

CITY OF ALBANY
SUSTAINABILITY COMMITTEE & PLANNING AND ZONING COMMISSION
JOINT MEETING
STAFF REPORT

Agenda date: 10/21/09
Prepared by: AC
Reviewed by: JB

ITEM/ 6-1

SUBJECT: Recommendation to the City Council on Amendments to the City of Albany Green Building Standards of Compliance and Checklists

STAFF RECOMMENDATION

Recommend to the City Council that they approve amendments to the City of Albany Green Building Standards of Compliance and Checklists.

BACKGROUND

In December 2006, the City Council adopted "Green Building and Bay Friendly Landscaping," "Construction and Demolition Debris," and "Water Reuse" Ordinances. The Green Building Ordinance was implemented as a mandatory program beginning July 1, 2007. All projects that require design review are required to meet a green points threshold as a part of the approval. See Attachment 1 for current standards of compliance.

DISCUSSION

The Planning and Zoning Commission reviewed the Green Building program on November 28, 2008 and June 6, 2009. Changes to the standards of compliance reflect updated checklists and an increase in minimum thresholds for home remodel projects. The proposed revisions also incorporate elements of the California Green Building Code that has been adopted by the California Building Standards Commission. In addition, the proposed changes incorporate new state regulations for the installation and maintenance of water efficient landscaping.

Also attached is a memorandum from the California Attorney General's Office that summarizes local government green building programs. The memo is useful for comparing the level of green building required by various cities.

For additional information on green building programs, the following web links provide information on the checklists, including detailed reference guides:

<http://www.stopwaste.org/home/index.asp?page=269>

<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222>

City of Albany



GREEN BUILDING STANDARDS OF COMPLIANCE & CHECKLISTS

Prepared for City Council Review, July 2, 2007

City of Albany Green Building Standards of Compliance

Proposed Standards: Effective July 3, 2007

Project Description		Building Improvements		
		Checklist Required	Minimum Threshold	Third-party Verification
City Sponsored Projects	New construction less than 5,000 sq ft	LEED-NC Checklist (Version 2.2)	Maximum points practicable	At plan check only
	New construction more than 5,000 sq ft		Gold (39 points)	US Green Bldg Council
	Renovation less than 5,000 sq ft	LEED-CI Checklist (Version 2.0)	Maximum points practicable	At plan check only
	Renovation more than 5,000 sq ft		Gold (32 points)	US Green Bldg Council
Commercial Construction & Renovation Projects	New construction less than 5,000 sq ft	LEED-NC Checklist (Version 2.2)	Maximum points practicable	At plan check only
	New construction more than 5,000 sq ft		Gold (39 points)	US Green Bldg Council
	Renovation less than 5,000 sq ft	LEED-CI Checklist (Version 2.0)	Maximum points practicable	At plan check only
	Renovation more than 5,000 sq ft		Gold (32 points)	US Green Bldg Council
Single Family Residential	New construction	Single-Family Greenpoint Checklist (2006 Edition)	50 Points	At plan check only
	Renovation subject to Design Review	Green Points Rating System for Remodeling projects (2004 version + City Point Incentives)	50 Points	
Multi-family Residential	New construction or renovation of less than 5 units	Multifamily Greenpoint Checklist (2005 Edition version v.2)	Maximum points practicable	City Staff and/or certified 3rd party inspection
	New construction or renovation of more than 5 units		Minimum Points Standard	
Mixed Use	Consult with Planning Division staff			

City of Albany Green Building Standards of Compliance

Proposed Standards: Effective July 3, 2007

Project Description	Landscaping Improvements		
	Checklist Required	Minimum Threshold	Third-party Verification (Field Verification required of all projects)
City Sponsored Projects	Bay-Friendly Landscaping Checklist	Minimum Points Standard	At plan check only
Commercial Construction & Renovation Projects			
Single Family Residential	Not Required	Not Required	Not Required
Multi-family Residential	Bay-Friendly Landscaping Checklist	Minimum Points Standard	At plan check only
Mixed Use			

Prepared for City Council Review: June 18, 2007



City of Albany

Green Building Program Rating System for Remodeling Projects Supplemental Application Form

Project Address: _____

Checklist Prepared By: _____

Date Prepared: _____

	INPUT	Resources	Energy	IAQ/Health
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A. Site

1. Recycle Job Site Construction & Demolition Waste 65% = 1 point; 75% = 2 points; 80% = 4 points	up to 4 Resource pts			
2. Salvage Reusable Building Materials	4 Resource pts y=yes			
3. Remodel for Mixed Use, Adaptive Reuse, and Historic Preservation	4 Resource pts y=yes			
4. Protect Native Soil	2 Resource pts y=yes			
5. Minimize Disruption of Existing Plants & Trees	1 Resource pt y=yes			
6. Implement Construction Site Stormwater Practices	2 Resource pts y=yes			
7. Protect Water Quality with Landscape Design	2 Resource pts y=yes			
8. Design Resource-Efficient Landscapes and Gardens	4 Resource pts y=yes			
9. Reuse Materials/Use Recycled Content Materials for Landscape Areas	2 Resource pts y=yes			
10. Install High-Efficiency Irrigation Systems	2 Resource pts y=yes			
11. Provide for On-Site Water Catchment / Retention	2 Resource pts y=yes			

B. Foundation

1. Incorporate Recycled Flyash in Concrete 25% Recycled Flyash = 2 points; Add 1 point for every 10% increase of flyash, up to 5 points	up to 5 Resource pts			
2. Use Recycled Content Aggregate	2 Resource pts y=yes			
3. Insulate Foundation/Slab before backfill	3 Energy pts y=yes			

C. Structural Frame

1. Substitute Solid Sawn Lumber with Engineered Lumber	3 Resource pts y=yes			
2. Use FSC Certified Wood for framing (For every 10% of FSC lumber used = 2 points, up to 10)	up to 10 Resource pts.			
3. Use Wood I-Joists for Floors and Ceilings	2 Resource pts y=yes			
4. Use Web Floor Trusses	2 Resource pts y=yes			
5. Design Energy Heels on Trusses 6" or more	2 Energy pts y=yes			
6. Use Finger-Jointed Studs for Vertical Applications	2 Resource pts y=yes			
7. Use Engineered Studs for Vertical Applications	2 Resource pts y=yes			
8. Use Recycled Content Steel Studs for Interior Framing	2 Resource pts y=yes			
9. Use Structural Insulated Panels (SIPs)				
a. Floors	3 Energy pts y=yes			
b. Wall	3 Energy pts y=yes			
c. Roof	3 Energy pts y=yes			
10. Apply Advanced Framing Techniques	4 Resource pts y=yes			

		INPUT	Resources	Energy	IAQ/Health
11. Use Reclaimed Lumber for Non Structural Applications	3 Resource pts	y=yes			
12. Use OSB					
a. Subfloors	1 Resource pt	y=yes			
b. Sheathing	1 Resource pt	y=yes			

D. Exterior Finish

1. Use Sustainable Decking Materials					
a. Recycled content	3 Resource pts	y=yes			
b. FSC Certified Wood	3 Resource pts	y=yes			
2. Use Treated Wood That Does Not Contain Chromium/Arsenic	1 IAQ/Health pt	y=yes			
3. Install House Wrap under Siding	1 IAQ/Health pt	y=yes			
4. Use Fiber-Cement Siding Materials	1 Resource pt	y=yes			

E. Plumbing

1. Install Water Heater Jacket	1 Energy pt	y=yes			
2. Insulate Hot and Cold Water Pipes	2 Energy pts	y=yes			
3. Retrofit all Faucets and Showerheads with Flow Reducers					
a. Faucets (1 point each, up to 2 points)	Up to 2 Resource pts.				
b. Showerheads (1 point each, up to 2 points)	Up to 2 Resource pts.				
4. Replace Toilets with Ultra-Low Flush Toilets (1 point each, up to 3 points)	Up to 3 Resource pts.				
5. Install Chlorine Filter on Showerhead	1 IAQ/Health pt	y=yes			
6. Convert Gas to Tankless Water Heater	4 Energy pts	y=yes			
7. Install Water Filtration Units at Faucets (2 points each, up to 4 points)	Up to 4 IAQ/Health pts.				
8. Install On-Demand Hot Water Circulation Pump	4 Resource pts	y=yes			

F. Electrical

1. Install Compact Fluorescent Light Bulbs (CFLs) (6 bulbs=2 points, 10 bulbs =3 points, 12 bulbs = 4 points)	Up to 4 Energy pts.				
2. Install IC-AT Recessed Fixtures with CFLs (1 point each, up to 5 points)	Up to 5 Energy pts.				
3. Install Lighting Controls (1 point per fixture, up to 4 points)	Up to 4 Energy pts.				
4. Install High Efficiency Ceiling Fans with CFLs (1 point each, up to 4 points)	Up to 4 Energy pts.				

G. Appliances

1. Install Energy Star Dishwasher	1 Energy pt	y=yes			
2. Install Washing Machine with Water and Energy Conservation Features	1 Energy pt	y=yes			
3. Install Energy Star Refrigerator	1 Energy pt	y=yes			
4. Install Built-In Recycling Center	3 Resource pts	y=yes			

H. Insulation

1. Upgrade Insulation to Exceed Title 24 Requirements					
a. Walls	2 Energy pts	y=yes			
b. Ceilings	2 Energy pts	y=yes			
2. Install Floor Insulation over Crawl Space	4 Energy pts	y=yes			
3. Install Recycled-Content, Fiberglass Insulation with No Added Formaldehyde	3 IAQ/Health pts	y=yes			

			INPUT	Resources	Energy	IAQ/Health
4. Use Advanced Infiltration Reduction Practices	2 Energy pts	y=yes				
5. Use Cellulose Insulation						
a. Walls	4 Resource pts	y=yes				
b. Ceilings	4 Resource pts	y=yes				
6. Alternative Insulation Products (Cotton, spray-foam)						
a. Walls	4 Resource pts	y=yes				
b. Ceilings	4 Resource pts	y=yes				
I. Windows						
1. Install Energy-Efficient Windows						
a. Double-Paneled	1 Energy pt	y=yes				
b. Low-Emissivity (Low-E)	2 Energy pts	y=yes				
c. Low Conductivity Frames	2 Energy pts	y=yes				
2. Install Low Heat Transmission Glazing	1 Energy pt	y=yes				
J. Heating Ventilation and Air Conditioning						
1. Use Duct Mastic on All Duct Joints	2 Energy pts	y=yes				
2. Install Ductwork within Conditioned Space	3 Energy pts	y=yes				
3. Vent Range Hood to the Outside	1 IAQ/Health pt	y=yes				
4. Clean all Ducts Before Occupancy	2 IAQ/Health pts	y=yes				
5. Install Solar Attic Fan	2 Energy pts	y=yes				
6. Install Attic Ventilation Systems	1 Energy pt	y=yes				
7. Install Whole House Fan	4 Energy pts	y=yes				
8. Install Sealed Combustion Units						
a. Furnaces	3 IAQ/Health pts	y=yes				
b. Water Heaters	3 IAQ/Health pts	y=yes				
9. Replace Wall-Mounted Electric and Gas Heaters with Through-the-Wall Heat Pumps	3 Energy pts	y=yes				
10. Install 13 SEER/11 EER or higher AC with a TXV	3 Energy pts	y=yes				
11. Install AC with Non-HCFC Refrigerants	2 Resource pts	y=yes				
12. Install 90% Annual Fuel Utilization Efficiency (AFUE) Furnace	2 Energy pts	y=yes				
13. Retrofit Wood Burning Fireplaces						
a. Install EPA certified wood stoves/inserts	1 IAQ/Health pt	y=yes				
b. Install/Replace Dampers	1 Energy pt	y=yes				
c. Install Airtight Doors	1 Energy pt	y=yes				
14. Install Zoned, Hydronic Radiant Heating	3 Energy pts	y=yes				
15. Install High Efficiency Filter	4 IAQ/Health pts	y=yes				
16. Install Heat Recovery Ventilation Unit (HRV)	5 IAQ/Health pts	y=yes				
17. Install Separate Garage Exhaust Fan	3 IAQ/Health pts	y=yes				
K. Renewable Energy and Roofing						
1. Pre-Plumb for Solar Water Heating	4 Energy pts	y=yes				
2. Install Solar Water Heating System	10 Energy pts	y=yes				
3. Pre-Wire for Future Photovoltaic (PV) Installation	4 Energy pts	y=yes				
4. Install Photovoltaic (PV) System (1.2 kw = 6 points, 2.4 kw = 12 points, 3.6 kw = 18 points)	Up to 18 Energy pts					
6. Select Safe and Durable Roofing Materials	1 Resource pt	y=yes				
7. Install Radiant Barrier	3 Energy pts	y=yes				

	INPUT	Resources	Energy	IAQ/Health
L. Natural Heating and Cooling				
1. Incorporate Passive Solar Heating	5 Energy pts y=yes			
2. Install Overhangs or Awnings over South Facing Windows	3 Energy pts y=yes			
3. Plant Deciduous Trees on the West and South Sides	3 Energy pts y=yes			
M. Indoor Air Quality and Finishes				
1. Use Low/No-VOC Paint	1 IAQ/Health pts y=yes			
2. Use Low VOC, Water-Based Wood Finishes	2 IAQ/Health pts y=yes			
3. Use Low/No VOC Adhesives	3 IAQ/Health pts y=yes			
4. Use Salvaged Materials for Interior Finishes	3 Resource pts y=yes			
5. Use Engineered Sheet Goods with no added Urea Formaldehyde	6 IAQ/Health pts y=yes			
6. Use Exterior Grade Plywood for Interior Uses	1 IAQ/Health pts y=yes			
7. Seal all Exposed Particleboard or MDF	4 IAQ/Health pts y=yes			
8. Use FSC Certified Materials for Interior Finish	4 Resource pts y=yes			
9. Use Finger-Jointed or Recycled-Content Trim	1 Resource pts y=yes			
10. Install Whole House Vacuum System	3 IAQ/Health pts y=yes			
N. Flooring				
1. Select FSC Certified Wood Flooring	8 Resource pts y=yes			
2. Use Rapidly Renewable Flooring Materials	4 Resource pts y=yes			
3. Use Recycled Content Ceramic Tiles	4 Resource pts y=yes			
4. Install Natural Linoleum in Place of Vinyl	5 IAQ/Health pts y=yes			
5. Use Exposed Concrete as Finished Floor	4 Resource pts y=yes			
6. Install Recycled Content Carpet with Low VOCs	4 Resource pts y=yes			
O. City of Albany Incentives				
1. Additions less than 50% increase in floor area	20 Resource pts y=yes			
2. Additions less than 200sq.ft. or resulting in less than 1,500sq.ft.	10 Resource pts y=yes			
3. Seismic upgrade of existing building	25 Resource pts y=yes			
4. For having a hybrid or zero emissions vehicle	2 IAQ/Health pts y=yes			
5. For having no automobile	5 Resource pts y=yes			
6. Plant more than one street tree when feasible	2 IAQ/Health pts y=yes			
7. Earthquake kit	2 IAQ/Health pts y=yes			

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City of Albany

New Home Green Points Checklist Supplemental Application Form

Project Address: _____

Checklist Prepared By: _____

Date Prepared: _____

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
A. SITE		Possible Points				
1. Protect Native Soil and Minimize Disruption of Existing Plants & Trees						
<input type="checkbox"/>	a. Protect Native Topsoil from Erosion and Reuse after Construction	1				1
<input type="checkbox"/>	b. Limit and Delineate Construction Footprint for Maximum Protection					1
<input type="checkbox"/>	2. Deconstruct Instead of Demolishing Existing Buildings On Site				3	
3. Recycle Job Site Construction Waste (Including Green Waste)						
<input type="checkbox"/>	a. Minimum 50% Waste Diversion by Weight (Recycling or Reuse) - Required				R	
<input type="checkbox"/>	b. Minimum 65% Diversion by Weight (Recycling or Reuse)				2	
<input type="checkbox"/>	c. Minimum 80% Diversion by Weight (Recycling or Reuse)				2	
4. Use Recycled Content Aggregate (Minimum 25%)						
<input type="checkbox"/>	a. Walkway and Driveway				1	
<input type="checkbox"/>	b. Roadway Base				1	
B. LANDSCAPING		Possible Points				
1. Construct Resource-Efficient Landscapes						
<input type="checkbox"/>	a. No Invasive Species Listed by Cal-IPC Are Planted					1
<input type="checkbox"/>	b. No Plant Species Will Require Hedging				1	
<input type="checkbox"/>	c. 75% of Plants Are California Natives or Mediterranean Species					1
<input type="checkbox"/>	2. Use Fire-Safe Landscaping Techniques	1				
3. Minimize Turf Areas in Landscape Installed by Builder						
<input type="checkbox"/>	a. All Turf Will Have a Water Requirement Less than or Equal to Tall Fescue					2
<input type="checkbox"/>	b. Turf Shall Not Be Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide					2
<input type="checkbox"/>	c. Turf is <33% of Landscaped Area					2
<input type="checkbox"/>	d. Turf is <10% of Landscaped Area					2
<input type="checkbox"/>	4. Plant Shade Trees		1			1
<input type="checkbox"/>	5. Implement Hydrozoning: Group Plants by Water Needs					1
6. Install High-Efficiency Irrigation Systems						
<input type="checkbox"/>	a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers					1
<input type="checkbox"/>	b. System Has Smart (Weather-Based) Controllers					2
<input type="checkbox"/>	7. Apply Two Inches of Compost in the Top 6 to 12 Inches of Soil					2
<input type="checkbox"/>	8. Mulch All Planting Beds to the Greater of 2 Inches or Local Water Ordinance Requirement					1
<input type="checkbox"/>	9. Use 50% Salvaged or Recycled-Content Materials for 50% of Non-Plant Landscape Elements				1	
<input type="checkbox"/>	10. Reduce Light Pollution by Shielding Fixtures and/or Directing Light Downward	1				

C. FOUNDATION		Possible Points
1. Incorporate Recycled Flyash in Concrete		
<input type="checkbox"/>	a. Minimum 20% Flyash	1
<input type="checkbox"/>	b. Minimum 25% Flyash (1 pt)	1
<input type="checkbox"/>	2. Use Frost-Protected Shallow Foundation in Cold Areas (C.E.C. Climate Zone 16)	3
<input type="checkbox"/>	3. Use Radon Resistant Construction (In At-Risk Locations Only)	1

D. STRUCTURAL FRAME & BUILDING ENVELOPE		Possible Points
1. Apply Optimal Value Engineering		
<input type="checkbox"/>	a. 2x4 Studs at 24-Inch On Center Framing	1
<input type="checkbox"/>	b. Door and Window Headers Sized for Load	1
<input type="checkbox"/>	c. Use Only Jack and Cripple Studs Required for Load	1
2. Use Engineered Lumber		
<input type="checkbox"/>	a. Beams and Headers	1
<input type="checkbox"/>	b. Insulated Engineered Headers	1
<input type="checkbox"/>	c. Wood I-Joists or Web Trusses for Floors	1
<input type="checkbox"/>	d. Wood I-Joists for Ceilings	1
<input type="checkbox"/>	e. Engineered or Finger-Jointed Studs for Vertical Applications	1
3. Use FSC-Certified Wood		
<input type="checkbox"/>	a. Dimensional Studs: Minimum 40%	2
<input type="checkbox"/>	b. Dimensional Studs: Minimum 75%	2
<input type="checkbox"/>	c. Panel Products: Minimum 40%	1
<input type="checkbox"/>	d. Panel Products: Minimum 70%	1
<input type="checkbox"/>	4. Design Energy Heels on Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)	1
<input type="checkbox"/>	5. Design Trusses to Accommodate Ductwork	1
6. Use Oriented Strand Board (OSB)		
<input type="checkbox"/>	a. Subfloor	1
<input type="checkbox"/>	b. Sheathing	1
<input type="checkbox"/>	7. Use Recycled-Content Steel Studs for 90% of Interior Wall Framing	1
8. Use Solid Wall Systems (Includes SIPs, ICFs, & Any Non-Stick Frame Assembly)		
<input type="checkbox"/>	a. Floors	2 2
<input type="checkbox"/>	b. Walls	2 2
<input type="checkbox"/>	c. Roofs	2 2
<input type="checkbox"/>	9. Thermal Mass Walls: 5/8-Inch Drywall on All Interior Walls or Walls Weigh more than 40 lb/cu.ft.	1
10. Design and Build Structural Pest Controls		
<input type="checkbox"/>	a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers	1
<input type="checkbox"/>	b. All New Plants Have Trunk, Base, or Stem Located At Least 36 Inches from Foundation	1
11. Reduce Pollution Entering the Home from the Garage		
<input type="checkbox"/>	a. Tightly Seal the Air Barrier between Garage and Living Area	1
<input type="checkbox"/>	b. Install Separate Garage Exhaust Fan	1
12. Install Overhangs and Gutters		
<input type="checkbox"/>	a. Minimum 16-Inch Overhangs and Gutters	1
<input type="checkbox"/>	b. Minimum 24-Inch Overhangs and Gutters	1

E. EXTERIOR FINISH		Possible Points
<input type="checkbox"/>	1. Use Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking	2
<input type="checkbox"/>	2. Install a Drainage Plane (Rain Screen Wall System)	2
<input type="checkbox"/>	3. Use Durable and Non-Combustible Siding Materials	1
<input type="checkbox"/>	4. Select Durable and Non-Combustible Roofing Materials	2

