

Table C- 1: Total Costs Summary by Alternative (in 2007 Dollars)

ALTERNATIVE	BUILDING TREATMENT COSTS	INFRASTRUCTURE COSTS	ARCHEOLOGICAL COSTS	VEGETATION MANAGEMENT	RESOURCE EDUCATION COMPONENT COSTS	SUBTOTAL OF COSTS BY ALTERNATIVE (2007 DOLLARS)*	GROSS CONSTRUCTION COST ADJUSTMENT FOR ADDITIONAL SERVICES AND CONTINGENCIES**	ANNUAL OPERATION AND MAINTENANCE COSTS	TOTAL COST BY ALTERNATIVE (2007 DOLLARS)
No Action	\$877,581	\$0	\$85,120	\$16,800	\$0	\$979,501	\$342,825	\$52,360	\$1,374,687
A	\$877,581	\$0	\$85,120	\$44,800	\$17,472	\$1,024,973	\$358,741	\$53,767	\$1,437,481
B	\$2,466,505	\$606,456	\$107,520	\$16,800	\$145,376	\$3,342,658	\$1,169,930	\$127,025	\$4,639,613
C	\$3,222,833	\$611,892	\$107,520	\$16,800	\$145,376	\$4,104,421	\$1,436,547	\$130,945	\$5,671,913
D1	\$4,987,451	\$1,744,462	\$127,680	\$16,800	\$201,152	\$7,077,544	\$2,477,141	\$207,875	\$9,762,560
D2	\$11,861,885	\$1,933,320	\$127,680	\$16,800	\$201,152	\$14,140,838	\$4,949,293	\$262,763	\$19,352,893
E1	\$6,900,889	\$2,478,393	\$132,160	\$16,800	\$171,584	\$9,699,826	\$3,394,939	\$373,075	\$13,467,840
E2	\$12,142,064	\$3,371,103	\$132,160	\$16,800	\$180,320	\$15,842,447	\$5,544,856	\$400,874	\$21,788,177
F1	\$12,255,233	\$3,813,173	\$141,120	\$16,800	\$171,584	\$16,397,911	\$5,739,269	\$390,792	\$22,527,971
F2	\$17,526,897	\$4,215,663	\$141,120	\$16,800	\$180,320	\$22,080,801	\$7,728,280	\$409,199	\$30,218,280

\* component costs were calculated in 2004 and escalated by 4% per year to account for annual inflation

\*\*gross construction cost adjustment is 35% of subtotal (net construction costs) and includes costs for supplemental services, predesign services, design services, construction supervision, and construction contingencies

Table C- 2: Estimated Net Construction Costs

	NO ACTION	ALTERNATIVE								
		A	B	C	D1	D2	E1	E2	F1	F2
SUB- TOTAL BUILDING TREATMENT COST IN 2004 DOLLARS (Taken from Summary of Estimated Cost of Building Treatments by Alternative)	\$783,555	\$783,555	\$2,202,237	\$2,877,529	\$4,282,170	\$10,420,058	\$5,783,960	\$10,027,977	\$10,057,741	\$14,301,758
TOTAL FOR FURNITURE, FIXTURES AND EQUIPMENT FOR PUBLIC LODGING NOT COVERED IN OTHER CATEGORIES*							\$199,396	\$634,999	\$884,432	\$1,347,257
TOTAL FOR FURNITURE, FIXTURES AND EQUIPMENT FOR VISITING SCIENTIST LODGING NOT COVERED IN OTHER CATEGORIES					\$170,911	\$170,911	\$178,152	\$178,152		
TOTAL BUILDING TREATMENT COST (in 2004)	\$783,555	\$783,555	\$2,202,237	\$2,877,529	\$4,453,081	\$10,590,969	\$6,161,508	\$10,841,128	\$10,942,173	\$15,649,015
TOTAL BUILDING TREATMENT COST (in 2007)	\$877,581	\$877,581	\$2,466,505	\$3,222,833	\$4,987,451	\$11,861,885	\$6,900,889	\$12,142,064	\$12,255,233	\$17,526,897
INFRASTRUCTURE COMPONENTS										
PROPOSED PARKING IMPROVEMENTS TOTAL			\$270,810	\$270,810	\$301,354	\$408,654	\$301,354	\$569,784	\$508,221	\$817,310
WASTEWATER SYSTEM IMPROVEMENTS			\$41,334	\$41,334	\$438,914	\$442,804	\$857,930	\$911,210	\$1,118,750	\$1,122,430
ROAD AND ACCESS SYSTEM IMPROVEMENTS			\$141,718	\$146,572	\$365,150	\$375,986	\$420,625	\$849,381	\$871,470	\$871,470
WATER SYSTEM IMPROVEMENTS			\$51,617	\$51,617	\$391,138	\$437,735	\$542,942	\$589,539	\$786,178	\$832,775
TOTAL ELECTRIC SERVICE AND LINES			\$500	\$500	\$20,000	\$20,000	\$40,000	\$40,000	\$55,000	\$55,000
TOTAL PHONE SERVICE			\$35,500	\$35,500	\$41,000	\$41,000	\$50,000	\$50,000	\$65,000	\$65,000
TOTAL FOR INFRASTRUCTURE in 2004 (Parking, Roads, Water, Wastewater, Electric and Phone)			\$541,479	\$546,332	\$1,557,555	\$1,726,179	\$2,212,851	\$3,009,914	\$3,404,619	\$3,763,985
ARCHEOLOGICAL SURVEY, EVALUATION AND MONITORING 2004 COSTS (from Table C- 5)	\$76,000	\$76,000	\$96,000	\$96,000	\$114,000	\$114,000	\$118,000	\$118,000	\$126,000	\$126,000
VEGETATION MANAGEMENT 2004 COSTS	\$15,000	\$40,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
RESOURCE EDUCATION COMPONENTS 2004 COSTS	\$0	\$15,600	\$129,800	\$129,800	\$179,600	\$179,600	\$153,200	\$161,000	\$153,200	\$161,000
TOTAL NET CONSTRUCTION COST BY ALTERNATIVE IN 2004	\$874,555	\$915,155	\$2,984,516	\$3,664,662	\$6,319,236	\$12,625,748	\$8,660,559	\$14,145,042	\$14,640,992	\$19,715,001
TOTAL NET CONSTRUCTION COST BY ALTERNATIVE IN 2007	\$979,501	\$1,024,973	\$3,342,658	\$4,104,421	\$7,077,544	\$14,140,838	\$9,699,826	\$15,842,447	\$16,397,911	\$22,080,801

