FOREST CITY RENTAL PROPERTIES CORPORATION

314 DARTMOUTH STREET
BOSTON, MASS. 02116
TELEPHONE: (617) 437-9049

February 28, 1986

Mr. Paul E. Healy
City Clerk
City of Cambridge
795 Massachusetts Avenue
Cambridge, Massachusetts 02139

Dear Mr. Healy:

Enclosed is the information requested by the Cambridge City Council relative to the University Park draft Environmental Impact Report. The information is organized in three parts:

I. Consultant Directory
II. Methodology
III. Reduced Intensity Alternative

We have also sent copies of this information to City agencies, community residents and others who have expressed interest in receiving copies of the EIR.

We have enclosed copies for the Council and appreciate your distributing them to the councillors.

Sincerely yours,

Drew M. Leff

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Project Developer

cc: Secretary James Hoyte, Executive Office of Environmental Affairs
Samuel Mygatt, Environmental Protection Agency
Nancy Baker, Environmental Protection Agency

DML:amt
L013

I. CONSULTANT DIRECTORY

Consultant	Responsibility	Contact Person
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Vanasse/Hangen Associates, Inc. 60 Birmingham Parkway Boston, MA 02135 783-7000	Traffic; Water, Sewer and Drainage	Richard Hangen John Sadowski
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Goodwin, Procter & Hoar Exchange Place Boston, MA 02109 523-5700 Ext. 450	Legal Counsel	Susan Cooke

II. METHODOLOGY

INTRODUCTION

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In addition to the No-Build Alternative, three development alternatives are presented for analysis in the Environmental Impact Report: the Current Proposal, the most recent plan developed by the Proponent; the ENF Plan, the development concept originally generated by the Proponent and presented in the Environmental Notification Form (ENF) in early 1985; and the Reduced Intensity Alternative, an alternative prepared in response to a request by the Secretary of Environmental Affairs to assess a plan with a smaller overall program than originally presented in the ENF.

The following materials describe the methodology being used to assess the environmental effects in each of the impact categories noted above.

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The first part of the study involves an inventory of existing transportation conditions in the study area. Information was collected regarding daily and peak hour traffic volumes, accidents, street patterns, roadway geometrics, and traffic control for intersections and roadway segments located throughout the study area. The information was analyzed to determine existing conditions and problems. The existing network served as the base for development of future networks associated with various development alternatives for the site.

The analysis of probable project impacts involves forecasting transportation demands generated by the proposed development (all alternatives) along with demands from other new developments in the area. Projected traffic volumes from the background development are added to the existing base volumes to establish the No-Build network. Project related traffic for each alternative is then added to the No-Build network to determine total projected roadway volumes for each alternative in the Build analysis year. Levels of service are computed by comparing projected volumes to intersection and roadway capacity for the future highway system (existing roadways plus any planned improvements or additions). The probable impacts of development of University Park are determined by comparing the various Build conditions to No-Build conditions.

The final step in the study process is to analyze problem areas and identify potential measures to reduce or eliminate anticipated problems. Identified problem areas unrelated to the proposed Build alternatives are considered along with development related problem areas. Mitigation measures being considered include alternative access plans; roadway and intersection improvements; promotion of techniques to increase vehicle occupancy; increased transit use; and implementation of demand-modification techniques such as staggered work hours.

B. AIR QUALITY

Ambient air quality was assessed by performing a microscale analysis of carbon monoxide (CO) concentrations at 24 sensitive receptors adjacent to 7 roadway intersections in the project study area. The

objective of the air quality analysis is to determine if the proposed University Park development will interfere with the attainment or maintenance of Massachusetts and National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO). To demonstrate compliance, it is necessary to identify human activity centers (sensitive receptors) exposed to maximum air pollutant levels from motor vehicle emissions in the project area. Using air quality modeling techniques, CO levels are estimated at these sensitive receptors for the Build and No-Build alternatives for the present and future years. Comparison of projected pollutant levels to the NAAQS permits evaluation of whether motor vehicle emissions related to the proposed developments will pose a threat to public health or welfare.

