

Phoenix-Mesa Gateway Airport Fire Protection Master Plan

Phoenix-Mesa Gateway Airport, Mesa, Arizona

Dibble provided planning services to the Phoenix-Mesa Gateway Airport Authority to prepare the Phoenix-Mesa Gateway Airport Fire Protection Master Plan. The Master Plan evaluated modifications to the existing water supply infrastructure to improve flow and pressure for low and moderate fire protection demands, and evaluated zone-based dedicated storage and pumping systems for proposed high-demand facilities such as hangars using deluge and foam fire protection systems. Tasks included inventory of the existing water supply and distribution systems and existing facilities and their fire protection requirements; evaluation of the impacts of existing and proposed airport facilities (hangars, fuel storage, terminals, etc.) on the fire protection supply system; identification of potential sources of water; and evaluation of fire protection alternatives to meet existing and future demands, including relative costs and benefits. Alternatives development involved conceptual design, water systems modeling (a computer analysis modeling nine different water system alternatives with an 800-pipe model), cost estimates, and comparative analysis of various combinations of fire protection systems designs and phasing. The Master Plan recommended specific improvements to the existing supply system to address pressure and flow issues at current and future facilities, along with three dedicated "fire protection zones" with a projected combined fire pumping capacity of 40,000 gpm, and a combined storage capacity of over 3 million gallons, servicing existing and proposed hangar facilities.



Client:
Williams Gateway Airport Authority