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Design Development Phase

By Jim McClure, Retired Captain SJFD

Episode 7 in our exciting journey; at this point I have more episodes than Star Wars. We move forward to the second phase of the firehouse design process; the Design Development phase.

Again, from the American Institute of Architects.

DESIGN DEVELOPMENT PHASE SERVICES

Design development (DD) services use the initial design documents from the schematic phase and take them one step further. This phase lays out mechanical, electrical, plumbing, structural, and architectural details. Typically referred to as DD, this phase results in drawings that often specify design elements such as material types and location of windows and doors. The level of detail provided in the DD phase is determined by the owner's request and the project requirements. The DD phase often ends with a formal presentation to, and approval by, the owner. Deliverables: Design development often produces floor plans, sections, and elevations with full dimensions. These drawings typically include door and window details and outline material specifications.

Read that paragraph again. The most important sentence is *The level of detail provided in the DD phase is determined by the owner's request and the project requirements.*

I have been talking about the **Program Statement** since I started this series a year and a half ago. If you don't have it at this point, you are in deep trouble.

The details that need to be filled in by the architect and his/her staff need to be decided and in print. The other reason is having something to compare the DD drawings too. We did

not have a comprehensive program on my first project. I was totally dependent on other's opinions. Unfortunately, their usual method was to cut and paste from their previous jobs.

The mechanical, electrical, plumbing and structural engineers now show their effect on the design. If you notice that some of the walls are thicker than others it is because of one of them. The structural engineer determined that certain walls would have more concrete or more steel to carry the load. The mechanical engineer needed space in the walls to carry pipes and duct work. The building may appear taller than you thought it would. This may be the mechanical engineer needing more space between the floors.

The janitors closet is smaller because the Electrical Room needed to be bigger. You get the picture.

Architectural Pages

The first job here is to see if the size, shape and location of all the rooms are what you expected. You will use your program statement and room specifications in a comparison to the DD drawings. Are the doorways, windows, and layout correct? Has the shape of the rooms changed?

Why did the exercise room appear next to the office? It was supposed to be on the other side of the building. How come it does not look like the SD drawings anymore?

If the room shape has changed, can you still fit the specified furniture or equipment in it? The shelving we specified for our storage spaces was an unusual length. It was 6'5". Not a measurement that easily translates in a world that thinks in 12 or 16 inch increments. More than once the DD's would show up and the storage rooms were basically whatever space was left over. There would be room for one shelf set but no more. The square footage of the room would appear generous. Except the width of the room was not wide enough for a second set of shelves in parallel or at a right angle to the first. Nor was it long enough to have two units end to end. You wind up paying for square footage that is not efficient. The internal dimensions of a room are the critical numbers to verify.

Your Program Statement should define rooms by the interior length and width dimensions, not just square footage.

Structural Pages

The structural pages give more permanent definition to the building. Once the bearing walls and support columns are placed on the plans it will be more difficult to change room shapes and sizes.

Continued on page 5

FDAC EBA Health Insurance Pool



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Since 1972, the Fire Districts Association of California (FDAC) has provided California fire districts with programs, services and classes to help the districts they serve and enable their personnel and representatives to become more successful and effective. In 2005, FDAC facilitated the creation of the FDAC Employment Benefits Authority (FDAC EBA) in order to offer fire district staff and retirees a low-cost alternative for quality medical, dental, vision and life insurance. Today, more than 45 FDAC member fire districts are taking advantage of these benefits:

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Trust

- FDAC EBA is the only pool that was developed by firefighters for firefighters.

For more information about the FDAC EBA benefits package, contact Gallagher Benefit Services, Inc. at 800.557.5593.



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President's Message

By Richard Pearce, Fire Chief, Tiburon Fire Protection District



The Certificate of Achievement Program held in June received an excellent reception from the participants. This updated and revised program includes four (4) modules; presented over sixteen (16) hours. The valuable content includes; Legal Mandates and Regulations, Board Organization, Planning, Trends, Issues and Resources. Our goal is to present the Certificate of Achievement Program at least twice a year. If you're interested in bringing this important program to your area, please contact the FDAC office to assist in coordinating your event.

The latest version of the California Fire Assistance Agreement (CFAA) has generated many discussion points for us to address. Substantial changes have been proposed that will challenge many agencies willingness and ability to participate in this important agreement. There will be more to follow on this topic.

