FINAL REPORT

FROM THE
COMMITTEE TO STUDY THE
REASSIGNMENT OF PUPILS

RIR

TO THE
SCHOOL COMMITTEE
LEXINGTON, MASSACHUSETTS

MAY 12, 1975

REASSIGNMENT OF PUPILS

THE FINAL REPORT OF THE

COMMITTEE TO STUDY THE REASSIGNMENT OF PUPILS

MAY, 1975

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1. Mandate of the Committee

The Committee to Study Reassignment of Pupils was established as one of three citizens' study committees. The objectives of the CSRP were defined in a directive from the Lexington School Committee, dated February 3, 1975:

" ... to study the reassignment of pupils, specifically, the modification of school district lines to absorb all streets serviced by closed schools, the determination of the distances to be travelled to new assignments by children living on streets serviced by closed schools, and to estimate the potential growth within each district."

2. CRITERIA FOR CSRP STUDY (ELEMENTARY SCHOOLS)

(1) All pupils in a natural neighborhood should be assigned to the same school. A natural neighborhood is defined by boundaries which are considered "unsafe" for pedestrians and are unlikely to be crossed unattended by elementary age children. Redistricting along these lines is unlikely to disturb peer relations which have already been established outside of school. Examples of such boundaries are major traffic arteries, the B&M railroad, Wilson's farm, etc.

(2) All pupils within walking distance of a school should be assigned to that school. Where they cannot walk, they should be assigned to the nearest school.

(3) The Reassignment Plan should result in a single townwide redistricting plan that will remain unchanged throughout the closing schedule.

(4) Students in schools to be closed shall be redistricted in a single year and shall thereafter remain in the new district to which they are reassigned.

(5) Pupils in schools remaining open should be unaffected by redistricting where possible.

(6) Effort shall be made to minimize the division of school districts to be closed to preserve existing group identification where possible.

(7) Design reassignment/closing schedule to provide uniform distribution of students against capacity at completion of closing.

(8) The closing schedule should be designed with adequate margin to permit assignment options with regard to: Metco (approaching 10% of the elementary school population by 1980)*; new housing developments; errors in the projection data, etc.

(9) Attempt to adhere to the closing schedule set forth in the Facilities Study.

* see Appendix (e)

3. Sequence of Analysis for the Elementary Schools

(i) Division of the Existing Districts

A briefing on land use in Lexington was given to the committee by Mr. Briggs of the Planning Office on February 25, 1975.* Attention was focused on neighborhood definition and "natural" boundaries within the town, in addition to major changes in land use patterns which could affect the school population distribution or density over the next decade. In this way the committee members became more familiar with the current elementary school districts (Map 1) and where they conformed with, or violated "neighborhood boundaries".

Based upon this information and data collected by members of the committee, the four elementary districts recommended for closure in the Facilities Study, namely Parker, Hancock, Munroe, and Adams, were divided into subdistricts as shown in Map 2. The following "boundaries" were used:

(a) Hancock: Area 1 - east of the B & M RR tracks

Area 2 - west of the B & M and north of Mass. Avenue (including Mass. Ave.)

Area 3 - west of the B & M and south of Mass. Avenue (excluding Mass. Ave.)

(b) Munroe: Area 4 - north of the B & M and west of Hayes Lane (including Hayes Lane).

Area 5 - the remainder north of the B & M tracks

Area 6 - south of the B & M and west of Bloomfield Street (including Bloomfield St.)

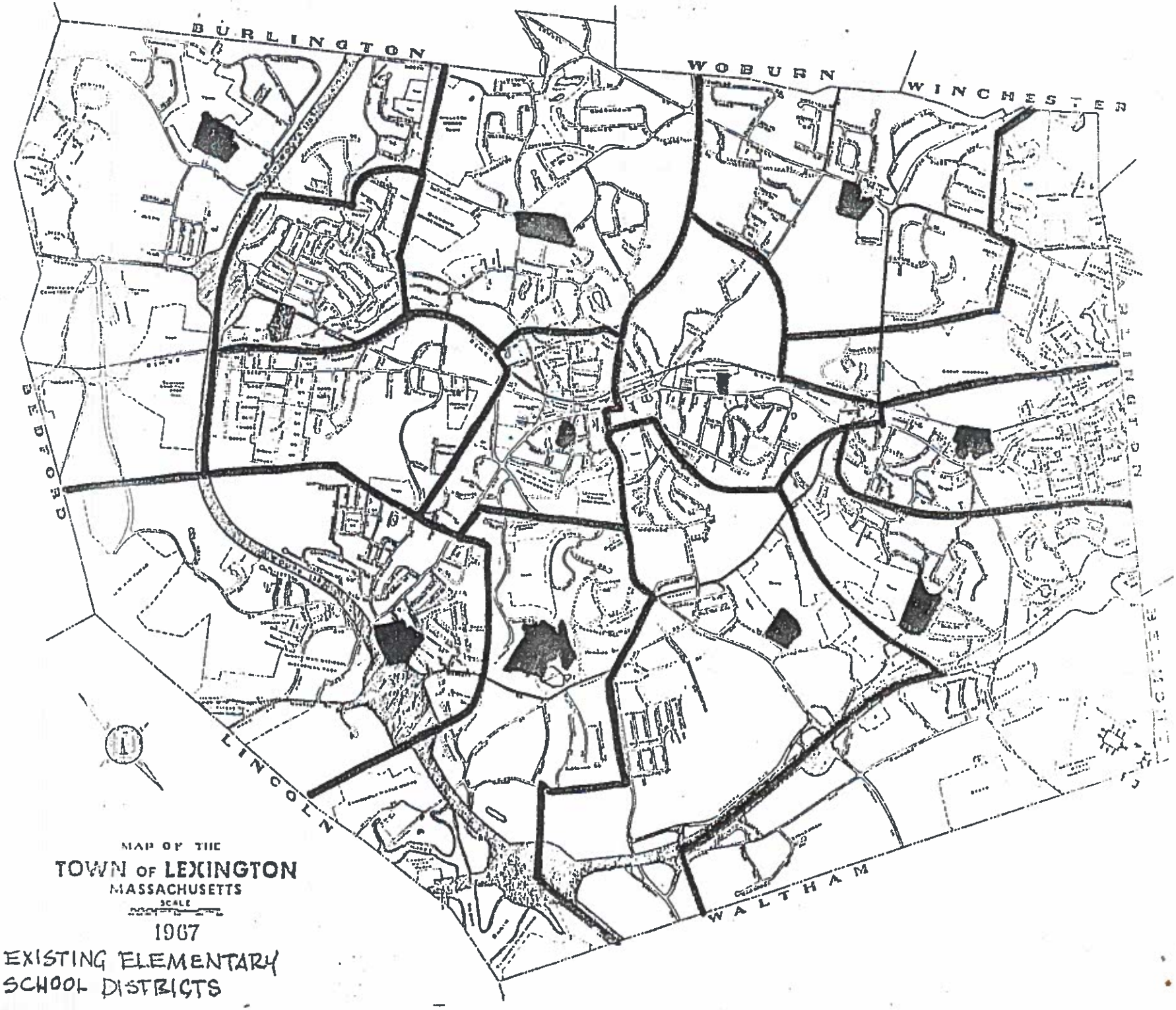
Area 7 - the remainder south of the B & M