F. PLUMBING		Possible Points	
1. Distribute Domestic Hot Water Efficiently			
<input type="checkbox"/>	a. Insulate Hot Water Pipes from Water Heater to Kitchen		1
<input type="checkbox"/>	b. Insulate All Hot Water Pipes OR Install On-Demand Hot Water Circulation System in conjunction with F.1.a Insulate Hot Water Pipes from Water Heater to Kitchen	1	1
<input type="checkbox"/>	c. Locate the Water Heater within 25 feet of All Hot Water Fixtures and Appliances		1
<input type="checkbox"/>	d. Use Engineered Parallel Piping	1	
<input type="checkbox"/>	2. Install Only High Efficiency Toilets (Dual-Flush or <=1.3 gpf)		3

G. APPLIANCES		Possible Points	
1. Install ENERGY STAR Dishwasher			
<input type="checkbox"/>	a. ENERGY STAR	1	
<input type="checkbox"/>	b. Dishwasher Uses No More than 6.5 Gallons/Cycle	1	1
<input type="checkbox"/>	2. Install ENERGY STAR Clothes Washing Machine with Water Factor of 6 or Less	1	3
3. Install ENERGY STAR Refrigerator			
<input type="checkbox"/>	a. ENERGY STAR: 15% above Federal Minimum	1	
<input type="checkbox"/>	b. Super-Efficient Home Appliance Tier 2: 25% above Federal Minimum	1	
<input type="checkbox"/>	4. Install Built-In Recycling Center		2

H. INSULATION		Possible Points	
1. Install Insulation with 75% Recycled Content			
<input type="checkbox"/>	a. Walls and/or Floors		1
<input type="checkbox"/>	b. Ceilings		1
2. Install Insulation that is Low-Emitting (Certified Section 01350)			
<input type="checkbox"/>	a. Walls and/or Floors	1	
<input type="checkbox"/>	b. Ceilings	1	
<input type="checkbox"/>	3. Pre-Drywall Inspection Shows Quality Installation of Insulation	1	

I. HEATING, VENTILATION & AIR CONDITIONING		Possible Points	
<input type="checkbox"/>	1. Design and Install HVAC System to ACCA Manual J, D, and S Recommendations	4	
2. Install Sealed Combustion (Direct Vent) Units in Conditioned Space			
<input type="checkbox"/>	a. Furnaces	2	
<input type="checkbox"/>	b. Water Heaters	2	
<input type="checkbox"/>	3. No Fireplace or Sealed Gas Fireplace with Efficiency Rating Not Less Than 60%	1	
<input type="checkbox"/>	4. Install ENERGY STAR Ceiling Fans with CFLs in Living Areas and Bedrooms	1	
5. Install Ventilation System for Nighttime Cooling			
<input type="checkbox"/>	a. Whole House Fan	1	
<input type="checkbox"/>	b. Automatically Controlled Integrated System	2	
<input type="checkbox"/>	c. Integrated System with Variable Speed Control	3	
<input type="checkbox"/>	6. Install Air Conditioning with Non-HCFC Refrigerants	1	
7. Design and Install Effective Ductwork			
<input type="checkbox"/>	a. Install HVAC Unit and Ductwork within Conditioned Space	3	
<input type="checkbox"/>	b. Use Duct Mastic on All Duct Joints and Seams	1	
<input type="checkbox"/>	c. Install Ductwork under Attic Insulation (Buried Ducts)	1	
<input type="checkbox"/>	d. Pressure Balance the Ductwork System for Master Bedroom	1	
<input type="checkbox"/>	e. Protect Ducts during Construction and Clean All Ducts before Occupancy		1
<input type="checkbox"/>	8. Install High Efficiency HVAC Filter (MERV 6+)		1
<input type="checkbox"/>	9. Install Zoned, Hydronic Radiant Heating with Slab Edge Insulation	1	1

<input type="checkbox"/>	10. Install Mechanical Ventilation System		
<input type="checkbox"/>	a. Any Whole House Ventilation System That Meets ASHRAE 62.2	1	2
<input type="checkbox"/>	b. Install ENERGY STAR Bathroom Fan		1
<input type="checkbox"/>	c. All Bathroom Fans Are on Timer or Humidistat		1
<input type="checkbox"/>	11. Use Low-Sone Range Hood Vented to the Outside		1
<input type="checkbox"/>	12. Install Carbon Monoxide Alarm(s)		1

J. BUILDING PERFORMANCE		Possible Points	
<input type="checkbox"/> 0%	1. Design and Build High Performance Homes (2 points for each 1% above T-24, up to 30 pts) <i>Enter the percent above Title 24 in the cell at left. Any value over 15% will automatically earn 30 points.</i>	30	
	2. House Obtains ENERGY STAR with Indoor Air Package Certification	5	2
	3. Inspection and Diagnostic Evaluations		
<input type="checkbox"/>	a. Third Party Energy and Green Building Review of Home Plans	1	1 1
<input type="checkbox"/>	b. Blower Door Test Performed	1	
<input type="checkbox"/>	c. House Passes Combustion Safety Backdraft Test		1

K. RENEWABLE ENERGY		Possible Points	
<input type="checkbox"/>	1. Pre-Plumb for Solar Hot Water Heating	4	
<input type="checkbox"/>	2. Install Solar Water Heating System	10	
<input type="checkbox"/>	3. Install Wiring Conduit for Future Photovoltaic Installation & Provide 200 ft² of South-Facing Roof	2	
	4. Install Photovoltaic (PV) Panels		
<input type="checkbox"/>	a. 1.2 kW System	6	
<input type="checkbox"/>	b. 2.4 kW System	6	
<input type="checkbox"/>	c. 3.6 kW or more	6	

L. FINISHES		Possible Points	
<input type="checkbox"/>	1. Provide Permanent Walk-Off Mats and Shoe Storage at Home Entrances	1	
	2. Use Low/No-VOC Paint		
<input type="checkbox"/>	a. Low-VOC Interior Wall/Ceiling Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))	1	
<input type="checkbox"/>	b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (Flat))	3	
<input type="checkbox"/>	3. Use Low VOC, Water-Based Wood Finishes (<150 gpl VOCs)	2	
<input type="checkbox"/>	4. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives	2	
<input type="checkbox"/>	5. Use Recycled-Content Paint	1	
	6. Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed		
	At Least 50% of Each Material (1 pt each):		
<input type="checkbox"/>	a. Cabinets		1
<input type="checkbox"/>	b. Interior Trim		1
<input type="checkbox"/>	c. Shelving		1
<input type="checkbox"/>	d. Doors		1
<input type="checkbox"/>	e. Countertops		1
	7. Reduce Formaldehyde in Interior Finish (Section 01350) for At Least 50% of Each Material Below:		
<input type="checkbox"/>	a. Cabinets		1
<input type="checkbox"/>	b. Interior Trim		1
<input type="checkbox"/>	c. Shelving		1
<input type="checkbox"/>	d. Subfloor		1

<input type="checkbox"/>	8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb	3
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M. FLOORING		Possible Points
1. Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. Note: Flooring Adhesives Must Have <50 gpl VOCs.		
<input type="checkbox"/>	a. Minimum 15% of Floor Area	1
<input type="checkbox"/>	b. Minimum 30% of Floor Area	1
<input type="checkbox"/>	c. Minimum 50% of Floor Area	1
<input type="checkbox"/>	d. Minimum 75% of Floor Area	1
<input type="checkbox"/>	2. Thermal Mass Floors: Floor Covering Other than Carpet on 50% or More of Concrete Floors	1
<input type="checkbox"/>	3. Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)	2

N. OTHER		Possible Points
<input type="checkbox"/>	1. Incorporate Green Points Checklist in Blueprints - Required	
<input type="checkbox"/>	2. Develop Homeowner Manual of Green Features/Benefits	
3. Community Design Measures & Local Priorities: See the Community Planning & Design section in Chapter 4 of the new Home Guidelines for measures. Maximum of 20 points for suggested measures. Local requirements may also be listed here.		
<input type="checkbox"/>	4. For having a hybrid or zero emissions vehicle	
<input type="checkbox"/>	5. For having no automobile	
<input type="checkbox"/>	6. Planting more than one street tree when feasible	
<input type="checkbox"/>	7. Earthquake kit	

Summary								
Points Achieved from Specific Categories				0	0	0	0	0
Total Points Achieved				0				



City of Albany

Multifamily GreenPoint Checklist Supplemental Application Form

Project Address: _____

Checklist Prepared By: _____

Date Prepared: _____

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
A. PLANNING & DESIGN		Possible Points				
1. Infill Sites						
<input type="checkbox"/>	a. Project is Located Within an Urban Growth Boundary & Avoids Environmentally Sensitive Sites	1				
<input type="checkbox"/>	b. Project Includes the Redevelopment of At Least One Existing Building				1	
0	c. Housing Density of 15 Units Per Acre or More (1 pt for every 5 u/a) <i>Enter Project Density Number (In Units Per Acre)</i>	10				
<input type="checkbox"/>	d. Locate Within Existing Community that has Sewer Line & Utilities in Place	1				
<input type="checkbox"/>	e. Project Redevelops a Brownfield Site or is Designated a Redevelopment Area by a City	1				
f. Site has Pedestrian Access Within 1/2 Mile to Neighborhood Services (1 Pt for 5 Or More, 2 Pts for 10 Or More):						
<input type="checkbox"/>	1) Bank	2				
<input type="checkbox"/>	2) Place of Worship					
<input type="checkbox"/>	3) Full Scale Grocery/Supermarket					
<input type="checkbox"/>	4) Day Care					
<input type="checkbox"/>	5) Cleaners					
<input type="checkbox"/>	6) Fire Station					
<input type="checkbox"/>	7) Hair Care					
<input type="checkbox"/>	8) Hardware					
<input type="checkbox"/>	9) Laundry					
<input type="checkbox"/>	10) Library					
<input type="checkbox"/>	11) Medical/Dental					
<input type="checkbox"/>	12) Senior Care Facility					
<input type="checkbox"/>	13) Public Park					
<input type="checkbox"/>	14) Pharmacy					
<input type="checkbox"/>	15) Post Office					
<input type="checkbox"/>	16) Restaurant					
<input type="checkbox"/>	17) School					
<input type="checkbox"/>	18) After School Programs					
<input type="checkbox"/>	19) Commercial Office					
<input type="checkbox"/>	20) Community Center					
<input type="checkbox"/>	21) Theater/Entertainment					
<input type="checkbox"/>	22) Convenience Store Where Meat & Produce are Sold.					
g. Proximity to Public Transit						
Development is Located Within:						
<input type="checkbox"/>	1/4 Mile of One Planned or Current Bus Line Stop	1				
<input type="checkbox"/>	1/4 Mile of Two or More Planned or Current Bus Line Stops	1				
<input type="checkbox"/>	1/2 Mile of a Commuter Train/Light Rail Transit System	1				
h. Reduced Parking Capacity:						
<input type="checkbox"/>	Less than 1.5 Parking Spaces Per Unit	1				
<input type="checkbox"/>	Less than 1.0 Parking Spaces Per Unit	1				
2. Mixed-Use Developments						
<input type="checkbox"/>	a. At least 2% of Development Floorspace Supports Mixed Use (Non-Residential Tenants)	1				
<input type="checkbox"/>	b. Half of Above Non-Residential Floorspace is Dedicated to Neighborhood Services	1				
3. Building Placement & Orientation						
<input type="checkbox"/>	a. Protect Soil & Existing Plants & Trees	1				
4. Design for Walking & Bicycling						
<input type="checkbox"/>	a. Sidewalks Are Physically Separated from Roadways & Are 5 Feet Wide	1				
<input type="checkbox"/>	b. Traffic Calming Strategies Are Installed by the Developer	1				
<input type="checkbox"/>	c. Provide Dedicated, Covered & Secure Bicycle Storage for 15% of Residents	1				
<input type="checkbox"/>	d. Provide Secure Bicycle Storage for 5% of Non-Residential Tenant Employees & Visitors	1				

5. Social Gathering Places		
<input type="checkbox"/>	a. Outdoor Gathering Places for Residents (Average of 50 sf Per Unit Or More)	1
<input type="checkbox"/>	b. Outdoor Gathering Places Provide Natural Elements (For compact sites only; this point not available if A.5a is checked)	1
6. Design for Safety and Natural Surveillance		
<input type="checkbox"/>	a. All Main Entrances to the Building and Site are Prominent and Visible from the Street	1
<input type="checkbox"/>	b. Residence Entries Have Views to Callers (Windows or Double Peep Holes) & Can Be Seen By Neighbors	1
7. Landscaping		
<input checked="" type="checkbox"/>	Check here if the landscape area is <10% of the total site area. Projects with <10% landscape area can only check up to 3 boxes in this section.	
<input type="checkbox"/>	a. No Plant Species will Require Shearing	1
<input type="checkbox"/>	b. No plantings are Listed on the Invasive Plant Inventory by the California Invasive Plant Council	1
<input type="checkbox"/>	c. Specify California Native or Mediterranean Species that Require Occasional, Little or No Summer Watering	1
<input type="checkbox"/>	d. Create Drought Resistant Soils:	
<input type="checkbox"/>	i. Mulch All Planting Beds to a Depth of 2 Inches or Greater as Per Local Ordinance	
<input type="checkbox"/>	ii. Amend with 1 Inch of Compost or as per Soil Analysis to Reach 3.5% Soil Organic Matter	1
<input type="checkbox"/>	e. Design & Install High-Efficiency Irrigation System	
<input type="checkbox"/>	i. Specify Smart (Weather-Based) Irrigation Controllers	1
<input type="checkbox"/>	ii. Specify Drip, Bubblers or Low-Flow Sprinklers for All Non Turf Landscape Areas	1
<input type="checkbox"/>	f. Group Plants by Water Needs (Hydrozones) in Planting Plans & Identify Hydrozones on Irrigation Plans	1
<input type="checkbox"/>	g. Minimize Turf in Landscape Installed by Builder	
<input type="checkbox"/>	i. Do Not Specify Turf on Slopes Exceeding 10% or in Areas Less Than 8 Feet Wide	1
<input type="checkbox"/>	ii. Less Than 33% of All Landscaped Area is Specified as Turf AND All Turf has Water Requirement <= To Tall Fescue	1
8. Building Performance Exceeds Title 24		
Enter the Percent Above the 2005 Version of Title 24 for Residential and Non-Residential Portions of the Project		
<input checked="" type="checkbox"/>	a. Residences: 2 Points for Every 1% Above 2005 T24 (Weighted Average Up To 30 Total Points for Measure 8 a & b)	30
<input checked="" type="checkbox"/>	b. Non-Residential Spaces: 2 Points for Every 1% Above 2005 T24 (Up To 30 Total Points for Measure 8 a & b)	
<input type="checkbox"/>	Check here if using 2001 version of Title 24. 1 Point for Every 1% Above 2001 Title 24.	
9. Cool Site		
<input type="checkbox"/>	a. At least 30% of the Site Includes Cool Site Techniques	1
10. Adaptable Buildings		
<input type="checkbox"/>	a. Include Universal Design Principles in Units	
<input type="checkbox"/>	50% of Units	1
<input type="checkbox"/>	80% of Units	1
<input type="checkbox"/>	b. Live/Work Units Include A Dedicated Commercial Entrance	1
11. Affordability		
<input type="checkbox"/>	a. A Percentage of Units are Dedicated to Households Making 80% or Less of AMI	
<input type="checkbox"/>	10% of All Units	1
<input type="checkbox"/>	20%	2
<input type="checkbox"/>	30%	1
<input type="checkbox"/>	50% or More	1
<input type="checkbox"/>	b. Development Includes Multiple Bedroom Units (At least 1 Unit with 3BR or More at or Less Than 80% AMI)	2

B. SITEWORK		Possible Points
1. Construction & Demolition Waste Management		
Divert a Portion of all Construction & Demolition Waste:		
<input type="checkbox"/>	a. Required: Divert 50%	R
<input type="checkbox"/>	b. Divert 65%	2
<input type="checkbox"/>	c. Divert 80% or more	2

2. Construction Material Efficiencies		
<input type="checkbox"/>	a. Lumber is Delivered Pre-Cut from Supplier (80% or More of Total Board Feet)	1
<input type="checkbox"/>	b. Components of the Project Are Pre-Assembled Off-Site & Delivered to the Project	
<input type="checkbox"/>	25% of Total Square Footage	2
<input type="checkbox"/>	50% of Total Square Footage	2
<input type="checkbox"/>	75% of Total Square Footage or More	2
3. Construction Indoor Air Quality (IAQ) Management Plan		
<input type="checkbox"/>	a. An IAQ Management Plan is Written & Followed for the Project	2

C. STRUCTURE		Possible Points	
1. Recycled Aggregate			
<input type="checkbox"/>	a. Minimum 25% Recycled Aggregate (Crushed Concrete) for Fill, Backfill & Other Uses		1
2. Recycled Flyash in Concrete			
<input type="checkbox"/>	a. Flyash or Slag is Used to Displace a Portion of Portland Cement in Concrete		
<input type="checkbox"/>	20%		1
<input type="checkbox"/>	30% or More		1
3. FSC-Certified Wood for Framing Lumber			
<input type="checkbox"/>	a. FSC-Certified Wood for a Percentage of All Dimensional Studs:		
<input type="checkbox"/>	40%		2
<input type="checkbox"/>	70%		2
<input type="checkbox"/>	b. FSC-Certified Panel Products for a Percentage of All Sheathing (OSB & Plywood):		
<input type="checkbox"/>	40%		1
<input type="checkbox"/>	70%		1
4. Engineered Lumber or Steel Studs, Joists, Headers & Beams			
<input type="checkbox"/>	a. 90% or More of All Floor & Ceiling Joists		1
<input type="checkbox"/>	b. 90% or More of All Studs		2
<input type="checkbox"/>	c. 90% or More of All Headers & Beams		2
5. Optimal Value Engineering Framing			
<input type="checkbox"/>	a. Studs at 24" Centers on Top Floor Exterior Walls &/or All Interior Walls		1
<input type="checkbox"/>	b. Door & Window Headers Sized for Load		1
<input type="checkbox"/>	c. Use Only Jack & Cripple Studs Required for Load		1
6. Steel Framing			
<input type="checkbox"/>	a. Mitigate Thermal Bridging by Installing Exterior Insulation (At Least 1-Inch of Rigid Foam)		2
7. Structural Insulated Panels (SIPs) Or Other Solid Wall Systems			
<input type="checkbox"/>	a. SIPs Or Other Solid Wall Systems are Used for 80% of All:		
<input type="checkbox"/>	Floors	2	2
<input type="checkbox"/>	Walls	2	2
<input type="checkbox"/>	Roofs	2	2
8. Raised Heel Roof Trusses			
<input type="checkbox"/>	a. 75% of All Roof Trusses Have Raised Heels		1
9. Insulation			
<input type="checkbox"/>	a. All Ceiling, Wall & Floor Insulation is 01350 Certified OR Contains No Added Formaldehyde		1
<input type="checkbox"/>	b. All Ceiling, Wall & Floor Insulation Has a Recycled Content of 50% or More		1
10. Durable Roofing Options			
<input type="checkbox"/>	a. <i>Required:</i> No Shingle Roofing OR All Shingle Roofing Has 3-Yr Subcontractor Guarantee & 20-Yr Manufacturer Warranty		R
<input type="checkbox"/>	b. All Sloped Roofing Materials Carry a 40-Year Manufacturer Warranty		1
11. Moisture Shedding & Mold Avoidance			
<input type="checkbox"/>	a. Building(s) Include a Definitive Drainage Plane Under Siding		4
<input type="checkbox"/>	b. Bathroom Fans are Supplied in All Bathrooms, Are Exhausted to the Outdoors & Are Equipped with Controls		1
<input type="checkbox"/>	c. A Minimum of 80% of Kitchen Range Hoods Are Vented to the Exterior		1

12. Green Roofs		
<input type="checkbox"/>	a. A Portion of the Low-Slope Roof Area is Covered By A Vegetated or "Green" Roof	
<input type="checkbox"/>	25%	2 2
<input type="checkbox"/>	50% or More	2 2

