



# Breaking Ground

The OPSC/DSA Connection to California School Districts

State of California • Department of General Services

A Publication of the Division of the State Architect and the Office of Public School Construction

✱ Winter 2002

## A Letter From Stephan Castellanos and Luisa M. Park



Stephan Castellanos, FAIA  
State Architect, DSA

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Executive Officer, OPSC

The articles for this edition of *Breaking Ground* center on the Division of the State Architect's (DSA) recent name change of the Access Compliance Unit to the Universal Design Unit. As many of you are aware, the concept "Universal Design" is a broader, more comprehensive "design-for-all" approach to the development of architecture around human diversity. Therefore, we are very excited to present this edition, which is focused around this important concept.

The feature article, "What is Universal Design?" provides an insightful view into the world of universal design, and defines the direction and goals of the DSA in this arena. We take that one step further and include an article on "Successful Steps to Getting Your Universal Design Plan Review Expedited" through the DSA. This article provides architects and design professionals with a list of helpful tips that can assist them in meeting the DSA's plan approval requirements. On the Office of Public School Construction (OPSC) side of plan review, we have

included an article "How to Tips" from the OPSC Plan Verification Unit that we believe complements the DSA's plan review article. The OPSC "How To Tips" is an expansion of a previous *Breaking Ground* article on this same topic. Finally, we are excited to unveil this edition's Feature Project! Instead of a single project, this edition includes a variety of school projects that depict the philosophy and the practical application of Universal Design. We want to extend our sincere thanks to the architectural firm Sally Swanson Associates for their assistance in providing this wonderful material.

We hope this edition will be informative and useful for all of you who are involved in the building of school facilities. In addition, we want to thank all of you that have taken the time to provide us with feedback on our joint newsletter. If you would like to write us, but don't know how, please see the article "How May *Breaking Ground* Better Serve You?" on page 2 for details.

The DSA and OPSC would like to wish you a happy and prosperous 2002.

Stephan Castellanos, FAIA  
State Architect  
Division of the State Architect

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## What is Universal Design?

Access Compliance is gone but not forgotten — it has been incorporated into the Office of Universal Design and has become just one component in the overall program of education, training, and collaboration with design professionals. The DSA-AC Program changed dramatically with the shift in focus from accessibility to Universal Design. Instead of regulating access compliance issues through plan review, the program of accessibility shifted from "corrections" to "giving directions." In an effort to prevent accessibility from being an add-on burden or cost to the project, or an afterthought at the end of a design process, the development of a delivery system of how to provide compliance information seemed to make more sense. Getting involved in the preliminary design process and integrating universal design features in design development opened up opportunities to partner with our clients in a more wholesome and collaborative approach to designing public buildings. "We wanted to tell architects how to do it right, rather than tell them what they did wrong. We wanted to be in the approval business, not the correction business," said Michael Mankin, AIA, Chief of the Office of Universal Design, adding, "If we publish our in-house standards and allow our clients to know beforehand exactly what we categorically accept, everyone will have the option of reviewing their own plans. They will know those plans are ready

*Continued on page 2*

## OPSC Reminders. . .

- ▶ **State Allocation Board Meetings\***  
February 27, 2002  
March 27, 2002  
April 24, 2002
- ▶ **Implementation Committee Meetings\***  
February 1, 2002 (Sacramento)  
March 8, 2002 (Ontario)  
April 5, 2002 (Sacramento)
- ▶ **SFP New Construction Application Timeline**  
Applications accepted by the OPSC on or prior to March 29, 2002 will be processed for consideration at the June 2002 SAB meeting.
- ▶ **Deferred Maintenance Program**  
Five Year Plan and Critical Hardship applications for this fiscal year are due May 30, 2002.
- ▶ **Joint Use Funding Cycle**  
July 1, 2001 – May 30, 2002: Period for districts eligible to participate in the Lease-Purchase Program funding of Joint Use projects for gymnasiums, multipurpose rooms and libraries (SB 1795).
- ▶ **Interest Earned Report (Form SAB 180)**  
Due quarterly (March 31, June 30, September 30 and December 31) from each county for all districts which have earned interest from the Leroy F. Greene Lease-Purchase Fund.
- ▶ **Project Tracking Number**  
Project Tracking Number (PTN) required on specified forms effective now (as of October 1, 2001).