C. NOISE

The principal objective of the noise impact analysis was to quantify the effects of increased motor vehicle activity associated with University Park on sensitive receptors in the community. To accomplish this, ambient monitoring was performed to establish existing noise levels, and future noise levels were modeled at four representative receptors. The estimated increase in future noise levels can be compared to audible change criteria while the total traffic noise level can be compared to U.S. Environmental Protection Agency (EPA) guidelines for the prevention of hearing loss.

D. WIND

A qualitative analysis of the impact of the proposed development on pedestrian-level wind conditions was performed. In order to predict anticipated ground wind conditions on the site, historic wind data recorded over fifteen years at the weather station at Logan Airport was utilized. This data describes patterns of wind velocity by season, direction, and temperature. The wind velocity and direction data was used in conjunction with a complete site analysis to evaluate existing conditions. This involved observation of conditions not only on-site, but within the surrounding area as well. The analysis is then used to evaluate the general building massing in the area, with special

attention paid to upstream wind obstructions and potential channels which might serve to divert or concentrate wind flow.

E. MASSING AND SHADOW

Visual representation of project massing was based on existing renderings and computer-generated drawings. The shadow analysis was based on computer-generated modeling of the development alternatives for University Park.

The overall shadow study area includes nine blocks bounded by Massachusetts Avenue, Purrington Street, Pacific Street and Brookline Street. The analysis focuses upon five areas considered to be sensitive receptors in terms of shadow effects. These areas consist of the project's principal open space areas as well as the project's new residential frontage along Brookline Street.

Shadow analyses are conducted at three times of the year -- at the vernal equinox (same conditions as the autumn equinox), the summer solstice and the winter solstice. Morning, noontime and afternoon shadow conditions are analyzed for each date.

F. OPEN SPACE

This analysis focusses on the effects of the proposed development with respect to open space resources. The methodology applied includes a survey and description of existing open space resources within the city, neighborhood and project site; an assessment of the project's effects as related to the area, use and layout of open space; and an identification of various mitigation measures to ensure that the open space created as a result of the project provides the greatest possible benefit to the community. Principal sources of information used for this analysis include the city's 1983 Recovery Action Program and a detailed survey/evaluation of the city's open space areas, conducted by the Department of Community Development in 1985.

G. ARCHAEOLOGICAL RESOURCES

The approach applied here involved background research and analysis leading to an evaluation of the archaeological potential of the University Park site. As requested by the State Archaeologist at the Massachusetts Historical Commission, this investigation was conducted at the "reconnaissance" level, consisting primarily of documentary research of site history. As part of this effort, a detailed history of land use at the project location was conducted in order to identify the types of resources that may still exist within the site. Other components of the reconnaissance study included research into the potential presense of known archaeological sites in the area, contact with the Cambridge Historical Commission, and a walkover inspection of the property.

H. HISTORIC RESOURCES

A history of Cambridgeport in the vicinity of the project site was completed which describes recognized historic resources which currently exist within the general area. Effects of proposed development on area historic properties are then described, focussing largely on effects of project-related traffic, as requested in the Scoping Certificate issued for this Draft EIR.

The principal criteria used in determining the presence of historically significant properties in the project vicinity was designation on the National Register of Historic Places. Research conducted was based on materials provided by the Massachusetts Historical Commission. This research included review of the State Register of Historic Places, which lists National Register properties as well as those designated under various other federal, state and local statutes.

I. GROWTH AND DEVELOPMENT

The focus of this analysis is to identify potential effects of the proposed project on housing and commercial development within the City of Cambridge and the neighborhood of Cambridgeport.

Existing housing in Cambridge and in the Cambridgeport neighborhood is described on the basis of a variety of characteristics and indicators which are organized into the following groupings: quantity, structural conditions, tenure/ownership and cost. The information presented is based on discussion with members of the Cambridge Community Development Department, several of the city's recent housing-related publications, and 1970 and 1980 United States Census data.

