

Green Schools: High-Performance, Sustainable Design

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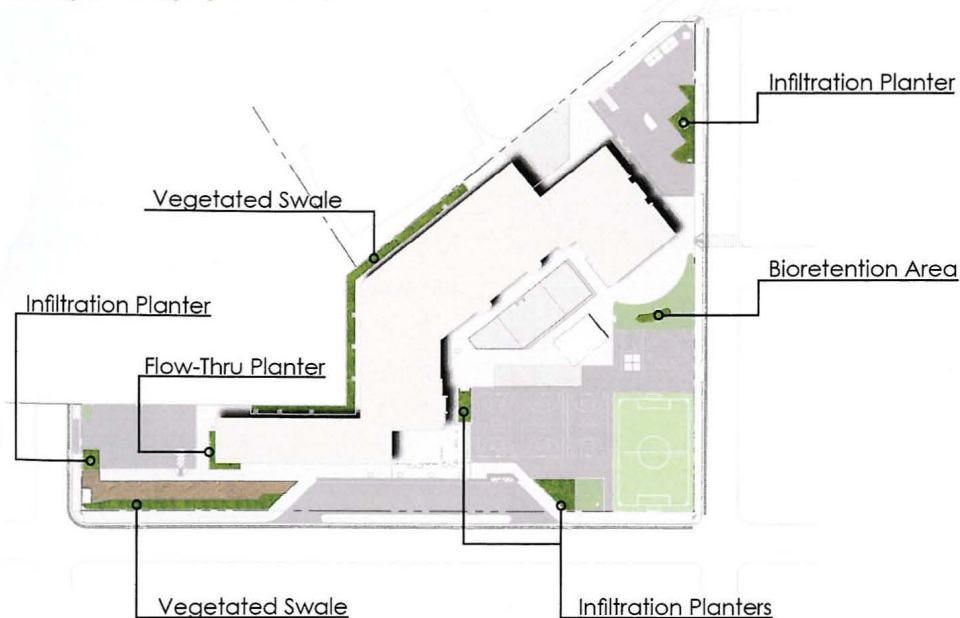


Green building, landscaping, engineering and technology are all key factors that aid schools in reducing energy costs, reducing waste and conserving water while maintaining a positive learning atmosphere for students. The renovation of Ford Elementary School in Richmond, CA, is an example of how a team of engineers and architects are incorporating green practices into their designs to help create an environmentally responsible learning experience for students, teachers and administrators.

WRECO, a civil and water resources engineering firm, together with Sally Swanson Architects, Inc. and other specialty design firms, are currently working on this project, estimated to be completed by January 2010. WRECO is leading the civil engineering design portion of the Ford Elementary School Renovation Project that first began in 2007. WRECO, a certified Bay Area Green Business in Contra Costa County, is responsible for the site demolition, site improvement, site grading, best management practices (BMPs) design, erosion control and utility engineering.

Ford Elementary School was built in 1949 and had outdated electrical and mechanical systems, aged buildings and minimal ground cover. In order to improve and update these conditions, the school was being redesigned to meet the criteria of the Collaborative for High Performance Schools. This initiative began with the intention of improving the quality of the classroom and the experience of its students. The design of the project will also comply with the Contra Costa County Department of Public Works and City of Richmond

Site layout with proposed BMPs



Architectural rendering

RENDERING COURTESY OF SALLY SWANSON ARCHITECTS, INC.

standards. The school will demonstrate exemplary sustainability features such as energy efficiency, rainwater harvesting and regionally sourced construction materials.

Upon completion, the school buildings will have been relocated to expose the space adjacent to the streets. The design team designed areas for an eco garden, biofiltration swales, a new soccer field and other storm water treatment BMPs in order to reduce the impervious areas. The garden and outdoor amphitheater will contribute to the outdoor curriculum for the students. Planter boxes located in front of the new school building were designed to catch storm water that falls from the roof. Landscape architects picked out native plants that would need minimal irrigation, helping the school to conserve water. The new school building was designed with larger windows facing in a direction that provides optimum sunlight to classrooms.

One of WRECO's primary goals is to put the environment first and to perform work that will benefit the next generation. If the designs are green, the end product will be green. The effort put forth by each member of the design team has made this project and the experience a success.

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