freight (freight tracking, asset tracking, freight terminal processes, drayage operations, international border crossing process, and freight-highway connection systems)

Traffic accidents, stalled vehicles, weather-related congestion, and special events at major attractions are all examples of occurrences that can cause nonrecurring congestion. Because nonrecurring congestion is not always predictable, traditional solutions such as adding lanes are not always effective. ITS solutions can help relieve this type of congestion by identifying the type of incident and developing a response plan, such as dispatching assistance or providing information to motorists.

Orange County has developed a framework for coordinating all future ITS projects, called the Orange County Regional ITS Architecture. OCTA, Caltrans, the Federal Highways Administration, and Orange County jurisdictions have collaborated on this foundational plan, which has a 10-year time frame. Orange County's ITS plan is integrated with the Southern California Regional ITS Architecture, completed by the SCAG. It is part of a nationwide mandate to establish national standards and common or interchangeable technologies for transportation management.

OCTA currently uses ITS technologies for a number of purposes ranging from supervising bus fleets to managing traffic on the Riverside (SR-91) Freeway express lanes. In addition, OCTA is in the process of identifying opportunities to implement ITS projects throughout the County within the Orange County Regional ITS Architecture framework.

Orange County Sustainable Communities Strategy

OC SCS Sustainability Strategy K:
Improve transit modes through enhanced service, frequency, convenience, and choices.

Public Transit Network

Orange County's existing public transportation network is described in detail in Chapter 2. Orange County is served by Metrolink commuter rail service and Amtrak's Pacific Surfliner intercity rail service connecting Orange County to San Diego, Los Angeles, Riverside, San Bernardino, and Ventura Counties. OCTA operates local fixed route bus service, community shuttle routes, StationLink Metrolink rail feeder routes, and express bus routes both within and outside the County. OCTA bus service is complemented by local transit service in the cities of Anaheim, Buena Park, Irvine, and Laguna Beach. Losses in sales tax and state funding revenues, combined with a decrease in fare revenue during the recent economic crisis created a need to reduce bus service levels by about 20 percent between 2008 and 2010.

The transit strategy identifies broad objectives for prioritizing future transit improvements to meet future demand as effectively and efficiently as possible. These objectives will serve to meet as much of the forecast transit demand as financially feasible and support OCTA's existing transit goals:

- Target high-demand corridors for improvements to fixed-route frequencies and hours of operations
- Initiate bus rapid transit (BRT) services
- Invest in Metrolink and Go Local feeders, and support California high-speed rail
- Explore express bus opportunities
- Improve access to regional bus service and local destinations with community circulators and rideshare programs
- Coordinate service planning with local land-use agencies
- Seek to restore transit funding from state and federal sources, as well as new funding and savings for transit operations

Target High-Demand Corridors and Initiate BRT Service

High-demand transit corridors are identified as corridors that received 15-minute or better peak-period headway service, on aggregate, during OCTA's peak level of service observed in June 2008. It is anticipated that these corridors will continue to show enough future demand to support the 15-minute or better peak-period headway transit service by 2035. These corridors are typically located in close proximity to many Orange County employment centers and higher density residential areas. Figure 49 highlights potential high-demand corridors for high-frequency transit service, including proposed BRT routes. OCTA will continue periodic evaluation of transit demand and potential high-frequency transit corridors. As financial resources become available over the next 25 years, core service areas such as these will be prioritized for fixed-route bus service expansion.

The first three BRT projects being planned are as follows:

- Westminster Avenue/Westminster Boulevard/17th Street: 22-mile fixed route BRT between Santa Ana and Long Beach including bus shelters and rolling stock
- Harbor Boulevard: 19-mile fixed route BRT between Fullerton and Costa Mesa including bus shelters and rolling stock
- Bristol Street-State College Boulevard: 28-mile fixed BRT from Brea Mall to Irvine Transportation Center includes shelters, and rolling stock

Invest in Metrolink and Go Local Feeders and Support California High-Speed Rail

OCTA is implementing the MSEP that involves the addition of more frequent commuter rail service between Fullerton and Laguna Niguel, and the necessary station and infrastructure improvements to accommodate this service. Additionally, OCTA is coordinating with the State on the California High Speed Rail project. To support these future rail services, regional gateway station improvements such as the Anaheim Regional Transportation Intermodal Center (ARTIC) are underway. These efforts will strengthen the backbone of Orange County's transit system.

The MSEP will increase the number of trains operating between Fullerton and Laguna Niguel and expand service outside typical peak commute periods in the morning and evening to provide more mid-day and off-peak services. These improvements, designed to attract additional riders, will enhance the Metrolink services by offering more frequent services throughout the day, providing up to 30-minute headways (Figure 50). Through M2, OCTA's goal is to extend the enhanced Metrolink service levels to Union Station in Los Angeles.

The M2 Go Local Program is intended to address increases in demand induced by the rail improvements noted above. Go Local provides a competitive opportunity for local jurisdictions to develop feeder services between rail stations and key destinations. Figure 51 displays the coordinated efforts between rail service expansion and feeder service. The California High-Speed Rail corridor and Metrolink service improvements are highlighted, along with the proposed Go Local projects.

Orange County Sustainable Communities Strategy

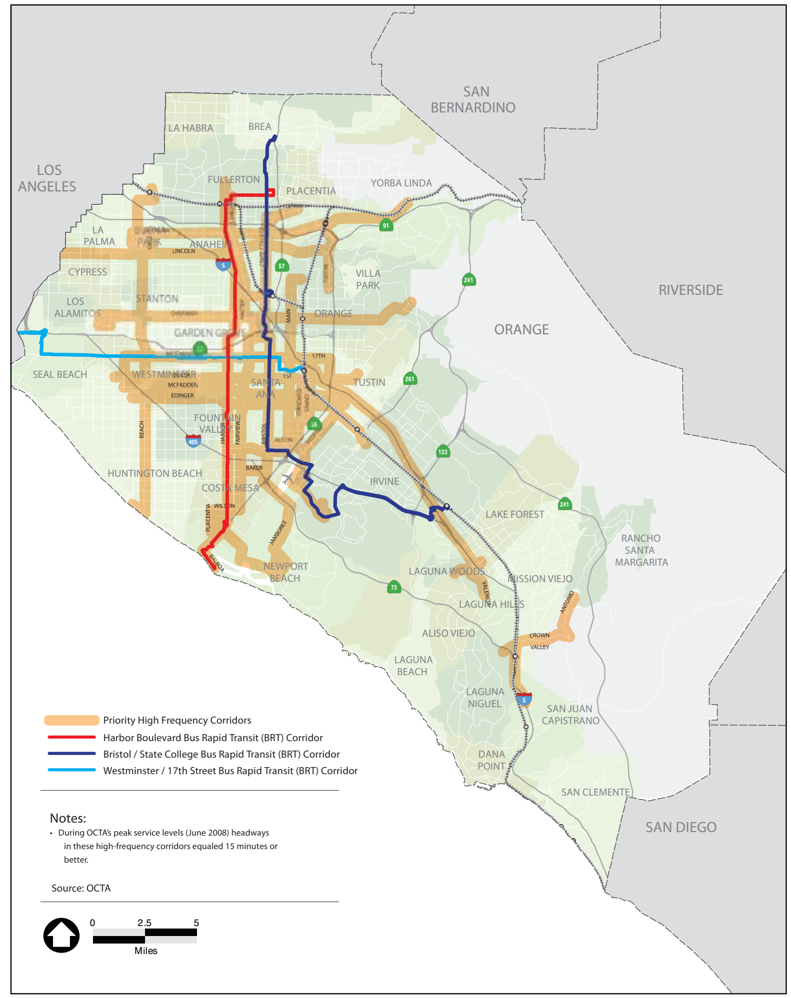


Figure 49 Orange County Potential High Frequency Public Transportation Corridors

Orange County Sustainable Communities Strategy

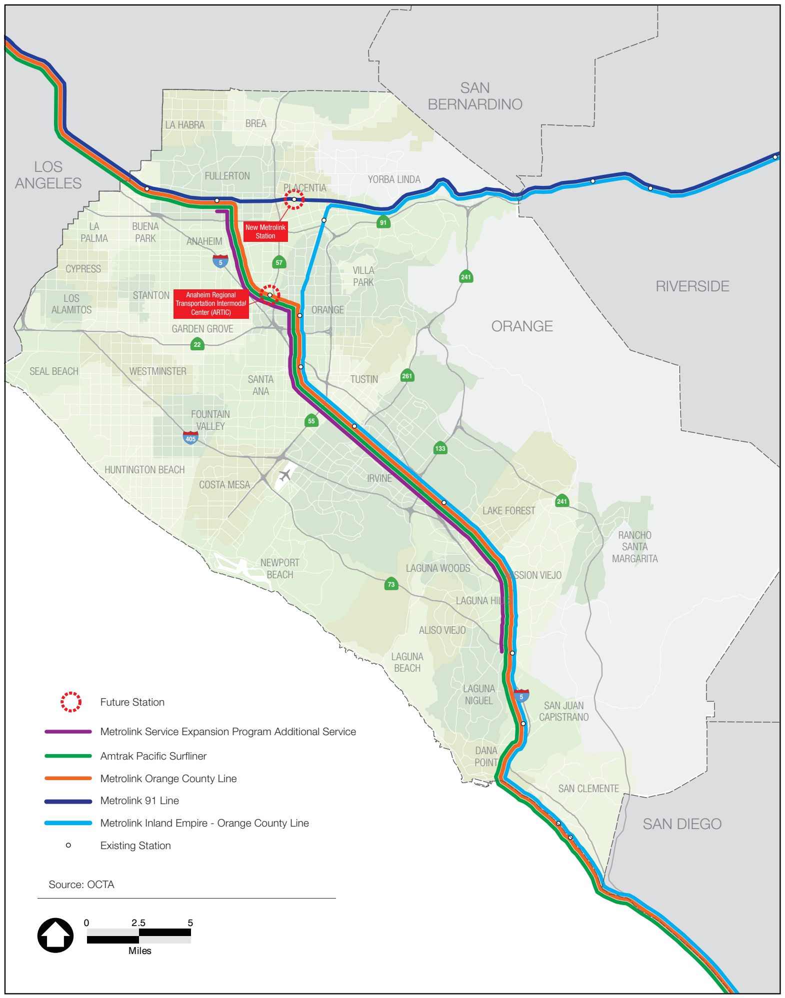


Figure 50 **Orange County Metrolink Service Expansion Program**

Orange County Sustainable Communities Strategy

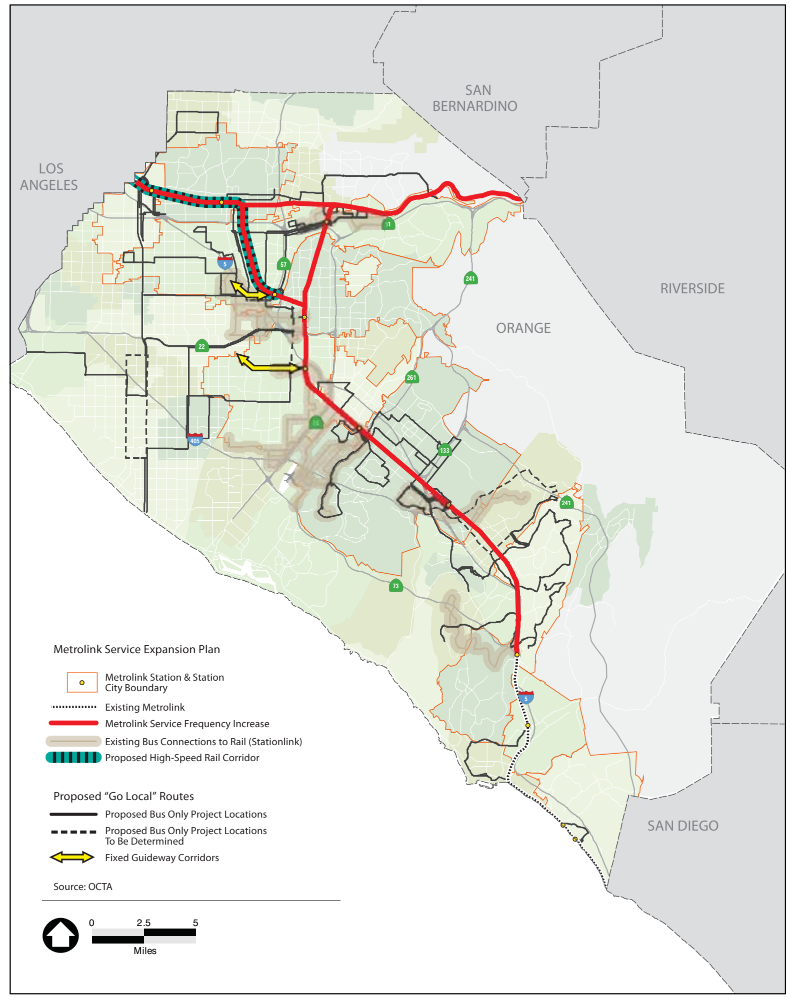


Figure 51 **Orange County Rail Service Expansion and Station Feeder Service Plan**

OCTA also plans to increase StationLink services as needed to coordinate with Metrolink service.

Explore Express Bus Opportunities

Intercounty and intracounty bus services are planned for those corridors that serve major destination areas and improve regional connectivity. Figure 52 identifies selected potential express bus corridors that will be further studied to determine their viability.

Improve Access to Regional Bus Service and Local Destinations

M2 provides another competitive opportunity to local jurisdictions to develop community circulator shuttles that will provide access to and from regional bus service and local destinations. These services could greatly improve the effectiveness of some major regional services such as BRT and express bus.

Other Transit Enhancements

The LRTP also includes safe transit stops and expanded transit convenience and choices for the elderly and handicapped population. Demand-responsive transit services are provided for the elderly, disabled, and other populations through ACCESS Services. This includes curb-to curb service, door-to-door service, and same-day taxi service, all of which meet the requirements of the ADA. The growth rate in demand for ACCESS services is higher than for traditional bus transit service. This is projected to continue throughout the timeframe covered by the LRTP. Between 2010 and 2035, ACCESS costs are projected to increase from 19% of the transit operating budget to 31%. As a result, OCTA is initiating a review of strategies that could continue to meet the requirements of ADA in a more cost-effective manner.

Orange County Sustainable Communities Strategy

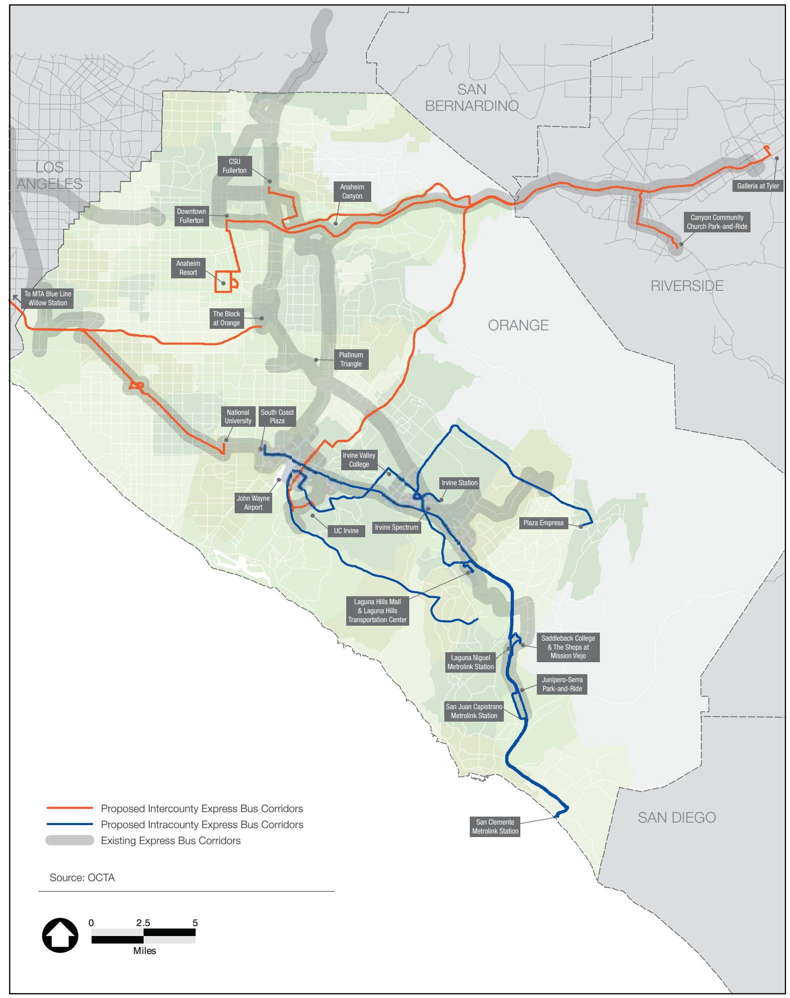


Figure 52 **Orange County Potential Express Bus Corridors**

OC SCS Sustainability Strategy L:
Expand and enhance Transportation Demand Management practices to reduce barriers to alternative travel modes and attract commuters away from single occupant vehicle travel.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM Ordinances

All jurisdictions in Orange County have adopted TDM ordinances that incorporate provisions consistent with rules adopted by the South Coast Air Quality Management District (SCAQMD). There are many programs administered or supported by OCTA to manage travel demand through the use of alternative transportation modes. These services help to reduce single occupant vehicle travel, reduce congestion, and enhance the quality of life for Orange County residents, commuters, and visitors.

Vanpool and Rideshare Programs

Vanpools and ridesharing provide substantial benefits for reducing congestion and reducing vehicle miles traveled. Vanpools and carpools typically reduce the number of long distance commute trips within a particular region, maximizing the congestion reduction and air quality benefits from each trip removed from the transportation system.

The expansion of vanpool services will focus on two target commute markets. The first commute market consists of expanding the long-distance vanpool services by targeting new or expanded services to employment and activity centers that are not currently well served by existing vanpools. Target employment centers include the Irvine Spectrum area, the Santa Ana Civic Center, the South Coast Metro area, and the Anaheim Canyon employment center along the Riverside (SR-91) Freeway.

The second vanpool strategy would explore the potential for shorter distance vanpools that would originate from Metrolink stations in Orange County and provide connections to employment centers that are not currently well served by OCTA's existing Stationlink and local bus services. These employment destinations could be directly served by the vanpool, reducing travel times from the Metrolink station to the commuter's ultimate destination. These services are beneficial in that the Metrolink commuter rail service can fulfill the long-distance portion of the commute and bring together several commuters from a larger area than a traditional vanpool.

Potential opportunity areas for vanpools for the year 2010 and 2035 within Orange County are depicted on Figure 53. These opportunity areas have an employment density

Orange County Sustainable Communities Strategy

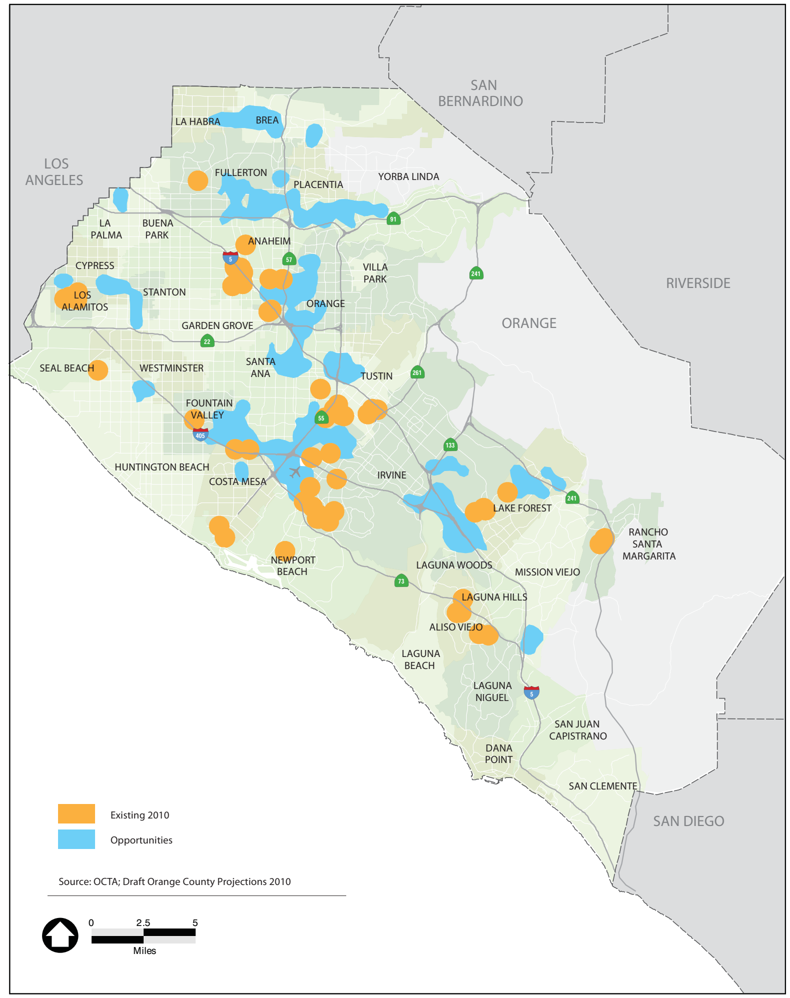


Figure 53 **Orange County Vanpool Opportunities**

of 5,000 jobs per square mile or more and could be served by vanpools developed through either of the strategies described above.

Park-and-Ride

Park-and ride facilities play an important role in increasing commuter access to alternative transportation modes. Orange County will continue to explore opportunities to increase the number of park-and-rides facilities through coordination with Caltrans, local jurisdictions, and private property owners to identify additional suitable park-and-ride sites, and will actively pursue resources to fund the construction and/or lease of new park-and-ride facilities.

Bicycle Programs

Bicycles can be used as the sole mode of transportation or as a complement to bus and rail travel. Bicycles can also play an important role in mitigating the growing challenges imposed by automobile dependence, including congestion and air pollution.

Bikeway planning, implementation, and maintenance efforts are recorded in the Commuter Bikeways Strategic Plan (CBSP). The CBSP was developed through a collaborative process among cities, the County, OCTA, Caltrans, and nonprofit organizations and the general public. The resulting CBSP (shown on Figure 54) includes a compilation of local bikeway plans proposing the addition of a total of 210 miles of Class I bikeways, 480 miles of Class II bikeways, and 95 miles of Class III bikeways. The CBSP also identifies regional bikeway priority locations that include transit stations, major employment centers, and schools. OCTA encourages implementing agencies to give priority to bikeway projects that connect to, or within these locations to improve regional connectivity. OCTA also recommends that projects be prioritized based on CBSP performance criteria that include safety, ease of implementation, and continuity.

Pedestrian Programs

Pedestrian-friendly environments improve the efficiency and connectivity of other modes of transportation, such as transit. A safe and attractive walking environment also furthers the goals of environmental sustainability by supporting reduced automobile dependence. Pedestrian programs and improvements are currently underway in many jurisdictions and will continue to be supported in Orange County.

Other TDM Programs

Multimodal Transportation Hubs. Multimodal transportation hubs are staffed or automated facilities that provide commuters access to multiple transportation modes in order to complete all or a portion of their trip. These facilities are typically located adjacent to a commuter rail station, park-and-ride or transit center and provide access to

Orange County Sustainable Communities Strategy

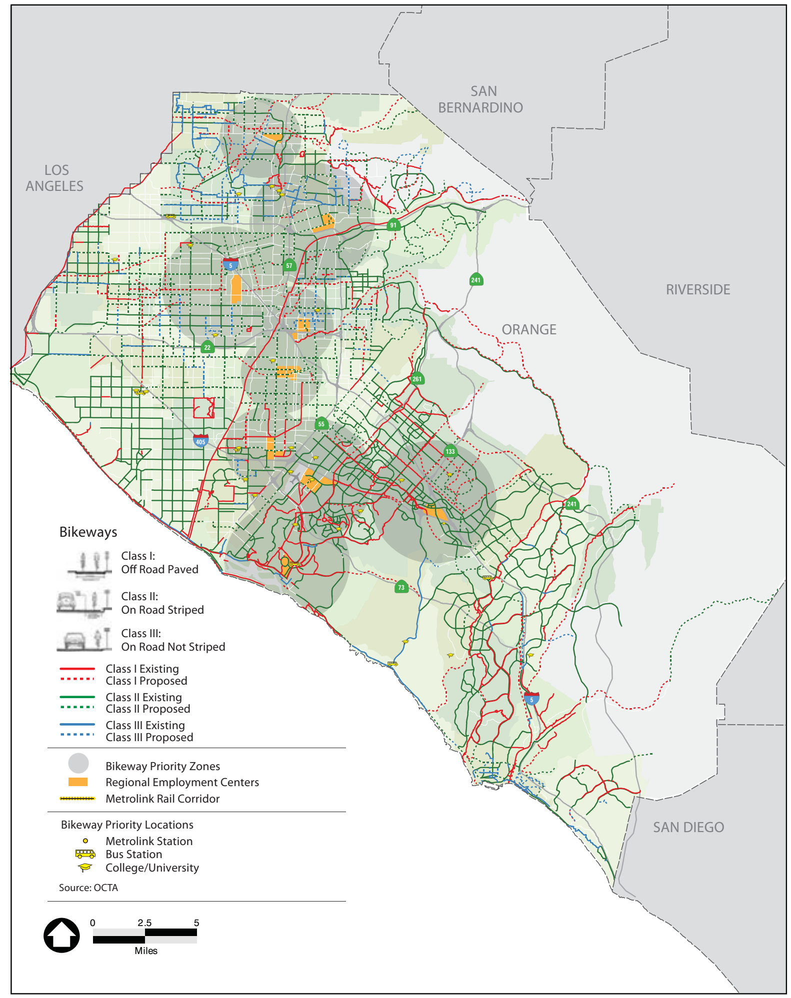


Figure 54 **Orange County Commuter Bikeways Strategic Plan**

bicycle lockers, bicycle rental, and carshare services. In the future, OCTA will explore the potential for implementing these types of facilities at Metrolink stations and transit centers in Orange County and work to identify potential satellite facilities that would supplement and extend the reach and effectiveness of the facilities placed at commuter rail stations and transit centers.

Commuter Financial Incentives. Commuter financial incentives incorporate a wide range of strategies and incentives that are intended to encourage alternative commute modes. Common incentives include employer-subsidized transit, parking, and rideshare benefits offered to commuters who utilize an alternative mode of transportation for a majority of their commute trips. A program that has been implemented elsewhere in the State offers employers the opportunity to provide their employees with discounted transit passes that are deducted pre-tax from employee paychecks, offering tax benefits for both the employer and the employee. Orange County employers are encouraged to explore the potential viability of this and other commuter incentive programs.

OC SCS Sustainability Strategy M:
Continue existing, and explore expansion of, highway pricing measures.

Priced Transportation Network
Orange County already has a unique resource in its priced transportation network. The OC SCS pricing strategy is designed to complete and optimize the scope and capacity of the County's priced transportation network composed of publicly-owned toll and express lanes. Priced facilities are an especially important tool for providing intra-county, inter-county and interregional capacity, while at the same time contributing to sustainability and emission reduction goals related to SB 375 and other state and federal mandates. The existing priced transportation network serves the locations where major employment and housing growth are projected to occur.

Toll roads and express lanes charge users a fee for travel but typically offer less congested traffic lanes than nearby freeways and roadways. Reduced congestion provides improved and more efficient mobility with fewer air pollutant and greenhouse gas emissions caused by congestion.

The toll road system is designed to interrelate with transit service. The toll roads can accommodate Bus Rapid Transit and express bus service, and toll road medians are sized and reserved to provide the flexibility for future transit, if appropriate.

Orange County Sustainable Communities Strategy

Existing Priced Network
As of 2008, the County's "freeway" system includes over 280 lane-miles of toll roads and 40 lane-miles of express lanes. The existing toll road and express lane network in Orange County includes the following facilities:

- State Route 91 (SR 91) Express Lanes
- Eastern/Foothill Transportation Corridors (SR 261, SR 241, and SR 133)
- San Joaquin Hills Transportation Corridor (SR 73)

The Eastern, Foothill, and San Joaquin Hills Transportation Corridors are owned by Caltrans and operated by the Transportation Corridor Agencies (TCAs). OCTA owns and operates the SR 91 Express Lanes. The Eastern, Foothill, and San Joaquin Transportation Corridors are operated with variable tolls that are adjusted based on peak and non-peak traffic levels and usage. The pricing for the SR 91 Express Lanes is dynamic, with toll rates directly tied to congestion levels in the express lanes and in the adjacent freeway lanes. Both toll programs serve as potential models for future pricing strategies that could be implemented elsewhere in Orange County and the region. The toll roads and the express lanes use the same FasTrak electronic payment system, providing seamless consumer convenience and flexibility.

Future Pricing Facilities and Related Services
Planned future toll projects in Orange County include the Foothill Transportation Corridor South project and the addition of direct toll-to-toll connectors at the State Route 91/State Route 241 interchange. When completed, the southern portion of State Route 241 would enhance the network by an adding 105 new tolled lane-miles.

In addition, TCA's public toll roads can accommodate and facilitate additional future intra-county and inter-county express bus services. The Toll Roads access major future employment growth concentrations in Irvine, Anaheim, Orange and south Orange County, where express bus service may be viable.

Further, TCA is planning to convert its operations to all-electronic tolling, eliminating any potential congestion at toll booths due to cash transactions. This streamlining program will result in further GHG emission reduction associated with congestion.

OC SCS Sustainability Strategy N:
Implement near-term (Transportation Improvement Program and Measure M2 Capital Action Plan) and long-term (LRTP 2035 Preferred Plan) transportation improvements to provide mobility choices and sustainable transportation options.

MEASURE M2 CAPITAL ACTION PLAN: YEAR 2020 STRATEGIES

Following the approval of M2 by Orange County voters in 2006, OCTA prepared the Measure M2 Capital Action Plan (CAP), which outlines a 5-year plan to advance the implementation of M2 projects through the 2011–2012 fiscal year. The primary objectives of the M2 CAP are the following:

- Objective 1: Complete the first major milestone (conceptual engineering) for every M2 freeway project. This ensures that all projects are eligible for matching funds and are ready to enter environmental review, design, and construction.
- Objective 2: Start construction of five major M2 freeway projects on the Riverside (SR-91), Orange (SR-57), and Santa Ana (I-5) Freeways.
- Objective 3: Enable Orange County local agencies to meet eligibility requirements for M2 funds, including new pavement management and signal synchronization programs.
- Objective 4: Award up to $165 million to cities and the County for signal synchronization and road upgrades.
- Objective 5: Implement high-frequency Metrolink service within Orange County with associated railroad crossing safety and quiet zone improvements completed or under construction. Begin project development for at least five major grade separation projects.
- Objective 6: Award up to $200 million in competitive funding for transit projects.
- Objective 7: Complete development work and allocate funds for transit fare discounts and improved services for seniors and persons with disabilities.
- Objective 8: Complete an agreement between OCTA and resource agencies detailing environmental mitigation of freeway improvements and commitments for project permitting. Begin allocation of funds for mitigation.
- Objective 9: Complete program development for road runoff/water quality improvements. Begin allocation of funds to water quality projects.

Major projects completed, currently underway, and planned within a Year 2020 horizon under the M2 CAP include the following:

Orange County Sustainable Communities Strategy

- Conceptual engineering for all CAP freeway projects (Figure 55)
- Start construction for these freeway projects:
  - Orange (SR-57) Freeway: Add northbound lane from Orangethorpe Avenue to Lambert Road and from Katella Avenue to Lincoln Avenue
  - Riverside (SR-91) Freeway: Add eastbound lane from Eastern Transportation Corridor (SR-241) to the Corona Expressway (SR-71)
  - Riverside (SR-91) Freeway: Lane additions from Costa Mesa (SR-55) Freeway to Eastern Transportation Corridor (SR-241)
  - San Diego (I-5) Freeway interchange at Ortega Highway (SR-74)\
  - Riverside (SR-91) Freeway: Add westbound lane from Santa Ana (I-5) Freeway to Orange (SR-57 Freeway)
- Approval of the M2 Local Agency Eligibility Procedures Manual
- Award of $8 million in funding for traffic signal synchronization along 10 significant street corridors
- Final design for seven railroad grade separation projects in Fullerton and Placentia

Initiation of rail rolling stock purchases for MSEP

- Initiation of rail grade crossing safety enhancements and quiet zone improvements at 51 grade crossings in Orange County
- Initiation of construction on the Sand Canyon Avenue grade separation project
- Approval of $82.3 million in funds to be used towards the completion of Phase 1 for ARTIC
- Ongoing planning and design work for Go Local fixed-guideway and bus/shuttle projects
- Planning for policies related to transit fare discounts for seniors and persons with disabilities
- Initiation of work on the M2 Freeway Environmental Mitigation Program
- Development of program guidelines for water quality programs is currently underway. Implementation of the M2 CAP projects will provide noticeable benefits for Orange County residents. The construction projects proposed in the CAP will also help the local economy by creating jobs within Orange County.

