

# The Town of Taos Alexander Gusdorf Eco-Park

*FIFA-Regulation Tournament Fields*

*Engaging High-Desert Mountain Environment*

*Beyond LEED-Efficient Sports Park*



**Where will you practice in 2010?**

# Master Plan | Athletic Amenities

## Come Play at Salazar: Your High-Altitude Sports Destination



### **Perfect Training Climate**

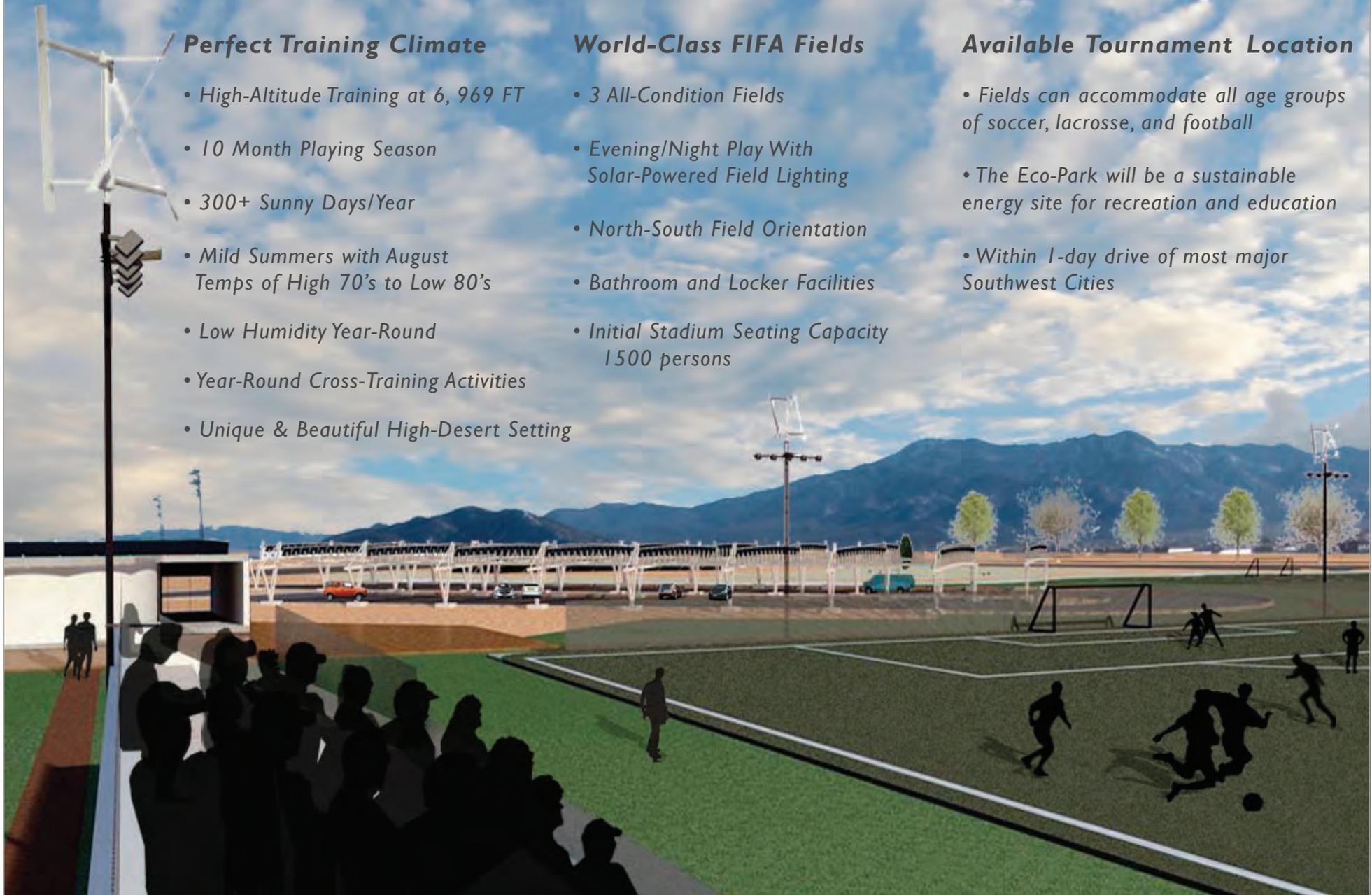
- High-Altitude Training at 6,969 FT
- 10 Month Playing Season
- 300+ Sunny Days/Year
- Mild Summers with August Temps of High 70's to Low 80's
- Low Humidity Year-Round
- Year-Round Cross-Training Activities
- Unique & Beautiful High-Desert Setting

