DEVELOPMENT PLAN FOR THE AIR RIGHTS AT SOUTH STATION TRANSPORTATION CENTER

by

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at
South Station Transportation Center

by
Michael Chu

Submitted to the Department of Architecture on August 16, 1985 in partial fulfillment of the requirement for the degree of Master of Science in Real Estate Development.

ABSTRACT

This thesis is a development plan for the air rights at the South Station Transportation Center in the City of Boston. The plan is for the development of three major real estate uses: an office tower, a hotel tower, and a high technology facility, all at the air rights above a transportation center serving rail, bus, and rapid transit commuters. The significant issues pertaining to air rights development, mixed used development, development process and related risks, market assessment, finanical feasibility and projections, financing structuring, and the regulatory approval processes were formulated for the South Station Air Rights Development. Upon completion, an estimated $100 million in public construction program will be supplemented by $100 million or more in private development would have been invested in the Transporatation Center and the Air Rights Development, respectively. 35,000 commuters are forcasted to be using the transporation facilities, and 2,400 to 4,000 people the air rights developments.

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The author also wishes to thank the Boston Redevelopment Authority and the Massachusetts Bay Transportation Authority for their cooperation in providing the necessary data on the subject of this thesis.

CHAPTER 1

INTRODUCTION AND SITE DESCRIPTION

South Station is the northern terminus in Boston of the Northwest Corridor Improvement Project for the Amtrak and related commuter rail services. It is undergoing phase one of an estimated $100 million public construction program to transform the outdated station into a modern transportation center serving commuter rail, commuter and inter-city bus, and rapid transit riders. A 1,700 car parking facility is also planned as a component of the transportation center.

At the air rights above the transportation center, the City of Boston envisioned a $100 million private real estate development program to consist of an office tower, a hotel, and a high technology facility. The objective of this thesis is to formulate a realistic private sector development plan and strategy to develop the air rights at South Station (hereinafter referred to as "South Station ARD" or "ARD") for a potential multiple use development.

LOCATION

The South Station site is located at Atlantic Avenue and Summer Street, bordering Boston's expanding financial district. Exhibit 1.1 illustrates the location of the South Station site in relationship to the city's central districts

and major thoroughfares. (All exhibits will be incorporated at the end of each chapter.)

Over the last 10 years, major new office developments have committed over 3 million square feet ("SF") at the southern fringe of the financial district near South Station. In 1975, the Stone and Webster Engineering Corporation completed its 400,000 SF world headquarter on Summer Street, 1 block west of South Station. In 1977, The Beacon Companies completed a 200,000 SF speculative office tower 2 blocks to the west near Summer Street. In 1978, the Federal Reserve Bank of Boston completed its 1 million SF headquarter 1 block to the north on Atlantic Avenue. The 250,000 SF Teradyne Corporation's world headquarter is 2 blocks to the west. In 1984, Wang Laboratories completed a 100,000 10 story facility 1 block south of the South Station site. In 1985, Rose Associates completed a 1 million SF speculative office tower across from South Station on Atlantic Avenue.

Presently, two major real estate developments are under construction at the eastern fringe of the financial district: phase one of the 1.8 million SF International Place office center and the $180 million mixed use development at Rowes Wharf.

The fringes of the financial district have an inventory close to 5 million SF of first class office space, or nearly 25% of the office space in the financial district. The

fringe of the district is definately expanding eastward toward the waterfront and southward toward South Station in order to accomodate with the continuing demand for new first class office space.

SOUTH STATION TRANSPORTATION CENTER PUBLIC IMPROVEMENT PROGRAM

In 1964, the Boston Redevelopment Authority ("BRA"), the city's planning and urban development agency, initiated The Central Business District - South Station Urban Renewal Plan ("Plan"). (1) The original adopted Plan defined the proposed Transportation Center at South Station to consist of a reconstructed rail terminal and platforms, and a new parking facility above the rail platforms.

In 1978, the Plan evolved into greater definition with the inclusion of a bus terminal facility above the parking.

In 1978, the BRA entered into a purchase and sale ("P&S") agreement to sell the South Station property to the Masachusetts Bay Transportation Authority ("MBTA"). Contained in said agreement, the MBTA agreed to construct, subject to available funds, the following improvements on the property:

a) a commuter and inter city rail facility;

( ) denotes a reference contained in the Bibliography.

b) a new concourse providing ticketing facilities and access for passenger between the headhouse, the rail platforms and any future bus terminal providing all necessary support functions to accommodate future inter city and commuter bus programs;

c) a parking deck for approximately 550 vehicles including a high capacity ramp system;

d) an inter city and commuter bus terminal;

e) the footing and structural systems necessary to support at least three additional parking levels for a total garage capacity of approximately 2,000 spaces;

f) improvements in the structure and systems of the headhouse to permit operational use of the ground floor and office on the upper floors of a standard comparable to other major rehabilitation in the area.

In addition, the P&S Agreement provided: a reservation of air rights to the BRA, its successors or assigns, of approximately 250,000 square feet above the uppermost parking and/or bus level, including access to the foundations, for future air rights developments by the BRA; and a cost sharing interrelationship among the state's Executive Office of Transportation and Construction ("EOTC"), the Federal Rail Administration ("FRA"), the federal Urban Mass Transportation Authority ("UMTA") and MBTA; and a good faith commitment by the MBTA to use its best efforts to obtain funding for all the proposed improvements listed above. In 1979, a quitclaim deed was

recorded at the Suffolk Registry of Deeds, conveying the property.

The current South Station Transportation Center project is comprised of 4 distinct elements.

The first element is the restoration of the pivotal headhouse and the realignment of the rail tracks, both of which are underging construction. This element is financed from the Federal Government's Northeast Corridor Rail Project. A new commuter and pedestrian concourse and mezzanine with retail space are also included.

The second element is a bus terminal for commuter and inter-city services. The terminal will be connected to the headhouse, and will provide for bus staging areas and necessary auxiliary facilities. There may be two bus operation levels elevated above the train tracks. Lobby entrance will be on street level.

The third element is a 1,700 space parking garage to be constructed over the bus terminal.

The MBTA is restoring the headhouse and constructing the rail improvements, and will construct the bus terminal and the public garage (in conjuction with the BRA), at a total estimated cost of approximately $100 million, the major portion of which will be financed with grants from the federal government. Foundations and structural capabilities for additonal future air rights development will be incorporated within the bus terminal and parking garage

structures.

When completed, the improved rail terminal will serve an estimated 30,000 rider trips daily, and a new connection to the MBTA Red line at South Station will serve 5,000 rider trips daily. The proposed terminal for commuter and intercity buses is forcasted to serve 20,000 rider trips daily. (2)

The BRA retains the ownership of the air rights above the transportation center rail. At or near the completion of the public improvements, the BRA will then solicit proposals from private sector developers, and negotiate the development of the air rights for commercial uses with the developer ("Developer") selected. The private development of the air rights is the fourth element at the South Station Transportation Center.

In 1980, the BRA commissioned a program feasibility and massing studies ("1980 Study") for its air rights property at the South Station site. (3) The 1980 Study envisioned 3 proposed commercial uses at be developed at the air rights:

1) a 400,000 SF 12 story office tower;
2) a 600 room 24 story convention-oriented hotel;
3) a 250,000 SF 2 story facility to be used by the region's high technology industries.

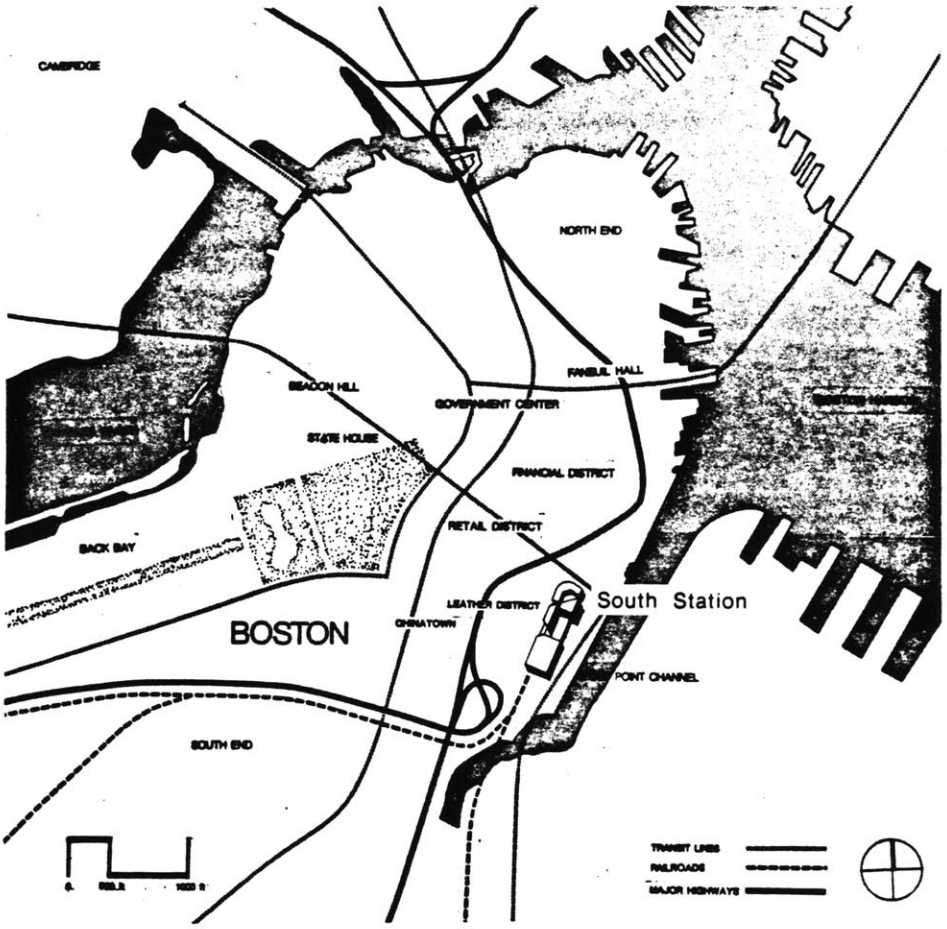
The physical and functional integration of the various transportation components and the air rights development components are extremely complex. Exhibit 1.2 contains an artist view of the transportation center and air rights

development from street level. Exhibit 1.3 contains an exploded view and description of the entire complex. Exhibit 1.4 contains architectural sections and an elevation of the transportation center and the air rights compponents. Exhibit 1.5 contains an aerial schematic illustration of the complex.

THESIS

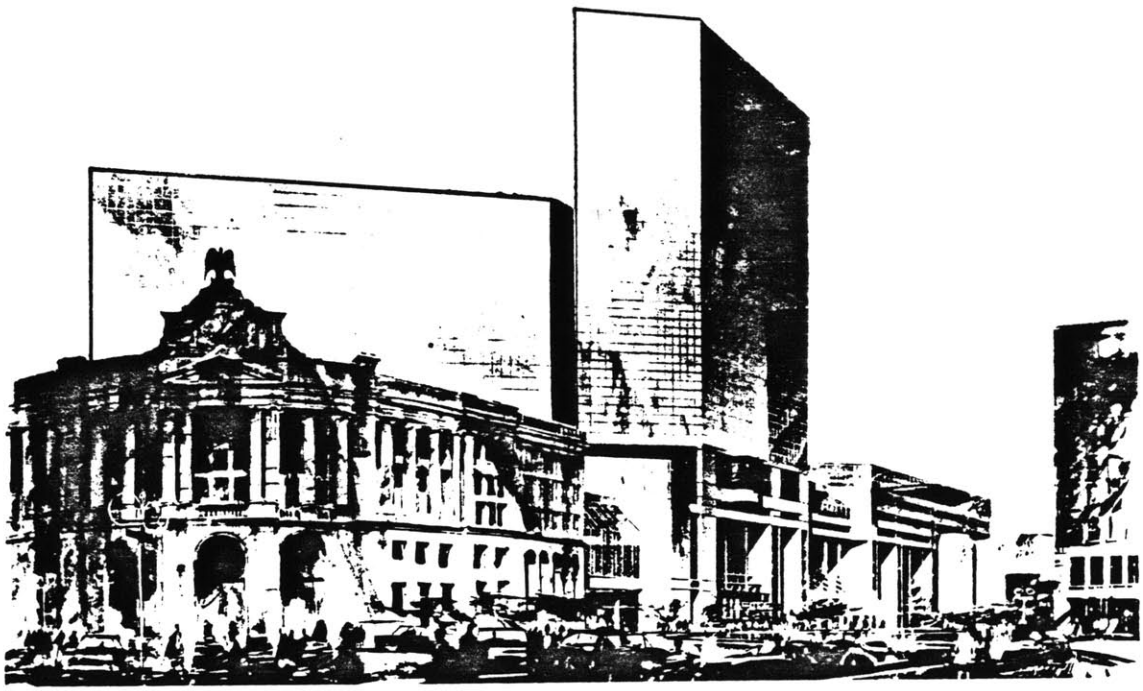
This thesis assumes that the Developer has been awarded the developer designation for the South Station ARD from the BRA through a Request for Proposal process. This thesis will address the following major issues: development management organization, assessment of the market potential for the three proposed uses; project feasibility analysis; regulatory approval process to secure the right to build, financing strategies and structuring; and a summary offering suggestions on how to improve the market potential for the development and benefits to the city.

Exhibit 1.1



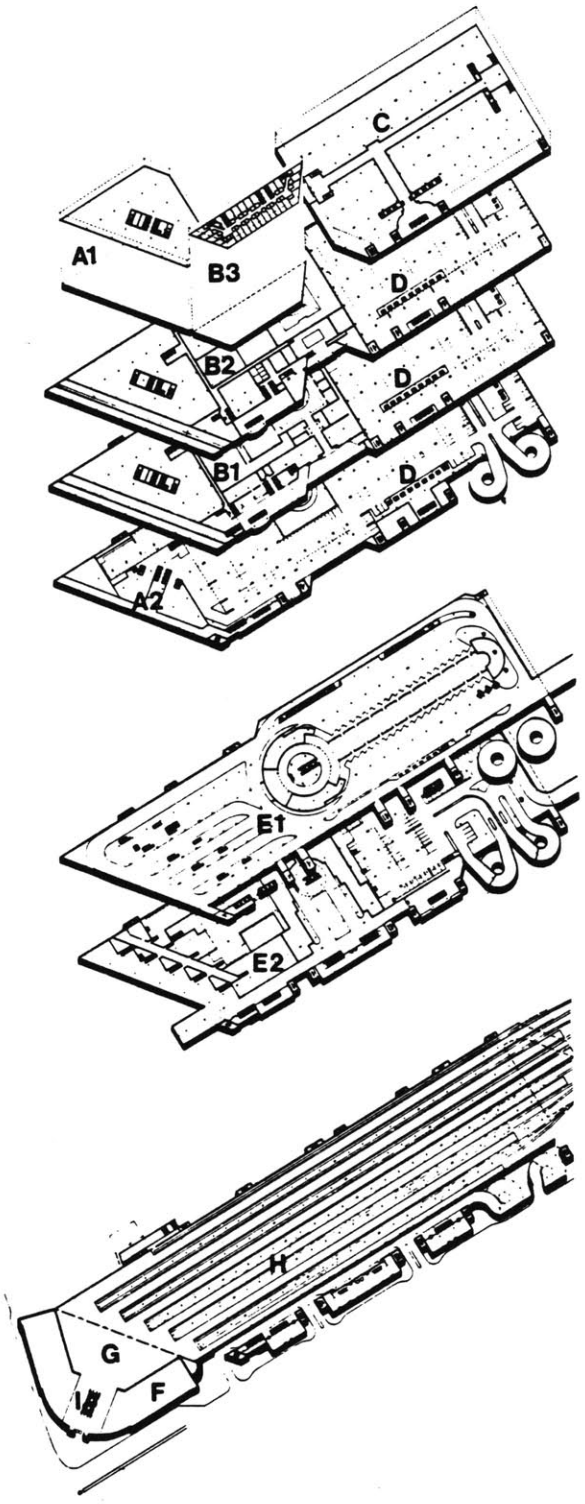
LOCATION MAP

Exhibit 1.2



VIEW OF THE DEVELOPMENT FROM STREET LEVEL

Exhibit 1.3



EXPLODED VIEW

AIR RIGHTS DEVELOPMENT
BOSTON REDEVELOPMENT AUTHORITY

OFFICE BUILDING
A1 400,000 SQUARE FOOT TOWER
A2 LOBBY

CONVENTION HOTEL
B1 LOBBY, CONVENTION FACILITIES, RESTAURANT AND CAFE
B2 HOTEL SERVICE SPACES, HEALTH CLUB
B3 600 GUEST ROOM TOWER

LOW RISE DEVELOPMENT
C TOTAL OF 250,000 SQUARE FOOT ON A 125,000 SQUARE FOOT SITE

PARKING
D 1700 CAR CAPACITY ON 3 LEVELS

BUS TERMINAL
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

E1 INTERCITY AND COMMUTER BUS TERMINALS
E2 PEDESTRIAN CONCOURSE AND CAR PARKING

TRAIN STATION
FEDERAL RAILROAD ADMINISTRATION AND MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

F RENOVATED HISTORIC SOUTH STATION HEADHOUSE WITH RECONSTRUCTED WEST WING 100,000 SQUARE FEET OFFICE & RETAIL

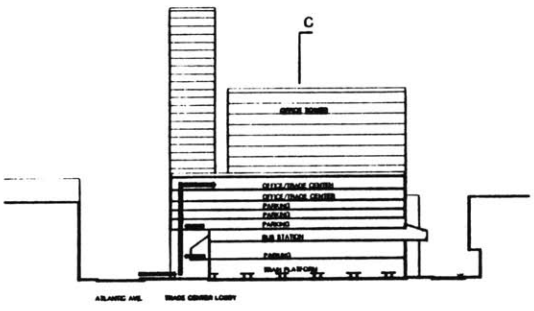
G MAIN CONCOURSE SPACE

H TRAIN BOARDING PLATFORMS

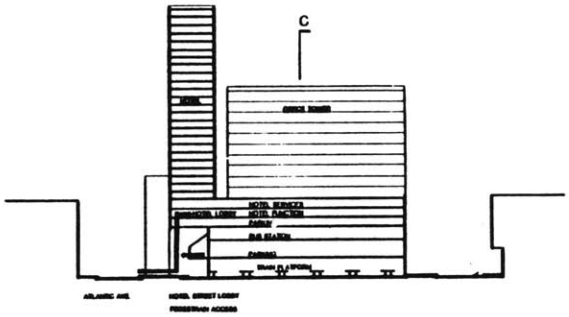
SUBWAY STATION RENOVATION
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

I ESCALATOR TO SUBWAY STATION

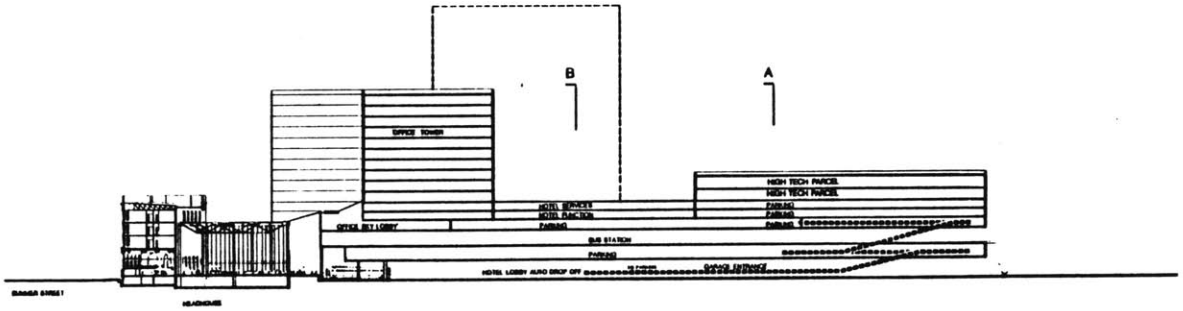
Exhibit 1.4



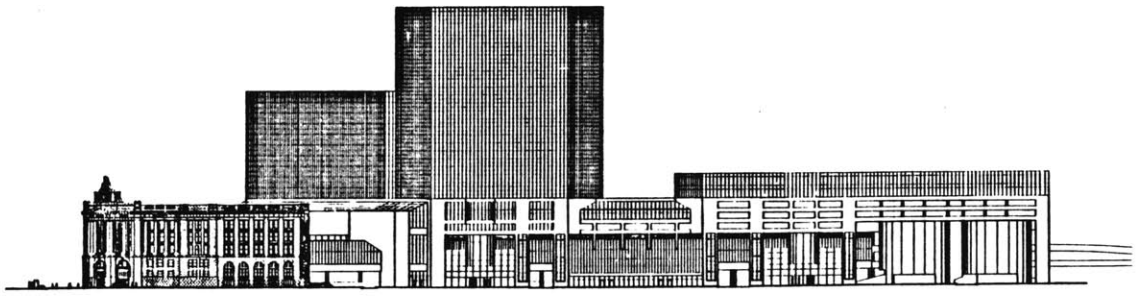
SECTION A



SECTION B

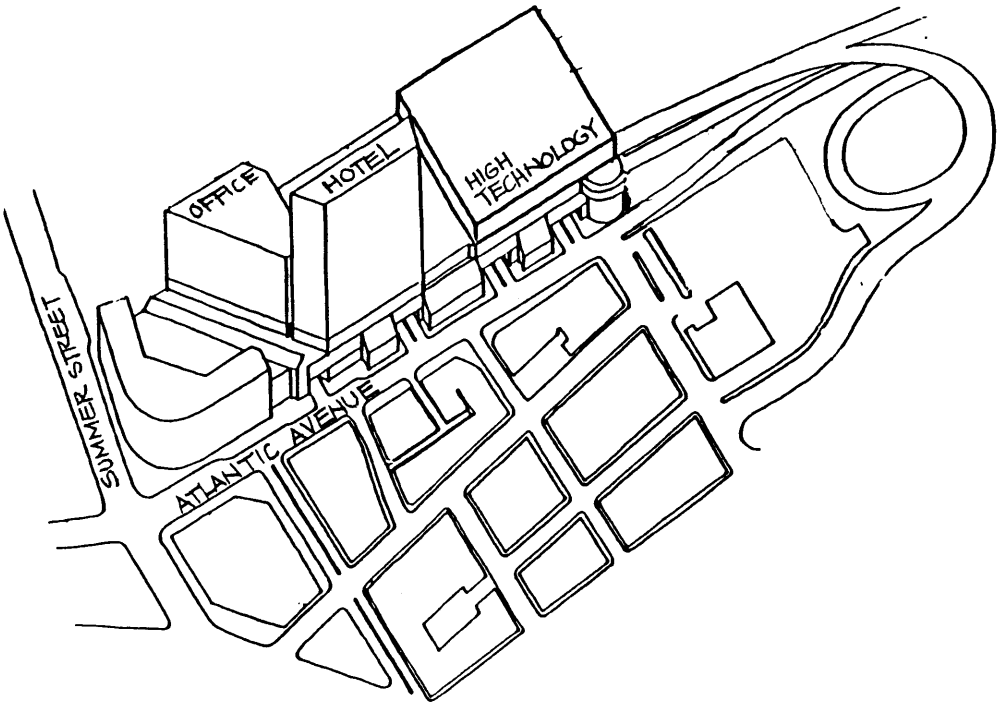


SECTION C



ATLANTIC AVENUE ELEVATION

Exhibit 1.5



SCHEMATIC ILLUSTRATION

CHAPTER 2

DEVELOPMENT PROCESS AND ORGANIZATION

SOUTH STATION AIR RIGHTS DEVELOPMENT

The South Station ARD undertaking would require from its Developer a greater level of planning, implementation, and financial management than a similar scale single use development at another location. The complexity in the ARD can be attributed to the physical and legal integration and coordination with the public sector components and infrastructure underneath, the multiple uses, the complex nature of the financing structure, and to its location within an older urban context.

This chapter discusses several decisions, strategies and issues that are critical to the successful implementation of the ARD.

IDENTIFYING THE PHASES OF THE ARD PROJECT

The South Station ARD can be expected to evolve through several phases where timing and decision making are critical to the schedule and cost control of the project. The key phases for the ARD would include: market assessment and preliminary financial feasibility analysis, project organization, formation of the project team, master

planning, regulatory approval, schematic design phase, project financing, design development and construction documentation, construction, marketing and initial occupancy phase.

At the start of the development process, a schedule organizing the significant phases is illustrated in Exhibit 2.1. Three months are budgeted for organization start up activities after developer designation, and six months for securing the approval for the ARD master plan (together with the proper rezoning) and clearances from environmental regulatory agencies. It would be 24 months from the start up before any construction activity. The development schedule would later incorporated the results of the market assessment and financial feasibility analyses.

Based on the the market assessment and the financial feasibility for each of the three uses, the Developer would decide if it would develop the three ARD components sequentially, over time, or two or more components simultaneously.

The three phases in the ARD implementation that would expose greatest financial risks to the Developer are: the obtaining of the regulatory approval for the entire ARD, the construction phase(s) and the marketing phase(s).

Each of the project phases will be discussed in greater details in the following sections.

MARKET ASSESSMENT PHASE AND INITIAL FEASIBILITY ANALYSIS

During this early phase, the Developer assesses the economic feasibility of the project in relationship to the market supply and forcast demand for each use component of the South Station ARD. Financial feasibility analyses would be undertaken to establish development and construction costs, market absoprtion and capture, revenue projections, and potential return on investment. Later, the program requirements, site analysis, budget studies, and other conceptual information are developed to define the market and scope of the project and its financial feasibility.

Realistic identification and assessment of the market for the office, hotel, and high technology components is vital to the conception of the project. From the market assessment studies, the Developer would be determining a window of opportunity to deliver the project to market, the segment of the market the project would capture, and the absportion or occupancy level achievable.

At this early stage, details of the project design have not been considered, and information needed to develop a project budget is sketchy at best. Many conceptual budgets are developed from ballpark square foot costs or historical costs of similar projects. Accuracy tends to vary widely from final project costs, and generally represents optimistic projections. Additional study and a clear defination of project objective and time requirements at

this stage would help to reduce unexpected surprises later. A specific set of outline design criteria identifying the major requirements of the building would be developed. These requirements may then be quantified, scheduled, and an estimation of material, labor, and indirect costs will produce the initial budget and schedule for the project.

During this phase, the Developer direct expenses are relatively minor, but all at risk. Many of the conceptual planning functions may be achieved with internal capabities, with market assessment and conceptual design activities contracted to third party professionals.

PROJECT ORGANIZATION

One of the first action by the Developer is to establish the project organization. Many professionals will be involved in developing the ARD project. The effectiveness of each individual's or group's efforts is largely determined by the organization, decision and communications channels established by the Developer. To establish the project organization's credibility and effectiveness, a senior officer from the Developer's organization, preferrably its president, must be involved in the reviews and decisions of major events as the project develops. The Developer would assess the market potential and constraints, the initial economic feasibility, and set

the initial overall concept for the development.

A development manager would be selected at the very start of the project organization to coordinate the master planning and the regulatory approval process. The development manager would also be responsible to: establish and administer the overall development cost control system, the interfacing with the legal, marketing, leasing and hotel operating professionals, and administer the project financing.

Before the schematic design phase for the first project component, a project manager would be selected to establish and administer the design and construction phases and their cost control systems. He or she would also administer the design and construction contracts, the project team, and interior improvements. If the timetable for any of the use component overlaps, a separate project manager would be selected to coordinate the given component. The project manager would coordinate the delivery of the documents required by the development manager. A project accountant would be assigned to administer and integrate all the cost control systems, and monitor the cash expenditure status of the project organization.

All development and project managers would report directly to the senior officer. The project accountant would report to the development manager. Major negotiations and decisions regarding regulatory approvals, project financing, selection of the project team, and leasing would

be made by the senior officer and implemented by the development manager. Once a month, or sooner at pre-defined milestones, the managers and the accountant report to the Developer the current status of the project schedule and cost control progess.

The managers are the Developer's representatives in the entire development process and would be granted full support in establishing a single source information flow between all project personnel. When coordinated and issued by the project managers, official communications are properly recorded, and redundant tasks and undue confusion are avoided. The responsibilities and authority limits for all parties are defined. The managers establish project coordination procedures for corespondences, files, meetings, and approvals of key project documents, and determine a timely cost reporting and control system, including a current change order system.

COST CONTROL SYSTEMS

Cost control must be implemented by the project accountant in conjunction with the managers, prior to any commitment of project funds. The first task is formating the costs elements into catagories reflecting the actual project execution plan. Budget amounts are established for each of the planned purchase requirements. The budget

control allows for direct comparision of planned and actual cost elements. The accuracy of cost information for land, consultant fees, construction , financing, and Developer's overhead determines the accuracy of the cost model.

The cost control model can employ a probalistic approach, with separate risk probabilities assigned to the differing cost items together with a variance probability assignment. A monitoring of the risks associated with the probable variances to the budget may identify possible large cost over runs due to adverse contingencies as the project evolves.

Cost tracking, reporting, and forcasting will then become the focus of the control effort after expenditures are initiated. Analysis is made of the quantities and price changes occurring during project development that vary from the original plan. Changes are totaled, and a updated cost is forcasted. This forcasting technique is applied based upon the actual cost to date plus the estimated cost to complete the item. Large variances are then analyzed to consider possible corrective action to achieve project objectives at reduced costs.

A master schedule must be established and clearly defined the realistic start and completion dates for major activities, such as government agency submisssion, review and approvals, design and construction activities, occupancy dates, interdependency of project activities graphically illustrated to denote sequence, and specific milestone dates

for the completion of keys tasks. Such a schedule would permit monitoring and updating of current status.

FORMATION OF THE PROJECT TEAM

A multitude of professionals would be involved in the South Station ARD. They include the Developer's organization, architects, design consultants, engineering consultants, attorneys, accountants, insurance agents, lenders and investors, contractors, marketing and leasing brokers, hotel opertors and property managers. The Developer, through its development and project managers, must orchestrate and coordinate all these professionals through the project development and delivery processes.

The primary project team is comprised of the Developer, its managers, the designers, and the contractors.

The Developer would pre-qualify several architects, design and engineering consultants, and contractors, and interview them as to their recent experiences in major project of similar uses and sizes.

The Developer would then select one architect to prepare the master plan for the ARD and also the design for each of the components. The Developer's choice of the architect is based on its design capabilities to tranform the Developer's concepts and visions into a physical design, its capabilities to deliver the design documents on

schedule, its cost monitoring and control system during the various phases of the design, and its construction administration capabilities. The Developer would similarly select the design and engineering consultants, but would assign them to be contracted by the architect.