\* proposed to be funded by concessioner in Alternatives E and F



Table C- 3: Estimated Gross Project Costs with 20- Year Projections

	ALTERNATIVE									
	NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2
2004 Net Construction Costs (from Table C- 2)	\$874,555	\$915,155	\$2,984,516	\$3,664,662	\$6,319,236	\$12,625,748	\$8,660,559	\$14,145,042	\$14,640,992	\$19,715,001
2004 Net Construction Low Cost (- 10%)	\$787,099	\$823,639	\$2,686,064	\$3,298,195	\$5,687,312	\$11,363,173	\$7,794,503	\$12,730,538	\$13,176,893	\$17,743,500
Supplemental Services (2% of net const)	\$15,742	\$16,473	\$53,721	\$65,964	\$113,746	\$227,263	\$155,890	\$254,611	\$263,538	\$354,870
Predesign Services (5% of net constr)	\$39,355	\$41,182	\$134,303	\$164,910	\$284,366	\$568,159	\$389,725	\$636,527	\$658,845	\$887,175
Design Services (10% of net constr)	\$78,710	\$82,364	\$268,606	\$329,820	\$568,731	\$1,136,317	\$779,450	\$1,273,054	\$1,317,689	\$1,774,350
Construction Supervision (8% of net constr)	\$62,968	\$65,891	\$214,885	\$263,856	\$454,985	\$909,054	\$623,560	\$1,018,443	\$1,054,151	\$1,419,480
Construction Contingencies (10% of net constr)	\$78,710	\$82,364	\$268,606	\$329,820	\$568,731	\$1,136,317	\$779,450	\$1,273,054	\$1,317,689	\$1,774,350
Total 2004 Gross Construction Low Cost	\$1,062,584	\$1,111,913	\$3,626,187	\$4,452,564	\$7,677,872	\$15,340,284	\$10,522,579	\$17,186,226	\$17,788,805	\$23,953,726
2004 Net Construction High Cost (+25%)	\$1,093,193	\$1,143,943	\$3,730,645	\$4,580,827	\$7,899,045	\$15,782,185	\$10,825,698	\$17,681,302	\$18,301,240	\$24,643,751
Supplemental Services (2% of net const)	\$21,864	\$22,879	\$74,613	\$91,617	\$157,981	\$315,644	\$216,514	\$353,626	\$366,025	\$492,875
Predesign Services (5% of net constr)	\$54,660	\$57,197	\$186,532	\$229,041	\$394,952	\$789,109	\$541,285	\$884,065	\$915,062	\$1,232,188
Design Services (10% of net constr)	\$109,319	\$114,394	\$373,064	\$458,083	\$789,904	\$1,578,218	\$1,082,570	\$1,768,130	\$1,830,124	\$2,464,375
Construction Supervision (8% of net constr)	\$87,455	\$91,515	\$298,452	\$366,466	\$631,924	\$1,262,575	\$866,056	\$1,414,504	\$1,464,099	\$1,971,500
Construction Contingencies (10% of net constr)	\$109,319	\$114,394	\$373,064	\$458,083	\$789,904	\$1,578,218	\$1,082,570	\$1,768,130	\$1,830,124	\$2,464,375
Total 2004 Gross Construction High Cost	\$1,475,811	\$1,544,324	\$5,036,370	\$6,184,116	\$10,663,711	\$21,305,950	\$14,614,693	\$23,869,758	\$24,706,674	\$33,269,063
2007 Net Construction Costs (from Table C- 2)	\$979,501	\$1,024,973	\$3,342,658	\$4,104,421	\$7,077,544	\$14,140,838	\$9,699,826	\$15,842,447	\$16,397,911	\$22,080,801
2007 Net Construction Low Cost (- 10%)	\$881,551	\$922,476	\$3,008,392	\$3,693,979	\$6,369,790	\$12,726,754	\$8,729,843	\$14,258,202	\$14,758,120	\$19,872,721
Supplemental Services (2% of net const)	\$17,631	\$18,450	\$60,168	\$73,880	\$127,396	\$254,535	\$174,597	\$285,164	\$295,162	\$397,454
Predesign Services (5% of net constr)	\$44,078	\$46,124	\$150,420	\$184,699	\$318,489	\$636,338	\$436,492	\$712,910	\$737,906	\$993,636
Design Services (10% of net constr)	\$88,155	\$92,248	\$300,839	\$369,398	\$636,979	\$1,272,675	\$872,984	\$1,425,820	\$1,475,812	\$1,987,272
Construction Supervision (8% of net constr)	\$70,524	\$73,798	\$240,671	\$295,518	\$509,583	\$1,018,140	\$698,387	\$1,140,656	\$1,180,650	\$1,589,818
Construction Contingencies (10% of net constr)	\$88,155	\$92,248	\$300,839	\$369,398	\$636,979	\$1,272,675	\$872,984	\$1,425,820	\$1,475,812	\$1,987,272
Total 2007 Gross Construction Low Cost	\$1,190,094	\$1,245,343	\$4,061,329	\$4,986,871	\$8,599,216	\$17,181,118	\$11,785,288	\$19,248,573	\$19,923,462	\$26,828,173
2007 Net Construction High Cost (+25%)	\$1,224,377	\$1,281,217	\$4,178,322	\$5,130,526	\$8,846,930	\$17,676,047	\$12,124,782	\$19,803,059	\$20,497,389	\$27,601,001
Supplemental Services (2% of net const)	\$24,488	\$25,624	\$83,566	\$102,611	\$176,939	\$353,521	\$242,496	\$396,061	\$409,948	\$552,020
Predesign Services (5% of net constr)	\$61,219	\$64,061	\$208,916	\$256,526	\$442,347	\$883,802	\$606,239	\$990,153	\$1,024,869	\$1,380,050
Design Services (10% of net constr)	\$122,438	\$128,122	\$417,832	\$513,053	\$884,693	\$1,767,605	\$1,212,478	\$1,980,306	\$2,049,739	\$2,760,100
Construction Supervision (8% of net constr)	\$97,950	\$102,497	\$334,266	\$410,442	\$707,754	\$1,414,084	\$969,983	\$1,584,245	\$1,639,791	\$2,208,080
Construction Contingencies (10% of net constr)	\$122,438	\$128,122	\$417,832	\$513,053	\$884,693	\$1,767,605	\$1,212,478	\$1,980,306	\$2,049,739	\$2,760,100
Total 2007 Gross Construction High Cost	\$1,652,908	\$1,729,642	\$5,640,735	\$6,926,210	\$11,943,356	\$23,862,663	\$16,368,456	\$26,734,129	\$27,671,475	\$37,261,351