Existing commercial development trends in the city and in the project area are summarized on the basis of a variety of information sources, including an interview with the city's Director of Economic Development and a report on citywide development activity from 1980 to the year 2000, prepared by the Department of Community Development in 1985. Other principal sources of information concerning recent or expected development trends in the area include the city's recently published Cambridgeport Revitalization Plan, contact with area real estate professionals, and with staff at the Massachusetts Institute of Technology. Discussion of commercial development trends is organized according to the following areas: the City of Cambridge, the Cambridgeport Industrial District, and Central Square.

J. WATER AND SEWER SERVICE

This analysis focusses on the water, sanitary sewer and storm drainage requirements of the proposed development. The discussion provides background information on the existing water, sewer, and storm drainage distribution systems in Cambridge, as well as a description of system components in the general vicinity of the site. The primary source of information on existing system conditions is the 1985 City of Cambridge Capital Improvements Study Progress Report.

The analysis also discusses the effects the proposed project may have on the Cambridge and Massachusetts Water Resources Authority (MWRA) systems. Details of this analysis include additional demands that may be placed on the Cambridge and MWRA systems, an assessment of their effects, and required changes in the existing system in order to meet service levels desired for the University Park development. All flow projections have been based on Title 5 of the Massachusetts State Environmental Code 310 CMR 15.00.

K. HAZARDOUS MATERIALS

This analysis discusses the extent to which chemicals or other substances of a potentially hazardous nature are known to exist on-site. In order to make a determination in this regard, an investigation of past and present site usage has been conducted. This research has included a walkover survey of existing conditions on-site, contact with a variety of state and local agencies and officials, and review of available historical data regarding past usage of the property.

L. CONSTRUCTION

This analysis describes the demolition and construction process anticipated for the University Park project. The discussion outlines specific Phase I plans for construction and demolition activities, and describes techniques to be utilized during these processes. Also included is a discussion of mitigation measures to be employed in order to minimize any adverse impacts which may be associated with such procedures.

The Reduced Intensity plan was generated in response to the Secretary of Environmental Affairs' request for the evaluation of a "20-30 percent reduced development alternative", as compared with the plan originally presented in the Environmental Notification Form. In order to develop this plan, total square footage, housing implications and traffic generation were considered. The Reduced Intensity plan represents a 26 percent reduction in PM peak hour trip generation compared to the plan presented in the Environmental Notification Form. Because this aternative is conceptual and does not represent a new design, it utilizes the same general physical layout as the ENF plan. Where opportunities for reduced impacts seem clear for the Reduced Intensity plan, they are noted as potential design variations.

In response to the Secretary of Environmental Affairs request that the Reduced Intensity plan reflect publicly-stated community and city goals for the project, the number of housing units on-site has been increased to 200 (184 new units plus 16 existing units along Massachusetts Avenue) and there has been a shift in building use from office to research and development and light industrial. The Reduced Intensity plan entails 900,000 square feet of office space, 680,000 square feet of research and development and light industrial space, 140,000 square feet of retail space and a 350 room hotel.

Reduced Intensity Alternative

Area Redeveloped	31 acres
Office	900,000 SF
R&D/Light Industrial	680,000 SF
Retail	140,000 SF
Hotel	350 Rooms
Housing	184 Units
Total New Development	2.17 Million SF

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February 21, 1986

Mr. Paul E. Healy
City Clerk
City of Cambridge
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795 Massachusetts Avenue
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Dear Mr. Healy:

We have received your letter of February 13, 1986 along with City Council Order #11 of February 3, 1986.

We are expecting to file the Draft Environmental Impact Report on March 14, 1986 with notice in the Environmental Monitor on March 21, 1986. We will set up a series of review meetings to enable the community and City to comment effectively on the Draft EIR. Tentatively, we are trying to schedule two evening meetings on March 25 and 27 in order to guide the community through the document at the beginning of the review period and a follow-up meeting two weeks later on the evening of April 9 to answer questions.

We will, of course, provide the information requested in the City Council Order. While most of this information has been discussed at previous meetings with the community, we are in the process of organizing it in written form. We expect to send this information to the Council and other interested parties by the end of next week.

