

4. DEMOGRAPHICS AND ENROLLMENT PROJECTIONS

A. STATISTICAL METHODOLOGY

October 1st system provided enrollments for school years 92-3 to 02-03 are listed by grade level and used to establish 10, 5 and 3 year survival ratio(s) as displayed in Table IX, Live Birth Data, obtained from the Mass. Dept. of Public Health, Research and Statistics are collected and displayed in Table II and subsequently used in Table IX to obtain birth to Kindergarten ratio(s). The Cohort Survival Method as used, calculates the survival of students, historically from birth to Kindergarten and from grade to grade, resulting in 10, 5 and 3 year average ratios. The recent 3 year average ratio has been applied in Table X to project K-6 enrollment through school year 2012-2013. The ratios used are key factors in the reliability of projections, given the validity of data at the starting point. Their strength lies in the fact that each ratio encompasses collectively the variables that could possibly account for an increase or decrease in the size of grade enrollment as it moves to the next grade. Each ratio represents the cumulative effect of migration, retention, drop-out, transfer, birth, death, and new community construction. Be further advised that Live Birth Data currently exists through 2000 only; thereafter, a recent three to ten year average is multiplied by a K:B ratio to extend a population through 2007 and subsequently projected to 2012-2013. Home Schooling, Non-Public, Choice and SPED numbers are provided for review, but not factored into our projected numbers -- they have already become a cumulative part of our progression ratio(s). Subtotals are also provided in grade combinations that may be applicable to future project decisions. It is acknowledged that projections are less than perfect and that local variables, change in economic climate, area employment or development may impact the growth of a community and its schools.

SUMMARY FINDINGS:

The census population of Williamsburg, as recorded in Table I, 1940-2000, displays an increase of 743 over the 60-year period, or 44.1%. The population growth chart shows steady increase in the initial five decades but falls to 2,427 in the most recent census (2000). This is in contrast to a 1999 MISER projection of 2,593 (2000) and 2,629 (2010) and a 1997 town clerk estimate of 2,601.

Table II portrays Live Births over an 18-year period, 1983-2000, with averages displayed in the most recent 15-10-5-3 years. A high of 35 (1985 and 1982) is countered by a low of 17 (1997). Over all the most recent 5 years has shown decline with a mid-point of 23 between a 3 and 10 year average, being used in our projection table.

Building Permits, Table III, display a high of 25 (1987) and a low of 3 (1998/2000). The various averages of 6.5, 5.8, 7.0 are below earlier years, 1983-1990. The most recent year reflects a rebound to 11, but overall the averages do not speak to a growth period.

Table IV depicts non-public attendance over a recent 11-year period. The average of 24.3 reflects at or near yearly totals and is marked by a high of 34 (1998) and a low of 15 (2002). Kindergarten shows greatest non-public attendance and may account for relatively low survival rates from Live Birth to Kindergarten as displayed in Table IX, especially in the late 80's.

Home Schooling, Table V, is virtually absent and the 11-year average of .99 bears little significance to our study conclusions.

Table VI, School Choice (Out), displays an 11-year average of 8.8 and is fairly consistent across grades from 1994 to and including 2002.

Choice (In), Table VII, cannot be counted in our historical or projected population per SBA edict, nonetheless, the K-6 system is serving an average of 17.5 students per year and has reached 25+ in 5 of the 11 years.

SPED, out-of-district, reached a high of 5 (1995) and has moved to 0 in the past (2) years. This may reflect emphasis in an inclusion program at the local level, or improved service capability, or transfer of families in a small population pool.

Historically, the recent 11-year, K-6 total student population averaged 198.6, with a high of 207 (10/94) and a recent low of 186 (10/02). Most noticeable is the low 5-year survival from Live Birth to Kindergarten in seven (7) of the 11-years. Usually this reflects attendance at a full-time, non-public Kindergarten program when one is not available in the public school. This is especially true when enrollment rebounds at the Grade 1 level. Otherwise, survival ratio(s) hover at or near 100%; somewhat lower Grade 5 to Grade 6.

Our projection chart, Table X, has been extended to 2012-2013, ten year future as required by SBA. As such it shows a decreasing student population this year (2002-2003), continuing to 2008-2009. Thereafter there is a slight increase to 199, 2012-2013. The pattern evidenced in Table X mirrors findings in the 1999 NESDEC Report and the slight growth reflects primary grade projection fueled by our averaged Live Birth estimate of (23). Be advised that the shaded quartile is most subjective as births have yet to occur and are a result of prior year averages. It may be further noted that 13.1% (28p.) of the 2002 population pool attend school elsewhere. This is offset to some degree by the 17.5 average Choice (In) attendance and most markedly by 27-25 and 28 choice in students in the most recent three school years.

