

# M&D Update

Volume 1, Issue 2, Spring 2002



Murray & Downs - Main & Sacramento Streets

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## What happened to my small renovation project?

Michael F. Ryan, AIA  
Principal  
Denis J. Stroup

At first glance, the scope of the project seems simple; for example, you may be removing an outdated piece of imaging

equipment and fitting up the space for a new, more modern one. But as all administrators and facility managers know, besides the usual budgeting and construction schedules, there are a number of other important items to consider when establishing the scope and impact of a renovation project.

In establishing the true scope of a renovation, attention should be given to not only the immediate area in question but also how the work will affect surrounding areas. Will adjacent functions be disrupted by construction activities? Will paths of egress be reduced or require temporary re-routing? Will the project produce excessive dust, noise,

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*“ How will  
construction  
personnel &  
materials access  
the site ... ”*

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vibrations or odors that must be mitigated? What separations between construction and non-construction areas are required and how will these be maintained? How will construction personnel & materials access the site and how will construction debris be removed? If, as is frequently the case, the space being renovated must stay in continuous operation, will phasing of construction or temporary relocation of the facilities be required? Depending upon the sensitivity of the area under construction, the mitigation of these items can significantly impact the project.

Quite often, even a minor renovation will require modification of or addition to mechanical, electrical, or plumbing service. As the source of these facilities is frequently located outside the area of construction, upgrading or bringing these services to the project location can require careful planning and can affect cost and scheduling.

Each renovation is unique and presents its own challenges. However, discussing issues like these described here will help define the true scope of the project and shed light on potential costs and scheduling implications, reducing surprises for all during construction. □

## Senate Bill 575 Fire Systems

Kirk S. Brainerd - Senior Project Architect

Senate Bill 575, commencing with all fully or partially state funded K-12 school projects submitted to DSA on or after July 1st, 2002 requires the following:

- All new construction projects shall include an automated fire detection, alarm, and **sprinkler system** in every building.

- All modernization projects and new building additions to an existing campus that cost more than \$200,000.00 shall include an automated fire detection and alarm system, but a sprinkler system is not required unless by other provisions of the code for projects on existing campuses.
- If placed on temporary foundations, portable classrooms are exempt from these provisions for a period of three years. Under certain circumstances, this exemption period may be extended an additional three years.
- Any project that is completely funded with local funds without assistance from the state is exempt from the provisions of SB 575.

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## Tidbits A Communication Tool

Roger M. Wilcox, AIA - Managing Architect

A Tidbit is defined as a tasty morsel. This is a perfect definition for one of the quality review processes we have instituted at Murray & Downs within our ongoing, in-house education program.

As architects and design professionals, communication is our product. We are retained to communicate program and design ideas, which have the end result of becoming physical form in buildings and their surrounds. This

communication process begins with identifying our clients' needs and converting these needs into conceptual designs. During our seventeen years in business, Murray & Downs has developed solid, successful communication skills with our clients, which allow us to provide sensible, well designed facilities.

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*“...design and construction lessons cross the boundaries of project and client...”*

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Office communication challenges every organization. At Murray & Downs, we constantly remind ourselves of its importance by maintaining

» **Tidbits, page 4**

## Principal's Perspective Living Within State Funded Construction Budgets

David P. Irons - Principal

School funding provided under SB50, with the minimum school district match, is as much as 15% less than was provided under the previous state funding program, depending on the grade level of the school being considered. The funding changes being considered in connection with the up-coming public school bond legislation will not significantly change new school construction budgets.

In response to the conservative construction budget guidelines established by the state, Murray & Downs has developed an optional Value-Engineered Systems Approach to school building design and construction to complement our traditional design services.

Our systems approach is essentially modular construction that is completely site-built. Our goal in developing this system was to offer districts a means to obtain the same level of performance and functionality that we provided in the buildings designed under the Leroy Green Lease Purchase Act, without exceeding the funding constraints of the current program. We were confident that we could accomplish this by greatly simplifying the design and detailing of the buildings while utilizing the same quality of materials and systems used in previous designs.

