



Appendix F  
Life Cycle Cost Analysis

ORIGINAL DESIGN LIFE CYCLE COST (PRESENT VALUE):

Life Cycle Cost Evaluation of Original SLCC Design

Year	First Cost / Replacement Cost	Annual Energy Cost		Annual Maint. Cost		TOTAL	Comments
		Electricity	Nat. Gas	Roof	Mech. Sys.		
0	\$22,810,424					\$22,810,424	From Heery Estimate
1		\$151,765	\$1,237	\$9,935	\$115,063	\$278,000	From HAP Model, Assumptions
2		\$144,451	\$1,149	\$9,462	\$109,584	\$264,646	
3		\$141,615	\$1,099	\$9,282	\$107,497	\$259,492	
4		\$138,834	\$1,051	\$9,105	\$105,449	\$254,439	
5		\$136,108	\$1,005	\$8,932	\$103,441	\$249,485	
6		\$133,435	\$961	\$8,761	\$101,470	\$244,628	
7		\$130,815	\$919	\$8,594	\$99,538	\$239,866	
8		\$128,246	\$879	\$8,431	\$97,642	\$235,198	
9		\$125,856	\$871	\$8,270	\$95,782	\$230,779	
10	\$313,191	\$123,510	\$864	\$8,113	\$93,957	\$539,635	Regular Mech. Sys. Upgrade
11		\$121,208	\$856	\$7,958	\$92,168	\$222,190	
12		\$118,949	\$849	\$7,807	\$90,412	\$218,016	
13		\$116,731	\$841	\$7,658	\$88,690	\$213,920	
14		\$114,556	\$834	\$7,512	\$87,001	\$209,902	
15		\$112,420	\$826	\$7,369	\$85,343	\$205,959	
16		\$110,325	\$819	\$7,229	\$83,718	\$202,090	
17		\$108,268	\$812	\$7,091	\$82,123	\$198,294	
18		\$106,250	\$805	\$6,956	\$80,559	\$194,570	
19		\$104,270	\$798	\$6,823	\$79,025	\$190,915	
20	\$2,071,850	\$102,326	\$790	\$6,693	\$77,519	\$2,259,179	Regular Mech / Roof Overhaul
21		\$100,419	\$784	\$6,566	\$76,043	\$183,811	
22		\$98,547	\$777	\$6,441	\$74,594	\$180,359	
23		\$96,710	\$770	\$6,318	\$73,173	\$176,972	
24		\$94,908	\$763	\$6,198	\$71,780	\$173,648	
25		\$93,139	\$756	\$6,080	\$70,412	\$170,387	
26		\$91,402	\$750	\$5,964	\$69,071	\$167,187	
27		\$89,699	\$743	\$5,850	\$67,756	\$164,048	
28		\$88,027	\$736	\$5,739	\$66,465	\$160,967	
29		\$86,386	\$730	\$5,630	\$65,199	\$157,944	
30	\$213,191	\$84,776	\$723	\$5,522	\$63,957	\$368,169	Regular Mech. Sys. Upgrade
31		\$83,196	\$717	\$5,417	\$62,739	\$152,069	
32		\$81,645	\$711	\$5,314	\$61,544	\$149,213	
33		\$80,123	\$704	\$5,213	\$60,372	\$146,412	
34		\$78,629	\$698	\$5,113	\$59,222	\$143,663	
35		\$77,164	\$692	\$5,016	\$58,094	\$140,966	
36		\$75,726	\$686	\$4,921	\$56,987	\$138,319	
37		\$74,314	\$680	\$4,827	\$55,902	\$135,722	
38		\$72,929	\$674	\$4,735	\$54,837	\$133,174	
39		\$71,569	\$668	\$4,645	\$53,792	\$130,674	
40	\$1,410,317	\$70,235	\$662	\$4,556	\$52,768	\$1,538,539	Regular Mech / Roof Overhaul
41		\$68,926	\$656	\$4,469	\$51,763	\$125,815	
42		\$67,641	\$650	\$4,384	\$50,777	\$123,453	
43		\$66,381	\$645	\$4,301	\$49,810	\$121,136	
44		\$65,143	\$639	\$4,219	\$48,861	\$118,862	
45		\$63,929	\$633	\$4,138	\$47,930	\$116,631	
46		\$62,737	\$628	\$4,060	\$47,017	\$114,442	
47		\$61,568	\$622	\$3,982	\$46,122	\$112,294	
48		\$60,420	\$617	\$3,906	\$45,243	\$110,187	
49		\$59,294	\$611	\$3,832	\$44,381	\$108,119	
50		\$58,189	\$606	\$3,759	\$43,536	\$106,090	
						<b>\$35,590,899</b>	

