

M&D Update

Volume 1, Issue 4, Fall 2002



Rolling Hills MS - Technology Building

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Storm Water Alert! New Regulations May Open Floodgates

Patty Karapinar, Architect

Currently, storm water pollution prevention regulations apply to all construction projects that disturb five acres or more of land. As of March 10, 2003, Phase II storm water regulations will apply to

all construction projects of one or more acres. While the Phase II regulations and policies surrounding them are being finalized, property owners who have current or upcoming construction projects are faced with the uncertainty of what will be required on their construction sites come March '03 and the potential for disruption and delays in construction in order to comply with the new regulations.

Storm water basics:

The national Clean Water Act (CWA) requires states to regulate pollution discharge into the "waters of the state" by enforcing the CWA and the three types of National Pollution Discharge Elimination System (NPDES) permitting requirements. These permitting types are the state's

"...the owner must have practices in place to control the cleanliness of storm water runoff..."

General Construction Activity Storm Water Permit (GCASWP), Municipal Permits, and, for specific projects such as transportation facilities, the state's General Industrial Activity Storm Water Permit (GIASWP).

"Waters of the State" are any waters, such as rivers, seasonal creeks, wetlands, ponds and storm drain outlets. "Pollutants" can be such things as soil, sediment, paints, pesticides, fertilizers, concrete or asphalt compounds, oil, grease or adhesives. In other words, construction materials and by-products must be eliminated or minimized from entering your storm drain outlets or from running off your property.

What are the requirements of the Phase II General Permit for your project? In general, these will include:

Planning Requirements

- A Notice of Intent (NOI) filed by the Owner before start of construction to comply with the General Permit;
- A Storm Water Pollution Prevention Plan (SWPPP);
- A Monitoring and Inspection Program as part of the SWPPP;

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Cutting Construction Costs - Part II Dollars & Sense

Gerry Hughes

As we move closer to the unprecedented \$13.05 billion school facilities bond in November, we're getting glimpses into the possible revisions to the rules and regulations for public school construction and it's looking like the gap between state funding and the "real" cost of school construction will continue. What follows is a continuation of our overview on Cutting Construction Costs. In Part I,

we looked at the costs of construction associated with location and topography, ecology and construction details. In Part II, we look at systematized construction and design re-use, timing and bid climate, and changes in the construction industry.

Am I Repeating Myself?

Imagine that you are a contractor faced with bidding on a new school construction project. If you bid too high, you don't get the job. If you bid too low, you could literally lose your shirt. Imagine that virtually every building of every school project on which you need to bid is different and unique. Might this be a bit unnerving?

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Tidbit

(Internal Office Communications)

Magnetic Scanners

Another heads up that when you are working on a library or other facility with a magnetic scanner at the exit, any metal within a certain distance of the scanner (verify with manufacturer) will cause malfunction of the scanner.

Here is a "caution" issued by one manufacturer: "Absolutely no metal allowed (including metal studs and metal corner beads) within 3 feet of scanner." This caution would also include such things as steel supports in a low wall required by structural as well as full height steel columns. Obviously, if this condition is discovered during construction, the possibilities of relocating columns or the scanner itself may be limited by work already in place or ordered.

Proposition 47 Fast Facts

California's \$13.05 billion school facilities bond will be presented to voters on Tuesday, Nov. 5th. Below is a brief summary.

- The bond requires a simple majority vote
- \$11.4 billion is allocated to K-12
- \$1.65 billion is allocated to the Community College, CSU, & UC Systems
- bond funds generally require matching local funds
- OPSC data indicates the need for 46,000 new classrooms in the next 5 years
- If the bond passes in November, OPSC intends to apportion all projects that were approved (but unfunded) by last Feb. '02 at its Nov./Dec. '02 SAB meeting. All remaining unfunded projects will be addressed in Jan. & Feb. '03



Storm Water Alert!

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- Post-Construction Best Management Practices (BMPs) for controlling storm water discharge.
- The SWPPP is intended to be a "living document" addressing construction erosion and sedimentation control that can be modified depending on changing site conditions.

