Expanding Yellow School Bus Service: Fiscal Impact of Three Proposed Policy Changes

In response to a request from Council Member Stephen Fiala, the Independent Budget Office (IBO) has analyzed three scenarios for changing current Board of Education (BOE) policy to expand eligibility of general education students for yellow school bus service. IBO has also prepared a five-year historical analysis of yellow bus spending and ridership. IBO has found that the three proposals for changing current policy would increase annual costs by between $43 million and $96 million, not counting summer school. Costs would increase further due to recently enacted city and state laws requiring every student on a school bus to have a seat.

Under current policy, BOE contractors transport 113,000 general education students per day on yellow buses, including 36,000 children who attend private schools.[1] BOE contractors also transport more than 60,000 students on special education vehicles consistent with each pupil's Individualized Educational Program. BOE does not charge pupils for bus service. In addition, BOE subsidizes public transportation for some public and private school students by distributing free-fare and half-fare Metrocards.

Current Pupil Transportation Eligibility

Under the current policy, as defined by Chancellor's Regulation A-801, the Board's Office of Pupil Transportation (OPT) determines eligibility for free transportation for general education students using distance-based criteria. Table 1 summarizes the current eligibility rules for public and private school students. General education pupils in kindergarten (K), first grade, and second grade qualify for free transportation if they reside more than one-half mile from school. Pupils in grades 3 through 6 qualify if they live more than one mile from school and pupils in grades 7 through 12 qualify if they live more than one and one-half miles from school.

Some students living closer to school than the distance threshold for their grade receive variances after demonstrating a compelling need for free transportation. OPT grants variances when a student walking to school would face hazardous conditions such as unsafe traffic, dangerous street crossings, or areas impassable to pedestrians. In addition, some students receive variances due to medical conditions.

Pupils who do not qualify for free transportation may apply for a half-fare Metrocard. Students in grades 3 and above must live at least one-half mile from school to be eligible for a half-fare Metrocard, which permits pupils to ride public buses to school at a 50 percent discount.

Students in grades K through 6 who qualify for free transportation receive yellow bus service whenever routing efficiency makes it feasible. Routing efficiency in particular neighborhoods depends on the concentration of student residences and the location of students

relative to the schools they attend. In cases where a bus route is not feasible, students receive a free-fare MetroCard that allows them to travel to school on public transportation without charge. Students in grades 7 through 12 who are eligible for free transportation generally receive free-fare MetroCards, but some receive a variance permitting them to ride yellow buses.

Table 1. Current Transportation Eligibility for General Education Students

Grade Level	Distance from school	Transportation eligibility
K-2	Less than ½ mile	Half-fare MetroCard; yellow bus only with variance
K-2	More than ½ mile	Free transportation: yellow bus whenever route is feasible, otherwise free-fare MetroCard
3-6	Between ½ mile and 1 mile	Half-fare MetroCard; yellow bus only with variance
3-6	More than 1 mile	Free transportation: yellow bus whenever route is feasible, otherwise free-fare MetroCard
7-12	Between ½ mile and 1½ miles	Half-fare MetroCard; yellow bus only with variance
7-12	More than 1½ miles	Free transportation: free-fare MetroCard; yellow bus only with variance

SOURCES: IBO; BOE Office of Pupil Transportation.

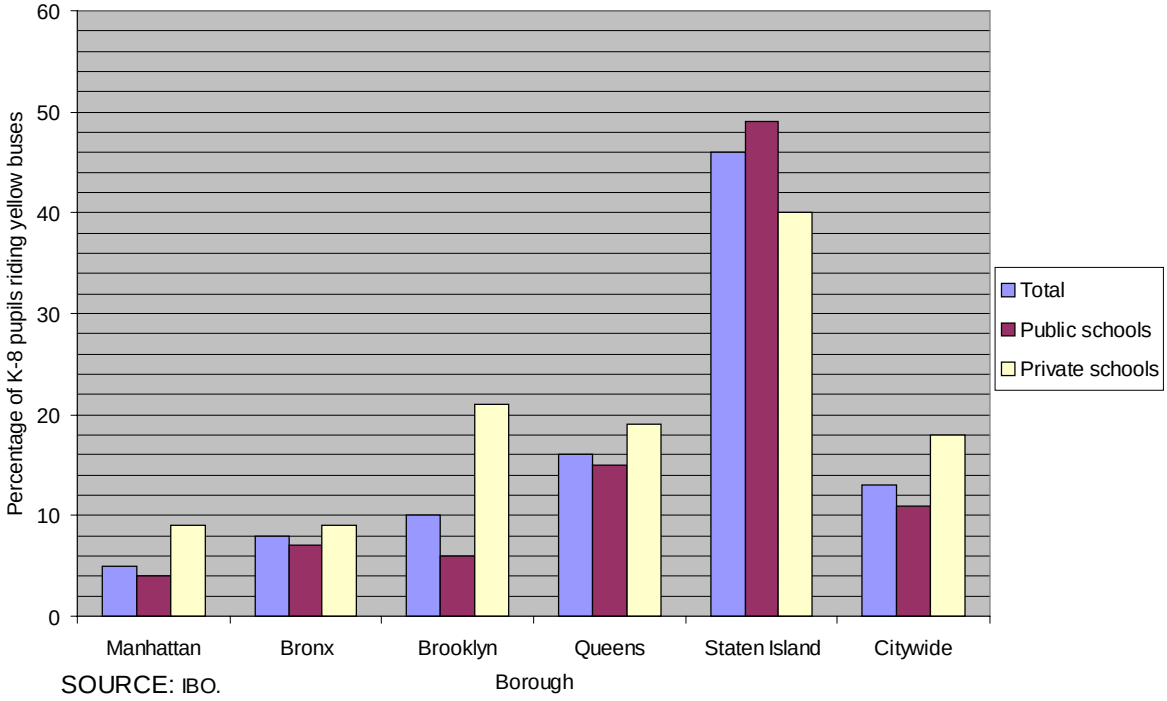
Overall, students with variances account for around 12 percent of daily ridership. Variances are more common in the lower density boroughs of Queens and Staten Island: one-third of the variances for students living less than 0.5 miles from their school occur in Queens, while over half of the variances for 7th and 8th grade students occur in Staten Island.

