cambridge systematics, inc. **memorandum**

MEMO TO: Alan Castaline, MBTA

FROM: Barry Faulkner

DATE: December 17, 1984

RE: Response to City of Cambridge position on Northwest Corridor Service Study recommendations.

One of the recommendations of the Northwest Corridor Service Study (NWCSS) is that Route 77 (Arlington Heights to Harvard Square via Mass. Ave.) continue to operate along its present routing, even after the new stations at Porter, Davis and Alewife open. However, it was recommended that all Route 77 buses make all stops in Cambridge, instead of the present policy of operating with limited stops between the North Cambridge trackless trolley terminal and Harvard Square during hours when the trackless trolleys are operating.

This recommendation was made after consideration of a number of routing alternatives which would have diverted half to two-thirds of this service to Alewife Station, including some which would have extended trackless trolley service to cover a portion of this route. Each option was evaluated against a set of five criteria, as described in previous memoranda. These criteria included: service quality, ridership, cost, technical feasibility, and local impacts.

Some of these (non-recommended) options to divert service to Alewife would have resulted in substantial operating cost savings, but would have meant large decreases in service quality, and a large loss of ridership.

The City of Cambridge, as expressed in a letter from the City Manager to the MBTA General Manager (and through other communication with the study team), has opposed the recommendation concerning Route 77, and has ques-

tioned the basic premises and methodology employed in the Northwest Corridor Service Study. The option which they prefer would split Route 77 into two routes: Arlington Heights to Alewife (accounting for about two-thirds of the current Route 77 service), and Arlington Center to Harvard (accounting for one-third of the current Route 77 service). Route 77A trackless trolley service from North Cambridge to Harvard would continue to operate during the day on weekdays, as it does now. This was one of the options analyzed as part of the Northwest Corridor Service Study.

This memorandum attempts to address the objections of the City of Cambridge on a point-by-point basis.

Potential Cost Savings

Cambridge argues that Option 3C would result in substantial operating cost savings compared to the recommended option.

The analysis done as part of NWCSS indicates that Option 3C would result in annual operating cost savings of $680,000 per year, compared to the base case (current routing and scheduling). This savings results from the fact that virtually all Route 77 buses would be operating over a shorter route. On the other hand, the additional travel time which would result from making local stops in Cambridge would add $63,000 per year to operating costs. The net difference is $743,000 per year.

However, cost was only one of five major criteria examined. For each option, cost impacts were compared to service quality and ridership impacts. In the case of Option 3C, it was estimated that these changes would result in an increase in user travel time of 215,000 hours per year. Some riders (those now going to rapid transit) would receive a slight net benefit of 2 1/2 minutes, which others (those going from Arlington Heights to Cam-

bridge) would have an extra transfer to make, requiring an extra 12 minutes each way, plus an additional fare.

Comparison of the cost and travel time impacts results in an implied value of travel time of $3.16--in other words, to justify the decrease in service quality with operating cost savings, user travel time would have to be valued at less than $3.16 per hour. This is a very low value. Other studies indicate that users value their own time at an average of $6.00 to $7.00 per hour.

NWCSS analysis of ridership impacts of option 3C indicate that an estimated 2400 transit trips per day would be lost as a result of the additional travel time and cost imposed. For each passenger lost, the MBTA would save 94 cents in operating costs. Systemwide, the MBTA currently spends an average of more than $2.00 per passenger (operating costs) to serve its riders. It is difficult to justify, on an economic or equity basis, a decision which would net less than $1.00 per passenger lost on Route 77, while spending more than $2.00 per passenger elsewhere in the system to retain current passengers.

The conclusion of the NWCSS analysis was that the potential cost savings of option 3C (even considering other benefits such as reduced traffic on Massachusetts Avenue in Cambridge) were not great enough to justify the substantial services and ridership disbenefits which would result.

Assessment Impact on Cambridge

Cambridge objects to paying an increased assessment on Route 77, which they feel serves chiefly Arlington.

At the present time (based on 1982 data), Cambridge is assessed for less than 17 percent of the net cost of service on Route 77, with Arlington assessed the remaining 83 percent. Normally, Cambridge would be assessed for 43 percent of the cost of this route, since 43 percent of the route mileage is located in Cambridge.* However, an adjustment has been made in the formula to reflect the fact that Route 77 buses make limited stops between North Cambridge and Harvard.

