Capital Improvements Element

The Hall County Capital Improvements Element[1], adopted June 25, 2009, is provided as an attachment to *Hall County Forward*.

[1] The 2017-2021 Community Work Program includes the following item for 2018: "Update Impact Fee Program and Amend Capital Improvements Element (CIE)."

Capital Improvements Element

The Hall County Capital Improvements Element[1], adopted June 25, 2009, is provided as an attachment to *Hall County Forward*.

Attachment: 2009 Hall County Capital Improvements Element

[1] The 2017-2021 Community Work Program includes the following item for 2018: "Update Impact Fee Program and Amend Capital Improvements Element (CIE)."

Capital Improvements Element

An Amendment to the

Hall County Comprehensive Plan

Adopted – June 25, 2009

ROSS+associates

urban planning & plan implementation

Table of Contents

June 25, 2009

Capital Improvements Element

An Amendment to the Hall County Comprehensive Plan

Introduction

The purpose of a Capital Improvements Element (CIE) is to establish where and when certain new capital facilities will be provided within a jurisdiction and how they may be financed through an impact fee program. As required by the Development Impact Fee Act, and defined by the Department of Community Affairs in its *Development Impact Fee Compliance Requirements*, the CIE must include the following for each category of capital facility for which an impact fee will be charged:

- the designation of **service areas** - the geographic area in which a defined set of public facilities provide service to development within the area;
- a **projection of needs** for the planning period of the adopted Comprehensive Plan;
- the designation of **levels of service** (LOS) - the service level that will be provided;
- a **schedule of improvements** listing impact fee related projects and costs for the first five years after plan adoption; and
- a description of **funding sources** proposed for each project during the first five years of scheduled system improvements.

System improvements expected to commence or be completed over the coming five years are also shown in the Short-Term Work Program (STWP). The STWP affects new and previously planned capital projects for the upcoming five-year period, beginning with the current year.

Categories for Assessment of Impact Fees

To assist in paying for the high costs of expanding public facilities and services to meet the needs of projected growth and to ensure that new development pays a reasonable share of the costs of public facilities, Hall County has developed this CIE for the categories of libraries, parks and public safety facilities (Fire, jail and Sheriff's Office).

Components of the Impact Fee System

The Hall County Impact Fee System consists of several components:

- The currently adopted Comprehensive Plan, including future land use assumptions and projected future demands;
- Service area population forecasts, based on population, households, dwelling unit and employment forecasts of the Comprehensive Plan;
- Service area definition and designation;
- Appropriate level of service standards for each impact fee eligible facility category;
- A methodology report, which establishes the impact cost of new growth and development and thus the maximum impact fees that can be assessed;
- This Capital Improvements Element to implement the County's proposed improvements; and
- A Development Impact Fee Ordinance, including an impact fee schedule by land use category.

Forecasts

Table P-1 presents the service area forecasts used for impact fee calculations. These forecasts are based on population, dwelling unit and employment information contained in the Comprehensive Plan. The four service area population forecasts used in this CIE are: county-wide dwelling units (for library facilities), county-wide "day/night population" (jail), county-wide "day/night population" outside of Gainesville (Sheriff's Patrol), and county-wide dwelling units outside Gainesville (parks). The "day/night population" forecast is the combination of the residential population and employment forecasts.

Table P-1

Service Area Forecasts
2000 - 2030

	County-wide Dwelling Units (Library)	County-wide Day/Night Population (Detention Facility)	County Outside Gainesville Day/Night Population (Fire & Sheriff's Patrol)	County-wide Dwelling Units Outside Gainesville (Parks)
2000	51,046	220,241	148,302	41,970
2001	52,688	226,793	153,392	43,304
2002	54,382	233,570	158,658	44,680
2003	56,131	240,580	164,104	46,101
2004	57,937	247,830	169,737	47,566
2005	59,800	255,330	175,563	49,078
2006	61,723	263,089	181,590	50,638
2007	63,709	271,115	187,823	52,247
2008	65,758	279,419	194,271	53,908
2009	66,113	280,600	195,648	54,203
2010	66,468	281,360	196,727	54,498
2011	67,579	286,003	200,223	55,287
2012	69,802	294,683	206,143	56,866
2013	73,136	308,030	215,024	59,233
2014	77,581	326,019	226,883	62,390
2015	82,026	344,770	239,422	65,546
2016	85,440	359,245	249,202	67,927
2017	88,954	373,310	258,618	70,365
2018	92,569	388,709	269,031	72,861
2019	96,284	404,585	279,771	75,413
2020	100,100	419,960	290,100	78,022
2021	104,017	436,747	301,490	80,689
2022	108,035	454,027	313,236	83,414
2023	112,153	471,818	325,348	86,195
2024	116,372	490,111	337,831	89,034
2025	120,691	508,927	350,698	91,929
2026	125,112	528,265	363,956	94,882
2027	129,632	548,127	377,611	97,891
2028	134,254	568,539	391,689	100,959
2029	138,976	590,858	407,179	104,083
2030	143,799	612,405	422,133	107,265
Net Increase, 2000-2030:	**92,753**	**392,164**	**273,831**	**65,295**

Cost Adjustments

Calculations related to impact fees are made in terms of the 'present value' of past and future amounts of money, including project cost expenditures and credits for future revenue. The Georgia Development Impact Fee Act defines 'present value' as "the current value of past, present, or future payments, contributions or dedications of goods, services, materials, construction, or money." This Section describes the methodologies used to make appropriate adjustments to project cost figures, both past and future, to convert such costs into current dollars, and to determine the present value of future revenue from new development that would be applied as a credit against impact fees.

Calculations for present value (PV) differ when considering past expenditures versus future costs. In both cases, however, the concept is the same – the 'actual' expenditure made or to be made is adjusted to the current year using appropriate rates (an inflation rate for past expenditures and a deflator for future costs). In essence, the present value is considered in light of an alternate investment strategy – a determination of what the same amount of money would be worth if it were invested rather than spent.

Past Expenditures

Past expenditures are considered in impact fee calculations only for previous expenditures for projects that created excess capacity for new development and are being recouped. An expenditure that was made in the past is converted to PV using the inflation rate of money – in this case the Consumer Price Index (CPI). Although this approach ignores the value of technological innovation (i.e., better computers are available today for the same historic prices) and evolving land prices (often accelerated beyond inflation by market pressures), the approach best captures the value of the money actually spent. For instance, it is not important that you can buy a better computer today for the same price that was paid 5 years ago; what is important is the money was spent 5 years ago and what that money would be worth today had it been saved instead of spent.

Table C-1 shows the historic CPI figures going back to 1967. The approach to bring past expenditures up to current dollars (PV) is straight-forward – the year in which the expenditure is made is inflated to the current year using the annual CPI figures. For instance, $100 spent in 1967 would require the expenditure of $645 in 2008 just to stay abreast of inflation; the PV of $100 in 1967, therefore, is $645. (Other examples are also shown on the table).

Table C-1

Consumer Price Index -- 1967-2008

	CPI* 1967=100%	Examples of Present Value in 2008		
1967	100.0	$100,000		
1968	104.2	104,200		
1969	109.8	109,800		
1970	116.3	116,300		
1971	121.3	121,300		
1972	125.3	125,300		
1973	133.1	133,100		
1974	147.7	147,700		
1975	161.2	161,200		
1976	170.5	170,500		
1977	181.5	181,500		
1978	195.4	195,400		
1979	217.4	217,400		
1980	246.8	246,800		
1981	272.4	272,400		
1982	289.1	289,100		
1983	298.4	298,400		
1984	311.1	311,100		
1985	322.2	322,200		
1986	328.4	328,400		
1987	340.4	340,400		
1988	354.3	354,300	$100,000	
1989	371.3	371,300	104,798	
1990	391.4	391,400	110,471	
1991	408.0	408,000	115,157	
1992	420.3	420,300	118,628	
1993	432.7	432,700	122,128	
1994	444.0	444,000	125,318	
1995	456.5	456,500	128,846	
1996	469.9	469,900	132,628	
1997	480.8	480,800	135,704	
1998	488.3	488,300	137,821	$100,000
1999	499.0	499,000	140,841	102,191
2000	515.8	515,800	145,583	105,632
2001	530.4	530,400	149,704	108,622
2002	538.8	538,800	152,075	110,342
2003	551.1	551,100	155,546	112,861
2004	565.8	565,800	159,695	115,871
2005	585.0	585,000	165,114	119,803
2006	603.9	603,900	170,449	123,674
2007	621.1	621,100	175,303	127,196
2008	645.0	$645,000	$182,049	$132,091

*Consumer Price Index data is from the U. S. Department of Labor.

