AFFORDABLE HOUSING AND SUSTAINABLE COMMUNITIES PROGRAM

2015-2016 PROGRAM GUIDELINES

STATE OF CALIFORNIA

STRATEGIC GROWTH COUNCIL

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Affordable Housing and Sustainable Communities Program Guidelines

Article I. General

Section 100. Purpose and Scope

(a) The purpose of these Program Guidelines is to implement Division 44, Part 1 of the Public Resources Code (PRC) (commencing with Section 75200), which establishes the Affordable Housing and Sustainable Communities (AHSC) Program, hereinafter referred to as the **AHSC Program**.

(b) The purpose of the **AHSC Program** is to reduce greenhouse gas (GHG) emissions through projects that implement land-use, housing, transportation, and agricultural land preservation practices to support infill and compact development, and that support related and coordinated public policy objectives, including the following:

(1) reducing air pollution;

(2) improving conditions in disadvantaged communities;

(3) supporting or improving public health and other co-benefits as defined in Section 39712 of the Health and Safety Code;

(4) improving connectivity and accessibility to jobs, housing, and services;

(5) increasing options for mobility, including the implementation of the Active Transportation Program established pursuant to Section 2380 of the Streets and Highway Code;

(6) increasing transit ridership;

(7) preserving and developing affordable housing for lower income households, as defined in Section 50079.5 of the Health and Safety Code; and

(8) protecting agricultural lands to support infill development.

Section 101. AHSC Program Overview

The **AHSC Program** furthers the purposes of AB 32 (Chapter 488, Statues 2006) and SB 375 (Chapter 728, Statutes, 2008) by investing in projects that reduce GHG emissions by supporting more compact, infill development patterns, encouraging active transportation and transit usage, and protecting agricultural land from sprawl development. Funding for the **AHSC Program** is provided from the Greenhouse Gas Reduction Fund (GGRF), an account established to receive Cap-and-Trade auction proceeds. The Cap-and-Trade Program, a key strategy for achieving the GHG emission reduction goals of AB 32, issues a limited number of GHG emissions permits (called allowances) each year. A portion of these allowances can be purchased from the State at quarterly auctions, thereby generating auction proceeds. These State auction proceeds are then deposited in the GGRF, where they become available for appropriation by the Legislature to further the purposes of AB 32.

The **AHSC Program** is administered by the **Strategic Growth Council (Council)**. The **Department of Housing and Community Development (Department)** will implement the transportation, housing and infrastructure component of the **AHSC Program**. The **Council** staff will coordinate efforts with **Department** staff, working with the **California Air Resources Board (ARB)** and the **Council** to administer the broader **AHSC Program**, including developing program guidelines, evaluating applications, preparing agreements, monitoring agreement implementation, reporting and amendments.

The funding recipient will track metrics in accordance with ARB's Funding Guidelines. The **Council** will coordinate with **ARB** to develop and incorporate consistent guidance in the following areas, which will apply to all GGRF programs:

- Expenditure records to ensure investments further the goals of AB 32.
- SB 535 (Chapter 830, Statutes 2012) requirements to maximize benefits to **Disadvantaged Communities** and determining whether an investment provides a "benefit to" or "is located within" a **Disadvantaged Community**.
- Consistent methodologies for quantifying GHG reductions and other economic, environmental and public health co-benefits.
- Project tracking and reporting.

The **AHSC Program** will provide grants and/or loans to projects that will achieve GHG reductions and benefit **Disadvantaged Communities** through increasing accessibility of affordable housing, employment centers and key destinations via low-carbon transportation resulting in fewer vehicle miles traveled (VMT) through shortened or reduced vehicle trip length or mode shift to transit, bicycling or walking. Three project prototypes have been identified to implement this strategy: 1) Transit Oriented Development (TOD) Project Areas, or 2) Integrated Connectivity Project (ICP) Project Areas, or 3) Rural Innovation Project Areas (RIPA).

Funds will be allocated through a competitive process, based on the merits of applications submitted and the proposed use of funds within the identified **Project Area**. The threshold requirements and application selection criteria focus on the extent to which developments realize the **AHSC Program's** objectives of reducing GHG emissions, benefiting **Disadvantaged Communities**, providing affordable housing, demonstrating project readiness, and meeting other policy considerations, as reflected in Section 107.

Article II. Program Requirements

Figure 1
AHSC Program Summary

Project Area Types	Transit Oriented Development (TOD) Project Area	Integrated Connectivity Project (ICP) Project Area	Rural Innovation Project Area (RIPA)
Transit Requirements (All Project Areas) §102	▪ MUST include **Qualifying Transit**, which means a transit line serving the public that is operated by a public entity (directly or via contract), or operated as a grant recipient (or sub-recipient) from a public entity. ▪ **Qualifying Transit** includes various forms of **Rail Service**, **Bus Service** and **Flexible Transit Service**. ▪ All Project Areas MUST also include a **Transit Station/Stop,** which is a designated drop-off and pick-up location served by at least one **Qualifying Transit** line departing two or more times during **Peak Hours** (unless it is **Flexible Transit Service**). *Note: Transit requirements based on transit that is operational as of date of application submission. ICP/RIPA projects that would build High Quality Transit will remain eligible as an ICP/RIPA.*		
Project Area Specific Requirements §102	▪ MUST be served by **High Quality Transit** ▪ Headway frequency of 15 minutes or less during **Peak Hours** ▪ Must operate on a railway or be a **Bus Rapid Transit (BRT)** service that either fully or partially operates on a dedicated bus-only lanes ▪ **Project Area** MUST include an **Affordable Housing Development** (funded either through **AHSC Program** funds or other sources).	▪ CANNOT be served by **High Quality Transit**	▪ CANNOT be served by **High Quality Transit** ▪ MUST be located within a **Rural Area**
Required AHSC Funded Components §102	**AHSC Program** funds MUST be used for **Affordable Housing** (which includes **Affordable Housing Developments** or **Housing Related Infrastructure**) AND at least one (1) other type of **Eligible Use**	**AHSC Program** funds MUST be used for **Sustainable Transportation Infrastructure** AND at least one (1) other type of **Eligible Use**	
Eligible Uses §103	▪ **Affordable Housing Developments** ▪ **Housing Related Infrastructure** (HRI) ▪ **Sustainable Transportation Infrastructure** (STI) (Active Transportation and Transit Infrastructure) ▪ **Transportation-Related Amenities** (TRA) (includes transportation and transit-related amenities, active transportation-related amenities and **Complete Streets**) ▪ **Programs**		
Affordable Housing Development Requirements §103	Affordable Housing Developments may be: ▪ New construction ▪ Acquisition and **Substantial Rehabilitation** including preservation of affordable housing at-risk ▪ Conversion of one or more nonresidential structures to residential dwelling units		
Funds Available §106	Target 35 percent of available funds to **TOD Project Areas**	Target 35 percent of available funds to **ICP Project Areas**	Target 10 percent of available funds to **RIPAs**
	Only applications which meet all Threshold Requirements will be eligible and considered for funding. If insufficient eligible applications are received in any Project Area Type (TOD, ICP or RIPA) funds targeted to that Project Area Type will roll over to fund additional applications in other Project Area Types.		
Project Awards §104	All Project Area Types are subject to the following minimum and maximum award amounts: Maximum: $20 Million Minimum: $1 Million for TOD Project Areas or $500,000 for ICP and RIPA Project Areas		
Statutory Funding Set-asides §105	▪ 50 percent of the **AHSC Program** expenditures shall be for Affordable Housing (Health & Safety Code § 39719(a)(1)(C)) ▪ 50 percent of **AHSC Program** expenditures shall be for projects benefitting **Disadvantaged Communities** (Public Resources Code § 75214) *Note: A single project can address both set-asides above, and are not mutually exclusive.*		

Section 102. Eligible Projects

The **AHSC Program** is designed to implement GHG emissions reductions through fewer or shorter vehicle trips. The **AHSC Program** will fund integrated land use and transportation projects supporting low-carbon transportation options. Promoting mode shift to low-carbon transportation will require strategies that link residential areas, major employment centers and other key destinations to accessible, reliable, affordable, safe and comfortable transit and active transportation options.

(a) All applicants will be required to define a **Project Area**. The **Project Area** is the area which encompasses transit, housing and destinations and is the area in which **AHSC Program** funds will be invested. Each **Project Area** must:

(1) be a contiguous area included within a distinct planning area in a local or regional planning document(s) or transit service area;

(2) include at least one **Transit Station/Stop** consistent with the requirements set forth in (c) or (d) below; and

(3) be of a defined size consistent with one of the following:

(A) For **Project Areas** with fixed transit routes, the defined **Project Area** may not exceed a one (1) mile radius from the identified **Transit Station/Stop**.

(B) For Project Areas with **Flexible Transit Service** routes, the defined **Project Area** must be defined based on the identified service area of the transit line or route.

(C) For Project Areas which include a **Transit Corridor** or bicycle network or both, the defined **Project Area** must be identified in a plan, i.e. general plan, bicycle master plan or transit corridor implementation plan.

(b) The **AHSC Program** includes three eligible **Project Area** types as defined below:

(1) Transit Oriented Development (TOD) **Project Areas**,
(2) Integrated Connectivity Project (ICP) **Project Areas**, and
(3) Rural Innovation Project Areas (RIPA).

A **<u>Transit Oriented Development (TOD) Project Area</u>** must demonstrate VMT reduction through fewer or shorter vehicle trips or mode shift to transit use, bicycling or walking by integrating **High Quality Transit** systems and key destinations including residential/mixed-uses, with an emphasis on affordable housing development and **Disadvantaged Community** benefits within a neighborhood, district or corridor. Examples of TOD typologies are described in in Appendix G.

An **<u>Integrated Connectivity Project (ICP) Project Area</u>** must demonstrate VMT reduction through fewer or shorter vehicle trips or mode shift to transit use, bicycling or walking within areas lacking **High Quality Transit**, with an emphasis on providing **Disadvantaged**

Community benefits. Project Areas that include **High Quality Transit** are <u>ineligible</u> to apply as an **ICP Project Area.**

A **<u>Rural Innovation Project Area (RIPA)</u>** must demonstrate VMT reduction through fewer or shorter vehicle trips or mode shift to transit use, bicycling or walking within areas lacking **High Quality Transit** within a **Rural Area**.

(c) **TOD Project Areas** must demonstrate <u>ALL</u> of the following:

(1) include at least one (1) **Transit Station/Stop** served by **High Quality Transit** at the time of application submittal;

(2) include an **Affordable Housing Development** located no further than one-half (½) mile from a **Transit Station/Stop** served by High Quality Transit. While the TOD Project Area must include an **Affordable Housing Development,** it may be funded from sources other than the AHSC Program but must meet the requirements of Section 103 (a)(1)(A) through (C);

AND

(3) include one (1) **Eligible Use,** combined as one of the following:

TOD Project Area Key Definitions
(From Appendix A)

<u>Transit Station Stop</u> means a designated location at which the various Qualifying Transit service(s) drop-off and pick-up riders. -

<u>High Quality Transit</u> means a Qualifying Transit line with high frequencies and permanent infrastructure demonstrated by: 1) Peak Period headway frequency of every 15 minutes or less and service seven days a week and 2) operation on a railway or be a **Bus Rapid Transit (BRT)** service that either fully or partially operates on a dedicated bus-only lane, or uses High Occupancy Vehicle (HOV) or High Occupancy Toll (HOT) lanes.

TOD Project Area REQUIRED COMPONENTS

- Affordable Housing Development
  -or-
- Housing Related Infrastructure
  -or-
- Both Affordable Housing Development and Housing Related Infrastructure

+

At least one (1) additional **Eligible Use**

- Sustainable Transportation Infrastructure
- Transportation-Related Amenities
- Programs

OPTIONAL

Additional **Eligible Uses** may be added at the discretion of the applicant

(d) **ICP Project Areas** must meet all of the following:

(1) include at least one (1) **Transit Station/Stop**;

(2) be served by at least one (1) mode of **Qualifying Transit** that does not meet the requirements of **High Quality Transit** at the time of application submittal;

AND

(3) Include **Capital Projects** or **Program Costs** as follows:

ICP/RIPA Project Area Key Definitions
(From Appendix A)

Qualifying Transit means a transit line serving the public that is operated by the following: 1) Directly operated by a public entity; 2) Operated by a public entity via a contract for purchased transportation service with a private or non-profit provider; or 3) Operated by a private or non-profit entity as a grant Recipient or sub-recipient from a public entity. Qualifying Transit for the purpose of the **Program** includes various forms of fixed transit service (Rail Service and Bus Service) and **Flexible Transit** Service. A Qualifying Transit line requires service that departs two (2) or more times during **Peak Hours** as determined by the transit operator. Flexible Transit is exempt from these Peak Hours requirements.

ICP Project Area REQUIRED COMPONENTS

Sustainable Transportation Infrastructure

+

At least one (1) additional **Eligible Use**:

- Affordable Housing Development
- Housing-Related Infrastructure
- Transportation-Related Amenities
- Programs

OPTIONAL

Additional **Eligible Uses** may be added at the discretion of the applicant

If the **ICP Project Area** application proposes to fund an **Affordable Housing Development** with AHSC Program funds, that housing must be located within a ½ mile of a **Transit Station/Stop.**

(e) **RIPAs** must meet all of the requirements detailed in Section 102(d) above for an ICP **Project Area** and must be located within a **Rural Area**.

Section 103. Eligible Costs

The **AHSC Program** funds **Capital Projects** or eligible **Program Costs** within TOD, ICP and RIPA **Project Areas** consistent with the requirements of Section 102(c), (d) and (e) as follows:

Figure 2 **Eligible Capital Projects and Program Costs**
Eligible **Capital Projects**
▪ **Affordable Housing Development** ▪ **Housing-Related Infrastructure** ▪ **Sustainable Transportation Infrastructure** ▪ **Transportation-Related Amenities**
Eligible **Program Costs**
▪ Active Transportation Programs ▪ Transit Ridership Programs ▪ **Criteria Air Pollutant** Reduction Programs

Examples of eligible costs within each category of eligible **Capital Projects** and **Program Costs** are identified in Appendix B.

(a) Capital Projects

(1) **Affordable Housing Development Capital Projects**

(A) **Affordable Housing Development Capital Projects** must:

(i) consist of one of more of the following:
- New construction
- Acquisition and **Substantial Rehabilitation** (including preservation of affordable housing at-risk of conversion to market rate)
- Conversion of one or more nonresidential structures to residential dwelling units;

(ii) be located within one-half (½) mile from a **Transit Station/Stop** that meets the **Project Area** transit requirements as defined in Section 102(c) or (d). The one-half (½) mile is to be measured from the nearest boarding point of the **Transit Station/Stop** to the entrance of the residential structure in the **Affordable Housing Development** furthest from the **Transit Station/Stop** along a walkable route. The walkable route, after completion of the proposed **Project**, shall be free of negative environmental conditions that deter pedestrian circulation such as barriers, stretches without sidewalks or walking paths, noisy vehicular tunnels, streets, arterials or highways without regulated crossings that facilitate pedestrian movement, or stretches without lighted streets;

(iii) include at least 20 percent of the total residential units as **Affordable Units**; and

(iv) have a minimum **Net Density**, upon completion of the **Affordable Housing Development**, not less than that shown on the following table:

Figure 3		
Project Location*	MINIMUM **NET DENSITY** REQUIREMENTS	
	Residential only Projects	Mixed-Use Projects (**Floor Area Ratio**)
Urban	30 units per acre	>2.0
Suburban	20 units per acre	>1.5
Non-Metropolitan	15 units per acre	>.75

Refer to Appendix C for definitions of Project Location designations and applicable **Net Density requirements*

(1) Mixed-use **Affordable Housing Developments** may demonstrate consistency with the **Net Density** requirements through <u>either</u> the unit per acre <u>or</u> Floor Area Ratio (FAR) requirements detailed in Figure 3 above.

(2) Acquisition and **Substantial Rehabilitation** (including preservation of affordable housing at-risk of conversion to market rate) are exempt from the above minimum density requirements but shall not result in fewer units or lower percentage of total affordability than currently except where reductions in unit count are required to meet building code requirements.

(v) must supply at least one (1) **Secure Overnight Bicycle Parking** spot for every two units, that is not publicly accessible and is completely enclosed. Bicycle parking at the **Affordable Housing Development** will be considered an eligible cost but may not be used to meet required Project Area components for TOD or ICP/RIPA **Project Areas** as outlined in Section 102.

(B) **Affordable Housing Development Capital Projects** may:

(i) include residential units that are rental or owner-occupied, or a combination of both;

(ii) consist of scattered sites with different ownership entities, within the boundaries of a discrete **Project Area**, as long as the sites are developed together as part of a common development scheme adopted, approved or required by a **Public Agency**; or

(iii) include nonresidential uses that are compatible under local zoning.

(C) Eligible costs for **Affordable Housing Development Capital Projects** are limited to:[1]

(i) Costs for a housing development, as specified in 25 CCR Section 7304 (a) and (b).

(ii) **Energy Efficiency**, **Low Impact Design, Renewable Energy** or **Urban Greening** improvements.

(iii) Soft costs such as those incidentally but directly related to construction, acquisition, or other pre-development components including, but not limited to, planning, engineering, construction management, architectural, and other design work, required mitigation expenses, appraisals, legal expenses, site acquisitions, and necessary easements. Soft costs shall not exceed 10 percent of total **AHSC Program** award.

(2) Housing-Related Infrastructure Capital Projects

(A) Eligible costs for **Housing-Related Infrastructure Capital Projects** are limited to: [1]

(i) Capital improvements required by a **Locality**, transit agency, or special district as a condition to the approval of the **Affordable Housing Development.**

(ii) **Energy Efficiency**, **Low Impact Design, Renewable Energy** or **Urban Greening** improvements.

(iii) Soft costs such as those incidentally but directly related to construction, acquisition, or other pre-development components including, but not limited to, planning, engineering, construction management, architectural, and other design work, required mitigation expenses, appraisals, legal expenses, site acquisitions, and necessary easements. Soft costs shall not exceed 10 percent of total **AHSC Program** award.

(iv) The minimum residential per unit parking spaces in parking structures as required for the **Project** by a **Locality** based on the following:

[1] *All eligible costs must be reasonable compared to similar capital activities of modest and necessary design.*

Figure 4
Allowable Structured Parking Costs

Project Specific Per Unit Parking Requirements* (inclusive of guest parking)	Maximum Allowable AHSC funds per space
Up to 2 spaces per unit	$10,000
0.5 to 1 space per unit	$20,000
<0.5 spaces per unit	$30,000

* *Total number of units / Total number of required parking spaces*

Note: The Council intends to decrease funds available for traditional parking spaces (excluding parking spaces dedicated for car share, electric vehicle charging stations, zero emission vehicles (ZEVs) or ADA accessible parking) in subsequent rounds of funding with the goal of eliminating funds for this use entirely.

(v) Required environmental remediation necessary for the capital project where the cost of the remediation does not exceed 50 percent of **AHSC Program** grant funds.

(vi) Real property acquisition of the **Housing-Related Infrastructure** project site and associated fees and costs, not including real estate commissions for purchase or acquisition.

(vii) Impact fees required by local ordinance are eligible for funding only if used for the identified eligible **Capital Project** not to exceed 15 percent of the **AHSC Program** award up to $300,000.

(3) **Sustainable Transportation Infrastructure Capital Projects** (including Active Transportation and Transit Infrastructure)

(A) Eligible costs for **Sustainable Transportation Infrastructure Capital Projects** are limited to: [2]

(i) Capital improvements that result in the improvement or addition of infrastructure that encourages mode-shift by enhancing: 1) public transit access; 2) pedestrian network; or 3) bicycle network (includes public bike-share programs) within the defined **Project Area** meeting the transit requirements detailed in Section 102 (c) or (d).

(ii) **Energy Efficiency**, **Low Impact Design, Renewable Energy** or **Urban Greening** improvements.

(iii) Impact fees required by local ordinance are eligible for funding only if used for the identified eligible **Capital Project** and do not exceed 15 percent of the AHSC Program award up to $300,000.

[2] *All eligible costs must be reasonable compared to similar capital activities of modest and necessary design.*

(iv) Soft costs such as those incidentally but directly related to construction, acquisition or project plans, specifications and estimates including, but not limited to, planning, engineering, construction management, architectural, and other design work, environmental impact reports and assessments, appraisals, legal expenses, site acquisitions, and necessary easements. Soft costs shall not exceed 30 percent of total **AHSC Program** award.

(v) **Activity Delivery Costs** that are associated with the implementation of the **Capital Project** not to exceed 10 percent of the costs associated with the **Capital Project**.

(vi) Other **Capital Project** costs required as a condition of local approval for the **Capital Project**, as approved by the **Department**.

(4) Transportation-Related Amenities Capital Projects

(A) **Transportation-Related Amenities** must be publically accessible.

(B) Eligible costs for **Transportation-Related Amenities Capital Projects** are limited to: [3]

(i) Capital improvements that are publicly accessible and provide supportive amenities to cyclists, pedestrians, and transit riders (i.e. bike parking, bus shelter, benches, street trees, etc.) within the defined **Project Area** meeting the transit requirements detailed in Section 102 (c) or (d).

(ii) **Energy Efficiency**, **Low Impact Design** or **Urban Greening** improvements.

(iii) Impact fees required by local ordinance are eligible for funding only if used for the identified eligible **Capital Project** and do not exceed 15 percent of the AHSC Program award up to $300,000.

(iv) Soft costs such as those incidentally but directly related to construction, acquisition or project plans, specifications and estimates including, but not limited to, planning, engineering, construction management, architectural, and other design work, environmental impact reports and assessments, appraisals, legal expenses, site acquisitions, and necessary easements. Soft costs shall not exceed 10 percent of total **AHSC Program** award.

(v) **Activity Delivery Costs** that are associated with the implementation of the **Capital Project** not to exceed 10 percent of the costs associated with the **Capital Project**.

[3] *All eligible costs must be reasonable compared to similar capital activities of modest and necessary design.*

(vii) Other **Capital Project** costs required as a condition of local approval for the **Capital Project**, as approved by the **Department**.

(b) Program Costs

(1) **Program Costs** include those costs typically associated with 1) program creation, or 2) expansion of existing programs to serve new populations or offer new program service and implementation. Eligible costs may include operational costs for programs for the term of the grant (3 years). Programs include education, outreach and training programs in the following three categories:

(A) Active Transportation Programs;

(B) Transit Ridership Programs; or

(C) **Criteria Air Pollutant** Reduction Programs.

(c) Ineligible costs include all of the following:

(1) Costs are not eligible for funding if there is another feasible, available source of committed funding for the **Capital Project** or portion thereof to be funded by the **AHSC Program** or if the cost is incurred prior to **AHSC Program** award;

(2) Routine maintenance of transportation infrastructure (including transit fleet);

(3) In lieu fees for local inclusionary housing programs;

(4) Ongoing operational costs beyond the term of the grant (3 years) for **Program Costs**; and

(5) Re-syndication of an existing Affordable Housing Development.

Section 104. Assistance Terms and Limits

(a) The maximum **AHSC Program** loan or grant award, or combination thereof, for a TOD, ICP and RIPA **Project Area** is $20 million with a minimum award of at least $1 million for TOD Project Area applications and at least $500,000 for ICP and RIPA Project Area applications.

(b) A single **Developer** may receive no more than $40 million per **NOFA** funding cycle.

(c) The limitations set forth in (b) above may be waived by the **Department** if necessary to meet statutorily required Affordable Housing and **Disadvantaged Community** set-asides as detailed in Section 105(d)(3)(A) and (B).

(d) For multi-phased developments, the amount of GHG reduction will be measured for the phase funded through the application for the specific **NOFA** funding cycle.

(e) Loans for rental **Affordable Housing Developments**, or the rental portions of a **Affordable Housing Development**, are subject to the following terms:

(1) **AHSC Program** funds will be provided as a loan for permanent financing by the **Department** to the owner of the **Affordable Housing Development**, with the same terms as the **Department's** Multifamily Housing (MHP) Program financing as set forth in 25 CCR 7308.

(2) The maximum loan amount shall be calculated pursuant to 25 CCR 7307 based on the number of **Restricted Units** in the **Affordable Housing Development**, affordability, unit sizes, location, and on the base amount for loan calculation as specified in the **AHSC Program NOFA**. For **Affordable Housing Developments** receiving 4% low-income housing tax credits, $60,000 per **Restricted Unit** may be added to the base amount for loan limit calculation purposes.

(3) Where the **Affordable Housing Development** is receiving low-income housing tax credits, the **Public Agency** or **Developer** may provide **AHSC Program** grant funds to the limited partnership of the **Affordable Housing Development** in the form of a zero (0) percent, deferred payment loan, with a term of at least 55 years. The loan may be secured by a deed of trust which may be recorded with the local county recorder's office. Provided, however, the beneficiary of the loan shall not under any circumstances exercise any remedy, including, without limitation, foreclosure, under the deed of trust without the prior written consent of the **Department**, in its sole and absolute discretion. The loan may not be sold, assigned, assumed, conveyed or transferred to any third party without prior written **Department** approval in its sole and absolute discretion.

(4) For **Affordable Housing Developments** assisted by other **Department** funding programs, repayment of the loan between the **Public Agency** and the developer or Developer and the limited partnership shall be limited to (1) no repayments to the **Public Agency** or the **Developer** until the maturity date or (2) repayment only from "distributions" from the **Affordable Housing Development** within the meaning 25

CCR 8301(h). The **Public Agency** or the **Developer** shall be responsible for all aspects of establishing and servicing the loan. The provisions governing the loan shall be entirely consistent with these Guidelines and all documents required by the **Department** with respect to the use and disbursement of **AHSC Program** funds. All documents governing the loan between the **Public Agency** and the developer borrower or **Developer** and the limited partnership borrower shall contain all the terms and conditions set forth in this subdivision and shall be subject to the review and approval of the **Department** prior to making the loan.

(f) Grants shall be subject to the following terms:

(1) The applicant must demonstrate that the grant does not result in a profit that exceeds the commercially reasonable range for other developments of similar size and level of risk.

(2) If the **Capital Project** grant includes multiple phases or developments, all entitlements and construction funding commitments for the first phase must be received prior to disbursement.

(3) **AHSC Program** grant funds will be disbursed as progress payments for eligible costs incurred after the **AHSC Program** award of funds.

(4) For homeownership **Affordable Housing Developments**, **AHSC Program** assistance will be provided in the form of a grant from the **Department** to a **Locality** or **Developer**, to be used to provide a loan from the **Locality** or a **Developer** to a qualified first-time homebuyer in an identified homeownership **Affordable Housing Development**, in accordance with the provisions of the BEGIN Program as set forth in the BEGIN Guidelines issued by the **Department**, as amended April 21, 2009, except for the requirements for regulatory relief, set forth in Section 106 of those guidelines, and the application selection criteria set forth in Section 119.

(5) For **Housing-Related Infrastructure Capital Project** grants:

(A) The total **Housing-Related Infrastructure Capital Project** grant amount is $35,000 per residential unit in the proposed **Affordable Housing Development**, and $50,000 per **Restricted Unit**.

(B) Conditions precedent to the first disbursement of **AHSC Program** funds shall include receipt of all required public agency entitlements and all construction funding commitments for the **Affordable Housing Development** supported by the **Housing-Related Infrastructure Capital Project**.

(C) Rental **Affordable Housing Developments** supported by the **Housing-Related Infrastructure Capital Project** shall be subject to a recorded covenant ensuring affordability for duration of at least 55 years. Homeownership **Affordable Housing Developments** supported by the **Housing-Related Infrastructure Capital Project** shall be subject to a

recorded covenant with a duration of at least 30 years that includes either a resale restriction or equity sharing upon resale.

(6) For **Program Cost** grants, the total grant amount for **Program Costs** within a **Project Area** shall not exceed 30 percent of the funding request for the overall **Project** up to $500,000.

Article III. Application Procedures

Section 105. Eligible Applicants and Application Process

(a) Eligible Applicants

(1) Eligible applicant entities shall include any of the following:

(A) A **Locality**, public housing authority, redevelopment successor agency, transit agency or transit operator, Regional Transportation Planning Agency (RTPA), local Transportation Commissions, Congestion Management Agencies, Joint Powers Authority (JPA), school district, facilities district, University or Community College District.

(B) A **Developer** or **Program Operator**.

(2) Where a **Public Agency** has a real property interest in the proposed **Project**, the application will be required to either include the Public Agency as a joint applicant or otherwise include a commitment to enter into a contractual agreement to develop the **Project**, if it is awarded.

(3) Joint applicants for the **Project** will be held jointly and severally liable for the completion of the **Project**.

(A) A recipient of Department funds must remain liable for performing all requirements of the award of funds as those requirements are set forth in the Standard Agreement. Where there are multiple recipients, all such recipients must remain jointly and severally liable to the Department for that performance. Notwithstanding the foregoing, recipients may indemnify each other and enter into agreements amongst one another as to which shall bear responsibility as to particular portions of the award. If a particular recipient is not statutorily required to maintain eligibility for award funds, that recipient may request to withdraw from the award at any time, and the Department shall, in its reasonable discretion, allow such withdrawal if agreed to by the remaining recipients and not otherwise prohibited by law.

(b) **NOFA** Process

(1) Pursuant to direction of the **Council**, the **Department** shall offer funds through a **NOFA** in accordance with the procedures for the **Department's** MHP Program set forth in 25 CCR 7317 and applications will be reviewed based on the steps detailed below and illustrated in Figure 7.

(2) Applications shall be made on forms made available by the **Department**.

(c) Concept Proposal Process

(1) All applicants must submit a required concept proposal. The intent of the concept proposal process is: 1) focus expenditures of local resources on the most competitive applications given limited **AHSC Program** funding; 2) provide targeted technical assistance to potential applicants, with a priority to **Disadvantaged Community** applicants; and 3) coordinate with Metropolitan Planning Organizations on supporting implementation of Sustainable Communities Strategies.

(2) Concept proposals will be reviewed based on the information detailed in Figure 6.

(3) Concept proposals will be reviewed based on select **AHSC Program** elements as detailed in Figure 6 below and evaluated as follows:

(A) Satisfaction of threshold requirements; and

(B) Demonstration of the level of **Enforceable Funding Commitments** (EFCs) calculated as follows:

$$\frac{\textit{AHSC funds requested + EFCs – Deferred Costs}}{\textit{Total Development Cost – Deferred Costs}}$$

(1) The resulting percentage calculation in (B) above cannot decrease between the time of concept proposal and full application submittal.

(C) To the extent a secondary filter is necessary in evaluating concept proposals, i.e. where there is a tie amongst projects, a project located within a Disadvantaged Community will be prioritized based on greatest percentile rank.

(4) Applicants will be notified whether or not they are invited to submit a full application based on ranking of concept proposals.

(A) To the extent cumulative funds requested of all concept proposals received exceed 150 percent of available funds for the applicable **NOFA**, the **Council** may limit invitations to submit full applications.

(B) In inviting full applications, consideration will be given to statutorily required Affordable Housing and **Disadvantaged Community** set-asides and TOD/ICP/RIPA targets as stated in Section 105(d)(4)(A) through (C) to include at least 150 percent of the respective set-aside or targets based on the total amount available as designated in the NOFA.

(C) At least one concept proposal from each Metropolitan Planning Organization jurisdiction will be invited to submit a full application granted it meets all threshold requirements of Section 106.

(D) An invitation to submit a full application does not guarantee project will compete successfully for funding.

Figure 5 **AHSC Concept Proposals** **Required Contents**	
Project Overview	
1	Project Description defining each of the following: • **Project Area** Type (TOD, ICP or RIPA) • **Project Area** (defined by vicinity map, service area, etc.) • Project location (i.e. address) • Transit Service map and schedules • Proposed Project Description • Eligibility for Statutory Set-Asides, if applicable ✓ Affordable Housing ✓ **Disadvantaged Communities** • Identification of **Project** Co-Benefits
2	**AHSC Program** funding amounts requested for: • Grant funds • Loan funds
3	Applicant Information: • Identification of joint applicants • Identification of participating entities
Threshold Requirements	
4	Description of GHG emission reduction strategies attributable to the **Project**
5	Demonstration of how the **Project** supports the implementation of the applicable SCS or other qualifying regional plan
6	Consistency with State Planning Priorities (Self-Certification form)
Project Readiness	
7	Evidence of **Enforceable Funding Commitments**
8	Project Budgets
9	Demonstration of **Project** readiness as appropriate: • **Site Control** (per Section 106(a)(7)) • All necessary NEPA and CEQA clearances per Section 106(a)(4) • All necessary discretionary land use approvals, excluding design review (per Section 106(a)(5) • Consistency with local public works department, or other responsible local agency requirements (for **Housing-Related and Transportation-Related Infrastructure Capital Projects** only) (per Section 106(a)(14)(D) or (15)(A)) • Estimated **Project** milestone schedule • Demonstration (self-certification) that **Project** construction has not yet commenced (per Section 106(a)(10))

Note: Applications will be submitted using the Financial Assistance Application Submittal Tool (FAAST).