(c) Adams: Area 8 - south of the B & M tracks and west of the town land

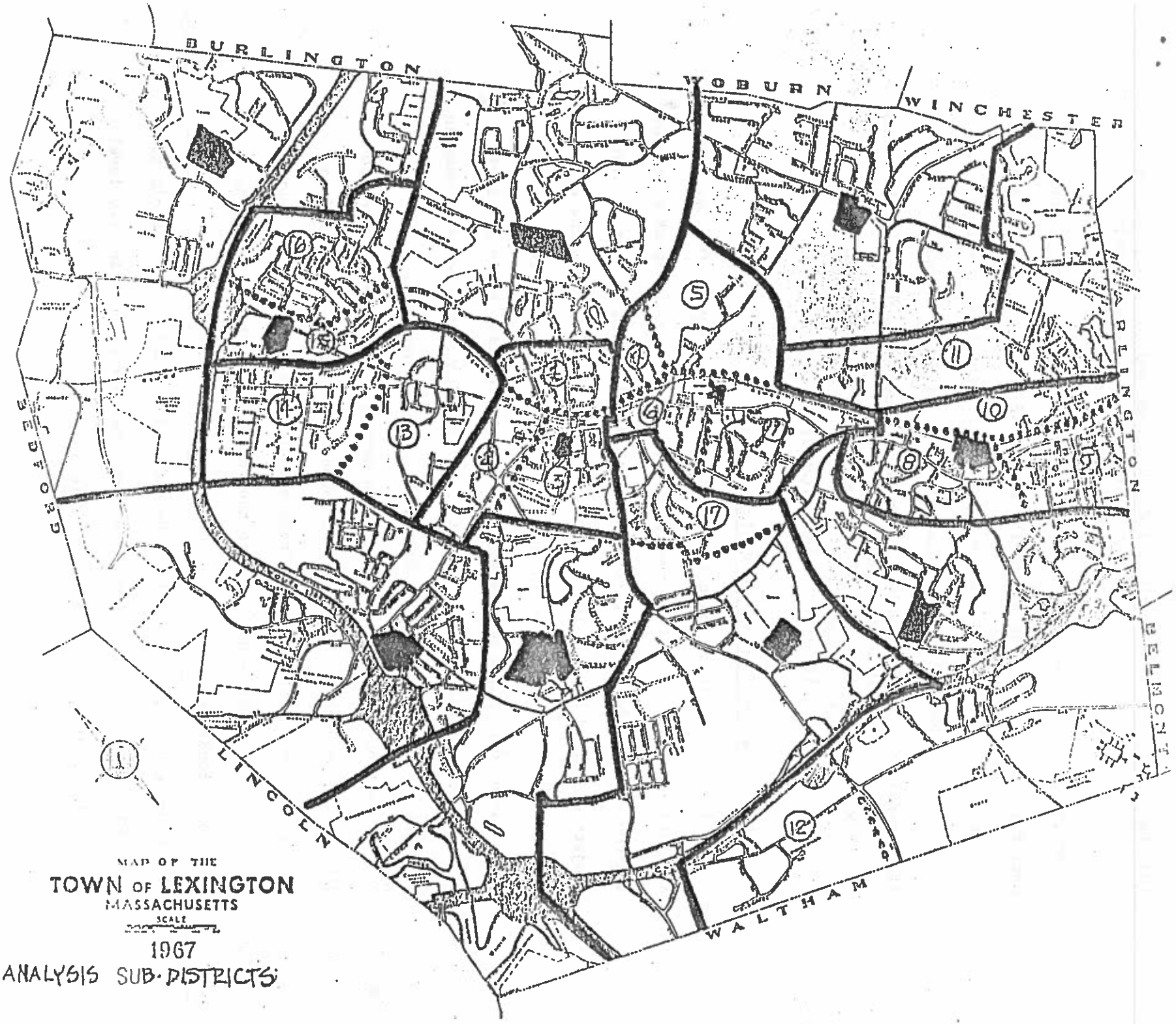
Area 9 - south of the B & M tracks from Oak Street to the Arlington line (including Oak St.)

Area 10 - north of the B & M tracks

* Further details are included in Appendix (e).



MAP 1: EXISTING ELEMENTARY SCHOOL DISTRICTS



MAP 2; ANALYSIS SUB-DISTRICTS

(d) Parker: Area 15 - south of Bedford Street and North Hancock Street (including Bedford St. and North Hancock St.)
Area 16 - the remainder of the Parker District

In addition, four other sub-districts as shown in Map 2, were defined to assist in the options possible in the choice of reassignment scenarios:

(e) Bridge: Area 13 and Area 14 with the division running west of the Public Works Building and south of Vaille Avenue

(f) Franklin: Area 17 - the portion of this district north of Worthen Road (including Worthen Road)

(g) Bowman: Area 12 - west of Waltham Street, (excluding Waltham St.) south of Route 2
Area 11 - the Bowman 2 district

(ii) Census Data Reduction and Redistricting

Using the school census data for the 73-74 school year, (the most recent available for analysis), the Committee, with the generous help of volunteers and the Planning Board, analyzed each of these districts so that accurate projections could be made through 1980. The data published by the enrollment projection subcommittee in the Appendix to that report in March of 1974, was used to guide our updated enrollment projections; in particular, district by district cohort survival ratios adopted by them were used in generating our projections based upon this 73-74 census data.

These tabulations are included in Appendix A for the seventeen sub-districts listed above, and cover the population with birth dates from 69-73, and Kindergarten through Grade 6 for the 1973-1974 school year.

Various closing sequences were then attempted with the following additional conditions:

(1) Closing of a school would not be accomplished unless the schools to which the affected students are reassigned are at 90% capacity level or less. This follows from criteria 8.

(2) Current capacity data were used in setting this criterion, predicated upon the assumptions shown in Table 1. Using these figures, rather than the "renovated" capacities reported in the facilities study, effectively decouples the two programs: namely renovation and closing. Furthermore, with the expected Metco increase which will approach 10% of Lexington's elementary school population in 1979-1980 (see Table 2) it was felt that the reduction in school capacity associated with the proposed renovations, might not be possible. Note that only the grade 1 - 6 population is considered in Table 2 since kindergartens are not effected by METCO. In 1979-80, the 240 grade 1 - 6 METCO students would represent 8.8% of the total projected elementary school enrollment (2732 students).

(3) The sequence will not "force" an accommodating capacity in the recipient schools. That is, an attempt is made to schedule the reassignment in a manner harmonious with the declining enrollments in these schools.

Table 1

Capacities (Elementary School)

	Existing			Renovated		
School	Class Rooms	Kinder gartens	Capacity	Class Rooms	Kinder gartens	Capacity
Fiske	16	1	440	13	1	365
Bowman	20	2	560	21.5	1	577
Bridge	19	2	535	21.5	1	577
Estabrook	17	1	465	13	1	365
Harrington	12	1	340*	14	1	390
Hastings	16	2	460	15	1	415
Franklin	15	2	435	11	1	315

K=1; Capacity=25* Classrooms +40
K=2; " " +60

Note: Harrington unusually low; the renovated capacity is used as the design capacity.

Table 2
Estimated Metco Elementary School Population
Grades 1-6, no kindergarten

Year	Total	Elementary*	Total El.	Total %
74-75	240	(144)	3700	3.9
75-76	280	168	3442	4.9
76-77	320	(192)	3247	5.9
77-78	360	(216)	2988	7.2
78-79	400	(240)	2696	8.9
79-80	(400)	(240)	2426	9.9

*Based upon the 75-76 ratio of 60% elementary

The sequence started (as recommended in the Facilities Study) with the closing of Hancock with redistricting to Fiske and Hastings. In the school year (76-77) recommended in the Facilities Study, this would have placed both recipient schools at 100% capacity (see pages B-1 and B-2). As shown there, the earliest this closing could be accomplished with adequate margin was in the 77-78 school year.