Very truly yours,

Drew M. Leff

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Project Developer

DML:amt
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cc: Massachusetts Environmental Protection Agency
Cambridge City Manager
Cambridge Office of Community Development

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A two-tiered study area was adopted for the traffic study in response to the scope established by the Massachusetts Environmental Policy Act (MEPA) office. The primary study area (Tier I) is bounded on the north by Massachusetts Avenue, on the west by Brookline Street, on the south by Memorial Drive, and on the east by Vassar Street. The study of this area focused on site access requirements, parking and local street impacts. The secondary study area (Tier II) is bounded on the north by Broadway Street, on the west by Western Avenue/Prospect Street and on the south and east by Memorial Drive. The primary emphasis of the study within this area is the analysis of impacts on key arterial roadways. These major arterials include Massachusetts Avenue, Broadway Street, Main Street, Western Avenue, River Street, Prospect Street, and Memorial Drive. A total of 28 intersection locations have been subject to detailed analyses.

The first part of the study involves an inventory of existing transportation conditions in the study area. Information was collected regarding daily and peak hour traffic volumes, accidents, street patterns, roadway geometrics, and traffic control for intersections and roadway segments located throughout the study area. The information was analyzed to determine existing conditions and problems. The existing network served as the base for development of future networks associated with various development alternatives for the site.

The analysis of probable project impacts involves forecasting transportation demands generated by the proposed development (all alternatives) along with demands from other new developments in the area. Projected traffic volumes from the background development are added to the existing base volumes to establish the No-Build network. Project related traffic for each alternative is then added to the No-Build network to determine total projected roadway volumes for each alternative in the Build analysis year. Levels of service are computed by comparing projected volumes to intersection and roadway capacity for the future highway system (existing roadways plus any planned improvements or additions). The probable impacts of development of University Park are determined by comparing the various Build conditions to No-Build conditions.

The final step in the study process is to analyze problem areas and identify potential measures to reduce or eliminate anticipated problems. Identified problem areas unrelated to the proposed Build alternatives are considered along with development related problem areas. Mitigation measures being considered include alternative access plans; roadway and intersection improvements; promotion of techniques to increase vehicle occupancy; increased transit use; and implementation of demand-modification techniques such as staggered work hours.

B. AIR QUALITY

Ambient air quality was assessed by performing a microscale analysis of carbon monoxide (CO) concentrations at 24 sensitive receptors adjacent to 7 roadway intersections in the project study area. The

objective of the air quality analysis is to determine if the proposed University Park development will interfere with the attainment or maintenance of Massachusetts and National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO). To demonstrate compliance, it is necessary to identify human activity centers (sensitive receptors) exposed to maximum air pollutant levels from motor vehicle emissions in the project area. Using air quality modeling techniques, CO levels are estimated at these sensitive receptors for the Build and No-Build alternatives for the present and future years. Comparison of projected pollutant levels to the NAAQS permits evaluation of whether motor vehicle emissions related to the proposed developments will pose a threat to public health or welfare.

C. NOISE

The principal objective of the noise impact analysis was to quantify the effects of increased motor vehicle activity associated with University Park on sensitive receptors in the community. To accomplish this, ambient monitoring was performed to establish existing noise levels, and future noise levels were modeled at four representative receptors. The estimated increase in future noise levels can be compared to audible change criteria while the total traffic noise level can be compared to U.S. Environmental Protection Agency (EPA) guidelines for the prevention of hearing loss.

D. WIND

A qualitative analysis of the impact of the proposed development on pedestrian-level wind conditions was performed. In order to predict anticipated ground wind conditions on the site, historic wind data recorded over fifteen years at the weather station at Logan Airport was utilized. This data describes patterns of wind velocity by season, direction, and temperature. The wind velocity and direction data was used in conjunction with a complete site analysis to evaluate existing conditions. This involved observation of conditions not only on-site, but within the surrounding area as well. The analysis is then used to evaluate the general building massing in the area, with special

attention paid to upstream wind obstructions and potential channels which might serve to divert or concentrate wind flow.