(d) Full Application Process

(1) For those applicants which have been invited to submit a full application package, a complete application must be submitted to the **Department** by the deadline detailed in the **NOFA**.

(2) The **Department** shall evaluate applications for compliance with the threshold requirements listed in Section 106, and score eligible applications based on the scoring criteria listed in Section 107.

(3) The highest scoring applications that meet all threshold requirements shall be recommended to the **Council** for funding as specified in the **NOFA**. The **Council** may make adjustments in this procedure to meet the following objectives:

(A) At least fifty (50) percent of **AHSC Program** expenditure for **Projects** benefitting **Disadvantaged Communities** (Refer to Figure 8 for additional information).

(B) At least fifty (50) percent of the annual proceeds appropriated for the **AHSC Program** shall be expended for affordable housing.[4] For the purposes of this set-aside, expenditures related to **Affordable Housing Development** and **Housing-Related Infrastructure Capital Projects** shall count toward this requirement.

(C) Project Area type targets are as follows:

(i) Target thirty five (35) percent of funds available as designated in the **NOFA** to **TOD Project Area** applications.

(ii) Target thirty five (35) percent of funds available as designated in the **NOFA** to **ICP Project Area** applications.

(iii) Target ten (10) percent of funds available as designated in the **NOFA** to **RIPA** applications.

(iv) Remaining twenty (20) percent of available funds may be awarded to any eligible project area type.

(v) To the extent applications received are not sufficient to meet **TOD Project Area**, **ICP Project Area or RIPA** targets detailed in (i), (ii) and (iii) above, the **Council** reserves the right to waive these requirements and recommend funding a greater percentage of applications in either of the three identified **Project Area** types.

(4) Project Area type targets and statutory set-asides detailed in (3) above will be subject to the following process:

[4] *The requirements detailed in Section 105(d)(3) subsections (A) and (B) are not mutually exclusive.*

(A) Applications for TOD, ICP and RIPA Project Areas will be ranked based on the result of the Estimated GHG Emissions Reductions as stated in Section 107(a) and binned separately by respective **Project Area** types.

(B) For each full application, the resulting score from this initial binning will be added to scores from the Supplemental Strategies and Policy Objective criteria to determine an applicant's total score.

(C) Total application scores will be ranked within each **Project Area** type (TOD, ICP and RIPA). Applications will be recommended to the Council for award based on the amount of funds available in each Project Area type, as detailed in Section 105(d)(3)(C).

(D) Applications not recommended for funding based on the application of **Project Area** type set-asides will be re-binned based on the Estimated GHG Emissions Reductions using the same methodology outlined in section 107(a) without regard to Project Area type.

(E) Each application's resulting GHG Emissions Reductions score will be added to previously determined scores for Supplemental Strategies and Policy Objective criteria to determine a revised total application score. This revised total application score will be used to allocate the remaining 20 percent of funds available under the NOFA, with specific consideration given to ensure statutory set-asides for Affordable Housing **and Disadvantaged Communities** are met.

(5) Though there are no statutory requirements or specific targets for regional allocation of awards, the Council is committed to striving for an equitable distribution of resources. Since it is in the interest of State to fund a variety of project types and scales in a variety of locations to demonstrate the many ways GHG may be reduced, adjustments may be made in the recommendation and award of funds.

(6) As station area plans for High Speed Rail are implemented, the **Council** may prioritize investments in these areas.

(7) The **Department** may elect to not evaluate compliance with some or all threshold requirements for applications that are not within a fundable range, as indicated by a preliminary point score of the full application.

(8) In the event of two or more applications having the same rating and ranking scores, the **Department** may apply a tie breaking criteria as outlined in the **NOFA**.

(9) Applications recommended for funding and approved by the **Council** are subject to conditions specified by the **Department**.

(e) Metropolitan Planning Agency Role in Application Review

(1) To support implementation of an applicable SCS and consistency with activities or strategies identified in a regional SCS, or similar planning document that demonstrate a per capita reduction in VMT and GHG, as allowed by SB 862 (Chapter 36, Statutes of 2014), MPOs have the option of participating in the review of respective AHSC applications as follows:

(A) MPO/regions may develop its own process prior to concept application due date to identify and recommend applications that have the highest regional priorities, and based on criteria established by the MPO/region. At a minimum, the identification of regional priority projects shall consider:

(i) how the proposed projects implement the region's SCS or equivalent regional plan; and

(ii) the extent to which the candidate projects align with regional priorities, including but not limited to: transit priority areas, high priority development areas, or other areas which are key to the SCS's strategies and priorities; and which support achieving the region's greenhouse gas emissions reduction targets.

(B) At concept application review, MPOs will review submitted applications from their respective regions to evaluate how the **Projects** support the implementation of the applicable SCS or other qualifying regional plan.

(C) At full application (Phase 2), MPO/regions will receive a copy of all applications submitted within their respective region.

(i) If the MPO/region opts to establish its own regional criteria, the MPO/region will apply these criteria to review full applications (Phase 2) within their jurisdiction and recommend the region's priority projects. This process may include a procedure for MPO Board approval of a ranked or recommended priority list of projects.

(D) The State and MPO/region may consult on respective rankings, focused particularly when the two processes identify different priority projects. The goal of the consultation is for each party to understand the basis for the other's determination, and thus assure more informed selection.

(E) After the consultation, the MPO/region may make a revised recommendation on regional projects, as informed by the consultation process. MPO's recommendations are transmitted to SGC. The MPO/region may elect to rank or recommend a limited number of projects within its region.

(2) MPO-developed process is not subject to reimbursement, and must adhere to State guidelines related to conflicts of interest and deadlines.

(3) Rankings determined by MPO/regions do not guarantee SGC recommendation for award.

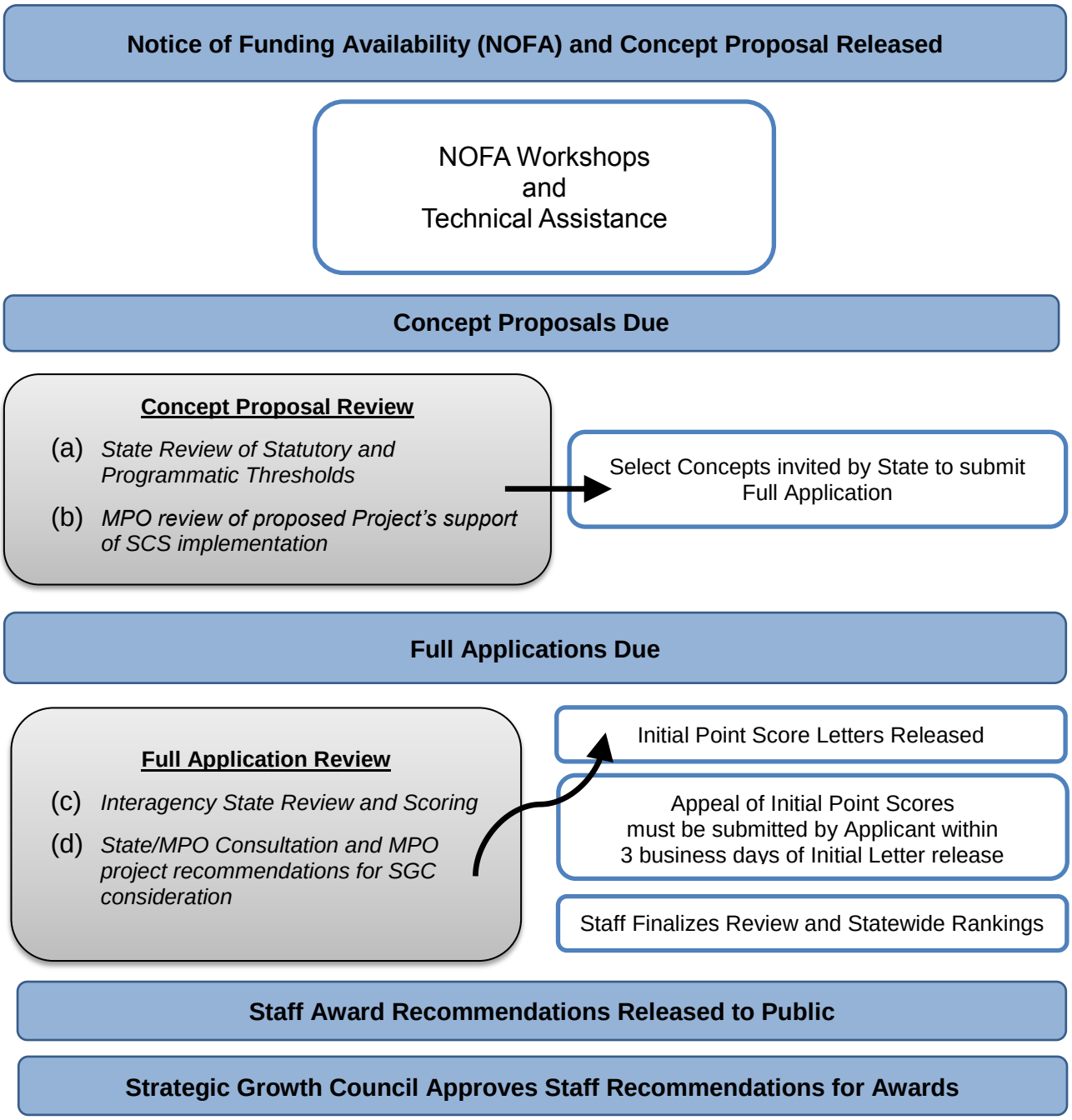
(4) Non-MPO regions and MPOs/regions who elect not to participate in this process may defer to the State's process.

(f) Availability of Applications

(1) All applications shall be made available to the public, subsequent to Council approval of final funding recommendations.

(2) Applications will be treated in accordance with Public Records Act. Certain information, in accordance with the Public Records Act, may be publicly disclosed.

Figure 6
AHSC Program Application Review Process



Section 106. Application Threshold Requirements

(a) Application Threshold Requirements

In addition to requirements detailed in Sections 102 through 105, to be eligible for **AHSC Program** funding, an application shall demonstrate to the **Department** all of the following:

(1) It will achieve a reduction in GHG emissions through fewer vehicle miles travelled, pursuant to the **AHSC Program** Quantification Methodology in Appendix D.

(2) The proposed **Project** supports implementation of the applicable SCS, as confirmed by the MPO, or similar sustainable planning document in non-MPO regions, as allowed by SB 862 (Chapter 36, Statutes of 2014). The application must be consistent with activities or strategies identified in the regional SCS, or similar planning document that demonstrate a per capita reduction in VMT and GHG.

(3) The proposed **Project** must be consistent with the State planning priorities established pursuant to Section 65041.1 of the Government Code.

(4) Completion of all necessary environmental clearances including those required under the California Environmental Quality Act and if applicable, the National Environmental Policy Act, and all applicable time periods for filing appeals or lawsuits have lapsed.

(A) Applicants who submit evidence to demonstrate a Lead Agency has prepared a Negative Declaration or Mitigated Negative Declaration which is currently under review, or where the Project is eligible for a categorical exemption, will not be required to submit evidence of completion as stated in (4) above.

(5) Applications must demonstrate that all necessary discretionary local land use approvals, excluding design review, have been granted.

(6) The application must be sufficiently complete to assess the feasibility of the proposed project and its compliance with **AHSC Program** and application requirements. For example, the applicant must demonstrate that the **Project** is financially feasible as evidenced by documentation such as, but not limited to, a market study, project pro-forma, sources and uses statement, or other feasibility documentation that is standard industry practice for the type of proposed **Affordable Housing Development**. A market study that meets the requirements specified in TCAC Regulations Section 10322(h)(10) will be accepted by the **Department**.

(7) The applicant or **Developer** of the **Project** must have **Site Control** sufficient to ensure the timely commencement of the Project as determined by the **Department**.

(8) Applicants must demonstrate at least two prior projects, similar in scope and size to the Project for which AHSC funds are being requested, which have been completed

by the applicant or joint applicant during the ten (10) years preceding the application due date.

(9) As of the date of application, the applicant(s), the **Project**, or the real property on which the **Project** is proposed (Property) may not be party to or the subject of any claim or action at the State or Federal appellate level. Further, the applicant(s) shall disclose and describe any claim or action undertaken by or against the applicant(s), the **Project** or the Property which affects or potentially affects the feasibility of the **Project**. This information will be used to determine feasibility of the **Project** as accessed in the Feasibility and Readiness Criteria (Section 107(c) and (d)) herein.

(10) Construction of the **Project** has not commenced as of the application deadline set forth in the **NOFA**.

(11) **Qualifying Transit** must be completed and offering service to the **Transit Station/Stop** of the **Project Area** by the time set forth in the Standard Agreement.

(12) Demonstrate consistency with State Relocation Assistance Law (CA Gov Code Sec. 7260-7277).

(13) The applicant must demonstrate that where applicable, climate adaptation measures are integrated into their **Project**. If the **Project** is located in a coastal zone, it should include information about the potential impacts of sea level rise (SLR) and the adaptation measures it will implement to address related impacts (See Appendix F for further guidance).

(14) The applicant must demonstrate that costs for any **Project** or component thereof will not result in loss or conversion of agricultural or other working lands, or natural resource lands for other uses.

(15) Applications requesting **AHSC Program** funding for **Affordable Housing Developments** and **Housing-Related Infrastructure Capital Projects** must also demonstrate to the satisfaction of the **Department** all of the following:

(A) Rental **Affordable Housing Developments** must meet the underwriting standards in the Uniform Multifamily Regulations, 25 CCR 8308 through 8312. However, the **Department** may use alternative underwriting standards to ensure financial feasibility.

(B) The **Affordable Housing Development** and/or **Housing-Related Infrastructure Capital Project(s)** are infeasible without **AHSC Program** funds, and other committed funds are not and will not be supplanted by **AHSC Program** funds.

(C) Owner-occupied **Affordable Housing Developments** must meet the requirements of the BEGIN Program, except for the following:

(i) The requirements for regulatory relief specified in the BEGIN Program

Guidelines, including those in Section 106 of these guidelines.

(ii) The requirements of Section 119 of the BEGIN Program Guidelines, on application selection criteria.

(D) If the application involves demolition or rehabilitation of existing units affordable to lower income households, the replacement **Affordable Housing Development** must include units, comparable in size, with equal or greater affordability, equal to or greater than the number of existing affordable units, except in cases where rehabilitated units provide amenities such as bathrooms and kitchens not present in existing units in which case, the reduction may not result in more than 25 percent fewer units upon project completion. First right of return must be provided to displaced residents.

(i) The above no net loss requirements would apply where an **Affordable Housing Development** or **Housing-Related Infrastructure Capital Project** is proposed on any property which includes a parcel or any portion of a parcel on which residential dwelling units affordable to lower income households currently exist or where there have been dwelling units restricted to lower-income households which have been vacated or demolished within the 5 year period preceding the application.

(E) Applicants must demonstrate the proposed Affordable Housing Development is consistent with State and Federal Fair Housing requirements including duties to affirmatively further fair housing.

(F) Where approval by a local public works department, or other responsible local agency, is required for the **Housing-Related Infrastructure Capital Project**, the application must include a statement from that department indicating that the **Housing-Related Infrastructure Capital Project** is consistent with all applicable local rules, regulations, codes, policies and plans enforced or implemented by that **Department**.

(16) Applications requesting AHSC Program funding for **Sustainable Transportation Infrastructure** and/or **Transportation-Related Amenities Capital Projects** must satisfy all of the following:

(A) Where approval by a local public works department, or other responsible local agency, is required for the **Project**, the application must include a statement from that entity indicating that the **Sustainable Transportation Infrastructure** and/or **Transportation-Related Amenities Capital Project(s)** is consistent with all applicable local rules, regulations, codes, policies and plans enforced or implemented by that entity.

(B) If the **Sustainable Transportation Infrastructure** and/or **Transportation-Related Amenities Capital Project(s)** involves the demolition existing units affordable to lower-income households, the application must demonstrate the replacement of demolished units,

comparable in size, of equal or greater affordability and equal to or greater than the number of the demolished affordable units located within comparable access to transit and include first right of return to displaced residents.

(i) The above no net loss requirements would apply where an **Sustainable Transportation Infrastructure or Transportation-Related Amenities Capital Project** is proposed on any property which includes a parcel or any portion of a parcel on which residential dwelling units affordable to lower income households currently exist or where there have been dwelling units restricted to lower-income households which have been vacated or demolished within the 5 year period preceding the application.

(17) Applications requesting **AHSC Program** funding for **Program Costs** must also demonstrate to the satisfaction of the **Department** all of the following:

(A) The **Program Costs** are infeasible without **AHSC Program** funds, and other committed funds are not being supplanted by **AHSC Program** funds

(b) **Disadvantaged Community** Benefits

The California Environment Protection Agency (CalEPA) has identified the census tracts in California with the top 25 percent of CalEnviroscreen 2.0 scores as Disadvantaged Communities. On September 4, 2015, ARB released Cap-and-Trade Auction Proceeds: Funding Guidelines for Agencies that Administer California Climate Investments (Funding Guidelines) that provides criteria to evaluate whether or not a project provides a benefit to a Disadvantaged Community. These criteria are detailed in Figure 7 below.

A **Project** that provides **Disadvantaged Community** benefits may receive priority for funding in order to meet the **AHSC Program Disadvantaged Community** funding targets. All applicants must evaluate the criteria in Figure 7 below and, if applicable, demonstrate in the application how the **Project** meets one of the criteria below.

If the eligible **Capital Project or Program Costs** are determined to provide benefit to a **Disadvantaged Community** pursuant to the Funding Guidelines, the application must demonstrate, based on ARB's Guidance, how the **AHSC Program** funds will provide benefit to a **Disadvantaged Community**.

Figure 7 **AHSC Program Disadvantaged Community Criteria**
Located Within: Evaluate the **Project** to see if it meets at least one of the following criteria for being located in a **Disadvantaged Community** census tract and provides direct, meaningful and assured benefit(s) to a **Disadvantaged Community**; and meaningfully addresses an important community need.
Project must meet the following criteria focused on reducing passenger VMT by **Disadvantaged Community** residents or in a **Disadvantaged Community**: ▪ A majority (50%+) of the **Project** is within one or more **Disadvantaged Communities** and reduces VMT, and the **Project** is designed to avoid displacement of **Disadvantaged Community** residents and businesses.
Provides Benefits To: If the **Project** does not meet the above criteria for "located within," evaluate the **Project** to see if it meets at least one of the following criteria for providing direct, meaningful and assured benefit(s) to a **Disadvantaged Community**; and meaningfully addresses an important community need.
Project must meet at least one of the following criteria focused on reducing passenger vehicle miles travelled by **Disadvantaged Community** residents or in a **Disadvantaged Community**: ▪ **Project** is accessible by walking within ½ mile of a **Disadvantaged Community** and reduces VMT, and is designed to avoid displacement of **Disadvantaged Community** residents and businesses; or ▪ **Project** includes recruitment, agreements, policies or other approaches that are consistent with federal and state law and result in at least 25% of project work hours performed by residents of a **Disadvantaged Community**; or ▪ **Project** includes recruitment, agreements, policies or other approaches that are consistent with federal and state law and result in at least 10% of project work hours performed by residents of a **Disadvantaged Community** participating in job training programs which lead to industry-recognized credentials or certifications.

Section 107. Application Selection Criteria

Scoring Philosophy and Process

AHSC Program funds will be allocated through a competitive process, based on the merits of the proposal to support sustainable development that expands and improves transit, walking and bicycling infrastructure and provides opportunities to reduce VMT by supporting connectivity between housing and key destinations to bring about reduction of GHG emissions.

The scoring criteria will apply to each application based upon the following three elements, each with specific criteria relative to the proposed eligible use of funds:

1. GHG Quantification Methodology
2. Supplemental Strategies
3. Policy Objectives

Figures 8, 9, and 10 below outlines the application review and scoring process showing the approximate weight of the three scoring elements and the criteria to be evaluated, as applicable, within each of the elements.

Applications meeting all threshold requirements as detailed in Section 106 will be reviewed and scored based upon the criteria detailed below. A total of 11 scoring criteria have been identified, however, not all criteria will apply to each application. Only those criteria which are applicable to the proposed project will be scored.

The maximum number of points will vary based upon the application submitted. As a result, scoring will be calculated based upon the percentage of maximum eligible points an application received. For example, if an application is submitted as an ICP without an Affordable Housing Development (AHD), the maximum applicable points would be 90. If the application receives 83 points, that application's final score would be 95.55 percent.

Figure 8
AHSC Scoring Elements

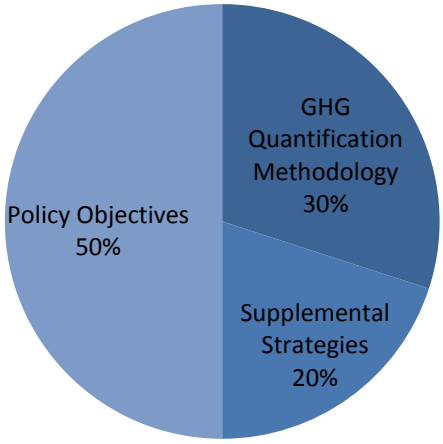


Figure 9
AHSC Scoring Elements and Criteria

Scoring Element	Points
GHG Reduction	
GHG Quantification Methodology	
• Estimated GHG Emissions Reductions (CalEEMod and TAC):	
Total Project GHG Reductions	15
Cost Efficiency of Reductions (Total Project GHG Reductions/AHSC $ Request)	15
Supplemental Strategies	
• Active Transportation Improvements	10
• Water, Energy, and Greening	10
GHG REDUCTION CATEGORY SUBTOTAL	**50**
Policy Objectives	
• Depth and Level of Housing Affordability	10
• Housing and Transportation Collaboration	10
• Community Benefit and Engagement	8
• Location Efficiency and Access to Destinations	8
• Funds Leveraged	5
• Anti-Displacement and Workforce Training Strategies	4
• Program Need and Readiness	3
• Implementation of Planning Efforts	2
POLICY OBJECTIVES CATEGORY SUBTOTAL	**50**
TOTAL POINTS	**100**

Applicable scoring criteria for each application will be determined based on the proposed **Project.** Figure 10 below identifies the applicability of individual criterion based upon the proposed **Project.**

Figure 10
AHSC Criteria Applicability

Physical Site with AHD and/or HRI	**Physical Site without AHD and/or HRI**	**No Physical Site**
Eligible Project Area Types		
TOD	ICP or RIPA	ICP or RIPA
Applicable Criteria		
ALL Criteria	ALL Criteria EXCEPT for: • Depth and Level of Housing Affordability	All Criteria EXCEPT for: • Active Transportation Improvements • Water, Energy and Greening • Depth and Level of Housing Affordability • Project Area Connectivity • Anti-Displacement Strategies
Maximum Points		
100	90	58
Project Examples		
• AHD + Transit Pass Program • HRI + Pedestrian Improvements	• Complete Street Improvements + Bike Share Program	• Regional or Corridor Transportation Network Improvements

The chart at the beginning of each section (see example below) indicates the applicable eligible use of **AHSC Program** funds which will be subject to scoring for each criterion (see Figure 12 for a complete listing of applicable criteria).

Criteria Applicability		
Physical Site <u>with</u> AHD/HRI	Physical Site <u>without</u> AHD/HRI	No Physical Site

Points within each applicable criteria will be assigned based on the following:

GHG Quantification Methodology – 30 Points

(a) <u>Estimated GHG Emissions Reductions – 30 Points Maximum</u>

Criteria Applicability		
Physical Site <u>with</u> AHD/HRI	Physical Site <u>without</u> AHD/HRI	No Physical Site
YES	YES	YES

For this section, applications will be scored based on the quantified GHG emission reductions based on: 1) the total **Project** GHG reduction score; <u>AND</u> 2) cost efficiency of estimated GHG reductions per AHSC dollar. Each of these scoring methods will represent a maximum of 15 points of the total combined 30 points available under this criterion.

Applications will be awarded points for Project GHG Emissions Reductions according to the following process:

(1) For each **Project**, applicants will calculate the estimated GHG reductions using the GHG Quantification Methodology (CalEEMod and TAC) in Appendix D.

(A) Total Project GHG Reduction score will represent the total GHG reduction calculated through the Quantification Methodology, and

(B) Cost efficiency of estimated GHG reductions will be calculated by the following formula:

$$\frac{\textbf{Total Project GHG Reductions}}{\textbf{AHSC \$ Request}}$$

Note: For the purposes of GHG quantification, the project life will vary based on the project type, as specified in Attachment 2 of the GHG Quantification Methodology.

(2) All applications will be ranked from highest to lowest for both the Total Project GHG Reduction score and the Efficiency of Reductions score.

(3) Each application will be assigned to one of 5 bins representing 1/5th of the total number of applications in ranked order with each bin receiving an assigned point score, up to a maximum of 15 points for both 1) total Project GHG reduction score and 2) cost efficiency of estimated GHG reductions, as follows:

Bin 1 = 15 points
Bin 2 = 12 points
Bin 3 = 9 points
Bin 4 = 6 points
Bin 5 = 3 points

(4) Bin scores for 1) total Project GHG reduction score and 2) cost efficiency of estimated GHG reductions, will be combined to determine final GHG Emissions Reduction criteria score as follows:

Total Project GHG Reductions Score		Efficiency of Reductions Score
Bin 1 = 15 points	+	Bin 1 = 15 points
Bin 2 = 12 points		Bin 2 = 12 points
Bin 3 = 9 points		Bin 3 = 9 points
Bin 4 = 6 points		Bin 4 = 6 points
Bin 5 = 3 points		Bin 5 = 3 points

Supplemental Strategies – 20 Points

(b) Active Transportation Improvements – 10 Points Maximum

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	NO

A maximum of 10 Points will be given for the installation, expansion, or improvement active transportation infrastructure (e.g., sidewalks, bikeways, trails, paths, and crossings). Strong Projects will address both bicycle AND pedestrian access. Transportation-Related Amenities are not eligible for points in this section. To be eligible for points, the applicant must include maps that clearly illustrate the project components and impacted areas. In addition, the applicant must demonstrate the following:

(1) Up to 4 points will be given for a clearly articulated purpose and need for the active transportation component of the **Project**.

The Applicant must demonstrate there is a need for the project being proposed and that the project was identified by or supported by the community it plans to serve. A strong project need often relates to network gap closure or the removal of barriers to access of destinations or safety. The applicant must include documentation of at least one active transportation safety issue or access barrier currently on the **Project** route or in the program area (e.g., high number of crashes involving auto/bike interactions on the route, high traffic speeds, high volume of vehicles, non-compliance with local traffic laws, inadequate traffic control devices for safe cycling, or a lack of low-stress bicycle facility present). A discussion of the user type (students, seniors, commuters, recreational, etc.) as well as estimate user volumes should be included. Strong **Projects** will address multiple issues along a corridor or within a bicycle or pedestrian network.

(2) Up to 6 points will be given for **Projects** that clearly describe how the proposed infrastructure **Project** will successfully address the identified purpose and need.

The applicant will need to demonstrate that the **Project** will do at least one of the following: reduce vehicular speed or volume near non-motorized users, improve sight distance and visibility, eliminate potential conflict points, improve compliance with traffic laws, or address any other barriers that may have existed on the route. Strong **Projects** will include innovative solutions (e.g., protected bikeways, rapid flashing beacons at crosswalks with pedestrian refuge islands, etc.) to address the identified issues. A discussion on the projected future use by new users should be included. Strong Projects will also discuss how the solution, when implemented, will increase network connectivity to key destinations and amenities.

(c) Water, Energy and Greening - 10 Points Maximum

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	NO

In order to receive full points for this criterion, applications must demonstrate how the proposed **Project** will incorporate infrastructure components or building standards that contribute to the reduction of greenhouse gas emissions through carbon sequestration, energy efficiency, or incorporation of renewable energy sources, as well as address other community benefits supporting public health, environmental, and economic factors.

(1) Urban Greening

Up to 3 points will be given to **Projects** that incorporate Urban Greening as follows:

(A) 2 points for Projects that incorporate Urban Greening, including native California vegetation or drought tolerant plants, trees and bioswales along an active transportation route, transit corridor, open space, or park, including at least two years of initial maintenance for establishment.

(B) 1 point for Projects that incorporate low-impact design green infrastructure elements which *meet or exceed* California's "Model Water Efficient Landscape Ordinance" (*as adopted per Executive Order B-29-15*) for local landscaping codes and standards in effect at the time of landscape permit application, that:

(i) increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture, and;

(ii) limit the portion of landscapes that can be covered in turf.

(2) Site Development and Energy Efficiency Standards:

4 points will be given to **Projects** that incorporate *any one (1) of the three* items below ((A), (B) or (C)) which *exceed* the 2013 California Building Standards Code, Title 24, or 2013 Building Energy Efficiency Standards, Title 24 as follows:

(A) **Projects** which exceed site development requirements per the 2013 California Green Building Code Standards (Title 24, Part 11), updated with the July 1, 2015 Supplement (*as adopted per Executive Order B-29-15*). Documentation must include either:

(i) Local green building ordinance adopted as mandatory for local building codes and standards (e.g. green building ordinance), in effect at the time of application for the building permit per California Health and Safety Code Section 18938.5, identifying that the adopted local ordinance exceeds Title 24, Part 11; or

(ii) Where a Project exceeds the jurisdiction's locally adopted building codes and standards, verification by a special inspector certified under a national or regional green building program or standard publisher, statewide energy consulting or verification organization that the Project will exceed Title 24, Part 11. Inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code, such as:

(1) LEED AP inspection for a proposal to be reviewed and project approved by United States Green Building Council LEED for

Homes or LEED for New Construction; or

(2) GreenPoints Raters certified by Build It Green for evaluating and certifying residential green buildings and green building professionals in California; or

(3) Other rating by a national or regionally recognized green building program or standard publisher or organization.

(B) Projects that exceed California's 2013 Building Energy Efficiency Standards Title 24, Part 6 (*as adopted per Executive Order B-29-15*) Documentation must include either:

(i) Local energy efficiency ordinance adopted as mandatory for local building codes and standards and approved by the Energy Commission as legally enforceable, and in effect at the time of building permit application; or

(ii) Where a local ordinance has not yet been approved by the Energy Commission as referenced in part (i) above, verification the Project will exceed Title 24, Part 6 provided by a special inspector certified under a national or regional green building program or standard publisher, statewide energy consulting or verification organization. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code, such as:

(1) LEED AP inspection for a proposal to be reviewed and project approved by United States Green Building Council LEED for Homes or LEED for New Construction; or

(2) Home Energy Rating System (HERS) raters certified by the California Energy Commission (CEC).

(C) **Projects** that incorporate one or more of the following elements and materials which exceed California Green Building Code Standards (Title 24, Part 11) (*as adopted per Executive Order B-29-15*). Possible elements include but are not limited to:

- Permeable paving for the parking, walking or patio surfaces;
- Native vegetation and patterns restored following construction;
- Cool or vegetated roof or walls;
- Resilient flooring systems;
- Thermal insulation;
- Recycled content ;
- Reduced or repurposed on-site construction waste ;
- Drought tolerant plants and tree species; or
- Vegetative or permeable alternatives to turf.

(3) On-Site Renewable Energy Generation.

3 points for **Project** sites which meet requirements for on-site renewable energy generation (e.g. fuel cell, solar, wind) as outlined in the California Green Building Code Standards (Title 24, Part 11) (as adopted per Executive Order B-29-15) for residential and nonresidential Reach Standards, including efficiency measures that should be installed in any building project striving to meet advanced levels of energy efficiency.

Projects comprised solely of eligible uses which do not require or consume energy, i.e. bicycle paths or sidewalks, will be provided a full 3 points under this section.

Policy Objectives – 50 points

(d) **Extent to which the Affordable Housing Development Serves Lower- and Moderate-Income Households – 10 Points Maximum**

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	NO	NO

*Note: This criterion will apply to all **TOD, ICP and RIPA Project Area** with an **Affordable Housing Development** or **Housing Related Infrastructure Capital Projects**.*

Applications will be scored based on the percentage of units in the **Affordable Housing Development** limited to various income levels, in accordance with the following schedule. Applicants may elect to exclude units from the "total units" calculation which are not utilized in the calculation of leverage points pursuant to subdivision (d) of this Section and which are not utilized in the calculation of the loan amount pursuant to Section 104.

