

**CALIFORNIA AIR POLLUTION CONTROL OFFICERS ASSOCIATION**

**REQUEST FOR PROPOSALS #2009-1**

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**Purpose**

The California Air Pollution Control Officers Association (CAPCOA) requests proposals demonstrating your firm's interest, qualifications, and ability to provide a technical analysis of greenhouse gas (GHG) mitigation measures. In the preparation of this Request for Proposals (RFP) the words "Respondent," "Proposer," "Contractor," and "Consultant" may be used interchangeably.

The goal of this RFP is to obtain expert technical support to assess and quantify the greenhouse gas (GHG) emission reductions (control efficiencies) associated with a range of GHG mitigation strategies. The Respondent must demonstrate experience identifying GHG mitigation measures as part of CEQA documents, for example, and knowledge of control efficiencies associated with the mitigation measures identified. More specifically, the proposal should demonstrate the Respondent's ability to evaluate the GHG mitigation measures contained in Attachment 1 to provide control efficiencies for GHG emissions, criteria pollutant and ROG emissions, and air toxics. Further, the Respondent should indicate expertise in identifying other GHG mitigation measures not specifically identified in Attachment 1.

Funding is being made available to CAPCOA through consortium of agencies, and the total amount available for this project is not yet known. As a result, the RFP requests a cost proposal with varying levels of involvement so the final project can most closely match the available funding.

**Index** - The following are contained in this RFP:

Section I	Background/Information/Schedule of Events
Section II	Work Statement/Schedule
Section III	Required Qualifications
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Section V	Proposal Evaluation/Selection Criteria
Section VI	Other Conditions
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**SECTION I: BACKGROUND/INFORMATION/SCHEDULE OF EVENTS**

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Since the adoption of AB 32, it has become clear that GHGs are a topic that should be analyzed as part of a California Environmental Quality Act (CEQA) document. The California Attorney General's Office has submitted comment letters on a number of CEQA documents because they failed to analyze GHGs, determine significance of GHG emissions, and/or identified sufficient mitigation measures. More recently, the California Office of Planning and Research (OPR) has developed amendments to the CEQA Guidelines addressing GHGs in CEQA documents, which were forwarded to the Resources Agency in April 2009. As a result of these past developments,

it has become increasingly important to identify GHG analysis methodologies, significance thresholds, and mitigation measures. This RFP addresses the need to identify GHG mitigation measures.

**Timeline**

The following timeline will guide this RFP Process. The due date for all proposals is firm. The other dates are tentative and subject to change.

Date/Time	Event
June 15, 2009	Release of RFP
June 29, 2009	Optional pre-bid teleconference*
July 10, 4:00 p.m.	Proposals due
Week of July 20, 2009	Interview of finalists (if necessary)
Week of July 27, 2009	Contractor selected
August 17, 2009	Contract signed
December 31, 2009	Draft work product completed
February 26, 2010	Final work product completed

\*Respondents planning on participating on the optional pre-bid teleconference should contact John Yu at 916-441-5700 or john@capcoa.org on or before June 24, 2009. Call-in details will be provided.

**Contacts:**

Questions regarding the content or intent of this RFP or on procedural matters should be addressed to:

**Administrative:**

Mel Zeldin  
 Executive Director  
 California Air Pollution Control Officers  
 Association  
 1107 Ninth Street, Suite 210  
 Sacramento, CA 95814  
 Phone: (916) 441-5700  
 Fax: (916) 441-5708  
 melz@capcoa.org

**Technical:**

Larry Allen  
 Air Pollution Control Officer  
 San Luis Obispo APCD  
 3433 Roberto Court  
 San Luis Obispo, CA 93401-7126  
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**Deadline**

Four hardcopies and an electronic copy of all responses to this RFP must be received at the CAPCOA office (listed above, as the “Administrative” address) not later than:

**4:00 p.m., Friday, July 10, 2009**

- No responses will be accepted after the time and date indicated above.
- All components as specified in Section IV must be addressed and included in the proposal, except the component indicated as “optional.”
- Failure to include all requested information may result in rejection.

- Minor or inconsequential deviations may be waived upon approval by CAPCOA.
- “RFP #2009-1” should be clearly marked on the submittal envelope.

## **SECTION II: WORK STATEMENT/SCHEDULE**

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### **Work Statement**

The following describes the tasks and deliverables to be performed under this project. There is a **basic** requirement and several **optional** components. The optional components must be included in the proposal, and will be primarily used to segment the project to match the available funding.

#### **Task #1: Review of Existing, and Identification of Additional, Measures**

Basic: Review CAPCOA Greenhouse Gas (GHG) mitigation measures document, Attachment 1, and determine if there are any measures not included in the document that should be included; if so, identify them and indicate their appropriate priority for quantification. Assess the prioritization of each existing measure to determine whether there are any measures that have been given a low priority for quantification that should be given a higher priority for quantification or vice versa.

**Deliverable:** Provide written comments showing the assessment and the justification for any such recommendations.

#### **Task #2: Literature Search and Quantification Methodologies**

Basic: Conduct a literature search to identify the best available methodologies which would provide the scientific basis for quantifying GHG emission reductions for the proposed GHG mitigation measures and any other potential GHG mitigation measures discovered during the literature search. Also, review existing quantifications of measures in Attachment 1 which have been conducted by Sacramento Metro AQMD or other air district and determine if previous results appear valid or need modification.

#### **Deliverables:**

1. Provide a written summary to CAPCOA of results of the literature search and any potential new operational mitigation measures to be used to support task #3.
2. Provide an analysis showing which measures quantified previously by air districts are appropriately quantified by specific pollutant; and which measures need modification.
3. Provide an outline to CAPCOA of the strategies and methodologies being planned to complete task #3.

#### **Task #3: Quantification and Assessment of Measures**

Basic: Quantify emission reductions and assign a percent reduction for each GHG mitigation measure in Attachment 1, Group A. (For any measure and pollutant for which the Task #2 analysis showed that the previous air district results are appropriate to retain, please annotate such retention as part of the deliverables.) For each of these measures:

1. Quantify the expected percent reduction in emissions of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>).
2. Identify whether the effectiveness of the measure would vary depending on the region where it was implemented.
3. Identify whether the measure would have an absolute emission reduction value or whether there would be a range of reduction values. If the reduction value could vary, identify the factors that would cause the variation and include formulas, tables, or other methodologies that allow for an emission reduction to be calculated in a variety of land use scenarios.

