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THE OUTLOOK FOR LAND USE FORECASTING

AN INITIAL APPRAISAL OF THE PROBLEM OF ESTIMATING THE DEMAND FOR LAND IN PORTLAND

1965

COMMUNITY RENEWAL PROGRAM

PORTLAND CITY PLANNING COMMISSION

THE OUTLOOK FOR LAND USE FORECASTING

An Initial Appraisal

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Demand for Land

in

Portland

By

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1. INTRODUCTION

The Assignment

As originally outlined, my assignment was as follows:

1. Review carefully all the existing local studies to determine their utility for making forecasts of the future demand for land.

2. Inventory and evaluate existing sources of data (public and private) in terms of their relevance to the problem.

3. Make a canvass of other Community Renewal Program (CRP) groups faced with a similar situation in order to obtain ideas as to how they are attempting to solve the problem.

4. Based upon the findings of the above steps, a report would be prepared which would detail the availability of local data, the approaches used in other cities, and delineate the opportunities and problems which might be encountered in making the various forecasts.

In the course of preparing this report, I have become sufficiently familiar with certain aspects of the local situation to hazard a rough estimate of the probable future demand for certain types of land uses; but these should not be considered final forecasts. Actual forecasts need more supporting data and further analysis, but I am of the opinion that much of this--as is so common with many of the consultant's reports for other cities--is really icing on the cake.

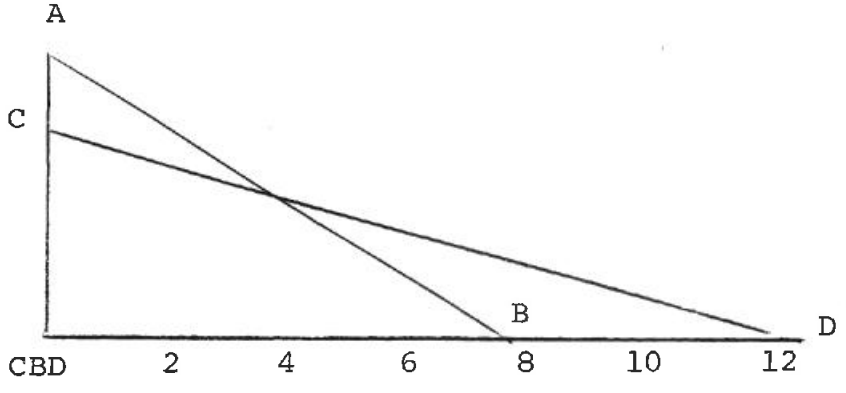
Fundamental Forces Affecting the Urban Spatial Structure

An ideal situation, in this writer's opinion, to base any community-wide urban renewal report, would be the existence of a set of well-defined, well-tested theories regarding the present and future urban spatial structure. It would then be possible to know whether certain CRP projects were "flying in the face of the wind" and whether other projects were predicted to enjoy success because they ran with--rather than counter to--trends in the changing urban structure. Public policy could, of course, take the position that certain trends were undesirable, and measures could be taken to resist and perhaps reverse these trends.

Unfortunately, no set of well tested hypotheses linked together into a well-developed and fully articulated theoretical system, is yet available. In their absence we have set down a number of forces currently affecting the urban spatial structure which, we believe, (but cannot necessarily prove) will have an underlying influence upon specific urban renewal programs and master plan proposals. (Postscript: lack of time prevented a further elaboration as originally intended. The following two whould be considered as examples.)

Automobile Undoubtedly the most powerful influence upon the urban structure in the last forty years has been the automobile. Its widespread use has resulted, in the words of one observer, in "a pronounced loosening of the urban fabric". While new federal programs may be ushering in a new era for rapid transit systems in the larger eastern cities, it is believed that these programs will not strongly affect Portland for two reasons: 1) the Portland urban area is not sufficiently large to discourage automobile commuting, and 2) the population density of most of the area is too low to economically support a rapid transit or mass transit system. These programs should, however, stem the decline--and perhaps eventual collapse--of the Rose City transit line and thus preserve and possibly improve mass transit service in the city (an important consideration).