\* Meeting dates subject to change. Check the OPSC Web site at [www.opsc.dgs.ca](http://www.opsc.dgs.ca) for latest dates and times.



State of California • Department of General Services

### Breaking Ground

The OPSC/DSA Connection to California School Districts

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## What is Universal Design? – continued from front page

for approval on the day they are submitted to our intake architects. It takes very little time to review plans that are complete and correct.”

The first goal of the Office of Universal Design was to put the *California Access Compliance Reference Manual* online. It includes most access-related statutes, all

*Instead of regulating access compliance issues through plan review, the program of accessibility shifted from “corrections” to “giving directions.”*

California Building Standards Code regulations, DSA policies, and most importantly, the “Official Comments” — the internal desk manual, a series of checklists used by Access Compliance staff in the plan review program. “By sharing our own internal document, we no longer hold anyone hostage to the process of needlessly waiting for our determinations”, Michael explains. “Our *Official Comments* are nothing more than just a best-practice approach to implementing accessibility.” Made up of individual checklists, the itemized lists identify what the Access Compliance staff “categorically” accept as meeting the requirements necessary for approval. Of course, there are times when legal or physical constraints or hardships justify a departure from a “best practice,” and those are considered on an individual basis. A lot of access compli-

ance matters are issues of conjecture, but the purpose of this manual is to create a “bright-line” as to what is acceptable and typically approved. It takes out a lot of the guesswork in what constitutes compliance. Other changes offer new resources for design professionals, and include a variety of upcoming seminars, web-based training modules, computer disks, online videos, flowcharts for determining code application, pre-approved standard construction details, and a Universal Design Technical helpline at 916.322.4700 — just ask for Aaron Noble. Andreas Michael is coordinating the Official Comments. “We would like to start recognizing competency and expertise already available in our consultants and clients,” commented Andreas. “We can teach architects the job we do, and we can work together to solve difficult issues. Quality assurance starts with education and training,” he added. Great school architecture simultaneously serves a variety of people - children, parents, grandparents, and employees. By including the principles of UD in the problem-solving development of site planning, building design, vertical and horizontal circulation and routing, the process of incorporating a range of features produces a variety of options for a diversity of needs.

“We want to keep experienced people in the workforce by ensuring that anyone able to work in the event of disability, can return to work in whatever way they can,” says Michael Mankin. “More people are reaching retirement age, but in spite of having some disabling condition, they want to continue to be involved in education, active in community activities, and their valuable work experience is an important resource. The best accessibility is invisible, because it’s totally integrated into the design. It doesn’t stand out as an add-on accommodation. Accessibility for all fosters the kind of environment that is supportive and meaningful, regardless of age or ability.”

## How may *Breaking Ground* better serve you?

We would like to hear from you on the article topics that you’d like us to cover. Your valuable input based on your perspectives and areas of expertise will assist us in producing an informative and useful *Breaking Ground*. Is there a column you would like to see each issue or perhaps a topic that would be helpful as a feature? We encourage our customers to please contact *Breaking Ground* with your ideas and comments at [breaking.ground@dgs.ca.gov](mailto:breaking.ground@dgs.ca.gov).

## “How to Tips” from the OPSC Plan Verification Team

# OPSC Plan Acceptance

One of the most important steps in receiving funding through the School Facility Program is to submit a complete application package to the OPSC. An essential component of a complete application package is the approved construction plans and specifications accompanied by a complete and accurate cost estimate. Unfortunately, some applications do not contain all of the necessary project plan submittals, resulting in a last minute rush to gather the missing documentation, or, worse yet, in reduced grant amounts. In rare cases, the omissions may even cause the application to be returned to the district. The following are some helpful tips from the OPSC Plan Verification Team to eliminate these frustrations.