E. MASSING AND SHADOW

Visual representation of project massing was based on existing renderings and computer-generated drawings. The shadow analysis was based on computer-generated modeling of the development alternatives for University Park.

The overall shadow study area includes nine blocks bounded by Massachusetts Avenue, Purrington Street, Pacific Street and Brookline Street. The analysis focuses upon five areas considered to be sensitive receptors in terms of shadow effects. These areas consist of the project's principal open space areas as well as the project's new residential frontage along Brookline Street.

Shadow analyses are conducted at three times of the year -- at the vernal equinox (same conditions as the autumn equinox), the summer solstice and the winter solstice. Morning, noontime and afternoon shadow conditions are analyzed for each date.

F. OPEN SPACE

This analysis focusses on the effects of the proposed development with respect to open space resources. The methodology applied includes a survey and description of existing open space resources within the city, neighborhood and project site; an assessment of the project's effects as related to the area, use and layout of open space; and an identification of various mitigation measures to ensure that the open space created as a result of the project provides the greatest possible benefit to the community. Principal sources of information used for this analysis include the city's 1983 Recovery Action Program and a detailed survey/evaluation of the city's open space areas, conducted by the Department of Community Development in 1985.

G. ARCHAEOLOGICAL RESOURCES

The approach applied here involved background research and analysis leading to an evaluation of the archaeological potential of the University Park site. As requested by the State Archaeologist at the Massachusetts Historical Commission, this investigation was conducted at the "reconnaissance" level, consisting primarily of documentary research of site history. As part of this effort, a detailed history of land use at the project location was conducted in order to identify the types of resources that may still exist within the site. Other components of the reconnaissance study included research into the potential presense of known archaeological sites in the area, contact with the Cambridge Historical Commission, and a walkover inspection of the property.

H. HISTORIC RESOURCES

A history of Cambridgeport in the vicinity of the project site was completed which describes recognized historic resources which currently exist within the general area. Effects of proposed development on area historic properties are then described, focussing largely on effects of project-related traffic, as requested in the Scoping Certificate issued for this Draft EIR.

The principal criteria used in determining the presence of historically significant properties in the project vicinity was designation on the National Register of Historic Places. Research conducted was based on materials provided by the Massachusetts Historical Commission. This research included review of the State Register of Historic Places, which lists National Register properties as well as those designated under various other federal, state and local statutes.

I. GROWTH AND DEVELOPMENT

The focus of this analysis is to identify potential effects of the proposed project on housing and commercial development within the City of Cambridge and the neighborhood of Cambridgeport.

Existing housing in Cambridge and in the Cambridgeport neighborhood is described on the basis of a variety of characteristics and indicators which are organized into the following groupings: quantity, structural conditions, tenure/ownership and cost. The information presented is based on discussion with members of the Cambridge Community Development Department, several of the city's recent housing-related publications, and 1970 and 1980 United States Census data.

Existing commercial development trends in the city and in the project area are summarized on the basis of a variety of information sources, including an interview with the city's Director of Economic Development and a report on citywide development activity from 1980 to the year 2000, prepared by the Department of Community Development in 1985. Other principal sources of information concerning recent or expected development trends in the area include the city's recently published Cambridgeport Revitalization Plan, contact with area real estate professionals, and with staff at the Massachusetts Institute of Technology. Discussion of commercial development trends is organized according to the following areas: the City of Cambridge, the Cambridgeport Industrial District, and Central Square.

J. WATER AND SEWER SERVICE

This analysis focusses on the water, sanitary sewer and storm drainage requirements of the proposed development. The discussion provides background information on the existing water, sewer, and storm drainage distribution systems in Cambridge, as well as a description of system components in the general vicinity of the site. The primary source of information on existing system conditions is the 1985 City of Cambridge Capital Improvements Study Progress Report.