Future Project Costs

In order to determine the present value of a project expenditure that will be made in the future, the Net Present Value (NPV) of the expenditure is determined. To determine the NPV of any project cost, two figures are needed – the future cost of the project anticipated in the year the expenditure will be made, and the net discount rate. Given the current cost of a project, that cost is first inflated into the future to the target expenditure year to establish the estimated future cost. The future cost is then deflated to the present using the net discount rate, which establishes the NPV for the project in current dollars. These two formulas are:

$$\text{Future Cost} = \text{Current Cost} \times (1 + \text{Inflation Rate})^{\text{Year of Expenditure – Current Year}}$$

$$\text{Net Present Value} = \text{Future Cost} \times (1 + \text{Net Discount Rate})^{\text{Current Year - Year of Expenditure}}$$

In this section two important adjustments are discussed that are required to convert current costs into future cost figures, and then back into current dollars. First, a cost inflator is examined. This adjustment factor is important in determining the future cost of a project, based on current cost estimates. The cost inflator may be based on anticipated inflation in construction or building costs, or on anticipated inflation in the value of money (for capital projects that do not include a construction component). In essence, costs increase over time. By identifying the appropriate inflation rate that is related to the type of project (building, project construction or nonconstruction), current estimates can be used to predict future costs.

The second cost adjustment is a deflator – the Net Discount Rate – based on potential interest earnings. In essence, the Net Discount Rate represents the amount of money that, if invested instead of spent, would be put 'in the bank' now to grow with interest to pay for future costs when the money is needed. The discount rate is both 'net' of taxes and other administrative costs, and is the most risk-free investment available. For the calculations included in this report, an anticipated rate of 3.00% is used, based on the local government's current experience and anticipated conditions.

Cost Inflators

Three different cost inflators are used in the impact fee calculations, based on the type of project being considered. For infrastructure projects, such as roads or ball fields, a 'construction cost inflator' is used. For projects that require construction of a structure (such as a fire station), a 'building cost inflator' is used as the appropriate inflation rate. For all non-construction types of projects (such as a fire truck or park land), an inflation rate is used that is based on the Consumer Price Index. These different types of inflators are discussed below.

Engineering News Record's Cost Indexes

ENR publishes both a Construction Cost Index (CCI) and a Building Cost Index (BCI) for the Atlanta area that are widely used in the construction industry. Both indexes have a materials and labor component. The components that comprise the CCI are: 200 hours of common labor at the local average of common labor rates, plus 25 cwt of standard structural steel shapes at the fabricated local price, plus 1.128 tons of portland cement at the local price, plus 1,088 board-ft of 2 x 4 lumber at the local price. For calculation of the CCI, costs in 1913 are set at 100. The BCI uses a labor component of 68.38 hours of skilled labor at the average local wage rate, plus fringes, for carpenters, bricklayers and structural ironworkers. The materials component is the same as that used in the CCI, and the BCI is also set at 100 in 1913.

Construction Cost Inflator

Table C-2 uses the example of a calculation of the annual average rate of increase reflected in construction costs. For this analysis, the 1999-2008 period is used as a base time period for an estimate of future construction cost increases due to inflation in labor and materials costs.

Table C-2 shows a construction project that cost $100,000 in 1999, and how much the same project would cost in each subsequent year using the Construction Cost Index published by Engineering News Record for the Atlanta area. Setting the 1999 Construction Cost Index (CCI) at '1.0,' the increase in the CCI as a multiple of 1999 is also shown on the table. The equivalent cost of the same project in each subsequent year is calculated by multiplying the CCI multiplier times $100,000. When the total for all such projects is summed for the 1999-2008 period, the equivalent average annual rate of increase is calculated as the percentage that would produce the same total. This percentage is used in the text of this analysis as the applicable inflator for future construction projects that will begin in years after 2008.

Table C-2

Construction Cost Inflator -- CCI

		CCI*		Effect of Inflation	
Year	Amount	1913=100	1998=1.0	CCI	Avg. Rate =
					3.879837%
1999	$ 100,000.00	3849.39	1.0000	$ 100,000.00	$ 100,000.00
2000		4105.86	1.0666	$ 106,662.61	$ 103,879.84
2001		4045.52	1.0510	$ 105,095.09	$ 107,910.21
2002		4189.12	1.0883	$ 108,825.55	$ 112,096.94
2003		4374.69	1.1365	$ 113,646.32	$ 116,446.12
2004		4611.31	1.1979	$ 119,793.27	$ 120,964.04
2005		4829.74	1.2547	$ 125,467.67	$ 125,657.25
2006		4893.35	1.2712	$ 127,120.14	$ 130,532.55
2007		5259.37	1.3663	$ 136,628.66	$ 135,597.00
2008		5801.13	1.5070	$ 150,702.58	$ 140,857.94
				$ 1,193,941.89	$ 1,193,941.89

* Construction Cost Index.
Source: *Engineering News Record* , Annual (December) Indices.

Building Cost Inflator

The inflator for future construction costs for buildings is based on ENR's Building Cost Index for each year from 1999 through 2008, and is calculated in the same manner as described above for the Construction Cost Inflator. Table C-3 shows the results.

Table C-3

Building Cost Inflator -- BCI

Year	Amount	BCI* 1913=100	BCI* 1998=1.0	Effect of Inflation BCI	Effect of Inflation Avg. Rate = 3.204070%
1999	$ 100,000.00	2,816.44	1.0000	$ 100,000.00	$ 100,000.00
2000		2,947.56	1.0466	$ 104,655.52	$ 103,204.07
2001		2,928.63	1.0398	$ 103,983.40	$ 106,510.80
2002		2,942.62	1.0448	$ 104,480.12	$ 109,923.48
2003		3,018.37	1.0717	$ 107,169.69	$ 113,445.51
2004		3,321.80	1.1794	$ 117,943.22	$ 117,080.38
2005		3,599.04	1.2779	$ 127,786.85	$ 120,831.71
2006		3,624.54	1.2869	$ 128,692.25	$ 124,703.25
2007		3,624.54	1.2869	$ 128,692.25	$ 128,698.83
2008		3,768.88	1.3382	$ 133,817.16	$ 132,822.43
				$ 1,157,220.46	$ 1,157,220.46

* Building Cost Index.
Source: *Engineering News Record* , Annual (December) Indices.

CPI Inflator

For projects that do not involve construction, only the future value of money needs to be considered (without regard to inflation in labor or materials costs). For this calculation, the Consumer Price Index (CPI) is used, assuming past experience will continue into the foreseeable future.

Table C-4 shows the CPI figures for every year since 1967, with 1967 being 100%. In 2008 the CPI is 644.951% of the 1967 CPI. Thus, an amount of money saved in 1967 would be worth 6.45 times its 1967 face value in 2008, including interest earned and discounted for inflation. The first column under the CPI heading shows the annual CPI percentages. Using 2008 as the base (2008=1.0), the second column under CPI on the table shows the multipliers that would convert an amount of money spent in each year into year 2008 present value dollars.

Using an annual amount of $10,000 as an example, the multipliers yield the figures shown for the CPI on the table under the Present Value heading. Cumulatively, the $420,000 spent over the 1967-2008 period would have a total present value of just over a million dollars. Considering the present value figures for the $10,000 annual expenditures, an ‘average’ overall inflation rate of almost 4.08% yields the same total amount over the same period.

The 42-year average of annual CPI change (the period of 1967-2008) shown on Table C-4 includes years of great variation, and may not be the best indicator of future change. While the historic CPI multipliers reflect major swings in interest and inflation in the past, these rates have moderated considerably in recent years as inflation has become a primary target of federal monetary policy. Looking only at the change in CPI from 1999 to 2008, an average annual inflation rate of about 3.02% best captures the change over that period. This lower inflation rate (compared to the 1967-2008 period) is assumed to be experienced ‘on average’ in future years, and is used for inflator calculations for future nonconstruction expenditures.

NPV Net Discount Rate

The Consumer Price Index is also used in determining the current value of money that will be spent in the future, based on inflation (the Net Present Value). In essence, the approach compares the expenditure to placing the funds in a savings account. That is, if one planned to spend $10,000 in 2010, how much would need to be placed in a savings account now to have $10,000 at that time? Since impact fees deal in public dollars, no deduction for taxes is required in the calculations.