LRTP YEAR 2035 PREFERRED PLAN

OCTA has developed a detailed program of transportation projects and improvements to address the transportation needs and challenges through the Year 2035. Specific focus is placed on the identification of projects that improve connectivity and mobility throughout the County, improvements that provide benefits for person throughput, travel time, and

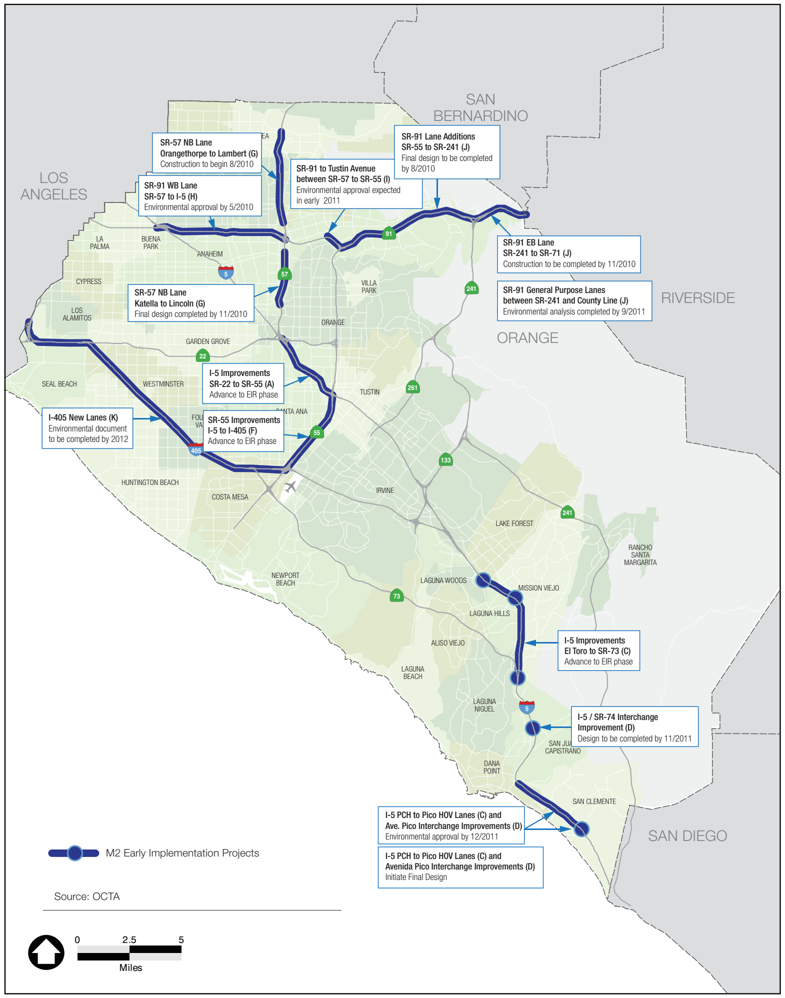


Figure 55 — **Orange County Measure M2 Capital Action Freeway Projects**

Orange County Sustainable Communities Strategy

level of service, and projects that provide for alternative modes of transportation and/or help to offset and minimize the environmental impact of transportation sources. The Year 2035 Preferred Plan represents the financially constrained plan identified in the Orange County LRTP. The Orange County LRTP also includes an unconstrained plan that will be included as part of the RTP development.

Transit Projects

Transit projects contained in the LRTP Year 2035 Preferred Plan range from improvements to OCTA bus services, to expansions of Metrolink commuter rail service, to the construction of regional transit gateways in Orange County that will improve access to a range of transit, including high-speed rail. A brief overview of transit projects contained in the Year 2035 Preferred Plan is provided below. A full list of transit projects with forecast costs is included in the Year 2035 Preferred Plan is provided in Appendix E.

Bus Service

- Fixed Route Service Expansion: Local bus service expansion, providing both capital and operational funding countywide, but primarily in the high-demand corridors identified in Figure 49. Service expansion will return bus service to 2008 levels, which were in place prior to budget and service cuts.
- Express Bus Service: Intercounty and intracounty express bus service will increase.
- Bus Rapid Transit Projects:
  - Westminster Avenue/Westminster Boulevard/17th Street: 22-mile fixed route BRT between Santa Ana and Long Beach.
  - Harbor Boulevard: 19-mile fixed route BRT between Fullerton and Costa Mesa.
  - Bristol Street–State College Boulevard: 28-mile fixed BRT from Brea Mall to Irvine Transportation Center.
- Go Local Bus/Shuttle: Locally-developed rail feeder bus services that provide connections between Metrolink stations and local destinations.
- StationLink: StationLink services focus on creating linkages and necessary connections to Metrolink stations and employment destinations.

Go Local Fixed-Guideway

- The Anaheim Rapid Connection (ARC): The City of Anaheim's fixed guideway project linking the Platinum Triangle/ARTIC and the Anaheim Resort area.

- Santa Ana-Garden Grove Fixed Guideway: Santa Ana and Garden Grove fixed guideway project proposes a transit service linking the Santa Ana Regional Transportation Center to the Santa Ana Civic Center and Garden Grove.

Rail

- Regional Gateways Program: The Regional Gateways program enhances key Orange County Metrolink stations.
- Metrolink Service Expansions: Increased Metrolink service to Los Angeles is planned by 2035.
- High Speed Rail: The California High-Speed Rail will connect Anaheim to Los Angeles and the Bay Area.

Other

- Safe Transit Stops: Promotes safer transit shelters and transit stops
- Vanpool and Park-and-Ride Program Expansion: Expands rideshare services by over 100 percent over existing 2010 levels.
- Elderly and Disabled Assistance: Expands transit convenience and choices for the elderly and disabled populations.

Freeway Projects

A brief overview of freeway projects contained in the Year 2035 Preferred Plan is provided below. A full list of freeway projects and their costs included in the Year 2035 Preferred Plan is provided in Appendix E.

Transportation System Management Projects

- Interstate 5: On Interstate 5 (I-5), from Avenida Pico to Pacific Coast Highway (PCH), add one HOV lane in each direction and improve the Avenida Pico Interchange. On the I-5, from SR-55 to SR-57, add one HOV lane in each direction. HOV ramp improvements at Barranca Parkway.
- Interstate 405: From the SR-73 to the San Gabriel River Freeway (I-605), add two express lanes each direction, converting existing HOV lanes, and adding one new express lane in each direction.
- State Route 57 Projects: On the Orange (SR-57) Freeway, provide an HOV interchange at Cerritos Avenue. Add a southbound deceleration lane at the Imperial Highway interchange. Add a northbound truck climbing auxiliary lane from Lambert Road to the Los Angeles County line and include a ramp improvement at Lambert Road.
- State Route 73 Projects: Add an HOV lane in each direction from MacArthur to the San Diego (I-405) Freeway. Provide an HOV connector at the I-405.

- State Route 91 Projects: Add an HOV connector at the Foothill Transportation Corridor (SR-241).
- Freeway TDM/TSM: Freeway TDM/ TSM design, implementation and operation.
- All—Freeway Service and Patrol Boxes: Maintain the freeway call box program and invest in motorist aid.

General Purpose Improvements

- Interstate 5: Widen from the Costa Mesa (SR-55) Freeway to the San Diego (I-405) Freeway and from the Orange (SR-57) Freeway to the Riverside (SR-91) Freeway providing a new mixed-flow lane in each direction. From Avery Parkway to Alicia Parkway, add one mixed-flow lane in each direction.
- Interstate 405: Add an auxiliary lane northbound from Jeffrey Road to Culver Drive. From SR-73 to the San Gabriel River (I-605) Freeway, add one mixed-flow lane in each direction. From the Santa Ana (I-5) Freeway to the Costa Mesa (SR-55) Freeway, add lanes and improve merging.
- State Route 55: From I-405 to I-5, add one auxiliary lane and one mixed-flow lane in each direction. From I-5 to SR-22, add one mixed-flow lane in each direction.
- State Route 57: On SR-57, widen to provide an additional mixed-flow northbound lane from Orangewood Avenue to Katella Avenue.
- State Route 91: Add a westbound mixed-flow lane from SR-241 to Gypsum Canyon Road. Add one auxiliary lane in each direction from Green River Road to SR-241 with additional improvements sponsored by Riverside County. Add one mixed-flow lane eastbound from the Orange (SR-57) Freeway to the Costa Mesa (SR-55) Freeway.

Interchange Projects

- Interstate 5: Reconfigure interchanges at Avery Parkway, Avenida Pico, La Paz Road, Los Alisos Boulevard, First Street, and Fourth Street. Add an interchange at Marguerite Parkway, Alicia Parkway, and Stonehill Drive. Improve access ramps.
- Interstate 605: Ramp improvements at Katella Avenue.
- State Route 55: Add interchange at Meats Avenue.
- State Route 57: Interchange improvements at Lambert Road.
- State Route 73 Projects: Interchange improvement at Glenwood Drive/Pacific Park Drive.
- State Route 91: Improve interchange at Costa Mesa Freeway (SR-55) and Lakeview Avenue. Improve access ramps at Gypsum Canyon. Add interchange and overcrossing at Fairmont Boulevard.

- State Route 241: Add interchange at Jeffrey Road.

Street Projects

Street projects contained in the Year 2035 Preferred Plan include expanding and extending arterials, ongoing maintenance, transportation demand management, ITS, and signal synchronization. A brief overview of street projects contained in the Year 2035 Preferred Plan is provided below. A full list of street projects included in the Year 2035 Preferred Plan is provided in Appendix E along with forecast costs.

Transportation Demand Management

- Signal Synchronization Program: Implement traffic signal synchronization over 750 miles of roadways.
- Commuter Bikeways Strategic Plan: Implement the Commuter Bikeways Strategic Plan (Figure 54, above). Responsibility for implementation lies with local jurisdictions.

Capacity & Maintenance

- Local Fare Share Program: Local fair share program funded by M2 is allocated to cities proportionally countywide
- Regional Capacity Program: Add over 800 miles of new capacity on the MPAH network. These projects build on previous efforts from the Original Measure M to complete the MPAH. Figure 56 shows the number of roadway lanes by segment to complete the current MPAH plan. Responsibility for implementation lies with local jurisdictions.
- Arterial Overpasses: Add an overpass over the Costa Mesa (SR-55) Freeway at Alton Parkway.

Achievements of the Transportation Strategies

The Year 2035 Preferred Plan makes investments in Orange County's transportation network using available funding over the next 25 years. The Preferred Plan of projects includes the implementation of the projects and programs contained in the M2 program, as well as numerous other transit, freeway, street, and travel demand management projects located throughout Orange County.

Expand Transportation System Choices

The Year 2035 Preferred Plan would result in substantial expansion of options across transportation modes including transit, driving, bicycling, walking, and ridesharing. On the transit side, approximately 400,000 additional bus service hours (restoring service to 2008 levels) would be added to the system, including Go Local projects. Metrolink

Orange County Sustainable Communities Strategy

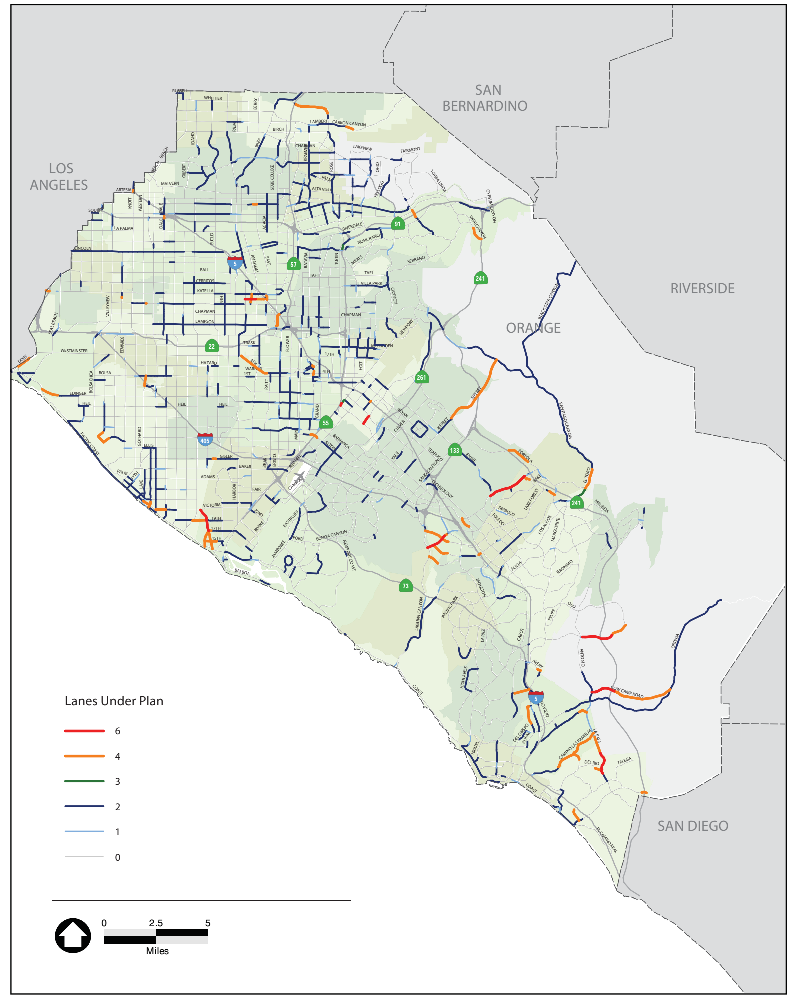


Figure 56 **Roadway Lanes to Complete Orange County Master Plan of Arterial Highways**

service would be expanding, resulting in up to 30-minute headways between Laguna Niguel and Los Angeles.

Connectivity and access to the freeway system would also be improved. The implementation of the continuous access HOV lanes through nearly all of Orange County will improve access to these facilities and smooth traffic flow. The addition of freeway lane miles and targeted interchange improvements help to increase capacity and access to the freeway system from nearby roadways.

The completion of the MPAH Regional Capacity Plan will expand access to arterial roadways throughout Orange County. The Year 2035 Preferred Plan expands access to alternative transportation modes, including vanpool and rideshare services, bicycle facilities, and other transportation demand management strategies.

Improve Transportation System Performance

The performance of the transportation system with the implementation of the projects outlined in the Year 2035 Preferred Plan has been measured in the OC LRTP. Table F, below, summarizes the level of improvement over the Year 2035 Baseline condition in several transportation performance metrics with the implementation of the projects contained in the Year 2035 Preferred Plan.

As Table F and Figure 57 show, the Year 2035 Preferred Plan is forecast to help reduce travel delays and improve travel speeds on freeways and streets throughout Orange County. The projects are also forecast to contribute an increase in transit ridership over the Year 2035 Baseline condition.

The projects contained in this plan also reduce traffic congestion. Severely congested segments of Orange County's freeway network, defined as segments operating above capacity (LOS F), are forecast to be reduced by 35 percent compared to the Year 2035 Baseline. Similarly, a 40 percent decrease is forecast to occur in the number of roadway segments that are severely congested under the Baseline 2035 scenario.

Table F: Preferred Scenario Performance Analysis (Compared to 2035 Baseline)

Performance Measure	2035 Baseline	2035 Preferred Plan
Daily vehicle hours traveled	3.4 million	Reduced by 24%
Daily hours of delay due to congestion	1.5 million	Reduced by 56%
Average peak period freeway speed (AM)	29 miles per hour	Increased by 22%
Average peak period HOV speed (AM)	35 miles per hour	Increased by 24%
Average peak period roadway speed (AM)	13 miles per hour	Increased by 82%
Daily transit trips	144,000	Increased by 11%

Note: Forecasts prepared by the California High-Speed Rail Authority project an additional 10% increase in transit ridership in Orange County with the Phase I High-Speed Rail project.

Orange County Sustainable Communities Strategy

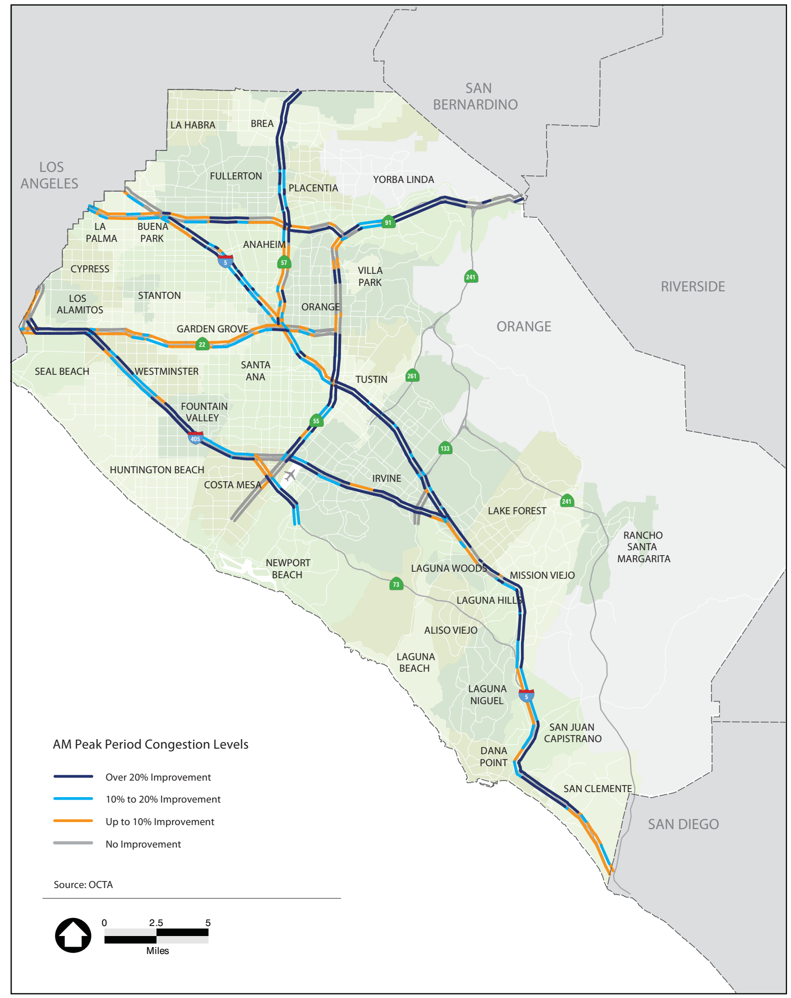


Figure 57

Performance of Orange County Long Range Transportation Plan

Ensure Sustainability

The Year 2035 Preferred Plan is forecast to invest over $39.4 billion in transportation improvements over the next 25 years. This investment is allocated in a fiscally sound and responsible manner, timing project implementation to available financial resources. The Plan also includes substantial investments in system maintenance and operations to help ensure that capital investments are maintained and operated at a consistent level for each project's life-cycle.

The environmental and water quality protection programs called for in M2 would be implemented through the Year 2035 Preferred Plan. These measures are designed to help reduce the amount of contaminated water runoff generated on freeways and streets, and to help create and preserve critical habitat in a coordinated fashion, increasing the benefit of these protections. A potential co-benefit of the preservation of these open space lands is the intensification, redevelopment, and infill of existing built environments.

The Preferred Plan includes improvements to transit service and transportation demand management measures. These investments are intended to help address future transit demand and reduce single-occupant vehicle trips to help the performance of the transportation system.

OC SCS Sustainability Strategy O:

Acknowledge current sustainability strategies practiced by Orange County jurisdictions and continue to implement strategies that will result in or support the reduction of GHG emissions.

In the OC SCS, a sustainability strategy is a project or policy that will result in or support the reduction of GHG emissions. For the SCS, an aggregated list of 222 sustainability strategies was created from lists produced by SCAG, CARB, and Orange County agencies. All strategies identified are measures that jurisdictions, agencies, and stakeholders have employed or may employ, and implementation of proposed projects or policies is at their discretion. The resulting list covers a wide range of projects and activities that fall generally within the following categories:

- Alternate Fuel
- Alternate Modes of Transportation
- Alternate Work (telecommuting/flexible work schedules)
- Bicycling
- Co-location of Facilities

- Freight/Goods Movement
- Land Use Policies
- Parking
- Pricing
- Transportation Demand Management (TDM)
- Transportation Infrastructure Investments
- Transportation System Management (TSM)
- Walking
- Other—activities that don't fit cleanly within one of the above

As part of the development process of the OC SCS, all jurisdictions within the County, as well as transportation agencies, stakeholders, and the public, were invited to identify sustainability strategies actively being used, as well as strategies planned for implementation during the SCS growth period from 2008 to 2035. Figure 58 depicts 14 categories of sustainability strategies and the number of Orange County agencies with projects or policies in those areas as of March 2011—a sort of "snapshot in time" of GHG-reducing activities in Orange County.

The list of sustainability strategies should be considered a sampling of measures available to reduce GHG emissions, and not a comprehensive or mandatory list of measures to be applied in any given situation. Some of these policies may be applicable in a general plan or at a regional scale, while others are applicable only to transportation agencies and projects. Still others may be applicable only at a development project level. Others are applicable only to transportation agencies and projects. Still others may be applicable only at a development project level. As such, the list of sustainability strategies should be considered a sampling of measures available to reduce GHG emissions, and not a comprehensive or mandatory list of measures to be applied in any given situation.

Transportation Infrastructure Investment and Transportation System Management
Transportation Infrastructure Investment and Transportation System Management are two of the most common strategies in Orange County. Transportation infrastructure investments are capital expenditures to improve the utility of the transportation system for all users and include strategies such as implementation of smart streets, improving links between travel modes, and providing enhanced bus stops. These are projects identified in addition to conventional municipal Capital Improvement Projects.

Transportation System Management seeks to enhance the performance of transportation infrastructure through better management and operation of the system. These investments demonstrate a commitment by agencies to maximize the utility and efficiency of infrastructure. Examples include traffic signal synchronization, bus fleet management and

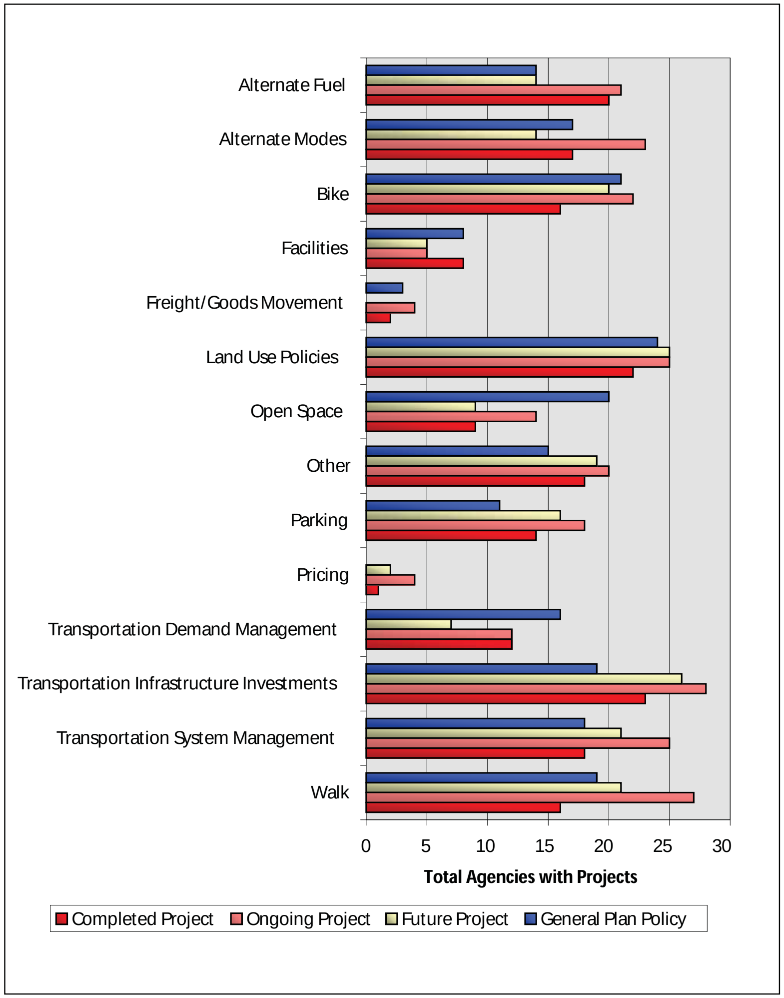


Figure 58 Orange County Sustainability Strategies Participation

signal priority, freeway information dissemination, ramp control, improvement of circulation efficiency through information (i.e. signage), and improvements to reduce or eliminate bottlenecks. Most jurisdictions also have land use policies designed to encourage residential and commercial development near existing transportation infrastructure.

Transportation infrastructure investments are ongoing with at least 26 agencies and Transportation System Management projects are ongoing with at least 23 agencies. Twenty-four agencies report future transportation infrastructure investments, and 20 agencies report future Transportation System Management projects. These include agencies that serve the County as a whole and some of these projects will be implemented countywide. Twenty-four cities have General Plan policies supporting land use related sustainability strategies. Within the 34 categories of land use strategies, Orange County cities report a total of 251 ongoing projects and 217 future actions. Encouraging placement of land uses near transit assets and investing in the utility of the transportation system will affect the mobility choices for residents of Orange County and will reduce vehicle miles traveled.

Orange County agencies are also active in improving bicycle facilities and the pedestrian environment. At least 20 agencies have ongoing projects to improve the bicycle transportation system or otherwise encourage commuting by bicycle. Eighteen agencies report that future projects are planned. Projects to improve the pedestrian experience are ongoing with at least 25 agencies, and 20 agencies report future planned projects. In addition to directly affecting the non-motorized environment, Orange County agencies also seek to encourage the use of alternate modes of transportation through policies such as encouraging large businesses to develop alternative transportation plans and providing for employer incentives. Improved facilities and experiences for non-motorized users coupled with incentives to seek alternatives to commuting by automobile create the potential to affect residents' mobility choices and reduce GHG emissions.

Alternative Fuels/Vehicles

Alternative fuels and Vehicles are emerging strategies being considered and implemented by jurisdictions and institutions in Orange County. Currently, the city of Newport Beach has constructed electric vehicle fuel stations for city vehicles and general public use. Plans for new neighborhoods in unincorporated areas of south Orange County include provision of neighborhood electric vehicles (NEVs) for short trip purposes. The Brea Lofts project, completed in 2008, included the provision of NEVs for each dwelling unit. Major educational institutions such as UC Irvine have developed a full menu of alternative fuel and vehicle strategies for on-campus and local mobility needs.

A complete listing of sustainability strategies submitted by jurisdictions, agencies, stakeholders and the public is included as Appendix F. The sustainability strategies are compiled as completed projects, ongoing projects, future projects, and General Plan policies. Each of these strategies results in outcomes that affect the planning of land use and mobility in Orange County by supporting regional objectives to reduce GHG. These sustainability strategies are offered for inclusion in the overall regional SCS as evidence of real measures resulting in integrated planning and reduced GHG in Orange County and throughout the SCAG region.

SPECIFIC EXAMPLES OF ORANGE COUNTY SUSTAINABILITY STRATEGIES

To highlight the comprehensive nature of sustainability strategies and their geographic distribution throughout the County, several examples of measures being implemented by Orange County jurisdictions follow. In addition to government agencies, the Orange County community is supported by many interests and organizations. Groups specializing in health care delivery, education, the environment, social justice, and affordable housing all have a role in the future of Orange County. These agencies engage in projects and implement plans that have direct and collateral benefits to mobility and the reduction of GHG emissions. A brief description of a small sample of these programs and plans also follows.

IMPACTS OF ORANGE COUNTY SCS SUSTAINABILITY STRATEGIES

What do we know about the potential impact of the different OC SCS strategies on potential GHG reductions? The California Air Resources Board (CARB) hired researchers from the University of California (Irvine and Davis campuses) to summarize the evidence on how different transportation and land use strategies could reduce greenhouse gas emissions.[1]

Summarizing the CARB Policy Briefs

In 2010, the CARB contracted with UC Irvine and UC Davis to develop 15 policy briefs which summarize the academic literature on land use and transportation policies that can reduce vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions. The policy

1 See http://arb.ca.gov/cc/sb375/policies/policies.htm.

briefs focused on the magnitude of impact, quantifying how GHG would change based on a specific policy.

The information on impact should be combined with local knowledge about the cost of and support for implementing specific policies. It is possible that a relatively low impact policy might be implemented broadly, while a high impact policy might be either expensive or politically difficult to implement. Consequently, one should not conclude that low impact policies or strategies are necessarily unattractive tools.

Appendix G provides a summary of the CARB briefs. These briefs each contain a discussion of GHG emissions in the context of the evidence summarized in each brief, and readers are referred there for more information: http://arb.ca.gov/cc/sb375/policies/policies.htm.

Grouping CARB Policies by Impact

Based on the CARB evidence, policies to reduce GHG emissions were assessed and grouped into impact categories as shown below.[2]

- **High Impact:** Policies that have a 0.1% or larger impact on VMT, driving, or driving emissions for a 1% policy implementation
- **High-Medium Impact:** Policies that have a 0.05 to 0.1% impact on VMT, driving, or driving emissions for a 1% policy implementation
- **Low-Medium Impact:** Policies that have a 0.01 to 0.05% impact on VMT, driving, or driving emissions for a 1% policy implementation
- **Low Impact:** Policies that have less than a 0.01% impact on VMT, driving, or driving emissions for a 1% policy implementation
- **No Impact:** Polices that can be expected to have no impact on VMT.

Linking OC SCS Sustainability Strategies to the CARB Evidence

Each OC SCS strategy is related to a corresponding CARB strategy. For most cases, clear matches and correspondence between the CARB strategies and those in the OC SCS exist, but the language and description of the strategies sometimes differs slightly. The evidence summarized for the CARB was drawn from the academic literature, while the OC SCS strategies are based on a public input process and consultation with jurisdictions

2 The evidence reviewed for CARB largely focused on VMT. SB 375 targets GHG reduction. To group policies by impact, it was often necessary to use VMT reduction as a proxy for GHG reduction, which abstracts from questions of vehicle fleet composition, vehicle fuel efficiency, and the carbon content of fuels. For a more complete discussion of the relationship between each policy and GHG reduction, see the CARB policy briefs at http://arb.ca.gov/cc/sb375/policies/policies.htm

within Orange County. For that reason, the OC SCS strategies are typically phrased in ways that link more directly to local land use plans and policies while the evidence from the CARB is often phrased in the more abstract mode of the scholarly literature. Yet a crosswalk between the two nomenclatures was easy to develop.

Having developed such a crosswalk between the category descriptions from the CARB and the OC SCS, the OC SCS strategies are then ranked as high, high-medium, low-medium, and low impact. One strategy is ranked as "no impact" based on the academic literature.

Table G: CARB Policies and OC SCS Strategies, Grouped by Impact Category

Policy	Impact Category	Corresponding OC SCS Strategy or Strategies
Road Pricing	High	Toll road options, highway pricing measures. ***(Sustainability Strategy M)***
Parking Pricing	High	Parking, Pricing ***(Sustainability Strategy O)***
Regional Accessibility to Employment	High	Support infill housing development and redevelopment, and increase regional accessibility. ***(Sustainability Strategies B and D)***
Jobs-Housing Balance	High	Improve jobs-housing ratio. ***(Sustainability Strategy E)***
Neighborhood Design (combination of density, mixed land use, and street network connectivity)	High	Support transit-oriented development, support infill housing development, support mixed use development ***(Sustainability Strategies A, B, C and G)***
Telecommuting	High	Alternate Work: telecommuting/flexible work schedules ***(Sustainability Strategy O)***
Reductions in Distance to Transit	High-Medium	Improve transit service, frequency, convenience, and choices. ***(Sustainability Strategy K)***
Reductions in Transit Fare	High-Medium	Improve transit service, frequency, convenience, and choices. ***(Sustainability Strategy K)***
Increases in Transit Service Hours or Service Miles	High-Medium	Improve transit service, frequency, convenience, and choices. ***(Sustainability Strategy K)***
Increases in Transit Service Frequency	High-Medium	Improve transit service, frequency, convenience, and choices. ***(Sustainability Strategy K)***
Employer-Based Trip Reduction (implemented at a workplace)	High-Medium	Transportation Demand Management ***(Sustainability Strategy L)***
Traffic Incident Clearance Programs	High-Medium	Transportation System Management ***(Sustainability Strategy J)***
Pedestrian Strategies	Low-Medium	Promote land use patterns that encourage the use of alternatives to single-occupant automobile use; Transportation Demand Management ***(Sustainability Strategy F and L)***

Orange County Sustainable Communities Strategy

Policy	Impact Category	Corresponding OC SCS Strategy or Strategies
Bicycle Strategies	Low	Promote land use patterns that encourage the use of alternatives to single-occupant automobile use; Transportation Demand Management ***(Sustainability Strategy F and L)***
Increases in (Unpriced) Freeway Lane Miles	No Impact	Implement the Transportation Improvement Program and Measure M2 (if unpriced and if does not include HOV or express lane options) ***(Sustainability Strategy N)***

Some strategies were not assessed for impact because they are not tied directly to available CARB research described above or are broadly categorized (some but not all of their elements are included in the categories above.) These include: support retention and/or development of affordable housing (G); support natural land restoration and conservation and/or protection offering significant carbon mitigation potential via both sequestration and avoidance of increased emissions due to land conversion (H); implement near-term (Transportation Improvement Programs and Measure M2 Capital Action Plan) and long-term (LRTP 2035 Preferred Plan) transportation improvements to provide mobility choices and sustainable transportation options (N); and acknowledge current sustainability strategies practiced by Orange County jurisdictions and continue to implement strategies that will result in or support the reduction of GHG emissions (O).

Anaheim Platinum Triangle

Project Location	*City of Anaheim*
Sustainability Strategy Category 	**Land Use Policies:** • Horizontal or vertical mixed-use • Increasing housing densities within/adjacent to employment areas • Increasing residential/commercial density near transit • Integrate affordable and market rate housing • Local housing for local workforce • Making developments transit ready • New housing and jobs within 1/2 mile of existing/planned transit stations **Alternate Modes:** • Increase bike/walk trips with improved streets and facilities
Project Description	Anaheim's Platinum Triangle features high-density housing, millions of square feet of new development opportunities for office and commercial, two national sports teams, an exciting array of dining and entertainment, plus immediate access to and from the rest of Southern California from three freeways and a major transit center. The project includes both vertical and horizontal mixed-use in an infill environment.
Emissions Reductions Benefits	The Platinum Triangle provides pedestrian- and transit-friendly environments both internally and through linkages to regional trails and bikeways, an employment and entertainment destination that encourages transit use to the area, and new energy and water efficient buildings and residences, all of which contribute to a greener future.
Project Status	Project is approved, and construction has begun.