**Option 1.1:** Same as the basic, but also includes GHG mitigation measures in Group B.

**Option 1.2:** Same as Option 1a, but also includes all additional measures identified in Task #1.

**Option 2.0:** Same as the basic, but the quantification also includes criteria pollutants and reactive organic gases (ROG).

**Option 2.1:** Same as 2.0, but also includes GHG mitigation measures in Group B.

**Option 2.2:** Same as 2.1, but also includes all additional measures identified in Task #1.

**Option 3.0:** Same as 2.0, but the quantification is expanded to include air toxics; if quantification is problematic, a qualitative evaluation is acceptable.

**Option 3.1:** Same as 3.0, but also includes GHG mitigation measures in Group B.

**Option 3.2:** Same as 3.1, but includes all additional measures identified in Task #1.

**Deliverables:**

1. Provide a draft report identifying each measure's emission reduction quantification and percent reduction assigned. The report should include a master table listing each mitigation measure, based on the mitigation measures in Attachment 1, and the expected reductions for each of the pollutants specified in Task #3 above, for the basic or option level determined under the contract. The report should also provide a complete description of the methods and reference sources used to calculate the emission reductions.
2. Provide a final report incorporating CAPCOA's comments on the draft report.

**Prior Efforts:** Respondents should be aware that previous work in this area has been done. The Sacramento Metropolitan Air Quality Management District completed a quantification effort for some greenhouse gas mitigation strategies in 2007. For information about that quantification effort, please contact Joseph Hurley ([jhurley@airquality.org](mailto:jhurley@airquality.org), 916.874.2694). In addition, San Joaquin Valley Air Pollution Control District has completed some quantification efforts. Please contact Dan Barber ([Daniel.Barber@valleyair.org](mailto:Daniel.Barber@valleyair.org), 559.230.6000).

**Schedule for Deliverables:**

The following schedule indicates the expected meetings and deliverable dates:

Contract Start Date (Approximate)	August 17, 2009
Kickoff Meeting in Sacramento	Week of August 25, 2009
Task #1 – Written comments due	September 25, 2009

Task #2 – Summary of Literature Search	October 15, 2009
Task #2 – Outline of Approach for Task #3	October 22, 2009
Mid-project Meeting in Sacramento	Week of Nov 2, 2009
Draft Final Report	December 31, 2009
Contractor’s Briefing to CAPCOA in Sacramento	Week of January 7, 2010
CAPCOA Comments due to Contractor	January 31, 2010
Final Report Due	February 26, 2010

### **SECTION III: REQUIRED QUALIFICATIONS**

The Respondent must demonstrate sufficient qualifications and experience in the following areas:

- 1) Knowledge of CEQA
- 2) Evaluation of commercial/residential projects under CEQA
- 3) Determination, evaluation, and/or assessment of CEQA mitigations and their control efficiencies
- 4) Knowledge of AB 32 and strategies to reduce greenhouse gases
- 5) Calculation of emissions and/or emissions inventories
- 6) Familiarity with criteria pollutant and air toxic emission

In providing qualifications, Respondents should provide sufficient explanation and specific project experience. Such demonstration must apply to at least one person on the project team for each area specified above.

### **SECTION IV: PROPOSAL SUBMITTAL REQUIREMENTS**

Submitted proposals must contain:

1. A cover letter including the name, address, and telephone number of the Respondent, and signed by the person or persons authorized to represent the firm. Firm contact information should also include a designated technical and administrative contact person.
2. A technical proposal (labeled as Volume 1) to include the following elements:
  - Sufficient discussion to demonstrate an understanding of the proposed project.
  - A reasoned approach to carry out the tasks listed in the work statement in Section II.
  - Personnel (by name) assigned to the project team, to include:
    - Designation of the project lead person
    - The title of each person on the project team
    - Identification of any subcontractors
    - A statement of the education and training program provided by, or required of, the staff identified for participation in the project, particularly with reference to the subject matter of this RFP.

(Note: substitution of the project lead, key team members, and subcontractors will not be permitted without prior written consent by CAPCOA.)
  - Demonstration of qualifications and experience:
    - Provide a resume or similar statement for each team member and subcontractor.

- Demonstrate how each of the required qualification areas in Section III is covered by at least one project team member.
  - Provide a summary of your firm's general qualifications to meet required qualifications and fulfill statement of work, including additional firm personnel and resources beyond those who may be assigned to the project.
  - Provide a short and concise summary of documents, if any, prepared by the Respondent during the last two years demonstrating knowledge and expertise identifying GHG mitigation measures and their control efficiencies.
  - A description of the proposed project management and organization:
    - Describe the Respondent's organizational structure using an organization chart or matrix showing the structure of the firm illustrating who reports to whom, as well as the relationship of all project personnel to the project manager.
    - Describe project monitoring or tracking procedures used to ensure that projects will be completed on time.
    - Describe the proposed management structure, program monitoring procedures, and organization of the proposed team that would be working on this project
    - Provide a level of effort for each member of the project team (both staff and any subcontractors).
  - A list of clients and their phone numbers.
  - An assessment of potential conflict of interest:
 

Address possible conflicts of interest with other clients affected by actions performed by the firm on behalf of CAPCOA. In particular, summarize any conflict of interest identification and resolution procedures and/or protocols adopted or established by your firm. Although the Respondent will not be automatically disqualified by reason of work performed for such firms, CAPCOA reserves the right to consider the nature and extent of such work in evaluating the Proposal.
3. A cost proposal and certifications (labeled as Volume 2) to include the following elements:
- A breakdown of costs, by task, as specified in Section 2 for the basic project. Costs should specify:
    - Labor costs by fully burdened hourly billing rate by staff category level and the number of proposed hours for each category.
    - Subcontractor costs
    - Travel costs
    - Other direct costs (e.g., postage, copying, etc) [Provide a basis of estimate for these costs. CAPCOA will not pay for any equipment or services unless adequately justified and documented. Any equipment or products paid for by CAPCOA will become property of CAPCOA.]
  - A breakdown of costs, by task, as specified separately for options 1.1, 1.2, 2.0, 2.1, 2.2, 3.0, 3.1, and 3.2.
 