Current Yellow Bus Service

The proportion of general education pupils in public and private schools who currently ride yellow buses varies considerably across boroughs. As shown in Chart 1, 46 percent of Staten Island pupils in grades K-8 ride yellow buses, compared with 16 percent in Queens, 10 percent in Brooklyn, 8 percent in the Bronx, and 5 percent in Manhattan.[2] This range closely mirrors the range of residential densities of the boroughs. Staten Island's high rate of yellow bus usage results from three factors: the borough has the greatest average distance that students live from school, the lowest availability of public transportation, and the largest number of variances granted to students facing hazardous walking conditions.

Everywhere in the city except Staten Island, greater proportions of private than public school students use yellow buses. This reflects the smaller number of private schools, each of which typically draws students from a wider geographic area than public schools. Private schools often request bus service because free transportation makes their school a more attractive option for students who live beyond walking distance. However, these schools do not always have sufficient student concentrations in particular geographic areas to make it feasible for BOE to provide the service.

Chart 1. Estimated Percentage of All K-8 Pupils Currently Riding Yellow Buses



SOURCE: IBO.

Three Scenarios for Expanding Yellow Bus Eligibility

Council Member Fiala asked IBO to examine three scenarios for expanding yellow bus service by lowering the minimum distance requirements for free transportation. Each proposal would amend the Chancellor's Regulations governing pupil transportation eligibility. Table 2 displays eligibility under current policy and under each of the three scenarios.

Under Scenario I, the most ambitious policy option, all K-8 students who live 0.5 miles or more from school would be eligible for free transportation. Compared with current policy, this scenario expands eligibility to students in grades 3-8 who live between 0.5 and 1.0 miles from school, and students in grades 7 and 8 who live more than one mile from school. Scenarios II and III reflect more modest service expansions.

Under Scenario II, all students in grades K through 5 who live 0.5 miles or more from school, and all students in grades 6 through 8 who live 1 mile or more from school, would be eligible for free transportation. Compared with current policy, this change adds students in grades 3 through 5 who live between 0.5 miles and 1 mile from school, plus students in grades 7 and 8 who live more than 1 mile from school.

Under Scenario III, students in grades K through 5 who live 0.5 miles or more from school, and students in grade 6 who live 1 mile or more from school, would be eligible for

yellow bus service. Compared with current policy, this scenario only adds students in grades 3 through 5 who live between 0.5 and 1.0 miles from school.

Table 2. Free Transportation Eligibility, Current Service vs. Three Scenarios for Expanded Service (C = currently eligibility and P= proposed eligibilility)

	Less than .5 miles				0.5-1 miles				1-1.5 miles				1.5 miles or greater			
	Current	Scenario			Current	Scenario			Current	Scenario			Current	Scenario		
		I	II	III		I	II	III		I	II	III		I	II	III
K					C	C	C	C	C	C	C	C	C	C	C	C
1					C	C	C	C	C	C	C	C	C	C	C	C
2					C	C	C	C	C	C	C	C	C	C	C	C
3						P	P	P	C	C	C	C	C	C	C	C
4						P	P	P	C	C	C	C	C	C	C	C
5						P	P	P	C	C	C	C	C	C	C	C
6						P			C	C	C	C	C	C	C	C
7						P				P	P		C	C	C	C
8						P				P	P		C	C	C	C

SOURCE: IBO.