Economic Surface For want of a better term, the economic surface is used to express the concept of the distribution of land values and population or other kinds of density over the urban area. The surface has been likened to a tent with the peak at the Central Business District (CBD). The following diagram expresses a simplified schematic cross-section.



Distance Limits

A-B represents the situation before the widespread use of the automobile. Central sites commanded a premium because of the convergence of the mass transit system, and their consequent high accessibility rating. With the general use of the automobile, however, it became possible to substitute sites farther out for central sites which has meant that central sites no longer can bring such high prices. Establishments can now consider a wider variety of potential sites. This has resulted in the central city losing some of its initial advantage--especially for certain types of commercial and industrial activities.

Plan of the Report

The main body of the report deals with three major classes of land use; industrial, commercial, and residential. Each of these major land use categories is considered in terms of its principal components defined by such factors as function and locational tendencies. Institutional or public land needs were not considered within the scope of this investigation. A suggestion for monitoring trends in building activity within the city using building permit data is outlined.

As this report is read, a number of conditions should be kept in mind:

1. My personal preferences lie in the direction of a strong urban core and central city, but I have tried to view the city's future role objectively. The Community Renewal Programs, geared as they are to the central city, have perhaps a built-in bias in favor of the central city. In the long run a disservice would be done to both the urban renewal program and the identification of the problems of the central city if unfavorable factors or trends are glossed over in the process of painting an optimistic picture of future prospects.

2. This report contains a number of statements which are expressions of opinion or judgment. To fully elaborate the reasoning underlying these statements would have increased the bulk of the report unduly, and led to numerous qualifications. I shall be happy to discuss, in greater detail, any specific point which might be questioned.

2. INDUSTRIAL LAND NEEDS

Introduction

It is fitting that present day Community Renewal Programs have extended their concern beyond purely residential considerations and now include non-residential activities and land uses within their scope. Of these, industrial developments are of critical importance, not only in terms of their role in the land use pattern, but in terms of their importance in sustaining the economic life of the community. A community economically strong has the potential to deal with problems in a much more positive fashion than a community whose problems are compounded by a weak economy. Furthermore, a vital industrial sector contributes far more to the tax base than it consumes, and thus it represents an important plus factor in the local fiscal balance sheet.

Examination of the economic prospects of the community are a prerequisite to virtually any specific analysis of urban problems and this includes renewal. A review of the economic prospects of Oregon, the Portland Metropolitan Area, and the City of Portland, will be made prior to an evaluation of the demand for industrial land within the city.

The Oregon Economy

Presently, the Oregon economy is enjoying a mild boom, as evidenced by a number of economic indicators. The unemployment rate is low, relative to past years and to the United States, and employment, bank debits, and retail sales, are all rising. Perhaps most important, personal income gains have outpaced the nation, according to Business Week estimates. All in all, the economic picture is satisfactory. Professor James D. Tattersall, a close student of Oregon's economic history, in a recent article in the Oregon Business Review, "The Oregon Economy Since World War II", (July 1962) divides Oregon's post war economic history into four periods (1946-1951, 1952-1956, 1957-1960, and the early 1960's). While he does not find the Oregon economic picture cloudless, he does conclude "Oregon's locational attributes appear to be sufficient to insure a continued steady growth rate with a level of per capital income close to the national average."

One of the reasons for optimism concerning the Oregon economy into the 1970's is the expected strong demand for wood products during most of that period. While Oregon is less dependent upon her forest products industries than in the late 1940's and 1950's, a strong demand for forest products is still the most important single contributor to the state's

economy. The post war-baby boom will reach the child-rearing home-buying age near the end of the 1960's and this should virtually assure a strong demand for new housing. This demand, unlike the last 5 years, will be more oriented to single family housing which uses significantly greater quantities of wood. Even if forest products should lose further ground in the competitive struggle with other materials, it is, nevertheless, expected that the overall pie will increase sufficiently to mean the actual demand will rise. The post war-baby boom will fuel the demand for housing which in turn will keep Oregon's forest products industry busy. The major if is whether the national economy can absorb the sharp rise in the labor force at a time when automation has reduced the need for workers in many industries. In other words, can we find the jobs for these young people?