- Plans and specifications must have current DSA and CDE approval.
- Be sure that all site development work in the cost estimate is reflected in the plans and vice versa. If the work is in the estimate but not in the plans, OPSC cannot verify the estimate and will disallow the funding. Conversely, if the work is in the plans but not in the estimate, the project will not receive all of the site development funding that is allowable.
- Only reasonable and appropriate site development work that meets common engineering practices and industry standards will be considered for SAB approval. Obviously, the terms “reasonable and appropriate” are subject to interpretation. If you are unsure that a particular cost will be considered for funding, you are invited and encouraged to contact the OPSC Plan Verification Team Supervisor, Rich Sheffield at 916.323.4455 even before the project is ready to be submitted.
- Include off-site improvement plans and specifications in the initial project plan submittal if funding is requested for that work. Remember that the off-site plans, although not approved by the Division of the State Architect, must be approved by the local entity having jurisdiction before they can be accepted.
- Utility costs may include all service necessary for the master-planned capacity of the site, even if the project being reviewed is only for a part of that capacity. Of course, the costs should not exceed that limit.

If you decide to submit your plans in an electronic format, you may use a CD-ROM, Zip Disk, or 3½” floppy disk. A complete discussion of this process can be found in the Spring 2001 issue of *Breaking Ground*. As a brief recap of that article, please remember the following tips:

- Use an electronic format readable by AutoCAD 2000 for Windows 2000.
- Submit CAD files with an “DWG” extension only.
- Do not compress the drawing files.
- Include a complete set of electronic files for the school site.
- Include an index of the required architectural drawings (name file “index.doc”).
- Make sure the file names are cross-referenced to standard title sheet names.
- Label disks clearly with the OPSC Project Number and School District Name.
- Check to see if your files are readable on an independent computer before you submit.

When submitting a hardcopy set of construction drawings, remember to:

- Submit a full set with all plan sheets, even if only a portion of the plan is for a district-funded project.
- Include plans for Site, Civil, City/County Street Development, Architectural (along with portable facilities), Structural, Electrical, Plumbing, Mechanical and Landscape.

Following these tips can assist you in successfully submitting an application for funding. For complete submittal instructions and document requirements, access our Web site at [www.opsc.dgs.ca.gov/Programs/cvaca.asp](http://www.opsc.dgs.ca.gov/Programs/cvaca.asp). In addition to the instructions, you will find a work sheet to assist in capturing all your project’s site development costs, as well as a copy of the Architect’s Submittal Guidelines, which will provide you with everything you need to know regarding plans, specifications and cost estimate submittal. We look forward to receiving your project application.

## OPSC Plan Verification Meetings

When an application for funding is submitted and the Office of Public School Construction has questions about the funding requested or the documentation submitted, OPSC advises the district in writing and requests a response within 15 days. That isn’t a lot of time, especially if the item at issue is something as complex as the amount of funding requested for site development work. To speed up the process, cut down on correspondence and reduce the possibility of misunderstandings, a new alternative has been developed. The district may now request a meeting with members of OPSC’s Plan Verification Team (PVT) to directly discuss and clarify any issues surrounding the district’s request for additional grants for site development costs. Immediate, on-the-spot resolution is now possible.

The response from districts and architects to this PVT meeting option has been overwhelming. To take advantage of this service, districts must contact the PVT within five calendar days from the date of the “15-Day” letter. You may schedule the appointment by calling Ms. Gretchen Winczner at 916.323.4455. The meeting will be scheduled to occur within approximately three business days on a Monday, Wednesday, or Friday during regular business hours (8 A.M. to 5 P.M.). This will allow ample time after the meeting to allow a response to items discussed in the meeting, if necessary.

While districts are still required to respond to questions and submit follow-up documentation within the original 15 calendar days of the date of the “15-Day” letter, the new PVT meeting option may help clarify the requirements necessary to support your funding request.

## Get to Know...

# *The Office of Universal Design (UD)*

*The Division of the State Architect's (DSA) Office of Universal Design, once known as the Access Compliance Program, was selected as this issue's program profile. We spent some time getting to know the staff and then asked them to share a few thoughts on why they enjoy working in this unit.*



### **DSA Los Angeles Regional Office**

(Left to right) Carlos Araujo, Associate Architect; Ferris Karim, Senior Architect; Elaine Miller, Associate Architect; and Ron Vaughn, Senior Architect

**Carlos Araujo**, Associate Architect, has spent the majority of his life in Southern California. After receiving his architectural degree from California State Polytechnic University, Pomona in 1987, Carlos devoted six years to planning, design, and construction for self-help community development in Tijuana and then helping San Diego's population of homeless farm-workers. He came to the unit from the Office of Emergency Services where he spent approximately seven years working on inspections and reports for the public infrastructure disaster claim unit. He now devotes his professional efforts to new school construction projects plan review for the Los Angeles Unified School District. "What I like about the Office of Universal Design is the increased professional responsibility I have as an architect," said Carlos.