Table C- 3a: 20- Year Projection of Estimated Gross Project Costs

20- YEAR COSTS (USING 2004 GROSS LOW CONSTRUCTION COST)		ALTERNATIVE									
		NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2
2004 Low Costs	\$1,062,584	\$1,111,913	\$3,626,187	\$4,452,564	\$7,677,872	\$15,340,284	\$10,522,579	\$17,186,226	\$17,788,805	\$23,953,726	
YEAR 1	\$1,105,087	\$1,156,389	\$3,771,234	\$4,630,666	\$7,984,987	\$15,953,895	\$10,943,482	\$17,873,675	\$18,500,357	\$24,911,875	
2	\$1,149,291	\$1,202,645	\$3,922,083	\$4,815,893	\$8,304,386	\$16,592,051	\$11,381,221	\$18,588,622	\$19,240,372	\$25,908,350	
3	\$1,195,262	\$1,250,751	\$4,078,967	\$5,008,529	\$8,636,561	\$17,255,733	\$11,836,470	\$19,332,167	\$20,009,987	\$26,944,684	
4	\$1,243,073	\$1,300,781	\$4,242,125	\$5,208,870	\$8,982,024	\$17,945,962	\$12,309,929	\$20,105,453	\$20,810,386	\$28,022,471	
5	\$1,292,796	\$1,352,812	\$4,411,810	\$5,417,225	\$9,341,305	\$18,663,801	\$12,802,326	\$20,909,672	\$21,642,801	\$29,143,370	
6	\$1,344,508	\$1,406,925	\$4,588,283	\$5,633,914	\$9,714,957	\$19,410,353	\$13,314,419	\$21,746,058	\$22,508,514	\$30,309,105	
7	\$1,398,288	\$1,463,202	\$4,771,814	\$5,859,270	\$10,103,555	\$20,186,767	\$13,846,996	\$22,615,901	\$23,408,854	\$31,521,469	
8	\$1,454,220	\$1,521,730	\$4,962,687	\$6,093,641	\$10,507,698	\$20,994,237	\$14,400,876	\$23,520,537	\$24,345,208	\$32,782,328	
9	\$1,512,388	\$1,582,599	\$5,161,194	\$6,337,387	\$10,928,005	\$21,834,007	\$14,976,911	\$24,461,358	\$25,319,017	\$33,409,621	
10	\$1,572,884	\$1,645,903	\$5,367,642	\$6,590,882	\$11,365,126	\$22,707,367	\$15,575,987	\$25,439,813	\$26,331,777	\$35,457,365	
11	\$1,635,799	\$1,711,739	\$5,582,348	\$6,854,517	\$11,819,731	\$23,615,662	\$16,199,027	\$26,457,405	\$27,385,048	\$36,875,660	
12	\$1,701,231	\$1,780,209	\$5,805,642	\$7,128,698	\$12,292,520	\$24,560,288	\$16,846,988	\$27,515,701	\$28,480,450	\$38,350,687	
13	\$1,769,280	\$1,851,417	\$6,037,867	\$7,413,846	\$12,784,221	\$25,542,700	\$17,520,867	\$28,616,329	\$29,619,668	\$39,884,714	
14	\$1,840,052	\$1,925,474	\$6,279,382	\$7,710,400	\$13,295,590	\$26,564,408	\$18,221,702	\$29,760,983	\$30,804,455	\$41,480,103	
15	\$1,913,654	\$2,002,492	\$6,530,557	\$8,018,816	\$13,827,413	\$27,626,984	\$18,950,570	\$30,951,422	\$32,036,633	\$43,139,307	
16	\$1,990,200	\$2,082,592	\$6,791,779	\$8,339,568	\$14,380,510	\$28,732,064	\$19,708,593	\$32,189,479	\$33,318,099	\$44,864,879	
17	\$2,069,808	\$2,165,896	\$7,063,451	\$8,673,151	\$14,955,730	\$29,881,346	\$20,496,936	\$33,477,058	\$34,650,822	\$46,659,474	
18	\$2,152,600	\$2,252,532	\$7,345,989	\$9,020,077	\$15,553,959	\$31,076,600	\$21,316,814	\$34,816,140	\$36,036,855	\$48,525,853	
19	\$2,238,704	\$2,342,633	\$7,639,828	\$9,380,880	\$16,176,118	\$32,319,664	\$22,169,487	\$36,208,786	\$37,478,330	\$50,466,887	
20	\$2,328,252	\$2,436,338	\$7,945,421	\$9,756,116	\$16,823,162	\$33,612,451	\$23,056,266	\$37,657,137	\$38,977,463	\$52,485,563	
20- YEAR COSTS (USING 2004 GROSS HIGH CONSTRUCTION COST)		NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2
2004 High Costs	\$1,475,811	\$1,544,324	\$5,036,370	\$6,184,116	\$10,663,711	\$21,305,950	\$14,614,693	\$23,869,758	\$24,706,674	\$33,269,063	
YEAR 1	\$1,534,844	\$1,606,097	\$5,237,825	\$6,431,481	\$11,090,259	\$22,158,188	\$15,199,281	\$24,824,549	\$25,694,941	\$34,599,826	
2	\$1,596,237	\$1,670,340	\$5,447,338	\$6,688,740	\$11,533,869	\$23,044,515	\$15,807,252	\$25,817,530	\$26,722,738	\$35,983,819	
3	\$1,660,087	\$1,737,154	\$5,665,232	\$6,956,290	\$11,995,224	\$23,966,296	\$16,439,542	\$26,850,232	\$27,791,648	\$37,423,172	
4	\$1,726,490	\$1,806,640	\$5,891,841	\$7,234,541	\$12,475,033	\$24,924,947	\$17,097,123	\$27,924,241	\$28,903,314	\$38,920,099	
5	\$1,795,550	\$1,878,906	\$6,127,514	\$7,523,923	\$12,974,035	\$25,921,945	\$17,781,008	\$29,041,211	\$30,059,447	\$40,476,903	
6	\$1,867,372	\$1,954,062	\$6,372,615	\$7,824,880	\$13,492,996	\$26,958,823	\$18,492,249	\$30,202,859	\$31,261,824	\$42,095,979	
7	\$1,942,067	\$2,032,224	\$6,627,520	\$8,137,875	\$14,032,716	\$28,037,176	\$19,231,939	\$31,410,973	\$32,512,297	\$43,779,818	
8	\$2,019,749	\$2,113,513	\$6,892,620	\$8,463,390	\$14,594,024	\$29,158,663	\$20,001,216	\$32,667,412	\$33,812,789	\$45,531,011	
9	\$2,100,539	\$2,198,054	\$7,168,325	\$8,801,926	\$15,177,785	\$30,325,010	\$20,801,265	\$33,974,109	\$35,165,301	\$47,352,251	
10	\$2,184,561	\$2,285,976	\$7,455,058	\$9,154,003	\$15,784,897	\$31,538,010	\$21,633,315	\$35,333,073	\$36,571,913	\$49,246,341	
11	\$2,271,943	\$2,377,415	\$7,753,261	\$9,520,163	\$16,416,293	\$32,799,530	\$22,498,648	\$36,746,396	\$38,034,789	\$51,216,195	
12	\$2,362,821	\$2,472,512	\$8,063,391	\$9,900,970	\$17,072,944	\$34,111,512	\$23,398,594	\$38,216,252	\$39,556,181	\$53,264,842	
13	\$2,457,334	\$2,571,412	\$8,385,927	\$10,297,008	\$17,755,862	\$35,475,972	\$24,334,538	\$39,744,902	\$41,138,428	\$55,395,436	
14	\$2,555,627	\$2,674,269	\$8,721,364	\$10,708,889	\$18,466,097	\$36,895,011	\$25,307,919	\$41,334,698	\$42,783,965	\$57,611,254	
15	\$2,657,852	\$2,781,240	\$9,070,218	\$11,137,244	\$19,204,741	\$38,370,811	\$26,320,236	\$42,988,086	\$44,495,324	\$59,915,704	
16	\$2,764,166	\$2,892,489	\$9,433,027	\$11,582,734	\$19,972,930	\$39,905,644	\$27,373,046	\$44,707,609	\$46,275,137	\$62,312,332	
17	\$2,874,733	\$3,008,189	\$9,810,348	\$12,046,043	\$20,771,847	\$41,501,870	\$28,467,967	\$46,495,914	\$48,126,142	\$64,804,825	
18	\$2,989,722	\$3,128,516	\$10,202,762	\$12,527,885	\$21,602,721	\$43,161,944	\$29,606,686	\$48,355,750	\$50,051,188	\$67,397,018	
19	\$3,109,311	\$3,253,657	\$10,610,872	\$13,029,000	\$22,466,830	\$44,888,422	\$30,790,953	\$50,289,980	\$52,053,236	\$70,092,899	
20	\$3,233,684	\$3,383,803	\$11,035,307	\$13,550,161	\$23,365,503	\$46,683,959	\$32,022,592	\$52,301,580	\$54,135,365	\$72,896,615	

Assumes 4 % annual inflation



Table C- 4: Summary of Estimated Costs for Building Treatments by Alternative\* (2004 Dollars)

Resource Name	Gross Area (Sq Ft)	Net Area (Sq Ft)	ALTERNATIVE										Comments
			NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2	
Appalachian Clubhouse (C)	5242	4010	\$12,400	\$12,400	\$437,090	\$437,090	\$437,090	\$437,090	\$441,090	\$441,090	\$482,670	\$482,670	RM based on \$0.28 per cf at 44,285 cf (2004 Means); for net sf - add screen porch and subtract basement; day use is based on sf x \$109; alt E- add 2- fixture bathroom @ \$2,000 each fixture (Means 2004); Alternative F - add 375 sf kitchen @ \$100 / sf (2004 Means); add kitchen sprinkler at \$10.88 / sf for 375 sf
			RM	RM	Day use	Day use	Day use	Day use	Day use	Day use	Day use and commercial kitchen	Day use and commercial kitchen	
Sneed (1)(C)	1160	1000	\$10,220	\$10,220	\$88,400	\$88,400	\$88,400	\$88,400	\$88,400	\$88,400	\$88,400	\$88,400	Hand removal is based on gross area x \$4.50 / sf + \$5,000 for 1- story cabin and \$7,000 for a 2- story cabin (Means 2004); Restore exterior and stabilize interior is priced at \$88.40 / sf of net area using Class C Guide at 2004 rate.
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Smith (2)(C)	1150	929	\$10,175	\$10,175	\$82,124	\$82,124	\$82,124	\$82,124	\$82,124	\$82,124	\$82,124	\$82,124	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Higdon (3)(C)	950	870	\$9,275	\$9,275	\$76,908	\$76,908	\$76,908	\$76,908	\$76,908	\$76,908	\$76,908	\$76,908	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Swan (4)(NC)	1180	1082	\$10,310	\$10,310	\$95,649	\$95,649	\$95,649	\$95,649	\$95,649	\$95,649	\$95,649	\$95,649	Alternatives B- F: Restore exterior as contributing
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Addicks (5) (C)	1020	960	\$9,590	\$9,590	\$84,864	\$84,864	\$84,864	\$84,864	\$84,864	\$84,864	\$84,864	\$84,864	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
"Adamless Eden" (C)**	140	131			\$5,790	\$5,790	\$5,790	\$5,790	\$5,790	\$5,790	\$5,790	\$5,790	
			included above	included above	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Creekmore (6)(C)	900	835	\$9,050	\$9,050	\$73,814	\$73,814	\$73,814	\$73,814	\$73,814	\$73,814	\$73,814	\$73,814	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Mayo (7)(C)	1100	1008	\$9,950	\$9,950	\$89,107	\$89,107	\$89,107	\$89,107	\$89,107	\$89,107	\$89,107	\$89,107	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Levi Trentham Log Cabin (7A)**	320	320	\$2,500	\$2,500	\$14,144	\$14,144	\$14,144	\$14,144	\$14,144	\$14,144	\$14,144	\$14,144	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Mayo Servants' Qtrs (7B) (C)**	280	280	\$2,500	\$2,500	\$12,376	\$12,376	\$12,376	\$12,376	\$12,376	\$12,376	\$12,376	\$12,376	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Cain (8)(C)	1200	1128	\$10,400	\$10,400	\$99,715	\$99,715	\$99,715	\$99,715	\$99,715	\$99,715	\$99,715	\$99,715	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Galyon (9)(C)	1170	1170	\$10,265	\$10,265	\$103,428	\$103,428	\$103,428	\$103,428	\$103,428	\$103,428	\$103,428	\$103,428	
			RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	