Methodology for Projecting Yellow Bus Ridership under Scenarios I, II, and III

To determine which groups of students would be affected by the proposed policy changes, IBO has divided K-8 students into 36 cohorts, nine grade levels multiplied by four commuting distance categories. As Table 3 indicates, at most, eight grade and distance cohorts would be affected by the proposed changes in eligibility: eight in Scenario I, five under Scenario II, and three under Scenario III. Since the remaining cohorts would be unaffected by these policy changes, IBO assumes that yellow bus ridership among these 28 cohorts would remain at current levels.

Table 3. Cohorts Affected by Proposed Changes in Eligibility Requirements

Grade	Less than 0.5 miles	0.5-1.0 miles	1.0-1.5 miles	Greater than 1.5 miles
K				
1				
2				
3		Scenarios I, II, III		
4		Scenarios I, II, III		
5		Scenarios I, II, III		
6		Scenario I		
7		Scenario I	Scenarios I, II	
8		Scenario I	Scenarios I, II	

SOURCE: IBO.

Shortly after Council Member Fiala submitted his request to IBO, the BOE Office of Pupil Transportation (OPT) completed an assessment of the impact of the three identical scenarios in a study entitled "Analysis of Yellow School Bus Eligibility Scenarios."[3] In constructing its analysis, OPT assumed that "all students who are eligible by grade and distance for yellow bus service will utilize the service." Although this assumption may be useful in constructing an upper limit for the cost of expanding service, it is unrealistic for two reasons.

First, there is little reason to expect that making bus service available to more students will increase ridership among students *already* eligible for the service. For example, increasing eligibility for grades 3 through 8 is unlikely to increase ridership in the earlier grades.

Second, since many students who are already eligible do not use yellow buses, it is reasonable to assume that some newly-eligible students would likewise decline the service. Some parents, feeling uneasy about sending their children on a yellow bus, would opt instead to continue escorting their children to school in a private vehicle, on public transit, or on foot. Some older pupils, travelling on their own, would continue to find walking or public transit preferable to riding a yellow bus. Finally, some private schools would continue to lack sufficient concentrations of eligible students to make yellow bus service feasible.

IBO assumes that newly-eligible cohorts would have ridership patterns resembling that of similar groups that are already eligible. Similar groups are cohorts closest in grade and distance. For example, if third graders living 0.5 to 1.0 miles from school became eligible for yellow bus service, we expect that they would have a similar usage pattern similar to second graders living 0.5 to 1.0 miles from school, a cohort that is presently eligible.

IBO used data for the 1999/00 school year from the OPT study to derive current utilization rates, that is, the proportion of students in each presently eligible cohort currently using yellow bus service. The rate is calculated by dividing the average daily ridership by the total number of pupils in the eligible grade and distance category. Projected utilization rates for newly-eligible cohorts were extrapolated from the current rates.

Table 4 presents the projected borough-level utilization rates for each grade and distance cohort that would become eligible for yellow bus service. As noted earlier, the variance in population density and public transportation accessibility across the city causes the utilization rates for yellow buses to vary widely. A relatively small percentage of newly-eligible students in Manhattan would be expected to use yellow buses, while in Staten Island almost all newly-eligible students would use them.

Table 4. Yellow Bus Utilization Rates by Borough for Newly-eligible Cohorts

Cohort	How utilization rate calculated	Utilization rate				
		Manhattan	Bronx	Brooklyn	Queens	Staten Island
Grades 3-5, 0.5-1.0 miles	Same rate as Grade 2, 0.5-1.0 miles	41%	75%	77%	92%	99+%
Grades 6- 8, 0.5-1.0 miles	Average of rates for Grade 2, 0.5-1.0 miles; and Grade 6, 1.0-1.5 miles	28%	58%	67%	76%	99+%
Grade 7, 1.0-1.5 miles	Average of rates for Grade 6, 1.0-1.5 miles; and Grade 7, greater than 1.5 miles	8%	22%	31%	37%	91%
Grade 8, 1.0-1.5 miles	Average of rates for Grade 6, 1.0-1.5 miles; and Grade 8, greater than 1.5 miles	8%	21%	31%	34%	88%

SOURCE: IBO.

Projected Average Daily Ridership under Scenarios I, II, and III

Multiplying the projected utilization rate by the number of students in each newly-eligible cohort provides an estimate of ridership for those cohorts. For all other cohorts, where no eligibility change is proposed, ridership is projected to remain at its current levels. Table 5 and Chart 2 summarize the results and compare projected ridership under the three scenarios with current usage. Appendix A presents the projected average daily ridership for each grade and distance cohort in each borough and citywide with data for newly-eligible cohorts highlighted.