Monitoring should be performed weekly as well as before, during and after rain events and should include corrective action for specific discharge problems that may occur. Records must be kept of all monitoring and adjustments in the SWPPP. The Regional Water Quality Control Board emphasizes that the owner should coordinate with the regulating agencies and document corrective efforts in order to minimize or eliminate fines if such breaches occur.

Post-Construction BMPs: As of March '03, once the contractor has left the site, the owner must have practices in place to control the cleanliness of storm water runoff entering the storm drain system from their property. What practices should be employed depend on specific site conditions and should become more clear once the Phase II regulations have been finalized.

What Agencies Are in Charge?

All of the following:

- State Water Resources Control Board (SWRCB): A Notice of Intent (NOI) to comply with the GCASWP, a site map and an application fee must be submitted to the SWRCB for the project by the owner.
- Regional Water Quality Control Boards (RWQCB) enforce the regulations.
- Municipalities enforce their local storm water ordinances as well as the state regulations. Municipalities also must consider storm water quality impacts in the CEQA process.

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Did you know ...?

- 1) Michaelangelo's art teacher, Domenico Ghirlandaio said, "If a peasant woman brings you a basket that she wants ornamented, do it as beautifully as you can, for in its modest way it is as important as a fresco on a palace wall."
- 2) The deadline for submission of the "Request for Inspection and Customer Grant Agreement" for the California Energy Commission's "Cool Savings with Cool Roofs" rebate program is November 30, 2002.
- 3) Based on the passage of Prop 47, AB1506 requires an awarding body of public works projects (school districts) to monitor prevailing wage compliance on projects that begin construction on or after April 1, 2003. The Governor approved this bill on September 25, 2002. □

Storm Water Alert!

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Both the RWQCB and municipalities inspect construction sites for compliance with storm water ordinances and permits, and for post-construction BMP implementation.

Who Can Help?

The Owner can assemble a team to address storm water issues that may include a district-hired consultant to develop and monitor the SWPPP. A construction manager can also monitor the contractor and the SWPPP. Your project's civil engineer can design best management practices for the construction phase, and your architect can include the establishment of post-construction BMPs that can be turned over to the Owner for maintenance at the end of construction. As architects, we can work with you to create fluid but biddable documents and strategize how to control change orders in the face of shifting requirements. Other team members might be the Owner's CEQA consultant and attorney.

On the bright side: The Coalition for Adequate School Housing (CASH website: www.cashnet.org) has expressed concern to the SWRCB on what effects the General Permit would have for school projects, and has offered to work with the Board to minimize adverse effects of the General Permit on school construction. □

Staff News

Introducing our new staff member:

Jon Hamilton - Jon joins us as a Senior Project Architect. He has lived in the Placerville area since 1989. Beyond his extensive experience in our firm's project types, educational, healthcare and civic facilities, Jon also brings to us his experience in master planning, site planning and space planning. We know Jon will be yet another valuable asset to our Murray & Downs team.

Wedding Bells!

Eric Peterson - Eric has been with M&D for four years. He currently assists our project architects in the production of project drawings. Eric was recently married to Aimee and we wish them both the very best!

Kathy Witherow - Yes, formerly Kathy Froehlich. She and Greg were married in October. So, when you see a different last name with "Kathy" you will know it is the same person that has been here for the past six years!

Congratulations to them both! □

M&D Fall Construction Update

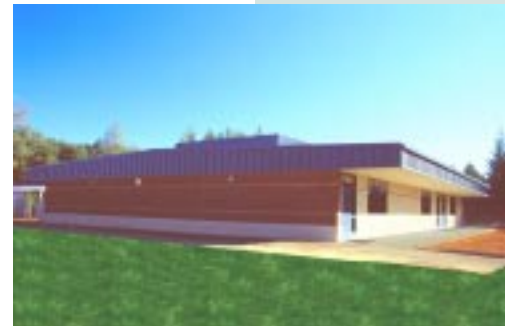
Oak Meadow Elementary School

Buckeye USD's fifth elementary school serving kindergarten through fifth grade is well under construction with completion scheduled for Spring '03. A re-use of plans from the district's nearby Silva Valley ES, the Oak Meadow ES design allowed BUSD to accelerate the design schedule and deliver a new school to its community in record time.