A fast track delivery process is recommended for the ARD. This thesis assumes that the Developer does not have a construction operation or subsidiary. In the traditional process, the construction of the building commences after the construction documents are complete for all the building system and the construction contract is awarded through competitive bidding or negotiation. In the fast track process, design and construction are combined into one overlapping process, whereby the project would be delivered in a shorter time, and thereby reducing the cost of construction loan interest payments and generating revenues from the completed project sooner. Fast track delivery, however, require a greater level of coordination among the Developer, the designers, and the contractors. It also requires timely decisions by the Developer. A major building system, such as the foundation, structural, or mechanical, can start construction when the design and specifications for just that system are completed.

At the start of the schematic phase for each ARD component, the Developer would contract with the general contractor for Construction Management ("CM") service. The CM would provide realistic market costs and building system

alternatives to Developer, the architect and its consultants, so that as the design for the project develops, the Developer would have more accurate cost data to do its financial analysis. The participation of the general contractor as a consultant would also provide a greater opportunity to evaluate alternative building systems and to modify the project cost parameters before construction is committed.

MASTER PLANNING PHASE

During the master planning phase for the ARD, its markets and target users, scope, image, quality standard, project costs parameters, traffic and pedestrian circulation, and project phasing are either defined or refined from earlier concepts. Master planning includes schematic design studies.

Project financing stategies would be explored to implement the master plan.

It is during this phase that schematic design and environmental engineering studies are commissioned for the regulatory approval processes.

A substantial budget must be allocated to contract architectural, design and engineering consultants to produce the studies for the master planning and the regulatory process. The costs to be incurred by the Developer are at

full risk.

THE REGULATORY PROCESS

The regulatory process requires the Developer to commission and manage the master plan, and design and engineering studies required for submission to the various governmental agencies having jurisdiction over the development for reviews and eventual approvals before a building permit can be granted. Chapter 4 will discusss in depth the public sector regulatory review and approval process.

This process constitutes one of the three phases in the development where the Developer is exposured to the greatest financial risks. Although the Developer has secured a legal equivalent of an "option" to develop the project, the Developer does not have all the necessary governmental permits and approvals to commence construction (i.e. the right to build). There is a multitude of review and appeal opportunities for any individual or groups to extend the review and approval process.

The Developer must fund an substantial budget, which is all at risk, to commission a multitude of design, engineering, and legal documents required for submission during the regulatory process. The Developer would recover all or a major portion of its up front risk capital only at the closing of the project financing and after obtaining the

right to build.

SCHEMATIC DESIGN PHASE

The Developer would proceed with the schematic phase for one or more of the ARD uses only after the master plan for the ARD has been approved by the city and the site properly rezoned, and the master plan for the entire ARD has cleared the environmental regulatory process.

The schematic design phase is the first and the most critical phase of the ARD project where the architect and its consultants transforms the Developer's concept and objectives into a building program and a schematic design.

It is at this phase that the design opportunity to control cost starts at full control, and diminishes to partial control at the end of schematics phase when the building program and systems are defined. The period to establish project scope, parameters, quality and cost is the schematic phase.

As the design develops, major design changes to reduce costs in materials and labor become more difficult to execute. Simultaneously, the accuracy of the cost estimating improves because estimated costs convert to actual costs as the major building systems components are being priced in the market.

Up to 75% to 80% of the building's construction costs

can be determined at the end of a properly managed schematic phase. The project team would have defined the building to a fairly high degree in the outline specifications: the foundation, structure, exterior skin, interior work, heating, ventilation and air conditioning, electrical, plumbing, and vertical transportation. At this point, the schematic documents submitted to the Developer by the project team would grant it a reliable data on the scope, quality and cost of the development, which would then be presented to a prospective construction lender, the long term financing lender, and investors.

If the estimates exceed the Developer's owner's budget, the Developer still has sufficient opportunity to make certain changes in the quality or scope without imparing the schedule. Such changes would be in the nature of: less expensive facade, elimination of the basement level, decreasing the height of the building, selecting an alternate structural system, mechanical system, or elevator system are among the possibilities.

It would be cost effective at this design phase for the Developer to commission a value engineering analysis and a life cycle costing of the building's system from the project team in order to determine the best alternative. Value engineering analysis is an effective way to control building cost during the design phase. Value engineering analysis is a systematic approach to identifying high or unnecessary cost areas and substituting alternative design solutions to

yield reduced life cycle costs without reducing functional performance or sacrificing overall performance. Areas typically considered for value analysis include: site layout, building space configuration and capacity, types of mechanical and electrical systems, contols, operation costs, and building maintenence. Since each system contributes to the overall project cost, it can be analyzed in combination with other systems to produce a more optimal building configuration in terms of function. The analysis concentrates on solutions, not only in the reduction of initial costs of the building systems, but also in costs to operate, maintain, and replace systems over the building's expect life cycle.

No project team member should make major project decisions after the schematic design phase without having participated fully in producing the building program, conceptual design, cost and financial projections and project schedule contained in the schematic report.

PROJECT FINANCING PHASE

During the master planning and schematic phases, the Developer would begin to solicit interest from financial instititutions to fund the construction and long term financing for the development.

At the end of a schematic phase, the Developer would

have more accurate data regarding the market potential, the development and construction cost, revenue projections, and project delivery schedule to present to the prospective financing sources.

Critical to the preservation of the Developer's economic interest in the development is it's method on how to finance the project. A highly leveraged debt financed project would enhance the returns to the Developer, but it is also vulnerable to negative leverage should there be a shortfall in the revenue projections, may lead to default of the project. A prudent method to finance the project is to form a financial partnership with a major institution investor, who has the long term resources and commitments to fund the capitals required by the development. Although the Developer grants 50% or more ownership interest in the project to the investors, it receives in return equity capital it needs to preserves its long term benefits in the project.

To secure construction financing for the project, the construction would typically require a pre-leasing commitment for 25% or 30% of the tenant space, a guarantee price contract with a qualified general contractor, a completion guarantee from the Developer, a commitment by the long term financing source to repay the construction loan or a guarantee of repayment by the Developer.

The financing strategy for the South Station ARD and each of its components will be discussed in greater detail

in Chapter 5.

DESIGN DEVELOPMEMT AND CONSTRUCTION DOCUMENT PHASE

After the Developer approves the schematic design documents, the design team proceeds into the design development phase. In the design development phase, the project team studies and refines the design with specifications for major building materials and systems.

At the end of this phase, proposals would be solicited from several general contractors, each prequalified as to its experience and capacity to deliver the project on time and on budget. The CM who had been serving as a consultant to the project would also be invited to submit a proposal. Each contractor would supply a detailed cost breakdown based on the schematic design as part of its proposal, and the cost would constitute the intitial Guarantee Maximum Price ("GMP") if that proposal is accepted. This cost information would verify the accuracy of the cost estimate from the schematic phase.

The selected general contractor selected would function as an integral member of the project team. Value engineering and life cycle costing would be refined during with the participation of the general contractor. It would advise and coordinate with the architect and its consultants as it is pricing and procuring materials and labor in the

market place. With the general contractor as part of the team, the accuracy of the cost estimates could be enhanced to 90% by the close of the design development phase.

The objective of the project team is in to deliver the project as defined by the design documents within the initial GMP. When this phase is completed, the team submits a design development report to the Developer listing all items in the schematic report in greater detail, together with the GMP price.

CONSTRUCTION PHASE

Once the project reaches the construction document phase, the design opportunity to meet cost decreases to where the project team has only a few means to prevent cost overruns. During this phase, buidling materials and products are specified in the exact forms they will be used in the building. Major building systems must avoid late changes. The team may concentrate on selecting alternate exterior materials, reducing the quality of the interior finishes, or simplifying a landscape design.

Subsequent design changes to original plans must be assessed and incorporated into the cost model to provide an accurate picture of the cost at points in time and the probable final cost. A change order system is the administrative focal point of this proces and would be maintained under the direction of the development and

project managers, and the project accountant.

Construction can commence during design development phase, after the project has secured project financing. With the construction document achieving 100% completion as as the general contractor finalizes its procurement of material and labor from subcontractors. The final construction cost and contract would be analyzed against the GMP.

If the the final construction procument costs are less than the initial GMP, the general contractor and the Developer would share in the saving as agreed to. A shared saving provision provides financial incentive to the general contractor to control the procurement of its purchases of material and labor.

If the final costs are greater than the initial GMP, due to a necessary change in the scope of the project or its quality as directed by the Developer or unforseen conditions, then a final GMP would be negotiated with the general contractor reflecting the changes.

The Developer is at enormous economic risks during the construction phase. The project's construction lender would typically require from the Developer guarantees for the completion of the project and the repayment of the construction loan. To partially offset its potential risks, the Developer could require bonds from the general contractor guaranteeing performance of completion and

payment of material and labor incurred in the construction of the project, and assign these bonds to the construction lender.

MARKETING AND MARKET CONDITIONS

The next and the last major risk exposure for the Developer is when the project is delivered to the market. A development is typically conceived and planned several years in advance of expected market demand and supply. If the market conditions and demand for the development is below forcasted, the Developer must have or have access to substantial capital to fund the operating deficits until the project achieved certain occupancy performance and thereby is able to trigger the funding of the long term financing.

If long term financing is delayed because the project is delayed in achieving stabilized operation, the Developer must then negotiate an extension to the construction loan. An extension will require additional penalty fees and costs to the Developer.

MANAGEMENT OPTIMIZATION

The function of the development and project managers is to optimize total project cost, schedule, and building performance within a set of project objectives set by the Developer. The success of this function requires well

conceived planning objectives, detailed pre-planning, a well defined implementation strategy, a framework for cost effective decision making, and able project management personnel and cost control systems.

SOUTH STATION AIR RIGHTS DEVELOPMENT ("ARD") SCHEDULE

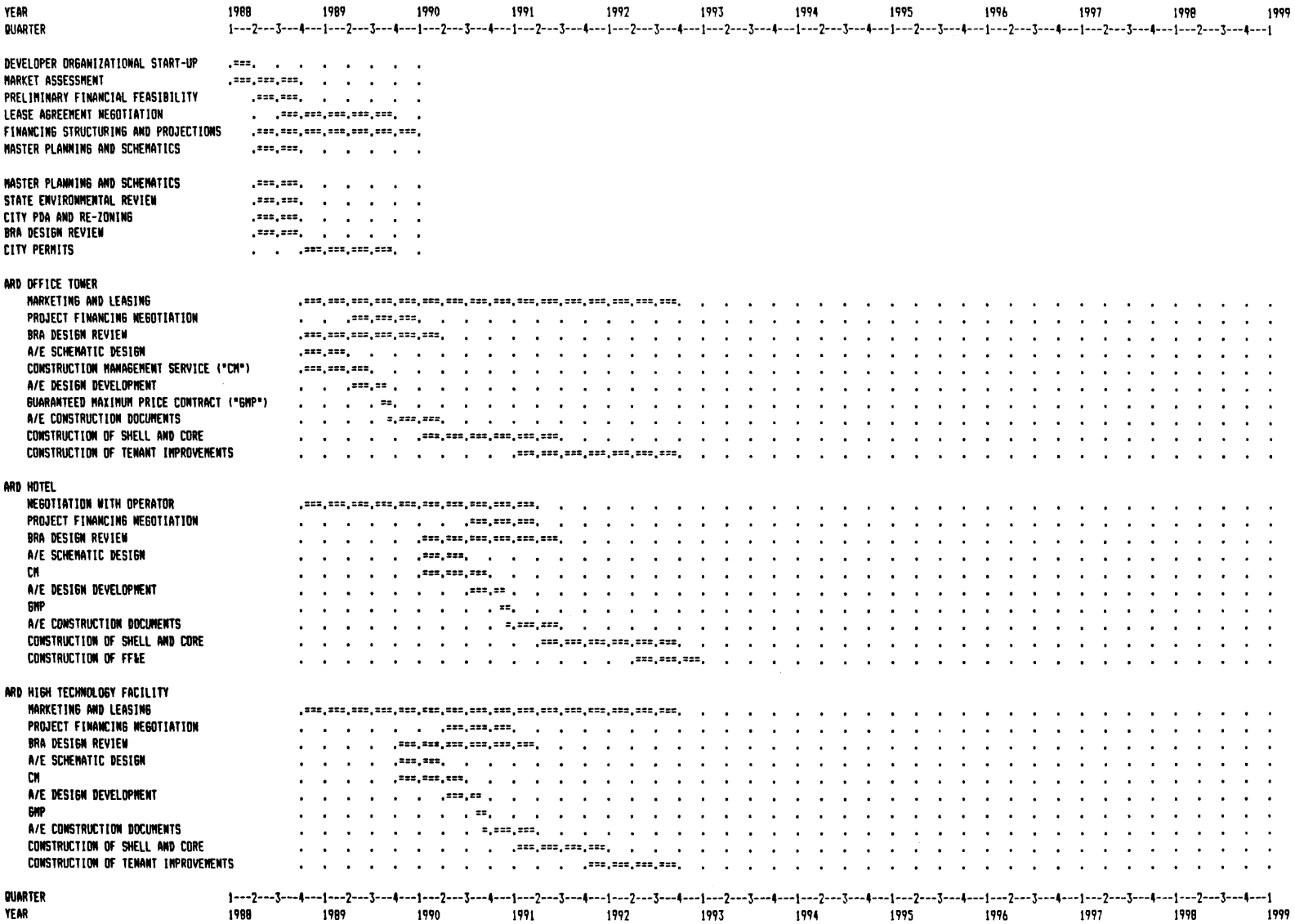


Exhibit 2.1

CHAPTER 3

MARKET ASSESSMENT AND STRATEGIES

MARKET ASSESSMENT PHASE

One of the first tasks the Developer for the South Station ARD must undertake is to study and assess the current and anticipated markets for each of the ARD uses. The Developer begins with a macro perspective, and then focuses on the particulars of each of the real estate markets.

CITY'S HISTORY AND QUALITY OF LIFE

Founded in 1630 and incorporated as a city in 1822, the city of Boston has become a major international center for business, finance, high technology, medicine, and higher education. Boston is the economic and transportation center of New England. The city's economy, the center of the first industrial revolution, has evolved from manufacturing and trade to a broad and diversed service base. After a long decline, the city resident population increased from 560,840 in 1979 to 570,719 in mid-1984 and forcasted to 600,000 by 1990; the office employment is forcasted to increase from 147,238 in 1979 to approximately 212,000 in 1990. (4)

Boston is endowed with a rich inventory of colleges,

academies, and conservatories. Many of its 65 colleges and universities are among the most well known in the world. With trade and vocational school included, the metropolitan area has more than 100 institutions of higher learning.

The reason most frequently cited by new companies for their establishment in Massachusetts is the direct access to faculty and graduates of such institutions such as Massachusetts Institute of Technology and Harvard University.

Boston's reputation in medical skills, research and facilities is well known nationally and internationally. Included in the numerous hospitals located in Boston's metropolitan region are the internationally known teaching hospitals of Massachusetts General, Beth Israel, and Children's Hospital, as well as the medical and dental schools at Harvard, Tuft and Boston Universities and New England Medical Center.

Recognized as a center for culture, Boston offers amenities such as the Museum of Fine Arts, the Museum of Science, the Boston Symphony Orchestra, and the Boston Pops. Recreational boating in the heart of the city, as well as its proximity to the Berkshire Mountains, skiing to the north, and the ocean shores of Cape Cod, Nantucket, and Martha's Vineyard are some of the popular recreational amenities readily accessible to the population.

Boston's rich historical, educational, cultural, and

recreational amenities reflects its quality of life and desirability as a place to work and live.

TRANSPORTATION AND ACCESS

Boston is readily accessible from most major New England and mid-Atlantic cities. The city's transportation system is well developed for air, land, and sea travel. Boston's Logan International Airport is only ten minutes by car or subway from downtown Boston. Eight major highways feed into the downtown area, including the Massachusetts Turnpike, Interstate 95, and Interstate 93. Two circumferential highways, Route 128 and Route 495, encircle the city at distances of approximately 12 and 25 miles, respctively. The MBTA, the area's mass transit systems, links 3 million people with the city.

By the end of 1985, it is forcasted that close to 300,000 commuters will enter the central business districts each day. (5)

EMPLOYMENT

Metropolitan Boston has run counter to national trends with unemployment at 4.3% verus a national unemployment rate of 7.5% as of year end 1984. This is due to the strong high technology and financial service oriented economic base within the area. Boston has the second highest ratio of

jobs to population of any of the nation's thirty largest cities, surpassed only by Washington D.C.. This high ratio of jobs to population indicates that Boston provides a direct source of employment and income for an area that extends well beyond the boundaries of the city. The proportion of professional, managerial, and technical personnel has risen sharply in the last decade and now represents 30% of Boston's total labor force. (6)

ECONOMIC GROWTH

Computer and data processing services, software development, finance, financial management, legal, medicine, education, and professional services in a variety of technical fields are now the important elements in the rapidly expanding services sector of the Boston's economy. Boston's economic future shows great potential as its economic structure becomes firmly established in modern export and services oriented activities. Unprecedented levels of economic development and construction activities currently underway in Boston should result in the creation of 50,000 new jobs over the next five years.

The BRA, the city's planning agency, projected a growth of 106,748 net new jobs in what it defined as the communication-information-knowledge ("CIK") industries from 1979 to 1990, and a growth of 212,000 net new jobs in all

industries in the city of Boston. (7)

In another study, the National Planning Association estimated that a total of 507,800 net new jobs for all industries will be created within the entire Boston metropolitan area from the 1980's through to the year 2000. (8)

There is a significant number of the high growth technology companies and financial management companies which have their headquarters in the greater Boston area. A selective list of major corporations headquartered and major financial managers that can be expected to contibute to the city's and region's economic growth are contained in Exhibits 3.1 and 3.2, respectively.

REAL ESTATE ENVIRONMENT

A considerable amount of major new development is taking place in Boston, including: the mixed use project at Copley Place, the mixed use project at Lafayette Place; a major new office tower at 53 State Street, a major new office tower at One Financial Center at Dewey Square next to the Boston Federal Reserve Bank. The $180 million mixed use project at Rowes Wharf, and the first phase of the 1.8 million square feet International Place office center are under construction. In addition, the city has successfully recycled much of its urban building stock on a large scale. Some recent examples include: the highly successful

commercial and retail development at Fanueil Hall-Quincy Market; the 105 acre project at Charleston Navy Yard, consisting of one million square feet of office and light manufacturing space, 1200 residential units, a major waterfront park and a marina.

Exhibit 3.3 identifies the South Station ARD location in relationship to the major office and hotel properties in the central and Back Bay districts, parking facilities, rapid transit stations, and major thoroughfares.

THE OFFICE MARKET

The BRA study on the CIK industries forcasted a growth of 39,475 net new jobs in the CIK industries that would require a direct need of 9.5 million SF of office space in the 1979-90 period. The study also forcasted an indirect demand for an additional 20,950 new net jobs, and a corresponding need for an additional 5 million SF of lower quality office space. (7)

In 1984, the BRA surveyed the downtown office market in nine major cities, and found that Boston had the lowest vacancy rate of 3.9% as of mid-1984, the lowest unemployment rate at 4.0%, the highest percentage of employment in the service industry at 53.9%, and the highest percentage of services exported at 40.7%. (9) Exhibit 3.4 summarizes the results from the survey. Exhibit 3.5 illustrates the

vacancy rates in the nine major metropolitan office markets.

There are two major offfice market in the City of Boston, the Downtown/Financial District and the Back Bay. The Downtown/Financial market is predominantly occupied by banking, finance, accounting and legal services; while the Back Bay is insurance companies, advertising and publishing. There is relatively little relocation movement historically of tenants between this two markets. (10)

As of April, 1985, the Downtown/Financial District is comprised of approximately 19.2 million SF of first class office space. Vacancies total 2 million SF, or 10.2%. The vacancy rate increased from 5% in 1984 due to the delivery into the market of approximately 3.3 million SF of newly completed space. Despite the increase in vacancy rate, several major office building totaling over one million SF started construction in 1985 due to the demand for new office space, including Rowes Wharf and International Place. The new spaces are asking record rents ranging from $30 to $45 per rentable SF. Over 3 million SF of new office space are undergoing regulatory review and are expected to be delivered to the market in 1986/87. (10)

Exhibit 3.6 identifies the nine office developments that are being reviewed by the BRA, their expected construction and occupancy dates.

Historical absorption over the past 5 years has averaged over 1 million SF per year, and over 2 million SF last year. (10) Many office leasing professionals expects a

greater absorption from 1985 to 1988 because of the continued growth of the local economy and the pent up demand resulting from the lack of significant quantity of quality office space during the past years. Employment growth generated by internal expansion will result in a compounding growth factor in the future years.

In a survey of the Boston office market, however, a major Boston realtor predicted a low vacancy rate of 9.3% in 1987, and increasing to 14.4% in 1990. Figure 3.7 contains a chart illustrating the projected office supply and vacancy trend.

The BRA, through its review process, however, regulates the delivery of office space to the market. Exhibit 3.8 compares the schedule for office developments approved by the BRA with the schedule proposed by the developers. BRA would approved 9 million additional SF of office space to be delivered by 1989, whereas the developers proposed the new inventories by 1987. As a result of the BRA approved schedule, Exhibit 3.9 compares the vacancy rates of 4.2% at the end of 1989 with the 14.4 % if the new office supply was not regulated by the BRA. The South Station ARD office tower would be delivered to the market in 1992, when a surplus of new office space is not projected.

The combined factors of a growing service sector economy and a planning control on the supply of office space by the city government are two factors that the Boston

office market would not expected to be over supplied with new inventories.

MARKET STRATEGY FOR THE ARD OFFICE TOWER

Real estate leasing professionals and the BRA expect that the major legal, accounting and financial services firms will continue the current healthy rate of growth and the resultant demand for office space. (11) That would be the general market for the office tower at the South Station ARD.

Although the South Station is located at the fringe of the financial district, over 3 million SF of office space have been developed with 2 blocks of the South Station ARD within the last 10 years, with 1 million delivered in 1985 across Atlantic Avenue at One Financial Center at Dewey Square. Exhibit 3.10 illustrates the major office developments completed within the vicinity of the ARD. Exhibit 3.11 is a photocopy of an aerial photograph showing the location of the ARD to the office developments contained in Exhibit 3.10.

A 400,000 SF highly visible office tower, located in the core of the financial district, could achieve 95% occupancy in 10 to 12 months in a growing economy and 5% vacancy office market.

The ARD office tower is set back from Atlantic Avenue, and thereby lacks street presence. To position the

office project in the market and to compete for tenants, the office project would be developed and marketed with three distinctive amenities. On site pay parking for 400 cars, or 1 space per 1,000 SF tenant space, would be provided in the parking garage. The nearby International Place will provide 800 on site parking for 1.8 million SF, or 1 space per 2,000 SF of tenant space. To capture a segment of the market, the ARD office tower might target to the smaller office users, starting from 5,000 SF. Third, the office building would be designed and marketed as an intelligent , also called a "smart building".

In an intelligent building, communication and data systems are incorporated within the building. A significant feature of an intelligent building is that tenants can shared in highly sophisticated communication and data processing systems that tenants can not afford on its own. (12) (13) (14) (15) (16) (17)

Given a continued growing economy, a 5% vacancy rate in the office marketplace, and the foregoing amenities, the ARD office tower could realistically achieve full occupancy within 21 months (assuming a linear function) after the building is delivered to the market in 1991/2.

THE HOTEL MARKET

In the opinion of several real estate and hotel

professionals, the supply of hotel rooms is currently exceeding demands, except at the waterfront locations.

In a 1979 study, the BRA report a total inventory of 6,925 hotel rooms in the city of Boston, and forcasted a demand for 10,087 new hotel rooms and a replacement of 1,125 hotel rooms by 1990. (18)

As of 1985, there are 8,935 rooms in the city of Boston, in 18 significant lodging facilities, including 3 new hotels.

The supply of lodging facilities in the city can be divided into 3 distinct locations: Financial/Government Center, Back Bay, and Midtown districts.

With all the 8,935 hotel rooms in operation, the Back Bay will have 57% of the hotel rooms in the city. The Financial/Government district will have only 25%, despite the fact that the Downtown, Financial and Government districts will have over three times the amount of office space as the Back Bay. Although the supply of office space does not necessarily coorelate directly to the need for hotel rooms, it is a major factor in assessing hotel demand. The other demands are from conventions and seasonal tourist.

There is one significant convention facility in the city, the John B. Hynes Veterans Auditorium, located in the Back Bay district. The auditorium is expending its convention and exhibition space from 326,000 SF to 700,000 SF, to be completed in 1986/87. Within the immediate

vicinity of the auditorium are 4,000 hotel room in 5 hotels to service the convention businesses.

Lodging facilities in the city of Boston achieved a combined market occupancy nf approximately 70% in 1984, with an average room rate of $84 per night. Within the three geographic markets, the Financial/Government Center district consistently achieves levels of occupancy and average room rates significantly above the Back Bay and Midtown districts. It is estimated that the Bostonian Hotel and the Marriott Long Wharf achieved the highest occupancy levels of nearly 90% in 1984. (19) A summary of occupancy levels and average room rates for the geographic markets in 1984 is as follows:

	Market Occupancy	Average Room Rates
Financial/Government Center	77-81%	$ 92-96
Back Bay	65-69%	$ 83-87
Midtown	59-63%	$ 65-69
Total Boston Market	67-71%	$ 82-86

THE MARKET STRATEGY FOR THE ARD HOTEL

The previous 1980 Study envisioned a 600 room convention type hotel, together with a health club and a roof garden above the parking structure, at the South Station ARD. (20) Based on interviews with several real estate and hotel professionals, a smaller scale hotel of 350

rooms targeted to business uses would have a greater market potental than one targeted to convention businesses.

The ARD hotel would be developed as what the hotel industry terms "mid priced luxury" hotel. The hotel would offer limited meeting facilities of high quality. The meeting rooms would be a series of boardrooms for conferences. (21) (22)

The hotel would also offer teleconferencing capabilities, by utilizing the communication sytems from the office tower. A recent article reports that teleconferencing has not so far curtailed the travel of business meeting attendees. (23)

As an additional marketing feature, the hotel would also features recreational amenities such as a roof garden, a swimming pool, a tennis court and a sauna to the hotel guests and the public. These facilities would be built above the parking structure.

The 1980 Study projected that 45.1% of all hotel roomnights in Boston were used by business and commercial travelers, 34.6% by groups and convention travelers, and 20.3% by tourists and others. (20) A 1983 article reported that 41% of all hotel uses were business travellers, 26% were on vacation, 21% were attending conferences, 4% on government business, and 8 % for miscellaneous reasons. (21) During the weekdays, the primarly hotel users would be business related. Although not in the immediate vicinity of

the Hynes Auditorium, some overflow from its convention activities can be also be expected. During the summer months, the hotel could also target the tourist travelers, especially the weekends.

The average asking room rate, if the hotel was delivered in 1985 with the foregoing described amenities, could be as high as $100 per night. A 70% occupancy level can be realistically achieved 3 to 5 years after the hotel opening.

THE HIGH TECHNOLOGY MARKET

In the current metropolitan market, the demand for high technology facilities, also popularly known as R&D (research and development) or flexible spaces, are centered along the Route 128 and Route 495 circumfrenetial highways 15 and 25 miles, respectively, outside of Boston. High technology space, with a ratio of 4 free parking space per 1,000 of tenant space, are asking $9.50 to $10.50 per rentable SF on a net net basis, i.e. the tenants paid for operating expenses and real estate taxes.

The 1980 Study envisioned a facility at the South Station ARD for the region's high technology industries. Its market demand, however, is an unknown factor and difficult to assess due to few comparables. There are two high technology presences near the South Station site, a 250,000 SF Teradyne Corporation facility, which is used for

administrative, engineering and testing, and light assembly functions, and a 100,000 SF Wang Laboratories facility. No occupancy cost figures are available for both facilities. Located across the Mystic River in the Charlestown section of Boston is the former Schrafft Candy Factory. The 575,000 SF multi-story factory is undergoing renovation into flexible high technology and economical office, with asking rents from $6.50 to $14.50 per rentable SF.

The West Cumming Park, in Worburn, is an example of a sucessful multilevel high technology center in a suburban setting. The recent building contains 6 floors, with 30,000 SF per floor. Ther are 4 freight elevators, separate from the pedestrian elevators, and ample truck waiting and loading facilities. Free parking is provided at a ratio of 3.5 spaces per 1,000 SF of tenant space. The asking rent is $15.00 per SF.

THE MARKET STRATEGY FOR THE ARD HIGH TECHNOLOGY FACILITY

The 1980 Study envisioned a two story 250,000 SF high technology facility at the ARD. The large floor area is an outdated floor size more suitable for light manaufacturing uses than R&D uses, which are typically housed in 30,000 SF floor sizes. For the ARD project, a 6 story 250,000 SF facility, with 41,500 SF per floor, would be a functional floor size to accomodate a multitude of potential uses such

as: R&D, large engineering service, data processing, and/or back office operations.

To attract the tenants to the ARD, a competitive asking rent of $12 per SF on a net nat basis, based on 1985 dollars, is a one prerequiste. Others factors include parking for at a minimum of 1 space per 1,000 SF of tenant space, and controlled truck access and loading facilities. The facility would also offer the shared tenant telecommunication amenities from the office tower systems.

Given the high construction cost for a facility located on air rights and in an urban setting, the facility might not be financially feasible at a rental of $12 in 1985. Therefore, an alternate program for a moderate quality office building, with the flexibility for both office and high technology uses, would be an alternate use. The potential tenants might be medical research activities associated with the area's hospital, engineering service opertions, data processing, and back office opertions.

THE ARD AS A MIXED USE AND TELECOMMUNICATION CENTER

Other than the office tower component, the hotel and the high technology uses might have marginal market potentials in the current and the immediate future.

Two development strategies, however, can greatly transform and improve the market presence and desirability of the South Station ARD site and project: a well conceived

mixed use plan and the incorporation of the intelligent building systems within each of the use components.

A well executed mixed use development would result in an synergy to the entire project, increasing its market image and desirability greater than the sum of its parts. The revenue potential for all the three uses, especially the hotel and the high technology components, would be greatly enhanced.

Developing the ARD as an intelligent center would differentiate the center in the market place, offering up to date sophisticated telecommunication systems to tenants in the office tower, to business travelers and conferences at the hotel, research and start-up companies and communication operations in the high technology facility.