D. SYSTEMS		Possible Points
1. Passive Solar Heating		
<input type="checkbox"/>	a. Orientation: At Least 40% of the Units Face Directly South	2
<input type="checkbox"/>	b. Shading On All South-Facing Windows Allow Sunlight to Penetrate in Winter, Not in Summer	1
<input type="checkbox"/>	c. Thermal Mass: At Least 50% of the Floor Area Directly Behind South-Facing Windows is Massive	2
2. Radiant Hydronic Space Heating		
<input type="checkbox"/>	a. Install Radiant Hydronic Space Heating for IAQ purposes (No Forced Air) in All Residences	2
3. Solar Water Heating		
<input type="checkbox"/>	a. Pre-Plumb for Solar Hot Water	1
<input type="checkbox"/>	b. Install Solar Hot Water System for Preheating DHW	4
4. Air Conditioning with Advanced Refrigerants		
<input type="checkbox"/>	a. Install Air Conditioning with Non-HCFC Refrigerants	1
5. Advanced Ventilation Practices		
Perform the Following Practices in Residences:		
<input type="checkbox"/>	a. Infiltration Testing by a C-HERS Rater for Envelope Sealing & Reduced Infiltration	2
<input type="checkbox"/>	b. Operable Windows or Skylights Are Placed To Induce Cross Ventilation (At Least One Room In 80% of Units)	1 1
<input type="checkbox"/>	c. Ceiling Fans in Every Bedroom & Living Room OR Whole House Fan is Used	1
6. Garage Ventilation		
<input type="checkbox"/>	a. Garage Ventilation Fans Are Controlled by Carbon Monoxide Sensors (Passive Ventilation Does Not Count)	1
7. Low-Mercury Lamps		
<input type="checkbox"/>	a. Low-Mercury Products Are Installed Wherever Linear Fluorescent Lamps Are Used	1
<input type="checkbox"/>	b. Low-Mercury Products Are Installed Wherever Compact Fluorescent Lamps Are Used	2
8. Light Pollution Reduction		
<input type="checkbox"/>	a. Exterior Luminaires Emit No Light Above Horizontal OR Are Dark Sky Certified	1
<input type="checkbox"/>	b. Control light Trespass Onto Neighboring Areas Through Appropriate Fixture Selection & Placement	1
9. Onsite Electricity Generation		
<input type="checkbox"/>	a. Pre-Wire for Photovoltaics & Plan for Space (Clear Areas on Roof & in Mechanical Room)	1
<input type="checkbox"/>	b. Install Photovoltaics to Offset a Percent of the Project's Total Estimated Electricity Demand	
<input type="checkbox"/>	10%	2 2
<input type="checkbox"/>	20%	2 2
<input type="checkbox"/>	30% or more	2 2
<input type="checkbox"/>	c. Educational Display is Provided in a Viewable Public Area	1
10. Elevators		
<input type="checkbox"/>	a. Gearless Elevators Are Installed	1
11. ENERGY STAR® Appliances		
<input type="checkbox"/>	a. Install ENERGY STAR Refrigerators in All Locations	
<input type="checkbox"/>	ENERGY STAR-Qualified	1
<input type="checkbox"/>	ACEEE-Listed Refrigerators	1
<input type="checkbox"/>	b. Install ENERGY STAR Dishwashers in All Locations	
<input type="checkbox"/>	All Dishwashers Are ENERGY STAR-qualified	1
<input type="checkbox"/>	Residential-grade Dishwashers Use No More than 6.5 Gallons Per Cycle	1 1
<input type="checkbox"/>	c. Install ENERGY STAR Clothes Washers In All Locations	1 1
<input type="checkbox"/>	d. Install Ventless Natural Gas Clothes Dryers in Residences	1
12. Central Laundry		
<input type="checkbox"/>	a. Central Laundry Facilities Are Provided for All Occupants	1

13. Water-Efficient Fixtures			
<input type="checkbox"/>	a. All Showerheads Use 2.0 Gallons Per Minute (gpm) or Less	1	1
<input type="checkbox"/>	b. High-Efficiency Toilets Use 1.28 gpf or Less or Are Dual Flush		
<input type="checkbox"/>	In All Residences		3
<input type="checkbox"/>	In All Non-Residential Areas		3
<input type="checkbox"/>	c. Install High Efficiency Urinals (0.5 gpf or less) or No-Water Urinals Wherever Urinals Are Specified:		
<input type="checkbox"/>	Average flush rate is 0.5 gallons per flush or less		1
<input type="checkbox"/>	Average flush rate is 0.1 gallons per flush or less		1
<input type="checkbox"/>	d. Flow Limiters Or Flow Control Valves Are Installed on All Faucets		
<input type="checkbox"/>	Residences: Kitchen - 2.0 gpm or less	1	1
<input type="checkbox"/>	Non-Residential Areas: Kitchen - 2.0 gpm or less	0	0
<input type="checkbox"/>	Residences: Bathroom Faucets- 1.5 gpm or less	1	1
<input type="checkbox"/>	Non-Residential Areas: Bathroom Faucets - 1.5 gpm or less	0	0
<input type="checkbox"/>	e. Non-Residential Areas: Install Pre-Rinse Spray Valves in Commercial Kitchens - 1.6 gpm or less		1
14. Source Water Efficiency			
<input type="checkbox"/>	a. Use Recycled Water for Landscape Irrigation or to Flush Toilets/Urinals		2
<input type="checkbox"/>	b. Use Captured Rainwater for Landscape Irrigation or to Flush 5% of Toilets &/or Urinals		4
<input type="checkbox"/>	c. Water is Submetered for Each Residential Unit & Non-Residential Tenant		4

E. FINISHES AND FURNISHINGS		Possible Points	
1. Construction Indoor Air Quality Management			
<input type="checkbox"/>	a. Perform a 2-Week Whole Building Flush-Out Prior to Occupancy	1	
2. Entryways			
<input type="checkbox"/>	a. Provide Permanent Walk-Off Mats and Shoe Storage at All Home Entrances	1	
<input type="checkbox"/>	b. Permanent Walk-Off Systems Are Provided at All Main Building Entrances & In Common Areas	1	
3. Recycling & Waste Collection			
<input type="checkbox"/>	a. Residences: Provide Built-In Recycling Center In Each Unit		2
4. Use Low/No-VOC Paints & Coatings			
<input type="checkbox"/>	a. Low-VOC Interior Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))		
<input type="checkbox"/>	In All Residences	1	
<input type="checkbox"/>	In All Non-Residential Areas:	0	
<input type="checkbox"/>	b. Zero-VOC: Interior Paints (<5 gpl VOCs (Flat))		
<input type="checkbox"/>	In All Residences	1	
<input type="checkbox"/>	In All Non-Residential Areas:	0	
<input type="checkbox"/>	c. Wood Coatings Meet the Green Seal Standards for Low-VOCs		
<input type="checkbox"/>	In All Residences	2	
<input type="checkbox"/>	In All Non-Residential Areas:	0	
<input type="checkbox"/>	d. Wood Stains Meet the Green Seal Standards for Low-VOCs		
<input type="checkbox"/>	In All Residences	2	
<input type="checkbox"/>	In All Non-Residential Areas:	0	
5. Use Recycled Content Exterior Paint			
<input type="checkbox"/>	a. Use Recycled Content Paint on 50% of All Exteriors		1
6. Low-VOC Construction Adhesives			
<input type="checkbox"/>	a. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives		1

7. Environmentally Preferable Materials for Interior Finish

Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed

a. Residences: At Least 50% of Each Material:

<input type="checkbox"/>	i. Cabinets	1
<input type="checkbox"/>	ii. Interior Trim	1
<input type="checkbox"/>	iii. Shelving	1
<input type="checkbox"/>	iv. Doors	1
<input type="checkbox"/>	v. Countertops	1

b. Non-Residential Areas: At Least 50% of Each Material:

<input type="checkbox"/>	i. Cabinets	0
<input type="checkbox"/>	ii. Interior Trim	0
<input type="checkbox"/>	iii. Shelving	0
<input type="checkbox"/>	iv. Doors	0
<input type="checkbox"/>	v. Countertops	0

8. Reduce Formaldehyde in Interior Finish Materials

Reduce Formaldehyde in Interior Finish Materials (Section 01350) for At Least 50% of Each Material Below:

a. Residences:

<input type="checkbox"/>	i. Cabinets	1
<input type="checkbox"/>	ii. Interior Trim	1
<input type="checkbox"/>	iii. Shelving	1
<input type="checkbox"/>	iv. Subfloor	1

b. Non-Residential Areas:

<input type="checkbox"/>	i. Cabinets	0
<input type="checkbox"/>	ii. Interior Trim	0
<input type="checkbox"/>	iii. Shelving	0
<input type="checkbox"/>	iv. Subfloor	0

9. Environmentally Preferable Flooring

Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. Note: Flooring Adhesives Must Have <50 gpl VOCs.

a. Residences:

<input type="checkbox"/>	i. Minimum 15% of Floor Area	1
<input type="checkbox"/>	ii. Minimum 30% of Floor Area	1
<input type="checkbox"/>	iii. Minimum 50% of Floor Area	1
<input type="checkbox"/>	iv. Minimum 75% of Floor Area	1

b. Non-Residential Areas:

<input type="checkbox"/>	i. Minimum 15% of Floor Area	0
<input type="checkbox"/>	ii. Minimum 30% of Floor Area	0
<input type="checkbox"/>	iii. Minimum 50% of Floor Area	0
<input type="checkbox"/>	iv. Minimum 75% of Floor Area	0

10. Low-Emitting Flooring

<input type="checkbox"/>	a. Residences: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)	1
<input type="checkbox"/>	b. Non-Residential Areas: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)	0

11. Durable Cabinets

Install Durable Cabinets in All:

<input type="checkbox"/>	a. Residences	1
<input type="checkbox"/>	b. Non-Residential Areas	0

12. Furniture & Outdoor Play Structures		
<input type="checkbox"/>	a. Play Structures & Surfaces Have an Overall Average Recycled Content Greater Than 20%	1
<input type="checkbox"/>	b. Environmentally Preferable Exterior Site Furnishings	1
<input type="checkbox"/>	c. At Least 25% of All newly Supplied Interior Furniture has Environmentally Preferable Attributes	1
13. Vandalism Deterrence		
<input type="checkbox"/>	a. Project Includes Vandalism Resistant Finishes and Strategies	1

F. OTHER		Possible Points
1. Incorporate GreenPoint Checklist in Blueprints		
<input type="checkbox"/>	a. <i>Required:</i> Incorporate GreenPoint Checklist in Blueprints	R
2. Operations & Maintenance Manuals		
<input type="checkbox"/>	a. Provide O&M Manual to Building Maintenance Staff	1
<input type="checkbox"/>	b. Provide O&M Manual to Occupants	1 1
3. Transit Options		
<input type="checkbox"/>	a. Residents Are Offered Free or Discounted Transit Passes	2
4. Educational Signage		
<input type="checkbox"/>	a. Educational Signage Highlighting & Explaining the Project's Green Features is Included	1
5. Vandalism Management Plan		
<input type="checkbox"/>	a. Project Includes a Vandalism Management Plan for Dealing with Disturbances Post-Occupancy	1
6. Innovation: List innovative measures that meet the green building objectives of the Multifamily Guidelines. Enter up to a 4 Points in each category. Points will be evaluated by local jurisdiction or GreenPoint rater.		
0	Innovation in Community : Enter up to 4 Points at left. Enter description here	
0	Innovation in Energy : Enter up to 4 Points at left. Enter description here	
0	Innovation in IAQ/Health : Enter up to 4 Points at left. Enter description here	
0	Innovation in Resources : Enter up to 4 Points at left. Enter description here	
0	Innovation in Water : Enter up to 4 Points at left. Enter description here	

Summary	
Points Achieved from Specific Categories	0 0 0 0 0
Current Point Total	0



City of Albany

Supplemental Application Form LEED-CI Version 2.0 Registered Project Checklist

Project Name:

Project Address:

Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sustainable Sites	
			Credit 1	Site Selection - Select a LEED Certified Building - OR - Locate the tenant space in a building with following characteristics (up to 3 points): 3
			Option 1A	Brownfield Redevelopment 1/2
			Option 1B	Stormwater Management: Rate and Quantity 1/2
			Option 1C	Stormwater Management: Treatment 1/2
			Option 1D	Heat Island Reduction, Non-Roof 1/2
			Option 1E	Heat-Island Reduction, Roof 1/2
			Option 1F	Light Pollution Reduction 1/2
			Option 1G	Water Efficient Irrigation: Reduce by 50% 1/2
			Option 1H	Water Efficient Irrigation: No Potable Use or No Irrigation 1/2
			Option 1I	Innovative Wastewater Technologies 1/2
			Option 1J	Water Use Reduction: 20% Reduction 1/2
			Option 1K	Onsite Renewable Energy 1/2 to 1
			Option 1L	Other Quantifiable Environmental Performance 1/2 to 3
			Credit 2	Development Density and Community Connectivity 1
			Credit 3.1	Alternative Transportation, Public Transportation Access 1
			Credit 3.2	Alternative Transportation, Bicycle Storage & Changing Rooms 1
			Credit 3.3	Alternative Transportation, Parking Availability 1

Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water Efficiency	
			Credit 1.1	Water Use Reduction - 20% Reduction 1
			Credit 1.2	Water Use Reduction - 30% Reduction 1

Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy & Atmosphere	
			Prereq 1	Fundamental Commissioning Required
			Prereq 2	Minimum Energy Performance Required
			Prereq 3	CFC Reduction in HVAC&R Equipment Required
			Credit 1.1	Optimize Energy Performance - Lighting Power 3
			Credit 1.2	Optimize Energy Performance - Lighting Controls 1
			Credit 1.3	Optimize Energy Performance - HVAC 2
			Credit 1.4	Optimize Energy Performance - Equipment and Appliances 2
			Credit 2	Enhanced Commissioning 1
			Credit 3	Energy Use, Measurement & Payment Accountability 2
			Credit 4	Green Power 1

Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Materials & Resources	
			Prereq 1	Storage and Collection of Recyclables Required
			Credit 1.1	Tenant Space, Long Term Commitment 1
			Credit 1.2	Building Reuse, Maintain 40% of Interior Non-Structural Components 1
			Credit 1.3	Building Reuse, Maintain 60% of Interior Non-Structural Components 1
			Credit 2.1	Construction Waste Management, Divert 50% From Landfill 1
			Credit 2.2	Construction Waste Management, Divert 75% From Landfill 1
			Credit 3.1	Resource Reuse, 5% 1
			Credit 3.2	Resource Reuse, 10% 1
			Credit 3.3	Resource Reuse, 30% Furniture and Furnishings 1
			Credit 4.1	Recycled Content, 10% (post-consumer + 1/2 pre-consumer) 1
			Credit 4.2	Recycled Content, 20% (post-consumer + 1/2 pre-consumer) 1
			Credit 5.1	Regional Materials, 20% Manufactured Regionally 1
			Credit 5.2	Regional Materials, 10% Extracted and Manufactured Regionally 1
			Credit 6	Rapidly Renewable Materials 1
			Credit 7	Certified Wood 1

Draft for Review: July 2, 2007

Yes ? No

Indoor Environmental Quality			Possible Points	6	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1	Minimum IAQ Performance	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1	Outside Air Delivery Monitoring	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	Increased Ventilation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1	Construction IAQ Management Plan, During Construction	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1	Low-Emitting Materials, Adhesives and Sealants	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2	Low-Emitting Materials, Paints and Coatings	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3	Low-Emitting Materials, Carpet Systems	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4	Low-Emitting Materials, Composite Wood and Laminate Adhesives	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.5	Low-Emitting Materials, Systems Furniture and Seating	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5	Indoor Chemical and Pollutant Source Control	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1	Controllability of Systems, Lighting	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2	Controllability of Systems, Temperature and Ventilation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1	Thermal Comfort - Compliance	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2	Thermal Comfort - Monitoring	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1	Daylight & Views - Daylight 75% of Spaces	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.2	Daylight & Views - Daylight 90% of Spaces	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.3	Daylight & Views - Views for 90% of Seated Spaces	1

Yes ? No

Innovation & Design Process			Possible Points	5	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1	Innovation in Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2	Innovation in Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3	Innovation in Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4	Innovation in Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	LEED™ Accredited Professional	1

Yes ? No

Goals (pre-certification estimates)			Possible Points	7
Certified 1 to 26 points Silver 27 to 31 points Gold 32 to 41 points Platinum 42 to 51 points				



City of Albany

Supplemental Application Form LEED-NC Version 2.2 Registered Project Checklist

Project Name:

Prepared by:

Yes ? No

Sustainable Sites

<input type="checkbox"/>	Prereq 1	Construction Activity Pollution Prevention	Required
<input type="checkbox"/>	Credit 1	Site Selection	1
<input type="checkbox"/>	Credit 2	Development Density & Community Connectivity	1
<input type="checkbox"/>	Credit 3	Brownfield Redevelopment	1
<input type="checkbox"/>	Credit 4.1	Alternative Transportation, Public Transportation Access	1
<input type="checkbox"/>	Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1
<input type="checkbox"/>	Credit 4.3	Alternative Transportation, Low-Emitting and Fuel-Efficient Vehicles	1
<input type="checkbox"/>	Credit 4.4	Alternative Transportation, Parking Capacity	1
<input type="checkbox"/>	Credit 5.1	Site Development, Protect or Restore Habitat	1
<input type="checkbox"/>	Credit 5.2	Site Development, Maximize Open Space	1
<input type="checkbox"/>	Credit 6.1	Stormwater Design, Quantity Control	1
<input type="checkbox"/>	Credit 6.2	Stormwater Design, Quality Control	1
<input type="checkbox"/>	Credit 7.1	Heat Island Effect, Non-Roof	1
<input type="checkbox"/>	Credit 7.2	Heat Island Effect, Roof	1
<input type="checkbox"/>	Credit 8	Light Pollution Reduction	1

Yes ? No

Water Efficiency

<input type="checkbox"/>	Credit 1.1	Water Efficient Landscaping, Reduce by 50%	1
<input type="checkbox"/>	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	1
<input type="checkbox"/>	Credit 2	Innovative Wastewater Technologies	1
<input type="checkbox"/>	Credit 3.1	Water Use Reduction, 20% Reduction	1
<input type="checkbox"/>	Credit 3.2	Water Use Reduction, 30% Reduction	1

Yes ? No

Energy & Atmosphere

<input type="checkbox"/>	Prereq 1	Fundamental Commissioning of the Building Energy Systems	Required
<input type="checkbox"/>	Prereq 2	Minimum Energy Performance	Required
<input type="checkbox"/>	Prereq 3	Fundamental Refrigerant Management	Required
<input type="checkbox"/>	Credit 1	Optimize Energy Performance	1 to 10
<input type="checkbox"/>	Credit 2	On-Site Renewable Energy	1 to 3
<input type="checkbox"/>	Credit 3	Enhanced Commissioning	1
<input type="checkbox"/>	Credit 4	Enhanced Refrigerant Management	1
<input type="checkbox"/>	Credit 5	Measurement & Verification	1
<input type="checkbox"/>	Credit 6	Green Power	1

Yes ? No

Materials & Resources 13 Points

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1	Storage & Collection of Recyclables	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1	Building Reuse , Maintain 75% of Existing Walls, Floors & Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2	Building Reuse , Maintain 100% of Existing Walls, Floors & Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3	Building Reuse , Maintain 50% of Interior Non-Structural Elements	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.1	Construction Waste Management , Divert 50% from Disposal	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2	Construction Waste Management , Divert 75% from Disposal	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1	Materials Reuse , 5%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2	Materials Reuse , 10%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1	Recycled Content , 10% (post-consumer + ½ pre-consumer)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2	Recycled Content , 20% (post-consumer + ½ pre-consumer)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1	Regional Materials , 10% Extracted, Processed & Manufactured Regionally	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2	Regional Materials , 20% Extracted, Processed & Manufactured Regionally	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6	Rapidly Renewable Materials	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7	Certified Wood	1

Yes ? No

Indoor Environmental Quality 15 Points

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1	Minimum IAQ Performance	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1	Outdoor Air Delivery Monitoring	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	Increased Ventilation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1	Construction IAQ Management Plan , During Construction	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2	Construction IAQ Management Plan , Before Occupancy	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1	Low-Emitting Materials , Adhesives & Sealants	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2	Low-Emitting Materials , Paints & Coatings	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3	Low-Emitting Materials , Carpet Systems	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4	Low-Emitting Materials , Composite Wood & Agrifiber Products	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5	Indoor Chemical & Pollutant Source Control	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1	Controllability of Systems , Lighting	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2	Controllability of Systems , Thermal Comfort	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1	Thermal Comfort , Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2	Thermal Comfort , Verification	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1	Daylight & Views , Daylight 75% of Spaces	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.2	Daylight & Views , Views for 90% of Spaces	1

Yes ? No

Innovation & Design Process 5 Points

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1	Innovation in Design : Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2	Innovation in Design : Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3	Innovation in Design : Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4	Innovation in Design : Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	LEED® Accredited Professional	1

Yes ? No

Project Totals (pre-certification estimates) 69 Points

Certified 26-32 points Silver 33-38 points Gold 39-51 points Platinum 52-69 points

BAY-FRIENDLY LANDSCAPING CHECKLIST

1 Landscape Locally



- 1. Evaluate climate, exposure and topography
- 2. Assess the soil and test drainage
- 3. Survey and protect flora & fauna
- 4. Consider the potential for fire
- 5. Use local, natural plant communities as models

2 Landscape for Less to the Landfill



- 1. Select appropriate plants:
 - A. Choose plants to match the microclimate & soil conditions
 - B. Choose plants that can grow to their natural size in the space allotted them
 - C. Replace sheared hedges with plants that can grow to their natural shape & size
 - D. Do not plant invasive species
- 2. Keep plant debris on site:
 - A. Grasscycle
 - B. Produce mulch from plant debris
 - C. Compost plant debris
- 3. Prune selectively and properly
- 4. Water and fertilize judiciously
- 5. Use goats for controlling weeds and creating firebreaks
- 6. Use salvaged items & recycled content materials
- 7. Reduce and recycle construction waste
- 8. Separate plant debris for clean green discounts

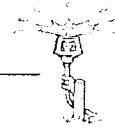
3 Nurture the Soil



- 1. Remove and store topsoil during construction
- 2. Protect soil from compaction
- 3. Defend against erosion
- 4. Amend the soil with compost before planting
- 5. Grasscycle
- 6. Mulch regularly
- 7. Aerate compacted soils
- 8. Feed soils naturally
- 9. Avoid synthetic, quick release fertilizers
- 10. Minimize the use of chemical pesticides

• See chapter 4, Summary of Bay-Friendly Landscaping Benefits to view list of practices categorized by Design, Construction and Maintenance.