Under the recommended plan, all buses would make local stops in Cambridge. Therefore, like any other route, Cambridge would be assessed 43 percent of the net cost of service, and Arlington's share would be reduced to 57 percent. This means that Cambridge would pay about $140,000 per year more than they do now and Arlington $140,000 per year less. Both communities would share the extra operating costs due to longer travel time.

Part of the reason for the magnitude of the change is that the share currently paid by Cambridge (17%) is lower than would be paid in accordance with operating data available to the Northwest Corridor Service Study. The expected Cambridge share (26%) was calculated as follows:

Limited stop trips account for 59 percent of all trips, averaged over a year. Cambridge's share of these trips should be 13.4 percent (corresponding to the share of the route between the North Cambridge car barn and the city line, expressed as a share of the entire route beyond the car barn). Trips which currently make all stops (early mornings, evenings and weekends) account for 41 percent of all trips, and Cambridge's share of these trips is 43 percent. The weighted average share is

$$(.59 * .134) + (.41 * .43) = .26$$

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*Route length: 5.6 miles; Cambridge 2.4; Arlington 3.2

The 17 percent figure, calculated by the MBTA treasurer's office, may be based on different (prior year) information, or a somewhat different measurement of route miles. In any case, Cambridge would be assessed a significantly larger amount under the formula.

The question of whether this increase is equitable or not is more difficult to answer. The question of equity can be restated as: whether or not the service to Cambridge is comparable to the share of costs Cambridge would pay. An analysis was made of trips with ultimate origins or destinations in Arlington or Cambridge (i.e., excluding one end of rapid transit trips to Boston). Of the total trip ends in these communities, 40 percent are in Cambridge, and 60 percent in Arlington. Of passengers on board at the peak load point, the Cambridge share is 60 percent, Arlington's 40 percent. These shares reflect the current limited-stop operation. With local stops, the Cambridge share will increase.

This analysis indicates that the share of trips to and from Cambridge (rather than Arlington) is consistent with the share of costs to be assigned to Cambridge.

Town of Residence of Riders

Cambridge argues that they should not have to pay for trips made by non-Cambridge residents, even if these trips have a destination in Cambridge (to work, shop, or attend school, for example). Beyond the assessment issue, these trips result in additional bus traffic on Massachusetts Avenue in Harvard Square. Cambridge argues that non-Cambridge residents should not be routed over Cambridge Streets, but into Alewife Station instead.

One half of local service costs are assessed on the basis of population. As a result, all communities pay a share of Route 77 losses, even though the route is located in Cambridge and Arlington.

The remaining half of costs for the local service is assessed "where the the loss occurs". This portion of the formula does not consider the home residence of the riders of any particular route.

Throughout this study, the NWCSS study team has adopted a regional outlook, appropriate for a regionwide agency such as the MBTA. No attempt has been made to further the interests of one community at the expense of another. On the contrary, the study team has tried to be sensitive to local concerns, while being as objective as possible in the assessment of alternative routing strategies.

Capacity on Route 77 Buses in Cambridge

Cambridge argues that North Cambridge residents will not be able to board Route 77 buses in peak hours because of the extreme crowding on these buses.

The NWCSS analyzed the crowding problem on Route 77. This route suffers from "bunching" in peak hours. Buses are dispatched at regular (3 minutes in the morning peak) intervals, but along the route, the gaps between buses may become extended or contracted. Buses often become bunched in groups of two or three. Within a group of this type, the first bus may be very crowded, picking up passengers which would otherwise take the second or third bus in the group.

An analysis of peak loads on Route 77 buses was done to determine the amount of available space. A bus which exceeded a 140% load (45 seated passengers, plus 18 standing, or 63 total) was considered "full", although ex-

Coordination of Schedules at North Cambridge

Cambridge argues that it will be easier to coordinate bus and trackless trolley schedules if buses come from Arlington Center instead of Arlington Heights. The reduced route distance will mean less bunching and delay, and will mean less crowded buses, so that Cambridge passengers will have a more even headway between buses.