Orange County Sustainable Communities Strategy

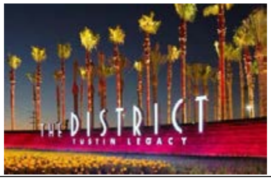
Irvine Business Complex and Vision Plan

Project Location	*City of Irvine*
Sustainability Strategy Category 	**Land Use Policies:** • Horizontal or vertical mixed-use • Increasing housing densities within/adjacent to employment areas • Increasing residential/commercial density near transit • Integrate affordable and market rate housing • Local housing for local workforce • Making developments transit ready • New housing and jobs within ½ mile of existing/planned transit stations or stops **Alternate Modes:** • Increase bike/walk trips with improved streets and facilities **Transit Infrastructure** • Enhanced bus stops • Improve transit options – including the i shuttle • Targeted infrastructure growth
Project Description 	The 2,800-acre Irvine Business Complex (IBC) is a unique part of the City of Irvine. Dating from the 1970s, the IBC was developed solely as a commercial and industrial center serving Southern California as a regional economic and employment base, including hotel, restaurant, commercial, retail, industrial, and office uses. Over time, the IBC began its transition from a suburban mixed-use commercial and industrial center to a more urban regional mixed-use center. In early 2004, the number of applications for residential units within the IBC increased dramatically. The City of Irvine identified the opportunity for a mixed-use community with a coordinated urban design framework within the IBC while ensuring the continued economic viability of existing and future businesses. The IBC Vision Plan aims to develop a comprehensive strategy and guiding urban design framework for future IBC development. The Vision Plan and Irvine Business Complex Residential Mixed-Use Overlay Zone call for creating sustainable urban neighborhoods within a framework of new streets and open spaces, a newer approach than has traditionally been considered in other residential areas of Irvine. The Vision Plan reflects a long-term view of the IBC as a mixed-use community and reflects the best planning techniques available to assist in the evolution of the IBC. In order to achieve a

	balanced urban environment, the IBC needs walkable neighborhoods where people can work, live, and play; feeling part of an evolving and vibrant cosmopolitan city. This requires a mix of uses and places that are activated both day and night, drawing together diverse community segments. The IBC is served by a system of public transportation bus routes. The Tustin Metrolink train station is 1.5 miles north of the IBC. In 2008, the iShuttle, operated by the City of Irvine and designed for the IBC community, went into service. The shuttle allows residents and employees an alternative way to commute to jobs and other destinations throughout the IBC.
Emissions Reductions Benefits	The IBC Vision Plan will provide enhanced pedestrian- and transit-friendly environments both internally and through linkages to the City's extensive trails and bikeways system. Providing public transportation options such as the i shuttle encourages transit use in the area and increases the use of alternate modes, which contribute to a greener future.
Project Status	IBC Vision Plan is approved and individual projects are under construction.

Orange County Sustainable Communities Strategy

Tustin Legacy

Project Location	*City of Tustin*
Sustainability Strategy Category	**Land Use Policies:** • Develop "complete communities" • Horizontal or vertical mixed-use • Increase housing densities within/adjacent to employment areas • Improve accessibility of housing to transit • Locate major regional activity centers near existing development • Increase residential/commercial density near transit • Integrate affordable and market rate housing • Local housing for local workforce • Locate schools in neighborhoods with student populations • Make developments transit ready • New housing and jobs within 1/2 mile of existing/planned transit stations **Alternate Modes:** • Arterial Improvements • Construct Regional Bikeways • Facilitate Increased Biking Opportunities • Improve Pedestrian Environment (E.G., Beautification, Access, Safety) • Improving Bicycle Infrastructure And Facilities (Lockers, Racks, Valets, Safe Bike Parking, Subsidies) • Improving Pedestrian Infrastructure And Facilities E.G. Pedestrian Bridge • Increase Bike/Walk Trips With Improved Streets And Facilities • Sidewalk Construction • Trail Improvement Project • Upgrade Bike Transportation System
Project Description 	Tustin Legacy is being developed on the site of the nearly 1600-acre former Marine Corps Air Station (MCAS) Tustin. To date, construction of the following has been completed at Tustin Legacy: • 1,680+ homes • "The District" Regional Shopping Center • Various educational institutions • Social services facilities • Neighborhood parks • Major roadways and related infrastructure

Project Location	*City of Tustin*
	Future development calls for an additional 2,100 residences, 6-7 million square feet of non-residential space (office, retail, restaurant, entertainment, research and development), educational facilities, new roadways including a major arterial connection, infrastructure and significant parkland and open spaces. One component will be a vibrant "Urban Community Core," a pedestrian-oriented, mixed-use district integrating a variety of uses and activities including retail, restaurant and entertainment uses, hotels, for-sale and apartment homes, and offices.
Emissions Reductions Benefits	Tustin Legacy is a complete community that provides pedestrian and transit friendly environments both internally and through linkages to the Tustin Metrolink Station and regional trails and bikeways. Linking land uses and trip purposes reduces overall vehicle miles traveled.
Project Status	Project is approved and under construction.

Orange County Sustainable Communities Strategy

Santa Ana Transit Zoning Code

Project Location	*City of Santa Ana*
Sustainability Strategy Category 	**Land Use Policies:** • Horizontal or vertical mixed-use • Increasing housing densities within/adjacent to employment areas • Increasing residential/commercial density near transit • Integrate affordable and market rate housing • Local housing for local workforce • Making developments transit-ready • New housing and jobs within 1/2 mile of existing/planned transit stations **Alternate Modes:** • Increase bike/walk trips with improved streets and facilities **Transit Infrastructure:** • Enhanced bus stops, improved transit facilities, targeted infrastructure growth
Project Description	The Transit Zoning Code (TZC) is a visionary new land use tool to create a healthier, more livable and more sustainable community. The cornerstone of this policy document is the interconnectedness of zoning and development standards with the creation of walkable communities, which in turn supports the successful creation of new transit opportunities. The 400-acre project area allows for both vertical and horizontal mixed-use in an infill environment. Density /intensity range from 5 to 90 dwelling units per acre, and 0.5 to 5.0 floor area ratio. Buildout potential includes 4,075 new housing units and 260,000 SF of commercial development opportunities.
Emissions Reductions Benefits	The TZC provides the framework for new housing and mixed-use development in a pedestrian and transit friendly environment. The Transit Zoning Code area is in close proximity to Metro East and Downtown/Civic Center employment hubs; as well as the Santa Ana Regional Transportation Center (SARTC) and proposed fixed guideway. Linking complementary land uses with non-motorized and transit travel options reduces overall vehicle miles traveled. . . . Concentration of pedestrian friendly, higher intensity development near transit opportunities promotes use of cleaner alternate modes of travel.
Project Status	The Transit Zoning Code was approved in June 2010. Development proposals are under review for over 140 infill residential units.

Beach and Edinger Corridors Specific Plan

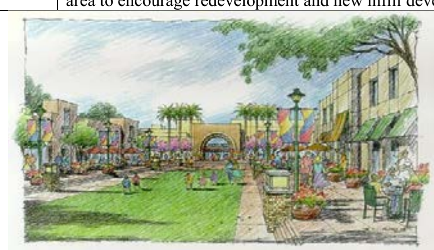
Project Location	***City of Huntington Beach***
Sustainability Strategy Category	**Land Use Policies:** • Horizontal or Vertical Mixed-use • Increasing Housing Densities within/Adjacent to Employment Areas • Increasing Residential/Commercial Density Near Transit • Integrate Affordable and Market Rate Housing • New Housing and Jobs within 1/2 Mile of Existing/Planned Transit Stations **Alternate Modes:** • Increase Bike/Walk Trips with Improved Streets and Facilities **Transit Infrastructure:** • Targeted Infrastructure Growth
Project Description 	The Beach and Edinger Corridors Specific Plan (BECSP) encompasses 459 acres along the City's two major commercial arteries, one a State highway and the other close to the OCTA bus transit station. Both are well-served by bus transit. The BECSP encourages mixed-use development with a focus on improving the pedestrian experience. This is achieved by not having a maximum density cap or floor area ratios, and by requiring public open space and private and public improvements that benefit the pedestrian in all projects. The BECSP requires that all required affordable housing be located within the Plan area.
Emissions Reductions Benefits	The BECSP fosters emission reductions by allowing for over half of the City's anticipated growth within the Plan area, an area well served by existing infrastructure and bus transit, and traversed by an existing rail line that may be used for passenger service in the future. The BECSP standards compel efficient land development, allow for reduced parking standards, and require sustainable building practices in all new development.
Project Status	The BECSP was approved March 2010. Two significant mixed-use projects have been approved and two are in the environmental review stage.

Laguna Niguel Gateway Specific Plan

Project Location	***City of Laguna Niguel***
Sustainability Strategy Category	**Land Use Policies:** • Horizontal or vertical mixed-use opportunities • High density housing opportunities within/adjacent to employment areas • High density residential/commercial density near transit station • New housing and jobs within ½ mile of existing transit station • Housing densities to accommodate both affordable and market rate housing **Alternate Modes:** Increase bike/pedestrian trips with improved bike lane, sidewalk, and trail connectivity throughout Gateway area and to regional systems **Transit Infrastructure:** Improved transit facilities, including expanded station operations and enhanced bus stops
Project Description	Laguna Niguel's Gateway area features high-density housing with as many as 2,994 dwelling units, development opportunities for as much as 2.1 million square feet of office, retail, restaurant or entertainment uses, hotel development opportunities for as many as 350 rooms, opportunities for both vertical and horizontal mixed-use in an infill environment, immediate access to and from the rest of Orange County from both the I-5 and 73 freeways, and a transit station that is the southern terminus of the region's double track system.
Emissions Reductions Benefits	The Gateway Area provides pedestrian- and transit-friendly environments both internally and through linkages to regional trail and bikeway systems; an employment, shopping, and entertainment destination that encourages multi-purpose trips to the area; increased transportation choices increases use of alternate modes, all of which contribute to fewer vehicle-miles traveled and to related emissions reductions.
Project Status	City Council approval of the Specific Plan Project is anticipated in July 2011.

Laguna Hills Urban Village Specific Plan

Project Location	*City of Laguna Hills*
Sustainability Strategy Category	**Land Use Policies:** • Horizontal or vertical mixed-use • Increasing housing densities within/adjacent to employment areas • Increasing residential/commercial density near transit • Integrate affordable and market rate housing • Local housing for local workforce • Making developments transit ready • New housing and jobs within 1/2 mile of existing/planned transit stations **Alternate Modes:** • Increase Bike/Walk Trips With Improved Streets And Facilities
Project Description	The Laguna Hills Urban Village Specific Plan regulates a 240-acre area in the City for the purpose of developing a community core in which a variety of public, regional commercial, recreational, and high density residential uses work in concert to create an urban village. The Laguna Hills Transportation Center is located within this area, which is served by transit. The plan allows for both vertical and horizontal mixed-use in an infill environment.
Emissions Reductions Benefits	The Urban Village Specific Plan provides the framework for new housing and mixed-use development in a pedestrian- and transit-friendly environment. The Laguna Hills Transportation Center is located within this area. Linking complementary land uses with non-motorized and transit travel options reduces overall vehicle miles traveled. Concentration of pedestrian-friendly, higher-intensity development near transit opportunities promotes use of cleaner alternate modes of travel.
Project Status	The Urban Village Specific Plan was adopted in November 2002 and updated in April 2011. The City is actively working with surrounding owners in the area to encourage redevelopment and new infill development.

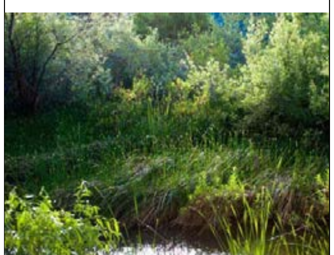


Orange County Sustainable Communities Strategy

South Brea Lofts

Project Location	*City of Brea*
Sustainability Strategy Category  	**Land Use Policies:** • Redevelopment of underutilized, blighted commercial properties downtown • Vertical mixed-use • Compact building design • Encourage new housing units adjacent to employment areas • Increasing residential/commercial density near Downtown Brea • Local workforce housing • Infill in areas with existing infrastructure • Integrate affordable and market rate housing **Alternative Transportation Modes:** • Each dwelling unit was provided a street-ready electric (NEV/Gem) vehicle • Increase bike/walk trips with improved streets and facilities
Project Description 	South Brea Lofts features 47 residential units in a live/work arrangement and 7,500 square feet of commercial uses with access to City Hall Park and Downtown Brea. The project features a vertical mixed-use design on a 2.8-acre infill site. Key elements of the project include workforce housing for moderate income households, dedicated work space with neighborhood commercial uses, activated street due to improved pedestrian access, and a "GEM" electric vehicle with each loft for local trips to school, post office, Brea Mall, community center, senior center, or businesses nearby.
Emissions Reductions Benefits 	The South Brea Lofts provides a pedestrian friendly environment to nearby community destinations. The project has strong internal and external pedestrian linkages to the Brea Boulevard corridor that connects to the employment and entertainment center of Downtown. By linking multiple land uses within this project, the reduction of overall vehicle trips and miles traveled reduces GHG levels for the region. The project provides Loft owners options that improve use of alternative transportation modes – all of which contribute to a sustainable future for Brea.
Project Status	Project was completed and occupied in 2008.

Transportation Corridor Agencies Habitat Preservation and Restoration Projects

Project Location	***SR 73 Toll Road and SR 241 Toll Road, City of Newport Beach and Orange County***
Sustainability Strategy Category	**Open Space:** Preservation of Habitat
Project Description  	Transportation Corridor Agencies (TCA) have set aside 2,200 acres of permanently protected open space. **Cactus Wren Habitat Linkage and Restoration** In partnership, the Nature Reserve of Orange County (NROC), the University of California, Irvine (UCI), and the TCA were awarded a grant in 2010 to enhance and restore habitat for the cactus wren, a small bird declining in the region. The project includes planting cactus in a habitat corridor used by the federally threatened California gnatcatcher bird along the wildlife linkage area that parallels the 73 Toll Road from Upper Newport Bay south through Bonita Channel to Coyote Canyon. Within four months of transplanting the cactus, a new cactus wren pair was observed using the newly transplanted habitat. **Bonita Creek Mitigation Site** The Bonita Creek Mitigation Site is one of 15 locations comprising 2,200 acres in Orange County that TCA conserved to compensate for the effects of constructing the Toll Roads. The approximately 40-acre wetland and coastal sage scrub site is the main wildlife link from Upper Newport Bay to the San Joaquin Hills and was restored in association with construction of the SR 73 Toll Road. The project consisted of restoring a creek from a narrow rip-rap lined ditch to thriving wetland and coastal sage scrub community. Coyote and mountain lion have been recorded using the site. **Live Oak Preservation Area** In 2005 TCA acquired the Live Oak

Project Location	***SR 73 Toll Road and SR 241 Toll Road, City of Newport Beach and Orange County***
	Preservation Area, a 23.2-acre site that sits east of the SR 241 Toll Road at El Toro Road and Live Oak Canyon. The site serves as an important buffer to a national forest and provides habitat for a number of sensitive animal species declining in the region. The site also contains valuable oak woodlands and coastal sage scrub habitat for the California gnatcatcher Riverside fairy shrimp. Protecting the land as open space helps preserve natural wildlife movement corridors in the area. **Upper Chiquita Canyon** In 1996, TCA placed a conservation easement over a 1,182 acre area, known as Upper Chiquita Canyon. The conservation area was originally planned for development as a golf course and residential area. Upper Chiquita provides habitat to the federally threatened California gnatcatcher, as well as the coastal cactus wren and numerous other plants and wildlife. The site serves as an important buffer to regional parks and open space preserves to the south. The TCA has been actively managing the site since 1996 and increasing its habitat values. Protecting the land as open space helps preserve natural wildlife movement corridors in the area.
Emissions Reductions Benefits	Carbon sequestration
Project Status	Completed

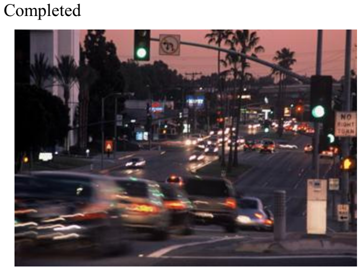
Sustainable Transportation at UC Irvine

Project Location	***City of Irvine***
Sustainability Strategy Category	**Alternate Modes:** • Employer incentives for alternative modes • Provide local shuttles • Rideshare programs • Vanpools **Bike:** • Improve bike/walk trips with improved streets and facilities.
Project Description	UC Irvine has 3 full-time and 1 part-time staff committed to implementation of Sustainable Transportation programs including: **Bike Infrastructure:** Extensive bike path network/ Signage/ Bike-Pedestrian bridges. **Bus:** University Pass Program provides annual OCTA access for $95 - an 86% subsidy. **Carpool**: Available for employees; provides reduced-rate parking and preferential parking for participants. **Shuttle**: UCI maintains a shuttle fleet for on-campus and near-campus transportation. **Train**: Provides 20% rebate for 10-day and monthly pass holders. **Vanpool**: UCI has 18 vanpools carrying passengers from various locations to UCI. **Pedestrian Infrastructure:** Extensive pedestrian path network / Signage / Bike-Pedestrian bridges. **ZEV-NET**: Zero-Emission Vehicles stationed at the Irvine Transportation Center for pooling to/from UCI. **Rideshare support** for individuals who do not bring a car to campus: • ZotWheels Bikeshare – The first fully-automated bikeshare program at a U.S. university. • Zipcar Carshare – 11 cars on campus available for hourly or daily use at $7-$8/hour.
Emissions Reductions Benefits	Extensive promotion of non-motorized transportation and alternatives to single-occupant vehicles results in reduced VMT.
Project Status	Programs are in place and ongoing.

Anaheim Resort Transit

Project Location	***City of Anaheim***
Sustainability Strategy Category	**Alternate Modes:** • Convert transit buses to alternative fuels • Provide local shuttles **Transit Infrastructure:** • Improve transit service • Intercity bus transit
Project Description 	The Anaheim Resort Transit (ART) is the transportation system for the residents, employees and guests of the City of Anaheim and the greater Anaheim Resort area, including the cities of Anaheim, Garden Grove and Orange. ART's frequent service with seventeen interchangable routes allow for easy access and convenient connections. The ART runs on alternative fuel which is a clean, comfortable, safe and easy way to access access Disneyland™, Disney California Adventure™, Downtown Disney®, the Anaheim Convention Center, restaurant and shops around The Anaheim Resort™ area. All buses are accessible to persons with disabilities. A unique, stable funding source was established and implemented to provide resources for 17 transit routes in a highly congested area.
Emissions Reductions Benefits	Combined resources have reduced the need for increased taxi service and individual shuttles formerly operated by the lodging establishments.
Project Status	Project is operating successfully and service levels have not been reduced due to economic conditions.

Beach Boulevard Signal Synchronization

Project Location	***Project spans the cities of Anaheim, Buena Park, Fullerton, Huntington Beach, La Habra, Stanton and Westminster.***
Sustainability Strategy Category	**TSM:** Implement Traffic Signal Coordination
Project Description	A study conducted to evaluate the benefits of traffic synchronization along Beach Boulevard (SR-39) resulted in the following improvements: • Travel times improved between 10 percent and 16 percent • Reduced number of stops between 20 percent and 38 percent • Increased average speeds between 11 percent and 19 percent The project synchronized more than 70 intersections along Beach Boulevard.
Emissions Reductions Benefits	Traffic light synchronization allows a series of lights along a street to turn green as traffic approaches during peak traffic hours. The resulting outcome is reduced congestion. Daily traffic along Beach Boulevard near Warner Avenue and the San Diego Freeway (I-405) ranges between 17,000 and 84,000 vehicles. Traffic engineers estimate that during a three-year period the traffic light synchronization along this area will save commuters approximately 2.2 million gallons of fuel.
Project Status	Completed 

Orange County Sustainable Communities Strategy

FasTrak Tolling/Interoperability Technology

Project Location	***SR 73, 241, 133 and 261 Toll Roads, Orange County***
Sustainability Strategy Category	**TSM:** Implement effective pricing.
Project Description	TCA developed and licenses FasTrak, the technology that enables interoperability on all priced facilities in the region and the state. For example, all priced facilities in Orange and San Diego Counties currently use the FasTrak transponder technology, making the system flow more smoothly with less congestion-related GHG emissions. This technology also provides interoperability on tolled facilities statewide; OCTA's 91 Express Lanes as well as priced lanes in San Diego County and in the Bay Area also employ FasTrak.
Emissions Reductions Benefits	FasTrak is essential to uncongested operation of a broader regional priced transportation network in the future.
Project Status	Electronic tolling via the FasTrak technology is available on 460 lane miles of SR 241, SR 261, SR 133, SR 73 and SR 91. FasTrak will expand to 105 lane miles of SR241 when the facility is completed to the Orange/San Diego County line.

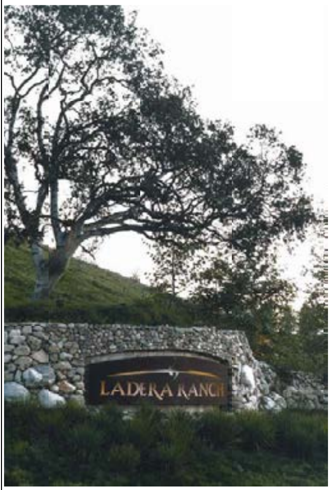
Robinson Ranch Road Traffic Calming Project

Project Location	*City of Rancho Santa Margarita*
Sustainability Strategy Category	**Transportation Infrastructure Investments:** • Traffic calming measures • Develop traffic calming systems
Project Description	The traffic calming project will construct four curb extensions along the north side of Robinson Rancho Road between Briarwood Lane and Morningside Drive, thereby reducing downhill vehicle speeds, and creating added protection for pedestrian crossings at the intersections. In addition, the curb extensions will improve sight distance for motorists exiting residential neighborhoods adjacent to Robinson Ranch Road.
Emissions Reductions Benefits	Traffic calming reduces speeds and volumes on specific roads. Typical strategies include traffic circles at intersections, raised crosswalks, and partial street closures to discourage short-cut traffic through residential neighborhoods. This reduces car use, increases road safety and creates a more pedestrian- and bicycle-friendly environment.
Project Status	Project is included in the City's Seven-Year Capital Improvement Program, and was recently awarded a Highway Safety Improvement Program project grant from the State.

Orange County Sustainable Communities Strategy

Ladera Ranch and the Ranch Plan Planned Communities

Project Location	*Southeasterly Unincorporated County of Orange*
Sustainability Strategy Category	**Land Use Policies:** • Compact building design with a mix of uses • Develop "complete communities" • Water-wise and ecologically friendly landscape plans • Horizontal or vertical mixed-use • Increasing housing densities within/adjacent to employment Areas • Local housing for local workforce • Preservation of habitat **Alternate Modes:** • Use of neighborhood electric vehicles. • Construct regional bikeways. • Upgrade bike transportation system. • Improve pedestrian infrastructure and facilities (Crown Valley pedestrian bridge).
Project Description 	**Ladera Ranch Planned Community:** In 2006, the prestigious Urban Land Institute chose Ladera Ranch as the winner of its Award of Excellence as the best planned community in the Americas. Begun in 1998 and substantially completed in 2006, Ladera Ranch set a new standard for the development of walkable master planned communities in Southern California. Its final-phase villages of Terramor and Covenant Hills have created a model for sustainable community practices; convincing many national production builders to apply green-building techniques used for the first time in Ladera Ranch to other projects around the country. **Ranch Plan Planned Community:** The Ranch Plan is a long-term land use plan approved in 2004, and likely to be developed over the next two decades. One of the corner-stone principles of the Ranch Plan is to create a community where all residents may easily and safely walk or bike to jobs, shopping, schools, parks and regional open spaces.
Emissions Reductions Benefits	**Ladera Ranch Planned Community:** • Emissions have been reduced through the creation of a Complete Community where homes, schools, shops, restaurants, offices, places of worship, child-care centers, and parks

Project Location	*Southeasterly Unincorporated County of Orange*
	all easily accessible via a short auto trip, or via the system of walking and bicycle trails. • The 1,260 home Terramor village land plan in particular emphasized walkability through the creation of a central Arroyo/Paseo trail network that doubled as a Biofiltration Treatment system. **Ranch Plan Planned Community:** • Builds upon the Ladera Ranch Complete Community model by integrating up to 5.2 million square feet of non-residential uses in addition to the 14,000 homes, including vertically integrated home-based businesses. • Incorporates an extensive system of regional and community level bikeways, hiking and walking trails that will provide linkages within and between each of the future neighborhoods and villages and to surrounding cities, nearby beaches, Caspers Regional Park and the Cleveland National Forest. • The land plan is based on the recognition that neighborhood streets are not just corridors for moving traffic, but should serve as Complete Streets; allowing social interaction, walking, biking and other transportation modes, including neighborhood electric vehicles. • Six villages have been entitled, each to be surrounded by natural open space and ranch/agriculture lands. Three quarters of the 22,815 acre Ranch Plan area will be dedicated to a conservancy to be preserved and privately managed as open space for habitat preservation (including the protection of seven threatened or endangered species, in addition to 25 sensitive species)
Project Status	**Ladera Ranch Planned Community:** • The 8,100 dwelling unit Ladera Ranch community is 99% built-out, implemented primarily between 1999 and 2006. **Ranch Plan Planned Community:** • Construction of Phase One of the Ranch Plan planned community has begun, with home sales beginning in 2013, and office and commercial uses to be built soon thereafter.

City of Aliso Viejo Green City Initiative

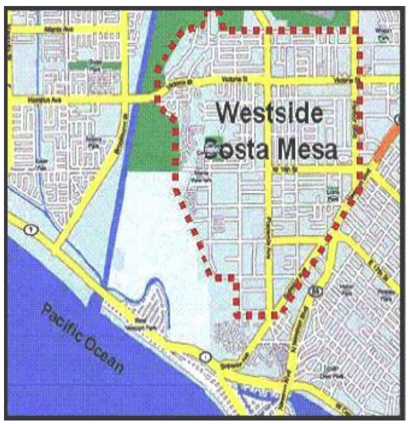
Project Location	*City of Aliso Viejo*
Sustainability Strategy Category	**Land Use Policies:** • Compact building design • Water-efficient landscape • Downtown revitalization • Enhanced energy efficiency codes • Land use and building code reform • Horizontal or vertical mixed-use • Increasing housing densities within/adjacent to employment areas • Increasing residential/commercial density near transit • Integrate affordable and market rate housing • Local housing for local workforce • Making developments transit ready • New housing and jobs within 1/2 mile of existing/planned transit stations • Provide recognition programs • Provide regulatory relief • Zoning reform • City educational programs • Reduce vehicle miles traveled • Adopt complete streets policy **Alternate Modes:** • Promote cleaner modes of transport • Trail improvement project • Improve connectivity of streets with pedestrian network • Improve pedestrian environment • Improve pedestrian infrastructure and facilities • Increase bike/balk trips with improved streets and facilities **Transit/Transportation Infrastructure:** • Enhanced bus stops • Improve transit service • Intercity bus transit • Traffic calming measures • Implement traffic signal coordination
Project Description	The Green City Initiative (GCI) will establish goals, policies and implementation actions related to energy conservation, water conservation, vehicle management,

Project Location	*City of Aliso Viejo*
	transportation, air quality, recycling, land use and adaptation to climate change, and will include requirements for a greenhouse gas emissions reduction monitoring program. Furthermore, a GCI Website has been created that posts a variety of information related to the GCI. Together with a new Facebook page, the Website will provide additional important venues for public participation in the Green City Initiative process. Finally, the City will establish a "Green Award Program" to recognize individuals and businesses who take steps to reduce their greenhouse gas emissions footprint.
Emissions Reductions Benefits	Though the impetus to GCI is in response to State legislative requirements, GCI is equally dedicated to creating a more sustainable, livable Aliso Viejo as well as about reducing GHG emissions. Furthermore, the GCI also is intended to enhance Aliso Viejo's ability to promote a healthy economic environment for residents and businesses in the City. The belief is that an enhanced "green" residential and business environment will attract and retain additional investment money and business income into Aliso Viejo – all of which contribute to a greener future.
Project Status	Project is in process, with expected completion date of December 2011.

Costa Mesa Urban Plans

Project Location	*City of Costa Mesa*
Sustainability Strategy Category 	**Land Use Policies:** • Compact building design • Horizontal or vertical mixed-use • Improve accessibility of housing to transit • Increasing residential density near transit • Infill in areas with existing infrastructure • Support revitalization of older, densely settled urban areas. • Zoning reform measures • Shared parking **Alternate Modes:** • Facilitate increased biking opportunities • Improve bicycle infrastructure and facilities **Transit Infrastructure:** • Enhanced bus stops and improve transit facilities.
Project Description 	In 2006, three Urban Plans were developed to establish overlay zones in specific areas of the westside of Costa Mesa: (1) 19 West Urban Plan, (2) Mesa West Bluffs Urban Plan, and (3) Mesa West Residential Ownership Urban Plan. West Costa Mesa is currently developed with mostly marginal commercial and light industrial uses in a great geographical location. The three main purposes of the urban plans are to do the following: • **Encourage Commercial/Residential mixed-use development** that combines residential and nonresidential uses in a single building (vertical mixed-use development) or in proximity on the same site (horizontal mixed-use development). This type of development could include office, retail, business services, personal services, public spaces and uses, and other community amenities to revitalize the area without exceeding the development capacity of the General Plan transportation system. • **Encourage adaptive reuse** of existing industrial or commercial structures, which would result in rehabilitated buildings with

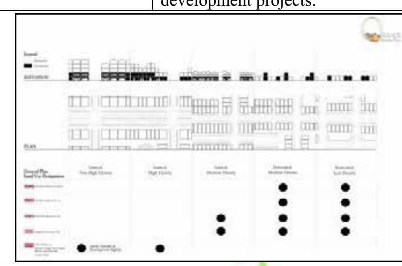
	unique architecture and a wider array of complementary uses. • **Meet demand for a new housing type** from artists, designers, craftspeople, professionals and small-business entrepreneurs.
Emissions Reductions Benefits	The urban plans provide for new housing and mixed-use development. Concentrating and intensifying development within half to one mile of the Harbor Boulevard transit corridor will encourage alternative transportation modes, reduce vehicle miles traveled and generally contribute to greener development.
Project Status	The Urban Plans were approved in 2006. Several projects for mixed-use and live-work units have been approved. One is currently under construction.



Orange County Sustainable Communities Strategy

Orange 2010 General Plan Update

Project Location	*City of Orange*
Sustainability Strategy Category	**Land Use Policies:** • Horizontal or vertical mixed-use • Increasing housing densities within/adjacent to employment areas • Increasing residential/commercial density near transit • Integrate affordable and market rate housing • Local housing for local workforce • New housing and jobs within 1/2 mile of existing/planned transit stations **Alternate Modes:** • Increase bike/walk trips with improved streets and f acilities **Transit Infrastructure:** • Enhanced bus stops • Improve transit facilities
Project Description	The Plan locates mixed-use districts around major employment and activity hubs including three regional medical centers, County justice facilities, shopping, entertainment, a university, the historic downtown Plaza, and major sports venues. Existing multi-modal transit in these areas are planned for expansion.
Emissions Reductions Benefits	The Plan's Land Use and Circulation and Mobility Elements improve efficiencies between land use and circulation, and encourage pedestrian and multi-modal linkage between neighborhoods, employment, goods, services, and recreation.
Project Status	The Plan was approved in 2010 and is under implementation through development of new mixed-use zoning standards, a transit-oriented specific plan around the Orange Transportation Center, and private development projects.



LAND USE, TRANSPORTATION, AND SUSTAINABILITY STRATEGY CONCLUSION

Orange County is engaged in a collective effort to link transportation and land uses through a wide spectrum of processes and organizations working together. This effort includes a variety of progressive measures undertaken by Orange County jurisdictions, agencies, and groups that lead to changes in the use of automobiles and light duty trucks, resulting in reductions in greenhouse gas emissions.

The scope of current and planned strategies is broad and encompasses significant investment by both the public and private sectors to implement them. They include the following:

- Promoting a land use pattern that accommodates future employment and housing needs.
- Using land in ways that make developments more compact and better links jobs, housing and major activity centers.
- Protecting natural habitats and resource areas.
- Implementing a transportation network of public transit, managed lanes and highways, local streets, bikeways, and walkways built and maintained with available funds.
- Managing demands on the transportation system (TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand.
- Managing the transportation system (TSM) through measures that maximize the efficiency of the transportation network.
- Utilizing innovative pricing policies to reduce vehicle miles traveled and traffic congestion during peak periods of demand.

These strategies are Orange County's contribution to regional strategies to achieve both 2020 and 2035 GHG thresholds established by CARB.

CHAPTER 4: COMPLYING WITH THE CLEAN AIR ACT

INTRODUCTION

SB 375 requires the SCS to allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506). This chapter describes how the strategies outlined in the OC SCS help to achieve this compliance by reducing air pollution.

AIR POLLUTION REDUCTIONS

While GHG emissions reduction is a significant goal of SB 375, the legislation recognizes that automobiles and light trucks account for 50% of air pollution in California and 70% of petroleum consumption. Established modeling methodology has shown that changes in land use and transportation policy can reduce air pollution.

The SCS strategies help to achieve the SB 375 objective of allowing the RTP to comply with the federal Clean Air Act by accomplishing one or more of the following goals:

- A reduction of Vehicle Miles Traveled (i.e., vehicles travel shorter distances from their origin to destination, by placing residential uses near work and shopping areas);
- A reduction of Vehicle Hours Traveled (i.e., vehicles spend less time on the roadways; they may travel the same distance as before, but reduced congestion and stop-and-start activity improves travel time); and,
- Minimizing the use of gasoline-powered vehicles by increasing the use of non-motorized travel, alternative fuel vehicle use, or shared rides.

Many of the strategies to reduce GHG emissions outlined in the OC SCS, including the sustainability strategies detailed in Appendix F, also will achieve at least one of the above actions. Air pollution can be reduced by avoiding extra miles, reducing traffic congestion, and reducing the number of gasoline-powered vehicles with single occupants. In doing so, they will help meet the federal air pollutant concentration standards, and provide significant assistance to California's goals of implementing the federal and state Clean Air Acts and reducing its dependence on petroleum.

Additionally, OC SCS strategies help to reduce smog-forming and other emissions that pose health risks. Further, many of the strategies provide increased opportunities for people to be physically active which can improve people's general health, potentially reduce costs of transportation by offering alternative choices, and increase social benefits by providing increased mobility for people who do not have the option of using a passenger vehicle (e.g., disabled, economically disadvantaged, etc.).

CLEAN AIR ACT CONCLUSION

Implementation of the strategies outlined in the OC SCS is expected to result in decreased air pollution, allowing the RTP and OC SCS to comply with the federal Clean Air Act.

CHAPTER 5: RESOURCE AREAS AND FARMLAND

INTRODUCTION

SB 375 requires the SCS to gather and consider the best practically available scientific information regarding resource areas and farmland in the region. This chapter provides a summary of the resource areas and farmlands located within Orange County. These lands are considered unavailable for development, thus focusing future development in more dense cores and along major transportation infrastructure.

California Department of Fish and Game: California Natural Diversity Database (CNDDB)

The CNDDB is a "natural heritage program" under the auspices of CDFG and is part of a nationwide network of similar programs, all of which provide location and natural history information on special status plants, animals, and natural communities to the public, other agencies, and conservation organizations. The data help drive conservation decisions, aid in the environmental review of projects and land use changes, and provide baseline data helpful in recovering endangered species and research projects. The CNDDB used here (Figure 59) has been pared down further, to highlight only those species considered rare, threatened, or endangered according to the State of California or the United States government. Sightings that were considered less accurate (greater than an 80m [meter] area) were also omitted.