### **World-Class FIFA Fields**

- 3 All-Condition Fields
- Evening/Night Play With Solar-Powered Field Lighting
- North-South Field Orientation
- Bathroom and Locker Facilities
- Initial Stadium Seating Capacity 1500 persons

### **Available Tournament Location**

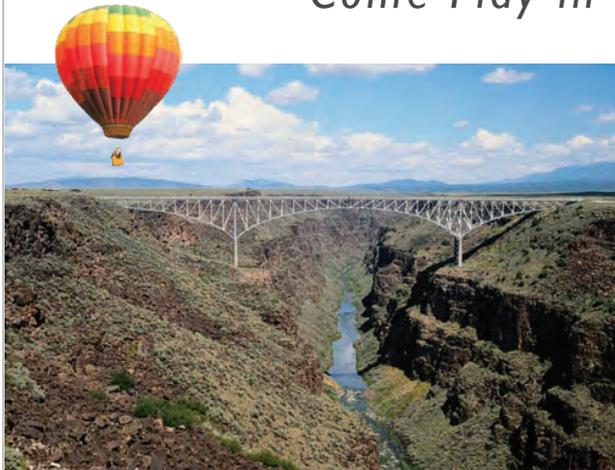
- Fields can accommodate all age groups of soccer, lacrosse, and football
- The Eco-Park will be a sustainable energy site for recreation and education
- Within 1-day drive of most major Southwest Cities





# Master Plan | Recreation Amenities

## Come Play in Taos: Your High-Altitude Sports and Recreation Destination



To Colorado

68

64

To Taos Ski Valley

### If practice at 7,000 feet above sea level isn't enough to take your breath away...

...discover why New Mexico is hailed as **The Land of Enchantment**. Be awed in the Gorge, challenged at the Ski Valley, rejuvenated by the ancient and alternative therapies practiced within our diverse culture. Isolated yet accessible, complete with five-star accommodations and award-winning cuisine, you can experience Taos within a day's drive of any major Southwest city, from a flight to Albuquerque, or from a flight to our local municipal airport.

