



LIFE CYCLE COST ANALYSIS



LIFE CYCLE COST ANALYSIS

80,000 SF Multipurpose Field	NATURAL GRASS				NATURAL GRASS				NATURAL GRASS				NATURAL GRASS				SYNTHETIC TURF			
	Sod on Native				Sand Cap				Perched Water Table/USGA Profile				Hybrid w/Perched Water Table				Synthetic Turf w/Pad			
Construction Costs	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount
Mass Excavate to Field Subgrade	80,000	SF	\$ 0.25	\$ 20,000	80,000	SF	\$ 0.75	\$ 60,000	80,000	SF	\$ 1.00	\$ 80,000	80,000	SF	\$ 1.00	\$ 80,000	80,000	cy	\$ 1.00	\$ 80,000
Load/Haul Spoils	250	cy	\$ 65.00	\$ 16,250	1,900	cy	\$ 65.00	\$ 123,500	3,700	cy	\$ 65.00	\$ 240,500	3,700	cy	\$ 65.00	\$ 240,500	250	cy	\$ 65.00	\$ 16,250
Fine Grading	80,000	sf	\$ 0.25	\$ 20,000	80,000	sf	\$ 0.25	\$ 20,000	80,000	sf	\$ 0.25	\$ 20,000	80,000	sf	\$ 0.25	\$ 20,000	80,000	sf	\$ 0.25	\$ 20,000
Field Drainage	-		\$ -	\$ -	80,000	sf	\$ 1.00	\$ 80,000	80,000	sf	\$ 5.00	\$ 400,000	80,000	sf	\$ 5.00	\$ 400,000	80,000	sf	\$ 4.00	\$ 320,000
Stone Base	-		\$ -	\$ -	-		\$ -	\$ -	-		\$ -	\$ -	-		\$ -	\$ -	80,000	sf	\$ 2.50	\$ 200,000
Sand/Gravel	-	sf	\$ -	\$ -	80,000	sf	\$ 3.00	\$ 240,000	80,000	sf	\$ 4.00	\$ 320,000	80,000	sf	\$ 4.00	\$ 320,000	-		\$ -	\$ -
GeoTextile Fabric	-	sf	\$ -	\$ -	80,000	sf	\$ 0.35	\$ 28,000	80,000	sf	\$ 0.35	\$ 28,000	80,000	sf	\$ 0.35	\$ 28,000	-		\$ 0.35	\$ -
Pad	-		\$ -	\$ -	-		\$ -	\$ -	-		\$ -	\$ -	-		\$ -	\$ -	80,000	sf	\$ 2.25	\$ 180,000
Field Irrigation	80,000	sf	\$ 2.50	\$ 200,000	80,000	sf	\$ 2.50	\$ 200,000	80,000	sf	\$ 2.50	\$ 200,000	80,000	sf	\$ 2.50	\$ 200,000	-	ea	\$ -	\$ -
Syringing System	-		\$ -	\$ -	-		\$ -	\$ -	-		\$ -	\$ -	-		\$ -	\$ -	80,000	sf	\$ 2.50	\$ 200,000
Concrete Curbs	-	sf	\$ -	\$ -	-	sf	\$ 0.50	\$ -	-	sf	\$ 0.50	\$ -	-	sf	\$ 0.50	\$ -	1,200	lf	\$ 40.00	\$ 48,000
Natural/Artificial Turf	80,000	-	\$ 1.25	\$ 100,000	80,000	-	\$ 1.25	\$ 100,000	80,000	-	\$ 1.25	\$ 100,000	80,000	-	\$ 8.00	\$ 640,000	80,000	sf	\$ 6.75	\$ 540,000
90 Day Maintenance Period	1	ls	\$ 60,000	\$ 60,000	1	ls	\$ 60,000	\$ 60,000	1	ls	\$ 60,000	\$ 60,000	1	ls	\$ 60,000	\$ 60,000	-		\$ -	\$ -
Subtotal Construction Costs:				\$ 416,250				\$ 911,500				\$ 1,448,500				\$ 1,988,500				\$ 1,604,250
Indirect Costs:																				
Contingency	10.00%			\$ 41,625	10.00%			\$ 91,150	10.00%			\$ 144,850	10.00%			\$ 198,850	10.00%			\$ 160,425
General Conditions	5.00%			\$ 20,813	5.00%			\$ 45,575	5.00%			\$ 72,425	5.00%			\$ 99,425	5.00%			\$ 80,213
Insurance	1.45%			\$ 6,036	1.45%			\$ 13,217	1.45%			\$ 21,003	1.45%			\$ 28,833	1.45%			\$ 23,262
Bonds	1.15%			\$ 4,787	1.15%			\$ 10,482	1.15%			\$ 16,658	1.15%			\$ 22,868	1.15%			\$ 18,449
Overhead & Fee	5.00%			\$ 20,813	5.00%			\$ 45,575	5.00%			\$ 72,425	5.00%			\$ 99,425	5.00%			\$ 80,213
Subtotal Indirect Costs				\$ 94,073				\$ 205,999				\$ 327,361				\$ 449,401				\$ 362,561
Total Field Construction Costs				\$ 510,323				\$ 1,117,499				\$ 1,775,861				\$ 2,437,901				\$ 1,966,811
Renovation Costs																				
Field Replacement - Year 10	80,000	sf	\$ 1.50	\$ 120,000	80,000	sf	\$ 2.00	\$ 160,000	80,000	sf	\$ 2.00	\$ 160,000	80,000	sf	\$ 10.00	\$ 800,000	80,000	sf	\$ 8.00	\$ 640,000
Field Replacement - Year 20	80,000	sf	\$ 1.50	\$ 120,000	80,000	sf	\$ 4.00	\$ 320,000	80,000	sf	\$ 4.00	\$ 320,000	80,000	sf	\$ 13.00	\$ 1,040,000	80,000	sf	\$ 9.50	\$ 760,000
Total Renovation Costs				\$ 240,000				\$ 480,000				\$ 480,000				\$ 1,840,000				\$ 1,400,000
Maintenance Costs:	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount	Qty	Unit	Unit Cost	Amount
Natural Grass Maintenance	1	yrs	\$ 42,000	\$ 42,000	1	yrs	\$ 65,000	\$ 65,000	1	yrs	\$ 65,000	\$ 65,000	1	yrs	\$ 65,000	\$ 65,000				\$ -
Synthetic Turf Maintenance																	1	yrs	\$ 6,000	\$ 6,000
Inflation @ 2%, total 20 years				\$ 1,020,490				\$ 1,579,329				\$ 1,579,329				\$ 1,579,329				\$ 145,784
Total Maintenance Costs				\$ 1,020,490				\$ 1,579,329				\$ 1,579,329				\$ 1,579,329				\$ 145,784
Total Ownership (20 years)				\$ 1,770,812				\$ 3,176,828				\$ 3,835,190				\$ 5,857,230				\$ 3,512,595
Hour Use			low	high			low	high			low	high			low	high			low	high
Annual			400	600			800	1000			800	1200			1200	1800			2000	2500
20 year			8000	12000			16000	20000			16000	24000			24000	36000			40000	50000
Cost per Hour of Use			\$221.35	\$147.57			\$198.55	\$158.84			\$239.70	\$159.80			\$244.05	\$162.70			\$87.81	\$70.25
Average			\$184				\$179				\$200				\$203				\$79	