FDAC has increased collaboration with our fire service partners, Cal Chiefs, CPF and CSFA in promoting a wide range of issues of interest to FDAC and its member agencies. Key among these is the legislative process, over the past year we have testified, supported, opposed and followed a large number bills; many in concert with our fire service partners. I am confident these relationships will build and pay large dividends as we begin to evaluate the next generation of legislative advocacy for FDAC. Perhaps the most effective tool in our legislative efforts revolves around our members and their relationships with their representative in the Assembly and Senate. I encourage each of you to identify your representatives, introduce yourself, and make frequent contact. This will assist tremendously in our legislative endeavors.

The FDAC board has been working diligently implementing the four (4) key initiatives of the strategic plan: Marketing / Membership, Education, Legislative and Administration. Each area has several goals and objectives to be accomplished. Sub-committees are being developed to work through these objectives. As mentioned previously, I recognize we have a tremendous depth and breadth of knowledge, skills and abilities within our membership. I would like to reach out for your support and participation on one of these important initiatives, whether you have interest or expertise, your input will be helpful.

I appreciate the Board and professional staff of FDAC for their continued support, commitment and involvement on the many issues before us. FDAC will continue to champion the initiatives outlined in the strategic plan, while addressing the never ending challenges and ever changing issues of modern day fire services. ■

By Catherine Smith, Executive Director



With the coming of fall, comes the start of the initial planning for the FDAC annual conference. Following high marks from attendees on the location, FDAC is returning to the Embassy Suites Napa Valley on April 8-10, 2015. The FDAC Conference Committee is looking for topics, speakers or other input you would like to share for consideration in the program. We want your FDAC conference experience to be the best yet so we encourage your input. Please send any thoughts or recommendations to yelena@fdac.org.

FDAC is also starting to plan for the 2015 education calendar. We have tentatively set a Certificate of Achievement (COA) series to be held in early 2015 in the San Diego area. If your local fire districts are interested in hosting a series in your area, please let us know. The COA instructors are willing and able to travel to various locations in 2015 if attendance is secured by the local fire districts. All of the COA modules were recently updated to ensure current information and trends are discussed. FDAC is excited about the new modules and our hope is to be able to engage as many FDAC members as possible in the new COA series. You can contact me at casmith@fdac.org if interested in coordinating a COA series.

FDAC members will also be getting a notification of some proposed FDAC bylaws changes. Membership changes are in response to the FDAC Board agreeing to amend our bylaws to assist FDAC EBA expand their offerings to all public entities that provide fire protection and abatement services. If you haven't received a quote from the FDAC EBA for health insurance and auxiliary coverages, I encourage you to contact Gallagher Benefit Services at (800) 557-5593. I know bylaws are less than stirring to read, but we do need a strong approval response to implement the changes. Thanks in advance for casting your electronic vote.

Speaking of risk sharing pools, I always urge FDAC members to look at FASIS (workers' compensation) and FAIRA (property & liability) coverages for your district. Contact information is included in this newsletter. Keeping our fire service family strong is vital moving forward in today's changing world. FDAC, FAIRA, FASIS and the FDAC EBA are all committed to providing the best programs to our members and the highest quality of customer service.

FDAC is preparing for the next legislative session starting in January 2015. There may be some changes in our advocacy approach so stay tuned. The FDAC Board is steadfast in their vow to be the strongest voice on behalf of fire districts in Sacramento. ■

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Design Development Phase

continued from page 1

What will help you compare the floor plans on the architectural pages with the structural pages are the Grid lines. I wrote about them last summer, volume 28 #1. The grid lines you see on page A2.1 will be in the same location on page S2.1. That thick wall on line 2 on the A page will center on the foundation under that that wall on the S page.

By the way, those grid lines show up as stakes in the dirt when construction begins. A civil engineer lays out all the grid lines. The layout of the entire building is dependent on those stakes being in the right place. I know it is a matter of science and math but it has always been magic to me. If the surveyor is off the whole building is off if it is not corrected.

The structural pages may be the hardest to understand.