Rio Grand Gorge Bridge

Municipal Airport



Taos Pueblo

Taos Plaza

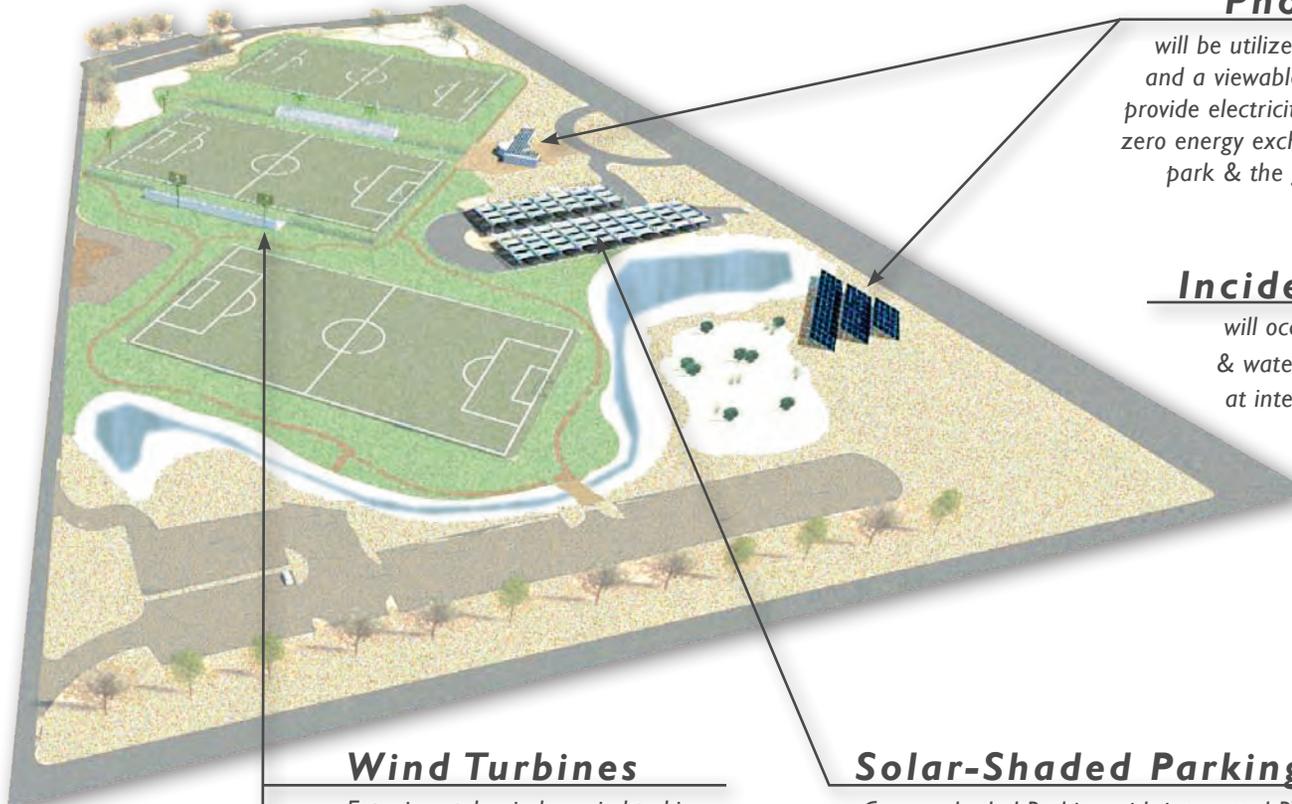
Salazar Eco-Park



To Santa Fe & Albuquerque

Looking North-East Toward the Sangre de Christo Mountains

View from Site:



## Photovoltaics

will be utilized in a roof-top array and a viewable on-ground array to provide electricity for an annual net-zero energy exchange, benefiting the park & the greater community.\*



## Incidental Learning

will occur as the Eco-Park's energy & water systems are demonstrated at interactive play stations located throughout the park.



## Wind Turbines

Experimental, noiseless wind turbines featured around championship field will determine the feasibility of & be available for future wind power generation.\*

