

Golf Course Development Analysis

New Mexico State University



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Introduction

The basis for this analysis by Jim Engh Design, is to evaluate the land adjacent to the existing golf course / clubhouse, for use as a new 18-hole golf course. This would include the general character of the land, soil, water, power, costs and the image creation aspects of such a golf course. Within this analysis are two differing golf course layout possibilities that will display some conceptual ideas.

Jim Engh Design has been fortunate to have received unique acclaim within the golf course design industry for its body of work. Within that portfolio is the photograph chosen for the cover of this report, Lakota Canyon GC in New Castle, Colorado. This photo is reminiscent of the mountainous background that is found at the NMSU campus and the potential for image creation that is possible through golf.

Certainly, many differing and unique landforms exist on planet earth. It is in-fact, the single most determining factor toward the potential quality of any golf course. Then it becomes the unique challenge of the golf course architect to choose how best to affect/control the land in order to achieve the function of a golf course. Having the wildly varying landforms existing on the



Four Mile Ranch, Canon City, Colorado

planet and the unique perspective, creative approach and style of each golf course architect, we are left with infinite possibilities as to how each golf course might be completed.

Project Analysis

Examined will be physical attributes that are required to determine the viable potential for each golf course project. Obviously, at this early stage not all questions can be completely answered. However, some questions will be raised in order to be answered at a later time.

Land Character

Consisting of rolling hills that have been formed by wind and water erosion over thousands of years, the land in question is almost perfectly suited to be used as a golf course. Vegetation consists mostly of low to medium growing shrubs, yucca and cactus that will be a physical and aesthetic benefit, without becoming a nuisance. Very little, if any, new vegetation would be required. Soils seem to be slightly varied between sand and loamy sand within the site. Thus, perfect for growing grass.

Erosion, within the sandy loamy soils, has created landforms that resemble that of Scotland and Ireland, the home of golf. Significantly, cost for construction of a new golf course would be very low when compared to that of typical new golf courses constructed today. The priority would be to embrace the natural character of the land, discovering, not creating, the dunes style



course for which the land is whispering. Also, understand that this style of golf course will be considerably different than any other course in Las Cruces or El Paso.

The location of the most unique and spectacular land that is best suited to creating the best golf course possible, happens to be located a reasonable distance from the existing clubhouse. This will require a creative approach to best maximize the potential of the land.

Construction Cost

Due to the rolling character of the land and the tremendous quality of the soil, the cost to construct a golf course on this land will be minimal. Obviously, the typical costs of irrigation, cart paths and greens construction might still be required. However,

it is our intent to use the existing character of the land to discover the golf holes. This will greatly reduce the cost of excavation and other processes.



Minot CC

Upon analysis, I would place the golf course construction cost of this project to be similar to other projects that we have completed. Specifically, I look at Four Mile Ranch in Canon City, Colorado and Minot CC in Minot North Dakota to be most similar. The construction for these courses was in the range of \$3 - \$4 million.

Please understand that this estimate is based upon golf course construction cost. It does not include design, engineering, maintenance equipment, grow-in or water source delivery costs.

Water

It is obvious that a reliable water source is required for a world-class golf course. We examined several possible options and have determined that two potentials for water exist for this project.

Firstly, there is and will be available water from the university. This is delivered through the same system that presently feeds water to the existing golf course. Alternatively, it is possible to drill a well on-site to a presumed depth of 1200 ft. to obtain suitable water. This cost is estimated to be \$400,000-\$500,000.

With minimal rainfall in the area and low humidity rates a reservoir pond on-site, could be constructed to store the water needed for times of shortage.

Electrical Power

A source of power exists on the site with the power lines running to the existing educational buildings and rodeo grounds.

Possible Constraints

Although there are many elements within this project that make it very desirable to pursue, there does exist a list of items that must be considered to be obstacles to overcome.

- Structures - Existing on the land and relatively near the present clubhouse are many structures that belong to the entomology



department, a university rodeo ground and a hazardous burial area. Although not insurmountable, these structures do create

some difficulties in the routing of the golf holes. See The Layouts.