This Value-Engineered Systems Approach has been adopted by a number of districts for the classroom portion of several projects and will soon be utilized for an entire elementary school. Two of these projects are currently under construction. Based on

» **Perspective, page 3**



*El Dorado Irrigation District Customer Services Bldg.*

### Tidbit From the Field...

“Just a reminder from the field. Ceiling access doors are necessary but problematic items in a project. Keep in mind that when you design a nice hard lid ceiling in an area that conceals items such as heat detectors, HVAC valves, and damper controls, they will need to be accessible. Our spec calls for each sub to provide access doors to accessible parts of their work. This can result in a hodgepodge of small to large doors scattered about the nicely organized ceiling you drew on the RCP. It would be worth discussing these items with your consultants during design so you don't get a surprise when you go to the opening ceremonies. Also, remember when locating access doors what they can look like after 6 months when covered with greasy fingerprints, etc.”

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## Did you know ...?

- 1) When selecting the perfect carpet style and color, be sure to throw the samples down on the floor and take a look at them from the same view that you will see once installed, you may be surprised at how they can change from table level to floor level!
- 2) When selecting color schemes for a particular interior, consider the use of the space. Warm schemes lend themselves to a more interactive environment and are better suited to group interaction areas. Cool schemes, on the other hand, lend themselves to a more individual type of work such as the environment desired in a library.
- 3) AB 16 (Hertzberg), the \$25 billion statewide school bond package, was passed by both the State Assembly and Senate and now awaits approval by Governor Davis to be placed on November's ballot. The proposed bond package authorizes two statewide GO bond elections: one in 2002 for \$13.05 billion, and a subsequent statewide election in 2004 for \$12.3 billion. You can find more information about the bond on the Coalition for Adequate School Housing (CASH) website at: [www.cashnet.org](http://www.cashnet.org) □

## Perspective

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the bid results, the construction cost for these value-engineered classroom buildings is approximately \$115-\$120 per square foot. The buildings have thin brick over stucco exteriors, built-up roofs, vinyl covered tackboard interiors, and the full complement of casework. Construction costs for traditional site-built classroom buildings with similar finishes and casework typically range from \$150 to \$160 per square foot.

The \$120 per square foot cost is comparable to prefabricated modular construction. Many school districts are considering using prefabricated modular construction to keep their portion of the funding to a minimum. One advantage of using our systems approach over prefabricated modular construction is that the district has more control over the final design and material selection. Specific program requirements can be incorporated during the design phases of the project. Another advantage is that an entire school can be competitively bid by one contractor. With prefabricated modular construction, site work and complex buildings such as theaters and multipurpose buildings are often done by a general contractor under a separate contract from that of the modular manufacturer. Dealing with two contractors on one project increases the district's project management work and can lead to conflicts and coordination problems.

We are continuing to refine our Value-Engineered Systems Approach to school construction by incorporating lessons learned during construction and researching alternative materials and assemblies. Looking forward, our goal is to optimize building life cycle costs and to meet school districts' programming needs within the minimum budget established by the state funding mechanism. □

## March Bond Results

62 K-12 districts throughout the state placed G.O. bonds on the March 5th ballot. Of these, 52 districts (84%) were successful for a total of over \$4.1 billion statewide.

14 out of 15 community college districts were successful as well, representing a statewide bond total of over \$2.3 billion. Since a large number of districts will still be relying on assistance from the state for contributing grant amounts on eligible projects, it is now more critical than ever for this November's proposed statewide bond election to be successful. □

## M&D Spring Bid & Construction Schedule

Marshall Hospital Temporary Office Facilities  
Marshall Hospital Parking Lot Renovation  
Marshall Hospital Nuclear Imaging Renovation  
Marshall Hospital Data Processing Renovation  
Marshall Hospital Fire Lid Restoration  
Marshall Hospital G.I. Lab Relocation  
UC Davis CT Scanner Building  
UC Davis Radiological Imaging Renovation  
Oak Meadow Elementary School  
Rescue Middle School  
McCaffrey Middle School  
Yuba City K-5  
Lake Hills Community Covenant Church  
Aquatic Center at Union Mine High School  
New Woodland High School - Buildings  
South Tahoe High School Modernization  
El Dorado Center (LRCCD) Parking Lot  
El Dorado Irrigation Dist. Customer Services Bldg.  
Latrobe Elementary School Re-roof □

## Staff News

### Introducing new staff members:

**Jess Eballar** - Jess comes to us via Seattle, WA, filling the position of Project Coordinator. He is an architect licensed in the states of Washington, Hawaii and Alaska. With over fourteen years experience, his knowledge of construction document production has already proven to be valuable to the firm.

