

POLICY Green Building	Document Number:	400.004
	Version Number:	01
	Date:	08/07/2018

1. Purpose

The Green Building Policy establishes a comprehensive framework for VTA to incorporate green building principles into its projects with the intention of designing, operating, and maintaining projects that are environmentally, socially, and economically sustainable.

Background

In 2008, VTA approved the Sustainability Program and established a goal to incorporate green building principles into VTA projects. VTA has since constructed and renovated several facilities with renewable energy, water and energy efficient fixtures, and other green building features. With this Green Building Policy, VTA seeks to formally incorporate green building principles into its projects. The intent of these principles is to conserve natural resources, reduce waste, support the local economy, provide healthy indoor environments, and generate long-term cost savings for VTA. Cost savings of green buildings is achieved primarily through reduced energy costs because green buildings are, on average, 30% more energy efficient when compared to conventional buildings.

These green building principles are supported by the vision and values of the 2016 Strategic Plan to innovate the way Silicon Valley moves. By proactively creating, collaborating, and leading in green building efforts, VTA will continue to advance its environmental sustainability goals.

2. Scope

For the purposes of this policy, green building refers to the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from siting to design, construction, operation, maintenance, renovation, and de-construction.

This policy applies to the planning, design, construction, renovation, and operation of all capital, facility, and joint-development projects on VTA-owned property.

3. Responsibilities

All VTA employees shall be directed to incorporate green building principles into all capital, facility, and joint-development projects on VTA-owned property to the maximum extent possible.

VTA Executive Staff shall ensure that this policy is applied early on in the planning, design, construction, renovation, and operation of VTA projects.

The Environmental Programs Department and VTA Sustainability Program Team shall provide assistance to VTA employees to meet the requirements of this policy and support the implementation and maintenance of this policy.



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The Real Estate and Joint Development Department shall encourage private developers to incorporate green building principles into projects located on VTA-owned property to the maximum extent possible.

4. Policy

Included in this policy is a list of green building principles established by the State of California, U.S. Green Building Council (USGBC), U.S. Environmental Protection Agency (EPA), and Institute for Sustainable Infrastructure.

VTA shall commit to incorporating the principles listed below into the planning, design, construction, renovation, and operation of all new and existing facilities. This effort shall be done to the maximum extent possible for all facilities that are constructed, owned, or managed by VTA or on VTA-owned property. Generally, the earlier green building features are incorporated into the design process, the lower the cost. Therefore, this effort shall be done at the earliest stage possible in the design process.

In addition, for VTA projects with a budget of \$100 million or greater, a Sustainability Plan shall be prepared that designates a Sustainability Coordinator for the project. The Sustainability Plan shall include a list and description of green building features to be included in the project and their anticipated environmental and cost savings, including a calculated return on investment.

4.1 California Green Building Standards Code

California Green Building Standards Code, California Code of Regulations (CCR), Title 24, Part 11, also known as CALGreen, applies to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure, unless otherwise indicated in the Code, throughout the State of California.

VTA commits to the following:

- Meet all mandatory measures for nonresidential structures. These mandatory measures are provided in Chapter 5 of the CALGreen Code.
- Incorporate as many voluntary measures for nonresidential structures as possible, with the goal of achieving Tier 1 and/or Tier 2 voluntary compliance. Voluntary measures are provided in Appendix A5 of the CALGreen Code.
- Provide electric vehicle charging stations for zero emission vehicles that are compatible with VTA's existing electric vehicle charging network based on the recommended ratios in Tier I of the CALGreen Code and as practicable.
- Exceed CALGreen requirements for the diversion of construction debris and waste from landfills.

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- Consider opportunities to incorporate CALGreen mandatory and voluntary measures for residential structures where applicable to VTA joint development projects.