4 Conserve Water



- 1. Create drought resistant soils with compost & mulch
- 2. Grow California natives or Mediterranean plants
- 3. Minimize the lawn
- 4. Implement hydrozoning - group plants by water needs
- 5. Design for on-site rainwater collection, recycled water and/or graywater use
- 6. Design and install high efficiency irrigation systems
- 7. Install a dedicated meter to monitor landscape water use
- 8. Manage irrigation according to need
- 9. Maintain the irrigation system so every drop counts
- 10. Request an irrigation audit

5 Conserve Energy



- 1. Plant and protect trees to moderate building temperatures
- 2. Reduce the heat island effect: shade paved areas
- 3. Shade air conditioners
- 4. Design lighting carefully
- 5. Choose and maintain equipment for fuel conservation
- 6. Specify local products & suppliers

6 Protect Water & Air Quality



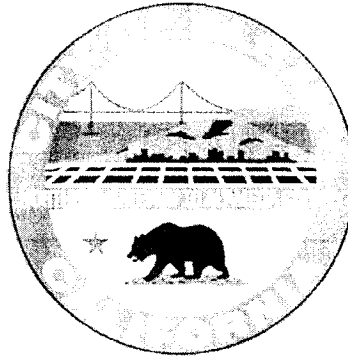
- 1. Use Integrated Pest Management:
 - A. Prevent pest problems
 - B. Train your staff to identify and monitor pest & beneficial populations
 - C. Educate your clients
 - D. Control pest problems with physical & mechanical methods
 - E. Control pest problems with biological controls
 - F. Control pest problems with the least toxic pesticide as a last resort
- 2. Eliminate high input decorative lawns
- 3. Keep soil covered
- 4. Choose and maintain your materials, equipment & vehicles carefully
- 5. Keep organic matter where it belongs
- 6. Minimize impervious surfaces
- 7. Plant trees
- 8. Maintain and manage the irrigation system carefully
- 9. Design a system to capture and treat water

7 Create & Protect Wildlife Habitat



- 1. Diversify
- 2. Choose California natives first
- 3. Provide water & shelter
- 4. Eliminate the use of pesticides
- 5. Conserve or restore natural areas & wildlife corridors

City of Albany



GREEN BUILDING

STANDARDS OF COMPLIANCE

&

CHECKLISTS

DRAFT REVISION OCTOBER 21, 2009

City of Albany Community Development Department
510-528-5760 / www.albanyca.org

City of Albany Green Building Standards of Compliance

Draft Standards: October 21, 2009

Project Description		Building Improvements		
		Checklist Required	Minimum Threshold	Third-party Verification
City Sponsored Projects	New construction less than 5,000 sq ft	LEED-NC Checklist (Version 3)	Maximum points practicable	Plan check and spot check field verification
	New construction more than 5,000 sq ft		Gold (39 points)	US Green Bldg Council
	Renovation less than 5,000 sq ft	LEED-CI Checklist (Version 3)	Maximum points practicable	Plan check and spot check field verification
	Renovation more than 5,000 sq ft		Gold (32 points)	US Green Bldg Council
Commercial Construction & Renovation Projects	New construction less than 10,000 sq ft	Small Commercial Green Building Checklist (Feb. 2009)	Maximum points practicable	Plan check and spot check field verification
	New construction more than 10,000 sq ft	LEED-NC or LEED-CS Checklist (Version 3)	Gold (39 points)	US Green Bldg Council
	Renovation less than 10,000 sq ft	Small Commercial Green Building	Maximum points practicable	Plan check and spot check field verification
	Renovation more than 10,000 sq ft	LEED-CI Checklist (Version 3)		
Single Family Residential	New construction	New Home Construction Green Building Guidelines (2009 edition)	50 Points	Plan check and spot check field verification.
	Renovation subject to Design Review	Green Points Rating System for Remodeling projects (2004 version + City Point Incentives)		
Multi-family Residential	New construction or renovation of less than 5 units	Multifamily Greenpoint Checklist (2005 Edition version v.2)	Maximum points practicable	City Staff and/or certified 3rd party inspection
	New construction or renovation of more than 5 units		Minimum Points Standard	
Education Facilities	New Construction or Renovation more than 5,000 sq ft	Collaborative for High Performance Schools	Maximum points practicable	City Staff and/or certified 3rd party inspection
Mixed Use	Consult with Planning Division staff			

Approved by City Council: _____

City of Albany Green Building Standards of Compliance

Draft Standards: October 21, 2009

Project Description		Landscaping Improvements		
		Checklist Required	Minimum Threshold	Third-party Verification
City Sponsored Projects	New landscape <u>less</u> than 2,500 sq ft	Bay-Friendly Scorecard for Commercial & Civic Landscapes (January 2008 3rd Ed.)	60 points	Plan check and spot check field verification
	New landscape <u>more</u> than 2,500 sq ft	Calif Code Regs Title 23 Water Efficient Landscape Ordinance (as amended by City of Albany)	Compliance	
Commercial Construction & Renovation Projects	New landscape <u>less</u> than 2,500 sq ft	Bay-Friendly Scorecard for Commercial & Civic Landscapes (January 2008 3rd Ed.)	60 points	
	New landscape <u>more</u> than 2,500 sq ft	Calif Code Regs Title 23 Water Efficient Landscape Ordinance (as amended by City of Albany)	Compliance	
Developer-Builder Residential Construction & Renovation Projects	New landscape <u>less</u> than 2,500 sq ft	Not Required	Not Required	
	New landscape <u>more</u> than 2,500 sq ft	Calif Code Regs Title 23 Water Efficient Landscape Ordinance (as amended by City of Albany)	Compliance	
Owner-Builder Residential Construction & Renovation Projects	New landscape <u>less</u> than 5,000 sq ft	Not Required	Not Required	
	New landscape <u>more</u> than 5,000 sq ft	Calif Code Regs Title 23 Water Efficient Landscape Ordinance (as amended by City of Albany)	Compliance	
Education Facilities	New landscape <u>less</u> than 2,500 sq ft	Bay-Friendly Scorecard for Commercial & Civic Landscapes (January 2008 3rd Ed.)	60 points	
	New landscape <u>more</u> than 2,500 sq ft	Calif Code Regs Title 23 Water Efficient Landscape Ordinance (as amended by City of Albany)	Compliance	
Mixed Use	New landscape <u>less</u> than 2,500 sq ft	Bay-Friendly Scorecard for Commercial & Civic Landscapes (January 2008 3rd Ed.)	60 points	
	New landscape <u>more</u> than 2,500 sq ft	Calif Code Regs Title 23 Water Efficient Landscape Ordinance (as amended by City of Albany)	Compliance	

Approved by City Council: _____

Checklists

Green Building Program Rating System for Remodeling Projects



City of Albany

Green Building Program Rating System for Remodeling Projects Supplemental Application Form

Project Address: _____

Checklist Prepared By: _____

Date Prepared: _____

	INPUT	Resources	Energy	IAQ/Health
--	-------	-----------	--------	------------

A. Site

1. Recycle Job Site Construction & Demolition Waste
65% = 1 point; 75% = 2 points; 80% = 4 points
2. Salvage Reusable Building Materials
3. Remodel for Mixed Use, Adaptive Reuse, and Historic Preservation
4. Protect Native Soil
5. Minimize Disruption of Existing Plants & Trees
6. Implement Construction Site Stormwater Practices
7. Protect Water Quality with Landscape Design
8. Design Resource-Efficient Landscapes and Gardens
9. Reuse Materials/Use Recycled Content Materials for Landscape Areas
10. Install High-Efficiency Irrigation Systems
11. Provide for On-Site Water Catchment / Retention

up to 4 Resource pts				
4 Resource pts	y=yes			
4 Resource pts	y=yes			
2 Resource pts	y=yes			
1 Resource pt	y=yes			
2 Resource pts	y=yes			
2 Resource pts	y=yes			
4 Resource pts	y=yes			
2 Resource pts	y=yes			
2 Resource pts	y=yes			
2 Resource pts	y=yes			

B. Foundation

1. Incorporate Recycled Flyash in Concrete
25% Recycled Flyash = 2 points; Add 1 point for every 10% increase of flyash, up to 5 points
2. Use Recycled Content Aggregate
3. Insulate Foundation/Slab before backfill

up to 5 Resource pts				
2 Resource pts	y=yes			
3 Energy pts	y=yes			

C. Structural Frame

1. Substitute Solid Sawn Lumber with Engineered Lumber
2. Use FSC Certified Wood for framing
(For every 10% of FSC lumber used = 2 points, up to 10)
3. Use Wood I-Joists for Floors and Ceilings
4. Use Web Floor Trusses
5. Design Energy Heels on Trusses 6" or more
6. Use Finger-Jointed Studs for Vertical Applications
7. Use Engineered Studs for Vertical Applications
8. Use Recycled Content Steel Studs for Interior Framing
9. Use Structural Insulated Panels (SIPs)
 - a. Floors
 - b. Wall
 - c. Roof
10. Apply Advanced Framing Techniques

3 Resource pts	y=yes			
up to 10 Resource pts.				
2 Resource pts	y=yes			
2 Resource pts	y=yes			
2 Energy pts	y=yes			
2 Resource pts	y=yes			
2 Resource pts	y=yes			
3 Energy pts	y=yes			
3 Energy pts	y=yes			
3 Energy pts	y=yes			
4 Resource pts	y=yes			

			INPUT	Resources	Energy	IAQ/Health
11. Use Reclaimed Lumber for Non Structural Applications	3 Resource pts	y=yes				
12. Use OSB						
a. Subfloors	1 Resource pt	y=yes				
b. Sheathing	1 Resource pt	y=yes				

D. Exterior Finish

1. Use Sustainable Decking Materials						
a. Recycled content	3 Resource pts	y=yes				
b. FSC Certified Wood	3 Resource pts	y=yes				
2. Use Treated Wood That Does Not Contain Chromium/Arsenic	1 IAQ/Health pt	y=yes				
3. Install House Wrap under Siding	1 IAQ/Health pt	y=yes				
4. Use Fiber-Cement Siding Materials	1 Resource pt	y=yes				

E. Plumbing

1. Install Water Heater Jacket	1 Energy pt	y=yes				
2. Insulate Hot and Cold Water Pipes	2 Energy pts	y=yes				
3. Retrofit all Faucets and Showerheads with Flow Reducers						
a. Faucets (1 point each, up to 2 points)	Up to 2 Resource pts.					
b. Showerheads (1 point each, up to 2 points)	Up to 2 Resource pts.					
4. Replace Toilets with Ultra-Low Flush Toilets (1 point each, up to 3 points)	Up to 3 Resource pts.					
5. Install Chlorine Filter on Showerhead	1 IAQ/Health pt	y=yes				
6. Convert Gas to Tankless Water Heater	4 Energy pts	y=yes				
7. Install Water Filtration Units at Faucets (2 points each, up to 4 points)	Up to 4 IAQ/Health pts.					
8. Install On-Demand Hot Water Circulation Pump	4 Resource pts	y=yes				

F. Electrical

1. Install Compact Fluorescent Light Bulbs (CFLs) bulbs=2 points, 10 bulbs =3 points, 12 bulbs = 4 points)	Up to 4 Energy pts.					
2. Install IC-AT Recessed Fixtures with CFLs (1 point each, up to 5 points)	Up to 5 Energy pts.					
3. Install Lighting Controls (1 point per fixture, up to 4 points)	Up to 4 Energy pts.					
4. Install High Efficiency Ceiling Fans with CFLs (1 point each, up to 4 points)	Up to 4 Energy pts.					

G. Appliances

1. Install Energy Star Dishwasher	1 Energy pt	y=yes				
2. Install Washing Machine with Water and Energy Conservation Features	1 Energy pt	y=yes				
3. Install Energy Star Refrigerator	1 Energy pt	y=yes				
4. Install Built-In Recycling Center	3 Resource pts	y=yes				

H. Insulation

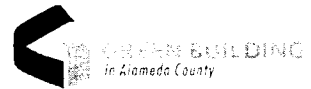
1. Upgrade Insulation to Exceed Title 24 Requirements						
a. Walls	2 Energy pts	y=yes				
b. Ceilings	2 Energy pts	y=yes				
2. Install Floor Insulation over Crawl Space	4 Energy pts	y=yes				
3. Install Recycled-Content, Fiberglass Insulation with Added Formaldehyde	3 IAQ/Health pts	y=yes				

			INPUT	Resources	Energy	IAQ/Health
4. Use Advanced Infiltration Reduction Practices	2 Energy pts	y=yes				
5. Use Cellulose Insulation						
a. Walls	4 Resource pts	y=yes				
b. Ceilings	4 Resource pts	y=yes				
6. Alternative Insulation Products (Cotton, spray-foam)						
a. Walls	4 Resource pts	y=yes				
b. Ceilings	4 Resource pts	y=yes				
I. Windows						
1. Install Energy-Efficient Windows						
a. Double-Paneled	1 Energy pt	y=yes				
b. Low-Emissivity (Low-E)	2 Energy pts	y=yes				
c. Low Conductivity Frames	2 Energy pts	y=yes				
2. Install Low Heat Transmission Glazing	1 Energy pt	y=yes				
J. Heating Ventilation and Air Conditioning						
1. Use Duct Mastic on All Duct Joints	2 Energy pts	y=yes				
2. Install Ductwork within Conditioned Space	3 Energy pts	y=yes				
3. Vent Range Hood to the Outside	1 IAQ/Health pt	y=yes				
4. Clean all Ducts Before Occupancy	2 IAQ/Health pts	y=yes				
5. Install Solar Attic Fan	2 Energy pts	y=yes				
6. Install Attic Ventilation Systems	1 Energy pt	y=yes				
7. Install Whole House Fan	4 Energy pts	y=yes				
8. Install Sealed Combustion Units						
a. Furnaces	3 IAQ/Health pts	y=yes				
b. Water Heaters	3 IAQ/Health pts	y=yes				
9. Replace Wall-Mounted Electric and Gas Heaters with Through-the-Wall Heat Pumps	3 Energy pts	y=yes				
10. Install 13 SEER/11 EER or higher AC with a TXV	3 Energy pts	y=yes				
11. Install AC with Non-HCFC Refrigerants	2 Resource pts	y=yes				
12. Install 90% Annual Fuel Utilization Efficiency (AFUE) Furnace	2 Energy pts	y=yes				
13. Retrofit Wood Burning Fireplaces						
a. Install EPA certified wood stoves/inserts	1 IAQ/Health pt	y=yes				
b. Install/Replace Dampers	1 Energy pt	y=yes				
c. Install Airtight Doors	1 Energy pt	y=yes				
14. Install Zoned, Hydronic Radiant Heating	3 Energy pts	y=yes				
15. Install High Efficiency Filter	4 IAQ/Health pts	y=yes				
16. Install Heat Recovery Ventilation Unit (HRV)	5 IAQ/Health pts	y=yes				
17. Install Separate Garage Exhaust Fan	3 IAQ/Health pts	y=yes				
K. Renewable Energy and Roofing						
1. Pre-Plumb for Solar Water Heating	4 Energy pts	y=yes				
2. Install Solar Water Heating System	10 Energy pts	y=yes				
3. Pre-Wire for Future Photovoltaic (PV) Installation	4 Energy pts	y=yes				
4. Install Photovoltaic (PV) System (1.2 kw = 6 points, 2.4 kw = 12 points, 3.6 kw = 18 points)	Up to 18 Energy pts					
6. Select Safe and Durable Roofing Materials	1 Resource pt	y=yes				
7. Install Radiant Barrier	3 Energy pts	y=yes				

			INPUT	Resources	Energy	IAQ/Health
L. Natural Heating and Cooling						
1. Incorporate Passive Solar Heating	5 Energy pts	y=yes				
2. Install Overhangs or Awnings over South Facing Windows	3 Energy pts	y=yes				
3. Plant Deciduous Trees on the West and South Sides	3 Energy pts	y=yes				
M. Indoor Air Quality and Finishes						
1. Use Low/No-VOC Paint	1 IAQ/Health pts	y=yes				
2. Use Low VOC, Water-Based Wood Finishes	2 IAQ/Health pts	y=yes				
3. Use Low/No VOC Adhesives	3 IAQ/Health pts	y=yes				
4. Use Salvaged Materials for Interior Finishes	3 Resource pts	y=yes				
5. Use Engineered Sheet Goods with no added Urea Formaldehyde	6 IAQ/Health pts	y=yes				
6. Use Exterior Grade Plywood for Interior Uses	1 IAQ/Health pts	y=yes				
7. Seal all Exposed Particleboard or MDF	4 IAQ/Health pts	y=yes				
8. Use FSC Certified Materials for Interior Finish	4 Resource pts	y=yes				
9. Use Finger-Jointed or Recycled-Content Trim	1 Resource pts	y=yes				
10. Install Whole House Vacuum System	3 IAQ/Health pts	y=yes				
N. Flooring						
1. Select FSC Certified Wood Flooring	8 Resource pts	y=yes				
2. Use Rapidly Renewable Flooring Materials	4 Resource pts	y=yes				
3. Use Recycled Content Ceramic Tiles	4 Resource pts	y=yes				
4. Install Natural Linoleum in Place of Vinyl	5 IAQ/Health pts	y=yes				
5. Use Exposed Concrete as Finished Floor	4 Resource pts	y=yes				
6. Install Recycled Content Carpet with Low VOCs	4 Resource pts	y=yes				
O. City of Albany Incentives						
1. 15% better than Title 24 Energy Calcs						
1. Additions less than 50% increase in floor area	10 Resource pts	y=yes				
2. Additions less than 200sq.ft. or resulting in less than 1,500sq.ft.	15 Resource pts	y=yes				
3. Seismic upgrade of existing building (5 pts bolts; 5 pts soft story brace; 5 pts roof diaphragm; 3 pts gas shutoff; 2 pts kit)	20 Resource pts	y=yes				
4. Installation of AC	-10 Resource pts	y=yes				
6. Plant more than one street tree when feasible	2 IAQ/Health pts	y=yes				
7. Comply with Voluntary Calif. Green Bldg Standards Code	30 Resource pts	y=yes				

Small Commercial Green Building Checklist

Small Commercial Green Building Checklist



This Commercial Checklist is intended to address new construction and renovations/expansions up to 10,000 square feet or \$3 million. Projects are recommended to meet all applicable measures on the checklist. For measures that are not applicable or are not in the project's scope of work, select "N/A" and make a note of why the measure does not apply to the project. For appendices, electronic copies of this checklist, and other green building resources, visit www.buildgreennow.org.

Project: _____

Address: _____ **Date:** _____

Site

Access to alternative transportation sources reduces the number of single passenger vehicle trips, reduces traffic congestion, and saves fuel and associated greenhouse gas emissions. Allowing space for bike parking increases participation in alternative transportation services. Cool sites and roofs reduce the amount of heat stored and re-radiated during summer days in urban environments that contribute to higher energy use and pollution.

Yes	No	N/A	Measure & Requirement	Documentation	Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Alternative Transportation Access Project is located within 1/4 mile of two or more bus lines AND/OR within 1/2 mile of a light rail or commuter rail transit stop (BART, Amtrak, etc.). Project also includes bicycle racks or storage areas for use by building occupants (workers) in a secure and covered area. If the project is in a high use public area, provide bicycle racks and/or storage options for visitors to the building as well. Provide bike racks or storage area capable of securing at least 1 bike for every 2,000 sf of building space.	1. Provide a simple map showing distances to public transit stops from the main entry of the buildings. Use the "Nearby Routes & Services" calculator on the www.511.org website or other transit agency website to calculate distances from the project address. 2. Provide a site plan that shows bike rack/storage locations. Highlight or circle the bike racks/storage areas and provide a total number of bikes able to be parked at the site. Bike racks dedicated to building occupants (workers) should be in a covered and secure location.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Reduced Parking Project does not exceed minimum local parking requirements OR the project does not provide any new parking.	1. Provide proof of the minimum local parking requirements for the site OR provide proof that no parking will be added. Minimum parking requirements usually come from the City. 2. If parking is added, provide a site plan with parking areas highlighted. Total and highlight the number of existing and new parking spaces.	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Reduced Heat Island Effect Combine cool roof and/or cool site techniques for 75% of site area being impacted by construction (including roof and all landscaping/hardscapes on site). Cool roofs are reflective surfaces applied to the roof. To find cool roof products, go to www.coolroofs.org and use the "Rated Products Directory". Cool site techniques include pervious surfaces (including open grid pavement and vegetation) and light colored concrete.	1. Site plan with the following areas calculated and clearly visible (if applicable): total site area, building/roof area, photovoltaic array area, landscape area, area of hardscapes under shade (from trees or awnings, etc.), and hardscape area. 2. Calculate the percent of the total site area that includes cool roof and/or cool site techniques. Photovoltaic panels can be exempt from the calculation if mounted on the roof or if they shade hard surfaces (subtract the photovoltaic array area from the total site area). For low-sloped roofs (<2:12), eligible cool roof materials must have a Solar Reflective Index (SRI) of 78 or higher. If SRI is not available for the cool roof product, then products with an initial solar reflectance of 0.70 or higher AND an initial thermal emittance of 0.75 or higher are acceptable. Steep sloped roofs (>2:12) do not need to comply and should have their square footage removed from calculation. 3. Provide manufacturer literature stating the cool roof SRI.	

Yes	No	N/A	Measure & Requirement	Documentation	Notes
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Water

Water-efficient fixtures reduce water use and sewer costs and reduce demand on water supplies and treatment facilities. For sites that have landscapes, see the Bay-Friendly for Permitted Landscapes checklist at www.buildgreennow.org.

Yes No N/A

4. Water Efficient Plumbing Fixtures	The following performance thresholds are required for all new fixtures: 1. Toilets: High Efficiency Toilets (HETs) with flush rate \leq 1.28 gallons per flush (gpf). 2. Urinals: Waterless or low-flow with flush rate \leq 0.5 gpf. 3. Faucets: flow rates \leq 1.5 gallons per minute (gpm) for all faucets except kitchen sinks. 4. Pre-rinse Spray Valves: flow rates \leq 2.0 gpm.	1. Floor plan(s) with fixture schedule(s) showing location of all new toilets, urinals, faucets and kitchen pre-rinse spray valves in the project. Include flow rates in the fixture schedule. 2. Specification sections showing that low-flow fixtures are specified for all new fixtures (if specifications are created for the project). 3. Manufacturer literature (cut sheets) showing flush rate of toilets and urinals to be installed, and flow rates for faucets and spray valves.	
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Energy

Exceeding energy efficiency minimums results in reduced greenhouse gas emissions, lower utility costs and increased comfort. Another benefit is higher quality construction, thanks to better air sealing, increased insulation, and high efficiency equipment.

