## Airwise Features & Benefits

**No. l: In large sizes, the capital cost of an Airwise structure is lower than any other form of clear span construction.**

**No. 2: An Airwise structure has lower operating expense, which continues for the life of the structure and is very important.**

**No. 3: An Airwise structure is a time saver since the cover is prefabricated in one piece that can be erected in less than a day.**

Airwise would be fabricating the cover in a factory while the anchor system and equipment are being installed.

**No. 4: Airwise structures are equipped with their own automatic electrical emergency power sources in the event of an electric public power failure.**

In today's world, electric power is too important to neglect. Consequently, a small patio cover in Niles, Ohio for Tin Pan Alley survived a tornado and was one of the few operating places in town for about l0 days, feeding the rescue workers.

**No. 5: Airwise structures utilize free solar light, “day-lighting", in the daytime.**

Lighting costs are not only significantly reduced but it has been shown that "day-lighting" has an uplifting effect. People learn faster, get well quicker, buy more, work more efficiently and generally are in a better mood. They are more satisfied in the presence of daylight.

**No. 6: Airwise structures have no known size limit.**

The clear span width depends on how far one can string a cable, and the length, being modular, can go on to whatever is desired.

**No. 7: Airwise structure have very high ventilation capability.**

This results in a minimum chance of encountering mould or "sick building effect, prevalent in so many modern structures today.

**No. 8: An Airwise structure uses free solar heat in the winter during the daytime.**

Even in the wintertime, a significant amount of heat is gained from the sun during the daytime, reducing heating costs.

**No. 9: An Airwise structure can eliminate the weight of a freezing rain or wet snow.**

When the weather is very cold, the snow is light in weight and just blows off the cover. However, a freezing rain or wet snow forms in temperatures between 28 and 34 degrees F, and is very heavy. This weight can be eliminated in an Airwise structure by "single layering" the cover, eliminating the insulation momentarily and letting a little heat go through the cover to let the weight run off as water. A flick of the switch, and the insulation layer is removed or recreated.

**No. 10: An Airwise structure is not adversely affected by the vibratory loads of an earthquake.**

An Airwise structure is made of flexible cables, which are very forgiving of seismic action.

**No. 11: An Airwise structure is basically simple and thus reliable.**

Whenever possible in the design and operation of an Airwise structure, nature is used. For instance, sunlight provides both light and heat. Gravity operates shutters and vents. Air provides structural support and ventilation. The systems involved are simple and reliable.

**No. 12: An Airwise structure requires little attention or maintenance.**

The fabric material is self-cleaning and the equipment is provided in small sizes so that there is much redundancy, one replacing another automatically until a scheduled maintenance period.

**No. 13: An Airwise structure is exceptional from a fire-fighting standpoint.**

Since an Airwise structure is made of fire resistant material and has a built in “breeze” with a defined direction, because all the fans are on one side and the vents are opposite to them, it is possible to install smoke detectors on the vent wall. This would define the location of the fire. A fire fighter could enter on the fan side, knowing that he would be in fresh air until he reaches the fire. This has been described as a"fire fighter's dream building”.

(If a fire from some foreign material inside the structure were intense enough to melt a hole in the surface, the internal ventilation would blow the smoke out the hole formed.)

**No. 14: An Airwise structure is inherently clean inside, since it uses filtered air and has no infiltration.**

An Airwise structure is really a giant "clean room", since it is pressurized with filtered air and all the leaks are outward. No dust or dirt can enter through openings as it does in a conventional structure.

**No.15: An Airwise structure is readily adaptable in many applications.**

The Airwise technology is merely a tool and can be used in a myriad of ways. It has already been applied to over thirty different types of applications, and this is just the start.

**No. 16: The erection and replacement of an Airwise structure can be simple and quick.**

Since an Airwise is usually made in one piece in a factory, it can be installed on a prepared site in a day. By use of our special sill channel and trolleys, it is also possible to replace a cover, while inflated in a day. The new cover is attached to the old cover at one end, and as that one is removed, the new one moves into place.

**No. 17: An Airwise structure has a pleasing natural appearance.**

On occasion we have been asked to cover a section of a town where they wanted to place something that could bring objections. The thought was that an Airwise structure would. be readily accepted. We have looked at big box buildings that are like caves inside. The artist's sketches show that an Airscape improves the total overall outdoors appearance; it gives the interior a cathedral like appearance and feeling.

Up to now, we have concentrated on making the structures economical and functional. Now, depending on the application, we are adding aesthetics to some of the designs.

**No. 18: An Airwise structure can be back lighted for aesthetic appearance and advertising.**

It has been demonstrated that the Airwise cover makes an excellent back lit screen. Projections on the inner surface show through perfectly on the outside. This can be color projection to attract attention or actual moving pictures and sales presentations.