Shenandoah HS - Charter School

El Dorado Union High School District's newest charter school, Shenandoah HS, opened its doors this past August to around thirty students. A combination of permanent and relocatable classrooms, the school's emphasis is on individual learning programs and internships with local businesses in the community. SHS is one of sixteen model high schools to be funded throughout the nation by the Bill and Melinda Gates Foundation.



UC Davis - CT Scanner Building

This new 2,025 SF medical facility adjoining the existing UC Davis Medical Center main hospital houses two General Electric CT Light Speed Plus scanners. CT Scanners are used by Internists to help diagnose their patient's possible internal conditions or abnormalities. Extensive coordination was required in the planning of this project to interface with the hospital's existing structure and its continuous hours of operation. □



Tidbit

(Internal Office Communications)

Patch & Paint

I continually see newly painted rooms with holes in the wall, nails and screws used to hang pictures, etc. painted over, wood beams with holes and notches, corners of walls with notches, etc. Our drawings generally call for paint, both in plan notes and in finish schedules. It seems that by simply indicating “patch and paint” we could eliminate a lot of these punch list items. That way when the painting sub is preparing a bid, he/she can plug in a number for the patching work.

Modernization/remodel projects have a lot of patching required, when we don't specifically address it on bid projects, it simply doesn't get done. Please check your schedules and specs to see how you addressed this issue. This is another area where photographic documentation of problem areas during initial site visits can be a helpful reminder.

Cutting Construction Cost

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Now imagine bidding on a project where most or all of the buildings have been previously constructed on other projects. You know about what they cost because it is a matter of public record. You probably know (or can find out) if the project came in under budget and if there were any significant issues during construction. The architect has incorporated clarifications and lessons learned through the initial construction of the project into a revised and “tighter” set of construction documents on which to base your bid. Imagine also that several of the buildings were designed with a systematic approach - a consistent pattern of details and building assemblies used over and over again to create a library or “systems approach” to construction. How might you feel about bidding this project now?

Clearly, systematized construction and design re-use are not appropriate for every building at every school. Changes in building codes, site conditions and program requirements will often warrant a “from the ground-up” design. However, systems designs and re-use of existing proven designs can give school districts additional options to combat rising construction costs.

Timing is Everything...

Imagine being able to add 5%, 10% or even more to your construction budget. One way to accomplish this seemingly magical feat is to carefully consider when your project will go to bid. Why? Because one factor which can have a tremendous impact on the total cost of construction is not in what is being bid, but in who wants to bid it. Real-world experience has repeatedly demonstrated that the number of qualified (and interested) bidders on a project can affect the final cost of a project by up to 30%!

Obviously there are a variety of factors that will affect the number of interested bidders on a project, including: the size/location of the project, the current conditions in the construction industry, the number of other projects currently being bid in the area and the availability of both general contractors and sub-contractors who have not yet “filled their books” for the coming construction season.

But of all these factors, there is one that virtually every school district has some degree of control over - bid timing. Choosing how and when to put a project out to bid can be one of the most important budgetary decisions that a school district can make. It's important for the architect and district to have up-to-date knowledge of the current bid climate so that the timing of the bid is both well-founded and appropriate to the district's specific needs and circumstances.

Thinking Outside the Box...

And finally, we must all be aware that building codes, funding regulations, construction techniques and building materials are continuously changing. Roofing materials, framing techniques, approaches to HVAC, lighting technologies and window components have all undergone radical changes in recent years. While it would never be prudent to gamble the success of any project with unproven products or materials, it is the responsibility of every architect and to be up-to-date on the latest innovations, technologies and industry standards, as well as any alternative materials or construction techniques that may serve the specific needs of their clients. At Murray & Downs, we find that collaboration at all levels as well as a commitment to team-building and staff development make it possible to continue to build on our experience and existing knowledge base, to encourage thinking outside the box and, most important, to make that knowledge and thinking available to our clients. □



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