Coordination of schedules means that trackless trolleys out of North Cambridge would be scheduled to depart so that they would run in the middle of a gap between two Arlington buses. Strict schedule coordination would not be practical under the recommended plan because the gap between Arlington buses is very short (3 to 8.5 minutes), and the variation in run times would make it impossible to predict the arrival times of buses at North Cambridge with sufficient accuracy. Further, such coordination would add little to service quality--in the peak period it would, at best, reduce the average wait time by 11 seconds.

Under Option 3C, schedule coordination would be easier to achieve, since the gap between buses from Arlington would be greater (9 to 24 minutes). The variation in travel time would be reduced slightly (the estimated standard deviation of travel times to North Cambridge would go from 3.3 minutes to 2.3 minutes), but the reduction in bunching would come chiefly from the change in headway. To achieve even combined headways during peak periods, additional trackless trolley service would be needed at a cost of approximately $60,000 per year (not included in NWCSS cost estimates).

Under the recommended plan, Cambridge riders would have 25 buses in the peak hour, of which (on average) 21 would have sufficient capacity. The time between buses would be less than 6 minutes two-thirds of the time (peak

period). Under Option 3C, Cambridge riders would have 12 buses in the peak hour, with the gap between buses up to 7.5 minutes two thirds of the time.

In other words, even with schedule coordination, the service quality in Cambridge--in terms of frequency and reliability--would be better under the recommended plan than under Option 3C.

Latent Demand

Cambridge has criticized the study procedures used. They feel that more consideration should have been given to new transit trips which would be generated by new development (i.e., at Alewife) or by providing transit transit service to new markets.

At the beginning of the study process, members of the study team and MBTA officials agreed on a work program for the NWCSS. After substantial consideration, it was decided not to do a comprehensive corridor-wide demand analysis of both transit and non-transit trips. Such a process would involve estimating trip origins and destinations (considering population and employment growth) for every traffic zone in the region, by trip purpose; then estimating potential transit shares and paths based on alternative levels of service and routing schemes.

This kind of analysis is usually done at the system planning stage to estimate long-term growth trends and impacts on transportation, and to identify major corridors for particular kinds of travel improvements. Smaller scale efforts are sometimes used to refine major corridor plans. These procedures, for example, were used in the development and planning of the Red Line extension.

The reasons for not using this method here were as follows:

perience has shown that people will continue to crowd on to a bus until it has 75 to 80 passengers on it. The 140% level represents the maximum load allowed by MBTA service standards, averaged over the peak 30 minutes of service.

A total of 71 peak period, peak direction trips on Route 77 were counted as part of the NWCSS. Of these, 11 (15%) had peak loads which exceeded 63 passengers. On 33, (46%) all seats were full, but there was sufficient standing room. On 27 (38%), seats were available for all passengers, even at the peak load point.

On inbound trips, the peak load point occurs at Norris Avenue (near the trackless terminal). Beyond this point, during AM peak hours, there is currently additional peak hour capacity on 5 out of 6 Route 77 buses. Other changes proposed as part of the Northwest Corridor plan will result in some additional unused capacity* --enough to absorb 75% of the peak period boardings from North Cambridge to Harvard, with no increase in crowding over the current level. The remaining 25% of boardings are assumed to use the Route 77A trackless trolleys, which would continue. In fact, the trackless trolleys, by themselves, would have sufficient capacity to carry 100% of these boardings.

People boarding inbound Route 77 buses in Cambridge would have a smaller chance of finding a seat than those who board in Arlington. The average length of the ride however, is less than 10 minutes. There will generally be sufficient seats available on the trackless trolley even at peak hours. In the outbound direction, all passengers have an equal chance of findings an empty seat when they board at Harvard.

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*For example, some current Arlington Heights riders will use Route 62 to Alewife.

- the major transit subcorridors (i.e., Massachusetts Avenue) are already well developed, with transit service histories which date back 80 to 100 years. It was clear that the major service issues would focus on these corridors.

- The demand process involved would have been very expensive, and would not have answered the most critical questions of service quality and operating feasibility to be addressed in this study. This demand process is appropriate for system-level planning but these system issues were dealt with during the Red Line process.