The analysis also discusses the effects the proposed project may have on the Cambridge and Massachusetts Water Resources Authority (MWRA) systems. Details of this analysis include additional demands that may be placed on the Cambridge and MWRA systems, an assessment of their effects, and required changes in the existing system in order to meet service levels desired for the University Park development. All flow projections have been based on Title 5 of the Massachusetts State Environmental Code 310 CMR 15.00.

K. HAZARDOUS MATERIALS

This analysis discusses the extent to which chemicals or other substances of a potentially hazardous nature are known to exist on-site. In order to make a determination in this regard, an investigation of past and present site usage has been conducted. This research has included a walkover survey of existing conditions on-site, contact with a variety of state and local agencies and officials, and review of available historical data regarding past usage of the property.

L. CONSTRUCTION

This analysis describes the demolition and construction process anticipated for the University Park project. The discussion outlines specific Phase I plans for construction and demolition activities, and describes techniques to be utilized during these processes. Also included is a discussion of mitigation measures to be employed in order to minimize any adverse impacts which may be associated with such procedures.

The Reduced Intensity plan was generated in response to the Secretary of Environmental Affairs' request for the evaluation of a "20-30 percent reduced development alternative", as compared with the plan originally presented in the Environmental Notification Form. In order to develop this plan, total square footage, housing implications and traffic generation were considered. The Reduced Intensity plan represents a 26 percent reduction in PM peak hour trip generation compared to the plan presented in the Environmental Notification Form. Because this aternative is conceptual and does not represent a new design, it utilizes the same general physical layout as the ENF plan. Where opportunities for reduced impacts seem clear for the Reduced Intensity plan, they are noted as potential design variations.

In response to the Secretary of Environmental Affairs request that the Reduced Intensity plan reflect publicly-stated community and city goals for the project, the number of housing units on-site has been increased to 200 (184 new units plus 16 existing units along Massachusetts Avenue) and there has been a shift in building use from office to research and development and light industrial. The Reduced Intensity plan entails 900,000 square feet of office space, 680,000 square feet of research and development and light industrial space, 140,000 square feet of retail space and a 350 room hotel.

Reduced Intensity Alternative

Area Redeveloped	31 acres
Office	900,000 SF
R&D/Light Industrial	680,000 SF
Retail	140,000 SF
Hotel	350 Rooms
Housing	184 Units
Total New Development	2.17 Million SF

3949A

FOREST CITY RENTAL PROPERTIES CORPORATION

314 DARTMOUTH STREET
BOSTON, MASS. 02116
TELEPHONE: (617) 437-9049

March 11, 1986

To Members of the Cambridge Community:

Our consultants are now completing the draft Environmental Impact Report (DEIR) for University Park and expect to have copies available on March 21, 1986. The document will provide an extensive discussion of the potential impact of the University Park development on a broad range of environmental issues.

As this will be a detailed and important document, we have scheduled three meetings with the community to assist in its review during the 30-day review period. At the first two meetings our consultants will guide you through the report, simplifying your reading and understanding of it. The first meeting will be held on Wednesday, March 26 and will cover all sections except those related to Traffic. The second meeting will be held one week later on Wednesday, April 2 and will cover the Traffic, Noise and Air Quality sections.

The third meeting on Wednesday, April 16 will provide an opportunity for you to ask questions and comment on any section of the DEIR.

All meetings will be held at the Central Square Branch of the Cambridge Public Library located at 45 Pearl Street. They will begin at 7:00 p.m.

We look forward to your involvement in this very important step in the development process.

Sincerely,

Drew M. Leff

Drew M. Leff
Project Developer

DML:amt

L021

16. S-187

Comm. from Drew M. Leff, Project Developer, Forest City Rental Properties Corp., trans. information requested by the Council Re: University Park draft Environmental Impact Report & a letter to the community stating copies of the report are expected to be available by March 21, 1986 & that a meeting will be held on April 16, 1986 at the Central Sq. Branch Library at 7:00 p.m. on this issue.

In City Council,

March 24, 1986

Referred to the Committee on Environment

Copy sent to Councillor Wolf Chair, Committee on Environment 3/28/86 mh