5. Improved Energy Efficiency

There are 2 paths for achieving this measure:
 Path 1. Performance: For buildings that require Title 24 energy modeling, complete Path 1. Check "N/A" in the Path 2 box.
 Path 2. Prescriptive: For projects that do not require energy modeling, complete Path 2. Check "N/A" in the Path 1 box.

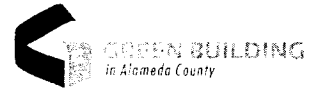
Yes No N/A

Path 1: Building Energy Modeling	Beat California minimum energy efficiency standards (Title 24, Part 6) by 10% or more.	1. Submit Title 24 report for whole building or by component. Percent better than code is determined by energy cost from ECON-1 report.	
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Yes No N/A

Path 2: For projects that DO NOT require building energy modeling: Complete A&B below.			
A. Select at least 2 of the following prescriptive energy efficiency measures			
<input type="checkbox"/>	i. Reduce Lighting Power Density (LPD) in the facility to 90% of code.	1. Provide lighting design plans and/or specifications. 2. Calculate the total LPD and include on plans or in other format. The LPD can be calculated from lighting design plans or from Title 24 submissions. Must be a maximum of 90% of Title 24 LPD. Do not include occupancy sensor or other switches/control strategies in this calculation.	
<input type="checkbox"/>	ii. Verify outside air economizer operation.	1. Evaluate economizer operation upon startup. Confirm operation of actuator from minimum position to 100% open. 2. Verify economizer operates per control sequence (outside air, room set point) to meet space requirements.	
<input type="checkbox"/>	iii. High performance windows - for all windows replaced.	1. Provide plans and/or specifications with window schedule. All new windows must be NFRC rated and have a U-factor no higher than 0.40. Solar Heat Gain Coefficient (SHGC) is dependent on glazing percentage, for buildings with less than 20% glazing, SHGC should be no higher than 0.45. For buildings with more than 20% glazing, SHGC should be no higher than 0.35. 2. Provide manufacturer cut sheets or other documentation of NFRC label for windows chosen.	
<input type="checkbox"/>	iv. All new or replaced windows have low-conductivity frames. Metal frames do not qualify, except those with thermal breaks.	1. Provide window schedule or specifications showing all new or replaced windows frames are vinyl, fiberglass, thermally-broken metal, or other non-metal. 2. Provide manufacturer cut sheet illustrating frame type.	

Small Commercial Green Building Checklist



Yes No N/A	Measure & Requirement	Documentation	Notes
<input type="checkbox"/>	v. High Efficiency HVAC Equipment. All new HVAC equipment must comply with the Consortium for Energy Efficiency (CEE) Tier 1 commercial HVAC standards. See www.buildgreenow.org for a link to the CEE standards or download them at www.cee1.org/com/com-main.php3 .	1. Provide plans and specifications showing equipment schedule and performance specifications. 2. Provide manufacturer literature confirming compliance with CEE Tier 1 standards.	
<input type="checkbox"/>	vi. Provide on-site renewable energy generation (solar, wind, etc) system capable of producing at least 5% of the building's total electrical load OR at least 10% of the building's hot water demand.	1. Provide estimated output and percent of building load to be offset with renewable energy system. Calculations to be provided by a licensed solar installer, electrical contractor, or from the CEC rebate application. 2. Provide manufacturer cut sheets for solar panels. If photovoltaics are installed, provide cut sheet for inverter(s).	
B. Select at least 3 of the following prescriptive energy efficiency measures			
<input type="checkbox"/>	i. Automatic daylight sensors are installed in at least 75% of spaces with exterior non-north facing windows. Automatic sensors must turn lights on, off, or dim depending on amount of daylight. (B.i and B.iii cannot both be attained on the same project).	1. Highlight areas to be daylit on plans (those areas or rooms within 15 feet of skylights or exterior, non-north windows). 2. Highlight locations of daylight sensors. 3. Provide calculation showing that 75% or more of the space in daylit areas (by square feet or rooms) are under daylighting control.	
<input type="checkbox"/>	ii. Locate occupancy sensors in 40% of intermittent or non regularly occupied spaces (hallways, bathrooms, closets, private offices). Exclude areas containing mechanical equipment or electrical panels which require light for maintenance activities.	1. Provide lighting plans with intermittent/non-regularly occupied spaces highlighted. 2. Highlight occupancy sensors on plans that serve these spaces. 3. Provide calculation showing that 40% or more of the spaces are controlled by occupancy sensors.	
<input type="checkbox"/>	iii. Multi-level switching in all "daylit" areas (B.i and B.iii cannot both be attained on the same project).	1. Provide lighting plans with daylit areas highlighted (those areas within 15 feet of skylights or exterior, non-north windows). 2. Confirm electrical design allows for multi-level switching.	
<input type="checkbox"/>	iv. All new exit signs in the project are to be LED or nuclear. Recommend replacing all existing exit signs as well, even if not in project scope.	1. Provide lighting plans specifying correct signage product.	
<input type="checkbox"/>	v. Install ENERGY STAR rated office equipment and appliances. For eligible equipment, at least 75% of all new office equipment and 90% of all new appliances must be ENERGY STAR rated. See www.energystar.gov for product lists.	1. Submit list of all planned new office equipment and appliances. 2. Calculate the percent of planned office equipment and appliances that are to be ENERGY STAR. If ENERGY STAR products are not available for a particular appliance or piece of equipment, note that on the list and do not include those in the percentage calculation.	
<input type="checkbox"/>	vi. High efficiency heating: If new furnaces are specified, they will have a minimum energy efficiency of 92 AFUE.	1. Submit plans or specifications highlighting efficiency of forced air furnace(s). 2. Submit manufacturer cut sheet for furnace(s) and highlight efficiency.	
<input type="checkbox"/>	vii. High efficiency water heating: Specify gas water heaters above 0.65 EF or preferably a condensing hot water heater at 0.86. Avoid electric hot water heaters. Specify boilers with efficiency of 90% or more. (This excludes all tankless water heaters and any small kitchen or bathroom water heaters under 5 gallons.)	1. Submit plans or specifications highlighting efficiency of water heater(s) or boiler(s). 2. Submit manufacturer cut sheet for water heaters/boilers and highlight efficiency.	

Yes	No	N/A	Measure & Requirement	Documentation	Notes
<input type="checkbox"/>			viii. Tight ducts: Duct testing and sealing for all ductwork.	1. Submit evidence that duct sealing and testing will be performed. This could be in the specifications; be a HERS duct testing contract or report; or other documentation that ducts will be sealed and tested. 2. Provide final duct testing report.	
<input type="checkbox"/>			ix. Develop and implement an Operations & Maintenance (O&M) Plan for the building. Download a guide to green O&M at www.StopWaste.Org/EPP .	1. Develop an O&M plan for the project. The plan should address all that apply: building lighting, heating, cooling, plumbing, solar, rainwater catchment, irrigation/landscaping practices and other systems as well as more general building policies (such as green cleaning, environmental purchasing, etc). The plan should describe accessibility of units, proper maintenance techniques, descriptions of proper use, model numbers & cut sheets, manufacturer contact information for replacement/repair/questions. The plan should include switching/controls diagrams, lighting plans, heating, cooling, plumbing, solar, rainwater, irrigation/landscaping practices. 2. Submit signed O&M plan from the owner saying that the O&M plan will be followed once occupied.	

Materials

Construction materials constitute about 22% of the disposed waste stream statewide. Many of these materials can be reduced, reused or recycled. Recycling reduces the amount of material entering landfills and can save money for building owners through reduced disposal and operating fees. Buying environmentally preferable new products can reduce the impact on raw materials extraction and disposal at end of life.

Yes No N/A

6. Construction Waste Management

During construction, divert 100% of concrete and asphalt concrete and divert at least 65% of remaining job site construction waste from landfill via recycling or reuse.

1. Prior to construction, complete a construction waste management plan. The City should provide a sample template, or one can be downloaded at www.buildgreennow.org.
2. After construction, provide final waste management plan and verification (service provider weight tags and/or receipts) that 100% of concrete and asphalt concrete were diverted and at least 65% of remaining job site construction waste diverted from landfill via recycling or reuse. If material was taken to a transfer station, a facility average recycling rate must be applied to the amount of material sent to that facility.

7. Environmentally Preferable Materials

Achieve at least 5 Environmentally Preferable Materials from i-xiv below.

Materials or finishes listed below meet at least one of the following environmentally preferable criteria: Plywood/MDF/wood is FSC certified; salvaged/reclaimed materials (including onsite materials); flyash in concrete; rapidly renewable materials (bamboo, etc); recycled content materials (at least 40% combined pre and post consumer); exposed concrete (for flooring only); or low-emitting (Volatile Organic Compounds (VOCs) and other chemicals. See www.buildgreennow.org for links and resources on Environmentally Preferable Materials.

<input type="checkbox"/>	i. Cabinets & Shelving (includes boxes, face frames and doors). <i>At least 50% of cabinets and shelving (by volume or linear feet) meet environmentally preferable criteria.</i>	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material (recycled content %, FSC certification, etc.). 3. Provide calculation of applicable material percentage.	
<input type="checkbox"/>	ii. Interior Trim (includes all trim for floors, doors, walls, ceilings, windows, wainscot). <i>At least 50% of all interior trim (by volume or linear feet) meet environmentally preferable criteria.</i>	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.	

Small Commercial Green Building Checklist



Yes	No	N/A	Measure & Requirement	Documentation	Notes
<input type="checkbox"/>			<p>iii. Doors and Door Cores At least 50% of all doors (by count) meet environmentally preferable criteria.</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.</p>	
<input type="checkbox"/>			<p>iv. Countertops and Substrates. At least 50% of all countertops and substrates (by volume or linear feet) meet environmentally preferable criteria.</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.</p>	
<input type="checkbox"/>			<p>v. Furniture (Includes systems and stand-alone furniture). At least 75% of all furniture (by number of pieces or by cost) meet environmentally preferable criteria.</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of furniture. 3. Provide calculation of applicable material percentage.</p>	
<input type="checkbox"/>			<p>vi. Ceiling Tiles. At least 75% of all ceiling tile (by square feet) meet environmentally preferable criteria.</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.</p>	
<input type="checkbox"/>			<p>vii. Insulation. At least 75% of all insulation (by volume, square feet, or cost) meet environmentally preferable criteria.</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.</p>	
<input type="checkbox"/>			<p>viii. Flooring. At least 50% (by square feet) of all flooring (exposed or stained concrete) or floor coverings (carpet, resilient flooring, tile, hardwood, etc.) meet environmentally preferable criteria.</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.</p>	
<input type="checkbox"/>			<p>ix. Flyash in Concrete Achieve 15% flyash as percentage of portland cement for all new concrete poured.</p>	<p>1. Provide proposed mix designs showing flyash as percentage of portland cement. 2. Provide calculation showing planned 15% flyash for total new poured concrete (ensure that flyash is percentage of portland cement).</p>	
<input type="checkbox"/>			<p>x. Exterior Paint. At least 50% of all exterior paint (by square footage or volume) is recycled content (40%+).</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature showing recycled content. 3. Provide calculation of applicable material percentage.</p>	
<input type="checkbox"/>			<p>xi. Low-Emitting Interior Paint. All interior paints are low emitting: ≤ 50 grams/liter for flat paints, ≤ 150 g/L for non-flat paints and other coatings.</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide documentation that all paints and coatings are low-emitting. Provide MSDS sheets.</p>	
<input type="checkbox"/>			<p>xii. Low-Emitting Adhesives & Sealants. All adhesives and sealants are low-emitting according to the South Coast Air Quality Management District Rule 1168 (see www.aqmd.gov/rules/reg/reg11/r1168.pdf for VOC limits).</p>	<p>1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide documentation that all adhesives and sealants are low-emitting. Provide MSDS sheets.</p>	

Yes	No	N/A	Measure & Requirement	Documentation	Notes
<input type="checkbox"/>			xiii. Low-Emitting Carpeting. <i>All carpeting, carpet pads, and adhesives are certified Green Label Plus per the Carpet and Rug Institute (CRI). See www.carpet-rug.org for label requirements and product lists.</i>	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide CRI Green Label Plus documentation.	
<input type="checkbox"/>			xiv. Low-Emitting Composite Wood. <i>All interior composite wood (MDF, plywood, particleboard, etc.) contain no added urea formaldehyde.</i>	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide MSDS sheets of composite wood.	

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Collection of Recyclables Encourage ongoing recycling by providing at least as much bin volume for recycling as for waste. Additionally, recycle at least 5 of the following material streams: glass, plastic, cardboard, aluminum, food scraps, hazardous waste (fluorescent lamps, batteries, oil, etc.), and e-waste (computer equipment).	1. Provide plans showing recycling receptacles are provided in all applicable areas: offices, private rooms, meeting rooms, kitchens, etc. 2. Provide calculation of adequate recycling volume. 3. Provide evidence of recycling for at least 5 of the material streams. Submit recycling hauler information for recyclables and food scraps. Provide a short narrative on how the facility will collect and recycle hazardous and e-waste.	
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Indoor Environment & Air

Effective daylighting and natural ventilation may improve indoor environmental quality. Natural ventilation can reduce heating and cooling requirements and may justify smaller, simpler HVAC systems, which can reduce the project's first costs. Ventilation (natural or mechanical) improves indoor air quality. Daylighting can offset some of the electric lighting load.

Yes	No	N/A	Measure & Requirement	Documentation	Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. Daylight, Views & Natural Ventilation Provide access to views to the outdoors (any window or skylight can provide a view) from 80% of regularly occupied areas. Operable windows are recommended for all projects; required if 2 or more walls have windows or access to outdoor air and there is not a security compromise by having operable windows.	1. Provide site plans with view areas highlighted (those areas within sightline of skylights or exterior windows). 2. Calculate percent of regularly occupied areas with/without access to views. 3. Provide window schedule showing operable and non-operable windows.	

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. Fresh Air Monitors for Densely Occupied Spaces For systems with moveable outside air dampers: For all densely occupied spaces, such as multi-purpose rooms or conference rooms, provide CO2 monitors with alarms (example: small visual indicator such as a light to alert building occupants or building operator), and the ability to manually adjust air flow.	1. Provide mechanical plans with CO2 monitors highlighted. 2. Confirm alarm function (user adjustable) of Building Automation System. Verify control sequence resulting from "alarm" in Sequence of Operations. 3. Provide Title 24 "Acceptance" forms. 4. Written confirmation that testing, adjusting and balancing (TAB) contractor will adjust and balance the moveable outside air damper to provide cooling as required for air conditioning the space. When CO2 monitor located within referenced AC unit's conditioned space sends an alarm signal the economizer damper actuator shall open outside air damper to provide 30% more air than the minimum damper setting.	
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Single Family GreenPoint Checklist

ENTER PROJECT NAME

Community

Energy

IAQ/Health

Resources

Water

<p>2. Use Engineered Lumber</p> <p><input type="checkbox"/> a. Beams and Headers</p> <p><input type="checkbox"/> b. Insulated Engineered Headers</p> <p><input type="checkbox"/> c. Wood I-Joists or Web Trusses for Floors</p> <p><input type="checkbox"/> d. Wood I-Joists or Rafters</p> <p><input type="checkbox"/> e. Engineered or Finger-Jointed Studs for Vertical Applications</p>				
<p>3. Use FSC-Certified Wood</p> <p><input type="checkbox"/> a. Dimensional Studs: Minimum 40%</p> <p><input type="checkbox"/> b. Dimensional Studs: Minimum 70%</p> <p><input type="checkbox"/> c. Panel Products: Minimum 40%</p> <p><input type="checkbox"/> d. Panel Products: Minimum 70%</p>				
<p>4. Design Energy Heels on Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)</p>				
<p>5. Design Trusses to Accommodate Ductwork</p>				
<p>6. Use Oriented Strand Board (OSB)</p> <p><input type="checkbox"/> a. Subfloor</p> <p><input type="checkbox"/> b. Sheathing</p>				
<p>7. Use Recycled-Content Steel Studs for 90% of Interior Wall Framing</p>				
<p>8. Use Solid Wall Systems (Includes SIPs, ICFs, & Any Non-Stick Frame Assembly)</p> <p><input type="checkbox"/> a. Floors</p> <p><input type="checkbox"/> b. Walls</p> <p><input type="checkbox"/> c. Roofs</p>				
<p>9. Thermal Mass Walls: 5/8-Inch Drywall on All Interior Walls or Walls Weigh more than 40 lb/cu.ft.</p>				
<p>10. Design and Build Structural Pest Controls</p> <p><input type="checkbox"/> a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers</p> <p><input type="checkbox"/> b. All New Plants Have Trunk, Base, or Stem Located At Least 36 Inches from Foundation</p>				
<p>11. Reduce Pollution Entering the Home from the Garage</p> <p><input type="checkbox"/> a. Tightly Seal the Air Barrier between Garage and Living Area</p> <p><input type="checkbox"/> b. Install Separate Garage Exhaust Fan</p>				
<p>12. Install Overhangs and Gutters</p> <p><input type="checkbox"/> a. Minimum 16-Inch Overhangs and Gutters</p> <p><input type="checkbox"/> b. Minimum 24-Inch Overhangs and Gutters</p>				

E. EXTERIOR FINISH

Possible Points

<p><input type="checkbox"/> 1. Use Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking</p>				
<p><input type="checkbox"/> 2. Install a Drainage Plane (Rain Screen Wall System)</p>				
<p><input type="checkbox"/> 3. Use Durable and Non-Combustible Siding Materials</p>				
<p><input type="checkbox"/> 4. Select Durable and Non-Combustible Roofing Materials</p>				

F. PLUMBING

Possible Points

<p>1. Distribute Domestic Hot Water Efficiently</p> <p><input type="checkbox"/> a. Insulate Hot Water Pipes from Water Heater to Kitchen</p> <p><input type="checkbox"/> b. Insulate All Hot Water Pipes OR Install On-Demand Hot Water Circulation System in conjunction with F.1.a Insulate Hot Water Pipes from Water Heater to Kitchen</p> <p><input type="checkbox"/> c. Locate the Water Heater within 25 feet of All Hot Water Fixtures and Appliances</p> <p><input type="checkbox"/> d. Use Engineered Parallel Piping</p>				
<p>2. Install Only High Efficiency Toilets (Dual-Flush or <=1.3 gpf)</p>				

G. APPLIANCES

Possible Points

<p>1. Install ENERGY STAR Dishwasher</p> <p><input type="checkbox"/> a. ENERGY STAR</p> <p><input type="checkbox"/> b. Dishwasher Uses No More than 6.5 Gallons/Cycle</p>				
<p>2. Install ENERGY STAR Clothes Washing Machine with Water Factor of 6 or Less</p>				3
<p>3. Install ENERGY STAR Refrigerator</p> <p><input type="checkbox"/> a. ENERGY STAR: 15% above Federal Minimum</p> <p><input type="checkbox"/> b. Super-Efficient Home Appliance Tier 2: 25% above Federal Minimum</p>				
<p>4. Install Built-In Recycling Center</p>				

ENTER PROJECT NAME

		Community	Energy	IAQ/Health	Resources	Water
H. INSULATION		Possible Points				
<input type="checkbox"/>	1. Install Insulation with 75% Recycled Content					
<input type="checkbox"/>	a. Walls and/or Floors					
<input type="checkbox"/>	b. Ceilings					
<input type="checkbox"/>	2. Install Insulation that is Low-Emitting (Certified Section 01350)					
<input type="checkbox"/>	a. Walls and/or Floors			1		
<input type="checkbox"/>	b. Ceilings			1		
<input type="checkbox"/>	3. Pre-Drywall Inspection Shows Quality Installation of Insulation		1			
I. HEATING, VENTILATION & AIR CONDITIONING		Possible Points				
<input type="checkbox"/>	1. Design and Install HVAC System to ACCA Manual J, D, and S Recommendations		4			
<input type="checkbox"/>	2. Install Sealed Combustion Units					
<input type="checkbox"/>	a. Furnaces			2		
<input type="checkbox"/>	b. Water Heaters			2		
<input type="checkbox"/>	3. No Fireplace or Sealed Gas Fireplace with Efficiency Rating Not Less Than 60%			1		
<input type="checkbox"/>	4. Install ENERGY STAR Ceiling Fans with CFLs in Living Areas and Bedrooms		1			
<input type="checkbox"/>	5. Install Mechanical Ventilation System for Nighttime Cooling (Points are Cumulative up to 3)					
<input type="checkbox"/>	a. Whole House Fan		1			
<input type="checkbox"/>	b. Automatically Controlled Integrated System		2			
<input type="checkbox"/>	c. Integrated System with Variable Speed Control		3			
<input type="checkbox"/>	6. Install Air Conditioning with Non-HCFC Refrigerants		1			
<input type="checkbox"/>	7. Design and Install Effective Ductwork					
<input type="checkbox"/>	a. Install HVAC Unit and Ductwork within Conditioned Space		3			
<input type="checkbox"/>	b. Use Duct Mastic on All Duct Joints and Seams		1			
<input type="checkbox"/>	c. Install Ductwork under Attic Insulation (Buried Ducts)		1			
<input type="checkbox"/>	d. Pressure Balance the Ductwork System for Master Bedroom		1			
<input type="checkbox"/>	e. Protect Ducts during Construction and Clean All Ducts before Occupancy			1		
<input type="checkbox"/>	8. Install High Efficiency HVAC Filter (MERV 6+)			1		
<input type="checkbox"/>	9. Install Zoned, Hydronic Radiant Heating with Slab Edge Insulation		1	1		
<input type="checkbox"/>	10. Install Mechanical Ventilation System					
<input type="checkbox"/>	a. Any Whole House Ventilation System That Meets ASHRAE 62.2		1	2		
<input type="checkbox"/>	b. Install ENERGY STAR Bathroom Fan			1		
<input type="checkbox"/>	c. All Bathroom Fans Are on Timer or Humidistat			1		
<input type="checkbox"/>	11. Use Low-Sone Range Hood Vented to the Outside			1		
<input type="checkbox"/>	12. Install Carbon Monoxide Alarm(s)			1		
J. BUILDING PERFORMANCE		Possible Points				
<input type="checkbox"/>	1. Design and Build High Performance Homes (2 points for each 1% above T-24, up to 30 pts) <i>Enter the percent above Title 24 in the cell at left. Any value over 15% will automatically earn 30 points.</i>		30			
<input type="checkbox"/>	2. House Obtains ENERGY STAR with Indoor Air Package Certification			5	2	
<input type="checkbox"/>	3. Inspection and Diagnostic Evaluations					
<input type="checkbox"/>	a. Third Party Energy and Green Building Review of Home Plans			1	1	1
<input type="checkbox"/>	b. Blower Door Test Performed			1		
<input type="checkbox"/>	c. House Passes Combustion Safety Backdraft Test				1	1
K. RENEWABLE ENERGY		Possible Points				
<input type="checkbox"/>	1. Pre-Plumb for Solar Hot Water Heating		4			
<input type="checkbox"/>	2. Install Solar Water Heating System		10			
<input type="checkbox"/>	3. Install Wiring Conduit for Future Photovoltaic Installation & Provide 200 ft ² of South-Facing Roof		2			
<input type="checkbox"/>	4. Install Photovoltaic (PV) Panels					
<input type="checkbox"/>	a. 1.2 kW System		6			
<input type="checkbox"/>	b. 2.4 kW System		6			
<input type="checkbox"/>	c. 3.6 kW or more		6			