"Working in this unit brings a sense of fairness to public access, and making the technical, analytical and design decisions here supports that responsibility." He wants to encourage designers to create spaces we can be proud of when it comes to accessibility. At home, Carlos enjoys family time with his wife and one-year old, and working in the garden and on his circa 1930 home.

**Don Fenlason**, Senior Architect, has been working in the architectural area for 27 years, the last seven with DSA. Having had a private practice before DSA, Don worked as a local developer of senior extended care facilities. "When I chose to come to DSA, I wanted to make an impact, a visible difference on architecture in the way of Universal Design," said Don. This position offers him the challenge of demonstrating to our stakeholders how persons with disabilities can live with equality by incorporating Universal Design into architectural design and planning. He also knows how important it is for schools to be made accessible for our students. While away from his working team, Don's home team is his wife and six boys. "We love watching all the kids compete in soccer and baseball," says Don. He has been coaching little league baseball for 13 years and loves it!



### **DSA San Diego Regional Office**

(Left to right) Rod Higgins, Senior Architect; Don Fenlason, Senior Architect; and Jim Schaible, Associate Architect

**Rod Higgins**, Senior Architect, joined this unit two years ago, bringing his 10 years of private practice experiences with Access Compliance to a continuing desire to design the best access projects possible. Having had personal experience with a disabled mother, Rod feels his work with this team gives him the opportunity to help implement programs that he believes in, while moving closer to using Universal Design as a whole new way of thinking and designing not just for the disabled but for everyone. "I want to be part of the solution in making sure accessibility issues are resolved once and for all," said Rod. While away from work, he enjoys his lay ministry work as a Staff Minister for Outreach at his church, hiking, and spending quality time with his family.



**DSA Headquarters – Sacramento**

(Left to right, back to front) Elizabeth Randolph, Program Technician II; Linda Huber, AGPA; Aaron Noble, Associate Architect; Michael Mankin, Chief, Office of Universal Design; and Mary Ainsleigh, Secretary to Michael Mankin

**Michael Mankin**, chief of the Office of Universal Design, came to the DSA with many years in private practice in the Bay Area. Michael designed multi-family residential and small commercial buildings such as restaurants then joined DSA in 1988 as a plan reviewer at the Los Angeles Regional Office. He then moved to DSA Headquarters, Sacramento, and joined the DSA rulemaking staff as an associate architect. In 1995, Michael received a DGS appointment as Principal of Access Compliance. “I truly enjoy serving the public by establishing successful processes that help people through the maze of regulations,” said Michael. “It’s very rewarding knowing architects and engineers want to incorporate Universal Design in the structures they design.” In his leisure hours away from work, Michael enjoys visiting historical sites, collecting historical artifacts, and studying English Literature. His three pets, a dog and two cats, like to remind Michael and his wife that they are only human.

**Aaron Noble**, Associate Architect, spent 20 years of residential and commercial architectural work with private firms, then served with the City of Roseville’s Department of Public Works’ Building Division until August 2000 when he joined the Office of Universal Design. “I came to work for this unit because of my enthusiasm for building codes and their application to architecture,” said Aaron. “I enjoy helping to assure an equal opportunity exists for everyone, regardless of ability, or disability. And, being part of a team that assures architecture includes design that is usable by “all” people to the greatest extent possible, is rewarding.” Aaron enjoys communicating with and educating callers on the proper application of accessibility laws. At home, Aaron and his wife spend their time chasing around five-year old twins.

*Continued on page 6*

## Successful Steps to Getting Your Universal Design Plan Review Expedited

Following a few key steps can assure your Universal Design (UD) plan is processed efficiently during the review process.

