

BUILDING SAFETY FIRE PROTECTION

FIRE PROTECTION IN AIR STRUCTURES



FIRE PROTECTION

Arizona's air supported structures have been accepted and used around the world with a variety of fire protection equipment. Normally it is determined that, due to the dome's fire resistant construction and easy egress, only fire alarm pull boxes and fire extinguishers in accessible locations are needed. The building contents, occupancy, and local regulations may require additional fire protection equipment. To the right you will find photographic examples of various fire protection systems and the applications where they were used.

It is important to note that there are no examples of air-supported buildings with full overhead sprinklers, as it is not possible to support the weight of water piping from the fabric. Several logistical challenges surrounding the suspension of water piping from the flexible fabric envelope make solutions such as the ones depicted below preferred in instances where enhanced fire protection is required.



STANDPIPE: A fire hydrant setup within the dome. They are often padded for the safety of occupants.

DIRECTIONAL WATER CANNONS: If automatic water-based deluge equipment is determined to be required, directional water cannons can be implemented. These units can be simple or computer controlled with thermal cameras to reduce water damage when triggered.



FIRE ALARM PULL BOXES: This is the most common system used in air structures. Depending on occupancy levels, the alarm boxes may need to be annunciated or just a local alarm. There is no water involved in this type of Fire Protection, but accessible fire extinguishers are often added as part of the system.



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