

Explosives Site Planning — A Team Effort

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One of the goals of our Air Force Explosives Safety Program is to use the process of explosives site planning to ensure the safety of our personnel, the public and Air Force assets and facilities. Why? Because failure to do so could result in the inability of commanders to perform their missions.

Successful explosives site planning requires an active team effort between the weapons safety manager (WSM), wing civil engineering personnel and the user (e.g. munitions, logistics and others). I'd like to take this opportunity to highlight some areas in which civil engineering and safety can work to each other's benefit.

You may have noticed an increase in the number of

explosives site plans being developed by your WSM over the past year. In addition to developing site plans to accommodate new construction and changes in mission requirements, your WSM is also generating new site plans for existing facilities and missions. This is driven by two looming Air Force-wide deadlines. The Department of Defense Explosives Safety Board (DDESB), which approves all violation-free explosives site plans, has mandated that the new requirements for Hazard Class Division 1.2.x

explosives be incorporated into existing site plans by the end of FY03. In addition, the Air Force has agreed to re-site all the old "baseline," or grandfathered, site plans by the end of FY05.

As you can imagine, we're talking about a lot of site plans being developed in the next several years – more than 5,700, in fact. We usually generate only about 400 a year Air Force-wide. In an attempt to help meet the site planning deadlines, we are in the process of implementing an automated explosives site planning software program at the majority of our installations. This new software is called ASHS, the Assessment System for Hazard Surveys.

ASHS uses a digital map and facility database as inputs, performs the quantity-distance calculations required based on the map and database information, and

generates an explosives site plan map and an AF Form 943 (the site plan data form). These two outputs are the key elements of an explosives site plan.

Alas, as with any software program, the old adage applies – garbage in, garbage out. This is where you come in. As we implement ASHS at your base we need your assistance to ensure the map and database are accurate. In fact, we need to have an accurate map and database even for situations where we're doing site planning the old-fashioned "stubby pencil" way. Implementation of the GeoBase program will certainly help the situation where GeoBase and ASHS implementation are occurring simultaneously.

The safety community recognizes that there has been a revolution of sorts in the way the Air Force contracts for new facility construction. The emphasis these days is on providing contractors with performance measurements versus detailed contractual design requirements; and, there's always an incentive to get the money on contract as early as possible — use it or lose it. Unfortunately, these two imperatives have the potential to cause big problems if your resident WSM is not brought into the contracting process early enough.

A proactive WSM can help you ensure any design requirements necessary for explosives safety (such as lightning protection systems and blast-resistant windows) are incorporated into the initial contract. It's always cheaper to write the contract correctly the first time than to modify it. Another concern with new construction is the placement of the facility to ensure quantity-distance separations requirements are met. These requirements apply not only to explosives storage or operating facilities, but to *any* facility placed inside an existing quantity-distance arc.

AFMAN 91-201, Explosives Safety Standards, allows for a two-stage explosives site planning process for new construction. A "preliminary" site plan can be submitted just to ensure the proposed facility location will meet quantity-distance requirements. The "final" site plan can then be submitted once the design has matured sufficiently to provide the necessary facility drawings to show compliance with explosives safety requirements.

In case you're not aware of the requirements, DDESB approval of the final site plan is required before construction can begin. However, Secretary of the Air Force approval is required for all new construction that violates quantity-distance requirements.

So work with your WSM to start the explosives site planning process early enough to avoid any delays in your construction schedule. Now, here's a footstomper — if you have to make changes to the facility location or design,



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make certain they're coordinated with the WSM.