1. Stay in contact. Contact the Division of the State Architect (DSA) regional Office of Universal Design early in the design process and stay in touch throughout the entire review process, if needed.
2. Become familiar with the principles of Universal Design and the ‘tools’ available from the DSA Web site at [www.dsa.dgs.ca.gov](http://www.dsa.dgs.ca.gov).
3. Use the UD Access Checklist. Identify important code issues that impact site and building design.
4. Contact DSA experts for support. Call the DSA regional office at any stage of the project design and development for help with code interpretation and code issue resolutions.
5. Prepare for the DSA preliminary review appointment. Make sure you have applied all of the items in the Preliminary Review section of the checklist. Submit hardship restriction requests, if necessary, as soon as possible to ensure adequate and timely consideration.
6. Document all UD-related decisions, deadlines and constraints. Make sure to keep track of all the decisions made at the preliminary review appointment that will impact the work of the DSA review process. Make this information available at your plan submittal.
7. Submit a complete document set for formal review. Include decisions made in the preliminary review. If needed, contact the DSA Project Intake Architect for assistance.
8. Visit the Tracker system on the DSA Web site. Review the status and plan review processes of your project. If needed, contact the assigned plan reviewer.
9. Review comments from DSA Office of Universal Design. Contact the plan reviewer, if needed.
10. Prepare for your back check appointment. Bring all your UD-related documentation to the appointment.

Visit the DSA Web site at [www.dsa.dgs.ca.gov](http://www.dsa.dgs.ca.gov) for information on Universal Design.

## The Office of Universal Design (UD) . . . *continued from page 5*

**Elizabeth Randolph**, Program Technician II, comes from the private sector as a legal secretary. For six years, she worked for the Department of General Services. As part of the Universal Design Team, Elizabeth assists in the development of the Title 24 code publications that pertain to access compliance, and researches and reviews state access statutes. “There is a sense of cohesion in this unit that makes working as a team a pleasure. Despite the tremendous workload and pressing deadlines, it is a supportive group of professionals that enjoy their work,” said Elizabeth. “It’s wonderful to see how our work in this unit translates into living and working conditions for people who need accessibility.” Elizabeth’s home life activities including spending enjoyable time with her husband and teenage son and volunteering at a school tutoring program for a basketball recreational league.



### DSA Oakland Regional Office

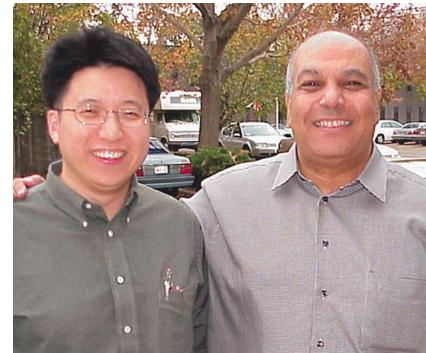
(Left to right) Barry Ryan, Senior Architect; Dickson Sum, Associate Architect; and Wendy Proctor, Triage Architect

**Barry Ryan**, Senior Architect, came to the United States from England in 1973, attending Oklahoma State University and then transferring to University of California, Berkeley, where he received a Masters of Architecture and subsequently completed a Master of City Planning degree. He worked for the Berkeley Planning Associates until 1982. Barry has worked in state service since 1984, beginning as a consultant for the Department of Fair Employment and Housing investigating discrimination complaints. He then joined the Office of Universal Design in 1987. “Because I use a wheelchair everyday, having an accessible environment is a personal issue for me,” said Barry. “I also would like to think that my efforts in this unit help make it possible for disabled children and adults to get the access they need to be with their friends, have fun, and go to school.” Barry’s work in this unit requires that he have a sound knowledge of architectural concepts, design, and practices that consider accessibility. He must also deal with the conflicts that exist between many compliance code issues that relate to social equality, architectural aesthetics, construction practicality, cost, physical limitations and time constraints. At home, Barry enjoys relaxing evenings with his wife and three teenagers.