Table C-4

Non-Construction Cost Inflator -- CPI

Based on Historic Consumer Price Index

		CPI		Present Value		
Year	Amount	1967=100%*	2008.=1.0	CPI	Inflator =	
					4.07591%	
1967	$ 10,000.00	100.0	6.44951	$ 64,495.10	51,446.84	
1968	10,000.00	104.2	6.18955	61,895.49	49,432.04	
1969	10,000.00	109.8	5.87387	58,738.71	47,496.14	
1970	10,000.00	116.3	5.54558	55,455.80	45,636.05	
1971	10,000.00	121.3	5.31699	53,169.91	43,848.82	
1972	10,000.00	125.3	5.14725	51,472.55	42,131.57	
1973	10,000.00	133.1	4.84561	48,456.12	40,481.58	
1974	10,000.00	147.7	4.36663	43,666.28	38,896.21	
1975	10,000.00	161.2	4.00094	40,009.37	37,372.92	
1976	10,000.00	170.5	3.78270	37,827.04	35,909.29	
1977	10,000.00	181.5	3.55345	35,534.49	34,502.98	
1978	10,000.00	195.4	3.30067	33,006.70	33,151.74	
1979	10,000.00	217.4	2.96666	29,666.56	31,853.43	
1980	10,000.00	246.8	2.61325	26,132.54	30,605.96	
1981	10,000.00	272.4	2.36766	23,676.62	29,407.34	
1982	10,000.00	289.1	2.23089	22,308.92	28,255.66	
1983	10,000.00	298.4	2.16136	21,613.64	27,149.09	
1984	10,000.00	311.1	2.07313	20,731.31	26,085.86	
1985	10,000.00	322.2	2.00171	20,017.10	25,064.26	
1986	10,000.00	328.4	1.96392	19,639.19	24,082.67	
1987	10,000.00	340.4	1.89469	18,946.86	23,139.53	
1988	10,000.00	354.3	1.82035	18,203.53	22,233.32	
1989	10,000.00	371.3	1.73701	17,370.08	21,362.60	
1990	10,000.00	391.4	1.64781	16,478.05	20,525.98	
1991	10,000.00	408.0	1.58076	15,807.62	19,722.12	
1992	10,000.00	420.3	1.53450	15,345.02	18,949.75	
1993	10,000.00	432.7	1.49053	14,905.27	18,207.62	
1994	10,000.00	444.0	1.45259	14,525.92	17,494.56	
1995	10,000.00	456.5	1.41282	14,128.17	16,809.42	
1996	10,000.00	469.9	1.37253	13,725.28	16,151.12	Inflator =
1997	10,000.00	480.8	1.34141	13,414.12	15,518.59	**3.02086%**
1998	10,000.00	488.3	1.32081	13,208.09	14,910.84	
1999	10,000.00	499.0	1.29249	12,924.87	14,326.89	13,071.53
2000	10,000.00	515.8	1.25039	12,503.90	13,765.81	12,688.24
2001	10,000.00	530.4	1.21597	12,159.71	13,226.70	12,316.19
2002	10,000.00	538.8	1.19701	11,970.14	12,708.70	11,955.04
2003	10,000.00	551.1	1.17030	11,702.98	12,211.00	11,604.49
2004	10,000.00	565.8	1.13989	11,398.92	11,732.78	11,264.21
2005	10,000.00	585.0	1.10248	11,024.80	11,273.29	10,933.91
2006	10,000.00	603.9	1.06798	10,679.76	10,831.79	10,613.30
2007	10,000.00	621.1	1.03839	10,383.91	10,407.59	10,302.09
2008	10,000.00	645.0	1.00000	10,000.00	10,000.00	10,000.00
1967-08	$ 420,000.00			$1,068,320.44	$1,068,320.43	
1999-08	$ 100,000.00			$114,748.99		$114,748.99

*Consumer Price Index data is from the U. S. Department of Labor.

Library Facilities

The Hall County Library System provides its patrons with resources and services to meet their informational, educational, and recreational needs. Special focus is placed on providing and maintaining an adequate reference collection to support current and reliable information for the community and encouraging Hall County residents to develop an interest in reading and lifelong learning. The library system serves as a learning resource center for all library patrons in the community.

Service Area

Materials, facilities and services of the Hall County libraries are equally available to the county's population. The entire county is considered a single service district for library services. An improvement in any part of the county increases service to all parts of the county to some extent.

Projection of Needs

Demand for library services is almost exclusively related to the county's resident population. Businesses make some use of public libraries for research purposes, but the use is incidental compared to that of the families and individuals who live in the county. Thus, a library services system impact fee is limited to future residential growth. Between 2000 and 2030, the number of dwelling units in the library facilities service area will grow from 51,046 to 143,799, an increase of 92,753 dwelling units.

Level of Service

The County decided in 2000 to adopt a level of service for library facilities based on the then current level of service in facility space and collection materials. There was, and remains, no existing deficiency. In **Table L-1**, the year 2000 facility space and collection materials levels of service figures are used to calculate future demand in square feet and collection volumes between 2000 and 2030. The additional number of forecasted dwelling units to the year 2030 is multiplied by the level of service to produce the future demand figures. Based on the adopted LOS, future growth will demand 97,939 additional square feet of library space by the year 2030 in order to maintain the adopted level of service. In addition, 330,703 collection materials will need to be added to serve new growth to 2030. Ultimately, more collection materials will need to be acquired in order to account for future collection material discards (see Table L-3).

Table L-1

Future Demand Calculation

New Growth

SF/dwelling unit	Number of New Dwelling Units (2000-30)	SF Demanded by New Growth
1.0559	92,753	97,939

Collection Materials/ dwelling unit	Number of New Dwelling Units (2000-30)	Collection Materials Demanded
3.5654	92,753	330,703

Capacity to Serve New Growth

Table L-2 presents the expected facility space demand in an annual format, accompanied by library facility projects proposed to meet this demand. Any of these projects could be re-configured; it is the addition of 97,939 square feet that is required, not the configuration. Note that both the East Hall and Murrayville projects are 15,000 sf projects that replace 5,000 sf facilities; only the net new square footage is shown here.

.

Table L-2

Future Library Facility Demand

Year	New Dwelling Units	SF Demanded (annual)	Running Total: SF Demanded	Project	Net New Square Footage
2000	*0*	*0*	*0*		
2001	1,642	1,733	1,733		
2002	1,695	1,789	3,523		
2003	1,749	1,847	5,370		
2004	1,805	1,906	7,276		
2005	1,863	1,968	9,243		
2006	1,923	2,031	11,274		
2007	1,985	2,096	13,371		
2008	2,049	2,164	15,535	South Hall Branch	22,400
2009	355	375	15,909		
2010	355	375	16,284		
2011	1,111	1,173	17,457	Clermont/North Hall Branch	15,000
2012	2,223	2,347	19,805		
2013	3,334	3,520	23,325		
2014	4,445	4,694	28,019		
2015	4,445	4,694	32,712	East Hall Branch*	10,000
2016	3,414	3,605	36,317	Murrayville Branch*	10,000
2017	3,514	3,710	40,027	Gainesville	30,000
2018	3,615	3,817	43,845		
2019	3,715	3,923	47,767	New Branch	12,500
2020	3,816	4,029	51,797		
2021	3,917	4,136	55,933		
2022	4,018	4,243	60,175		
2023	4,118	4,348	64,524		
2024	4,219	4,455	68,978		
2025	4,319	4,560	73,539		
2026	4,421	4,668	78,207		
2027	4,520	4,773	82,980		
2028	4,622	4,880	87,860		
2029	4,722	4,986	92,846		
2030	4,823	5,093	97,939		
	92,753	97,939		**Net New Growth Total:**	**99,900**

*Expansion project; only new square footage shown here.

.

Table L-3 presents the figures for collection material demand. Materials demanded by new growth are calculated in the first columns. Note that the 'Materials Demanded (annual)' column represents the number of materials that must be purchased in order to meet new growth's demand.