In an intelligent building, the tenants' electronic workstations can be integrated with the building's sophisticated digital communication or PBX systems, allowing communication within the building and with the local, national and international networks. In parallel to the communication systems, the work stations can also be integrated into high performance base band and broad base band area network systems, allowing high speed data and video communications. A satellite earth station would permits access directly to long distance communication systems at a reduced costs.

To implement the intellegent system within the

building, the Developer would award a contract with an established company such as SBS Real Estate Coomunication Corporation ("RealCom", owned by Aetna Life & Casulty, Comsat, and IBM), or MCC Powers (a unit of Mark Control Syatem), which in turn would finance, install, market to the tenants, and operate the system. The contract would provide the building owner a participation in the profits from the operation.

A schematic of a smart building is illustated in Exhibit 3.12.

Exhibit 3.1

CORPORATIONS HEADQUATERED IN GREATER BOSTON

A SELECTIVE LIST

	1983 Fortune 500 Ranking
Apollo Computer, Inc.	
Bank of Boston	
Bank of New England Corporation	
Cabot Corporation	224
Cullinet Corporation	
Data General Coporation	
Dennison Manufacturing	399
Digital Equipment Corporation	84
Foxoboro Company	442
The Gillette Comapny	169
John Hancock Mutual Life Insurance	
Liberty Mutual Insurance Comapny	
Lotus Corporation	
M/A-Com	395
New England Mutual Life Insurance	
New England Telephone and Telegraph Company	
Polariod Corporation	256
Prime Computer, Inc.	451
Raytheon	59
Shawmut Bank	
State Street Bank	
Wang Laboratories	227

Exhibit 3.2

FINANCIAL MANAGERS HEADQUATERED IN GREATER BOSTON

A SELECTIVE LIST

Boston Company

Fidelity Investments

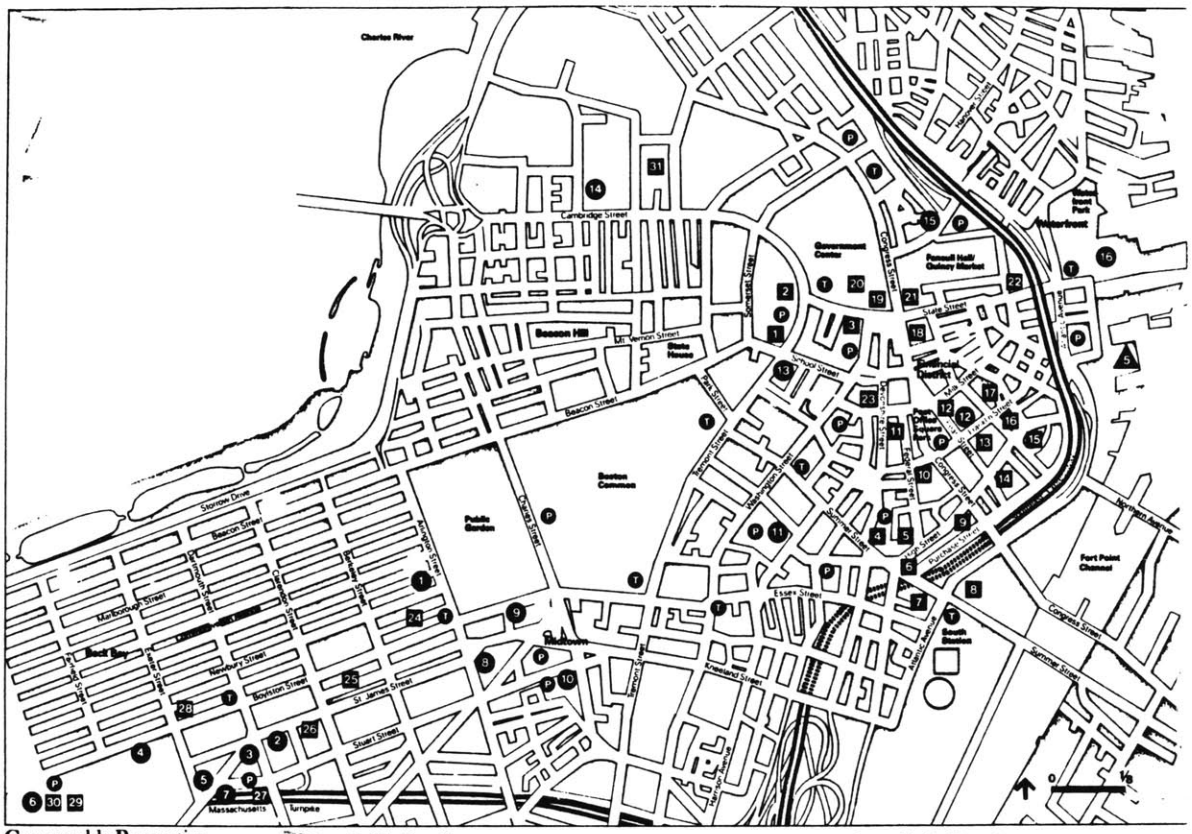
Putnam Management Company, Inc.

State Street Research and Management

Tucker Anthony & R L Day, Inc.

Winthrop Financial

Exhibit 3.3



Comparable Properties

Comparable Office Properties

1. One Beacon Street
2. Center Plaza
3. One Boston Place
4. 100 Summer Street
5. 155 Federal Street
6. 175 Federal Street
7. Dewey Square Tower
8. Federal Reserve Plaza
9. 99 High Street
10. 100 Federal Street
11. One Federal Street
12. One Post Office Square
13. 225 Franklin Street
14. 125 High Street
15. International Place (Fort Hill Square)
16. 265 Franklin Street
17. 260 Franklin Street
18. 53 State Street
19. 28 State Street
20. One Washington Mall
21. 60 State Street
22. 200 State Street (Marketplace Center)
23. 50 Milk Street
24. 399 Boylston Street
25. New England Mutual Life (St. James Garage)
26. 200 Clarendon Street (Hancock)
27. Copley Place
28. One Exeter Place
29. 101 Huntington Avenue
30. 800 Boylston Street. (Prudential)
31. 50 Staniford Street

Comparable Hotel Properties

1. The Ritz-Carlton
2. Copley Plaza
3. Westin Copley Place
4. Lenox Hotel
5. Copley Square Hotel
6. Sheraton Boston
7. Marriott Copley Place
8. Boston Park Plaza
9. Four Seasons
10. Howard Johnson's '57
11. Intercontinental at Lafayette Place
12. Meridien
13. Parker House
14. Holiday Inn Government Center
15. Bostonian
16. Marriott Long Wharf

Exhibit 3.4

THE DOWNTOWN OFFICE MARKET
IN NINE MAJOR CITIES

	Vacancy[1] Rate Mid-1984 (Percent)	Unemployment[2] Rate Mid-1984 (Percent)	Service[3] Industry (Percent of Total)	Services[4] Exported (Percent of Total)
BOSTON	3.9	4.0	53.9	40.7
New York	6.8	9.0	49.5	28.2
San Francisco	7.1	5.9	51.5	26.4
Chicago	10.3	8.4	35.3	3.3
Atlanta	14.3	5.1	40.3	13.3
Los Angeles	15.0	8.4	36.2	15.6
New Orleans	20.8	8.5	44.7	24.1
Denver	23.3	4.2	42.3	15.3
Houston	26.3	6.3	34.3	2.7
NATIONAL AVERAGE	10.3	7.3	31.0	NA

1. Only Class A office buildings in Central Business Districts.

   Source: Compiled by BRA Research Department from the Office Newtwork, Inc., "National Office Market Report", Fall/Winter 1984.

2. San Francisco metropolitan area includes Oakland.

   Source: U.S. Department of Labor, Bureau of Labor Statistics. Monthly rates are not seasonally adjusted.

3. Employment in services as a percent of total employment.

   Private services include three categories: Transportation, communications and public utilities; Finance, insurance, and real estate; and Business, personal, and professional services.

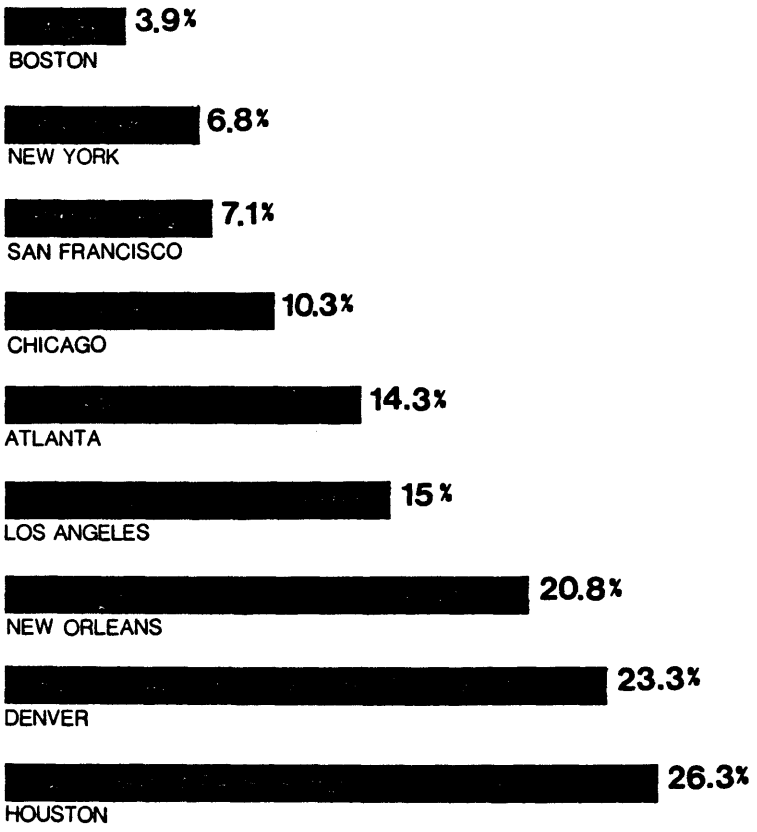
   Source: U.S. Department of Commerce, Bureau of Economic Analysis.

4. Percent of total services which are exported.

   Source: U.S. Department of Commerce, Bureau of Economic Analysis. Location Quotient Analysis.

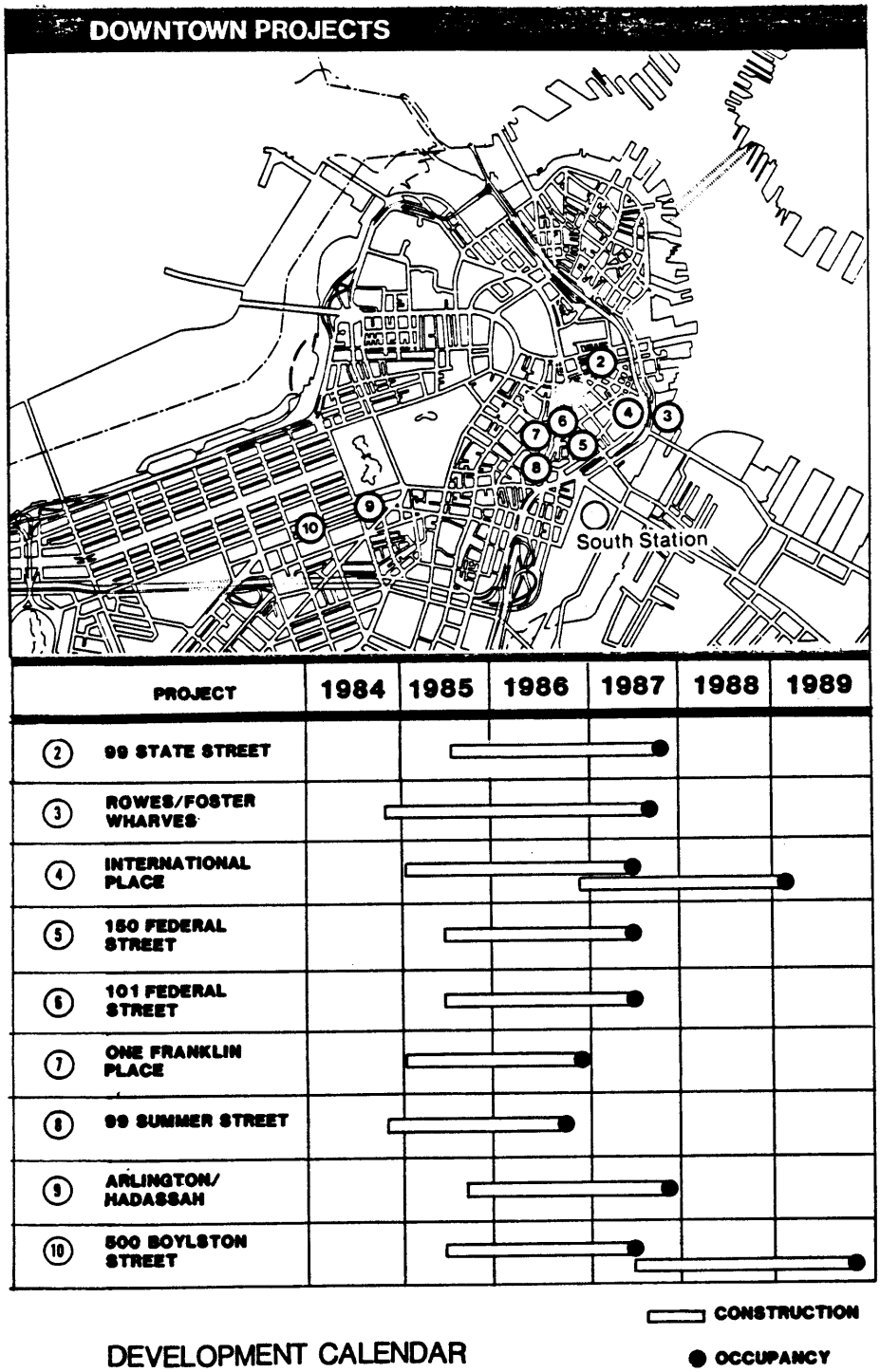
Exhibit 3.5

NINE MAJOR METROPOLITAN OFFICE MARKETS
Mid 1984 Vacancy Rates %



SOURCE: BRA Research

Exhibit 3.6



DEVELOPMENT CALENDAR

Exhibit 3.7

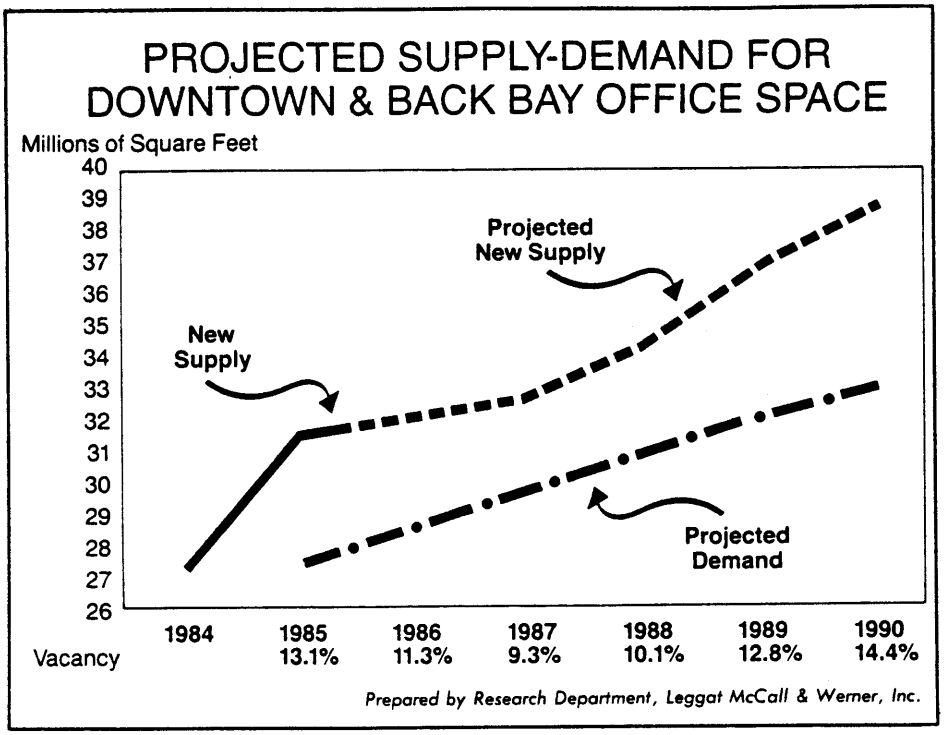

PROJECTED SUPPLY-DEMAND FOR
DOWNTOWN & BACK BAY OFFICE SPACE
Millions of Square Feet
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
Projected
New Supply
New
Supply
Projected
Demand
1984
1985
1986
1987
1988
1989
1990
Vacancy
13.1%
11.3%
9.3%
10.1%
12.8%
14.4%
Prepared by Research Department, Leggat McCall & Werner, Inc.

Exhibit 3.8

BOSTON'S OFFICE MARKET 1984-1989

Class A Office Space

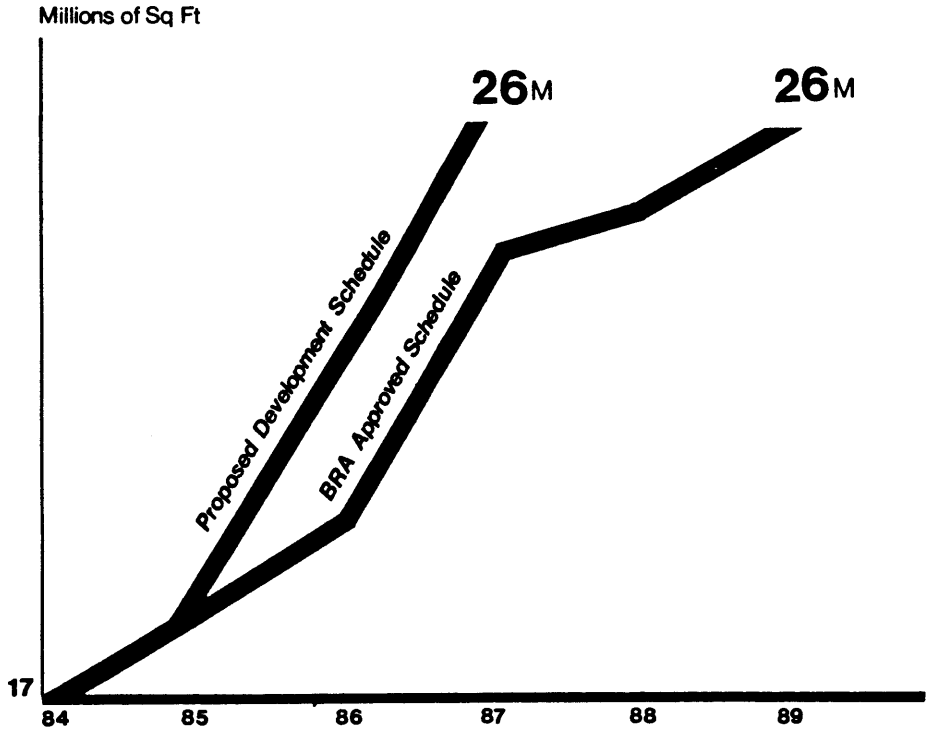


Exhibit 3.9

BOSTON'S OFFICE MARKET 1984-1989

VACANCY RATE (Percent)

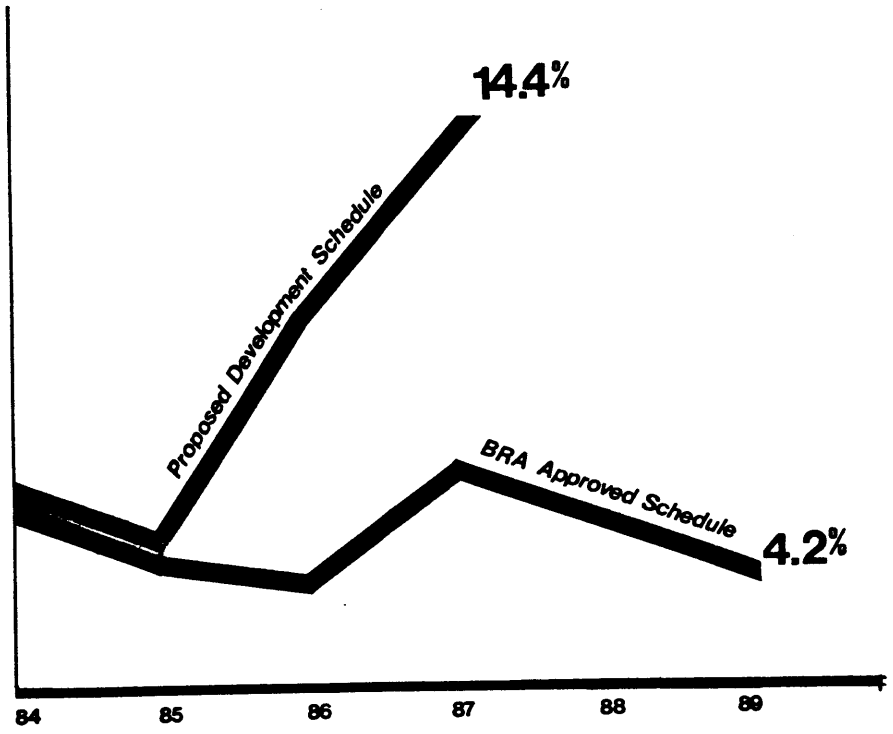
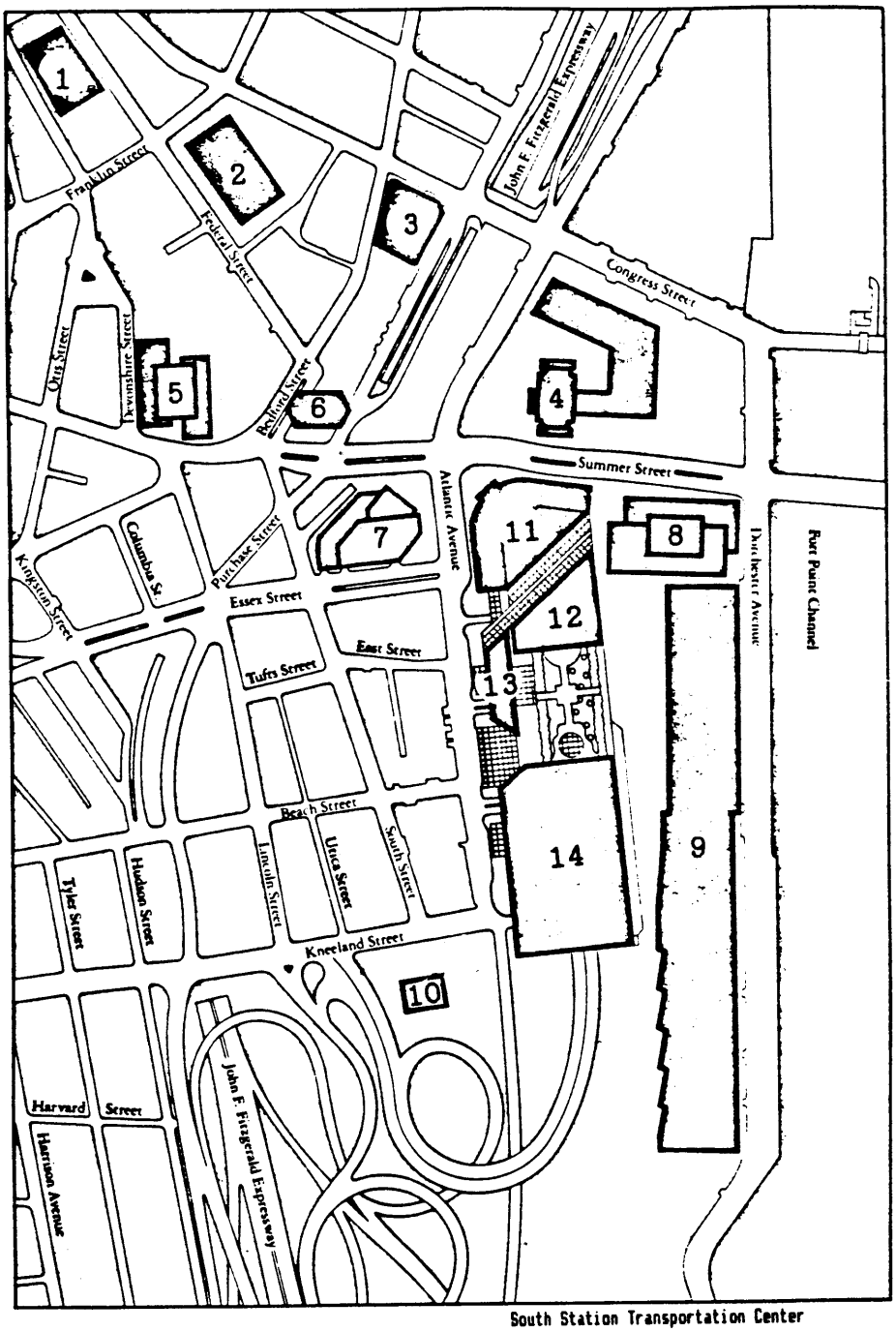


Exhibit 3.10



Area Map

South Station Transportation Center and Air Rights Development

1 Shawmut Bank Building
2 First National Bank Building
3 Keystone Building
4 Federal Reserve Bank Building
5 Blue Cross Blue Shield Building
6 Fiduciary Trust Building
7 One Financial Center
Dewey Square Tower
8 Stone & Webster Building
9 USPO South Postal Annex
10 Wang Laboratories Building
11 Restored Head House
12 Proposed Office Tower
13 Proposed Hotel
14 Proposed High Technology Facility
Facility

Exhibit 3.11

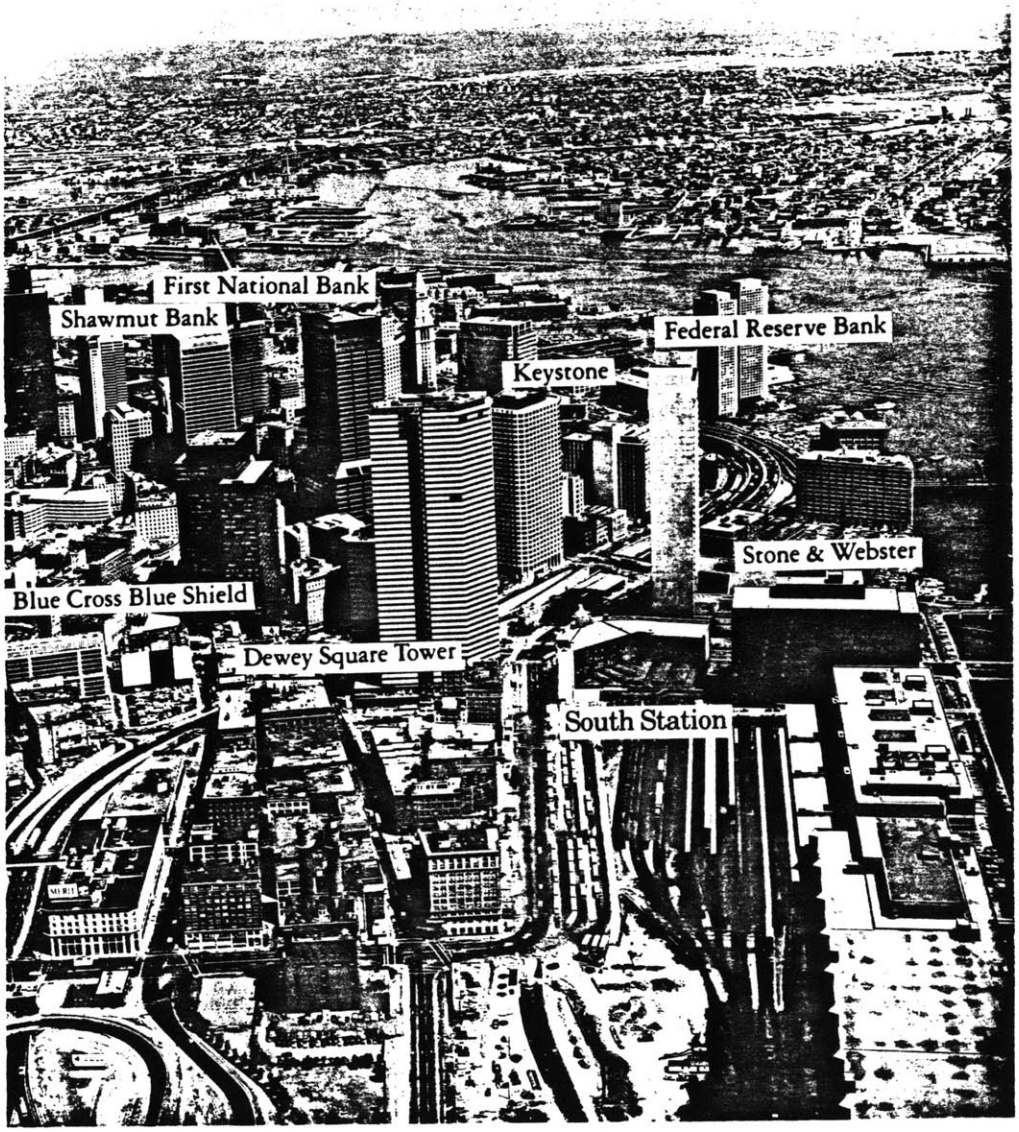
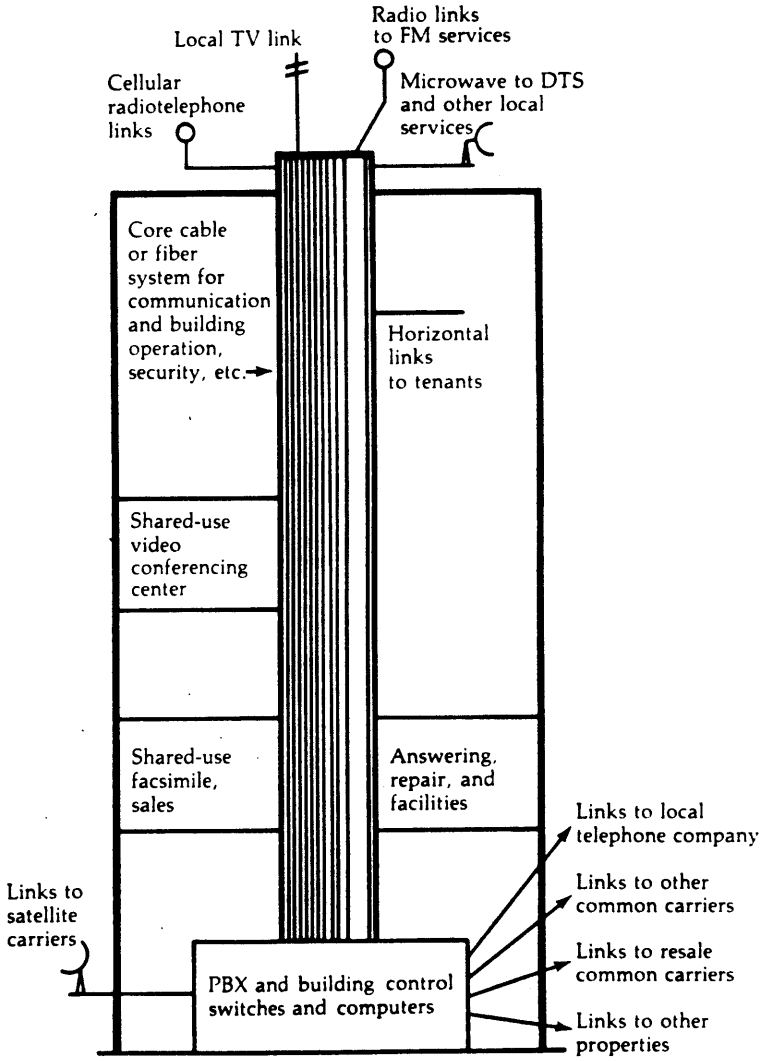

First National Bank
Shawmut Bank
Federal Reserve Bank
Keystone
Stone & Webster
Blue Cross Blue Shield
Dewey Square Tower
South Station

Exhibit 3.12

Schematic of a smart shared building



CHAPTER 4

PROJECT COSTS AND PRO-FORMAS

PROJECT COSTS AND PRO-FORMAS

This chapter presents the costs of construction and indirect cost for each of the three components, together with the the pro-forma of revenues and expenses at the stabilized operation.