A number of economic studies of the State's economy are due near the end of this year. They should provide further understanding of the States economy and they will also include forecasts. One is an economic study of Bonneville's power market areas of the Northwest (including Oregon). The other is an analysis conducted by the Oregon Department of Planning and Development, and the Bureau of Business Research of the University of Oregon.

The Portland Metropolitan Area

The economy of the Portland Metropolitan Area rests on a diversified base which has seen steady growth in the 1950's. Non-manufacturing sources of employment such as trade, finance, service, and government contribute to the economic strength. Among manufacturing categories, the fastest growing components have been electrical machinery and transportation equipment which bring further diversification to the manufacturing structure previously dominated by lumber and wood products, food and kindred products, and paper. Unlike many other communities in the West, Portland's economy is not based on defense industries. An expected cutback in defense (and perhaps space) budgets would have little direct effect. A marked cutback in these areas would, however, indirectly affect Portland, which would eventually feel the shock waves from California and Seattle and the possible loss of some subcontract work. The Port of Portland has commissioned the Battelle Institute to conduct an economic survey which should be available about the end of the year.

Portland's Prospects

The above paragraphs have indicated (but not documented) that the Oregon and Portland Metropolitan Area economic growth prospects are for a modest but well-sustained level at least equal to the last ten years. These prospects, however, do not automatically follow for the City of Portland. In common with many other central cities of major United States metropolitan areas, Portland faces the future with a host of inherent problems. Growth is restricted by the scarcity of vacant land; the inventory of physical structures continues to age, and the lower income and minority groups are concentrated within the City. Concern over these conditions has, in fact, led to such programs as the CRP in order to assist the City to maintain its position in the urban area. The nation-wide post war trends of the decentralization of commerce and industry within major metropolitan centers are too well known to repeat here.