Table L-3

Future Collection Materials Demanded

Year	New Growth Demand: New Dwelling Units	New Growth Demand: Materials Demanded (annual)	New Growth Demand: Running Total	Plus Discarded Materials	Total Materials Needed (annual)
2000	*0*	*0*		0	0
2001	1,642	5,853	5,853	468	6,321
2002	1,695	6,042	11,895	483	6,525
2003	1,749	6,236	18,131	499	6,735
2004	1,805	6,437	24,568	515	6,952
2005	1,863	6,644	31,212	532	7,176
2006	1,923	6,858	38,070	549	7,407
2007	1,985	7,078	45,148	566	7,644
2008	2,049	7,306	52,454	585	7,891
2009	355	1,266	53,720	101	1,367
2010	355	1,266	54,986	101	1,367
2011	1,111	3,961	58,947	317	4,278
2012	2,223	7,926	66,873	634	8,560
2013	3,334	11,887	78,760	951	12,838
2014	4,445	15,848	94,608	1,268	17,116
2015	4,445	15,848	110,456	1,268	17,116
2016	3,414	12,172	122,629	974	13,146
2017	3,514	12,529	135,158	1,002	13,531
2018	3,615	12,889	148,047	1,031	13,920
2019	3,715	13,246	161,292	1,060	14,306
2020	3,816	13,606	174,898	1,088	14,694
2021	3,917	13,966	188,863	1,117	15,083
2022	4,018	14,326	203,189	1,146	15,472
2023	4,118	14,682	217,872	1,175	15,857
2024	4,219	15,042	232,914	1,203	16,245
2025	4,319	15,399	248,313	1,232	16,631
2026	4,421	15,763	264,076	1,261	17,024
2027	4,520	16,116	280,191	1,289	17,405
2028	4,622	16,479	296,671	1,318	17,797
2029	4,722	16,836	313,507	1,347	18,183
2030	4,823	17,196	330,703	1,376	18,572
Total for New Growth		**330,703**		26,456	357,159

For collection materials the number of new items demanded by new growth that will be retained for at least 10 years is increased by an anticipated discard rate of 8.0% for “weeded” materials. This rate represents the number of materials required to meet the demand, as well as those “weeded” from the collection in a normal year. By including the weeded materials, the resulting ‘total materials needed’ reflects the total number of items required annually to maintain the LOS once these non-impact fee eligible materials are discarded. 330,703 new

materials will be needed to meet the demand of new growth to the year 2030; a total of 357,159 items will need to be purchased to maintain the level of service for new and existing development and to account for discarded materials (330,703 items for new growth, plus 26,456 items to account for discarded materials).

Capital Project Costs

The future facility projects and collection material purchases of the Department are shown on the schedules in **Tables L-4** and **L-5**. The costs are shown in current dollars, and then adjusted to reflect the net present value. For facility construction (Table L-4), the cost of construction is adjusted to reflect the construction cost inflation factor, before conversion to net present value.[1] For collection materials, the cost estimate is inflated based on the consumer price index, before conversion to net present value.

Again, note that the East Hall and Murrayville expansions are 20,000 sf projects that replace 10,000 sf facilities; the total square footage for both projects is shown here (compare with Table L-2). Because each facility doubles the size of the facility it is replacing, only half of the project cost is impact fee eligible.

Table L-4

Facility Costs to Meet Future Demand

Year	Project	Square Footage	Cost*	Adjusted Construction Cost**	Const. Cost - Net Present Value**	% for New Growth	New Growth Cost (NPV)
2008	South Hall Branch	22,400	$4,300,800	$4,300,800	$4,300,800	100.00%	$4,300,800
2011	Clermont/North Hall Branch	15,000	$2,880,000	$3,165,796	$2,897,152	100.00%	$2,897,152
2015	East Hall Branch	15,000	$2,880,000	$3,591,454	$2,920,180	66.67%	$1,946,787
2016	Murrayville Branch	15,000	$2,880,000	$3,706,526	$2,925,966	66.67%	$1,950,644
2017	Gainesville	30,000	$5,760,000	$7,650,572	$5,863,526	100.00%	$5,863,526
2019	New Branch	12,500	$2,400,000	$3,395,285	$2,452,826	84.31%	$2,067,998
		109,900	$21,100,800	$25,810,433	$21,360,451		**$19,026,907**

*Project costs based on an average of $192 per square foot construction cost.

**Adjusted cost is based on building construction cost estimate adjustment (Table C-3); net present value is based on anticipated interest earnings.

In Table L-5 collection materials costs are estimated at $29.92 per item. The percentage of the cost attributable for new growth in each year is based on the percentage of total items demanded that are attributable to new growth's demand (drawn from Table L-3).

[1] For more information on the cost inflator factor and net present value, see the 'Cost Adjustments' section of this document.

Table L-5

Collection Material Costs to Meet Future Demand

Year	Materials Needed (annual)	Gross Cost*	State Aid**	Net Total Cost	Adjusted Cost (Inflation)***	Net Present Value (Adjusted Cost)***	% for New Growth	New Growth Cost
2001	6,321	$189,133.10	($56,251.93)	$132,881.17	$107,891.50	$132,692.94	92.60%	$122,868.95
2002	6,525	$195,217.82	($58,255.32)	$136,962.51	$114,564.66	$136,796.19	92.60%	$126,669.60
2003	6,735	$201,513.96	($60,330.71)	$141,183.24	$121,662.65	$141,040.36	92.59%	$130,590.74
2004	6,952	$207,997.43	($62,480.74)	$145,516.69	$129,185.00	$145,398.86	92.59%	$134,627.47
2005	7,176	$214,704.19	($64,708.10)	$149,996.09	$137,184.30	$149,904.99	92.59%	$138,791.54
2006	7,407	$221,610.56	($67,015.61)	$154,594.95	$145,661.56	$154,532.35	92.59%	$143,078.20
2007	7,644	$228,722.98	($69,406.19)	$159,316.79	$154,645.17	$159,284.53	92.60%	$147,491.05
2008	7,891	$236,107.91	($71,882.85)	$164,225.06	$164,225.06	$164,225.06	92.59%	$152,050.69
2009	1,367	$40,892.30	($40,892.30)	$0.00	$0.00	$0.00	92.61%	$0.00
2010	1,367	$40,892.30	($40,892.30)	$0.00	$0.00	$0.00	92.61%	$0.00
2011	4,278	$128,002.91	($73,523.58)	$54,479.33	$59,567.22	$54,512.44	92.59%	$50,473.23
2012	8,560	$256,112.51	($75,672.87)	$180,439.64	$203,250.98	$180,585.86	92.59%	$167,210.55
2013	12,838	$384,115.42	($79,005.03)	$305,110.39	$354,064.90	$305,419.49	92.59%	$282,795.09
2014	17,116	$512,118.34	($83,507.58)	$428,610.76	$512,405.89	$429,131.87	92.59%	$397,341.08
2015	17,116	$512,118.34	($88,292.10)	$423,826.24	$521,992.26	$424,427.47	92.59%	$392,985.20
2016	13,146	$393,337.75	($91,967.07)	$301,370.68	$382,386.37	$301,859.33	92.59%	$279,494.81
2017	13,531	$404,843.22	($95,406.09)	$309,437.13	$404,481.82	$310,001.63	92.59%	$287,045.09
2018	13,920	$416,485.29	($99,283.47)	$317,201.82	$427,156.90	$317,844.85	92.59%	$294,303.26
2019	14,306	$428,020.68	($103,267.71)	$324,752.97	$450,536.58	$325,477.21	92.59%	$301,360.21
2020	14,694	$439,632.83	($106,974.27)	$332,658.56	$475,445.57	$333,467.96	92.60%	$308,776.06
2021	15,083	$451,274.90	($111,160.53)	$340,114.37	$500,786.09	$341,010.96	92.59%	$315,756.28
2022	15,472	$462,916.97	($115,454.43)	$347,462.54	$527,060.46	$348,449.06	92.59%	$322,639.39
2023	15,857	$474,452.36	($119,855.19)	$354,597.17	$554,131.57	$355,675.97	92.59%	$329,321.07
2024	16,245	$486,064.51	($124,363.98)	$361,700.53	$582,306.91	$362,874.42	92.59%	$336,003.06
2025	16,631	$497,599.90	($128,979.63)	$368,620.27	$611,374.32	$369,891.52	92.59%	$342,490.52
2026	17,024	$509,348.64	($133,704.09)	$375,644.55	$641,845.13	$377,016.37	92.59%	$349,089.53
2027	17,405	$520,747.44	($138,534.63)	$382,212.81	$672,796.26	$383,686.30	92.59%	$355,270.26
2028	17,797	$532,496.18	($143,473.98)	$389,022.20	$705,468.93	$390,601.04	92.59%	$361,674.68
2029	18,183	$544,031.58	($149,056.44)	$394,975.14	$737,901.57	$396,658.46	92.59%	$367,273.72
2030	18,572	$555,673.64	($154,229.40)	$401,444.24	$772,643.38	$403,236.79	92.59%	$373,360.93
	357,159	$10,686,185.95	($2,807,828.11)	$7,878,357.83	$11,172,623.00	$7,895,704.26		**$7,310,832.25**

*Cost is based on average unit cost of $29.92 per volume.
**State aid is based on the average annual contribution of $0.39 per capita.
***Adjusted cost is based on on CPI adjustment (Table C-4); net present value is based on anticipated interest earnings.