Instead, it was decided to identify and analyze potential new markets on an ad hoc basis. Travel patterns (including origins and destinations) were determined for existing riders through analysis of rider counts and on-board surveys. The study team contacted and/or met with municipal officials from each community, state representatives, and citizen groups. Through these meetings, the study team identified many new transit market opportunities, of which more than a half dozen were examined in detail. These included new trips generated by development in the Alewife area, and the existing work trip market between I-93-corridor communities and Cambridge.

Cambridge maintains that if more attention had been given to trips generated near Alewife, then a decision would have been made to reroute 77 into Alewife.

Projections of potential development indicate that up to 6,400,000 square feet of commercial space may be located in the general Alewife area by the year 2000. NWCSS estimates that this would result in 500 transit trips (250 each way) between Arlington and Alewife. This estimate is based on 4 employees per square foot and 1.7 work trips per employee (typical national figures for this kind of development), Arlington's current 7.5% share of Cambridge employment (after excluding communities south and west, such as Brookline and Newton), and an estimated transit share of 15%.

The Northwest Corridor Service Plan recommendations include six routes into Alewife Station--five of which serve Arlington. In fact, 95% of Route 77 riders in Arlington would be within one-quarter mile (a five minute walk) of one of the Alewife routes.

The 500 additional transit trips to and from Alewife can easily be absorbed by the planned capacity on these five routes. Additional growth can be accommodated by service adjustments on these routes. Many of these 500 riders would have improved service (increased frequency) if Route 77 were routed to Alewife as in Option 3C. However, Option 3C results in decreased service quality for more than 9000 existing Route 77 users.

Commitments made in previous studies

Cambridge feels that statements in the Red Line EIS, or statements made at EIS-related meetings by MBTA or state officials, represent a commitment to (among other things) divert most of Route 77 to Alewife.

The work program used for the NWCSS was specifically designed to allow full consideration of any feasible alternative. No previous constraints were made on what must or must not be included in the final plan.

The Red Line EIS included a proposed feeder bus system, based on an extension of Red Line service to Arlington Heights. That proposed feeder system included a route from Arlington Heights to Alewife, and a reduction of service frequency on a route from Arlington Heights to Harvard. At the time the EIS was prepared (1976-77), it was recognized that service planning would have to be done in the year or so before Red Line opening, to ensure that bus and trackless trolley service could respond to the most up to date assessment of needs and constraints. The major change, of course, is that the Red Line will be openining only as far as Alewife Station. Rider counts

and surveys were done as part of the NWCSS to obtain recent information on travel needs.

One of the impacts, as described in the EIS, of the revised bus service plan was a reduction in buses into Harvard Square. During the NWCSS, this issue was discussed with Cambridge officials, and the analysis done as part of the study was sensitive to this issue. The recommended service plan results in a reduction of 14 buses into Harvard Square during the peak hour--from 100 to 86. Of these 14 buses, 11 formerly used surface streets in Harvard Square and 3 are removed from the bus tunnel.

Option 3C would reduce the Harvard Square peak hour buses by an additional 13 (from 86 to 73). All of these would come from the bus tunnel, and no additional improvement in Harvard Square surface streets would be realized.

cambridge systematics, inc. memorandum

MEMO TO: Karla Karash, MBTA

FROM: Barry Faulkner

DATE: August 10, 1984

RE: Comparison of Route 77 Alternatives

This memorandum summarizes the analysis which compares the various alternative strategies for Route 77 in Arlington and Cambridge. The alternatives examined include those identified earlier in the Northwest Corridor Service Study, plus a sub-option (3B1) which you recently asked that we consider. The options are:

- 3A: Base Case. This leaves Route 77 exactly as it is now. The North Cambridge trackless trolley (Route 77A) would be reduced in frequency to reflect reduced demand, and would not be through-routed with Route 71 (Watertown) or Route 73 (Waverley). All other options are compared with this base case.

- 3A1: Base Case, with local stops. This is the same as the base case, except that the policy of running Arlington Heights buses with "limited" stops in Cambridge would be eliminated. That is, all Route 77 buses would make all stops in Cambridge.

