

**Elkmont Historic District**  
**Preliminary Capital Cost Estimate: Alternative D1**

**Proposed Parking Improvements (D1)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Orientation Area parking lot					
		Parking Area - paved 1- 25 cars	space	\$ 2,160.00	15	32,400
		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	Parking spaces at cabins	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	12	25,920
6	Striping	Striping	linear foot	\$ 1.25	2,500	3,125
7	Infiltration trench	Gravel/sand layer, lined w/geotextile fabric, 2' width, 3' depth	cubic foot	\$ 2.50	4,020	10,050
8	Parking wheel stops - precast	Parking wheel stops - precast	each	\$ 81.00	126	10,206
					<b>TOTAL</b>	<b>301,354</b>

**Wastewater System Improvements (D1)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter sewer line	PVC Sewer Pipe D3034 - 8 inch	linear foot	\$ 51.90	1,200	62,280
2	8" diameter sewer line under Jakes Creek	Ductile iron sewer pipe - 8 inch	linear foot	\$ 54.10	40	2,164
3	4" diameter sewer service line	PVC Sewer Pipe D3034 - 4 inch	linear foot	\$ 27.00	100	2,700
4	Standard manhole	Standard manhole	each	\$ 3,140.00	8	25,120
5	2" diameter low pressure sewer line	Polyvinyl Chlorised (PVC) Pipe - 2 inch D2241	linear foot	\$ 21.60	750	16,200
6	3" diameter pressure force main	Polyvinyl Chlorised (PVC) Pipe - 3 inch D2241	linear foot	\$ 29.20	3,200	93,440
7	Sewage lift station - single residence	Sewage lift station - single residence	each	\$ 7,790.00	4	31,160
8	Sewage pump station (wetwell and dual pumps) - large	Sewage pump station (wetwell and dual pumps) - large	each	\$ 173,100.00	1	173,100
9	Connection to existing sewer system	None available	each	\$ 1,000.00	2	2,000
10	Asphalt repair	None available	linear foot	\$ 30.00	25	750
11	Flow equalization basin	None available	lump sum	\$ 30,000.00	1	30,000
					<b>TOTAL</b>	<b>438,914</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.



## Proposed Roadway System Improvements (Dr)

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	Install new gate at Jakes Creek Road	None available	each	\$ 1,000.00	1	1,000
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	Walking path from Orientation parking lot to foot of Wonderland Hotel steps	Boardwalks - elevated (railing not included) (3 feet minimum above grade)	linear foot	\$ 43.26	550	23,793
		Handrails (wood)	linear foot	\$ 26.00	550	14,300
7	Walking path on west side of Hotel steps to top of steps	Trails, gravel	square yard	\$ 18.20	267	4,853
8	Walking path from Little River Trailhead to Spence (#42) cabin	Trails, gravel	square yard	\$ 18.20	367	6,673
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
10	Two lane asphalt road up to Wonderland Club from Elkmont Road	Road - asphalt surface, two lane	mile	\$ 592,000	0.142	84,064
11	Road widening at Wonderland Hotel driveway	Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	400	2,160
		Base Grading, complete	square yard	\$ 6.65	350	2,328
		Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
12	One lane road from Wonderland parking lot to Beaman (#58- 8H) cabin	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	430	2,322
13	Repair gravel on Catron Branch Road to Paine (#58- 2B) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.06	28,020
14	Second lane construction at Millionaire's Row in parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	427	2,306
TOTAL						365,150

## Water System Improvements (Dr)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	6" diameter water line to Wonderland Hotel area	Polyvinyl Chloride (PVC) Pipe - 6 inch C900	linear foot	\$ 38.90	7,500	291,750
2	Gate valve with box - 6 inch	Gate valve with box - 6 inch	each	\$ 973.00	7	6,811
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	6,000	18,000
4	Roadway pavement repair including #57 stone backfill	None available	linear foot	\$ 25.00	400	10,000
5	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	1,300	40,820
6	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	3	2,337
7	2" blow- off including valve and box	None available	each	\$ 700.00	2	1,400
8	Air release valve (1 inch - 2 inch) w/ manhole	Air release valve (1 inch - 2 inch) w/ manhole	each	\$ 4,760.00	2	9,520
9	Water service tap and service line	None available	each	\$ 1,500.00	7	10,500
TOTAL						391,138

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 Dr (2004):