**Jim Schaible**, Associate Architect, reviews plans, interacts with clients, and drafts policy related to access compliance. He left a private practice, and joined this unit four years ago after deciding to share his knowledge and experiences for the good of the school children. “It’s great to know

I am able to share my school building code knowledge to help make schools better for our children,” says Jim. “I hope to make an important contribution and difference in the way the design professional approaches incorporating Universal Design and accessibility into building plans.” Jim’s personal life involves using his construction expertise to help with charitable project work on camps for underprivileged children and constructing sanitation facilities for low-income farm workers in Baja, California.

**Saher Yassa**, Senior Architect, has been with DSA for 14 years, coming to the United States from Europe where he worked as a general contractor. Prior to that he worked as an architect for the Egyptian government on institutional projects such as prisons, transportation, and large civil projects. Saher is now the lead plan reviewer for Access Compliance in the Sacramento regional office where he enjoys solving difficult problems especially related to schools and transportation issues submitted by local architects and state agencies. He spent much of his time working with CalTrans to make sure their railroad platforms and cars were accessible to people with disabilities. Saher has been with DSA’s Access Compliance longer than most of his team members, starting back in 1988 when he was one of the first to be involved in the expansion of the plan review for accessibility. He spends time at home working on internet technology and computer programs and enjoys spending time with his wife and two college-age children.



### DSA Sacramento Regional Office

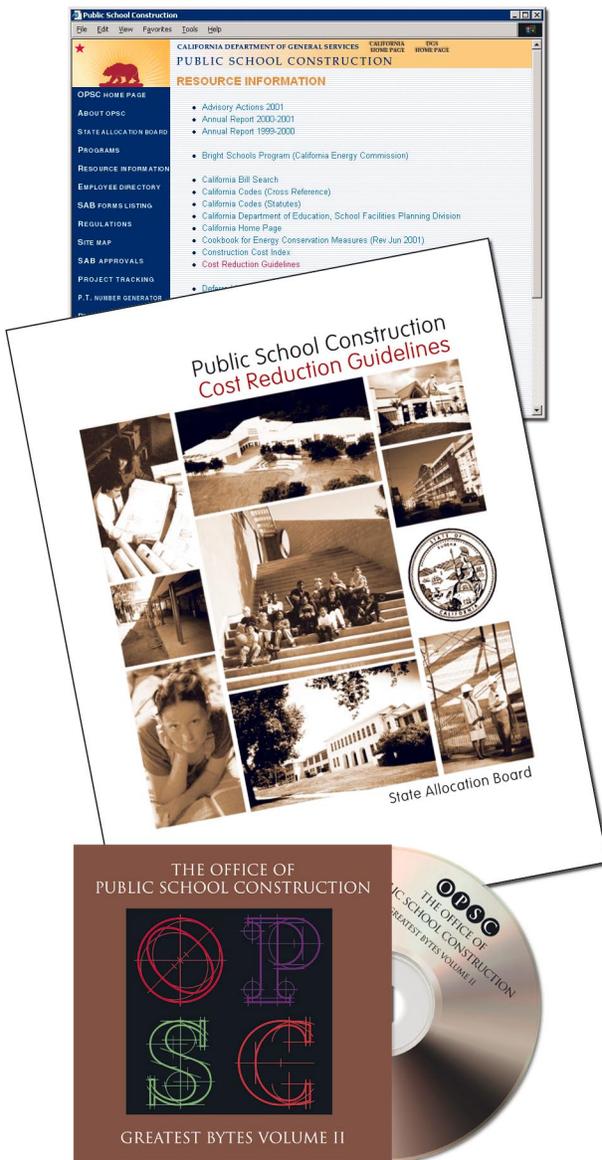
Johnson Chen, Architectural Associate and Saher Yasser, Senior Architect

**Ron Vaughn**, Senior Architect, joined the unit in July 2001. Working with Access Compliance and DSA staff in the past has given Ron the interest and experience needed to now focus on enforcement regulations in his new position. “I am glad to be working with a unit that is interested in formulating an efficient, accountable, and quality program,” said Ron. His background of 12 years of service with the Department of Parks and Recreation’s Development Division and another 15 years with the Planning and Construction Division of the Department of Corrections is an asset to the unit. Outside of the office, he enjoys watching rugby and football, and enjoying the artistic world of sculpture.