Fire Protection Facilities

Fire protection is provided by the County to the entire county outside of Gainesville by the Hall County Fire Department. The capital value of this service is based upon fire stations, administrative office space, land, and

apparatus. In 2000, fire protection services were provided by a thirteen stations with a total square footage of 63,585, utilizing a total of 31 heavy vehicles.

Service Area

Fire services are provided on a system-wide basis, rather than on a rigidly defined service area basis, with all stations and companies covering one another. The City of Gainesville provides fire service within the City. In 1997 the County and City of Gainesville entered into a mutual dispatch agreement supplementing the amount of equipment and personnel responding on initial alarms for structure fires. This agreement has been expanded throughout the years to its current state. For any given call the nearest station responds with available equipment. Depending on the nature of the call, two or more stations may respond. If the equipment at a nearby station is not available, equipment is dispatched from the next nearest station.

The entire County, excluding the City of Gainesville, is therefore considered a single service district for fire services. An improvement in any portion of the county increases service to all parts of the county to some extent. New stations are added to the system primarily to maintain the maximum 5-mile response radius in areas as they become developed, and serve the existing population nearby in addition to providing increased capacity within their primary coverage areas and for the stations they supplement.

Projection of Needs

Between 2000 and 2030, the day/night population (a combination of residents and employees) in the fire protection facilities service area will grow from 148,302 to 422,133, an increase of 273,831persons.

Level of Service

For the purposes of impact fee calculations the County in 2000 determined that a level of service, based on the addition of six stations and twelve heavy vehicles, would be adequate to serve the future service area population then projected for the year 2030 (422,133 day/night population). The adopted LOS standards from 2000 are next multiplied by the forecasted day/night population increase to produce the expected future demand in **Table F-1**. The ‘day/night population increase’ figure is taken from Table P-1. There is no existing deficiency in either facility space or heavy vehicles. The excess capacity available in facility space and heavy vehicles is subtracted from the total future demand to produce ‘net demand’ figures.

Table F-1

Future Demand Calculation
New Growth

SF/day/night population	Day/night Pop Increase (2000-30)	SF Demanded by New Growth
0.2288	273,831	62,653
	Excess Capacity	(29,653)
	Net Demand	**33,000**

Heavy Vehicles/func-tional pop	Day/night Pop Increase (2000-30)	New Heavy Vehicles Demanded
0.000066	273,831	18.16
	Excess Capacity	(6.16)
	Net Demand	**12.00**

Capacity to Serve New Growth

Tables F-2 and F-3 provide an annual breakdown of the demand for stations and equipment following the adopted level of service standards. The facility projects shown in Table F-2 are based on the County's desire to increase the inventory of fire stations in a balanced way; the final projects could be reconfigured, with 33,000 new square feet ultimately required to serve new growth.

.

Table F-2

Future Fire Protection Facility Projects

Year	Day/night Pop Increase	SF Demanded (annual)	Running Total: SF Demanded*	Project	Net New Square Footage*
2000	*0*	*0*	(29,653)		29,653
2001	5,090	1,165	(28,488)		
2002	5,265	1,205	(27,284)		
2003	5,446	1,246	(26,038)		
2004	5,633	1,289	(24,749)		
2005	5,826	1,333	(23,416)		
2006	6,027	1,379	(22,037)	Fire Station #14	5,500
2007	6,234	1,426	(20,611)		
2008	6,448	1,475	(19,135)	Fire Station #15	5,500
2009	1,377	315	(18,820)		
2010	1,079	247	(18,573)		
2011	3,496	800	(17,774)	Fire Station #16	5,500
2012	5,920	1,355	(16,419)		
2013	8,881	2,032	(14,387)		
2014	11,859	2,713	(11,674)		
2015	12,539	2,869	(8,805)		
2016	9,780	2,238	(6,567)		
2017	9,416	2,154	(4,413)	Fire Station #17	5,500
2018	10,413	2,383	(2,030)		
2019	10,740	2,457	427		
2020	10,329	2,363	2,791	Fire Station #18	5,500
2021	11,390	2,606	5,397		
2022	11,746	2,688	8,084		
2023	12,112	2,771	10,855		
2024	12,483	2,856	13,712		
2025	12,867	2,944	16,656	Fire Station #19	5,500
2026	13,258	3,033	19,689		
2027	13,655	3,124	22,813		
2028	14,078	3,221	26,034		
2029	15,490	3,544	29,578		
2030	14,954	3,422	33,000		
				Net New Growth Total:	**62,653**

*Figures reflect existing excess capacity.

Any future fire stations will be built at locations to be determined in the future with regard to NFPA standards, ISO rating criteria and response times in order to adequately serve the demands created by new growth and development.

Table F-3
Future Heavy Vehicles Demanded

Year	Day/night Pop Increase	New Vehicles Demanded (annual)*	Actual Net New Vehicles
2000	*0*	*(6.16)*	
2001	5,090	0.34	
2002	5,265	0.35	
2003	5,446	0.36	
2004	5,633	0.37	
2005	5,826	0.39	1
2006	6,027	0.40	
2007	6,234	0.41	
2008	6,448	0.43	
2009	1,377	0.09	
2010	1,079	0.07	
2011	3,496	0.23	3
2012	5,920	0.39	
2013	8,881	0.59	
2014	11,859	0.79	
2015	12,539	0.83	
2016	9,780	0.65	
2017	9,416	0.62	4
2018	10,413	0.69	
2019	10,740	0.71	
2020	10,329	0.69	2
2021	11,390	0.76	
2022	11,746	0.78	
2023	12,112	0.80	
2024	12,483	0.83	
2025	12,867	0.85	2
2026	13,258	0.88	
2027	13,655	0.91	
2028	14,078	0.93	
2029	15,490	1.03	
2030	14,954	0.99	
		12.00	12

*Figures reflect existing excess capacity.

Capital Project Costs

The future facility and heavy vehicle plans of the Department are shown on the schedules in **Tables F-4** and **F-5**. The costs are shown in current dollars, and then adjusted to reflect the net present value. For facility construction (Table F-4), the cost of construction is adjusted to reflect the construction cost inflation factor, before conversion to net present value.[2] For heavy vehicles, the cost estimate is inflated based on the consumer price index, before conversion to net present value.

Table F-4
Facility Costs to Meet Future Demand

Year	Project	Square Footage	Cost*	Adjusted Construction Cost**	Const. Cost - Net Present Value**	% for New Growth	New Growth Cost (NPV)
2006	Fire Station #14	5,500	$1,400,000	$1,314,421	$1,394,469	100.00%	$1,394,469
2008	Fire Station #15	5,500	$1,400,000	$1,400,000	$1,400,000	100.00%	$1,400,000
2011	Fire Station #16	5,500	$1,400,000	$1,538,929	$1,408,338	100.00%	$1,408,338
2017	Fire Station #17	5,500	$1,400,000	$1,859,514	$1,425,163	100.00%	$1,425,163
2020	Fire Station #18	5,500	$1,400,000	$2,044,042	$1,433,650	100.00%	$1,433,650
2025	Fire Station #19	5,500	$1,400,000	$2,393,173	$1,447,909	100.00%	$1,447,909
		33,000	$8,400,000	$10,550,078	$8,509,528		**$8,509,528**

*Estimated costs based on comparable facilities ($255 per square foot).

**Adjusted cost is based on building construction cost estimate adjustment (Table C-3); net present value is based on anticipated interest earnings.

[2] For more information on the cost inflator factor and net present value, see the 'Cost Adjustments' section of this document.