This thesis tests the initial financial feasibility of each component against the 1985 market. 1983 constuction and development costs were derived from known historical data. The components were assumed to be delivered to market in 1985, using 1985 revenue potentials and operating expenses.

Financial feasibility was tested again the second time, but with construction costs escalated to 1990 dollars, and revenue potentials and operating expenses escalated to 1992 dollars. 1992 is the year that one or more of the ARD uses can be expected to be delivered to the market. An escalation of 6% per annum was used for the costruction cost, the revenue potential and the operating expenses. Escalating 5 to 7 years into the future is a risky assumption on the part of the Developer, since the degree of accuracy decreases with each year foracasted into the future.

To determine the air rights value, a cash on cash rate of return was assumed for each of the uses. The cash on cash rate was determined by considering the relative risk of the use component to another location. A .50% premium was added to each cash on cash rate used to compensate for the loss of the residual benefits from sale or refinancing at the end of the air rights lease when the improvements revered back to the lessor.

To test the financial feasibility of an ARD project, the required cash on cash return rate must be equaled or exceeded by the pro-forma. Each of the uses at the ARD is discussed in the following sections.

THE OFFICE COMPONENT

The development program for the office tower at South Station ARD is a 400,000 SF first class office building, equipped with shared telecommunication systems. 400 reserved parking spaces are assumed to be available for rent in the public gararge to the office tenants and users.

A 1983 construction cost of $90.63 per SF, and a total developement cost of $152.66 per SF was used for the office component. The construction cost was escalated to $128.69 per SF in 1990, and the total development cost to $218.28 per SF. Exhibit 4.1 contains the breakdown of the 1983 and the escalated 1990 costs.

OFFICE PRO-FORMA

Based on interviews with several real estate and leasing professionals, the most optimistic but achievable asking rent would be an average of $35 per rentable SF if the space was delivered in 1985 for leasing. $35 was escalated to $49.70 in 1992. At One Financial Center across Atlantic Avenue, the current asking rent is from $32 to $45 per SF.

For the office tower project at ARD, a cash on cash return of 13.50% would be required.

Exhibit 4.2 illustrates the pro forma of the revenues and expenses at stabilized operation in 1985 and in 1992.

In the 1985 pro-forma, a cash on cash return rate of 13.30% would be achieved. Due to the net effect of inflation, the cash on cash return escalated to 14% if the office tower was delivered in 1992.

If delivered in 1985, the office tower development is marginally profitable until the tenants starts to turn over and when the space are released or renewed in future years at higher rents. If delivered in 1992, the office tower could be a profitable venture, subject to project financing and the financial projections to be presented in Chapter 5.

AIR RIGHTS LEASE PAYMENTS FOR THE OFFICE TOWER PARCEL

For the office tower, the BRA had envisioned an annual payment of $520,000 per year for the air right lease. (24) The economics of the development does not support this land value payment during the initial years of operation.

A skewed lease payment schedule will be proposed in the Chapter 5, where the lease payments would be lower in the earlier years and escalated to greater amounts when the project is generating increased revenue.

THE HOTEL COMPONENT

The development program for the hotel tower at the South Station ARD is a 350 room mid-luxury hotel, equipped with teleconferencing capabilities and limited recreational amenities, and marketed to traveling business people and business groups. A business type hotel typically averages 750 gross SF per room, with 5% of its area for food and beverage functions, and 5% of its area for meeting and banquet functions. A 350 room hotel would contain a total of 262,500 SF, 13,000 SF for restaurant and bar, and 13,000 SF for meeting and banquet functions. 700 reserved parking spaces, or 1,25 per hotel room and 10 spaces per 1,000 SF of restaurant and function areas, would be required in the public parking facility. The parking requirement may be reduced to 400 because the hotel can share with the parking

needs of the office tenants. (25)

A 1983 construction cost of $87,500 per hotel room, and a total developement cost of $125,946 per room were used. The construction cost was escalated to $124,250 per room in 1990, and the total development cost to $180,083 per room. Exhibit 4.3 contains the breakdown of the 1983 and the escalated 1990 costs.

HOTEL PRO-FORMA

Based on interviews with hotel professionals, an average room rate of $100 per night could be asked if the the South Station ARD hotel was delivered in 1985. Escalated to 1992, the average room rate would be $142 per night.

A hotel development at ARD would require a cash on cash return of 14.5%.

Exhibit 4.4 illustrates the pro forma of the revenues and expenses at stabilized operation in 1985 and in 1992. In 1985 pro forma, a cash on cash return of 9.97% could be achieved. Due the relative costs of operating expenses, the cash on cash return if the hotel was delivered in 1992 decreased to 9.95%.

At $100 per room night, the hotel development is a marginally profitable venture to attract investors or project financing. The hotel would require an average room rate of $155 per night in the 1985 market, or $220 in 1992,

to be a financially feasible venture, as presented in Exhibit 4.5. The market would support that rate if there is an accute shortage of new hotel rooms, thereby generating the demand to the South station ARD, or if the South Station ARD hotel is a special place within a vibrant mixed use development.

HOTEL REVENUES AND EXPENSES ASSUMPTIONS

The hotel room revenues are forcasted on the basis of the anticipated average room rate and average occupancy levels for a new hotel.

Food revenues include income derived from sales of food and nonalcoholic beverages, including banquets, but excluding employee meals. The projections were based on both in-house and transient utilization of the hotel's food and beverage facilities. Food revenues are assumed to be approximately 42% of room revenues.

The percentage used, and those following, are industry averages.

The beverage revenues include income derived from the sales of all alcoholic beverages, and are assumed to be 40% of the food sales.

The other sources of revenues includes: public room reveneues, which are assumed to be 1% of room sales; telephone revenues and hotel concession shops.

Room department expenses include payroll and related costs. Other operating expenses include travel agents' commissions, linen, laundry services, paper supplies, guest supplies, and other expenses directly related to the rooms department. Rooms department expenses are assumed to be 20% of the room revenues.

Food and beverage department expenses include the cost of the food and beverage served to guests, payroll and related costs. Other expenses include replacement costs for china, glassware, silver and line , cleaning and paper supplies, kitchen fuel, uniforms, and other expenses directly related to the food and beverage department. Food, beverage and public rooms department expenses are assumed to be 85% of total revenues from food, beverage, and public rooms revenues.

Beverage department expenses are assumed to be 58% of the revenues from the sales of alcoholic beverages.

Administrative, general, payroll and related expenses include projected payroll and related overhead expenses for the administrative staff. Other expenses include bad debts, credit card commissions, legal and accounting fees, and miscellaneous administrative costs. These expenses are assumed to be 6.5 % of total revenue.

Base hotel management fee is assumed to be 4% of the room revenues. The incentive is assumed to be 10% of cash flow from operation before insurance and taxes, replacement

reserve for fixed assets, and debt service.

A franchise fee to the hotel chain is assumed to be 4% of room revenues.

An marketing, advertising and promotional budget of 3.5% of total revenue is assumed.

Energy costs including expenses for electricity, heating, fuel, water, waste removal and related overhead expenses are assumed to be 4% of total revenue.

Property operation and maintenance expenses also include staffing requirements for the property operation and maintenance staff, and related overhead costs. Other property and maintenance expenses include those expenses allocated for furniture, decoration, painting, decorating and repairs of building and equipment. These expenses are assumed to be 7% of the total revenue.

Insurance and real estate taxes are assumed to be 4.5% of total revenue.

The percentages assumed for the above are derived from industry figures. The consolidation of the above expenses represent 65% of the total hotel reveunes from all sources.

AIR RIGHT LEASE PAYMENTS FOR THE HOTEL PARCEL

For the hotel tower, the BRA had envisioned an annual payment of $690,000 for the air right lease based on the 600 room convention hotel. (24) The economics of the development at $100 room rent per night cannot support any

land value payment. An average room rate of $155 per night in the 1985 market, or $220 in 1992, would be required to justify an air rights lease payment envisioned by the BRA.

ALTERNATE OFFICE USE ON THE HOTEL PARCEL

Even with the successful leasing of the office tower at the ARD, the market potential of a hotel at this fringe location is judged to be unpredictable. Therefore, the developer would incorporate in the master plan a second 400,000 SF office tower developemnt program as an alternate use on the hotel air rights parcel.

THE HIGH TECHNOLOGY COMPONENT

The development program for the high technology facility at the South Station ARD is a 250,000 SF facility starting at Air Right Level 6 above street grade.

The facility program would be flexible for high technology, research and development, engineering, back office, and/or data processing operations and tenants.

A parking ratio of 1 parking space per 1000 SF of tenant space is recommended as an on site amenity in the parking garage to attract tenants.

A 1983/4 construction cost of $69.00 per SF, and a total developement cost of $100.59 per SF was used for the

high technology component. The construction cost was escalated to $97.98 per SF in 1990/1, and a total development cost to $143.51 per SF. project cost. Exhibit 4.6 contains the breakdown of the 1983/4 and the escalated 1990/1 costs.

HIGH TECHNOLOGY PRO-FORMA

The high technology component at the South Station ARD would ask an average of $12.00 per SF, on a net net basis, in 1985 dollars, in order to compete for tenants. The $12 would escalate to $17.00 in 1992.

A cash on cash return of 14.00% would be required for the high technology facility.

Exhibit 4.7 contains the pro-forma of revenues and expenses at stabilized operation in 1985 and in 1992. illustrates that based on the economic value, the air right

In the 1985 pro forma, a cash on cash return of 9.98% could be achieved. Even with the net effect of inflation, the cash on cash escalated to only 10.00% if the facility eas delivered in 1992.

The high technology facility is a marginally feasible development because of the high cost of construction in a central city location, and the insufficient revenue potential to financially support the expenses.

Similar to the hotel parcel, the Developer would incorporate into the master plan an alternate program for

a moderate office for the high technology parcel should there be insufficient market demand and revenue potential when the first two air rights parcels are developed.

AIR RIGHT LEASE PAYMENTS FOR THE HIGH TECHNOLOGY PARCEL

The BRA envisioned an annual payment of $81,000 for the air right lease. (24) Based on the $12.00 rent in the 1985 market, the economics of the high technology development can not support any land value payment. To justified the air rights lease payment, a market rent of $17.00 would be required in the 1985 market, as illustrated in Exhibit 4.8.

DEVELOPMENT SCHEDULE

As a result of the market assessment and the financial feasibility analyses, the development schedule as contained in Exhibit 2.1 needs to be periodically reviewed in light of the analyses for each of the three ARD uses. A best and a worst case scenario would be studied for the three components.

ECONOMIC FEASIBILITY AND AIR RIGHTS VALUE

The economic feasibility for the ARD office development is greater in 1992 than in 1985, due primarily to the the

net effect of inflation on the revenue escalation. The economic feasibility for the hotel and the high technology facility are still questionable in 1992, even with the effect of inflation.

The financial feasibility presented in this chapter is a time static analysis. The next phase in determining the financing feasibility for each of the development components will be presented in Chapter 5. Time series and discounted cash flow analysis are used to demonstrate potential returns on investments, i.e profitability, to financing and investing interests, in order to secure project financing.

Based on the foregoing pro-formas, the value of the air rights, given the revenue potentials and the project costs, are significantly less those envisioned by the BRA. As the office project develops in 1990, the factor of inflation increased air rights value from that in 1985. As for the hotel and the high technology facility, an economic value to the air rights can not be justified in 1990. Developing the hotel and the high technology sites for office use would be an alternative to generate a positive value in the air rights parcels.

SOUTH STATION A&D OFFICE TOWER
EXHIBIT : PROFORMA OF REVENUES & EXPENSES @ STABLIZED OPERATION

REVENUE SOURCES	UNITS	1985 $	1992 $	@ 1.42 INFLATION FACTOR
GROSS POTENTIAL	$/SF NRA/YR	35.00	49.70	
GROSS POTENTIAL RETAIL	$/SF NRA-R/YR		0.00	
GROSS POTENTIAL PARKING	$/Space/YR		0.00	
VACANCY FACTOR	%	5.00%	5.00%	
EFFECTIVE GROSS POTENTIAL	$/YR	11,305,000	16,053,100	
OPERATING EXPENSES				
OFFICE	$/SF NRA/YR	4.50	6.39	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	1,530,000	2,172,600	
REAL ESTATE TAXES				
OFFICE	$/SF NRA/YR	4.50	6.39	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	1,530,000	1,530,000	
HOUSING LINKAGE PAYMENT				
OFFICE	$/SF NRA/YR	0.37	0.37	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	125,800	125,800	
NOI BEFORE LAND & DEBT SERVICE	$/YR	8,119,200	12,224,700	
TOTAL PROJECT DEVELOPMENT COST	$/YR	61,064,191	87,311,558	
CASH ON CASH RETURN		13.30%	14.00%	
LAND RESIDUAL CALCULATION				
NOI Before Land & Debt Serv.	$/YR	8,119,200	12,224,700	
Cash on Cash Return Required		13.50%	13.50%	
Project Value	$	60,142,222	90,553,333	
Project Cost (less Land)	$	61,064,191	87,311,558	
RESIDUAL LAND VALUE	$	(921,969)	3,241,776	
Land Cost if Known	$	0	0	
Land Premium if Paid	$	921,969	0	
ANNUAL LAND LEASE IF KNOWN	$	520,000	520,000	
% Return on Residual Land Value		ERR	16.04%	NOTE: An ERR indicates no computation was possible.
CASH ON CASH RETURN AFTER LAND LEASE		12.44%	13.41%	
LAND LEASE CALCULATION				
Rate of Return Proposed		10.00%	10.00%	
Annual Land Lease Justified	$	0	324,178	
CASH ON CASH RETURN AFTER LAND LEASE		13.30%	13.63%	

Exhibit 4.1

SOUTH STATION ARD OFFICE TOWER
EXHIBIT : PROJECT DEVELOPMENT COSTS

		1983/4 $			1990/1 $	@ 1.42 INFLATION FACTOR							
AREA SUMMARY	UNITS												
GROSS AREA	GSF	400,000			400,000								
EFFICIENCY FACTOR	%	85.00%			85.00%								
NET RENTABLE AREA	NRA	340,000			340,000								
NET RETAIL AREA	NRA-R				0								
PARKING SPACES	Spaces				0								
TOTAL GROSS AREA	GSF	400,000			400,000								
TOTAL NET RENTABLE AREA	NRA	340,000			340,000								
								COSTS DEDUCTIBLE @ OR OVER---------->					
PROJECT DEVELOPMENT COSTS	UNITS	OFFICE	$/GSF	% TOTAL	OFFICE	$/GSF	% TOTAL CONSTRUCT.	YR @ YEAR	LEASE TERMS	5 YRS	10 YRS	LOAN TERM	BASIS
CONSTRUCTION COSTS													
Shell, Core, Common Areas	$/GSF	70.00			99.40								
Site Preparation	$/GSF				0.00								
Premium or Other Costs	$/GSF	10.00			14.20								
Tenant Improvements	$/NRA	12.50			17.75								
Retail Tenant Improvements	$/NRA-R				0.00								
Parking	$/Space				0.00								
SUB TOTAL - CONSTRUCTION		36,250,000	90.63	59.36%	51,475,000	128.69	58.96%	0	0	0	0	0	0	51,475,000
INDIRECT DEVELOPMENT COSTS	UNIT COST												
If Lage Construction Cost	0.00%												
Architectural/Engineering	10.00%	3,625,000	9.06		5,147,500	12.87							
Permits,Licenses,Surveys,Tests	1.50%	543,750	1.36		772,125	1.93							
Legal and Accounting	2.00%	725,000	1.81		1,029,500	2.57				1,029,500			
Insurance	1.00%	362,500	0.91		514,750	1.29				514,750			
Advertising and Marketing	1.00%	362,500	0.91		514,750	1.29				514,750			
Leasing Commission (Assuming max. 5 Yr leases)	3.500	1,190,000	2.98	1.95%	1,689,800	4.22	1.94%		1,689,800				
Real Estate Taxes	492,000	492,000	1.23	0.81%	698,640	1.75	0.80%				698,640		
Land Lease	260,000	260,000	0.65	0.43%	369,200	0.92	0.42%			369,200			
Construction Management Fee	3.00%	1,087,500	2.72		1,544,250	3.86				1,544,250			
Development Management Fee	3.00%	1,087,500	2.72		1,544,250	3.86				1,544,250			
Working Capital, Contingencies @ Lage Construction Cost	5.00%	1,812,500	4.53		2,573,750	6.43							
Leasing Incentives	10.00	3,400,000	8.50	5.57%	4,828,000	12.07	5.53%						
NOI Deficit Provision	10.00	3,400,000	8.50	5.57%	4,828,000	12.07	5.53%						
Long Term Financing Fee, Max.	1.00%	611,000	1.53		873,500	2.18						873,500	
Construction Years	1.50												
Constructn Loan Interest Rate	14.00%				15.00%								
Average Outstand Balance	0.50												
Construction Interest + Fee @	1.00%	5,854,941	14.64	9.59%	8,908,543	22.27	10.20%				8,908,543		
SUB TOTAL - INDIRECT		24,814,191	62.04	40.64%	35,836,558	89.59	41.04%	0	0	1,689,800	5,516,700	9,607,183	873,500	18,149,375
LAND COST IF KNOWN													
Calculated Land Residual Value		(921,969)			3,241,776								
Land Premium if Paid		921,969	2.30	1.51%	0	0.00	0.00%						
SUB TOTAL - LAND		0	0.00	0.00%	0	0.00	0.00%						
TOTAL PROJECT DEVELOPMENT COST		61,064,191	152.66	100.00%	87,311,558	218.28	100.00%	0	0	1,689,800	5,516,700	9,607,183	873,500	69,624,375
CONSTRUCTION LOAN, % OF TOTAL COST	80.00%	48,851,353			69,849,246								
EQUITY REQUIRED		12,212,838			17,462,312								

Exhibit 4.2

SOUTH STATION ARD HOTEL
EXHIBIT : PROJECT DEVELOPMENT COSTS

		1983/4 $		1990 $	@	1.42 INFLATION FACTOR								
AREA SUMMARY	UNITS													
GROSS AREA	GSF	262,500		262,500										
HOTEL ROOMS	Rooms	350		350										
NET HOTEL FUNCTION AREA	NSF-H	13,000		13,000										
NET RETAIL AREA	NRA-R	13,000		13,000										
PARKING SPACES	Spaces			0										
TOTAL GROSS AREA	GSF	262,500		262,500										
TOTAL NET RENTABLE AREA	NRA	26,000		26,000										
									COSTS DEDUCTIBLE @ OR OVE					
PROJECT DEVELOPMENT COSTS	UNITS	HOTEL	$/ROOM	HOTEL	$/GSF	$/ROOM	% TOTAL CONSTRUCT. V	@ YEAR	5 YRS	10 YRS	17 YRS	LOAN TERM		BASIS
CONSTRUCTION COSTS														
Shell, Core, Common Areas	$/GSF			0.00										
Site Preparation	$/GSF			0.00										
Premium or Other Costs	$/GSF	10.00		14.20										
Hotel Room	$/Room	60,000		85,200										
Hotel FF&E	$/Room	20,000		28,400							7,000,000			
Hotel Functions	$/NSF-H			0.00										
Parking	$/Space			0										
SUB TOTAL - CONSTRUCTION		30,625,000	87,500	43,487,500	165.67	124,250	69.00%	0	0	0	0	7,000,000	0	36,487,500
INDIRECT DEVELOPMENT COSTS	UNIT COST													
If Iage Construction Cost	0.00%													
Architectural/Engineering	10.00%	3,062,500	8,750	4,348,750	16.57	12,425								
Permits,Licenses,Surveys,Tests	1.50%	459,375	1,313	652,313	2.49	1,864								
Legal and Accounting	2.00%	612,500	1,750	869,750	3.31	2,485			869,750					
Insurance	1.00%	306,250	875	434,875	1.66	1,243			434,875					
Pre-Opening Expenses @ $/Room	200	70,000	200	99,400	0.38	284			99,400					
Franchise Fee @ $/Room	300	105,000	300	149,100	0.57	426								
Real Estate Taxes	252,000	252,000	720	357,840	1.36	1,022	0.57%			357,840				
Land Lease	202,000	202,000	577	286,840	1.09	820	0.46%		286,840					
Construction Administration	3.00%	918,750	2,625	1,304,625	4.97	3,728								
Development Administration	3.00%	918,750	2,625	1,304,625	4.97	3,728								
Contingencies	5.00%	1,531,250	4,375	2,174,375	8.28	6,213								
@ Iage Construction Cost														
Operating Reserve @ $/Room	1,000	350,000	1,000	497,000	1.89	1,420	0.79%							
Long Term Financing Fee, Max.	1.00%	441,000	1,260	631,000	2.40	1,803						631,000		
Construction Years	1.50													
Constructn Loan Interest Rate	14.00%			15.00%										
Average Outstanding Balance	0.50													
Interest Payment + Fee @	1.00%	4,226,356	12,076	6,430,947	24.50	18,374	10.20%			6,430,947				
SUB TOTAL - INDIRECT		13,455,931	38,446	19,541,439	74.44	55,833	31.00%	0	0	1,690,865	6,788,787		631,000	10,430,788
LAND COST IF KNOWN														
Calculated Land Residual Value		(13,761,966)		(13,761,966)										
Land Premium if Paid		13,761,966	39,320	13,761,966	52.43	39,320	21.83%							
SUB TOTAL - LAND		0	0	0	0.00	0	0.00%							
TOTAL PROJECT DEVELOPMENT COST		44,080,931	125,946	63,028,939	240.11	180,083	100.00%	0	0	1,690,865	6,788,787	7,000,000	631,000	46,918,288
CONSTRUCTION LOAN, % OF TOTAL COST	80.00%	35,264,745		50,423,152										
EQUITY REQUIRED AT CONSTRUCTION		8,816,186		12,605,788										

EXHIBIT : PROFORMA OF REVENUES & EXPENSES @ STABLIZED OPERATION

REVENUE SOURCES	UNITS	1985 $	1992 $	@ 1.42 INFLATION FACTOR
GROSS POTENTIAL HOTEL ROOMS	$/Room/Night	100.00	142.00	
GROSS POTENTIAL HOTEL OTHERS	% Room Rev	42.00%	42.00%	
GROSS POTENTIAL HOTEL FUNCTIONS	$/SF NRA-H/YR		0.00	
GROSS POTENTIAL RETAIL	$/SF NRA-R/YR		0.00	
GROSS POTENTIAL PARKING	$/Space/YR		0.00	
VACANCY FACTOR - HOTEL ROOMS	%	30.00%	30.00%	
VACANCY FACTOR	%		0.00%	
EFFECTIVE GROSS POTENTIAL	$/YR	12,698,350	18,031,657	
OPERATING EXPENSES				
HOTEL ROOMS	% Eff Room Revenue	87.50%	87.50%	
HOTEL OTHERS			0.00%	
HOTEL FUNCTION AREAS	$/SF NRA-H/YR		0.00	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	7,824,688	11,111,056	
GROSS OPERATING RATIO		38.38%	38.38%	
REAL ESTATE TAXES & INSURANCE				
HOTEL	% Eff Gross	4.50%	0.05	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	402,413	571,426	
TOTAL DIP PAYMENT (LINKAGE)	$/YR	75,000	75,000	
NOI BEFORE LAND & DEBT SERVICE	$/YR	4,396,250	6,274,175	
TOTAL PROJECT DEVELOPMENT COST	$/YR	44,080,931	63,028,939	
CASH ON CASH RETURN		9.97%	9.95%	
LAND RESIDUAL CALCULATION				
NOI Before Land & Debt Serv.	$/YR	4,396,250	6,274,175	
Cash on Cash Return Required		14.50%	14.50%	
Project Value	$	30,318,966	43,270,172	
Project Cost (less Land)	$	44,080,931	63,028,939	
RESIDUAL LAND VALUE	$	(13,761,966)	(19,758,767)	
Land Cost if Known	$	0	0	
Land Premium if Paid	$	13,761,966	19,758,767	
ANNUAL LAND LEASE IF KNOWN	$	402,500	402,500	
% Return on Residual Land Value		ERR	ERR	NOTE : An ERR indicates invalid computation.
CASH ON CASH RETURN AFTER LAND LEASE		9.06%	9.32%	
LAND LEASE CALCULATION				
Rate of Return Proposed		10.00%	10.00%	
Annual Land Lease Proposed	$	0	0	
CASH ON CASH RETURN AFTER LAND LEASE		9.97%	9.95%	

EXHIBIT : PROFORMA OF REVENUES & EXPENSES @ STABLIZED OPERATION

REVENUE SOURCES	UNITS	1985 $	1992 $ @ 1.42 INFLATION FACTOR
GROSS POTENTIAL HOTEL ROOMS	$/Room/Night	155.00	220.10
GROSS POTENTIAL HOTEL OTHERS	% Room Rev	42.00%	42.00%
GROSS POTENTIAL HOTEL FUNCTIONS	$/SF NRA-H/YR		0.00
GROSS POTENTIAL RETAIL	$/SF NRA-R/YR		0.00
GROSS POTENTIAL PARKING	$/Space/YR		0.00
VACANCY FACTOR - HOTEL ROOMS	%	30.00%	30.00%
VACANCY FACTOR	%		0.00%
EFFECTIVE GROSS POTENTIAL	$/YR	19,682,443	27,949,068
OPERATING EXPENSES			
HOTEL ROOMS	% Eff Room Revenue	87.50%	87.50%
HOTEL OTHERS			0.00%
HOTEL FUNCTION AREAS	$/SF NRA-H/YR		0.00
RETAIL	$/SF NRA-R/YR		0.00
PARKING	$/Space/YR		0.00
TOTAL	$/YR	12,128,266	17,222,137
GROSS OPERATING RATIO		38.38%	38.38%
REAL ESTATE TAXES & INSURANCE			
HOTEL	% Eff Gross	4.50%	0.05
RETAIL	$/SF NRA-R/YR		0.00
PARKING	$/Space/YR		0.00
TOTAL	$/YR	623,739	885,710
TOTAL DIP PAYMENT (LINKAGE)	$/YR	75,000	75,000
NOI BEFORE LAND & DEBT SERVICE	$/YR	6,855,438	9,766,221
TOTAL PROJECT DEVELOPMENT COST	$/YR	44,080,931	63,028,939
CASH ON CASH RETURN		15.55%	15.49%
LAND RESIDUAL CALCULATION			
NOI Before Land & Debt Serv.	$/YR	6,855,438	9,766,221
Cash on Cash Return Required		14.50%	14.50%
Project Value	$	47,278,879	67,353,250
Project Cost (less Land)	$	44,080,931	63,028,939
RESIDUAL LAND VALUE	$	3,197,948	4,324,311
Land Cost if Known	$	0	0
Land Premium if Paid	$	0	0
ANNUAL LAND LEASE IF KNOWN	$	402,500	402,500
% Return on Residual Land Value		12.59%	9.31% NOTE : An ERR indicates invalid computation.
CASH ON CASH RETURN AFTER LAND LEASE		14.64%	14.86%
LAND LEASE CALCULATION			
Rate of Return Proposed		10.00%	10.00%
Annual Land Lease Proposed	$	319,795	432,431
CASH ON CASH RETURN AFTER LAND LEASE		14.83%	14.81%

