TSA's VENTURE INTO REAL ESTATE

by ERIC D. CRAIK

It is difficult to lay one's finger on the precise motive that generated the unique set of sailplane shelters as illustrated by the photos accompanying this article.

The original hangaring facilities for TSA at Grand Prairie were probably no worse than those at many other glider clubs, but there was a general irritation in the Texas club directed against the usual hangar rash, inaccessibility of one's particular sailplane, and coping with a set of hangar doors that were positively dangerous to open and close. Another drawback of the former set-up was the tedious, not to say ingenious, task of jostling eight or nine sailplanes into a floor space that apparently wouldn't hold six ships! This chore was accomplished only by the "weak minds and strong backs."

The solution to resolving and eliminating these problems was simple—build our own hangar. At least, this was the oft uttered panacea, but no one had seriously considered the economic implications of such a scheme to determine whether this obvious remedy was feasible financially, nor at the same time designed such a building that would delete all the evils of the existing facilities.

Nothing active was undertaken until a bunch of TSAers accidently got together in Phil Easley's work shop one Saturday afternoon. The subject of hangars was mentioned during the session, and everyone grabbed bits of plywood and started sketching three views. It soon became obvious that although the structures would have to be spartan, the design part of this project would pose no problem at all. E. Kurzawa, among those present, had done some conventional T-hangar designing and propounded several ingenious ideas. Gordon Graff, Jock Forbes, Pat Sherman, Jock Powell. Phil and the author, all contributed something to this discussion, and eventually resolved this problem into three factors: suitable location, economic feasibility, and type of building.

The next stage was to put the whole matter to Jon Carsey. He had for some time independently been giving serious thought to such a step, and, among other valuable suggestions, proposed to locate the hangar at the south edge of the parking ramp, using the existing concrete as a floor for the shed part of the shelter. By removing this major expense, it made the whole project seem much more practicable for the limited funds at the club's disposal.

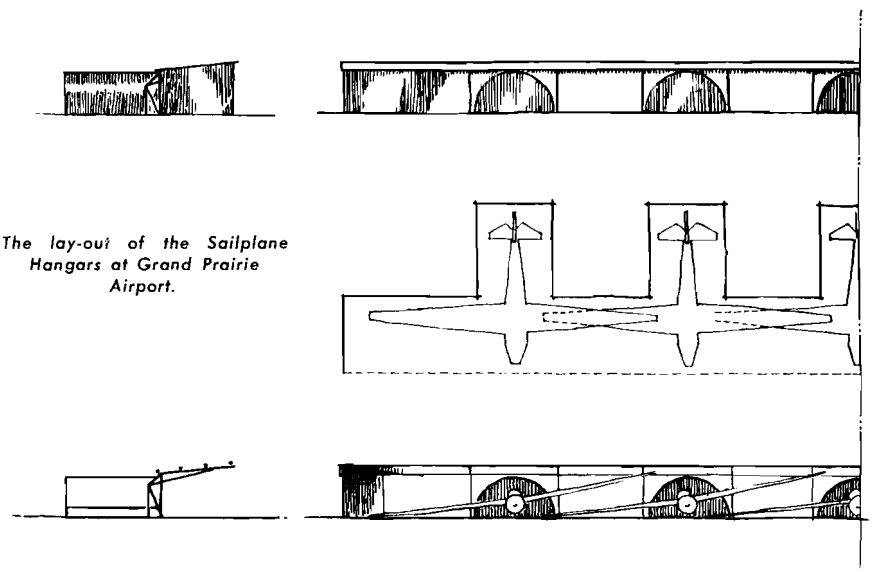
ing to another airfield — voluntarily or involuntarily.)

The views shown indicate how all these desirable factors were included.

Hangar dimensions were resolved by surveying the club TG-3 and a Pratt Reed. The Pratt Reed determined the placement of the quonset centres (i.e. 30 ft. apart), the height of the quonset (i.e. 6 ft. 6 in.), and the TG-3 determined the minimum shelter depth from trailing edge to nose (12 ft.). In actual practice, the latter dimension is one that could have usefully been extended for another 18 inches to two feet.

A quantitative analysis soon determined the actual building materials to be used, i.e. 2 in. and 2½ in. I.D. pipe and galvanized corrugated iron. These materials are relatively cheap and plentiful in this part of Texas.

Box and tepee shaped rear structures were considered, but the former posed strength difficulties (bearing in mind minimum material requirements) and the latter, which had the merit of extreme simplicity, required



The lay-out of the Sailplane Hangars at Grand Prairie Airport.

Plans were then drawn up to conform with the following premises:

1. Minimum dimensions (compatible with adequate and safe clearances).

2. Structural simplicity (to keep down material expenses and, of course, labor costs in frame erection).

3. Cantilever roof. (This factor to allow complete accessibility to any one sailplane without disturbing any of the others.)

4. Portability. (A design point incorporated in the event of TSA moving

a wasteful floor area and, naturally, a large sheet area to provide elevator tip clearances. The quonset proved best, as rolled iron, providing most of its own structural strength, needed only a frame to support it.

The cantilever trusses are all 2 in. I.D. throughout; apart from the ridge pole which carries the roof for 5 ft. at its peak unsupported by bracing. Each of these trusses is based on 15 ft. centres and tied with 2 in. I.D. purling—4 on the roof and 2 at the back — and that, essentially, is the total structure!

After the design was made it was