ENTER PROJECT NAME

Community
Energy
IAQ/Health
Resources
Water

L. FINISHES

Possible Points

<input type="checkbox"/>	1. Provide Permanent Walk-Off Mats and Shoe Storage at Home Entrances				
	2. Use Low/No-VOC Paint				
<input type="checkbox"/>	a. Low-VOC Interior Wall/Ceiling Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))				
<input type="checkbox"/>	b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (Flat))				
<input type="checkbox"/>	3. Use Low VOC, Water-Based Wood Finishes (<150 gpl VOCs)				
<input type="checkbox"/>	4. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives				
<input type="checkbox"/>	5. Use Recycled-Content Paint				
	6. Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed				
	At Least 50% of Each Material (1 pt each):				
<input type="checkbox"/>	a. Cabinets				
<input type="checkbox"/>	b. Interior Trim				
<input type="checkbox"/>	c. Shelving				
<input type="checkbox"/>	d. Doors				
<input type="checkbox"/>	e. Countertops				
	7. Reduce Formaldehyde in Interior Finish (Section 01350) for At Least 50% of Each Material Below:				
<input type="checkbox"/>	a. Cabinets				
<input type="checkbox"/>	b. Interior Trim				
<input type="checkbox"/>	c. Shelving				
<input type="checkbox"/>	d. Subfloor				
<input type="checkbox"/>	8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb				

M. FLOORING

Possible Points

	1. Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. <i>Note: Flooring Adhesives Must Have <50 gpl VOCs.</i>				
<input type="checkbox"/>	a. Minimum 15% of Floor Area				
<input type="checkbox"/>	b. Minimum 30% of Floor Area				
<input type="checkbox"/>	c. Minimum 50% of Floor Area				
<input type="checkbox"/>	d. Minimum 75% of Floor Area				
<input type="checkbox"/>	2. Thermal Mass Floors: Floor Covering Other than Carpet on 50% or More of Concrete Floors				
<input type="checkbox"/>	3. Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)				

N. OTHER

Possible Points

<input type="checkbox"/>	1. Incorporate Green Points Checklist in Blueprints - Required				R
<input type="checkbox"/>	2. Develop Homeowner Manual of Green Features/Benefits				
	3. Community Design Measures & Local Priorities: See the Community Planning & Design section in Chapter 4 of the New Home Guidelines for measures. Maximum of 20 points for suggested measures. Local requirements may also be listed here.				
0	Enter description here				
0	Enter description here				
0	Enter description here				
0	Enter description here				
	4. Innovation: List innovative measures that meet the green building objectives of the Guidelines. Enter up to a maximum combined total of 20 pts. See Innovation Checklist for suggested measures.				
0	Innovation in Community: Enter description here				
0	Innovation in Energy: Enter description here				
0	Innovation in IAQ/Health: Enter description here				
0	Innovation in Resources: Enter description here				
0	Innovation in Water: Enter description here				

Summary

Points Achieved from Specific Categories

0 0 0 0 0

Total Points Achieved

0

Project has not yet met the recommended minimum requirements

- Total Project Score of At Least 50 Points
- Minimum points in specific categories: Energy (11), IAQ/Health (5), Resources (6), Water (3)
- Required measures A.3.a and/or N.1

Multifamily GreenPoint Checklist

ENTER PROJECT NAME

Community	Energy	IAQ/Health	Resources	Water
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7. Landscaping

Check here if the landscape area is <10% of the total site area. Projects with <10% landscape area can only check up to 3 boxes in this section.

- a. No Plant Species will Require Shearing
- b. No plantings are Listed on the Invasive Plant Inventory by the California Invasive Plant Council
- c. Specify Drought-tolerant California Natives, Mediterranean or Other Appropriate Species
- d. Create Drought Resistant Soils:
 - i. Mulch All Planting Beds to a Depth of 2 Inches or Greater as Per Local Ordinance
 - ii. Amend with 1 Inch of Compost or as per Soil Analysis to Reach 3.5% Soil Organic Matter
- e. Design & Install High-Efficiency Irrigation System
 - i. Specify Smart (Weather-Based) Irrigation Controllers
 - ii. Specify Drip, Bubblers or Low-Flow Sprinklers for All Non Turf Landscape Areas
- f. Group Plants by Water Needs (Hydrozones) in Planting Plans & Identify Hydrozones on Irrigation Plans
- g. Minimize Turf in Landscape Installed by Builder
 - i. Do Not Specify Turf on Slopes Exceeding 10% or in Areas Less Than 8 Feet Wide
 - ii. Less Than 33% of All Landscaped Area is Specified as Turf AND All Turf has Water Requirement <= To Tall Fescue

8. Building Performance Exceeds Title 24 by at least 15%-Required

Enter the Percent Above the 2005 Version of Title 24 for Residential and Non-Residential Portions of the Project.

- 0%
- a. Residences: 2 Points for Every 1% Above 2005 T24
- 0%
- b. Non-Residential Spaces: 2 Points for Every 1% Above 2005 T24

9. Cool Site

- a. At least 30% of the Site Includes Cool Site Techniques

10. Adaptable Buildings

- a. Include Universal Design Principles in Units
 - 50% of Units
 - 80% of Units
- b. Live/Work Units Include A Dedicated Commercial Entrance

11. Affordability

- a. A Percentage of Units are Dedicated to Households Making 80% or Less of AMI
 - 10% of All Units
 - 20%
 - 30%
 - 50% or More
- b. Development Includes Multiple Bedroom Units (At least 1 Unit with 3BR or More at or Less Than 80% AMI)

RESIDENTIAL POSSIBLE POINTS

1. Construction & Demolition Waste Management

- Divert a Portion of all Construction & Demolition Waste:
 - a. Required: Divert 50%
 - b. Divert 65%
 - c. Divert 80% or more

2. Construction Material Efficiencies

- a. Lumber is Delivered Pre-Cut from Supplier (80% or More of Total Board Feet)
- b. Components of the Project Are Pre-Assembled Off-Site & Delivered to the Project
 - 25% of Total Square Footage
 - 50% of Total Square Footage
 - 75% of Total Square Footage or More

3. Construction Indoor Air Quality (IAQ) Management Plan

- a. An IAQ Management Plan is Written & Followed for the Project

C. STRUCTURE POSSIBLE POINTS

1. Recycled Aggregate

- a. Minimum 25% Recycled Aggregate (Crushed Concrete) for Fill, Backfill & Other Uses

2. Recycled Flyash in Concrete

- a. Flyash or Slag is Used to Displace a Portion of Portland Cement in Concrete
 - 20%
 - 30% or More

ENTER PROJECT NAME

Community

Energy

IAQ/Health

Resources

Water

3. FSC-Certified Wood for Framing Lumber

- a. FSC-Certified Wood for a Percentage of All Dimensional Studs:
 - 40%
 - 70%
- b. FSC-Certified Panel Products for a Percentage of All Sheathing (OSB & Plywood):
 - 40%
 - 70%

4. Engineered Lumber or Steel Studs, Joists, Headers & Beams

- a. 90% or More of All Floor & Ceiling Joists
- b. 90% or More of All Studs
- c. 90% or More of All Headers & Beams

5. Optimal Value Engineering Framing

- a. Studs at 24" Centers on Top Floor Exterior Walls &/or All Interior Walls
- b. Door & Window Headers Sized for Load
- c. Use Only Jack & Cripple Studs Required for Load

6. Steel Framing

- a. Mitigate Thermal Bridging by Installing Exterior Insulation (At Least 1-Inch of Rigid Foam)

7. Structural Insulated Panels (SIPs) Or Other Solid Wall Systems

- a. SIPs Or Other Solid Wall Systems are Used for 80% of All:
 - Floors
 - Walls
 - Roofs

8. Raised Heel Roof Trusses

- a. 75% of All Roof Trusses Have Raised Heels

9. Insulation

- a. All Ceiling, Wall & Floor Insulation is 01350 Certified OR Contains No Added Formaldehyde
- b. All Ceiling, Wall & Floor Insulation Has a Recycled Content of 50% or More

10. Durable Roofing Options

- a. *Required:* No Shingle Roofing OR All Shingle Roofing Has 3-Yr Subcontractor Guarantee & 20-Yr Manufacturer Warranty
- b. All Sloped Roofing Materials Carry a 40-Year Manufacturer Warranty

R

11. Moisture Shedding & Mold Avoidance

- a. Building(s) Include a Definitive Drainage Plane Under Siding
- b. ENERGY STAR Bathroom Fans are Supplied in All Bathrooms, Are Exhausted to the Outdoors & Are Equipped with Controls
- c. A Minimum of 80% of Kitchen Range Hoods Are Vented to the Exterior

12. Green Roofs

- a. A Portion of the Low-Slope Roof Area is Covered By A Vegetated or "Green" Roof
 - 25%
 - 50% or More

D. SYSTEMS

Possible Points

1. Passive Solar Heating

- a. Orientation: At Least 40% of the Units Face Directly South
- b. Shading On All South-Facing Windows Allow Sunlight to Penetrate in Winter, Not in Summer
- c. Thermal Mass: At Least 50% of the Floor Area Directly Behind South-Facing Windows is Massive

2. Radiant Hydronic Space Heating

- a. Install Radiant Hydronic Space Heating for IAQ purposes (No Forced Air) in All Residences

3. Solar Water Heating

- a. Pre-Plumb for Solar Hot Water
- b. Install Solar Hot Water System for Preheating DHW

4. Air Conditioning with Advanced Refrigerants

- a. Install Air Conditioning with Non-HCFC Refrigerants

5. Advanced Ventilation Practices

Perform the Following Practices in Residences:

- a. Infiltration Testing by a C-HERS Rater for Envelope Sealing & Reduced Infiltration
- b. Operable Windows or Skylights Are Placed To Induce Cross Ventilation (At Least One Room In 80% of Units)
- c. Ceiling Fans in Every Bedroom & Living Room OR Whole House Fan is Used

6. Garage Ventilation

- a. Garage Ventilation Fans Are Controlled by Carbon Monoxide Sensors (Passive Ventilation Does Not Count)

ENTER PROJECT NAME

	Community	Energy	IAQ/Health	Resources	Water
7. Low-Mercury Lamps					
<input type="checkbox"/>					
a. Low-Mercury Products Are Installed Wherever Linear Fluorescent Lamps Are Used					
<input type="checkbox"/>					
b. Low-Mercury Products Are Installed Wherever Compact Fluorescent Lamps Are Used					
8. Light Pollution Reduction					
<input type="checkbox"/>					
a. Exterior Luminaires Emit No Light Above Horizontal OR Are Dark Sky Certified					
<input type="checkbox"/>					
b. Control light Trespass Onto Neighboring Areas Through Appropriate Fixture Selection & Placement					
9. Onsite Electricity Generation					
<input type="checkbox"/>					
a. Pre-Wire for Photovoltaics & Plan for Space (Clear Areas on Roof & in Mechanical Room)					
<input type="checkbox"/>					
b. Install Photovoltaics to Offset a Percent of the Project's Total Estimated Electricity Demand					
<input type="checkbox"/>					
10%					
<input type="checkbox"/>					
20%					
<input type="checkbox"/>					
30% or more					
<input type="checkbox"/>					
c. Educational Display is Provided in a Viewable Public Area					
10. Elevators					
<input type="checkbox"/>					
a. Gearless Elevators Are Installed					
11. ENERGY STAR® Appliances					
<input type="checkbox"/>					
a. Install ENERGY STAR Refrigerators in All Locations					
<input type="checkbox"/>					
ENERGY STAR-Qualified					
<input type="checkbox"/>					
ACEEE-Listed Refrigerators					
<input type="checkbox"/>					
b. Install ENERGY STAR Dishwashers in All Locations					
<input type="checkbox"/>					
All Dishwashers Are ENERGY STAR-qualified					
<input type="checkbox"/>					
Residential-grade Dishwashers Use No More than 6.5 Gallons Per Cycle					
<input type="checkbox"/>					
c. Install ENERGY STAR Clothes Washers In All Locations					
<input type="checkbox"/>					
d. Install Ventless Natural Gas Clothes Dryers in Residences					
12. Central Laundry					
<input type="checkbox"/>					
a. Central Laundry Facilities Are Provided for All Occupants					
13. Water-Efficient Fixtures					
<input type="checkbox"/>					
a. All Showerheads Use 2.0 Gallons Per Minute (gpm) or Less					
<input type="checkbox"/>					
b. High-Efficiency Toilets Use 1.28 gpf or Less or Are Dual Flush					
<input type="checkbox"/>					
In All Residences					
<input type="checkbox"/>					
In All Non-Residential Areas					
<input type="checkbox"/>					
c. Install High Efficiency Urinals (0.5 gpf or less) or No-Water Urinals Wherever Urinals Are Specified:					
<input type="checkbox"/>					
Average flush rate is 0.5 gallons per flush or less					
<input type="checkbox"/>					
Average flush rate is 0.1 gallons per flush or less					
<input type="checkbox"/>					
d. Flow Limiters Or Flow Control Valves Are Installed on All Faucets					
<input type="checkbox"/>					
Residences: Kitchen - 2.0 gpm or less					
<input type="checkbox"/>					
Non-Residential Areas: Kitchen - 2.0 gpm or less					
<input type="checkbox"/>					
Residences: Bathroom Faucets- 1.5 gpm or less					
<input type="checkbox"/>					
Non-Residential Areas: Bathroom Faucets - 1.5 gpm or less					
<input type="checkbox"/>					
e. Non-Residential Areas: Install Pre-Rinse Spray Valves in Commercial Kitchens - 1.6 gpm or less					
14. Source Water Efficiency					
<input type="checkbox"/>					
a. Use Recycled Water for Landscape Irrigation or to Flush Toilets/Urinals					
<input type="checkbox"/>					
b. Use Captured Rainwater for Landscape Irrigation or to Flush 5% of Toilets &/or Urinals					
<input type="checkbox"/>					
c. Water is Submetered for Each Residential Unit & Non-Residential Tenant					

E. FINISHES AND FURNISHINGS					Possible Points
1. Construction Indoor Air Quality Management					
<input type="checkbox"/>					
a. Perform a 2-Week Whole Building Flush-Out Prior to Occupancy					
2. Entryways					
<input type="checkbox"/>					
a. Provide Permanent Walk-Off Mats and Shoe Storage at All Home Entrances					
<input type="checkbox"/>					
b. Permanent Walk-Off Systems Are Provided at All Main Building Entrances & In Common Areas					
3. Recycling & Waste Collection					
<input type="checkbox"/>					
a. Residences: Provide Built-In Recycling Center In Each Unit					

ENTER PROJECT NAME

Community

Energy

IAQ/Health

Resources

Water

4. Use Low/No-VOC Paints & Coatings

a. Low-VOC Interior Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))

- In All Residences
- In All Non-Residential Areas:

b. Zero-VOC: Interior Paints (<5 gpl VOCs (Flat))

- In All Residences
- In All Non-Residential Areas:

c. Wood Coatings Meet the Green Seal Standards for Low-VOCs

- In All Residences
- In All Non-Residential Areas:

d. Wood Stains Meet the Green Seal Standards for Low-VOCs

- In All Residences
- In All Non-Residential Areas:

5. Use Recycled Content Exterior Paint

- a. Use Recycled Content Paint on 50% of All Exteriors

6. Low-VOC Construction Adhesives

- a. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives

7. Environmentally Preferable Materials for Interior Finish

Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed

a. Residences: At Least 50% of Each Material:

- i. Cabinets
- ii. Interior Trim
- iii. Shelving
- iv. Doors
- v. Countertops

b. Non-Residential Areas: At Least 50% of Each Material:

- i. Cabinets
- ii. Interior Trim
- iii. Shelving
- iv. Doors
- v. Countertops

8. Reduce Formaldehyde in Interior Finish Materials

Reduce Formaldehyde in Interior Finish Materials (Section 01350) for At Least 50% of Each Material Below:

a. Residences:

- i. Cabinets
- ii. Interior Trim
- iii. Shelving
- iv. Subfloor

b. Non-Residential Areas:

- i. Cabinets
- ii. Interior Trim
- iii. Shelving
- iv. Subfloor

9. Environmentally Preferable Flooring

Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. Note: Flooring Adhesives Must Have <50 gpl VOCs.

a. Residences:

- i. Minimum 15% of Floor Area
- ii. Minimum 30% of Floor Area
- iii. Minimum 50% of Floor Area
- iv. Minimum 75% of Floor Area

b. Non-Residential Areas:

- i. Minimum 15% of Floor Area
- ii. Minimum 30% of Floor Area
- iii. Minimum 50% of Floor Area
- iv. Minimum 75% of Floor Area

10. Low-Emitting Flooring

- a. Residences: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)
- b. Non-Residential Areas: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)

ENTER PROJECT NAME

Community	Energy	IAQ/Health	Resources	Water
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11. Durable Cabinets

Install Durable Cabinets in All:

- a. Residences
- b. Non-Residential Areas

12. Furniture & Outdoor Play Structures

- a. Play Structures & Surfaces Have an Overall Average Recycled Content Greater Than 20%
- b. Environmentally Preferable Exterior Site Furnishings
- c. At Least 25% of All newly Supplied Interior Furniture has Environmentally Preferable Attributes

13. Vandalism Deterrence

- a. Project Includes Vandalism Resistant Finishes and Strategies

			0	
1				

F. OTHER

Possible Points

1. Incorporate GreenPoint Checklist in Blueprints

- a. *Required* Incorporate GreenPoint Checklist in Blueprints

Y

2. Operations & Maintenance Manuals

- a. Provide O&M Manual to Building Maintenance Staff
- b. Provide O&M Manual to Occupants

3. Transit Options

- a. Residents Are Offered Free or Discounted Transit Passes

2

4. Educational Signage

- a. Educational Signage Highlighting & Explaining the Project's Green Features is Included

1

5. Vandalism Management Plan

- a. Project Includes a Vandalism Management Plan for Dealing with Disturbances Post-Occupancy

1

6. Innovation: List innovative measures that meet the green building objectives of the Multifamily Guidelines. Enter up to a 4 Points in each category. Points will be evaluated by local jurisdiction or GreenPoint rater.