## Solar-Shaded Parking

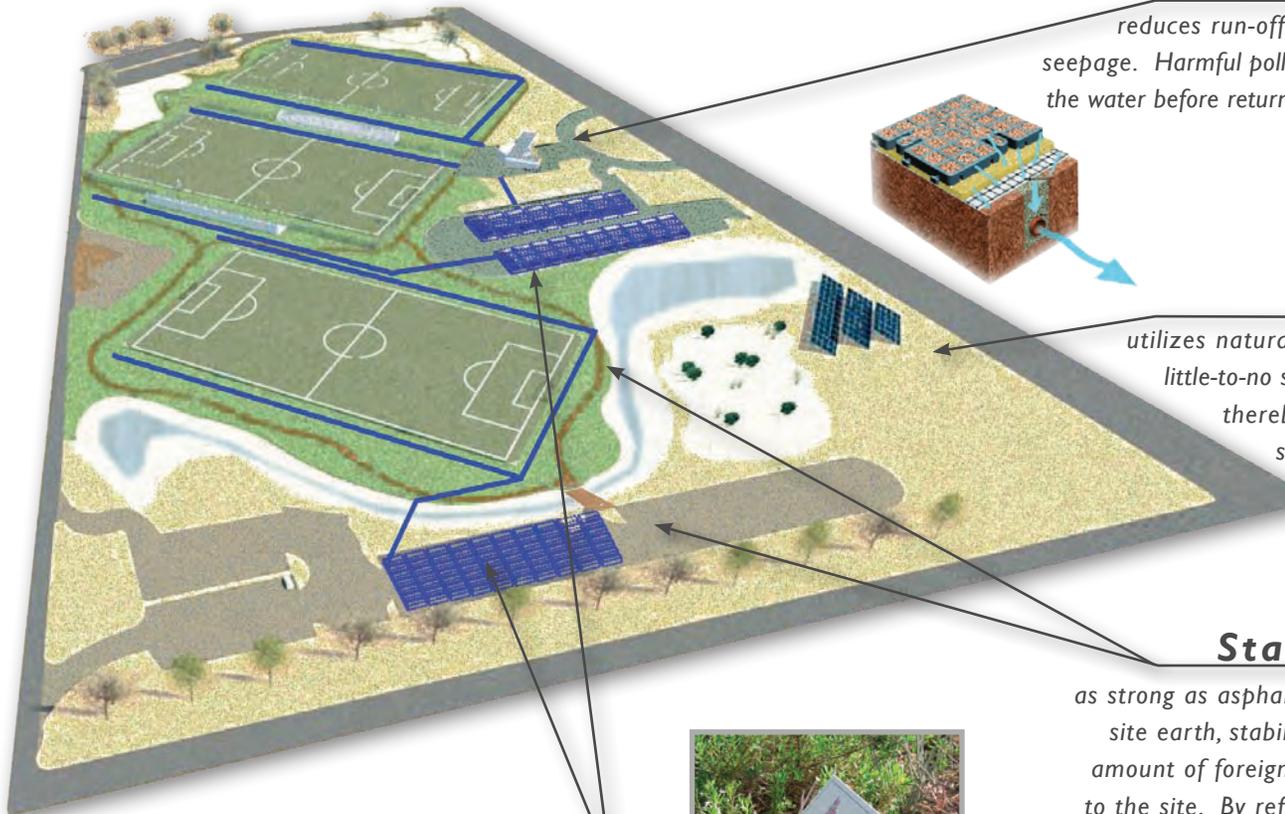
Canvas-shaded Parking with integrated PV panels will keep cars cool while increasing the potential for energy capture.



\* The issues of safety and security for wind generation & photovoltaics will be addressed through recommendation of the manufacturers.

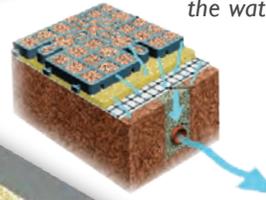


# Alexander Gusdorf Eco-Park Master Plan | Water Management



## Permeable Paving

reduces run-off by permitting natural seepage. Harmful pollutants are filtered from the water before returning to the groundwater.



## Xeriscaping

utilizes natural vegetation requiring little-to-no supplemental irrigation, thereby conserving the water supply, a critical concern in a desert climate.



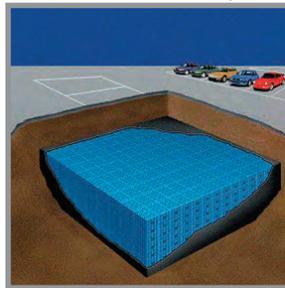
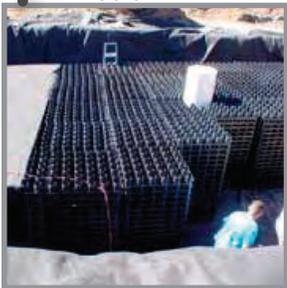
## Stabilized Soil

as strong as asphalt but made from on-site earth, stabilized soil reduces the amount of foreign material introduced to the site. By reflecting more thermal radiation than asphalt, it also stays cooler. Stabilized soil will be utilized for parking lot & meandering pedestrian pathways.