4.2 Other Green Building Principles

VTA commits to incorporate other green building principles and programs, as applicable. Specifically, VTA commits to the following:

- Ensure that projects meet the highest standards for energy efficiency by referring to the USGBC's Leadership in Energy and Environmental Design (LEED) program, Institute for Sustainable Infrastructure's Envision™ rating system, EPA's Energy Star program, California Energy Commission's (CEC) Building Energy Efficiency Standards, and Pacific Gas and Electric's (PG&E) Business Energy Checkup website.
- Incorporate on-site renewable energy systems (e.g. solar photovoltaic arrays and solar hot water) or carbon-free electricity (power generated without fossil fuels) to the maximum extent practicable, provided the systems are economically feasible.
- Ensure that projects are designed to minimize water use for both indoor and outdoor uses and utilize fixtures and equipment that meet the EPA's Water Sense ratings.
- Ensure that projects are designed to minimize the use of non-organic herbicides, pesticides, and fertilizers.
- Include on-site recycling and compost programs for organic waste.
- Consider opportunities for on-site water reuse or recycling.
- Connect to recycled water infrastructure (purple pipes) for irrigation or process water whenever available.
- Comply with LEED indoor air quality standards for air filtration, ventilation, and selection of building materials to support the health and well-being of building occupants.
- Include requirements for quantifying the disposition of construction debris and waste in contract specifications.
- Comply with all applicable VTA policies, including VTA's Sustainable Landscaping Policy and Complete Streets Policy.
- Comply with VTA's Municipal Separate Storm Sewer System (MS4) Permit.
- Use vegetation, soil, and other green infrastructure elements to reduce and treat storm water at its source.

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- Require outside developers to consider Zero Net Energy (ZNE) building practices for new residential and commercial construction, and include such guidance in VTA proposal criteria (weighted such that proposals that make stronger commitments to ZNE measures are considered more favorably).

5. Definitions

The following terms shall have the assigned definitions for all purposes under this policy:

- CALGreen** refers to the California Green Building Standards Code, California Code of Regulations (CCR), Title 24, Part 11, available at the California Building Standards Commission website at www.bsc.ca.gov.
- Green building** refers to the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from siting to design, construction, operation, maintenance, renovation, and deconstruction. Green building is also known as a sustainable or high performance building.
- Green infrastructure** refers to bioswales, bioretention basins, permeable pavement, and other systems that use or mimic natural processes to filter, treat, or reuse storm water on site. Green infrastructure is referred to as low impact development when applied to land.
- Zero Net Energy** refers to a building with zero net energy consumption, meaning the total amount of energy used by the building on an annual basis is roughly equal to the amount of renewable energy created on the site. Goals for the development of zero net energy buildings are included in the California Energy Efficiency Strategic Plan.

Approval Information

<i>Prepared by</i>	<i>Reviewed by</i>	<i>Approved by</i>
 Carolyn Gonot Chief Engineering and Program Delivery Officer	 Nuria I. Fernández General Manager/CEO	 VTA Board of Directors

Date Approved: 10/4/18

POLICY Sustainable Landscaping	Document Number:	340.003
	Version Number:	2
	Date:	09/26/2018

1. Purpose:

The purpose of this policy is to conserve water resources, reduce or prevent pollution, and improve wildlife habitat and biodiversity through the use of sustainable landscaping practices.

2. Scope:

This policy applies to the planning, design, construction, and maintenance of landscaping for all VTA capital projects and for all VTA facilities located on VTA-owned property.

3. Responsibilities:

This policy applies to all VTA employees and contractors responsible for planning, designing, constructing, and maintaining landscaping for VTA projects and facilities.

4. Policy:

VTA commits to implement the following sustainable landscaping practices to the maximum extent possible in accordance with the purpose of this policy.

