

## **1.0 Executive Summary**

The purpose of this report is to summarize the existing mechanical systems located at the M Resort. Design objectives and operation specific information was utilized to attain a better understanding of the design criterion used for this resort.

Throughout this report calculations and tables from past technical assignments have been included in order to observe how the various systems affect one another and the system as a whole. For instance, heating and cooling, loads along with utility rates were used to determine the systems energy consumption.

This system has been found to meet the owner's requirements for the resort. Without a detailed comparison to other methods, the system chosen works well with the diverse loads and space types found throughout the building. Design conditions as well as schematics and equipment schedules have been provided to help understand the system.

A critique of the system has been included which evaluates the system to be sufficient and logical based on the design objectives. There have been some discrepancies found in the heating, cooling, and ventilation loads, however these seem to point towards issues with the precision of the Trace model. Therefore before further analysis is conducted for the project, a second simulation must be run.