The CNDDB is updated monthly and contains information that has been mapped at the parcel level to about 1:24,000 scale. The November 2010 CNDDB is used in this document, which is applicable to County-level maps.

National Flood Hazard Layer

The National Flood Hazard Layer (NFHL) created and maintained by Federal Emergency Management Agency (FEMA) is a compilation of effective flood insurance rate maps and Letter of Map Change. In its basic form, NFHL shows areas within the 100-year

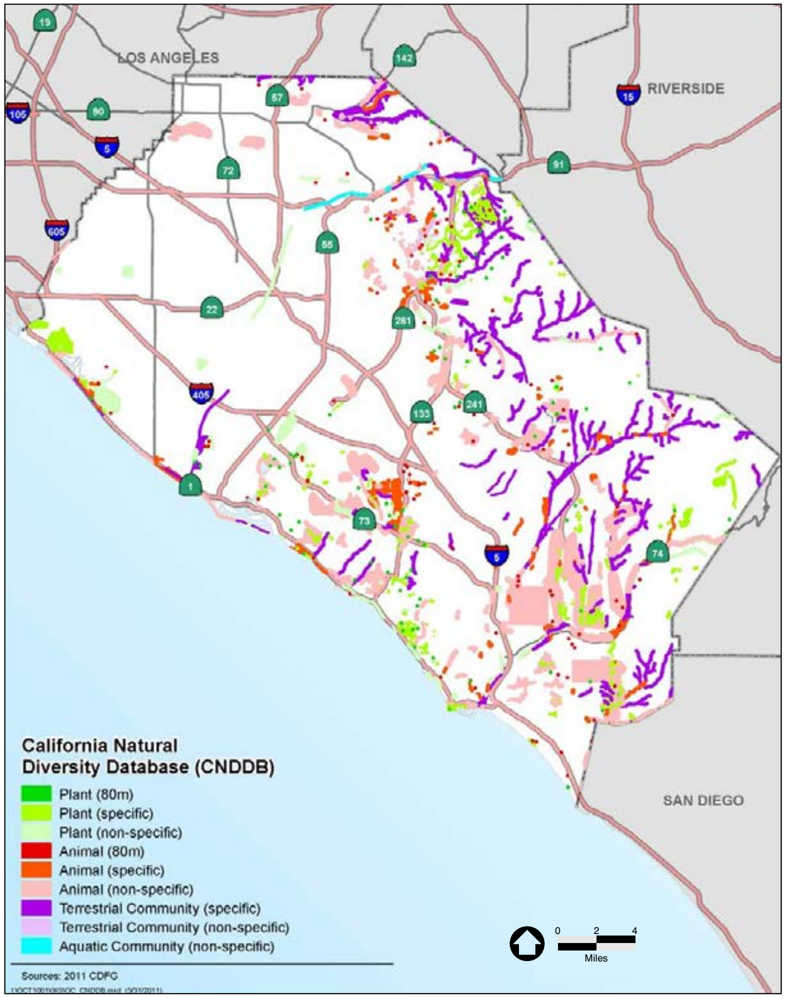


Figure 59 **California Natural Diversity Database**

Orange County Sustainable Communities Strategy

floodplain at risk of flood damage during such an event. The NFHL on Figure 60 has been mapped at a scale of 1:6,000 or better (i.e., a larger scale) and is applicable for County-level maps. The information is updated approximately quarterly; September 2010 is the date of the information used here.

Natural Community Conservation Planning (NCCP)

In 1991, the California legislature passed the NCCP Act to encourage a collaborative process for regional planning. As a result, natural open space reserves have been set aside in the coastal and central portions of Orange County.

The NCCP is administered by the U. S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and the County of Orange and is designed to protect open space associated with species preservation. Within each NCCP boundary, set areas are open space reserves and natural corridor linkages that allow for animals to move from one to another. Any potential changes from the existing open space land use to another type of land use must be reviewed thoroughly by USFWS, CDFG, and the County, and be consistent with the goals of the NCCP.

The reserves for the central and coastal NCCP have been established, but the reserve for the southern NCCP has not been fully approved and is still awaiting CDFG approval. That being said, the southern NCCP reserve will not be modified significantly upon CDFG approval and should be viewed as an area where land use changes are discouraged.

For the most part, the NCCP depicted on Figure 61 has been mapped at the parcel level and is applicable for County level maps. The dates for the datasets used in the mapping are as follows:

- NCCP, Central & Coastal: August, 2010
- NCCP, Southern: 2006

California Protected Areas Database (CPAD)

The California Protected Areas Database (CPAD) is a GIS inventory of all lands owned by agencies whose general mission is to continue the open space uses on them. The database contains lands held in fee ownership by public agencies and non-profits; it does not contain data on private conservation and other similar public agency easements. This information is collected and compiled by GreenInfo Networks on an as-needed basis, which usually runs about once a year. The CPAD database highlights public lands owned or managed by the federal government, State of California, Orange County, or local city or non-governmental agency.

Orange County Sustainable Communities Strategy

Figure 60 **Flood Hazard Layer**

Orange County Sustainable Communities Strategy

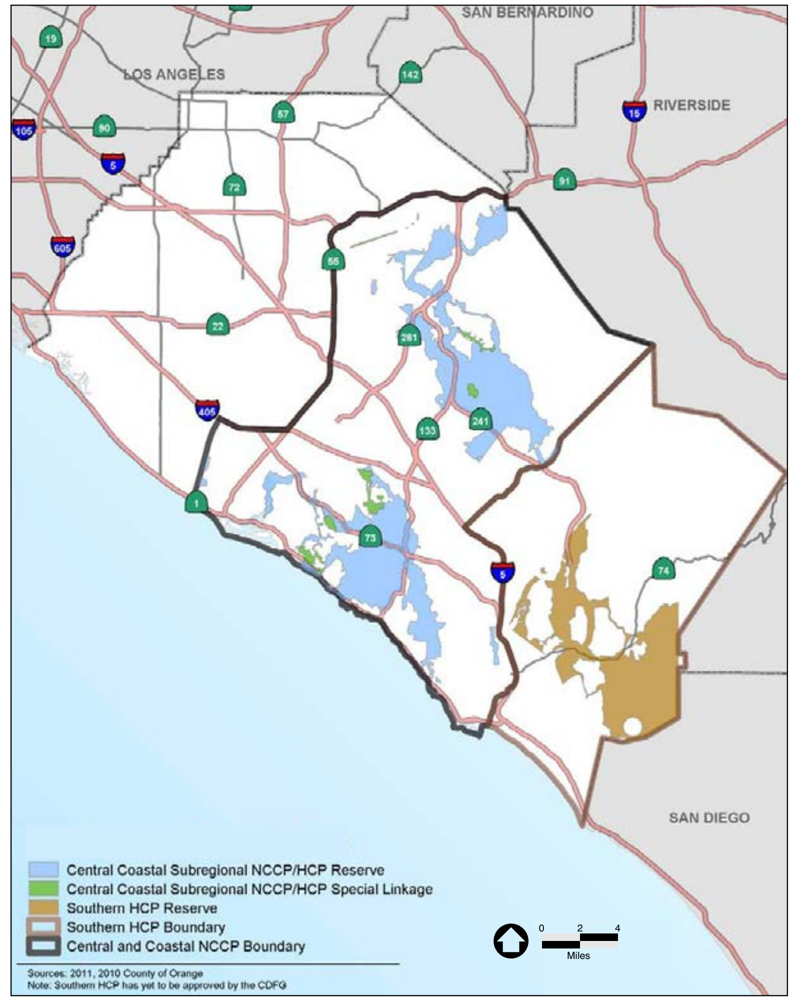


Figure 61 **Natural Community Conservation Plan**

The CPAD version used for Figure 62 is version 1.5 (June 2010). The data was compiled by GreenInfo Networks. The scale of mapping is done at 1:24,000 (or larger) and is applicable to County level maps.

Farmland Mapping Provided by the USDA Farmland Monitoring and Mapping Program (FMMP)

The FMMP was established in 1982 in response to a critical need for assessing the location, quality, and quantity of agricultural lands, and conversion of these lands over time. FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California.

Specific farmland was identified using the FMMP dataset created for Orange County in 2008 by the U. S. Department of Agriculture. Of all of the categories of farmland, only Prime Farmland, Farmland of Statewide Importance, and Unique Farmland were identified and used in our mapping. While the conversion of agricultural land to nonagricultural uses represents an important environmental concern which requires appropriate discussion in environmental documents prepared pursuant to the California Environmental Quality Act (CEQA), development of such land is not prohibited by law.

Farmland mapping through the FMMP occurs biennially (depending on governmental funding levels), the most current year for Orange County being 2008. The scale of mapping for Figure 63 is 1:24,000 and is applicable to County level maps.

Williamson Act parcels (separate from the FMMP but part of the overall conservation effort of farmlands) do not exist within Orange County. The last Williamson Act parcels were located in Rancho Mission Viejo in the southern part of Orange County and expired by 2008.

USFWS Critical Habitat

The USFWS creates and manages critical habitat for a variety of species deemed to be endangered or threatened due to habitat loss. These critical habitat areas are identified by the USFWS as areas critical to the species survival and success. Each critical habitat is unique to the species it covers.

The various critical habitats are all mapped on Figure 64 at a scale of 1:24,000 or greater and are applicable to County-level maps. Following are the dates of the various critical habitats mapped in our mapping:

- Arroyo Toad: 2/11/2011
- Braunton's Milk-vetch: 12/14/2006
- Coastal California Gnatcatcher: 12/19/2007

Orange County Sustainable Communities Strategy

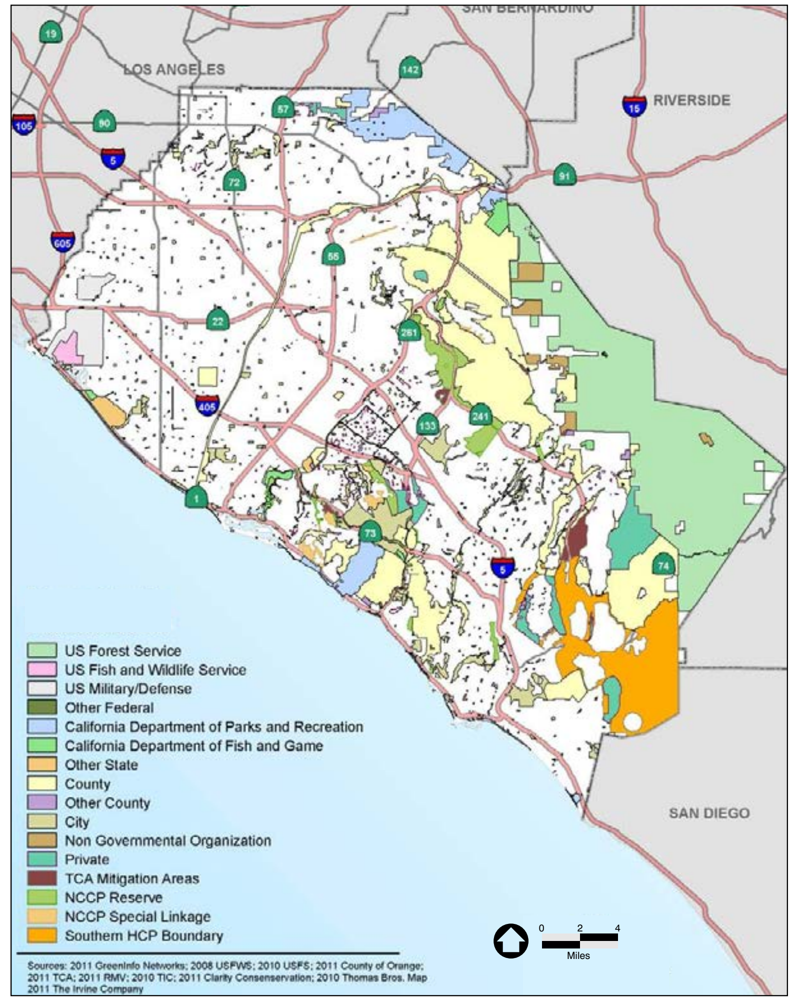


Figure 62 California Protected Areas Database

Orange County Sustainable Communities Strategy

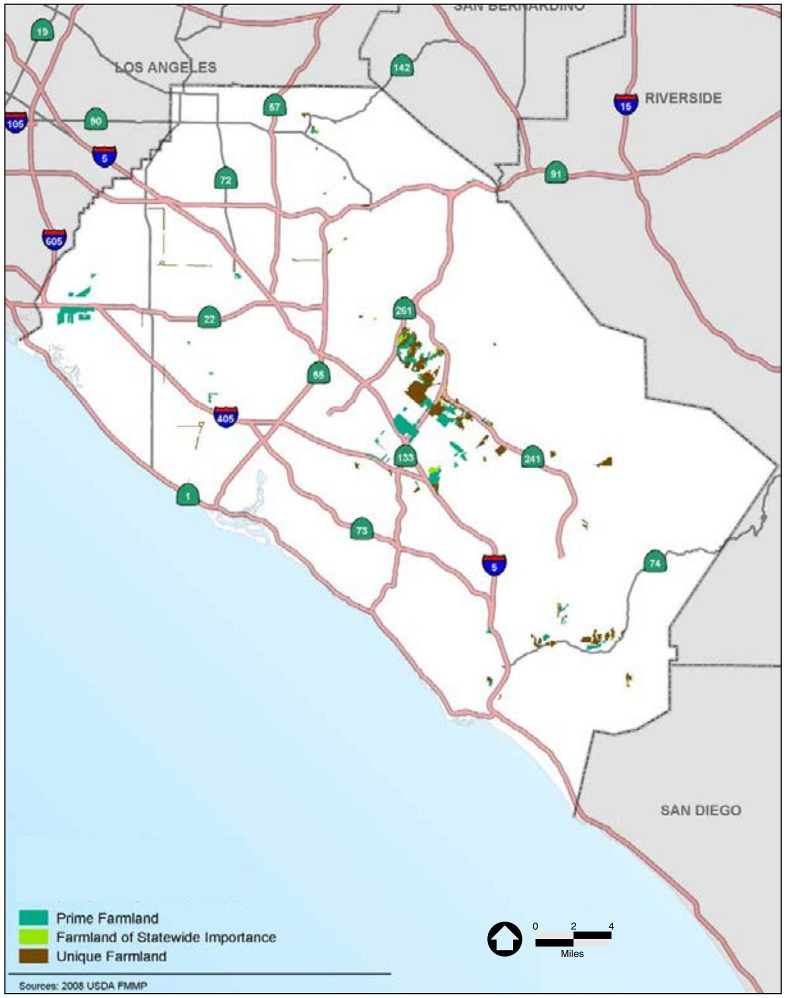


Figure 63

Farmland Monitoring and Mapping Program

Orange County Sustainable Communities Strategy

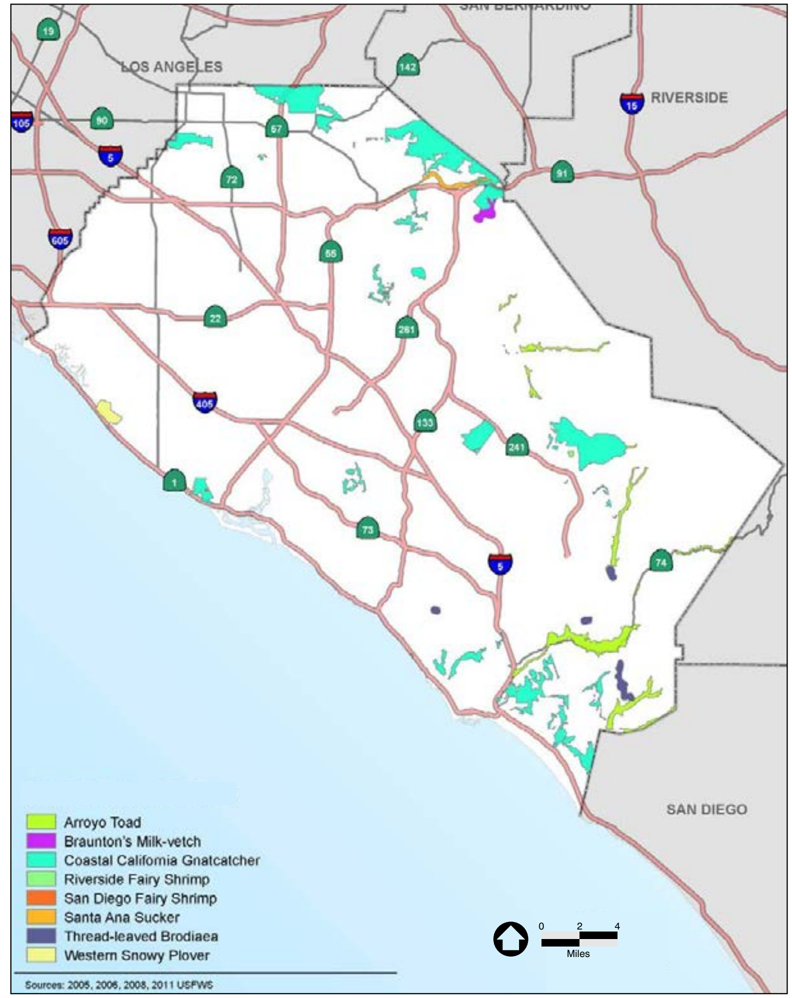


Figure 64

U. S. Fish and Wildlife Service Critical Habitat

- Riverside Fairy Shrimp: 5/12/2005
- San Diego Fairy Shrimp: 1/11/2008
- Santa Ana Sucker: 1/13/2011
- Thread-leaved Brodiaea: 2/11/2011
- Western Snowy Plover: 10/31/2005

Measure M2 Mitigation Program

M2 includes a comprehensive Environmental Mitigation Program that provides landscape-level mitigation to offset environmental impacts for the 13 freeway improvement projects using five percent of M2 freeway program revenue. OCTA is implementing the mitigation program through a collaborative partnership with CDFG, USFWS, Caltrans, and the environmental community.

The M2 mitigation program was among a handful of projects identified by the OCTA Board of Directors that allowed for early planning, advance funding, and implementation. In late 2010, the Board of Directors authorized expenditure of approximately $42 million for acquisition of natural lands (inclusive of long-term management costs) as part of the M2 Environmental Mitigation Program. Additional funds are anticipated to be available in the future; the specific amount of funds available will be dependent on the revenue stream from the sales tax measure. A suite of the most biologically valuable properties and those that most closely align with the freeway impacts are under consideration and/or negotiation. This program is conducted through a voluntary process, similar to private open market transactions. Offers have been made to a number of properties and it is conceivable that the initial funding allocation could yield over a thousand acres of acquired open space properties throughout Orange County. OCTA will receive streamlined permits from the resource agencies for its freeway projects.

Orange County Sustainable Communities Strategy

RESOURCE AND FARMLAND CONCLUSION

Following is a summary of the resource areas and farmland described above:

Areas that fall within a category of the CNDDB would most likely be protected as a natural resource or habitat, so they would not support residential development under SB 375.

SB 375 excludes areas where it has been "determined that the flood management infrastructure designed to protect that land is not adequate to avoid the risk of flooding."

NCCP reserves and/or special linkages (central, coastal, and southern NCCP) do not support residential development under SB 375 and are protected open space areas.

The public lands or open-space lands identified in the CPAD do not support residential development under SB 375. The CPAD areas should be considered as protected open space areas.

Development of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland often constitutes a significant impact under CEQA. Critical habitat represents land that has been preserved for existing natural resources and is therefore not suitable for residential development under SB 375.

Approximately $42 million has been authorized for the acquisition and long-term management of natural lands as part of the M2 Environmental Mitigation Program. Additional funds are anticipated to be available in the future; the specific amount of funds available will be dependent on the revenue stream from the sale tax measure.

APPENDICES

Orange County Sustainable Communities Strategy

APPENDIX A

SCAG LETTER TO CARB CONDITIONING GHG EMISSIONS REDUCTIONS

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS
Main Office
818 West Seventh Street
12th Floor
Los Angeles, California
90017-3435
t (213) 236-1800
f (213) 236-1825
www.scag.ca.gov

September 20, 2010

Ms. Mary Nichols
Chair,
California Air Resources Board
PO Box 2815
Sacramento, CA 95812

Dear Chairwoman Nichols:

This letter is to transmit the Regional Council action of September 2, 2010 regarding the upcoming Air Resources Board (ARB) meeting to consider establishing greenhouse gas emission reduction targets for 2020 and 2035 in accordance with SB 375 (Steinberg).

The Regional Council at its September meeting approved the following motion:

"SCAG recommends to ARB the following targets for GHG reductions: in 2020, 6%, and in 2035, 8%. And, if ARB accepts the 11 recommendations or the 11 items that we have (see attached report), including adding in fully funding the redevelopment funds and adding the self-help projects/counties, then SCAG would sit down with ARB as a partner and renegotiate the higher numbers."

Thank you for your consideration of this recommendation. As you may be aware, the recommendation came after a long discussion and hearing public input from numerous stakeholders in our region.

SCAG Regional Council looks forward to working with the ARB to successfully implementing SB 375 requirements. Please feel free to contact Mr. Hasan Ikhrata, SCAG Executive Director or me at 213-236-1800 should you have any questions or comments.

Sincerely,

Larry McCallon
SCAG President
Councilmember, City of Highland

CC: James Goldstein
Lynn Terry
Terry Roberts
Regional Council

REPORT

DATE: September 2, 2010

TO: Regional Council (RC)
Community, Economic, and Human Development Committee (CEHD)
Energy and Environment Committee (EEC)
Transportation Committee (TC)

FROM: Hasan Ikhrata, Executive Director, (213) 236-1844, ikhrata@scag.ca.gov

SUBJECT: SB 375 Final Draft Regional Targets

EXECUTIVE DIRECTOR'S APPROVAL:

RECOMMENDED ACTION:
Support the California Air Resources Board's (ARB) staff recommended SB 375 final draft greenhouse gas (GHG) emission reduction targets of 8% for 2020 and 13% for 2035. This support for the final draft targets are conditioned upon a combination of the following actions or alternative equivalent measures:

- Restoration of previous levels of State funding for transportation, transit in particular.
- Continued leadership by the regional partners to increase availability of State funds for the region.
- Continued partnership by the state and regional partners to increase availability of state funding for the region.
- Continuing partnership and commitment from each County Transportation Commission (CTC) to support the SCS development process, including a focus on non-motorized transportation solutions.
- Continued leadership by the regional leaders to increase availability of federal funding through the next transportation authorization and through climate change legislation.
- ARB will commit to working with MPOs, local governments, state agencies and the Legislature to identify, pursue and secure adequate incentives and sustainable sources of funding for local and regional planning and other activities related to the implementation of SB 375.
- Targeted increase in funding commitments for Transportation Demand Management, non-motorized transportation (walk and bike), transit, transportation, redevelopment and other necessary funding from Federal, State and local agencies.
- Timely implementation of the "30-10" proposed acceleration for Measure R projects in Los Angeles County.
- Improvements in land use planning in cooperation with local governments, mostly at the neighborhood scale.
- Expanded funding for Compass Blueprint demonstration projects, a voluntary city/county grant program directed to sustainable planning objectives (as discussed at the SCAG General Assembly).
- Implementation of Green Cities voluntary recognition and awards program (as discussed at the General Assembly).

EXECUTIVE SUMMARY:
On August 9, 2010, the ARB released a staff report recommending final draft GHG targets for each region pursuant to SB 375. This report summarizes activity leading up to this stage, and recommends action for the Regional Council in response to ARB's staff recommendation. This report contains (A) a

REPORT

description of what is required for the region to succeed in meeting targets, (B) a rationale supporting the staff's recommendation, (C) an update and chronology of events leading up to the release of the final draft targets, and (D) identification of anticipated next steps.

STRATEGIC PLAN:

1. Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies
   a. Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.
2. Obtain Regional Transportation Infrastructure Funding and Promote Legislative Solutions for Regional Planning Priorities

BACKGROUND:

Since SB 375 went into effect in January 2009, SCAG has worked to ensure this region's successful implementation of this important legislation. The long term importance of this legislation and the efforts and dialogue it has thus far generated, a statewide policy discussion has occurred as to how to best implement SB 375 that ensures California's future regarding the key issues of land use, transportation and emissions reduction.

One of the keys in achieving a successful outcome of SB 375 includes obtaining from the ARB appropriate per capita GHG reduction targets for 2020 and 2035. The appropriate targets for SCAG are those that can be achieved with a sound Sustainable Communities Strategy (SCS) in the Regional Transportation Plan (RTP), while still challenging the region to submit a SCS plan in 2012 that successfully achieved the targets established by the ARB.

ARB has sole discretion to adopt regional targets under SB 375, but has engaged in a collaborative process to enable stakeholder input and collaboration of the MPOs as well as other stakeholders as a part of their final decision-making process. After considerable additional analysis and discussion, both with stakeholders in over 100 outreach meetings within the SCAG region as well as with our major MPO partners throughout California, SCAG staff recommends support of the targets proposed by ARB staff in their August 9 staff report of 8% in 2020 and 13% in 2035, based on the ambitious principal.

In making this recommendation, it is acknowledged that these targets will not be easily achieved and cannot be met by adopting a "business as usual" approach. Successful implementation is predicated on several key assumptions outlined below where SCAG, in partnership with cities, counties, the business community, and county transportation commission's, must work together in the next year to develop and submit a SCS plan that achieves the goals set by ARB. This report outlines certain areas of change that appear to be achievable based on current data, the final and more specific analysis of how these goals can best be met will occur as part of the next phase of the implementation process as we prepare and then complete a SCS for the SCAG region.

These final draft targets for SCAG are on par with those currently proposed by the other three major MPOs in the State (Bay Area, Sacramento and San Diego) and, while certainly challenging for Southern California, they are possibly achievable based on updated assumptions and analysis of the options and resources

REPORT

available to SCAG for the 2012 RTP/SCS. Staff recommends that working together with the Federal and State governments, this region needs to make the effort to do all that it reasonably can to meet these targets. Such an effort will allow this region to be successful both in developing a SCS as required by SB 375 and, more importantly, positioning our region to create opportunities for a substantially improved quality of life for our residents and businesses in the areas of public health, congestion relief, air quality and land use.

A. Path Forward

In March 2009, the Regional Council and policy committees set broad goals for the implementation of SB 375 in the SCAG region. These goals included a strong preference for achieving the GHG target with the SCS contained within the RTP, and not resorting to the optional, unconstrained Alternative Planning Strategy (APS). SCAG has been actively involved in the target setting process, including developing five scenarios for input to ARB. Those initial scenarios demonstrated achievability of targets of 7-8% for 2020 and 5-6% for 2035. Since that time, the three other large MPOs in the State developed scenarios that were more aggressive, achieving up to 19% per capita reductions in 2035. Consequently, SCAG staff performed additional sensitivity testing of 2035 scenarios that considered additional Transportation Demand Management (TDM) and non-motorized measures (equivalent to SANDAG's 2035 scenario), refined forecasting analysis of local socioeconomic input, revised modeling parameters, and off-model analyses. The tests indicate that a 13% or more per capita reduction target in 2035 is very ambitious, but possibly achievable, assuming successful implementation of projected regional projects (including 30-10 plan in Los Angeles County) and commitments from the State and Federal governments as outlined in the staff recommendation. The specific revised analysis to demonstrate achievability of these targets is described further below, under "Rationale and Outcomes."

SCAG has placed a high degree of importance on input and involvement from key partners and stakeholders throughout the target setting process and will continue to do so during the development of the SCS. As part of SCAG's review of ARB's final draft targets, staff has provided briefings to the Plans and Programs Technical Advisory Committee, County Transportation Commission's Executive Officers, Southern California Leadership Council (SCLC), Greater Land Use Economic Council (GLUE), AQMD, individual business meetings, individual and group environmental stakeholders meetings, and others. The staff recommendation reflects input from these groups.

Input from the key regional stakeholders has been summarized below:

- Environmental Groups: Staff conducted several meetings with representatives from the environmental community (including the National Resources Defense Council (NRDC), Environmental Defense Fund (EDF), Climateplan, Clean Air Coalition, and Move LA) During these meetings, staff responded to extensive questioning about the SCAG submitted target setting methodology, modeling assumptions, and whether the proposed seven scenarios considered in setting a target range for 2020 and 2035 GHG reduction were sufficiently ambitious. The general consensus received from these discussions was that SCAG could do more GHG reduction by 2035 than SCAG staff is recommending to the SCAG Board. Further, these environmental groups indicated they intended to transmit correspondence to the Regional Council and ARB. Members requested SCAG staff provide another option which clarifies what it would take (i.e., funding and other actions) to do more than 13% GHG goal proposed by ARB staff. Staff indicated they would continue to consider all relevant information as part of the upcoming development of the SCS Plan.

REPORT

- Business Groups: Staff met several times with business leaders (including the SCLC, GLUE, Building Industry Association of Southern California (BIA), and the Irvine Company, including representatives from Orange County Business Council (OCBC), Orange County Transportation Authority (OCTA) and Orange County Council of Governments (OCCOG) to discuss the SCAG staff recommendation supporting the ARB staff recommendation with the conditions outlined above to achieve the proposed 2020 and 2035 GHG reduction targets. There was general consensus from the meetings, given the state of the California economy, that there is significant risk to the region to support a higher GHG goal than originally submitted to ARB without an ARB Board funding commitment to partner with SCAG. They indicated that it is imperative that ARB Board commit to a funding partnership with SCAG to achieve the 2035 GHG reduction goals by providing incentive funding for activities such as expanded compass program for cities/counties who want to voluntary implement the ARB goals. In addition, the SCLC has transmitted a letter to ARB addressing other actions the Board could take to reduce GHG and at the same time improve the economy.

- Regional Transportation Agencies Executive Officers: Staff has regularly sought input from the Chief Executive Officers (CEOs) of the County Transportation Commissions as the ARB target setting process has preceded. Staff met with the CEOs on August 20 and provided an update on staff's recommendation to support the ARB staff GHG target recommendations pending Regional Council support on September 2. Full partnership with the Commissions is essential to the successful development of a SCS in 2012 and accepted by ARB. Meaningful GHG reduction in the transportation sector can only be accomplished with the support of the Commissions. The Commissions are mandated to fulfill the voter approved local sales tax transportation programs. In addition, program State and Federal transportation funds that will support clean fuel alternatives, provide increased modal alternatives to single occupancy vehicles, reduce congestion chokeholds, increase bikeway program investments, and increase transportation demand management options (such as HOV lane expansion, congestion pricing, signal synchronization, etc.). The overall consensus of the discussion at the CEOs meeting was to support SCAG staff recommendation with the understanding of the need to clarify in writing that ARB will be a full funding partner with the region to implement SB 375 GHG goals. At the point of this report being prepared no Board actions of the CTCs have yet taken place.

A key component of the anticipated path forward is SCAG's commitment to an expanded Compass Blueprint program and the development of a new Green Cities Initiative. The Compass Blueprint program has created a successful collaboration with local government for 84 demonstration projects throughout the SCAG region to implement strategies consistent with the goals of SB 375. These strategies include in-fill development, transit oriented development, mixed use, and neighborhood design to encourage walking and biking. SCAG's new Green Cites Initiative, announced at the General Assembly is anticipated to provide voluntary tools and tracking capacity for local government in preparing sustainability plans. Further, the program will allow local governments to compete for awards and recognition for the communities doing the most to reduce GHG emissions. As part of the staff recommendation included in this report, SCAG will be seeking a commitment from ARB to assist in pursuing and securing further funding for these programs.

B. Rationale and Outcomes

As mentioned, ARB has the sole discretion to determine regional targets. That said, it is important for SCAG to participate in the process of determining targets in order to ensure the appropriate planning is done

REPORT

to best position this region's ability to achieve these targets and to remain competitive with the rest of the State.

The proposed final GHG targets, particularly those for 2035, would be challenging for the SCAG region, in that it would be necessary to move substantially beyond status quo commitments in a number of areas. Nevertheless, staff believes it is important for SCAG, as the largest region in the State, to continue to establish a responsible leadership role in the implementation of SB 375. The targets as currently proposed are in approximate parity with each of the major regions in California, as shown below under "Chronology." This approximate parity with other regions is important, especially if any future State funding opportunities or criteria were to be based on these targets. Each of the other three large MPOs at this point has formally recommended a GHG target as reflected in the ARB staff report.

As noted, SCAG has prepared further scenario analysis that demonstrates that a 13% target, or more, can be attainable with significant funding from State, Federal and regional sources in 2035 assuming certain adjustments to both policy measures and technical assumptions. Specifically, SCAG tested a scenario with the following assumptions beyond those included in the 2008 RTP and the analysis that was performed earlier this year for the initial SCAG draft targets:

a) In conjunction with the Compass Blueprint program already included in the analysis, recent local input on an improved jobs/housing balance was analyzed.

b) A 1% reduction in home-based work trips, 174% increase in vanpools, 144% increase in carpools, and 20% increase in walk/bike to school (e.g., "safe routes to school"), which is similar to the TDM levels assumed by SANDAG in their 2035 scenario;

c) A 2.5 % reduction in VMT associated with non-motorized transportation;

d) Additional auto operating cost increase of $0.02/mile to a total of $0.24/mile (e.g., increases in fuel costs, repairs, maintenance, tires, and accessories); and

e) Capturing on-going local land use and community design improvement through off-model analysis, beyond that which has already been accounted for within the Compass Blueprint program.

As outlined by the conditions that are a part of staff's recommendation, in order to demonstrate achievement of a 13% target through the SCS, SCAG , its partners and the State and Federal governments would need to show commitment to implement and fund the underlying measures, or measures that achieve equivalent results. While the analysis shows the potential for such a target to be met, it should not be interpreted to mean that the region could do so without significant challenge and additional resources.