Next, Munroe was closed into Fiske and Franklin to see if it should precede Hancock. We found that the earliest that closure could take place with adequate margin was 1978-79 (see B-3 and B-4). Therefore, it was decided to recommend the closure of Hancock (first) in the 1977-78 school year.

The third sequence involved the closing of Munroe into Fiske after Hancock was closed. This is shown in the analysis of B-5 and indicate that Munroe cannot be closed until the 1979-80 year due to the addition of the Hancock students in Fiske. This sequence concludes the treatment of Hancock, Munroe, Fiske, Franklin and Hastings.

In accordance with the proposed closure sequence, Adams was next closed into Bowman and Harrington. As can be seen from the sub-districting Map 2, this involved the movement of Bowman 2 into Harrington (see page B-7), which was chosen as the preferred option when it was found that the Liberty Heights district (9) could not be accommodated by Harrington nor by Bowman, without the reassignment of the Bowman 2 sub-district. This assignment, although it violated criterion 5, did integrate the subdistricts north of Mass. Avenue (including Adams 10) while assigning the Bowman 2 students to a closer school.

It was then found that the closing of Adams, the largest of the schools to be reassigned, could not be accommodated until 1979-1980. (see page B-7).

Finally, Parker was reassigned to the Estabrook and Bridge Schools. It was determined (see pages B-9 and B-10) that this reassignment permitted Parker

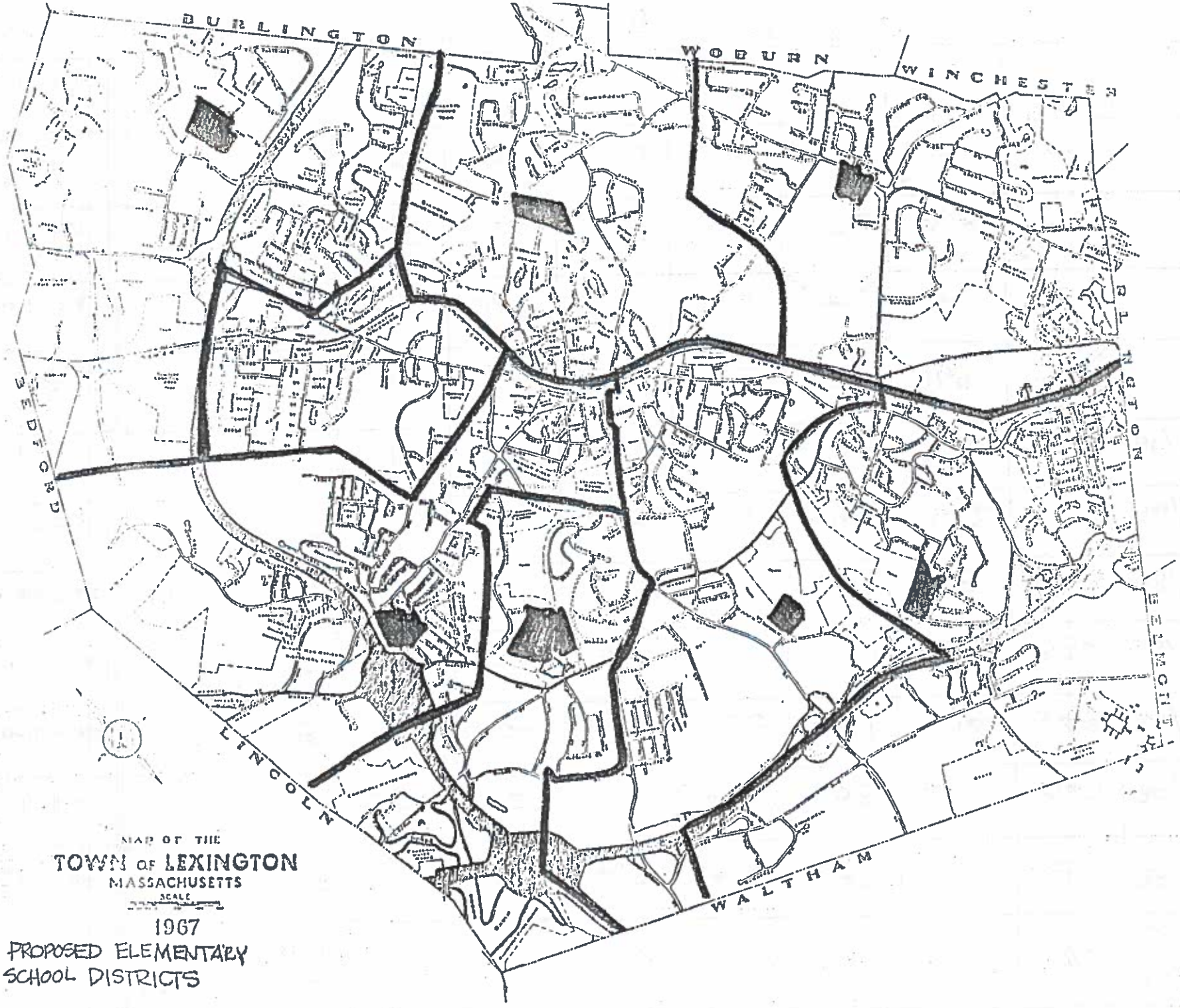
to close in 1978-1979, a year in advance of the time recommended in the Facilities Study.

A summary of these projections and of the reassignment sequence just outlined is shown in Table 3. As indicated in the last column of that table, this schedule results in a quite uniform distribution of the students vis à vis current capacity, i.e., an average of 82%. It should be pointed out that the development path of Table 3 differs markedly from the somewhat unrealistic path adopted in the Facilities Study; i.e., in which students reassigned from a closed facility were rather broadly distributed among those facilities remaining open.

The redistricted map for the town of Lexington resulting from this proposed reassignment sequence is shown in Map 3. The boundary definitions of the proposed redistricted town shown on this map should be assumed to concur with those currently in force where ambiguity exists.

School	Current Capacity	Renovated Capacity	73/74	74/75	75/76	76/77	77/78	78/79	79/80	% Capacity Cur./Ren.
Bridge	535	577	529	507	479	471	435	463	453	85/79
Bowman	560	577	575	527	477	420	403	359	449	80/78
Hastings	460	415	431	408	390	356	421	374	343	75/83
Harrington	390	390	365	329	311	276	277	252	336	86/86
Estabrook	465	377	448	417	394	354	323	413	384	83/101
Fiske	440	365	454	415	398	371	380	342	379	86/103
Franklin	435	315	382	365	360	348	321	314	351	81/111
Monroe			184	185	189	182	177	169	—	
Hancock			215	207	186	170	—	—	—	
Adams			395	385	375	359	332	318	—	
Peaker			295	274	238	219	194	—	—	
Totals										

Table 3: PROPOSED CLOSING SEQUENCE AND PROJECTED ENROLLMENTS



MAP 3: PROPOSED ELEMENTARY SCHOOL DISTRICTS

(iii) Grade Structure Analysis

This analysis considers the effect of the school closings on average class size and the class size distribution at each school.

Average Class Size

First, the grade projections made in Appendix C of the 1974 Enrollment Projection Sub-committee Report were extrapolated through 1980 by using the average of the 76-77 and 77-78 Kindergarten classes as estimates of the 78-79 and 79-80 Kindergarten classes. This is the same technique as was employed in Appendix B of this report. The resulting class sizes are listed above the slash for each school in Table 4-A. Then, a simple class count was established by simply dividing classes to keep the maximum class size at 30 and maximum Kindergarten at 25. The number of classes for each grade is listed below the slash. The result is an indication of what might happen, in general, if there were no closures and a simple whole grade strategy was employed to limit class size. The total class average for grades 1-6 without METCO is 21.9. METCO would raise the average to 24.1, just above the current value of 23.9. One hundred and eleven grade 1-6 classes (classroom teachers) would be required. This is 27% fewer than the current 153.

