

Illinois Governor's Award

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Local Government Sample

The Village of 'Any Town', Illinois has identified and implemented a series of projects that has substantially impacted the environmental impact on the environment. There are several (three) village owned buildings that have been remodeled in accordance with Leadership in Energy and Environmental Design (LEED) standards. In addition, the village has implemented several programs and changes to routine village operations, such as storm water management, that minimize environmental impacts. These efforts are part of an on-going effort to continuously improve efficiency while minimizing operating costs.

This building remodel include adding a rain water collection system (a cistern), alternative drainage systems that utilizes tumbled rock that minimizes soil erosion and allows rain water draining from gutters to allow for the water to be absorbed into the soil rather than being directed into the sewer system. Low flow, dual flush toilets have been installed in each of the three remodeled buildings; where showers are provided, low flow shower heads have been installed, day lighting is better utilized including opening blinds and adding sky lights and light tubes through the roof, motion sensors for lighting in bathrooms has been installed.

The heating and ventilation systems of all village owned buildings has been assessed to provide proper maintenance and programmable thermostats have been installed in each building/system. Architectural features such as carpets, paints and wood stains have been carefully selected so that only paints and stains that contain no or low volatile organic compounds (VOC) have been used when remodeling the three above referenced buildings. The village manager has adopted a policy that prohibits the purchase and use of any future purchases of traditional high VOC paints and coatings.

The Village of Any Town, Illinois has made a commitment to minimizing our impact on the environment while providing people with the services and resources that help support their continued enjoyment within the community. The village has approached sustainability efforts from the top down, through leadership from the village manager and support from the community board. A sustainability team, representative of each department within the village, has established key areas of performance and improvement including water savings, waste

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minimization, energy efficiency, material selection and indoor environmental quality. In addition, several village policies and procedures have been adopted in support of sustainability.

Sustainable Landscaping and Grounds Projects

The Village of Any Town redesigned aging landscaping outside the three buildings that underwent complete remodeling efforts. The three buildings are situated in a short distance from one another. A five hundred gallon cistern, which is a rain water collection system, has been installed at the center and is now in use. Water captured in the tank is used to water plants and trees planted around the three buildings. Previously this water would have been drained to the storm sewer where it would be re-directed to an area stream. By installing the cistern 500 gallons of water is utilized on site. The cistern was installed in January 2009. The cistern has been filled and the water utilized six times during the year. This equates to 3,000 gallons of water being used for irrigation at the time it is needed.

The gardens have been expanded in order to add interest and beauty to the landscaping and to minimize the amount of mowing needed on the village property. The gardens have been planted with native shrubs, water wise perennials, including ground cover plants that help minimize water evaporation, and perennial flower bulbs.

Permeable pavement is planned for installation as soon as the budget permits. In the mean time gravel drainage swales have been installed along the edges of paved areas and rain water is directed toward them. The tumbled gravel drainage swales are designed to allow rain water to soak in and minimize soil erosion.

The Village of Any Town, Illinois has installed pervious paver bricks as sidewalk at center building of the three. This pervious pavers are attractive and act as an effective means to further manage stormwater. This system captures holds water and allows it to seep into the ground, which is one key reducing storm water runoff, and meets U.S. Environmental Protection Agency (EPA) storm water regulations. Better stormwater management helps eliminate the need for retention ponds and other storm water management devices.

Water Savings

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A measurement and verification program was implemented in order to track accomplishments with regard to building modifications, etc. Dual flush toilets, low flow urinals, sinks and shower heads (where showers exist) have been installed within each village building. Water meters have been installed in order to accurately measure the water use savings. A water usage comparison for a baseline and proposed building was established. The water consumption table is identified below:

Water Use Baseline Summary		
Annual Water Consumption	390,764 Gallons/Year	
Daily Water Consumption	1070.59 Gallons/Day	
Water Use / Savings Summary P.S.C.		
Annual Water Consumption	162,537 Gallons/Year	228,227 G/Y Saved
Daily Water Consumption	445.31 Gallons/Day	625.28 G/D Saved

A 41% savings in water use has been realized. This savings has minimized the costs and environmental impacts associated with managing this waste water.