Table 5. Estimated Average Daily Ridership on Yellow Buses by Borough: Current Ridership Compared with Expanded Eligibility

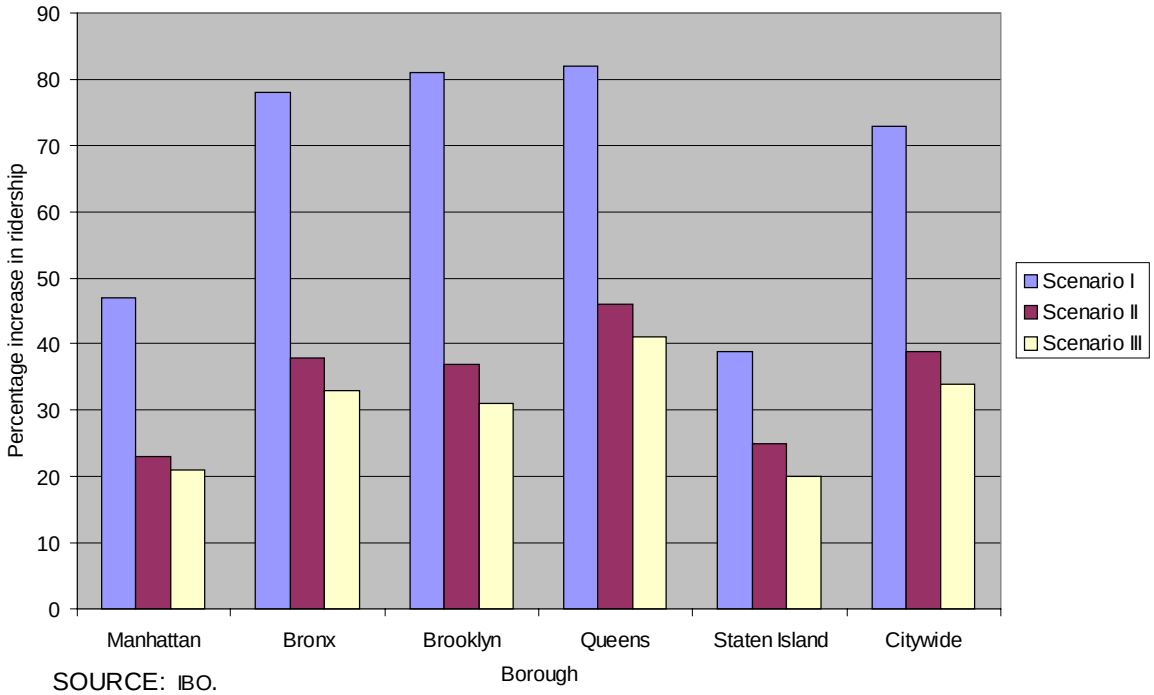
	Manhattan	Bronx	Brooklyn	Queens	Staten Island	Total Citywide
Current ridership	6,797	14,752	31,252	39,276	21,502	113,549
Scenario I	9,950	28,693	56,607	71,339	30,639	197,228
Scenario II	8,353	21,348	42,749	57,334	27,561	157,345
Scenario III	8,178	20,599	41,049	55,202	26,474	151,502

SOURCE: IBO.

Scenario I, the scenario that would expand yellow bus eligibility the most, is projected to increase ridership 73 percent above current levels. Under Scenarios II and III, ridership would increase 39 and 34 percent, respectively. The increase in ridership would vary considerably by borough. Comparing Scenario I with current levels, the percentage increase would be greatest in Queens (82 percent) and Brooklyn (81 percent), followed closely by the Bronx (78 percent). The percentage increases would be lowest in Staten Island (39 percent) and Manhattan (47 percent). Under Scenarios II and III, Staten Island and Manhattan again would have the lowest percentage increases in ridership.

It may seem surprising that Staten Island and Manhattan, two boroughs at opposite ends of the density spectrum and with different patterns of current yellow bus usage, experience the two lowest percentage increases in yellow bus ridership. The reasons are fundamentally different. In high-density Manhattan, the number of students who gain access to yellow buses under the new eligibility criteria would be relatively small. Furthermore, based on the behavior of Manhattan cohorts that already have access to yellow buses, we project that only a small percentage of the newly-eligible students would use the service. In Staten Island, on the other hand, many students who would meet the new eligibility criteria already receive yellow bus service because of a variance.

Chart 2. Projected Increases in Yellow Bus Ridership over Current Usage



SOURCE: IBO.

Estimated Number of Buses Required to Expand Service

Using the projected ridership increases, IBO has estimated the number of additional buses needed to meet the increased demand. As shown in Table 6, Scenario I would require contracting for 1,090 additional buses, nearly double the 560 that would be needed under Scenario II. Scenario III would require 487 buses. These estimates assume that there would be no change in route efficiency and that borough load factors would remain at their current levels. If load factors remain constant, the number of buses required in each borough will rise in exact proportion to the projected increase in ridership.

