

## Maintenance Costs for Natural Grass Soccer Field

Annual Maintenance Costs	
Materials	\$5,233
Labor	\$23,585
Fuel	\$585
Water	\$15,000
<b>Total Cost</b>	<b>\$44,404</b>

### General Turf Maintenance - Soccer Field

Labor	Staff	Frequency	Hours Per	Annual Labor Hours	Hourly Rate w Burden	Cost
Mowing (Fall / Winter)	Groundskeeper II	Weekly	2.5	65	\$ 49.37	\$ 3,208.92
Mowing (Spring /Summer)	Groundskeeper II	2x / Week	5.5	143	\$ 49.37	\$ 7,059.62
Edging	Groundskeeper II	Weekly	2.5	130	\$ 49.37	\$ 6,417.84
Aerating	Park Maintenance Supervisor	Twice / yr	3	6	\$ 66.27	\$ 397.60
	Sr. Groundskeeper	Twice / yr	3	6	\$ 55.10	\$ 330.58
	Groundskeeper II	Twice / yr	3	6	\$ 49.37	\$ 296.21
Fertilizing	Sr. Groundskeeper	Twice / yr	2	4	\$ 49.37	\$ 197.47
	Groundskeeper II	Twice / yr	2	4	\$ 49.37	\$ 197.47
Spot Seed	Groundskeeper II	Twice / yr	4	8	\$ 49.37	\$ 394.94
Verticut Turf	Groundskeeper II	Twice / yr	8	16	\$ 49.37	\$ 789.89
Irrigation Checks / Repairs	Irrigation Technician	Daily Check, Monthly Test, and as needed repairs		80	\$ 53.69	\$ 4,294.88
<b>Total Labor</b>						<b>\$ 23,585.43</b>

Category	Material / Staff	Unit Measure	Quantity	Cost Per	Cost	Total Costs
Supplies / Materials	Top Soil	Tons	35	\$ 19	\$655.99	
	Perennial Rye Seed	50lb bags	4	\$ 116	\$463.05	
	Bermuda Seed	50lb bags	1	\$ 331	\$330.75	
	Fertilizer	50lb bags	16	\$ 21	\$335.16	
	Sequoia Red Moss Topper	cu yards	20	\$ 47	\$948.15	
	Irrigation Supplies	As Needed				\$2,500.00
<b>Total Materials</b>						<b>\$5,233.10</b>

Utility	Units	Annual Use	Cost Per	Total
Fuel to Mow	2.5 Gallons/Mow	195	\$3.00	\$585.00
Water	Gallons	2,500,000	\$0.0060	\$15,000.00

<b>Annual Renovation Costs (Sod)</b>						
Materials	\$5,647					
Equipment Rentals	\$4,600					
Contract Work (grading / sod)	\$58,800					
Labor	\$11,099					
<b>Total Cost</b>	<b>\$80,146</b>					

<b>Estimated Field Renovation Costs - Sod (90,000 sq. ft. Complex soccer field)</b>							
Category	Material / Staff	Unit Measure	Quantity	Cost Per	Cost	Total Costs	
Supplies / Materials	Top Soil	Tons	150	\$ 19	\$2,811.38		
	Fertilizer	50lb bags	16	\$ 21	\$335.16		
	Irrigation Supplies	As Needed			\$2,500.00	<b>\$5,646.54</b>	
Equipment Rentals	Stripping	Day	1	\$ 2,250	\$2,250.00		
	Top Dresser	Day	1	\$ 1,200	\$1,200.00		
	Heavy Roller	Day	1	\$ 1,150	\$1,150.00	<b>\$4,600.00</b>	
In House Staff Labor	Park Services Manager	Hours	22	\$ 83.27	\$1,831.85		
	Park Maintenance Supervisor	Hours	28	\$ 66.27	\$1,855.45		
	Sr. Groundskeeper	Hours	34	\$ 55.10	\$1,873.30		
	Irrigation Technician	Hours	27	\$ 53.69	\$1,449.63		
	Groundskeeper II	Hours	51	\$ 49.37	\$2,517.87		
	Groundskeeper I	Hours	43	\$ 36.53	\$1,570.92	<b>\$11,099.02</b>	
Lasergrading	Contract Labor	rip, till, grade	1	\$ 12,000	\$12,000.00	<b>\$12,000.00</b>	
Sod Purchase and Installation	Contract Labor	Square Feet	90,000	\$ 0.52	\$46,800.00	<b>\$46,800.00</b>	
<b>Total Cost</b>					<b>\$80,145.55</b>	<b>\$ 80,145.55</b>	