**Jerry McInnes, AIA** - Boomerang! Jerry is a returning staff member after an eleven-year hiatus. During that time, Jerry has been honing his talents with firms in Sacramento, Reno and Angels Camp. He returns to us as a Project Architect with vast experience in both medical and educational facilities; we know we will have no problem keeping him busy! We are very happy to have him back with the firm. □

## Tidbit

### From the Field...

"Remember to check sightlines from student seating (eye level) to wall mounted items such as televisions and projection screens when providing suspended lighting fixtures in classrooms. This becomes more critical when the District is providing the TV bracket for the contractor to install. We should get catalog cuts from the District for the file and design confirmation. There are two types of brackets, one where the TV sits on the shelf and one where the TV hangs below the shelf. This will affect your mounting height/sightline verification."



## SB575

### » Continued from page 1

What does this mean for California School Districts? One of the most significant consequences of SB 575 is the increased cost for construction projects. Current law requires installation of a manual system (i.e. manual pull fire stations at every exit, unless a fire sprinkler system is required by other provisions



William Brooks Elementary School

Photo By: Kathy Kelly

in the code). The majority of our clients have chosen to upgrade these requirements in the past to a fully automatic fire alarm system (i.e. heat and smoke detectors, which notify the fire department in the event of a fire). The increased cost is now the addition of the sprinkler system, which is approximately \$2.50 to \$3.00 per square foot. For

rural districts without municipal water supplies, this cost will be dramatically compounded with the potential addition of water storage tanks and associated plumbing requirements.

The State Allocation Board has until July 2003 to adjust the funding grants available to pay for this increased cost of construction. Until SB575 is challenged and perhaps modified, architects and districts must proceed with designing these systems to obtain DSA approval prior to realizing the outcome of the funding source.

An implementation policy will soon be issued by the Office of the State Fire Marshal, clarifying the requirements of SB575.

For more information, refer to Senate Bill 575 by logging on to <http://osfm.fire.ca.gov> □

projects. While many design solutions implemented during construction do not always get incorporated into the next set of construction drawings due to such issues as overlapping schedules or time constraints, the Tidbit system allows our entire office the opportunity to gain time sensitive information on a daily basis. Because of the opportune nature of the Tidbit system, design and construction lessons cross the boundaries of project and client; while one project team uncovers the lesson in construction, another project team can incorporate appropriate solutions into their projects during design.

Approximately two years ago, the formalized Tidbit system was adopted by the construction administration staff. Since that time, Tidbits have evolved to include all areas of the office. It is not unusual to get a Tidbit from the administrative staff with suggestions on how to make the distribution of our bid documents more efficient, or from a Project Architect relating a crucial detail learned from a specified building systems representative. The Tidbit program at Murray & Downs has prompted a firm-wide recognition of effective communication when delivering our clients' projects. To date we have accumulated nearly 200 tidbits in our database, which are readily accessible to our existing staff and are a big help in acclimating our newer staff members. □



Marshall Center for Primary Care

Photo By: Kathy Kelly

## Tidbits

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an intraoffice e-mail Tidbit system. In essence, this system allows those actually working at the project site to bring back practical lessons to the office. The efficiency and speed of e-mailing these lessons allows everyone in the office timely access to the information from the site. Initially, this was a way to circulate lessons learned during the construction phase of a project to our entire staff, not just a particular team working on the project. Now, these Tidbits strengthen our designs in every phase of our

## In The Next Issue

Cutting the Cost of Construction

Tomorrow's Technology Today

Collaborative Design

More Tidbits



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