Exhibit 4.5

SOUTH STATION ARD HIGH TECHNOLOGY FACILITY
EXHIBIT : PROJECT DEVELOPMENT COSTS

		1983/4 $			1990/1 $	@	1.42 INFLATION FACTOR							
AREA SUMMARY	UNITS													
GROSS AREA	GSF	250,000			250,000									
EFFICIENCY FACTOR	%	90.00%			90.00%									
NET RENTABLE AREA	NRA	225,000			225,000									
NET RETAIL AREA	NRA-R				0									
PARKING SPACES	Spaces				0									
TOTAL GROSS AREA	GSF	250,000			250,000									
TOTAL NET RENTABLE AREA	NRA	225,000			225,000									
								COSTS DEDUCTIBLE @ OR OVER----------						
PROJECT DEVELOPMENT COSTS	UNITS	HIGH TECH	$/GSF	% TOTAL	HIGH TECH	$/GSF	% TOTAL CONSTRUCT. YR	@ YEAR	LEASE TERMS	5 YRS	10 YRS	LOAN TERM	BASIS	
CONSTRUCTION COSTS														
Shell, Core, Common Areas	$/GSF	50.00			71.00									
Site Preparation	$/GSF				0.00									
Premium or Other Costs	$/GSF	10.00			14.20									
Tenant Improvements	$/NRA	10.00			14.20									
Retail Tenant Improvements	$/NRA-R				0.00									
Parking	$/Space				0.00									
SUB TOTAL - CONSTRUCTION		17,250,000	69.00	68.60%	24,495,000	97.98	68.27%	0	0	0	0	0	0	24,495,000
INDIRECT DEVELOPMENT COSTS	UNIT COST													
If Iage Construction Cost	0.00%													
Architectural/Engineering	8.50%	1,466,250	5.87		2,082,075	8.33								
Permits,Licenses,Surveys,Tests	1.50%	258,750	1.04		367,425	1.47								
Legal and Accounting	2.00%	345,000	1.38		489,900	1.96				489,900				
Insurance	1.00%	172,500	0.69		244,950	0.98				244,950				
Advertising and Marketing	1.00%	172,500	0.69		244,950	0.98				244,950				
Leasing Commission	2.000	450,000	1.80	1.79%	639,000	2.56	1.78%		639,000					
(Assuming max. 5 Yr leases)														
Real Estate Taxes	56,000	56,000	0.22	0.22%	79,520	0.32	0.22%				79,520			
Land Lease	41,000	41,000	0.16	0.16%	58,220	0.23	0.16%			58,220				
Construction Management Fee	3.00%	517,500	2.07		734,850	2.94				734,850				
Development Management Fee	3.00%	517,500	2.07		734,850	2.94				734,850				
Working Capital, Contingencies	5.00%	862,500	3.45		1,224,750	4.90								
@ Iage Construction Cost														
Leasing Incentives	0.00	0	0.00	0.00%	0	0.00	0.00%							
NOI Deficit Provision	5.00	1,125,000	4.50	4.47%	1,597,500	6.39	4.45%							
Long Term Financing Fee, Max.	1.00%	251,500	1.01		359,000	1.44						359,000		
Construction Years	1.00													
Constructn Loan Interest Rate	14.00%				15.00%									
Average Outstand Balance	0.50													
Construction Interest + Fee @	1.00%	1,660,460	6.64	6.60%	2,526,413	10.11	7.04%				2,526,413			
SUB TOTAL - INDIRECT		7,896,460	31.59	31.40%	11,383,403	45.53	31.73%	0	0	639,000	2,507,720	2,605,933	359,000	5,271,750
LAND COST IF KNOWN														
Calulated Land Residual Value		(7,226,817)			(10,263,760)									
Land Premium if Paid		7,226,817	28.91	28.74%	10,263,760	41.06	28.61%							
SUB TOTAL - LAND		0	0.00	0.00%	0	0.00	0.00%							
TOTAL PROJECT DEVELOPMENT COST		25,146,460	100.59	100.00%	35,878,403	143.51	100.00%	0	0	639,000	2,507,720	2,605,933	359,000	29,766,750
CONSTRUCTION LOAN, % OF TOTAL COST	80.00%	20,117,168			28,702,723									
EQUITY REQUIRED		5,029,292			7,175,681									

Exhibit 4.6

SOUTH STATION ARD HIGH TECHNOLOGY FACILITY
EXHIBIT : PROFORMA OF REVENUES & EXPENSES @ STABLIZED OPERATION

REVENUE SOURCES	UNITS	1985 $	1992 $	@ 1.42 INFLATION FACTOR
GROSS POTENTIAL	$/SF NRA/YR	12.00	17.04	
GROSS POTENTIAL RETAIL	$/SF NRA-R/YR		0.00	
GROSS POTENTIAL PARKING	$/Space/YR		0.00	
VACANCY FACTOR	%	5.00%	5.00%	
EFFECTIVE GROSS POTENTIAL	$/YR	2,565,000	3,642,300	
OPERATING EXPENSES				
OFFICE	$/SF NRA/YR	Net	0.00	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	0	0	
REAL ESTATE TAXES				
OFFICE	$/SF NRA/YR	Net	0.00	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	0	0	
HOUSING LINKAGE PAYMENT				
OFFICE	$/SF NRA/YR	0.25	0.25	
RETAIL	$/SF NRA-R/YR		0.00	
PARKING	$/Space/YR		0.00	
TOTAL	$/YR	56,250	56,250	
NOI BEFORE LAND & DEBT SERVICE	$/YR	2,308,750	3,586,050	
TOTAL PROJECT DEVELOPMENT COST	$/YR	25,146,460	35,878,403	
CASH ON CASH RETURN		9.98%	10.00%	
LAND RESIDUAL CALCULATION				
NOI Before Land & Debt Serv.	$/YR	2,308,750	3,586,050	
Cash on Cash Return Required		14.00%	14.00%	
Project Value	$	17,919,643	25,614,643	
Project Cost (less Land)	$	25,146,460	35,878,403	
RESIDUAL LAND VALUE	$	(7,226,817)	(10,263,760)	
Land Cost if Known	$	0	0	
Land Premium if Paid	$	7,226,817	10,263,760	
ANNUAL LAND LEASE IF KNOWN	$	81,000	81,000	
% Return on Residual Land Value		ERR	ERR	NOTE: An ERR indicates no computation was possible.
CASH ON CASH RETURN AFTER LAND LEASE		9.65%	9.77%	
LAND LEASE CALCULATION				
Rate of Return Proposed		10.00%	10.00%	
Annual Land Lease Justified	$	0	0	
CASH ON CASH RETURN AFTER LAND LEASE		9.98%	10.00%	

Exhibit 4.7

SOUTH STATION ARD HIGH TECHNOLOGY FACILITY
EXHIBIT : PROFORMA OF REVENUES & EXPENSES @ STABLIZED OPERATION

REVENUE SOURCES	UNITS	1985 $	1992 $	@	1.42 INFLATION FACTOR
GROSS POTENTIAL	$/SF NRA/YR	17.00	24.14		
GROSS POTENTIAL RETAIL	$/SF NRA-R/YR		0.00		
GROSS POTENTIAL PARKING	$/Space/YR		0.00		
VACANCY FACTOR	%	5.00%	5.00%		
EFFECTIVE GROSS POTENTIAL	$/YR	3,633,750	5,159,925		
OPERATING EXPENSES					
OFFICE	$/SF NRA/YR	Net	0.00		
RETAIL	$/SF NRA-R/YR		0.00		
PARKING	$/Space/YR		0.00		
TOTAL	$/YR	0	0		
REAL ESTATE TAXES					
OFFICE	$/SF NRA/YR	Net	0.00		
RETAIL	$/SF NRA-R/YR		0.00		
PARKING	$/Space/YR		0.00		
TOTAL	$/YR	0	0		
HOUSING LINKAGE PAYMENT					
OFFICE	$/SF NRA/YR	0.25	0.25		
RETAIL	$/SF NRA-R/YR		0.00		
PARKING	$/Space/YR		0.00		
TOTAL	$/YR	56,250	56,250		
NOI BEFORE LAND & DEBT SERVICE	$/YR	3,577,500	5,103,675		
TOTAL PROJECT DEVELOPMENT COST	$/YR	25,146,460	35,878,403		
CASH ON CASH RETURN		14.23%	14.22%		
LAND RESIDUAL CALCULATION					
NOI Before Land & Debt Serv.	$/YR	3,577,500	5,103,675		
Cash on Cash Return Required		14.00%	14.00%		
Project Value	$	25,553,571	36,454,821		
Project Cost (less Land)	$	25,146,460	35,878,403		
RESIDUAL LAND VALUE	$	407,111	576,418		
Land Cost if Known	$	0	0		
Land Premium if Paid	$	0	0		
ANNUAL LAND LEASE IF KNOWN	$	81,000	81,000		
% Return on Residual Land Value		19.90%	14.05%		NOTE: An ERR indicates no computation was possible.
CASH ON CASH RETURN AFTER LAND LEASE		13.90%	14.00%		
LAND LEASE CALCULATION					
Rate of Return Proposed		10.00%	10.00%		
Annual Land Lease Justified	$	40,711	57,642		
CASH ON CASH RETURN AFTER LAND LEASE		14.06%	14.06%		

Exhibit 4.8

CHAPTER 5

FINANCING STRATEGIES AND STRUCTURING

FINANCING RISKS

A critical phase in the South Station ARD that the Developer must properly manage is the project financing. A long time frame of 24 months before the closing of project financing is expected for the ARD. The inaccuracy in forcasting inflation in construction costs and revenue potential, an ever dynamic financial market, the lack of long term interest rate stability, increasing construction costs, access to resources to fund the operating deficits during the initial years of a real estate project are several factors that would compel the Developer to form a financial partnership with a major institutional investor ("Investor") which would provide the financal stability and long term investment commitment to the ARD. The Investor would typically be a pension fund.

Based on the project costs and pro-formas presented in Chapter 4 for each of the three use components, this chapter discusses a realistic strategy, and the related issues, of negotiating the finanical partnership with an Investor, also popularly known as a joint venture, to develope the ARD.

The financing structuring, together with the financial projections, for each of the ARD uses will be discussed

later in the chapter.

THE INVESTOR AS A PARTNER

The Developer would organize a separate limited partnership for each of the three development components when it has secured the developer designation.

The Developer will grant to the Investor the right to be admitted as an additional, but equal, general partner and also as an additional, but equal, limited partner to each of the limited partnership when the Investor funds its equity requirement at the closing of the construction financing for any one of the component. The participation as a general partner as well as a limited partner permits a flexibility at a later date to transfer interest in one or both catagories.

General partners have the right to actively manage the operation of the business for the limited partnership, and have unlimited financial liability exposure if the business should fail. The limited partners are passive investors, and their financial liability are limited to their investment.

An Investor may elect to fund a real estate development, separately as an equity partner and as a mortgagee. As an equity partner, the Investor would be allocated an interest in the operating cash flow after all

expenses, and residual benefit from sale or refinancing. Passive revenue, such as that from a real estate operation, received by a pension fund is exempt from federal taxation; the tax shelter benefits from the real estate investment is of no benefit to the Investor.

The Investor may invest as a partner, irregardless if it is also the mortgagee or if the property is debt financed with another lender.

ALLOCATION OF ECONOMIC INTERESTS

In a limited partnership vehicle, it is legal to allocate separately the components of economic benefits, within limitations imposed by the IRS, generated from the ownership of real estate properties.

Profits and Losses (i.e. taxable income) are accounting concepts that is independent of any allocation of cash generate from the venture. Income tax credits such as the investment credits must be allocated among the partners at the same rates as the profits and losses (taxable income) allocation. A loss (i.e. a negative taxble income) is a tax benefit that can be used to offset a partner's tax liabilities from other revenues. Problems with the IRS arise when profits are allocated to the partners in different ratios than losses, and when profit and loss allocations change during the term of the partnership.

Under current IRS rules, cash flow after all expenses

and debt service payments (as opposed to taxable income) may be allocated among the partners independent of the taxable income allocation, and the allocation may change during the term of ther partnership.

The third source of economic benefits from real estate venture is the residual benefits from refinancing the property in an amount greater than existing financing, from the sale of the property, or from condemnation and casualty losses. The allocation of residual benefits may also be independent of the other benefit allocations.

When an Investor is also the mortgagee, the partnership agreement would provide a priority in the repayment of the mortgagee's investment on sale or refinancing prior to distribution of residual benefits to the equity holders.

OTHER KEY ISSUES IN A JOINT VENTURE

The major area of a joint venture negotiation and agreement involves: security interest, contribution of initial capital, contribution of additional capital, return of capital, rate of return on investment; compensation to the Developer; performance standards and guarantees by each of the venturers; allocation of economic risks; allocation of economic benefits; management and control of the venture; settlement of disputes; and buyout arrangement. (26) (27) (28) (29) (30)

SECURITY INTEREST

If the Investor is also funding the debt financing for the project, it would be granted a security interest (a mortgage) in the project. The Developer would negotiate that the partnership be able to increase the amount of the senior debt, or add a junior debt without the consent of the mortgagee if the economics of the project can support the additional debt. The Developer at a later date may require access to its partnership interest to raise additional capital.

A mortgagee may insist on retaining the rights to approve project design, selection of architects and contractors, leasing and property agents, tenants and lease terms, and thereby exercise significant control over the development. A mortgagee can also exercise control over the transfer of the project with mortgage provisions that restrict loan prepayment, junior financing, and due-on-transfer clauses. The Developer must negotiate a clear limitation of control over the development and the operation by the mortgagee.

INITIAL CAPITAL CONTRIBUTION

The Developer would typically fund all the risk capital to secure the right to build the ARD, costs which would

include: legal services, master planning, environmental and engineering studies, market studies and project admininistration. It is the objective for the Developer to recover all its risk capital incurred at the closing of the construction financing for the first component, simultaneously with the closing of the partnership agreement. The difference between the total project cost and the net amount of the construction loan is the equity capital to be contributed by the Developer and the Investor.

The Developer would negotiate a loan from the Investor to fund the Developer's equity amount, such amount to be credited to the Developer's capital account. The Developer would therefore increase its financial leverage with no or minium equity in the project. The Developer would seek to have the loan's interest payment would be a preferred claim against the project's cash flow if cash flow is available, and not be accrued with additional interest against future cash flow and residual benefits. Cash flow and residual benefits are distributed in accordance to the allocation of the project's economic benefits only after all partner's preferred claims are paid.

In a limited partnership venture with individual investors, it is the Developer's objective to secure all the equity funds from the investors. The equity capital would also be a preferred claim against the project's residual benefit before distribution.

The Developer would negotiate a commitment from the Investor to fund a 5 year construction loan at the pro-forma interest rate when pre-leasing commitment has achieved an agreed level. A construction loan may be secured from a third party lender if a interest rate is lower than the pro-forma interest rate. In addition, the Developer would negotiate a stand-by commitment from the same Investor to fund the long term financing without additional leasing commitments if financing can not be secured at the pro-forma interest rate from a third party long term lender. All long term financing would be on a non-recourse basis, i.e. the lender has security only on the property and no recourse against the mortgagee. When the project has achieved stabilized operation, and when interest rates are more competitive, the Investor's loan to the project would be refinanced.

The Developer would be concerned that the promised funds will be advanced when and as needed. If the funding is to be staged, the Developer must verify that the Investor will have the funds for the venture when they are needed. The Developer must negotiate the conditions under which the Investor may withhold funding, and the remedies in event of default by the Investor, both self-help remedies (such as the right of the Developer to advance or to borrow the needed funds and charge it to the Investor's interest), and the ultimate remedy (such as permanent dilution or sale of the investor's interest). Noninstitutional or inexperienced

investors would be required to secure their obligations to fund the venture by delivering a letter of credit, by escrowing the funds, or by depositing all the funds with the venture on the closing date.

ADDITIONAL CAPITAL CONTRIBUTION

In the South Station ARD, as in most real estate development ventures, there is always the need for additional capital, whether dued to cost overruns, contingencies, extra tenant installations, or operating deficits. If the Developer can not fund its allocation of the additional capital along with the Investor, the Developer's partership interest is diluted in favor of the Investor in accordance to pre-agreed formula. It is conceivable that the Developer's partnership interest can be diluted completely. Some institutional investors may loan additional equity capital contribution to the Developer, at a fixed terms or a floating terms loan with a due date. The loan would bear interest, and be secured by a lien against the Developer partnership interest and allocation of benefits in the project and other properties in aggregate market not less than the loan amount.

RETURN OF CAPITAL TO THE INVESTOR

The recovery of invested capital is the initial primary concern to the Investor. The sources of financial return from an operating property are: cash fow after all expenses and debt service, tax benefits from legitimate tax deduction and depreciation if the investors are individuals, residual benefits from proceeds at refinancing of the property or at sale.

RETURN ON INVESTMENT TO INVESTOR

An Investor participating as a development partner in a real estate venture has a target objective of 18% Internal Rate of Return based on before tax benefits ("BTIRR"), which is equivalent to 600 basis points above long term U. S. treasury debts. (30)

The Developer, however, would not guarantee any of the returns to the Investor. The financial projections must demonatrate that such an return on investment objective could be realistically achieved. The Investor would be allocated a partnership interest, which is simply a priority right to receive any available benefits after preferred claims, to produce the investment returns.

If the Investor also funds the long term financing, secured by a mortgage on the property, the interest payments should be accounted as a priority return on the total

invested capital. The balance of the returns would come from a participation of an increase in the revenue, before tax cash flow, and or proceeds from refinancing or sale.

It is the Developer's objective to retain 50% partnership interest in the venture, and be allocated 50% of the cash flow, tax shelter benefits, and residual benefit after all loans and accrued interest payment due the Investor are settled.

COMPENSATING THE DEVELOPER PARTNER

In addition to an allocation of a partnership interest in the ownership of the venture, the Developer would be negotiating to be compensated with various types of service contracts, such as project development, construction management, marketing and leasing, and property management at the South Station ARD. These various service contracts may permit the Developer to subcontract out its routine duties, subject to approval by the partnership. The compensation may consist of a base fee and an incentive or bonus fee tied to the venture's performance. The various service contracts are revenue or profit centers to the Developer. When these service contracts serve to equalize interests with the Investor (where the Investor has claimed a disproportionate share of the venture partnership), the IRS may recharacterize the interest to the Developer as

ordinary income.

The Developer would negotiate that its fees not be deferred or subordinated to its capital contributions. The incentive or bonus fees, however, may be subordinated to the payment of a defined return to the investor partner, or may be carried to future years.

MANAGEMENT OF A JOINT VENTURE

It is critical for the Developer to negotiate the major decisions that would require the agreement of the venture partners. Typical of the major decisions are : selection of project consultants and professionals (such as lawyers, accountants, architects, and contractors); approval of contract agreements (such as construction, brokerage, and property management); approval of tenant leases that deviate from the agreed pro-forma (such as tenant participation in the venture's equity, extra tenant installation, longer lease term, larger lease area); approval of any financing and sale on the project; and approval of any agreement with any party that is affilated with a venture partner. Once the major issues have be defined, all other decisions can be considered as administrative. The Developer may be delegated the responsibilities to sign checks, leases, and perform the administrative functions. A system of periodic reporting system must be established to account for the finance and all significant activities of the venture.

PERFORMANCE OF INVESTOR FUNDING

The Developer must negotiate the performance from the Investor to be unconditional, or conditional only upon certain critical and well defined default conditions on the part of the Developer or upon default conditions of other aspect of the venture. The reason for the Investor's unconditonal performance is that the venture's funding may be tied to commitments of third party mortgage lender who will not proceed unless the Investor's funding commitment is a secure one. The Developer may have an obligation to a third party, such as a guarantee of completion to a construction lender, and is dependent upon the timely contributions of the investor to avoid default under that guarantee. The Investor must not be in a position to withold performance merely because of a technical oe insignificant default by the Developer.

CONSTRUCTION GUARANTEES BY DEVELOPER PARTNER

An investor typically will require the Developer to guarantee the timely completion on construction, and payments of all project cost and expenses until the completion date. The principal issues are : what

constitutes completion, and what costs do the Developer guarantees to pay. In order to define completion, there must be a quality set of plans and specifications that details the scope of the project and what elements are within the scope of the guarantee. Tenant finishes and improvements are generally not included within the guarantee. The current fast track construction method, where construction proceed under a Guaranteed Maximum Price from a general contractor based on a less than completed plans and specifications, requires flexibilty on the part of the investor as to the definition of project budget and completion. Completion is defined to be completed deemed completed upon issuance of all final certificates of occupancy and government approvals. Extra costs incurred in design changes that were decided upon by both partners must be adjusted to guarantee of completion, both as cost and schedule. As to the guarantee of payment of project costs, the Developer should negotiate those costs to be the base construction contact costs, excluding development costs such as construction loan interest, real estate taxes, architect's fee, legal and accounting, unexpected site preparation costs, design changes to owner's or tenant's requests, and uncontrolable contruction delays. The payment guarantee would remain in effect until all costs covered have been paid. When the Developer grants the above guarantees, it must be allowed to excercise the controls and to make the decisions to perform on the guarantees. The

investor must not have the sole right to initiate and/or approve design changes.

LEASE UP GUARANTEE BY DEVELOPER PARTNER

The Investor, especially a passive one, may require the Developer to guarantee against any operating deficit during the lease up period. There are various forms of this guarantee. At the extreme, the development/operating partner net lease the entire project intially. A Developer may agree to contribute a certain amount of additonal funds to carry the venture. If the Developer is required to provide this guarantee, it must negotiate that the investor does not have the right to approve all leases.

SETTLEMENT OF DISPUTES

Disputes and disagreements are inevitable in any joint venture, especially when a venture is experiencing difficulties and possible failures. Disputes may be resolved by arbitration, pursuant to an arbitration clause in the agreement, or by litigation, or by a buy out of one partner by the other, pursuant to a buy out provision in the agreement, or by a forced sale of the property. The partners may elect arbitration as a remedy to settle certain defined issues, and elect litigation for the settlement of other disputes. The primary advantages of arbitration are:

a lower cost than litigation, a shorter time period to settle the disputes, finality of the arbitrtor's decision, and a trial of the issues before a panel of arbitrators knowledgable of real estate industry. When a Developer has multiple contracts with the venture, the election of arbitration can render a definite answer if the dispute in one area will have an effect on the other contracts.

Another provision for the settlement of dispute is the buy out of one partner by the other. A buy out method can be inequitable in favor of the weathier investor, unless the Developer can raise the funds from another investor, and if the buy out price is economically feasible. A typical buy out provision would be triggered when the offeror mades a offer to buy the project at a stated price. If the offeree accepts the offer, it would purchase the property at the stated price. If the offeree do not respond, then the offerer would be the buyer.

A final remedy to dispute resolution is a forced sale to an unrelated third party.

DETERMINATION OF MARKET VALUE

An accepted method in determining the market value of the venture for a buyout or a forced sale is for each partner to select an appraiser. Both appraisers in turn will select a third appraiser. The three appraisers each will determine

the market value of the real estate venture. The fair market value wil be determined by a simple averaging of the two appraisals with the least difference in value. A partner's interest shall than be determined in proportion to the allocation of partnership and economic benefits provisions contained in the partnership agreement to the approved appraised sale value.

ASSUMPTIONS ON THE FINANICAL STRUCTURINGS

The development of the three use component comprising of the ARD will proceed separately and independently over a course of a 6 year construction timetable, given the market assessment and the financial feasibility analyses for each use.

The office tower would be developed first, followed by the hotel, if a hotel is financially feasible by then or by an alternate office tower of same size as the first. The final component would be the high technology facility. Each component would require a different financing structuring.

For analysis purpose, the financial projections for each of the three components are forcasted for the same 1992 delivery date to the market. Forcasting inflation rate beyond that would produce any meaningful data.

The after tax benefits were based on the proposed changes to the tax codes, "Fundamental Tax Simplification

and Reform", November 1984. The marginal tax bracket for the investors is assumed at 35%. The capital gains tax rate is assumed at 35%. A property's basis would be depreciated on a straight line basis over 63 years. The hotel's FF&E property would be depreciated over a straight line basis over 17 years. Start up expenses, including advertising and marketing, legal and accounting, and air rights lease payment during construction period was deducted in equal amount over 5 years. Real estate taxes and insurance during construction period were deducted in equal amount over 10 years.

A time series will be used to generate the financial projection for 16 years, and a discounted cash flow analysis will be used to determine the Internal Rate of Returns ("IRR") if the project was to be sold or refinanced at any given year. (32)

A capitalization rate of 10.5% to determine the economic value of the office tower, a 12.5% for the hotel, and a 11.5% for the high technology. The rates were assumed relative to comparable developments at an established locations. (33)

Each of the financial projections partition the return on investment at the year of sale or refinance into six sources of returns: operating cash flow, tax benefits, investment tax credits, loan amortization, return of equity, and net appreciation after capital gains tax at sale. (33) (43) The relative value of return for each source indicates

where the returns are generated from. Investment tax credit is generated to the owner at the year the building is put into service, while cash flow and tax benefits are at each operating year. The owner would benefit from the loan amortization and return on equity only at sale or refinancing in the future year. Net appreciation is the most unpreditable source of future return, realized only at sale or refinancing.

THE ARD OFFICE TOWER FINANCING STRUCTURE

The revenue potential for the ARD office tower is $49.70 per net rentable SF in the 1992 market, escalated from $35.00 in 1985.

For the office project, the Investor would be committed to the development, construction financing, stand by long term financing, and operation for the long term investment. In the first scenario, the Developer contributes an equal amount of the equity into the project along with the Investor. Both would be allocated equal interest in all the benefits. Exhibit 5.1 illustrates that over a 11 year holding period, the Investor would earn a 20.36% BTIRR. The Developer would earn a After Tax Net Present Value ("ATNPV") of $3.685 million, using a discount rate of 15%.

The second scenario is preferred, where the Investor contribute all the project equity at financing, and half of

the additional equity required for operating deficit. The balance would be contributed by the Developer. To achieve the return on investment objective, the Investor requires 80% partnership interest in the venture, because the revenue potential of the ARD office is insufficient for the Developer to negotiate an equal interest. The Developer would grant 80% interest to the Investor only if the Investor would also be a general partner along with the Developer, and share the unlimited financial risk exposure. Exhibit 5.2 illustrates that over a 11 year holding period, the Investor would earn a 18.21% BTIRR. The Developer would earn an ATNPV of $5.410 million, at the same discount rate of 15%. The primary sources of return are from annual cash flow and net appreciation at sale.

THE ARD HOTEL FINANCING STRUCTURE

The decision to proceed with the hotel development or with the alternate second office tower depends directly on the revenue potential of the hotel at the South Station site in 1992, escalated from 1985.

If room revenue can be realistically forcasted to achieve an average of $220 per room night in the 1992 market (escalated from $142 in 1985), then the operating hotel project could generate only a maximum of 11.25% ATIRR to the Investor if the project is sold in year 15. Exhibit

5.3 illustrates the returns on investment if the hotel project is sold or refinancing at any given year. The primary sources of return are from annual cash flow and net appreciation at sale.

The $220 room rate had previously generated a cash on cash return of 15.49%, greater than the 14.50% required, in Chpater 4. When the financing structuring are incorporated in the financial projections, however, the returns on investment are adjusted in accordance to the allocation of interests, and may indicate a development is not financible.

If the hotel revenue potential is forcasted to be an average of $140 per room nights (escalated from the $100 in 1985), and if the Developer decides to evalute the financiability of the hotel project with 35 or less individual investors (i.e. syndicating the tax shelter benefits), Exhibit 5.4 illustates that such an alternative is not a feasible one. The individual investors would contribute 100% of the equity; the Developer would allocate 95% of the profits and losses, and 50% of the CF and residual benefits so that the individual investors could generate a maximum of only 5.67% IRR with the tax benefits. The institutional Investor would withdraw, and be compensated with a fee equal to .5% of the project cost; its general partnership interest would transfer to the Developer before construction starts, and its limited partnership interest to the individual investors as each is admitted. Because the individual investors are limited

partners, whereby their financial risks are limited to their capital investment, the Developer would not grant them greater the 50% allocation in the cash flow and residual benefits, whereby its financial risk as general partner is unlimited.

THE ARD HIGH TECHNOLOGY FACILITY

The potential uses in the 6 story high technology facility, as revised in a foregoing chapter, are for research and development, data processing, and/or back office operations. An alternate development for the site would be a moderate quality office tower that can also served and be marketed to the high technology operations.

If the revenue potential is forcasted to be an average of $24 per Net Rentable Area SF (escalated from a $17 in 1985). A maximum of only 10.87% IRR with tax benefits could be generated to individual investors, syndicated through a limited partnership, as presented in Exhibit 5.5. The primary source of the return is from annual cash flow. The $24 rent had previously in Chapter 4 generated a cash on cash required return of 14%.

If the revenue potential is an average of only $17 (escalated from $12 in 1985) the market potential, then the facility might be developed to be 50% owned by the tenants as indiviaual investors, as consideration for contributing

100% of the equity capital and leasing 100% of the space. The institutional Investor would withdraw in the same method as described in the foregoing section. A pre-lease commitement for 50% of the space must be secured as a condition before construction starts. Exhibit 5.6 illustates the retuns to the tenants investors if sale or refinancing is elected in any year. An IRR of 8.45% with tax benefits would be generated to the investors if the project is sold at the end of 12 years. The primary source of the return is the return of the equity capital at sale.

AIR RIGHTS DEVELOPMEMT

A closing issue pertaining to the financing of leasehold development is the subject of subordination, of which the ARD development at the BRA air rights is a legal equivalent. The Developer must negotiate with the BRA several provisions pertinent to securing project financing for the leasehold improvements at the South Station ARD.

The Investor, either as a mortgagee or as an equity partner, would require the subordination of the property fee to the project financing. If the subordination is not available as in the case of an air rights development, the Investor would require several measures to protect its economic interest in the development and the project in event of default by the lessee: simultaneous transmittal of notice of default to Investor by lessor; rights by Investor

to cure default; rights by Investor to succeed to all the lessee's rights under the original lease for the unexpired term; and rights by Investor to assign or sublet the lease to another developer.