- Environmental/Flooding - Although, rainfall is quite low in the area, there is still a potential for storm water rains to create an issue for the valleys within the project. Certainly, a local engineer should be retained at some point in the future to share with us, any requirements. Also, these same channels might be considered to be jurisdictional by FEMA or the US Army Corps of Engineers. Again, a consulting engineer may be required.

- Future Roads - Throughout the site are dirt roads and tracks that provide a variety of functions. It seems that the main road, Geothermal Road, will become a permanent paved road in the future. Although this road has been considered in the golf course routings presented, the future of the smaller roads is not certain.

- Protected Vegetation - The consensus of the team was that there are no protected vegetation species on the land. However, a local expert may be required to assist with this matter.

Perspective

JED has had several site visits and has spent great time both walking and driving the land. Throughout this time, it has become clear that our initial reaction is in-fact accurate. The land that is available for a new potential golf course is of a standard that is simply world-class.

This golf course project has many advantages over today's typical project. From a financial perspective, the course will be tremendously economical to construct. It will have the use of an existing clubhouse and infrastructure. Certainly, the reason for considering this project was a stroke of brilliance. Creating valuable development land by reducing the original golf course land is a revenue source that is simply not available to other projects.

Often overlooked is the "image creation" aspect of golf. Especially, a new golf course. Golf has the innate ability to gain attention on a national scale and to raise the image of an area or organization. If done to a high standard, with proper media exposure, a new world-class golf course can bring a unique and added identity to Las Cruces and especially to New Mexico State University. Keep in mind that there are very few world-class, university owned golf courses in the world. I can assure

you that opening the golf course that I have envisioned on this land, in the name of NMSU would gain the imagination of the national media.