(Note: Please specify whether the proposed costs represent a reduced rate for public entity clients. Also, CAPCOA recognizes that the costs for options 1.2, 2.2, and 3.2 depend on the results of Task #1; therefore reasonable estimates are acceptable. Associated assumptions should be explained.)
  - Certifications:
    - All Respondents must complete Attachment #2, References
    - All Respondents must complete Attachment #3, Litigation Involvement.

- All Respondents must complete Attachment #4, Assurance and Certification
  - State of Corporation and Tax Payer Information  
Federal Income Tax Law requires CAPCOA to file information returns for “services rendered” by certain individuals and parties. The Tax Law Code provides that the Taxpayer Identification Number of the “payment recipient” (consultant under contract) must be furnished upon request to the “service recipient” (CAPCOA). In order to comply with the Tax Law reporting responsibilities and to protect consultants under contract from withholding or penalty, Proposals must include a W-9 Form.
4. (Optional) Sample document (labeled as Volume 3)
- Respondent may provide any examples of previous work performed that are directly related to the current RFP.

## **SECTION V: PROPOSAL EVALUATION/SELECTION CRITERIA**

### **Proposal Evaluation**

A selection committee composed of staff from CAPCOA and/or its member agencies will evaluate the proposals for responsiveness and completeness. Each member of the evaluation panel shall be accorded equal weight in his or her rating of proposals. The evaluation panel members shall evaluate the proposals according to the specified criteria and numerical weightings set forth below.

### **Evaluation Criteria**

Criteria for evaluating responses will include:

	<b>Evaluation Criteria</b>	<b>Points Possible</b>
A	Demonstrated Experience	25
B	Understanding of, and Responsiveness to the RFP	25
C	Reputation of Respondent (References)	10
D	Project Management, Organization and Technical Writing	15
E	Cost Proposal	25
	Total	100

### **Award Notification**

The CAPCOA Executive Director or his designee will notify both the successful and unsuccessful Respondents in writing. The CAPCOA Executive Director or his designee will attempt to notify all Respondents by phone on the same day. If the Respondents cannot be reached by phone, a notification will be faxed to the Respondent on the same day. CAPCOA will retain documentation verifying the notification.

## **SECTION VI: OTHER CONDITIONS**

### **Limitations**

This RFP does not commit CAPCOA to award a contract, to pay any costs incurred in the preparation of proposals, or to procure or contract for services or supplies. Costs for developing proposals are entirely the responsibility of the Respondent and shall not be chargeable to CAPCOA. All proposals become the property of CAPCOA and will not be returned to the Respondents.

**Ambiguity**

If Respondent discovers any ambiguity, conflict, discrepancy, omission, or other error in the RFP, the Respondent shall immediately notify CAPCOA of such error and request such modification or clarification of the document.

CAPCOA may modify the RFP prior to the deadline by issuance of a revision to all parties who have received the RFP.

**CAPCOA Discretion**

CAPCOA reserves the right, without limitation, to reject any and all proposals received without further review if:

- It is not prepared in the format described;
- Required submittals are not included;
- Directions for submitting proposals are not followed; or
- It is signed by an individual not authorized to represent the firm.

CAPCOA also reserves the right, without limitation, to waive any minor informality or irregularity in any proposal or to cancel awarding of a contract and advertise for new proposals, all as the public good may require.

**Contract**

It is understood that the successful Respondent will enter into a professional services contract with CAPCOA.

**SECTION VII: FUNDING**

Funding is being made available to CAPCOA through consortium of agencies, and the total amount available for this project is not yet known. As a result, the level of contract will be that most closely aligning the basic or optional program level with the funding available. It is envisioned that a probable range of funding levels will be between \$50,000 and \$100,000.

Measure #	Measure Name	Measure Description	Reduction Methodology and Source	Priority Average
<b>Bicycle/Pedestrian/Transit Measures</b>				
1	<b>Pedestrian network</b> , including:	The project provides a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site. Minimize pedestrian barriers.	Because this measure also eliminates physical barriers between residential and non-residential uses that impede bicycle or pedestrian circulation, this measure is similar in nature to 6. As cited in the TIAX report, the CCAP guidebook attributes a 1% reduction in VMT. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.	4.3
	• Traffic calming	Project design includes pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways are designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming features.	SMAQMD appears to have the best information available as reflected in their Guidance for Land Use Emission Reductions, which allocates reductions by the percent of intersections with traffic calming improvements as indicated in the table below. We were unable to locate more specific information. Source: Draft Update to SMAQMD Guidance for Land Use Emission Reductions.	2.8
	• Pedestrian design	Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking. Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points. Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances.	The CCAP guidebook attributes between 1% and 4% reduction from all pedestrian measures. There is no specific information related to providing shaded pedestrian pathways between transit facilities and building entrances. It could be said that providing covered carpool/vanpool spaces near the entrance to the buildings has the similar goal of increasing the comfort of the user while walking to the building entrance. The TIAX report assigns a 1% reduction to the covered carpool measure. Transit usage is most affected by the headway times and the proximity to the destination. Therefore, it would seem reasonable to assume .5% Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by Tax on behalf of SMAQMD.	3
	• Orientation toward planned or existing transit, bikeway, or pedestrian corridor	Project is oriented towards planned or existing transit, bicycle, or pedestrian corridor. Setback distance is minimized.	The CCAP guidebook attributes a 0.5 % reduction per 1% improvement in transit frequency. Based on a case study presented in the CCAP report, a 10% increase in transit rider ship would result in a 0.5% reduction. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by Tax on behalf of SMAQMD.	3.0
	• Project siting	Site projects to increase the potential for pedestrians to walk and bike to destinations.		3.6