The load factor indicates how many students are carried in an average bus run, and is highest in Staten Island (112) and lowest in Manhattan (45). Higher load factors do not necessarily indicate overcrowding because on a given run, a bus may service more than one school. For example, suppose a yellow bus that has a seating capacity of 66 operates a two-school route.[4] The bus begins its run by picking up 60 children. The bus then travels to the first school, where it drops off 45 passengers and continues riding with 15. The bus picks up 45 more children on route to the second school. The bus then arrives at the second school and discharges its 60 passengers. In this example, the load factor equals 90 and the bus has enough seats for all its passengers.

Table 6. Estimated Number of Buses Required under the Three Scenarios

	Manhattan	Bronx	Brooklyn	Queens	Staten Island	Citywide Total	Increase over current
Current usage of buses	151	221	430	465	192	1,459	
Scenario I requirements	222	430	779	845	274	2,549	1,090
Scenario II requirements	186	320	588	679	246	2,019	560
Scenario III requirements	182	309	565	654	236	1,946	487
Memo: Load factor	44.8	66.8	72.7	84.5	112.0		

SOURCES: IBO, BOE Office of Pupil Transportation.

Base Cost of Expanding Yellow Bus Service

As shown in Table 7, expanding yellow bus eligibility would cost $95 million per year under Scenario I, $49 million under Scenario II, and $42 million under Scenario III. The current service costs $107 million per year. BOE currently pays around $398 per bus per day during the regular school year. Assuming that the service is contracted for 184 days, the total cost is roughly $73,000 per bus per school year for each of the 1,459 buses.[5] The $107 million cost of the nearly 1,500 buses already in use would not be affected by service expansion because BOE has contracts

in place for the current service level through the 2004/05 school year. Those contracts lock in present rates with a built-in inflation adjustment based on the Consumer Price Index.

The OPT study assumed that significant increases in yellow bus service would raise the unit cost by 20 percent. Based on conversations with OPT officials, bus companies, industry experts, and other area school boards, IBO concurs that the expanded service would have a higher unit cost due to a limited supply of vehicles and/or drivers. IBO concluded that the 20 percent cost increase projected by OPT is a reasonable assumption. Each additional bus thus would have a unit cost of around $88,000 per school year. However, IBO only applies the 20 percent increase to buses not covered by current contracts. In contrast, OPT applied a 20 percent increase in the daily rate to all yellow bus service, both current and expanded.

Administrative Costs of Expanded Service

A significant expansion of yellow bus service would increase the administrative workload of the Office of Pupil Transportation. OPT would need to hire additional inspectors, accountants, and contract compliance clerks. IBO estimates that staffing requirements would increase by four to eight full-time positions raising administrative costs by $300,000 to $600,000 a year.

Table 7. Summary of Costs of Expanding Yellow Bus Service (Regular Academic Year, Standees Permitted)

$ millions	Scenario I	Scenario II	Scenario III
Current Service (FY 00)	106.8	106.8	106.8
Expanded Service	95.2	48.6	42.2
Increased Administration	0.6	0.3	0.3
Total	202.6	155.7	149.3

SOURCE: IBO.

NOTE: These estimates are based on current load factors and therefore do not include the impact of a no-standing policy. These estimates also do not include the impact of expanded yellow bus eligibility on summer costs.

Added Cost of No-standing Laws

Recently enacted laws prohibiting standing on yellow buses will increase the cost of providing yellow bus service and of implementing any expansions of yellow bus eligibility. Under current operations, passengers on some routes do not always have a seat. This past April, however, the state amended the education law and the vehicle and traffic law to prohibit school buses from operating with passengers standing in most circumstances.[6] Although the state law phases-in a no-standing requirement over five years, the subsequent New York City enactment of Local Law 48 of 2000 requires BOE to implement a no-standing policy during the upcoming school year. These no-standing mandates would decrease load factors and require BOE to operate more buses.

IBO has not attempted to estimate the cost of implementing a no-standing policy due to

a lack of information about the current overcrowding on yellow buses. OPT has informed IBO that as of June 13, 2000 they had not prepared any comprehensive analyses of the impact of a no-standing policy. The City Council Finance Division has estimated the cost of the no-standing policy at up to $20 million per year, an increase of nearly 20 percent. BOE officials, however, have indicated that a new computer system to improve route efficiency will likely limit the cost increase to ten to fifteen percent. Therefore, the cost of expanding yellow bus eligibility, would likely be at least 10 percent greater under a no-standing policy than under the current policy.