Table F-5

Heavy Vehicle Costs to Meet Future Demand

Year	New Vehicles	Gross Cost*	Adjusted Cost (Inflation)**	Net Present Value (Adjusted Cost)**	% for New Growth	New Growth Cost (NPV)
2005	Engine	$390,000	$356,688	$389,763	100.00%	$389,763
2011	Engine	$390,000	$426,423	$390,237	100.00%	$390,237
2011	Engine	$390,000	$426,423	$390,237	100.00%	$390,237
2017	Engine	$390,000	$509,790	$390,711	100.00%	$390,711
2011	Ladder	$1,000,000	$1,093,391	$1,000,608	100.00%	$1,000,608
2017	Engine	$390,000	$509,790	$390,711	100.00%	$390,711
2017	Engine	$390,000	$509,790	$390,711	100.00%	$390,711
2017	Engine	$390,000	$509,790	$390,711	100.00%	$390,711
2020	Engine	$390,000	$557,400	$390,949	100.00%	$390,949
2020	Engine	$390,000	$557,400	$390,949	100.00%	$390,949
2025	Ladder	$1,000,000	$1,658,548	$1,003,449	100.00%	$1,003,449
2025	Engine	$390,000	$646,834	$391,345	100.00%	$391,345
		$5,900,000	$7,762,265	$5,910,382		**$5,910,382**

*Estimated costs based on comparable units.

**Adjusted cost is based on on CPI adjustment (Table C-4); net present value is based on anticipated interest earnings.

Detention Facilities

In 2000, the Hall County Sheriff's Department operated a 489-inmate jail facility in downtown Gainesville. The jail administration and operation was funded from county general fund and fees obtained from Gainesville and other jurisdictions for housing prisoners. The facility was initially constructed as Phase I in 1982 to house 145 inmates with expansions in 1992 (Phase II) adding 200 additional cells and in 1993 adding 144 additional cells. The Department also runs a male work release facility off Barber Road. In addition, some inmates are boarded offsite. The new Hall County Public Safety Facility (PSF) includes space for inmate housing, and Sheriff Department Administration.

Service Area

The entire county is considered a single service area for the provision of the detention facility services because all residents and employees in the county have equal access to the benefits of the program.

Projection of Needs

Between 2000 and 2030, the day/night population (a combination of residents and employees) in the detention facilities service area will grow from 220,241 to 612,405, an increase of 392,164persons.

Level of Service

In 2000, the County determined that it would adopt a LOS based on the several additions to the jail, serving the county up to the year 2020. Based on that calculation there was a resulting year 2000 deficiency of 145,733 square feet. In **Table D-1** the adopted level of service is applied to future growth. The 'day/night population increase' figure is calculated from Table P-1. The additional number of forecasted day/night population to the year 2030 is multiplied by the adopted level of service to produce the future demand figure. New growth will demand a total of 440,932 square feet, but because of the original deficiency of 145,733 square feet, a total of 586,665 square feet will need to be provided to serve new and existing development.

.

Table D-1

Future Demand Calculation

SF/day/night population	Day/night Pop Increase (2000-30)	Total SF Demanded
1.1244	392,164	440,932
	Existing Deficiency	145,733
	Total SF Demanded	**586,665**

Capacity to Serve New Growth

A set of future projects are contemplated to meet future demand. **Table D-2** presents the annual forecasted square footage demand, accompanied by proposed facility projects. These projects could be reconfigured to be a series of projects; in the end, 440,932 square feet of new facility space is impact fee eligible.

Table D-2

Future Jail Expansion Projects

Year	Day/night Pop Increase	SF Demanded (annual)	Running Total: SF Demanded*	Future Projects	Net New Square Footage*
2000	*0*	*0*	*145,733*		(145,733)
2001	6,552	7,367	153,100		
2002	6,777	7,620	160,719		
2003	7,010	7,881	168,601		
2004	7,250	8,152	176,753		
2005	7,500	8,433	185,186		
2006	7,759	8,723	193,909	New Jail (Phase One)	275,522
2007	8,026	9,024	202,933		
2008	8,304	9,336	212,270		
2009	1,181	1,328	213,598		
2010	760	855	214,452		
2011	4,643	5,220	219,672		
2012	8,680	9,759	229,432		
2013	13,347	15,007	244,439		
2014	17,989	20,226	264,665		
2015	18,751	21,083	285,748		
2016	14,475	16,275	302,023		
2017	14,065	15,814	317,837		
2018	15,399	17,314	335,151		
2019	15,876	17,850	353,001		
2020	15,375	17,287	370,288		
2021	16,787	18,875	389,163	Expansion (Phase Two)	94,766
2022	17,280	19,429	408,591		
2023	17,791	20,003	428,595		
2024	18,293	20,568	449,163		
2025	18,816	21,156	470,319	Future Expansion	175,000
2026	19,338	21,743	492,061		
2027	19,862	22,332	514,393		
2028	20,412	22,950	537,344		
2029	22,319	25,095	562,438		
2030	21,547	24,227	586,665	Future Expansion	190,000
				New Growth Total:	589,555

*Figure reflects existing deficiency.

Capital Project Costs

Future cost to meet the square footage demanded by new growth to 2030 is shown in **Table D-3**. Since there is an existing deficiency in facility space, a portion of the first project is not impact fee eligible. Likewise, a portion of the last project represents excess capacity that will be available to serve new growth beyond the current planning horizon (2030). The costs are shown in current dollars, and then adjusted to reflect the net present value; the cost of construction is adjusted to reflect the construction cost inflation factor, before conversion to net present value.[3]

Table D-3
Facility Costs to Meet Future Demand

Year	Future Projects	Square Feet	Cost*	Adjusted Construction Cost**	Const. Cost - Net Present Value**	% for New Growth	New Growth Cost (NPV)
2006	New Jail (Phase One)	275,522	$38,053,675	$35,727,527	$37,903,334	47.11%	$17,855,030
2021	Expansion (Phase Two)	94,766	$9,476,600	$14,279,442	$9,723,605	100.00%	$9,723,605
2025	Future Expansion	175,000	$32,725,000	$55,940,411	$33,844,868	100.00%	$33,844,868
2030	Future Expansion	190,000	$35,530,000	$71,109,122	$37,111,318	99.51%	$36,929,362
		735,288	$115,785,275	$177,056,502	$118,583,125		**$98,352,866**

*Phase One and Two project costs provided by the County; project cost for third project is based on average of $187 per square foot.

**Adjusted cost is based on building construction cost estimate adjustment (Table C-3); net present value is based on anticipated interest earnings.

[3] For more information on the cost inflator factor and net present value, see the 'Cost Adjustments' section of this document.

Sheriff's Patrol Facilities

The Hall County Sheriff's Department is a full service department that plays many roles. Among other things, the department serves warrants, provides for officers to the court, and acts as the primary responder for law enforcement service in the county, outside of Gainesville. In terms of law enforcement, the department provides public safety services to all residents and employees within the county limits, as well as protection to all property within that boundary, outside the City of Gainesville. Further, the sheriff provides backup to other emergency service staff, including Gainesville's police officers, depending on the specific situation. Deputies also provide education and training to the public. While incidental assistance is provided to Gainesville on an on-request basis, the primary law enforcement role of the Sheriff focuses on the remainder of the county outside of Gainesville. It is this law enforcement role that is treated in this chapter.

A precinct system for law enforcement in Hall County is desirable to address long term law enforcement needs. Response time will continue to decrease as the county develops unless strategically placed stations are located in growth areas of the county. Based on current and future populations, the Sheriff's department is anticipating adding two new precincts to its system, in addition to accessory space for evidence and property storage.

Service Area

The entire county outside the City of Gainesville is considered a single service area for the provision of Sheriff's Patrol services because all residents and employees outside Gainesville have equal access to the benefits of the program.

Projection of Needs

Between 2000 and 2030, the day/night population (a combination of residents and employees) in the Sheriff's Patrol facilities service area will grow from 148,302 to 422,133, an increase of 273,831persons.

Level of Service

The County determined in 2000 that it would adopt a LOS based on the current level of service. In **Table SP-1** the adopted level of service, based on the year 2000 LOS, is applied to future growth. The 'day/night population increase' figure is calculated from Table P-1. The additional number of forecasted day/night population to the year 2030 is multiplied by the adopted level of service to produce the future demand figure. There is no existing deficiency.

.