2	<b>Bike lane street design</b> , including:	Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.		<b>3.9</b>
	• Intersection design	Incorporate bicycle-friendly intersections into street design.		<b>2.9</b>
	• Proximity to bike path/bike lanes	Entire project is located within 1/2 mile of an existing Class I or Class II bike lane and project design includes a comparable network that connects the project uses to the existing offsite facility.	As a rule of thumb, the CCAP guidebook attributes a 1% to 5% reduction associated with the use of bicycles, which reflects the assumption that their use is typically for shorter trips. Based on the CCAP guidebook, the TIAX report allots 2.5% reduction for all bicycle-related measures and a 1/4 of that for this measure alone. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.	<b>4.1</b>
	• Land dedication for bike trails	Larger projects may be required to provide for, contribute to, or dedicate land for the provision of off-site bicycle trails linking the project to designated bicycle commuting routes in accordance with an adopted citywide or countrywide bikeway plan.		<b>2.6</b>
3	<b>Bike parking</b> , including: • Non-residential:	Non-residential projects provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand.	As a rule of thumb, the Center for Clean Air Policy (CCAP) guidebook attributes a 1% to 5% reduction associated with the use of bicycles, which reflects the assumption that their use is typically for shorter trips. Based on the CCAP guidebook, the TIAX report allots 2.5% reduction for all bicycle-related measures and a 1/4 of that for this measure alone. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.	<b>3.6</b>
	• Multi-unit residential	Long-term bicycle parking is provided at apartment complexes or condominiums without garages.		<b>2.9</b>
	• Bike parking near transit centers	Develop vehicle and bicycle all day parking lots near rail stations, transit stops, and freeway access points.		<b>3.0</b>
4	<b>End of trip facilities</b>	Non-residential projects provide "end-of-trip" facilities including showers, lockers, and changing space.	The Transportation Demand Management (TDM) Encyclopedia allows a 2-5% reduction for worksite showers and lockers. The CCAP guidebook attributes a 1% to 5% reduction associated with the use of bicycles, which reflects the assumption that their use is typically for shorter trips. Based on the CCAP guidebook, the TIAX report allots 2.5% reduction for all bicycle-related measures and a 1/4 of that for this measure alone. Source: TDM Encyclopedia May 11, 2006; CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.	<b>3.5</b>
5	<b>Bus shelter for planned and existing transit service</b>	Bus or Streetcar service provides headways of one hour or less for stops within 1/4 mile; project provides safe and convenient bicycle/pedestrian access to transit stop(s) and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting).	This reduction is based on the assumption that the measure applies to providing bus stop route information & benches. Emission reductions are based on conclusion obtained from the TIAX report and the CCAP guidebook. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.	<b>3.1</b>

Parking Measures				
6	<b>Paid parking incentives</b>	Employee and/or customer paid parking system.	Shoupe, 2005. Parking Cash Out. [\$5/day reduces drive-alone share by 21% for commuters to downtown LA, with elasticity of -0.18 (e.g., if price increases 10%, then solo driving goes down by 1.8% more (Wilson 1991)) [Reported 1-10% reduction in trips to central city sites, and 2-4% in suburban sites (Urban Institute)].	3.8
7	<b>Parking cash out</b>	Employer provides employees with a choice of forgoing subsidized parking for a cash payment equivalent to the cost of the parking space to the employer.	Shoupe, 2005. Parking Cash Out. [2/3 as effective as charging for parking (8 case studies - chapter 4, 13% reduction in solo driver trips, -12% VMT per employee, and -11% in vehicle trips per commuter)].	3.6
8	<b>Tree planting</b> , including: • Residential, • Commercial Schools Parking areas	Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance. Provide parking lot areas with 50% tree cover within 10 years of construction, in particular low emitting, low maintenance, native drought resistant trees. Reduces urban heat island effect and requirement for air conditioning, effective when combined with other measures (e.g., electrical maintenance equipment and reflective paving material).	Annual net CO2 reduction of 3.1 kg/m2 canopy cover/Moderate (McPherson 2001).	3.5
9	<b>Minimum parking</b>	Provide minimum amount of parking required including parking reduction beyond code. Special review of parking required.	Nelson/Nygaard, 2005. pg. 16. (trip reduction = ((actual parking provision - ITE parking generation rate) / ITE parking generation rate) *0.5). (Note: this formula is not verbatim from that cited in the Nelson/Nygaard document, since the formula provided did not make sense for computing trip reductions. This is what EDAW believes was meant, and this method actually works.)	3.4
10	<b>Park &amp; ride lot</b>	Construction/enhancement of a Park and Ride lot.		3.3
11	<b>Parking for electric vehicles</b> , including:	Provide two sets of conductive/inductive electric vehicle charging stations and signage prohibiting parking for non-electric vehicles.		3.0
	• Reduced/no parking fee for EVs/CNG vehicles	Provide a reduced/no parking fee for EVs/CNG vehicles.		2.8

Site Design measures				
12	<b>Light-colored paving,</b> including:	Project provides light-colored paving(e.g. increased albedo pavement).	NA/Low: Increasing the albedo of 1,250 km of pavement by 0.25 would save cooling energy worth \$15M per year.	<b>3.8</b>
	<ul style="list-style-type: none"> <li>• Non-roof surfaces</li> </ul>	Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30% of the site's non-roof impervious surfaces, including parking lots, walkways, plazas, etc.; OR place a minimum of 50% of parking spaces underground or covered by structured parking; OR use an open-grid pavement system (less than 50% impervious) for a minimum of 50% of the parking lot area. Unshaded parking lot areas, driveways, fire lanes, and other paved areas have a minimum albedo of .3 or greater.	Reductions are based on the Sustainable Site credits (SS Credit 7.1) documented in the Leadership in Energy & Environmental Design (LEED), Green Building Rating System for New Constructions and Major Renovations, Version 2.2, October 2005. The reduction assumes that the project provides any combination of the following strategies for 50% of the site landscape (including roads, sidewalks, courtyards and parking lots): Shade (within 5 years of occupancy); paving materials with a solar Reflectance Index (SRI) of at least 29; open grid pavement system.	
13	<b>Landscaping,</b> including:	Landscape with native drought-resistant species (plants, trees and bushes) to reduce the demand for gas powered landscape maintenance equipment. Project shall use drought resistant native trees, trees with low emissions and high carbon sequestration potential. Evergreen trees on the north and west sides afford the best protection from the setting summer sun and cold winter winds. Additional considerations include the use of deciduous trees on the south side of the house that will admit summer sun; evergreen plantings on the north side will slow cold winter winds; constructing a natural planted channel to funnel summer cooling breezes into the house. Neighborhood CCR's not requiring that front and side yards of single family homes be planted with turf grass. Vegetable gardens, bunch grass, and low-water landscaping shall also be permitted, or even encouraged.		<b>3.1</b>
	<ul style="list-style-type: none"> <li>• Drought resistant species</li> </ul>			
	<ul style="list-style-type: none"> <li>• Water efficient landscapes</li> </ul>	Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls. Create Water efficient landscapes.		<b>2.9</b>
14	<b>Neighborhood electric vehicle access and light vehicle networks</b>	Make physical development consistent with requirements for neighborhood electric vehicles (NEV). Create local "light vehicle" networks, such as NEV systems.	No direct empirical support for this measure available. May not be relevant/applicable in the near term, until NEVs become more common/inexpensive. Current studies show that for most trips, NEVs do not replace gas-fueled vehicles as the primary vehicle. For the purposes of providing incentives for developers to promote NEV use, assume that a neighborhood with internal NEV connections only receives 0.5 points, with external connections to other surrounding uses, 1.0 point, with external connections to other NEV networks, 1.5 points.	<b>3.4</b>