Applicants should calculate applicable points based on the scale provided below for owner-occupied and rental units by level of affordability. Applicable points should be multiplied by 0.333 to determine the final point score for this criterion not to exceed a maximum of 10 points.

For owner-occupied units:

(1) 0.13 points will be awarded for each percent of total units that are owner-occupied and restricted to initial occupancy by households with incomes not exceeding the moderate income limit.

(2) 0.25 points will be awarded for each percent of total units that are owner-occupied and restricted to occupancy by households with incomes not exceeding the moderate income limit at affordable housing costs for not less than 55 years.

(3) 0.30 points will be awarded for each percent of total units that are owner-occupied and restricted to occupancy by households with incomes not exceeding the lower income limit at affordable housing costs for not less than 55 years.

For rental units:

(4) 0.13 points will be awarded for each percent of total units that are rental **Restricted Units** for households with incomes less than or equal to 50 percent of State Median Income, expressed as a percentage of Area Median Income.

(5) 0.7 points will be awarded for each percent of total units that are rental **Restricted Units** for households with incomes less than or equal to 40 percent of State Median Income, expressed as a percentage of Area Median Income.

(6) 0.9 points will be awarded for each percent of total units that are rental **Restricted Units** for households with incomes less than or equal to 35 percent of State Median Income, expressed as a percentage of Area Median Income.

(7) 1.3 points will be awarded for each percent of total units that are rental **Restricted Units** for households with incomes not exceeding 20 percent of State Median Income (adjusted by the **Department** to avoid exclusion of working CalWORKs recipients and individuals receiving SSI and expressed as a percentage of Area Median Income) for the first 10 percent of total **Restricted Units**; then 1 point for each subsequent percent of total **Restricted Units**.

(8) For rental **Affordable Housing Developments** utilizing 9% low income housing tax credits, applicants may elect to have their rental units scored in accordance with the scoring system used for this purpose by TCAC, under the lowest income point category. Applicants making this election shall be awarded 0.577 points for every 1 point they would be eligible to receive using TCAC's system (so that applications eligible for the maximum possible 52 points using the 9% scale receive 30 points in this category for the Program).

(e) **Housing and Transportation Collaboration (10 points)**

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	YES

(1) 4 Points for applications brought forth as a joint application between a housing developer and a public agency that has authority over public transit or transportation infrastructure

(2) 3 Points for applications which represent a coordinated housing and transportation investment demonstrated by a request of AHSC funds of at least $500,000 for an **Affordable Housing Development** and/or **Housing Related Infrastructure** project AND at least $500,000 for **Sustainable Transportation Infrastructure** eligible uses.

(3) 1 Point for **Projects** which have received funding from other Greenhouse Gas Reduction Funds which directly benefit or contribute to the development of proposed Project, i.e. Transit and Intercity Rail Capital Program.

(4) 1 Point for **Projects** within environmentally cleared High Speed Rail Station Planning Areas.

(5) 1 Point for applicants that provide a narrative explanation of thoughtful integration of the housing and transportation infrastructure investments proposed with AHSC funding. Description may include a discussion of the planning process as well as a discussion of the collaborative process that took place between the joint-applicants

(f) **Community Benefits and Engagement – 8 Points Maximum**

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	YES

The Community Benefits and Engagement criterion is premised on the idea that **Projects** should fulfill an identified community need and that the community is involved in the development of the **Project**. Points will be based on the relative level of engagement based on the **Project** scope and the quality of the engagement of the target population. For example, affordable housing developments should engage with low-income individuals who potentially may live there and/or representatives from affordable housing advocacy organizations; transportation projects aimed at improving access to major job centers should engage with current or potential employees of those job centers, etc. Extensive discussion of community benefits is found in Appendix E: Community Benefits.

Points will be assigned based on the following:

(1) 1.5 points for applications which describe who was engaged in the identification and development of this **Project**. Documentation should include the following:

(A) List the public stakeholders involved. Public stakeholders can include, but are not limited to: residents, community leaders, elected officials, advocacy organizations, local businesses, and members of vulnerable or underserved populations (i.e. elderly, youth, physically and/or mentally disabled, members from disadvantaged communities).

(B) List the governmental stakeholders involved (i.e. other departments, agencies, jurisdictions, etc. impacted by the proposed that are NOT the applicant). These can include, but are not limited to: local health department, schools/school districts, emergency services, law enforcement, metropolitan planning organization, etc.

(C) In the narrative, provide additional context describing the relative level of community engagement. For example, for many smaller and rural communities, participation of three public stakeholders groups with a total of fifteen people may be a significant level of engagement for that community. However, in a larger, more urban community, this same level of engagement would be insufficient relative to the total population.

(D) Provide letters of recommendation from key public and governmental stakeholders. In particular, letters of support should emphasize how this **Project** meets an identified community need. Applicants may submit no more than five (5) letters of recommendation from diverse sectors including government, community groups, non-profits and private sector stakeholders

(2) <u>1.5 points</u> for applications which describe how stakeholders were engaged. Applicants should consider the following:

(A) What types of meetings or events and how many were held to engage stakeholders (e.g. open houses, community charrettes, city council meetings, planning commission meetings, etc.)?

(B) How were meetings or events noticed (e.g. local newspaper, county website, on the radio, at school parents group meetings, etc.)?

(C) Where did meetings or events take place (e.g. school, community center, city council hall, etc.)?

(D) Were meetings or events accessible by public transportation?

(E) Were translational services provided at the meetings or events? If so, in what language?

(F) What time of day were meetings or events held (e.g. morning, afternoon, evening, etc.)?

(G) Was childcare provided during the meetings or events?

(H) Were stakeholders part of a decision-making body (i.e. technical advisory committee, citizens advisory committee, etc.) that identified this project/plan? If so, what body?

(3) 5 points for identification of additional community benefits

Points will be provided based on the applicant describing identified community benefits beyond the new affordable housing and improved transportation infrastructure. The application should describe who will benefit, engagement of various community stakeholders, including low-income residents/employees, and how the community needs were identified (e.g. through the community engagement process, a local needs assessment, as part of a local health department plan or other city/county plan, etc.). Additionally, the applicant should describe how the **Project** was designed to meet those needs and provide additional community benefits. Applicants may include up to 3 additional community benefits.

NOTE: The additional community benefits section is designed to award points to those proposals that have gone above and beyond the minimal requirements of the program guidelines to respond to community needs (i.e. beyond the need for affordable housing and public transportation infrastructure) and provide additional community benefits. Examples of additional community benefits are included in Appendix E.

(g) **Location Efficiency and Access to Destinations– 8 points maximum**

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	NO

(1) 6 Points in total will be given for the walkability and bikeability of the **Project** site as determined by walkscore.com by using the address of the project site. If the project is a corridor and does not have a specific address, use the center most point of the **Project** for the calculation. Points will be given on the following scale:

3 points for Walk Score - The methodology for Walk Score uses an algorithm that accounts for distance to amenities, population density, as well as road metrics such as block length and intersection density. Points for Walk Score will be given as follows:

3 Points: Walk Score of 90-100
2 Points: Walk Score of 70-89
1 Point: Walk Score of 50-69

3 points for Bike Score - The methodology for Bike Score uses an algorithm that accounts for the presence of bike lanes, hills, destinations and road

connectivity, and bike commuting mode share. Points for Bike Score will be given as follows:

3 Points: Bike Score of 90-100
2 Points: Bike Score of 70-89
1 Point: Bike Score of 50-69

(2) Up to 2 points will be given for projects that provide a map highlighting the location of the existing and operational services within the Project Area as follows:

0.5 Points: Grocery store or supermarket of at least 25,000 gross interior feet
0.5 Points: Medical clinic that accepts Medi-Cal payments
0.5 Points: Public elementary, middle or high school
0.5 Points: Licensed child care facility

(h) **Funds Leveraged – 5 Points Maximum**

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	YES

A maximum of 5 points will be awarded for applications demonstrating E**nforceable Funding Commitments** to leverage AHSC funded eligible uses for both **Capital Projects** and Program activities. Applications will be scored based on the amount of **Enforceable Funding Commitments** (as defined in Appendix A(p) – page A-2) from sources other than the **AHSC Program**, as a percentage of the requested amount of **AHSC Program** funds as follows:

5 Points: >150%
4 Points: 100% to 150%
3 Points: 75% to 100%
2 Points: 50% to 74.9%
1 Point: 25 to 49.9%

(i) **Anti-Displacement and Workforce Training Strategies – 4 Points Maximum**

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	NO

NOTE: All applicants are required to comply with threshold requirements related to anti-displacement

and no net loss of affordable units as set forth in Section 106(a)(15)(D)((i) and 106(a)()(B)(i) as well as consistent with State Relocation Assistance Law as outlined in Section 106(a)(12).

A maximum of 4 points will be provided for demonstration of policies, strategies or programs designed to avoid both the physical and economic displacement of low-income residents and businesses of the **Project Area** and community as follows:

(1) Physical Business Anti-Displacement Strategies

For Projects in which there is a documented risk of physical displacement of businesses employing or owned by lower-income households, applicants will receive points as follows:

1 point for identification and implementation of more than two (2) strategies
0.5 points for identification and implementation of at least one (1) strategy

Examples of Business Anti-Displacement strategies include, but are not limited to:

- Implementation of an overlay zone designed to protect and assist small businesses;
- Establishment of a small business advocate office and designate a single point of contact for every small businesses;
- Creation and maintenance of a small business alliance;
- Increased visibility of the jurisdiction's small business assistance programs;
- Formal program to ensure that some fraction of a jurisdiction's purchases of goods and services come from local businesses;
- Business Relocation Plans.

Note: The Department recognizes not all Projects may have a need to evaluate physical displacement risk and/or include anti-displacement strategies. Applicants which can demonstrate the proposed AHSC-funded project will NOT result in the physical displacement of lower-income businesses will receive a full point for the Physical Displacement portion of this criterion.

(2) Economic Anti-Displacement and Workforce Training/Employment Strategies

The following applies to applications which include an AHSC-funded physical capital infrastructure improvement.

Projects with policies or programs to prevent economic displacement of lower-income households and promote the recruitment, training, and/or hiring of disadvantaged populations with barriers to employment will be awarded points as follows:

3 points for identification and implementation of more than three (3) strategies
2 points for identification and implementation of 2 to 3 strategies
1 point for identification and implementation of at least one (1) strategy

Examples of Economic Anti-Displacement strategies include, but are not limited to:

- Tenant Anti-Harassment Policies
- Condominium Conversion Restrictions
- Rent Stabilization Ordinances
- Just Cause Eviction Policies
- Source of Income non-discrimination ordinances
- Policies to preserve single-room occupancy units and/or mobile home parks

Examples of Workforce Training/Employment Strategies include, but are not limited to:

- Project labor agreements with targeted hire commitments
- Community workforce agreements
- High-road agreements
- Partnerships with community-based workforce development and job training entities that have a track record of success serving disadvantaged populations and/or have demonstrated a high job placement rate among trainees from disadvantaged communities
- Partnerships with pre-apprenticeship, state certified community conservation corps, "earn-while-you-learn" models, and/or YouthBuild programs; and/or registered apprenticeship programs that lead to industry recognized credentials, certifications and/or references for long term employment
- Partnerships with local Workforce Investment Board programs serving disadvantaged populations.

*Note: Applicants will be awarded points for targeting residents of **Disadvantaged Communities** and/or individuals with employment barriers as defined by Section 14005, Letter J of the Unemployment Insurance Code. This definition can be found here: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1270*

(j) Programs Need and Readiness – 3 Points Maximum

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	YES

NOTE: Applications submitted without an AHSC-funded Program eligible use will receive zero points for this criterion.

(1) Need and Benefit of Program Activities

Up to 2 points will be awarded for applicants that demonstrate the extent to which the proposed **Program** activity is addressing the needs of, and providing benefits to, those to be served by the **Program** activity. To receive full points, applicants must describe all of the following:

- Targeted users for the program;
- Issue or need the program is attempting to address;
- Why the program will successfully address the identified issue or need; and
- Why AHSC funding is needed for this program.

(2) Program Readiness and Sustainability

Up to 1 point will be awarded for applicants that demonstrate and describe both of the following:

- **Program Operator** prior experience operating similar successful programs; and

- How the **Program Operator** will sustain the program beyond the term of the AHSC standard agreement and funds.

(k) **Implementation of Planning Efforts – 2 Points Maximum**

Criteria Applicability		
Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
YES	YES	YES

A maximum of 2 points will be awarded to **Projects** which implement local policies or programs that specifically reflect regions' SCS/RTP outcomes and support the objectives of the **AHSC Program**, include specific climate and adaptation efforts as follows:

(1) 1.0 point for **Projects** which are reflected in regional Transit Priority Areas, or the regional equivalent, pursuant to SB 375;

(2) 0.50 points for **Projects** which implement climate adaptation efforts and climate mitigation efforts that integrate multiple sectors (e.g. housing, transportation, and green infrastructure) to optimize climate and public benefits as reflected in a current regional or local planning document;

(3) 0.25 points for a Project which directly implements a policy in one (1) of the following long range local plans. Examples include:

- General Plan (e.g. program or policy of the circulation element or site identified in the site inventory of an adopted housing element)
- Specific Plan
- Community Plan
- Climate Action Plan
- Redevelopment Plan
- Bicycle Master Plan

- Disadvantaged Community Assessment (Government Code Section 65302)
- Pedestrian Master Plan
- Local Coastal Plan
- Transit Plan

(4) 0.25 points for any one (1) of the following project-specific plans as follows:

- Transit Corridor Plan
- Station Area Plan
- Corridor System Management Plan
- Transit Village Plan
- Transportation Demand Management (TDM) Strategy or Plan
- Other related plans (specify)

Evidence of implementation of the above plans must be demonstrated by providing relevant sections of the applicable plan or a letter or resolution executed by an officer or an equivalent representative, from the appropriate governing body. Examples of implementation may include an applicable zoning ordinance, development regulations or program.

Section 108. Criteria Applicability

Based on the application's proposed **Project** as defined in Sections 102 and 103, Figure 11 below indicates the criteria which will be applied and then scored to determine an applicant's final score.

Figure 11
Criteria Applicability

Guideline Reference Section 107		Physical Site with AHD/HRI	Physical Site without AHD/HRI	No Physical Site
GHG Quantification Methodology				
a	Estimated GHG Emissions Reductions	X	X	X
Supplemental Strategies				
b	Active Transportation Improvements	X	X	N/A
c	Water, Energy and Greening	X	X	N/A
Policy Objectives				
d	Depth and Level of Housing Affordability	X	N/A	N/A
e	Housing and Transportation Collaboration	X	X	X
f	Community Benefit and Engagement	X	X	X
g	Location Efficiency and Access to Destinations	X	X	N/A
h	Funds Leveraged	X	X	X
i	Anti-Displacement Strategies	X	X	N/A
j	Program Need and Readiness	X	X	X
k	Implementation of Planning Efforts	X	X	X

Article IV. Program Operations

Section 109. Legal Documents

(a) Rental **Affordable Housing Developments**: Upon the award of **AHSC Program** funds to assist a rental **Affordable Housing Development**, the **Department** shall enter into one or more agreements with the applicant, which may be in the form of a conditional commitment letter issued by the **Department** and accepted by the applicant and a State of California Standard Agreement (Standard Agreement), which shall commit funds from the **AHSC Program** in an amount sufficient to fund the approved **AHSC Program** loan amount. The agreement or agreements shall contain the following:

(1) a description of the approved **Affordable Housing Development** and the permitted uses of **AHSC Program** funds;
(2) the amount and terms of the **AHSC Program** loan;
(3) the regulatory restrictions to be applied to the **Affordable Housing Development** through the Regulatory Agreement;
(4) special conditions imposed as part of the **Department's** approval of the **Affordable Housing Development**;
(5) requirements for the execution and the recordation of the agreements and documents required under the **AHSC Program**;
(6) terms and conditions required by federal or state law;
(7) requirements regarding the establishment of escrow accounts for the deposit of documents and the deposit and disbursement of **AHSC Program** loan proceeds;
(8) the approved schedule of the **Affordable Housing Development**, including land acquisition if any, commencement and completion of construction or rehabilitation work, and occupancy by eligible households;
(9) terms and conditions for the inspection and monitoring of the **Project** in order to verify compliance with the requirements of the **AHSC Program**;
(10) provisions regarding tenant relocation in accordance with State law;
(11) provisions relating to the placement on or in the vicinity of, the **Affordable Housing Development** site a sign indicating that the **Council** has provided financing for the **Affordable Housing Development**. The **Council** may also arrange for publicity of the **AHSC Program** loan in its sole discretion; and
(12) provisions to ensure that the eligible costs and use of **AHSC Program** funds maintain the required GHG Reduction represented in the application.
(13) Other provisions necessary to ensure compliance with the requirements of the **AHSC Program**.

(b) For rental **Affordable Housing Developments** the **Department** shall enter into a Regulatory Agreement with the applicant for not less than the original term of the loan that shall be recorded against the property of the **Affordable Housing Development** prior to the disbursement of funds. The Regulatory Agreement shall include, but not be limited to, the following:

(1) the number, type and income level of **Restricted Units**;
(2) standards for tenant selection pursuant to 25 CCR 8305;
(3) provisions regulating the terms of the rental agreement pursuant to 25 CCR 8307;
(4) provisions related to a Rent Schedule, including initial rent levels for **Restricted Units** and non-Restricted Units pursuant to subsections (a) and (b) of 25 CCR

7312;

(5) conditions and procedures for permitting rent increases pursuant to 25 CCR 7312;

(6) provisions for limitations on Distributions pursuant to 25 CCR 8314 and on developer fees pursuant to 25 CCR 8312;

(7) provisions regarding the deposit and withdrawal of funds to and from reserve accounts in accordance with 25 CCR 8308 and 8309;

(8) assurances that the **Affordable Housing Development** will be maintained in a safe and sanitary condition in compliance with state and local housing codes and the management plan, pursuant to 25 CCR 7324;

(9) description of the conditions constituting breach of the Regulatory Agreement and remedies available to the parties thereto;

(10) provisions governing use and operation of non-Restricted Units and common areas to the extent necessary to ensure compliance with AHSC Program requirements;

(11) special conditions of loan approval imposed by the **Department**;

(12) Article 4, Subchapter 4, Chapter 7, Division 1 of Title 25, "Program Operations," Sections 25 CCR 7321 through 7326, shall apply to rental **Affordable Housing Developments** assisted by the **AHSC Program**; and

(13) other provisions necessary to assure compliance with the requirements of the **AHSC Program**.

(c) All **AHSC Program** loans for assistance to rental **Affordable Housing Development**s shall be evidenced by a promissory note payable to the **Department** in the principal amount of the loan and stating the terms of the loan consistent with the requirements of the **AHSC Program**. The note shall be secured by a deed of trust on the **Affordable Housing Development** property naming the **Department** as beneficiary or by other security acceptable to the **Department**; this deed of trust or other security shall be recorded junior only to such liens, encumbrances and other matters of record approved by the Department and shall secure the **Department's** financial interest in the **Affordable Housing Development** and the performance of applicant's **AHSC Program** obligations.

(d) Upon the award of **AHSC Program** funds to a **Locality** for assistance to a homeowner **Affordable Housing Development**, the **Department** shall enter into a Standard Agreement with the Recipient constituting a conditional commitment of funds. This agreement shall require the **Recipient** to comply with the requirements and provisions of these Guidelines. The Standard Agreement shall encumber **AHSC Program** funds in an amount sufficient to fund the approved **Project**, subject to limits established in the **NOFA** and consistent with the application. The Standard Agreement shall contain, but not be limited to, the following:

(1) a description of the approved local **Project** and the permitted uses of **AHSC Program** funds;

(2) requirements for the execution and, where appropriate, the recordation of the agreements and documents required under the **AHSC Program**;

(3) the **Recipient's** responsibilities for completion of the **Project**, including, but not limited to, number of units to be assisted, marketing, **AHSC Program** loan processing and funding, construction monitoring and disbursement, report submissions, and file documentation;

(4) manner, timing and conditions for disbursement of **AHSC Program** funds to **Recipients**;
(5) provisions relating to the placement on or in the vicinity of the homeownership **Affordable Housing Development** project site, a sign indicating that the **Council** has provided financing for the **Project.** The **Council** may also arrange for publicity of the **Project** in its sole discretion;
(6) remedies available to the **Department** in the event of a violation, breach or default of the Standard Agreement;
(7) requirements that the **Recipient** permit the **Department** or its designated agents and employees the right to inspect the project or local program and all books, records and documents maintained by the **Recipient** in connection with the local program and the local program individual Program loans;
(8) special conditions imposed on a case-by-case basis as part of **Department's** approval of the **Project**;
(9) terms and conditions required by federal or state law; and
(10) provisions to ensure that the eligible Capital Use and Program Use of funds maintains the required GHG Reduction as represented in the application.
(11) other provisions necessary to ensure compliance with the requirements of the **AHSC Program**.

(e) Prior to the disbursement of **AHSC Program** funds for a homeownership **Affordable Housing Development**, the **Department** shall enter into a monitoring agreement with the **Recipient** requiring the **Recipient** to comply with **AHSC Program** requirements. The monitoring agreement shall contain, but not be limited to, the following:
(1) requirements regarding the establishment of a reuse account for the deposit of loan repayments, including interest and principal, and the requirements for disbursement of funds from the reuse account;
(2) the plan for servicing of the **AHSC Program** loans as prepared by the **Recipient** to be reviewed for approval by the **Department**
(3) the plan for the reuse of **AHSC Program** funds as prepared by the **Recipient** to be reviewed for approval by the **Department**;
(4) requirements for submittal of an annual report on a form provided by the **Department**;
(5) remedies available to the **Department** in the event of a violation, breach or default of the monitoring agreement;
(6) requirements that the **Recipient** permit the **Department** or its designated agents and employees the right to inspect the **AHSC Program** and **Project** books, and all records and documents maintained by the Recipient in connection with the reuse account and long term loan servicing; and
(7) other provisions necessary to ensure compliance with the requirements of the **AHSC Program**.

(f) All homebuyer program loans originated by a **Recipient** for a homeowner **Affordable Housing Development** shall be evidenced by the following documents and provisions, models of which may be provided by the **Department**:
(1) A promissory note evidencing the program loan, payable by the homebuyer to the **Recipient** in the principal amount of the program loan and stating the terms and rate of interest of the program loan consistent with the requirements of the **AHSC Program**. The **Recipient** is and shall be prohibited from assigning their beneficial

interest under the note.

(2) The note shall be secured by a deed of trust, or other appropriate security instrument acceptable to the **Department**, on the homebuyer property naming the **Recipient** as beneficiary. This deed of trust or other appropriate security instrument shall be recorded in the official records of the county in which the unit is located and shall secure the **Recipient's** financial interest in the **Project**.

(g) Grants shall be governed by a Standard Agreement or other agreement with the **Recipient** in a form prescribed by the **Department**. The agreement shall ensure that the provisions of Section 105 of these Guidelines are applicable to the **Project** covered by the agreement and enforceable by the **Department**. The agreement will contain such other provisions as the **Department** determines are necessary to meet the requirements and goals of the **AHSC Program**, including but not limited to the following:

(1) a description and sources and uses of the approved **Project** and the permitted uses of **AHSC Program** funds;

(2) provisions governing the amount, terms and conditions of the **AHSC Program** grant;

(3) provisions governing the construction work and, as applicable, the acquisition and preparation of the site of the **Capital Project**, and the manner, timing and conditions of the disbursement of grant funds;

(4) a schedule for completion of the **Project** and a series of milestones for progress toward **Project** completion together with the remedies available to the **Department** in the event of the failure to meet such milestones;

(5) provisions for the payment of prevailing wages if and as required by state or federal law;

(6) requirements for periodic reports from the **Recipient** on the construction and use of the **Project** and provisions for monitoring of the **Project** by the **Department**;

(7) the **Recipient's** responsibilities for the development of the approved **Project**, including, but not limited to, construction management, maintaining of files, accounts and other records, and report requirements;

(8) provisions relating to the development, construction, affordability and occupancy of the **Affordable Housing Development** supported by the **Housing-Related Infrastructure Capital Project**, if applicable;

(9) Provisions relating to the placement on, or in the vicinity of, the **Project** site, a sign indicating that the **Council** has provided financing for the **Project**. The **Council** may also arrange for publicity of the grant in its sole discretion;

(10) remedies available to the **Department** in the event of a violation, breach or default of the Standard Agreement;

(11) requirements that the **Recipient** permit the **Department** or its designated agents and employees the right to inspect the **Project** and all books, records and documents maintained by the **Recipient** in connection with the **AHSC Program** grant or loan or both;

(12) special conditions imposed as part of **Department** approval of the project;

(13) terms and conditions required by federal or state law;

(14) provisions to ensure that the **Project** maintains the required GHG Reduction as represented in the application; and

(15) other provisions necessary to ensure compliance with the requirements of the **AHSC Program**.

Section 110. Reporting Requirements

(a) During the term of the Standard Agreement and according to the annual deadline identified in the Standard Agreement, the **Recipient** shall submit, upon request of the **Department** and the **Council**, an annual performance report that demonstrates satisfaction of all reporting requirements pursuant to the **AHSC Program** reporting requirements identified in the Standard Agreement and any additional reporting requirements developed by the **Department**, the **Council** or **ARB**. The reports will be filed on forms provided by the **Department**.

(b) **Recipient** is also responsible for meeting the project reporting requirements of ARB's *Cap-and-Trade Auction Proceeds Funding Guidelines for Agencies that Administer California Climate Investments* and ARB quantification methodologies. These may include, but are not limited to: **Project** metrics; the duration over which the **Recipient** will track **Project** metrics; how often **Recipient** will report; the format **Recipient** will use to report; **Project** profile information; **Project** benefit information; and information related to **Disadvantaged Community** benefits.

(c) At any time during the term of the Standard Agreement, the **Department** may perform or cause to be performed a financial audit of any and all phases of the **Recipient's Project**. At the **Department's** request, the **Recipient** shall provide, at its own expense, a financial audit prepared by a certified public accountant. The State of California has the right to review project documents and conduct audits during project implementation and over the project life.

Section 111. Performance Requirements

(a) **Recipients** shall begin construction of the housing units to be developed in the **Affordable Housing Development** that is a **Capital Project** and the housing designated in the application within the time set forth in the Standard Agreement but not more than two (2) years from the date of the **AHSC Program** award.

(b) The housing units to be developed in the **Affordable Housing Development** that is a **Capital Project** and the housing designated in the application must be completed, as evidenced by receipt of a certificate of occupancy, within the period of time set forth in the Standard Agreement, but not more than five (5) years from the date of the **AHSC Program** award.

(c) **AHSC Program** funds must be disbursed in accordance with deadlines specified in the Standard Agreement, and in no event later than the following disbursement deadlines:

Figure 12
TENTATIVE Performance Milestone Dates

NOFA Date	Disbursement Deadline	Standard Agreement Executed	Disbursement Agreement Executed
January 2016	June 30, 2021	September 2018	September 2018

(d) **Recipients** may only reapply for **AHSC Program** funds in a subsequent **NOFA** for the same **Project** (i.e. multi-phased projects) if the Recipient has disbursed at least fifty (50) percent of the funds allocated from prior awards.

Section 112. Defaults and Cancellations

(A) In the event of a breach or violation by the **Recipient** of any of the provisions of the Standard Agreement, the **Department** may give written notice to the **Recipient** to cure the breach or violation within a period of not less than 15 days. If the breach or violation is not cured to the satisfaction of the **Department** within the specified time period, the **Department**, at its option, may declare a default under the Standard Agreement and may seek legal remedies for the default including the following:

(1) The **Department** may seek, in a court of competent jurisdiction, an order for specific performance of the defaulted obligation or the appointment of a receiver to complete the **Project** in accordance with **AHSC Program** requirements.

(2) The **Department** may seek such other remedies as may be available under the relevant agreement or any law.

(b) Funding commitments and Standard Agreements may be canceled by the **Department** under any of the following conditions:

(1) The objectives and requirements of the **AHSC Program** cannot be met by continuing the commitment or Standard Agreement;

(2) Construction of the **Capital Project** or implementation of **Program Costs** cannot proceed in a timely fashion in accordance with the timeframes established in the Standard Agreement; or

(3) Funding conditions have not been or cannot be fulfilled within required time periods.

(c) Upon receipt of a notice of intent to cancel the grant from the **Department**, the **Recipient** shall have the right to appeal to the Director of the **Department**.

Section 113. Prevailing Wages

For the purposes of the State Prevailing Wage Law (Labor Code Sections 1720 – 1781), a grant or loan under the **AHSC Program** shall be considered public funding for the construction, rehabilitation, demolition, relocation, preservation, or other physical improvement of the **Capital Project** subject to the provisions of the State Prevailing Wage Law. AHSC Program funding of the **Project** shall not necessarily, in and of itself, be considered public funding of a **Project** unless such funding is considered public funding under the State Prevailing Wage Law. It is not the intent of the **Department** in these regulations to subject **Projects** to the State Prevailing Wage Law by reason of **AHSC Program** funding of the **Project** in those circumstances where such public funding would not otherwise make the **Project** subject to the State Prevailing Wage Law. Although the use of **AHSC Program** funds does not require compliance with federal Davis Bacon wages, other funding sources may require compliance with federal Davis Bacon wages.

APPENDICES

Appendix A	Definitions
Appendix B	Examples of Eligible Costs
Appendix C	Project Location Designations
Appendix D	Greenhouse Gas Quantification Methodology for the Strategic Growth Council's Affordable Housing and Sustainable Communities Program for Fiscal Year 2015-16
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Appendix A. Definitions

(a) "Active Transportation" means infrastructure and non-infrastructure projects that encourage increased use of active modes of transportation, but does not include funding program operations. The project types include but are not limited to:

(1) Infrastructure Projects: capital improvements (construction) that will encourage increased use of active modes of transportation, such as biking and walking

(2) Non-infrastructure Projects: education, encouragement and planning activities must encourage increased use of active modes of transportation, such as biking and walking**.**

(b) "Active Transportation Program" means non-infrastructure related programs which instill safe pedestrian, bicyclist and motorist behaviors to make safe active transportation possible. Non-infrastructure activities can stand-alone or be conducted with infrastructure projects (fixed facilities or permanent structural changes) to increase effectiveness.

(c) "Activity Delivery Costs" means staff costs incurred by the Public Agency that are directly related to implementing specific Capital Project and Program Costs. They may include costs such as project document preparation, project underwriting, construction management, inspections, or reporting to the Department.

(d) "Affordable Housing Development" means a Capital Project that is a Housing Development in which at least 20 percent of the total units are Affordable Units.

(e) "Affordable Unit" means a housing unit that satisfies all the following criteria:

(1) The unit must satisfy one of the following affordability criteria:

(A) It is available at an "affordable rent" as that terms is used and defined in Section 50053 of the Health & Safety Code;

(B) It is offered at an "affordable housing cost", as that terms is used and defined in Section 50052.5 of the Health & Safety Code; or

(C) It is available at an "affordable rent" or an "affordable housing cost" according to the alternative percentages of income for agency-assisted rental and cooperative housing developments pursuant to Department regulations adopted under Health and Safety Code section 50462(f).

(2) For "Affordable Units" that are rental units, they must be subject to a recorded Program covenant ensuring affordability for a duration of at least 55 years.

(3) For "Affordable Units" that are ownership units, they must be sold to and occupied by an income-qualified household, and subject to a recorded covenant with a duration of at least 30 years that includes either a resale restriction or equity sharing upon resale.

(4) For the purposes of this definition, the terms "persons and families of low income" and "area median income" shall have the same meanings as set forth in Health and Safety Code section 50093 and 50093(c).

(5) The unit must be occupied by a “lower income household” as defined by Health and Safety Code section 50079.5, which includes “very low income households” as defined by Health and Safety Code section 50105 and also includes “extremely low income households” as defined by Health and Safety Code section 50106.

(e) “Agency” means California Natural Resources Agency.

(f) “AHSC Program” means the program as implemented by these Program Guidelines.

(b) “ARB” means the California Air Resources Board.

(c) “Area Median Income” means the most recent applicable county median family income published by the California Tax Credit Allocation Committee.

“Bus Rapid Transit” (BRT) means a rubber-tired form of rapid transit in an integrated system of facilities, equipment, services, and amenities that exceed the speed and reliability of regular bus service. BRT usually includes use of dedicated right-of way, including busways, exclusive lanes, and bypass/queue jumping lanes for buses at congested intersections to reduce vehicle running time and typically includes a combination of the following additional features: (1) center of road alignment, mixed-traffic prohibitive intersection treatments; (2) use of more limited-stop service including express service and skip-stopping; (3) application of Intelligent Transportation Systems (ITS) technology such as signal priority, automatic vehicle location systems, system security, and customer information; (4) platform level boarding and off-board fare collection.