## Underground Water Tanks

can annually store 2 million gallons of rainwater harvested as run-off from the soccer fields. This water will supply bathroom facilities and the landscape.



## Native Vegetation will be highlighted with Interpretive Signage.



# Alexander Gusdorf Eco-Park Master Plan | Site Plan

Taos, NM





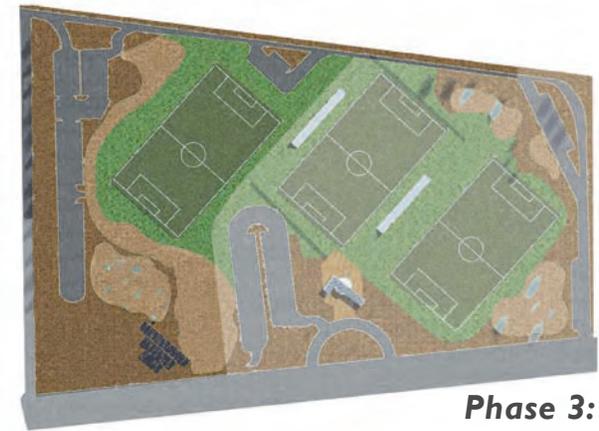
# Alexander Gusdorf Eco-Park Master Plan | Schedule & Phasing



**Phase 1:  
Completion Spring 2010**

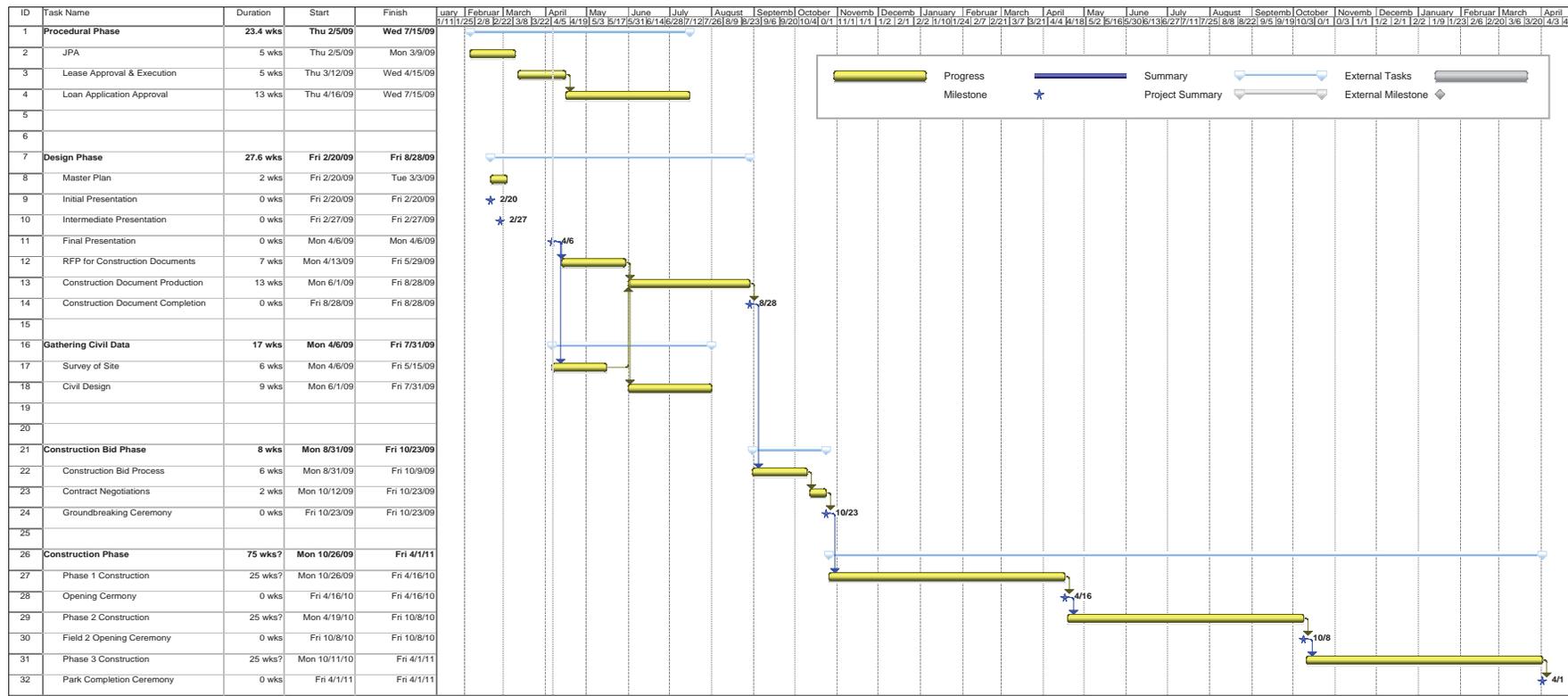


**Phase 2:  
Completion Upon Funding**



**Phase 3:  
Completion Upon Funding**

Construction Phasing



Design/Bid Schedule

# Alexander Gusdorf Eco-Park Master Plan | Engineering

Taos, NM



**Abeyta Engineering, Inc.**

209 Camino De La Merced | Taos, NM 87571 | 575.737.0377

## Preliminary Engineer Estimate\* - Complete Project

ITEM NO.	DESCRIPTION	QTY.	UNIT	UNIT PRICE	TOTAL
1	Mobilization	1	LS	\$ 20,000.00	\$ 20,000.00
2	Construction Staking by Contractor	1	LS	\$ 18,000.00	\$ 18,000.00
3	Clearing & Grubbing	1	LS	\$ 10,000.00	\$ 10,000.00
4	Removal of Structures and Obstructions	1	LS	\$ 5,000.00	\$ 5,000.00
5	Sampling and Testing by the Contractor	1	LS	\$ 10,000.00	\$ 10,000.00
6	Erosion Control (Includes EPA SWPPP)	1	LS	\$ 10,000.00	\$ 10,000.00
7	Soccer Fields (complete field incl. turf, drainage system, goals, & subgrade materials)	3	EA	\$ 700,000.00	\$ 2,100,000.00
