

RITZ CARLTON RESORT AT DOVE MOUNTAIN

Marana, Arizona

The 311,000 sq. ft. Ritz Carlton Resort has 226 guest rooms and nine casita buildings. The first level includes a 17,000 sq ft. full service spa, grand ballrooms, meeting rooms, lobby, laundry and administration offices. The five-story resort has three full service kitchens, a pool side grill, and one restaurant.

Adams and Associates Engineers provided full HVAC, Plumbing, and Fire Protection design services for this project. HVAC systems included central water-cooled, primary variable flow chilled water plant, central primary-secondary heating water plant, central domestic hot water plants for guestrooms and laundries, and a combination fire sprinkler / wet standpipe fire suppression system.

The fire protection system design included a fire sprinkler system with sprinkler head and piping layout of roughly 3,500 sprinklers for the entire resort. Included were combined Class I manual standpipes with multiple zoned floor control assemblies, 3-hour separation between the Type I (concrete) hotel and Type V (wood framed) spa buildings, an Ansul Piranha hood suppression system, and concealed CPVC piping installed within faux wood beams in the guest rooms. The resort is conditioned through a four-pipe chilled and heating water system utilizing high-efficient water-cooled centrifugal chillers in a primary, variable flow chilled water system.

Adams and Associates Engineers also assisted with the commissioning of the resort.



Provided ground-up HVAC and plumbing design services for this luxury 5-star resort framed against the Tortolita Mountains.

PROJECT ATTRIBUTES

- 311,000 sq. ft. mixed-use building
- Mechanical and Plumbing Design Services
- Project completion: 2009
- Client: Hill Glazier
- System: central water-cooled, primary variable flow chilled water plant, central primary-secondary heating water plant, central domestic hot water plants for guestrooms and laundries, and a combination fire sprinkler / wet standpipe fire suppression system
- Construction Cost: approximately \$276 million
- Project Delivery Method: CM@R

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