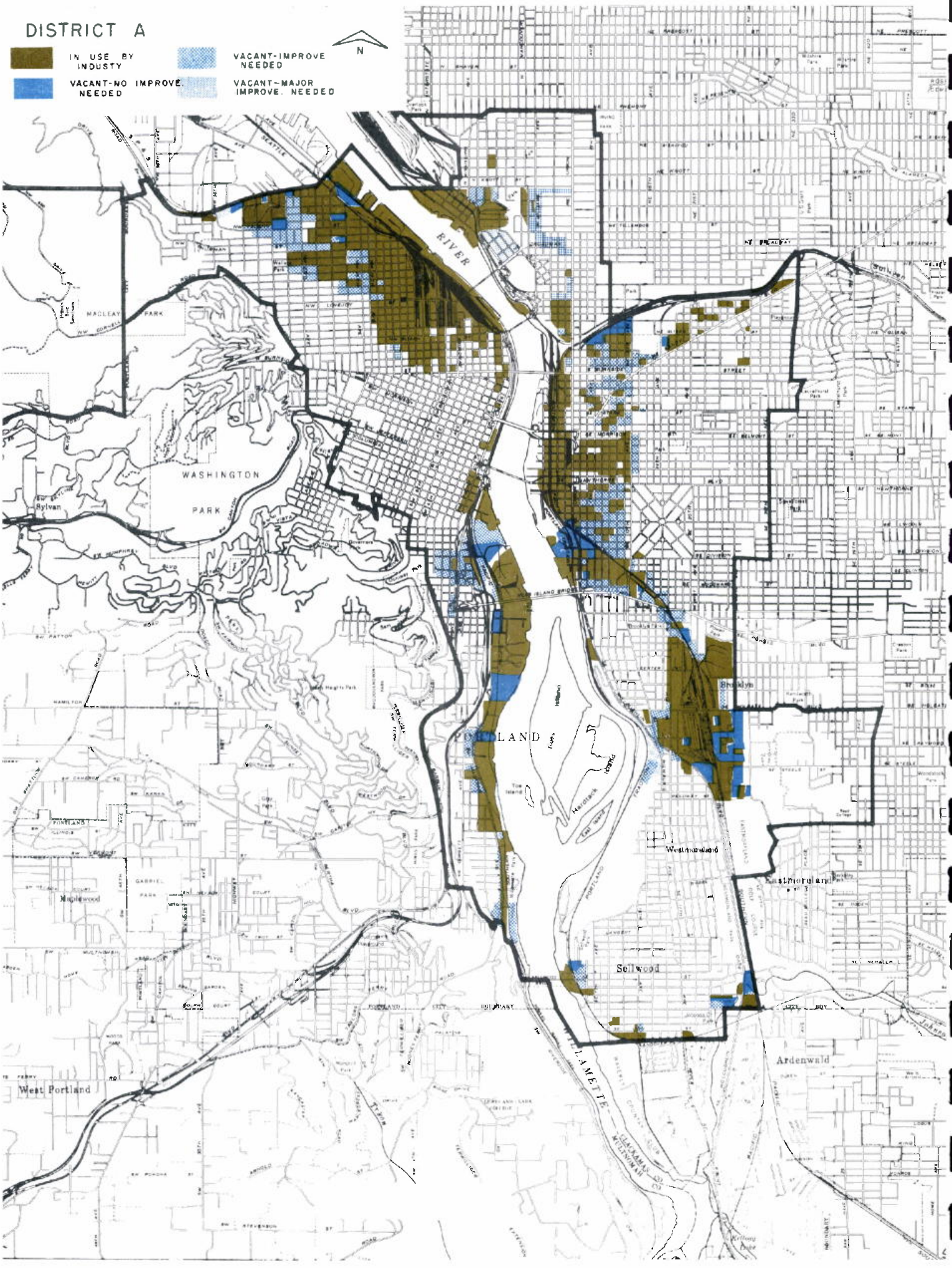
The question underlying any estimate of Portland's economic future in terms of industrial prospects is whether Portland can maintain its traditional position as the locus of industrial employment in the face of competition from suburban sites? An effort was therefore made to ascertain the proportion of metropolitan area employment by individual industrial categories accounted for by the City. Unfortunately, for purposes of this time series analysis, no data exist to answer this question directly. The only data available are State of Oregon Department of Employment estimates which are published only on a county level. Also, the County figures were not readily available on a yearly basis, so the second quarter was used to represent the years. An additional problem was a change in coverage to include one person establishments about 1959. It was felt Multnomah County could be used as a substitute for the City, since it has been estimated that Portland accounted for about 95 percent of the County's manufacturing employment (this proportion was about 97 percent at the beginning of the time period--1954).

Because of the above qualifications and the yearly fluctuations inherent in the economy, slight yearly changes in Table I should not be considered significant. For manufacturing as a whole, Multnomah's share of the SMSA has declined a number of percentage points over the time span, but there have been no signs of a drastic shift. Actual employment has remained about the same, which indicates that the County's share has slipped, not because of absolute decline but because other counties have grown faster. Wholesale trade--which employs about half as many people as all the manufacturing categories--has presumably remained concentrated in Multnomah County.

Table 1 - Multnomah County Employment,[1] 1954-1962
Percent[2] of SMSA Employment for Second Quarter of Year