SOUTH STATION ARD OFFICE TOWER
SUMMARY EXHIBIT - FINANCIAL PROJECTIONS ($ 000'S)

		ALLOCATION OF INTERESTS	REVENUE ESCALATION	1ST AVAIL BTCF	R.O.EQUITY FROM BTCF	ACCUMU- LATE @	3RD AVAIL BTCF	4TH AVAIL BTCF	PROFITS & LOSSES	RESIDUAL IF RESIDUAL	RESIDUAL IF CONVERSION	TENANT DATA	YEAR LEASES	TURN OVER %	MONTHS VACANT	OR VACANCY %
PROJECT COST DATA																
TOTAL PROJECT COST	87,312	LENDER	0.00%	0.00%						0.00%						5.00%
CONSTRUCTION LOAN AMOUNT	69,849	INVESTORS			0.00%	0.00%		50.00%	50.00%	50.00%		50.00%	5	20.00%	3	
LONG TERM MORTGAGE AMOUNT	72,232	DEVELOPER					0	50.00%	50.00%	50.00%		50.00%	3	20.00%	3	
(13.50%, 30 YRS AMORTIZATION)												(ABSORPTION @ 20,000 SF/MONTH)				

CASH FLOW & RETURN PROJECTIONS @	YEAR DATA COLUMN	1990/1 CONSTRUCTN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LENDER FUNDING		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INVESTOR FUNDING		(8,731)	(496)	1,192	0	0	0	0	0	0	0	0	0	0	0	0	0	
DEVELOPER FUNDING		(8,731)	(496)	1,192	0	0	0	0	0	0	0	0	0	0	0	0	0	
GROSS POTENTIAL REVENUE @	49.70	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898
GROSS POTENTIAL, OTHERS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POTENTIAL ESCALATION @	6.00%	0	0	0	0	1,614	1,614	4,472	4,394	6,394	6,394	8,683	12,507	12,507	15,234	15,234	15,234	23,599
EFFECTIVE OCCUPANCY		6.62%	77.21%	100.00%	100.00%	87.50%	100.00%	87.50%	87.50%	100.00%	100.00%	87.50%	87.50%	100.00%	87.50%	100.00%	100.00%	75.00%
EFFECECTIVE GROSS INCOME		1,118	13,046	16,898	16,898	16,198	18,512	18,698	20,380	23,292	23,292	22,383	25,730	29,405	28,115	32,132	32,132	30,373
- OPERATING EXPENSES & TAXES	12.78	(288)	(3,355)	(4,345)	(4,345)	(3,802)	(4,345)	(3,802)	(3,802)	(4,345)	(4,345)	(3,802)	(3,802)	(4,345)	(3,802)	(4,345)	(4,345)	(3,259)
- HOUSING LINKAGE PAYMENT			(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	0	0	0	0
- TOTAL EXPENSE ESCALATION	6.00%		0	(261)	(537)	(830)	(1,141)	(1,470)	(1,819)	(2,188)	(2,580)	(2,996)	(3,436)	(3,903)	(4,398)	(4,923)	(5,479)	(6,068)
ESCALATION PAID BY TENANTS			0	260.712	537.06672	830.00272	1140.5148	1469.6577	1818.5492	2188.3742	2580.3886	2995.9239	3436.3914	3903.2868	4398.1961	4922.7998	5478.8798	6068.3246
- VACANCY & TURN OVER EXPENSES			0	0	0	(1,327)	0	(2,076)	(1,696)	0	0	(2,136)	(3,086)	0	(2,661)	0	0	(7,724)
- CAPITAL RESERVE @	1.00%	(11).	(130)	(169)	(169)	(162)	(185)	(187)	(204)	(233)	(233)	(224)	(257)	(294)	(281)	(321)	(321)	(304)
NET OPERATING INCOME (NOI)		820	9,486	12,309	12,309	10,832	13,907	12,539	14,603	18,639	18,639	14,146	18,509	24,691	21,371	27,465	27,465	19,086
ACTUAL DEBT SERVICE COVERAGE			0.00	1.00	1.22	1.07	1.38	1.24	1.45	1.84	1.84	1.40	1.83	2.44	2.12	2.72	2.72	1.89
- LEASEHOLD PAYMENT W/ ESCALATION			0	(123)	(123)	0	(139)	(126)	(146)	(186)	(186)	(161)	(185)	(247)	(214)	(275)	(275)	(191)
NOI, AFTER LEASEHOLD PAYMENT			9,486	12,186	12,186	10,832	13,768	12,433	14,457	18,452	18,452	13,985	18,324	24,444	21,158	27,191	27,191	18,895
- INTEREST PAYMENTS @	13.50%		(10,477)	(8,236)	(9,719)	(9,667)	(9,608)	(9,608)	(9,541)	(9,475)	(9,399)	(9,314)	(9,219)	(9,112)	(8,992)	(8,859)	(8,709)	(8,541)
- LOAN AMORTIZATION			0	(239)	(385)	(436)	(495)	(495)	(562)	(629)	(705)	(790)	(885)	(992)	(1,111)	(1,245)	(1,395)	(1,563)
BEFORE TAX CASH FLOW		820	(991)	3,711	2,082	729	3,664	2,329	4,353	8,349	8,349	5,881	8,220	14,340	11,054	17,087	17,087	8,791
- DEDUCTIONS & DEPRECIATIONS		(3,226)	(3,679)	(3,825)	(3,803)	(4,006)	(3,909)	(3,006)	(3,060)	(3,060)	(3,060)	(2,246)	(2,448)	(2,448)	(2,623)	(2,623)	(2,623)	(3,102)
+ LOAN AMORTIZATION & CAPITAL RESERVE		11	130	408	553	598	680	682	766	862	938	1,014	1,142	1,286	1,392	1,566	1,716	1,867
PROFITS & LOSSES, TAXABLE INCOME		(2,395)	(4,540)	293	(1,167)	(2,680)	435	5	2,059	6,150	6,226	4,648	6,914	13,178	9,823	16,030	16,180	7,556
+ NET TAX BENEFITS @	35.00%	838	1,589	(103)	409	938	(152)	(2)	(721)	(2,153)	(2,179)	(1,627)	(2,420)	(4,612)	(3,438)	(5,611)	(5,663)	(2,645)
AFTER TAX CASH FLOW		1,658	598	3,608	2,491	1,666	3,512	2,328	3,633	6,196	6,169	4,254	5,800	9,728	7,616	11,477	11,424	6,147
CAPITALIZED VALUE, ANY YEAR @	10.50%							157,655	168,638	168,638	174,176	199,729	223,951	229,166	249,335	249,335	261,800	
NET GAIN IF SALE OR CONVERSION @ ANY YEAR								80,973	92,660	95,720	103,987	128,116	150,247	157,398	176,519	179,142	193,483	
AFTER TAX CASH IF SALE OR CONVERSION								56,998	63,726	63,217	66,159	82,438	98,251	101,466	114,793	114,986	122,930	
AFTER TAX IRR TO PROJECT								35.23%	33.21%	30.73%	29.42%	29.52%	29.33%	28.46%	28.12%	27.40%	27.06%	
BEFORE TAX IRR TO INVESTORS								20.50%	20.39%	19.26%	18.97%	19.92%	20.36%	19.97%	20.01%	19.58%	19.50%	
AFTER TAX NPV TO DEVELOPER @	15.00%							875	1,436	995	1,109	2,565	3,685	3,627	4,187	3,878	4,080	
BEFORE TAX IRR TO LENDER								15.22%	15.01%	14.86%	14.76%	14.68%	14.62%	14.58%	14.55%	14.52%	14.50%	
LOAN IF REFINANCED @ ANY YEAR	15.00%							70,592	82,084	104,768	104,768	90,757	104,038	138,788	120,129	154,383	154,383	
NET PROCEEDS @ REFINANCING								(792)	11,081	34,100	34,729	21,564	35,502	70,789	53,300	88,331	89,576	
AFTER TAX IRR TO PROJECT								-0.31%	15.16%	19.43%	20.42%	17.34%	21.07%	25.22%	23.63%	25.61%	25.41%	
BEFORE TAX IRR TO INVESTORS								-19.75%	-1.45%	9.82%	10.92%	8.99%	11.90%	15.74%	14.67%	16.77%	16.89%	
AFTER TAX NPV TO DEVELOPER @	15.00%							(9,927)	(6,990)	(2,486)	(2,247)	(3,992)	(2,218)	1,491	(174)	2,547	2,511	
BEFORE TAX IRR TO LENDER								15.22%	15.01%	14.86%	14.76%	14.68%	14.62%	14.58%	14.55%	14.52%	14.50%	

PARTITION OF PROJECT IRR (RELATIVE VALUE)		SALE OR CONVERSION @ YR	12	REFINANCED @ YR	12
BEFORE TAX CASH FLOW			50.55%		58.06%
USABLE TAX BENEFITS @	35.00%		-3.54%		-4.07%
INVESTMENT TAX CREDITS			0.00%		0.00%
LOAN AMORTIZATION			3.74%		4.30%
RETURN OF EQUITY CAPITAL			10.44%		11.35%
NET AFTER TAX APPRECIATION			38.81%		30.36%

NOTE: A negative IRR or an ERR indicates no computation was possible.

SOUTH STATION ARD OFFICE TOWER

SUMMARY EXHIBIT - FINANCIAL PROJECTIONS ($ 000'S)

		ALLOCATION OF INTERESTS	REVENUE ESCALATION	1ST AVAIL R.O.EQUITY BTCF FROM BTCF	ACCUMU- LATE @	3RD AVAIL BTCF	4TH AVAIL BTCF	PROFITS & LOSSES	RESIDUAL IF RESIDUAL CONVERSION	TENANT DATA	YEAR LEASES	TURN OVER %	MONTHS VACANT	OR VACANCY %
PROJECT COST DATA														
TOTAL PROJECT COST	87,312	LENDER	0.00%	0.00%					0.00%					5.00%
CONSTRUCTION LOAN AMOUNT	69,849	INVESTORS		12.00%	0.00%		80.00%	50.00%	80.00%	50.00%	5	20.00%	3	
LONG TERM MORTGAGE AMOUNT	72,232	DEVELOPER				100	20.00%	50.00%	20.00%	50.00%	3	20.00%	3	
(13.50%, 30 YRS AMORTIZATION)										(ABSORPTION @ 20,000 SF/MONTH)				

CASH FLOW & RETURN PROJECTIONS @	YEAR DATA COLUMN	1990/1 CONSTRUCTN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LENDER FUNDING		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INVESTOR FUNDING		(17,462)	(496)	2,383	0	0	0	0	0	0	0	0	0	0	0	0	0	
DEVELOPER FUNDING		0	(496)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
GROSS POTENTIAL REVENUE @	49.70	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898	16,898
GROSS POTENTIAL, OTHERS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POTENTIAL ESCALATION @	6.00%	0	0	0	0	1,614	1,614	4,472	6,394	6,394	6,394	8,683	12,507	12,507	15,234	15,234	15,234	23,599
EFFECTIVE OCCUPANCY		6.62%	77.21%	100.00%	100.00%	87.50%	100.00%	87.50%	87.50%	100.00%	100.00%	87.50%	87.50%	100.00%	87.50%	100.00%	100.00%	75.00%
EFFECECTIVE GROSS INCOME		1,118	13,046	16,898	16,898	16,198	18,512	18,698	20,380	23,292	23,292	22,383	25,730	29,405	28,115	32,132	32,132	30,373
- OPERATING EXPENSES & TAXES	12.78	(288)	(3,355)	(4,345)	(4,345)	(3,802)	(4,345)	(3,802)	(3,802)	(4,345)	(4,345)	(3,802)	(3,802)	(4,345)	(3,802)	(4,345)	(4,345)	(3,259)
- HOUSING LINKAGE PAYMENT			(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)	0	0	0	0
- TOTAL EXPENSE ESCALATION	6.00%		0	(261)	(537)	(830)	(1,141)	(1,470)	(1,819)	(2,188)	(2,580)	(2,996)	(3,436)	(3,903)	(4,398)	(4,923)	(5,479)	(6,068)
ESCALATION PAID BY TENANTS			0	260.712	537.06672	830.00272	1140.5148	1469.6577	1818.5492	2188.3742	2580.3886	2995.9239	3436.3914	3903.2868	4398.1961	4922.7998	5478.8798	6068.3246
- VACANCY & TURN OVER EXPENSES			0	0	0	(1,327)	0	(2,076)	(1,696)	0	0	(2,136)	(3,086)	0	(2,661)	0	0	(7,724)
- CAPITAL RESERVE @	1.00%	(11)	(130)	(169)	(169)	(162)	(185)	(187)	(204)	(233)	(233)	(224)	(257)	(294)	(281)	(321)	(321)	(304)
NET OPERATING INCOME (NOI)		820	9,486	12,309	12,309	10,832	13,907	12,559	14,603	18,639	18,639	16,146	18,509	24,691	21,371	27,465	27,465	19,086
ACTUAL DEBT SERVICE COVERAGE			0.00	1.80	1.22	1.07	1.38	1.24	1.45	1.84	1.84	1.60	1.83	2.44	2.12	2.72	2.72	1.89
- LEASEHOLD PAYMENT W/ ESCALATION			0	(123)	(123)	0	(139)	(126)	(146)	(186)	(186)	(161)	(185)	(247)	(214)	(275)	(275)	(191)
NOI, AFTER LEASEHOLD PAYMENT			9,486	12,186	12,186	10,832	13,768	12,433	14,457	18,452	18,452	15,985	18,324	24,444	21,158	27,191	27,191	18,895
- INTEREST PAYMENTS @	13.50%		(10,477)	(8,236)	(9,719)	(9,667)	(9,608)	(9,608)	(9,541)	(9,475)	(9,399)	(9,314)	(9,219)	(9,112)	(8,992)	(8,859)	(8,709)	(8,541)
- LOAN AMORTIZATION			0	(239)	(385)	(436)	(495)	(495)	(562)	(629)	(705)	(790)	(885)	(992)	(1,111)	(1,245)	(1,395)	(1,563)
BEFORE TAX CASH FLOW		820	(991)	3,711	2,082	729	3,664	2,329	4,353	8,349	8,349	5,881	8,220	14,340	11,054	17,087	17,087	8,791
- DEDUCTIONS & DEPRECIATIONS		(3,226)	(3,679)	(3,825)	(3,803)	(4,006)	(3,909)	(3,006)	(3,060)	(3,060)	(3,060)	(2,246)	(2,448)	(2,448)	(2,623)	(2,623)	(2,623)	(3,102)
+ LOAN AMORTIZATION & CAPITAL RESERVE		11	130	408	553	598	680	682	766	862	938	1,014	1,142	1,286	1,392	1,566	1,716	1,867
PROFITS & LOSSES, TAXABLE INCOME		(2,395)	(4,540)	293	(1,167)	(2,680)	435	5	2,059	6,150	6,226	4,648	6,914	13,178	9,823	16,030	16,180	7,556
+ NET TAX BENEFITS @	35.00%	838	1,589	(103)	409	938	(152)	(2)	(721)	(2,153)	(2,179)	(1,627)	(2,420)	(4,612)	(3,438)	(5,611)	(5,663)	(2,645)
AFTER TAX CASH FLOW		1,658	598	3,608	2,491	1,666	3,512	2,328	3,633	6,196	6,169	4,254	5,900	9,728	7,616	11,477	11,424	6,147
CAPITALIZED VALUE, ANY YEAR @	10.50%							157,655	168,638	168,638	174,176	199,729	223,951	229,166	249,335	249,335	261,800	
NET GAIN IF SALE OR CONVERSION @ ANY YEAR								80,973	92,660	95,720	103,987	128,116	150,247	157,598	176,519	179,142	193,483	
AFTER TAX CASH IF SALE OR CONVERSION								56,998	63,726	63,217	66,159	82,438	98,251	101,466	114,793	114,986	122,930	
AFTER TAX IRR TO PROJECT								35.23%	33.21%	30.73%	29.42%	29.52%	29.33%	28.46%	28.12%	27.40%	27.06%	
BEFORE TAX IRR TO INVESTORS								17.28%	17.50%	16.71%	16.62%	17.67%	18.21%	17.96%	18.09%	17.74%	17.74%	
AFTER TAX NPV TO DEVELOPER @	15.00%							4,838	5,033	4,692	4,591	5,088	5,410	5,154	5,234	4,892	4,781	
BEFORE TAX IRR TO LENDER								15.22%	15.01%	14.86%	14.76%	14.68%	14.62%	14.58%	14.55%	14.52%	14.50%	
LOAN IF REFINANCED @ ANY YEAR	15.00%							70,592	82,084	104,768	104,768	90,757	104,038	138,788	120,129	154,383	154,383	
NET PROCEEDS @ REFINANCING								(792)	11,081	34,100	34,729	21,564	35,502	70,789	53,308	88,331	89,576	
AFTER TAX IRR TO PROJECT								-0.31%	15.16%	19.43%	20.42%	17.34%	21.07%	25.22%	23.63%	25.61%	25.41%	
BEFORE TAX IRR TO INVESTORS								-20.55%	-3.70%	8.18%	9.28%	7.64%	10.32%	13.95%	13.00%	15.05%	15.21%	
AFTER TAX NPV TO DEVELOPER @	15.00%							1,898	2,864	3,202	3,164	2,391	2,985	4,244	3,441	4,317	4,117	
BEFORE TAX IRR TO LENDER								15.22%	15.01%	14.86%	14.76%	14.68%	14.62%	14.58%	14.55%	14.52%	14.50%	

PARTITION OF PROJECT IRR (RELATIVE VALUE)		SALE OR CONVERSION @ YR 11	REFINANCED @ YR 12
BEFORE TAX CASH FLOW		43.03%	58.06%
USABLE TAX BENEFITS @	35.00%	-1.26%	-4.07%
INVESTMENT TAX CREDITS		0.00%	0.00%
LOAN AMORTIZATION		3.62%	4.30%
RETURN OF EQUITY CAPITAL		11.88%	11.35%
NET AFTER TAX APPRECIATION		42.73%	30.36%

NOTE: A negative IRR or an ERR indicates no computation was possible.

SOUTH STATION ARD HOTEL
SUMMARY EXHIBIT - FINANCIAL PROJECTIONS

($ 000'S)

		ALLOCATION OF	REVENUE ESCALATION	1ST AVAIL R.O. EQUIT BTCF	FROM BTCF	ACCUMU- LATE @	3RD AVAIL BTCF	4TH AVAIL BTCF	PROFITS & LOSSES	RESIDUAL IF CONVERSION
PROJECT COST DATA		INTERESTS								
TOTAL PROJECT COST	63,029	LENDER	0.00%	0.00%						0.00%
CONSTRUCTION LOAN AMOUNT	50,423	INVESTORS			10.00%	0.00%		50.00%	95.00%	50.00%
LONG TERM MORTGAGE AMOUNT	40,500	DEVELOPER					100	50.00%	5.00%	50.00%

CASH FLOW & RETURN PROJECTIONS @		YEAR CONSTRUCTN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		1990/1																
		DATA COLUMN																
LENDER FUNDING		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INVESTOR FUNDING		(12,606)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DEVELOPER FUNDING		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HOTEL ROOM RATE, w/INFLATN @	6.00%	220.00	220.00	233.20	247.19	262.02	277.74	294.41	312.07	330.80	350.65	371.69	393.99	417.63	442.68	469.24	497.40	527.24
EFFECTIVE OCCUPANCY		1.29%	55.00%	60.00%	65.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
HOTEL ROOM REVENUE		361	15,458	17,875	20,526	23,431	24,837	26,328	27,907	29,582	31,357	33,238	35,232	37,346	39,587	41,962	44,480	47,149
FOOD, BEVERAGES & OTHERS		152	6,492	7,507	8,621	9,841	10,432	11,058	11,721	12,424	13,170	13,960	14,798	15,685	16,627	17,624	18,682	19,802
GROSS REVENUES		513	21,950	25,382	29,147	33,273	35,269	37,385	39,628	42,006	44,526	47,198	50,030	53,032	56,213	59,586	63,161	66,951
- OPERATING EXPENSES & TAXES	202.40	(332)	(14,221)	(15,514)	(16,807)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)	(18,100)
- HOUSING LINKAGE PAYMENT			(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)
- TOTAL EXPENSE ESCALATION	6.00%		0	(931)	(2,077)	(3,457)	(4,751)	(6,122)	(7,575)	(9,116)	(10,748)	(12,479)	(14,314)	(16,259)	(18,320)	(20,506)	(22,822)	(25,277)
- CAPITAL RESERVE @	2.00%	(10)	(439)	(508)	(583)	(665)	(705)	(748)	(793)	(840)	(891)	(944)	(1,001)	(1,061)	(1,124)	(1,192)	(1,263)	(1,339)
GROSS OPERATING INCOME		170	7,222	8,362	9,612	10,982	11,645	12,348	13,093	13,883	14,720	15,607	16,548	17,544	18,601	19,721	20,909	22,167
GROSS OPERATING RATIO			38.38%	38.38%	38.20%	38.03%	37.87%	37.72%	37.58%	37.45%	37.32%	37.20%	37.09%	36.98%	36.88%	36.79%	36.70%	36.61%
- GROUND LEASE PAYMENT W/ ESCALATION			0	0	(96)	(110)	(116)	(123)	(131)	(139)	(147)	(156)	(165)	(175)	(186)	(197)	(209)	(222)
- INTEREST PAYMENTS @	13.50%		(5,071)	(6,958)	(5,405)	(6,831)	(6,828)	(5,412)	(5,378)	(5,344)	(5,305)	(5,262)	(5,213)	(5,159)	(5,098)	(5,029)	(4,953)	(4,867)
- LOAN AMORTIZATION			0	0	(188)	(223)	(253)	(253)	(287)	(321)	(360)	(403)	(452)	(506)	(567)	(636)	(712)	(798)
- INCENTIVE MANAGEMENT FEE			0	(140)	(392)	(382)	(445)	(656)	(730)	(808)	(891)	(979)	(1,072)	(1,170)	(1,275)	(1,386)	(1,503)	(1,628)
BEFORE TAX CASH FLOW		170	2,151	1,263	3,531	3,436	4,003	5,904	6,567	7,271	8,017	8,807	9,645	10,534	11,475	12,473	13,531	14,653
- DEDUCTIONS & DEPRECIATIONS		0	(3,468)	(3,586)	(3,569)	(3,569)	(3,569)	(3,214)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)
+ LOAN AMORTIZATION & CAPITAL RESERVE		10	439	508	771	888	958	1,001	1,080	1,161	1,251	1,347	1,453	1,567	1,692	1,828	1,976	2,137
PROFITS & LOSSES, TAXABLE INCOME		181	(878)	(1,815)	732	755	1,392	3,690	6,614	7,399	8,234	9,122	10,065	11,068	12,134	13,268	14,474	15,757
+ NET TAX BENEFITS @	35.00%	(63)	307	635	(256)	(264)	(487)	(1,291)	(2,315)	(2,590)	(2,882)	(3,193)	(3,523)	(3,874)	(4,247)	(4,644)	(5,066)	(5,515)
AFTER TAX CASH FLOW		107	2,459	1,899	3,275	3,172	3,516	4,612	4,252	4,681	5,135	5,615	6,123	6,660	7,228	7,830	8,465	9,138
CAPITALIZED VALUE, ANY YEAR @	12.50%							111,085	117,783	124,882	132,408	140,385	148,841	157,804	167,305	177,376	188,051	
NET GAIN IF SALE OR CONVERSION @ ANY YEAR								47,718	55,047	62,754	70,861	79,392	88,374	97,832	107,796	118,296	129,363	
AFTER TAX CASH IF SALE OR CONVERSION								48,379	52,363	56,626	61,184	66,056	71,264	76,831	82,781	89,140	95,937	
AFTER TAX IRR TO PROJECT								39.69%	37.21%	35.42%	34.09%	33.06%	32.25%	31.61%	31.09%	30.67%	ERR	
AFTER TAX IRR TO INVESTORS								10.60%	10.77%	10.89%	10.99%	11.06%	11.12%	11.17%	11.20%	11.23%	11.25%	
AFTER TAX NPV TO DEVELOPER @	15.00%							11,135	11,862	12,553	13,206	13,823	14,403	14,948	15,458	15,935	16,381	
BEFORE TAX IRR TO LENDER								14.84%	14.68%	14.56%	14.48%	14.42%	14.38%	14.35%	14.32%	14.30%	14.28%	
LOAN IF REFINANCED @ ANY YEAR	15.00%							69,409	73,596	78,035	82,740	87,727	93,014	98,617	104,557	110,854	117,528	
NET PROCEEDS @ REFINANCING								28,878	33,276	37,958	42,937	48,234	53,872	59,871	66,258	73,059	80,302	
AFTER TAX IRR TO PROJECT								25.53%	27.46%	28.52%	29.10%	29.40%	29.53%	29.57%	29.55%	29.50%	ERR	
AFTER TAX IRR TO INVESTORS								5.52%	6.87%	7.84%	8.57%	9.13%	9.56%	9.90%	10.16%	10.37%	10.54%	
AFTER TAX NPV TO DEVELOPER @	15.00%							7,027	8,368	9,583	10,684	11,682	12,587	13,409	14,156	14,834	15,451	
BEFORE TAX IRR TO LENDER								14.84%	14.68%	14.56%	14.48%	14.42%	14.38%	14.35%	14.32%	14.30%	14.28%	

PARTITION OF PROJECT IRR (RELATIVE VALUE)		SALE OR CONVERSION @ YR	10	REFINANCED @ YR	10
BEFORE TAX CASH FLOW			58.46%		67.78%
USABLE TAX BENEFITS @	35.00%		-10.46%		-12.12%
INVESTMENT TAX CREDITS			0.00%		0.00%
LOAN AMORTIZATION			1.81%		2.10%
RETURN OF EQUITY CAPITAL			10.00%		11.59%
NET AFTER TAX APPRECIATION			40.18%		30.65%

NOTE: A negative IRR or an ERR indicates no computation was possible.

SOUTH STATION ARD HOTEL
SUMMARY EXHIBIT - FINANCIAL PROJECTIONS

($ 000'S)

		ALLOCATION OF	REVENUE	1ST AVAIL	R.O. EQUIT	ACCUMU-	3RD AVAIL	4TH AVAIL	PROFITS		RESIDUAL IF
PROJECT COST DATA		INTERESTS	ESCALATION	BTCF	FROM BTCF	LATE @	BTCF	BTCF	& LOSSES	RESIDUAL	CONVERSION
TOTAL PROJECT COST	63,029	LENDER	0.00%	0.00%						0.00%	
CONSTRUCTION LOAN AMOUNT	50,423	INVESTORS			10.00%	0.00%		50.00%	95.00%	50.00%	
LONG TERM MORTGAGE AMOUNT	40,500	DEVELOPER					100	50.00%	5.00%	50.00%	

CASH FLOW & RETURN PROJECTIONS @		1990/1 YEAR CONSTRUCTN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DATA COLUMN																		
LENDER FUNDING		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INVESTOR FUNDING		(12,606)	(61)	(1,506)	0	0	0	0	0	0	0	0	0	0	0	0	0	
DEVELOPER FUNDING		0	(3)	(79)	0	0	0	0	0	0	0	0	0	0	0	0	0	
HOTEL ROOM RATE, w/INFLATN @	6.00%	142.00	142.00	150.52	159.55	169.12	179.27	190.03	201.43	213.52	226.33	239.91	254.30	269.56	285.73	302.88	321.05	340.31
EFFECTIVE OCCUPANCY		1.29%	55.00%	60.00%	65.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
HOTEL ROOM REVENUE		233	9,977	11,537	13,249	15,124	16,031	16,993	18,013	19,094	20,239	21,454	22,741	24,105	25,552	27,085	28,710	30,432
FOOD, BEVERAGES & OTHERS		98	4,190	4,846	5,564	6,352	6,733	7,137	7,565	8,019	8,500	9,011	9,551	10,124	10,732	11,376	12,058	12,782
GROSS REVENUES		331	14,168	16,383	18,813	21,476	22,765	24,130	25,578	27,113	28,740	30,464	32,292	34,229	36,283	38,460	40,768	43,214
- OPERATING EXPENSES & TAXES	130.64	(215)	(9,179)	(10,014)	(10,848)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)	(11,682)
- HOUSING LINKAGE PAYMENT			(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)	(68)
- TOTAL EXPENSE ESCALATION	6.00%		0	(601)	(1,341)	(2,232)	(3,066)	(3,951)	(4,889)	(5,884)	(6,938)	(8,055)	(9,239)	(10,494)	(11,825)	(13,235)	(14,730)	(16,315)
- CAPITAL RESERVE @	2.00%	(7)	(283)	(328)	(376)	(430)	(455)	(483)	(512)	(542)	(575)	(609)	(646)	(685)	(726)	(769)	(815)	(864)
GROSS OPERATING INCOME		110	4,637	5,373	6,180	7,064	7,492	7,946	8,427	8,937	9,477	10,050	10,657	11,300	11,982	12,705	13,472	14,284
GROSS OPERATING RATIO			30.38%	30.38%	30.20%	30.03%	37.87%	37.72%	37.58%	37.45%	37.32%	37.20%	37.09%	36.98%	36.88%	36.79%	36.70%	36.61%
- GROUND LEASE PAYMENT W/ ESCALATION			0	0	0	0	0	0	0	0	(95)	(100)	(107)	(113)	(120)	(127)	(135)	(143)
- INTEREST PAYMENTS @	13.50%		(5,071)	(6,950)	(5,405)	(6,831)	(6,828)	(5,412)	(5,378)	(5,344)	(5,305)	(5,262)	(5,213)	(5,159)	(5,098)	(5,029)	(4,953)	(4,867)
- LOAN AMORTIZATION			0	0	(188)	(223)	(253)	(253)	(287)	(321)	(360)	(403)	(452)	(506)	(567)	(636)	(712)	(798)
- INCENTIVE MANAGEMENT FEE			0	0	(59)	(1)	(41)	(228)	(276)	(327)	(372)	(428)	(488)	(552)	(620)	(691)	(767)	(848)
BEFORE TAX CASH FLOW		110	(433)	(1,585)	529	9	371	2,053	2,486	2,944	3,345	3,856	4,396	4,970	5,578	6,222	6,905	7,628
- DEDUCTIONS & DEPRECIATIONS		0	(3,468)	(3,586)	(3,569)	(3,569)	(3,569)	(3,214)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)
+ LOAN AMORTIZATION & CAPITAL RESERVE		7	283	328	564	652	708	736	799	864	935	1,013	1,098	1,191	1,293	1,405	1,528	1,663
PROFITS & LOSSES, TAXABLE INCOME		117	(3,618)	(4,844)	(2,477)	(2,908)	(2,491)	(426)	2,251	2,775	3,247	3,835	4,461	5,128	5,838	6,594	7,399	8,258
+ NET TAX BENEFITS @	35.00%	(41)	1,266	1,695	867	1,018	872	149	(788)	(971)	(1,136)	(1,342)	(1,561)	(1,795)	(2,043)	(2,308)	(2,590)	(2,890)
AFTER TAX CASH FLOW		69	833	110	1,396	1,027	1,242	2,202	1,698	1,973	2,209	2,513	2,835	3,175	3,534	3,914	4,315	4,738
CAPITALIZED VALUE, ANY YEAR @	12.50%							71,507	75,830	80,413	85,270	90,419	95,877	101,662	107,795	114,295	121,185	
NET GAIN IF SALE OR CONVERSION @ ANY YEAR								10,515	15,612	20,953	26,552	32,425	38,588	45,059	51,857	59,000	66,510	
AFTER TAX CASH IF SALE OR CONVERSION								23,700	26,233	28,958	31,886	35,030	38,407	42,032	45,924	50,101	54,585	
AFTER TAX IRR TO PROJECT								15.47%	15.76%	15.90%	16.13%	16.25%	16.35%	16.43%	16.49%	16.55%	16.59%	
AFTER TAX IRR TO INVESTORS								-0.99%	2.56%	1.75%	2.68%	3.42%	4.04%	4.55%	4.98%	5.35%	5.67%	
AFTER TAX NPV TO DEVELOPER @	15.00%							2,304	2,743	3,166	3,560	3,935	4,291	4,629	4,947	5,246	5,526	
BEFORE TAX IRR TO LENDER								14.87%	14.70%	14.58%	14.50%	14.44%	14.39%	14.36%	14.33%	14.31%	14.30%	
LOAN IF REFINANCED @ ANY YEAR	15.00%							44,665	47,367	50,232	53,269	56,488	59,901	63,518	67,352	71,416	75,723	
NET PROCEEDS @ REFINANCING								4,381	7,310	10,433	13,761	17,308	21,090	25,122	29,424	34,015	38,916	
AFTER TAX IRR TO PROJECT								-4.93%	1.93%	6.26%	-0.45%	4.87%	8.15%	10.34%	11.88%	12.99%	13.81%	
AFTER TAX IRR TO INVESTORS								-21.46%	-14.87%	-10.07%	-2.01%	-0.34%	0.99%	2.06%	2.94%	3.66%	4.26%	
AFTER TAX NPV TO DEVELOPER @	15.00%							1,173	1,835	2,442	1,195	1,928	2,590	3,187	3,726	4,214	4,655	
BEFORE TAX IRR TO LENDER								14.87%	14.70%	14.58%	14.50%	14.44%	14.39%	14.36%	14.33%	14.31%	14.30%	

PARTITION OF PROJECT IRR (RELATIVE VALUE)		SALE OR CONVERSION @ YR	10	REFINANCED @ YR	10
BEFORE TAX CASH FLOW			16.22%		24.31%
USABLE TAX BENEFITS @	35.00%		18.02%		27.00%
INVESTMENT TAX CREDITS			0.00%		0.00%
LOAN AMORTIZATION			4.30%		6.44%
RETURN OF EQUITY CAPITAL			26.76%		35.46%
NET AFTER TAX APPRECIATION			34.70%		6.79%

NOTE: A negative IRR or an ERR indicates no computation was possible.