Added Cost of Summer School Transportation

IBO's cost estimates for expanding yellow bus eligibility pertain to service during the standard academic year, September through June. In 2000, however, yellow bus service was provided for the first time to summer school pupils following the same eligibility criteria as the standard year. If BOE continues to provide summer transportation, then expanding yellow bus eligibility would increase summer transportation costs. BOE has estimated that summer transportation for general education costs $20 million combined for yellow bus service and public transportation subsidies, roughly one-eighth of the combined cost during the academic year. Expanding yellow bus eligibility year round (academic year and summer), therefore may cost one-eighth more than expanding it just during the academic year.

Impact on State Transportation Aid

The State Education Department reimburses local school districts, including New York City, for a portion of approved transportation expenses. Transporting students who live less than 1.5 miles from school, however, is not an approved expense. The three scenarios analyzed here would therefore not increase state transportation aid to BOE. The cost of expanding yellow bus service would need to be financed using city funds or unrestricted education grants such as state operating aid.

Impact on Public Transportation Subsidies

The NYC Board of Education (BOE) spent roughly $57 million on public transportation discount passes in Fiscal Year 1999 (school year 1998/99). This total included a $45 million flat fee paid to MTA New York City Transit (NYCT). In addition, BOE reimburses franchise bus companies and Staten Island Railroad (SIRTOA) for student pass usage on a per-ride basis. BOE paid $10.9 million to five franchise bus companies regulated by the Department of Transportation, and $750,000 to SIRTOA.

IBO lacks sufficient information to calculate how the proposed changes in eligibility for free transportation would impact BOE spending on public transportation subsidies. There are three reasons, however, to expect only a minimal impact. First, BOE has paid a flat fee of $45 million to NYCT each year since 1995, although the number of students receiving public transit subsidies has been increasing. The size of the payment to NYCT was fixed following negotiations between the city and MTA and would not necessarily change to correspond with changes in student ridership. Second, high school students rather than younger pupils are the primary users of student Metrocards. More than 70 percent of free-fare cards distributed to students go to those

in grades nine through twelve, whose eligibility for free transportation would not change. Third, the increased number of students newly eligible for free-fare cards would be partially offset by students switching from using half-fare cards to yellow buses.

Five-year Historical Analysis

As part of his request, Council Member Fiala asked IBO to analyze historical data for the past five years of yellow bus service. Table 8 presents ridership and expenditure data for fiscal years 1995-2000. BOE spending on yellow bus service for general education pupils has increased roughly 20 percent from $88 million in 1995 to a projected $105 million in 2000.[7] Table 8 also contains historical data on combined pupil transportation expenditures for general education buses, special education vehicles, and public transit subsidies. Yellow bus expenditures have grown less rapidly than spending on pupil transportation overall due to larger increases in special education expenditures.

Table 8. Yellow Bus Service, Fiscal Years 1995-2000

	Average Daily Ridership			Expenditures in Millions of Dollars	
	Public	Private	Total	Yellow buses (general ed.)	Pupil Transportation (U/A 338)
1995	73,910	31,090	105,000	87.6	N/A
1996	70,920	35,180	106,100	82.2	373.7
1997	70,320	36,680	107,000	92.8	397.8
1998	73,260	35,740	109,000	100.3	429.9
1999	75,490	34,510	110,000	98.4	461.0
2000	76,750	36,250	113,000	105.1	508.4

SOURCES: IBO using data from BOE Office of Pupil Transportation; NYC Integrated Financial Management System; NYC Office of Management and Budget (OMB); and NYC Comptroller's *Comprehensive Annual Financial Reports.*

NOTES: FY 2000 data is preliminary; the ridership data are as of December 1999 and expenditure data are OMB projections as of April 2000. Pupil transportation expenditures refer to Unit of Appropriation 338, which includes special education vehicles and public transportation subsidies as well as general education yellow bus service.

Inflation explains the majority of the increase. The yellow bus contracts include annual rate increases based on the local Consumer Price Index for urban consumers. The local index (CPI-U-NY) has risen by twelve percent during the past five years, resulting in a 12 percent hike in contract bus rates.

The rest of the increase appears to be due to increased ridership. Over the 1995 to 2000 period, ridership has risen eight percent, from 105,000 to 113,000 students per day. Although IBO does not have data indicating the number of buses contracted each year, it is logical to assume there has been a corresponding increase in buses.

Notes

[1] Private schools include all elementary and secondary schools in New York City operated by organizations other than BOE, such as those schools operated by religious institutions, for-profit companies, non-profit organizations and the City University of New York.

[2] These percentages are approximations calculated from public and nonpublic school enrollment data for school year 1998/99 (enrollment data for 1999/00 are not yet available) and average daily ridership for 1999/00 (IBO does not have ridership data by borough for 1998/99).

[3] This OPT document was completed early in calendar year 2000.

[4] Newer buses have a seating capacity of 66 children, while older buses have a capacity of 60.

[5] The 1999/00 elementary and middle school calendar included 184 instructional days in Manhattan, Staten Island, and the Bronx and 183 instructional days in Brooklyn and Queens.