\$1,496,555



**Elkmont Historic District**  
**Preliminary Capital Cost Estimate: Alternative D2**

**Proposed Parking Improvements (D2)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Upper Wonderland Hotel parking lot	Parking Area - Paved 26- 50 cars	space	\$ 1,950.00	50	97,500
2	Orientation Area parking lot	Parking Area - Paved 1- 25 cars	space	\$ 2,160.00	15	32,400
		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
3	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
4	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
5	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
6	Parking spaces at cabins	Parking Area - Paved 1- 25 cars	space	\$ 2,160.00	12	25,920
7	Striping	Striping	linear foot	\$ 1.25	3,500	4,375
8	Infiltration Trench	None available				
9	Gravel/Sand Layer, lined w/geotextile fabric, 2' Width, 3' Depth	None available	cubic foot	\$ 2.50	5,820	14,550
10	Parking Wheel Stops - Precast		each	\$ 81.00	176	14,256
					<b>TOTAL</b>	<b>408,654</b>

**Wastewater System Improvements (D2)**

ITEM	NPS Description		Unit	Unit Price	Qty	Total
1	8" Dia. Sewer Line	PVC Sewer Pipe D3034 - 8 inch	linear foot	\$ 51.90	1,200	62,280
2	8" Dia. Sewer Line Under Jake's Creek	Ductile Iron Sewer Pipe - 8 inch	linear foot	\$ 54.10	40	2,164
3	4" Dia. Sewer Service Line	PVC Sewer Pipe D3034 - 4 inch	linear foot	\$ 27.00	100	2,700
4	6" Dia. Sewer Service Line	PVC Sewer Pipe D3034 - 6 inch	linear foot	\$ 38.90	100	3,890
5	Standard Manhole	Standard Manhole	each	\$ 3,140.00	8	25,120
6	2" Dia.Low Pressure Sewer Line	Polyvinyl Chlorised (PVC) Pipe - 2 inch D2241	linear foot	\$ 21.60	750	16,200
7	3" Dia. Pressure Force Main	Polyvinyl Chlorised (PVC) Pipe - 3 inch D2241	linear foot	\$ 29.20	3,200	93,440
8	Sewage Lift Station - single residence	None available	each	\$ 7,790.00	4	31,160
9	Sewage Pump Station (wetwell and dual pumps) - large	None available	each	\$ 173,100.00	1	173,100
10	Connection to Existing Sewer System	None available	each	\$ 1,000.00	2	2,000
11	Asphalt Repair	None available	linear foot	\$ 30.00	25	750
12	Flow Equalization Basin	None available	lump sum	\$ 30,000.00	1	30,000
					<b>TOTAL</b>	<b>442,804</b>

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**Proposed Roadway System Improvements (D2)**

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	Install new gate at Jakes Creek Road	None available	each	\$ 1,000.00	1	1,000
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	Walking path from Orientation parking lot to foot of Wonderland Hotel steps	Boardwalks - elevated (railing not included) (3 feet minimum above grade)	linear foot	\$ 43.26	550	23,793
7	One lane road through Orientation parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0379	22,437
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	500	2,700
8	Walking path on west side of steps to top of steps	Trails, gravel	square yard	\$ 18.20	267	4,853
9	Walking path from Little River Trailhead to Spence (#42) cabin	Trails, gravel	square yard	\$ 18.20	367	6,673
10	Little River Trailhead	Road - asphalt surface, two lane	mile	\$ 591,999	0.07	39,242
11	Orientation Parking Area access road	Road - asphalt surface, two lane	mile	\$ 592,000	0.08	44,848
12	Two lane asphalt road up to Wonderland Hotel from Elkmont Road	Road - asphalt surface, two lane	mile	\$ 592,000	0.142	84,064
13	Road widening at Wonderland Hotel driveway	Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	400	2,160
		Base Grading, complete	square yard	\$ 6.65	350	2,328
		Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
14	One lane road from Wonderland parking lot to Beaman (#58- 8H) cabin	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	430	2,322
15	Repair gravel on Catron Branch Road to Paine (#58- 2B) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.06	28,020
16	Second lane construction at Millionaire's Row in parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	427	2,306
					<b>TOTAL</b>	<b>375,986</b>

