Final Staff Report

Appendix J:
GHG Emission Reduction Measures - Development Projects

GHG Emission Reduction Measures						
MEASURE #	***Measure Name***	***Commercial***	***Mixed-Use***	***Residential***	***Estimated CO_2 Equivalent Point Reductions***	***Measure Description***
Bicycle/Pedestrian/Transit Measures						
1	**Bike parking**	C	M	~	0.625	Non-residential projects provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand. Short term facilities are provided at a minimum ratio of one bike rack space per 20 vehicle spaces. Long-term facilities provide a minimum ratio of one long-term bicycle storage space per 20 **employee** parking spaces.
2	**End of trip facilities**	C	M	~	0.625	Non-residential projects provide "end-of-trip" facilities including showers, lockers, and changing space. Facilities shall be provided in the following ratio: four clothes lockers and one shower provided for every 80 employee parking spaces. For projects with 160 or more employee parking spaces, separate facilities are required for each gender.
3	**Bike parking at multi-unit residential**	~	~	R	0.625	Long-term bicycle parking is provided at apartment complexes or condominiums without garages. Project provides one long-term bicycle parking space for each unit without a garage. Long-term facilities shall consist of one of the following: a bicycle locker, a locked room with standard racks and access limited to bicyclists only, or a standard rack in a location that is staffed and/or monitored by video surveillance 24 hours per day.
4	**Proximity to bike path/bike lanes**	C	M	R	0.625	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. Existing facilities are defined as those facilities that are physically constructed and ready for use prior to the first 20% of the projects occupancy permits being granted. Project design includes a designated bicycle route connecting all units, on-site bicycle parking facilities, offsite bicycle facilities, site entrances, and primary building entrances to existing Class I or Class II bike lane(s) within 1/2 mile. Bicycle route connects to all streets contiguous with project site. Bicycle route has minimum conflicts with automobile parking and circulation facilities. All streets internal to the project wider than 75 feet have class II bicycle lanes on both sides.
5	**Pedestrian network**	C	M	R	1	The project provides a pedestrian access network that internally links all uses and connects to **existing** external streets and pedestrian facilities. Existing facilities are defined as those facilities that are physically constructed and ready for use prior to the first 20% of the projects occupancy permits being granted.

MEASURE #	*Measure Name*	*Commercial*	*Mixed-Use*	*Residential*	*Estimated CO_2 Equivalent Point Reductions*	*Measure Description*
5a	**Pedestrian Network**	C	M	R	0.5	The project provides a pedestrian access network that internally links all uses for connecting to **planned** external streets and pedestrian facilities (facilities must be included pedestrian master plan or equivalent).
6	**Pedestrian barriers minimized**	C	M	R	1	Site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and non-residential uses that impede bicycle or pedestrian circulation are eliminated. Barriers to pedestrian access of neighboring facilities and sites are minimized. This measure is not meant to prevent the limited use of barriers to ensure public safety by prohibiting access to hazardous areas, etc…
7	**Bus shelter for existing transit service**	C	M	R	0.5	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).
8	**Bus shelter for planned transit service**	C	M	R	0.25	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. If measure 7 is selected, it excludes this measure.