15	Residential density	Project provides high-density residential development.	Nelson/Nygaard, 2005. pg 11. (trip reduction = $0.6 \cdot (1 - (19749 \cdot ((4.814 + \text{households per residential acre}) / (4.814 + 7.14))^{-.639}) / 25914)$ (Holtzclaw et al 2002). Asymptote of 60% reduction. <b>Relative to a 3 du/ac development.</b> Note that there is no direct empirical support for the added reductions for proximity to transit; the 60% asymptote in this equation is to correct for double-counting from transit services, mix-of-uses, and bicycle and pedestrian connections (which could contribute another 40% reduction).	3.9
16	Affordable housing component	Residential development projects of 5 or more dwelling units provide a deed-restricted low-income housing component on-site (as defined in Ch 22.35 of Sacramento County Ordinance Code) [Developers who pay into In-Lieu Fee Programs are not considered eligible to receive credit for this measure].	Nelson/Nygaard, 2005. pg. 15. (trip reduction = % units deed-restricted below market rate housing * 0.04).	3.1
<b>Mixed-use &amp; Land Use Measures</b>				
17	Urban mixed-use, including:	Development of projects predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with functional interrelationships and a coherent physical design.	Nelson/Nygaard, 2005. pg. 12. (trip reduction = $(1 - (\text{ABS}(1.5 \cdot h - e) / (1.5 \cdot h + e)) - 0.25) / 0.25 \cdot 0.03$ ) where h = study area housing units, e = study area employment (Criterion & Fehr & Peers, 2001). Asymptote of 9% reduction, and an ideal 1.5 jobs per household.	4.1
	• Office/Mixed-use density	Project provides high density office or mixed-use proximate to transit. Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.	No empirical support for this measure, beyond that provided by SMAQMD in its draft guidance. According to Nelson/Nygaard, 2005, trip generation at the non-residential end is influenced by density to a much lesser degree, so this is fairly consistent with the transit reductions applied in measure 20.	4.1
18	Suburban mixed-use	Have at least three of the following on site and/or offsite within ¼ mile: Residential Development, Retail Development, Park, Open Space, or Office.	By definition, this type of land use implies that housing availability is greater than employment availability. On a project-by-project basis, use formula :Nelson/Nygaard, 2005. pg. 12. (trip reduction = $(1 - (\text{ABS}(1.5 \cdot h - e) / (1.5 \cdot h + e)) - 0.25) / 0.25 \cdot 0.03$ ) where h = study area housing units, e = study area employment (Criterion & Fehr & Peers, 2001) to obtain higher than 3% reduction. Otherwise, assume 3% max reduction.	4.0

<b>Building Component Measures</b>				
19	<b>Onsite renewable energy system</b>	Project provides onsite renewable energy system(s).	Reductions are based on the Energy & Atmosphere credits (EA Credit 2) documented in the Leadership in Energy & Environmental Design (LEED), Green Building Rating System for New Constructions and Major Renovations, Version 2.2, October 2005. The reduction assumes that at least 12.5% of the buildings total energy use (as expressed as a fraction of annual energy cost) is supplied through the use of on-site renewable energy systems. Alternatively a project may use the Department of Energy (DOE) Commercial Buildings Energy Consumption Survey (CBECS) database to determine the estimated electricity use. Non-polluting and renewable energy potential includes solar, wind, geothermal, low-impact hydro, biomass and bio-gas strategies. When applying these strategies, projects may take advantage of net metering with the local utility. The measure is enforceable through LEED Letter certification and building design calculations demonstrating that at least 12.5% of total energy costs are supplied by the renewable energy system(s).	<b>4.5</b>
20	<b>Solar water-heaters</b>	Project provides solar water heaters.		<b>2.6</b>
21	<b>Exceed Title 24</b>	Project Exceeds title 24 requirements by 20%.	Reductions assume at least a 20% over Title 24 requirements, as calculated by the Sacramento Municipal Utility District (SMUD, 2006 Advantage Home Program Overview). The proposed point value for this operational mitigation measure is 1.0, consistent with the rating assigned to this measure by SMAQMD Land Use Mitigation Measures. Total compliance margin is based on energy savings relative to the total energy budget and cooling energy budget of the Title 24 Standard design home. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, specifications and any available manufacturer's documentation on the devices to be used. This measure's successful implementation may be verified by a site review following construction to confirm that the project as built contains ozone destruction catalysts as described in the Air Quality Plan.	<b>3.4</b>
22	<b>Shading mechanisms</b>	Install energy-reducing shading mechanisms for windows, porch, patio and walkway overhangs.	Up to \$450 annual energy savings (Energy Star 2007).	<b>3.0</b>