**Water System Improvements (D2)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter water line to Wonderland Hotel area	Polyvinyl Chloride (PVC) Pipe - 8 inch C900	linear foot	\$ 44.30	7,500	332,250
2	Gate valve with box - 8 inch	Gate valve with box - 8 inch	each	\$ 1,244.00	7	8,708
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	6,400	19,200
4	Roadway pavement repair including #57 stone backfill	None available	linear foot	\$ 25.00	400	10,000
5	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	1,300	40,820
6	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	3	2,337
7	2" blow-off including valve and box	None available	each	\$ 700.00	2	1,400
8	Air release valve (1 inch - 2 inch) w/ manhole	Air release valve (1 inch - 2 inch) w/ manhole	each	\$ 4,760.00	2	9,520
9	Water service tap and service line	None available	each	\$ 1,500.00	9	13,500
					<b>TOTAL</b>	<b>437,735</b>

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**Total for Alternative D2 (2004):**

**\$1,665,179**



**Elkmont Historic District**  
**Preliminary Capital Cost Estimate: Alternative E1**

**Proposed Parking Improvements (E1)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Orientation Area parking lot	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	15	32,400
		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	1000	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	1800	9,720
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.4	1,516
5	Parking spaces at cabins	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	12	25,920
6	Striping	Striping	linear foot	\$ 1.25	2,500	3,125
7	Infiltration trench	Gravel/sand layer, lined w/geotextile fabric, 2' width, 3' depth	cubic feet	\$ 2.50	4,020	10,050
8	Parking wheel stops - precast	Parking wheel stops - precast	each	\$ 81.00	126	10,206
					<b>TOTAL</b>	<b>301,354</b>

**Wastewater System Improvements (E1)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diamter sewer line	PVC Sewer Pipe D3034 - 8 inch	linear foot	\$ 51.90	1,200	62,280
2	8" diameter sewer line under Jakes Creek	Ductile iron sewer pipe - 8 inch	linear foot	\$ 54.10	40	2,164
3	4" diameter sewer service line	PVC Sewer Pipe D3034 - 4 inch	linear foot	\$ 27.00	400	10,800
4	Standard manhole	Standard manhole	each	\$ 3,140.00	8	25,120
5	2" diameter low pressure sewer line	Polyvinyl Chlorised (PVC) Pipe - 2 inch D2241	linear foot	\$ 21.60	600	12,960
6	3" diameter pressure force main	Polyvinyl Chlorised (PVC) Pipe - 3 inch D2241	linear foot	\$ 29.20	5,560	162,352
7	3" diameter pressure force main under Bearwallow Branch	Ductile iron sewer pipe - 4 inch	linear foot	\$ 26.10	40	1,044
8	Sewage lift station - single residence	Sewage lift station - single residence	each	\$ 7,790.00	9	70,110
9	Sewage pump station (wetwell and dual pumps) - large	Sewage pump station (wetwell and dual pumps) - large	each	\$ 173,100.00	1	173,100
10	Connection to existing sewer system	None available	each	\$ 1,000.00	2	2,000
11	Asphalt repair	None available	linear foot	\$ 30.00	200	6,000
12	Flow Equalization Basin	None available	lump sum	\$ 30,000.00	1	30,000
13	Wastewater treatment plant expansion	None available	lump sum	\$ 300,000.00	1	300,000
					<b>TOTAL</b>	<b>857,930</b>

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Proposed Roadway System Improvements (Ei)

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	Install new gate at Jakes Creek Road	None available	each	\$ 1,000.00	1	1,000
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	Walking path from Orientation parking lot to foot of Wonderland Hotel steps	Boardwalks - elevated (railing not included) (3 feet minimum above grade)	linear foot	\$ 43.26	550	23,793
7	One lane road through Orientation parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0379	22,437
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	500	2,700
8	Walking path on west side of steps to top of steps	Trails, gravel	square yard	\$ 18.20	267	4,853
9	Walking path from Little River Trailhead to Spence (#42) cabin	Trails, gravel	square yard	\$ 18.20	367	6,673
10	Little River Trailhead	Road - asphalt surface, two lane	mile	\$ 591,999	0.07	39,242
11	Orientation Parking Area access road	Road - asphalt surface, two lane	mile	\$ 592,000	0.08	44,848
12	Two lane asphalt road up to Wonderland Hotel from Elkmont Road	Road - asphalt surface, two lane	mile	\$ 592,000	0.142	84,064
13	Road widening at Wonderland Hotel driveway	Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	400	2,160
		Base Grading, complete	square yard	\$ 6.65	350	2,328
		Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
14	One lane road from Wonderland parking lot to Beaman (#58- 8H) cabin	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	430	2,322
15	Repair gravel on Catron Branch Road to Paine (#58- 2B) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.0473	22,089
16	Second lane construction at Millionaire's Row in parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	427	2,306
17	Asphalt repair/one lane overlay at Millionaire's Row up to Cambier (#49) cabin	Resurface Road (site preparation, tack coat, 2- inch mat, seal and chip)	square yard	\$ 32.50	1,556	50,570
TOTAL						420,625