**No. 19: An Airwise structure can be made of temporary or long life materials.**

Because an Airwise structure has been uniquely configured to take its design loads in cables built into the seams of the cover film or fabric, which is not under load, a wide variety of materials are available for use. These can vary from window clear to opaque and from inexpensive limited life coverings to more durable long life materials. This can significantly reduce the cost of a seasonal structure, while still yielding similar performance, allowing one to try an application inexpensively.

**No.20: An Airwise structure can sustain indoor landscaping.**

In many of the finer buildings, plants are used for aesthetics and for health purposes. To maintain these plants in appearance and to keep them alive, often they are returned to the florist for outdoor growth periods and/or replaced with substitutes. Airwise makes exceptional greenhouses, so the plants thrive in our structures. There is no need for removing or replacing them.

**No.21: An Airwise structure is basically 'green', being environmentally friendly and at a cost savings.**

Sunlight is used for lighting and heating and fresh air is used for support and ventilation. This provides "day-lighting" at its maximum, and tends to eliminate sick building problems. Water can be collected and reused, and the electrical equipment can be the designed and operated automatically for optimum efficiency.

Since most of these features are inherent in the structure, they are provided at no cost.

**No.22: An Airwise structure is clear span with no columns, providing maximum use of the interior area.**

Most conventional structures of any large size are only economical if they contain a forest of columns to support their roof. The Airwise structure, regardless of size, contains none of these restricting elements.

**No.23: An Airwise structure provides maximum day-lighting and an uplifting attitude for its occupants.**

It has been-shown that the presence of sunlight results in better learning: that patients in hospitals recuperate quicker; that people get along better with their peers and that customers tend to buy more. They even say that there is a correlation between the stock market and the kind of day. An Airwise structure in any application that brings the outdoors in, results in attitude improvement.

**No.24: An Airwise structure, being inherently a 'clean room' lends itself to being a “Safe Haven" in the event of an emergency.**

An Airwise structure has already been used as the "safe area" in the event of a poison gas leak at a chemical plant. Since the air entering an Airwise structure is filtered and there can be no infiltration through leaks, it is possible to pre-select the type of filter and make a "safe haven" in the event of a chemical or biological leak or terrorist attack. We have already been approached by officials to determine whether it makes sense to get schools to make their assembly areas and sports facilities using Airwise Structures, so that children could have a safe place to go during emergencies.

**No.25: The Airwise structures, being relatively new, lend themselves to innovative applications.**

The ability to simulate outdoor environments and to do so in giant sizes, never previously possible economically, lets one think broadly of enclosed golf courses, NASCAR race tracks, stadiums with grass playing fields, cities in inhospitable areas, and a myriad of other applications.

**No.26: An Airwise structure does not require ducts for ventilation or specific air flow.**

Because of the location of the fans along one side and the vents along the opposite side a breeze is created in the structure resulting in an inherent air flow from fans to vents, across the entire inside area. Also, since the inside pressure is higher than the outside, a flow can be created at any location by making an opening in the cover at that location. (An example would be a lavatory that could be located anywhere and directly vented out of the cover.)

**No.27: An Airwise structure can be readily relocated.**

Since Airwise Structures are usually designed and built as a kit to be manufactured in a factory and delivered to the site for erection, the procedure, can be reversed and the structure taken down, repackaged and moved to another site for re-erection. The foundation is the only part left behind and if designed with forethought, even that can be removed and reused.

**No.28: An Airwise structure contains a "built in" security system.**

The Airwise control panel always measures the internal pressure as compared to the outside ambient pressure. It also detects a public power failure. Contacts are provided for connection to an alarm or auto dial system to notify security or the building operator if something is amiss. If the building is not operating properly, someone opens a door a door or cuts the fabric, a fan would automatically come on to replace the lost air and assure the integrity of the structure. That would activate the alarm alerting security.

**No.29: An Airwise structure can be stratified horizontally to permit the use of different environments.**

Because of the way the air enters on one side of the structure and exits on the other, it is possible to create different environments inside the structure, such as refrigerated or cooled area over an ice rink, a moderate environment over a basketball court and a warm environment over a pool, all under the same roof.

**No.30: An Airwise structure used as weather protection at a construction site is usually large enough to also serve as an on site warehouse, eliminating loss of material and tools.**

To prevent material at a site from getting wet or disappearing from attrition, often warehouses are built or rented on site. It has been found that this extra expense is not necessary where an Airwise is used. This applies even to landscaping materials, since size is no limitation.

**No.31: An Airwise structure, in the form of a town for many residents in a normally inhospitable region, would be less costly than a conventional town built in a more temperate zone.**

The homes in such a town would be built on streets with lawns and gardens and would be built for aesthetic and security reasons and not for winds aid weather. They would just have conditioning to make them comfortable for personal preferences over and above the ambient conditions. No garages would be required, just a driveway, since one would already be out of the weather.

Servicing can be done at ground level instead of below a frost line. No provision is necessary for excessive insulation, snow or wind loads or UV degradation. Roof tops can be flat and used as patios or gardens.