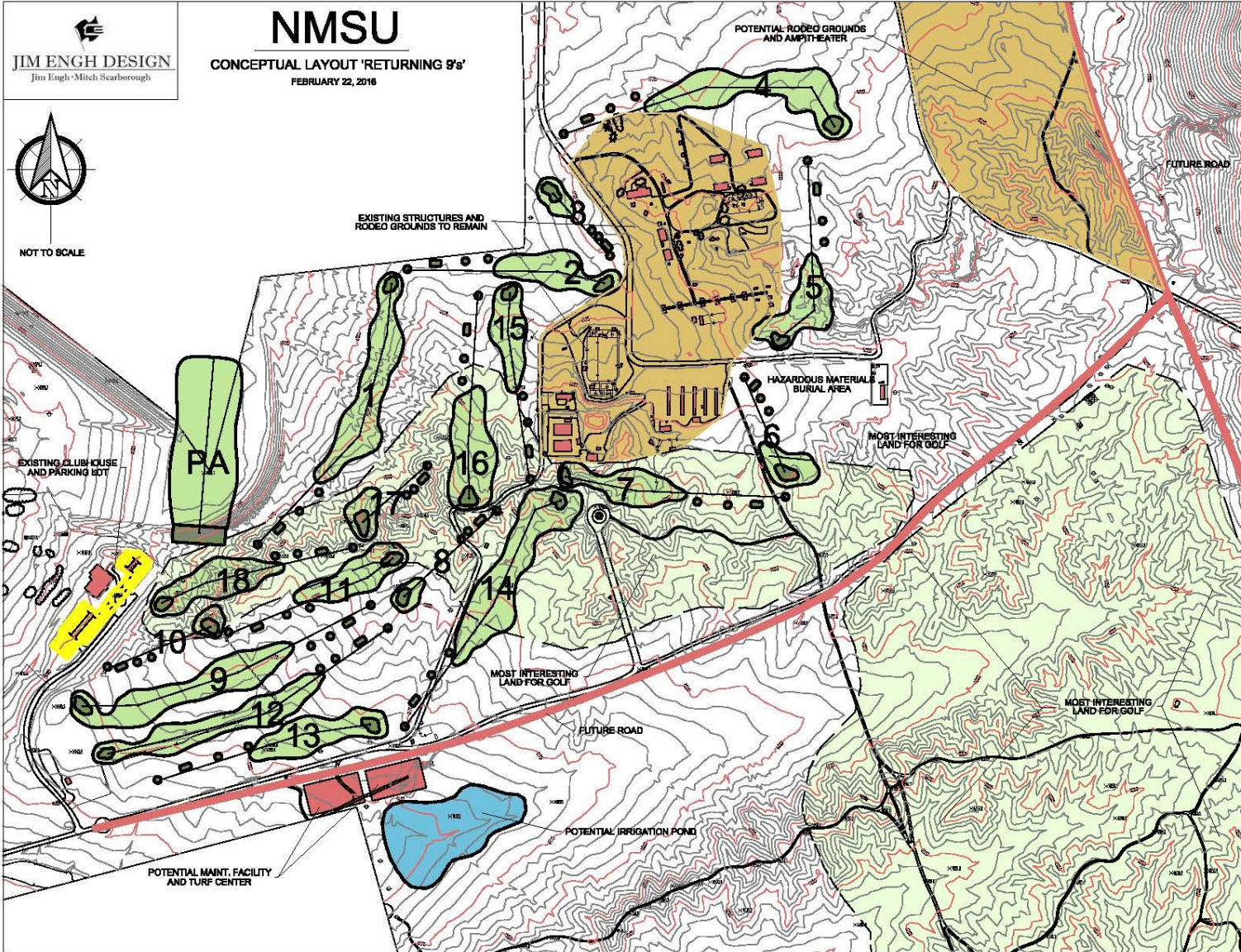
The Layouts

Upon visiting the land, it quickly became obvious that a decision would have to be made regarding the type of golf course layout that would be best for the project. Certainly, there is a tremendous financial advantage to having an existing, quality clubhouse facility. This feature alone makes the project exponentially more practical. However, along with this existing clubhouse comes the issue of placement for the new golf course.

Typically, the golf course architect has a considerable input as to the location of the clubhouse. And that location is often in a place that will accommodate the implementing of two 9 Hole Loops, each would return to the clubhouse at holes 9 and 18.

Two very important aspects of the land have become obvious during the undertaking of this study. Firstly, is the existence of structures on the land that is near to the clubhouse. Secondly, we have recognized that the most interesting and best suited land for golf is not located adjacent the existing clubhouse.

Please view the layouts below to better understand the possibilities that presently exist for the golf course layout.