Water System Improvements (Ei)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	6" diameter water line to Wonderland Hotel area	Polyvinyl Chloride (PVC) Pipe - 6 inch C900	linear foot	\$ 38.90	7,500	291,750
2	Gate valve with box - 6 inch	Gate valve with box - 6 inch	each	\$ 973.00	7	6,811
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	8,500	25,500
4	Roadway pavement repair including #57 stone backfill	None available	linear foot	\$ 25.00	400	10,000
5	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	1,300	40,820
6	4" diameter water line to Millionaire's Row area and new well site	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	2,860	89,804
7	4" diameter water line under Bearwallow Branch	Ductile iron pipe - 4 inch	linear foot	\$ 28.10	40	1,124
8	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	7	5,453
9	2" blow- off including valve and box	None available	each	\$ 700.00	2	1,400
10	Air release valve (1 inch - 2 inch) w/ manhole	Air release valve (1 inch - 2 inch) w/ manhole	each	\$ 4,760.00	3	14,280
11	Water service tap and service line	None available	each	\$ 1,500.00	14	21,000
12	Additional well	None available	each	\$ 35,000.00	1	35,000
TOTAL						542,942

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Total for Alternative Ei (2004): \$ 2,122,851



**Elkmont Historic District**  
**Preliminary Capital Cost Estimate: Alternative E2**

**Proposed Parking Improvements (E2)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Parking lot across the river from the Wonderland Hotel	Parking Area - paved 51- 200 cars	space	\$ 1,840	75	138,000
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	2,700	14,580
2	Upper Wonderland Hotel parking lot	Parking Area - paved 26- 50 cars	space	\$ 1,950.00	50	97,500
3	Orientation Area parking lot	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	15	32,400
		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
4	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	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
6	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	1800	9,720
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.4	1,516
7	Parking spaces at cabins	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	12	25,920
8	Striping	Striping	linear foot	\$ 1.25	5,000	6,250
9	Infiltration trench	Gravel/sand layer, lined w/geotextile fabric, 2' width, 3' depth	cubic foot	\$ 2.50	8,220	20,550
10	Parking wheel stops - precast	Parking wheel stops - precast	each	\$ 81.00	251	20,331
					<b>TOTAL</b>	<b>569,784</b>

**Wastewater System Improvements (E2)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter sewer line	PVC Sewer Pipe D3034 - 8 inch	linear foot	\$ 51.90	1,200	62,280
2	8" diameter sewer line under Jakes Creek	Ductile iron sewer pipe - 8 inch	linear foot	\$ 54.10	40	2,164
3	4" diameter sewer service line	PVC Sewer Pipe D3034 - 4 inch	linear foot	\$ 27.00	400	10,800
4	6" diameter sewer service line	PVC Sewer Pipe D3034 - 6 inch	linear foot	\$ 36.80	100	3,680
5	Standard manhole	Standard manhole	each	\$ 3,140.00	8	25,120
6	2" diameter low pressure sewer line	Polyvinyl Chlorised (PVC) Pipe - 2 inch D2241	linear foot	\$ 21.60	600	12,960
7	3" diameter pressure force main	Polyvinyl Chlorised (PVC) Pipe - 3 inch D2241	linear foot	\$ 29.20	5,560	162,352
8	3" diameter pressure force main under Bearwallow Branch	Ductile iron sewer pipe - 4 inch	linear foot	\$ 26.10	40	1,044
9	Sewage lift station - single residence	Sewage lift station - single residence	each	\$ 7,790.00	9	70,110
10	Sewage pump station (wetwell and dual pumps) - large	Sewage pump station (wetwell and dual pumps) - large	each	\$ 173,100.00	1	173,100
11	Connection to existing sewer system	None available	each	\$ 1,000.00	2	2,000
12	Asphalt repair	None available	linear foot	\$ 30.00	200	6,000
13	Flow equalization basin	None available	lump sum	\$ 30,000.00	1	30,000
14	Wastewater treatment expansion: drip irrigation*	None available	lump sum	\$ 349,600.00	1	349,600
					<b>TOTAL</b>	<b>911,210</b>

\* assumes suitable drip irrigation site available within one mile of Elkmont Historic District; includes extra 15% for additional environmental studies, if needed

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.