INDUSTRY	1954	1955	1956	1957	1958	1959	1960	1961	1962
	Number & Percent	Number & Percent	Number & Percent	Number & Percent	Number & Percent	Number & Percent	Number & Percent	Number & Percent	Number & Percent
Manufacturing Total	41,309 68.8	42,279 68.3	46,068 70.1	42,303 67.3	40,643 69.6	43,287 67.3	44,411 68.6	41,942 66.0	42,635 64.9
Lumber and Wood Products	5,494 52.2	5,694 52.4	5,433 54.5	4,719 55.5	4,275 56.3	5,064 56.7	5,234 58.2	4,821 56.3	4,760 54.9
Furniture & Fixtures	1,673 96.4	1,667 96.2	1,701 97.1	1,738 96.6	1,655 99.3	1,743 96.8	1,769 96.5	1,643 94.1	1,728 92.6
Primary Metals	3,091 -	3,620 -	4,146 67.2	3,955 67.4	4,028 78.5	4,082 73.8	3,978 74.6	3,819 75.4	3,848 75.5
Fabricated Metal Products	4,188 -	4,059 -	4,720 96.3	4,125 87.2	3,389 84.7	3,773 84.5	3,667 82.1	3,333 81.3	3,101 76.2
Machinery (Except Electrical)	3,432 94.5	3,741 90.5	4,273 92.2	3,664 92.4	3,335 88.6	3,889 90.4	4,035 89.0	3,667 89.4	3,921 88.5
Electrical Machinery	637 -	1,090 -	872 54.5	733 33.3	792 35.0	879 24.2	919 22.1	824 16.0	770 13.1
Transportation Equipment	2,686 97.1	2,548 96.8	3,996 94.4	3,148 96.4	2,674 95.5	2,896 93.4	2,837 90.6	2,881 92.9	3,320 92.2
Food & Kindred Products	6,924 71.4	7,229 74.0	7,365 72.0	7,205 70.4	8,193 81.9	8,085 81.9	7,889 83.3	8,081 81.9	7,795 82.0
Textile Mill Products	2,248 -	2,417 -	2,273 79.3	2,271 79.2	2,055 81.1	2,197 76.7	2,262 78.9	1,617 74.7	1,953 79.2
Apparel	2,057 -	2,168 -	2,331 79.5	1,627 53.6	1,494 54.0	1,766 58.2	2,229 71.1	2,026 70.7	2,346 72.6
Paper & Allied Products	1,480 20.7	1,385 19.5	1,757 24.0	1,748 23.7	1,360 19.1	1,436 19.2	1,455 19.9	1,412 19.3	1,393 18.9
Printing & Publishing	2,942 86.5	2,134 86.0	2,911 87.3	3,076 89.6	3,079 89.7	3,115 89.0	3,047 89.6	3,135 88.7	2,979 89.4
Communications	4,014 46.5	4,202 51.0	4,587 50.2	4,678 59.7	4,897 55.4	4,603 54.8	4,571 54.4	4,450 53.0	4,535 53.1
Wholesale Trade	- - -	- - -	- - -	- - -	19,343 91.7	20,601 91.7	21,274 92.0	20,320 91.1	22,318 92.0

1 Number of employes covered by Unemployment Compensation for Multnomah County
2 Multnomah County percent share of Metropolitan area
Source: Oregon Department of Employment


DISTRICT A
IN USE BY INDUSTY
VACANT-NO IMPROVE. NEEDED
VACANT-IMPROVE NEEDED
VACANT-MAJOR IMPROVE. NEEDED
N
RIVER
MACLEAY PARK
WASHINGTON PARK
Sylvan
PORTLAND
Brooklyn
Westmoreland
Sellwood
Ardenwald
West Portland
Hayhurst
WILLAMETTE

In conclusion, these data--while imperfect and subject to some possible error--do not indicate any wholesale exodus of industrial employment out of Multnomah County. The same conclusions--to a somewhat lesser degree--would probably be true for the City.

Supply of Industrial Land

The Metropolitan Planning Commission in its carefully done report on Land for Industry made an estimate of the amount of vacant land for various parts of the metropolitan area. Vacant land was classified by zoning and also in terms of whether improvements were needed. The report has been criticized in some quarters as overstating the amount of land available. Conflicting definitions of quantity of land available may occur, depending upon how a survey handles factors such as parcel size, topographic conditions, availability of utilities, ownership patterns (legal tangles for example), and asking price. The major areas of interest for the City of Portland are District A and District B, which are shown on maps reproduced from the Land for Industry report. District A essentially borders the Willamette River of the inner harbor area from N. W. Nicolai and N. Russell on the north, to the Sellwood Bridge on the south. District B includes the lower Willamette as shown on the map, as well as that area north of the City west of N. E. 33rd Avenue.