Table SP-1
Future Demand Calculation

SF/day/night population	Day/night Pop Increase (2000-30)	New Square Feet Demanded
0.0681	273,831	18,637

Capacity to Serve New Growth

For the purposes of impact fee calculations the County has determined that a level of service, based on the addition of four facilities (three precincts and a storage facility—for a total of 17,500 new square feet in facility space), would be adequate to serve the future service area population then projected for the year 2030 (422,133 day/night population). The calculation of the resulting levels of service, based on these additions, is shown in **Table SP-2**. The result is an excess capacity of 1,137 square feet; there is no existing deficiency.

Table SP-2
Adopted Level of Service Calculation

Existing Square Feet	11,231
Square Feet to Be Added	17,500
Total Square Feet (2030)	28,731
Total Square Feet (2030)	28,731
day/night population in 2030	422,133
Square Feet/day/night population	**0.068061**
Current Demand in Square Feet	10,094
Existing Square Feet	11,231
Excess Capacity (SF)	1,137

The adopted LOS standard from Table SP-2 is next multiplied by the forecasted day/night population increase to produce the expected future demand in **Table SP-3**. The 'day/night population increase' figure is taken from Table P-1. The current excess capacity in facility space is subtracted from new growth's demand for facility space to produce the total square feet required to attain and maintain the adopted level of service.

Table SP-3
Future Demand Calculation

SF/day/night population	Day/night Pop Increase (2000-30)	New Square Feet Demanded
0.0681	273,831	18,637
	Excess Capacity	(1,137)
	Net Demand	**17,500**

Future Sheriff's Patrol facilities projects are contemplated to meet future demand. **Table SP-4** presents the annual forecasted square footage demand, accompanied by the proposed facility projects. The projects could

be reconfigured; 18,637 square feet are ultimately impact fee eligible, though the County does not intend to recoup the value of the excess capacity; a total of 17,500 square feet must be built to meet new demand.

Table SP-4

Future Facility Projects

Year	Day/night Pop Increase	SF Demanded (annual)	Running Total: SF Demanded*	Project	Net New Square Footage*
2000	*0*	*0*	*(1,137)*		1,137
2001	5,090	346	(791)		
2002	5,265	358	(433)		
2003	5,446	371	(62)		
2004	5,633	383	322		
2005	5,826	397	718		
2006	6,027	410	1,128		
2007	6,234	424	1,553		
2008	6,448	439	1,991		
2009	1,377	94	2,085		
2010	1,079	73	2,159	South Hall Precinct	5,000
2011	3,496	238	2,396		
2012	5,920	403	2,799		
2013	8,881	604	3,404		
2014	11,859	807	4,211		
2015	12,539	853	5,064	Northwest Hall Precinct	5,000
2016	9,780	666	5,730	Evidence & Property Storage	2,500
2017	9,416	641	6,371		
2018	10,413	709	7,080		
2019	10,740	731	7,811		
2020	10,329	703	8,514		
2021	11,390	775	9,289		
2022	11,746	799	10,088	North Hall Precinct	5,000
2023	12,112	824	10,913		
2024	12,483	850	11,762		
2025	12,867	876	12,638		
2026	13,258	902	13,540		
2027	13,655	929	14,470		
2028	14,078	958	15,428		
2029	15,490	1,054	16,482		
2030	14,954	1,018	17,500		
				New Growth Total:	18,637

*Figures reflect existing excess capacity.

Capital Project Costs

Future costs to meet the square footage demanded by new growth to 2030 are shown in **Table SP-5**. Estimated project cost is based on comparable facility estimates of other jurisdictions. The costs are shown in current dollars, and then adjusted to reflect the net present value. For facility construction, the cost of construction is adjusted to reflect the construction cost inflation factor, before conversion to net present value.[4]

Table SP-5
Project Costs to Meet Future Demand

Year	Project	Square Footage	Cost*	Adjusted Construction Cost**	Const. Cost - Net Present Value**	% for New Growth	New Growth Cost (NPV)
2010	South Hall Precinct	5,000	$875,000	$931,969	$878,471	100.00%	$878,471
2016	Evidence & Prop. Strge	2,500	$437,500	$563,057	$444,483	100.00%	$444,483
2015	Northwest Hall Precinct	5,000	$875,000	$1,091,153	$887,208	100.00%	$887,208
2022	North Hall Precinct	5,000	$875,000	$1,360,704	$899,585	100.00%	$899,585
		17,500	$3,062,500	$3,946,884	$3,109,746		**$3,109,746**

*Cost estimate is based on an estimated per square foot cost of $175.

**Adjusted cost is based on building construction cost estimate adjustment (Table C-3); net present value is based on anticipated interest earnings.

[4] For more information on the construction cost inflator and net present value, see the 'Cost Adjustments' section of this document.

Parks and Recreation Facilities

Public open space and recreational opportunities are available throughout Hall County through a variety of parks and facilities, some of which are owned and operated by the County, others that are leased from the Corps of Engineers, others that are jointly owned and operated by the City of Gainesville and Hall County, some that are operated by the individual cities and others that are operated by private non-profit associations. As the county population grows, the provision of open space is becoming a more important issue. The development of parks and the preservation of open land have several significant psychological and physical benefits. Public open space adds desirability to a community, preserves property values and broadens recreational opportunities for the citizens of Hall County. Hall County will continue to research new areas that can be used as open space and passive parks that provide a higher standard of living for Hall County's residents. These parks and open space projects are not a component of the County's Greenspace Plan, which is not a part of this impact fee program. The following are some policies and goals related to the County's park and recreation program:

- Increase accessibility. Provide adequate geographical coverage, provide parks in high growth areas, and improve recreation site visibility. Consider developing four regional recreation complexes at strategic geographic locations within the county.
- Increase the quantity of land available for recreation use by present and future residents of Hall County.
- Utilize land previously acquired but not yet developed, and acquire new land well in advance of development.
- Focus on the development of large community and neighborhood parks, making maintenance more cost-effective.
- Construct pedestrian trails and bikeways where feasible to provide linkages between residential areas, activity centers and county parks. Construct pedestrian trails and bikeways where feasible to provide linkages between residential areas, activity centers and county parks. The County would like to extend trail and passive use by using: wetlands, floodplains and lake Lanier resources.
- Develop more partnership to provide recreational opportunities: develop more "School in a Park" facilities.

Service Area

The county park system operates as part of a county-wide system of parks—excluding the City of Gainesville. Parks and recreational facilities are made available to the county's population outside of Gainesville without regard to where in the county the resident lives. In addition, the facilities are provided equally to all residents, and often used on the basis of the programs available, as opposed to proximity of the facility. For instance, children active in the little leagues play games at various locations throughout the county, based on scheduling rather than geography. Other programs are located only at certain centralized facilities, to which any Hall resident can come. As a general rule, parks facilities are located throughout the county, and future facilities will continue to be located around the county so that all residents will have recreational opportunities available on an equal basis. Thus, the entire county outside of Gainesville is considered a single service area for parks & recreation.

Projection of Needs

Demand for recreational facilities is almost exclusively related to the county's resident population. Businesses may make some use of public parks for office events, company softball leagues, etc., but the use is minimal and considered incidental compared to that of the families and individuals who live in the county. Thus, a parks and recreation impact fee is limited to future residential growth. Between 2000 and 2030, the number of dwelling units in the park facilities service area will grow from 41,970 to 107,265 , an increase of 65,295 dwelling units.

Level of Service

The County has adopted a level of service standard for parks acreage and developed components based on the year 2000 LOS. **Table PR-1** shows the future demand in parks acreage and components based on the adopted LOS standard for parks acreage and developed components. The increase in dwelling units between 2000 and 2030 is multiplied by the level of service standards to produce the future demand. The 'new dwelling units' figure is taken from Table P-1. There are no existing deficiencies.

Table PR-1
Future Demand Calculation
New Growth

AC/1,000 Dwelling Units	Number of New Dwelling Units (2000-30)	Acres Demanded
18.81	65,295	1,228

Adopted LOS per 1,000 Dwelling Units	New Components Demanded (2000-2030)	
0.524	34.2	Ball Fields
0.048	3.1	Football Fields
0.381	24.9	Soccer Fields
0.500	32.7	Tennis Court
0.131	8.6	Basketball Court
0.071	4.7	Volleyball Court
0.071	4.7	Play Fields
0.048	3.1	Trails*
0.357	23.3	Pavillions
0.310	20.2	Playgrounds
0.071	4.7	Gymnasiums

*Includes multi-purpose, walking, and jogging trails.