23	<b>Roofs</b> , including: • Energy star roof	Install Energy Star labeled roof materials.	Reductions are based on the credits documented in the SMAQMD Guidance for Land Use Reductions and consistent with the point rating now set at 0.5 for qualified roof products. Baseline conditions assume indirect emission reduction through more even temperature control of environmental space. Approach is enforceable and may be monitored through site review and/or consultation with lead agency that roofing materials match those described in the SMAQMD Guidance for Land Use Reductions.	
	• Cool roofs	Install light colored "cool" roofs and cool pavements.		<b>3.0</b>
	• Green roofs	Install a vegetated roof that covers at least 50% of roof area.	Reductions are based on the Energy & Atmosphere credits (EA Credit 2) documented in the Leadership in Energy & Environmental Design (LEED), Green Building Rating System for New Constructions and Major Renovations, Version 2.2, October 2005. The reduction assumes that a vegetated roof is installed on a least 50% of the roof area or that a combination high albedo and vegetated roof surface is installed that meets the following standard: $(\text{Area of SRI Roof}/0.75) + (\text{Area of vegetated roof}/0.5) \geq \text{Total Roof Area}$ .	<b>2.9</b>
24	<b>Solar orientation</b>	Orient 75 or more percent of homes and/or buildings to face either north or south (within 30 degrees of N/S).	Reduction assumes that proper solar orientation can produce a total energy savings of 11% to 16.5% and reduce heating fuel consumption by up to 25% (Local Government Commission, 1998). Mitigation measure points are based on the credits documented in the SMAQMD Guidance for Land Use Reductions and consistent with the point rating now set at 0.5 for proper orientation. Reduction methodology will be based on quantification of the difference in solar radiance from development with designed orientations (75 or more percent of homes and/or buildings to face within 30 degrees either north or south) compared to evenly distributed orientations. Project compliance will be based on the percentage of orientation buildings designed with proper design features (overhangs, landscaping).	<b>3.6</b>
25	<b>Thermal integrity of buildings</b>	Improve the thermal integrity of buildings, and reduce the thermal load with automated time clocks, occupant sensors, or energy-reducing programmable thermostats that automatically adjust temperature settings.	Programmable thermostats have \$100 annual savings in energy costs (Energy Star 2007).	<b>3.0</b>
26	<b>Energy efficient appliances</b> , including:	Project to use energy efficient appliances (e.g. Energy Star).		
	• Ceiling/whole-house fans	Install energy-reducing ceiling/whole-house fans.	50% more efficient than conventional fans (Energy Star 2007).	<b>3.1</b>
	• Low water use appliances	Require the installation of low-water use appliances.	Avoided water agency cost for using water-efficient kitchen pre-rinse spray valves of \$65.18 per acre-foot.	<b>2.5</b>

27	<b>Building materials,</b> including: • Locally made building materials	Use locally made building materials for construction of the project and associated infrastructure.		<b>2.6</b>
	• "Green" building materials	Project uses materials which are resource efficient, recycled, with long life cycles and manufactured in an environmentally friendly way.		<b>3.4</b>
28	<b>Passive heating and cooling systems</b>	Install energy-reducing passive heating and cooling systems (e.g., insulation and ventilation).		<b>3.1</b>
<b>TDM &amp; Traffic &amp; Vehicles Measures</b>				
29	<b>Transit incentives</b>	Provide public transit incentives such as free or low-cost monthly transit passes or free transfers between all shuttles and transit.		<b>4.0</b>
30	<b>School bus services</b>	Work with the school district to restore or expand school bus services or implement use of alternative fuel buses or control devices (PM traps/filters).		<b>4.0</b>
31	<b>Ride sharing programs,</b> including: • Implementation of a transportation management association (TMA)	Include permanent TMA membership and funding requirement. Funding to be provided by Community Facilities District or County Service Area or other non-revocable funding mechanism.	TCM Encyclopedia estimates a 6-7% reduction. Urbemis specifies percent reductions based on the number of elements adopted. CCAP estimated reductions from 3% to 25% for TDMs with complementary transit and land use measures. TDMs have been shown to reduce employee vehicle trips up to 28% with the largest reductions achieved through parking pricing and transit passes. The impact depends on the travel alternatives. Sources: TCM Encyclopedia, May 11, 2006; CCAP Transportation Emission Guidebook; Nygaard, 2005' Urbemis.	<b>3.9</b>
	• Promote ride sharing programs	Promote ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.		

32	<b>Alternative work practices</b> , including: • Satellite Work Offices	Provide satellite work offices when appropriate, applicable for office/industrial and educational institutions.		2.5
	• Telecommute & flex work programs	Institute a telecommute and/or flexible work hours program. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.		3.0
33	<b>Shuttle service</b>	Provide shuttle service to public transit.		3.6
34	<b>Ride sharing parking</b> , including:	Accommodations for car sharing programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.		3.1
	• Vanpool parking	Include wide parking spaces or vanpool only spaces to accommodate vanpool vehicles.		2.9
35	<b>Traffic flow improvements</b> , include: • right-of-way capital improvements	The project should contribute to traffic-flow improvements that reduce emissions and are not considered as substantially growth inducing. The local transportation agency should be consulted for specific needs.		3.1
	• Street grid	Multiple and direct street routing (grid style).	Reductions are based on CCAP estimates for similar measures. Source: CCAP Transportation Emission Guidebook.	2.8
	• Contribution to transportation systems	Larger projects may be required to contribute a proportionate share to the development and/or continuation of a regional transit system. Contributions may consist of dedicated right-of-way, capital improvements, easements, etc. The local transportation agency should be consulted for specific needs.		2.8
36	<b>Grid power during construction</b>	Grid power shall be used (as opposed to diesel generators) for job site power needs where feasible during construction.		4.0

37	<b>Construction equipment</b> , including: • Alternative fueled equipment	Use alternative fuel types for construction equipment. At the tailpipe biodiesel emits 10% more CO <sub>2</sub> than petroleum diesel. Overall lifecycle emissions of CO <sub>2</sub> from 100% biodiesel are 78% lower than those of petroleum diesel (NREL 1998, EPA 2007b).		3.9
	• Heavy-duty off road vehicle plan	The project shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. The District should be contacted for average fleet emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can access the Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure. <a href="http://www.airquality.org/ceqa/Construction_Mitigation_Calculator.xls">http://www.airquality.org/ceqa/Construction_Mitigation_Calculator.xls</a>		2.8
	• Zero emission construction vehicles	Use low or zero-emission vehicles, including construction vehicles.		2.8
<b>Energy measures</b>				
38	<b>Combined Heat and Power</b>	Use combined heat and power in appropriate applications.		3.5
39	<b>Lighting efficiency</b> , including: • utilizing LEDs	Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.		2.5
	• Limit outdoor lighting	Limit the hours of operation of outdoor lighting.		2.5
	• Install efficient indoor lighting	Install efficient lighting and lighting control systems. Site and design building to take advantage of daylight. Install energy-reducing day lighting systems (e.g., skylights, light shelves and interior transom windows).		3.1
40	<b>Energy efficiency</b>	Design building to be energy efficient.		3.4