8	Stadium Lighting, turnkey system	1		\$ 130,000.00	\$ 130,000.00
9	Unclassified Excavation	65,000	CY	\$ 5.00	\$ 325,000.00
10	Subgrade Preparation	38,000	SY	\$ 1.25	\$ 47,500.00
11	Gravel Pave permeable driving surface (includes aggregate basecourse & gravel)	21,000	SY	\$ 45.00	\$ 945,000.00
12	Concrete Curb & Gutter	18,000	LF	\$ 15.00	\$ 270,000.00
13	Dumped Cobble Riprap - 6"	4000	SY	\$ 35.00	\$ 140,000.00
14	12" Storm Sewer Pipe (includes junctions and manholes)	3100	LF	\$ 40.00	\$ 124,000.00
15	18" Storm Sewer Pipe (includes junctions and manholes)	600	LF	\$ 50.00	\$ 30,000.00
16	10,000 Gallon Cistern (for landscape irrigation)	6	EA	\$ 15,000.00	\$ 90,000.00
17	Natural Gas Service	250	LF	\$ 12.00	\$ 3,000.00
18	6" Sanitary Sewer	250	LF	\$ 15.00	\$ 3,750.00
19	2.5" Domestic Water	250	LF	\$ 16.00	\$ 4,000.00
20	4" Buried Conduit for Electric	4300	LF	\$ 10.00	\$ 43,000.00
21	1.5" Landscape Water	1200	LF	\$ 14.00	\$ 16,800.00
22	Landscape allowance	1		\$ 500,000.00	\$ 500,000.00
23	Hardscape allowance	1		\$ 500,000.00	\$ 500,000.00
24	Structure allowance - concessions, restroom, storage,	1800		\$ 200.00	\$ 360,000.00
24a	• Greywater wetland	1		\$ 60,000.00	\$ 60,000.00
24b	• Building integrated solar, 4 kw net-metered system	1		\$ 50,000.00	\$ 50,000.00
25	Parking canopy solar array	1		\$ 800,000.00	\$ 800,000.00
26	Telephone Service System (4" SCH 40 PVC Conduit Only to be Placed in Electric Trench)	250	LF	\$ 4.00	\$ 1,000.00