Next, the grade projections for the schools remaining open when closures take place (as set forth in Appendix B) are given in Table 4-B. Again, a simple whole grade strategy was employed. The result is a very large class size; with METCO the average class size would be 27.1.

As a result of the large class size, the number of classrooms required is only 97, 14 less than without the closings. This would result in a 37% reduction in classrooms (classroom teachers) but at the price of exceedingly large class sizes.

TABLE 4

79-80 Grade Structure (whole Grade strategy)

Without Closures (TABLE 4-A)

	K	1	2	3	4	5	6	1-6
Adams	35/2	36/2	38/2	34/2	44/2	47/2	54/2	253/12 = 21.1
Bowman	31/2	33/2	35/2	31/2	53/2	54/2	50/2	256/12 = 21.3
Bridge	47/2	52/2	39/2	65/3	66/3	69/3	63/3	354/16 = 22.1
Estabrook	31/2	33/2	34/2	30/1	50/2	48/2	54/2	249/11 = 22.6
Fiske	27/2	30/1	21/1	38/2	53/2	41/2	52/2	235/10 = 23.5
Franklin	38/2	37/2	34/2	40/2	51/2	44/2	43/2	249/12 = 20.8
Hancock	16/1	19/1	19/1	19/1	19/1	20/1	26/1	124/6 = 20.6
Harrington	28/2	30/1	33/2	26/1	40/2	38/2	37/2	204/10 = 20.4
Hastings	22/1	22/1	12/1	36/2	45/2	50/2	60/2	225/10 = 22.5
Munroe	18/1	23/1	20/1	25/1	25/1	29/1	27/1	149/6 = 24.8
Parker	13/1	13/1	11/1	14/1	25/1	32/2	35/2	130/6 = 21.7
Totals	306/18 = 17.0							2426/111 = 21.9

With 10% METCO = 24.1

With Closures (TABLE 4-B)

	K	1	2	3	4	5	6	1-6
Bowman	52/3	55/2	52/2	58/2	72/3	82/3	78/3	397/15 = 26.5
Bridge	54/3	59/2	48/2	69/3	76/3	76/3	71/3	399/16 = 24.9
Estabrook	41/2	42/2	40/2	43/2	68/3	70/3	80/3	343/15 = 22.9
Fiske	41/2	47/2	38/2	56/2	66/3	51/2	80/3	338/14 = 24.1
Franklin	45/2	46/2	41/2	50/2	58/2	56/2	65/2	306/12 = 25.5
Harrington	41/2	44/2	50/2	35/2	60/2	50/2	56/2	295/12 = 24.6
Hastings	33/2	38/2	26/1	49/2	58/2	67/3	72/3	310/13 = 23.8
Totals	307/16 = 19.1							2388/97 = 24.6

With 10% METCO = 27.1

Strategy

(1) Maximum allowable class size = 30
(2) Maximum Kindergarten = 25

From Table 4 two conclusions can be drawn.

First, even if schools are not closed, substantial reductions in classroom teacher staff can be realized while maintaining the current average class size (approximately 24) due to the decreasing enrollment.

Second, a simple whole grade strategy for establishing classroom counts leads to unrealistically large class sizes should the schools be closed.

Current practice in Lexington elementary schools is to combine adjacent grades in one class to achieve desired class sizes. In fact, some schools create combined classes for educational advantages even when it is not required to balance class sizes. Over 30% of the elementary school classes are combined grades at the present time.

Table 5 shows the same class sizes but with classroom counts established by a simple combined class strategy. The strategy was designed to promote an average class size of 23.5, (without METCO) to increase the "without closure" average and to decrease the "with closure" average. The results in either case are identical with 105 classrooms required. The slight difference (approximately 1%) in the average class size is due to slight differences in the data sources between the '74 Enrollment Projection Sub-committee Report and this report.

TABLE 5

79-80 Grade structures (Combined Grade strategy)

Without Closures (Table 5-A)

	K	1	2	3	4	5	6	1-6
Adams	35/2	(74/3)		34/2	44/2	47/2	54/2	253/11 = 23.0
Bowman	31/2	(68/3)		31/2	53/2	54/2	50/2	256/11 = 23.3
Bridge	47/2	52/2	39/2	65/3	66/3	69/3	63/3	354/16 = 22.1
Estabrook	31/2	(67/3)		30/1	50/2	48/2	54/2	249/10 = 24.9
Fiske	27/2	30/1	21/1	38/2	53/2	41/2	52/2	235/10 = 23.5
Franklin	38/2	(71/3)		40/2	51/2	44/2	43/2	249/11 = 22.6
Hancock	16/1	(25/1)	(26/1)	(25/1)		20/1	26/1	122/5 = 24.4
Harrington	28/2	30/1	38/2	26/1	40/2	(75/3)		204/9 = 22.7
Hastings	22/1	22/1	(48/2)		45/2	50/2	60/3	225/10 = 22.5
Munroe	18/1	23/1	20/1	25/1	25/1	29/1	27/1	149/6 = 24.8
Parker	13/1	(24/1)		14/1	25/1	(67/3)		130/6 = 21.7
Totals	306/18 = 17.0							2426/105 = 23.1

With METCO = 25.4

With Closures (Table 5-B)

	K	1	2	3	4	5	6	1-6
Bowman	52/3	55/2	52/2	58/3	72/3	82/3	78/3	397/16 = 24.8
Bridge	54/3	57/3	48/2	69/3	76/3	76/3	71/3	399/17 = 23.5
Estabrook	41/2	42/2	40/2	45/2	68/3	70/3	80/3	343/15 = 22.9
Fiske	41/2	47/2	38/2	56/3	66/3	51/2	80/3	338/15 = 22.5
Franklin	45/2	46/2	41/2	50/2	58/3	56/3	55/2	306/14 = 21.9
Harrington	41/2	44/2	50/2	35/2	60/3	60/2	56/3	295/14 = 21.1
Hastings	33/2	38/2	26/1	49/2	58/3	67/3	72/3	310/14 = 22.1
Totals	306/16 = 19.1							2388/105 = 22.8

With METCO = 25.1

Criteria

(1) Maximum allowable class size = 30
(2) Maximum allowable average class size on divisible classes (i.e. same grade or adjacent grades) = 28(-)
(3) Minimum allowable average class size on summable classes (i.e. adjacent grades) = 19(+)
(4) Maximum Kindergarten = 25

The table demonstrates the effectiveness of combined classes in arriving at desired class sizes and permitting reductions in classes (classroom teachers) whether or not school closings are made. The reduction in Grade 1-6 classrooms is about 30% in either case with a resultant average class size of about 25.

Classroom Capacity

The combined class scheme in Table 5-B places the most severe demands on the schools in terms of number of classrooms required. Consideration of these requirements in light of the current number of classrooms (see Table 1) indicates that there are currently adequate classrooms in all schools except Harrington. Harrington would require the renovated capacity of 14 classrooms.

However, if the renovated classroom counts in Table 1 are considered it can be seen that the renovations proposed for Fiske, Estabrook and Franklin would not be possible. In each of these schools, the renovation involve dropping 3 or 4 classrooms to be used for other purposes. Either larger classes would have to be accepted, METCO loads at those schools made lighter than 10%, or other of the criteria accepted for this study would have to be re-examined. It should be reiterated that this analysis and the closing sequence recommended here, were based upon current capacity. Decoupling as this does, the closing sequence from the renovation program, the decision as to the implementation of the latter can be based upon a district by district analysis as the enrollment projections are updated over the next four years.