While the current focus is on target setting, it needs to be recognized that this entire effort and the overall intent behind SB 375 is to encourage regions throughout California to engage in a concerted, but reasonable effort, to put the State on a path toward a more sustainable future. In this light, as compared to the performance of the existing 2008 RTP, achieving the 13% per capita GHG reduction target in 2035 would be expected to result in the following estimated outcomes:

REPORT

- 1.7 million hours reduction in daily vehicle delays, equivalent to $7.7 billion annual cost savings (in 2009 dollars) due to congestion relief
- 3.4 million gallons daily reduction in light and medium vehicle fuel consumption
- 3.2 tons daily reduction in NOx and 2.9 tons daily reduction in PM10

Beyond these important outcomes for increasing the region's livability for 19 million residents, the region would accrue related benefits in public health due to reduced emissions exposure and illness, increased productivity, and economic activity due to reduced congestion and transportation cost.

At present, our current capacity to more specifically measure benefits and outcomes is limited both by time and by the availability of proper data and tools. As a function of the on-going MPO consultation efforts, regions are working to develop a set of performance measures that could be applied to the SCS statewide. Additionally, SCAG is continually working to improve our technical tools, including those made available to the local government members for their own planning processes.

C. Chronology

The chronology leading to ARB's determination of final regional targets includes:

- SCAG region outreach and dialogue among members and stakeholders – on-going, beginning November 2008 (more than 100 meetings to date)
- Completion of statewide Regional Targets Advisory Committee (RTAC) report, establishing parameters and process for target setting – September 2009
- Regional Workshop to review the RTAC report (Ontario) – November 18, 2009
- Consultation with other Metropolitan Planning Organizations (MPOs) on scenario development and other issues – September 2009 to present
- Development of five "sketch" scenarios to establish range of "ambitious/achievable" targets for the SCAG region – January 2010 to May 2010
- Regional Council authorization for SCAG staff to submit target information and recommendation to ARB – April 2, 2010
- General Assembly and Regional Conference (La Quinta) featuring review and discussion on target scenario – May 5-6, 2010
- Formal submittal of target scenarios in coordination with other large MPOs – May 18, 2010
- ARB release of preliminary draft GHG targets – June 30, 2010, as follows:
  - SCAG - 5-10% for 2020, 3-12% for 2035
  - SANDAG - 5-10% for 2020, 5-19% for 2035
  - MTC - 5-10% for 2020, 3-12% for 2035
  - SACOG - 5-10% for 2020, 13-17% for 2035
- Additional analysis testing scenarios assumptions and measures – May 18, 2010 to present
- ARB release of final draft GHG targets – August 9, 2010, as follows:
  - SCAG - 8% for 2020, 13% for 2035
  - SANDAG - 7% for 2020, 13% for 2035
  - MTC - 7% for 2020, 15% for 2035
  - SACOG - 7% for 2020, 16% for 2035
- Comments due to ARB on the final draft targets – September 22, 2010
- Scheduled ARB hearing to adopt targets – September 23, 2010

REPORT

Staff has reported extensively to the Regional Council and policy committees at critical stages of the targets setting process. Background information on target setting, including the RTAC report, SCAG and other regional scenarios, and ARB's staff report on proposed final targets are available on ARB's website - http://www.arb.ca.gov/cc/sb375/sb375.htm, and on SCAG's website, www.scag.ca.gov/sb375.

D. Next Steps

Pending direction from the Regional Council, SCAG will participate in the conclusion of the target setting process, including providing written comments and testimony at the September 23 ARB hearing. Subsequently, the focus will shift to the development of the 2012 RTP/SCS and the process to seek and define commitment to the steps and options as described above.

Of note for SCAG region local jurisdictions, staff is developing a round of workshops that will engage local governments, CTCs, and regional stakeholders (including the business community and environmental community) on the development of the SCS. Finally, SCAG staff continues to take steps to implement the expansion of Compass Blueprint and the Green Cities award and recognition program discussed at the General Assembly. Future staff reports to the Regional Council will request input and discussion on these new initiatives.

Staff has prepared a draft comment letter to ARB in response to their August 9 staff report. The comment letter includes the recommendations contained in this staff report and associated comments. The draft letter is attached to this report.

Staff has attached the correspondence received to date. Subsequently received correspondence received related to this matter will be distributed at the meeting.

FISCAL IMPACT:
SCAG staff work to implement SB 375 is included in the 2010-2011 Overall Work Program 020.SCG0599.

ATTACHMENTS
1) Target scenario and analysis matrix
2) Draft comment letter to ARB
3) Correspondence received as of August 27th

Reviewed by: ______________________
Department Director

Reviewed by: ______________________
Chief Financial Officer

APPENDIX B

SCAG/OCCOG/OCTA MOU
SCAG Framework and Guidelines

Orange County Sustainable Communities Strategy

OC SCS: THE PROCESS

Public Participation

SCAG is leading the regional public participation process for the SCAG Regional SCS. In December 2009, SCAG approved a Public Participation Plan that includes public involvement in the development of the Regional SCS, as follows:

- Hold at least two informational meetings in each county for members of the Board of Supervisors and/or City Councils in order to present a draft of the SCS and to solicit and consider their input and recommendations.
- Hold at least three iterative public workshops per county (with the exception of Imperial County, where only one is required) in order to provide the public with the information and tools necessary to provide a clear understanding of SCS related issues and policy choices.
- Hold at least three public hearings on the draft SCS in the RTP, in different parts of the region, in order to maximize the opportunity for public participation throughout the region.

In addition to the SCAG outreach described above, the OCCOG Board directed staff to augment the regional effort with local outreach. The following is a brief description of the enhanced public outreach conducted in Orange County by OCCOG.

Local Jurisdictions

Orange County is made up of 34 cities and the County of Orange, which represents the unincorporated communities. Representatives from each of these 35 local jurisdictions participated in the creation of the OC SCS through a variety of means including the following:

- Development and approval of OCP-2010
- Providing input on the OC SCS outline and draft document
- Contributing strategic counsel regarding the approach to creating an OC SCS

Local jurisdictions participated in the development of the OC SCS by providing important background and setting information, incorporation of critical sustainability strategies, including transportation and land use strategies, and opportunities and ramifications for OC SCS implementation.

Public Meetings
All of the OCCOG Board and TAC meetings and meetings of the joint OCTA/OCCOG Sustainable Communities Strategy Joint Working Committee—created to guide and oversee the development of the OC SCS—were open to the public. At various milestones

in the development of the OC SCS (e.g., the project schedule, approval of the OCP-2010 data, the draft outline, and the draft SCS), items were brought to these policy and technical groups for review, discussion and input. Public comments were solicited at each meeting.

Stakeholder Roundtables
OCCOG hosted a series of roundtables with Orange County nonprofit organizations representing housing, health care, environment, transportation, and education. At these roundtables, staff introduced the OC SCS process, provided status reports on the OC SCS, and gathered feedback throughout the development of the OC SCS.

Web Tool
A web tool was created for the OC SCS to facilitate and document public engagement in the local SCS process (www.oc-scs.org). The web tool provided general information about SB 375, the regional and local SCS, and the various organizations involved in the development of the SCS. The web tool also was used for distribution of key OC SCS documents including a draft outline for the OC SCS, and draft and final draft versions of the complete text and maps of the proposed OC SCS. Comments on these documents were compiled and became part of the comprehensive record of public participation in the OC SCS (to be provided as an Appendix to the final document).

Documentation
Clearly outlined in the SCAG/OCCOG/OCTA MOU is a requirement to deliver to SCAG comprehensive documentation of the OC SCS process and public participation, including meeting notices, agendas, minutes, comments and responses to comments, handouts and presentations. This documentation has been compiled and will be included as an Appendix to the final version of the OC SCS.

MEMORANDUM OF UNDERSTANDING NO. C-0-1712
BY AND BETWEEN
ORANGE COUNTY TRANSPORTATION AUTHORITY
AND
ORANGE COUNTY COUNCIL OF GOVERNMENTS
AND
THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
FOR ORANGE COUNTY SUSTAINABLE COMMUNITIES STRATEGY

THIS MEMORANDUM OF UNDERSTANDING (hereinafter referred to as "MOU") is entered by and between the Orange County Transportation Authority, (hereinafter referred to as "AUTHORITY"), the Orange County Council of Governments, (hereinafter referred to as "OCCOG"), and the Southern California Association of Governments, (hereinafter referred to as "SCAG"), collectively referred to as the "Parties."

RECITALS:

WHEREAS, Senate Bill 375 (Chapter 728, laws of 2008, "SB 375") requires SCAG to prepare a regional Sustainable Communities Strategy (hereinafter referred to as "SCS" or "Regional SCS") as part of SCAG's Regional Transportation Plan (RTP) to achieve goals for the reduction of greenhouse gas emissions from automobiles and light trucks in the SCAG region which comprises the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura;

WHEREAS, SB 375 allows AUTHORITY, as the county transportation commission for Orange County, and OCCOG, as a subregional council of governments for Orange County, to develop and submit to SCAG a subregional SCS for Orange County (hereinafter referred to as "Orange County SCS");

WHEREAS, as part of its implementation of SB 375, SCAG has developed and adopted a certain "Framework and Guidelines for the Subregional Sustainable Communities Strategy" (hereinafter referred to as "Framework and Guidelines"), attached hereto as Exhibit "A" and incorporated herein by this reference.

WHEREAS, SCAG is required by SB 375 to include a subregional SCS in the regional SCS, to the extent consistent with state and federal law, including the SCS conducted by Orange County; and

WHEREAS, AUTHORITY, OCCOG and SCAG desire to enter into this MOU to demonstrate mutual commitments to prepare the Orange County SCS.

NOW, THEREFORE, the Parties enter into the following MOU with respect to the matters set forth herein:

1. This MOU establishes the roles, responsibilities, and requirements for AUTHORITY, OCCOG, and SCAG that are necessary to develop an Orange County SCS that shall be included in the regional SCS prepared by SCAG.

2. AUTHORITY and OCCOG shall prepare the Orange County SCS consistent with SCAG's adopted Framework and Guidelines, as attached hereto, to ensure that the region can successfully incorporate strategies within the Orange County SCS into the Regional SCS, and not inhibit the region from complying with SB 375.

3. AUTHORITY and OCCOG agree to comply with the Milestones Schedule, attached hereto as Exhibit "B" and incorporated by this reference, and work with SCAG and the other subregions to ensure the successful delivery of a regional SCS by using the Deliverables Template, attached hereto as Exhibit "C" and incorporated herein by this reference as the primary template for developing a subregional SCS workplan. The Deliverables Template may be subject to change, based on direction from the SCAG Regional Council or Community, Economic and Human Development Policy Committee, and approval by OCCOG.

4. AUTHORITY shall prepare the transportation element of the Orange County SCS through AUTHORITY'S Long-Range Transportation Plan (LRTP). Such transportation element shall, at a minimum, identify a transportation network (i.e., list of transportation projects) to service the

transportation needs of Orange County, and describe transportation policies (e.g., Transportation Demand Management and Transportation System Management strategies).

5. OCCOG shall prepare the Orange County SCS, and use AUTHORITY'S LRTP as the transportation element of the Orange County SCS.

6. OCCOG and AUTHORITY are encouraged by SCAG to conduct a public participation process in developing the Orange County SCS, above and beyond the process required for the regional SCS required under Section 65080(b)(2)(D)-(E) of the California Government Code. Further, SCAG encourages OCCOG to develop a public participation plan, similar to SCAG's Public Participation Plan adopted in December 2009, for such purposes.

7. OCCOG and AUTHORITY agree to participate in all publicly noticed meetings, workshops, hearings, and other outreach activities organized in Orange County by SCAG at which the regional SCS or Orange County SCS is included on the agenda. All parties shall coordinate with one another during implementation of SCAG's public participation process in order to ensure broad public and stakeholder participation, and to avoid duplication of effort.

8. OCCOG and AUTHORITY shall retain and deliver to SCAG all documentation pertaining to the Orange County SCS from publicly noticed meetings, workshops, and hearings at which the Orange County SCS is included on the agenda. Such documentation shall include but is not limited to meeting notices, agendas, minutes, comments and responses to comments, sign-up sheets, handouts, and copies of power point presentations.

9. AUTHORITY, OCCOG, and SCAG acknowledge that population, housing, and employment estimates are being prepared by the Center for Demographic Research at California State University Fullerton through the Orange County Projection process and the 2012 RTP growth forecasting process (hereinafter referred to as the "OCP dataset"). SCAG agrees to use the OCP dataset as reviewed and approved by OCCOG, for the Regional SCS and the 2012 RTP; provided, that SCAG, in consultation with OCCOG, may make adjustments to the OCP dataset in order to ensure consistency with SCAG's 2012 RTP growth forecast.

10. AUTHORITY and Orange County local agencies shall provide SCAG with population, employment, and housing estimates in transportation analysis zone (TAZ) format consistent with the Orange County Transportation Analysis Model (OCTAM).

11. AUTHORITY agrees to incorporate new land use-transportation interactions into OCTAM, and these shall include, at a minimum, net residential and employment densities, jobs/housing diversity, design characteristics, and destination accessibility.

12. The Parties agree and acknowledge that population, housing, and employment data submitted to SCAG by OCCOG and AUTHORITY shall be accurately reflected in all documentation produced by SCAG that relates to the Orange County SCS and Regional SCS.

13. The Parties agree and acknowledge that RHNA responsibilities shall remain with SCAG, and neither AUTHORITY nor OCCOG shall assume delegation responsibility for RHNA as part of the Orange County SCS development. However, neither AUTHORITY nor OCCOG is precluded by this MOU from assuming delegation responsibility for RHNA as part of a subsequent, separate agreement.

14. SCAG agrees to accept AUTHORITY's LRTP as Orange County's program of transportation projects as input for the 2012 Regional Transportation Plan.

15. SCAG agrees to acknowledge that the Renewed Measure M program is exempt from SB 375 requirements, to the extent consistent with SB 375 and the final, adopted California Transportation Commission RTP guidelines.

16. SCAG agrees that in addition to preparation of the Orange County SCS developed under this MOU, development of an Alternative Planning Strategy (APS) by AUTHORITY and OCCOG is optional. This understanding shall not preclude SCAG from preparing a regional APS pursuant to SB 375.

17. SCAG shall not develop SCS related targets that are attributable to the subregions.

18. SCAG agrees that it will not impose a penalty on the Orange County subregion if the greenhouse gas targets, as established by the California Air Resources Board, are not met by the Regional SCS.

19. SCAG shall accept the Orange County SCS prepared in accordance with this MOU, as the Orange County subregion's input into the Regional SCS prepared by SCAG.

20. AUTHORITY, OCCOG, and SCAG shall separately amend this MOU in writing or develop a separate, mutual funding agreement addressing Orange County SCS costs should state or federal funding become available that can be applied toward preparation of the Orange County SCS.

21. AUTHORITY, OCCOG, and SCAG agree to work closely together throughout the regional SCS process and Orange County SCS process to provide technical input, applicable planning data, and constructive feedback with respect to all documents, products and deliverables developed and associated with the Orange County SCS.

22. The AUTHORITY, OCCOG, and SCAG agree to work together in good faith, using reasonable efforts to resolve any unforeseen issues and disputes arising out of the performance of this MOU.

23. The Parties agree in good faith to provide the resources necessary to implement the provisions of the MOU.

24. AUTHORITY, OCCOG, and SCAG agree to defend, indemnify and hold harmless the other parties, their Officers, agents, elected officials, and employees, from all liability, claims, losses and demands, including defense costs and reasonable attorneys' fees, whether resulting from court action or otherwise, arising out of the acts or omissions of the defending party, its officers, agents, or employees, in the performance of the MOU. When acts or omissions of one party are directed by another party, the party directing the acts or omission shall owe this defense and indemnity obligation to the agencies following the directions. The provisions of this paragraph shall survive termination of this MOU.

25. This MOU shall be governed by all applicable federal, state, and local laws. The signatories warrant that in the performance of this MOU, each shall comply with all applicable federal, state and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated there under.

26. This MOU may only be modified or amended upon written mutual consent of all signatories. All modifications, amendments, changes and revisions of this MOU in whole or part, and from time to time, shall be binding upon the parties, so long as the same shall be in writing and executed by the signatories.

27. This MOU, including all exhibits and documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the term(s) and condition(s) of the agreement between the parties and it supersedes all prior representations, understandings and communications. The invalidity in whole or part of any term or condition of this MOU shall not affect the validity of the other term(s) or condition(s).

28. Any party may withdraw from this MOU upon 30 days written notice to the other, until the due date set forth in Exhibit "B" for submittal to SCAG of the preliminary Orange County SCS. After such due date, any party may withdraw from this MOU only upon mutual written agreement by all Parties.

29. Each signatory shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any incident of fire, flood; acts of God; commandeering of material, produces, plants or facilities by federal, state or local government; national fuel shortage; or a material act or omission by any other party; when satisfactory evidence of such cause is presented to the other parties, and provided further such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.

30. Any notice sent by first class mail, postage paid, to the address and addressee, shall be deemed to have been given when in the ordinary course it would be delivered. The representatives of the parties who are primarily responsible for the administration of this MOU, and to whom notices, demands and communications shall be given are as detailed in Exhibit "D". If there are any changes in the names and/or addresses listed in Exhibit "D", the party desiring to make such changes shall give a written notice to the other respective parties within five (5) days of such change.

31. This MOU shall continue in full force and effect from the Effective Date up to and until the date that the Regional SCS is adopted by SCAG's Regional Council, unless otherwise terminated earlier in accordance with section 28 of this MOU. The Effective Date of this MOU shall mean the date (last date indicated below) that all parties have fully executed this MOU.

[Signature Page to follow.]

MEMORANDUM OF UNDERSTANDING NO. C-0-1712

IN WITNESS WHEREOF, the Parties hereto have caused this MOU No. C-0-1712 to be executed by their duly authorized representatives.

ORANGE COUNTY TRANSPORTATION AUTHORITY ("Authority")

By ________________ Date: 9/21/10

Will Kempton, Chief Executive Officer

ORANGE COUNTY COUNCIL OF GOVERNMENTS ("OCCOG")

By ________________ Date: 9/20/10

Kristine Murray, Executive Director

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS ("SCAG")

By ________________ Date: 9/15/2010

Hasan Ikhrata, Executive Director

Page 8 of 8

Exhibit A: SCAG's Adopted Framework and Guidelines

Southern California Association of Governments

(Approved by Regional Council - April 1, 2010)

FRAMEWORK AND GUIDELINES for SUBREGIONAL SUSTAINABLE COMMUNITIES STRATEGY

I. INTRODUCTION

SB 375 (Steinberg), also known as California's Sustainable Communities Strategy and Climate Protection Act, is a new state law which became effective January 1, 2009. SB 375 calls for the integration of transportation, land use, and housing planning, and also establishes the reduction of greenhouse gas (GHG) emissions as one of the main goals for regional planning. SCAG, working with the individual County Transportation Commissions (CTCs) and the subregional organizations within the SCAG region, is responsible for implementing SB 375 in the Southern California region. Success in this endeavor is dependent on collaboration with a range of public and private partners throughout the region.

Briefly summarized here, SB 375 requires SCAG as the Metropolitan Planning Organization to:

- Prepare a Sustainable Communities Strategy (SCS) as part of the 2012 Regional Transportation Plan (RTP). The SCS will meet a State-determined regional GHG emission reduction target, if it is feasible to do so.
- Prepare an Alternative Planning Strategy (APS) that is not part of the RTP if the SCS is unable to meet the regional target.
- Integrate SCAG planning processes, in particular assuring that the Regional Housing Needs Assessment (RHNA) is consistent with the SCS, at the jurisdiction level.
- Specific to SCAG only, allow for subregional SCS/APS development.
- Develop a substantial public participation process involving all stakeholders.

Unique to the SCAG region, SB 375 provides that "a subregional council of governments and the county transportation commission may work together to propose the sustainable communities strategy and an alternative planning strategy . . . for that subregional area." Govt. Code §65080(b)(2)(C). In addition, SB 375 authorizes that SCAG "may adopt a framework for a subregional SCS or a subregional APS to address the intraregional land use, transportation, economic, air quality, and climate policy relationships." ***Id.*** Finally, SB 375 requires SCAG to "develop overall guidelines, create public participation plans, ensure coordination, resolve conflicts, make sure that the overall plan complies with applicable legal requirements, and adopt the plan for the region." ***Id.***

The intent of this Framework and Guidelines for Subregional Sustainable Communities Strategy (also referred to herein as the "Framework and Guidelines" or the "Subregional Framework and Guidelines") is to offer the SCAG region's subregional agencies the highest degree of autonomy,

flexibility and responsibility in developing a program and set of implementation strategies for their subregional areas. This will allow the subregional strategies to better reflect the issues, concerns, and future vision of the region's collective jurisdictions with the input of the fullest range of stakeholders. In order to achieve these objectives, it is necessary for SCAG to develop measures that assure equity, consistency and coordination, such that SCAG can incorporate the subregional SCSs in its regional SCS which will be adopted as part of the 2012 RTP pursuant to SB 375. For that reason, this Framework and Guidelines establishes standards for the subregion's work in preparing and submitting subregional strategies, while also laying out SCAG's role in facilitating and supporting the subregional effort with data, tools, and other assistance.

While the Framework and Guidelines are intended to facilitate the specific subregional option to develop the SCS (and APS if necessary) as described in SB 375, SCAG encourages the fullest possible participation from all subregional organizations. As SCAG undertakes implementation of SB 375 for the first time, SCAG has also designed a "collaborative" process, in cooperation with the subregions, that allows for robust subregional participation for subregions that choose not to exercise their statutory option.

II. ELIGIBILITY AND PARTICIPATION

SB 375 allows for subregional councils of governments in the SCAG region to have the option to develop the SCS (and the APS if necessary) for their area. SCAG interprets this option as being available to any subregional organization recognized by SCAG, regardless of whether the organization is formally established as a "subregional council of governments."

County Transportation Commissions (CTCs) play an important and necessary role in the development of a subregional SCS. Any subregion that chooses to develop a subregional strategy will need to work closely with the respective CTC in its subregional area in order to identify and integrate transportation projects and policies. Beyond working with CTCs, SCAG encourages partnership efforts in the development of subregional strategies, including partnerships between and among subregions.

Subregional agencies must formally indicate to SCAG, in writing, by December 31, 2009 if they intend to exercise this option to develop their own SCS. Subregions that choose to develop an SCS for their area must do so in a manner consistent with this Framework and Guidelines. The subregion's intent to exercise its statutory option to prepare the strategy for their area must be decided and communicated through formal action of the subregional agency's governing board. Subsequent to receipt of any subregion's intent to develop and adopt an SCS, SCAG will convene discussions regarding a formal written agreement between SCAG and the subregion, which may be revised if necessary, as the SCS process is implemented.

III. FRAMEWORK

The Framework portion of this document covers regional objectives and policy considerations, and provides general direction to the subregions in preparing their own SCS, and APS if necessary.

A. SCAG's preliminary goals for implementing SB 375 are as follows:

- Achieve the regional GHG emission reduction target for cars and light trucks through an SCS.
- Fully integrate SCAG's planning processes for transportation, growth, intergovernmental review, land use, housing, and the environment.
- Seek areas of cooperation that go beyond the procedural statutory requirements, but that also result in regional plans and strategies that are mutually supportive of a range of goals.
- Build trust by providing an interactive, participatory and collaborative process for all stakeholders. Provide, in particular, for the robust participation of local jurisdictions, subregions and CTCs in the development of the SCAG regional SCS and implementation of the subregional provisions of the law.
- Assure that the SCS adopted by SCAG and submitted to California Air Resources Board (ARB) is a reflection of the region's collective growth strategy and vision for the future.
- Develop strategies that incorporate and are respectful of local and subregional priorities, plans, and projects.

B. Flexibility

Subregions may develop any appropriate strategy to address the region's greenhouse gas reduction goals and the intent of SB 375. While subregions will be provided with SCAG data, and with a conceptual or preliminary scenario to use as a helpful starting point, they may employ any combination of land use policy change, transportation policy, and transportation investment, within the specific parameters described in the Guidelines.

C. Outreach Effort and Principles

Subregions are required to conduct an open and participatory process that includes the fullest possible range of stakeholders. As further discussed within the Guidelines, SCAG amended its existing Public Participation Plan (PPP) to describes SCAG's responsibilities in complying with the outreach requirements of SB 375 and other applicable laws and regulations. SCAG will fulfill its outreach requirements for the regional SCS/APS which will include outreach activities regarding the subregional SCS/APS. Subregions are also encouraged to design their own outreach process that meets each subregion's own needs and reinforces the spirit of openness and full participation. To the extent that subregions do establish their own outreach process, this process should be coordinated with SCAG's outreach process.

D. Communication and Coordination

Subregions developing their own SCS are strongly encouraged to maintain regular communication with SCAG staff, the respective CTC, their jurisdictions and other stakeholders, and other subregions if necessary, to review issues as they arise and to assure close coordination. Mechanisms for on-going communication should be established in the early phases of strategy development.

E. Planning Concepts

SCAG, its subregions, and member cities have established a successful track record on a range of land use and transportation planning approaches through the on-going SCAG Compass Blueprint Program, including approximately 60 local demonstration projects completed to date. Subregions are

encouraged to capture, further develop and build off the concepts and approaches of the Compass Blueprint program. In brief, these include developing transit-oriented, mixed use, and walkable communities, and providing for a mix of housing and jobs.

IV. GUIDELINES

These Guidelines describe specific parameters for the subregional SCS/APS effort under SB 375, including process, deliverables, data, documentation, and timelines. As described above, the Guidelines are created to ensure that the region can successfully incorporate strategies developed by the subregions into the regional SCS, and that the region can comply with its own requirements under SB 375. Failure to proceed in a manner consistent with the Guidelines will result in SCAG not accepting a subregion's submitted strategy.

A. Subregional Process

(1) <u>Subregional Sustainable Communities Strategy</u>

Subregions that choose to exercise their optional role under SB 375 will develop and adopt a subregional Sustainable Communities Strategy. That strategy must contain all of the required elements, and follow all procedures, as described in SB 375. Subregions may choose to further develop an Alternative Planning Strategy (APS), according to the procedures and requirements described in SB 375. If subregions prepare an APS, they must prepare a Sustainable Communities Strategy first, in accordance with SB 375. A subregional APS is not "in lieu of" a subregional SCS, but in addition to the subregional SCS. In part, an APS must identify the principal impediments to achieving the targets within the SCS. The APS must show how the GHG emission targets would be achieved through alternative development patterns, infrastructure, and additional transportation measures or policies. SCAG encourages subregions to focus on feasible strategies that can be included in the SCS.

The subregional SCS must include all components of a regional SCS as described in SB 375, and outlined below:

(i.) identify the general location of uses, residential densities, and building intensities within the subregion;
(ii.) identify areas within the subregion sufficient to house all the population of the subregion, including all economic segments of the population, over the course of the planning period of the RTP taking into account net migration into the region, population growth, household formation and employment growth;
(iii.) identify areas within the subregion sufficient to house an eight-year projection of the regional housing need for the subregion pursuant to Section 65584;
(iv.) identify a transportation network to service the transportation needs of the subregion;
(v.) gather and consider the best practically available scientific information regarding resource areas and farmland in the subregion as defined in subdivisions (a) and (b) of Section 65080.01;
(vi.) consider the state housing goals specified in Sections 65580 and 65581;
(vii.) set forth a forecasted development pattern for the subregion, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the ARB; and

(viii.) allow the RTP to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506). See, Government Code §65080(b)(2)(B).

In preparing the subregional SCS, the subregion will consider feasible strategies, including local land use policies, transportation infrastructure investment (e.g., transportation projects), and other transportation policies such as Transportation Demand Management (TDM) strategies (which includes pricing), and Transportation System Management (TSM) strategies. Technological measures may be included if they exceed measures captured in other state and federal requirements (e.g., AB32).

As discussed further below (under "Documentation"), subregions need not constrain land use strategies considered for the SCS to current General Plans. In other words, the adopted strategy need not be fully consistent with local General Plans currently in place. However, should the adopted subregional strategy deviate from General Plans, subregions will need to demonstrate the feasibility of the strategy by documenting any affected jurisdictions' willingness to adopt the necessary General Plan changes.

The regional SCS shall be part of the 2012 RTP. Therefore, for transportation investments included in a subregional SCS to be valid, they must also be included in the 2012 RTP. Further, such projects need to be scheduled in the RTIP for construction completion by the target years (2020 and 2035) in order to demonstrate any benefits as part of the SCS. As such, subregions will need to collaborate with the respective CTC in their area to coordinate the subregional SCS with future transportation investments. It should also be noted that the California Transportation Commission is updating their RTP Guidelines. This topic is likely to be part of further discussion through the SCS process as well.

SCAG will accept and incorporate the subregional SCS, unless (a) it does not comply with SB 375, (b) it is does not comply with federal law, or (c) it is does not comply with SCAG's Subregional Framework and Guidelines. In the event that a compiled regional SCS, including subregional submissions, does not achieve the regional target, SCAG will initiate a process to develop and consider additional GHG emission reduction measures region-wide. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process. Furthermore, SCAG will compile and disseminate performance information on the preliminary regional SCS and its components in order to facilitate regional dialogue. The development of a subregional SCS does not exempt any subregion from further GHG emission reduction measures being included in the regional SCS. Further, all regional measures needed to meet the regional target will be subject to adoption by the Regional Council, and any additional subregional measures beyond the SCS submittal from subregions accepting delegation needed to meet the regional target must also be adopted by the subregional governing body.

(2) <u>Subregional Alternative Planning Strategy (APS)</u>

Subregions are encouraged to focus their efforts on feasible measures that can be included in an SCS. In the event that a subregion chooses to prepare an APS, the content of a subregional APS should be consistent with what is required by SB 375 (***see***, Government Code §65080(b)(2)(H)), as follows:

(i.) Shall identify the principal impediments to achieving the subregional SCS.

(ii.) May include an alternative development pattern for the subregion pursuant to subparagraphs (B) to (F), inclusive.
(iii.) Shall describe how the alternative planning strategy would contribute to the regional greenhouse gas emission reduction target, and why the development pattern, measures, and policies in the alternative planning strategy are the most practicable choices for the subregion.
(iv.) An alternative development pattern set forth in the alternative planning strategy shall comply with Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, except to the extent that compliance will prevent achievement of the regional greenhouse gas emission reduction targets approved by the ARB.
(v.) For purposes of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), an alternative planning strategy shall not constitute a land use plan, policy, or regulation, and the inconsistency of a project with an alternative planning strategy shall not be a consideration in determining whether a project may have an environmental effect.

Any precise timing or submission requirements for a subregional APS will be determined based on further discussions with subregional partners. As previously noted, a subregional APS is in addition to a subregional SCS.

(3) <u>Outreach and Process</u>

SCAG will fulfill all of its outreach requirements under SB 375 for the regional SCS/APS, which will include outreach regarding any subregional SCS/APS. SCAG staff has revised its Public Participation Plan to incorporate the outreach requirements of SB 375, and integrate the SB 375 process with the 2012 RTP development as part of SCAG's Public Participation Plan Amendment No. 2, adopted by SCAG's Regional Council on December 3, 2009. Subsequent to the adoption of the PPP Amendment No. 2, SCAG will continue to discuss with subregions and stakeholders the Subregional Framework & Guidelines, which further describe the Public Participation elements of SB 375.

Subregions that elect to prepare their own SCS or APS are encouraged to present their subregional SCS or APS, in coordination with SCAG, at all meetings, workshops and hearings held by SCAG in their respective counties. Additionally, the subregions would be asked to either provide SCAG with their mailing lists so that public notices and outreach materials may also be posted and sent out by SCAG, or SCAG will provide notices and outreach materials to the subregions for their distribution to stakeholders. The SCAG PPP Amendment No. 2 provides that additional outreach may be performed by subregions. Subregions are strongly encouraged to design and adopt their own outreach processes that mimic the specific requirements imposed on the region under SB 375. Subregional outreach processes should reinforce the regional goal of full and open participation, and engagement of the broadest possible range of stakeholders.

(4) <u>Subregional SCS Approval</u>

It is recommended that the governing board of the subregional agency approve the subregional SCS prior to submission to SCAG. While the exact format is still subject to further discussion, SCAG recommends that there be a resolution from the governing board of the subregion with a finding that the land use strategies included in the subregional SCS are feasible and based upon consultation with the local jurisdictions in the respective subregion. Subregion should consult with their legal counsel as to compliance with the California Environmental Quality Act (CEQA). In SCAG's view, the

subregional SCS is not a "project" for the purposes of CEQA; rather, the 2012 RTP which will include the regional SCS is the actual "project" which will be reviewed for environmental impacts pursuant to CEQA. As such, the regional SCS, which will include the subregional SCSs, will undergo a thorough CEQA review. Nevertheless, subregions approving subregional SCSs should consider issuing a notice of exemption under CEQA to notify the public of their "no project" determination and/or to invoke the "common sense" exemption pursuant to CEQA Guidelines § 15061(b)(3).

Finally, in accordance with SB 375, subregions are strongly encouraged to work in partnership with the CTC in their area. SCAG can facilitate these arrangements if needed.

(5) <u>Data Standards</u>

SCAG is currently assessing the precise data standards anticipated for the regional and subregional SCS. In particular, SCAG is reviewing the potential use of parcel data and development types currently used for regional planning. At present, the following describes the anticipated data requirements for a subregional SCS.

1. Types of Variables
   Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables include land uses, residential densities, building intensities, etc, as described in SB 375.

2. Geographical Levels
   SCAG is considering the collection and adoption of the data at a small-area level as optional for local agencies in order to make accessible the CEQA streamlining provisions under SB 375. The housing unit, employment, and the land use variables can be collected at a small-area level for those areas which under SB 375 qualify as containing a "transit priority project" (i.e. within half-mile of a major transit stop or high-quality transit corridor) for purposes of allowing jurisdictions to take advantage of the CEQA streamlining incentives in SB 375.

   For all other areas in the region, SCAG staff will collect the population, household, employment, and land use variables at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years
   The socio-economic and land use variables will be required for the base year of 2008, and the target years of 2020 and 2035.

(6) <u>Documentation</u>

Subregions are expected to maintain full and complete records related to the development of the subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board.

(7) Timing

An overview schedule of the major milestones of the subregional process and its relationship to the regional SCS/RTP is included below. Subregions must submit the subregional SCS to SCAG by the date prescribed. Further, SCAG will need a preliminary SCS from subregions for the purpose of preparing a project description for the 2012 RTP Program Environmental Impact Report. The precise content of this preliminary submission will be determined based on further discussions. The anticipated timing of this preliminary product is approximately February 2011.