(d) “Bus Service” means regularly scheduled public transit service operating with limited stops using a fixed route.

(e) "Capital Project" means a project consisting of the construction, rehabilitation, demolition, relocation, preservation, acquisition, or other physical improvement that is an integral part of, or is necessary for completion of a Project.

(f) “CCR” means the California Code of Regulations.

(g) “Complete Streets” means context sensitive streets designed and operated to ensure safe access by all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete streets projects include, but are not limited to:

(1) Development of new bikeways and walkways that improve safe and comfortable access of pedestrians and cyclists to local amenities.
(2) Development of special bus lanes and dedicated bus lanes.
(3) Development of comfortable and accessible public transportation stops and amenities.
(4) Development or improvement of frequent and safe crossing opportunities.
(5) Installation of accessible pedestrian signals.
(6) Development of curb extensions, roundabouts, median islands, “road diets”, lane narrowing projects, or other traffic calming mechanisms with the intent of improving safety and accessibility for non-motorized users.

(h) "Consolidated Transportation Service Agency (CSTA)" means an agency designate by the Regional Transportation Planning Agency (RTPA) to consolidate and/or coordinate social transportation services. A CTSA may be a public agency (city, county or operator), a private entity operating under a license, a non-profit organization, a public corporation, a public district or joint powers entity, or a State department or agency. An RTPA may not be a CTSA.

(i) "Criteria Air Pollutants" means an air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM10 and PM2.5. The U.S. EPA and CARB periodically review new scientific data and may propose revisions to the standards as a result.

(j) "Council" means the California Strategic Growth Council, established pursuant to Public Resources Code Section 75121.

(k) "Deferred Costs" means costs deferred at construction loan closing, including but not limited to: capitalized reserves, loan fees, syndication costs, legal, accounting, audit, consultant fees, and developer fees paid from operating cashflow.

(l) "Department" means the Department of Housing and Community Development of the State of California.

(m) "Destination Transit Station/Stop" means a Transit Station located not more than thirty (30) minutes from the Transit Station/Stop that serves the Affordable Housing Development or Key Destination via public transit and involves no more than one transfer point.

(n) "Developer" means the entity responsible for the construction of an Affordable Housing Development, housing-related infrastructure or sustainable transportation infrastructure or transportation related amenity Capital Project.

(o) "Disadvantaged Community" means a census tract with a score in the top 25% in California Environmental Protection Agency's CalEnviroScreen tool, or provides a benefit to such areas per the California Air Resources Board's Proposed Funding Guidelines..

(p) "Enforceable Funding Commitment" means permanent commitments, including but not limited to the following:

(1) Low-income housing tax credit equity contributions (without the necessity of a tax credit reservation letter) and tax-exempt bonds in connection with four (4) percent low-income housing tax credits, AHSC Program funds, funding previously issued by the Department simultaneously with the commitment of AHSC Program funds will be considered committed in this calculation.

(2) Funds conditionally reserved under the following programs shall be accepted as

funding commitments: the Department of Housing and Urban Development's (HUD) Supportive Housing Program (SHP), HOME Investment Partnerships Program (HOME), Community Development Block Grant Program (CDBG), and the California Department of Mental Health's Mental Health Services Act (MHSA) Program.

(3) A land donation in fee for no other consideration that is supported by an appraisal or purchase/sale agreement ("Land Donation") or a local fee waiver resulting in quantifiable cost savings for the Project where those fees are not otherwise required by federal or state law ("Local Fee Waiver") may be considered a funding commitment. The value of the Land Donation will be the greater of either the original purchase price or the current appraised value as supported by an independent third party appraisal prepared by a MAI-qualified appraiser within one year of the application deadline. A funding commitment in the form of a Local Fee Waiver must be supported by written documentation from the local Public Agency.

(4) Owner equity contributions or developer funds. Such contributions or funds shall not be subsequently substituted with a different funding source or forgone if committed in the application, except that a substitution may be made for up to 50% of deferred developer fee. The Department may require the applicant to evidence the availability of the proposed amount of owner equity or developer funds.

(5) Funds for transportation projects which are programmed for allocation and expenditure in the applicable capital improvement plan consistent with the terms and timeframes of the Standard Agreement.

(q) "Energy Efficiency" means managing and restraining the growth in energy consumption.

(r) "Flexible Transit Service" means a form of transit for the public characterized by flexible routing and scheduling of small/medium vehicles operating in shared-ride mode (with at least two passengers) between pick-up and drop-off locations according to passenger needs. Flexible Transit Service includes vanpool, shuttle and feeder bus systems that reduce vehicle miles travelled.

(s) "Floor Area Ratio" (FAR) means the square footage of the floor area of a building divided by the site square footage, excluding therefrom dedicated streets, sidewalks, parks and open space. The floor area of a building is the sum of the gross area of each floor of the building, excluding mechanical space, cellar space, floor space in open balconies, enclosed parking and elevators or stair bulkheads. Multiplying the FAR by the area of the site produces the minimum amount of floor area required in a building on the lot. For example, on a 10,000 square-foot site in a district with a minimum FAR of 1.5, the floor area of a building must be at least 15,000 square feet.

(t) "GHG Reduction" means Greenhouse Gas Reduction.

(u) "Green infrastructure" means using vegetation, soils, and natural processes (through

evaporation, filtration, sequestration, reuse, runoff) to help create healthier urban environments through land and water management. At the scale of a city or county, green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to Low Impact Design and stormwater management systems that mimic nature by soaking up and storing water, including Green Streets. Green infrastructure should be managed to maintain long-lasting benefits, which further the project's ability to safeguard against climate change.

(v) "Green Streets" means a sustainable stormwater strategy that meets regulatory compliance and resource protection goals by using a natural systems approach to manage stormwater, reduce flows, improve water quality and enhance watershed health.

(x) "High Quality Transit" means a **Qualifying Transit** line with high frequencies AND permanent infrastructure as follows:

(1) Frequency: **High Quality Transit** must have **Peak Period** headway frequency of every 15 minutes or less and service seven days a week.

(2) Permanent Infrastructure: High Quality Transit must operate on a railway or be transit service with **Bus Rapid Transit** features that either fully or partially operate on a dedicated bus-only lane, or uses High Occupancy Vehicle (HOV) or High Occupancy Toll (HOT) lanes.

(y) "Housing Choice Voucher" means the federal government's program for assisting very low-income families, the elderly, and the disabled to afford decent, safe, and sanitary housing in the private market. Since housing assistance is provided on behalf of the family or individual, participants are able to find their own housing, including single-family homes, townhouses and apartments.

(z) "Housing Development" means a residential development or the residential portion of a mixed-use development.

(aa) "Housing-Related Infrastructure" means a capital infrastructure improvement required as a condition of approval of an affordable housing development by a Locality, transit agency or special district such as sewer, water or utility system upgrades, streets, drainage basins, etc.

(bb) "Integrated Connectivity Project (ICP) Project Area" means a Project Area which includes at least one (1) Transit Station/Stop with a combination of two or more eligible costs as defined in Section 103.

(cc) "Intelligent Transportation Systems" means electronics, communications, or information technology, used singly or in combination, to improve the efficiency, accessibility or safety of the surface transportation system.

(dd) "Locality" means a California city, unincorporated area within a county or a city and county.

(ee) "Low Impact Design (LID)" means design which controls water at the source—both rainfall and storm water runoff through a decentralized system that distributes storm water across a project site in order to replenish groundwater supplies.

(ff) "Lower Income" has the meaning set forth in Health and Safety Code Section 50079.5.

(gg) "Mixed Use Development" means a building, combination of buildings, or building complex, designed to functionally and physically integrate non-residential uses such as retail, commercial, institutional, recreational, or community uses with residential uses, in a complementary manner.

(hh) "Moderate Income" has the meaning set forth in Health and Safety Code Section 50093.

(ii) "MHP" shall mean the Multifamily Housing Program authorized and governed by Sections 50675 through 50675.14 of the Health and Safety Code and the regulations promulgated there under in 25 CCR 7300, *et seq*.

(jj) "Net Density" means the total number of dwelling units per acre of land to be developed for residential or mixed use, excluding allowed deductible areas. Allowed deductible areas are public dedications of land which are for public streets, public sidewalks, public open space, and public drainage facilities. Non-allowed deductible areas include utility easements, setbacks, private drives and walkways, landscaping, common areas and facilities, off street parking, and drainage facilities exclusive to a development project. Mitigations required for development will not be included in the allowed deductible areas.

(kk) "NOFA" means a Notice of Funding Availability issued by the Department.

(ll) "Peak Hours" or "Peak Period" means the period with the highest ridership during the entire transit service day as determined by the transit operator. Must include at least one hour during the morning commute hours and one during evening commute hours, Monday through Friday. Each Peak Period cannot be longer than three hours.

(mm) "Performance measures" means indicators of transit regarding data indicators such as accessibility, mobility choices and ridership.

(nn) "Program Cost" means the cost(s) associated with 1) program creation, or 2) expansion of existing programs to serve new populations or offer new program service and implementation.

(oo) "Program Operator" means the entity that administers the day-to-day operational responsibilities for the program for which the AHSC Program funding is sought.

(pp) "Project" means the proposed use of funds representing a combination of Capital Projects or Program Costs which are proposed by the applicant to be funded the AHSC Program.

(qq) "Project Area" means the area encompassing the Transit Station/Stop, housing and key destinations.

(rr) "Public Agency" means a Locality, transit agency, public housing authority or redevelopment successor agency.

(ss) "Qualifying Transit" means a transit line serving the public that is operated by the following: (1) Directly operated by a public entity; (2) Operated by a public entity via a contract for purchased transportation service with a private or non-profit provider; or (3) Operated by a private or non-profit entity as a grant Recipient or sub-recipient from a public entity. Qualifying Transit for the purpose of the Program includes various forms of fixed transit service (Rail Service and Bus Service) and Flexible Transit Service. A Qualifying Transit line requires service that departs two (2) or more times during Peak Hours as defined by the transit operator. Flexible Transit service is exempt from these Peak Hours frequency requirements.

(tt) "Rail Service" means regularly scheduled public transit service running on rails or railways.

(uu) "Recipient" means the eligible applicant receiving a commitment of Program funds.

(vv) "Restricted Units" mean residential units restricted by an enforceable covenant or agreement with the Department or other public agency to occupancy by low- or very low-income households, with affordable rents pursuant to 25 CCR 7312 of the MHP regulations or affordable housing costs pursuant to the BEGIN Program for at least 55 years. Restricted Units must be substantially equivalent in size and number of bedrooms to the balance of units in the Housing Development. Restricted Units may consist of units designated for any housing tenure, rental or owner-occupied, within the Housing Development.

(ww) "Rural Area" means the definition in Health and Safety Code Section 50199.21

(xx) "Rural Innovation Project Area (RIPA)" means a Project Area located within a Rural Area which includes at least one (1) Transit Station/Stop with a combination of two or more eligible costs as defined in Section 103.

(yy) "Secure Overnight Bicycle Parking" means bicycle parking that is not accessible to the general public, is completely enclosed and protects the bicycle from inclement weather, and allows for the bicycle frame to be secured to the bicycle rack at two points. Examples of Secure Overnight Bicycle Parking include bicycle rooms, bicycle lockers, and bicycle cages.

(zz) "Site Control" means the applicant or developer has control of property through one or more of the following:

(1) fee title;
(2) a leasehold interest on the property with provisions that enable the lessee to make improvements on and encumber the property provided that the terms and

conditions of any proposed lease shall permit, prior to grant funding, compliance with all program requirements;

(3) an enforceable option to purchase or lease which shall extend through the anticipated date of the Program award as specified in the NOFA;
(4) an executed disposition and development agreement, right of way, or irrevocable offer of dedication to a Public Agency;
(5) an executed encroachment permit for construction of improvements or facilities within the public right of way or on public land;
(6) an executed agreement with a public agency that gives the applicant exclusive rights to negotiate with the agency for the acquisition of the site; provided that the major terms of the acquisition have been agreed to by all parties;
(7) a land sales contract or enforceable agreement for acquisition of the property; or
(8) other forms of site control that give the Department equivalent assurance that the applicant or developer will be able to complete the Project and all housing designated in the application in a timely manner and in accordance with all the requirements of the Program.

(aaa) "Substantial Rehabilitation" means a Housing Development with reasonable rehabilitation construction contract costs of at least $35,000 per residential unit. Rehabilitation projects must fully and efficiently address all of the physical needs of the Project for the term of the project loan and therefore merely meeting the minimum threshold cost amount of $35,000 per residential unit may not, in and of itself, be sufficient to be considered Substantial Rehabilitation for purposes of the project loan.

(bbb) "Sustainable Transportation Infrastructure" means capital project(s) that result in the improvement or addition of infrastructure that encourages mode-shift from single occupancy vehicles by enhancing: 1) public transit service, 2) pedestrian networks, or 3) bicycle networks (includes public bike-share programs) within the defined **Project Area** meeting the transit requirements detailed in Section 102 (c) or (d).

(ccc) "TCAC" means the California Tax Credit Allocation Committee.

(ddd) "Transit Corridor" means a transportation corridor which meets one of the following criteria: `1) A corridor served by Qualifying Transit; or 2) A corridor served by High Quality Transit that has been the subject of analysis, planning and environmental mitigation, and has been designated for investment within the regional transportation plan of a MPO, RTPA, or within a long range transportation plan of a transit agency.

(eee) "Transit Signal Priority (TSP)" means an operational strategy that facilitates the movement of transit vehicles through traffic-signal controlled intersections. Objectives of TSP include meeting on time schedule performance and improved transit travel time efficiency while minimizing impacts to normal traffic operations. TSP is made up of four components: (1) a detection system that lets the TSP system where the vehicle requesting signal priority is located. The detection system communicates with a (2) priority request generator that alerts the traffic control system that the vehicle would like to receive priority. (3) Priority control strategies; and 4) System management software collecting data and generating reports.

(fff) “Transit Station/Stop” means a designated location at which the various **Qualifying Transit** service(s) drop-off and pick-up riders.

(ggg) “Transportation Demand Management” (TDM) means strategies that increase transportation system efficiency by encouraging shifting from single-occupant vehicle (SOV) trips to non-SOV transportation modes, or shifting SOV trips off peak travel periods. Effective TDM strategies result in reduction of vehicle miles traveled (VMT) by increasing travel options, providing incentives and information to incentivize individuals and employers to modify their travel behavior to support these objectives, and/or by reducing the need to travel or reducing travel distance via location efficient development patterns. TDM strategies encourage travel by transit, bike, walking or in shared vehicles.

(hhh) “Transportation-Related Amenities” means capital improvements that are publicly accessible and provide supportive amenities to pedestrians, cyclists and transit riders (i.e. bike parking, bus shelter, benches, street trees, etc.) within the defined **Project Area** meeting the transit requirements detailed in Section 102 (c) or (d).

(iii) "Urban Forestry" means the cultivation and management of native or introduced trees and related vegetation in urban areas for their present and potential contribution to the economic, physiological, sociological, and ecological well-being of urban society.

(jjj) "Urban forest" means those native or introduced trees and related vegetation in the urban and near-urban areas, including, but not limited to urban watersheds, soils and related habitats, street trees, park trees, residential trees, natural riparian habitats, and trees on other private and public properties.

(kkk) “Urban Greening” means the incorporation of pedestrian and bicycle trail systems, urban street canopy, drought tolerant and native species landscaping and landscape restoration, green and cool roofing, community gardens and stormwater features into public open spaces

(lll) “Very-Low Income” has the meaning set forth in Health and Safety Code Section 50105.

(mmm) “Vulnerable Communities” means communities which include, but are not limited to, women, racial or ethnic groups, low-income individuals and families, individuals who are incarcerated and those who have been incarcerated, individuals with disabilities, individuals with mental health conditions, children, youth and young adults, seniors, immigrants and refugees, individuals who are Limited English Proficient (LEP), and lesbian, gay, bisexual, transgender, queer and questioning (LGBTQQ) communities, or combinations of these populations.

Appendix B. Examples of Eligible Costs

Figure B-1
Examples of Eligible Costs

		Affordable Housing Developments and Housing-Related Infrastructure	Sustainable Transportation Infrastructure	Transportation-Related Amenities	Active Transportation Programs	Transit Ridership Programs	Criteria Air Pollutant Reduction Programs
Housing Construction							
	Construction, rehabilitation, demolition, relocation, preservation. acquisition or other physical improvement of affordable housing	X					
	Site Acquisition or preparation costs related to a an Affordable Housing Development, including easements and rights of way	X					
Complete Streets and Non-Motorized Transportation							
	Installation of new or improved walkways that improve mobility and access of pedestrians		X				
	Installation of new or improved bikeways that improve mobility and access of cyclists		X				
	Installation of new or improved pedestrian crossings or over-crossings		X				
	Non-capacity increasing streetscape improvements, including, but not limited to the installation of lighting, signage, or other related amenities for pedestrians, cyclists and transit riders			X			
	Street crossing enhancements including installation of accessible pedestrian signals		X				
	Traffic calming projects including development of curb extensions, roundabouts, median islands, "road diets," lane narrowing projects		X				
	Signage and way-finding markers			X			
	Installation of traffic control devices to improve safety of pedestrians and bicyclists		X				
	Street furniture (e.g. benches, shade structures, etc.			X			
	Bicycle repair kiosks			X			
	Installation of new multi-use paths for active transportation users		X				
	Publically accessible bicycle parking			X			

	Bike Sharing infrastructure		X				
	Bicycle carrying structures on public transit			X			
Transit and Station Areas							
	Development of special or dedicated bus lanes		X				
	Development and/or improvement of transit facilities or stations		X				
	Capital purchases of transit related equipment which will increase transit service and/or reliability		X				
	Transit Signal Priority technology systems		X				
	Real-time arrival/departure information systems			X			
	Installation of at-grade boarding infrastructure		X				
	Development or improvement of shelters or waiting areas at transit station/stops			X			
	Improvement or addition of lighting to a station area or pedestrian walkways			X			
	Transit ticket machine purchase or improvements			X			
	Transit passenger amenities - e.g. WiFi access			X			
	Transit Vehicle Procurement for service expansion		X				
	Station area signage			X			
	Removal of access barriers to transit stations		X				
Green Infrastructure, Urban Greening and Element Beyond Title 24							
	Energy efficiency measures that meet or exceed Title 24 Part 6 Efficiency Standards	X	X				
	Green Building measures that meet or exceed Title 24 Part 11 Green Building Standards	X	X				
	Water Management measures related to housing or transportation infrastructure including: • soil restoration and permeable surfaces • heat island mitigation (e.g. reflective and vegetated surfaces, shade canopy) • rainwater recycling, flow and filtration systems including rain gardens • stormwater planters and filters • vegetated swales, • bioretention basins • infiltration trenches • integration with riparian buffers • drought tolerant plants and tree species • vegetative or permeable alternatives to turf	X	X	X			
	Community demonstration or outdoor education gardens or orchards	X		X			
	Creation, development or rehabilitation of parks	X		X			

	and open space						
Programs							
	Pedestrian and bicycle safety education programs				X		
	Development and publishing of community walking and biking maps, include school route/travel plans				X		
	Development & implementation of "walking School Bus" or "bike train" programs				X		
	School crossing guard training programs				X		
	Bicycle clinics				X		
	Public outreach efforts to increase awareness and understand the needs of active transportation users				X		
	Bike sharing program operations				X		
	Ride and/or car share programs				X		
	Transit subsidy programs					X	
	Education and marketing of transit subsidy programs					X	
	Transportation Demand Management (TDM) programs					X	
	Outreach and marketing of Consolidated Transportation Service Agency (CTSA) programs					X	
	E-Mobility programs which include the expansion or development of internet based applications that allow customers, clients and/or the public to conduct transactions online, circumventing vehicle travel						X

Appendix C. Project Location Designations

Note: Information below is to be used exclusively for determining minimum net density requirements for Affordable Housing Development to be consistent with the requirements of Section 103(a)(1)(A)(iv)

Figure C-1
Project Location Designation Definitions

Non-Metropolitan	Suburban	Urban
Jurisdictions (cities/counties) located within Non-Metropolitan Counties	Jurisdictions (cities/counties) located within a Metropolitan Statistical Area (MSA) with a population of less than 2 million ***unless*** a **city** has a population of greater than 100,000 in which case it would be considered Urban	Jurisdictions (cities/counties) located within a Metropolitan Statistical Area (MSA) with a population of more than 2 million ***unless*** a **city** has a population of less than 25,000 in which case it would be considered suburban

Detailed information on required densities by Locality is available on the Department's website (http://www.hcd.ca.gov/hpd/Default_2010census_update.pdf).

Please note: While the document referenced above, indicates that a sub-group of Non-Metropolitan jurisdictions have a required density of 10 units per acre (see Table A on page 3 and corresponding required densities detailed in Table B beginning on page 4 of the memorandum), for the purposes of determining **AHSC Program**-required **Affordable Housing Development** densities, these localities indicated with a density of 10 units per acre are required to have densities equal to or greater than 15 units per acre as detailed in Section 103(a)(1)(A)(iv).

Appendix D

California Air Resources Board

Greenhouse Gas Quantification Methodology for the Strategic Growth Council Affordable Housing and Sustainable Communities Program

California Air Resources Board

Greenhouse Gas Quantification Methodology for the Strategic Growth Council Affordable Housing and Sustainable Communities Program

Greenhouse Gas Reduction Fund
Fiscal Year 2015-16

Version 2
March 23, 2016

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Section A. Introduction

The California Air Resources Board (ARB) is responsible for providing the quantification methodology to estimate greenhouse gas (GHG) emission reductions from projects receiving monies from the Greenhouse Gas Reduction Fund (GGRF) for California Climate Investments. For the Strategic Growth Council's (SGC) Affordable Housing and Sustainable Communities (AHSC) Program, ARB staff developed this GHG emission reduction quantification methodology to be used by applicants to estimate proposed project GHG emission reductions in Fiscal Year (FY) 2015-16 and to note ongoing reporting requirements for funded projects.

This methodology uses currently available tools to estimate the change in vehicle miles traveled (VMT) and associated GHG emission reductions based on specific land use and transportation characteristics of the proposed project. These tools consist of components of the "California Emissions Estimator Model" (CalEEMod) and calculation methodologies based on the "Methods to Find the Cost-Effectiveness of Funding Air Quality Projects for Evaluating Motor Vehicle Registration Fee Projects and Congestion Mitigation and Air Quality Improvement Projects" (CMAQ Methods).

Methodology Development

ARB and SGC staff followed a set of principles to guide the development of the quantification methodology. These principles ensure that the methodology for AHSC projects would:

- Apply at the project-level.
- Align with the project types proposed for funding with the AHSC Program.
- Provide uniform methods to be applied statewide, and be accessible by all applicants.
- Estimate GHG emission reductions from a discrete list of VMT reduction measures.
- Use existing and proven tools or methodologies where available.
- Reflect relationships between VMT and GHG reductions that are supported by empirical literature.

In addition, SGC held two public "Lessons Learned" workshops in July 2015 to discuss issues faced by applicants in the FY 2014-15 AHSC application and selection process. ARB attended the workshops to listen to issues specific to the quantification methodology. The input from applicants at the Lessons Learned workshops helped to inform the updates in this quantification methodology.

ARB released a draft FY 2015-16 quantification methodology for public comment in October 2015. Public comments and changes to the Draft AHSC Guidelines were considered in the development of the December 2015 version of the Quantification Methodology.

Tools

CalEEMod and the CMAQ Methods are used statewide, are publicly available, and are subject to regular updates to incorporate new information. The tools and documentation are free of charge and available to anyone with internet access. Both methods require land use characteristics and VMT reduction features from the proposed project, which should be readily available in the project application.

CalEEMod is a "state-of-the-practice" land use emissions calculator tool designed to quantify GHG emissions and criteria air pollutants associated with land use development projects, including transit-oriented developments and mixed-used developments. CalEEMod is used statewide by lead agencies to evaluate the GHG emissions and criteria air pollutants of land use development projects pursuant to the California Environmental Quality Act (CEQA), the National Environmental Protection Act (NEPA), and for compliance with local air quality rules and regulations. CalEEMod includes a suite of mitigation measures so that a user may compare a mitigated project's emissions to an unmitigated project's emissions. The GHG emission reduction impacts of the mitigation measures were developed by and are detailed in a study conducted by the California Air Pollution Control Officers Association (CAPCOA) titled "Quantifying Greenhouse Gas Mitigation Measures" (CAPCOA Quantification Report).[1] The CAPCOA Quantification Report includes detailed fact sheets that describe the underlying research and the data used to develop the reduction impacts (also called effects or elasticities) and provide project level examples for each measure. The CalEEMod tool, User's Guide, and other supporting documents can be downloaded from www.caleemod.com.

The CMAQ Methods are a set of equations for evaluating the cost-effectiveness of certain types of transportation projects, including bicycle paths, vanpools, and new bus service. The CMAQ Methods were developed by ARB and the California Department of Transportation and are used statewide by transportation agencies to evaluate criteria pollutant emission reductions from transportation projects competing for State motor vehicle fee and federal CMAQ funding. The CMAQ Methods were used as the basis for developing the GHG reduction estimates for certain project features that are not captured in CalEEMod, specifically transit and connectivity (TAC) features. The CMAQ Methods document can be downloaded from http://www.arb.ca.gov/. However, all of the equations and assumptions needed for this quantification method are included in this document and some assumptions have been modified as necessary. Therefore, the equations used in this quantification methodology are referred to as TAC Methods.

[1] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Major Updates

ARB updated the FY 2014-15 quantification methodology to enhance the analysis and provide additional clarity to project applicants. The major changes include:

- GHG emission factors that include upstream GHG emission sources. This "Well-to-Wheels" approach quantifies the emissions produced from the production; distribution of the different fuel types, including hydrogen and electricity; and any associated exhaust emissions. This approach is consistent with other GGRF programs and ARB's Low Carbon Fuel Standard (LCFS) Program.
- Equations for calculating LUT-9 and SDT-2 in the "Additional Benefits" section of this quantification methodology (instead of CalEEMod; see Table 3 for additional details).
- Clarification of how applicants should choose "Project Setting" for a project using CalEEMod.
- Clarification of the maximum percent VMT reduction possible for individual VMT reduction strategies and by Project Setting (i.e., VMT reduction "caps"). These caps are built into CalEEMod and reflect the result of literature reviewed by CAPCOA in the CAPCOA Quantification Report.
- TAC Methods to calculate new train service and new ferry service.
- Information from the approved Funding Guidelines for Agencies Administering California Climate Investments (Funding Guidelines) on reporting after a project is selected for funding. Refer to Section E for details.
- Additional definitions and clarity to the text.
- Development of an online mapping tool to determine the "distance to central business district," to provide transparency of the methodology.

Since the adoption of the quantification methodology in December 2015, ARB has made additional changes for ease-of-use; no equations or methods have been changed. This Version 2 quantification methodology reflects the changes, including:

- Development of an Excel-based calculator tool to simplify the use of the quantification methodology, referred to as the AHSC GHG calculator and described in sections B and C.
- Addition of an example project, provided in Appendix A.
- Clarification of default parking rates for calculating PDT-1 in CalEEMod, provided in Appendix B.
- Guidance for estimating weekly auto trips eliminated by pedestrian facilities, provided in Section C.

Note:

CAPCOA is currently preparing updates to CalEEMod; however, CalEEMod Version 2013.2.2 must be used with this quantification methodology. ARB may revise this document to reflect an updated CalEEMod model for use in FY 2016-17.

AHSC Project Types

The AHSC Program will reduce GHG emissions through projects that implement land use, housing, and transportation strategies to support infill, compact, and affordable housing development projects. The AHSC Program identifies three project types: Transit Oriented Development (TOD), Integrated Connectivity Projects (ICP), and Rural Innovation Project Areas (RIPA). For GHG quantification purposes, projects that include affordable housing or housing related infrastructure will primarily use CalEEMod. Projects without a housing-related component will use the methodologies from the TAC Methods.

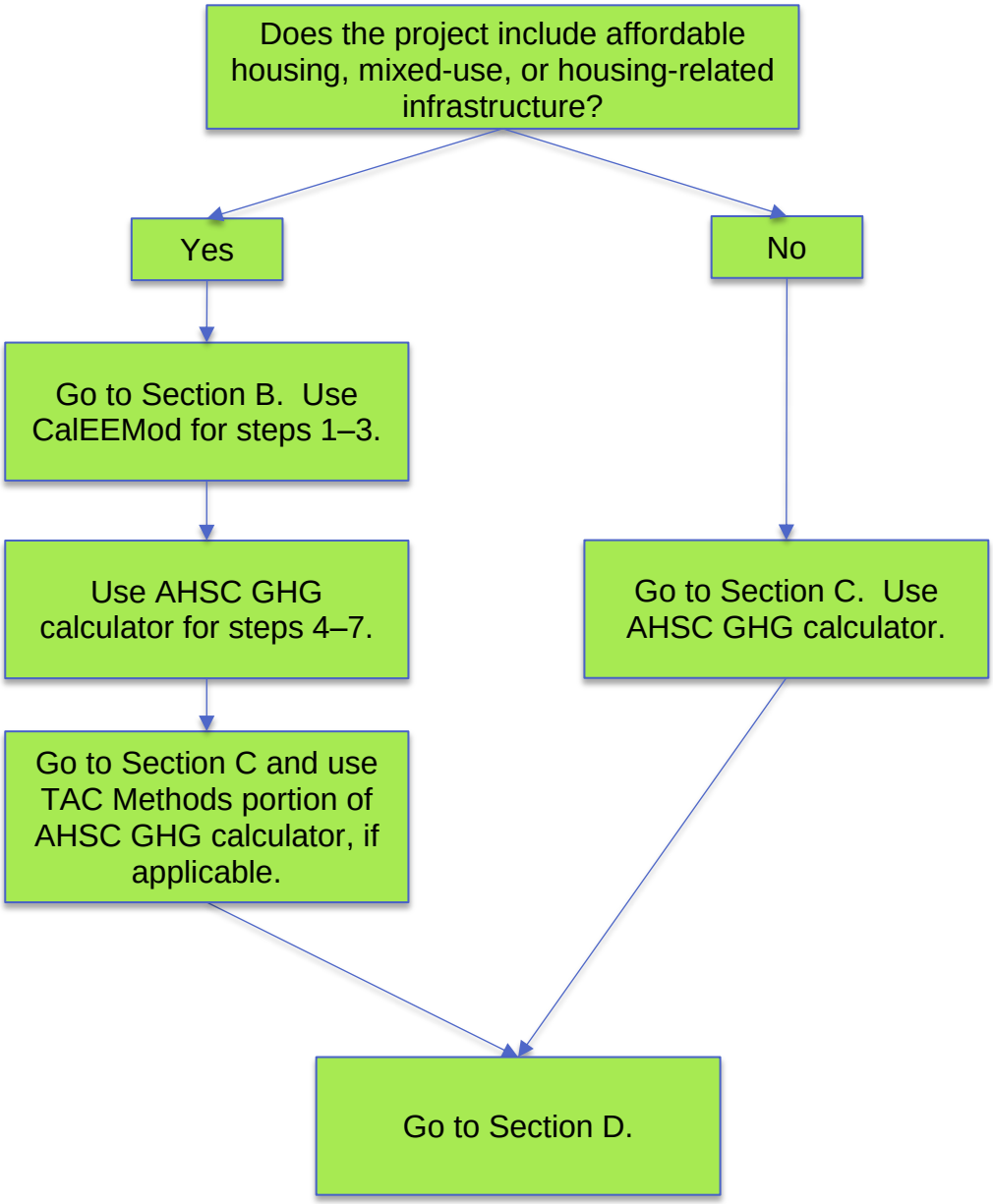
Table 1 lists the most common project types SGC expects to receive in the AHSC Program and identifies which quantification method would likely be used. For some projects, it may be appropriate to use both methods. Appendix A includes an example project that uses both methods.

Table 1. Example Project Features and Quantification Method

AHSC Project Features	CalEEMod	TAC Methods
Affordable housing (including affordable housing developments, housing-related infrastructure, and substantial rehabilitation of housing)	X	
Mixed use development	X	
Transit and commute improvements (e.g., transit subsidy) associated with housing or other land use development	X	
Regional transit projects (e.g., new bus service, vanpools) not associated with housing or other land use development components		X
Bicycle paths or lanes		X
Pedestrian facilities		X
Affordable housing AND vanpool	X	X

Figure 1 outlines the process for calculating the GHG reductions for the proposed project.