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<tr><th>MEASURE #</th><th>Measure Name</th><th>Commercial</th><th>Mixed-Use</th><th>Residential</th><th>Estimated CO_2 Equivalent Point Reductions</th><th>Measure Description</th></tr>
<tr><td>9</td><td>Traffic calming</td><td>C</td><td>M</td><td>R</td><td>see table in Measure Description</td><td>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 measures. Traffic calming measures include: bike lanes, center islands, closures (cul-de-sacs), diverters, education, forced turn lanes, roundabouts, speed humps, etc… Percent of Streets with Improvements
<table>
<tr><td></td><td colspan="5">Percent of Streets with Improvements</td></tr>
<tr><td rowspan="5">Percent of Intersections with Improvements</td><td></td><td>25%</td><td>50%</td><td>75%</td><td>100%</td></tr>
<tr><td>25%</td><td>0.25</td><td>0.25</td><td>0.5</td><td>0.5</td></tr>
<tr><td>50%</td><td>0.25</td><td>0.5</td><td>0.5</td><td>0.75</td></tr>
<tr><td>75%</td><td>0.5</td><td>0.5</td><td>0.75</td><td>0.75</td></tr>
<tr><td>100%</td><td>0.5</td><td>0.75</td><td>0.75</td><td>1.0</td></tr>
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MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
Parking Measures						
10	**Paid parking**	C	M	R	see below	Employee and/or customer paid parking system
10a	**Paid Parking - Urban site within 1/4 mile from transit stop**	C	M	R	5	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10b	**Paid Parking- Urban site greater than 1/4 mile from transit stop**	C	M	R	1.50	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10c	**Paid Parking- Suburban site within 1/4 mile of transit stop**	C	M	R	2	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10d	**Paid Parking- Suburban site greater than 1/4 mile from transit stop**	C	M	R	1	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10e	**Parking cash out**	C	M		0.6	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.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
11	**Minimum parking**	C	M	R	3	Provide minimum amount of parking required. Special review of parking required. If zoning codes in the San Joaquin Valley area have provisions that allow a project to build less than the typically mandated amount of parking if the development features design elements that reduce the need for automobile use. This measure recognizes the air quality benefit that results when facilities minimize parking needs, and grants mitigation value to project that implement all available parking reductions. Once land uses are determined, the trip reduction factor associated with this measure can be determined by utilizing the Institute of Transportation Engineers (ITE) Parking generation publication. The reduction in trips can be computed as shown below by the ratio of the difference of minimum parking required by code and ITE peak parking demand to ITE peak parking demand for the land uses multiplied by 50%. The maximum achievable trip reduction is 6%. For projects where retail space occupies 50% or more of the total built space, do not use December specific parking generation rates (from ITE). Percent Trip Reduction = 50*[(min parking required by code - ITE peak parking demand) / (ITE peak parking demand)].
12	**Parking reduction beyond code**	C	M	R	6	Provide parking reduction less than code. Special review of parking required. Recommend a Shared Parking strategy. Trip reductions associated with parking reductions beyond code shall be computed in the same manner as described under measure 11, as the same methodology applies. The maximum achievable trip reduction is 12%. This measure can be readily implemented through a Shared Parking strategy, wherein parking is utilized jointly among different land uses, buildings, and facilities in an area that experience peak parking needs at different times of day and day of the week. For example, residential uses and/or restaurant/retail uses, which experience peak parking demand during the evening/night and on the weekends, arrange to share parking facilities with office and/or educational uses, which experience peak demand during business hours and during the week.
13	**Pedestrian pathway through parking**	C	M	R	0.5	Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances. Pathway must connect to all transit facilities internal or adjacent to project site. Site plan should demonstrate how the pathways are clearly marked, shaded, and are placed between transit facilities and building entrances.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
14	**Off street parking**	C	M	R	see below	Parking facilities are not adjacent to street frontage
14a	**Off street parking**	C	M	R	1.5	For 1.5% reduction, parking facilities shall not be sited adjacent to public roads contiguous with project site. Functioning pedestrian entrances to major site uses are located along street frontage. Parking facilities do not restrict pedestrian, bicycle, or transit access from adjoining uses. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, a description of where parking is located relative to the buildings on the site, site plans, maps, or other graphics, which demonstrate the placement of parking facilities behind on-site buildings relative to streets contiguous with the project site. Surrounding uses should be high density or mixed-use, there shall be other adjoining pedestrian and bicycle connections, such as wide sidewalks and bike lanes, and surrounding uses shall also implement measure 15.
14b	**Off street parking**	C	M	R	1	For 1.0% reduction, (parking structures only) proponent must show that parking facilities that face street frontage feature ground floor retail along street frontage. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, a written description of the parking facility and the amount of retail space on the ground floor, site plans, maps, or other graphics demonstrating the placement of retail/commercial space along all street fronts contiguous with parking structure.
14c	**Off street parking**	C	M	R	0.1	For 0.1% reduction, the project is not among high-density or mixed uses, is not connected to pedestrian or bicycle access ways, or is among uses that do not also hide parking. This point value is reflective of the importance that other pedestrian and density measures be in place in order for this measure to be effective.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
Site Design Measures						
15	**Office/Mixed-Use proximate to transit**	C	M	~	see below	Mitigation value is based on project density and proximity to transit. Planned transit must be in MTP or RT Master Plan. To count as "existing transit" service must be fully operational prior to the first 20% of the projects occupancy permits being granted. Project must provide safe and convenient pedestrian and bicycle access to all transit stops within 1/4 mile. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, a written description of how the project complies with the measure, a map or graphic depicting the location of the project in relation to the transit stop. Graphic should demonstrate a 1/4 mile radius, arc, from transit and planned pathways and linkages to the transit stop. Proponent shall also provide graphics depicting the size and layout of the building as well as the calculations demonstrating the FAR (floor to area ratio).
15a	**Office/Mixed-Use proximate to Planned Light Rail Transit**	C	M	~	0.4	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	0.5	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	0.75	2.25 or greater FAR (Floor to Area Ratio)
15b	**Office/Mixed-Use proximate to Planned Bus Rapid Transit**	C	M	~	0.2	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	0.25	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	0.3	2.25 or greater FAR (Floor to Area Ratio)