Table C- 4: Summary of Estimated Costs for Building Treatments by Alternative\* (2004 Dollars)

Resource Name	Gross Area (Sq Ft)	Net Area (Sq Ft)	ALTERNATIVE										Comments
			NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2	
Galyon rear i- rm. (NC)			\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
			RH	RH	RH	RH	RH	RH	RH	RH	RH	RH	
Baumann (10) (C)	1780	1679	\$13,010	\$13,010	\$13,010	\$148,424	\$148,424	\$148,424	\$148,424	\$148,424	\$148,424	\$148,424	
			RH	RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Scruggs- Brisco (11) (C)	1326	1326	\$10,967	\$10,967	\$10,967	\$117,218	\$117,218	\$117,218	\$117,218	\$117,218	\$117,218	\$117,218	
			RH	RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Sneed (12) (NC)	1200	1200	\$9,400	\$9,400	\$9,400	\$9,400	\$9,400	\$9,400	\$9,400	\$9,400	\$9,400	\$9,400	RM based on \$7,000 for structure and \$2,400 for block foundation
			RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	
Cook (13)(C)	1280	1180	\$10,760	\$10,760	\$10,760	\$104,312	\$104,312	\$104,312	\$104,312	\$104,312	\$104,312	\$104,312	
			RH	RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Jamerson (14) (NC)	1312	1312	\$7,400	\$7,400	\$7,400	\$7,400	\$7,400	\$7,400	\$7,400	\$7,400	\$7,400	\$7,400	RM based on \$7,000 for structure and \$400 for block foundation
			RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	
Hale (15)(C)	1560	1450	\$5,000	\$5,000	\$5,000	\$128,180	\$128,180	\$128,180	\$128,180	\$128,180	\$128,180	\$128,180	
			RM	RM	RM	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Burdette (16) (NC)	1160	1160	\$7,300	\$7,300	\$7,300	\$7,300	\$7,300	\$7,300	\$7,300	\$7,300	\$7,300	\$7,300	RM based on \$7,000 for structure and \$300 for block foundation
			RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	
Bagley (17) (NC)	1677	1677	\$7,700	\$7,700	\$7,700	\$7,700	\$7,700	\$7,700	\$7,700	\$7,700	\$7,700	\$7,700	RM based on \$7,000 for structure and \$700 for block foundation
			RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	
Gilliand (18) (C)	1525	1402	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$196,729	\$196,729	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Thomas (19) (C)	1250	1117	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$173,143	\$173,143	Alt F: For structural repairs, add 300 sf x \$40.80 /sf to cost of rehabilitation
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
F. Andrews (20)(NC)	1280	1169	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$165,039	\$165,039	
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
Andrews- Sherling (21) (C)	1280	1280	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$10,760	\$174,406	\$174,406	Alt F: For structural repairs, add 200 sf x \$40.80 /sf to cost of rehabilitation
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
Congleton- Brownlow (22)(C)	1045	957	\$9,703	\$9,703	\$9,703	\$9,703	\$9,703	\$9,703	\$9,703	\$9,703	\$134,767	\$134,767	
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
McDonald (23)(C)	1400	1300	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$192,984	\$192,984	Alt F: For structural repairs, add 300 sf x \$40.80 /sf to cost of rehabilitation
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
W. Arnett (24)(NC)	1220	1111	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$159,308	\$159,308	Alt F: add cost for porch repairs at 50 sf x \$40.80 /sf
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	



Table C- 4: Summary of Estimated Costs for Building Treatments by Alternative\* (2004 Dollars)

Resource Name	Gross Area (Sq Ft)	Net Area (Sq Ft)	ALTERNATIVE										Comments
			NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2	
Franklin (25) (NC)	1250	1137	\$12,625	\$12,625	\$12,625	\$12,625	\$12,625	\$12,625	\$12,625	\$12,625	\$161,121	\$161,121	
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
Hutchins (26) (NC)	730	667	\$8,285	\$8,285	\$8,285	\$8,285	\$8,285	\$8,285	\$8,285	\$8,285	\$94,127	\$94,127	
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
Gaines (27) (NC)	1300	1193	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	
			RH	RH	RH	RH	RH	RH	RH	RH	RH	RH	
Spengler- Schmid (28) (NC)	1100	1033	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$144,139	\$144,139	Alt. F: includes additional \$2,000 to restore side of building
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
F. Arnett (29) (C)	1100	1016	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$141,954	\$141,954	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Wright (30) (C)	1470	1364	\$11,615	\$11,615	\$11,615	\$11,615	\$11,615	\$11,615	\$11,615	\$11,615	\$189,770	\$189,770	
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
Matthews (31)(C)	1300	1247	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$168,267	\$168,267	
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
"Little Cottage" (31A) (C)**	320	300	\$3,220	\$3,220	\$3,220	\$3,220	\$3,220	\$3,220	\$3,220	\$3,220	\$39,712	\$39,712	
			RH	RH	RH	RH	RH	RH	RH	RH	Rehabilitate for lodging	Rehabilitate for lodging	
Allen (32)(C)	1200	1154	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$155,356	\$155,356	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Jeffords (33) (NC)	1119	1024	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$144,302	\$144,302	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
McAmis (34) (C)	1075	984	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$138,631	\$138,631	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Culver (35) (C)	1400	1308	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$180,831	\$180,831	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Knaffl (36) (C)	1010	925	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
			RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	
Johnston (37) (NC)	875	804	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$121,033	\$121,033	Alt. F: Add \$8,160 (200 sf x \$40.80/sf) for structural damage
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Byers (or Chapman) (38)(C)	1200	1115	\$7,000	\$7,000	\$7,000	\$106,080	\$106,080	\$106,080	\$106,080	\$106,080	\$106,080	\$106,080	
			RM	RM	RM	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & preserve interior	
Dudley (39) (C)	2400	2277	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$310,374	\$310,374	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	



Table C- 4: Summary of Estimated Costs for Building Treatments by Alternative\* (2004 Dollars)