Figure 1. Quantification Methodology Flow Chart



GHG Emission Reductions Quantification Approach

This methodology estimates the GHG emission reductions of a proposed AHSC project that are based on the reduction in VMT due to specific project characteristics (e.g., housing density) and project features (e.g., new bus service). Both CalEEMod and the TAC Methods combine project specific data with default data to establish an initial case and a project case. The difference between the initial case and project case is the quantified GHG emission reductions from the VMT reduction features identified in the proposed project.

The metric used to assess the efficiency of the project to reduce GHG emissions per dollar of GGRF funds will be reported by the applicant as:

$$\frac{Total\ Project\ GHG\ Reductions\ in\ Metric\ Tons\ of\ CO_2e}{GGRF\ Funds\ Requested\ (\$)}$$

GGRF Funds Requested is the dollar amount requested through the AHSC Program and any other GGRF programs to which the applicant has applied or may apply. Additional documentation and reporting requirements are provided in sections D and E. The following sections describe the process for estimating the GHG emission reductions for proposed projects in the FY 2015-16 AHSC Program.

Requirements for Program implementation and reporting are subject to change based on future revisions that apply to the Program (e.g., legislation, updates to ARB's Funding Guidelines). Implementing agencies/grantees should note that additional reporting may be required or modified for some types of projects based on the evolving needs of the Program. For example, the requirements and methods of data collection are still under development for Phase 2 reporting and will be published at a later date.

Program Assistance

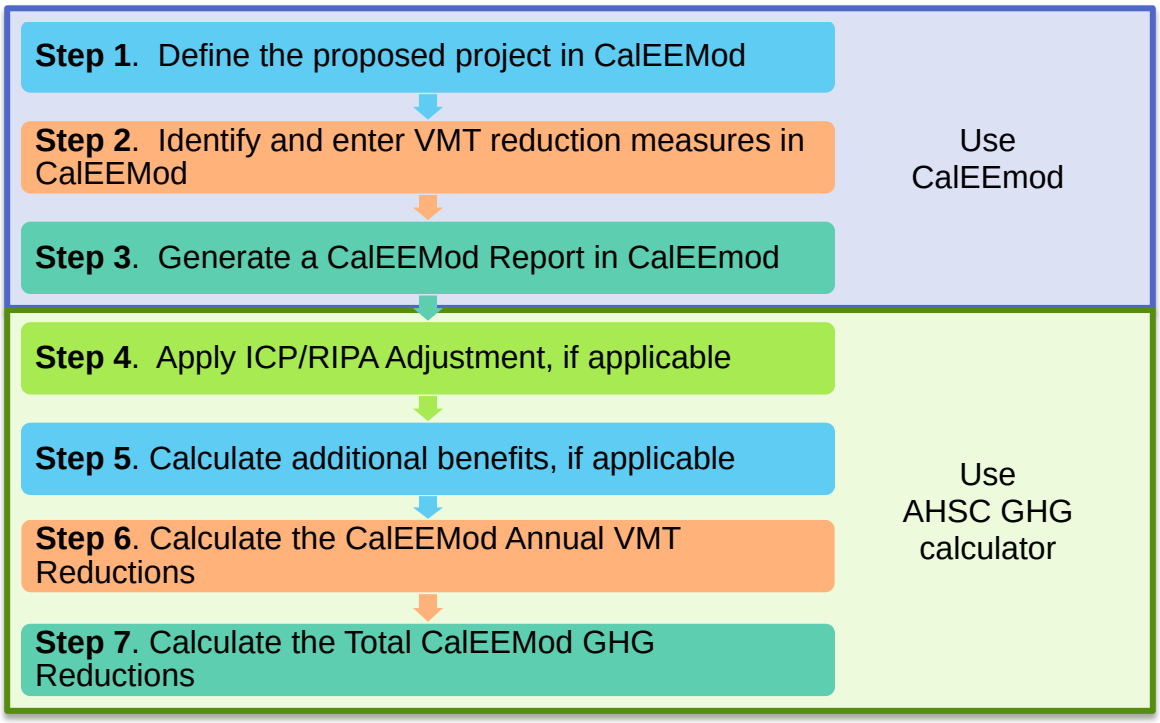
ARB staff will review the quantification portions of the AHSC project applications to ensure that the methods described in this document were properly applied to estimate the GHG emission reductions for the proposed project. Applicants should use the following resources for additional questions and comments:

- Applicants are encouraged to check the frequently asked questions (FAQ) page regularly during the application process, which is at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm.
- Questions on this document should be sent to GGRFProgram@arb.ca.gov.
- For more information on ARB's efforts to support implementation of GGRF investments, see: www.arb.ca.gov/auctionproceeds.
- Questions pertaining to the AHSC Program should be sent to ahsc@sgc.ca.gov.

Section B. Quantification Method Using CalEEMod

Applicants will follow the steps outlined in Figure 2 to estimate the VMT reductions for the proposed project using CalEEMod. In CalEEMod, the VMT associated with the initial case is referred to as the "Unmitigated VMT" and the VMT associated with the project case is referred to as the "Mitigated VMT." Use CalEEMod for steps 1 through 3 and the AHSC GHG calculator for steps 4 through 7.

Figure 2. Steps for Estimating VMT Reductions Using CalEEMod

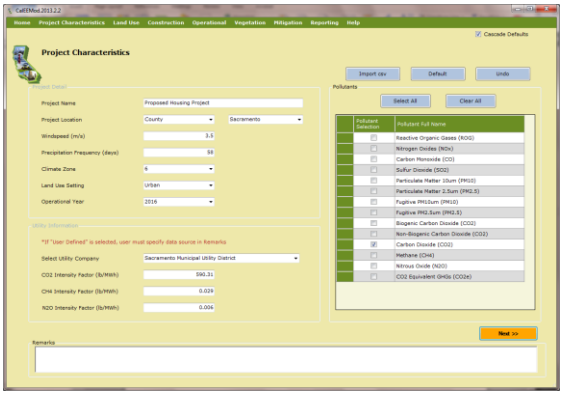


Steps 1—3: Overview

CalEEMod will be used for steps 1 through 3. Refer to the Tools section for more information on CalEEMod and where to obtain the software.

Step 1: Define the Proposed Project

<u>Project Characteristics Screen</u>



Cascade Defaults: Leave this box checked

Project Name: Enter project pin number and project name

Project Location: Select "County" and enter the county of the project site

Climate Zone: Enter any climate zone from the drop-down box[2] (Windspeed and Precipitation will autofill)

Land Use Setting: For RIPA project types, select "Rural;"[3] otherwise, select "Urban"

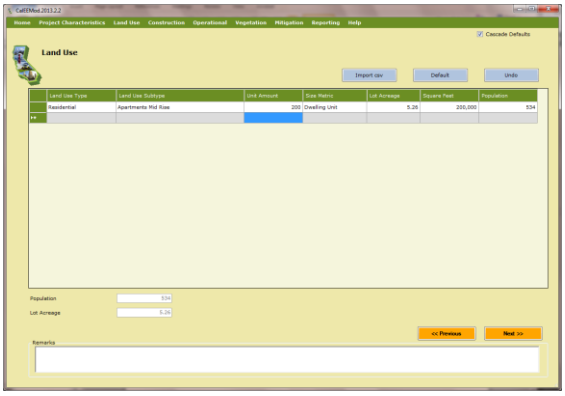
Operational Year: Enter the first year of operation of the proposed project

Select Utility Co.: Select "Statewide Average"[4] (CO_2, CH_4, and N_2O Intensity Factors will autofill)

Pollutants: All boxes can be unchecked[4]

[2] The climate zone for a project can be looked up using CalEEMod's User's Guide Appendix F - Climate Zones Zip Code/Cities Lookup, Climate Zone Zip Code/Cities Lookup or the Climate Zone Map. However, the applicant may enter any allowable climate zone as this information is not used for calculations in this quantification methodology.
[3] The use of "rural" must be consistent with the definition in the AHSC Guidelines.
[4] CalEEMod is used to develop VMT estimates only; GHGs are calculated outside of CalEEMod.

Land Use Screen



Cascade Defaults: Leave this box checked

Land Use Type: Select "Residential" or "Commercial" (See Appendix B) (multiple rows may be used to characterize the proposed project)

Land Use Subtype: See Appendix B (multiple rows may be used to characterize the proposed project)

Unit Amount:

Residential Land Use Types: Enter number of dwelling units
Non-residential Land Use Types: Enter the square footage in thousands (i.e., if the non-residential floor area is 10,000 square feet, enter "10" as the Unit Amount)

Size Metric:

Residential Land Use Types: Select "Dwelling Unit"
Non-residential Land Use Types: Select "1,000 sqft"

Lot Acreage: Leave as default values.[5]

Square Feet: Leave as default values.[5]

Population: Leave as default values.[5]

Applicants should not enter any values into the following screens: Construction, Operational, and Vegetation.

User Tip:
Residential land use types include assumptions on parking; therefore, the applicant does not need to add parking as an additional land use type.

[5] These values are not used in the computation of VMT.

Step 2: Identify and Enter VMT Reduction Measures

Applicants should identify land use and other project features that would result in reduced VMT and enter the applicable project data into the "Land Use & Site Enhancement" or "Commute" screens according to the instructions below.

Mitigation: Traffic, Land Use & Site Enhancement Screen

Project Setting: The Project Setting is used to determine the maximum VMT reductions possible based on the project's location and project-specific features. The Project Settings in CalEEMod are based on the definitions provided in the CAPCOA Quantification Report and are shown in Table 2. For purposes of this quantification methodology, applicants must enter the appropriate Project Setting according to Appendix C. The applicant must provide supporting documentation for the Project Setting selected.

Table 2. Project Settings in the "Land Use & Site Enhancement" Screen

CalEEMod Project Setting Types*	Project Setting Description
Low Density Suburban[6]	**Note: Refer to Appendix C to determine Project Setting Type**
Suburban Center	
Urban	
Urban Center[7]	

*Listed in the order shown in CalEEMod

For RIPA Projects: Select "Low Density Suburban"

Select the VMT reduction measures that apply to the project according to Table 3 for Land Use and Site Enhancement Measures. Note that some of the measures will be calculated in Step 5 (Additional Benefits). For each measure selected, applicants must provide supporting documentation.

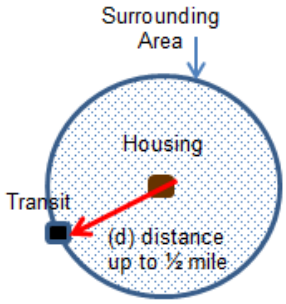
User Tip:
Applicants must check the appropriate box of the measure and enter any necessary data into CalEEMod. Applicants should not check the box of measures calculated outside of CalEEMod or that do not apply to the project.

Mitigation: Traffic, Commute Screen

Select the commute-related measures included in the proposed project and enter the required project specific data as identified in Table 4. Commute measures apply to employees working in the non-residential spaces in mixed-use development projects. Therefore, these measures may only be used with mixed-use development projects. Applicant must be able to demonstrate how these measures would be implemented by the tenant.

[6] Referred to as "Suburban" in the CAPCOA Quantification Report.
[7] Referred to as "Compact Infill" in the CAPCOA Quantification Report.

NOTE: For all measures that rely on features within the project area, the metrics should be evaluated for an area within the housing development and surrounding area which can extend a distance (d) from the housing development not to exceed one-half (½) mile, as shown below. The applicable measures are also denoted with "[(a)]" in Tables 3 and 4 in the "VMT Reduction Measure" column. For example, the VMT Reduction Measure "Improve Walkability Design" indicates the intersections should be evaluated according to this note.



ID[8]	VMT Reduction Measure	
Land Use & Site Enhancement Mea		
LUT-1	Increase Density	H th
LUT-3	Increase Diversity	M
LUT-9[11]	Improve Walkability Design[(a)]	P s

Table 3. "Land Use & Site Enhancement" VMT Reduction Measures

ID[8]	VMT Reduction Measure	Use this Measure if…	Project Specific Data Inputs Required by CalEEMod[9]	Maximum Potential VMT Reduction by Measure[10]	Maximum Potential VMT Reduction by Group[10]
Land Use & Site Enhancement Measures					
LUT-1	Increase Density	Housing development density is greater than 7.6 dwelling units per acre	**Do not use in CalEEMod; See Step 5** Dwelling units per acre of project	30%	Urban: 65% Urban center: 30% Suburban center: 10% Low density suburban: 5%
LUT-3	Increase Diversity	Multiple land use types in project	Select for mixed-use developments (no additional data required)	30%	
LUT-9[11]	Improve Walkability Design[(a)]	Project area has >36 intersections per square mile	**Do not use in CalEEMod; See Step 5** Number of intersections per sq. mi.	21.3%	
LUT-4	Improve Destination Accessibility	Project is within 12 miles of a Central Business District (CBD)	**Do not use in CalEEMod; See Step 5** Distance to CBD (See Appendix D)	20%	
LUT-5	Increase Transit Accessibility	**TOD Project** within 3 miles of Qualifying Transit[12]; **ICP/RIPA Project** within 3 miles of Qualifying Transit AND headways <75 minutes[13]	Distance to transit station (0-2.9 miles)	24.6%	
LUT-6	Integrate Below Market Rate Housing	Project incorporates affordable housing	**Enter Percentage of units (not # of Units)** that are affordable[14] (0-100)	4%[14]	

[8] Measures listed in the order shown on the CalEEMod screens. IDs reference to the CAPCOA Quantification Report.
[9] Values in parentheses indicate valid inputs.
[10] Range of effectiveness derived from the CAPCOA Quantification Report, except as noted.
[11] The Fact Sheet in the CAPCOA Quantification Report lists this measure as LUT-8. There are two measures listed as LUT-8; Improve Walkability Design begins on page 182.
[12] As defined in AHSC Guidelines.
[13] ICP/RIPA projects that do not meet these criteria may not use LUT-5.
[14] The CAPCOA Quantification Report states the maximum reduction potential as 1.2%; however, the maximum reduction potential is 4% (see http://www.montgomeryplanning.org/transportation/documents/TripGenerationAnalysisUsingURBEMIS.pdf). The reduction is applied correctly in CalEEMod.

Table 3. (continued) "Land Use & Site Enhancement" VMT Reduction Measures

ID[8]	VMT Reduction Measure	Use this Measure if…	Project Specific Data Inputs Required by CalEEMod[9]	Maximum Potential VMT Reduction by Measure[10]	Maximum Potential VMT Reduction by Group[10]
Neighborhood Enhancement Measures					
SDT-1	Improve Pedestrian Network[(a)]	Project area includes a pedestrian access network	Designate if improvements are "Project Site" only or "Project Site and Connecting Off-Site"	2%	5%
SDT-2	Provide Traffic Calming Measures[(a)]	Project's streets and intersections feature traffic calming features (Complete Street features)[15]	**Do not use in CalEEMod; See Step 5**	1%	
SDT-3	Implement NEV Network	Project provides viable neighborhood electric vehicle (NEV) network	**Do not use**[16]	12.7%	
Parking Policy/Pricing Measures					
PDT-1	Limit Parking Supply	Project parking requirements are reduced or eliminated	% reduction in residential spaces below ITE avg. weekday parking generation rate[17] (0-100)	20%[18]	20%
PDT-2	Unbundle Parking Costs	Project parking and property costs are separate	Monthly parking cost (0-200)	20%[19]	
PDT-3	On-Street Market Pricing[(a)]	On-street parking utilizes market-rate pricing (such as meters)[20]	% increase in price (0-50)	5.5%	

[15] Applicants will be required to document which traffic calming feature(s) will be implemented in order to take credit for this measure.
[16] Measure removed from use in this quantification methodology. This measure pertains to low-speed, arterial road vehicles, as classified in the California Vehicle Code Section 385.5.
[17] See Appendix B for default ITE parking rates.
[18] The CAPCOA Quantification Report states that the maximum reduction potential is 12.5%; however, CalEEMod allows up to 20% reduction.
[19] The CAPCOA Quantification Report states that the maximum reduction potential is 13% for parking costs of $125; however, CalEEMod allows up to 20% reduction for parking costs of $200.
[20] If the project area will increase parking rates between the time of application to building occupancy and the rate of increase is known, applicants may use this measure. Users may only enter an increase in price up to 50%.

Table 3. (continued) "Land Use & Site Enhancement" VMT Reduction Measures

ID[8]	VMT Reduction Measure	Use this Measure if…	Project Specific Data Inputs Required by CalEEMod[9]	Maximum Potential VMT Reduction by Measure[10]	Maximum Potential VMT Reduction by Group[10]
Transit Improvement Measures					
TST-1	Provide BRT System[(a)]	Establish a Bus Rapid Transit line with operational funding stream[21]	% of lines serving project converting to BRT (0-100)	3.2%	10%
TST-3	Expand Transit Network[(a)]	Establishes or enhances bus line with operational funding stream[21]	% increase transit coverage (0-100)	7.4%[22]	
TST-4	Increase Transit Frequency[(a)]	Reduces headways of existing transit[21]	Level of implementation (percentage of lines improved) (<50% or ≥50%) % reduction in headway (increase in frequency) (0-100)	3.1%	

[21] This measure should not be used if TAC Methods are applied for the same service.
[22] The CAPCOA Quantification Report states the maximum reduction potential as 8.2%; however, the maximum reduction potential is 7.4%.

Table 4. "Commute" VMT Reduction Measures

ID[23]	VMT Reduction Measure	Use this Measure if…	Project Specific Data Inputs Required by CalEEMod[24]	Maximum Potential VMT Reduction by Measure[25]	Maximum Potential VMT Reduction by Group[25]
Commute Trip Measures					
TRT-1&2	Implement Trip Reduction Program	TMA membership or other comprehensive services	% employees eligible Enter program type as **Voluntary** (0-100)	6.2%	25% of Work VMT
TRT-4	Transit Subsidy[26]	Proponent subsidizes sustainable modes of transportation for employees	% employees eligible (0-100) and daily transit subsidy amount ($)[27]	20.0%	
TRT-15	Implement Employee Parking "Cash-Out"	Employer provides cash-value of a parking space to employees who do not use one	% employees eligible (0-100)	7.7%	
TRT-14	Workplace Parking Charge	Charge employees for their parking	% employees eligible (0-100) and daily parking charge ($)	19.7%	
TRT-6	Encourage Telecommuting and Alternative Work Schedules	Allow/require 9/80s, 4/40, or telecommuting	% employees work 9/80, % employees work 4/40, or % employees telecommute 1.5 days (Total percentage 0-100)	5.5%	
TRT-7	Market Commute Trip Reduction Option	Market sustainable travel options	% employees eligible (0-100)	4.0%	
TRT-11	Employee Vanpool/Shuttle	Provide employer-sponsored vanpool or shuttle program	**Do not use in CalEEMod.** **Apply TAC Methods**	13.4%	
TRT-3	Provide Ride Sharing Program	Establish a carpooling program with associated infrastructure	% employees eligible (0-100)	15%	

[23] Measures listed in the order shown on the CalEEMod screens. IDs reference to the CAPCOA Quantification Report.
[24] Values in parentheses indicate valid inputs.
[25] Range of effectiveness derived from the CAPCOA Quantification Report, except as noted.
[26] TRT-4 is used for subsidized transit passes for employees. For subsidized transit passes for residents, see Step 5.
[27] The subsidy must be provided on an annual basis and be funded for a minimum of three years. For annualized rates, refer to Table 5.

Step 3: Generate a CalEEMod Report

Reporting Screen

Select "Annual" emissions

Click "Recalculate Emissions and Run Report"

CalEEMod will generate a report that includes annual Total VMT estimates for the project for both the initial case, which is identified as "unmitigated" in the CalEEMod report, and the project case, identified as "mitigated." The VMT outputs are found in the Section 4.2 as shown in Figure 3. The unmitigated annual VMT is the estimated VMT that would occur if the project did not include the mitigation features selected in CalEEMod; the mitigated annual VMT accounts for the land use and commute features selected. These CalEEMod outputs will be used as inputs to the ARB-developed AHSC GHG calculator, which is described in steps 4 through 7.

User Tip:
GHG emissions are calculated outside of CalEEMod based on the VMT estimates generated in CalEEMod.

Figure 3. CalEEMod Report Section 4.2 VMT Output

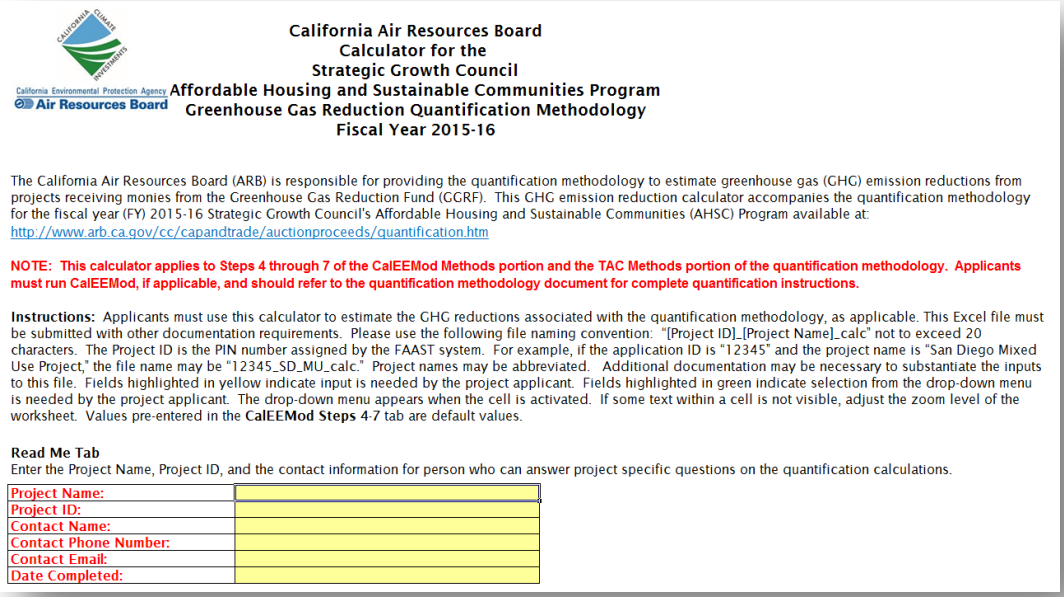
4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	659.00	716.00	607.00	1,882,065	1,466,443
Total	659.00	716.00	607.00	1,882,065	1,466,443

Applicants must submit both the input and output files used to generate the VMT data, in Excel format. Applicants are requested to name the input and output files using the following format: "[Pin#]_[ProjectName]_input/output" not to exceed 20 characters. For example, if the application pin number is "12345," the project name is "San Diego Bay Housing," and the file is the input file, the file name may be "12345_SDBay_input." Project names may be abbreviated.

Steps 4—7: Overview

Applicants must use the Excel-based AHSC GHG calculator for steps 4 through 7. The equations used in the calculations are based on CalEEMod and the CAPCOA Quantification Report and are provided in Appendix E. The AHSC GHG calculator can be downloaded from the GGRF website at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm. Applicants must begin with the **Read Me** tab, which contains instructions and prompts users to enter project information.



California Air Resources Board
Calculator for the
Strategic Growth Council
Affordable Housing and Sustainable Communities Program
Greenhouse Gas Reduction Quantification Methodology
Fiscal Year 2015-16

The California Air Resources Board (ARB) is responsible for providing the quantification methodology to estimate greenhouse gas (GHG) emission reductions from projects receiving monies from the Greenhouse Gas Reduction Fund (GGRF). This GHG emission reduction calculator accompanies the quantification methodology for the fiscal year (FY) 2015-16 Strategic Growth Council's Affordable Housing and Sustainable Communities (AHSC) Program available at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm

NOTE: This calculator applies to Steps 4 through 7 of the CalEEMod Methods portion and the TAC Methods portion of the quantification methodology. Applicants must run CalEEMod, if applicable, and should refer to the quantification methodology document for complete quantification instructions.

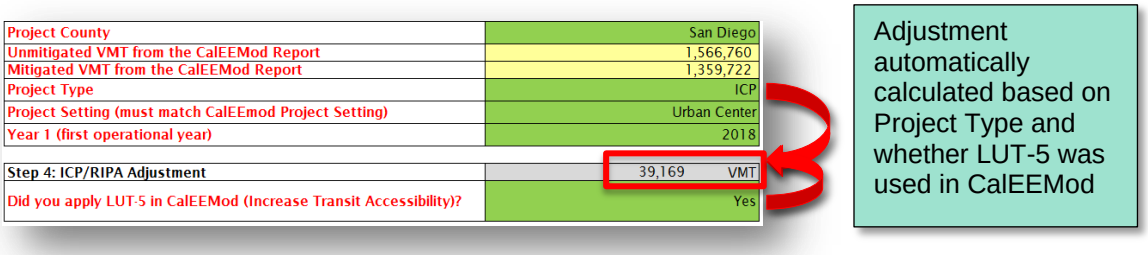
Instructions: Applicants must use this calculator to estimate the GHG reductions associated with the quantification methodology, as applicable. This Excel file must be submitted with other documentation requirements. Please use the following file naming convention: "[Project ID]_[Project Name]_calc" not to exceed 20 characters. The Project ID is the PIN number assigned by the FAAST system. For example, if the application ID is "12345" and the project name is "San Diego Mixed Use Project," the file name may be "12345_SD_MU_calc." Project names may be abbreviated. Additional documentation may be necessary to substantiate the inputs to this file. Fields highlighted in yellow indicate input is needed by the project applicant. Fields highlighted in green indicate selection from the drop-down menu is needed by the project applicant. The drop-down menu appears when the cell is activated. If some text within a cell is not visible, adjust the zoom level of the worksheet. Values pre-entered in the **CalEEMod Steps 4-7** tab are default values.

Read Me Tab
Enter the Project Name, Project ID, and the contact information for person who can answer project specific questions on the quantification calculations.

Project Name:	
Project ID:	
Contact Name:	
Contact Phone Number:	
Contact Email:	
Date Completed:	

Step 4: ICP/RIPA Adjustment

The data supporting transit accessibility (LUT-5) in CalEEMod are based on high-quality transit service. Since ICP and RIPA projects by definition per AHSC Guidelines do not include high-quality transit, an adjustment is needed for these projects. Therefore, this adjustment only applies to ICP and RIPA projects that are taking credit for LUT-5 in CalEEMod. The adjustment will be calculated automatically based on the Project Type and whether LUT-5 was applied in CalEEMod.[28]



[28] Based on documentation in the CAPCOA Quantification Report for TST-4: Increase Transit Frequency/Speed

Step 5: Calculate Additional Benefits

Applicants should enter the requested information for the measures that apply to the project. The AHSC GHG calculator will display the percent VMT reductions by measure. For measures that do not apply to the project, inputs should be left as defaults, resulting in no change to VMT for the measure(s).

The AHSC GHG calculator provides additional benefits for the following measures if applicable to the proposed project, as described in Tables 3 and 4:

A. LUT-1: Increase Density
B. LUT-9: Improve Walkability Design
C. LUT-4: Improve Destination Accessibility (see Appendix D for estimating Distance to CBD)
D. SDT-2: Provide Traffic Calming Measures
E. TRT-4(residents): Transit Subsidy for Residents. Note: The CalEEMod Transit Subsidy is applicable to non-residential land use types (for employees). This adjustment has been provided to apply transit subsidies to residents.

Step 5: Calculate Additional Benefits		
A. LUT-1: Increase Density	25.24	%
Number of dwelling units per acre for the Project If N/A, leave blank or enter "0"	35.00	
B. LUT-9: Improve Walkabililty Design	0.00	%
Number of Intersections per square mile for the Project Area If N/A, leave blank or enter "0"		
C. LUT-4: Increase Destination Accessibility	0.00	%
Distance to CBD (miles)[1] If N/A, enter "12"	12.00	
D. SDT-2: Provide Traffic Calming Measures	0	%
Yes/No	No	
E. TRT-4(residents): Transit Subsidy for Residents	0.40	%
Subsidy per eligible resident per Year If N/A, select "$0 to $273.74"	$1,087.70 to $2,175.39	
Percent of residents eligible for the subsidy (0-100)	20.00	
Number of years the subsidy is funded (0-30)	3.00	

Step 6: Calculate the CalEEMod Annual VMT Reductions

This Step calculates the annual VMT reductions according to the project features and the maximum potential reductions according to the Project Setting and listed in Table 5. This Step is automated and no user input is required.

Table 5. Maximum Potential Reductions by Project Setting Type

CalEEMod Project Setting Types*	Maximum Potential Reductions (Total maximum project VMT reduction)[29]
Low Density Suburban	15%
Suburban Center	20%
Urban Center	40%
Urban	75%

*Listed in order of increasing maximum potential reductions

Step 7: Calculate the Total CalEEMod GHG Reductions

This Step converts the annual VMT reductions to annual GHG reductions and calculates the GHG reductions over the life of the project, 30 years. This Step is automated and no user input is required. Information on the emission factors used to convert VMT reductions to GHG emission reductions is available in Appendix F.

Step 6: Calculate the CalEEMod Annual VMT Reductions		
Additional % VMT Reductions (A+B+C+D+E from Step 5)	25.64	%
Additional VMT Reductions	401,667.79	VMT
Total Annual VMT Reductions	569,536.79	VMT
Percent VMT Reduction	36%	%
Maximum Potential Annual Reductions	40%	VMT
Annual CalEEMod VMT Reductions	**569,536.79**	**VMT**
Step 7: Calculate the Total CalEEMod GHG Emission Reductions		
CalEEMod GHG Emission Reductions (Yr 1)	291.06	MT CO_2e
CalEEMod GHG Emission Reductions (Yr F)	179.24	MT CO_2e
Total CalEEMod GHG Emission Reductions	**7,054.42**	MT CO_2e

If your project has features requiring use of TAC Methods, go to **Section C. TAC Methods**; otherwise, go to **Section D. Documentation**.

[29] As defined in the CAPCOA Quantification Report. The interactions among transportation-related measures are complex and sometimes counter-intuitive. The maximum reduction values are derived from the percentage difference in per capita VMT compared against a statewide average and reflect the highest reduction levels justified by the literature as reviewed for the CAPCOA Quantification Report.

Section C. Quantification Method for Using Transit and Connectivity Methods

Transit and Connectivity Methods (TAC methods) are provided for new or expanded transportation service project features that are not quantified in CalEEMod. Applicants should identify the applicable TAC method(s) as described in Table 6 based on the proposed project features.

Table 6. TAC Methods by Project Type

Project Type	Operation of New/Expanded Bus, Train, Ferry, Vanpool, or Shuttle Service	Bicycle Paths, Bicycle Lanes, or Pedestrian Facilities
Description	Cleaner vehicles that service fixed-routes; commuter vanpools; or tourist or shopping shuttles to work sites, homes, or schools	Bicycle Paths (Class 1) or Bicycle Lanes (Class 2), or Pedestrian Facilities, that are targeted to reduce commute and other non-recreational auto travel
TAC Method	$GHG\ Emission\ Reductions = GHG\ Emissions\ of\ Displaced\ Autos - GHG\ Emissions\ of\ New/Expanded\ Service\ Vehicle$	$GHG\ Emission\ Reductions = GHG\ Emissions\ of\ Displaced\ Autos$

Note: The AHSC Program estimates GHG reductions associated with a decrease in VMT from a new or expanded transportation service. GHG reductions associated with replacement of vehicles in an existing service are not quantified.

AHSC GHG Calculator

Applicants must use the AHSC GHG calculator to determine GHG reductions associated with TAC Methods. The equations used to estimate VMT in the calculations are based on the CMAQ Method and are provided in Appendix E. Information on the emission factors used to convert VMT reductions to GHG emission reductions is available in Appendix F. The AHSC GHG calculator can be downloaded from http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm.

Begin with the **Read Me** tab, which contains instructions and prompts users to enter project information. Year 1 refers to the first operational year of the new service. For projects that do not require ongoing operational funds (bicycle lanes/paths and pedestrian facilities), Year F is calculated automatically based on the estimated life of the facility (20 years for Class 1 bicycle lanes and pedestrian facilities and 15 years for Class 2 bicycle facilities). For projects that do require ongoing operational funds, Year F refers to the last year of enforceable committed funds for operation of the new/expanded service. These and other definitions are provided in the **Definitions** tab of the AHSC GHG calculator.

Table 7 indicates which factors in the **TAC Inputs** tab require input from the applicant ("✓"), and which values are either not applicable or have default values programmed into the AHSC GHG calculator (shaded cells).