B. REGIONAL PLANNING

Pending

C. LOCAL PLANNING

Pending

A. Table 1 - POPULATION GROWTH

YEAR	CENSUS 1940	CENSUS 1950	CENSUS 1960	CENSUS 1970	CENSUS 1980	CENSUS 1990	CENSUS 2000	PROJECTED 2005	PROJECTED 2010
Williamsburg	1,684	2,056	2,186	2,342	2,237	2,515	2,427	in process MISER	

Source: Federal Census Reports/Mass. Institute for Social & Economic Research (MISER)

B. TABLE II - LIVE BIRTH HISTORY

YEAR	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Recent 15 Yr. Avg.	Recent 10 Yr. Avg.	Recent 5 Yr. Avg.	Recent 3 Yr. Avg.
Williamsburg	32	32	35	35	32	34	30	31	34	19	29	30	33	18	17	21	24	22	27.3	24.7	20.4	22.3

Source: Bureau of Health Statistics, Research & Evaluation (Commonwealth of Massachusetts.)

C. TABLE III - BUILDING PERMITS (SINGLE FAMILY)

YEAR	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Recent 10 Yr. Avg.	Recent 5 Yr. Avg.	Recent 3 Yr. Avg.	7.0
Williamsburg	9	8	15	18	25	11	10	9	5	6	6	12	5	7	5	3	7	3	11	6.5	5.8	5.8	

Source: NESDC Report, 1999 / p-off.

D. TABLE IV - Non-Public Enrollment

Grade	Year											Recent 11 Yr. Avg
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
K	4	6	6	7	4	5	5	3	2	3	2	4.3
1	0	2	5	5	3	3	5	5	3	1	1	3.0
2	5	0	2	4	4	4	6	5	5	4	1	3.6
3	3	5	0	2	3	5	8	6	5	2	4	3.9
4	4	4	4	0	2	2	3	4	5	2	2	2.9
5	4	4	3	4	0	2	5	3	4	4	2	3.2
6	4	4	4	3	5	1	2	5	4	2	3	3.4
Totals	24	25	24	25	21	22	34	31	28	18	15	(24.3)
Source: Admin.												

E. TABLE V - Home Schooling

Grade	Year											Recent 11 Yr. Avg
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
K	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	1	0	0	0	0	0	0	0.09
3	0	0	1	0	0	1	0	0	1	0	1	0.36
4	0	0	0	1	0	0	0	0	0	2	0	0.27
5	0	0	0	0	0	0	0	0	0	1	1	0.18
6	0	0	0	0	0	0	0	0	1	0	0	0.09
Totals	0	0	1	1	1	1	0	0	2	3	2	(.99)
Source: Admin.												

F. TABLE VI: CHOICE (OUT)											
Grade	Year										Recent 11 Yr. Avg
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
K	0	0	2	1	2	4	4	3	1	1	0
1	0	0	1	1	1	1	4	4	3	1	1
2	0	0	2	1	1	1	1	1	4	3	0
3	0	0	2	2	1	0	1	1	1	3	4
4	0	0	2	2	2	1	0	1	0	3	2
5	0	0	3	2	2	1	0	0	0	0	4
6	0	0	1	3	2	2	0	0	0	0	0
Total	0	0	13	12	11	10	10	10	9	11	11
Source: Admin.											

G. TABLE VII: CHOICE (IN)											
Grade	Year										Recent 11 Yr. Avg
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
K	0	0	0	0	0	1	0	0	7	3	10
1	0	0	0	1	2	1	1	0	4	7	2
2	0	1	0	3	1	5	1	0	1	3	7
3	0	0	1	2	7	1	5	0	3	1	3
4	0	0	0	2	4	9	1	5	4	3	1
5	0	0	0	3	8	5	9	1	6	3	2
6	0	0	0	1	7	11	5	9	2	5	3
Total	0	1	1	12	29	33	22	15	27	25	28
Source: Admin.											

