

CITY OF CAMBRIDGE

COMMUNITY DEVELOPMENT DEPARTMENT

City Hall Annex - Inman & Broadway - Cambridge, Mass. 02139

(617) 876-6800
EXTENSION 344

March 21, 1975

RECOMMENDATION ON PREFERRED STATION LOCATION AND TUNNEL ALIGNMENT FOR MBTA RED LINE EXTENSION IN THE HARVARD SQUARE AREA

In response to your recent request, the Community Development Department is pleased to recommend that the City of Cambridge indicate to the Massachusetts Bay Transportation Authority its preference for the "D" alignment and station location for the MBTA Red Line extension in the Harvard Square area. The Department has spent more than a year and one-half in detailed analysis of this issue and in joint study with MBTA and its consultant, Sverdrup and Parcel & Associates, Inc., and is convinced that the "D" alignment and station location (which proceeds directly up Massachusetts Avenue toward Porter Square) is the best long-term and short-term choice for Cambridge.

The next step for MBTA is to designate a preferred alignment and to proceed with an environmental assessment of the preferred alignment and each of the other alternatives. We understand that in July, MBTA intends to submit a capital grant application for the Red Line extension to the Urban Mass Transportation Administration (UMTA) of the Federal Department of Transportation. The administrative procedures required to carry out a major project of this type are nearly as complicated as the engineering and construction aspects of the project. Therefore, it is vital that Cambridge act as promptly as it can on this decision as a means of reaffirming its wholehearted support for the Red Line extension, and to assist MBTA in moving the project forward.

In addition to the Department's technical analysis, nearly all of the informed citizen groups who have commented have recommended the "D" alignment. There are some advocates of the "G" alignment (along Mt. Auburn Street through Brattle Square) most notably Harvard University. There do not seem to be strong advocates of the "A" alignment (which loops under Brattle Street, Mt. Auburn St., and Hilliard St.) and there are outspoken opponents of that alignment. Our comments deal principally with the "D" and "G" alignments.

Even prior to a consideration of cost, the "D" alignment (directly up Massachusetts Avenue) has long-term advantages at least equal to or greater than line "G" (through Mt. Auburn Street and Brattle Square). When the costs

of construction, compared with the benefits are compared, the choice of "D" becomes clear. The estimated cost of the various alignments is:

Line D-1	\$32 million
Line D-2	\$35 million
Line G-1	\$74 million
Line G-2	\$79 million

Many of the advocates of both the "D" alignments and "G" alignments are not indicating a preference, at this time, between the respective alternatives 1 and 2, preferring that those details be worked out in the engineering phase which comes next. The average difference in cost between the "D" alignments and the "G" alignments is \$43 million--more than double.

While the stations are some distance apart financially, they are not far apart physically. The principal station entrance for the "D" alignments is only 275 feet from the principal station entrance for the G-2 alignment and 450 feet from the principal station entrance of the G-1 alignment. The center of the passenger loading platform for the "D" stations is 530 and 825 feet away respectively from the center of the loading platforms of the two "G" stations.

Where the cost is more than double, there must be a clearcut and overwhelming case presented that there are corresponding benefits to be achieved by the more expensive alignment and station. When the distance between the station entrances is about 450 feet, the task of showing significantly greater benefit is difficult indeed.

To date the Department has heard few arguments to justify the increased cost of the "G" alignment, nor based on a year and one-half of study of MBTA lines and our intimate knowledge of the Harvard Square area, do we foresee how such a justification could be made.

Apparently a significant consideration for Harvard University in advocating line "G" is their desire: 1) to close Massachusetts Avenue south of the Harvard Yard to traffic, 2) to convert that section of Massachusetts Avenue to a pedestrian way, and 3) to physically join the Harvard campus. In order to permit the closing of Massachusetts Avenue to general traffic, Harvard proposes that a vehicular tunnel be developed under Massachusetts Avenue. It argues that continuation of the rapid transit tunnel under Massachusetts Avenue (either alignment "A" or "D") would eliminate the option of constructing the vehicular tunnel. Based on our studies and those of Sverdrup & Parcel, we do not think a vehicular tunnel is a feasible project

and do not think any realistic future traffic option will be foreclosed if the rapid transit tunnel remains under Massachusetts Avenue. In attempting to design a vehicular tunnel under Massachusetts Avenue, we have encountered at least a dozen severe technical problems and the distinct likelihood of creating more problems elsewhere in the Harvard Square area. Cost of the vehicular tunnel under Massachusetts Avenue has been estimated by Sverdrup & Parcel at \$17,300,000 plus an annual maintenance cost of \$780,000 per year for ventilation. If a major reason for Harvard's preferring line "G" (under Mt. Auburn Street) is to proceed with a vehicular tunnel under Massachusetts Avenue, then the additional cost of line "G" should be considered as \$60 million (\$43 million plus \$17 million).

In concluding this recommendation, the Department wishes to stress that principal emphasis must be placed on the long-term benefits of the station location and the rapid transit extension. There is no question that during the two-year period of subway construction activity, there will be disruption and inconvenience to motorists, businessmen and pedestrians. Our analysis concludes the disruption will be inconvenient, not fatal; Harvard Square can continue to operate and will survive intact to be a much improved area once the Red Line is extended.

The Department will be pleased to provide a more complete technical backup for this recommendation if either the City Manager or the City Council request.



CITY OF CAMBRIDGE

CAMBRIDGE, MASSACHUSETTS 02139
Tel. 876-6800

EXECUTIVE DEPARTMENT
JAMES L. SULLIVAN
City Manager

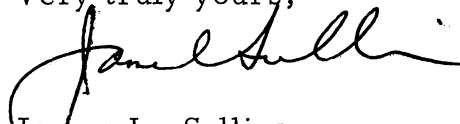
March 24, 1975

To the Honorable, the City Council:

Enclosed please find a copy of the Community Development Department's recommendation on the preferred station location and tunnel alignment for MBTA Red Line Extension in the Harvard Square area.

I am in full concurrence with the recommendation that the "D" alignment is the best long-term and short-term choice for Cambridge.

Very truly yours,



James L. Sullivan
City Manager

JLS/mbf

Enc.

Resolution
Agenda # 20
110
MBTA Red Line Extension in the
Harvard Square area.

In City Council

March 24, 1975

Referred to Transportation
Committee for report
Copy sent to Transportation
Committee 3/25/75 dl

Need Resolution for
COUNCIL APPROVAL