ITEM SUBTOTAL	\$ 6,616,050.00
SOFT COSTS	\$ 550,000.00
10% CONTINGENCY	\$ 661,605.00
ESTIMATE SUBTOTAL	\$ 7,827,655.00
NMGRT @ 7.9375%	\$ 621,320.12
<b>TOTAL ESTIMATE</b>	<b>\$ 8,448,975.12</b>

\*Current survey data for topography & existing conditions not yet obtained. Estimates based on historical data.



## Abeyta Engineering, Inc.

209 Camino De La Merced | Taos, NM 87571 | 575.737.0377

## Preliminary Engineer Estimate\* - Phase I

ITEM NO.	ITEM DESCRIPTION	QTY.	UNIT	PRICE	TOTAL
1	Mobilization	1	LS	\$ 10,000.00	\$ 10,000.00
2	Construction Staking by Contractor	1	LS	\$ 5,000.00	\$ 5,000.00
3	Clearing & Grubbing	1	LS	\$ 4,000.00	\$ 4,000.00
4	Removal of Structures and Obstructions	1	LS	\$ 2,000.00	\$ 2,000.00
5	Sampling and Testing by the Contractor	1	LS	\$ 3,000.00	\$ 3,000.00
6	Erosion Control (Includes EPA SWPPP)	1	LS	\$ 3,500.00	\$ 3,500.00
7	Soccer Fields (complete field includes turf, drainage system, goals, and any subgrade materials)	1	EA	\$ 750,000.00	\$ 750,000.00
8	Unclassified Excavation	25,000	CY	\$ 5.00	\$ 125,000.00
9	Subgrade Preparation	6,400	SY	\$ 1.25	\$ 8,000.00
10	GravelPave permeable driving surface (includes aggregate basecourse & gravel)	6,100	SY	\$ 45.00	\$ 274,500.00
11	Concrete Curb & Gutter	2,300	LF	\$ 15.00	\$ 34,500.00
12	Dumped Cobble Riprap - 6"	1500	SY	\$ 35.00	\$ 52,500.00
13	12" Storm Sewer Pipe (includes junctions and manholes)	1200	LF	\$ 40.00	\$ 48,000.00
14	18" Storm Sewer Pipe (includes junctions and manholes)	200	LF	\$ 50.00	\$ 10,000.00
15	10,000 Gallon Cistern (for landscape irrigation)	2	EA	\$ 15,000.00	\$ 30,000.00
16	Natural Gas Service	250	LF	\$ 12.00	\$ 3,000.00
17	6" Sanitary Sewer	250	LF	\$ 15.00	\$ 3,750.00
18	2.5" Domestic Water	250	LF	\$ 16.00	\$ 4,000.00
19	4" Buried Conduit for Electric	2100	LF	\$ 10.00	\$ 21,000.00
20	1.5" Landscape Water	700	LF	\$ 14.00	\$ 9,800.00
21	Telephone Service System (4" SCH 40 PVC Conduit Only to be Placed in Electric Trench)	250	LF	\$ 4.00	\$ 1,000.00
21	Landscape allowance	1		\$ 200,000.00	\$ 200,000.00
22	Hardscape allowance	1		\$ 200,000.00	\$ 200,000.00
23	Structure allowance - concessions, restroom, storage,	1800		\$ 200.00	\$ 360,000.00
23a	• Greywater wetland	1		\$ 60,000.00	\$ 60,000.00
23b	• Building integrated solar, 4 kw netmetered system	1		\$ 50,000.00	\$ 50,000.00



ITEM SUBTOTAL	\$ 2,272,550.00
10% CONTINGENCY	\$ 227,255.00
ESTIMATE SUBTOTAL	\$ 2,499,805.00
NMGR @ 7.9375%	\$ 198,422.02
<b>PHASE I TOTAL ESTIMATE</b>	<b>\$ 2,698,227.02</b>

\*Current survey data for topography & existing conditions not yet obtained. Estimates based on historical data.