[6] Chapter 19 of the Laws of New York 2000.

[7] As of April 2000, the city's financial plan included $105.1 million for yellow bus service in FY 2000. Using ridership reports and unit cost data from OPT, IBO estimates the cost of the service to be $106.8 million (as shown in Table 7).

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This analysis was prepared by Robert Weiner with Alan Treffeisen, senior budget and policy analysts at IBO.

Appendix A. Average Daily Ridership of Yellow School Buses

1. CITYWIDE

	< 0.5 m	between 0.5 m & 1.0 m				between 1.0 m and 1.5 m				>1.5 m	total ridership			
	current=I,II,III	current	scenario I	scenario II	scenario III	current	scenario I	scenario II	scenario III	current=I,II,III	current	scenario I	scenario II	scenario III
K	162	12,052	12,052	12,052	12,052	2,439	2,439	2,439	2,439	4,658	19,311	19,311	19,311	19,311
1	456	13,716	13,716	13,716	13,716	2,816	2,816	2,816	2,816	4,727	21,715	21,715	21,715	21,715
2	490	13,307	13,307	13,307	13,307	2,995	2,995	2,995	2,995	4,971	21,763	21,763	21,763	21,763
3	311	1,001	13,646	13,646	13,646	3,113	3,113	3,113	3,113	5,144	9,569	22,214	22,214	22,214
4	254	1,047	13,280	13,280	13,280	3,142	3,142	3,142	3,142	5,415	9,858	22,091	22,091	22,091
5	252	1,099	13,397	13,397	13,397	3,382	3,382	3,382	3,382	5,485	10,218	22,516	22,516	22,516
6	147	733	14,154	733	733	4,484	4,484	4,484	4,484	8,465	13,829	27,250	13,829	13,829
7	104	415	13,815	415	415	456	3,475	3,475	456	2,860	3,835	20,254	6,854	3,835
8	91	376	13,437	376	376	436	3,259	3,259	436	2,548	3,451	19,336	6,274	3,451
K-8	2,267	43,746	120,804	80,922	80,922	23,263	29,106	29,106	23,263	44,273	113,549	196,449	156,567	150,725

2. STATEN ISLAND

	< 0.5 m	between 0.5 m & 1.0 m				between 1.0 m and 1.5 m				>1.5 m	total ridership			
	current=I,II,III	current	scenario I	scenario II	scenario III	current	scenario I	scenario II	scenario III	current=I,II,III	current	scenario I	scenario II	scenario III
K	33	1,766	1,766	1,766	1,766	576	576	576	576	399	2,774	2,774	2,774	2,774
1	71	1,788	1,788	1,788	1,788	659	659	659	659	565	3,083	3,083	3,083	3,083
2	62	1,731	1,731	1,731	1,731	721	721	721	721	670	3,184	3,184	3,184	3,184
3	41	279	1,697	1,697	1,697	789	789	789	789	755	1,864	3,282	3,282	3,282
4	47	304	1,669	1,669	1,669	796	796	796	796	727	1,874	3,239	3,239	3,239
5	29	282	1,693	1,693	1,693	824	824	824	824	755	1,890	3,301	3,301	3,301
6	7	82	1,174	82	82	971	971	971	971	2,004	3,064	4,156	3,064	3,064
7	6	99	1,113	99	99	242	801	801	242	1,568	1,915	3,488	2,474	1,915
8	7	73	1,045	73	73	206	734	734	206	1,568	1,854	3,354	2,382	1,854
K-8	303	6,404	13,676	10,598	10,598	5,784	6,871	6,871	5,784	9,011	21,502	29,861	26,783	25,696

3. BROOKLYN

	< 0.5 m	between 0.5 m & 1.0 m				between 1.0 m and 1.5 m				>1.5 m	total ridership			
	current=I,II,III	current	scenario I	scenario II	scenario III	current	scenario I	scenario II	scenario III	current=I,II,III	current	scenario I	scenario II	scenario III
K	39	2,899	2,899	2,899	2,899	681	681	681	681	1,089	4,708	4,708	4,708	4,708
1	111	3,494	3,494	3,494	3,494	905	905	905	905	1,650	6,160	6,160	6,160	6,160
2	143	3,293	3,293	3,293	3,293	1,003	1,003	1,003	1,003	1,705	6,144	6,144	6,144	6,144
3	60	177	3,517	3,517	3,517	938	938	938	938	1,542	2,717	6,057	6,057	6,057
4	51	172	3,443	3,443	3,443	1,030	1,030	1,030	1,030	1,865	3,118	6,389	6,389	6,389
5	47	89	3,277	3,277	3,277	1,109	1,109	1,109	1,109	1,839	3,084	6,272	6,272	6,272
6	55	135	4,728	135	135	1,470	1,470	1,470	1,470	2,486	4,146	8,739	4,146	4,146
7	24	92	4,646	92	92	95	932	932	95	371	582	5,973	1,419	582
8	17	92	4,803	92	92	92	955	955	92	392	593	6,166	1,456	593
K-8	547	10,443	34,098	20,241	20,241	7,323	9,023	9,023	7,323	12,939	31,252	56,607	42,750	41,050