## Road System Improvements (E2)

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	Install new gate at Jakes Creek Road	None available	each	\$ 1,000.00	1	1,000
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	Walking path from Orientation parking lot to foot of Hotel steps	Boardwalks - elevated (railing not included) (3 feet minimum above grade)	linear foot	\$ 43.26	800	34,608
7	One lane road through Orientation parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0379	22,437
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	500	2,700
8	Walking path on west side of steps to top of steps	Trails, gravel	square yard	\$ 18.20	267	4,853
9	Walking path from Little River Trailhead to Spence (#42) cabin	Trails, gravel	square yard	\$ 18.20	367	6,673
10	Little River Trailhead	Road - asphalt surface, two lane	mile	\$ 591,999	0.07	39,242
11	Orientation Parking Area access road	Road - asphalt surface, two lane	mile	\$ 592,000	0.08	44,848
12	Two lane asphalt road up to Wonderland Hotel	Road - asphalt surface, two lane	mile	\$ 592,000	0.142	84,064
13	Road widening at Wonderland Hotel driveway	Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	400	2,160
		Base Grading, complete	square yard	\$ 6.65	350	2,328
		Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
14	One lane road from Wonderland parking lot to Beaman (#58- 8H) cabin	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	430	2,322
15	Repair gravel on Catron Branch Road to Paine (#58- 2B) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.0473	22,089
16	Second lane construction at Millionaire's Row in parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	427	2,306
17	Asphalt repair/one lane overlay at Millionaire's Row up to Cambier (#49) cabin	Resurface Road (site preparation, tack coat, 2- inch mat, seal and chip)	square yard	\$ 32.50	1,556	50,570
18	New two- lane bridge over Little River w/ pedestrian lane	Vehicle Bridge (price is calculated per square foot of surface)	square foot	\$108.00	3,780	408,240
19	Walking path from Wonderland overflow parking lot	Trails, gravel	square yard	\$18.20	533	9,701
					<b>TOTAL</b>	<b>849,381</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.



Water System Improvements (E2)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter water line to Wonderland Hotel area	Polyvinyl Chloride (PVC) Pipe - 8 inch C900	linear foot	\$ 44.30	7,500	332,250
2	Gate valve with box - 8 inch	Gate valve with box - 8 inch	each	\$ 1,244.00	7	8,708
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	8,900	26,700
4	Roadway pavement repair including #57 stone backfill	None available	linear foot	\$ 25.00	400	10,000
5	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	1,300	40,820
6	4" diameter water line to Millionaire's Row area and new well site	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	2,860	89,804
7	4" diameter water line under Bearwallow Branch	Ductile iron pipe - 4 inch	linear foot	\$ 28.10	40	1,124
8	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	7	5,453
9	2" blow-off including valve & box	None available	each	\$ 700.00	2	1,400
10	Air release valve (1 in - 2 in) w/ manhole	Air release valve (1 inch - 2 inch) w/ manhole	each	\$ 4,760.00	3	14,280
11	Water service tap and service line	None available	each	\$ 1,500.00	16	24,000
12	Additional well	None available	each	\$ 35,000	1	35,000
					<b>TOTAL</b>	<b>589,539</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 E2 (2004): \$2,919,914**



**Elkmont Historic District**  
**Preliminary Capital Cost Estimate: Alternative F1**

**Proposed Parking Improvements (F1)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Orientation Area parking lot	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	15	32,400
		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	New trailhead parking in front of Kuhlman (#40) cabin	Parking Area - gravel	space	\$ 920	35	32,200
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	650	3,510
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.15	569
6	Parking spaces at cabins	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	81	174,960
7	Striping	Striping	linear foot	\$ 1.25	4,600	5,750
8	Infiltration trench	Gravel/sand layer, lined w/geotextile fabric, 2' width, 3' depth	cubic foot	\$ 2.50	8,220	20,550
10	Parking wheel stops - precast	Parking wheel stops - precast	each	\$ 81.00	230	18,630
					<b>TOTAL</b>	<b>508,221</b>