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
15c	**Office/Mixed-Use proximate to Existing Light Rail Transit**	C	M	~	0.75	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	1	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	1.5	2.25 or greater FAR (Floor to Area Ratio)
15d	**Office/Mixed-Use proximate to Existing Bus Rapid Transit**	C	M	~	0.4	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	0.5	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	0.75	2.25 or greater FAR (Floor to Area Ratio)
16	**Orientation toward existing transit, bikeway, or pedestrian corridor**	C	M	R	0.5	Project is oriented towards existing transit, bicycle, or pedestrian corridor. Setback distance is minimized. Setback distance between project and adjacent uses is reduced to the minimum allowed under jurisdiction code. Setback distance between different buildings on project site is reduced to the minimum allowed under jurisdiction code. Setbacks between project buildings and sidewalks is reduced to the minimum allowed under jurisdiction code. Buildings are oriented towards street frontage. Primary entrances to buildings are located along public street frontage. Project provides bicycle access to existing bicycle corridor. Project provides access to existing pedestrian corridor. (Cannot get points for both this measure and measure 17)

MEASURE #	*Measure Name*	*Commercial*	*Mixed-Use*	*Residential*	*Estimated CO_2 Equivalent Point Reductions*	*Measure Description*
17	**Orientation toward planned transit, bikeway, or pedestrian corridor**	C	M	~	0.25	Project is oriented towards planned transit, bicycle, or pedestrian corridor. Setback distance is minimized. Planned transit, bicycle or pedestrian corridor must be in the MTP, RT Master Plan, General Plan, or Community Plan. Setback distance between project and existing or planned adjacent uses is minimized or non-existent. Setback distance between different buildings on project site is minimized. Setbacks between project buildings and planned or existing sidewalks are minimized. Buildings are oriented towards existing or planned street frontage. Primary entrances to buildings are located along planned or existing public street frontage. Project provides bicycle access to any planned bicycle corridor(s). Project provides pedestrian access to any planned pedestrian corridor(s).
18	**Residential Density With <u>No Transit</u>**	~	~	R	see below	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	**3-6 Du/acre**	~	~	R	0	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	**7-10 Du/acre**	~	~	R	1	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.

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-	**11-20 Du/acre**	~	~	R	3	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	**21-30 Du/Acre**	~	~	R	5	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	**31-40 Du/acre**	~	~	R	6	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	**41-50 Du/acre**	~	~	R	8	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	**50+ Du/acre**	~	~	R	10	Project provides high-density residential development. Mitgation value is based on project density with **no transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
18a	**Residential density With Planned Light Rail Transit**	~	~	R	see below	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**3-6 Du/acre**	~	~	R	0	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**7-10 Du/acre**	~	~	R	1.75	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**11-20 Du/acre**	~	~	R	3.75	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

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-	**21-30 Du/Acre**	~	~	R	5.75	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**31-40 Du/acre**	~	~	R	6.75	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**41-50 Du/acre**	~	~	R	8.75	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**50+ Du/acre**	~	~	R	10.75	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

MEASURE #	*Measure Name*	*Commercial*	*Mixed-Use*	*Residential*	*Estimated CO_2 Equivalent Point Reductions*	*Measure Description*
18b	**Residential Density with Planned Bus Rapid Transit**	~	~	R	see below	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**3-6 Du/acre**	~	~	R	0	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**7-10 Du/acre**	~	~	R	1.25	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**11-20 Du/acre**	~	~	R	3.25	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
-	**21-30 Du/Acre**	~	~	R	5.25	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**31-40 Du/acre**	~	~	R	6.25	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**41-50 Du/acre**	~	~	R	8.25	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	**50+ Du/acre**	~	~	R	10.25	Project provides high-density residential development. Mitgation value is based on project density and proximity to **planned bus rapid transit**. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