ALTERNATIVE													
Resource Name	Gross Area (Sq Ft)	Net Area (Sq Ft)	NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2	Comments
Kuhlman (40) (C)	1200	1119	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$154,975	\$154,975	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Kuhlman garage and woodshed (40A) (C)	400	400	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$8,000	\$8,000	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for storage	Rehabilitate for storage	
McNabb (41) (NC)	1000	822	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$131,943	\$131,943	Alt F. Add \$4,000 for repair of structural damage
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate for lodging	Rehabilitate for lodging	
Spence (42) ("River Lodge") (C)	2160	1850	\$14,720	\$14,720	\$14,720	\$14,720	\$163,540	\$163,540	\$277,168	\$277,168	\$277,168	\$277,168	
			RH	RH	RH	RH	Restore exterior & preserve interior	Restore exterior & preserve interior	Restore exterior & rehabilitate interior for scientist lodging	Restore exterior & rehabilitate interior for scientist lodging	Rehabilitate for lodging	Rehabilitate for lodging	
Brandau (43) (C)	1070	980	\$9,815	\$9,815	\$9,815	\$9,815	\$9,815	\$9,815	\$146,152	\$146,152	\$146,152	\$146,152	Alts E and F: add \$8,160 for repair of structural damage (200 sf x \$40.80/sf)
			RH	RH	RH	RH	RH	RH	Restore exterior & rehabilitate interior for scientist lodging	Restore exterior & rehabilitate interior for scientist lodging	Rehabilitate for lodging	Rehabilitate for lodging	
Parrott (44) (NC)	1500	1389	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
			RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	
Murphy (45) (C)	1900	1728	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$257,141	\$257,141	\$257,141	\$257,141	Alts E and F: add \$12,240 for repair of structural damage (300 sf x \$40.80/sf)
			RM	RM	RM	RM	RM	RM	Restore exterior & rehabilitate interior for scientist lodging	Restore exterior & rehabilitate interior for scientist lodging	Rehabilitate for lodging	Rehabilitate for lodging	
Murphy garage (45A) (NC)			\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
			RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	
Murphy gazebo (NC)			cost included above	cost included above	cost included above	cost included above	cost included above	cost included above	cost included above	cost included above	\$200	\$200	
			RM	RM	RM	RM	RM	RM	RM	RM	repair & paint	repair & paint	
Miller (46) (C)	1900	1730	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$253,082	\$253,082	\$253,082	\$253,082	Alts E and F: add \$8,160 for repair of structural damage (200 sf x \$40.80/sf)
			RM	RM	RM	RM	RM	RM	Restore exterior & rehabilitate interior for scientist lodging	Restore exterior & rehabilitate interior for scientist lodging	Rehabilitate for lodging	Rehabilitate for lodging	
Faust (47) (C)	1400	1307	\$11,300	\$11,300	\$11,300	\$11,300	\$11,300	\$11,300	\$188,980	\$188,980	\$188,980	\$188,980	Alts E and F: add \$8,160 for repair of structural damage (200 sf x \$40.80/sf)
			RH	RH	RH	RH	RH	RH	Restore exterior & rehabilitate interior for scientist lodging	Restore exterior & rehabilitate interior for scientist lodging	Rehabilitate for lodging	Rehabilitate for lodging	
Faust garage (47A) (C)			\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$8,000	\$8,000	\$8,000	\$8,000	
			RH	RH	RH	RH	RH	RH	Rehabilitate for storage	Rehabilitate for storage	Rehabilitate for storage	Rehabilitate for storage	
Young (48) (NC)	1300	1210	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	\$10,850	
			RH	RH	RH	RH	RH	RH	RH	RH	RH	RH	
Cambier (49) (C)	1300	1225	\$12,850	\$12,850	\$12,850	\$12,850	\$12,850	\$12,850	\$168,028	\$168,028	\$168,028	\$168,028	
			RH	RH	RH	RH	RH	RH	Restore exterior & rehabilitate interior for scientist lodging	Restore exterior & rehabilitate interior for scientist lodging	Rehabilitate for lodging	Rehabilitate for lodging	



Table C- 4: Summary of Estimated Costs for Building Treatments by Alternative\* (2004 Dollars)

ALTERNATIVE													
Resource Name	Gross Area (Sq Ft)	Net Area (Sq Ft)	NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2	Comments
May or Moore (58-1A) (C)	1300	1253	\$12,850	\$12,850	\$12,850	\$12,850	\$172,413	\$172,413	\$172,413	\$172,413	\$172,413	\$172,413	Alts. D, E, and F: add \$4,080 for repair of structural damage (100 sf x \$40.80/sf)
			RH	RH	RH	RH	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	
Paine (58-2B) (C)	1400	1292	\$5,000	\$5,000	\$5,000	\$5,000	\$184,737	\$184,737	\$184,737	\$184,737	\$184,737	\$184,737	Alts. D, E, and F: add \$4,080 for repair of structural damage (100 sf x \$40.80/sf)
			RM	RM	RM	RM	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	
Preston (58-3C) (C)	1220	1114	\$10,490	\$10,490	\$10,490	\$10,490	\$157,300	\$157,300	\$157,300	\$157,300	\$157,300	\$157,300	
			RH	RH	RH	RH	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	
Bowman Brown (58-4D) (NC)	2300	2153	\$17,350	\$17,350	\$17,350	\$17,350	\$17,350	\$17,350	\$17,350	\$17,350	\$17,350	\$17,350	
			RH	RH	RH	RH	RH	RH	RH	RH	RH	RH	
Hicks (58-5E) (C)	1400	1100	\$11,300	\$11,300	\$11,300	\$11,300	\$178,568	\$178,568	\$178,568	\$178,568	\$178,568	\$178,568	
			RH	RH	RH	RH	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	
McMillian/Keith (58-6F) (NC)	1340	949	\$11,030	\$11,030	\$11,030	\$11,030	\$11,030	\$11,030	\$11,030	\$11,030	\$11,030	\$11,030	
			RH	RH	RH	RH	RH	RH	RH	RH	RH	RH	
Vandergriff (58-7G) (NC)	1230	1129	\$12,535	\$12,535	\$12,535	\$12,535	\$12,535	\$12,535	\$168,854	\$168,854	\$168,854	\$168,854	Alts E and F: add \$10,200 for repair of structural damage (250 sf x \$40.80/sf)
			RH	RH	RH	RH	RH	RH	Rehabilitate interior for lodging	Rehabilitate interior for lodging	Rehabilitate interior for lodging	Rehabilitate interior for lodging	
Tate, Beaman & Tucker (58-8H) (C)	1700	1553	\$14,650	\$14,650	\$14,650	\$14,650	\$227,357	\$227,357	\$227,357	\$227,357	\$227,357	\$227,357	Alts E and F: add \$8,160 for repair of structural damage (200 sf x \$40.80/sf)
			RH	RH	RH	RH	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	
Richards or Brandau (58-9I) (NC)	1200	876	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$164,571	\$164,571	Alt F: add \$12,240 for repair of structural damage (300 sf x \$40.80/sf)
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate interior for lodging	Rehabilitate interior for lodging	
Richards or Brandau woodshed (NC)			\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$17,680	\$17,680	
			RM	RM	RM	RM	RM	RM	RM	RM	Rehabilitate interior for storage	Rehabilitate interior for storage	
Wonderland Servants' Quarters (Riordan) (C)	1220	1126	\$5,000	\$5,000	\$5,000	\$5,000	\$157,431	\$157,431	\$157,431	\$157,431	\$157,431	\$157,431	
			RM	RM	RM	RM	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for scientist lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	Restore exterior; rehabilitate interior for lodging	
Wonderland Hotel (58) (C)	13391	13391	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000	\$3,691,000	\$45,000	\$2,725,000	\$45,000	\$2,725,000	Hotel is 160,714 cubic feet; removal costs are cf x \$0.28 per cf
			RM	RM	RM	RM	RM	Reconstruct for curatorial	RM	Reconstruct hotel for lodging	RM	Reconstruct hotel for lodging	
Wonderland Hotel Annex (C)	7025	6425	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$1,590,600	\$35,000	\$951,625	\$35,000	\$951,625	Annex is 125,000 cf; removal costs are cf x \$0.28 per cf
			RM	RM	RM	RM	RM	Restore exterior and rehabilitate interior for curatorial use	RM	Restore exterior and rehabilitate interior for lodging	RM	Restore exterior and rehabilitate interior for lodging	



Table C- 4: Summary of Estimated Costs for Building Treatments by Alternative\* (2004 Dollars)