Plumbing Pages

The plumbing pages may be the easiest to review. First, look for where the underground pipes go. They shouldn't be under the path of travel of the rigs if it can be helped. If they have to be dug up, you don't want the work to impact the rigs. Secondly, the exception to this rule is to ensure there is a sewer cleanout somewhere remote and out of the way in the rear yard. This cleanout is for the day 20 to 30 years in the future when the plumbing system in the building needs work. You can bring in a bathroom modular with showers, toilets and sinks. The cleanout gives you a place for the waste. With a hose bib nearby the building can stay in service. Trust me, this works. Right now I am imagining the firefighters who work in a very tight urban location. They are thinking, "We don't even have enough room to park, let alone bring in a giant porta potty!" Sorry folks.

Review the fixture schedule to make sure the fixtures listed are the ones you spec'd. If they are not and you live in an 'or equal' environment, make sure they are equal. You spec'd the Binford 2000 faucet for a reason.

If you use hot water heat, the boilers will be listed here, not in the Mechanical pages. Again make sure the system listed works as advertised. I had such bad relationship with one architect; I called the mechanical engineer who spec'd the system to make sure the system would work.

Electrical Pages

Hopefully, the electrical room is another room on the exterior of the building. This makes the servicing electricians happy. There are other reasons of course. Think of the last fire you rolled up on. Isn't somebody assigned "Utilities"? Isn't it better to have all that stuff on the outside of the building? Another reason is firefighters tend to use every space in the building. I know our electricians were never happy with the space; something about "keep clear for 3 feet." The fact is we used the electrical rooms as closets.

Similarly to the plumbing issues, try to keep conduit out from under the path of travel. This has an exception also. We deliberately buried two 4" empty conduits under the front and back aprons and driveways. This was right next to the sidewalk. The conduit ended in Christie boxes at both ends. Their purpose is for the day some utility company comes down the street and needs to lay new line. They can use the boxes and conduit without tearing up the street and impacting the response time.

Review the schedule pages for compliance with the spec's. There may be pages showing the sub-panels and what areas they feed. The other issue with sub-panels is their location. I mentioned in an earlier edition how they can show up in storage rooms you were hoping to fill with shelving. I would rather have them in a public hallway than take up valuable storage rooms.

For those of you keeping score, you are probably wondering where the Mechanical pages are. Due to space limitations and the amount of info to share, the Mechanical Pages will be the sole topic next issue.

Questions/Comments? Operators are standing by.

jim@mcclure904.net

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FASIS

Your Workers' Compensation Solution

The Fire Districts Association of California – Fire Association Self-Insurance System (FASIS) is a governmental joint powers authority that has been serving the workers' compensation needs for Fire Districts since 1984. FASIS was established for the purpose of self-insuring its workers' compensation coverage and establishing a cost-effective and comprehensive workers' compensation program.

FASIS provides a long-term alternative to the roller coaster ride inherent to the California commercial workers' compensation insurance market.

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For more information contact:

FASIS

Bickmore

1750 Creekside Drive, Suite 200,

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Telephone – 800.541.4591 / FAX – 916.244.1198

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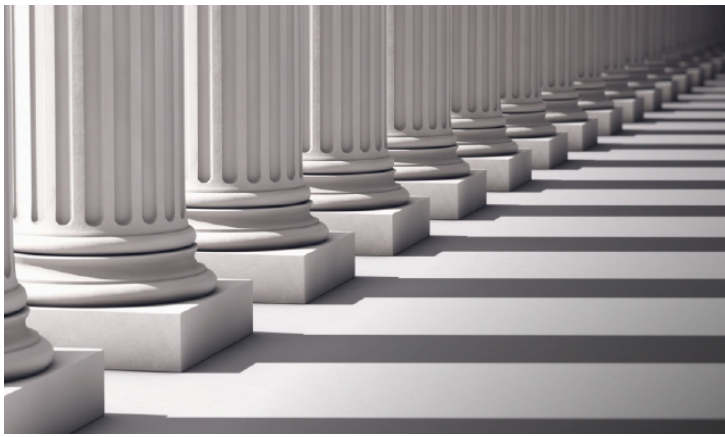


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Legislative Report

By Ralph Heim, Legislative Advocate

Hundreds of Bills Await Governor's Action

The 2013-14 Legislative Session came to a close in the early morning hours of August 30, one day ahead of the constitutional adjournment date of August 31st. In the final days of the Session, the Legislature passed hundreds of bills and Governor Brown has until September 30 to sign or veto.