Table 7. Input Requirements by Project Type for TAC Methods

Description	Project-Level Data Required				
	Bus/ Shuttle/ Vanpool	Train	Ferry	Bike	Pedestrian
Year 1	✓	✓	✓	✓	✓
Year F[a]	✓	✓	✓		
Days of operation per year of new service (D)	260 (weekday service) 365 (daily service)	✓	✓	200	
Daily ridership of new service (R)[b]	✓	✓	✓		
Adjustment factor to account for transit dependency (A)		✓	✓		
Length of average auto trip reduced (L)		✓	✓		
Adjustment factor to account for auto trips used to access new service (AA)		✓	✓		
Length of average trip for auto access to transit (LL)		✓	✓		
Average Daily Traffic (ADT)				✓	
Bicycle Paths/Lanes ADT Adjustment Factor (A)				✓	
Bicycle Paths/Lanes Activity Center Credit (C)				✓	
Pedestrian Weekly Auto Trips Eliminated					✓[c]
Fuel Type of New Service	✓	✓	✓		
Engine Model Year of New Service	✓				
Annual VMT/ Units of Fuel	✓ (VMT)	✓ (VMT)	✓ (Fuel)		

[a] Year F is the last year of enforceable committed funds for the operation of the new/expanded service.
[b] If the Ridership will vary over the life of the project, the AHSC GHG calculator allows different inputs for Year 1 and Year F. If the ridership is not expected to change, the same value should be input for Year 1 and Year F.
[c] There is no required method to estimate the weekly auto trips eliminated by pedestrian facilities. Applicants should develop a "reasonable estimate" based on project features and amenities; the supporting documentation will be reviewed during the application process. As an example, if a new housing development project includes installation of a sidewalk connecting the development to a grocery store 0.2 miles away, it may be reasonable to assume a proportion of the residents will walk to and from the store weekly, thereby eliminating auto trips. An applicant who assumes 15% of 100 residents will walk to the store once a week instead of driving would result in 30 auto trips eliminated per week (15 residents walking each way results in 30 one-way trips). A similar project that includes installation of a sidewalk connecting a housing development to a transit center may result in 5% of 100 residents walking to the station five days per week instead of driving. This would result in 50 auto trips eliminated per week. Longer distances to amenities would likely result in lower expected trips per week. The TAC Methods assume a default "Length of auto trip eliminated" of one mile; therefore, one mile is used in the AHSC calculator regardless of the actual distance to the amenity.

Project Details							
Transit and Connectivity Method	County	Year 1 (Yr 1)	Year F (Yr F)	Annual Days of Operation (D)	Yr 1 Daily Ridership (R)	Yr F Daily Ridership (R)	Adjustment factor (A)
Shuttle	Butte	2018	2020	260	1,000	1,000	

	GHGs of New Service Vehicle			Net Benefits	
Pedestrian Yr F Weekly Auto Trips Eliminated	Fuel Type	Engine MY	Annual VMT/ Units of Fuel	Total GHG Emission Reductions (MTCO2e)	Average Annual Auto VMT Reduced
	Hydrogen Fuel Cell	2017	12,000	2,679.87	2,643,550.00

Once the TAC Methods have been completed, go to **Section D. Documentation**.

Section D. Documentation

Applicants must report the Total Project GHG Emission Reductions estimated in the calculator tool. Applicants are required to provide electronic documentation that is complete and sufficient to allow the calculations to be reviewed and replicated. Paper copies of supporting materials must be available upon request by ARB staff.

The following checklist is provided as a guide to applicants; additional data and/or information may be necessary to support project-specific input assumptions. Documentation is required by all applicants for #1-8; however, some documentation may not be applicable to certain applicants (for example, #11 may not be applicable to housing-only projects).

	Documentation Description	Completed
1.	Contact information for the person who can answer project specific questions from staff reviewers on the quantification calculations	
2.	Project description, including excerpts or specific references to the location in the main AHSC application of the project information necessary to complete the applicable portions of the quantification methodology	
3.	Populated calculator tool file (in .xlsm)	
4.	If the Total GGRF funds requested are different than the AHSC GGRF funds requested, provide an explanation of the other GGRF program(s) where funding is sought, including the fiscal year of the application(s)	
5.	Electronic copies of the CalEEMod input and output files as described in Step 3 of Section B • A list of the VMT reduction measures used in the proposed project with clearly identified project specific input data used in Section B • Documentation for determining Distance to Central Business District and Project Setting Type	
6.	Any other information as necessary and appropriate to substantiate inputs (e.g., Project Setting or Ridership)	

Total Project GHG Emission Reductions is equal to the sum total of each of the GHG Reductions calculated in Sections B and C and are automatically summed in the AHSC GHG calculator in the **GHG Summary** tab.

Total Project GHG Emission Reductions per dollars of AHSC requested is calculated as:

$$\frac{Total\ Project\ GHG\ Emission\ Reductions\ in\ Metric\ tons\ (MT)\ of\ CO_2e}{AHSC\ Funds\ Requested\ (\$)}$$

Applicants should enter the AHSC Funds Requested ($) into the AHSC GHG calculator for all project features. The AHSC GHG calculator will provide the Total GHG Emission Reductions per AHSC Funds Requested.

Total Project GHG Emission Reductions per dollars of GGRF requested is calculated as:

$$\frac{Total\ Project\ GHG\ Emission\ Reductions\ in\ Metric\ tons\ (MT)\ of\ CO_2e}{Total\ GGRF\ Funds\ Requested\ (\$)}$$

Applicants should enter the GGRF Funds Requested ($) into the AHSC GHG calculator for all project features. The AHSC GHG calculator will provide the Total GHG Emission Reductions per GGRF Funds Requested.

The dollars requested from AHSC may be different from the dollars requested from GGRF if the applicant has applied for, anticipates applying for, or received funding for the proposed project through a separate GGRF program. If no other GGRF funds are requested, the Total Project GHG Emissions Reductions per dollars of GGRF and AHSC will be the same.

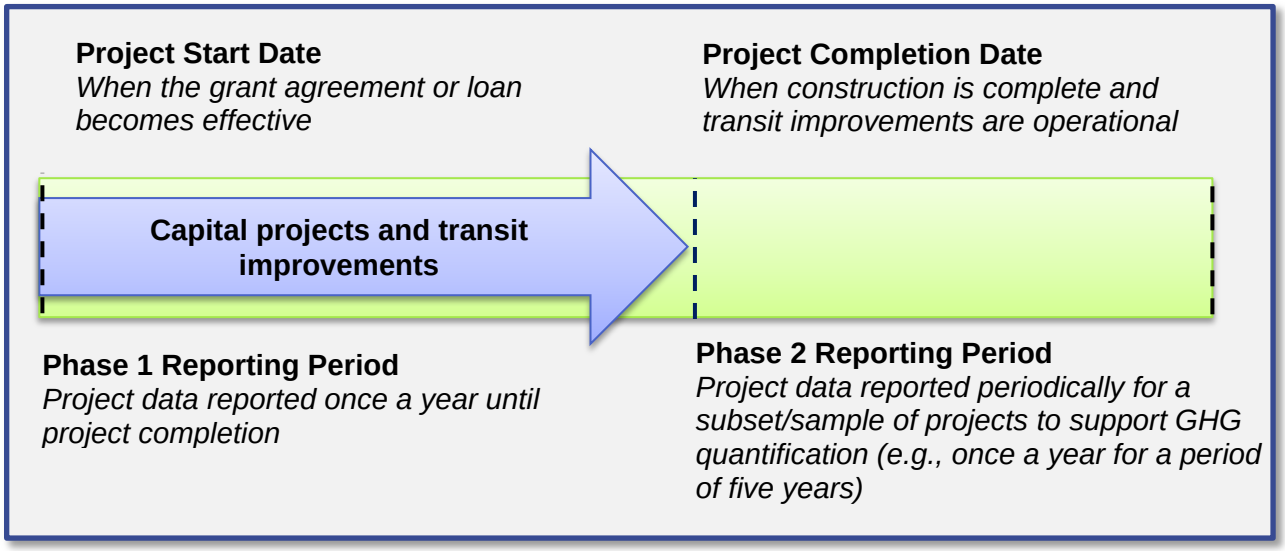
Applicants are required to provide electronic documentation that is complete and sufficient enough to allow the quantification calculations to be reviewed and replicated. Paper copies of any materials must be available upon request by SGC or ARB staff.

Section E. Reporting after Funding Award

Accountability and transparency are essential elements for all projects funded by the GGRF. Each administering agency is required to track and report on the benefits of the California Climate Investments funded under their program(s) and each funding recipient has the obligation to provide the necessary data or access to data for their project to support reporting on project outcomes.

In 2015, ARB developed Funding Guidelines for Agencies Administering California Climate Investments (Funding Guidelines).[30] The Funding Guidelines describe the reporting requirements and set the minimum project-level reporting requirements for projects funded by SGC. Volume III of the Funding Guidelines summarizes the major reporting components that SGC must report to ARB. Because much of this data comes directly from AHSC projects, AHSC funding recipients will need to provide project data to SGC to support these reporting requirements.

The figure below and Table 8 show the project phases and when reporting is required.



[30] California Air Resources Board. Funding Guidelines for Agencies that Administer California Climate Investments, December 21, 2015 available at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/arb-funding-guidelines-for-ca-climate-investments.pdf.

Table 8. Quantification and Reporting By Project Phase

	Timeframe	Quantification Methodology Section
Project Selection	Covers the period from solicitation to selection of projects and funding awards	All applicants use methods in this QM to **estimate** GHG reductions based on application data.
Phase 1	Covers the period from the beginning of the project until it becomes operational or the initial implementation is completed	Funded projects use methods in this QM, as needed, to update GHG **estimates** based on project changes.
Phase 2	Starts after Phase 1 is complete and a project becomes operational	GHG reductions **achieved** are quantified and reported for a subset of funded projects.

Phase 1 reporting is required for all AHSC funding recipients during project implementation (e.g., initial construction). This quantification methodology provides guidance on how to estimate project benefits to satisfy Phase 1 reporting requirements. At a minimum, ARB expects that AHSC funding recipients will report to SGC once a year during project construction (for projects with a capital component) or during implementation (for transit without a capital component) and once at the end of the project.

Phase 2 reporting is required for only a subset of AHSC projects and is intended to document actual project benefits achieved after the project becomes operational. Phase 2 data collection and reporting will not be required for every project. SGC will be responsible for identifying the subset of individual projects that must complete Phase 2 reporting, identifying who will be responsible for collecting Phase 2 data, and for reporting the required information to ARB. ARB will work with SGC to address "Phase 2" procedures, including but not limited to:

- The **timelines** for Phase 2 reporting, i.e., when does Phase 2 reporting begin, how long will Phase 2 reporting be needed.
- As applicable, **approaches for determining the subset of projects** that need Phase 2 reporting (i.e., how many **X** projects out of **Y** total projects are required to have Phase 2 reporting).
- **Methods for monitoring or measuring** the necessary data to quantify and document achieved GHG reductions and other select project benefits.
- **Data to be collected**, including data field needed to support quantification of GHG emission benefits.
- Reporting requirements for transmitting the data to ARB or SGC for program transparency and use in reports.

Once the Phase 2 quantification method and data needs are determined ARB will develop and post the final ARB approved Phase 2 methodology for use in Phase 2 reporting.

Appendix A. Example Project

Introduction

The following is a hypothetical project[31] to demonstrate how the FY 15-16 Affordable Housing and Sustainable Communities Program Quantification Methodology would be applied. This example does not provide examples of the supporting documentation that is required of actual project applicants.

Overview of the proposed project

The proposed project is a collaborative **TOD** project between a housing developer and a transit agency, proposing the following components:

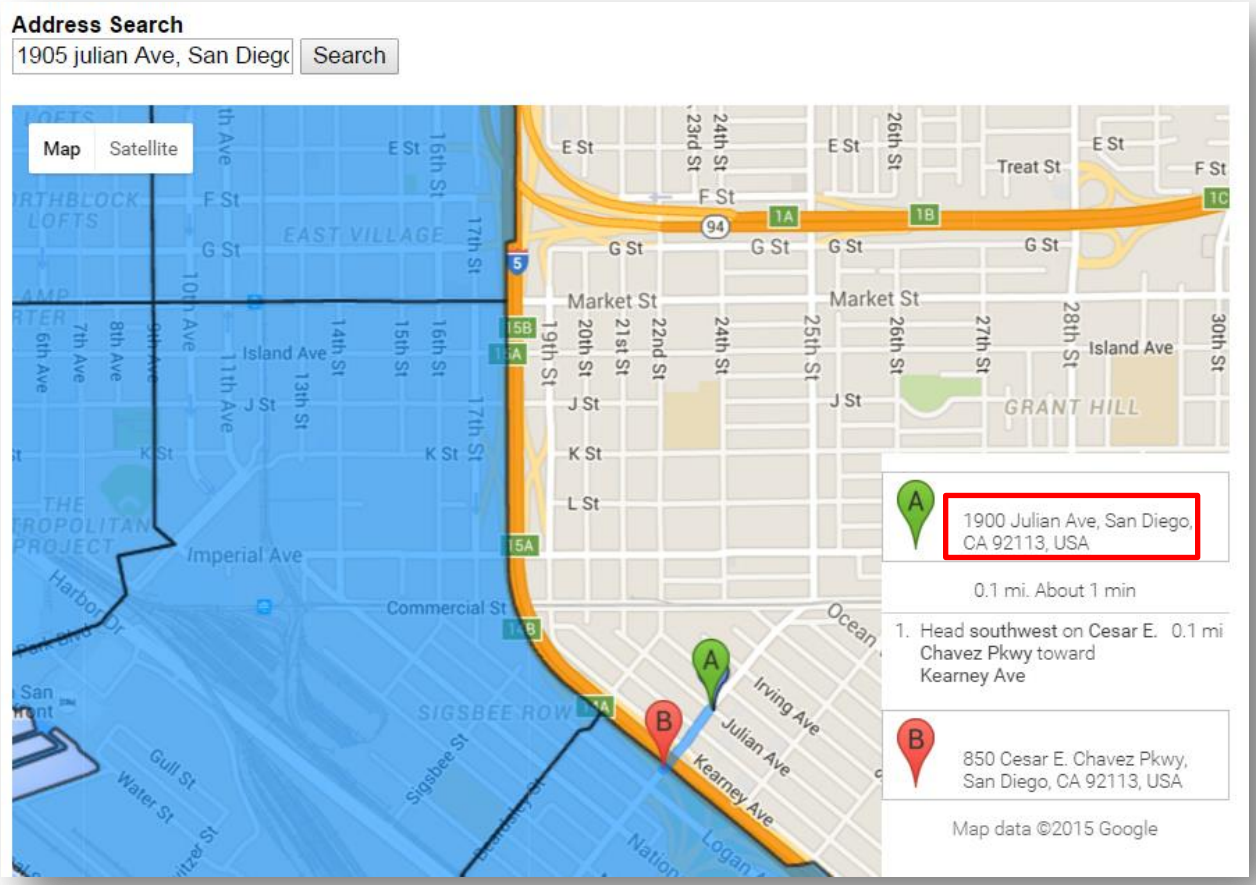
- Mixed-use development with affordable housing
- New bus service

The proposed project is located in San Diego County with the following project features:

- First year of development operation: 2018.
- 4-story rental development with 80 units; 75% are affordable.
- 3,000 square feet of commercial use. No tenant is committed to the property; therefore, no reduction measures associated with the commercial development can be guaranteed (i.e., no measures will be applied on the "commute" screen in CalEEMod).
- 2.5 acres (32 dwelling units per acre).
- 1 parking space per dwelling unit (ITE default average weekday parking rate for a mid-rise urban apartment is 1.2 spaces per dwelling unit. This quantification methodology is requiring reductions from residential only; therefore, the project has a reduction in parking spaces of 18.7% [(1-1.23)/1.23]).
- The new hydrogen-powered bus service would be funded by AHSC funds for three years and therefore can demonstrate 3 years of operational funds. No subsidy is provided to riders.
- The new bus service would begin operation in 2018 and consist of 2 model year 2018 buses, with a ridership of 500 passengers per day on a daily service schedule.
- The new bus service would run 30,000 miles (total for 2 buses) per year.
- The application request is for $5,000,000 from the AHSC Program. No other GGRF funding is being or has been sought.
- The distance to the nearest Central Business District (CBD) is 0.1 miles, as shown on the next page.
- PIN number assigned by FAAST system: 12345.

[31] The hypothetical project has not undergone verification of any AHSC Program requirements; all assumptions about location type and features are for quantification methodology demonstration purposes only.

Refer to Appendix D for instructions on estimating Distance to CBD.



Methods to apply

According to Table 1 in the Quantification Methodology, the applicant would use CalEEMod for the development portion of the project and TAC Methods for the new bus service.

As described in Section A of the quantification methodology, users can download CalEEMod for free at www.caleemod.com. For Steps 4 through 7 of the CalEEMod component, the TAC Methods component, and some of the documentation components, ARB has developed an Excel-based calculator. All applicants must use the calculator for the applicable components of their project. The calculator is available at ARB's Auction Proceeds Quantification Page, under the Strategic Growth Council's Affordable Housing and Sustainable Communities Program: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm.

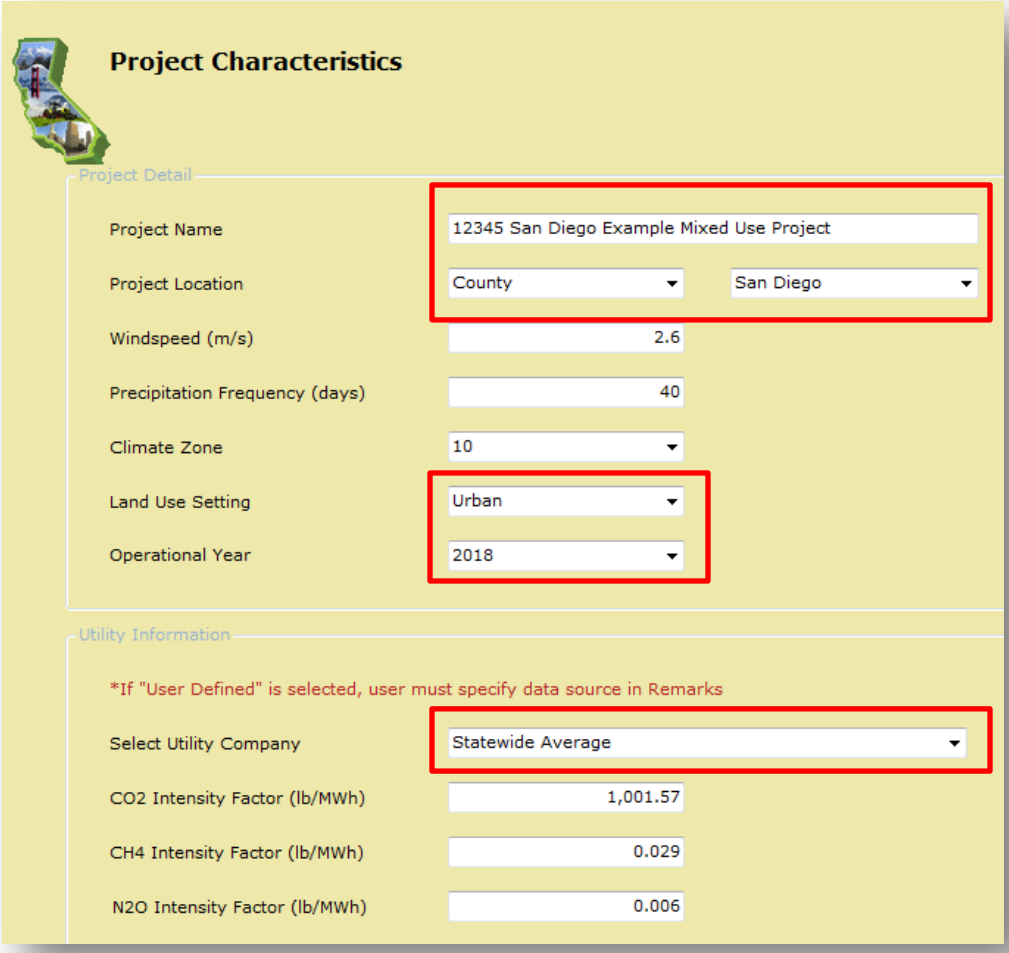
CalEEMod component

Step 1: Define the proposed project in CalEEMod

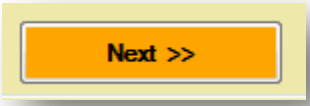
Project Characteristics Screen

Note: Include PIN number in Project Name

Project Name: 12345 San Diego Example Mixed Use Project
Project Location: "County" and San Diego
Climate zone: Choose any allowable zone
Land Use Setting: This is not a RIPA project, so select "Urban"
Utility: Statewide Average
Pollutants: All pollutants may be de-selected



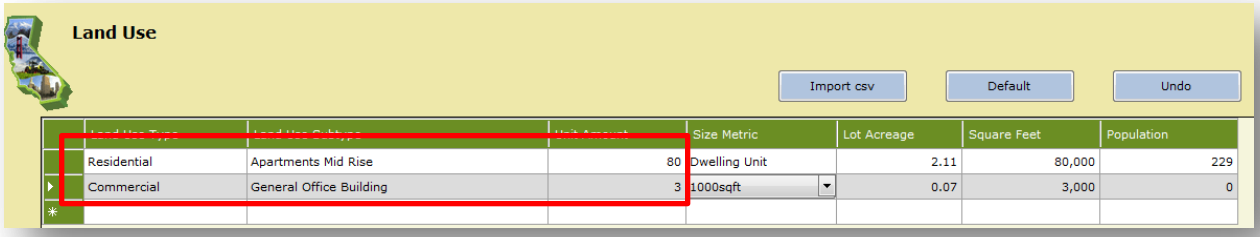
Click "Next."



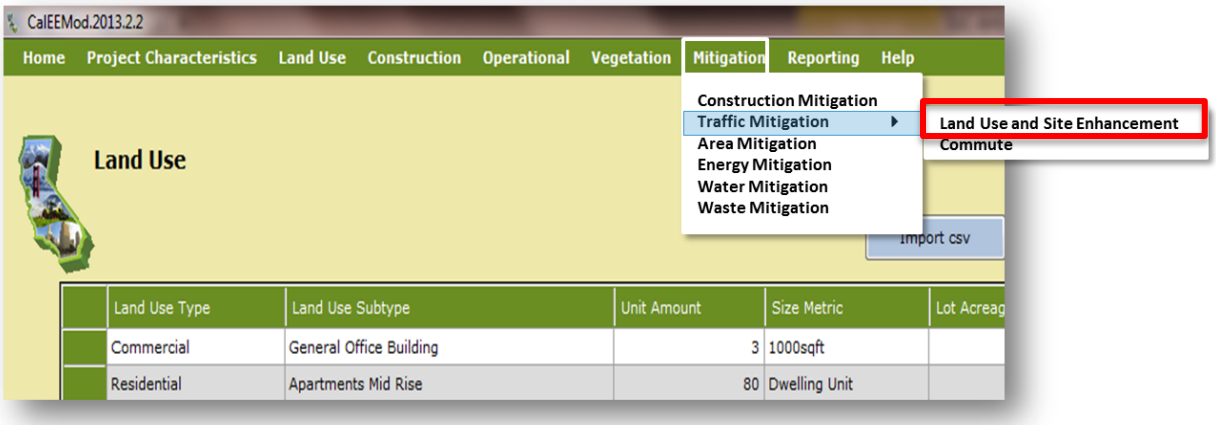
Land Use Screen

Refer to Appendix B to determine the appropriate Land Use Type and Land Use Subtype for each project component. Since the proposed project is a four-story rental apartment, it is classified as “Apartment Mid Rise” and all non-residential property is classified as “General Office Building.”

Line 1: Residential, Apartment Mid-rise, “80” for the number of dwelling units
Line 2: Commercial, General Office Building, “3” for “thousands of square feet”



Select “Mitigation” > “Traffic Mitigation” > “Land Use and Site Mitigation.”



Step 2: Identify and Enter VMT Reduction Measures

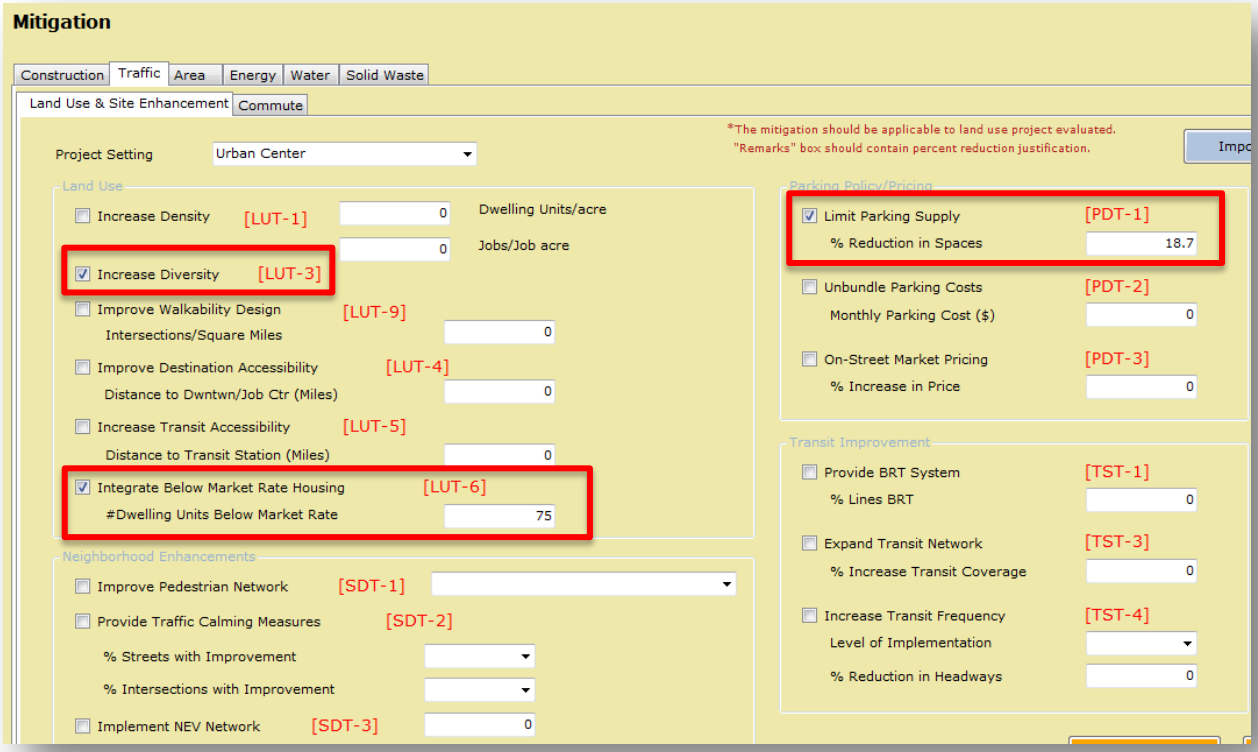
Mitigation: Traffic, Land Use & Site Enhancement Screen

Refer back to Table 3 of the quantification methodology for additional information by measure. Note: CalEEMod may prompt the user to enter "Remarks" on some screens. These will not be reviewed as the supporting documentation for inputs.

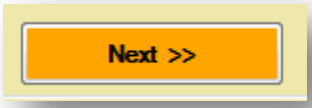
Project Setting: "Urban Center"[32]
The project has the following features:
LUT-1, LUT-3, LUT-4, LUT-6, and PDT-1.
LUT-1 and LUT-4 are calculated outside of CalEEMod and must not be selected in CalEEMod.

Enter the following in CalEEMod:
LUT-3: Check the box.
LUT-6: Check box and enter "75" for percent of units below market rate.
PDT-1: Check the box and enter "18.7" for percent reduction in spaces.

The other measures will be estimated in Step 5.



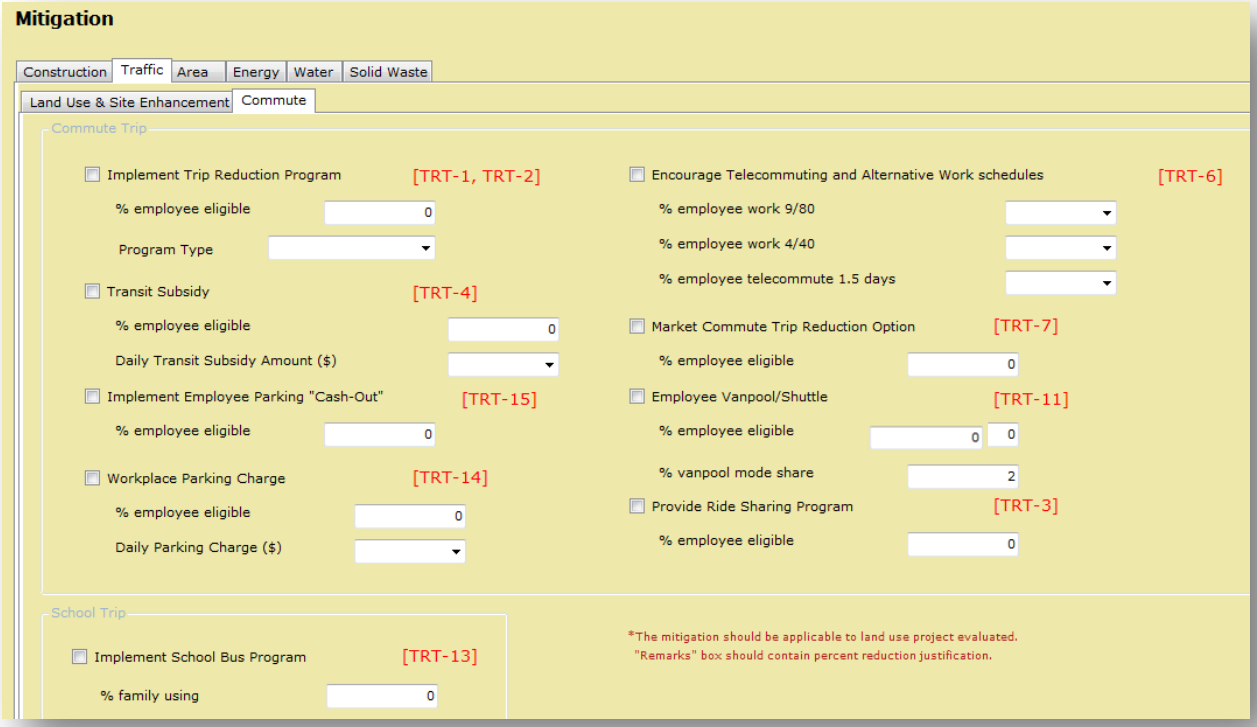
Click "Next."



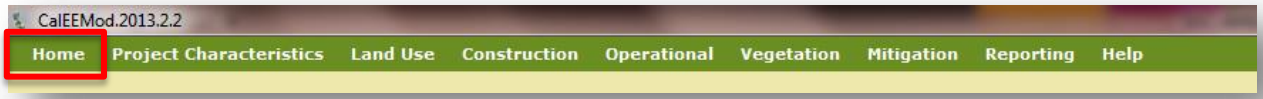
[32] The Project Setting selected is for demonstration purposes only. No analysis has been conducted to determine the Project Setting type for this location.

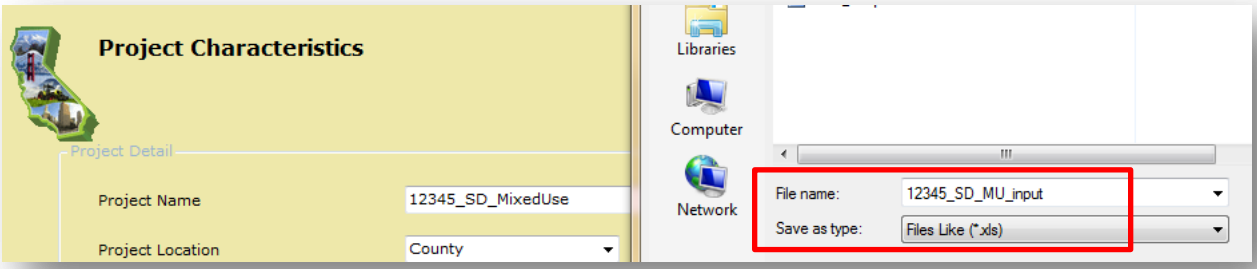
Mitigation: Traffic, Commute Screen

There are no commute-related measures that are enforceable in the proposed project; therefore, no measures are selected on this screen.



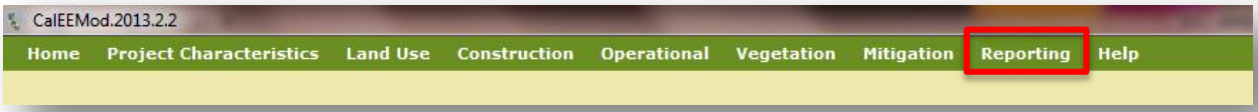
Under the Home tab, select “Save As” and save the input file as “12345_SD_MU_input.”