0 Innovation in **Community**: Enter up to 4 Points at left. Enter description here

0 Innovation in **Energy**: Enter up to 4 Points at left. Enter description here

0 Innovation in **IAQ/Health**: Enter up to 4 Points at left. Enter description here

0 Innovation in **Resources**: Enter up to 4 Points at left. Enter description here

0 Innovation in **Water**: Enter up to 4 Points at left. Enter description here

Summary

Points Achieved from Specific Categories

0 0 0 0

Current Point Total

0

Project has not yet met the recommended minimum requirements

- Total Project Score of At Least 50 Points
- Minimum points in specific categories: Community (6), Energy (30), IAQ/Health (5), Resources (6), Water (3)
- Required measures B.1a, C.10a, and/or F.1a

LEED 2009 for New Construction and Major Renovation



LEED 2009 for New Construction and Major Renovation

Project Checklist

Project Name

Date

Sustainable Sites

Possible Points: 26

Materials and Resources, Continued

Possible Points: 15

Y	N	P	Description	Possible Points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Construction Activity Pollution Prevention	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Site Selection	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Development Density and Community Connectivity	5
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Brownfield Redevelopment	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 Alternative Transportation—Public Transportation Access	6
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Alternative Transportation—Bicycle Storage and Changing Rooms	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4 Alternative Transportation—Parking Capacity	2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1 Site Development—Protect or Restore Habitat	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2 Site Development—Maximize Open Space	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1 Stormwater Design—Quantity Control	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2 Stormwater Design—Quality Control	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1 Heat Island Effect—Non-roof	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2 Heat Island Effect—Roof	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8 Light Pollution Reduction	1

Water Efficiency

Possible Points: 10

Y	N	P	Description	Possible Points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Water Use Reduction—20% Reduction	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Water Efficient Landscaping	2 to 4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Innovative Wastewater Technologies	2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Water Use Reduction	2 to 4

Energy and Atmosphere

Possible Points: 35

Y	N	P	Description	Possible Points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Fundamental Commissioning of Building Energy Systems	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2 Minimum Energy Performance	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 3 Fundamental Refrigerant Management	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Optimize Energy Performance	1 to 19
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 On-Site Renewable Energy	1 to 7
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Enhanced Commissioning	2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Enhanced Refrigerant Management	2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Measurement and Verification	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6 Green Power	2

Materials and Resources

Possible Points: 14

Y	N	P	Description	Possible Points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Storage and Collection of Recyclables	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Construction Waste Management	1 to 2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Materials Reuse	1 to 2

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Recycled Content	1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Regional Materials	1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6 Rapidly Renewable Materials	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7 Certified Wood	1

Indoor Environmental Quality

Possible Points: 15

Y	N	P	Description	Possible Points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Minimum Indoor Air Quality Performance	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2 Environmental Tobacco Smoke (ETS) Control	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Outdoor Air Delivery Monitoring	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Increased Ventilation	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1 Construction IAQ Management Plan—During Construction	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2 Construction IAQ Management Plan—Before Occupancy	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 Low-Emitting Materials—Adhesives and Sealants	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Low-Emitting Materials—Paints and Coatings	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 Low-Emitting Materials—Flooring Systems	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4 Low-Emitting Materials—Composite Wood and Agrifiber Products	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Indoor Chemical and Pollutant Source Control	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1 Controllability of Systems—Lighting	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2 Controllability of Systems—Thermal Comfort	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1 Thermal Comfort—Design	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2 Thermal Comfort—Verification	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1 Daylight and Views—Daylight	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.2 Daylight and Views—Views	1

Innovation and Design Process

Possible Points: 6

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Innovation in Design: Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Innovation in Design: Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Innovation in Design: Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Innovation in Design: Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.5 Innovation in Design: Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 LEED Accredited Professional	1

Regional Priority Credits

Possible Points: 4

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Regional Priority: Specific Credit	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Regional Priority: Specific Credit	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Regional Priority: Specific Credit	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Regional Priority: Specific Credit	1

Total

Possible Points: 110

LEED 2009 for New Construction and Major Renovation

LEED 2009 for Core and Shell Development



LEED 2009 for Core and Shell Development

Project Checklist

Project Name

Date

Sustainable Sites

Possible Points: 28

Materials and Resources

Possible Points: 13

Y N ?

Y N ?

Prereq 1	Prereq 2	Prereq 3	Prereq 4	Prereq 5	Prereq 6	Prereq 7
Construction Activity Pollution Prevention						
Site Selection						
Development Density and Community Connectivity						
Brownfield Redevelopment						
Alternative Transportation—Public Transportation Access						
Alternative Transportation—Bicycle Storage and Changing Rooms						
Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles						
Alternative Transportation—Parking Capacity						
Site Development—Protect or Restore Habitat						
Site Development—Maximize Open Space						
Stormwater Design—Quantity Control						
Stormwater Design—Quality Control						
Heat Island Effect—Non-roof						
Heat Island Effect—Roof						
Light Pollution Reduction						
Tenant Design and Construction Guidelines						

Water Efficiency

Possible Points: 10

Y N ?

Water Use Reduction—20% Reduction			
Water Efficient Landscaping			
Innovative Wastewater Technologies			
Water Use Reduction			

Energy and Atmosphere

Possible Points: 37

Y N ?

Fundamental Commissioning of Building Energy Systems			
Minimum Energy Performance			
Fundamental Refrigerant Management			
Optimize Energy Performance			
On-Site Renewable Energy			
Enhanced Commissioning			
Enhanced Refrigerant Management			
Measurement and Verification—Base Building			
Measurement and Verification—Tenant Submetering			
Green Power			

Storage and Collection of Recyclables			
Building Reuse—Maintain Existing Walls, Floors, and Roof			
Construction Waste Management			
Materials Reuse			
Recycled Content			
Regional Materials			
Certified Wood			

Indoor Environmental Quality

Possible Points: 12

Y N ?

Minimum Indoor Air Quality Performance			
Environmental Tobacco Smoke (ETS) Control			
Outdoor Air Delivery Monitoring			
Increased Ventilation			
Construction IAQ Management Plan—During Construction			
Low-Emitting Materials—Adhesives and Sealants			
Low-Emitting Materials—Paints and Coatings			
Low-Emitting Materials—Flooring Systems			
Low-Emitting Materials—Composite Wood and Agrifiber Products			
Indoor Chemical and Pollutant Source Control			
Controllability of Systems—Thermal Comfort			
Thermal Comfort—Design			
Daylight and Views—Daylight			
Daylight and Views—Views			

Innovation and Design Process

Possible Points: 6

Y N ?

Innovation in Design: Specific Title			
Innovation in Design: Specific Title			
Innovation in Design: Specific Title			
Innovation in Design: Specific Title			
Innovation in Design: Specific Title			
LEED Accredited Professional			

Regional Priority Credits

Possible Points: 4

Y N ?

Regional Priority: Specific Credit			
Regional Priority: Specific Credit			
Regional Priority: Specific Credit			
Regional Priority: Specific Credit			

Total

Possible Points: 110

LEED 2009 for Commercial Interiors



LEED 2009 for Commercial Interiors

Project Checklist

Project Name

Date

Y	N	?

Sustainable Sites

<input type="checkbox"/>	Credit 1	Site Selection	1 to 5	
<input type="checkbox"/>	Credit 2	Development Density and Community Connectivity	6	
<input type="checkbox"/>	Credit 3.1	Alternative Transportation—Public Transportation Access	6	
<input type="checkbox"/>	Credit 3.2	Alternative Transportation—Parking Availability	2	
<input type="checkbox"/>	Credit 3.3	Alternative Transportation—Parking Availability	2	

Possible Points: 21

Water Efficiency

<input type="checkbox"/>	Prereq 1	Water Use Reduction—20% Reduction	6 to 11	
<input type="checkbox"/>	Credit 1	Water Use Reduction	6 to 11	

Possible Points: 11

Energy and Atmosphere

<input type="checkbox"/>	Prereq 1	Fundamental Commissioning of Building Energy Systems	37	
<input type="checkbox"/>	Prereq 2	Minimum Energy Performance	5	
<input type="checkbox"/>	Prereq 3	Fundamental Refrigerant Management	5	
<input type="checkbox"/>	Credit 1.1	Optimize Energy Performance—Lighting Power	1 to 5	
<input type="checkbox"/>	Credit 1.2	Optimize Energy Performance—Lighting Controls	1 to 3	
<input type="checkbox"/>	Credit 1.3	Optimize Energy Performance—HVAC	5 to 10	
<input type="checkbox"/>	Credit 1.4	Optimize Energy Performance—Equipment and Appliances	1 to 4	
<input type="checkbox"/>	Credit 2	Enhanced Commissioning	5	
<input type="checkbox"/>	Credit 3	Measurement and Verification	2 to 5	
<input type="checkbox"/>	Credit 4	Green Power	5	

Possible Points: 37

Materials and Resources

<input type="checkbox"/>	Prereq 1	Storage and Collection of Recyclables	1	
<input type="checkbox"/>	Credit 1.1	Tenant Space—Long-Term Commitment	1 to 2	
<input type="checkbox"/>	Credit 1.2	Building Reuse	1 to 2	
<input type="checkbox"/>	Credit 2	Construction Waste Management	1 to 2	
<input type="checkbox"/>	Credit 3.1	Materials Reuse	1 to 2	
<input type="checkbox"/>	Credit 3.2	Materials Reuse—Furniture and Furnishings	1	
<input type="checkbox"/>	Credit 4	Recycled Content	1 to 2	
<input type="checkbox"/>	Credit 5	Regional Materials	1 to 2	
<input type="checkbox"/>	Credit 6	Rapidly Renewable Materials	1	
<input type="checkbox"/>	Credit 7	Certified Wood	1	

Possible Points: 14

Indoor Environmental Quality

Y	N	?	
<input type="checkbox"/>	Prereq 1	Minimum IAQ Performance	
<input type="checkbox"/>	Prereq 2	Environmental Tobacco Smoke (ETS) Control	
<input type="checkbox"/>	Credit 1	Outdoor Air Delivery Monitoring	1
<input type="checkbox"/>	Credit 2	Increased Ventilation	1
<input type="checkbox"/>	Credit 3.1	Construction IAQ Management Plan—During Construction	1
<input type="checkbox"/>	Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
<input type="checkbox"/>	Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
<input type="checkbox"/>	Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
<input type="checkbox"/>	Credit 4.3	Low-Emitting Materials—Flooring Systems	1
<input type="checkbox"/>	Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
<input type="checkbox"/>	Credit 4.5	Low-Emitting Materials—Systems Furniture and Seating	1
<input type="checkbox"/>	Credit 5	Indoor Chemical & Pollutant Source Control	1
<input type="checkbox"/>	Credit 6.1	Controllability of Systems—Lighting	1
<input type="checkbox"/>	Credit 6.2	Controllability of Systems—Thermal Comfort	1
<input type="checkbox"/>	Credit 7.1	Thermal Comfort—Design	1
<input type="checkbox"/>	Credit 7.2	Thermal Comfort—Verification	1
<input type="checkbox"/>	Credit 8.1	Daylight and Views—Daylight	1 to 2
<input type="checkbox"/>	Credit 8.2	Daylight and Views—Views for Seated Spaces	1

Possible Points: 17

Innovation and Design Process

<input type="checkbox"/>	Credit 1.1	Innovation in Design: Specific Title	6
<input type="checkbox"/>	Credit 1.2	Innovation in Design: Specific Title	1
<input type="checkbox"/>	Credit 1.3	Innovation in Design: Specific Title	1
<input type="checkbox"/>	Credit 1.4	Innovation in Design: Specific Title	1
<input type="checkbox"/>	Credit 1.5	Innovation in Design: Specific Title	1
<input type="checkbox"/>	Credit 2	LEED Accredited Professional	1

Possible Points: 6

Regional Priority Credits

<input type="checkbox"/>	Credit 1.1	Regional Priority: Specific Credit	4
<input type="checkbox"/>	Credit 1.2	Regional Priority: Specific Credit	1
<input type="checkbox"/>	Credit 1.3	Regional Priority: Specific Credit	1
<input type="checkbox"/>	Credit 1.4	Regional Priority: Specific Credit	1

Possible Points: 4

Total

<input type="checkbox"/>			110
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Possible Points: 110

Bay-Friendly Scorecard for Commercial & Civic Landscapes

Bay-Friendly Scorecard for Commercial & Civic Landscapes

2008 Version

This scorecard tracks Bay-Friendly features incorporated into the design and construction of new landscapes. The minimum requirements for a Bay-Friendly Landscape are: earn a total of 60 points or more; and complete the 9 required practices indicated by the "R" in the columns labeled "Possible Points."

A. Site Planning	Landscapes Locally	Less to Landfill	Nurture the Soil	Conserve Water	Conserve Energy	Water and Air Quality	Create Wildlife Habitat
	POSSIBLE POINTS						
1. Select and evaluate the site carefully							
a. Submit the completed Bay-Friendly Site Analysis before 100% design development documents	5						
b. The site is located within an urban growth boundary and avoids environmentally sensitive sites	3						
c. The site development results in the clean up of a contaminated site (i.e. brownfield) or is in a designated redevelopment area						3	
2. Consider the potential for fire							
a. For sites adjacent to fire sensitive open space or wildlands only: Submit a Fire Mitigation Plan	5						
3. Keep plant debris on site							
a. Produce mulch from plant debris							
i. Design documents specify areas under tree & shrub canopies and at least 10 feet away from hard surfaces and storm drains, to be used as a leaf repository for mulch		1					
ii. Construction documents specify that of the trees identified for removal, some are chipped for use as mulch onsite		1					
b. Produce compost from plant debris							
i. A site for composting is included in landscape plans. Systems for composting up to and including 3 cubic yards at one time		1					
ii. Systems for composting more than 3 and up to 10 yards at one time (total 2 points)		1					
iii. Systems 10 cubic yards or larger (total 3 points)		1					
4. Reduce and recycle waste							
a. An easily accessible area is dedicated to the collection and storage of materials for recycling		2					
5. Minimize site disturbance							
a. On greenfield sites, limit site disturbance to protect topography, vegetation and hydrology (total 3 points)	1					1	1
b. On previously developed sites, restore vegetation and hydrology (total 3 points)	1					1	1
6. Provide water and/or shelter for wildlife such as birdhouse, bathhouses, boulders, logs, wood piles, large native shrubs or trees							1
7. Conserve or restore natural areas & wildlife corridors							
a. The landscape is designed to preserve 80% of existing mature healthy trees and penalties for destruction of protected trees are included in construction contract							2
b. The landscape is designed to increase open space compared to its previous use and/or to connect it to other open space or wildlife corridors							2
c. Create or protect a diverse plant buffer of low maintenance vegetation along creeks, shorelines or monocultured landscaped areas							2
Site Planning Subtotal, out of possible 34 points							

Bay-Friendly Scorecard
 Version 2008

	Landscape Locally	Less to Landfill	Nurture the Soil	Conserve Water	Conserve Energy	Water and Air Quality	Create Wildlife Habitat
B. Stormwater and Site Drainage							
POSSIBLE POINTS							
1. Minimize impervious surfaces							
a. Permeable paving, gravel or other porous surfaces are installed for						1	
i. 25% OR						2	
ii. 33% (total 3 points) OR						2	
iii. 50% of the paved area (total 5 points)						2	
b. No impervious surfaces directly connect to the storm drain						2	
2. Design a system to capture and filter storm water							
a. Capture and filter runoff from parking lots into landscape beds, vegetated swales or other landscape stormwater bmps						2	
b. Incorporate landscape measures, including vegetated swales, infiltration planters, detention basins and/or stormwater wetlands, that are designed to capture and filter 85% of average annual stormwater runoff OR						2	
c. Designed to capture and filter 100% of average annual runoff (total 4 points)						2	
d. Bioswales specify flat bottoms of at least 18 inches across and/or rock cobble at points of concentrated flow						1	
e. Turf is not specified in bioswales						1	
f. Direct rain water from all down spouts to planters, swales or landscaped areas						1	
C. Earthwork and Soil Health							
1. Assess the soil and test drainage							
a. Submit laboratory soil analysis results and recommendations for compost and natural fertilizers (total 3 points)	2		1				
2. Remove and store topsoil before grading							
a. The removal, temporary storage, and re-spreading of topsoil is specified in the landscape design documents AND specifications include a maximum topsoil pile height of 6 feet, as well as measures to protect the stored topsoil from erosion			2				
3. Protect soil from compaction							
a. Grading specifications and construction plans call for the installation and maintenance of fencing to prohibit parking or materials staging in areas identified for protection			2				
b. Design documents specify that soil is not worked when wet			1				
4. Aerate compacted soils							
a. Design documents include specification to alleviate compacted soils to a depth of at least 8 inches, before planting, for all landscaped areas that can not be protected during construction			1				
b. Design documents include specification to alleviate compacted soils to a depth of at least 12 inches, before planting, for all landscaped areas that can not be protected during construction (total 2 points)			1				
5. Feed soils naturally & avoid synthetic fertilizers							
a. Fertilizers or soil amendment materials prohibited by Organic Materials Research Institute in its generic materials list are prohibited in construction of the project			1				
6. Mulch							
a. Required: Planting specifications and plans indicate that after construction, all soil on site is protected with a minimum of 3 inches of recycled mulch			R				

	Landscape Locally	Less to Landfill	Nurture the Soil	Conserve Water	Conserve Energy	Water and Air Quality	Create Wildlife Habitat
POSSIBLE POINTS							
7. Amend the soil with compost before planting							
a. Quality compost is specified as the soil amendment, at the rates indicated by a soil analysis, to bring the soil organic matter content to a minimum of:							
i. Required: 3.5% by dry weight OR 1 inch of quality compost OR				R			
ii. 5% by dry weight OR (total 2 points)				I	I		
iii. Specify the use of compost from processors that participate in the US Composting Council's Standard Testing Assurance program				I			
8. Use IPM design and construction practices to prevent pest problems							
a. Sheet mulch is specified for weed control (total 3 points)			I			2	
b. Synthetic chemical pre-emergents are prohibited						2	
9. Keep soil & organic matter where it belongs							
a. Compost berms or blankets or socks are specified for controlling erosion (total 2 points)			I			I	
b. High Speed Soil or socks are specified for controlling erosion (total 2 points)							
D. Materials							
1. Use salvaged items & recycled content materials							
a. Non-plant landscape materials are salvaged or made from recycled content materials or FSC certified wood:							
i. Decking (100% of non structural materials)		I					
ii. Fencing (100% of non structural materials)		2					
iii. Outdoor furniture such as bike racks, benches, tables and chairs (50% minimum)		2					
iv. Planters or retaining walls (100% of either or both)		I					
v. Parking stops or lighting/sign posts (100% of either or both)		I					
vi. Play structures or surfaces (100% of either or both)		2					
vii. Edging or decorative glass mulch (100% of either or both)		I					
b. A minimum 25% of recycled aggregate (crushed concrete) is specified for walkway, driveway, roadway base and other uses		2					
c. Replace Portland cement in concrete with flyash or slag							
i. 20%		I					
ii. 25% (total 2 points)		I					
d. Purchased compost and/or mulch is recycled from local, organic materials such as plant or wood waste							
i. 100% of compost OR 100% of mulch		I					
ii. 100% of both (total 2 points)		I					
2. Reduce and recycle landscape construction waste							
a. Required: Divert 50% of landscape construction and demolition waste.		R					
b. Divert 100% of asphalt and concrete and 65% of remaining materials OR		2					
c. Divert 100% of asphalt and concrete and 80% of remaining materials (total 4 points)		2					
d. Donate unused materials		I					
3. Reduce the heat island effect with cool site techniques							
a. at least 50% of the paved site area includes cool site techniques						2	



		Landscape Locally	Less to Landfill	Nurture the Soil	Conserve Water	Conserve Energy	Water and Air Quality	Create Wildlife Habitat
		POSSIBLE POINTS						
4. Design lighting carefully						2		
a. Energy fixtures are specified for all site lighting								
b. Photovoltaic is specified for site lighting								
c. Bath lighting is solar powered						1		
d. 5% of all other site lighting is solar powered						2		
e. 10% of all other site lighting is solar powered (total 4 points)						2		
f. Reduce light pollution and trespass: exterior luminaries emit no light above horizontal or Dark Sky certified						1		
g. Site and exterior building lighting does not cast direct beam illumination onto adjacent properties or right of ways						1		
5. Choose and maintain equipment for fuel conservation								
a. Specify solar powered pump(s) for water features						1		
6. Specify low embodied energy products								
a. 50% of any stone and non-concrete hardscapes materials are produced within 500 miles of the project site						2		
7. Use integrated pest management								
a. Construction documents include construction specifications that require integrated pest management							2	
8. Use organic pest management								
a. Construction documents include construction specifications that prohibit the use of pesticides not allowed by Organic Materials Research Institute in its generic materials (4 points)								2
E. Planting								
1. Select appropriate plants: choose & locate plants to grow to natural size and avoid shearing								
a. Required: No species will require shearing		R						
b. Plants specified can grow to mature size within space allotted them		1						
2. Select appropriate plants: do not plant invasive species								
a. Required: None of the species listed by Cal-IPC as invasive in the San Francisco Bay Area included in the planting plan		R						
3. Grow drought tolerant CA native, Mediterranean or climate adapted plants								
a. Required: Specify California native, Mediterranean or other climate adapted plants that require occasional, little or no summer water for 75% of all non-turf plants						R		
b. 50% California native or Mediterranean or other climate adapted plants that require occasional, little or no summer water for 100% of all non-turf plants						2		
c. 50% of the non-turf plant palette need no irrigation once established (total 5 points)						3		
4. Minimize the lawn								
a. Turf not specified in areas less than 8 feet wide or in medians, unless irrigated with surface or low volume irrigation						2		
b. Turf shall not be installed on slopes exceeding 10%						2		
c. Required: A maximum of 25% of total irrigated area is specified as turf, with sports or multiple use fields exempted						R		
d. Maximum of 15% of total landscaped area is specified as turf, with sports or multiple use fields exempted						2		
e. Turf is specified (total 5 points)						3		