Energy Efficiency

Energy efficiency projects have been implemented in the three remodeled village owned buildings. The lighting in the three buildings was updated and alternative, high efficiency mercury lamp fixtures as well as LED lighting systems have been installed. In addition, sky lights and light tubes have been installed in areas where no natural light is permitted to enter. Employees are also encouraged to turn out lights and utilize the natural light versus mechanical light whenever possible. The day lighting systems provide as much as 50 Ft/Candles of light at all times in areas in which natural lighting is available.

Motion sensors are also utilized in storage areas and in bathrooms within each of the three remodeled buildings and in employee offices. The sensors installed in the employee offices utilize a form of artificial intelligence to memorize occupancy patterns. If a consistent daily pattern is recognized, the system will shut off the lights within that office area when the occupant leaves. Likewise once motion is sensed the lighting system will automatically reestablish the rooms lighting.

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On demand water heating systems have been installed in the three remodeled buildings. A traditional water heater will heat the water 24 hours a day 7 days a week in anticipation of its use. With an on-demand heating system water is heated when it is used. A significant amount of energy is being saved as a result of the water heating equipment change.

Electricity Use Baseline Summary		
Annual Average Electricity Consumption	1,215,580 kW	
Daily Average Electricity Consumption	3330 kW	
Electricity Use / Savings Summary		
Annual Average Electricity Consumption	497,532 kW	718,048 kW Saved
Daily Average Electricity Consumption	1363 kW	1,967 kW Saved

An overall electricity savings of 61% has been realized. This savings also minimizes our carbon footprint.

Natural Gas Use Baseline Summary		
Annual Average Natural Gas Consumption	1,946,723 (1,000 BTU)/Year	
Daily Average Natural Gas Consumption	5,333 (1,000 BTU)/Year	
Natural Gas Use / Savings Summary		
Annual Average Natural Gas Consumption	604,900 (1,000 BTU)/Year	1,341,823 BTU Saved
Daily Average Natural Gas Consumption	1,657 (1,000 BTU)/Year	3,676 BTU Saved

An overall savings of 69% of natural gas has been realized. This savings not only conserving our supply of natural gas but has reduced our carbon footprint significantly.

Material Selection

The Village of Any Town worked with the architect and the remodeling contractor to incorporate quality, environmentally friendly materials that support sustainability. Desired features, depending on the product included natural fibers, fast growing plant resources, no or low VOC containing coatings, paints, sealers, etc. End of life of a product was also considered including the design and recyclability of new office furniture, etc. Items installed in the three remodeled buildings include carpet tiles that contain 40% recycled content and 20% post consumer content

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materials. Ceiling tiles are made from 100% recycled fiber, all metal wall studs contain 50% recycled aluminum, floor tiles are made from natural stone, drywall board is backed with recycled papers. Counter tops are made from locally manufactured solid surface countertop maker that contains recycled glass cullet from an area glass manufacturer. The glass cullet in the countertops once went to a landfill.

Sustainable Forestry Initiative (SFI) (<http://www.sfiprogram.org/>) certified products were also utilized throughout the building. These products certified by SFI come from well-managed forests adhering to strict environmental and socioeconomic standards in accordance with the principles and criteria of the forest stewardship council.

When conducting any demolition in the three remodeled buildings the remodeling contractor segregated all materials that could be salvaged and reused or sent for recycled. The Village partnered with an area disposal company that recently implemented a construction waste recycling service. According to the agreement between the remodeling contractor and the Village, a minimum of 75% by weight of the solid waste generated in the demolition was to be re-use or recycled. According to measures collected throughout the remodeling process, 86% of the material removed was recycled, reused or repurposed

In addition to it's recently completed LEED compliant remodel of the three village owned buildings, LED lighting systems were installed on 40 traffic signal intersections. This resulted in a savings of 85% in energy costs. The village has also sponsored electronic waste drop-off and recycling drives as well as paint collection drives. Latex paint that is collected is rebled into a neutral color by a contractor and then is made available to local residents for a minimal purchase price.

Village representatives/employees embrace this concept of sustainability. It is important to the residents for the village to implement responsible solutions in our community, not only for ourselves, but for our environment and future generations.