(8) Relationship to Regional Housing Needs Assessment (RHNA) and Housing Element

Although SB 375 calls for an integrated process, subregions are not automatically required to take on RHNA delegation as described in State law if they prepare an SCS/APS. However, SCAG encourages subregions to undertake both processes due to their inherent connections.

SB 375 requires that the RHNA allocated housing units be consistent with the development pattern included in the SCS. ***See***, Government Code §65584.04(i). Population and housing demand must also be proportional to employment growth. At the same time, in addition to the requirement that the RHNA be consistent with the development pattern in the SCS, the SCS must also identify areas that are sufficient to house the regional population by income group through the RTP planning period, and must identify areas to accommodate the region's housing need for the next local Housing Element eight year planning period update. The requirements of the statute are being further interpreted through the RTP guidelines process. Staff intends to monitor and participate in the guideline process, inform stakeholders regarding various material on these issues, and amend, if necessary, these Framework and Guidelines, pending its adoption.

SCAG will be adopting the RHNA and applying it to local jurisdictions at the jurisdiction boundary level. SCAG staff believes that consistency between the RHNA and the SCS may still be accomplished by aggregating the housing units contained in the smaller geographic levels noted in the SCS and including such as part of the total jurisdictional number for RHNA purpose. SCAG staff has concluded that there is no consistency requirement for RHNA purposes at sub-jurisdictional level, even though the SCS is adopted at the smaller geographic level for the opportunity areas.

The option to develop a subregional SCS is separate from the option for subregions to adopt a RHNA distribution, and subject to separate statutory requirements. Nevertheless, subregions that develop and adopt a subregional SCS should be aware that the SCS will form the basis for the allocation of housing need as part of the RHNA process. Further, SCS development requires integration of elements of the RHNA process, including assuring that areas are identified to accommodate the 8 year need for housing, and that housing not be constrained by certain types of local growth controls as described in State law.

SCAG will provide further guidance for subregions and a separate process description for the RHNA.

B. COUNTY TRANSPORTATION COMMISSIONS' ROLES AND RESPONSIBLITIES

Subregions that develop a subregional SCS will need to work closely with the CTCs in their area in order to coordinate and integrate transportation projects and policies as part of the subregional SCS. As discussed above (under "Subregional Sustainable Communities Strategy"), any transportation

projects identified in the subregional SCS must also be included in the 2012 RTP in order to be considered as a feasible strategy. SCAG can help to facilitate communication between subregions and CTCs.

C. SCAG ROLES AND RESPONSIBLITIES

SCAG's roles in supporting the subregional SCS development process are in the following areas:

(1) Preparing and adopting the Framework and Guidelines

SCAG will adopt these Framework and Guidelines in order to assure regional consistency and the region's compliance with law.

(2) Public Participation Plan

SCAG will assist the subregions by developing, adopting and implementing a Public Participation Plan and outreach process with stakeholders. This process includes consultation with congestion management agencies, transportation agencies, and transportation commissions; and SCAG will hold public workshops and hearings. SCAG will also conduct informational meetings in each county within the region for local elected officials (members of the board of supervisors and city councils), to present the draft SCS, and APS if necessary, and solicit and consider input and recommendations.

(3) Methodology

As required by SB 375, SCAG will adopt a methodology for measuring greenhouse gas emission reductions associated with the strategy.

(4) Incorporation/Modification

SCAG will accept and incorporate the subregional SCS unless it does not comply with SB 375, federal law, or the Subregional Framework and Guidelines. As SCAG intends the entire SCS development process to be iterative, SCAG will not amend a locally-submitted SCS. SCAG may provide additional guidance to subregions so that subregions may make amendments to its subregional SCS as part of the iterative process, or request a subregion to prepare an APS if necessary. Further, SCAG can propose additional regional strategies if feasible and necessary to achieve the regional emission reduction target with the regional SCS. SCAG will develop a written agreement with each subregional organization to define a process and timeline whereby subregions would submit a draft subregional SCS for review and comments to SCAG, so that any inconsistencies may be identified and resolved early in the process.

(5) Modeling

SCAG currently uses a Trip-Based Regional Transportation Demand Model and ARB's EMFAC model for emissions purposes. In addition to regional modeling, SCAG is developing tools to evaluate the effects of strategies that are not fully accounted for in the regional model. SCAG is also developing two additional tools – a Land Use Model and an Activity Based Model – to assist in strategy development and measurement of outcomes under SB 375.

In addition to modeling tools which are used to measure results of completed scenarios, SCAG is developing a scenario planning tool for use in workshop settings as scenarios are being created with jurisdictions and stakeholders. The tool will be made available to subregions and local governments for their use in subregional strategy development.

(6) Adoption/Submission to State

After the incorporation of subregional strategies, SCAG will finalize and adopt the regional SCS as part of the 2012 RTP. SCAG will submit the SCS to ARB for review as required in SB 375.

(7) Conflict Resolution

While SB 375 requires SCAG to develop a process for resolving conflicts, it is unclear at this time the nature or purpose of a conflict resolution process as SCAG does not intend to amend a locally-submitted SCS. As noted above, SCAG will accept the subregional SCS unless it is inconsistent with SB 375, federal law, or the Subregional Framework and Guidelines. SCAG will also request that a subregion prepare an APS if necessary. It is SCAG's intent that the process be iterative and that there be coordination among SCAG, subregions and their respective jurisdictions and CTCs. SCAG is open to further discussion on issues which may generate a need to establish a conflict resolution process as part of the written agreement between SCAG and the subregional organization.

(8) Funding

Funding for subregional activities is not available at this time, and any specific parameters for future funding are speculative. Should funding become available, SCAG anticipates providing a share of available resources to subregions. While there are no requirements associated with potential future funding at this time, it is advisable for subregions to track and record their expenses and activities associated with these efforts.

(9) Preliminary Scenario Planning

SCAG will work with each subregion to collect information and prompt dialogue with each local jurisdiction prior to the start of formal SCS development. This phase of the process is identified as "preliminary scenario planning" in the schedule below. The purpose of this process is to create a base of information to inform SCAG's recommendation of a regional target to ARB prior to June 2010. All subregions are encouraged to assist SCAG in facilitating this process.

(10) Data

SCAG is currently developing, and will provide each subregion with datasets for the following:

(1) 2008 Base year;
(2) General Plan/Growth projection & distribution;
(3) Trend Baseline; and
(4) Policy Forecast/SCS.

While the Trend Baseline is a technical projection that provides a best estimate of future growth based on past trends and assumes no general plan land use policy changes, the Policy Forecast/ SCS is derived using local input through a bottom-up process, reflecting regional policies including transportation investments. Local input is collected from counties, subregions, and local jurisdictions.

Data/GIS maps will be provided to subregions and local jurisdiction for their review. This data and maps include the 2008 base year socioeconomic estimates and 2020 and 2035 socioeconomic forecast. Other GIS maps including the existing land use, the general plan land use, the resource areas, and other important areas identified in SB 375. It should be noted that none of the data/ maps provided were endorsed or adopted by SCAG's Community, Economic and Human Development Committee (CEHD). All data/maps provided are for the purpose of collecting input and comments from subregions and local jurisdictions. This is to initiate dialogue among stakeholders to address the requirements of SB 375 and its implementation.

The list of data/GIS maps include:

1. Existing land use
2. Zoning
3. General plan land use
4. Resource areas include:
   (a.) all publicly owned parks and open space;
   (b.) open space or habitat areas protected by natural community conservation plans, habitat conservation plans, and other adopted natural resource protection plans;
   (c.) habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal Endangered Species Act (1973), the California Endangered Species Act, or Native Plant Protection Act;
   (d.) lands subject to conservation or agricultural easements for conservation or agricultural purposes by local governments, special districts, or nonprofit 501(c)(3) organizations, areas of the state designated by the State Mining and Geology Board as areas of statewide or regional significance pursuant to Section 2790 of the Public Resources Code, and lands under Williamson Act contracts;
   (e.) areas designated for open-space or agricultural uses in adopted open-space elements or agricultural elements of the local general plan or by local ordinance;
   (f.) areas containing biological resources as described in Appendix G of the CEQA Guidelines that may be significantly affected by the sustainable communities strategy or the alternative planning strategy; and
   (g.) an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance.
5. Farmland
6. Sphere of influence
7. Transit priority areas
8. City/Census tract boundary with ID
9. City/TAZ boundary with ID

(11) Tools

SCAG is developing a Local Sustainability Planning Model (LSPM) for subregions/local jurisdictions to analyze land use impact. The use of this tool is not mandatory and is at the discretion of the Subregion. The LSPM is a web-based tool that can be used to analyze, visualize and calculate the impact of land use changes on auto ownership, mode use, vehicle miles of travel (VMT), and greenhouse gas emissions in real time. Users will be able to estimate transportation and emissions impacts by modifying land use designations within their community.

Other tools currently maintained by SCAG may be useful to the subregional SCS development effort, including the web-based CaLOTS application. SCAG will consider providing guidance and training on additional tools based on further discussions with subregional partners.

(12) <u>Resources and technical assistance</u>

SCAG will assist the subregions by making available technical tools for scenario development as described above. Further, SCAG will assign a staff liaison to each subregion, regardless of whether the subregion exercises its statutory option to prepare an SCS. SCAG staff can participate in subregional workshops, meetings, and other processes at the request of the subregion, and pending funding and availability. SCAG's legal staff will be available to assist with questions related to SB 375 or SCAG's implementation of SB 375. Further, SCAG will prepare materials for its own process in developing the regional SCS, and will make these materials available to subregions.

D. MILESTONES/SCHEDULE

- CARB issues Final Regional Targets – September 2010
- SCS development (preliminary scenario, draft, etc) – through early 2011
- Release Draft RTP/regional SCS for public review – November 2011
- Regional Council adopts RTP/SCS – April 2012

If other milestones are needed, they will be incorporated into the written agreement between SCAG and the Subregion.

Exhibit B: Milestones Schedule

The key milestones and related schedule required as part of the development of the Orange County Subregional SCS are as follows:

1. Status report on Preliminary Subregional SCS – Dec 2010
2. Adopted OCP 2010/Delivery to SCAG – Jan 2011
3. Preliminary SCS / for purposes of preparing PEIR project description (intended to be narrative only project description that describes intended strategies or strategy options that are likely to be incorporated into the final Subregional SCS.) –Feb 2011
4. Status report on Draft Subregional SCS – Feb 2011
5. Draft Subregional SCS (containing all components described above) to be incorporated into draft Regional SCS – April 2011
6. Status report on final Subregional SCS – April 2011
7. Final Subregional SCS for incorporation into Regional SCS – June 2011
8. Iterative process, if necessary to meet target – June to November 2011
9. OCCOG to participate in regional outreach conducted in Orange County – June 2011 to February 2012
10. Regional SCS adoption – April 2012

Exhibit C: Deliverables Template

The Orange County Subregional SCS will consist of the following components:

1. Database (OCP dataset) that allocates population, housing, household, and employment to areas of the county. Geographic area should be the smallest level practicable for the COG to produce, preferably at the parcel level. The database must reflect the base year 2008 and each variable in the two GHG target years (2020 and 2035), in accordance with the Data Standards set forth below.
2. A map or series of maps that illustrates the growth distribution described above, and that further delineates uses, intensities, and residential densities, in accordance with the Data Standards set forth below.
3. A listing of transportation projects that are incorporated in the subregional SCS.
4. A listing and description of transportation policies (e.g. TDM, TSM and others) to be employed.
5. Documentation that establishes the process, including the public participation and outreach process used to develop the SCS, and demonstrates the affected jurisdictions willingness to consider general plan changes.
6. A narrative description of the strategies employed to reduce greenhouse gas emissions. A further description of any other strategies that were considered and not ultimately included.

<u>DATA STANDARDS</u>

The following data standards will be used in the development of a subregional SCS:

1. Types of Variables

Variables are categorized into socio-economic variables and land use variables. The socio-economic variables include population, households, housing units, and employment. The land use variables may include land uses designations, building densities, building intensities, and applicable policies.

2. Geographical Levels

Socio-economic and land-use variables should be provided to SCAG at the smallest geographical level practicable for OCCOG to produce, preferably at the parcel level. At a minimum, such variables will be provided at the Census tract or Traffic Analysis Zone (TAZ) level.

3. Base Year and Forecast Years

The socio-economic data and land use variables will be required for the base year of 2008, and as feasible, for the target years of 2020 and 2035.

<u>DOCUMENTATION</u>

Subregions are expected to maintain full and complete records related to the development of the Subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board. Subregions shall include information regarding the status of the documentation as part of the required status reports to SCAG, and copies of the actual documentation shall be submitted to SCAG as part the final Subregional SCS.

Exhibit D: Notices

Notices, demands and communications between the Parties related to this MOU shall be provided to the following persons:

To Authority/OCCOG:

Kris L. Murray
Executive Director, Government Relations Orange County Transportation Authority
Executive Director Orange County Council of Governments
550 S. Main Street
Orange, CA 92863
Tel: 714-560-5908
Fax: 714-560-5796
Email: kmurray@octa.net

To SCAG:

Huasha Liu
Director, Land Use & Environmental Planning
Southern California Association of Governments
818 W. 7th St., 12th Fl.
Los Angeles, CA 90017
Tel: (213) 236-1836
Fax: (213) 236-9689
Email: Liu@scag.ca.gov

APPENDIX C

REQUIRED DOCUMENTATION

- Correspondence regarding consistency of General Plans
- Electronic copies of Transportation Demand Management Ordinances
- Electronic copies of individual jurisdictions' response to sustainability strategies

OCCOG

Orange County Council of Governments
Member Agencies

Aliso Viejo
Anaheim
Brea
Buena Park
Costa Mesa
Cypress
Dana Point
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Irvine
La Habra
La Palma
Laguna Beach
Laguna Hills
Laguna Niguel
Laguna Woods
Lake Forest
Los Alamitos
Mission Viejo
Newport Beach
Orange
Placentia
Rancho Santa Margarita
San Clemente
San Juan Capistrano
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
Westminster
Yorba Linda
County of Orange
OCTA
TCA
OC Sanitation District
ISDOC
South Coast AQMD

MEMORANDUM

DATE: June 13, 2011

TO: Southern California Association of Governments

FROM: Dave Simpson, Executive Director Orange County Council of Governments

SUBJECT: OC SCS Documentation

The Orange County Council of Governments (OCCOG) has reviewed the Southern California Association of Governments (SCAG) Framework and Guidelines for references to required documentation in the Orange County Sustainable Communities Strategy (OC SCS). Two paragraphs in the SCAG Framework and Guidelines describe subregions' obligations for documentation. Both are provided below:

> "As discussed further below (under "Documentation"), subregions need not constrain land use strategies considered for the SCS to current General Plans. In other words, the adopted strategy need not be fully consistent with local General Plans currently in place. However, should the adopted subregional strategy deviate from General Plans, subregions will need to demonstrate the feasibility of the strategy by documenting any affected jurisdictions' willingness to adopt the necessary General Plan changes."
>
> **Documentation**
> "Subregions are expected to maintain full and complete records related to the development of the subregional SCS, including utilizing the most recent planning assumptions considering local general plans and other factors. In particular, subregions must document the feasibility of the subregional strategy by demonstrating the willingness of local agencies to consider and adopt land use changes necessitated by the SCS. The format for this documentation may include adopted resolutions from local jurisdictions and/or the subregion's governing board."

OCCOG interprets these requirements to state that the OC SCS must include agendas, action minutes, and resolutions and declarations related to land use strategies that would require local General Plan Amendments. Land use strategies within the Draft OC SCS are consistent with all Orange County jurisdictions. No actions to General Plans will be necessitated as a result of this OC SCS process or document. Therefore, no documentation of willingness to make these changes is included.

06/10/11 «P:\OCT1001\Correspondence\Documentation Memo2.doc»

Orange County Council of Governments
550 South Main Street / P.O. Box 14184 / Orange / California 92863-1584 / (714) 560-6282

Orange County Sustainable Communities Strategy

APPENDIX D

ORANGE COUNTY PROJECTIONS DATA DEVELOPMENT PROCESS

Sustainable Communities Strategy Orange County

ORANGE COUNTY PROJECTIONS DATA DEVELOPMENT PROCESS

INTRODUCTION

The socioeconomic data and growth forecasts for the OC SCS process and document was developed through the Orange County Projections process, involving extensive data collection, analysis, outreach, and review directed and managed by the Center for Demographic Research (CDR) at Cal State Fullerton.

Orange County Projections (OCP)

The OCP series was developed by the County of Orange in the 1970s to provide County departments and agencies with a consistent set of projections of population, housing, and employment for use in their operations and planning activities. The uses and applications have expanded over time, and numerous private and public agencies use the OCP to serve Orange County in the future. Some of these applications include forecasting traffic, sewer, and water demands; public service needs such as fire, police, social, and health; pollution from mobile sources; and revenues.

In addition, all the requirements of local and regional planning efforts (including transportation and infrastructure planning, congestion management, air quality management, integrated waste management and growth management) have emphasized the importance of an accurate and uniform set of projections for use by all jurisdictions, agencies and programs. For example, as the uniform dataset used in Orange County planning, the OCP is incorporated into each of SCAG's RTP growth forecasts, which are used in environmental impact reports and transportation plans.

The OCP series is updated every three to four years. Over time, the update process has expanded to increase the level of countywide coordination, commitment, and review. The OCP contains population, housing, and employment projections at the County level for a 25-30 year horizon, as well as a variety of other geographic areas including the general government jurisdictions (34 cities and the unincorporated county area); the County's 70 Community Analysis Areas (CAAs) and 10 Regional Statistical Areas (RSAs); and the 577 census tracts in the County. These additional geographic distributions of the data have been made available for programmatic applications and information purposes.

Small Area Projections

A major step in developing the 2010 Orange County Projections was the collection of data from each jurisdiction in Orange County. Initially, jurisdictions were asked to respond to draft projections for themselves and for the smaller statistical sub-areas within them. These preliminary numbers were evaluated in the light of jurisdictional policies,

significant trends or anticipated policy changes, or projections the jurisdictions themselves may have developed. Standard supportive documentation citation such as the General Plan and its housing and land use elements, annexation plans, and development phasing schedules also was solicited. The small area projections went through several iterations with the jurisdictions' feedback incorporated into the draft projections until a consensus was achieved. In this way, a large amount of information was collected for small geographic areas across the County.

Data for the OC SCS

In order to provide the most accurate picture possible of the Orange County subregion, and to preserve the detail and integrity of the data submitted by local jurisdictions, the OCP-2010 data set was used for the development of the OC SCS.

In fall 2009, CDR sent out 2008 estimates for jurisdictions to review and provide feedback. Corrections were incorporated. In March 2010, the CDR met with all 35 jurisdictions and distributed the draft projections data. Once again, jurisdictional feedback was incorporated. The final draft projections data were distributed in fall 2010, and final comments and changes incorporated into the final dataset. The OCP-2010 was approved by the CDR TAC and CDR MOC in December 2010. The OCCOG TAC and OCCOG Board approved the OCP-2010 in January 2011.

OCP 2010 Development and Process Schedule

Develop Base Year Estimates	Summer 2009
Develop Population, Housing, and Employment (PHE) Assumptions	September 2009
Review and Approval by CDR Technical Advisory Committee	October 2009
Project Countywide PHE (control totals)	October-November 2009
Approval by CDR Technical Advisory Committee (TAC) & Management Oversight Committee	December 2009
OCCOG Approval of Countywide PHE	January-March 2010
Allocate Countywide PHE to Split Traffic Analysis Zones (TAZ)	Winter 2010
Jurisdictional Review/Adjustment of PHE/Jurisdictional Approval	March-October 2010
Approval by CDR TAC & MOC	December 2010
OCCOG Technical Advisory Committee Approval	January 2011
OCCOG Board of Directors Approval	January 2011

As part of the revision and update process to the Orange County Projections, once the OCP data is approved by the OCCOG Board, the data is then transmitted to SCAG by CDR on behalf of OCCOG and Orange County. During the development process of the OC SCS and SCAG's Regional SCS and RTP, draft and OCP data is provided to SCAG to incorporate into the draft and final versions of the integrated growth forecast.

The OCP-2010 dataset (population, housing and employment) referenced in the OC SCS was approved by the OCCOG Board on January 27, 2011. OCP-2010 is based on the approved OCP update and revision process which took place during 2009-2010; it does not include the 2010 Census data for California released on March 8, 2011.

It is acknowledged that SCAG policy committee actions have directed SCAG staff to revise the draft growth forecast dataset for the Regional SCS and RTP to include the 2010 Census data and the 2010 State EDD employment benchmark. The CDR is coordinating with SCAG on this update process, and is evaluating the timeline and process to revise OCP-2010 to include the new data and be consistent with the growth forecast update effort being undertaken by SCAG.

Consistent with SCAG's process, any update to the growth forecast dataset will be to the 2010 totals for population, housing, and employment, and the growth increments from 2010 to 2035 will remain the same and be applied to the revised 2010 totals. If a revision is made to the OCP-2010, this effort will be completed after the June 2011 submittal deadline of the final OC SCS to SCAG. Further, the updated dataset will be provided to SCAG through a data amendment process and the full OC SCS document will not be revised.

APPENDIX E

2010 LONG RANGE TRANSPORTATION PLAN

Available at

www.octa.net/lrtp

Orange County Sustainable Communities Strategy

APPENDIX F

SUSTAINABILITY STRATEGIES

Sustainability Strategy List for Orange County Sustainable Communities Strategy Development

#	CDR #	CARB #	SCAG #	Item	Completed Project	Ongoing Project	Future Project	General Plan Policy	Category
1	23		68,70	Alternative Fuel Infrastructure	Ana, CM, LB, LHb, MV, NB, SA	Ana, F, LW, LHb, MV	Ana, BP	AV, Ana, HB, MV, RSM, SA	Alternate Fuel
2			192	Convert Street Sweeping And Refuse Vehicles To Alternative Fuels	Ana, C, F, Irv, LW, MV, O, RSM, SC, SA, S, T	BP, CM, F, Irv, LB, LHb, MV, T	Irv, B, F	B, HB, MV, SA, T	Alternate Fuel
3			194	Convert Transit Buses To Alternative Fuels		LB, OCTA	LW		Alternate Fuel
4			191	Develop Alternative Fuel Stations	Irv, MV, SA	Ana, B, Irv, F, MV, OC, SB	BP, CM, F, LW, SC	AV, B, MV, RSM, SA	Alternate Fuel
5			190	Expand Use Of Alternative Fuels	LP, MV, SA, T	Ana, CM, F, LW, LHb, LP, MV, SA, T	BP, F, LB, LHb, LP	AV, B, LH, MV, RSM, SA, S, T, W	Alternate Fuel
6			195	Replace Gasoline Powered Mowers With Electric Mowers		Ana	B, LW	B, NB, SA	Alternate Fuel
7			193	Replace Local Government Fleets With Alternative Fuel Vehicles	C, DP, Irv, LF, LP, MV, SA, S	Ana, CM, C, DP, F, HB, Irv, LP, MV, OC, SA, S, TCA	B, BP, C, F, LB, LP, MV, SC	B, C, HB, MV, O, SA, T, W	Alternate Fuel
8			196	Require Zero Emission Forklifts	B, C		B	B, MV, SA	Alternate Fuel
9			111	Adopt Best Work Places For Commuters Policies		Ana	LW	SA	Alternate Modes
10			117	Commuter Choice Programs Bundle	SA	SA	HB, SA		Alternate Modes
11			124	Dial-A-Ride	SA	B, CM, LW, MV, SA	SA	AV, B, MV	Alternate Modes
12		65		Eco Driver Education	GG	GG	GG, LW	GG	Alternate Modes
13	37			Employer Incentives For Alternative Modes	Irv, SA, S	Ana, BP, HB, Irv, NB, OC, SA, S	LW	HB, LF, MV	Alternate Modes
14			178, 179	Encourage Alternative Transportation - Public And Private	MV, SA	Ana, BP, C, F, Irv, LB, LW, MV, OC, SA, W	F, MV, SA	AV, Ana, B, C, F, HB, LB, LH, LF, MV, O, RSM, SA, S, T, W	Alternate Modes
15			182	Encourage Large Businesses To Develop Alternative Transportation Plans	OCTA	Ana, C, MV, OCTA	LW	Ana, C, MV, O	Alternate Modes
16		39, 67	108, 109, 110, 115, 116, 119, 122	Implement/Promote Telecommuting And Flexible/Alternative Work Schedules	Irv, LH, SC, SA	Ana, B, BP, CM, C, HB, Irv, MV, NB, OC, SA	LW, SA	B, C, HB, LH, MV, W	Alternate Work
17			138	Expand And Improve Rideshare Program	GG, OCTA	GG, MV, O, OCTA	GG, LW	C, GG, LF, MV	Alternate Modes
18	28	52, 40	58, 132	Expand Regional Park And Ride Facilities, Park And Ride Lots	Irv, LH, MV, SA, T	Ana, B, CM, Irv, LB, SA, T	HB, LW, T	Ana, B, HB, LF, MV, RSM, SA, T, W	Alternate Modes
19	35		112	Guaranteed Ride Programs (Provides On-Call Transportation For Employees Using Alternative Transportation Who Miss Their Ride, Need A Ride For An Emergency, Etc…)	SA	Ana, HB, OC, SA	F, LW	MV	Alternate Modes
20	29, 30	40, 42	134, 135, 137	Implement/Promote Vehicle Sharing Programs (E.G., Van Sharing, Car Sharing)	SA	Ana, HB, Irv, OC, SA	HB, LW	Ana, B, C, HB, LH, MV	Alternate Modes
21			141	Issue Free Bus Passes To Downtown Workers, Students, And Retirees		LB	LW	MV	Alternate Modes
22	18		42	Non-Motorized Zones	NB, SA	SA	LW, SC, SA		Alternate Modes
23			140	Promote Rideshare Marketing Strategies	GG, OCTA	GG, OCTA	GG, LW	GG, MV	Alternate Modes
24	34	40		Promotion Of Alternative Modes (Rideshare Week, Dump The Pump, Bike To Work Week, Etc…)	LP, OCTA	Ana, LP, MV, NB, O, OCTA	LW, LP, MV	Ana, MV	Alternate Modes
25		43		Provide Local Shuttles	LHb, MV, SA	Ana, B, BP, HB, Irv, LB, LW, LHb, OC, SA, W	DP, F, Irv, LF, MV, SC, SA	B, MV, SA	Alternate Modes
26			145	Public Transit Coordination Bundle	MV, SA	Ana, B, MV, SA	LF, MV, SA	Ana, B, MV, SA	Alternate Modes
27	26	40	123	Rideshare Programs	GG, OCTA	Ana, GG, O, OCTA	GG, LW	Ana, GG, LF, MV, W	Alternate Modes
28			180	Tap Funding Sources For Alternative Transportation	Irv, MV, O, RSM, SA	Ana, CM, C, Irv, MV, O, SA	Irv, O, SA	B, HB, LF, MV, RSM, SA	Alternate Modes
29				Teleconferencing Technologies	MV, RSM, SA	Ana, CM, Irv, LW, MV, OC, SC		MV	Alternate Modes
30			142	Transit Pricing Incentives Bundle					Alternate Modes
31	25		70	Use Of Neighborhood Electric Vehicles For Circulator Transit	Ana, B	Ana, B, LW, NB	Ana, F, OC, SC	Ana, B	Alternate Modes
32	27	40	58, 62, 136, 139	Vanpools	C, OCTA	Ana, C, MV, OCTA	LW	Ana, C, MV	Alternate Modes
33	31	40	101, 151	Implement/Promote Bike Sharing	CM, GG	CM, GG, Irv	Ana, CM, F, GG, LW	CM, GG	Bike
34			41	City Bicycle Plan Amendments	DP, Irv	CM, F, HB, Irv, MV, NB, SA, SB, W	AV, Ana, Irv, LW, OC, SC, SA,	Ana, GG, MV, RSM, SA, S	Bike
35			45	Construct Regional Bikeways	Ana, B, DP, HB, Irv, LHb, MV, NB, O, SA, T, W	Ana, B, F, Irv, LW, LHb, MV, O, OC, SA, TCA	B, CM, F, Irv, LHb, MV, O, OC, SC, SA, TCA, T	B, GG, Irv, LH, LHb, LF, MV, O, RSM, SC, SA, T	Bike
36			48	Create Signature Bike Projects/Programs	DP, Irv, MV, SA	HB, Irv, MV, NB, SA	AV, Irv, LW, MV, SA	GG, Irv, MV, SA	Bike
37			102	Educational Outreach To Promote Safety Among Cyclists		Ana, HB, Irv, MV, NB, SA, S, W	F, HB, LW, MV	F, GG, MV, O, SA	Bike
38			49	Facilitate Increased Biking Opportunities	B, DP, MV, RSM, T	Ana, CM, C, LW, MV, NB, OC, SA, TCA, T	B, F, Irv, MV, OC, SC, SA, S, TCA, T	AV, B, C, F, GG, HB, Irv, LH, LF, MV, O, RSM, SA, S, T	Bike
39		30, 31		Improve Cyclist Environment (E.G., Safety, Access)	Ana, B, DP, Irv, LP, RSM, SA	Ana, B, C, CM, Irv, LW, LP, MV, NB, SA	Ana, F, Irv, LP, SC, SA, S, T	AV, Ana, B, C, F, GG, HB, Irv, LH, LP, MV, O, RSM, SC, SA, S, T, W	Bike
40	16	29, 53	35, 43, 44, 107, 155, 152	Improving Bicycle Infrastructure And Facilities (Lockers, Racks, Valets, Safe Bike Parking, Subsidies)	Ana, HB, MV, RSM, SA, T	Ana, B, CM, LW, MV, NB, O, OC, SA, T	Ana, B, F, HB, Irv, MV, SC, SA, T	AV, Ana, B, C, CM, F, GG, HB, LH, MV, RSM, SC, SA, S, T	Bike
41			153	Increase Bike/Walk Trips With Improved Streets And Facilities	Ana, DP, HB, LP, MV, RSM, SA	Ana, CM, C, LW, LP, MV, NB, O, SC, SA, W	AV, B, F, HB, Irv, LP, MV, OC, SA, TCA, T, W	B, C, F, GG, HB, Irv, LH, LF, LP, MV, O, RSM, SA, T	Bike
42			103	Promote Health Through Bicycle Programs By Partnering With Local Health Groups	SA	Ana, NB, SC, SA	F, LW, SA	F, GG, SA	Bike
43			47	Upgrade Bike Transportation System	HB, MV, SA, W	Ana, CM, C, Irv, LW, MV, NB, O, SA, S, W	Ana, B, F, MV, OC, SC, SA, S, TCA, T	Ana, B, C, F, GG, HB, LH, LF, MV, O, RSM, SC, SA, T	Bike
44	13	68		Co-Location/On-Site Facilities E.G. Day Care, Cafeteria…	Ana, C, HB, Irv, SA	Ana, MV, SA	Ana, LW	Ana, C, F, MV, SA	Facilities
45	12	17		Locate Schools In Neighborhoods With Student Populations	Ana, HB, Irv, LP, MV, SC, SA	Irv, SA	Irv, SA, T	C, F, HB, Irv, RSM, SA	Facilities

Sustainability Strategy List for Orange County Sustainable Communities Strategy Development