	Landscape Locally	Less to Landfill	Nurture the Soil	Conserve Water	Conserve Energy	Create Wildlife Habitat
	P	O	S	S	P	T
6. Manage and maintain irrigation system so every drop counts						
a. Maintenance task list includes a schedule for reading the dedicated meter or submeter and reporting water use				1		
b. At completion of the installation, the contractor shall provide the property owner with 1. precipitation rate for each valve zone, 2. area calculations for each irrigation zone and the irrigation plans which include the location of irrigation supply shut off, 3. internet address for watering index information				2		
c. Maintenance task list includes regular checking of irrigation equipment, and/or checking soil moisture content before watering AND/OR immediate replacement of broken equipment with equal or superior materials				1		
7. Use IPM as part of maintenance practices						
a. Maintenance task list includes integrated pest management specifications						
b. At least one landscaping staff member or contractor is trained in the use of IPM or is a Bay-Friendly Qualified Professional						
8. Choose and maintain your materials, equipment & vehicles carefully						
a. Maintenance task list specifies that all oil leaks are repaired immediately and that repairs are not done at the landscape site						
b. Equipment that uses biobased lubricants and/or alternative fuels is specified in the maintenance task list						
9. Use organic pest management						
a. Maintenance task list prohibits the use of pesticides that are not allowed by Organic Materials Research Institute in its generic materials list						2
H. Innovation						
1. Bay-Friendly Landscape Guidelines and Principles are defined and referenced in the construction bid documents	3					
2. Design & install educational signage						
a. Provide instructional signs and other educational materials to describe the landscapes Bay-Friendly design, construction and maintenance practices	4					
3. Create a Bay-Friendly Maintenance task list						
a. Provide a detailed Bay-Friendly maintenance task list and/or use the BF Maintenance Specification Guidelines as an official reference document in the the landscape maintenance contract and/or with on site landscape staff (total 7 points)	1	1	1	1	1	1
4. Employ a holistic approach						
a. Site analysis is submitted AND 65% of landscape construction waste is diverted AND planting plan includes a diverse palette AND 50% of non-turf plants are California native species AND none of the landscape area is in turf AND compost is specified for amending the soil during installation AND natural fertilizers are specified as the exclusive source of nutrients AND integrated OR organic pest management is specified (total 7 points)	1	1	1	1	1	1
5. Innovation: Design your own Bay-Friendly innovation						
a. Enter the description of the innovation here, and enter up to 4 points to the right. Points will be evaluated by the Bay-Friendly rater	0	0	0	0	0	0
Summary						
Total Possible Points:	25	41	18	45	22	28
Total Points Achieved:						0

California Green Building Standards Code Worksheet

APPLICATION MATRIX (AM-HCD)

GREEN BUILDING MEASURE	REQUIRED	TARY
PLANNING AND DESIGN		
SITE DEVELOPMENT (406)		
406.2 A plan is developed and implemented to manage storm water drainage during construction.	2010 CBC ¹	
ENERGY EFFICIENCY		
PERFORMANCE APPROACH (503)		
503.2 Minimum requirements. Low-rise residential buildings shall meet or exceed the minimum standard design required by the California Energy Standards currently in effect.	2010 CBC ¹	
PRESCRIPTIVE APPROACH (504)		
504.6 Minimum requirements Low-rise residential buildings shall meet or exceed the minimum standard design required by the California Energy Standards currently in effect.	2010 CBC ¹	
AIR SEALING PACKAGE (506)		
506.1 Joints and openings. Joints and other openings at the following locations: 1. Exterior joints around window and door frames, including doors between the house and garage, between interior HVAC closets and unconditioned space, between attic and underfloor access, and conditioned space and between wall sole plates, floors, exterior panels and all siding materials. 2. Openings for plumbing, electrical and gas lines in exterior walls and interior wall, ceilings and floors. 3. Openings into the attic. 4. Exhaust ducts from clothes dryers and other exhaust fans shall have a damper. 5. Cuts or notches in exterior wall plates.	2010 CBC ¹	
506.1.1 Other openings. Whole house fan louvers shall close tightly and be insulated or covered to a minimum of R-4.2.		
WATER EFFICIENCY AND CONSERVATION		
INDOOR WATER USE (603)		
603.2 Indoor water use shall be reduced by 20 percent using one of the follow methods: 1. Water saving fixtures or flow restrictors shall be used. 2. A 20 percent reduction in baseline water use shall be demonstrated.	7/01/2011	
603.2.1 Multiple showerheads shall not exceed maximum flow rates.	7/01/2011	
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY		
CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING (708)		
708.3 A minimum of 50 percent of the construction waste generated at the site is diverted to recycle or salvage. Exception: Alternate waste reduction methods are developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.	2010 CBC ¹	
BUILDING MAINTENANCE AND OPERATION (710)		
710.2 An operation and maintenance manual shall be provided to the building occupant or owner.	2010 CBC ¹	

(continued)

APPLICATION MATRIX (AM-HCD)—continued

GREEN BUILDING MEASURE	REQUIRED	VOLUNTARY
INDOOR ENVIRONMENTAL QUALITY		
POLLUTANT CONTROL (804)		
804.3 Duct openings and other related air distribution component openings shall be covered.	2010 CBC ¹	
804.4.1 Adhesives shall be No- or Low-VOC.	2010 CBC ¹	
804.4.2 Paints, stains and other coatings shall be No- or Low-VOC.	2010 CBC ¹	
804.4.3 Carpet and carpet systems shall be Low-VOC.	2010 CBC ¹	
804.4.4 Particleboard, medium density fiberboard (MDF) and plywood used in interior finish systems shall comply with low formaldehyde emission standards.	2010 CBC ¹	
INTERIOR MOISTURE CONTROL (805)		
805.2 Vapor retarder and capillary break is installed at slab on grade foundations.	2010 CBC ¹	
805.3 Moisture content of wood used in wall and floor framing is checked before enclosure.	2010 CBC ¹	
AIR QUALITY AND EXHAUST (806)		
806.3 Exhaust fans which terminate outside the building are provided in every bathroom.	2010 CBC ¹	
806.4 MERV 6 or higher filters are installed on central air and heating systems.	2010 CBC ¹	

1. Unless specified otherwise, this measure shall become effective on the effective date of the 2010 *California Building Code*.

APPLICATION MATRIX (AM-DSA/SS)
(RESERVED)

GREEN BUILDING MEASURE	REQUIRED	VOLUNTARY
PLANNING AND DESIGN		
(Reserved)		
ENERGY EFFICIENCY		
(Reserved)		
WATER EFFICIENCY AND CONSERVATION		
(Reserved)		
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY		
(Reserved)		
ENVIRONMENTAL AIR QUALITY		
(Reserved)		



Local Government Green Building Ordinances in California

In recent years, numerous local governments in California have implemented "green" building ordinances. These measures can increase energy efficiency, reduce greenhouse gas emissions, and decrease other harmful environmental impacts. This document identifies the various approaches to green building ordinances that jurisdictions have taken and the most common features of the measures.

The following cities in California have enacted mandatory Green Building Ordinances:

City	Ordinance	Effective Date	Link
Albany	Ord. 06-016	July 2007	Here
Brisbane	Ord. 524	January 2008	Here
Calabasas	Ord. 2003-185	February 2004	Here
Cotati	Res. PC No. 06-24	January 2008	Here
Culver City	Ord. No. 2008-004	March 2008	Here
Davis	Ord. No. 2323	August 2008	Here
Hayward	Ord. No. 08-20	August 2009	Here
Healdsburg	Ord. No. 1079	August 2009	Here
Livermore	Ord. No. 1804	January 2008	Here
Long Beach	Ord. No. 09-0013	June 2009	Here
Los Altos	Ord. No. 07-315	December 2007	Here
Los Altos Hills	Ord. No. 512	November 2008	Here
Los Angeles	Ord. No. 179820	May 2008	Here
Marin (Co.)	Ord. No. 3492	June 2008	Here
Mill Valley	Ord. No. 1246	December 2008	Here
Morgan Hill	Municipal Code Chapter 15.68	Ord. Pending	Here
Napa	Ord. No. O2009 3	January 2009	Here
Novato	Ord. No. 1503	October 2005	Here
Palm Desert	Ord. No. 1124	February 2007	Here
Palo Alto	Ord. No. 5006	July 2008	Here

Pasadena	Ord. No. 7031	May 2008	Here
Pleasanton	Ord. No. 1934	January 2006	Here
Rohnert Park	Ord. No. 782	July 2007	Here
San Francisco	Admin. Bulletin No. AB-093	October 2008	Here
San Jose	Ord. No. 28622	September 2009	Here
San Mateo (Co.)	Ord. No. 04411	March 2008	Here
San Rafael	Ord. No. 1853	August 2007	Here
Santa Barbara	Ord. No. 5446	March 2008	Here
Santa Cruz	Ord. 2005-29	January 2007	Here
Santa Monica	Ord. No. 2261	May 2008	Here
Santa Rosa	Ord. No. 3869	June 2008	Here
Sebastopol	Res. 5454	March 2005	Here
Sonoma	Ord. No. 03-2009	August 2009	Here
Tiburon	Ord. No. 512	November 2008	Here
Windsor	Ord No 2007-215	June 2007	Here
West Hollywood	Ord. No. 07-762	October 2007	Here

Green Rating Systems

The enactment of local green building requirements has been facilitated by the development of several independent rating systems increasingly used in the building industry to objectively evaluate "green" buildings. The most common system is Leadership in Energy and Environmental Design (LEED®), developed by the United States Green Building Council (<http://www.usgbc.org>). LEED has developed several rating systems with guidelines for different construction markets, including new nonresidential buildings, core and shell construction of commercial buildings, construction of commercial interiors, the construction of schools, health care facilities, and retail spaces, and a newly-developed system for homes (LEED-H), released in January of 2008. The LEED for the Neighborhood Development Rating System is in the pilot program stage and should be released in 2009.

Under the LEED rating system, the use of specific green building practices or design elements, in addition to certain prerequisite practices, accrue "points" on a checklist. Depending upon the number of points earned, each project is given a rating which corresponds to a level of LEED certification. Projects which meet the minimum number of points are "Certified." Projects which accrue more than the minimum are rated "Bronze," "Silver," "Gold," or "Platinum," according to the number of points earned. Most cities require some level LEED-equivalent performance for some types of buildings, but do not require registration with the United States Green Building Council.

Another rating system used by local governments in their green building ordinances is the "GreenPoints Rated" program first developed by a coalition of Alameda County waste agencies (<http://stopwaste.org>) and promoted by Build It Green, a nonprofit organization based in Berkeley, California (<http://www.builditgreen.org>). The GreenPoints Rated system, while similar in approach to LEED, is focused on residential development, including separate guidelines for single-family and multifamily buildings. A building must attain at least 50 "GreenPoints" to be certified as "GreenPoint Rated."

Several cities or counties have developed their own "points" systems using guidelines and checklists based on the GreenPoint Rated system. These include guidelines developed by the Sonoma County Waste Management Agency (<http://www.recyclenow.org>) and the City of West Hollywood (<http://www.weho.org/greenbuilding/>). These alternative systems award points for many of the same practices, such as the use of fly ash in concrete, the recycling of construction debris, and the installation of overhangs.

While the far majority of local ordinances require or permit the use of LEED ratings for public and commercial projects, most local ordinances rely on GreenPoints or related systems for residential construction. In 2007, Build it Green signed a Memorandum of Understanding with Davis Energy Group (www.davisenergy.com) to calibrate the LEED for Homes and GreenPoints Rated systems for use in California, allowing for cross-training of building professionals, concurrent verification, and the possibility of "dual-branded" homes meeting the requirements of both systems.

As an alternative to the approach of LEED and GreenPoints Rated, the California Building Industry Association's Building Industry Institute has developed the California Green Builder program (<http://cagreenbuilder.org>) to help builders and communities introduce and verify green building practices. The California Green Builder program combines prescriptive green building measures with a performance-based verification system. Unlike LEED and GreenPoints Rated, the California Green Builder protocols do not use "points," but require specific practices and third party verification of a building's actual performance. The California Green Builder program ensures that buildings exceed state energy efficiency requirements by at least 15%, while verifying practices such as duct sealing and construction waste management. As of yet, no California city has required developers to use the Green Builder Program. However, cities such as San Bernardino, Riverside, and Cathedral City have passed ordinances that provide incentives for developers who use the system.

Examples of cities' minimum LEED, GreenPoint Rated, or other point requirements for private development:

City	Nonresidential Buildings	Residential Buildings
Albany	LEED Gold if over 5000 ft. ²	50 GreenPoints for single-family
Berkeley	Energy audit required if construction totals more than \$50,000	Energy audit required if construction totals more than \$50,000
Brisbane	LEED Silver if over 10,000 ft. ²	50 GreenPoints for multifamily
Calabasas	LEED Certified if over 500 ft. ² ; LEED Silver if over 5000 ft. ²	
Cotati	60 GreenPoints	60 GreenPoints
Chula Vista		50 GreenPoints
Livermore	LEED Certified Equivalent	50 GreenPoints

Long Beach	LEED Certified if over 50 units	LEED Certified if over 50,000 ft. ²
Los Altos		50 GreenPoints
Los Angeles	LEED Certified if over 50,000 ft. ²	LEED Certified if over 50,000 ft. ² and at least 50 units.
Novato		50 GreenPoints
Palo Alto	LEED Silver if over 5,000 ft. ²	70 GreenPoints if over 1250 ft. ²
Pasadena	LEED Certified if over 25,000 ft. ² ; LEED Silver if over 50,000 ft. ²	LEED Certified if over four stories
Pleasanton	LEED Certified if over 20,000 ft. ²	
Rohnert Park	LEED Silver	90 GreenPoints
San Francisco	LEED Gold	75 GreenPoints or LEED Silver
San Rafael	LEED Certified; LEED Silver if over 30,000 ft. ²	60 GreenPoints
San Mateo (Co.)	LEED Silver if over 3,000 ft. ²	50 GreenPoints or LEED Certified
Santa Cruz		10 GreenPoints + 1.5 GreenPoints for every 100 ft. ² over 350 ft. ²
San Francisco	LEED Gold (by 2012)	75 GreenPoints or LEED Silver (by 2012)
Santa Monica	7 LEED Points (all LEED prerequisites)	
Sebastopol	60 Sonoma County Points	60 Sonoma County Points
Hayward	LEED Silver if valued over \$3,000,000	50 GreenPoints if more than 20 units
Windsor	20 LEED Points	50 GreenPoints
West Hollywood	60 City Points Or LEED Certified	60 City Points or LEED Certified

Prescriptive Measures

Rating systems offer flexibility for developers, since the developer can choose which green building practices will be used to meet the requirements. However, some cities have chosen to prescribe specific green building measures in lieu of or in addition to required ratings. These requirements address the particular resource needs of a community, and include measures such as the installation of water-saving plumbing fixtures, solar panels, or the use of energy-saving EnergyStar appliances.

Some cities that require specific prescriptive measures with examples:

City	Required Measures
Cotati	Pre-plumb for solar water heating; 30% fly ash in concrete; 50% native plants in landscaping; protection for 80% drought conditions.
Chula Vista	Pre-plumb for solar water heating
Culver City	1kw of installed solar panels
Palm Desert	Fluorescent, automatic-OFF landscape and utility lighting; NEMA premium electric motors and pumps; conduit for solar
Pasadena	Meet LEED credit 3.1 (water efficiency)
Rohnert Park	Variable speed pool pumps; EnergyStar exhaust fans
Santa Barbara	Variable speed pool pumps; EnergyStar appliances; NEMA premium HVAC motors
Santa Monica	Efficient water heating; EnergyStar appliances; light sensors/dimmers
Sebastopol	Dual flush toilets; low-flow showerheads
West Hollywood	Roof capacity for solar panels; bike parking; many others.

Performance Standards

Performance standards provide a way to measure the energy efficiency of a building. Tools and guidelines for assessing the performance of buildings have been developed to implement California's energy efficient building standards, and are available from the California Energy Commission (<http://www.energy.ca.gov/title24/>). Both the California Green Builder program and GreenPoints Rated systems require qualifying buildings to exceed Title 24 requirements by at least 15%, and buildings using the LEED system are awarded points for exceeding Title 24 requirements by more than 15%.

As an alternative to ratings systems such as LEED, GreenPoint Rated, or California Green Builder, which grant certification for specific actions designed to conserve resources, many local governments have chosen to directly implement performance standards as alternate means of compliance or as separate requirements from green building practices. Under California Public Resources Code § 25402.2(h), such requirements, when they relate to energy efficiency, must be approved by the California Energy Commission and must be more stringent than the requirements found in Title 24, Part 6 of the California Code of Regulations. Nearly ten cities have received approval from the Energy Commission to incorporate energy efficiency performance standards into their green building ordinances separate from incorporation of GreenPoints Rated or LEED. An updated list is available [here](#).

Cities that have adopted performance-based requirements exceeding Title 24:

City	Energy Efficiency Requirement (increase over Title 24)
Cotati	15%
Los Altos	15% for non-residential buildings

Los Altos Hills	15% for residential buildings
Palm Desert	10% for residential buildings; 15% if over 4,000 ft. ²
Rohnert Park	10-15% for residential buildings based on size
San Rafael	All homes above 3,500 ft. ² must equal Title 24 energy use of a 3,500 ft. ² home
Santa Barbara	20% for residential buildings
Santa Monica	10% exempts projects from prescriptive requirements
Santa Rosa	15% for residential buildings

Municipal Buildings

Many ordinances in California require that municipal buildings and other city-sponsored projects promote green building practices. These are often the first and most stringent green building requirements passed by a city.

Examples of cities which have higher green building requirements for public buildings than for private projects:

City	Requirement for Municipal Buildings
Albany	LEED Gold if over 5,000 ft. ²
Berkeley	LEED Silver
Brisbane	LEED Silver if over 5,000 ft. ²
Livermore	LEED Silver
Los Altos	LEED Certified if over 7,500 ft. ²
Los Angeles	LEED Certified if over 7,500 ft. ²
Pasadena	5000 ft. ² ; LEED Silver
Rohnert Park	LEED Silver
San Rafael	LEED Certified; LEED Silver if over 30,000 ft. ²
West Hollywood	LEED Certified
Livermore	LEED Certified

Enforcement

Cities have chosen many different mechanisms for enforcing green building requirements. Most cities require submission of completed checklists based on building plans at the permitting stage. In most cities, buildings permits are contingent upon a complete and sufficient checklist. Many cities, such as Rohnert Park, Santa Monica, and Palo Alto provide for green building verification

prior to issuing an occupancy permit. The power to restrict permits for non-compliant buildings is an important part of ensuring compliance by private developers. San Mateo County requires builders to post a bond of \$1.50 per square foot to ensure compliance with green building requirements.

In addition to enforcement through the permitting process, some local ordinances provide for penalties for violation of a green building ordinance. Ordinances can provide for infractions or injunctions for violators, or even civil penalties. Criminal and civil sanctions are an important way of insuring that green building practices are followed even after the permitting process is complete.

Cities and their methods of green building enforcement:

City	Enforcement
Berkeley	Plan check at permit stage
Brisbane	Verification prior to occupancy permit
Cotati	Plan check and project inspection
Culver City	3rd party inspection
Livermore	Verification plan submitted at permit stage; inspection prior to occupancy permit; infraction or injunction for violation; violation is also public nuisance
Long Beach	3 rd party inspection prior to occupancy permit
Los Altos	Verification prior to final inspection
Los Angeles	Plan check or LEED registration at permit stage
Novato	Plan check at permit stage
Palo Alto	Plan check and verification prior to final inspection
Rohnert Park	Plan check and verification prior to final inspection; infraction and civil penalty for violation
Pasadena	Verification at final inspection; additional inspections as needed
San Mateo (Co.)	Plan check at permit stage; bond required until 3 rd party verification
Santa Cruz	Plan check at permit stage
Santa Monica	Plan check at permit stage and final inspection
Santa Rosa	Plan check at permit stage and final inspection
Windsor	Verification plan developed at permit stage
West Hollywood	Plan check at land use and permitting stages

Livermore	Verification at permit stage
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Incentives

Many ordinances that codify mandatory green building requirements also provide incentives that encourage developers to meet or exceed the required standard. These incentives can take the form of rebates or reimbursements, or preferential treatment as expedited permit review, expedited inspections, or even permit variances such as increased floor-area-ratio (FAR) or unit density.

Examples of cities that provide incentives for green performance in addition to mandatory standards:

City	Incentives
Anaheim	Expedited permit processing and fee waivers
Costa Mesa	Expedited permit processing and fee waivers
Chula Vista	50 GreenPoints meets indoor air plan requirements; expedited permit processing
Los Angeles	Expedited permit processing for LEED Silver
Petaluma	Buildings attaining 50 GreenPoints get certificate, plaque, city recognition
San Francisco	Priority permitting for LEED Gold; FAR/height waivers for higher performance
San Rafael	Expedited permit, fee waiver, sign, plaque for 100 GreenPoints or LEED Gold
San Mateo (Co.)	Priority permitting for 75 GreenPoints or LEED Certified
Santa Monica	Permit processing for 35 GreenPoints or 33 LEED points
Marin (Co.)	Rebates for installation of home solar panels

Comprehensive Ordinances

As this document illustrates, there are a variety of approaches, methods, and measures to ensure that a city’s development occurs in the most sustainable way possible. Required ratings, prescriptive measures, performance standards, powerful enforcement, and a variety of incentives can all work together to promote the effective and efficient shift to environmentally sensitive building. The most comprehensive programs combine all of these elements to establish minimum standards while encouraging innovation and voluntary commitment to green practices. Cities and counties of all sizes can take ambitious action to combat climate change. Two such comprehensive programs are compared below:

	San Francisco (proposed)	Rohnert Park
Approximate population (U.S. census estimate)	764,000 in 2007	41,083 in 2006
Residential requirement	75 GreenPoints (by 2012)	90 GreenPoints
Nonresidential requirement	LEED Gold (by 2012)	LEED Silver
Examples of prescriptive requirements	On-site space designated for compostable waste, in addition to recycling (by 2012)	Variable speed pool pumps; Energy Star exhaust fans; mastic applied to duct joints
Incentives	For "significantly" exceeding requirements: -Additional building height or FAR -Priority permitting -Equalization of green assessment evaluations, avoiding increased taxes for green features -Rebate or refunds of project fees	None
Enforcement	Plan check and verification prior to final inspection	Plan check and verification prior to final inspection; infraction and civil penalty for violation

Several organizations offer information to local governments interested in developing green building initiatives. Model ordinances and resolutions covering city buildings and encouraging green building in the private sector are available at <http://www.stopwaste.org>. These resolutions are common first steps to developing mandatory green building requirements. Global Green USA (<http://www.globalgreen.org>) offers several publications and resources for local governments, including *Developing Green Building Programs: A Step-by-Step Guide for Local Governments*.