Resource Name	ALTERNATIVE												Comments
	Gross Area (Sq Ft)	Net Area (Sq Ft)	NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2	
COST OF BUILDING TREATMENTS SUBTOTAL			\$616,579	\$616,579	\$1,773,353	\$2,330,830	\$3,498,166	\$8,699,766	\$4,746,531	\$8,343,156	\$8,295,654	\$11,892,279	
# BUILDINGS TO BE CLEANED BY SERVICE MASTER					12	17	25	25	33	33	58	58	
CLEANING COST (\$3,610 PER BUILDING)					\$43,320	\$61,370	\$90,250	\$90,250	\$119,130	\$119,130	\$209,380	\$209,380	
SEEDING AND / OR RESTORATION OF FORMER BUILDING SITES			\$47,450	\$47,450	\$39,000	\$35,750	\$29,900	\$29,900	\$25,350	\$25,350	\$7,800	\$7,800	
APPALACHIAN CLUBHOUSE CLEANING					\$10,617	\$10,617	\$10,617	\$10,617	\$10,617	\$10,617	\$10,617	\$10,617	
SUBTOTAL WITH CLEANING AND SEEDING / RESTORATION			\$664,029	\$664,029	\$1,866,302	\$2,438,584	\$3,628,958	\$8,830,558	\$4,901,661	\$8,498,286	\$8,523,509	\$12,120,134	
ADDITIONAL COSTS FOR GENERAL SITE CONDITIONS (18%)			\$119,525	\$119,525	\$335,934	\$438,945	\$653,212	\$1,589,500	\$882,299	\$1,529,691	\$1,534,232	\$2,181,624	
GRAND TOTAL BY ALTERNATIVE FOR BUILDINGS			\$783,555	\$783,555	\$2,202,237	\$2,877,529	\$4,282,170	\$10,420,058	\$5,783,960	\$10,027,977	\$10,057,741	\$14,301,758	

RM = remove, mechanical; RH = remove by hand

\* Calculated with Means 2004 \*\* building < 500 sf calculated at reduced costs



Table C- 4a: Building Treatments Table Key

National Park Service: *Class "C" Estimating Guide, Historic Preservation and Stabilization*; April 1993: "These cost figures are valid through December 1995"

National Park Service: *Class "C" Estimating Guide, New Construction*. February 28, 2001

R. S. Means Company, Inc.: *Means Building Construction Cost Data 1995*, 53rd annual addition 1994

R. S. Means Company, Inc.: *Repair and Remodeling Cost Data 2004*, 25th annual addition 2003

David Chapman, GRSM: provided \$18 / sf cost for "dry" sprinkler system for curatorial facility

Service Master of the Smokies: Project Manager Mark Burkett provided estimate for content removal and antiseptic cleaning of cabins.

Hanta Virus Treatment: GRSM Safety Officer Lance Lewis determined that testing would not be required and all structures would be treated as potentially infected with the virus.

Additional costs relative to this would be minimal primarily consisting of the use of respirators by workers and a final disinfecting as included in the Service Master quote.

**Inflation Factor:** (used to adjust 1995 National Park cost figures)

1995 data from the Park's *Class "C Estimating Guide* was used with an inflation mark- up of 4% per year arrived at by comparing identical entries from the Means 1995 cost data and the Means 2004 cost data.

**Park Cost Adjustment:** Cost estimate increased to reflect the higher cost of working in a National Park (from 2- 18- 04 phone conversation with Bob Merrick at the NPS Denver Service Center).

18% for General Conditions

**Demolition costs:** (figures from 2004 Means Cost Data confirmed by Burnett Demolition)

1 story cabin mechanical removal: \$5,000

2 story cabin mechanical removal: \$7,000

removal of 1 story building < 500 sf: \$2,500

garage or small structure removal: \$1,000

Hand removal \$40.50 / cubic yard based on 1 cubic yard per square yard of floor area

Mechanical removal cost = \$4.50 per square foot

Removal of footings and for #12, 14, 16 & 17 only: \$12 / linear foot footings

Removal of block foundations for #12, 14, 16 & 17 only: \$2.30 / sf block

Hotel, Annex, and Appalachian Clubhouse mechanical removal \$0.28 / cubic foot of standing building.

Burnett Demolition, Pers. comm. confirmed Means demolition costs as adequate to include some handwork, use of respirators, and remote site conditions.

#### Rehabilitation and Restoration Costs

Figures from Class "C" estimating guide with 1.36 inflation factor: Inclusions based on 2- 18- 04 phone conversation with Bob Merrick at NPS' Denver Service Center. Costs escalated at 4% per year.

\$88.40 / sf for exterior only restoration for exhibit (includes structural repair, new roof, exterior doors, windows and finishes.)

\$119 / sf for inhabitable interiors (includes exterior restoration plus electrical, plumbing, and interior finishes.) Cost provided by GRSM based on similar projects.

\$40.80 / sf for additional structural repair based on area to be repaired.

\$109 / sf for commercial space in Appalachian Clubhouse (includes exterior repair doors, windows, new roof, structural repair, interior finishes, electrical, plumbing (no commercial kitchen).

\$140 / sf rehab Annex for hotel use includes all above plus 35% for reconfiguring existing building (7% cut & patch existing; 7% limited equipment use; 6% limited material storage;

6% protection of existing work; and 9% temp. bracing and shoring)

treatment of 1 story building < 500 sf calculated at 50% of estimated cost for larger buildings

\$10.88 / sf for water sprinkler systems for cabins

#### Figures from other sources:

\$18 / sf for "dry" sprinkler system for curatorial space (GRSM)

\$200 / sf for new hotel with restaurant (Means 2004; inflated as per discussion with concessionaire Denver North Corporation based on their lodge construction in Sequoia National Park)

\$224 / sf for new laboratory space for curatorial facility (Means 2004) also used for Annex curatorial reuse

\$3,610 per cabin for content removal and antiseptic cleaning of average 1,100 sf cabin (Service Master)

\$100 / sf for commercial kitchen space (Means 2004) used for Alt F Appalachian Clubhouse (375 sf kitchen area only)

\$7,525 to rebuild leaning chimney at Wonderland servants Quarters (Riordan) (Means 2004)

other chimney repair is not included

\$0.33 / sf for pressure washing pervious pavement (Mobile Power Washing Services)



Table C- 5: Potential Costs for Additional Archeological Survey, Evaluation, and Monitoring in Elkmont Historic District

Site	Locus	Assessment	Cost by Project Alternative									
			No Action	A	B	C	D1	D2	E1	E2	F1	F2
4oSV120	Locus A	Potentially significant resource	\$21,000	\$21,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
	Locus B	Non- significant resource	None	None	None	None	None	None	None	None	None	None
	Locus C	Potentially significant resource	\$13,000	\$13,000	\$13,000	\$13,000	\$13,000	\$13,000	\$13,000	\$13,000	\$13,000	\$13,000
	Locus D	Significant resource	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$13,000	\$13,000
	Other Areas	Unsurveyed	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
4oSV121	Locus A	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
	Locus B	Potentially significant resource	None	None	\$8,800	\$8,800	\$8,800	\$8,800	\$8,800	\$8,800	\$8,800	\$8,800
4oSV122	Locus A	Potentially significant resource	None	None	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200
	Locus B	Non- significant resource	None	None	None	None	None	None	None	None	None	None
	Locus C	Non- significant resource	None	None	None	None	None	None	\$2,000	\$2,000	\$2,000	\$2,000
	Locus D	Non- significant resource	None	None	None	None	None	None	None	None	None	None
	Other Areas	Unsurveyed	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$14,500	\$14,500	\$14,500	\$14,500
4oSV123	Locus A	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
	Locus B	Potentially significant resource	\$1,500	\$1,500	\$1,500	\$1,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500
4oSV124	Locus A	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
	Locus B	Non- significant resource	None	None	None	None	None	None	None	None	None	None
4oSV125	Locus A	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
	Locus B	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
	Locus C	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
	Locus D	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
	Locus E	Non- significant resource	None	None	None	None	None	None	None	None	None	None
	Locus F	Non- significant resource	None	None	None	None	None	None	None	None	None	None
4oSV165	Locus A	Non- significant resource	No effect	None	None	None	None	None	None	None	None	None
4oSV166	Locus A	Potentially significant resource	\$12,000	\$12,000	\$12,000	\$12,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000
	Locus B	Potentially significant resource	None	None	None	None	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
	Locus C	Non- significant resource	None	None	None	None	None	None	None	None	None	None
	Locus D	Potentially significant resource	None	None	None	None	None	None	None	None	None	None
Total Projected Costs (2004)			\$76,000	\$76,000	\$96,000	\$96,000	\$114,000	\$114,000	\$118,000	\$118,000	\$126,000	\$126,000
Total Projected Costs (2007)			\$85,120	\$85,120	\$107,520	\$107,520	\$127,680	\$127,680	\$132,160	\$132,160	\$141,120	\$141,120