(iv) Busing Analysis

The closing of any of the four older elementary schools will bring increased busing of children. Those older schools have small local districts from which virtually all the children can walk. In Appendix D, an estimate of the number of students which would be bused if the four schools were closed is made. The estimates were made for the year of closing and at the end of all four closings, 1979-80. Only the summary of 1979-80 is presented here in Table 6. In general, 456 children

Table 6
Estimated Increase in Busing in 1979-80

School	Students Bused	Total Students	%Total Bused
Hancock	66	138	48
Munroe	103	167	62
Adams	130*	288	45
Parker	157	157	100
Total	456	750	61

* Net; less Bowmans' students now bused who could walk to Harrington

would be bused who otherwise would walk to school. This represents 61 percent of the students reassigned (not including Bowman 2 to be assigned to Harrington) and 17 percent of the total (K-6) elementary school enrollment forecasted for that year (2732 students).

(v) Conclusions

Based upon the closing sequence proposed in Table 3, and the analyses which have followed from it, the following conclusions are possible.

(a) The four elementary schools can be closed in the 1977-1980 period in a manner which results in minimum disturbance of the student population. The schedule proposed by this committee differs from the rather unrealistic path outlined in the Facilities Study, in which students from the closed facility were reassigned with little regard for dislocation.

(b) With the anticipated increase in METCO student population, this sequence will result in an average enrollment at each school of 92% of current capacity. This may affect the renovation programs at some of the schools due to their concomitant reduction in capacity.

(c) It appears that these school closings have no impact on the number of classrooms (hence, on the teaching staff complement). With the projected decline in enrollment, reduction in teaching staff to maintain current pupil: teacher ratios can be accommodated whether or not this reassignment program is implemented.

4. Analysis for the Junior High Schools

In reassigning the students of Muzzey to Clarke and Diamond the committee felt that an attempt should be made to follow the new elementary school district boundaries shown in Map 3. This would permit the continuing relations of students through public school unlike the current district (e.g., Franklin division) as shown on Map 4. An attempt was made to redistrict as follows:

To Clarke

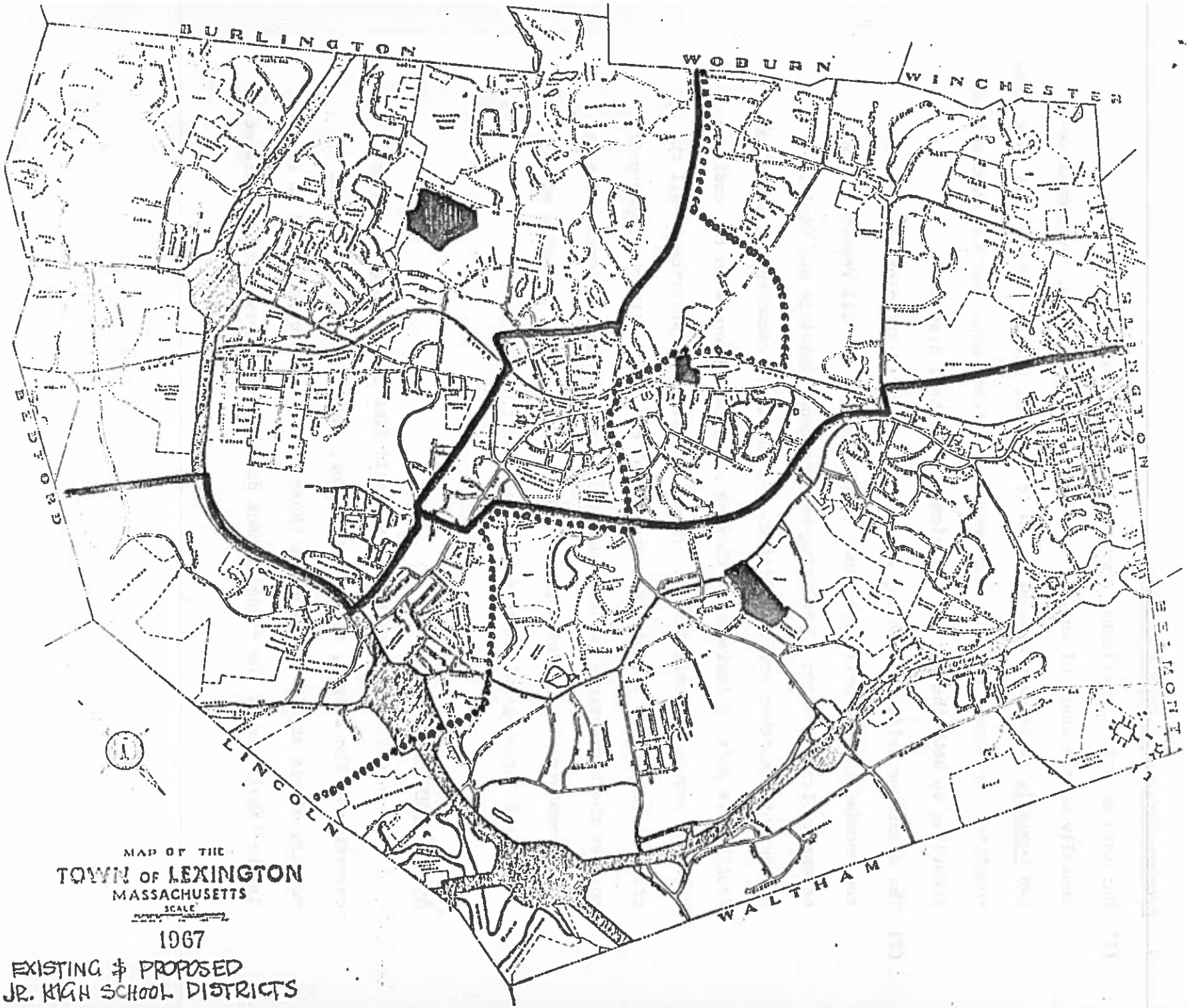
.New Bowman, Harrington and Franklin

To Diamond

.New Bridge, Fiske, Estabrook and Hastings

An enrollment projection was made for that plan and is presented in Appendix C, page C-3. The projection indicates too many students assigned to Diamond. The trial was not acceptable.

An attempt was then made to balance the student population by assigning Bridge 1 to Clarke. This would divide Bridge but along natural boundaries. A revised enrollment projection was made for the new plan and is presented in Appendix C, page C-5. The projection indicates nearly a perfect balance between the two remaining junior highs. Muzzey could be closed in the 79-80 school year as indicated in the Facilities Report with approximately 10% margin. The following year (80-81) the average junior high enrollments would be about 85% of capacity. The recommended redistricted lines are shown on Map 4.



MAP4: EXISTING & PROPOSED
JR. HIGH SCHOOL DISTRICTS

5. Recommendations of CSRP Committee

(1) Maintain an active enrollment committee and upgrade survival ratios annually on the basis of current census data. In this way, the committee can annually reevaluate whatever plan is adopted. To facilitate this task, this committee recommends that the new census data taken each year be computerized according to both the old and new elementary school districts.

(2) The committee believes that any attempt to adhere to the closing schedule recommended in the Facilities Study (beginning 76/77) will result in: unnecessary fragmentation of existing neighborhood/districts and violation of many of the other criteria listed. We therefore recommend that if the decision is made to implement a closing plan, it conform with the redistricting sequence detailed here. This plan satisfies practically all the criteria set forth, and provides the school committee with the opportunity to test the projections for two additional years before implementation, so that premature closings with their concomitant negative economic, educational and sociological impacts will not result.

Acknowledgements

The members of the sub-committee would like to acknowledge the cooperation of Ken Briggs, Planning Director, and the assistance of the members of his staff. The work of those citizens who volunteered to assist in the tabulation of the school census data was also very much appreciated.