**Wastewater System Improvements (F1)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter sewer line	PVC Sewer Pipe D3034 - 8 inch	linear foot	\$ 51.90	2,400	124,560
2	8" diameter sewer line under Jakes Creek	Ductile iron sewer pipe - 8 inch	linear foot	\$ 54.10	40	2,164
3	4" diameter sewer service line	PVC Sewer Pipe D3034 - 4 inch	linear foot	\$ 27.00	3,000	81,000
4	Standard manhole	Standard manhole	each	\$ 3,140.00	16	50,240
5	2" diameter low pressure sewer line	Polyvinyl Chlorised (PVC) Pipe - 2 inch D2241	linear foot	\$ 21.60	600	12,960
6	3" diameter pressure force main	Polyvinyl Chlorised (PVC) Pipe - 3 inch D2241	linear foot	\$ 29.20	6,760	197,392
7	3" diameter pressure force main under Bearwallow Branch	Ductile iron sewer pipe - 4 inch	linear foot	\$ 26.10	40	1,044
8	Sewage lift station - single residence	Sewage lift station - single residence	each	\$ 7,790.00	11	85,690
9	Sewage pump station (wetwell and dual pumps) - large	Sewage pump station (wetwell and dual pumps) - large	each	\$ 173,100.00	1	173,100
10	Connection to existing sewer system	None available	each	\$ 1,000.00	2	2,000
11	Asphalt repair	None available	linear foot	\$ 30.00	300	9,000
12	Flow equalization basin	None available	lump sum	\$ 30,000.00	1	30,000
13	Wastewater treatment expansion: drip irrigation*	None available	lump sum	\$ 349,600.00	1	349,600
<b>TOTAL CONSTRUCTION COSTS</b>					<b>TOTAL</b>	<b>1,118,750</b>

\* assumes suitable drip irrigation site available within one mile of Elkmont Historic District; includes extra 15% for additional environmental studies, if needed

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.



Proposed Roadway System Improvements (Ft)

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	Install new gate at Jakes Creek Road	None available	each	\$ 1,000.00	1	1,000
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	Walking path from Orientation parking lot to foot of Hotel steps	Boardwalks - elevated (railing not included) (3 feet minimum above grade)	linear foot	\$ 43.26	800	34,608
7	One lane road through Orientation parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0379	22,437
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	500	2,700
8	Walking path on west side of steps to top of steps	Trails, gravel	square yard	\$ 18.20	267	4,853
9	Walking path from Little River Trailhead to Spence (#42) cabin	Trails, gravel	square yard	\$ 18.20	367	6,673
10	Little River Trailhead	Road - asphalt surface, two lane	mile	\$ 591,999	0.07	39,242
11	Orientation Parking Area access road	Road - asphalt surface, two lane	mile	\$ 592,000	0.08	44,848
12	Two lane asphalt road up to Wonderland Hotel	Road - asphalt surface, two lane	mile	\$ 592,000	0.142	84,064
13	Road widening at Wonderland Hotel driveway	Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	400	2,160
		Base Grading, complete	square yard	\$ 6.65	350	2,328
		Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
14	One lane road from Wonderland parking lot to Beaman (#58- 8H) cabin	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	430	2,322
15	Repair gravel one lane Catron Branch Road past the Wonderland Hotel from Beaman (#58- 8H) cabin to Richards (#58- 9I) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.0473	22,089
16	Second lane construction at Millionaire's Row in parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	427	2,306
17	Asphalt repair/one lane overlay at Millionaire's Row up to Cambier (#49) cabin	Resurface Road (site preparation, tack coat, 2- inch mat, seal and chip)	square yard	\$ 32.50	1,556	50,570
18	Repair gravel on Catron Branch Road to Paine (#58- 2B) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.0473	22,089
19	Walking path from Wonderland overflow parking lot	Trails, gravel	square yard	\$ 18.20	533	9,701
20	New two- lane bridge over Little River w/ pedestrian lane	Vehicle Bridge (price is calculated per square foot of surface)	square foot	\$ 108	3,780	408,240
TOTAL						871,470