Annual Renovation Costs (Seed)						
Materials	\$13,507					
Equipment Rentals	\$4,600					
Contract Work (grading)	\$6,000					
Labor	\$8,801					
<b>Total Cost</b>	<b>\$32,909</b>					
<b>Estimated Field Renovation Costs - Seed (90,000 sq. ft. Complex soccer field)</b>						
Category	Material / Staff	Unit Measure	Quantity	Cost Per	Cost	Total Costs
Supplies / Materials	Top Soil	Tons	150	\$ 19	\$2,811.38	
	Perrenial Rye Seed	50lb bags	18	\$ 116	\$2,083.73	
	Bermuda Seed	50lb bags	6	\$ 331	\$1,984.50	
	Fertilizer	50lb bags	16	\$ 21	\$335.16	
	Sequoia Red Moss Topper	cu yards	80	\$ 47	\$3,792.60	
	Irrigation Supplies	As Needed			\$2,500.00	<b>\$13,507.36</b>
Equipment Rentals	Stripping	Day	1	\$ 2,250	\$2,250.00	
	Top Dresser	Day	1	\$ 1,200	\$1,200.00	
	Heavy Roller	Day	1	\$ 1,150	\$1,150.00	<b>\$4,600.00</b>
In House Staff Labor	Park Services Manager	Hours	16	\$ 83.27	\$1,332.26	
	Park Maintenance Supervisor	Hours	22	\$ 66.27	\$1,457.85	
	Sr. Groundskeeper	Hours	29	\$ 55.10	\$1,597.81	
	Irrigation Technician	Hours	15	\$ 53.69	\$805.35	
	Groundskeeper II	Hours	42	\$ 49.37	\$2,073.54	
	Groundskeeper I	Hours	42	\$ 36.53	\$1,534.39	<b>\$8,801.20</b>
Lasergrading	Contract Labor	no ripping, tilling	1	\$ 6,000	\$6,000.00	<b>\$6,000.00</b>
<b>Total Cost</b>					<b>\$32,908.56</b>	<b>\$ 32,908.56</b>

<b>Maintenance Costs for Natural Grass Soccer Field with EPIC System</b>						
<b>Annual Maintenance Costs</b>						
Materials	\$11,206					
Labor	\$28,362					
Fuel	\$585					
Water	\$9,000					
<b>Total Cost</b>	<b>\$49,153</b>					
<b>General Turf Maintenance - Soccer Field</b>						
Labor	Staff	Frequency	Hours Per	Annual Labor Hours	Hourly Rate w Burden	Cost
Mowing (Fall / Winter)	Groundskeeper II	Weekly	2.5	65	\$ 49.37	\$ 3,208.92
Mowing (Spring /Summer)	Groundskeeper II	2x / Week	5.5	143	\$ 49.37	\$ 7,059.62
Edging	Groundskeeper II	Weekly	2.5	130	\$ 49.37	\$ 6,417.84
Aerating	Park Maintenance Supervisor	Monthly	3	36	\$ 66.27	\$ 2,385.58
	Sr. Groundskeeper	Monthly	3	36	\$ 55.10	\$ 1,983.49
	Groundskeeper II	Monthly	3	36	\$ 49.37	\$ 1,777.25
Fertilizing	Sr. Groundskeeper	Monthly	2	24	\$ 49.37	\$ 1,184.83
	Groundskeeper II	Monthly	2	24	\$ 49.37	\$ 1,184.83
Spot Seed	Groundskeeper II	Monthly	4	48	\$ 49.37	\$ 2,369.66
Verticut Turf	Groundskeeper II	Twice / yr	8	16	\$ 49.37	\$ 789.89
Irrigation Checks / Repairs	Irrigation Technician	Daily Check,		0	\$ 53.69	\$ -
		Monthly Test, and as needed repairs				
<b>Total Labor</b>						<b>\$ 28,361.92</b>
Category	Material / Staff	Unit Measure	Quantity	Cost Per	Cost	Total Costs
Supplies / Materials	Proprietary Sand	Tons	35	\$ 28	\$983.98	
	Perennial Rye Seed	50lb bags	24	\$ 116	\$2,778.30	
	Bermuda Seed	50lb bags	6	\$ 331	\$1,984.50	
	Fertilizer	50lb bags	96	\$ 21	\$2,010.96	
	Sequoia Red Moss Topper	cu yards	20	\$ 47	\$948.15	
	Irrigation Supplies	As Needed				\$2,500.00
<b>Total Materials*</b>						<b>\$11,205.89</b>
<b>*Materials and Labor for aerating, seeding (6 times per year), and fertilization have been adjusted to reflect monthly application.</b>						
<b>Proprietary Sand costs higher than the soil we purchase. Not having an actual cost per ton, it is estimated at 1.5 times soil.</b>						
Utility	Units	Annual Use	Cost Per	Total		
Fuel to Mow	2.5 Gallons/Mow	195	\$3.00	\$585.00		
Water**	Gallons	1,500,000	\$0.0060	\$9,000.00		
<b>**Water use is being estimated at 60% to that of natural turf; although not substantiated that these would be actual use reductions.</b>						