APPENDIX A

School Census Data : Sub-District Analysis

(See Map 2)

1973-1974 School Census Data Tabulation

District	Sub District (See Map 2)	Year of Birth					School Grade							K-6 Total
		73	72	71	70	69	K	1	2	3	4	5	6	
Hancock	1	2	3	3	1	1	13	10	9	16	9	13	10	80
	2 and 3	3	8	8	8	12	10	12	17	19	25	30	21	134
Monroe	4	3	5	6	1	5	5	9	5	3	5	1	3	31
	5	1	4	4	8	2	5	7	11	9	8	4	6	50
	6	2	3	5	4	6	5	8	10	8	16	6	13	66
	7	2	2	3	2	4	5	5	5	6	7	7	4	39
Adams	8	10	10	17	12	13	22	27	20	31	21	24	31	176
	9	8	17	13	22	23	20	27	23	25	23	27	24	169
	10	0	3	2	1	2	5	4	5	4	8	4	6	36
Bowman 2	11	4	13	7	19	10	14	26	20	19	19	25	28	151
Bowman 3	12	3	4	2	3	6	3	6	6	7	8	8	6	44
Bridge 2	13	5	4	6	8	11	11	13	10	13	12	14	17	90
	14	4	4	7	13	4	11	17	21	19	19	20	20	127
Parker	15	6	7	4	9	7	8	7	9	10	14	11	12	71
	16	9	5	12	17	22	25	21	26	32	23	37	40	204
Franklin	17	2	4	2	9	4	12	10	8	14	11	17	18	90

APPENDIX B

Elementary District Sequence Analyses

APPENDIX B

Hancock 1 to Fiske

	Hancock 1		Fiske		
	K	1	K	1	K-6
73-74	13	10	47	67	454
74-75	1	16	37	52	415
75-76	1	1	48	41	398
76-77	4	2	34	53	371
77-78	4	5	19	38	333
78-79	(4)	5	(27)	21	299
79-80	(4)	(5)	(27)	(29)	261

Actual 73-74

	K	1	2	3	4	5	6
Fiske	47	67	63	61	66	69	81
Hancock 1	13	10	9	16	9	13	10
Total	60	77	72	77	75	82	91

Hancock 1 + Fiske

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	60	77	72	77	75	82	91	534	
74-75	38	68	77	72	77	75	82	489	
75-76	49	42	68	77	72	77	75	460	
76-77	38	55	42	68	77	72	77	429	98
77-78	23	43	55	42	68	77	72	380	86
78-79	(31)	26	43	55	42	68	77	342	78
79-80	(31)	(34)	26	43	55	42	68	299	68

* Capacity = 440; Proposed = 365

Hancock 2+3 to Hastings

Hancock 2+3

Ratios		1.02	1.06	1.09	1.21	1.20
	1	2	3	4	K	1
73-74	8	8	8	12	10	12
74-75		8	8	9	15	12
75-76			9	9	11	17
76-77				9	11	13
77-78					11	13
78-79					(11)	14
79-80					(11)	(14)

Hastings

	K	1	K-6
73-74	53	57	431
74-75	44	60	408
75-76	40	50	390
76-77	32	45	356
77-78	11	36	326
78-79	(22)	12	282
79-80	(22)	(24)	250

Actual 73-74

	K	1	2	3	4	5	6
Hancock 2+3	10	12	17	19	25	30	21
Hastings	53	57	67	45	71	64	74
Total	63	69	84	64	96	94	95

Hancock 2+3 + Hastings

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	63	69	84	64	96	94	95	565	
74-75	59	72	69	84	64	96	94	538	
75-76	51	67	72	69	84	64	96	503	109
76-77	43	58	67	72	69	84	64	457	99
77-78	22	49	58	67	72	69	84	421	92
78-79	(33)	26	49	58	67	72	69	374	81
79-80	(33)	(38)	26	49	58	67	72	343	75

*Capacity = 460 ; Proposed = 415

Munroe 415 to Fiske

Munroe 415

Ratios		1.06	1.06	1.01	.98	1.24
	1	2	3	4	K	1
73-74	9	10	9	7	10	16
74-75		10	11	9	7	12
75-76			10	11	9	9
76-77				10	10	11
77-78					10	13
78-79					(10)	12
79-80					(10)	(13)

Fiske

K	1	K-6
47	67	454
37	52	415
48	41	398
34	53	371
19	38	333
(27)	21	299
(27)	(29)	261

Actual 73-74

	K	1	2	3	4	5	6
Munroe 415	10	16	16	12	13	5	9
Fiske	47	67	63	61	66	69	81
Total	57	83	79	73	79	74	90

Munroe 415 + Fiske

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	57	83	79	73	79	74	80	525	
74-75	44	64	83	79	73	79	74	496	
75-76	57	50	64	83	79	73	79	485	
76-77	44	64	50	64	83	79	73	457	104
77-78	29	51	64	50	64	83	79	420	95
78-79	(37)	33	51	64	50	64	83	382	87
79-80	(37)	(42)	33	51	64	50	64	341	78

* Capacity = 440; Proposed = 365

Munroe 6+7 to Franklin

Munroe 6+7

	1	2	3	4	K	1
Ratios		1.06	1.06	1.01	.98	1.24
73-74	5	8	6	10	10	13
74-75		5	8	6	10	12
75-76			6	9	6	12
76-77				6	8	7
77-78					6	10
78-79					(7)	7
79-80					(7)	(7)

Franklin

	K	1	K-6
73-74	44	64	382
74-75	45	43	365
75-76	53	44	360
76-77	41	51	348
77-78	35	40	321
78-79	(38)	34	314
79-80	(38)	(37)	287

Actual 73-74

	K	1	2	3	4	5	6
Munroe 6+7	10	13	15	14	23	13	17
Franklin	44	64	44	61	51	57	61
Total	54	77	59	75	74	70	78

Munroe 6+7 + Franklin

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	54	77	59	75	74	70	78	487	
74-75	55	55	77	59	75	74	70	465	
75-76	59	56	55	77	59	75	74	455	104
76-77	49	58	56	55	77	59	75	429	99
77-78	41	50	58	56	55	77	59	396	91
78-79	(45)	41	50	58	56	55	77	382	88
79-80	(45)	(46)	41	50	58	56	55	351	81

* Capacity = 435 ; Proposed = 315

Munroe 4+5 to Fiske + Hancock 1

Hancock 1

Ratios 1.02 1.06 1.09 1.21 1.20

	1	2	3	4	K	1
73-74	3	3	1	1	13	10
74-75		3	3	1	1	16
75-76			3	3	1	1
76-77				4	4	2
77-78					4	5
78-79					(4)	5
79-80					(4)	(5)

Fiske + Munroe 4+5

K	1	K-6
57	83	525
44	64	496
57	50	485
44	64	457
29	51	420
(37)	33	382
(37)	(42)	341

Actual 73-74

	K	1	2	3	4	5	6
Fiske+Mun4+5	57	83	79	73	79	74	80
Hancock 1	13	10	9	16	9	13	10
Total	70	93	88	89	88	87	90

Hancock 1 + Fiske + Munroe 4+5

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	70	93	88	89	88	87	90	605	
74-75	45	80	93	88	89	88	87	570	
75-76	58	51	80	93	88	89	88	547	
76-77	48	66	51	80	93	88	89	515	
77-78	33	56	66	51	80	93	88	467	106
78-79	(41)	38	56	66	51	80	93	425	97
79-80	(41)	(47)	38	56	66	51	80	379 *	86