- 3B: Heights Local. Route 77 would be split into two routes: Arlington Heights to Harvard (77H) and Arlington Heights to Alewife (77A). The North Cambridge trackless would be designated 77C. The diesel bus service would be split 50-50 between 77A and 77H so that each route would have headways double that of the current Route 77.

- 3B1: Heights Local, extra service. This is the same as 3B, except that the operating cost savings realized from that alternative are put back into additional service. These savings would provide an increase in service of almost 15 percent, so that a 6-minute peak headway would be reduced to 5.25 minutes on each branch.

- 3C: Center Local. Route 77 would be split into two routes: 77A--Heights to Alewife (as in 3B), and 77H--Arlington Center to Harvard (instead of Heights to Harvard). Service is split approximately 2/3 to 77A and 1/3 to 77H.

The options are evaluated on their consistency with the five objectives identified earlier in the study: service quality, ridership, costs, technical feasibility and local impacts. These impacts are described in the narrative, below, and in the attached tables.

Service Quality

Service quality, from the user's perspective, is measured according to two criteria: the change in the total amount of transit travel time, and the change in the number of transfers (bus to bus or bus to rapid transit) required.

Option 3A1 is the only option which realizes a net improvement (reduction) in user travel time. This results from the reduced wait time for Cambridge users, since more buses will stop to pick them up. This outweighs the extra time spent by Arlington riders because of slower travel times through Cambridge. The other options add travel time, since the headways (and hence, the wait time) on each branch are longer than the current headways on Route 77. The travel time saved for rapid transit users by going to Alewife, instead of Harvard, offsets only a small part of this additional travel time. Option 3C is significantly worse than the 3B options, since many passengers are forced to transfer, at a large increase in travel time (and and increase in fare).

Option 3C is the only option which requires additional transfers, compared to the base case. These transfers would total 2,600 per day, or 780,000 per year.

Ridership

Ridership is closely related to service quality. The larger the change

in service quality, the larger the impact on ridership.

The chief criterion used for evaluation of ridership impacts is the net change in total transit system ridership resulting from a particular service change (that is, diversions to other bus routes or to rapid transit are not counted). Reflecting the service impact, Option 3A1 realizes a small increase in ridership, while 3C results in a significant decrease in system ridership (2400 passengers per day, or almost 15 percent of the current ridership on 77 and 77A).

An additional criterion examined is the impact on bus feeder trips into rapid transit. Since many of the impacted passengers are local passengers, rather than rapid transit passengers, the impacts are somewhat different. In this case, option 3C has a smaller negative impact than the 3B options.

Special consideration was given to the impact on riders with special needs. Since both Harvard and Alewife Stations will be completely accessible to the handicapped, there is no significant difference on this criterion as a function of which station special needs passengers are brought to. However, the additional transfers required under option 3C are a particular problem for those who have difficulty boarding buses as a result of age or physical impairment.

Cost

Changes in annual bus operating costs and revenues were estimated for each option. Option 3A1 results in a slight increase in costs, because of extra service required to compensate for slower operating speeds in Cambridge. Options 3B and 3C have the potential to save a significant amount of money, since the travel time and bus mileage for both options would be reduced. Option 3B1 has no operating cost improvement, since this

option assumes that all such savings are put into additional service.

Changes in system revenue result chiefly from the gain or loss of system riders. For option 3C, this is offset by the fact that some riders would be forced to transfer, and thus pay an extra fare.

The cost increases or savings listed in table 3 are in comparison to the base case. The base case includes a substantial cost savings on a number of routes, compared to current costs, because of service adjustments made possible by diversions to the rapid transit line. A total savings of $468,000 per year can be attributed to Routes 77, 77A, and 83.

Local Impacts

The objective of the study is to minimize negative local impacts, which vary widely in nature and seriousness. Two criteria are most relevant in this case:

- the number of buses entering Harvard Square in the peak hour. This is a factor which the City of Cambridge is sensitive to. Currently, approximately 100 buses enter Harvard Square during the peak hour (7:30 to 8:30 a.m.) on all routes combined.

- the accessibility of major activity centers (Harvard Square, Alewife, and Arlington Center) to riders along Mass. Ave. This is described in qualitative terms (Fair, Good, etc.), although it is a function of the number of buses going to each destination, the transfers required, and the number of people served.