**Bowe Ellis, PE**

DeLapp Engineering | Taos Office | 575.758.7025

## Electrical Lighting Design

### **Athletic Field Lighting**

- **Luminare design to reduce light spill and light pollution**
- **Eight poles with forward throw lighting to reduce glare**
- **Balanced-spectrum lighting (reds and blues instead of only blues)**
- **Very low maintenance**
  - Softlighting: 12 yr lamplife, no realignment, \$11,000 savings in 12-yr cycle
  - MUSCO: 25yr warranty includes lamps, realignment & maintenance

### **Parking Lot & Grounds Lighting**

- **Provided at all parking lots, pathways and main plaza**
- **Full cut-off for dark skies**
- **Full level lighting during events**
- **Lower (safety) levels at other use times**

### **Additional Information**

Obtaining additional usage information will have significant impacts on the design and cost of Taos Eco-Park electrical systems. Aspects such as parking lot lighting levels, time-of-day lighting shut-off. Concession and locker room design and solar system design can all be tailored to work most efficiently with the expected use of the facility. It is our goal to provide a working, conscientious design employing renewable systems at a cost not excessive for intended use.

Certain information will be particularly useful for our master plan design. If available, we request from you the following:

- Record of monthly electrical costs from similar athletic fields with night lighting
- Record of monthly electrical costs for concession, locker room, and maintenance buildings from similar athletic parks
- Usage statistics for similar athletic field support facilities which may be represented as the following
  - # of days facilities were unlocked
  - # of days with scheduled events
  - typical days and hours of facility use
- Types of Equipment required for concessions
- Size information of similar facilities such as floor area, number of showers, stalls, lockers



**Susan Raymond, ASLA**

P.O. Box 879 | Ranchos de Taos, NM 87571 | 505.758.7597 | rstudio@msn.com

## Landscape

### Plan

- modeled on local, natural plant mosaics
- ‘plant islands’ w/in pathing and/or water delivery systems
- respond to site conditions
  - sun exposure
  - south/southeast winds
  - heat from non-permeable surfaces

### Plant Materials

- low-water-use and low-maintenance
- largely native but including xeric plants appropriate to site needs
- fast growing windbreaks
- fast growing shade
  - counteracts heat from non-permeable surfaces by creating cooler microclimates
  - sun protection

### Rainwater Harvesting & Delivery

- ditches or ‘dry streambeds’ to distribute water to landscape
- detention basins to detain water for plant use
- wick under permeable paving to harvest rainwater and slowly release to adjacent plant material
- use of organic mulches to retain water
- cisterns & drip irrigation as an efficient way to establish plant material and for supplemental use in times of drought

## Hardscape (exclusive of fields)

### Paving

- local materials
- permeable
- organic layouts

# Alexander Gusdorf Eco-Park Master Plan | Landscape Proposed Program Elements

## Play Areas

### Amenities

- shade by trees and structures
- seating for parents – recycled materials
- drinking fountains

### Play Structures

- newest technologies
- highest safety standards
- recycled materials
- ISO 14001 certified
- manufacturer committed to environmental stewardship
- lowest carbon footprint
- durable materials
- recycled play surfacing

## Interpretive Opportunities

### Native & Xeric Plant Material

- low-water use and low-maintenance alternatives to more conventional landscaping choices

### Rainwater Harvesting & Delivery Methods

- alternative to using drinking water on the landscape
- efficient and sustainable irrigation methods
- organic mulches to retain water

### Wildlife Habitat

- importance of beneficial insects and birds to the environment
- Community Wildlife Habitat certification from the National Wildlife Federation
- post interpretive signage in the landscape to educate about the importance of wildlife habitat within the community
- demonstrate traditional/cultural uses of native plants