* Capacity = 440 ; Proposed = 365

BOWMAN MINUS BOWMAN 2 (INTERIM RESULT)

Ratios 1.11 .98 1.04 .88 1.09

	1	2	3	4	K	1	2	3	4	5	6	K-6
73-74	19	26	35	47	32	51	53	65	71	78	75	424
74-75		21	25	36	41	35	51	53	65	71	78	394
75-76			21	26	32	45	35	51	53	65	71	352
76-77				21	23	35	45	35	51	53	65	307
77-78					19	25	35	45	35	51	53	263
78-79					(21)	21	25	35	45	35	51	233
79-80					(21)	(23)	21	25	35	45	35	205

BOWMAN 2

Ratios 1.11 .98 1.04 .88 1.09

	1	2	3	4	K	1
73-74	13	7	19	10	14	26
74-75		14	7	20	9	15
75-76			14	7	17	10
76-77				15	6	19
77-78					13	7
78-79					(10)	14
79-80					(10)	(11)

Adams 10 and Bowman 2 to Harrington

	Adams 10						Harrington		
Ratios	1.03	1.02	1.04	1.01	1.03		1.06		
	1	2	3	4	K	1	K	1	K-6
73-74	3	2	1	2	5	4	35	50	365
74-75		3	2	1	2	5	36	37	329
75-76			3	2	1	2	38	38	311
76-77				3	2	1	25	40	276
77-78					3	2	31	26	277
78-79					(3)	3	(28)	33	252
79-80					(3)	(3)	(28)	(30)	232

Actual 73-74

	K	1	2	3	4	5	6
Adams 10	5	4	5	4	8	4	6
Harrington	35	50	55	31	62	58	74
Bowman 2	14	26	20	19	19	25	28
Total	54	80	80	54	89	87	108

Adams 10 + Bowman 2 + Harrington

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	54	80	80	54	89	87	108	552	142
74-75	47	56	80	80	54	89	87	493	126
75-76	56	50	56	80	80	54	89	465	119
76-77	33	60	50	56	80	80	54	413	106
77-78	47	35	60	50	56	80	80	408	105
78-79	(41)	50	35	60	50	56	80	372	95
79-80	(41)	(44)	50	35	60	50	56	336 *	86

* Capacity = 390, Proposed = 390

Adams 8+9 + Bowman = Bowman 2

Adams 8+9

	1	2	3	4	K	1
Ratios		1.03	1.02	1.04	1.01	1.03
73-74	27	30	34	36	42	54
74-75		28	31	35	36	43
75-76			28	32	36	37
76-77				30	32	37
77-78					30	33
78-79					(31)	31
79-80					(31)	(32)

Bowman - Bowman 2

	K	1	K-6
73-74	32	51	424
74-75	41	35	394
75-76	32	45	352
76-77	23	35	307
77-78	19	25	263
78-79	(21)	21	233
79-80	(21)	(23)	205

Actual 73-74

	K	1	2	3	4	5	6
Adams 8+9	42	54	43	56	44	52	55
Bo - Bo 2	32	51	53	65	71	78	75
Total	74	105	96	121	115	130	130

Bowman minus Bowman 2 + Adams 8+9

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	74	105	96	121	115	130	130	771	138
74-75	77	78	105	96	121	115	130	722	129
75-76	68	82	78	105	96	121	115	665	119
76-77	55	72	82	78	105	96	121	609	109
77-78	49	58	72	82	78	105	96	540	96
78-79	(52)	52	58	72	82	78	105	499	89
79-80	(52)	(55)	52	58	72	82	78	449	80

* Capacity = 560; Proposed = 577

Parker 15 to Bridge

Parker 15

Ratios	1.16	1.02	1.1	.95	1.03
	1	2	3	4	K	1
73-74	7	4	9	7	8	7
74-75		8	4	10	7	8
75-76			8	4	9	7
76-77				9	4	10
77-78					9	4
78-79					(7)	9
79-80					(7)	(7)

Bridge

K	1	K-6
56	62	529
62	63	507
59	69	479
58	66	471
35	65	435
(47)	39	411
(47)	(52)	401

Actual 73-74

	K	1	2	3	4	5	6
Parker 15	8	7	9	10	14	11	12
Bridge	56	62	75	78	73	94	91
Total	64	69	84	88	87	105	103

Parker 15 + Bridge

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	64	69	84	88	87	105	103	600	112
74-75	69	71	69	84	88	87	105	573	107
75-76	68	76	71	69	84	88	87	543	101
76-77	62	76	76	71	69	84	88	526	98
77-78	44	69	76	76	71	69	84	489	91
78-79	(54)	48	69	76	76	71	69	463	87
79-80	(54)	(59)	48	69	76	76	71	453	85

*Capacity = 535; Proposed = 577

Parker 16 to Estabrook

	Parker 16						Estabrook		
Ratios	1.16	1.02	1.1	.95	1.03				
	1	2	3	4	K	1	K	1	K-6
73-74	5	12	17	22	25	21	51	50	448
74-75		6	12	19	21	26	46	54	417
75-76			6	13	18	22	48	48	394
76-77				7	13	18	29	50	354
77-78					6	13	32	30	323
78-79					(10)	6	(31)	34	297
79-80					(10)	(10)	(31)	(32)	279

Actual 73-74

	K	1	2	3	4	5	6
Parker 16	25	21	26	32	23	37	40
Estabrook	51	50	60	64	71	73	79
Total	76	71	86	96	94	110	119

Parker 16 + Estabrook

	K	1	2	3	4	5	6	K-6	% Capacity
73-74	76	71	86	96	94	110	119	652	—
74-75	67	80	71	86	96	94	110	604	—
75-76	66	70	80	71	86	96	94	563	121
76-77	42	68	70	80	71	86	96	513	110
77-78	38	43	68	70	80	71	86	456	98
78-79	(41)	40	43	68	70	80	71	413 *	89
79-80	(41)	(42)	40	43	68	70	80	384	83

* Capacity = 465 ; Proposed = 365

APPENDIX C

Junior High School Sequence Analysis

APPENDIX C

Townwide Ratios - Grades 6-9*

	6→7	7→8	8→9
70/71-71/72	0.947	0.989	0.966
71/72-72/73	0.965	0.984	1.003
72/73-73/74	0.976	0.970	0.958
73/74-74/75	0.996	0.967	0.907
	0.97	0.98	0.96

Actual 74-75 Enrollments

	7	8	9	7-9
Clarke	275	246	253	774
Diamond	291	289	259	839
Muzzey	172	167	152	491
	738	702	664	2104

Jr. High Capacities*

Clarke	900
Diamond	900
Muzzy	600
	2400

* From the Facilities Report

Grade 6 Projections

	73/74	74/75	75/76	76/77	77/78	78/79	79/80
Hastings	95	94	96	64	84	69	72
Franklin	78	70	74	75	59	77	55
Fiske	90	87	88	89	88	93	80
Harrington	108	87	89	54	80	80	56
Bowman	130	130	115	121	96	105	78
Bridge	103	105	87	88	84	69	71
Estabrook	119	110	94	96	86	71	80
	723	683	643	587	577	564	492

Total Projections

Ratios .97 .98 .96

	6	7	8	9	7-9	7-9 *
74-75	663	738	702	664	2104	2077
75-76	643	663	723	674	2021	2033
76-77	587	624	649	694	1967	1946
77-78	577	569	611	623	1803	1829
78-79	564	560	558	587	1705	1730
79-80	492	547	548	536	1631	1683

* 74 Enrollment Report.