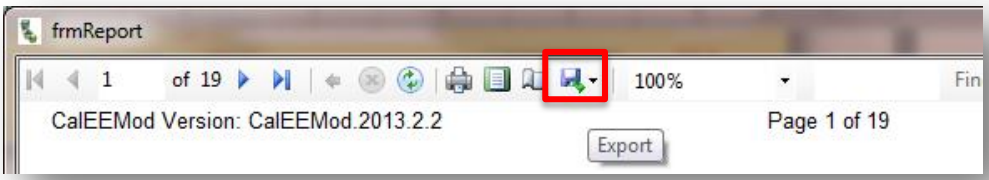
Step 3: Generate a CalEEMod Report

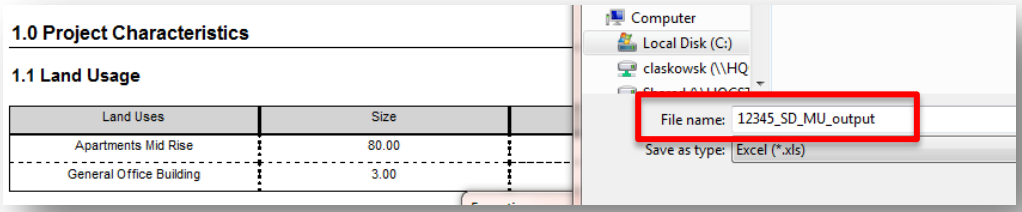
Select “Reporting.”



To run the model, select “Annual” and click on “Recalculate All Emissions and Run Report.” **<u>Allow the program several minutes to run.</u>**

Export the output as an Excel file named “12345_SD_MU_output.”





The output will include unmitigated annual VMT and mitigated annual VMT totals under Trip Summary Information, which will be used in the next steps.

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	527.20	572.80	485.60	1,506,948	1,293,591
General Office Building	33.03	7.11	2.94	59,812	51,344
Total	560.23	579.91	488.54	1,566,760	1,344,935

Step 4—7

For Steps 4 through 7, use the Excel-based calculator. The CalEEMod mitigated and unmitigated VMT and other project features will be used as inputs to the calculator.

The **Read Me** tab contains important instructions and basic project information must be inputted here.

Read Me Tab

Enter the Project Name, Project ID, and the contact information for person who can

Project Name:	12345 San Diego Mixed Use
Project ID:	12345
Contact Name:	Any R Body
Contact Phone Number:	(619) 555-5555
Contact Email:	ARB@account.com
Date Completed:	1/1/2016

CalEEMod Steps 4-7 Tab

Applicants with housing-related project features must use CalEEMod according to St
this tab. Additional benefits are calculated in this tab based on project-specific info

READ ME | CalEEMod Steps 4-7 | TAC Inputs | GHG Summary | Definitions

Proceed to the **CalEEMod Steps 4-7** tab and enter the basic project information in the green and yellow cells. The information entered must match the inputs (County, Project Type, Project Setting, and Year 1) and outputs (Unmitigated VMT and Mitigated VMT) from CalEEMod.

Project Name:	12345 San Diego Mixed Use
Project ID:	12345

Project County	San Diego
Unmitigated VMT from the CalEEMod Report	1,566,760
Mitigated VMT from the CalEEMod Report	1,344,935
Project Type	TOD
Project Setting (must match CalEEmod Project Setting)	Urban Center
Year 1 (first operational year)	2018

Step 4: ICP/RIPA Adjustment

Select whether LUT-5 was applied in CalEEMod. Based on this answer and the project type, the calculator automatically calculates the Adjustment, if applicable. No adjustment is needed for this project.

Step 4: ICP/RIPA Adjustment	0	VMT
Did you apply LUT-5 in CalEEMod (Increase Transit Accessibility)?		No

Step 5: Calculate Additional Benefits

LUT-1 and LUT-4 apply to the project. Applicant should enter the number of dwelling units per acre for the Project as “32” and the distance to CBD as “0.1” (see below). No other fields should be modified as the other measures are not applicable to the project.

Step 5: Calculate Additional Benefits		
A. LUT-1: Increase Density	22.47	%
Number of dwelling units per acre for the Project If N/A, leave blank or enter "0"		32.00
B. LUT-9: Improve Walkabililty Design	0.00	%
Number of Intersections per square mile for the Project Area If N/A, leave blank or enter "0"		
C. LUT-4: Increase Destination Accessibility	19.83	%
Distance to CBD (miles)[1] If N/A, leave blank or enter "12"		0.10
D. SDT-2: Provide Traffic Calming Measures	0	%
Yes/No		No
E. TRT-4(residents): Transit Subsidy for Residents	0.00	%
Subsidy per eligible resident per Year If N/A, leave blank or select "$0 to $273.74"		$0 to $273.74
Percent of residents eligible for the subsidy (0-100)		
Number of years the subsidy is funded (0-30)		

Step 6: Calculate the CalEEMod Annual VMT Reductions

This Step is automated. The calculator determines the annual VMT reductions.

Step 6: Calculate the CalEEMod Annual VMT Reductions		
Additional % VMT Reductions (A+B+C+D+E from Step 5)	42.31	%
Additional VMT Reductions	662,849.43	VMT
Total Annual VMT Reductions	884,674.43	VMT
Percent VMT Reduction	56%	%
Maximum Potential Annual Reductions	40%	VMT
Annual CalEEMod VMT Reductions	**626,704.00**	**VMT**

Step 7: Calculate the Total CalEEMod GHG Reductions

The calculator estimates the Total CalEEMod GHG reductions.

Step 7: Calculate the Total CalEEMod GHG Emission Reductions		
CalEEMod GHG Emission Reductions (Yr 1)	320.27	MT CO_2e
CalEEMod GHG Emission Reductions (Yr F)	197.23	MT CO_2e
Total CalEEMod GHG Emission Reductions	**7,762.50**	MT CO_2e

New Bus Service

To determine the Total GHG Emission Reductions from the new bus service, the applicant must use the **TAC Methods** tab in the calculator.

Go to the **TAC Inputs** tab and enter “New Bus Service (local bus)”; the fields that need to be inputted will turn yellow or green. Enter the following information according to the project’s features: County, Year 1, Year F, Annual Days of Operation, Yr 1 Daily Ridership, and Yr F Daily Ridership (equal to Yr 1 Daily Ridership unless more detailed project information is available). The proposed project consists of two hydrogen-fuel buses that would each operate 2018-2021; therefore, the information for both buses may be entered in a single row. If there were any differences, such as a different Year 1 or fuel type, each bus would be entered on a separate line. The information, such as ridership and VMT, would be specific to the new or expanded service within each row.

Project Details								
Transit and Connectivity Method	County	Year 1 (Yr 1)	Year F (Yr F)	Annual Days of Operation (D)	Yr 1 Daily Ridership (R)	Yr F Daily Ridership (R)	Adjustment factor (A)	Lengt
New Bus Service (local bus)	San Diego	2018	2021	365	500	500		
Total TAC Methods GHG Emission Reductions								

READ ME | CalEEMod Steps 4-7 | TAC Inputs | GHG Summary | Definitions

Scroll to the right to enter additional information: Fuel Type of the new bus service, Engine Model Year, and Annual VMT of the new bus service. The calculator will automatically provide the Total GHG Emission Reductions and Average Annual Auto VMT reductions.

	GHGs of New Service Vehicle			Net Benefits	
edestrian r F Weekly uto Trips liminated	Fuel Type	Engine MY	Annual VMT/ Units of Fuel	Total GHG Emission Reductions (MTCO2e)	Average Annual Auto VMT Reduced
	Hydrogen Fuel Cell	2018	30,000	1,291.69	967,250.00
				1,291.69	967,250.00

Information for Documentation

The applicant should proceed to the **GHG Summary** tab and enter the Total AHSC Funds Requested and the Total GGRF Funds Requested to determine the Total GHG Emission Reductions per AHSC and GGRF Funds Requested, which are required documentation components.

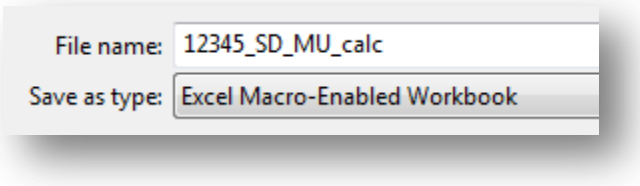
Total GHG Emission Reductions are automatically calculated from the **CalEEMod Steps 4—7** tab and **TAC Inputs** tab.

The AHSC funds requested may equal the Total GGRF funds requested if the applicant has not and does not plan to request funds for the same project and phase from other GGRF programs. In this case, applicants should enter the same dollar amount into both fields.

	GHG Emissions (MT CO_2e)	Description
Total CalEEMod GHG Emission Reductions	7,762.50	Total GHG emission reductions from CalEEM applicable.
Total TAC Methods GHG Emission Reductions	1,291.69	Total GHG emission reductions from TAC Me applicable.
Total Project Net GHG Benefit	9,054.19	Total project GHG emission reductions in M project.
AHSC Funds Requested ($)	5,000,000.00	AHSC Funds Requested for the proposed pr
Total GHG Emission Reductions / AHSC Funds Requested ($)	0.00181084	Emissions per AHSC funding requested.
Total GGRF Funds Requested ($)	5,000,000.00	Total GGRF Funds Requested for the propos · If you are applying, have applied, or are pl GGRF funds for the proposed project, enter t for all GGRF programs. · If you are applying only to AHSC for GGRF funds requested in the "Total GGRF Funds R
Total GHG Emission Reductions / Total GGRF Funds Requested ($)	0.00181084	Emissions per total GGRF funding requested program-specific funding requested UNLESS will seek or has sought funding from other G must provide details in this case.

READ ME | CalEEMod Steps 4-7 | TAC Inputs | GHG Summary | Definitions

Save the file as instructed on the **Read Me** tab:



Applicants must submit the completed calculator along with other required documentation to SGC and ARB. Refer to Section D of the quantification methodology and the AHSC Program Application for additional requirements.

Appendix B. Land Use Subtypes and Default Parking Rates

Residential Land Use Subtypes and Parking Rates

Applicants must select the residential land use subtype that most accurately reflects the type of development proposed in the application. For example, a senior housing project would most appropriately be classified as "Retirement Community." Table B-1 provides descriptions for the most common residential land use types. Definitions were derived using the CalEEmod User's Guide. For applicants using PDT-1, default ITE parking rates are also provided in Table B-1 and were derived from ITE Parking Generation, 4th Edition, Average Peak Period Parking Demand and the percent reduction should be calculated using only the residential land use information.

Table B-1. Residential Land Use Subtype Descriptions and Default Parking Rates

Residential Land Use Subtype	Description	ITE Default Parking Rates (spaces per dwelling unit)
Single Family Housing	All single-family detached homes on individual lots.	1.83
Apartments High Rise	High-rise apartments are units located in rental buildings that have more than 10 levels and most likely have one or more elevators.	1.37
Apartments Low Rise	Low-rise apartments are units located in rental buildings that have 1-2 levels.	1.23
Apartments Mid Rise	Mid-rise apartments in rental buildings that have between 3 and 10 levels.	Apartments with three or four stories should use 1.23; apartments with five to 10 stories should use 1.37
Condo/Townhouse	Ownership units that have at least one other owned unit within the same building structure.	1.38
Condo/Townhouse High Rise	Ownership units that have three or more levels.	1.38
Retirement Community	Communities that provide multiple elements of senior adult living.	0.59

Non-Residential Land Use Subtypes and Parking Rates

For the non-residential component of mixed-use projects, the applicant must use a land use type of "Commercial" and a land use subtype of "General Office Building." PDT-1 only applies to residential land uses; therfore, no parking rate information is needed for non-residenical land use subtypes.

Appendix C. Project Setting Types

Applicants should use the descriptions in the table below, as defined in the CAPCOA Quantification Report, to determine the appropriate Project Setting. The descriptions provide the typical characteristics of the Project Setting types used by CAPCOA and in CalEEMod for determining the effectiveness of strategies for reducing VMT. The maximum reduction values are derived from the percentage difference in per capita VMT compared against a statewide average and reflect the highest reduction levels justified by the literature as reviewed for the CAPCOA Quantification Report. TOD and ICP Project Type applicants must provide a narrative explaining the justification for the Project Setting used. RIPA Project Type applicants are required to use Low Density Suburban and therefore do not have to submit a narrative.

CalEEMod Project Setting Types	CAPCOA GHG Location Types	CAPCOA Location Description	Maximum Reductions (Cap on % VMT reduction)
Urban	Urban	A project located within the central city and may be characterized by multi-family housing, located near office and retail. The urban locations listed above have the following characteristics: o Location relative to the regional core: these locations are within the CBD or less than five miles from the CBD (downtown Oakland and downtown San Francisco). o Ratio or relationship between jobs and housing: jobs-rich (jobs/housing ratio greater than 1.5) o Density character • typical building heights in stories: six stories or (much) higher • typical street pattern: grid • typical setbacks: minimal • parking supply: constrained on and off street • parking prices: high to the highest in the region o Transit availability: high quality rail service and/or comprehensive bus service at 10 minute headways or less in peak hours Examples: San Francisco, Downtown Oakland	75%

CalEEMod Project Setting Types	CAPCOA GHG Location Types	CAPCOA Location Description	Maximum Reductions (Cap on % VMT reduction)
Urban Center	Compact Infill	A project located on an existing site within the central city or inner-ring suburb with high-frequency transit service. Examples may be community redevelopment areas, reusing abandoned sites, intensification of land use at established transit stations, or converting underutilized or older industrial buildings. The compact infill locations listed above have the following characteristics: o Location relative to the regional core: these locations are typically 5 to 15 miles outside a regional CBD o Ratio or relationship between jobs and housing: balanced (jobs/housing ratio ranging from 0.9 to 1.2) o Density character • typical building heights in stories: two to four stories • typical street pattern: grid • typical setbacks: 0 to 20 feet • parking supply: constrained • parking prices: low to moderate o Transit availability: rail service within two miles, or bus service at 15 minute peak headways or less Examples: Fairfax (LA), Albany	40%

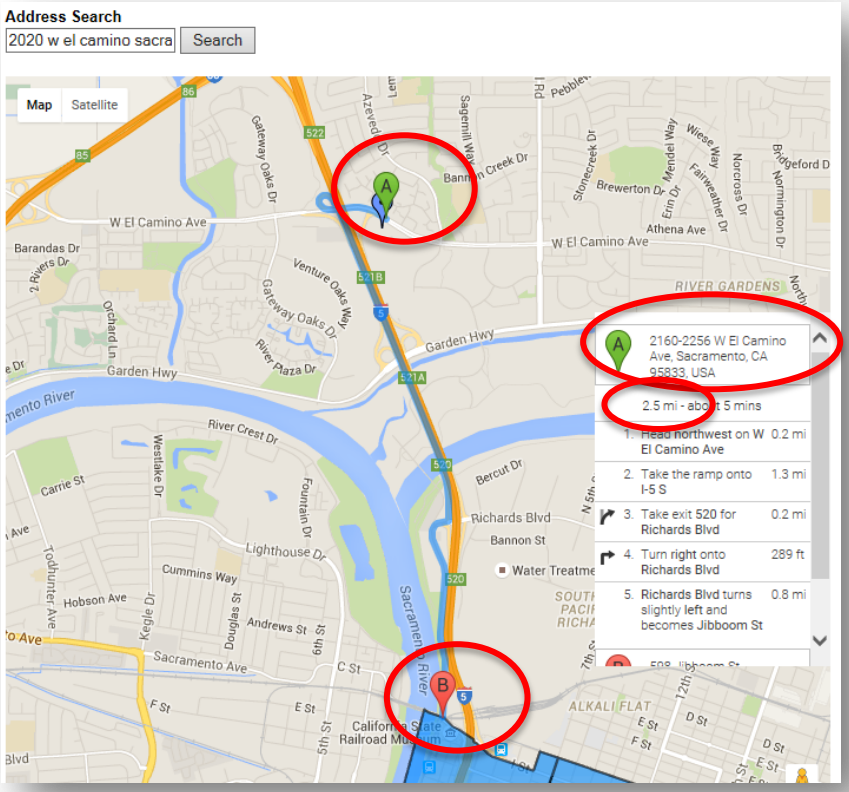
CalEEMod Project Setting Types	CAPCOA GHG Location Types	CAPCOA Location Description	Maximum Reductions (Cap on % VMT reduction)
Suburban Center	Suburban Center	A project typically involving a cluster of multi-use development within dispersed, low-density, automobile dependent land use patterns (a suburb). The center may be an historic downtown of a smaller community that has become surrounded by its region's suburban growth pattern in the latter half of the 20th Century. The suburban center locations listed above have the following characteristics: o Location relative to the regional core: these locations are typically 20 miles or more from a regional CBD o Ratio or relationship between jobs and housing: balanced o Density character • typical building heights in stories: two stories • typical street pattern: grid • typical setbacks: 0 to 20 feet • parking supply: somewhat constrained on street; typically ample off-street • parking prices: low (if priced at all) o Transit availability: bus service at 20-30 minute headways and/or a commuter rail station Examples: Downtown San Rafael, San Mateo	20%

CalEEMod Project Setting Types	CAPCOA GHG Location Types	CAPCOA Location Description	Maximum Reductions (Cap on % VMT reduction)
Low Density Suburban	Suburban	A project characterized by dispersed, low-density, single-use, automobile dependent land use patterns, usually outside of the central city (a suburb). Suburbs typically have the following characteristics: o Location relative to the regional core: these locations are typically 20 miles or more from a regional CBD o Ratio or relationship between jobs and housing: jobs poor o Density character • typical building heights in stories: one to two stories • typical street pattern: curvilinear (cul-de-sac based) • typical setbacks: parking is generally placed between the street and office or retail buildings; large-lot residential is common • parking supply: ample, largely surface lot-based • parking prices: none o Transit availability: limited bus service, with peak headways 30 minutes or more Examples: Areas that don't fit into one of the other definitions	15%

Appendix D. Distance to Central Business District

The distance from a project to a central business district (CBD) is used in the Quantification Method Using CalEEMod for LUT-4 (calculated in Step 5) and as one of the criteria in selecting a Project Setting type (see Appendix C). Central Business District (CBD) is defined as census tract (using 2011 census data) with at least 5,000 jobs per square mile. To determine the distance to CBD for a project, applicants will use the following webpage, which includes instructions: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/kml/jobcentermap.html.

Applicants are instructed to submit a screenshot of the map that includes the "from" and "to" pins, the project address, and the project distance to CBD. An example screenshot with the required elements circled is shown below. In this example, the distance from the project to CBD is 2.5 miles. This value would be used in Equation 5 (Step 5 of Section B), if applicable and for determining the appropriate Project Setting in Appendix C.



Appendix E. Equations Supporting the AHSC GHG Calculator Tool

ARB developed the Excel-based AHSC GHG calculator tool to automate many of the portions of this quantification methodology. This appendix provides the equations used in the AHSC GHG calculator.

CalEEMod Methods—Additional Benefits and GHG Calculations

Calculations supporting Section B steps 4 through 7 are provided below.

Step 4: ICP/RIPA Adjustment

The data supporting transit accessibility (LUT-5) in CalEEMod are based on high-quality transit service. Since ICP and RIPA projects by definition per AHSC Guidelines do not include high-quality transit, an adjustment is needed for these projects. Therefore, this Step only applies to ICP and RIPA projects that are taking credit for LUT-5 in CalEEMod.

For ICP/RIPA projects implementing LUT-5[33]:

$$ICP/RIPA\ Adjustment = 0.025 * Unmitigated\ VMT \qquad \textbf{(Eq. 1)}$$

[33] Based on documentation in the CAPCOA Quantification Report for TST-4: Increase Transit Frequency/Speed

Step 5: Calculate Additional Benefits

The following equations support these measures:

A. LUT-1: Increase Density
B. LUT-9: Improve Walkability Design
C. LUT-4: Improve Destination Accessibility
D. SDT-2: Provide Traffic Calming Measures
E. TRT-4(residents): Transit Subsidy for Residents. Note: The CalEEMod Transit Subsidy is applicable to non-residential land use types (for employees). This equation has been provided to apply transit subsidies to residents.

A. Increase Density (LUT-1)

$$\%\,Density\ Increase = 100 * \left[\frac{\boldsymbol{Project\ dwelling\ units\ per\ acre} - 7.6}{7.6}\right] \quad \textbf{(Eq. 2)}$$

$$\%\,VMT\ Reduction = 0.07 * \%\,Density\ Increase$$

or 30% (whichever is lower) **(Eq. 3)**

B. Improve Walkability Design (LUT-9)

$$\%\,VMT\ Reduction = 100 * 0.12 * \left[\frac{\boldsymbol{\#\ of\ Intersections\ per\ Square\ Mile} - 36}{36}\right] \quad \textbf{(Eq. 4)}$$

or 21.3% (whichever is lower)

C. Increase Destination Accessibility (LUT-4)

$$\%\,Distance\ Decrease = 100 * \left[\frac{\boldsymbol{Distance\ to\ CBD} - 12}{12}\right] \quad \textbf{(Eq. 5)}$$

$$\%\,VMT\ Reduction = -0.20 * \%\,Distance\ Decrease$$

or 20% (whichever is lower) **(Eq. 6)**

Refer to Appendix D for instructions on estimating Distance to CBD.

D. Provide Traffic Calming Measures (SDT-2)

$$\%\,VMT\ Reduction = 1\% \quad \textbf{(Eq. 7)}$$

E. Transit Subsidy for Residents (TRT-4(residents))

$$\%\,VMT\ Reduction = A * B * \left(\frac{C}{30}\right) \quad \textbf{(Eq. 8)}$$

Where,
A is the percent VMT reduction per eligible resident shown in Table E-1.

Table E-1. Adjustment Factor (A) Lookup Table for Eq. 8

Transit Subsidy or Discount per Year per Eligible Resident	A=Percent Reduction in Commute VMT per Eligible Resident		
	Low Density Suburban[34]	Suburban Center[35]	Urban and Urban Center[35]
From $273.75 to $543.84	1.5%	3.4%	6.2%
$543.85 to $1,087.69	3.3%	7.3%	12.9%
$1,087.70 to $2,175.39	7.9%	16.4%	20.0%
$2,175.40 or greater	20.0%	20.0%	20.0%

Note: Subsidies below $273.75 per Eligible Resident per Year may not use this measure.

B is the percent of residents eligible for the subsidized or discounted transit program (i.e., 0-100).

C is the number of years that the subsidy/discount is funded or guaranteed under the proposed project or transit agency program (i.e., 0-30 years).[35]

Example: A project providing a $2,500 per year subsidy to 100% of residents for 3 years would calculate the % VMT reduction as: % VMT reduction = [20% * 100 * (3/30)] = 2%.

[34] Refer to Project Setting designation used from Table 2.
[35] The subsidy/discount may include GGRF and other enforceable commitment funds.

Step 6: Calculate the CalEEMod Annual VMT Reductions

Annual VMT reductions

$$Additional\ \%\ VMT\ Reductions = Eq.3 + Eq.4 + Eq.6 + Eq.7 + Eq.8 \quad \textbf{(Eq. 9)}$$

$$Additional\ VMT\ Reductions = Unmitigated\ VMT * Additional\ \%\ VMT\ Reductions \quad \textbf{(Eq. 10)}$$

$$Total\ Annual\ VMT\ Reductions = Unmitigated\ VMT - Mitigated\ VMT + Additional\ VMT\ Reductions\ (Eq.10) - ICP/RIPA\ Adjustment\ (Eq.1) \quad \textbf{(Eq. 11)}$$

Percent VMT Reductions for the project

$$Percent\ VMT\ Reduction = \frac{Total\ Annual\ VMT\ Reductions}{Unmitigated\ VMT} \quad \textbf{(Eq. 12)}$$

The project Maximum Potential Reductions according to the Project Setting is shown in Table E-2.

Table E-2. Maximum Potential Reductions by Project Setting Type

CalEEMod Project Setting Types*	Maximum Potential Reductions (Total maximum project VMT reduction)[36]
Low Density Suburban	15%
Suburban Center	20%
Urban Center	40%
Urban	75%

*Listed in order of increasing maximum potential reductions

If the Percent VMT Reduction is greater than the Maximum Potential Reduction for the Project Setting, **Adjust** the Percent VMT Reduction:

$$Adjusted\ Percent\ VMT\ Reduction = Maxiumum\ Potential\ Reduction\ by\ Project\ Setting \quad \textbf{(Eq. 13)}$$

Annual CalEEMod VMT Reductions

$$Annual\ CalEEmod\ VMT\ Reductions = (Adjusted)Percent\ VMT\ Reduction * Unmitigated\ VMT \quad \textbf{(Eq. 14)}$$

[36] As defined in the CAPCOA Quantification Report. The interactions among transportation-related measures are complex and sometimes counter-intuitive. The maximum reduction values are derived from the percentage difference in per capita VMT compared against a statewide average and reflect the highest reduction levels justified by the literature as reviewed for the CAPCOA Quantification Report.

Step 7: Calculate the Total CalEEMod GHG Reductions

CalEEMod GHG Reductions for Year 1 and Year F:

$$CalEEmod\ Reductions\ (Yr\ 1) = \frac{Annual\ CalEEMod\ VMT\ Reductions * AVEF_{Yr\ 1}}{1{,}000{,}000} \quad \textbf{(Eq. 15)}$$

$$CalEEmod\ Reductions\ (Yr\ F) = \frac{Annual\ CalEEMod\ VMT\ Reductions * AVEF_{Yr\ F}}{1{,}000{,}000} \quad \textbf{(Eq. 16)}$$

Where,
AVEF is the Auto Vehicle Emission Factor (grams of CO_2e per mile) by county for Year 1 or Year F. The life of the project is defined as 30 years; therefore, Year F = Year 1 + 30. Emission factor lookup tables are provided in the links in Table E-5. Appendix F provides the methodology for the emission factor development.

Total CalEEMod GHG Reductions:

$$CalEEmod\ Reductions = \frac{CalEEMod\ Reductions_{Yr\ 1} + CalEEMod\ Reductions_{Yr\ F}}{2} * 30 \quad \textbf{(Eq. 17)}$$

TAC Methods—Additional Benefits and GHG Calculations

Calculations supporting the TAC Methods are provided below.

New/Expanded Bus, Train, Shuttle, or Vanpool Service

Annual VMT of Displaced Autos from New Service

$$Annual\ Auto\ VMT\ Reduced\ from\ New\ Service = [(\boldsymbol{D}) * (\boldsymbol{R}) * (\boldsymbol{A})] * [(\boldsymbol{L}) - (\boldsymbol{AA}) * (\boldsymbol{LL})] \quad \textbf{(Eq. 18)}$$

Where,

Factor	Description	Default Values			
		Bus	**Train**[37]	**Shuttle**	**Vanpool**
D	Days of operation per year of new service	260 (weekday service) 365 (daily service)	User-defined	260 (weekday service) 365 (daily service)	260 (weekday service) 365 (daily service)
R	Daily ridership of new service	Expected daily ridership based on project data. For example, one bus rider commuting round trip per day is two bus trips per day.*			
A	Adjustment factor to account for transit dependency	0.5 (local bus) 0.83 (long distance commuter)	User-defined	0.83	0.83
L	Length of average auto trip reduced	10.8 miles[38]	User-defined	16	35
AA	Adjustment factor to account for auto trips used to access new service	0.1 (local bus) 0.8 (long distance commuter)	User-defined	0.75	0.75
LL	Length of average trip for auto access to transit	2 miles (local bus) 5 miles (long distance commuter)	User-defined	5	5

*If the Ridership will vary over the life of the project, the applicant must calculate the Annual Auto VMT reduced for the first and last year of the project operation.

[37] Default values for new Train service are not available due to high variability. Applicants must provide these values and document how the values were derived.
[38] Average statewide trip length, per CalEEMod.

Auto GHG Reductions for Year 1 and Year F of the New Service

$$New\ Service\ Auto\ Reductions\ (Yr\ 1) = \frac{(Annual\ VMT\ Reduced_{Yr\ 1}) * AVEF_{Yr\ 1}}{1{,}000{,}000} \quad \textbf{(Eq. 19)}$$

$$New\ Service\ Auto\ Reductions\ (Yr\ F) = \frac{(Annual\ VMT\ Reduced_{Yr\ F}) * AVEF_{Yr\ F}}{1{,}000{,}000} \quad \textbf{(Eq. 20)}$$

Where,
AVEF is the Auto Vehicle Emission Factor (grams of CO_2e per mile), found in the Lookup table links in Table E-5.

New Service Auto GHG Useful Life (UL) Reductions

$$New\ Service\ Auto\ Reductions = \frac{New\ Service\ Auto\ Reductions_{Yr1} + New\ Service\ Auto\ Reductions_{YrF}}{2} * UL \quad \textbf{(Eq. 21)}$$

Where,
UL is Useful Life, as defined as the number of years the project has enforceable committed funds for operation of the new/expanded service.

New Service GHG Emissions for Year 1 and Year F

$$New\ Service\ Emissions\ (Yr\ 1) = \frac{(NSVMT_{Yr\ 1}) * NSEF_{Yr\ 1}}{1{,}000{,}000} \quad \textbf{(Eq. 22)}$$

$$New\ Service\ Emissions\ (Yr\ F) = \frac{(NSVMT_{Yr\ F}) * NSEF_{Yr\ F}}{1{,}000{,}000} \quad \textbf{(Eq. 23)}$$

Where,
NSVMT is the annual VMT for the New Service and **NSEF** is the Emission Factor (grams of CO_2e per mile) for the New Service, according to Table E-5 or E-6.

New Service GHG Useful Life (UL) Emissions

$$New\ Service\ UL\ Emissions = \frac{New\ Service\ Emissions_{Yr1} + New\ Service\ Emissions_{YrF}}{2} * UL \quad \textbf{(Eq. 24)}$$

New Service Total GHG Reductions

$$New\ Service\ Total\ GHG\ Reductions = New\ Service\ Auto\ UL\ Reductions - New\ Service\ UL\ Emissions \quad \textbf{(Eq. 25)}$$

New Ferry Service

Annual VMT of Displaced Autos from New Service

$$Annual\ Auto\ VMT\ Reduced\ from\ New\ Service = [(\boldsymbol{D}) * (\boldsymbol{R}) * (\boldsymbol{A})] * [(\boldsymbol{L}) - (\boldsymbol{AA}) * (\boldsymbol{LL})] \quad \textbf{(Eq. 26)}$$

Where,

Factor	Description
D	Days of operation per year of new service
R	Daily ridership of new service
A	Adjustment factor to account for transit dependency
L	Length of average auto trip reduced
AA	Adjustment factor to account for auto trips used to access new service
LL	Length of average trip for auto access to transit

*If the Ridership will vary over the life of the project, the applicant must calculate the Annual Auto VMT reduced for the first and last year of the project operation. Applicant must provide these values and documentation supporting the values.

Auto GHG Reductions for Year 1 and Year F of the New Service

$$New\ Service\ Auto\ Reductions\ (Yr\ 1) = \frac{(Annual\ VMT\ Reduced_{Yr\ 1}) * AVEF_{Yr\ 1}}{1{,}000{,}000} \quad \textbf{(Eq. 27)}$$

$$New\ Service\ Auto\ Reductions\ (Yr\ F) = \frac{(Annual\ VMT\ Reduced_{Yr\ F}) * AVEF_{Yr\ F}}{1{,}000{,}000} \quad \textbf{(Eq. 28)}$$

Where,
AVEF is the Auto Vehicle Emission Factor (grams of CO_2e per mile), found in the Lookup tables links in Table E-5.

New Service Auto GHG Useful Life (UL) Reductions

$$New\ Service\ Auto\ Reductions = \frac{New\ Service\ Auto\ Reductions_{Yr1} + New\ Service\ Auto\ Reductions_{YrF}}{2} * UL \quad \textbf{(Eq. 29)}$$

Where,
UL is Useful Life, as defined as the number of years the project has enforceable committed funds for operation of the new/expanded service.