#	CDR #	CARB #	SCAG #	Item	Completed Project	Ongoing Project	Future Project	General Plan Policy	Category
46			165	Allow Increased Size And Weight Of Trucks		C, HB			Freight/Goods Movement
47			56	Designated Truck Lanes	W	W		AV, SA, W	Freight/Goods Movement
48			163	Encourage Cold Ironing At Ports					Freight/Goods Movement
49			164	Facilitate Freight Logistics Improvements					Freight/Goods Movement
50			166	Facilitate Pre-Clearance At Scale Houses					Freight/Goods Movement
51			53	Feeder Barge Container Services					Freight/Goods Movement
52			54	Increase Rail Capacity And Address Rail Freight System Bottlenecks	OCTA	OCTA			Freight/Goods Movement
53			52	Intermodal Freight Initiatives					Freight/Goods Movement
54			167	Promote Freight Villages/Consolidation Centers					Freight/Goods Movement
55			162	Reduce Locomotive Fuel					Freight/Goods Movement
56			55	Shift Freight Movements From Truck To Rail					Freight/Goods Movement
57			12	"Fix- It First" And Location Efficient Funding Strategies		SA		SA	Land Use Policies
58	7	4		Compact Building Design (With A Mix Of Uses)	Ana, B, CM, C, F, GG, Irv, LP, O, SA, S	Ana, B, CM, C, F, GG, Irv, LP, O, SA	Ana, B, CM, C, F, GG, Irv, LW, LP, SA	AV, Ana, B, CM, C, F, GG, Irv, LP, NB, O, SA, S	Land Use Policies
59	8	8	63	Develop "Complete Communities"	F, Irv, MV, SA	F, Irv, LF, MV, SA	CM, F, Irv, LW, SA, T	Ana, C, F, GG, Irv, MV, O, SA, T	Land Use Policies
60			32	Develop A Species List Of Water Wise And Ecologically Friendly Plants For Use In New Development And Other Landscape Projects	Ana, B, GG, HB, Irv, MV, SC, SA, S	B, CM, GG, Irv, LW, NB, SA, S	B, BP, CM, GG	AV, B, GG, HB, MV, SC, SA, S	Land Use Policies
61			21	Develop Model Green Development And Green Building Laws For Local Governments To Adapt And Adopt	Ana, Irv, LB, LHb, RSM, SA	CM, Irv, MV, NB, SA	Ana, BP, CM, SC	NB, O, SA	Land Use Policies
62			5	Downtown Revitalization	Ana, B, CM, C, DP, F, HB, Irv, SA, T	Ana, B, CM, C, DP, F, HB, Irv, SC, SA, S, T	AV, B, BP, CM, C, DP, F, HB, Irv, SA, S, T	Ana, B, CM, C, DP, F, GG, HB, Irv, O, SC, SA, T	Land Use Policies
63			18	Emphasize Local Authority To Require Low Impact Development	C, DP, Irv, RSM, SA	BP, C, OC, SC, SA	C, SA, W	C, GG, LH, SA	Land Use Policies
64			23	Enhance Energy Efficiency Code Enforcement And Development	B, DP, HB, Irv	B, BP, HB, Irv, LW, MV, NB, OC,	B, CM	AV, B, GG, Irv, NB, SA, S	Land Use Policies
65			25	Ensure Local Enforcement Of The State Energy Code	B, DP, Irv, LB, RSM, SA	Ana, B, BP, CM, DP, F, HB, Irv, LF, LW, NB, OC, SC, SA, SB, S, T	B, CM, Irv, T	AV, B, GG, Irv, OC, SA	Land Use Policies
66	6	5	8,9	Horizontal Or Vertical Mixed Use	Ana, B, C, DP, F, HB, Irv, NB, SC, SA, S, T	Ana, B, CM, C, DP, F, Irv, LW, LP, MV, OC, SA	AV, Ana, B, BP, CM, C, DP, F, HB, Irv, LF, LP, NB, SA, T	Ana, B, CM, C, DP, F, GG, HB, Irv, LB, LH, LP, NB, O, OC, SC, SA, S, T, W	Land Use Policies
67		18		Implement Other Location-Related Policies		Ana	AV, BP, LW	Ana, HB, O, SA	Land Use Policies
68		13		Improve Accessibility Of Housing To Transit	Ana, F, HB, MV, SA, T	Ana, CM, F, LW, MV, OC, T	AV, Ana, B, BP, CM, F, HB, Irv, MV, SA, T	Ana, B, C, F, GG, HB, MV, NB, O, OC, SA, T	Land Use Policies
69		2	3	Increase Opportunities For Redevelopment/Reuse (E.G., Brownfields)	Ana, CM, HB, LP, T	Ana, BP, CM, Irv, LF, LP, OC, S, T	Ana, CM, F, Irv, LP, T	Ana, CM, C, F, GG, LP, O, OC, T	Land Use Policies
70	4		8	Increasing Housing Densities Within/Adjacent To Employment Areas	Ana, B, C, HB, Irv, LH, SA, T	Ana, B, C, Irv, OC, SA, T	AV, Ana, B, BP, C, F, Irv, NB, SA, S, T	Ana, B, C, F, GG, HB, Irv, NB, O, OC, SC, SA, S, T	Land Use Policies
71	3	3,9		Increasing Residential/Commercial Density Near Transit	Ana, B, C, LH, SA, T	Ana, B, C, GG, HB, LW, OC, SA, T	Ana, B, BP, C, DP, F, GG, HB, SA, S, T	Ana, B, C, DP, F, GG, NB, O, OC, SA, S, T	Land Use Policies
72	1	1	1	Infill In Areas With Existing Infrastructure	Ana, B, CM, C, DP, HB, Irv, NB, RSM, SC, SA, T	Ana, B, BP, CM, C, GG, HB, Irv, LW, LF, MV, NB, OC, SA, S, T	AV, Ana, B, CM, C, DP, F, GG, HB, Irv, LH, NB, RSM, SA, SC, T	Ana, B, CM, C, DP, F, GG, HB, LH, NB, O, OC, RSM, SA	Land Use Policies
73	11	12		Integrate Affordable And Market Rate Housing	Ana, B, C, GG, HB, Irv, LB, LP, O, RSM, SA, T	Ana, B, BP, CM, C, GG, HB, Irv, LW, LHb, LF, LP, MV, NB, OC, SC, SA, S	AV, Ana, B, C, DP, F, GG, HB, Irv, LHb, LP, SC, SA, T	Ana, B, CM, C, DP, F, GG, HB, Irv, LB, LF, LP, NB, O, OC, RSM, SC, SA, S, T	Land Use Policies
74			13	Land Use And Building Code Reform	DP, Irv, LB, LP, NB, SA	AV, BP, CM, HB, Irv, LW, LHb, LP, NB, O, OC, SC, SA, SB, S	AV, C, Irv, LP, SA	GG, O, SA	Land Use Policies
75	10	11		Local Housing For Local Workforce	Ana, B, C	Ana, B, BP, CM, C, LW, OC, SA	Ana, B, C, F, SA	AV, Ana, B, CM, C, F, GG, Irv, LF, MV, NB, O, OC, RSM, SC	Land Use Policies
76	5	16	6	Locate Major Regional Activity Centers Near Existing Development	Ana, B, CM, HB, Irv, SA, T	Ana, B, BP, CM, HB, Irv, LW, LF, OC, SA	Ana, B, HB, Irv, SC, SA, T	AV, Ana, B, HB, Irv, OC, SA, T	Land Use Policies
77	15	10	2	Making Developments Transit Ready	Ana, C, HB, MV, SA	Ana, BP, C, HB, LW, LF, MV, OC, SC, SA	Ana, C, F, HB, MV, SA, S	AV, Ana, C, F, HB, LF, MV, OC, SC, SA, S	Land Use Policies
78	2	6	2,4	New Housing And Jobs Within 1/2 Mile Of Existing/Planned Transit Stations	Ana, CM, HB, Irv, NB, SA	Ana, CM, F, Irv, LW, T	Ana, B, BP, CM, F, HB, Irv, LH, NB, SA, S, T	Ana, B, CM, F, LH, O, SA	Land Use Policies
79	9			Plan For A Changing Demand In Types Of Housing	Ana, DP, HB, Irv, SC	Ana, B, CM, Irv, SC	Ana, B, BP, DP, F, LW, NB	Ana, B, CM, C, DP, F, LF, NB, O, OC, SC	Land Use Policies
80			24	Prepare Model Components To Add To Plans Regarding Transit Station Area Plans And Energy Conservation		Irv, MV, SA	LW, SA	AV, SA	Land Use Policies
81			26	Prepare Model Energy Code Enhancement Provisions For Local Adoption	Irv	CM, Irv	AV, LW, SA	SA	Land Use Policies
82		19	33	Provide Financial Incentives (E.G., Grants, Tax Credits) For Non-Transportation Investments Like Housing, Parks, And Storm Water Management	HB, LP, SA, T	CM, HB, LP, MV, SA, T	HB, LW, LP, SA, T	HB, MV, NB, SA, T	Land Use Policies
83		21	30	Provide Recognition Programs	B, Irv	B, CM, HB, LW, RSM, SA	AV, B, O, SA	B, CM	Land Use Policies
84		20	28	Provide Regulatory Relief (E.G., Expedited Permit Processing)	DP, LP, T	Ana, B, CM, DP, HB, Irv, LW, LF, LP, MV, O, RSM, SA, T	AV, B, DP, Irv, LP, NB, T	AV, B, CM, DP, Irv, OC, RSM, T	Land Use Policies
85			10	Smart Growth Planning, Modeling, And Tools	B, HB, T	Ana, B, CM, LW, SA, T	B, SA, T	Ana, B, CM, LH, O, SA, T	Land Use Policies
86			7	Support Revitalization Of Older, Densely Settled Urban Areas	Ana, B, CM, C, HB, SA, T	Ana, B, CM, HB, LW, OC, SA, S, T	AV, Ana, B, CM, C, HB, SA, T	Ana, B, CM, C, HB, NB, O, OC, SA, S, T	Land Use Policies

Sustainability Strategy List for Orange County Sustainable Communities Strategy Development

#	CDR #	CARB #	SCAG #	Item	Completed Project	Ongoing Project	Future Project	General Plan Policy	Category
87			15	Targeted Infrastructure Investment Section Toward Priority Growth Centers	Ana, C, Irv	Ana, C, Irv, LW, SA	Ana, Irv, SA	Ana, C, Irv, NB, SA	Land Use Policies
88			27	Transferable Development Rights (Tdrs)	CM, Irv	CM, Irv	F, Irv, O	B, F, NB, O	Land Use Policies
89			31	Use Plants From Local Gene Pool In City Projects Adjacent To Natural Open Spaces	O, OC, TCA	MV, SA	AV, LF, SA		Land Use Policies
90			16	Zoning Reform Measures	GG, HB, Irv, LP	CM, GG, Irv, LP, O, OC, SC, SA, SB	AV, BP, F, GG, Irv, LP, O, SA	CM, GG, Irv, O, OC, S	Land Use Policies
91	14	14, 15	11, 17, 29	Ensure Adequate Access To Open Space And Preservation Of Habitat	Ana, C, GG, HB, Irv, LB, MV, SC, T	Ana, BP, CM, C, GG, HB, Irv, LW, MV, OC, RSM, SC, SA	AV, Ana, C, F, GG, Irv, SC, T	AV, Ana, B, CM, C, F, GG, HB, Irv, LB, LH, LF, MV, NB, O, OC, RSM, SC, SA, T	Open Space
92				Additional City Technologies	LP, MV, SA, T	LW, LP, MV, SC, SA, T	F, LP, T	F, LP, MV	Other
93				City Educational Programs	DP, Irv, LB, MV	Ana, B, CM, DP, Irv, LW, LF, MV,	B, F, Irv, MV	AV, B, F, Irv, O	Other
94				City Wi-Fi Access To The Internet	BP, Irv, LB, MV, NB	B, DP, F, Irv, LW, LF, OC	B, F, Irv, SA	F, MV	Other
95				Installation Of Artificial Turf	Ana, GG, Irv, NB, O, SC, SA, S	Ana, B, DP, F, Irv, LW, LHb, LF, SA	B, CM, GG, Irv, LHb, LF, MV, O, SC, T	Ana, GG	Other
96			14	Location-Efficient Mortgage		LW			Other
97	32			Online Permitting	B, C, Irv, LH, MV, O, SC, T	Ana, B, C, F, Irv, LB, MV, NB, OC, SC, S, T	AV, B, BP, CM, C, F, HB, Irv, LW, LF, NB, SA, T	B, MV	Other
98				Reduce The Amount Of Evaporative Emissions From City Gasoline Fueling Site	BP, Irv, SA	Ana		SA	Other
99				Reduce The Number Of City Operational Vehicle Miles Traveled		Ana, S	DP	Ana	Other
100				Reduce The Number Of Commuter Vehicle Miles Traveled And The Associated Greenhouse Gas Emissions.	Irv, NB	Ana, Irv, MV, OC, SA	AV, DP, Irv, MV, SC, SA	AV, Ana, HB, Irv, MV, OC, SA, S, T	Other
101	33			Webcasts Of City Council Or Planning Commission Meetings	B, BP, DP, HB, Irv, LB, SC	Ana, B, CM, F, Irv, MV, NB, OC, SA, T	AV, B, Irv, LW, T	B, CM	Other
102	21	37	59, 130	Altering/Reducing Parking Requirements And Supply	Ana, CM, HB, Irv, SC, SA, T	Ana, CM, F, LW, MV, SA	AV, Ana, BP, C, F, O, OC, RSM, S	Ana, CM, DP, F	Parking
103	45			Higher Tax On Free Private Parking					Parking
104			201	Implement Parking Pricing, Excise Tax And/Or Supply Restrictions			T	F	Parking
105	38	41	125	Improve Parking Management (E.G., Employee Parking "Cash Out", Unbundling Parking Cost From Property Cost)			LW	F	Parking
106	19			Managed Parking	Ana, DP, GG	Ana, CM, DP, GG, HB, NB, SC, SA	Ana, CM, GG, O	Ana, DP, GG, SA	Parking
107	22			On-Street Parking	Ana, C, DP, HB, MV, NB, T	Ana, BP, CM, DP, MV, SA, T, W	Ana, MV, T	Ana, MV	Parking
108			133	Parking Pricing		NB, SA		DP	Parking
109			128	Parking Regulation In Suburban Areas	GG	BP, GG, SA	GG	GG	Parking
110			131	Require Village Employees To Park In Perimeter Lots		LB, SA	LW		Parking
111	24		126, 127, 129	Preferred/Reserved Parking For Alternate Fuel , High Occupancy Vehicles And Car Share Programs	Ana, HB, Irv	Ana, LW, MV, OC, SA	AV, Ana, BP, CM, O	Ana, CM, GG, MV	Parking
112	20			Shared Parking	Ana, B, C, GG, HB, Irv, LP, MV, NB, SA, T	Ana, B, BP, CM, GG, LW, LP, MV, SC, SA, T, W	AV, Ana, B, GG, SA, T	Ana, B, CM, C, GG, LH, SA, T	Parking
113		50		Fuel Tax					Pricing
114		46		Implement Congestion Pricing	OCTA		LB		Pricing
115		44		Implement Metered Pricing		LB, NB, SA	F		Pricing
116	43	47	149, 147	Additional Pricing Options: Congestion Pricing, Hot Lane Pricing, Etc. On Major Routes		Ana	MV		TDM
117			114	E-Commerce Incentives					TDM
118			120	Encourage The Use Of Vehicle Navigation Systems	Irv, MV	MV, SA			TDM
119			143	Expand Affordable Public Transportation Coverage	MV	Ana, LB, LW, MV	MV, OCTA	Ana, MV	TDM
120		49	147	Implement Distance-Based (VMT) Pricing					TDM
121			148	Increased Fuel Tax (With Targeted Use Of Revenue Toward Travel Alternatives)					TDM
122			118	On-Site Day Care Programs	Ana, C, Irv, SA	Ana, SA		Ana, HB, LF, MV, OC, SA	TDM
123		69	113, 202	Pay-As-You-Drive Insurance					TDM
124			104	Promote Cleaner Modes Of Transport With Additional Way Finding Signs And Maps	Ana, HB, Irv, MV, SA	Irv, LW, SA, W	AV, F, Irv, SA	F, HB, SA, S	TDM
125			121	Promote Safety Program		HB, LW, MV, OC, SA, TCA	AV	GG, HB, MV, O, SA	TDM
126			106, 154	Promote Transportation Alternative By Third Parties	HB, Irv	Ana, Irv, LW, OC	Irv	Ana, HB, MV, OC	TDM
127			144	Reduced Transit Pricing		Ana			TDM
128			150	Study/Develop Pricing Policies And Structures To Discourage Car Travel Bundle					TDM
129			146	Transportation Demand Management Ordinance	C, HB, Irv, LB, LHb, MV, NB, O, SC, SA, T	Ana, B, Irv, LW, LHb, SA, W	AV, Irv, RSM	AV, Ana, B, C, HB, LF, MV, RSM, SA, T, W	TDM
130			51	Adopt And Implement Complete Streets Policy	Irv	HB, Irv, SA	AV, Ana, B, Irv, RSM, T	C, F, HB, Irv, O, SA	TII
131			75	Arterial Improvements	Ana, B, CM, C, DP, HB, Irv, LH, LHb, LP, MV, OC, SA, TCA, T, W	Ana, B, BP, CM, C, HB, Irv, LH, LW, LHb, LF, LP, MV, NB, O, OC, RSM, SA, S, TCA, T, W	AV, B, CM, C, DP, F, HB, Irv, LH, LHb, LP, MV, OC, SA, TCA, T, W	AV, Ana, B, CM, C, DP, F, HB, Irv, LH, LP, MV, O, RSM, T	TII
132			86	Bus Fleet Measures	GG	LB			TII

Sustainability Strategy List for Orange County Sustainable Communities Strategy Development

#	CDR #	CARB #	SCAG #	Item	Completed Project	Ongoing Project	Future Project	General Plan Policy	Category
133			82	Bus Rapid Transit	GG	W	Ana, OCTA, W	Ana	TII
134			80	Commuter Transit	BP, GG, OCTA	LB, LF, W	MV, W	Ana, LF, MV	TII
135			91	Converting Car Beaches To Mixed Use Development	Ana	Ana	GG, SA	Ana, GG	TII
136			84	Create Regional Multimodal Transportation Centers	BP, Irv, O, SA, T	Ana, Irv, SA	Ana, F, GG, Irv, SA	Ana, F, Irv, MV, O, SA	TII
137			64	Energy Efficient Lighting Along Transportation Corridors	Ana, C, HB, LP, O	Ana, C, LW, LP, MV, NB, SA	AV, C, LP, O, SC	LP, SA, S	TII
138			95	Enhance Bus Stops	Ana, C, HB, Irv, LP, MV, RSM, SA, T, W	Ana, C, Irv, LW, LHb, LF, LP, MV, SA, W	C, LHb, LP, MV, T	AV, LH, LP, MV, O, SA, T	TII
139		54	61, 74	Expand High Occupancy Toll (Hot Lanes) System				MV	TII
140	40	22	60, 79	Expand Transit Network And Improve Transit Facilities	MV	Ana, LB, MV, OCTA, W	MV	Ana, MV	TII
141			66	Feeder And Distributor Systems – Orbital Routes	OCTA	OCTA, W	LB		TII
142			90	Feeder-Distributor Services	OCTA	OCTA, W	LB		TII
143			76	High Speed Regional Transport System			Ana	Ana, MV	TII
144			57	Highway-Rail Grade Separations	Ana, Irv, T	Ana, Irv, T	Irv, SA, T	Ana, Irv, SA, T	TII
145			71	Implement Automated Speed Enforcement	LF, T	DP, SA, T	LW, T		TII
146	41	32	37, 46	Improve Linkages Between Travel Modes	Ana, Irv, SA, T	Ana, CM, Irv, LW, MV, SA, T	CM, F, MV, T	Ana, F, LH, LF, MV, O, SA, T	TII
147		23		Improve Transit Facilities (E.G., Safety)	Ana, BP, Irv, MV, O	Ana, LF, MV, SA, T	SA, T	Ana, SA	TII
148			99	Improve Transit Service (Frequency, Convenience, And Quality)		Ana, LB, MV, W	AV, Ana, OCTA	Ana, MV	TII
149			81	Intercity Bus Transit	GG, OCTA	GG, LB, OCTA, W	AV, GG	Ana, GG, MV	TII
150			83	Light Rail Transit				MV	TII
151			69	Major Co2/Vmt Reduction Strategies			Irv	S	TII
152			73	Mixed-Flow Lanes	OCTA	OCTA	OCTA		TII
153	42			OCTA Go Local Projects	RSM	LB, LW, LF, MV, OCTA, W	Ana, MV, O, RSM	Ana, GG, MV	TII
154			65	Pavement Management	C, LHb, LP, MV, OCTA	Ana, BP, C, LB, LW, LHb, LF, LP, MV, NB, O, OCTA, RSM	C, LHb, LP, MV	Ana, C, GG, LP, MV, O, RSM	TII
155			98	Public Transport – Coordination Of Routes	OCTA	LB, MV, NB, OCTA		GG, LF, MV	TII
156			96	Public Transport – Hours Of Service	OCTA	LB, MV, OCTA		GG, MV	TII
157			97	Public Transport – Route Structure	OCTA	LB, MV, OCTA		GG, MV	TII
158		59	72	Ramp Metering	Irv				TII
159			92	Reactivation And Use Of Unused Or Lightly Used Rail Row	B, Irv	B, SA	Ana, B, F, HB, Irv, O, SA	B, F, SA	TII
160		34		Rehabilitate And Maintain Pavement	B, C, Irv, LP, MV, OC, TCA, T	B, BP, C, Irv, LW, LF, LP, MV, O, OC, RSM, SC, SA, SB, S, TCA, T	B, C, Irv, LP, MV, OC, SA, TCA, T	B, C, Irv, LH, LP, MV, O, RSM, SA	TII
161			87	Replacement Of Bus Fleets	OCTA	LB, OCTA			TII
162			67	Smart Streets	Ana, B, C, HB, Irv, LHb, OC, S, TCA, T	B, BP, C, HB, Irv, LW, OC, S, TCA, T	AV, B, Irv, OC, SA, TCA, T	Ana, B, C, SA, T	TII
163			88	Statewide Policies On Replacement Of Transit Equipment					TII
164			89	Station Cars		Ana			TII
165			93	Support Extension Of Rail Line	SA	Ana, LW	F	F, HB, MV	TII
166			85	Targeted Infrastructure Growth	Ana, Irv	Ana, Irv, LP, SA	C, Irv, SA	Ana, C, GG, HB, Irv, LP	TII
167			50	Traffic Calming Measures	Ana, B, DP, Irv, LHb, MV, OC, SA, TCA, T, W	Ana, B, BP, CM, DP, LHb, LF, LP, MV, NB, OC, RSM, SC, SA, TCA, T, W	AV, B, DP, LHb, OC, SA, TCA, T, W	AV, Ana, B, CM, C, DP, GG, LH, LP, MV, O, RSM, SA, T	TII
168			78	Transit Marketing, Promotion, And Pricing Incentives	MV, OCTA	Ana, LW, OCTA		Ana, GG, MV	TII
169			100	Transit Oriented Infrastructure Development In Infill Corridors	Ana, DP, MV	Ana, DP, LW, MV, SA	Ana, DP, F, SA, S	Ana, DP, F, GG, MV, SA	TII
170			94	Village Trolley – Trial Basis	Irv	Ana	DP, F, Irv, SC	B	TII
171		25		Adopt Competitive Fare Structure					TSM
172			198	Adopt Emission Based Tolls					TSM
173				Alternatively-Fueled, Heavy Duty Vehicles	Irv, MV	Irv, LW, LP, MV	Irv, SC		TSM
174		62	158, 159	Anti-Idling Traffic Codes For Commercial Vehicles		BP			TSM
175			19	Assess Climate Impacts Of Development	F, LF, O	Ana, CM, HB, Irv, LW, LF, O, OC, SC	AV, LF, O	AV, Ana, CM, LH, O	TSM
176			22	Assessment Of Regional Impact Development Projects For Climate Mitigation	Ana	Ana, Irv, OC	Ana	Ana	TSM
177	44	48	197	Cordon Pricing (E.G. London, Fee For Vehicle Access To Roads Within Specified Area)					TSM
178			203	Convert Existing Roads To Toll Roads					TSM
179			175	Develop Traffic Calming Systems	Ana, DP, Irv, LB, MV, SA	Ana, B, DP, CM, LF, LP, MV, NB, SA, W	AV, B, DP, LF, SA	B, CM, DP, LB, LP, MV	TSM
180			157	Distribute Educational Information	MV	B, BP, CM, DP, LF, MV, SA, W	AV, B, LF, MV, SA	B, SA	TSM
181		51		Eliminate Or Reduce Highway And Arterial Projects That Result In Additional "General Purpose" Lane Miles		LB, LW			TSM
182			172	Encourage Bus Tracking Systems And Information Sharing		LW	LB		TSM
183			187	Encourage Intermodal Travel	MV, OCTA	Ana, LB, LW, MV, OCTA	AV, MV	Ana, MV	TSM
184			189	Encourage Old Vehicle And Equipment Retirement For Construction Vehicles		LP, OC, TCA	AV		TSM
185			188	Encourage Old Vehicle And Equipment Retirement For General Public		Ana, SA	AV		TSM

Sustainability Strategy List for Orange County Sustainable Communities Strategy Development

#	CDR #	CARB #	SCAG #	Item	Completed Project	Ongoing Project	Future Project	General Plan Policy	Category
186			185	Encourage Regional Transit Programs	OCTA	LB, LW, LP, MV, OCTA, W		Ana, LF, MV	TSM
187			160	Encourage Truck Stop Electrification					TSM
188		63		Enhance Vehicle Inspection And Maintenance Programs		B, LP, SA	SA	LP	TSM
189			183	Expand Transit Services		LB, MV, W	OCTA	Ana, LF, MV	TSM
190			186	Facilitate Intermodal Travel	MV, OCTA	LB, MV, OCTA, W	MV	Ana, LF, MV, O	TSM
191		61		Freeway Travelers Information System	Irv				TSM
192			169	Help Establish Baselines/Guidelines To Create Green Transportation Standards		SA, W	AV, SA		TSM
193		36		Implement Effective Pricing		SA			TSM
194		55		Implement Traffic Signal Coordination	Ana, B, DP, HB, Irv, MV, O, OC, TCA, T, W	AV, Ana, B, BP, CM, DP, HB, Irv, LW, LF, LP, MV, NB, OC, SC, SA, S, TCA, T, W	AV, B, DP, HB, Irv, MV, OC, SA, S, TCA, T, W	AV, Ana, B, DP, HB, Irv, LH, LP, MV, T	TSM
195			199	Implement Urban And Intercity Road Tolls	Ana				TSM
196		38		Improve Circulation Efficiency Through Information (E.G., Signage)	Ana, HB, Irv, SA, T, W	AV, Ana, BP, CM, HB, Irv, LW, LF, LP, SC, SA, T, W	AV, Irv, O, SC, SA, S, T, W	AV, Ana, CM, LP, S	TSM
197			184	Improve Transit Stops And Stations	Ana, MV, O, OCTA, W	Ana, LB, LW, LF, MV, O, OCTA, W	MV, OCTA	Ana, LF, MV, O	TSM
198		60		Incident Management System	OCTA, W	LB, OCTA, W			TSM
199			176	Increase Use Of HOV, Hot And Dedicated BRT Lanes		MV		MV	TSM
200			174	Lower And/Or Enforce Speed Limits	Ana, Irv, T, W	AV, Ana, B, BP, CM, HB, Irv, LW, LF, LP, NB, O, RSM, SA, T, W	Irv, SA, T, W	LP, RSM, SA, T	TSM
201		64		Operation Improvements To Relieve Bottlenecks	Ana, HB, Irv, W	Ana, B, CM, HB, Irv, LW, SA, W	AV, HB	AV, B, HB, SA	TSM
202				Other Reduced VMT	Ana, LF	LF	LF	Ana	TSM
203			156	Promote Maintenance And Driver Training	Ana	Ana, LP, SA			TSM
204			161	Promote Truck Refrigeration Units					TSM
205		56		Queue Jumps/Bus Priority At Intersections			SA		TSM
206	36	57	170, 173	Real-Time Transit Information	DP	Ana, DP, LW	DP, LB, OCTA, W	DP	TSM
207				Reduce Particulate Matter (Pm) Emissions From On-Road Diesel-Powered Heavy-Duty Vehicles.	MV	Ana, MV, SA	BP, SA	SA	TSM
208		24		Reduce Passenger Travel Time (E.G., More Frequent Headways)		LB, W	OCTA	Ana	TSM
209		58		Speed Limit Reductions To 55 Mph	RSM				TSM
210			20	Streamlining Development Projects That Reduce VMT, Energy Consumption, Transportation Impact.	Ana, HB	Ana, LP	O		TSM
211			168	Support Procurement Of An Efficient Heavy-Duty Vehicle Fleet	Irv, MV	Irv, LP, MV, SA	Ana, Irv	SA	TSM
212			181	Support School Bus Use		CM, HB		AV	TSM
213			200	Use Toll Revenue To Fund Alternative Fuel Vehicles					TSM
214		35		Use Transportation System Management (E.G., Congestion Management)	B, MV, SA, T	B, CM, C, LP, MV, SA, T	AV, B, MV, T	AV, B, C, LH, LF, MV, SA, T	TSM
215	39	33	77, 171, 177	Using Intelligent Transportation System Technologies, Signal Synchronization, Prioritization For Buses	C, MV, OCTA, W	Ana, CM, C, LP, MV, NB, OCTA, RSM, W	C, MV, OCTA, W	Ana, C, MV, RSM	TSM
216		7		Improve Connectivity Of Streets And Pedestrian Network (E.G., Through Streets)	B, C, HB, Irv, MV, SA, T, W	Ana, B, CM, C, Irv, LB, LP, MV, NB, RSM, SA, W	B, C, F, GG, HB, Irv, MV, SC, SA, T, W	AV, Ana, B, C, F, GG, HB, Irv, MV, LH, LF, LP, O, RSM, SA, T	Walk
217		27, 28	34	Improve Pedestrian Environment (E.G., Beautification, Access, Safety)	Ana, B, C, GG, HB, Irv, MV, OC, SA, TCA, T, W	Ana, B, BP, CM, C, GG, Irv, LB, LW, LF, LP, MV, O, OC, RSM, SC, SA, SB, TCA, T, W	AV, Ana, B, C, F, GG, HB, Irv, LF, MV, OC, SC, SA, S, TCA, W	AV, Ana, B, C, F, GG, HB, Irv, LH, LF, LP, MV, O, RSM, SA, S, T	Walk
218	17	26	35, 38	Improving Pedestrian Infrastructure And Facilities E.G. Pedestrian Bridge	Ana, DP, HB, Irv, LF, MV, SA, T, W	Ana, CM, Irv, LB, LF, LW, MV, NB, O, RSM, SC, SA, T, W	Ana, BP, CM, HB, Irv, LF, SA, S, T, W	AV, Ana, GG, HB, Irv, LH, LF, MV, O, RSM, SA, T	Walk
219			105	Increase Bike/Walk Trips With Improved Streets And Facilities	Ana, B, C, DP, HB, Irv, MV, SA, T, W	B, CM, C, DP, Irv, LW, LP, MV, NB, RSM, SC, SA, T, W	AV, B, C, DP, F, HB, Irv, LF, MV, SA, S, T, W	AV, Ana, B, C, DP, F, GG, HB, Irv, LH, LF, MV, O, RSM, SA, T	Walk
220			39	Sidewalk Construction	B, C, DP, Irv, LHb, LF, MV, OC, SA, TCA, T, W	B, BP, CM, DP, F, HB, Irv, LB, LW, LHb, LF, LP, MV, NB, O, OC, RSM, SC, SA, S, TCA, T, W	Ana, B, DP, F, GG, Irv, LHb, LF, MV, OC, SA, TCA, T, W	Ana, B, C, DP, F, GG, Irv, LH, MV, RSM, SA, T	Walk
221			36	Statewide Walkable And Bike Policy	Irv	Irv, LP, W	AV, Irv	GG, Irv	Walk
222			40	Trail Improvement Project	Ana, B, DP, Irv, MV, NB, SA, T, W	Ana, B, CM, DP, F, Irv, LW, MV, O, RSM, SA, W	AV, Ana, B, DP, F, GG, Irv, LHb, LF, MV, SA, T	AV, Ana, B, DP, F, GG, HB, Irv, LHb, MV, RSM, SA, T	Walk

Notes:

CDR	Center for Demographic Research
CARB	California Air Resources Board
SCAG	Southern California Association of Governments
TDM	Transportation Demand Management
TII	Transportation Infrastructure Investments
TSM	Transportation System Management
AV	Aliso Viejo
Ana	Anaheim
B	Brea
BP	Buena Park
CM	Costa Mesa
C	Cypress
DP	Dana Point
F	Fullerton
GG	Garden Grove
HB	Huntington Beach
Irv	Irvine
LB	Laguna Beach
LH	Laguna Hills
LW	Laguna Woods
LHb	La Habra
LF	Lake Forest
LP	La Palma
MV	Mission Viejo
NB	Newport Beach
O	Orange
RSM	Rancho Santa Margarita
SC	San Clemente
SA	Santa Ana
SB	Seal Beach
S	Stanton
T	Tustin
W	Westminster
TCA	Transportation Corridor Agencies
OC	County of Orange
OCTA	OCTA

San Joaquin Hills Corridor Agency

Chairman:
Bert Hack
Laguna Woods

Transportation Corridor Agencies

Foothill/Eastern Corridor Agency

Chairman:
Peter Herzog
Lake Forest

February 10, 2011

Scott Martin
Center for Demographic Research
PO Box 6850
2600 Nutwood Ave., Ste 750
Fullerton, CA 92831

Subject: Toll Road-Related Best Management Practices for the Orange County Sustainable Community Strategy

Dear Mr. Martin:

At present, the proposed Orange County Sustainable Community Strategy (SCS) Best Management Practices (BMP) list contains seven toll-related BMPs. We offer the following status update on the Transportation Corridor Agencies (TCA) BMP implementation and recommendations for expanding the list to better reflect actual planned enhancements to TCA's toll-related BMPs.

SR 73, the San Joaquin Hills Transportation Corridor; SR 241, the Foothill Transportation Corridor; and SR 241/261/133, the Eastern Transportation Corridor comprise 51 miles of toll roads, roughly 27% of Orange County's freeway network. The addition of 40 miles of SR 91 express lanes operated by OCTA increases that total.

TCA toll facilities are all variably priced (higher tolls during peak hours) to incentivize free-flow traffic conditions that reduce GHG emissions that would otherwise occur under more congested conditions. Toll road pricing also incentivizes higher average vehicle occupancy, which reduces overall trips and associated GHG emissions in the region.

Many researchers, including Dr. Marlon Boarnet of UCI, have identified pricing as the most powerful mitigation/BMP for alleviating GHG emissions. Orange County is the only subregion with a priced transportation network at this time, and will be the only one with such a large portion of the total network subject to pricing in the future.

The BMP list contains the following transportation pricing BMPs related to TCA's toll roads:

> Additional Pricing Options: Congestion Pricing, Hot Lane Pricing, etc. on major routes;

20I E. SANDPOINTE AVE., SUITE 200, P. 0. BOX 28870, SANTA ANA, CA 92799-8870 714/436-9800 FAX 714/436-9848

Members: Anaheim • Costa Mesa • County of Orange • Dana Point • Irvine • Lake Forest • Laguna Hills • Laguna Niguel•
Mission Viejo • Orange • Newport Beach • Sonta Ana • San Clemente • San Juan Capistrano • Tustin • Yorba Linda

Mr. Scott Martin
February 10, 2011
Page 2 of 4

Ensure Adequate Access to Open Space And Preservation Of Habitat [Note that TCA toll roads provide access to beach destinations, as well as recreational areas adjacent to the Cleveland National Forest and HCP/NCCP open space; this access will further expand when the 241 completion project is constructed];

Use Toll Revenue to Fund Alternative Fuel Vehicles [Note that this BMP will not apply to TCA's toll roads, as the bond covenants require all toll revenues collected on TCA facilities to be used to repay existing construction bonds];

Expand High Occupancy Toll (Hot Lanes) System [Note that TCA toll roads are all general purpose lanes, so this BMP would not apply];

Adopt Emission Based Tolls;

Convert Existing Roads to Toll Roads; and

Implement Urban and Intercity Road Tolls.

RECOMMENDATIONS

In light of their potential GHG reduction importance, we suggest that these and all transportation other pricing related BMPs (such as cordon pricing) be grouped together to better convey the full range existing pricing implementation and future options. At present, they are identified as a mix of TDM, TSM and pricing measures. Grouping them will also better correspond to SCAG's SCS guidelines calling for pricing strategies.

We also recommend that the seven tolling related BMPs be expanded to capture the full range of pricing actions and future options being pursued by the TCA on its public toll road system. The following additional measures are either being currently implemented and/or are being considered for future implementation by the TCA. All of them have a high degree of feasibility:

1) Implement Inter-County and Inter-Regional Toll Facilities.

In contrast to the existing BMP that focuses on urban and intercity tolls, this new BMP addresses the type of facility exemplified by the TCA toll corridors that provide intra-county, inter-county and inter-regional access.

Existing Implementation: TCA has constructed and currently operates 460 lanes miles of toll road that serve intra-county, inter-county, and inter-regional trips.