Water System Improvements (Ft)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	6" diameter water line to Wonderland Hotel area	Polyvinyl Chloride (PVC) Pipe - 6 inch C900	linear foot	\$ 38.90	7,500	291,750
2	Gate valve with box - 6 inch	Gate valve with box - 6 inch	each	\$ 973.00	7	6,811
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	11,300	33,900
4	Roadway pavement repair including #57 stone backfill	None available	linear foot	\$ 25.00	400	10,000
5	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	1,300	40,820
6	4" diameter water line to Millionaire's Row area and new well site	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	2,860	89,804
7	4" diameter water line under Bearwallow Branch	Ductile iron pipe - 4 inch	linear foot	\$ 28.10	40	1,124
8	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	7	5,453
9	4" diameter water line to Jakes Creek tank	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	3,400	106,760
10	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	4	3,116
11	2" blow- off including valve & box	None available	each	\$ 700.00	3	2,100
12	Air release valve (1 inch - 2 inch) w/ manhole	Air release valve (1 inch - 2 inch) w/ manhole	each	\$ 4,760.00	4	19,040
13	Water storage tank rehabilitation - Jakes Creek tank	None available	each	40,000	1	40,000
14	Water service tap and service line	None available	each	1,500	37	55,500
15	Booster station (from existing tanks to Jakes Creek tank)	None available	each	45,000	1	45,000
16	Additional well	None available	each	35,000	1	35,000
TOTAL						786,178

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 Ft (2004): \$3,284,619



**Elkmont Historic District**  
**Preliminary Capital Cost Estimate: Alternative F2**

**Proposed Parking Improvements (F2)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	Parking lot across the river from the Wonderland Hotel	Parking Area - paved 51- 200 cars	space	\$ 1,840.00	90	165,600
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	3,150	17,010
2	Upper Wonderland Hotel parking lot	Parking Area - paved 26- 50 cars	space	\$ 1,950	50	97,500
3	Orientation Area parking lot	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	20	43,200
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	1,350	7,290
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.3	1,137
4	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
5	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
6	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	1800	9,720
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.4	1,516
7	New trailhead parking in front of Kuhlman (#40) cabin	Parking Area - gravel	space	\$ 920	35	32,200
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	650	3,510
		Clearing and Grubbing - sparse	acre	\$ 3,790.00	0.15	569
8	Parking spaces at cabins	Parking Area - paved 1- 25 cars	space	\$ 2,160.00	81	174,960
9	Striping	Striping	linear foot	\$ 1.25	7,500	9,375
10	Infiltration trench	Gravel/sand layer, lined w/geotextile fabric, 2' width, 3' depth	cubic feet	\$ 2.50	8,220	20,550
11	Parking wheel stops - precast	Parking wheel stops - precast	each	\$ 81.00	375	30,375
					<b>TOTAL</b>	<b>817,310</b>

**Wastewater System Improvements (F2)**

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter sewer line	PVC Sewer Pipe D3034 - 8 inch	linear foot	\$ 51.90	2,400	124,560
2	8" diameter sewer line under Jakes Creek	Ductile iron sewer pipe - 8 inch	linear foot	\$ 54.10	40	2,164
3	4" diameter sewer service line	PVC Sewer Pipe D3034 - 4 inch	linear foot	\$ 27.00	3,000	81,000
4	6" diameter sewer service line	PVC Sewer Pipe D3034 - 6 inch	linear foot	\$ 36.80	100	3,680
5	Standard manhole	Standard manhole	each	\$ 3,140.00	16	50,240
6	2" diameter low pressure sewer line	Polyvinyl Chlorised (PVC) Pipe - 2 inch D2241	linear foot	\$ 21.60	600	12,960
7	3" diameter pressure force main	Polyvinyl Chlorised (PVC) Pipe - 3 inch D2241	linear foot	\$ 29.20	6,760	197,392
8	3" diameter pressure force main under Bearwallow Branch	Ductile iron sewer pipe - 4 inch	linear foot	\$ 26.10	40	1,044
9	Sewage lift station - single residence	Sewage lift station - single residence	each	\$ 7,790.00	11	85,690
10	Sewage pump station (wetwell and dual pumps) - large	Sewage pump station (wetwell and dual pumps) - large	each	\$ 173,100.00	1	173,100
11	Connection to existing sewer system	None available	each	\$ 1,000.00	2	2,000
12	Asphalt repair	None available	linear foot	\$ 30.00	300	9,000
13	Flow equalization basin	None available	lump sum	\$ 30,000.00	1	30,000
14	Wastewater treatment expansion: drip irrigation*	None available	lump sum	\$ 349,600.00	1	349,600
					<b>TOTAL</b>	<b>1,122,430</b>

\* assumes suitable drip irrigation site available within one mile of Elkmont Historic District; includes extra 15% for additional environmental studies, if needed

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.