4. QUEENS

	< 0.5 m	between 0.5 m & 1.0 m				between 1.0 m and 1.5 m				>1.5 m	total ridership			
	current=I,II,III	current	scenario I	scenario II	scenario III	current	scenario I	scenario II	scenario III	current=I,II,III	current	scenario I	scenario II	scenario III
K	61	5,098	5,098	5,098	5,098	597	597	597	597	2,011	7,767	7,767	7,767	7,767
1	125	5,720	5,720	5,720	5,720	673	673	673	673	1,569	8,087	8,087	8,087	8,087
2	146	5,697	5,697	5,697	5,697	703	703	703	703	1,651	8,197	8,197	8,197	8,197
3	103	298	5,711	5,711	5,711	755	755	755	755	1,748	2,904	8,317	8,317	8,317
4	85	289	5,612	5,612	5,612	670	670	670	670	1,756	2,800	8,123	8,123	8,123
5	95	470	5,660	5,660	5,660	764	764	764	764	1,669	2,998	8,188	8,188	8,188
6	55	395	5,149	395	395	1,216	1,216	1,216	1,216	2,771	4,437	9,191	4,437	4,437
7	65	210	4,911	210	210	110	1,241	1,241	110	799	1,184	7,016	2,315	1,184
8	63	206	4,756	206	206	130	1,131	1,131	130	503	902	6,453	1,903	902
K-8	798	18,383	48,314	34,309	34,309	5,618	7,750	7,750	5,618	14,477	39,276	71,339	57,334	55,202

5. BRONX

	< 0.5 m	between 0.5 m & 1.0 m				between 1.0 m and 1.5 m				>1.5 m	total ridership			
	current=I,II,III	current	scenario I	scenario II	scenario III	current	scenario I	scenario II	scenario III	current=I,II,III	current	scenario I	scenario II	scenario III
K	16	1,667	1,667	1,667	1,667	388	388	388	388	659	2,730	2,730	2,730	2,730
1	124	2,191	2,191	2,191	2,191	382	382	382	382	483	3,180	3,180	3,180	3,180
2	106	2,078	2,078	2,078	2,078	352	352	352	352	457	2,993	2,993	2,993	2,993
3	96	198	2,196	2,196	2,196	422	422	422	422	548	1,264	3,262	3,262	3,262
4	62	251	2,066	2,066	2,066	443	443	443	443	490	1,246	3,061	3,061	3,061
5	77	242	2,276	2,276	2,276	520	520	520	520	708	1,547	3,581	3,581	3,581
6	26	105	2,632	105	105	722	722	722	722	726	1,579	4,106	1,579	1,579
7	9	8	2,541	8	8	6	405	405	6	104	127	3,059	526	127
8	3	3	2,288	3	3	4	354	354	4	76	86	2,722	436	86
K-8	519	6,743	19,934	12,589	12,589	3,239	3,989	3,989	3,239	4,251	14,752	28,693	21,348	20,598

6. MANHATTAN

	< 0.5 m	between 0.5 m & 1.0 m				between 1.0 m and 1.5 m				>1.5 m	total ridership			
	current=I,II,III	current	scenario I	scenario II	scenario III	current	scenario I	scenario II	scenario III	current=I,II,III	current	scenario I	scenario II	scenario III
K	13	622	622	622	622	197	197	197	197	500	1,332	1,332	1,332	1,332
1	25	523	523	523	523	197	197	197	197	460	1,205	1,205	1,205	1,205
2	33	508	508	508	508	216	216	216	216	488	1,245	1,245	1,245	1,245
3	11	49	525	525	525	209	209	209	209	551	820	1,296	1,296	1,296
4	9	31	491	491	491	203	203	203	203	577	820	1,280	1,280	1,280
5	4	16	492	492	492	165	165	165	165	514	699	1,175	1,175	1,175
6	4	16	472	16	16	105	105	105	105	478	603	1,059	603	603
7	-	6	604	6	6	3	96	96	3	18	27	718	120	27
8	1	2	545	2	2	4	86	86	4	9	16	641	98	16
K-8	100	1,773	4,781	3,184	3,184	1,299	1,473	1,473	1,299	3,595	6,767	9,950	8,353	8,178

Source: IBO.

Note: Citywide ridership here equals the five-borough sum, meaning that current citywide ridership for some cohorts is slightly more or less than listed in the OPT study. The OPT study appears to contain some small inconsistencies whereby the citywide total does precisely equal the five-borough sum.