Table C- 6: Resource Education Components by Alternative (2004 Dollars)

	ALTERNATIVE									
	NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2
<b>RESOURCE EDUCATION COMPONENTS</b>										
<b>Orientation Area and Parking</b>										
3- Panel Orientation Kiosk			\$23,400	\$23,400	\$23,400	\$23,400	\$23,400	\$23,400	\$23,400	\$23,400
Self- guiding Brochure			\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
<b>Wonderland Hotel</b>										
Wayside Exhibits			\$7,800	\$7,800	\$7,800		\$7,800		\$7,800	
Exhibits on Porch						\$7,800		\$7,800		\$7,800
Lobby Exhibits								\$7,800		\$7,800
<b>Elkmont Campground</b>										
Wayside Exhibit		\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
<b>Millionaire's Row</b>										
Spence Wayside Exhibit					\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
Murphy Wayside Exhibit							\$7,800	\$7,800	\$7,800	\$7,800
Interior Exhibits at Spence Cabin							\$7,800	\$7,800	\$7,800	\$7,800
Synchronous Firefly Wayside Exhibit		\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
<b>Society Hill</b>										
Wayside Exhibit at Chapman Cabin				\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
<b>Daisy Town</b>										
Wayside Exhibit at the Mayo Cabin			\$7,800							
Wayside Exhibit at the Daisy Town Mailboxes			\$7,800							
Wayside Exhibit with Orientation to Daisy Town				\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
Wayside Exhibit looking up Daisy Town Streetscape			\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
Wayside Exhibit Near the Appalachian Clubhouse			\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
Wayside Exhibit on West Side of Appalachian Clubhouse			\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800
Interior Exhibits at Appalachian Clubhouse			\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
<b>General</b>										
Interpretive Programs					\$42,000	\$42,000				
Revise Elkmont Nature Trail Brochure			\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
<b>TOTAL FOR RESOURCE EDUCATION COMPONENTS (2004 COSTS)</b>	<b>\$0</b>	<b>\$15,600</b>	<b>\$129,800</b>	<b>\$129,800</b>	<b>\$179,600</b>	<b>\$179,600</b>	<b>\$153,200</b>	<b>\$161,000</b>	<b>\$153,200</b>	<b>\$161,000</b>
<b>TOTAL FOR RESOURCE EDUCATION COMPONENTS (2007 COSTS)</b>	<b>\$0</b>	<b>\$17,472</b>	<b>\$145,376</b>	<b>\$145,376</b>	<b>\$201,152</b>	<b>\$201,152</b>	<b>\$171,584</b>	<b>\$180,320</b>	<b>\$171,584</b>	<b>\$180,320</b>



Table C- 7: Estimated Operation and Maintenance (O&amp;M) Costs with 20- Year Projections

ALTERNATIVE										
	NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2
Upkeep of buildings used for exhibits and day use at Appalachian Clubhouse excluding interior of restrooms (ave. \$500/cabin; \$1000 for Appalachian Clubhouse)			\$7,000	\$9,500	\$10,000	\$10,000	\$9,500	\$9,500	\$9,500	\$9,500
Annual maintenance of visiting scientist housing					\$9,000	\$9,000	\$9,000	\$9,000		
Annual maintenance of curatorial facility mowing	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,000	\$2,000	\$1,500	\$1,500
trash removal	\$2,500	\$2,500	\$2,500	\$2,500	\$3,500	\$5,000	\$3,500	\$3,500	\$3,500	\$3,500
Annual cost of daily maintenance of restroom facilities @ 2 hours per restroom per day plus supplies			\$36,500	\$36,500	\$36,500	\$73,000	\$36,500	\$36,500	\$36,500	\$36,500
maintain / clean / replace exterior exhibits*	\$0	\$1,256	\$2,691	\$2,691	\$2,691	\$2,736	\$2,691	\$2,781	\$2,691	\$2,781
maintain / clean / replace interior exhibits*	\$0	\$0	\$7,880	\$7,880	\$7,880	\$7,880	\$7,880	\$7,880	\$7,880	\$11,820
Law Enforcement**	\$39,000	\$39,000	\$39,000	\$39,000	\$84,000	\$84,000	\$84,000	\$84,000	\$84,000	\$84,000
Housing for Law Enforcement					\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Infrastructure	\$2,750	\$2,750	\$6,000	\$7,000	\$12,750	\$14,400	\$21,250	\$25,200	\$30,100	\$34,600
Annual maintenance of drip irrigation system								\$10,000	\$10,000	\$10,000
Annual maintenance of pervious pavement (frequency of treatment = every 2 years; \$0.33 per square foot)	\$0	\$0	\$9,344	\$9,344	\$10,781	\$15,094	\$10,781	\$21,562	\$17,250	\$25,156
Management of Concessions Contract							\$140,000	\$140,000	\$140,000	\$140,000
Total O & M in 2004 dollars	\$46,750	\$48,006	\$113,415	\$116,915	\$185,602	\$234,610	\$333,102	\$357,923	\$348,921	\$365,357
Total Annual O&M Adjusted for 4% Inflation by Year; Starting in 2007	NO ACTION	A	B	C	D1	D2	E1	E2	F1	F2
1	\$52,360	\$53,767	\$127,025	\$130,945	\$207,875	\$262,763	\$373,075	\$400,874	\$390,792	\$409,199
2	\$54,454	\$55,918	\$132,106	\$136,183	\$216,190	\$273,273	\$387,998	\$416,909	\$406,423	\$425,567
3	\$56,633	\$58,154	\$137,390	\$141,630	\$224,837	\$284,204	\$403,518	\$433,585	\$422,680	\$442,590
4	\$58,898	\$60,481	\$142,886	\$147,295	\$233,831	\$295,572	\$419,658	\$450,928	\$439,587	\$460,294
5	\$61,254	\$62,900	\$148,601	\$153,187	\$243,184	\$307,395	\$436,445	\$468,965	\$457,171	\$478,705
6	\$63,704	\$65,416	\$154,545	\$159,314	\$252,911	\$319,691	\$453,902	\$487,724	\$475,458	\$497,854
7	\$66,252	\$68,033	\$160,727	\$165,687	\$263,028	\$332,479	\$472,059	\$507,233	\$494,476	\$517,768
8	\$68,902	\$70,754	\$167,156	\$172,314	\$273,549	\$345,778	\$490,941	\$527,522	\$514,255	\$538,478
9	\$71,658	\$73,584	\$173,842	\$179,207	\$284,491	\$359,609	\$510,579	\$548,623	\$534,825	\$560,018
10	\$74,525	\$76,527	\$180,796	\$186,375	\$295,871	\$373,993	\$531,002	\$570,568	\$556,218	\$582,418
10 Year Total O & M Cost	\$628,640	\$645,534	\$1,525,073	\$1,572,137	\$2,495,767	\$3,154,757	\$4,479,175	\$4,812,932	\$4,691,886	\$4,912,892
11	\$77,506	\$79,588	\$188,028	\$193,830	\$307,705	\$388,953	\$552,242	\$593,391	\$578,467	\$605,715
12	\$80,606	\$82,772	\$195,549	\$201,583	\$320,014	\$404,511	\$574,331	\$617,127	\$601,606	\$629,944
13	\$83,830	\$86,083	\$203,371	\$209,647	\$332,814	\$420,692	\$597,305	\$641,812	\$625,670	\$655,411
14	\$87,183	\$89,526	\$211,506	\$218,033	\$346,127	\$437,519	\$621,197	\$667,484	\$650,697	\$681,347
15	\$90,671	\$93,107	\$219,966	\$226,754	\$359,972	\$455,020	\$646,045	\$694,183	\$676,725	\$708,601
16	\$94,297	\$96,832	\$228,764	\$235,824	\$374,371	\$473,221	\$671,887	\$721,951	\$703,794	\$736,945
17	\$98,069	\$100,705	\$237,915	\$245,257	\$389,346	\$492,150	\$698,762	\$750,829	\$731,945	\$766,423
18	\$101,992	\$104,733	\$247,432	\$255,067	\$404,919	\$511,836	\$726,713	\$780,862	\$761,223	\$797,080
19	\$106,072	\$108,922	\$257,329	\$265,270	\$421,116	\$532,309	\$755,781	\$812,096	\$791,672	\$828,963
20	\$110,315	\$113,279	\$267,622	\$275,881	\$437,961	\$553,601	\$786,012	\$844,580	\$823,339	\$862,121
20 Year Total O & M Cost	\$1,559,180	\$1,601,081	\$3,782,554	\$3,899,284	\$6,190,111	\$7,824,569	\$11,109,449	\$11,937,247	\$11,637,025	\$12,185,172