# Concerned About Containing Project and Operational Costs?

Would you like access to realistic and insightful ideas in achieving measurable reductions in the cost of school facilities construction?

Please remember to utilize the *Public School Construction Cost Reduction Guidelines*. It's been nearly two years since the State Allocation Board approved the guidelines for the districts' and design professionals' use, and the information is just as useful and more necessary than ever before. Suggestions contained in the guidelines emphasize efficiency, better processes, and innovative ideas that produce schools we can take pride in, while making the most of resources available to us. We encourage districts to access the guidelines by selecting "Resource Information" on the OPSC's Web site at [www.dgs.ca.gov/opsc](http://www.dgs.ca.gov/opsc), or on your copy of *The OPSC Greatest Bytes Volume I or II* that was mailed to each school district.



# Californians Met the Energy Challenge This Summer; Fall and Winter Will Test Our Commitment

Congratulations and thanks to every Californian who contributed to the state's success in meeting the energy challenge this summer! Your commitment to conservation played a major role in preventing rolling blackouts.

This year, the State and Consumer Agency/Department of General Services and other state offices significantly cut electricity use from January through the end of August compared to the same period in 2000. For example, in monitoring 37 of the state's largest office buildings covering nearly 12 million square feet, the Department of General Services, has recorded an average 22.4 percent drop in electricity use. Despite hikes in utility rates, the state was still able to save more than \$800,000 in cities such as Sacramento, Los Angeles, San Francisco, Oakland, San Diego, Van Nuys, and Riverside.

While the state has made extraordinary progress in bringing new power generation on line, the threat of shortages remains real. Conservation, both now and for the long term, will continue to be an important part of the strategy to keep the lights on.

Fall and winter months present challenges just as tough as the summer months. There are increased demands for power across the state for lighting, heating and other priorities. So we cannot let our guard down just because the seasons have changed.

Below are some practical cool weather tips from the Flex Your Power Web site that will help all of us continue to save power, save money and keep electricity flowing to all California communities.

## Winter Time Energy-Saving Tips

- Turn down your thermostat to 68 degrees (or lower as health permits) and wear warm clothing.
- Wrap hot water tanks with jacket insulation especially older water heaters to reduce heat loss.
- Plug your leaks by weather-stripping, sealing, and caulking leaky doors and windows, and installing foam gaskets behind outlet covers.
- Keep your fireplace damper closed unless a fire is burning to prevent up to 8 percent of your furnace-heated air from going up the chimney.
- Replace air conditioner filters so your HVAC system can run efficiently.

For more energy saving tips, incentives, and information on how you can conserve energy and save money, visit: [www.flexyourpower.com](http://www.flexyourpower.com).



## DSA Reminders. . .

▶ **DSA Advisory Board Quarterly Meetings\***

March 7, 2002

June 13, 2002

September 12-13, 2002

▶ **DSA Inspector Exam Dates**

March 23, 2002

June 22, 2002

September 21, 2002

December 7, 2002

\* Meeting dates subject to change. Check the DSA Web site at [www.dsa.ca.gov](http://www.dsa.ca.gov) for the latest dates and times.

*The OPSC/DSA Connection to California School Districts*



## Breaking Ground

**State of California**  
Gray Davis, Governor



**State and Consumer Services Agency**



Aileen Adams, Secretary



**Department of General Services**



Barry D. Keene, Director



Dennis Dunne, Chief Deputy Director



**Division of the State Architect**



Stephan Castellanos, FAIA, State Architect



**Office of Public School Construction**



Luisa M. Park, Executive Officer



Karen McGagin, Deputy Executive Officer



**State Allocation Board**

Bruce B. Hancock, Assistant Executive Officer



FEATURE PROJECT:

# Universal Design

“...at any point in our lives, personal self-esteem, identity, and well being are deeply affected by our ability to function in our physical surroundings with a sense of comfort, independence and control.”

**Leslie Kanes Weisman, AIA**

Author, Lecturer, Activist, Professor of Architecture at the New Jersey Institute of Technology  
from a speech presented to the Chicago Public Schools Design Competition, Community Forum

“The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”

In this issue, *Breaking Ground* deviates from the normal practice of highlighting a single distinctive educational facility to focus on several design solutions which effectively illustrate the concepts and practical implementation of Universal Design. *Breaking Ground* is indebted to the architectural firm of Sally Swanson Associates, for providing the information and photographs for this issue’s Universal Design featured projects.

