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### **Corporate Vs FBO Hangars: A Tale of Two Price Tags**

- Corporate flight departments tend to spend 30% to 50% more than fixed base operations to build what is fundamentally the same hangar facility.
- The common thread in analyzing corporate facility costs is that corporations generally employ an architect to design the facility, while FBOs will engage a contractor for a design/build approach to the job.
- Site preparation is the biggest variable in any project.
- Building codes are generally non-specific regarding hangars, and the standards for items such as the required fire suppression systems are often a matter of local interpretation.
- FBOs which may be a part of a chain can benefit greatly by the prior experience that may have been garnered by building other similar hangars in different locations.
- Despite the high costs that corporations incur in the construction of their hangars, if the airport allows them to have a fuel farm and realize its financial benefits, construction costs (and other real estate related costs) are eventually offset by the fuel savings.

Pre-engineered steel hangars are ubiquitous structures, and benefit from the simple form and function they perform in the airport environment. My analysis of a number of larger open bay facilities reveals that corporations tend to spend between 30% to 50% more than FBOs when a hangar is constructed on an airport. The reasons for this vary, but have much to do with the "cost center" characteristic of the corporate aviation department as opposed to the need for an FBO to minimize overhead and expenses in order to make a profit.

Almost anyone who has built a hangar on a public airport with an underlying ground lease will tell you that the actual construction of the hangar is the easy part of the process. Many corporations and fixed base operations have tales of an approval processes and lease negotiations can go on for months or even years. Once the underlying lease is secured, building the hangar becomes a matter of adopting a particular approach to the construction, and following through. Most heads of corporate flight departments state that the thing they would do over again if they had the chance would be not to hire an architect. Because pre-engineered steel buildings are made by a variety of manufacturers, dealers in various locations are now equipped with all of the engineering capacity to produce a design/build structure which will fulfill virtually all of the requirements required by any corporate flight department.



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Because corporations are structured environments, there is an inherent tendency to commission an architect to reinvent the wheel. The design process is then extended, and adds unnecessary cost to the completed project.

FBOs have a greater degree of familiarity with on-airport structures, and are less likely to automatically turn a project over to an architect. As a result, they benefit from the attractive savings which can be produced by allowing the contractor to design the structure around the particular capabilities of the building system he utilizes.

For both corporate and FBO hangars, site preparation is the most pervasively variable component of any large hangar project. If a parcel of unimproved land is level, served with all utilities, and is adjacent to vehicular access roads, then the costs incurred with its development are nominal. The installation of utilities, along with the topographic configuration of an airside site can add 10% to 30% to a project's cost depending on location and the extent of work required.

In addition to the particular characteristics which apply to the site as a whole, the specific capabilities of the apron and aircraft maneuvering area can also have an effect on cost. Many airports are quite specific regarding the technical specifications of the apron area which they allow to be built on a property. Depending on the airport's policy, an FBO or a corporation may be required to install a heavy duty concrete apron area with a prescribed thickness and load bearing capacity. This may represent an over-improvement with relation to the particular weight and size aircraft actually to be operated on the apron, but still is a conditional requirement when building on the airport.

A basic feature of a number of building codes utilized in the United States is that regulations which are pertinent to aircraft hangars are often a bastardized version of the rules which apply to similar structures such as public garages for cars. The code can leave a number of gray areas. The most critical cost area relates to fire suppression. Large hangars in excess of 12,000 to 15,000 square feet are often required to have both water and chemical type fire suppression systems. The basic cost of a high deluge water and foam system adds approximately \$10 per square foot to a hangar's budget. Oftentimes, the hangar's location on the airport and the type of activities which take place within it can convince local officials to grant variances in the code based on their perception of the potential for a hazardous fire occurring within the structure. When FBO versus corporate hangar costs are analyzed one of the most important reasons why FBOs do it cheaper is that there seems to be a greater familiarity with the hangar construction process. This sometimes results from fixed base operations being part of a larger chain, and the availability of expertise regarding hangars and their construction within the FBO's organization.



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In addition to the greater body of general knowledge, FBOs have a strong motivation to build hangars as cheaply as possible. Every dollar spent unnecessarily adds a burden to that particular location and makes it harder to make a profit.

Despite the fact that corporations spend more money on their hangar facilities than FBOs do, the factor which tends to make the increased hangar costs palatable is that large corporate hangars are generally permitted to install and utilize their own fuel farm. Multi aircraft turbine powered corporate aviation fleets amortize the cost of their fuel farm relatively quickly. The average period of payback lasts from two to four years, depending on the number of hours flown. After the fuel farm has been paid off, the benefits which accrue from the fuel savings available to the corporation are strictly applicable to what ever real estate cost the entity chooses to apply to its facility. The right to use and enjoy the benefits of a fuel farm then becomes a factor in the value of a facility. A corporation which owned a hangar but did not have a fuel farm would be less attractive to the corporate marketplace than a facility which included an underlying ground lease which permitted a fuel farm.