SOUTH STATION AND HIGH TECHNOLOGY FACILITY
SUMMARY EXHIBIT - FINANCIAL PROJECTIONS

($ 000'S)

PROJECT COST DATA		ALLOCATION OF (INTERESTS	REVENUE ESCALATION	1ST AVAIL BTCF	R.O.EQUITY FROM BTCF	ACCUMU- LATE @	3RD AVAIL BTCF	4TH AVAIL BTCF	PROFITS & LOSSES	RESIDUAL IF CONVERSION		TENANT DATA	YEAR LEASES	TURN OVER %	MONTHS VACANT	OR VACANCY %
TOTAL PROJECT COST	35,878	LENDER	0.00%	0.00%						0.00%						5.00%
CONSTRUCTION LOAN AMOUNT	28,703	INVESTORS			10.00%	0.00%		50.00%	95.00%	50.00%		50.00%	5	10.00%	3	
LONG TERM MORTGAGE AMOUNT	31,650	DEVELOPER					100	50.00%	5.00%	50.00%		50.00%	3	10.00%	3	
(13.50%, 30 YRS AMORTIZATION)												(ABSORPTION @ 10,000 SF/MONTH)				

CASH FLOW & RETURN PROJECTIONS @	YEAR DATA COLUMN	1990/1 CONSTRUCTN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LENDER FUNDING		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INVESTOR FUNDING		(7,176)	(1,102)	1,473	0	0	0	0	0	0	0	0	0	0	0	0	0	
DEVELOPER FUNDING		0	(58)	1,473	0	0	0	0	0	0	0	0	0	0	0	0	0	
GROSS POTENTIAL REVENUE @	24.00	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400
GROSS POTENTIAL, OTHERS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POTENTIAL ESCALATION @	6.00%	0	0	0	0	516	516	1,429	2,043	2,043	2,043	2,775	3,997	3,997	4,868	4,868	4,868	7,541
EFFECTIVE OCCUPANCY		6.67%	60.00%	100.00%	100.00%	87.50%	100.00%	87.50%	87.50%	100.00%	100.00%	87.50%	87.50%	100.00%	87.50%	100.00%	100.00%	75.00%
EFFECECTIVE GROSS INCOME		360	3,240	5,400	5,400	5,176	5,916	5,975	6,513	7,443	7,443	7,153	8,222	9,397	8,985	10,268	10,268	9,706
- OPERATING EXPENSES & TAXES	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- HOUSING LINKAGE PAYMENT			(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	0	0	0	0
- TOTAL EXPENSE ESCALATION	6.00%		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESCALATION PAID BY TENANTS			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- VACANCY & TURN OVER EXPENSES			0	0	0	(394)	0	(614)	(503)	0	0	(633)	(912)	0	(788)	0	0	(2,283)
- CAPITAL RESERVE @	1.00%	(4)	(32)	(54)	(54)	(52)	(59)	(60)	(65)	(74)	(74)	(72)	(82)	(94)	(90)	(103)	(103)	(97)
NET OPERATING INCOME (NOI)		356	3,146	5,284	5,284	4,669	5,795	5,240	5,883	7,307	7,307	6,386	7,166	9,241	8,107	10,166	10,166	7,326
ACTUAL DEBT SERVICE COVERAGE			0.00	4.77	1.19	1.05	1.31	1.18	1.33	1.65	1.65	1.44	1.62	2.09	1.83	2.30	2.30	1.65
- LEASEHOLD PAYMENT W/ ESCALATION			0	(53)	(53)	0	(58)	(52)	(59)	(73)	(73)	(64)	(72)	(92)	(81)	(102)	(102)	(73)
NOI, AFTER LEASEHOLD PAYMENT			3,146	5,231	5,231	4,669	5,737	5,187	5,824	7,234	7,234	6,323	7,095	9,149	8,026	10,064	10,064	7,253
- INTEREST PAYMENTS @	13.50%		(4,305)	(2,517)	(4,268)	(4,246)	(4,222)	(4,222)	(4,194)	(4,166)	(4,135)	(4,099)	(4,060)	(4,016)	(3,966)	(3,910)	(3,848)	(3,778)
- LOAN AMORTIZATION			0	(39)	(160)	(181)	(206)	(206)	(233)	(261)	(293)	(328)	(367)	(412)	(461)	(517)	(579)	(649)
BEFORE TAX CASH FLOW		356	(1,160)	2,676	804	242	1,310	760	1,397	2,807	2,807	1,895	2,668	4,721	3,599	5,637	5,637	2,826
- DEDUCTIONS & DEPRECIATIONS		(1,263)	(1,363)	(1,446)	(1,438)	(1,512)	(1,462)	(1,032)	(1,029)	(1,029)	(1,029)	(812)	(872)	(872)	(923)	(923)	(923)	(1,064)
+ LOAN AMORTIZATION & CAPITAL RESERVE		4	32	93	214	233	265	265	298	336	367	399	450	506	551	619	682	746
PROFITS & LOSSES, TAXABLE INCOME		(903)	(2,491)	1,323	(421)	(1,037)	112	(6)	666	2,113	2,144	1,483	2,246	4,355	3,227	5,333	5,395	2,507
+ NET TAX BENEFITS @	35.00%	316	872	(463)	147	363	(39)	2	(233)	(740)	(751)	(519)	(786)	(1,524)	(1,129)	(1,867)	(1,888)	(877)
AFTER TAX CASH FLOW		672	(288)	2,213	951	605	1,270	762	1,164	2,067	2,056	1,376	1,882	3,197	2,469	3,770	3,748	1,948
CAPITALIZED VALUE, ANY YEAR @	11.50%							62,054	62,135	62,135	68,153	78,341	78,444	85,606	85,717	85,717	107,751	
NET GAIN IF SALE OR CONVERSION @ ANY YEAR								30,303	30,905	31,934	38,621	48,377	48,432	56,036	56,276	57,200	78,835	
AFTER TAX CASH IF SALE OR CONVERSION								16,926	16,997	16,870	20,448	26,904	27,308	31,746	32,179	32,317	45,973	
AFTER TAX IRR TO PROJECT								31.77%	29.12%	27.57%	27.95%	28.54%	27.41%	27.43%	26.67%	26.17%	26.90%	
AFTER TAX IRR TO INVESTORS								7.27%	7.20%	7.23%	8.37%	9.67%	9.45%	10.01%	9.81%	9.68%	10.87%	
AFTER TAX NPV TO DEVELOPER @	15.00%							6,313	6,230	6,347	6,977	7,704	7,663	8,183	8,168	8,268	9,184	
BEFORE TAX IRR TO LENDER								13.40%	13.42%	13.44%	13.45%	13.46%	13.47%	13.48%	13.49%	13.50%	13.50%	
LOAN IF REFINANCED @ ANY YEAR	15.00%							29,453	33,067	41,071	41,071	35,898	40,282	51,943	45,569	57,140	57,140	
NET PROCEEDS @ REFINANCING								(1,906)	1,877	10,035	10,296	5,467	10,135	22,047	16,148	28,065	28,581	
AFTER TAX IRR TO PROJECT								-5.35%	12.78%	16.70%	18.39%	20.39%	19.54%	24.09%	22.63%	24.77%	24.67%	
AFTER TAX IRR TO INVESTORS								-23.91%	-10.03%	4.08%	4.71%	-0.48%	5.19%	8.23%	7.12%	9.06%	9.06%	
AFTER TAX NPV TO DEVELOPER @	15.00%							4,076	4,983	5,444	5,720	6,104	5,958	7,399	6,972	8,060	8,196	
BEFORE TAX IRR TO LENDER								13.40%	13.42%	13.44%	13.45%	13.46%	13.47%	13.48%	13.49%	13.50%	13.50%	

PARTITION OF PROJECT IRR (RELATIVE VALUE)		SALE OR CONVERSION @ YR	12	REFINANCED @ YR	12
BEFORE TAX CASH FLOW			57.58%		65.59%
USABLE TAX BENEFITS @	35.00%		1.68%		1.91%
INVESTMENT TAX CREDITS			0.00%		0.00%
LOAN AMORTIZATION			3.47%		3.96%
RETURN OF EQUITY CAPITAL			10.79%		10.58%
NET AFTER TAX APPRECIATION			26.48%		17.97%

NOTE: A negative IRR or an ERR indicates no computation was possible.

SOUTH STATION ARD HIGH TECHNOLOGY FACILITY
SUMMARY EXHIBIT - FINANCIAL PROJECTIONS

($ 000'S)

		ALLOCATION OF	REVENUE 1ST AVAIL	R.O.EQUITY	ACCUMU-	3RD AVAIL	4TH AVAIL	PROFITS	RESIDUAL IF		TENANT	YEAR	TURN	MONTHS	OR
PROJECT COST DATA		INTERESTS	ESCALATION	BTCF FROM BTCF	LATE @	BTCF	BTCF	& LOSSES	RESIDUAL	CONVERSION	DATA	LEASES	OVER %	VACANT	VACANCY %
TOTAL PROJECT COST	35,878	LENDER	0.00%	0.00%					0.00%						5.00%
CONSTRUCTION LOAN AMOUNT	28,703	INVESTORS		10.00%	0.00%		50.00%	95.00%	50.00%		50.00%	5	10.00%	3	
LONG TERM MORTGAGE AMOUNT	22,419	DEVELOPER				100	50.00%	5.00%	50.00%		50.00%	3	10.00%	3	
(13.50%, 30 YRS AMORTIZATION)											(ABSORPTION @ 10,000 SF/MONTH)				

CASH FLOW & RETURN PROJECTIONS @	YEAR	1990/1 CONSTRUCTN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	DATA COLUMN																	
LENDER FUNDING		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
INVESTOR FUNDING		(7,176)	(1,991)	(5,970)	(336)	(795)	(12)	0	0	0	0	0	0	0	0	0	0	
DEVELOPER FUNDING		0	(105)	0	(18)	(42)	(1)	0	0	0	0	0	0	0	0	0	0	
GROSS POTENTIAL REVENUE @	17.00	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825	3,825
GROSS POTENTIAL, OTHERS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POTENTIAL ESCALATION @	6.00%	0	0	0	0	365	365	1,012	1,447	1,447	1,447	1,965	2,831	2,831	3,448	3,448	3,448	5,342
EFFECTIVE OCCUPANCY		6.67%	60.00%	100.00%	100.00%	87.50%	100.00%	87.50%	87.50%	100.00%	100.00%	87.50%	87.50%	100.00%	87.50%	100.00%	100.00%	75.00%
EFFECECTIVE GROSS INCOME		255	2,295	3,825	3,825	3,667	4,190	4,233	4,613	5,272	5,272	5,067	5,824	6,656	6,364	7,273	7,273	6,875
- OPERATING EXPENSES & TAXES	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- HOUSING LINKAGE PAYMENT			(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	0	0	0	0
- TOTAL EXPENSE ESCALATION	6.00%		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESCALATION PAID BY TENANTS			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- VACANCY & TURN OVER EXPENSES			0	0	0	(322)	0	(483)	(407)	0	0	(509)	(710)	0	(631)	0	0	(1,790)
- CAPITAL RESERVE @	1.00%	(3)	(23)	(38)	(38)	(37)	(42)	(42)	(46)	(53)	(53)	(51)	(58)	(67)	(64)	(73)	(73)	(69)
NET OPERATING INCOME (NOI)		252	2,210	3,725	3,725	3,246	4,086	3,645	4,098	5,158	5,158	4,445	4,993	6,528	5,670	7,201	7,201	5,016
ACTUAL DEBT SERVICE COVERAGE			0.00	4.75	1.19	1.04	1.30	1.16	1.31	1.64	1.64	1.42	1.59	2.08	1.81	2.30	2.30	1.60
- LEASEHOLD PAYMENT W/ ESCALATION			0	0	0	0	0	0	0	(52)	(52)	0	0	(65)	(57)	(72)	(72)	0
NOI, AFTER LEASEHOLD PAYMENT			2,210	3,725	3,725	3,246	4,086	3,645	4,098	5,106	5,106	4,445	4,993	6,462	5,613	7,129	7,129	5,016
- INTEREST PAYMENTS @	13.50%		(4,305)	(2,725)	(3,965)	(3,954)	(3,954)	(2,990)	(2,971)	(2,951)	(2,929)	(2,904)	(2,876)	(2,844)	(2,809)	(2,770)	(2,726)	(2,676)
- LOAN AMORTIZATION			0	(27)	(113)	(128)	(146)	(146)	(165)	(185)	(207)	(232)	(260)	(292)	(327)	(366)	(410)	(460)
BEFORE TAX CASH FLOW		252	(2,095)	973	(354)	(837)	(13)	509	962	1,970	1,970	1,309	1,858	3,326	2,477	3,993	3,993	1,880
- DEDUCTIONS & DEPRECIATIONS		(1,259)	(1,328)	(1,386)	(1,381)	(1,447)	(1,412)	(970)	(971)	(971)	(971)	(745)	(790)	(790)	(831)	(831)	(831)	(940)
+ LOAN AMORTIZATION & CAPITAL RESERVE		3	23	66	151	165	188	188	211	238	260	283	318	358	390	439	483	528
PROFITS & LOSSES, TAXABLE INCOME		(1,004)	(3,400)	(347)	(1,583)	(2,119)	(1,237)	(273)	202	1,237	1,259	847	1,386	2,894	2,037	3,601	3,645	1,469
+ NET TAX BENEFITS @	35.00%	351	1,190	122	554	742	433	96	(71)	(433)	(441)	(296)	(485)	(1,013)	(713)	(1,260)	(1,276)	(514)
AFTER TAX CASH FLOW		604	(905)	1,094	200	(95)	420	605	891	1,537	1,530	1,012	1,373	2,313	1,764	2,732	2,717	1,366
CAPITALIZED VALUE, ANY YEAR @	11.50%							43,955	44,012	44,012	48,275	55,492	55,564	60,637	60,716	60,716	76,324	
NET GAIN IF SALE OR CONVERSION @ ANY YEAR								13,394	14,012	14,983	19,961	26,980	27,128	32,687	32,961	33,792	49,293	
AFTER TAX CASH IF SALE OR CONVERSION								14,625	14,609	14,434	16,884	21,418	21,667	24,750	25,020	25,056	34,667	
AFTER TAX IRR TO PROJECT								0.61%	1.46%	2.46%	4.92%	7.23%	7.26%	8.45%	8.43%	8.58%	10.31%	
AFTER TAX IRR TO INVESTORS								-10.65%	-8.17%	-6.29%	-4.08%	-2.03%	-1.35%	-0.22%	0.20%	0.59%	2.01%	
AFTER TAX NPV TO DEVELOPER @	15.00%							(166)	(120)	20	518	1,077	1,092	1,498	1,520	1,622	2,298	
BEFORE TAX IRR TO LENDER								13.61%	13.61%	13.61%	13.61%	13.61%	13.61%	13.61%	13.61%	13.62%	13.62%	
LOAN IF REFINANCED @ ANY YEAR	15.00%							20,490	23,033	28,991	28,991	24,983	28,068	36,691	31,870	40,475	40,475	
NET PROCEEDS @ REFINANCING								(1,720)	944	7,007	7,192	3,432	6,718	15,516	11,034	19,879	20,245	
AFTER TAX IRR TO PROJECT								ERR	-27.37%	-5.55%	-2.98%	-6.04%	-0.87%	-2.90%	3.09%	2.93%	4.05%	
AFTER TAX IRR TO INVESTORS								ERR	-37.96%	-20.50%	-16.57%	-17.14%	-12.10%	-2.62%	-6.76%	-0.63%	-0.13%	
AFTER TAX NPV TO DEVELOPER @	15.00%							(148)	400	1,491	1,476	884	1,251	913	1,718	1,466	1,595	
BEFORE TAX IRR TO LENDER								13.61%	13.61%	13.61%	13.61%	13.61%	13.61%	13.61%	13.61%	13.62%	13.62%	

PARTITION OF PROJECT IRR (RELATIVE VALUE)		SALE OR CONVERSION @ YR	12	REFINANCED @ YR	12
BEFORE TAX CASH FLOW			16.26%		21.49%
USABLE TAX BENEFITS @	35.00%		18.53%		24.48%
INVESTMENT TAX CREDITS			0.00%		0.00%
LOAN AMORTIZATION			5.01%		6.62%
RETURN OF EQUITY CAPITAL			44.16%		46.87%
NET AFTER TAX APPRECIATION			16.05%		0.54%

NOTE: A negative IRR or an ERR indicates no computation was possible.

CHAPTER 6

REGULATORY APPROVAL PROCESS

THE RIGHT TO BUILD

This thesis assumes that the Developer has been awarded the developer designation for the South Station ARD from the BRA. The developer designation is a legal equivalent to an option to lease a real property so that the Developer can develop a leasehold improvement. The designation does not constitute a legal right to build the improvements. To secure the legal right to build (i.e. the right to be granted a building permit), the Developer must secure in advance an approval for the master plan for the South Station ARD from the city (in conconjuction with a proper rezoning for the site), environmental clearances from the state, architectural design approvals by the city, and an aggrement on the air rights lease.

The Developer would proceed with the master planninmg phase and the various regulatory processes with the city, state, and federal government (if required), simultaneously since they are all interrelated.

The results from the assessment of the market potential and the financial feasibility analyses of each ARD uses would set the direction for the master planning phase. The master planning phase would define and refine the scope of

the entire development, its density, the individual uses, the functional integretion of the uses, the vehicular and pedestrian circulation, the physical massing, and site planning, all of which would be subject to the regulatory review and approval processes.

The Developer is at full financial risk during this phase of the project.

This chapter discusses the several significant regulatory processes that determinine if the proposed South Station ARD may be built, at what density, an indirectly when. The ARD would be suject, but not necessarily limited, to state environmental regulations, federal environmental regulations if federal funding for any of the ARD components is invloved, and city zoning and development procedures.

STATE ENVIRNOMENTAL COMPLIANCE

The state's Masschusetts Environmental Protection Agency ("MEPA") requires that persons seeking a state permit, order, or other action for a private project that may result in significant environmental damage must first submit an environmental impact report ("EIR") to the Secretary (the "Secretary") of the Executive Office of Environmental Affairs ("EOEA") for consideration of the impact of the project. (35) For any project which must be reviewed under MEPA, an Environmental Notification Form

("ENF") must initially be filed with the EOEA, all participating agencies and designated entities. A "scoping hearing" is then held to receive comments from the public agencies and public interest groups, and to identify the significant envirnomental issues. The Secretary is then required to issue a certificate stating whether or not an EIR is required for the project, and what issues the EIR must addressed.

One of the issues that the Secretary must address is whether the proposed air rights development, other than the parking facility contained in the 1978 EIR for the South Station Transportation Center, can be an reviewed as admendment with a Notice of Project Change, or a new and separate EIR would be required.

A proposed development may be exempted from the ENF and EIR requirements by the Secretary if a project does not require any permit, subsidy, license, approval, funding. guarantee or insurance action, or any other major action by an agency of the Commonwealth of Massachusetts other than a sewer connection permit from the Massachusetts Division of Water Pollution Control, and if a project is not a categorically included one (36), is not located in any designated area of critical environmental concern, and is not a Class D project requiring alteration of 10 or more acres of land (37). A catagorically included project includes one that: is 300 feet or greater in height, provides 1000 or more parking spaces, increases current

vehicular traffic impact by 10% or more, contains 500,000 SF or maore of nonresidential floor area, contains 350 or more of residential units, and/or requires 100,000 gallons or more of water from a public source.

A special procedure may be established by the Secretary of Environmental Affairs for major and complicated projects. (38) (39) A special procedure was established for the Copley Place development in Boston (EOEA Number 03074) which coordinated the all the environmental and historical issues to be reviewed and addressed. A special procedure should be utilized for the South Station air rights development.

In the case of the South Station property, The Wetland Protection Act applies to certain work in or within 100 feet of defined envirnomentally sensative area, such as a natural body of water as the Fort Point Channel. (40) If the air rights developments do not discharge water run off directly into the Fort Point Channel 100 feet away, the Boston Conservation Commission should administratively find the air rights development is not significant to the interest identified by the Act. If the Commission, however, determines that the work may cause significant impact to the environmental sensative area, an Order of Conditions must be applied for, together with the submission of detailed engineering plans and construction methods to protect the environmental sensative areas, and review of the proposed work at public hearings.

The South Station air rights developments abutts the designated historically South Station headhouse, and abutts but not within the designated historic Leather District, and therefore is not subject to the Historic District Act. (41) The Historic Distric Act imposes certain requirements to alteration of physical properties within areas designated as historic districts. Chapter 152, which further regulate historic preservation sites does apply to the ARD. (42) Chapter 152 defined an adverse effect as "the isolation or alteration of a site's surrounding environment; the introduction of visual, audible or atmospheric elements that are out of character with the site or alter its setting." Site is defined to be " any building, structure, district or area ..that is one hundred and fifty years old or more and significant in the history, archeology, architecture or culture of the nation, the commonwealth or its communities as determined" by the local historical commission. A review and design changes may therefore be required by the Massachusetts Historic Commission for the South Station air rights development. This process may also trigger the MEPA process, and therefore should be undertaken in conjunction with that MEPA process.

The Clean Air Act empowers the Massachusetts Department of Environmental Quality Engineering ("DEQE") to adopt regulations to prevent pollution or contamination of the atmosphere. (43) There will be extensive exhaust fans ventilating the rail and bus terminals, and the parking

facilities, all to be constructed by the public authority. Depending on concerns expressed by the community and other public interest groups, DEQE may required public hearings to review and approve the plans, specifications, proposed maintenance procedures.

The Clean Water Act empowers the Division of Water Pollution Control ("DWPC") within the DEQE to adopt standards of minium water quality and to prescribe effluent limitations, and establish permit programs and procedures applicable to the management and disposal of pollutants. (44) The tie in of new or existing sewer connections for discharges which represent an increase or change from existing use, and are in excess of 2,000 gallon daily requires a sewer connection permit from DWPC. (45) (46) An approval of grease traps is required from MDC to remove grease from the water run off discharge into the MDC storm drainage system. (47)

The South station property is also within the jurisdiction of the Metropolitan District Commission ("MDC"). (48) The air rights developments will discharge waste into the Boston sewer system which is a tributary to the MDC sewerage system. MDC regulations requires "industrial users" to obtain a permit from the MDC before discharging sewerage into any of its tributary system. Industrial user is defined by the MDC regulations to be any user identified in specific devisions of the "Standard

Industrial Classification Manual" of the U.S. Office of Management and Budget. If a project contains non-residential uses, then a sewerage permit from the MDC is required, jointly with a permit from the city. (49) (50)

Based on the foregoing discussion the proposed ARD project would require a separate and a new EIR. The ARD is a catagorically included project, and it is subject to the Chapter 152 regulating historic districts.

The South Station ARD would have completed and cleared the state environmental review process with the issuance of a Certificate of Adequacy on the Draft EIR from the Secretary of Environmental Affairs.

FEDERAL ENVIRONMENTAL COMPLIANCE

The Superfund Act imposes a reporting requirement on anyone who owns or operates a facility where hazardous waste, as defined under the Resource, Conservation and Recovery Act, has been or is now stored, treated or disposedof, unless the facility has a hazardous waste facility permit or has been accorded interim status. (51) (52) One should suspect the application of this Act at the South Station property, where trains utilizing diesel fuels have been operating for over 50 years. It would be prudent for the private developer(s) of the air rights to secure releases of liability from the property and air rights

owners, the MBTA and the BRA respectively, for the potential hazardous waste accumulated under the property.

If any components of the air rights development involves major federal actions and funding that would significantly affect the quality of the human environment, the preparation of an Environmental Impact Statement ("EIS") would be required. (53) The review procedures must also be conducted in accordance with Section 106 to determine the impacts of a federally funded project upon property and districts included in or eligible for inclusion in the National Register of Historic Places. (54) The Massachusetts Historical Commission must determine if the air rights components at South Station is of any significance to the abutting designated historic Leather District, a designated historic district.

The Federal Railway Administration issued a PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT in June 1978 ("1978 EIS") addressing the social, economic, and envirnomental impacts of alternative concepts for South Station and associated improvements for the site. The 1978 EIS did not address the other air rights development proposed afterward.

The federal Clean Air Act provides for the regulation of stationary sources of air pollutant emission. (55) If the proposed high technology component in the air rights development was to contain manufacturing or industrial operations, this Act would be applicable. The rail, bus

terminal and the parking components of the South Station Transportation Center will have extensive exhaust fans to ventilate those facilities, but those fans and the structures in which they are housed can be characterized as indirect sources. Although the fans may be outside the scope of emission control requirements imposed by the federal government upon stationary sources with direct emission of air pollutants, they can be subjected to indirect source controls imposed by state authorities or by local governments.

The federal Clean Water Act prohibits the discharge of pollutants, prohibited or industrial waste into U.S. waters and their tributaries from pipes, ditches, and other point sources except in compliance with the Act's permit and pretreatment requirements. (56)

AMENDMENT TO URBAN RENEWAL PLAN

The original South Station Urban Renewal Plan defined the proposed Transportation Center at South Station to consist of a reconstructed rail terminal and affliated new parking facility above the rail platforms, both improvements to be publicly sponsored. (57)

To implement the South Station ARD project, the BRA Board must determine if the proposed air rights development of commercial uses by private sponsors over the South Station Transportation Center constitutes a significant

modification to the adopted Plan. A significant modification to the Plan would require a public hearing before the Boston City Council,a recommendation on the adoption of the modified plan from the Council's Planning and Development Committe, approval by the City Council, and finally the approval by the Mayor of the City of Boston. The plan modified by the City would then be submitted to the Commonwealth Executive Office of Community and Development ("EOCD") for approval because the Plan is a closed out urban renewal project.

ZONING VARIANCES AND SPECIAL PERMITS

The South Station site is not currently zoned for the development of the air rights components by a private developer. There are three procedures to apply for a zoning change to permit the air rights development. One alternative is to apply for relief from the current zoning for the site in the form of variances, conditional use permits and exceptions from the Zoning Board of Appeal. Petitioner for relief from zoning restrictions must demonstrate unnecessary hardship. The second alternative is to petition the city's Zoning Commission to change the zoning map for the area or to the text of the Zoning Code. Zoning changes require the Mayoral approval. The BRA, also functioning as the city planning authority, advises both the

Zoning Board of Appeals and the Zoining Commission as to the merits of the requests. The third alternative is to request a special zoning designation, which would require a zoning amendment. For project(s) within a special zoning designation, zoning exceptions may be granted by the Board of Appeal without the proof of hardship. A special designation of Planned Development Area ("PDA") approach is recommended for the South Station site. (58) PDA designation, however, requires a several set of procedures covering the planning, design review, and citizen review.

PLANNED DEVELOPMENT AREA

PDA designation may be obtained for a project on a site of at least one acre. (58) For PDA designation, the BRA must approve a development plan; the Zoning Commission must adopt a map amendment; and the Board of Appeal must grant exceptions to the Zoning Code. (59)

At the time of filing for PDA designation, the developer is required to consult with abutters and community organizations. The BRA may elect to formalize a process to insure community participation with a contract between the BRA and the community's advisory committee. The BRA would set up and administer a community review process set up and administer by the BRA to surface potential issues relating to the project development. The BRA sets the agenda for the

meetings. The process can be concurrent, but should be separate from, the MEPA process.

In additon, the proposed air rights development is also subject to the design review and approval by the BRA during the schematic, design development, contract documents, and construction inspection stages. (60)

The Boston Zoning Code categorizes commercial projects containing 100,000 square feet or more as Development Impact Projects ("DIP"). (61) Developers of DIPs are require to make a development impact payment (also known as housing linkage payment) to the Neighborhood Housing Trust or to other wise contibute to the creation of low and moderate income housing. A petition for a variance, conditional use permit, exception or zoning map or text amendment, or a PDA triggers the proposed project to DIP review and approval.

THE BRA REVIEW FUNCTIONS

The Zoning staff will be responsible for making a determination as to whether deviations requested from the applicable zoning by laws are necessary and appropriate, in consultation with Neighbor Planning, Urban Design, Environmental Review, Transportation, and Legal staff. The Zoning staff will recommend to the Zoning Board of Appeals whether or not the PDA petition, variances and/or special permits should be granted.

The Development staff will be responsible for

determining whether the project is financially feasible by taking into consideration the financing terms, the terms of the air rights lease, the cash flow projections, and any other financial considerations. It will also be working with the DIP committee and the Legal staff.

The Urban Design staff will be responsible for the final approval of the Plans and Outline Specifications at this preliminary stage, in consultation with Zoning, Neighborhood Planning, Environmental Review, and/or Historic Preservation staff.

The Environmental Review staff will be responsible for determining whether the requirements of MEPA are complied with, including a review of the Environmental Notification Forms, in consultation with the Historic Preservation Commission, the Landmarks Commission, the Conservation Commission, and Neighborhood Planning.