Future Implementation: TCA will add 105 new tolled lanes between 2012 and 2035 to meet intra-county, inter-county and inter-regional travel demand.

2) Reduce congestion and associated GHG emissions through variable toll pricing.

Mr. Scott Martin
February 10, 2011
Page 3 of 4

Existing Implementation: TCA currently implements variable peak hour pricing on 460 lane miles of FTC, ETC and SJHTC toll roads.

Future Implementation: TCA will continue to implement variable peak hour pricing on 460 lane miles FTC, ETC and SJHTC toll roads, and will expand this by 105 additional lane miles of variably priced roads by 2030.

3) Reduce congestion and associated GHG emissions through dynamic toll pricing.

Future Implementation: Although TCA tolls do not vary continuously throughout the day in response to congestion at this time, this technique is available for use when and if appropriate on The Toll Roads.

4) **Reduce vehicle trips and associated GHGs by providing express bus transit on toll lanes.**

Existing Implementation: TCA and OCTA currently have in place agreements allowing such routes.

Future Implementation: TCA, OCTA and other providers could expand express/rapid bus service on toll lanes.

5) **Reduce vehicle trips and associated GHGs by providing transit in the dedicated median of existing toll corridors.**

TCA has reserved right of way for future mass transit in the median of its corridors.

6) **Reduce congestion and associated GHGs with a common, transferrable tolling technology for priced facilities.**

Existing Implementation: All priced facilities in Orange and San Diego Counties currently use the FasTrak transponder technology, making the system flow more smoothly with less congestion-related GHG emissions. Electronic tolling via the FasTrak technology is available on 460 lane miles of SR 241, SR 261, SR 133, SR 73 and SR 91. This technology also provides interoperability on tolled facilities statewide; OCTA's 91 Express Lanes as well as priced lanes in San Diego County and in the Bay Area also employ FasTrak.

Future Implementation: Expansions of the priced transportation network should use the same technology to avoid duplication and user confusion. For example, the completion of SR 241, the Foothill Transportation Corridor South, will employ FasTrak technology on 105 additional lane miles. This BMP should also be employed in the SCAG regional SCS to maintain regional and statewide interoperability.

7) **Reduce congestion and associated GHGs with cashless full electronic tolling.**

Mr. Scott Martin
February 10, 2011
Page 4 of 4

Future Implementation: TCA is planning to implement cashless, full electronic tolling on 460 existing lane miles of SR 241, SR 261, SR 133 and SR 73 between 2012 and 2020. This total will grow to 565 lane miles when the southern portion of 241 is fully built out by 2030.

8) **Reduce vehicle trip and development-related GHG emissions through toll road open space mitigation.**

Existing Implementation: The San Joaquin Hills, Eastern and Foothill Transportation Corridor toll roads have provided approximately 2,200 acres of dedicated open space as environmental mitigation. This acreage will remain undeveloped in perpetuity despite significant future pressure for urban development to accommodate a growing population and economy in Orange County. In doing so, the dedicated open space will contribute to higher densities and more compact development elsewhere in the Orange County subregion, which is beneficial for GHG reduction. In addition, the dedicated open space provides permanent carbon sequestration benefits that the SCS should capture.

Future Implementation: Any additional toll road open space dedications will expand on the benefits described above.

Thank you for the opportunity to comment on the draft BMP list. I am available to discuss any questions or comments you have on the requested additions above. You can reach me at (949) 754-3475 or vmcfall@thetollroads.com.

Sincerely,

Valarie McFall
Deputy Director
Environmental Planning

cc: Tony Petros, LSA Associates

February 18, 2011 OC School Districts - SCS Info. prepared by Andrea Sullivan 714/966.4325

OC SCS Questions	ACSD	AUHSD	BOUSD	BPSD	CUSD	CESD	CYSD	FVSD	FJUHSD	FSD	GGUSD	HBCSD	HBUHSD	IUSD	LHCSD	LBUSD	LAUSD	LJSD	MSD	NMUSD	OCDE	OUSD	PYLUSD	Saddleback College	SVUSD	SAUSD	So. Community College	TUSD	WSD
Does your district have any plans to improve parking or access from arterials on campuses?			N	N		N			N		Y	N		Y							N			Y	N	Y	N		
GGUSD- Yes/Maybe. We are hoping to obtain approval for State modernization funding through the School Facilities Program to modernize 66 sites. Parking and access will be improved through these efforts.																													
HBCSD- Last summer we expanded and improved parking lots and access at Huntington Seacliff and Smith Elementary Schools. No further plans.																													
FJUHSD - No, we did that in the last 3 years.																													
CESD - No immediate plans.																													
SOCCD - Not in the immediate future. There are proposals but they appear to be twenty plus years out.																													
IUSD - Parking improvements, such as circulation upgrades/enhancements and increased parking capacity occur at sites being modernized when funding/budget allows																													
SAUSD - We have around 15 parking lot improvement projects. We also are adding parking lots at two schools that do not currently have parking.																													
Walk or bike to school programs/incentives for students/parents/staff?			N	N		N			N		N	N		Y							N			N	N	Y	N		
OCDE - Alternative Ed. Program students are not allowed to drive themselves to school. Our Green Committee encourages green practices.																													
SAUSD - A limited number of District Safety Officers will be deployed at their respective school sites on bicycles to augment patrol and crime prevention coverage. All District Safety Officers were allowed the opportunity to express an interest in this strategy that augments other primary methods of patrol, i.e., foot patrol and golf carts.																													
IUSD -The City of Irvine offers a grant program in coordination with Irvine Unified School District to promote pedestrian travel to schools.																													

February 18, 2011 OC School Districts - SCS Info. prepared by Andrea Sullivan 714/966.4325

OC SCS Questions	ACSD	AUHSD	BOUSD	BPSD	CUSD	CESD	CYSD	FVSD	FJUHSD	FSD	GGUSD	HBCSD	HBUHSD	IUSD	LHCSD	LBUSD	LAUSD	LJSD	MSD	NMUSD	OCDE	OUSD	PYLUSD	Saddleback College	SVUSD	SAUSD	So. Community College	TUSD	WSD
Any new bike accommodations planned? (trail connections, bike lockers)			N	N		N			N		N	N		Y							N			N	N		N		
GGUSD- No funding.																													
HBCSD - No plans. One middle school intends to add skateboard racks in the bike area.																													
IUSD - The City of Irvine's Master Plan incorporates numerous walking and biking trails that connect many of the existing and planned communities to																													
OCDE - We have bike racks at our new school - Harbor Learning Center.																													
Any telecommuting or similar programs ongoing?			N	N		N			N		Y	N		N							N			N	N	N	Y		
GGUSD- As much as possible. The instructional staff (teachers) have access for many of our web-based computer programs (Student system-entering grades at home, viewing test scores of data assessment system, e-mail….)																													
OCDE - We have teleconferencing and videoconferencing capabilities.																													
SAUSD - Just conference calls for the district office and consultants to reduce travel costs.																													
Online courses offered?			N	N		N			Y		Y	N		N							Y			Y	Y	Y	Y		
GGUSD- We have had several on-line courses for high school students, and looking into on-line Independent Study.																													
FJUHSD - Not yet we are starting independent study on line and will be expanding…surprisingly the union is not in support.																													
SVUSD - Health, Civics, Economics, Calculus BC																													
BOUSD - Not at this time, but will in the future.																													
OCDE - At our Pacific Coast High School and at teacher trainings.																													
SOCCD - Including a plan for increase in same																													
SAUSD - Online courses are being currently offered at Century and Valley for credit recovery. Web conferencing and online learning is beginning to be used for professional development. Web conferencing is extensively used for admin planning.																													

2 of 5

February 18, 2011 OC School Districts - SCS Info. prepared by Andrea Sullivan 714/966.4325

OC SCS Questions	ACSD	AUHSD	BOUSD	BPSD	CUSD	CESD	CYSD	FVSD	FJUHSD	FSD	GGUSD	HBCSD	HBUHSD	IUSD	LHCSD	LBUSD	LAUSD	LJSD	MSD	NMUSD	OCDE	OUSD	PYLUSD	Saddleback College	SVUSD	SAUSD	So. Community College	TUSD	WSD
Staggered start times for schools?			Y	Y		N			Y		Y	Y									N			N	Y	N	Y		
GGUSD- We have a few schools with staggered starts – which were negotiated many years ago (decades). Staggered starts are problematic for some as they can extend meal schedules but more efficient for bus transportation (less bus drivers needed.) However, staggered starts complicate employee contractual issues. Many teachers unions have negotiated 'collaboration' time on a specific day each week, and staggered starts make it more difficult to implement collaboration programs among teachers (they like to do this all at the same time – just like taking lunch at the same time each day).																													
HBCSD-Slightly staggered start times(8:05-8:40) to accommodate district bus services.																													
TUSD - Some of our schools in Tustin Ranch and West Irvine have staggered start times but only by 15 min. At these sites kindergarten starts school at say 8:00 a.m. and the others (grades 1-5) start at 8:15 a.m.																													
CESD - No, school start times were standardized this year.																													
IUSD - Some of the elementary schools have staggered start times. In addition, the middle and high schools rely on differentiated schedules through the use of block scheduling, late start, and implementation of zero period.																													
SAUSD - We have suggested adjusting the bell schedules before and likely will again. At the time, it was not a priority and had a large impact on parents and students.																													
Daycare offered on campus? (limits trips)			Y	Y		N			Y		N	Y						Y			N			Y	Y		Y		
GGUSD- We have preschool programs for community students, but not day care for employees and their offspring.																													
HBCSD- Before/after school care to accommodate parent needs for childcare.																													
FJUHSD - Just completed a new facility for 80 students at one location and about 20 employees at another.																													
LJUSD - We offer onsite daycare at a few of our elementary sites.																													
SOCCD - Yes there are daycare services on both campuses. Not sure what you mean by quantify campus utilization in a number if you are asking can we evaluate the number or percentage of students that are served, then yes.																													
SVUSD - We offer daycare before and after school for school aged students for elementary only. Not an all day program.																													

3 of 5

OC SCS Questions	ACSD	AUHSD	BOUSD	BPSD	CUSD	CESD	CYSD	FVSD	FJUHSD	FSD	GGUSD	HBCSD	HBUHSD	IUSD	LHCSD	LBUSD	LAUSD	LJSD	MSD	NMUSD	OCDE	OUSD	PYLUSD	Saddleback College	SVUSD	SAUSD	So. Community College	TUSD	WSD
IUSD -Yes, all elementary and K-8 campuses have daycare services offered through the City of Irvine.																													
SAUSD - We do not have ES student daycare, with the exception of Think together, which houses our afterschool program. We have a cal-safe program that allows parenting teens to bring their kids to school. Not all parenting teens are given a space. Additional information breakdown of schools available upon request.																													
Can they quantify campus utilization in a number?			Y			N																		Y			Y?		
FJUHSD - 100 trips each way?																													
BPSD - Not sure.																													
GGUSD - ???																													
SOCCD - Not sure what you mean by quantify campus utilization in a number if you are asking can we evaluate the number or percentage of students that are served, then yes.																													
Question not answered or understood by most participants																													
Bus transit offered?			Y	Y		N			Y		N	N		Y							Y			Y	Y	Y	Y		
GGUSD- Not available for employees, but we sure do offer bus passes for the 'homeless' students.																													
FJUHSD - No home to school but we do sell OCTA bus passes at student rates																													
SOCCD - Yes, there are bus stop locations at both campuses																													
SVUSD - Yes for six sites.																													
OCDE - All Special Ed students are bussed; no bussing for other programs																													
IUSD - Limited to a few schools.																													
SAUSD - We do not have any plans to provide transit shuttle services. We only have 3 bus routes for our 54,000+ students, outside of SDC.																													
Alternative fuel vehicles used?			N	Y		N			Y		Y	N		N							N			N	N	N			
GGUSD- Yes – we have 27 CNG busses, and due to replace another 13 diesel busses in the near future with CNG (110 busses in fleet).																													

BPSD - CNG
FJUHSD - 13 CNG
OUSD - Since we are in the South Coast Air Quality Management District (SCAQMD), school District must comply with SCAQMD rule 1195. This means we cannot purchase Diesel powered engines. For our white fleet (maintenance & other), we purchase gasoline powered engines. We also purchase the smaller school buses with gasoline powered engines. When we purchase or receive a grant for our larger school buses, we purchase Compressed Natural Gas (CNG) powered engines. currently have six (6) school buses that are powered by CNG. We also have retrofitted most of our Diesel engines with a Particular Trap. This trap replaces the muffler and doesn't allow the particulate matter to get into the air. We also installed a CNG fuelling station at our bus yard.
SOCCD - Electric carts are used in some instances for on campus deliveries and services.

Subject: FW: UCI Information
Attachments: Survey Spreadsheet for Employers 2011.xls; 2010 AQMD Filing Document - Final.pdf

From: Michael Davis [mailto:msdavis@pts.uci.edu]
Sent: Thursday, March 24, 2011 10:11 AM
To: Les Card
Subject: UCI Information

Les:

Sorry this is so slow in coming. Here is a brief description of what we're doing for Sustainable Transportation here at UCI.

STAFF –

UC Irvine has **3 full-time employees**, **1 part-time** dedicated to Sustainable Transportation efforts:

- Mike Davis, Interim Manager
- Antoinette Saenz, Employee Transportation Coordinator
- Ramon Zavala, Employee Transportation Coordinator
- Ken Ezell, Employee Transportation Coordinator (part-time); Charter Services Coordinator

WEB PRESENCE –

www.parking.uci.edu/AT

PROGRAMS –

- Bike – Bike infrastructure: Extensive bike path network / Signage/ Bike-Pedestrian bridges. Safety & Training: B.E.E.P. program. Information: www.bike.uci.edu
- Bus – University Pass Program: Membership provides annual OCTA access for just $95 (next year $155). Presently represent an 86% subsidy (next year 77%). Information: www.parking.uci.edu/AT/modes/OCTA.cfm
- Carpool – Available for employees. Provides reduced-rate parking and preferential parking for participants. Information: www.parking.uci.edu/AT/modes/carpool.cfm
- Shuttle – UCI maintains a shuttle fleet for on-campus and near-campus transportation. The fleet has real-time tracking. Information: www.shuttle.uci.edu
- Train - Provides 20% rebate for 10-day and monthly pass holders. Information: www.parking.uci.edu/AT/modes/train.cfm
- Vanpool – UCI presently has 18 vanpools carrying passengers from various locations to UCI. These vanpools come in during morning rush hour; return at evening rush hour. Information: www.parking.uci.edu/AT/modes/vanpool.cfm
- Walk – Infrastructure: Extensive pedestrian path network / Signage / Bike-Pedestrian bridges. Information: www.parking.uci.edu/AT/modes/walkorbike.cfm
- ZEV-NET – Zero-Emission Vehicles stationed at the Irvine Transportation Center for pooling to/from UCI. Information: www.parking.uci.edu/AT/documents/zevnetflyer.pdf

INCENTIVES – [Complimentary "rainy day" parking permits given to employees for each month in the program.]

- Bike – 5 complimentary "rainy day" parking permits for each month in the program
- Bus – 2 complimentary "rainy day" parking permits
- Carpool – 2 complimentary "rainy day" parking permits
- Shuttle – 2 complimentary "rainy day" parking permits
- Train - 2 complimentary "rainy day" parking permits
- Vanpool - 4 complimentary "rainy day" parking permits
- Walk - 5 complimentary "rainy day" parking permits

"RIDESHARE" SUPPORT – [These give mobility options to those who don't bring a car to campus]

- ZotWheels Bikeshare – The first fully-automated bikeshare program at a U.S. university; the only bikeshare program in the Western U.S. Information: www.parking.uci.edu/zotwheels/main.cfm
- Zipcar Carshare – 11 cars on campus available for hourly or daily use at $7-$8/hour. Gas, insurance, and 180 miles included. Information: www.zipcar.com/uci/
- Zimride – Ride matching site for the UCI campus. Allows people to post or request a ride. Links with Facebook. Information: www.zimride.com/uci
- Holiday Shuttle - Provides complimentary shuttle service for the UCI community to John Wayne Airport and the Irvine Transporation Center before and after the Thanksgiving, Winter, and Spring breaks. Information: www.parking.uci.edu/public/holidayshuttle.cfm
- Pre-Tax Benefit: UCI provides a pre-tax benefit through payroll deduction for those who involved in the Bus, Carpool, and Vanpool Programs.

SAVINGS FROM UCI SUSTAINABLE TRANSPORTATION–

- Financial: $14.5 million saved annually ($12 million in fuel, vehicle, & parking costs for participants; $2.5 million for UCI community via reduction of need for parking construction & maintenance).
- Emissions: More than 23,000,000 Vehicle Miles Traveled (VMT) saved annually through all UCI sustainable programs. This equates to nearly 10,800 metric tons in GHG emissions saved each year.

AWARDS –

- 2011 League of American Bicyclists' "Certified Bicycle Friendly University" - Silver Designation
- 2010 Best Workplaces for Commuters' Race to Excellence - Gold Award
- 2010 Parking Program of the Year Award – California Public Parking Association (CPPA)
- 2010 Best Workplaces for Commuters designation – National Center for Transit Research / U.S. EPA
- 2010 Innovative Achievement in Auxiliary Services Award- National Association of College Auxiliary Services (NACAS)
- 2010 Rideshare Diamond Award – presented by the OCTA, VCTC & MTA
- 2010 Employee Transportation Coordinator (ETC) Champion Award – Mike Davis - Association for Commuter Transportation
- 2010 Honoree - Spirit of Volunteerism Award – Volunteer Center of Orange County (VCOC renamed OneOC)
- 2010 Bright Idea Award – Zotwheels Automated Bikeshare - Harvard University's Ash Center for Democratic Governance and Innovation
- 2010 Innovators Award – Student Systems and Services Category - Campus Technology
- 2010 Leadership Award – Transportation Category - Green California / California EPA
- 2009 Best Workplaces for Commuters Race to Excellence Silver Award
- 2009 OCTA Share the Ride Challenge Award
- 2009 Perfect 10 - Transportation Category - Sierra Club
- 2009 Environmental Achievement Award - US EPA Region IX
- 2009 Rideshare Diamond Award - presented by the OCTA, VCTC & MTA
- 2009 Best Work Places for Commuters - US EPA National Transit Research Center

- 2008 Governor's Environmental and Economic Leadership Award (GEELA) - Climate Change - State of California
- 2008 Clean Air Award - Innovative Transportation Program - SCAQMD
- 2008 Award - Innovation and Collaboration from the McHenry County Economic Development Corporation's Business Accelerator Program - ZotWheels Design
- 2008 Best Practice Award - TDM Category – UC / CSU / CCC Sustainability (Project Greenlight)
- 2007 Best Practice Award - TDM Category – UC / CSU / CCC Sustainability (Strategic Mobility Program)
- 2007 Best Practice Award - Fleet Category – UC / CSU / CCC Sustainability (Biofuel conversion)

Also attached is a form we completed for SCAG, our last AQMD survey (showing our Average Vehicle Ridership and describing our programs).

Let me know if you have any questions.

Mike

KEEPING UCI MOVING

Michael Davis
Interim Manager,
Sustainable Transportation
UCI Parking & Transportation Services
200 Public Services Bldg, Irvine, CA 92697 - Zot: 4525

Phone: 949.824.5060 Fax: 949.824.2387
www.parking.uci.edu

APPENDIX G

CARB POLICY BRIEF RANKING ANALYSIS

Summarizing the ARB briefs leads to the rankings of policies based on impact shown in the table below.

Table H: Summary of ARB Policy Briefs

Policy	Change in Policy	Reduction in VMT or change in other policy variable when noted	Impact Category	ARB policy brief
Road Pricing	1% increase in toll or price	0.1 to 0.45% reduction in traffic volumes	High	Road user pricing
Parking Pricing	Offering employees parking cash out[a]	12% reduction for employees accepting cash out	High	Parking pricing
Regional Accessibility to Employment	1% increase in access to employment [b]	0.13 to 0.25% reduction in VMT	High	Regional Accessibility
Jobs-Housing Balance	1% improvement in jobs-housing balance	0.29 to 0.35% reduction in VMT	High	Jobs-Housing balance
Neighborhood Design	Changes in density, mixed use, and street connectivity simultaneously	0.25% reduction in VMT [f]	High	
Residential Density	1% increase in neighborhood residential density [c]	0.05 to 0.12% reduction in VMT		Residential Density
Mixed Land Use	1% increase in land use mix [d]	0.02 to 0.11% reduction in VMT		Land Use Mix
Street Network Connectivity	1% increase in connectivity [e]	0.06 to 0.12% reduction in VMT		Network Connectivity
Telecommuting	Per individual telecommuter	17% VMT reduction on average weekday [g]	High	Telecommuting
Transit				
Distance from transit station	1 mile reduction in distance to nearest station	1.3% to 5.8% reduction in VMT	High-Medium	Distance to Transit (Transit Access)
Fare	1% reduction in fare	0.4% increase in transit ridership [i]	High-Medium	Transit Service
Service hours or service miles	1% increase in service hours or miles	0.7% increase in transit ridership [i]	High-Medium	Transit Service
Service frequency	1% increase in service frequency	0.5% increase in transit ridership [i]	High-Medium	Transit Service
Employer-Based Trip Reduction	Implementation of program at a worksite	4% to 6% reduction in commute VMT for employees at work site	High-Medium	Employer-Based Trip Reduction
Traffic Incident Clearance Programs	Regional implementation of a freeway incident clearance program	Approximate 1% reduction in two criteria pollutants, CO and NOx	High-Medium [h]	Traffic Incident Clearance Programs
Pedestrian Strategies	1% increase in sidewalk coverage, length, or width	0.09 to 0.27% increase in walking [i]	Low-Medium	Pedestrian Strategies
Bicycle Strategies	1% increase in either bicycle lane density (miles of lane per square mile of land) or spending share of federal transportation funds on bicycle infrastructure (per capita)	0.32% increase in bicycle commute mode share [i]	Low	Bicycle Strategies

Notes:

[a] Parking cash-out offers employees income equal to the value of free parking at work, and then charges employees for parking.

[b] Access to employment is measured by a distance-weighted gravity variable that sums all jobs in region or metropolitan area, inversely weighting jobs by a function of the distance from a residence to the job location.

[c] Neighborhoods were typically census tracts or transportation analysis zones, or approximately ¼ to ½ mile distances around residences.

[d] In the academic literature, land use mix is often measured by entropy or dissimilarity indices. See http://arb.ca.gov/cc/sb375/policies/mix/landusemix_bkgd.pdf.

[e] Measured as percent of street intersections that are four-way or by average block size.

[f] From National Research Council (2009) based on Bento et al. (2005). See http://www.arb.ca.gov/cc/sb375/policies/density/density_brief.pdf.

[g] Includes both telecommute and non-telecommute days. (Adjusts for the fact that telecommuters typically telecommute some but not all days per week.)

[h] Classification as ―high-medium” is based on fact that regional impact (approximate 1% reduction in two criteria pollutants) is of same magnitude as regional VMT reduction from regional implementation of employer-based trip reduction programs, where region is a metropolitan area.

[i] Increases in walking, bicycling, and transit ridership will not lead to one-for-one reductions in driving, as low market shares for walking, bicycling, and transit imply that large percentage increases in walk, bicycle, or transit mode share will be associated with smaller decreases in driving share. Paulley et al. (2006), cited in the ARB transit service policy brief, gives evidence that changes in transit service are associated with about 1/10th of the impact on driving as on transit service, and a factor of 1/10 is used to scale the impacts for walking, bicycling, and transit ridership in Table 1 when organizing the policies into impact categories in Table 2.

References

Bento, Antonio M., Maureen L. Cropper, Ahmed Mushfiq Mobarak, and Katja Vinha. 2005. The Effects of Urban Spatial Structure on Travel Demand in the United States. *The Review of Economics and Statistics* 87,3: 466-478.

Duranton, Gilles and Matthew A. Turner. 2011. The Fundamental Law of Road Congestion: Evidence from U.S. Cities. American Economic Review, forthcoming. Working paper version available at http://individual.utoronto.ca/gilles/Papers/Law.pdf.

National Research Council, Committee on Relationships Among Development Patterns, Vehicle Miles Traveled, and Energy Consumption. 2009. *Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions*. Washington, D.C.: National Academies Press.

Paulley, N., Balcombe, R., Mackett, R., Titheridge, H., Preston, J., Wardman, M., Shires, J., White, P. (2006). The demand for public transport: The effects of fares, quality of service, income and car ownership. *Transport Policy* 12: 295-306.

APPENDIX H

CEQA STREAMLINING: EXISTING LAND USE, DENSITY, AND BUILDING INTENSITY DATA

CEQA Streamlining: Existing Land Use, Density, and Building Intensity Data

SB 375 provides incentives in the form of CEQA streamlining to support community designs that help reduce GHG emissions. To take advantage of these CEQA streamlining provisions in SB 375, projects must prequalify based on two criteria:

- A project must be consistent with the land use designation, density, building intensity, and applicable policies in an approved SCS or Alternative Planning Strategy.[1]
- A project must be considered a Transit Priority Project (TPP) or a Residential/ Mixed Use Residential Project (as defined in SB 375).

To help OCCOG jurisdictions take advantage of the CEQA streamlining provisions in SB 375, SCAG will include maps in the regional 2012 RTP/SCS in order to show the uses, densities, intensities and locations for future development, and in order to facilitate subsequent project consistency findings. These maps will use the Orange County Projection dataset as reviewed and approved by OCCOG. SCAG, in consultation with OCCOG and OCCOG jurisdictions, may provide more detail in order to allow interested jurisdictions to take advantage of the CEQA streamlining provisions in SB 375. SCAG will only show more land use detail where a jurisdiction has acknowledged that the land use information is based on their input and approved of its being displayed in the adopted plan.

To facilitate SB 375 CEQA Streamlining, individual Orange County jurisdictions are asked to provide detailed land use information (uses, densities, intensities at a defined geographic level) to SCAG. These data are called out in the SCAG Framework and Guidelines and the legislation specific to the streamlining provisions. Additionally, or in lieu of detailed land use information, jurisdictions may work with SCAG in designating the appropriate regional "development type" in locations for potential future projects. Jurisdictions themselves will determine whether a particular project meets the CEQA streamlining qualifications, including making the consistency finding. If a jurisdiction does not participate in the SCS data collection effort for existing land use, density, and building intensity, there is no direct adverse consequence due to not providing input.

In order to provide the most accurate data possible for the Orange County subregion, and to preserve individual jurisdictions' general plan and existing data accuracy, detail, and integrity, and to meet the requirements under SB 375 for purposes of CEQA

[1] CARB will review the regional SCS to accept or reject SCAG's determination whether or not the implementation of the SCS would achieve the GHG emission reduction targets for the region. If the regional targets cannot be achieved by the regional SCS, then SCAG must prepare an Alternative Planning Strategy (APS). An APS is a separate document from the RTP and describes how the targets could be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

streamlining, SCAG prepared and provided Orange County local jurisdictions with a set of data/ GIS maps of detailed land use information, including General Plan, zoning, and existing general land use designation, density and building intensity data and maps, all for the jurisdictions' review and comment. Data/Maps Guides and Review Packets were provided by SCAG in electronic and hard copy format to OCCOG on February 11, 2011, for individual Orange County jurisdiction's review by April 29, 2011.

The information contained in the data packets document was developed and/or collected by the staff in the Data and GIS group in the Department of Research, Analysis, and Information Services (RAIS) under the Land Use and Environmental Planning (LUEP) Division at SCAG. The SCAG Data/Map Guide included information on the sources, methodologies, and contents of each dataset. These data/ GIS maps are identified in SB 375 as required to be considered in the SCS development to address the requirements of SB 375 and its implementation for purposes of CEQA streamlining. Comments and corrections from subregions and local jurisdictions are due to SCAG by April 29, 2011.

The list of data/GIS maps included in the SCAG map and data packets, along with the review requested of Orange County jurisdictions, appears as Table F, below.

Table F: Contents of the SCAG Map and Data Packets, with Review of Orange County Jurisdictions

Category	Action	GIS Shapefile available?
Land Use		
General Plan	review & comment	Yes
Zoning	review & comment	Yes
Existing Land Use as of 2008	review & comment	Yes
Geographical boundaries		
Jurisdiction Boundary & Sphere of Influence	review & comment	Yes
Census Tract Boundary	None	Yes
TAZ Boundary	None	Yes
Transit Priority Projects		
Major Stops & High Quality Transit Corridors	review & comment	Yes
Resource Areas & Farmland		
Endangered Species and Plants	review & comment	Yes
Flood areas	review & comment	Yes
Natural Habitat	review & comment	Yes
Open Space and Parks	review & comment	Yes
Farmland	review & comment	Yes

BACKGROUND: EXISTING LAND USE, DENSITY, AND BUILDING INTENSITY

In 2008 and early 2009, SCAG began to collect the general plan and zoning information from local jurisdictions, with year adopted ranging from 1971 to 2009 by jurisdiction. The general plan and zoning documents, maps, and/or GIS shapefiles collected were coded into GIS shapefiles at parcel level. Parcel data were acquired from Digital Map Product for Orange County. Beginning in July 2009, SCAG communicated with local jurisdictions, and revised the general plan and zoning data based on the results of the local review. Through a process of collecting general plan and zoning documents and receiving comments from local jurisdictions, information included in the data packets reflected the local inputs received by January 31, 2010. SCAG continues to receive local input, and will incorporate them into the database. General Plan data are shown at a parcel level; in many areas, they depict a local agency's adopted documents accurately. However, the data shown in some areas may be generalized or inaccurate for many reasons, a primary reason because the parcel level database representing general plan does not support multiple uses or designations on a single parcel (either splitting the parcel or representing overlays). Additionally, data on building size, existing use, and other specific parcel-related information that SCAG collected from other original data sources such as the Orange County Assessor's Office may have been in error and/or not up to date. Due to these inaccuracies and limitations, if site specific data is necessary, users should always reference a local agency's adopted documents or field surveys to determine actual land use designations.

At the jurisdiction level, both general plan land use and zoning maps are prepared with the land use or zoning codes used in each local jurisdiction. General Plan land use maps are also available at larger geographic levels, such as subregion, county, or the entire SCAG region with SCAG's standardized General Plan codes. For detailed information on the standardized codes, please refer to SCAG's General Plan Code Table.

SCAG prepared three sets of land use maps (General Plan Land Use, Zoning and 2008 Existing Land Use) at parcel level. The three land use maps were originally provided to local jurisdictions in September/October 2009. Based on one-on-one meetings and communication with local jurisdictions throughout the 1st round outreach (July 2009-January 2010) the Data/Map packets of existing land use, density, and building intensity data transmitted to Orange County jurisdictions in February 2011 reflect the local inputs received by January 31, 2010. Data was also incorporated for the cities of Irvine, San Clemente and San Juan Capistrano that was received after January 31st. The City of Costa Mesa is continuing to work with SCAG to correct the existing land use map for their jurisdiction.

Orange County Sustainable Communities Strategy

Orange County Jurisdiction Review Process

OCCOG distributed the electronic files and hard copies to Orange County cities and the County of Orange for review. They were asked to review and submit updates and comments for purposes of SB 375 CEQA streamlining, a description of which is attached. All Orange County jurisdictions received the SCAG datasets in both electronic and hard copy format. Most but not all OC jurisdictions reviewed for purposes of SB 375 CEQA Streamlining.

SCAG staff presented a data orientation and review session to the OCCOG TAC on March 1, 2011 and additionally at a broader meeting of SCS stakeholders on March 9, 2011. Additionally, SCAG staff was available and conducted meetings at CDR during the last week of March 2011 to provide technical data and GIS assistance to Orange County jurisdictions with limited data/GIS capability that needed assistance in the Data/Map review.

Based upon parcel level data originally provided by SCAG, Orange County jurisdictions reviewed the data to various degrees for purposes of CEQA streamlining.

Results

The results of that process are attached as data elements and appendices to this document. General Plan, zoning, and existing land use (density and building intensity) data are identified and provided at the parcel level in attached Excel files by Orange County jurisdiction.

In Appendix I, individual jurisdiction General Plans are presented along with web address links to individual jurisdictions' General Plans. Individual jurisdiction General Plans are always considered the final and ultimate authority on land use and zoning, especially for those jurisdictions that opted not to review the SCAG data.

For those jurisdictions that did not fully review, there are some limitations, conditions, and caveats to the existing land use, density, and building intensity data. Data provided by SCAG on land use is in some areas inaccurate and/or generalized. Because the parcel level database representing existing land use, general plan, and zoning data does not support multiple uses or designations on a single parcel (either splitting the parcel or representing overlays, such as zoning overlays), the data ultimately shown may generalize the data and thus not accurately depict a local government's adopted general plan or zoning or the existing land use on the site (including land use designated through a development or other legal agreement).

Due to these caveats and limitation, if site-specific data is necessary, users should always reference and rely on individual City and County of Orange general plans as the final authority. A local agency's adopted documents are always the final say on allowable land use designations and zoning, and actual site visits or field surveys to determine densities and building intensities should be undertaken.

Orange County Sustainable Communities Strategy

APPENDIX I

JURISDICTION GENERAL PLANS

REGIONAL TRANSPORTATION PLAN
2012–2035 RTP
SUSTAINABLE COMMUNITIES STRATEGY
Towards a Sustainable Future

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

818 West 7th Street, 12th Floor
Los Angeles, CA 90017
Phone: (213) 236-1800
Fax: (213) 236-1825
www.scag.ca.gov

REGIONAL OFFICES

Imperial County
1405 North Imperial Avenue
Suite 1
El Centro, CA 92243
Phone: (760) 353-7800
Fax: (760) 353-1877

Orange County
OCTA Building
600 South Main Street
Suite 906
Orange, CA 92863
Phone: (714) 542-3687
Fax: (714) 560-5089

Riverside County
3403 10th Street
Suite 805
Riverside, CA 92501
Phone: (951) 784-1513
Fax: (951) 784-3925

San Bernardino County
Santa Fe Depot
1170 West 3rd Street
Suite 140
San Bernardino, CA 92410
Phone: (909) 806-3556
Fax: (909) 806-3572

Ventura County
950 County Square Drive
Suite 101
Ventura, CA 93003
Phone: (805) 642-2800
Fax: (805) 642-2260

please recycle 2347 2012.04.09