41	<b>Biogas and methane recovery</b>	Use on-site generated biogas, including methane, in appropriate applications. Establish methane recovery in local landfills and wastewater treatment plants to generate electricity.		3.1
<b>Water Conservation and Efficiency</b>				
42	<b>Reclaimed water</b>	Use reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.		3.3
43	<b>Adopt a Water Conservation Strategy</b>	The strategy may include, but not be limited to, imposing restrictions on the time of watering, requiring water-efficient irrigation equipment, and requiring new construction to offset demand so that there is no net increase in water use. <sup>43</sup> Include enforcement strategies, such as citations for wasting water.		3.1
<b>Solid Waste Measures</b>				
44	<b>Provide storage areas for recyclables</b>	Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.		3.1
<b>Miscellaneous &amp; Other Measures</b>				
45	<b>Limit vehicle idling, including:</b> • Loading dock trucks	All truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling and must be required to connect to the 110/208 volt power to run any auxiliary equipment. Signage shall be provided.		3.8
	• Commercial and construction vehicles	Limit idling time for commercial vehicles, including delivery and construction vehicles.		2.6
46	<b>Purchase of Rights-Of-Way</b>	Purchase abandoned railroad rights-of-way for future transit line, bikeway or hiking use(s).		2.5

47	<b>Off-Site Mitigation,</b> including: • Mitigation Fee Program	Provide/Pay into an off-site mitigation fee program, which focuses primarily on reducing emissions from existing development and buildings through retro-fit (e.g., increased insulation).	Though there is currently no program in place, the potential for real and quantifiable reductions of GHG emissions could be high if a defensible fee program were designed	3.8
	• Mitigation for carbon sequestration	Establish a mitigation program for development of those types of open space that provide carbon sequestration benefits. Require like-kind replacement for, or impose mitigation fees on development of such lands. Use funds generated to protect existing, or create replacement, open space.		3.3
	• Offset Purchase	Provide/purchase offsets for additional emissions by acquiring carbon credits or engaging in other market "cap and trade" systems.		3.3
48	<b>Fund Incentives for Energy Efficiency</b>	Fund incentives to encourage the use of energy efficient vehicles, equipment and lighting. Provide financial incentives for adoption of identified efficiency measures.		2.6
49	<b>Increasing natural environments,</b> including: • Preserve existing conservation areas	Preserve existing conservation areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) that provide carbon sequestration benefits.		3.1
	• Preserve or create open space	Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.		2.5

MEASURE #	Measure Name	Measure Description	Reduction Methodology and Source	Priority Average
<b>Bicycle/Pedestrian/Transit Measures</b>				
50	<b>Bus shelter for planned transit service</b>	Project provides transit stops with safe and convenient bicycle/pedestrian access. Project provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting) in anticipation of future transit service.	This reduction is based on the assumption that the measure applies to providing bus stop route information & benches. Emission reductions are based on conclusion obtained from the TIAX report and the CCAP guidebook. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.	2.9
<b>Parking Measures</b>				
51	<b>Off street parking</b>	Parking facilities are not adjacent to street frontage.	No empirical support for this specific measure; however, range of values is based on other pedestrian-oriented measures. The range recognizes the dependence of this measure on other measures. To be awarded 1.0 points, development must be in an area with density, wide sidewalks, and where other uses are also hiding parking. The efficacy of this measure is reduced to 0.1 if the development does not include other pedestrian and mixed-use measures. Parking structure with ground-floor retail is awarded 0.5.	2.4
<b>Site Design measures</b>				
52	<b>Site design measures</b>	Site design to minimize the need for external trips by including services/facilities for day care, banking/ATM, restaurants, vehicle refueling, and shopping.		2.9
53	<b>Local farmer's market</b>	Project shall dedicate space in a centralized, accessible location for a weekly farmers' market.		2.5
54	<b>Community gardens</b>	Project shall dedicate space for community gardens.		2.5
<b>Mixed-use &amp; Land Use Measures</b>				
55	<b>Develop brown fields</b>	Develop "brownfields" and other underused or defunct properties near existing public transportation and jobs.		2.9
56	<b>Best management practices</b>	Require best management practices in agriculture and animal operations to reduce emissions, conserve energy and water, and utilize alternative energy sources, including biogas, wind and solar.		2.5
57	<b>Other mixed-use</b>	All residential units are within ¼ mile of parks, schools or other civic uses.	This measure has less to do with employment/housing balance. No empirical support for this measure, but logic from measures 24 and 25 still applies.	2.4

58	<b>Land use density</b>	The project should provide densities of nine units per acre or greater, where allowed by the General Plan and/or Zone Plan, along bus routes and at bus stops to encourage transit use, where feasible.		2.1
<b>Building Component Measures</b>				
59	<b>No fireplace</b>	Project does not feature fireplaces or wood burning stoves.	<p>Reductions assume a 100% emission reduction from baseline conditions, as calculated using the methodology documented in the Staff Report for SMAQMD Rule 417, Wood Burning Appliances, Appendix D. The approach is consistent with SMAQMD rule development, based on a conversation with SMAQMD staff (Mr. Donny Homer). Calculating emission reductions in the greater Sacramento area yields 1.0 point benefit to the project, consistent with the current point value of the measure. Emission reductions are calculated as follows:</p> $\text{Emission Reduction} = (\text{Emissions}) - [(\text{New Emissions certified stove aesthetic} \times \text{fraction of adoption}) + (\text{New Emissions certified stove heat} \times \text{fraction of adoption}) + (\text{New EmissionsNG aesthetic} \times \text{fraction of adoption}) + (\text{New EmissionsNG heat} \times \text{fraction of adoption}) + (\text{New Emissions electric aesthetic} \times \text{fraction of adoption}) + (\text{New Emissions electric heat} \times \text{fraction of adoption})]$	2.9
60	<b>Electric yard equipment compatibility</b>	Project provides electrical outlets for building exterior areas.		2.5
61	<b>Natural gas outlet</b>	Install a natural gas outlet in the rear of each residence if available.		2.4
62	<b>Ozone destruction catalyst</b>	Install ozone destruction catalyst on air conditioning systems.	<p>Reductions assume over 80% of harmful, ground level ozone is converted into oxygen through application of air conditioning system technology. The proposed point value for this operational mitigation measure is 1.5, a mid-point value consistent with the rating assigned to this measure by the Feather River Air Quality Management District as a Standard Mitigation Measures for All Projects. The SMAQMD has had point values for this measure ranging from 1.25 (i.e., Land Use Mitigation Measures), to 2.5 for specific projects (i.e., Lent Ranch Marketplace, City of Elk Grove). Air conditioning systems for commercial, office and residential buildings within the project will be treated with an ozone destruction catalyst ("cap" or coating of the condenser coils) to convert ozone to oxygen as the catalyst makes contact with air moving through the air conditioner. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, specifications and any available manufacturer's documentation on the devices to be used.</p>	2.1