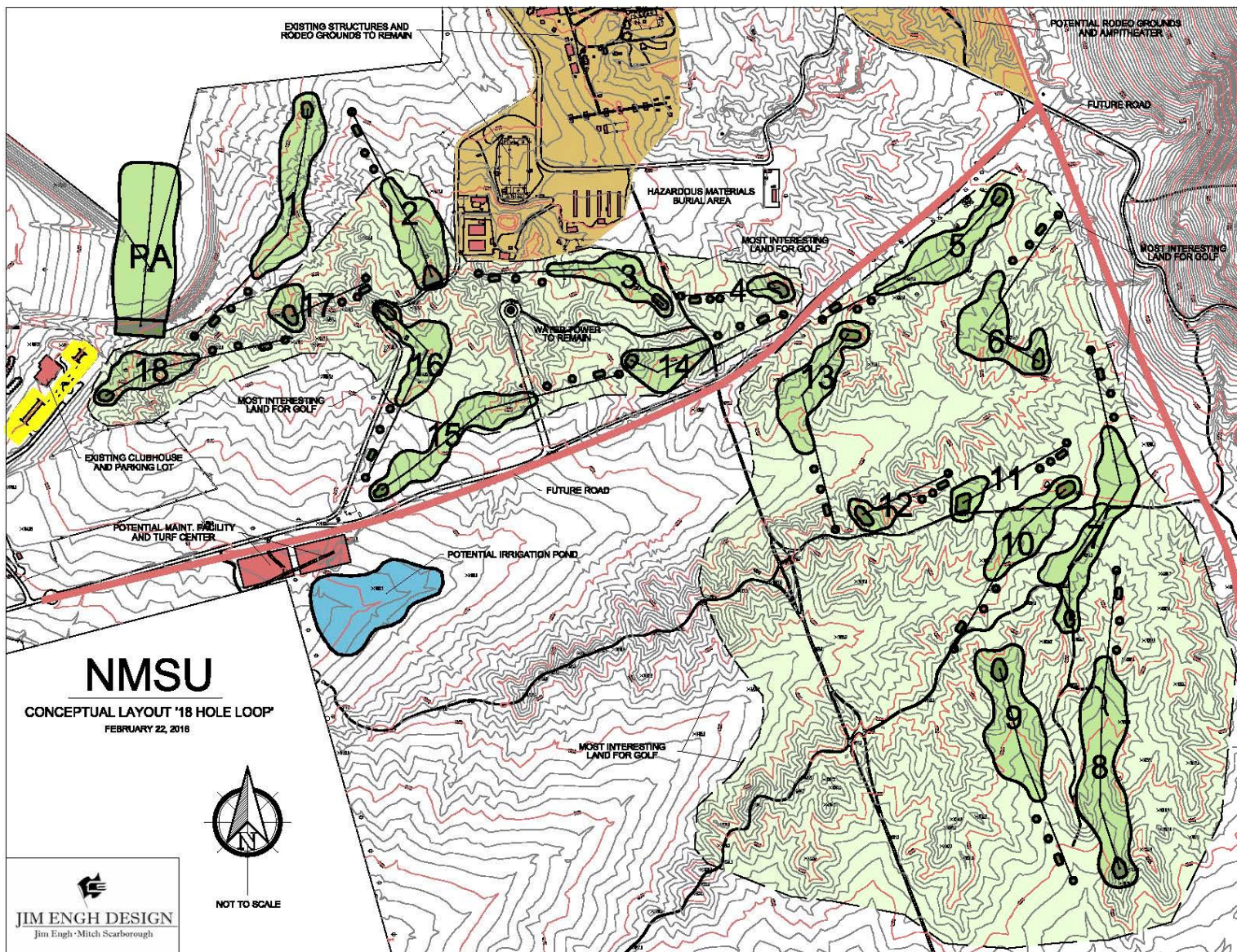


Two 9 Hole Loops

Obviously, it is desirable to have the ability to manage golfers as they play a round of golf. It is also practical to be able to offer golfers the ability to play just 9 holes. However, constraints exist on this site that make two 9 Hole Loops somewhat impractical.

Specifically, the existing facilities of the rodeo ground, entomology lab and the hazardous burial area. Due to the close proximity to the existing clubhouse, the routing of the golf course must play within and directly around these unattractive structures. It also happens to be the least attractive land for golf on the site. This situation places the golf holes in a required area, as opposed to placing them on the best land for golf.

A returning 9 Holes Loop can only extend a certain distance from the clubhouse. Therefore, it is not possible to place these holes within the most exciting and spectacular land available for golf.



18 Hole Loop

As previously described, the best land for golf is not located near the existing clubhouse. Therefore, it will require the golf holes to extend out to these areas from the clubhouse. In effect, an 18 Hole Loop, will afford the opportunity to create the most interesting and spectacular golf course possible.

Certainly, the most important factor to having an 18 Hole Loop layout is the management of the golf course. And the opinion of the existing staff is paramount to such a decision. I was both encouraged and impressed by the open-minded support for the 18 Hole Loop from Dan Koesters, Director of Golf and Jason White, Head Golf Professional, at the pro shop. And especially the enthusiastic support from Karl Olson, Golf Course Superintendent.

Especially important to this situation is the inclusion of an existing 9 Hole Loop that will accommodate those looking for a simple 9 Hole golf experience.

Obviously, the placement of the golf course on the most suitable land will require less cost for construction. However, almost more importantly, is that the golf course will provide a world-class facility to the university and to the City of Las Cruces. This will be a golf facility that, because of its spectacular nature,

will bring local pride and national recognition to New Mexico
State University.

Conclusion

It has been an honor to have prepared this study for New Mexico State University. The excitement and enthusiasm from the NMSU staff has been overwhelming and I hope that we will be able to continue to work with all involved in the future.

The project has a strong financial situation with minimal construction cost, existing facilities and a sound funding source. Additionally, the character of the land will ensure that this golf course will be of world-class quality that will capture the imagination of the golf world on a national basis.

After much studying of this project, it appears to JED that this project is simply one the best situations that we have seen. It would be an extreme pleasure to continue to be involved with such a tremendous project.

You have my sincere thanks.

Jim Engh