\* based on cleaning exterior exhibits once per year at \$44.67 each; interior exhibit cleaning at \$3,940 each; replacement of two exhibits every 3 years at annual cost of \$2,334

\*\* current law enforcement expenditures are estimated based on 0.25 of one GS- 9, Step 5 FTE

estimated law enforcement for Alternatives No Action through C are based on the actual need for enforcement under the existing condition and the assumption that visitor use will remain constant



Elkmont Historic District  
Preliminary Capital Cost Estimate: Alternative B

Proposed Parking Improvements (B)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Orientation Area Parking Lot	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	12	25,920
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	900	4,860
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.2	758
2	Appalachian Clubhouse Lot	Parking Area - paved 26- 50 cars	space	\$ 1,950.00	24	46,800
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	1,000	5,400
3	Along Millionaire's Row	Parking Area - paved 26- 50 cars	space	\$ 1,950.00	35	68,250
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	700	3,780
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.15	569
4	Parking at former cabins 12,14,16,& 17	Parking Area - paved 26- 50 cars	space	\$ 1,950.00	40	78,000
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	1,800	9,720
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.4	1,516
5	Striping	Striping	linear feet	\$ 1.25	2,300	2,875
6	Infiltration trench	Gravel/sand layer, lined w/geotextile fabric, 2' width, 3' depth	cubic feet	\$ 2.50	4,020	10,050
7	Parking wheel stops - precast	Parking wheel stops - precast	each	\$ 81.00	152	12,312
					<b>TOTAL</b>	<b>270,810</b>

Wastewater System Improvements (B)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter sewer line	PVC Sewer Pipe D3034 - 8 inch	linear feet	\$ 51.90	600	31,140
2	8" diameter sewer line under Jakes Creek	Ductile iron sewer pipe - 8 inch	linear feet	\$ 54.10	40	2,164
		Standard manhole	each	\$ 3,140.00	2	6,280
3	Connection to existing sewer system	None available	each	\$ 1,000.00	1	1,000
4	Asphalt repair	None available	linear feet	\$ 30.00	25	750
					<b>TOTAL</b>	<b>41,334</b>

Proposed Roadway System Improvements (B)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Asphalt repair/overlay down Daisy Town Loop Road between Jakes Creek Cemetery Road and Little River	Resurface Road (site preparation, tack coat, 2- inch mat, seal and chip)	square yard	\$ 32.50	1,111	36,108
2	Bank stabilization at existing culverts	None available	each	\$ 500.00	1	500
3	Relocate gate on Little River Road	None available	each	\$ 500.00	1	500
4	Relocate gate at Jakes Creek Road	None available	each	\$ 500.00	1	500
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	walking path from Orientation parking lot to Hotel	Trails, gravel	square yard	\$ 18.20	367	6,673
7	Little River Trailhead	Road - asphalt surface, two lane	mile	\$ 591,999	0.07	39,242
8	Orientation Parking Area access road	Road - asphalt surface, two lane	mile	\$ 592,000	0.08	44,848
					<b>TOTAL</b>	<b>141,718</b>

Water System Improvements (B)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear feet	\$ 31.40	1,300	40,820
2	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	3	2,337
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	1,000	3,000
4	2" blow-off including valve & box	None available	each	\$ 700.00	1	700
5	Air release valve (1 in - 2 in) w/ manhole	Air release valve (1 inch - 2 inch) w/ manhole	each	\$ 4,760.00	1	4,760
					<b>TOTAL</b>	<b>51,617</b>

NPS descriptions are shaded. Those items for which the Class C Estimating Guide did not contain a similar item description are not shaded and an estimated unit cost has been developed using the average cost of recent projects in the Park and Means 2000.

**Total for Alternative B (2004): \$505,479**



**Elkmont Historic District**  
**Preliminary Capital Cost Estimate: Alternative C**

**Proposed Parking Improvements (C)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Orientation Area Parking Lot	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	12	25,920
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	900	4,860
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.2	758
2	Appalachian Clubhouse Lot	Parking Area - paved 26- 50 cars	space	\$ 1,950	24	46,800
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	1,000	5,400
3	Along Millionaire's Row	Parking Area - paved 26- 50 cars	space	\$ 1,950	35	68,250
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	700	3,780
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.15	569
4	Parking at former cabins 12,14,16,& 17	Parking Area - paved 26- 50 cars	space	\$ 1,950	40	78,000
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	1,800	9,720
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.4	1,516
5	Striping	Striping	linear foot	\$ 1.25	2,300	2,875
6	Infiltration Trench	Gravel/sand layer, lined w/geotextile fabric, 2' width, 3' depth	cubic foot	\$ 2.50	4,020	10,050
7	Parking Wheel Stops - Precast	Parking wheel stops - precast	each	\$ 81.00	152	12,312
					<b>TOTAL</b>	<b>270,810</b>

**Wastewater System Improvements (C)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" Dia. Sewer Line	PVC Sewer Pipe D3034 - 8 inch	linear foot	\$ 51.90	600	31,140
2	8" Dia. Sewer Line Under Jake's Creek	Ductile iron sewer pipe - 8 inch	linear foot	\$ 54.10	40	2,164
3	Standard Manhole	Standard manhole	each	\$ 3,140.00	2	6,280
4	Connection to Existing Sewer System	None available	each	\$ 1,000.00	1	1,000
5	Asphalt Repair	None available	linear foot	\$ 30.00	25	750
					<b>TOTAL</b>	<b>41,334</b>

**Proposed Roadway System Improvements (C)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Asphalt repair/overlay down Daisy Town Loop Road between Jakes Creek Cemetery Road and Little River Road	Resurface Road (site preparation, tack coat, 2- inch mat, seal and chip)	square yard	\$ 32.50	1,111	36,108
2	Bank stabilization at existing culverts	None available	each	\$ 500.00	1	500
3	Relocate gate on Little River Road	None available	each	\$ 500.00	1	500
4	Relocate gate at Jakes Creek Road	None available	each	\$ 500.00	1	500
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	Walking path from Orientation parking lot to Hotel steps	Trails, gravel	square yard	\$ 18.20	367	6,673
7	Walking path on west side of steps to top of steps	Trails, gravel	square yard	\$ 18.20	267	4,853
8	Little River Trailhead	Road - asphalt surface, two lane	mile	\$ 591,999	0.07	39,242
9	Orientation Parking Area access road	Road - asphalt surface, two lane	mile	\$ 592,000	0.08	44,848
					<b>TOTAL</b>	<b>146,572</b>

Water System Improvements (C)

ITEM	NPS Description		Unit	Unit Price	Qty	Total
1	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	1300	40,820
2	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	3	2,337
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	1,000	3,000
4	2" blow-off including valve and box	None available	each	\$ 700.00	1	700
5	Air release valve (1 inch - 2 inch) w/ manhole	Air release valve (1 inch - 2 inch) w/ manhole	each	\$ 4,760.00	1	4,760
					TOTAL	51,617

NPS descriptions are shaded. Those items for which the Class C Estimating Guide did not contain a similar item description are not shaded and an estimated unit cost has been developed using the average cost of recent projects in the Park and Means 2000.

Total for Alternative C (2004): \$510,332