Trial Redistrict #1*

Clarke (Capacity = 900)

Ratios	.97	.98	.96			
	6	7	8	9	7-9	% Capacity
74-75	287					
75-76	278	278				
76-77	250	270	273			
77-78	235	243	264	262	769	85
78-79	262	228	238	254	720	80
79-80	189	254	223	228	705	78

Diamond (Capacity = 900)

Ratios	.97	.98	.96			
	6	7	8	9	7-9	% Capacity
74-75	396					
75-76	365	384				
76-77	337	354	376			
77-78	342	327	347	361		
78-79	302	331	320	333		
79-80	303	293	325	308	926	103

* Clark
- Bowman
- Harrington
- Franklin

Diamond
- Estabrook
- Hastings
- Fiske
- Bridge

NOTE: New elementary districts

Bridge 1 (Bridge - Bridge 2)

Ratios 1:12

	K	1	2	3	4	5	6
73-74 Total *1	56	62	75	78	73	94	91
73-74 Bridge2 *2	22	30	31	32	31	34	37
73-74 Bridge1	34	32	44	46	47	60	54
74-75		38	32	44	46	47	60
75-76			38	32	44	46	42
76-77				38	32	44	46
77-78					38	32	44
78-79						38	32
79-80							38

*1 From 74 Enrollment Report
*2 From Appendix A.

Trial Redistrict #2 *

Clarke (Capacity = 900)

Ratios	.97	.93	.96				
	6	7	8	9	7-9	% Capacity	
74-75	347						
75-76	320	337					
76-77	296	310	330				
77-78	279	287	304	317	908	101	
78-79	294	271	281	292	844	94	
79-80	227	285	265	270	820	91	
80-81		220	279	254	753	84	

Diamond (Capacity = 900)

Ratios	.97	.98	.96				
	6	7	8	9	7-9	% Capacity	
74-75	336						
75-76	323	326					
76-77	291	313	319				
77-78	298	282	307	307	896	100	
78-79	270	289	277	295	861	96	
79-80	265	262	283	266	811	90	
80-81		257	257	272	786	87	

*

Clark	Diamond
Bowman	Estabrook
Harrington	Hastings
Franklin	Fiske.
Bridge 1	Bridge 2.

NOTE: New elementary districts

Bridge 1 (Bridge - Bridge 2)

Ratios 1:1.2

	K	1	2	3	4	5	6
73-74 Total *1	56	62	75	78	73	94	91
73-74 Bridge2 *2	22	30	31	32	31	34	37
73-74 Bridge1	34	32	44	46	42	60	54
74-75		38	32	44	46	42	60
75-76			38	32	44	46	42
76-77				38	32	44	46
77-78					38	32	44
78-79						38	32
79-80							38

*1 From 74 Enrollment Report
*2 From Appendix A.

Appendix D- Busing Analysis

Hancock to Fiske and Hastings

- Hancock 1 to Fiske.
  100 % can walk.

- Hancock 2+3 to Hastings
  Estimated 30% can walk. (70% by bus)
  - Lake St. — Hastings Rd.
    Columbus St. — Mass Ave. (part)
    Cedar St. — Lincoln St (part)
    Childs St. — Etc.

- Hancock 2+3 students (See B-2.)
  At closing 77-78 = 95
  At end 79-80 = 94

- Increased busing.
  At closing 77-78 = 67
  At end 79-80 = 66

Munroe to Fiske and Franklin

- Munroe 4 to Fiske.
  100% can walk.

- Munroe 5 to Fiske.
  100% by bus

- Munroe 6+7 to Franklin
  100% by bus

• Munroe 5 students

Ratios 1.06 1.06 1.01 .93 1.24

	1	2	3	4	K	1	2	
73-74	4	4	8	2	5	7	11	
74-75		4	4	8	2	6	7	
75-76			4	4	8	2	6	6
76-77				5	4	10	2	5
77-78					4	5	10	4
78-79					(4)	6	5	3
79-80					(4)	(6)	6	
					K	1	2	

At closing 79-80 = 39
At end 79-80 = 39

• Munroe 6+7 students (See B-4)
At closing 79-80 = 64
At end 79-80 = 64

• Increased busing
At closing 79-80 = 103
At end 79-80 = 103

Adams to Bowman and Harrington

• Adams 8 (Fallen Hill) to Bowman
100% can walk.

• Adams 9 (Liberty Heights) to Bowman
100% by bus

• Adams 10 to Harrington
100% by bus

- Bowman 2 to Harrington (100% now by bus)
  Estimate 30% can walk (70% by bus)
  - Whipple Rd. Clyde Pl.
    Russell Rd. Abernathy Rd.
    Carnegie Pl. Etc.
    Ingleside Rd.

- Adams 9 (Liberty Heights) students

Ratios 1.03 1.02 1.04 1.01 1.03

	1	2	3	4	K	1	2	
73-74	17	13	22	23	20	27	23	
74-75		18	13	23	23	21	27	
75-76			18	14	23	24	21	6
76-77				19	14	24	24	5
77-78					19	15	24	4
78-79					(17)	19	15	3
79-80					(17)	(17)	19	
					K	1	2	

At closing 79-80 = 137
At end 79-80 = 137

- Adams 10 students (See B-7)
  At closing 79-80 = 19
  At end 79-80 = 19

- Bowmen 2 students (See B-6)
  At closing (and end) 79-80 = 86

- Increased busing
  At closing (and end) 79-80 = 130 students

Parker to Bridge and Estabrook

- Parker 16 to Estabrook
  100% by bus (across Rt. 128!)

- Parker 15 to Bridge
  100% by bus

- Parker 15 students (See B-9)
  At closing 78-79 = 52
  At end 79-80 = 52

- Parker 16 students (See B-10)
  At closing 78-79 = 116
  At end 79-80 = 105

- Increased busing
  At closing 78-79 = 168
  At end 79-80 = 157

Increased busing at end 79-80 (Elementary)

School	Bused	Total	% Total
Hancock	66	138	48%
Munroe	103	167	62%
Adams	130*	288	45%
Parker	157	157	100%
Total	456	750	61%

* Net; Adams less Bowman 2 students who could walk to Harrington.

APPENDIX E

Consideration of Town Population Trends

Consideration of Town Population Trends

Based upon the land use briefing by the town planner, the committee makes the following observations:

1. The population of the town has stabilized at the 33-35,000 level, with population changes of less than 1% per year.
2. There will be no major changes in the land use pattern within Lexington. This assumption is partly predicated upon the strong role taken by the conservation commission.
3. Transportation decisions may encourage population growth in Lexington. The Red Line extension to Lexington is some years in the future.
4. Chapter 774 housing could impose 800 units on Lexington. This law was enacted in 1969 and thus far Lexington has built only a few units for the elderly. Mr. Briggs indicated that the nature of the housing provided and the present rate of progress suggest that any substantial impact on the schools will be several years away. The financing method now being used, namely the MHFA program, requires that twenty-five percent of a developments' units be in the subsidized category. The town's policy to date has discouraged large developments of apartment complexes. Unless the state law is more vigorously pressed, it is doubtful that Lexington will build the number of units suggested by the Chapter 774 legislation. However, it is possible that such a development could occur with major impact in a single location. From the data in Tables 2 and 3 it can be shown that when closings are completed (79-80) the average reserve capacity in each of the elementary schools (using current capacity with 240 METCO) is only 50 students. Reserve capacity in Harrington and Fiske is only in the twenties! Therefore, this committee recommends:
   (1) that the school committee keep informed on the planned development of apartment complexes and,
   (2) that any schools to be closed remain available for future school use (rather than immediately being demolished or sold) for a time to be determined by the school committee and the appropriate town officials as required by such planned developments.

Who's the boy

to the left of Danny ?

I was with him in the first grade!

since

David Kahne

- member of Student Adv. Bd.

the fellas called him