## Road System Improvements (F2)

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	Install new gate at Jakes Creek Road	None available	each	\$ 1,000.00	1	1,000
5	Place gravel on Daisy Town walkway	Trails, gravel	square yard	\$ 18.20	733	13,347
6	Walking path from Orientation parking lot to foot of Hotel steps	Boardwalks - elevated (railing not included) (3 feet minimum above grade)	linear foot	\$ 43.26	800	34,608
7	One lane road through Orientation parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0379	22,437
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	500	2,700
8	Walking path on west side of steps to top of steps	Trails, gravel	square yard	\$ 18.20	267	4,853
9	Walking path from Little River Trailhead to Spence (#42) cabin	Trails, gravel	square yard	\$ 18.20	367	6,673
10	Little River Trailhead	Road - asphalt surface, two lane	mile	\$ 591,999	0.07	39,242
11	Orientation Parking Area access road	Road - asphalt surface, two lane	mile	\$ 592,000	0.08	44,848
12	Two lane asphalt road up to Wonderland Hotel	Road - asphalt surface, two lane	mile	\$ 592,000	0.142	84,064
13	Road widening at Wonderland Hotel driveway	Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	400	2,160
		Base Grading, complete	square yard	\$ 6.65	350	2,328
		Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
14	One lane road from Wonderland parking lot to Beaman (#58- 8H) cabin	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	430	2,322
15	Repair gravel one lane Catron Branch Road past the Wonderland Hotel from Beaman (#58- 8H) cabin to Richards (#58- 9I) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.0473	22,089
16	Second lane construction at Millionaire's Row in parking area	Road - asphalt surface, two lane	mile	\$ 592,000	0.0331	19,595
		Site Preparation - minor grading - top 2- 3 inches	square yard	\$ 5.40	427	2,306
17	Asphalt repair/one lane overlay at Millionaire's Row up to Cambier (#49) cabin	Resurface Road (site preparation, tack coat, 2- inch mat, seal and chip)	square yard	\$ 32.50	1,556	50,570
18	Repair gravel on Catron Branch Road to Paine (#58- 2B) cabin	Road - gravel surface, two lane	mile	\$ 467,000	0.0473	22,089
19	Walking path from Wonderland overflow parking lot	Trails, gravel	square yard	\$18.20	533	9,701
20	New two- lane bridge over Little River w/ pedestrian lane	Vehicle Bridge (price is calculated per square foot of surface)	square foot	\$ 108	3,780	408,240
					<b>TOTAL</b>	<b>871,470</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.



Water System Improvements (F2)

ITEM	Description	NPS Description	Unit	Unit Price	Qty	Total
1	8" diameter water line to Wonderland Hotel area	Polyvinyl Chloride (PVC) Pipe - 8 inch C900	linear foot	\$ 44.30	7,500	332,250
2	Gate valve with box - 8 inch	Gate valve with box - 8 inch	each	\$ 1,244.00	7	8,708
3	Compact ductile iron fittings and thrust blocks	None available	pounds	\$ 3.00	11,700	35,100
4	Roadway pavement repair including #57 stone backfill	None available	linear foot	\$ 25.00	400	10,000
5	4" diameter water line to Daisy Town area	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	1,300	40,820
6	4" diameter water line to Millionaire's Row area and new well site	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	2,860	89,804
7	4" diameter water line under Bearwallow Branch	Ductile iron pipe - 4 inch	linear foot	\$ 28.10	40	1,124
8	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	7	5,453
9	4" diameter water line to Jakes Creek tank	Polyvinyl Chloride (PVC) Pipe - 4 inch C900	linear foot	\$ 31.40	3,400	106,760
10	Gate valve with box - 4 inch	Gate valve with box - 4 inch	each	\$ 779.00	4	3,116
11	2" blow-off including valve and box	None available	each	\$ 700.00	3	2,100
12	Air release valve (1 in - 2 in) w/ manhole	Air release valve (1 inch - 2 inch) with manhole	each	\$ 4,760.00	4	19,040
13	Water storage tank rehabilitation - Jakes Creek tank	None available	each	\$ 40,000.00	1	40,000
14	Water service tap and service line	None available	each	\$ 1,500.00	39	58,500
15	Booster station (from existing tanks to Jakes Creek tank)	None available	each	\$ 45,000.00	1	45,000
16	Additional well	None available	each	\$ 35,000.00	1	35,000
					<b>TOTAL</b>	<b>832,775</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 F2 (2004): \$3,643,985**