Presented below are summaries of a number of the key bills FDAC engaged in this year:

***Assembly Bill 2493(Bloom)Redevelopment:** FDAC joined an oppose coalition consisting of the California Professional Firefighters, California Special Districts Association, California State Association of Counties, and a number of individual counties opposing AB 2493, which would allow up to 39 successor agencies of dissolved RDAs to spend up to \$750 million in bond proceeds on projects that were not under contract before the June 28, 2011, RDA dissolution. These are property tax increment tax revenues that are scheduled to be returned to local agencies, including fire protection districts. **Status: AB 2493 passed to the Governor and FDAC will be joining the above-cited coalition in submitting a veto request letter to Governor Brown.**

***Assembly Bill 2577(Cooley/Pan):** Jointly authored by Assembly Members Cooley and Pan, AB2577 is perhaps the most significant revenue measure in decades for the Fire Service, specifically those agencies providing ground emergency medical transport. If signed by Governor Brown, AB 2577 would build on legislation signed into law in 2011(Assembly Bill 678), which has resulted in over \$100 million of federal matching funds being received by local transporting agencies.

By including Medi-Cal Managed Care, AB 2577 is estimated to return an estimated \$500 million through the federal matching grants. **Status: FDAC joined with CPF, CSFA, the League of California Cities, California Metro Chiefs, and the California Fire Chiefs Association as signatories on a letter to Governor Brown urging him to sign Assembly Bill 2577.**

Oil by Rail

Given the significant increase in shipments of hazardous materials and crude oil by rail through various regions of California, numerous bills were introduced this year to impose a fee on railroads that ship these materials, the revenue to be used by the Office of Emergency Services for spill training and for local first responders for training and the purchase of specialize equipment.

While the Brown Administration decided not to proceed with the fee legislation until next year, the Legislature did amend a state budget trailer bill, **Assembly Bill 1476**, that provides a loan of \$10 million to OES to commence the development of an "oil by rail" program, anticipating passage of the fee next year and providing a permanent revenue source for the program. **Status: FDAC joined Cal Chiefs and CPF in supporting AB 1476 that is on the Governor's desk and since it is an Administration sponsored bill, Governor Brown will sign the measure.**

***Assembly Bill 380(Dickinson):** Also related to the "oil by rail" issue, AB 380 by Assembly Member Dickinson would require railroad carrying hazardous materials, including crude oil through California, to provide specific route, volume and type of cargo information to OES. In turn, when OES determines that information received from a railroad is of high interest to one or more local agencies, they will provide that(those)local agencies with said information. AB 380 also contains confidentiality language adopted by the federal government to ensure the information is not made available to the general public. **Status: FDAC supports AB 380, which is pending on the Governor's desk.**

Status of Other Key FDAC Legislation

***Assembly Bill 1486(Committee on Budget)Fireworks Tax on Distribution:** FDAC and the whole of the Fire Service has been working with the State Fire Marshal and other stakeholders toward resolving the growing issue of disposal of illegal fireworks. Assembly Bill 1486 was sponsored by the Brown Administration and proposed a 10-cent per pound tax on the sale and distribution of safe and sane fireworks, allowing the State Fire Marshal to increase the tax to 20-cents, under specific conditions.

Day before the Session's end, the Administration decided not to proceed with AB 1486, but is committed to working toward a long-term solution to the disposal issue. **FDAC supported Assembly Bill 1486.**

***Assembly Bill 2040(Dahle)Fire Prevention fees/State Responsibility Area:** While not eliminating the SRA fee, AB 2040 amends the SRA fee statute, changing certain definitions, such as deleting the definition of "structure" for the purposes of the fee, instead using "habitable structures." AB 2040 makes a number of similar definitional changes. **Status: Assembly Bill 2040 is on the Governor's desk and FDAC supports the measure.**

***Senate Bill 611(Hill)Modified Limousines/Inspection Program and Safety Requirements:** Senate Bill 611 by Senator Hill, responds to a growing number of tragic accidents involving modified limousines and will require each such vehicle to be equipped with 2 readily accessible and fully charged fire extinguishers and requires periodic inspections conducted by the CHP. **Status: FDAC supports Senate Bill 611, which is pending on the Governor's desk.**

For those who just can't wait, the 2015-16 Legislative Session convenes for Organizational Session at noon, December 1st. ■