New Service GHG Emissions for Year 1 and Year F

$$New\ Service\ Emissions\ (Yr\ 1) = \frac{(Fuel\ Consumption_{Yr\ 1}) * FEF}{1{,}000{,}000} \quad \textbf{(Eq. 30)}$$

$$New\ Service\ Emissions\ (Yr\ F) = \frac{(Fuel\ Consumption_{Yr\ F}) * FEF}{1{,}000{,}000} \quad \textbf{(Eq. 31)}$$

Where,
Fuel Consumption is the amount of fuel consumed by the Ferry per year in Year 1 or Year F;
FEF is the carbon intensity Emission Factor (grams of CO_2e per unit of fuel) for the Ferry, according the type of fuel consumed:

Fuel Type (units)	**FEF (gCO_2e/unit of fuel)**
CNG (scf)	78
Diesel (gal)	13,818
Electric/BEV or PHEV (KWh)	379
Hydrogen Fuel Cell (kg)	12,678
Hydrogen Fuel Cell (SB 1505) (kg)	10,466
LNG (gal)	6,824

Emission factors calculated by ARB

New Service GHG Useful Life (UL) Emissions

$$New\ Service\ UL\ Emissions = \frac{New\ Service\ Emissions_{Yr\ 1} + New\ Service\ Emissions_{Yr\ F}}{2} * UL \quad \textbf{(Eq. 32)}$$

New Service Total GHG Reductions

$$New\ Service\ Total\ GHG\ Reductions = New\ Service\ Auto\ UL\ Reductions - New\ Service\ UL\ Emissions \quad \textbf{(Eq. 33)}$$

Bicycle Paths or Lanes

Annual VMT Reductions of Displaced Autos from Bicycle Paths/Lanes

$$Bike\ Lane\ Auto\ VMT\ Reduced = (\boldsymbol{D}) * (\boldsymbol{ADT}) * (\boldsymbol{A} + \boldsymbol{C}) * (\boldsymbol{L}) \quad \textbf{(Eq. 34)}$$

Where,

Factor	Description	Default Values
D	Days of use per year of new service	200
ADT*	Annual Average Daily Traffic (two-way traffic volume in trips/day on parallel road. Use applicable value from project data (Maximum = 30,000)	Use project-specific data.
A	Adjustment factor to account for bike use	Use applicable value from Table E-3
C	Activity Center Credit near project	Use applicable value from Table E-4
L	Length of bicycle trip	1.8 miles per trip in one direction

*If the ADT will vary over the life of the project, the applicant must calculate the Auto VMT reduced for the first and last year of the project operation. Applicant must provide these values and documentation supporting the values.

Table E-3. Adjustment Factor (A) Lookup Table for Eq. 34

Average Daily Traffic (ADT)	Length of Bike Project (one direction)	A (for cities >250,000 and non-university towns <250,000)	A (for university towns with population <250,000)
ADT ≤ 12,000 vehicles per day	≤ 1 mile	.0019	.0104
	> 1 & ≤ 2 miles	.0029	.0155
	> 2 miles	.0038	.0207
12,000 < ADT ≤ 24,000 vehicles per day	≤ 1 mile	.0014	.0073
	> 1 & ≤ 2 miles	.0020	.0109
	> 2 miles	.0027	.0145
24,000 < ADT ≤ 30,000 vehicles per day Maximum is 30,000	≤ 1 mile	.0010	.0052
	> 1 & ≤ 2 miles	.0014	.0078
	> 2 miles	.0019	.0104

Table E-4. Activity Center Credit (C) Lookup Table for Eq. 34

Count your Activity Centers. If there are…	Within 1/2 mile of Project Area	Within 1/4 mile of Project Area
3	.0005	.001
More than 3 but fewer than 7	.0010	.002
7 or more	.0015	.003

Activity Center examples: Bank, church, hospital or HMO, light rail station (park & ride), office park, post office, public library, shopping area or grocery store, university, or junior college. These metrics should be evaluated for the project location site and surrounding area which can extend a distance from the housing development not to exceed one-half (½) mile.

Auto GHG Reductions for Year 1 and Year F of the Bike Lane

$$Bike\ Lane\ Auto\ Reductions\ (Yr\ 1) = \frac{Bike\ Lane\ Auto\ VMT\ Reduced_{Yr\ 1} * AVEF_{Yr\ 1}}{1{,}000{,}000} \quad \textbf{(Eq. 35)}$$

$$Bike\ Lane\ Auto\ Reductions\ (Yr\ F) = \frac{Bike\ Lane\ Auto\ VMT\ Reduced_{Yr\ F} * AVEF_{Yr\ F}}{1{,}000{,}000} \quad \textbf{(Eq. 36)}$$

Where,
AVEF is the Auto Vehicle Emission Factor (grams of CO_2e per mile), found in the Lookup table links in Table E-5.

Bike Lane GHG Useful Life (UL) Reductions

$$Bike\ Lane\ UL\ Reductions = \frac{Bike\ Lane\ Auto\ Reductions_{Yr1} + Bike\ Lane\ Auto\ Reductions_{YrF}}{2} * UL \quad \textbf{(Eq. 37)}$$

Where,
UL is Useful Life, which is 20 years for Class 1 and 15 years for Class 2 bicycle lanes.

Pedestrian Facilities

Annual VMT Reductions of Displaced Autos

$$Ped\ Auto\ VMT\ Reduced\ =\ (\boldsymbol{W}) * (\boldsymbol{T}) * (\boldsymbol{L}) \qquad \textbf{(Eq. 38)}$$

Where,

Factor	Description	Default Values
W	Weeks of operation per year	52
T*	Auto trips eliminated	Use: Total one-way trips per week based on project data
L	Length of auto trip eliminated	Use: Average distance to adjacent activity center (Default: 1.0)

*If the auto trips eliminated will vary over the life of the project, the applicant must calculate the Auto VMT reduced for the first and last year of the project operation. Applicant must provide these values and documentation supporting the values.

Auto GHG Reductions for Year 1 and Year F of the Pedestrian Facilities

$$Ped\ Auto\ Reductions\ (Yr\ 1) = \frac{Ped\ Auto\ VMT\ Reduced_{Yr\ 1} * AVEF_{Yr\ 1}}{1{,}000{,}000} \qquad \textbf{(Eq. 39)}$$

$$Ped\ Auto\ Reductions\ (Yr\ F) = \frac{Ped\ Auto\ VMT\ Reduced_{Yr\ F} * AVEF_{Yr\ F}}{1{,}000{,}000} \qquad \textbf{(Eq. 40)}$$

Where,
AVEF is the Auto Vehicle Emission Factor (grams of CO_2e per mile), found in the Lookup table links in Table E-5.

Pedestrian Facilities GHG Useful Life (UL) Reductions

$$Ped\ UL\ Reductions = \frac{Ped\ Auto\ Reductions_{Yr1}\ + Ped\ Auto\ Reductions_{YrF}}{2} * UL \qquad \textbf{(Eq. 41)}$$

Where,
UL is Useful Life, which is defined as 15 years.

Emission Factor Lookup Tables

GGRF programs estimate transportation-related emissions using a "Well-to-Wheels" approach, which consists of emissions resulting from the production and distribution of different fuel types, including hydrogen and electricity, and any associated exhaust emissions. AHSC Program applicants use project-specific data to calculate new or avoided vehicle miles traveled (VMT) and VMT is converted to greenhouse gas emissions using Well-to-Wheels emission factors embedded in the AHSC GHG calculator tool. Table E-5 provides links to the relevant Lookup tables used in the AHSC GHG calculator. A detailed methodology of how the emission factors were developed is provided in Appendix F.

Table E-5. Auto, Bus, Van, and Shuttle Emission Factor Tables

Emission Factor	Link to Lookup Tables	How to use Lookup Tables
Auto Vehicle Emission Factors	http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/ef_avef_final.pdf	Look up the county and year for both Year 1 and Year F
Bus Emission Factors	http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/ef_bus_final.pdf	Look up Year 1 and the Model Year of the vehicle being added, according to fuel type, for the emission factor for Year 1. Look up Year F and the same Model Year and fuel type, for the emission factor for Year F.
Van/ Shuttle Emission Factors	http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/ef_ldh_busshuttle_final.pdf	Look up Year 1 and the Model Year of the vehicle being added, according to fuel type, for the emission factor for Year 1. Look up Year F and the same Model Year and fuel type, for the emission factor for Year F.

For trains, the same emission factor will be used for both Year 1 and Year F, according to fuel type in Table E-6.

Table E-6. Train Emission Factor Tables

Train Fuel Type	gCO_2e/mile
CNG	21,596
Diesel	25,136
Electric (Heavy Rail)	5,592
Electric (Light Rail)	7,795
Electric (Trolley Bus, Cable Car, Street Car)	8,298
Hydrogen Fuel Cell	13,602
Hydrogen Fuel Cell (SB 1505)	11,229
LNG	23,529

Appendix F. Emission Factors

The emission factors were developed using fuel consumption rates from ARB's Mobile Source Emission Factor Model (EMFAC 2014[39]) and carbon intensity values for different fuel types from ARB's Low Carbon Fuel Standard (LCFS) Program. This approach provides consistency amongst transportation-related GGRF programs and ARB's Low Carbon Fuel Standard (LCFS[40]) Program.

The following sections detail how the emission factors were developed.

Auto Vehicle Emission Factors

Passenger (auto) vehicle emission factors (**AVEF**) were derived using the following steps.

1. Emissions by county for each calendar year from 2016 through 2050 were downloaded from EMFAC 2014 with the following parameters:
    a. Annual Average
    b. EMFAC2011 vehicle categories LDA, LDT1, LDT2, and MDV
    c. Aggregated model year
    d. Aggregated speed
    e. Gasoline fuel

2. The auto fuel consumption rate (**AFCR**, in gallons of gasoline per mile) was calculated using the total gallons of gasoline used by each vehicle category divided by the total mileage by vehicle category by county and year, using the following equation:

$$AFCR = \frac{(Fuel_Consumption_{LDA} + Fuel_Consumption_{LDT1} + Fuel_Consumption_{LDT2} + Fuel_Consumption_{MDV}) * 1{,}000}{VMT_{LDA} + VMT_{LDT1} + VMT_{LDT2} + VMT_{MDV}}$$

    Where,
    Fuel_Consumption is the total fuel consumption for the vehicle type, in 1,000 gallons per day, from EMFAC 2014, and

    VMT is the total vehicle miles traveled for the vehicle type, in miles per day, from EMFAC 2014.

3. The auto vehicle emission factors (**AVEF**, in grams of CO_2e per mile) were calculated for each year and county by multiplying auto fuel consumption rate the by the Well-to-Wheels carbon content factor for gasoline, which is 11,460.09 g CO_2e per gallon (Table E-1), using the following equation:

$$AVEF = 11{,}460.09 * AFCR$$

[39] http://www.arb.ca.gov/emfac/2014/
[40] http://www.arb.ca.gov/fuels/lcfs/lcfs.htm

Bus and Van/Shuttle Emission Factors

The bus and van/shuttle new service emission factors (NSEF) were derived using a similar method, as follows.

1. The statewide emissions each calendar year from 2016 through 2050 were downloaded from EMFAC 2014 with the following parameters:
    a. Annual Average
    b. EMFAC2011 vehicle categories UBUS for bus and LHD1 for Van/Shuttle
    c. All model years
    d. Aggregated speed
    e. Diesel fuel
2. The new service fuel consumption rate (**NSCR**, in gallons of diesel per mile) was calculated using the total gallons of diesel fuel used by each vehicle category and model year divided by the total mileage by vehicle category and model year, using the following equation:

$$NSCR_{diesel} = \frac{Fuel_Consumption_{(UBUS\ \ \boldsymbol{OR}\ LDH1)}\ *\ 1{,}000}{VMT_{(UBUS\ \ \boldsymbol{OR}\ LDH1)}}$$

Where,
Fuel_Consumption is the total fuel consumption for the vehicle type, in 1,000 gallons per day, from EMFAC 2014, and

VMT is the total vehicle miles traveled for the vehicle type, in miles per day, from EMFAC 2014.

3. Diesel emission factors were developed using data as described in (a) below. Emission factors for other fuel types convert the diesel new service fuel consumption rate to the appropriate fuel type as described in (b).
    a. Diesel: the new service emission factor (**NSEF**, in grams of CO_2e per mile) for each calendar year and model year were obtained by multiplying the new service fuel consumption rate (**NSCR**, in gallons per mile) by the Well-to-Wheels carbon content factor for diesel (13,818.14 g CO_2e per gallon) using the following equation:

$$NSEF = 13{,}818.14 * NSCR$$

    b. Non-Diesel: For fuel types other than diesel, staff converted the diesel fuel consumption rate (**NSCR**) from Step 2 to the equivalent new service emission factor (**NSEF**, in grams of CO_2e per mile) using the following equation:

$$NSEF_{new_fuel} = NSCR_{diesel} * ED_{diesel} * \left(\frac{1}{ED_{new_fuel}}\right) * \left(\frac{1}{EER}\right) * CC_{new_fuel}$$

Where,

$NSCR_{diesel}$ = New Service Consumption Rate for diesel, from Step 2 (gallons per mile)

ED_{diesel} = 134.47 MJ per gallon, from Table E-1

$ED_{new\ fuel}$ = Energy density of the new fuel type (MJ per unit of new fuel), from Table E-1

EER = Energy Economy Ratio (unitless), from Table E-1

CC_{new_fuel} = Carbon Content of the new fuel type (grams of CO_2e per unit of new fuel), from Table E-1

Table E-1. Fuel-Specific Factors

Fuels (units)	Energy Density	Carbon Content gCO_2e/unit*	EER Values Relative to Diesel
Diesel (gal)	134.47 (MJ/gal)	13,818.14 (gCO_2e/gal)	1.0
Gas (gal)	115.63 (MJ/gal)	11,460.09 (gCO_2e/gal)	0.9
CNG (scf)	0.98 (MJ/scf)	77.88 (gCO_2e/scf)	0.9
LNG (gal)	78.83 (MJ/gal)	6,824.31 (gCO_2e/gal)	0.9
Hydrogen (kg)	120.00 (MJ/kg)	12,678.00 (gCO_2e/kg)	1.9
Hydrogen SB 1505 compliant (kg)		10,466.4 (gCO_2e/kg)	
Electric (KWh)	3.6 (MJ/KWh)	378.58 (gCO_2e/KWh)	4.2 (Bus) 2.7 (Shuttle/Van) 4.6 (Heavy Rail) 3.3 (Light Rail)

*Calculated using fuel type megajoule (MJ) per unit of fuel from ARB Staff Report Table III-2. Energy Densities of LCFS Fuels and Blendstocks[41] and ARB CA-GREET fuel type grams of CO_2e per MJ.[42]

[41] Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Re-Adoption of the Low Carbon Fuel Standard, December 2014

[42] Direct values (without energy efficiency ratio adjustments). Source: California Air Resources Board, CA-GREET 1.8b versus 2.0 CI Comparison Table, April 1, 2015

Train Emission Factors

Train emission factors were derived using the following process.

1. A Train Consumption Rate (TCR, in gallons of diesel per mile) was calculated using the total gallons of diesel fuel used by 130 trains across the State in 2010 divided by the total mileage of those trains using the following equation:

$$TCR_{diesel} = \frac{Fuel\ Consumption}{VMT}$$

2. The diesel emission factor was developed using data as described in (a) below. Emission factors for other fuel types convert the diesel new service fuel consumption rate to the appropriate fuel type as described in (b).
   a. Diesel: the new service emission factor (**NSEF**, in grams of CO_2e per mile) for each calendar year and model year were obtained by multiplying the new service fuel consumption rate (**NSCR**, in gallons per mile) by the Well-to-Wheels carbon content factor for diesel (13,818.14 g CO_2e per gallon) using the following equation:

   $$NSEF = 13{,}818.14 * TCR$$

   b. Non-Diesel: For fuel types other than diesel, staff converted the diesel fuel consumption rate (**NSCR**) from Step 2 to the equivalent new service emission factor (**NSEF**, in grams of CO_2e per mile) using the following equation:

   $$NSEF_{new_fuel} = TCR_{diesel} * ED_{diesel} * \left(\frac{1}{ED_{new_fuel}}\right) * \left(\frac{1}{EER}\right) * CC_{new_fuel}$$

   Where,

   $NSCR_{diesel}$ = New Service Consumption Rate for diesel, from Step 2 (gallons per mile)

   ED_{diesel} = 134.47 MJ per gallon, from Table E-1

   $ED_{new\ fuel}$ = Energy density of the new fuel type (MJ per unit of new fuel), from Table E-1

   EER = Energy Economy Ratio (unitless), from Table E-1

   CC_{new_fuel} = Carbon Content of the new fuel type (grams of CO_2e per unit of new fuel), from Table E-1

Ferry Emission Factors

Due to the high variability in ferries, standardized emission factors are not available for new/expanded ferry service. Emissions for ferries require project-specific information on the estimated quantity and type of fuel used annually, which are used with the appropriate carbon content factor from Table E-1 to convert fuel to GHG emissions.

Appendix E. Community Benefits

In order to maximize benefits to all communities served by the **AHSC Program**, all applicants are required to report community benefits of the **Project**. The following resources should be used as a starting point for describing the community benefits of the **Project**. However, due to the nature of the AHSC Program's infrastructure investments, many of the benefits described below are inherently achieved through the funded components of AHSC applications. For the purposes of earning points in the Community Benefit and Engagement section of the scoring criteria, applicants will be required to demonstrate how the community benefits provided by their Projects go beyond the required infrastructure components of the AHSC Program. Some examples are below.

Example #1: Throughout the community engagement process, the community was concerned about the lack of healthy food options in the neighborhood. As a result, Project developers included ground floor level retail space including space designed for a small grocery store. Project developers have also designated space on the south side of the building for a small community education garden. Developers have been in initial conversations with a local non-profit that teaches youth gardening classes about using the site as a new teaching location.

Example #2: From the local needs assessment conducted by the local department of public health in partnership with the local hospital, improved pedestrian and bicycle infrastructure between the neighborhood where the Project is proposed, the local elementary school, and a nearby park were identified as a high need and barrier to increased physical activity for local children. As a result, Project developers partnered with the local public health department and the local planning office to conduct a walk audit with parents and students from the school along the likely routes for students between the three destinations (proposed Project, the school, and the park) to identify possible hazards for students as well as others in the neighborhood who might use the route. Through design charrette, a number of options to improve the infrastructure were proposed and the community was given the opportunity to provide comment and vote and their preferred design. Finally, the local department of public health who runs the Safe Routes to Schools Program for the County and the school have entered into a memorandum of understanding to provide educational services and non-infrastructure programing to help increase the rates of walking and biking of students to school.

Example #3: Throughout the community engagement process, access to jobs and job trainings were raised as a high priority. Through ongoing conversations between the community stakeholders and the Project developers, the agreed upon solution was to include a community room on the ground floor of the affordable housing that can be reserved in advance to host meetings, classes, celebrations, etc. This space would be designed as a multi-use room with furniture that can be reconfigured based on the need of the occupants. Project developers are working with a local job readiness and training program to offer evening and weekend classes for residents of the building and the community at large.

Example #4: One of the primary community concerns in the neighborhood his community safety and violence prevention. While the affordable housing development is within walking distance of a number of amenities, residents have expressed fear of violence as a barrier to

accessing these amenities and utilizing the built environment improvements originally proposed. Recognizing that many of the larger community safety concerns are outside the scope of influence of the developers, there are a number of concrete actions that can be taken to help improve safety. The Project developers, partnering with the community, local city planners, and the local police department, utilized a Crime Prevention Through Environmental Design (CPTED) framework to identify additional design features to integrate along some of the likely bike and pedestrian routes to key amenities.

ARB's Interim Guidance on Disadvantaged Communities

Figure E-1 below is excerpted from ARB's Interim Guidance on **Disadvantaged Communities** (Table 3, page 19)[5] and provides a list of commonly identified **Disadvantaged Community** needs. Figure E-2 below was developed by the California Health in All Policies Task Force as part of the Healthy Community Indicators Project[6] and provides an additional set of potential community benefits that may be associated with a proposed project.

These tables should be used as a starting point in identifying potential community benefits of the proposed **Project**. The applicant should identify the estimated timeframe in which these community benefits will be provided.

Figure E-1 **Illustrative Examples of Common Needs of Disadvantaged Communities (as identified by Community Advocates)**
Public Health and Safety Co-Benefits: 1. Reduce health harms (e.g., asthma) suffered disproportionately by low-income residents/communities due to air pollutants 2. Reduce health harms (e.g., obesity) suffered disproportionately by low-income residents/communities due to the built environment (e.g., by providing active transportation opportunities, parks) 3. Increase community safety 4. Reduce heat-related illnesses and increase thermal comfort (e.g., weatherization and solar energy can provide more efficient and affordable air conditioning; urban forestry can reduce heat-island effect) 5. Increase access to parks, greenways, open space, recreation, and other community assets.
Economic Co-Benefits: 1. Create quality jobs and increase family income (e.g., targeted hiring for living wage jobs that provide access to health insurance and retirement benefits with long-term job retention) 2. Increase job readiness and career opportunities (e.g., workforce development programs, on-the-job training, industry-recognized certifications) 3. Revitalize local economies (e.g., increased use of local businesses/small businesses) 4. Reduce housing costs (e.g., affordable housing) 5. Reduce transportation costs (e.g., free or reduced cost transit passes) and improve access to public transportation (e.g., new services in under-served urban and rural communities)

[5] http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/535investments.htm
[6] http://www.cdph.ca.gov/programs/Pages/HealthyCommunityIndicators.aspx#HealthyCommFramwk

6. Reduce energy costs (e.g., weatherization, solar, etc.)
7. Improve transit service levels and reliability on systems/routes that have high use by low-income riders
8. Bring jobs and housing closer together (e.g., affordable housing in transit-oriented development, and in healthy, high-opportunity neighborhoods)
9. Preserve community stability and maintain housing affordability for low-income households (e.g., prioritize projects in jurisdictions with anti-displacement policies in place.)

Environmental Co-Benefits:

1. Reduce exposure to local toxic air contaminants (e.g., provide a buffer between bike/walk paths and corridors with high levels of transportation pollution)
2. Prioritize zero-emission vehicle projects for areas with high diesel air pollution
3. Reduce exposure to pesticides in communities near agricultural operations.

The Healthy Community Framework was developed through a consensus process between 19 State agencies, departments, and offices, with significant input from public stakeholders across California including local health departments, community organizations, academics, advocates, and residents. Each item on the framework is a potential co-benefit, and each is tied to specific indicators that are part of the SGC/CDPH Healthy Community Indicators Project.

Figure E-2
Healthy Communities Framework

A Healthy Community provides for the following through all stages of life:

►Meets basic needs of all

- Safe, sustainable, accessible and affordable transportation options
- Affordable, accessible and nutritious foods and safe drinkable water
- Affordable, high quality, socially integrated and location-efficient housing
- Affordable, accessible and high quality health care
- Complete and livable communities including quality schools, parks and recreational facilities, child care, libraries, financial services and other daily needs
- Access to affordable and safe opportunities for physical activity
- Able to adapt to changing environments, resilient, and prepared for emergencies
- Opportunities for engagement with arts, music and culture

►Quality and sustainability of environment

- Clean air, soil and water, and environments free of excessive noise
- Tobacco- and smoke-free
- Green and open spaces, including healthy tree canopy and agricultural lands
- Minimized toxics, greenhouse gas emissions and waste
- Affordable and sustainable energy use
- Aesthetically pleasing

►Adequate levels of economic, social development

- Living wage, safe and healthy job opportunities for all, and a thriving economy
- Support for healthy development of children and adolescents
- Opportunities for high quality and accessible education

►Health and social equity

►Social relationships that are supportive and respectful

- Robust social and civic engagement
- Socially cohesive and supportive relationships, families, homes and neighborhoods

►Safe communities, free of crime and violence

In addition to identifying the public health and safety, economic, and environmental community benefits, project applicants should also identify how the project and the community benefits it provides increase resiliency effects of a changing climate and how the project makes the community better suited to deal with potential future risks, like sea-level rise, extreme heat, decreased water supply, and more intense and frequent floods and fires.

For example, project elements such as water conservation and recycling, use of natural infrastructure to address changing hydrological systems, and the integration of cooling materials and shade canopies should be identified with information on how the safeguarding potential of those community benefits will be provided over the project life. For more information on Climate Resiliency, please see Appendix F.

The applicant should also consider and identify the recipients who will directly benefit from the proposed project, such as specific **Disadvantaged Communities** as identified by CalEPA or the **Vulnerable Populations** served by the Project. When completing the community benefits section of the application, the applicant should identify the **Disadvantaged Community**, **Vulnerable Population**, or other community benefits will be provided to.

The application should also outline how the community benefit addresses an identified need of the populations served by the **Project**. Ideally, **Projects** should result in community benefits that either address an important need commonly identified by **Disadvantaged Community** residents (as mentioned above), address a key factor that caused the area(s) to be identified as a **Disadvantaged Community** (e.g., unemployment levels or poor air quality), provide community benefits that improve a Healthy Communities Indicator, or provide a direct benefits to a **Vulnerable Population**.

For example, this can be accomplished by a project that directly addresses a key factor that caused an area to be identified as a disadvantaged community or vulnerable population– such as unemployment levels or poor air quality – in the first place.

Vulnerable Populations include, but are not limited to:

- Lower-Income Households*
- Children*
- Elderly*
- Unemployed Individuals*
- Individuals with low educational attainment*
- Individuals who are limited-English proficient**
- Individuals with chronic diseases***
- Individuals with physical or mental disabilities
- Immigrants and refugees

* *Included in the composite ranking of CalEnviroScreen 2.0*
** *Included in the composite ranking of CalEnviroScreen 2.0 as "Linguistic isolation"*
*** *Conditions related to specific chronic disease included in CalEnviroScreen 2.0, "Asthma emergency department visits" and "Low birth-weight infants."*

The following tools are available to help an applicant identify the baseline conditions of a community receiving the project benefits:

- ***Disadvantaged Communities*** *and CalEnviroScreen* - Identification of **Disadvantaged Communities** is based on geographic, socioeconomic, public health, and environmental hazard criteria and utilizes the CalEnviroScreen tool, which includes "burden of pollution" indicators, such as exposures and environmental effects, and "population characteristics," such as sensitive population and socioeconomic factors.
  - ✓ http://oehha.ca.gov/ej/ces2.html
  - ✓ http://www.calepa.ca.gov/EnvJustice/GHGInvest/
  - ✓ http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/535investments.htm

- *Healthy Communities Data and Indicators Project (HCI)* - This framework was developed by the Health in All Policies Task Force with extensive public discussion and input from community stakeholders and public health organizations. The framework identifies 20 key attributes of a healthy communities and provides data, statistical measures, and for planning healthy communities and evaluating the impact of plans, projects, policy, and environmental changes on community health.
  - ✓ http://www.cdph.ca.gov/programs/Pages/HealthyCommunityIndicators.aspx#HealthyCommFramwk

Appendix F. Climate Resiliency

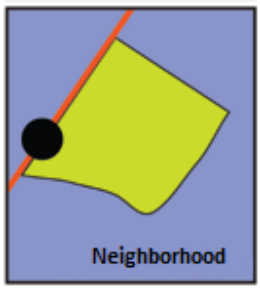
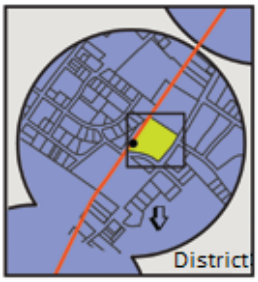
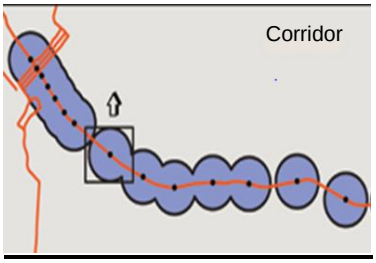
The State of California is dedicated to safeguarding public health and safety of its citizens, the economy, and the environment by increasing many measures of resiliency to climate change. The AHSC Program supports the goals of the Safeguarding California Plan and the State of California Sea-Level Rise Guidance document. Please also refer to Executive Order B-30-15 for more information on state climate resiliency mandates.

Technical resources for proposed projects to address climate resiliency measures can be found in the following documents:

Safeguarding California Plan http://resources.ca.gov/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf
The Safeguarding California Plan provides policy guidance for state decision makers, and is part of continuing efforts to reduce impacts and prepare for climate risks. This plan, which updates the 2009 California Climate Adaptation Strategy, highlights climate risks in nine sectors in California, discusses progress to date, and makes realistic sector-specific and cross-sector recommendations. ▪ Agriculture ▪ Biodiversity and Habitat ▪ Emergency Management ▪ Energy ▪ Forestry ▪ Ocean and Coastal Ecosystems and Resources ▪ Public Health ▪ Transportation ▪ Water
California Adaptation Planning Guide: Planning for Adaptive Communities http://resources.ca.gov/docs/climate/01APG_Planning_for_Adaptive_Communities.pdf
This document presents the basis for climate change adaptation planning and introduces a step-by-step process for local and regional climate vulnerability assessment and adaptation strategy development. All communities seeking climate adaptation planning guidance should start with this document.
State of California Sea-Level Rise (SLR) Guidance Document http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf
The California Ocean Protection Council adopted a 2011 resolution stating that state agencies, as well as non-state entities implementing projects or programs funded by the state or on state property, should incorporate consideration of the risks posed by SLR into all decisions regarding areas or programs potentially affected by SLR. The resolution also states that state agencies should carefully invest public funds and incentivize SLR risk reduction by following the recommendations within this resolution when providing funding to non-state entities, to the extent permissible by law. This SLR Guidance Document provides guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California. Additional Planning Considerations Concerning SLR include but are not limited to: ▪ Storms and Extreme Events ▪ Changing Shorelines ▪ Changes in Tectonic Activity ▪ Trends in Local Sea Level

Cal-Adapt www.cal-adapt.org
Cal-Adapt is a web-based climate adaptation planning tool. Cal-Adapt allows the user to identify potential climate change risks in specific geographic areas throughout the state. Users can either query by location, or click on an interactive map to explore what climate impacts are projected to occur in their area of interest.
Addressing Climate Change Adaptation in Regional Transportation Plans http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/documents/FR3_CA_Climate_Change_Adaptation_Guide_2013-02-26_.pdf#zoom=65
This document provides a clear methodology for regional agencies to address climate change impacts through adaptation of transportation infrastructure. The purpose of this manual is to expand knowledge and develop tools that will assist California MPOs and RTPAs with incorporating climate change impacts into planning, design, engineering, and operational decisions.
Guidance for Incorporating Sea Level Rise in the Project Initiation Document Process http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/documents/guide_incorp_slr.pdf#zoom=65
Caltrans has developed a guidance document for incorporating sea level rise into the transportation project planning process. The documents include technical guidance for the engineering design and a planning level document to determine what projects should consider sea level rise. This guidance begins to incorporate sea level rise into the planning and design of projects vulnerable to the effects of sea level rise. The guidance provides sea level rise assumptions for the state along with criteria for determining when sea level rise should be incorporated into projects.
Other Resources related to Adaptation Planning and Implementation
▪ Climate Action for Health: Integrating Public Health into Climate Action ▪ California Multi-Hazard Mitigation Plan 2013 ▪ Preparing California for Extreme Heat 2013 ▪ California Local Energy Assurance Planning (CaLEAP) Tool -The CaLEAP program is a California Energy Commission-sponsored project to assist local governments in preparing plans to ensure that key assets are resilient to disaster events that impact energy and help local governments develop Energy Assurance Plans (EAPs). ▪ CalEMA's MyPlan - MyPlan is a map service designed to be a simple interface to California natural hazard data products. ▪ CalEMA's MyHazards - a map service designed to identify hazards that exist in your area and learn how to reduce risks.

Appendix G: Examples of TODs

TOD Neighborhood	TOD District	Transit Corridor
Focus on projects improving connectivity and accessibility of public transit, active transportation infrastructure and affordable housing and/or mixed-use areas. • Most likely to be located within a predominantly multifamily or moderate-to-high density residential or residential mixed-use neighborhood • Projects to improve and promote transit accessibility with improvements to a neighborhood with a variety of supportive infrastructure improvements focused on connecting residents and key destinations, including neighborhood schools and neighborhood-scale retail, for example: ✓ Active transportation improvements to incentivize walking and biking; ✓ Safe and accessible street improvements, improving visibility of neighborhood pathways, improvements to transit stations and express bus stops, neighborhood schools and parks, and to transit. 	Could consist of similar types of improvements in a TOD Neighborhood of a metropolitan area, but impacting a larger geographic area. • An area with high employment intensity, mixed uses, and either including, or providing accessibility to, areas of high residential density. • Improvements supporting a major transit hub area. • Would typically include business and commercial areas served by a multi-modal or inter-modal regional transit or mobility hub(s). • Improvements support significant activity nodes within a sub-region or region. • Includes “first mile–last mile” improvements to leverage transit access. 	Projects focused on improving operation of a transit system relative to activity nodes, improving the capacity to attract and maintain ridership sufficient to achieve and sustain a competitive level of service along a Transit Corridor(s). • Projects may include similar types of improvements as in TOD Neighborhood Area or District, but focused on the **Transit Corridor**, including operation of transit service • Activity nodes should include high employment intensity, mixed uses, providing accessibility to, areas of high residential density.