Capacity to Serve New Growth

Table PR-2 presents a schedule of future park acreage demand, and projects to meet that demand, based on the adopted LOS. While the specific land acquisition projects may be re-configured over time, 1,228 new acres are ultimately impact fee eligible.

Table PR-2

Future Park Land Acquisition

Year	New Dwelling Units	AC Demanded (annual)	Running Total: AC Demanded	Project	Net New Acres
2000	*0*	*0*		Cedar Creek Reservoir	520
2001	1334	25.1	25	East Hall Community Park	90
2002	1,376	25.9	51	Williams Mill	48
2003	1,420	26.7	78	Healan's Mill	4
2004	1,465	27.6	105		
2005	1,512	28.4	134	Cherokee Bluffs Park	106
2006	1,560	29.3	163	Mulberry Creek	22
2007	1,610	30.3	193	North Hall Park (Clermont)	40
2008	1,661	31.2	225		
2009	295	5.5	230	Marina Bay	80
2010	295	5.5	236	North Hall Community Park	80
2011	789	14.8	251		
2012	1,579	29.7	280		
2013	2,367	44.5	325		
2014	3,157	59.4	384		
2015	3,156	59.4	443	Neighborhood Park	80
2016	2,381	44.8	488		
2017	2,438	45.9	534		
2018	2,496	47.0	581	Future Unnamed Park A	125
2019	2,552	48.0	629		
2020	2,609	49.1	678		
2021	2,667	50.2	728		
2022	2,725	51.3	780		
2023	2,781	52.3	832		
2024	2,839	53.4	885	Future Unnamed Park B	142
2025	2,895	54.5	940		
2026	2,953	55.5	995		
2027	3,009	56.6	1,052		
2028	3,068	57.7	1,110		
2029	3,124	58.8	1,168		
2030	3,182	59.9	1,228		
				Net New Growth Total:	1,337

Capital Project Costs

Table PR-3 presents the estimated costs for the land acquisition projects. The cost estimate for land acquisition has been provided by the County or is based on comparable land acquisition costs ($30,000 per acre). The costs are shown in current dollars, and then adjusted to reflect the net present value.[5]

Table PR-3
Land Acquisition Costs

Year	Project	Acres	Gross Cost*	Adjusted Cost (Inflation)**	Net Present Value (Adjusted Cost)**	% for New Growth	New Growth Cost
2000	Cedar Creek Reservoir	520	$2,100,000	$1,655,076	$2,096,601	100.00%	$2,096,601
2002	East Hall Community Park	90	$675,000	$564,615	$674,180	100.00%	$674,180
2002	Williams Mill	48	$1,200,000	$1,003,761	$1,198,543	100.00%	$1,198,543
2003	Healan's Mill	4	$264,000	$227,498	$263,733	100.00%	$263,733
2005	Cherokee Bluffs Park	106	$3,373,000	$3,084,898	$3,370,951	100.00%	$3,370,951
2006	Mulberry Creek	22	$823,000	$775,442	$822,667	100.00%	$822,667
2007	North Hall Park (Clermont)	40	$1,200,000	$1,164,813	$1,199,757	100.00%	$1,199,757
2009	Marina Bay	80	$0	$0	$0	100.00%	$0
2010	North Hall Community Park	80	$2,800,000	$2,971,723	$2,801,134	100.00%	$2,801,134
2015	Neighborhood Park	80	$2,400,000	$2,955,885	$2,403,405	100.00%	$2,403,405
2018	Future Unnamed Park A	125	$3,750,000	$5,049,903	$3,757,602	100.00%	$3,757,602
2024	Future Unnamed Park B	142	$4,260,000	$6,858,236	$4,273,826	23.43%	$1,001,275
		1,337	$22,845,000	$26,311,850	$22,862,398		**$19,589,848**

*Project costs provided by the county or otherwise based on land acquisition costs based on an average cost of $30,000 per acre.

**Adjusted cost is based on on CPI adjustment (Table C-4); net present value is based on anticipated interest earnings.

Table PR-4 is a listing of the future capital projects costs for the developed components required in order to maintain the adopted level of service standards. The 'units to be added' figures are drawn directly from Table PR-1, and rounded up to the next whole facility. As a result, some portions of these projects are not impact fee eligible since they provide excess capacity beyond that demanded by currently forecasted growth. This is because the County cannot construct a portion of a facility, but must provide developed components in 'whole' numbers. For example, new growth to 2030 requires 34.2 ball fields in order to maintain the current LOS (see table PR-1). However, 35 ball fields will have to be built, since 34 ball fields is not enough, and there is no such thing as 0.2 of a ball field. So 35 ball fields will be built, and 0.8 of one ball field will be excess capacity that can be recouped through future impact fee collections from growth beyond 2030.

[5] For more information on the cost inflator factor and net present value, see the 'Cost Adjustments' section of this document.

Table PR-4

Future Park Facility Costs

Year	Facility Type	Units to be Added	Cost per Unit*	Gross Cost	Adjusted Cost (Inflation)**	Net Present Value (Adjusted Cost)**	% for New Growth	Net Cost to New Growth
2011	Ball Fields	5	$325,000	$1,625,000	$1,821,575	$1,666,999	100.00%	$1,666,999
2015	Ball Fields	10	$325,000	$3,250,000	$4,242,308	$3,449,384	100.00%	$3,449,384
2018	Ball Fields	10	$325,000	$3,250,000	$4,755,497	$3,538,537	100.00%	$3,538,537
2024	Ball Fields	10	$325,000	$3,250,000	$5,975,627	$3,723,813	92.00%	$3,425,908
2018	Football Fields	4	$462,000	$1,848,000	$2,704,049	$2,012,066	77.50%	$1,559,351
2011	Soccer Fields	10	$455,000	$4,550,000	$5,100,411	$4,667,599	100.00%	$4,667,599
2018	Soccer Fields	10	$455,000	$4,550,000	$6,657,696	$4,953,951	100.00%	$4,953,951
2024	Soccer Fields	5	$455,000	$2,275,000	$4,182,939	$2,606,669	98.00%	$2,554,536
2011	Tennis Court	8	$55,000	$440,000	$493,227	$451,372	100.00%	$451,372
2015	Tennis Court	8	$55,000	$440,000	$574,343	$466,994	100.00%	$466,994
2018	Tennis Court	8	$55,000	$440,000	$643,821	$479,063	100.00%	$479,063
2024	Tennis Court	9	$55,000	$495,000	$910,134	$567,165	96.67%	$548,260
2018	Basketball Court	4	$42,000	$168,000	$245,823	$182,915	100.00%	$182,915
2024	Basketball Court	5	$42,000	$210,000	$386,117	$240,616	92.00%	$221,366
2024	Volleyball Court	5	$42,000	$210,000	$386,117	$240,616	94.00%	$226,179
2009	Play Fields	2	$91,000	$182,000	$189,061	$183,555	100.00%	$183,555
2013	Play Fields	3	$91,000	$273,000	$330,232	$284,861	90.00%	$256,375
2020	Track/Trail	4	$100,000	$400,000	$631,590	$442,984	77.50%	$343,313
2018	Pavillions	12	$41,200	$494,400	$723,421	$538,293	100.00%	$538,293
2024	Pavillions	12	$41,200	$494,400	$909,031	$566,478	94.17%	$533,433
2012	Playground	10	$160,000	$1,600,000	$1,863,138	$1,655,374	100.00%	$1,655,374
2016	Playground	11	$160,000	$1,760,000	$2,386,507	$1,883,931	92.73%	$1,746,918
2011	Gymnasiums	1	$1,000,000	$1,000,000	$1,120,969	$1,025,846	100.00%	$1,025,846
2018	Gymnasiums	2	$1,000,000	$2,000,000	$2,926,460	$2,177,561	100.00%	$2,177,561
2024	Gymnasiums	2	$1,000,000	$2,000,000	$3,677,309	$2,291,577	85.00%	$1,947,841
				$37,204,800	$53,837,404	$40,298,221		**$38,800,924**

*Cost estimates are based on comparable facility costs.
**Adjusted cost is based on construction cost estimate adjustment (Table C-2); net present value is based on anticipated interest earnings.

Project years have been selected to match the proposed projects from Table PR-3, where practical. Project cost estimates have been supplied by the County, or are based on comparable facility construction estimates; these gross costs have been converted to net present value figures.[6]

[6] For more information on the cost inflator factor and net present value, see the 'Cost Adjustments' section of this document.