

WILLARD PEAK SKI RESORT

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PROJECT SUMMARY

In response to the escalating demand for winter sports in Utah, Silver Slope Financial (SSF) has initiated a project to construct a new ski resort near Cache Valley. Peak Engineering employed a two-stage geospatial information systems (GIS) analysis to determine the optimal site. Six alternatives were considered, including Willow Flat, Maple Creek, Wilderness Peak, Big Hollow, Willard, and a No-Build alternative. Following a thorough evaluation based on criteria such as snow availability, skiable terrain, cost, accessibility, and vertical split, the Willard site was selected as the recommended alternative.

ALTERNATIVES

- North to South
- Willow Flat
 - Maple Creek
 - Wilderness Peak
 - Big Hollow
 - Willard Peak
 - No-Build



CRITERIA AND SELECTION PROCESS

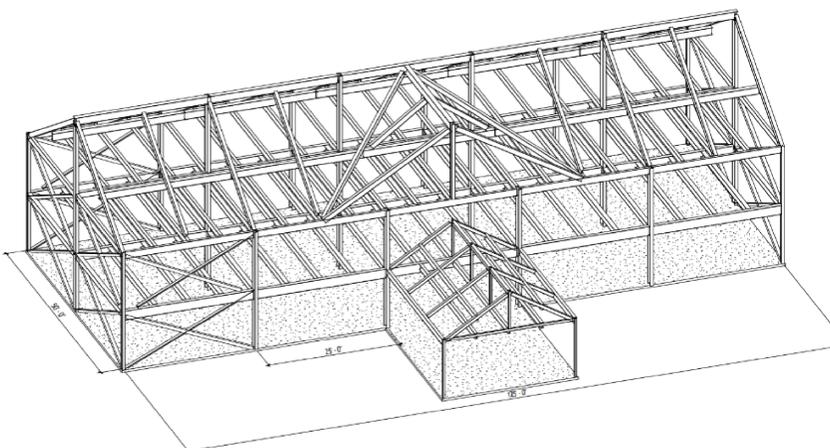
The five alternative locations were selected based on land availability, estimated snowpack, proximity to major airports, base elevation, and availability of GIS data. These criteria were used to narrow down the search to five locations within Northern Utah and Southern Idaho. A set of criteria was used to evaluate the five distinct location alternatives. The criteria are snow availability, skiable terrain and slope, cost, accessibility, and vertical drop. The criteria were weighted by importance as follows: snow availability (50%), skiable terrain & slope (20%), cost (15%), accessibility (10%), and vertical split (5%).

SELECTED ALTERNATIVE

The Willard Peak Location meets all the design criteria and achieved the second highest score overall in the alternative analysis. The design team used educated reasoning to choose Willard Peak based on the results from the decision matrix. One reason for selecting this alternative is its proximity to a commercial airport. The Willard Peak location is just under an hour away from Salt Lake City Airport. Another reason for choosing this alternative is that Silver Slope Financial preferred a location in Utah rather than in Idaho.



LODGE DESIGN



The ski lodge is a two-story steel building with a covered entrance. The main footprint of the building is 50 ft x 125 ft with 25 ft bays. The covered entrance is a 30 ft wide driveway.

The lodge will include a ski rental area, ticket office, and lockers on the first floor. The second floor will have a kitchen and dining area with a view of the mountain.

SITE DESIGN



The upper paved parking lot (left) has approximately 85 parking stalls. Also shown are the lodge entrance and a 32,500 cubic feet (CF) stormwater detention pond. The lower parking lot (not shown) has approximately 1,500 parking stalls, a shuttle stop, and a 285,000 CF stormwater detention pond.

A well that provides 250 gallons per minute (gpm) is available on site. A hydraulic pump has been installed to transfer water to a 350,000 gallon storage tank situated on a hill above the lodge. A piping system has been designed to connect the well to the storage tank and from the storage tank to the lodge. Illustrated on the right is the piping system from the storage tank to the lodge, which is operated by gravity to ensure adequate water pressure and flow.

DESIGN TEAM



PEAK
ENGINEERING

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Silver Slope Financial - Client

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