Option 3C has the greatest impact on buses into Harvard Square, and provides the best access (most buses) to Alewife, although it is inferior in terms of accessibility to Harvard Square and Arlington Center.

Technical Feasibility

Each option presents certain technical problems which must be dealt with. The major problems are:

- 3A and 3A1: The large number of buses entering Harvard Square means that special operating procedures must be used to ensure the

smooth functioning of the Harvard Square bus tunnel. Such procedures, which minimize the use of surface streets in Harvard Square, have been developed as part of the Northwest Corridor Service Study.

- 3B and 3B1: Under these options, everyone in Arlington will have a choice of a bus to Harvard or one to Alewife. Most rapid transit passengers will choose the first to come along, which results in an imbalance in the service. To counteract this, it will be necessary to dispatch buses from Arlington Heights in pairs (an Alewife bus first, followed closely by a Harvard bus). This has a negative service impact for local riders.

- 3C: The Heights-Alewife (77A) and Center-Harvard (77H) routes would operate independently, a scheduling advantage. There is an opportunity for beneficial coordination of schedules between the Center-Harvard route and the North Cambridge trackless trolley, which is not practical in the other options.

Summary

Option 3A1 provides a modest service benefit at a modest increase in operating costs. It basically preserves a major, high-frequency route serving a major destination and transfer point (Harvard Square).

Options 3B and 3C result in substantial operating cost savings, but at a significant price in terms of service quality and ridership. The implied tradeoff between cost and travel time is about $3.00 per hour, a rather low value to place on user travel time. With a more appropriate user travel time value of $6-$7 per hour, these options would not be justifiable on these criteria alone. Both options, however, result in reductions of buses in Harvard Square (of 10 to 13 percent).

Option 3B1 provides some reductions in negative service and ridership impacts (about 25 percent less than 3B), but is still negative on these factors, while saving no operating cost. Its only advantage is the reduction of buses in Harvard Square.

Table 1
Service Quality

Option	user travel time hours/year	transfers per day
3A1	-10,300 (benefit)	0
3B	+96,200 (disbenefit)	0
3B1	+72,000 "	0
3C	+237,000 "	2,600

Table 2
Ridership

Option	system ridership gain(+)/loss(-) per weekday	rapid transit feeder riders per day
3A1	+90	+40
3B	-1,110	-230
3B1	-830	-170
3C	-2,400	-140

Table 3
Cost

Option	Annual Operating Cost	Annual Systemwide Revenue	Net Impact
3A	+63,000	+7,000	+56,000
3B	-312,000	-85,000	-227,000
3B1	0	-64,000	+64,000
3C	-680,000	+15,000	-695,000

Table 4
Local Impacts

Option	peak hour buses in Harvard Square	Accessibility Mass. Ave. to: Arl Ctr	Harvard	Alewife
3A	nc	Very Good	Very Good	Fair
3B	-10	Good	Good	Good
3B1	-9	Good	Good	Good
3C	-13	Good	Fair	Very Good

cambridge systematics, inc.

American Twine Building
222 Third Street
Cambridge, Mass. 02142
(617) 354-0167

January 18, 1985

Robert W. Healy
City Manager
Cambridge City Hall
795 Mass. Ave.
Cambridge, Mass. 02139

Dear Mr. Healy:

As you know, the MBTA will conduct a public meeting on January 29 to discuss the final recommendations of the Northwest Corridor Service Study.

We recognize that the City of Cambridge does not agree with some of the recommendations of the study, in particular, those concerning Routes 77 and 96. This disagreement has generated a considerable amount of discussion concerning both the recommended and alternative service plans for these routes, and we expect that these options will be discussed in some detail at the January 29 meeting.

One of our concerns is that many of the people affected by these plans may not know that other options are still being considered. We have prepared flyers to be distributed on the affected routes to inform riders of the meeting and the options being considered. Copies of the flyers' texts are enclosed.

I am also enclosing, for your information, two memoranda which have been prepared to review the issues concerning the Route 77 alternatives. One of these summarizes the findings of the study, and the other reviews many of the particular arguments that Cambridge has presented. Copies of these memoranda and flyers have also been sent to Arlington officials and to state representatives and senators whose districts are affected by the Route 77 options. If I can provide any further information, please let me know.