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18c	**Residential Density with Existing Light Rail Transit**	~	~	R	see below	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**3-6 Du/acre**	~	~	R	0	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**7-10 Du/acre**	~	~	R	2.5	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**11-20 Du/acre**	~	~	R	4.5	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**21-30 Du/Acre**	~	~	R	6.5	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
-	**31-40 Du/acre**	~	~	R	7.5	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**41-50 Du/acre**	~	~	R	9.5	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**50+ Du/acre**	~	~	R	11.5	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing light rail** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
18d	**Residential Density with Existing Bus Rapid Transit**	~	~	R	see below	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**3-6 Du/acre**	~	~	R	0	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**7-10 Du/acre**	~	~	R	2	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
-	**11-20 Du/acre**	~	~	R	4	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**21-30 Du/Acre**	~	~	R	6	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**31-40 Du/acre**	~	~	R	7	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**41-50 Du/acre**	~	~	R	9	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	**50+ Du/acre**	~	~	R	11	Project provides high-density residential development. Mitgation value is based on project density and proximity to **existing bus rapid** transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
19	**Street grid**	C	M	R	1	Multiple and direct street routing (grid style). The measure applies to projects with an internal connectivity factor (CF)>=0.80, and average of 1/4 mile or less between external connections along perimeter of project. [CF=# of intersections / (# of cul-de-sacs + intersections)]
20	**Neighborhood Electric Vehicle access**	C	M	R	see below	Make physical development consistent with requirements for neighborhood electric vehicles (NEV). Current studies show that for most trips, NEVs do not replace gas,fueled vehicles as the primary vehicle. For the purpose of providing incentives for developers to promote NEV use, assume the percent reductions noted below.
20a	**Neighborhood Electric Vehicle access**	C	M	R	1.5	For 1.5% reduction, a neighborhood shall have internal NEV connections and connections to other existing NEV networks serving all other types of uses.
20b	**Neighborhood Electric Vehicle access**	C	M	R	1	For 1.0% reduction, a neighborhood shall have internal and external connections to surrounding neighborhoods.
20c	**Neighborhood Electric Vehicle access**	C	M	R	0.5	For 0.5% reduction, a neighborhood has internal connections only.
21	**Affordable Housing Component**	~	~	R	see below	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]. Percent reductions shall be calculated according to the following formula: % reduction=% units deed-restricted below the market rate housing *0.04
21a	**Affordable Housing Component**	~	~	R	0.6	Reductions apply if 15% of units are deed-restricted below the market housing rate.

MEASURE #	*Measure Name*	*Commercial*	*Mixed-Use*	*Residential*	*Estimated CO_2 Equivalent Point Reductions*	*Measure Description*
21b	**Affordable Housing Component**	~	~	R	0.8	Reductions apply if 20% of units are deed-restricted below the market housing rate.
21c	**Affordable Housing Component**	~	~	R	1.2	Reductions apply if 30% of units are deed-restricted below the market housing rate.
21d	**Affordable Housing Component**	~	~	R	1.6	Reductions apply if 40% of units are deed-restricted below the market housing rate.
21e	**Affordable Housing Component**	~	~	R	2	Reductions apply if 50% of units are deed-restricted below the market housing rate.
21f	**Affordable Housing Component**	~	~	R	2.4	Reductions apply if 60% of units are deed-restricted below the market housing rate.
21g	**Affordable Housing Component**	~	~	R	2.8	Reductions apply if 70% of units are deed-restricted below the market housing rate.
21h	**Affordable Housing Component**	~	~	R	3.2	Reductions apply if 80% of units are deed-restricted below the market housing rate.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
21i	**Affordable Housing Component**	~	~	R	3.6	Reductions apply if 90% of units are deed-restricted below the market housing rate.
21j	**Affordable Housing Component**	~	~	R	4	Reductions apply if 100% of units are deed-restricted below the market housing rate.
Mixed-Use Measures						
22	**Urban Mixed-Use Measure**	~	M	~	see below	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 inter-relationships and a coherent physical design. Mitigation points for this measure depend on job to housing ratio.
22a	**Urban Mixed-Use Measure**	~	M	~	3	Reductions apply if the ratio (jobs:houses) is ≥ .5 < 1.0
22b	**Urban Mixed-Use Measure**	~	M	~	6.6	Reductions apply if the ratio (jobs:houses) is ≥ 1 < 1.5
22c	**Urban Mixed-Use Measur**e	~	M	~	9	Reductions apply if the ratio (jobs:houses) is ≥ 1.5 < 2.0
22d	**Urban Mixed-Use Measure**	~	M	~	7.29	Reductions apply if the ratio (jobs:houses) is ≥ 2.0 < 2.5