<b>TDM &amp; Traffic &amp; Vehicles Measures</b>				
63	<b>Zero emission infrastructure.</b>	Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).		2.9
64	<b>Promote "least polluting"</b>	Promote "least polluting" ways to connect people and goods to their destinations.		2.4
65	<b>Low carbon fuel incentive program</b>	Institute a low-carbon fuel vehicle incentive program.		2.3
66	<b>Education &amp; Information on public transportation</b>	Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.		2.0
<b>Construction Measures</b>				
67	<b>Construction employee plan</b>	Develop trip reduction plan to achieve 1.5 AVR for construction employees.		2.9
68	<b>Equipment Idling</b>	2-minute limit on diesel equipment idling		2.8
69	<b>Certified diesel construction equipment</b>	Use ARB-certified diesel construction equipment. Increases CO2 emissions when trapped CO and carbon particles are oxidized (Catalyst Products 2007, ETC 2007).		2.5
70	<b>Native tree planting program</b>	Implement or contribute to a native tree-planting program to offset the loss of existing trees at the construction site.		2.4
71	<b>Low emission on-site stationary equipment</b>	Use low emission on-site stationary equipment.		2.3
72	<b>Construction burning</b>	Alternatives to open burning of vegetative material will be used unless otherwise deemed infeasible by the District. Among suitable alternatives are chipping, mulching, or conversion to biomass fuel.		2.1

73	<b>Construction vehicle inventory</b>	The prime contractor shall submit to the District a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman		2.0
<b>Energy measures</b>				
74	<b>Energy education</b>	Provide a complimentary electric lawnmower to each residential buyer.	Reduction is based on a 0.5% reduction in total airshed VOC emissions, as attributable to the Lawn Mower Buy-Back program (Portland, Oregon, ten-year ozone maintenance plan). Mitigation measure points are based on the credits documented in the SMAQMD Guidance for Land Use Reductions and consistent with the point rating now set at 1.0 for electric lawnmowers. Approach is enforceable and may be monitored through site review and/or consultation with lead agency that roofing materials match those described in the SMAQMD Guidance for Land Use Reductions.	2.9
<b>Water Conservation and Efficiency</b>				
75	<b>Low impact development practices</b>	Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment. (Retaining storm water runoff on-site can drastically reduce the need for energy-intensive imported water at the site.)		2.8

76	<b>Graywater</b>	Use graywater. (Graywater is untreated household waste water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines.) For example, install dual plumbing in all new development allowing graywater to be used for landscape irrigation.		2.6
<b>Solid Waste Measures</b>				
77	<b>Extend recycling services offered and Enhanced Recycling/Waste Reduction, Reuse, Composting</b>	Extend the types of recycling services offered (e.g., to include food and green waste recycling). Provide infrastructure/education that promotes the avoidance of products with excessive packaging, recycle, buying of refills, separating of food and yard waste for composting, and using rechargeable batteries.		2.9
78	<b>Recycle demolished construction material</b>	Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). Use locally made building materials for construction of the project and associated infrastructure.		2.6
79	<b>Solid waste education</b>	Provide education and publicity about reducing waste and available recycling services.		2.0
<b>Miscellaneous &amp; Other Measures</b>				
80	<b>Prohibit Gas Powered Landscape Maintenance</b>	Prohibit gas powered landscape maintenance equipment within developments.		2.6
81	<b>Open Burning</b>	Open burning shall be prohibited through CC&Rs on all lots.		2.4
82	<b>Require Environmentally Responsible Purchasing</b>	Require environmentally responsible purchasing. Require or give preference to products that reduce or eliminate indirect greenhouse gas emissions, e.g., by giving preference to recycled products over those made from virgin materials.		2.0

## Attachment #2

### REFERENCES

Respondents must provide references from three (3) organizations that are or have received similar services. A brief description of services rendered, in addition to name, address, telephone number and contact person must be provided. Respondents may include letters of reference with this attachment.

#### **Reference #1:**

Date of Service:  
Name of Organization:  
Address:  
Phone:  
Email:  
Contact Person:  
Description of Service:

#### **Reference #2:**

Date of Service:  
Name of Organization:  
Address:  
Phone:  
Email:  
Contact Person:  
Description of Service:

#### **Reference #3:**

Date of Service:  
Name of Organization:  
Address:  
Phone:  
Email:  
Contact Person:  
Description of Service:

**Attachment #3**

**DEBARMENT AND LICENSING CERTIFICATION FORM**

The Respondent certifies that, neither the Respondent firm nor any owner, partner, director, officer, or principal of the Respondent, nor any person in a position with management responsibility or responsibility for administration of federal funds:

- a) Is presently debarred, suspended, proposed for debarment, has had required licenses revoked or been declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency;
- b) Has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph b) above; or
- d) Has within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.

The Respondent further certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_

By \_\_\_\_\_  
Authorized Signature of Respondent

\_\_\_\_\_  
Printed Name and Title

\_\_\_\_\_  
Respondent Firm Name & Type of Entity (Corp, Sole Proprietor, Partnership)

\_\_\_\_\_  
Address

\_\_\_\_\_  
City/State/Zip Code

\_\_\_\_\_  
Area Code/Telephone number and email address

**Attachment #4**

**ASSURANCE AND CERTIFICATION**

I, (We), the undersigned, as duly authorized representative(s) of the Respondent agency, affirm that the information and statements contained within this Proposal to the best of my (our) knowledge, are truthful and accurate, and further, that I (we) am (are) duly authorized to submit this Proposal from the Respondent agency to deliver services.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date