Sincerely,

Barry Faulkner
Project Manager

enclosures

cc: City Council

Northwest Corridor Service Study
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

Cambridge Systematics, Inc.
Ammann & Whitney
Segal/DiSarcina Associates
Energy & Environmental Engineering, Inc.

ROUTE 77 RIDERS:

There will be a public meeting next week to discuss final recommendations for service changes on bus and trackless trolley routes in the area. These recommendations are the result of a year-long study of service in the Northwest Corridor and how it might be affected by the Red Line extension.

Date:	Tuesday, January 29, 1985
Place:	Masonic Hall, 1950 Mass. Ave. (Porter Sq), Cambridge
Time:	1:00-3:00 pm and 7:30-9:30 pm (two sessions: attend either one--presentation will be repeated)

The recommended changes for Route 77 would retain the present routing between Arlington Heights and Harvard. Buses would make all local stops in Cambridge at all hours. Frequency on the North Cambridge trackless trolley would be reduced to reflect the diversion of passengers to new Red Line stations.

An alternative routing scheme for Route 77 is also being discussed, however. This alternative would route approximately two-thirds of current Route 77 buses from Arlington Heights into Alewife Station, via Mass. Ave. and the Alewife Brook Parkway. One-third of Route 77 buses would operate between Arlington Center and Harvard Square via Mass. Ave. This would mean buses to Harvard Square every 10-15 minutes in rush hours (instead of the current 3-4 minutes) and every 25-30 minutes midday (instead of the current 8-9 minutes). Buses to Alewife would operate every 5-7 minutes during the peak, and 12-15 minutes midday. Frequency on the trackless trolley would still be reduced, as above.

These alternatives have very different implications in terms of service quality, ridership loss, and assessments paid by the community. Changes on other routes are also being proposed (see reverse side). To learn more about these changes, or to express your opinion, attend one of the meeting sessions on January 29.

The Northwest Corridor Service Study Final Report may be reviewed in the main libraries in Cambridge, Arlington, Medford, and Lexington, and in the Davis Square branch library in Somerville, or at the State Transportation Library at 10 Park Plaza in Boston.

Northwest Corridor Service Study

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

Cambridge Systematics, Inc.

Ammann & Whitney
Segal/DiSarcina Associates
Energy & Environmental Engineering, Inc.

ROUTE 94 & 96 RIDERS:

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Date:	Tuesday, January 29, 1985
Place:	Masonic Hall, 1950 Mass. Ave. (Porter Sq), Cambridge
Time:	1:00-3:00 pm and 7:30-9:30 pm (two sessions: attend either one--presentation will be repeated)

The recommended changes for Routes 94 and 96 are as follows:

- Route 94 would be terminated at Davis Square. Buses would continue to serve Medford Square, West Medford, Boston Avenue and College Avenue to Davis Square. Service frequency would be increased slightly (buses approximately every 15 minutes during peak hours).

- Route 96 would be combined into a single route variation, via George Street. Buses would continue to operate from Medford Square to Harvard via Winthrop Street, College Ave. to Davis, and Mass. Ave. to Harvard. Service frequency would be about the same as for 94 (every 15 minutes in the peak hours).

An alternative routing scheme for Route 96 is also being discussed, however. This alternative would terminate all Route 94 and Route 96 buses at Davis. Passengers with final destinations in the Harvard Square or Porter Square areas would transfer to the Red Line at Davis Square, under this scheme.

These alternatives have very different implications in terms of service quality, ridership loss, and assessments paid by the community. Changes on other routes are also being proposed (see reverse side). To learn more about these changes, or to express your opinion, attend one of the meeting sessions on January 29.

The Northwest Corridor Service Study Final Report may be reviewed in the main libraries in Cambridge, Arlington, Medford, and Lexington, and in the Davis Square branch library in Somerville, or at the State Transportation Library at 10 Park Plaza in Boston.

17. S-74

Comm. from Barry Faulkner, Project Mgr., Cambridge Systematics, Inc. Re: an MBTA public hearing to be held on January 29, 1985 Re: the final recommendations of the Northwest Corridor Service Study.

In City Council,

January 28, 1985

1/28/85
- Placed on File -