<b>Annual Renovation Costs (Sod)</b>	
Materials	\$7,052
Equipment Rentals	\$4,600
Contract Work (grading / sod)	\$58,800
Labor	\$11,099
<b>Total Cost</b>	<b>\$81,551</b>

<b>Estimated Field Renovation Costs - Sod (90,000 sq. ft. Complex soccer field)</b>						
Category	Material / Staff	Unit Measure	Quantity	Cost Per	Cost	Total Costs
Supplies / Materials	Top Soil	Tons	150	\$ 28	\$4,217.06	
	Fertilizer	50lb bags	16	\$ 21	\$335.16	
	Irrigation Supplies	As Needed			\$2,500.00	<b>\$7,052.22</b>
Equipment Rentals	Stripping	Day	1	\$ 2,250	\$2,250.00	
	Top Dresser	Day	1	\$ 1,200	\$1,200.00	
	Heavy Roller	Day	1	\$ 1,150	\$1,150.00	<b>\$4,600.00</b>
In House Staff Labor	Park Services Manager	Hours	22	\$ 83.27	\$1,831.85	
	Park Maintenance Supervisor	Hours	28	\$ 66.27	\$1,855.45	
	Sr. Groundskeeper	Hours	34	\$ 55.10	\$1,873.30	
	Irrigation Technician	Hours	27	\$ 53.69	\$1,449.63	
	Groundskeeper II	Hours	51	\$ 49.37	\$2,517.87	
	Groundskeeper I	Hours	43	\$ 36.53	\$1,570.92	<b>\$11,099.02</b>
Lasergrading	Contract Labor	rip, till, grade	1	\$ 12,000	\$12,000.00	<b>\$12,000.00</b>
Sod Purchase and Installation	Contract Labor	Square Feet	90,000	\$ 0.52	\$46,800.00	<b>\$46,800.00</b>
<b>Total Cost</b>					<b>\$81,551.24</b>	<b>\$ 81,551.24</b>



<b>Renovation Cost (Glorietta Ballfield)</b>					
<b>Category</b>			<b>Cost</b>		
Materials	Sand, gravel, top soil, brick dust		\$7,375.14		
Equipment Rentals	Stripping, Rolling		\$4,720.86		
Drainage Materials	Pipes		\$3,389.97		
In House Staff Labor			\$38,546.18		
Lasergrading	Contract Labor		\$14,900		
Sod Purchase and Installation	Contract Labor		\$38,500		
<b>Total Cost</b>			<b>\$107,432.15</b>		

### Maintenance Costs for Artificial Turf

<b>Annual Maintenance Costs</b>	
Materials	\$2,134
Labor	\$3,851
Contract labor	\$4,300
<b>Total Cost</b>	<b>\$10,285</b>

<b>Artificial Turf Maintenance - Soccer Field</b>						
Labor	Staff	Frequency	Hours Per	Annual Labor Hours	Hourly Rate w Burden	Cost
Brushing	Groundskeeper II	Bi-Weekly	1.5	39	\$ 49.37	\$ 1,925.35
Grooming	Groundskeeper II	Bi-Weekly	1.5	39	\$ 49.37	\$ 1,925.35
Decompaction	Contract Labor	Annually				\$ 3,500.00
*Repairs	Contract Labor	As Needed, once every five years				\$ 800.00
<b>Total Labor</b>						<b>\$ 8,150.70</b>
Category	Material / Staff	Unit Measure	Quantity	Cost Per	Cost	Total Costs
**Supplies/Materials	Geofill infill	lb	2200	\$ 0.97	\$2,134.00	\$ 2,134.00
<b>Total Materials</b>						<b>\$2,134.00</b>

\*Repairs: most seam tears are covered under warranty.

Wear and tear is estimated to need repairs every 5 years; at a cost of \$4,000, on averages \$800 per year.

\*\*Geofill material is provided during construction & included as part of the annual de-compaction of the fields. Geofill ships in a 2,200 lb sack for \$2,134; this amount is used to estimate cost for annual infill material