The Transportation staff will be responsible for assessing the adequacy of access, circulation and parking conditions to insure optimum use of public transit, good pedestrian connections, proper driveway locations, curb cuts, appropriate parking, etc. Environmental and service aspects of traffic and impacts on adjacent neighborhoods will be assessed. Transportation staff will consult with the traffic Liaison Committee and, if necessary, the Public Improvement Commission.

The Legal staff will be responsible for reviewing the application to insure that it is in compliance with the

municipal requirements.

PARKING PERMITS

Permits to secure, construct, maintain, and store automobiles must be applied for from several authorities.

An exemption from the parking freeze for commercial parking spaces is required from the Boston Air Pollution Control Commission. (62)

A permit to erect and maintain a parking structure is required from the Boston Committee on Licenses, Public Safety Commission. (63)

A license for the storage of flammable and/or explosive materials is required from the Boston Committe on Licenses, Public Safety Commission. (64)

A certificate of registration is required from the Boston Fire Department. (64) (65)

SEWER TIE IN PERMITS

The Boston Water and Sewer Commission is responsible for the granting of permit to connect a development to the public water and sewer system. (66) This process is concurrent with the building permit process.

BUILDING PERMITS AND NOTICES

A fossil fuel utilization permit is required from DEQE for an fossil fuel emergency generator that can generate more than 3 million BTU per hour. (67) (68) (69)

If a proposed building is greater than 200 feet in height, a notice to the Federal Aviation Administration is required. (70)

The city's Public Improvement Commission ("PIC") is responsible for the formal approval of easements, closures, improvements, and permits which affects public rights of ways. (71) (72)

The PIC, through the city's Public Works Department ("DPW") and Boston Traffic Commission, is responsible for the granting of permits for new curb cuts, modification or elimination of existing curb cuts, excavation or other construction in any Boston public streets. (71) (72) This process is concurrent with the Building Permit Process.

An approval of building plan and construction details pertaining to fire safety equipments, such as fire sprinkler systems, fire alarms, smoke alarms, escape exits, fire proof walls, is required from the Boston Fire Department. (71)

After Developer is granted zoning variances and special permits from the Zoning Board of Appeals, the developer submits Final Working Plans and Specifications to the City of Boston Building Department for the building permit. (73)

If signs, awnings, canopies, or marquee project into

sidewalks, permits are required from the PIC, through the city DPW. (74)

Compliance with construction noise restriction is monitored by the Boston Air Pollution Control Commission. (71) (75)

The architect for the project must certify that the project has been designed in compliance with the Architectural Barriers Board Regulations, as administer by the Architectural Barriers Board. (76) (77) The architect must determine is a variance from the Architectural Barriers Board is required.

20 days before demolition, a notice to the state DEQE is required. (78)

20 days before construction, a notice to the state DEQE is required. (78)

24 hours before of construction, a notice to the Boston Building Department is required. (73)

AIR RIGHTS LEASE NEGOTIATION

After designation as the developer for the air rights development, the developer would proceed to negotiate the economic and development control issues with the BRA, the legal owner of the air rights.

The significant economic issues would pertain to: developer's project financing commitments, a financiable air

rights lease, base lease payments, commencement date for payments, and a formula for escalating the air right lease payment over time,.

The significant development issues would pertain to: the right of access to the publicly sponsored components during construction and operation of the privately sponsored components, assignment and transfer of rights from the fee owner, design review, project component modifications, and project schedule.

The financial value of the air right, and its lease payments, is a direct function of the economic value of the development, which in turn is a function of the revenue potential and the project costs.

From a 1983 report, the BRA envisioned a certain air right lease apyment schedule for each of the use components. (78) Realitic and separate payment schedules must be negotiated with the BRA that reflects the economic value of each component. It is very possible that the economic value of the each uses may not support air right lease payments in the early years of operation or in any year of operation. Although the BRA, and the city in turn may not collect the envisioned air right lease payment, the ARD components will be paying a market rate real estate taxes and a housing linkage payments as per zoning code.

As a critical part of the air rights lease negotiation, the Developer must negotiate an agreement to lease and operate the parking facility under the ARD to be constructed

by the BRA and MBTA. It is critical to the marketing and leasing of the ARD that it can offer on site parking amenity greater than those found in other downtown developments. 1050 parking space out of the potential 1,700 spaces would be reserved for rent to ARD tenants and users during the regular business hours. The balance of the parking spaces and the balance of the time would be available for rent to the general public.

CHAPTER 7

SUMMARY AND CONCLUSION

The air rights development ("ARD") at the South Station Transportation Center presents an unique opportunity for a mixed use development above a modern mass transit transportation center. The center is undergoing construction by the state's MBTA, and will service 35,000 commuters forcasted to be using the rail, bus and rapid transit facilities when completed after 1990. Included in the transportation center plan is a 1,700 car parking facility serving the rail and bus travelers, the needs of the ARD and the general public.

The BRA owns approximately 5.5 acres of air rights above the transportation center. The BRA will lease their development rights to a private developer ("Developer"), awarded through an Request for Proposal process, who will develop the three parcels: for an office tower, a hotel, and a high technology facility.

A PIONEER LOCATION

Although the South Station ARD site borders the city's expanding financial district, many local real estate professionals consider the location to be a pioneering one. A development at such a location requires optimism by the

Developer and continued growth of the local economy. Reliance on conventional or current standards to assess the project's potential at South Station may assure a its' failure due to lack of financial sponsorship. A pioneering project, such as the ARD, if conceived and implemented succesfully in response to the market conditions, can create extraordinary value for the development and the surrounding neighborhood in the process. It should be pointed out, however, that many pioneering projects did not succeed with the initial sets of owners; and that some were resold numerous times at successively lower prices until the price was right for financial success.

MIXED USE SYNERGY

The South Station site, with a 5.5 acre development parcel at the fringe of a build-up financial district, close proximity to the city's retail district, and ready access to mass transportation facilities, has the potential for a mixed use developemnt ("MXD"). There are several often cited reasons supporting mixed use developments in urban sites. Increasing land cost in most metropolitan areas, together with an increasing commuter transportation problem compel developers and municipal planning agencies to use urban site effeciently and optimally at higher densities. (80) Mixed use developments can offer both flexible and/or faster

development opportunites, and can also offer several uses and products either simultaneously or individually in response to the market demand. The combination of 2 or more uses may enable the project developer to construct more or greater quality amenties and greater architectural and interior design features in the shared common spaces and parking facility through spatial and cost efficiencies. Well conceived and implemented MXDs, have historically, offered an enhanced product differentiation, generated a greater tenant demand, higher revenues, a shorter absorption schedule, and/or higher occupancies. (80) (81)

Office users respond positively toward MXDs because they offer the convenience and vitality of being a part of a complex that contains on site amenties not found in a single use building. Employees can shop or exercise at lunch time, executives can attend business lunches or meeting without traffic congestion or weathering the climate, and out of town clients can lodge conveniently at the MXD's hotel. A successful hotel would serve as the synergy factor for the other uses in the ARD development, thereby enhancing their marketability. The hotel would extend the day's activity cycle by attracting an after hour population to its lodging and eating facilities. A well implemented MXD contains a synergy where the development is greater in market demand and economic value than the sum of its separate uses.

A coherent and efficient design solution is critical to to the economic performance of a mixed use development, much

more so than a single use project, because it affects the marketability for individual uses, synergy among the the project components, economies of scale, and operating efficiencies.

The 1980 Study previously commissioned by the public authority are deficient in: a) a coherent physical and functional integration of the three air right uses, 2) a major focal point connecting the three, and 3) a direct street grade access and entry sequence to each. A major pedestrian circulation network, either at street grade or at a "skyway" one level above street grade must be deliberately set aside within the transportation center component so that a future connection can be made among the office tower, the hotel, and the high technology facility .

The office component, conceived as a 400,000 SF tower, should have been in the range of 800,000 SF to 1,000,000 SF in a MXD. (80) A larger office component would supply a critical mass recommended for the synergy factor and would command a greater presence along Atlantic Avenue. A change in the program is almost impossible at this date because the foundation structure is presently being installed, as part of the public construction program, to support the 400,000 SF office tower.

The hotel component, envisioned as a 600 room convention hotel, has been discussed in the chapter on market assessment as being not appropriate for the location

and the Boston hotel market. A 350 room mid-luxury business hotel is a more realistic alternative proposal.

Both the office and the hotel components requires significant street grade accesses and coherent entry sequences, which are critical to the identity and marketing success of each use. The office should have a minimum of 5,000 SF at street grade for a visible entance lobby function. The hotel should have a minmium of 10,000 SF at street grade for a lobby, check in and a hotel related function.

The high technology component, envisioned as a 250,000 SF 2 story facility, starting at six levels above street grade, contains too large a floor size. A 125,000 SF floor size seems more appropriate may for traditional light manufacturing use, a use which there exist decreasing demand in a central business location. A 30,000 SF to 45,000 SF floor size is a proposed alternative proposed for multi-tenant, high technology, and research and development uses. A 45,000 SF floor size is a functional size for large engineering firms, back office or data processing operation. The high technology facility would require 4 to 6 freight elevators, and controlled truck access and loading docks.

The South Station Transportation Center facility, when completed by the public authorities, will contribute a significant transportation convenience to the office tenants at the South Station ARD. The transportation center will create a vibrant people oriented atrium lobby at the

restored headhouse, serving 35,000 commuters. While the atrium is expected to be a active pedestrian place, the entry and access to the three ARD uses must be designed for proper security control and management from the commuter traffic.

DEVELOPMENT FEASIBILITY

The ARD office tower would be a marginal, but financible, development if delivered to the market at an average asking rent of $49.70 per SF net rentable area (escalated from a 1985 market rent of $35.00 per SF and 1983 construction cost of $90.63 per SF). In a joint venture with a instituitonal investor owning 80% interest, a return of 18.21% IRR without tax benefits could be generated to the investor, which would make the project financible.

It is doubtful whether the hotel and the high technology facility would be financible in 1990. The hotel development could generate to the investors a maximum return of only 11.25% IRR with tax benefits if an average room rate of $220 per night was assumed in 1992 (escalated from a 1985 room rate of $142 and a 1983 construction cost of $87,500 per hotel room), and a maximum of 5.57% at an average room rate of $140 (escalated from a 1985 room rate of $100). The high technology facility could generate to the investors a maxmium return of only 10.87% IRR with tax benefits if an

average rent of $24.00 per SF net rentable area, based on a net net lease, was assumed in 1992 (the $24.00 was escalated from a 1985 rent of $17.00), and a maxmium return of 8.45% at $17.00 (escalated from $12.00 in 1985).

If a mixed use development concept can not be implemented for the South Station ARD, then a logical alternative for the hotel and the high technology air rights parcels would be to develop them for a first class office tower of 400,000 SF and a moderate quality flexible office facility, respectively.

DEVELOPMENT SCHEDULE

Based upon the market assessment and financial projection analyses, a phased and flexible development program is recommended for the ARD project. Exhibit 7.1 contains the development schedule, amended to illustrate the best and worst scenarios for the ARD parcels.

Given the projected market demand for new office space, the ARD office parcel would be developed first, so as to establish a major visible presence on Atlantic Avenue, across from the one million SF One Financial Center. The financial projections for the office component enables it to secure its financing relatively easier than the hotel use.

Using the office tower to establish the ARD's market presence for the site, and depending on the market conditions, the hotel parcel would be developed next either

for a hotel or another office tower.

The high technology parcel is located at the rear of the ARD, and would be developed last. Depending on the market conditions, it would be developed for either a high technology or a moderate quality flexible office facility.

DEVELOPMENT RISKS

The start of any construction activity at the South Station ARD would be two years from the start of developer designation. During that period, the development is vulnerable to changing new regulatory rerquirements, economic downtown, and inflation.

The development of a multiple use or a MXD at the South Station ARD presents substantial risks to the Developer, as a result of three external factors: securing the right to build, construction costs, and market conditions.

The City of Boston and the Commonwealth of Massachusetts both have rigorous regulatory processes pertaining to the development of real estate. It would be two years before proper re-zoning, environmental clearances, design review and approval, and finally a building permit would be granted and project financing would be closed. During the regulatory process, all the costs incurred by the Developer are at full risk.

Projecting inflation rate 2 to 10 years into the

future by the Developer for the financial feasibility and projections for each of the uses is a significant risk in forcasting construction costs, market potential, and the threshold of profitability.

The Developer would plan the ARD and proceed with one or more of its uses several years before the product is delivered to the market. If the market conditions deteriorate and are below those forcasted in the projections, the Developer must fund the operating deficit, in order to avoid financial default and to preserve the development's long term value.

For the South Station ARD, which a long term development schedule, it would be prudent for the Developer to form a financial partnership (popularly known as joint venture) with a major institutional investor. The investor would provide the long term financial stablity and commitment. The Developer would negotiate with the investor to fund all or nearly all of the equity required, in exchange for half ownership interest, or more if required in order to generate a certain return on investment objective to the investor.

THE VALUE OF THE SOUTH STATION AIR RIGHTS DEVELOPMENT

The BRA will lease the air rights to the Developer for the leasehold development of the three parcels. The land value of an income producing real estate development is a

direct function of its economic value, which in turn is a function of the revenue potential (i.e. market rent) at that location and the capital cost of the project. The value of the air rights lease, which is an amortization of the value, is similarly determined. If the lease agreement calls for the reversion of all improvements to the lessor, a premium of .50% must be added to the economic return required from the development in order to compensate for the loss of the residual benefits at reversion.

The air right lease payment envisioned by the BRA for each of the three uses cannot be justified by their financial feasibility. A skewed land lease payment schedule is an alternate method when the financial projections can support such payments. The lease payments would start at a lower amount during the early years and increase in the later years when each of the uses establishes its market presence and generates higher revenues.

Even though the South Station ARD may not pay the BRA the air rights lease payments it envisioned, the development would generate positive economic impacts to the city through other benefits. A regular housing linkage and real estate taxpayments from the ARD would contribute to the city's fiscal programs. The three uses would contibute a total of $2.46 millions to the city's housing linkage program for low and moderate housing. (82) When completed, the three uses would contribute approximately $4.5 millions annually in

real estate tax payments, thereby increasing the city's fiscal basis by $45 millions if a 10% is assumed for the city's cost of borrowed funds.

From an urban revitalization perspective, South Station is the eastern terminus of the Downtown Crossing Economic Strategy Plan, adopted by the city in 1983. The Downtown Crossing Plan formulated an overall economic and physical development strategy linking the city's downtown retail district, Park Square, Essex Street Corridor, Dewey Square, and South Station. (85) Exhibit 7.2 contains the illustrative plan for the Downtown Crossing Economic Strategy Plan.

From an urban transportation perspective, the South Station ARD is a vital component of the South Station Transportation Center and the Downtown Crossing Plan. Exhibit 7.3 illustrates the roadway and transit improvement in the Downtown Crossing Plan. The ARD would reduce commuter traffic congestion by offering tenants and employees the convenience of mass transit and parking facilities located directly underneath their workplaces.

CONCLUSION

The South Station ARD is a development that requires tremendous public and private sector partnership between the Developer, the BRA (owner and lessor of the air rights), and the MBTA (the primary developer of the public infrastructure

and structural systems). The cooperation pertains to significant design, structural, legal, and financial issues at the interface between the public sector components in the transpotation center and the private sector development of the air rights above.

The South Station Transportation Center and the Air Rights Development presents challenging opportunities for both the public and private sectors, who through their efforts can achieve a successful integrated development. It calls upon them to mobilize the unique resources of either sector so that an urban transportation and revitalization program can achieve a better environment from public investment, produce fiscal benefits to both the city and the state, and provide a reasonable market return to the private sector investment.

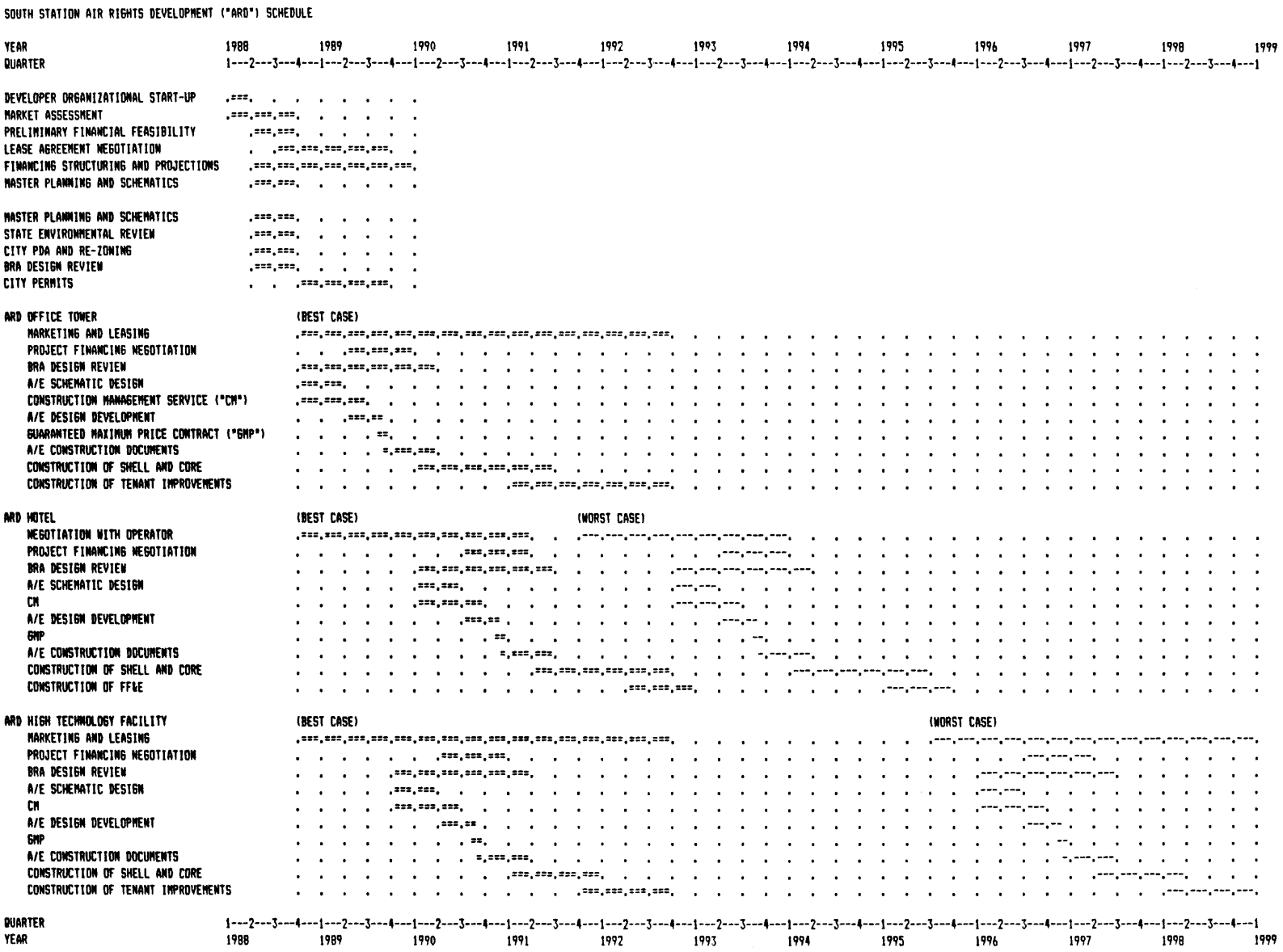
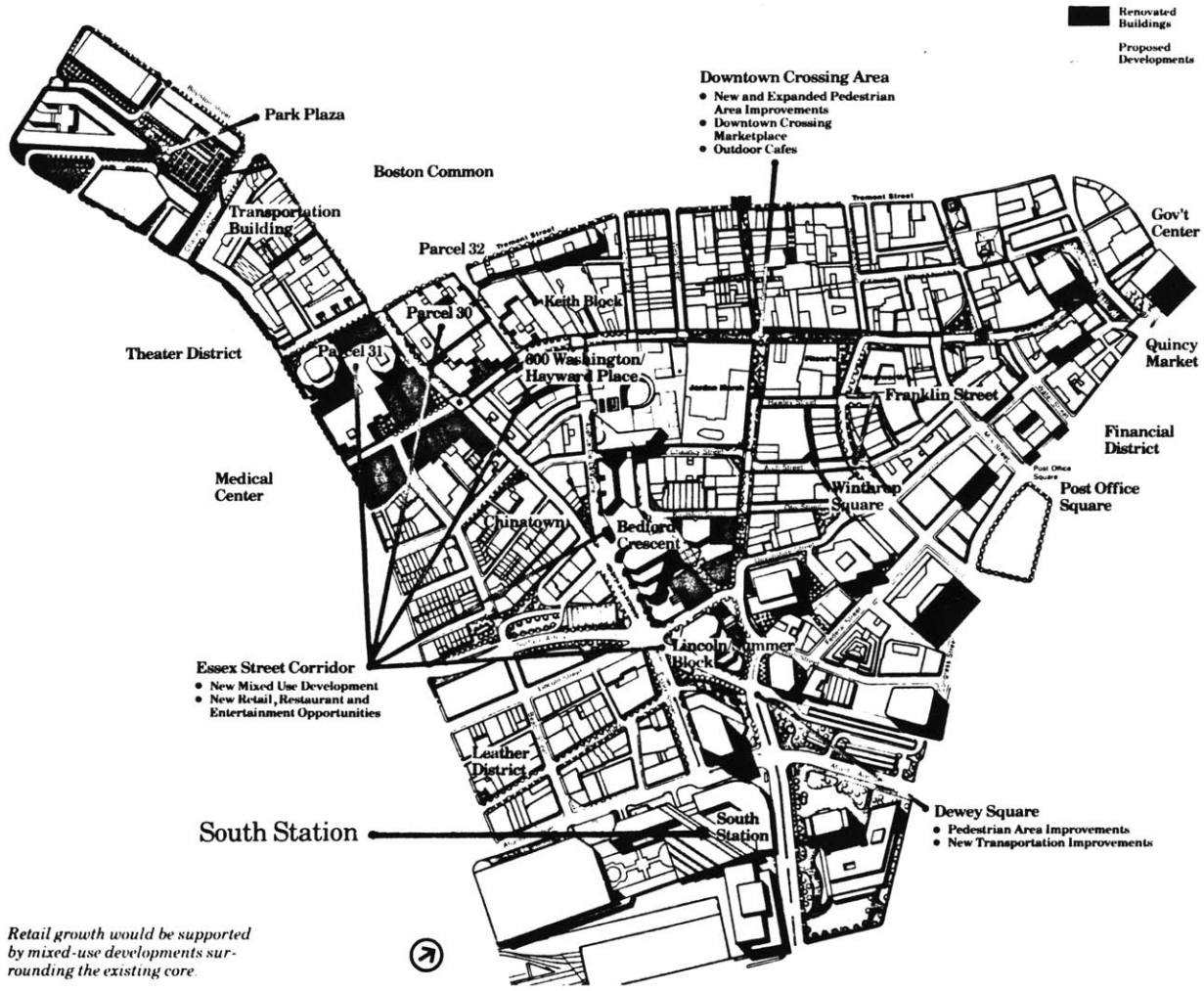

SOUTH STATION AIR RIGHTS DEVELOPMENT ("ARD") SCHEDULE
YEAR 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999
QUARTER 1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1
DEVELOPER ORGANIZATIONAL START-UP
MARKET ASSESSMENT
PRELIMINARY FINANCIAL FEASIBILITY
LEASE AGREEMENT NEGOTIATION
FINANCING STRUCTURING AND PROJECTIONS
MASTER PLANNING AND SCHEMATICS
MASTER PLANNING AND SCHEMATICS
STATE ENVIRONMENTAL REVIEW
CITY PDA AND RE-ZONING
BRA DESIGN REVIEW
CITY PERMITS
ARD OFFICE TOWER
(BEST CASE)
MARKETING AND LEASING
PROJECT FINANCING NEGOTIATION
BRA DESIGN REVIEW
A/E SCHEMATIC DESIGN
CONSTRUCTION MANAGEMENT SERVICE ("CM")
A/E DESIGN DEVELOPMENT
GUARANTEED MAXIMUM PRICE CONTRACT ("GMP")
A/E CONSTRUCTION DOCUMENTS
CONSTRUCTION OF SHELL AND CORE
CONSTRUCTION OF TENANT IMPROVEMENTS
ARD HOTEL
(BEST CASE)
(WORST CASE)
NEGOTIATION WITH OPERATOR
PROJECT FINANCING NEGOTIATION
BRA DESIGN REVIEW
A/E SCHEMATIC DESIGN
CM
A/E DESIGN DEVELOPMENT
GMP
A/E CONSTRUCTION DOCUMENTS
CONSTRUCTION OF SHELL AND CORE
CONSTRUCTION OF FF&E
ARD HIGH TECHNOLOGY FACILITY
(BEST CASE)
(WORST CASE)
MARKETING AND LEASING
PROJECT FINANCING NEGOTIATION
BRA DESIGN REVIEW
A/E SCHEMATIC DESIGN
CM
A/E DESIGN DEVELOPMENT
GMP
A/E CONSTRUCTION DOCUMENTS
CONSTRUCTION OF SHELL AND CORE
CONSTRUCTION OF TENANT IMPROVEMENTS
QUARTER 1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1---2---3---4---1
YEAR 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999

Exhibit 7.1

Exhibit 7.2

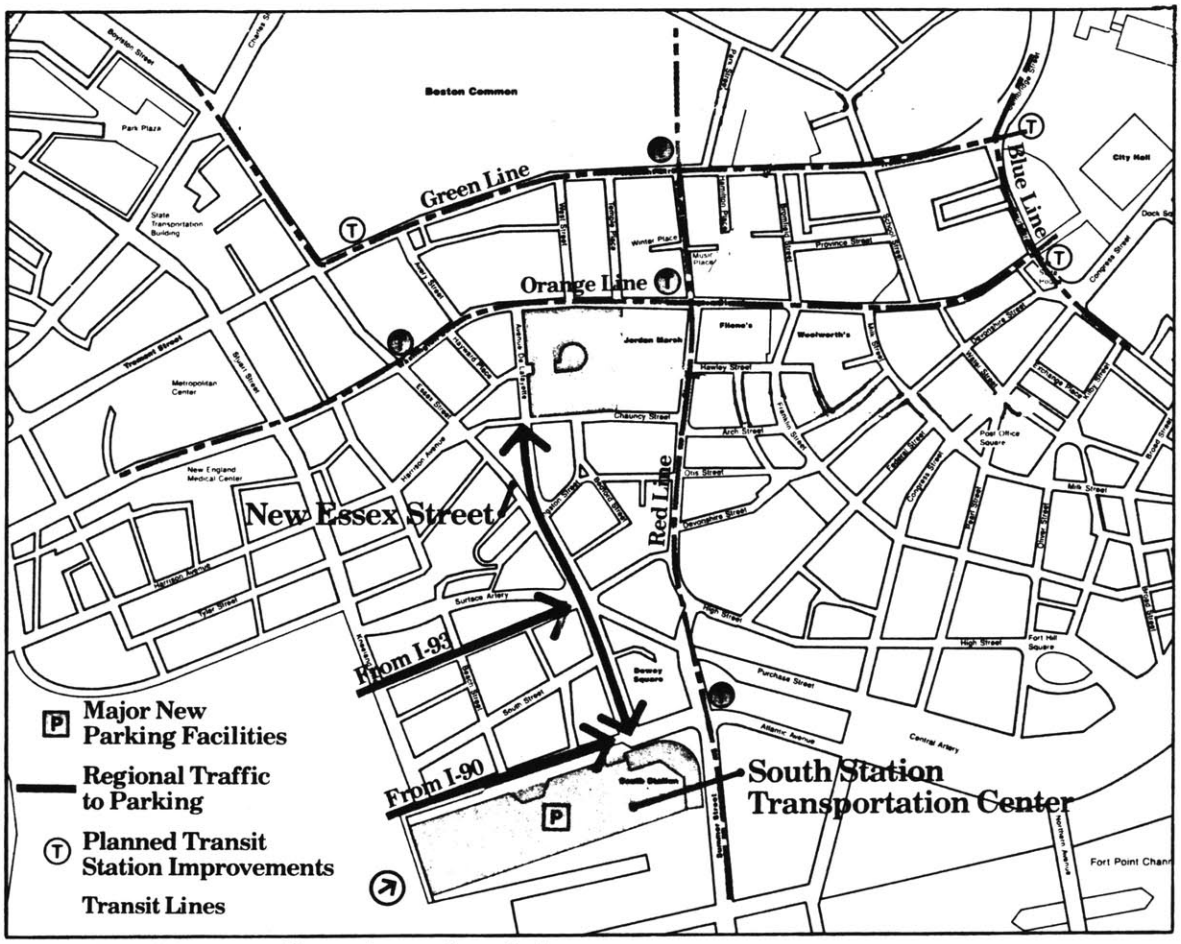
Downtown Crossing Illustrative Plan

of Proposed Improvements and New Development



Retail growth would be supported by mixed-use developments surrounding the existing core.

Exhibit 7.3



Accessibility will be improved by roadway and transit changes.

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(43) Clean Air Act, M.G.L. Chapter 111, Section 142a-142J, and implementing regulations adopted by the Department of Environmental Quality Engineering ("DEQE"), Division of Air Quality Control.

(44) Clean Water Act, M.G.L. Chapter 21, Sections 26-53, and implementing regulations adopted by the DEQE Division of Water Pollution Control ("DWPC").

(45) M.G.L. Chapter 21, Sections 26-53.

(46) 314 C.M.R. 8.00.

(47) 350 C.M.R. 11.02 (5).

(48) M.G.L. Chapter 92, Sections 1-9, and implementing regulations adopted by the Metropolitan District Commission ("MDC").

(49) M.G.L. Chapter 92, Section 1-8A.

(50) 350 C.M.R. 11.00.

(51) Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("Superfund"), 42 U.S.C. Section 9601-9657.

(52) 42 U.S.C. Sections 6901-6983 ("RCRA").

(53) National Environmental Policy Act ("NEPA"), U.S.C. Section 4321-4335, and implementing regulations adopted by the President's Council on Environmental Quality ("CEQ"), the Office of Management and Budget ("OMB"), the Department of Housing and Urban Renewal ("HUD"), the Federal Highway Administration ("FHWA"), the Federal Railroad Administration ("FDA"), and the Urban Mass Tansportation Administration ("UMTA").

(54) National Historic Preservation Act of 1966, Section 106 ("Section 106").

(55) Clean Air Act, 42 U.S.C. Section 7401-7642, and implementing regulations adopted by the U.S. Environmental Protection Agency ("EPA").

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