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
22e	**Urban Mixed-Use Measure**	~	M	~	6	Reductions apply if the ratio (jobs:houses) is ≥ 2.5 < 3.0
22f	**Urban Mixed-Use Measure**	~	M	~	5	Reductions apply if the ratio (jobs:houses) is ≥ 3.0< 3.5
22g	**Urban Mixed-Use Measure**	~	M	~	4.2	Reductions apply if the ratio (jobs:houses) is ≥3.5 ≤ 4.0
23	**Suburban mixed-use**	C	M	R	3	Have at least three of the following on site and/or offsite within ¼ mile: Residential Development, Retail Development, Park, Open Space, or Office.
24	**Other mixed-use**	~	M	R	1	All residential units are within ¼ mile of parks, schools or other civic uses.
Building Component Measures						
25	**Energy Star roof**	C	M	R	0.5	Install Energy Star labeled roof materials. Energy star qualified roof products reflect more of the sun's rays, decreasing the amount of heat transferred into a building.
26	**Onsite renewable energy system**	C	M	R	1	Project provides onsite renewable energy system(s).
27	**Exceed title 24**	C	M	R	1	Project Exceeds title 24 requirements by 20%

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO_2 Equivalent Point Reductions	Measure Description
28	**Solar orientation**	~	~	R	0.5	Orient 75 or more percent of homes and/or buildings to face either north or south (within 30 degrees of North or South). Building design includes roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter.
29	**Non-Roof Surfaces**	C	M	R	1	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
30	**Green Roof**	C	M	R	0.5	Install a vegetated roof that covers at least 50% of roof area. Project should demonstrate detailed graphics depicting the planned roof, detailed information on maintenance requirements for the roof, and the facilities plan for maintaining the roof post construction.
TDM and Misc. Measures						
31	**Electric lawnmower**	~	~	R	1	Provide a complimentary electric lawnmower to each residential buyer

Additional GHG Emission Reduction Measures Requiring Additional Investigation			
1	**Bike Lane Street Design**		Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.
2	**Bike & 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.
3	**School siting**		Site schools to increase the potential for students to walk and bike to school.
4	**Transit street design**		The project will provide for on-site road and off-site bus turnouts, passenger benches, and shelters as demand and service routes warrant subject to review and approval by local transportation planning agencies.
5	**Site design measures**		Site design to minimize th need for external trips by including services/facilities for day care, banking/ATM, restaurants, vehicle refueling, and shopping.
6	**Other mixed-use**		All residential units are within 1/4 mile of parks, schools or other civic uses.
7	**Mixed-Use**		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.
8	**Open Space**		Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.
9	**Natural Gas Stove**		Project features only natural gas or electric stoves in residences.
10	**Solar Design**		Incorporate appropriate passive solar design and solar heaters.
11	**Vehicle Idling**		Limit idling time for commercial vehicles, including delivery and construction vehicles.
12	**Ride Sharing Programs**		Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.
13	**Shuttle Service**		Provide shuttle service to public transit.

14	**School Bus Services**		Work with the school district to restore or expand school bus services.
15	**Shuttle Bus Services**		Operation of a shuttle bus to shopping, health care, public services sites and other nearby trip attactors to reduce automobile use.
16	**Energy efficient appliances**		Install energy efficient heating and cooling systems, appliances and equipment, and control systems.
17	**Renewable Energy Use**		Install solar, wind, and geothermal power systems and solar hot water heaters. Educate consumers about existing incentives.
18	**Solar Panels in Parking areas**		Install solar panels on carports and over parking areas.
19	**Photovoltaic Roofing Tiles**		Install Photovoltaic roofing tiles for solar power.
20	**Tree Planting**		Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.
21	**Local Farmer's Market**		Project shall dedicate space in a centralized, accessible location for a weekly farmers' market.
22	**Community Gardens**		Project shall dedicate space for community gardens.
23	**Best management practices**		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.
24	**Land Use Density**		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.
25	**Zero Emission Infrastructure**		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).
26	**Low carbon fuel incentive program**		Institute a low-carbon fuel vehicle incentive program.