**SALLY SWANSON ASSOCIATES**, have twenty-five years experience in providing Universal Design for Learning (UDL) solutions within existing institutional and educational environments.

A positive relationship with the Division of the State Architect is an important component of successful UDL implementation, says Sally Swanson, AIA. “DSA has been receptive to our structural solutions and insights when implementing code requirements. Our continued relationship promotes ideas about strategies for UDL applicability.”

When designing for access, the firm explores means by which all persons (not only the disabled) move and interface with their surroundings. The firm’s goal is to enhance the built environment in addition to facilitating overall well-being. SSA designs not only respond to current codes, but also embrace the seven principles of Universal Design as developed by the Center for Universal Design at North Carolina State University.

## The Seven Principles of Universal Design

▶ **Equitable Use...** *The design is useful and marketable to people with diverse abilities.*

### Guidelines

- Provide the same means of use for all users: identical whenever possible; equivalent when not.
- Avoid segregating or stigmatizing any users.
- Provisions for privacy, security, and safety should be equally available to all users.
- Make the design appealing to all users.

**Laney Community College**  
Oakland, California  
Campus Wide ADA Upgrades



▲ Equitable Use: Provide the same means of use for all users. Avoid segregating or stigmatizing any users.



◀◀ Equitable Use: Provisions for privacy, security, and safety should be equally available to all users.

Architectural designs and  
photographs provided by:  
**SALLY SWANSON ASSOCIATES**  
490 POST STREET, #830  
SAN FRANCISCO, CALIFORNIA 94102

▶ **Flexibility in Use...** *The design accommodates a wide range of individual preferences and abilities.*

### Guidelines

- Provide choice in methods of use.
- Accommodate right- or left-handed access and use.
- Facilitate the user's accuracy and precision.
- Provide adaptability to the user's pace.

**Yerba Buena High School**  
San Jose, California



▲ Flexibility in Use: Provide adaptability.



▲ Flexibility in Use: Provide choice in methods of use.

- ▶ **Simple and Intuitive...** *Use of the design is easy to understand regardless of the user's experience, knowledge, language skills, or current concentration level.*

**Guidelines**

- Eliminate unnecessary complexity.
- Be consistent with user expectations and intuition.
- Accommodate a wide range of literacy and language skills.
- Arrange information consistent with its importance.
- Provide effective prompting and feedback during and after task completion.

- ▶ **Perceptible Information...** *The design effectively communicates necessary information to the user, regardless of ambient conditions or the user's sensory abilities.*

**Guidelines**

- Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- Provide adequate contrast between essential information and its surroundings.
- Maximize "legibility" of essential information.
- Differentiate elements in ways that can be easily perceived.
- Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

- ▶ **Size and Space for Approach and Use...** *Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.*

**Guidelines**

- Provide a clear line of sight to important elements for any seated or standing user.
- Make reach to all components comfortable for any seated or standing user.
- Accommodate variations in hand and grip size.
- Provide adequate space for the use of assistive devices or personal assistance.

- ▶ **Tolerance for Errors...** *The design minimizes hazards and the adverse consequences of accidental or unintended action.*

**Guidelines**

- Arrange elements to minimize hazards and errors. Hazardous elements should be eliminated, isolated, or shielded. Provide warnings of hazards and errors.
- Provide fail-safe features.
- Discourage unintentional actions in tasks that require vigilance.

- ▶ **Low Physical Effort...** *The design can be used efficiently and comfortably and with a minimum of fatigue.*

**Guidelines**

- Allow a user to maintain a neutral body position.
- Use reasonable operating forces.
- Minimize repetitive actions.
- Minimize sustained physical effort.

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▲ **Size and Space for Approach and Use:** Provide a clear line of sight to important elements for any seated or standing user.



◀ **Size and Space for Approach and Use:** Make reach to all components comfortable for any seated or standing user.

**Size and Space for Approach and Use:** Provide adequate space for the use of assistive devices or personal assistance. ▶