H. TABLE VIII: SPED (OUT OF DIST.)											
Grade	Year										Recent 11 Yr. Avg
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
K	0	1	1	1	0	0	0	0	0	0	0
1	1	0	1	1	1	0	0	0	0	0	0
2	0	1	0	1	1	1	0	0	0	0	0
3	1	0	1	0	1	1	1	0	0	0	0
4	0	1	0	1	0	1	1	0	0	0	0
5	0	0	1	0	0	0	1	1	0	0	0
6	0	0	0	1	0	0	0	1	1	0	0
Total	2	3	4	5	3	3	3	2	1	0	0
Source: Admin. (Revised) 11/14/02											

I. Historical Enrollment / Survival Ratios - Table IX.

BIRTH YEAR	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
DIST.L.B.	32	34	30	31	34	19	29	30	33	18	17	
YEAR	10-92	10-93	10-94	10-95	10-96	10-97	10-98	10-99	10-00	10-01	10-02	Recent yr. 10/5/3
Grade K	27	28	25	24	35	20	17	24	30	28	19	ave. Ratio(s)
K:B	.8438	.8235	.8333	.7742	1.0294	1.0526	.5862	.8000	.9091	1.5556	1.1176	R10=.9482; R5=.9937; R3=1.1941
1	35	32	30	24	24	36	23	21	26	30	28	
1:K		1.1852	1.0714	.9600	1.0000	1.0286	1.1500	1.2353	1.0833	1.0000	1.0000	R10=1.0714; R5=1.0937; R3=1.0278
2	28	36	33	27	28	25	38	23	21	26	30	
2:1		1.0286	1.0313	.9000	1.1667	1.0417	1.0556	1.0000	1.0000	1.0000	1.0000	R10=1.0224; R5=1.0111; R3=1.0000
3	29	27	31	30	28	29	25	41	23	21	26	
3:2		.9643	.8611	.9091	1.0370	1.0357	1.0000	1.0789	1.0000	1.0000	1.0000	R10=.9886; R5=1.0158; R3=1.0000
4	26	32	31	35	29	31	33	25	41	22	20	
4:3		1.1034	1.1481	1.1290	.9667	1.1071	1.1379	1.0000	1.0000	.9565	.9524	R10=1.0501; R5=1.0094; R3=.9696
5	22	25	30	32	31	33	29	33	25	41	22	
5:4		.9615	.9375	1.0323	.8857	1.1379	.9355	1.0000	1.0000	1.0000	1.0000	R10=.9890; R5=.9871; R3=1.0000
6	36	22	27	25	29	30	30	29	32	25	41	
6:5		1.0000	1.0800	.8333	.9063	.9677	.9091	1.0000	.9697	1.0000	1.0000	R10=.9666; R5=.9758; R3=.9899
PK	22	21	20	22	23	22	20	24	22	21	26	A/11=22.1
K-6	203	202	207	197	204	204	195	196	198	193	186	A/11=198.6
PK-6	225	223	227	219	227	226	215	220	220	214	212	A/11=220.7
K-3	119	123	119	105	115	110	103	109	100	105	103	A/11=110.1
4-6	84	79	88	92	89	94	92	87	98	88	83	A/11 = 88.5
PK-2	112	117	108	97	110	103	98	92	99	105	103	A/11=104.0
3-6	113	106	119	122	117	123	117	128	121	109	109	A/11=116.7
Preschool Other Towns	5	7	9	3	3	7	4	3	4	3	3	A/11=4.6

* Corrected, 11/14/02, per Admin.

J. Pupil Projections / Application of Survival Ratio(s) - Table X.

	BIRTH YEAR	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Dist. L.B.	33	18	17	21	24	22							
	School Year	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13
	Multiplier													
	(1.1941)													
GRADES		Actual	Enrollment					Yr/5					Yr/10	
K	(1.0278)	30	28	19	25	29	26							
1	(1.0000)	26	30	28	20	26	30	27						
2	(1.0000)	21	26	30	28	20	26	30	27					
3	(.9696)	23	21	26	30	28	20	26	30	27				
4	(1.0000)	41	22	20	25	29	27	19	25	29	26			
5	(.9899)	25	41	22	20	25	29	27	19	25	29	26		
6		32	25	41	22	20	25	29	27	19	25	29	26	
PK		22	21	26	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)
K-6		198	193	186	170	177	183	186	185	186	195	198	197	199
PK-6		220	214	212	192	199	205	208	207	208	190	220	219	221
PK-3		122	126	129	125	125	124	133	136	135	137	137	137	137
4-6		98	88	83	67	74	81	75	71	73	80	83	82	84
PK-2		99	105	103	95	97	104	107	104	108	108	108	108	108
3-6		121	109	109	97	102	101	101	101	100	109	112	111	113