PROPOSED DESIGN LIFE CYCLE COST (PRESENT VALUE):

Life Cycle Cost Evaluation of Proposed SLCC Design

Year	First Cost / Replacement Cost	Annual Energy Cost		Annual Maint. Cost		TOTAL	Comments
		Electricity	Nat. Gas	Roof	Mech. Sys.		
0	\$23,891,764					\$23,891,764	From Heery Estimate
1		\$121,368	\$494	\$9,776	\$114,408	\$246,046	From HAP Model, Assumptions
2		\$115,519	\$459	\$9,310	\$108,960	\$234,248	
3		\$113,251	\$439	\$9,133	\$106,884	\$229,707	
4		\$111,027	\$420	\$8,959	\$104,848	\$225,254	
5		\$108,847	\$401	\$8,789	\$102,851	\$220,888	
6		\$106,710	\$384	\$8,621	\$100,892	\$216,607	
7		\$104,614	\$367	\$8,457	\$98,970	\$212,409	
8		\$102,560	\$351	\$8,296	\$97,085	\$208,292	
9		\$100,648	\$348	\$8,138	\$95,236	\$204,370	
10	\$373,688	\$98,772	\$345	\$7,983	\$93,422	\$574,209	Regular Mech. Sys. Upgrade
11		\$96,931	\$342	\$7,831	\$91,642	\$196,746	
12		\$95,124	\$339	\$7,682	\$89,897	\$193,042	
13		\$93,351	\$336	\$7,535	\$88,185	\$189,407	
14		\$91,611	\$333	\$7,392	\$86,505	\$185,841	
15		\$89,904	\$330	\$7,251	\$84,857	\$182,342	
16		\$88,228	\$327	\$7,113	\$83,241	\$178,909	
17		\$86,583	\$324	\$6,977	\$81,655	\$175,540	
18		\$84,969	\$321	\$6,844	\$80,100	\$172,235	
19		\$83,386	\$318	\$6,714	\$78,574	\$168,992	
20	\$2,312,326	\$81,831	\$316	\$6,586	\$77,078	\$2,478,137	Regular Mech / Roof Overhaul
21		\$80,306	\$313	\$6,461	\$75,609	\$162,689	
22		\$78,809	\$310	\$6,338	\$74,169	\$159,626	
23		\$77,340	\$307	\$6,217	\$72,756	\$156,621	
24		\$75,899	\$305	\$6,099	\$71,371	\$153,672	
25		\$74,484	\$302	\$5,982	\$70,011	\$150,779	
26		\$73,095	\$299	\$5,868	\$68,678	\$147,941	
27		\$71,733	\$297	\$5,757	\$67,370	\$145,156	
28		\$70,396	\$294	\$5,647	\$66,086	\$142,423	
29		\$69,084	\$291	\$5,539	\$64,827	\$139,742	
30	\$254,371	\$67,796	\$289	\$5,434	\$63,593	\$391,482	Regular Mech. Sys. Upgrade
31		\$66,532	\$286	\$5,330	\$62,381	\$134,530	
32		\$65,292	\$284	\$5,229	\$61,193	\$131,998	
33		\$64,075	\$281	\$5,129	\$60,028	\$129,513	
34		\$62,881	\$279	\$5,032	\$58,884	\$127,075	
35		\$61,709	\$276	\$4,936	\$57,763	\$124,683	
36		\$60,558	\$274	\$4,842	\$56,662	\$122,337	
37		\$59,430	\$272	\$4,750	\$55,583	\$120,034	
38		\$58,322	\$269	\$4,659	\$54,524	\$117,774	
39		\$57,235	\$267	\$4,570	\$53,486	\$115,558	
40	\$1,574,011	\$56,168	\$264	\$4,483	\$52,467	\$1,687,393	Regular Mech / Roof Overhaul
41		\$55,121	\$262	\$4,398	\$51,468	\$111,249	
42		\$54,094	\$260	\$4,314	\$50,487	\$109,155	
43		\$53,085	\$257	\$4,232	\$49,526	\$107,100	
44		\$52,096	\$255	\$4,151	\$48,582	\$105,085	
45		\$51,125	\$253	\$4,072	\$47,657	\$103,107	
46		\$50,172	\$251	\$3,995	\$46,749	\$101,166	
47		\$49,237	\$248	\$3,919	\$45,859	\$99,262	
48		\$48,319	\$246	\$3,844	\$44,985	\$97,394	
49		\$47,418	\$244	\$3,771	\$44,128	\$95,561	
50		\$46,534	\$242	\$3,699	\$43,288	\$93,763	
						<b>\$36,168,854</b>	