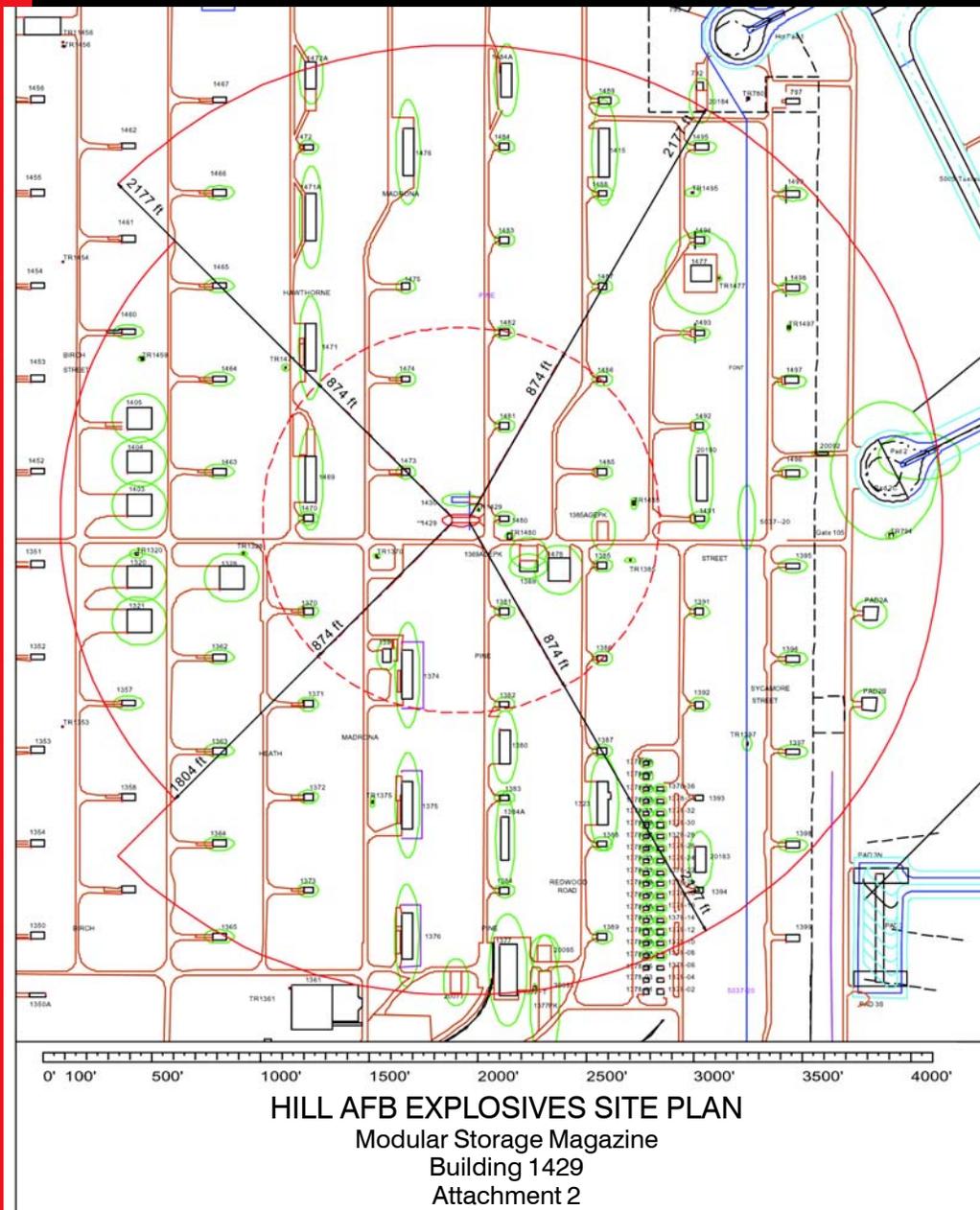
A final word on construction — if possible, for explosives facilities use a facility design that has already been approved by the DDESB. This will not only reduce the amount of paperwork required for the explosives site plan, but will also speed up the site plan review process. There is a list of DDESB-approved designs in their Technical Paper 15, Approved Protective Construction. You can get a copy of this paper through your local WSM.

One word of caution — deviating from the DDESB-approved design will invalidate their approval. The impact may be limited to submitting the necessary drawings and analysis to gain their approval, but it might also result in an inability to apply reduced quantity-distance criteria approved for the original design.

Again, explosives site planning, and the overall explosives safety program, is a team effort. Working together will ensure a smooth

explosives site planning process, save money on construction contracts and, most importantly, ensure our commanders have the people and assets there when they need them to accomplish the mission.

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The explosives site plan map is used to graphically show relationships between the facility being sited and surrounding exposures. (Courtesy AFSC)