4.1 Conserve Water Resources

- Plant low maintenance, drought tolerant, and native plant species;
- Refer to the Santa Clara Valley Water District's *Approved Plant List*, which identifies water needs for plants using Water Use Classifications of Landscape Species in Region #1 for the North Central Coast of California, and/or the East Bay Municipal Utility District's *Landscapes for Summer-Dry Climates of the San Francisco Bay Region* for low water use plants;
- Preserve and protect established vegetation;
- Incorporate compost, mulch, and other appropriate organic materials to reduce runoff, conserve soil moisture, and increase carbon sequestration;
- Limit or eliminate the use of turf area by using plantings, mulch, decomposed granite, rock, or pervious hardscape;
- Group plants with similar water needs into climate and water zones ("hydrozones") to maximize water efficiency;
- Choose irrigation equipment that uses the least amount of water for the design, layout, and type of landscape;

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- Install rain shut-off devices, flow sensors, weather-based irrigation controllers, pressure compensating spray heads, and vandal resistant sprinkler heads and adjust irrigation times and durations with the seasons and for proper coverage and even distribution;
- Use reclaimed water for irrigation where available;
- Respond promptly to leaks and perform regular inspections of irrigation equipment to ensure good working order;
- In areas of heavy public use, select and place landscaping and irrigation equipment appropriately to avoid damage and follow city specifications for irrigation equipment placement.

4.2 Reduce or Prevent Pollution

- Refer to the Santa Clara Valley Urban Runoff Pollution Prevention Program's *Plant List and Planting Guidance for Landscape-Based Stormwater Measures*, C.3 Stormwater Handbook, Appendix D, for guidance in selecting plants and designing landscape to reduce or prevent pollution;
- Ensure that projects are designed to minimize the use of non-organic herbicides, pesticides, and fertilizers;
- Limit or avoid the use of non-organic chemicals to control weeds and pests at existing facilities;
- Avoid use of overhead spray irrigation adjacent to storm drain inlets and pedestrian walkways to prevent water from directly discharging to the Municipal Separate Storm Sewer Systems (MS4) and misting into public paths;
- Use vegetation, mulching, low impact development treatment, and other green infrastructure elements to reduce runoff and treat storm water runoff from facilities and hardscape;
- Use VTA's *Storm Water and Landscaping Design Criteria Manual* as guidance to control storm water runoff on all VTA properties and project sites in compliance with the requirements of the Phase II Small MS4 General Permit Program.

4.3 Improve Wildlife Habitat and Biodiversity

- Select plants native to California that provide habitat and food for birds, insects, and other wildlife;

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- Under no circumstances shall any plants listed as invasive by the California Invasive Plant Council's Invasive Plant Inventory be used for landscaping.

5. *Definitions:*

- 5.1 **Sustainable landscaping** refers to the use of design and maintenance practices that work harmoniously with local climate and soils. A sustainable landscape is adapted to an area's rainfall patterns and can thrive with minimal watering, maintenance, and chemical use. In contrast, conventional landscapes may feature plants that require lots of water, frequent gas-powered mowing to maintain, and pesticides and fertilizers to promote healthy growth. Rain or excess irrigation water can transport these chemicals into storm drains and are harmful to fish and other wildlife.
- 5.2 **Invasive plant** means species of plants identified by the California Invasive Plant Council (IPC) as invasive to areas within the IPC-delineated Central West region, and that are rated by the IPC as being either moderately invasive or highly invasive. It also includes plants in the United States Department of Agriculture invasive and noxious weeds database.
- 5.3 **Native plant** means a plant indigenous to a specific area of consideration. For the purpose of this Policy, the term shall refer to plants indigenous to the coastal ranges of Central and Northern California, and more specifically to such plants that are suited to the ecology of the present or historic natural community of the project's vicinity.

6. *Summary of Changes:*

The Purpose was revised to increase clarity of the three main objectives of the policy. Responsibilities were moved to the Policy section and grouped into the objectives referred to in the Purpose. The Scope was revised to increase clarity for the reader. Terminology, definitions, and references were updated throughout the document to be consistent and current given the passage of time since the initial release of the policy. Approval Information was updated as needed.

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7. Approval Information:

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9/28/2018

Date Approved: _____