District A. Since our main interest--as explained later--is with central sites, our primary concern is with the estimate of vacant land in District A. Vacant land (with no improvement needed) which was zoned industrially, was estimated at 211 acres. Only half of this amount was in parcel sizes of one acre or more, and it is important to note, therefore, that 106 acres are in parcels of less than one acre. Unfortunately, the classification system of parcel size gave but one class to all parcels over one acre. It was also estimated that an additional 223 acres were in non-industrial use, but could be changed to industrial use. However, only 38 acres of this amount were over one acre in parcel size. Pending an extensive field survey of those areas indicated as vacant or considered as potentially industrial, it would be our conclusion that the amount of land available for industrial development in this district is quite limited.

Development of potential sites south of the Ross Island Bridge should await a policy decision as to the ultimate use of the riverfront.

In District B

The Swan Island--Mocks Bottom development of the Port of Portland currently satisfies the need for centrally located high value land. This supply of land should be close to exhaustion by

about 1970, which might be considered the approximate target date for any industrial renewal site to be made available. Considering the long lead times necessary to complete all phases of urban renewal, it would not be too early to begin preliminary studies in 1965 to offer a number of alternative areas to the Portland Development Commission as potential industrial renewal areas.

Once the Mocks Bottom land has been reclaimed, the Port, in the course of its dredging operations, expects to fill about a total of 100 acres in the inner harbor area in the foreseeable future, which could be made available for industrial use. This would just about complete the potential industrial sites in the inner harbor.

The Future Demand for Industrial Land

A number of points should be made preliminary to any discussion of the demand for industrial land within the City of Portland.

1. Much of the demand for land within central cities is for distribution and wholesaling purposes, not manufacturing.

2. Much of the demand is generated by relocations within the urban area not by new industries locating in the area.

3. The larger the concern, the greater its space needs, the more likely it will select a suburban site.

These are nation-wide trends and to my knowledge they apply in the Portland area as well. Consequently, the typical firm which represents a market for central city land is distribution oriented, has already been established in the area, and is small or medium in size. This does not mean that other types of firms would not be potential candidates for central sites, but the "best bet" would be the above mentioned type of firm.

Implicit in our discussion has been the assumption that demand for industrial land in Portland will be in terms of central locations. The reasons for this are:

(a) Almost all existing industrially zoned land in Portland is adjacent to the river and is thus centrally located to a degree.

(b) Peripheral sites in the City would be competing directly with suburban sites, and it is rather unlikely they would be selected.


DISTRICT B
IN USE BY INDUSTY
VACANT-IMPROVE. NEEDED
VACANT-NO IMPROVE. NEEDED
VACANT-MAJOR IMPROVE. NEEDED
Ramsey Lake
Bybee Lake
SMITH LAKE
NORTH PORTLAND HARBOR
HAYDEN ISLAND
WILLAMETTE

(c) The types of firms most oriented to the city prefer central locations.

The potential demand for industrial land within the city can be approached in a number of ways. A review of the building permits valued at $25,000 or more for the past ten years indicates that most of the building for industrial purposes has been for distribution and wholesale uses. It has been difficult to separate manufacturing from distribution and from storage with the information available on a building permit. It appears, however, that there has been virtually no substantial new manufacturing construction within the city, although there have been additions and alterations. The available trend data we have thus indicate rather limited prospects for growth in manufacturing under present conditions.

The Metropolitan Planning Commission, in the process of compiling a report for the highway study (Growth Factors), made a revision and updating of an earlier Portland City Planning Commission study, Economic Prospects. The Commission's detailed work sheets, which allocated aggregate employment changes by type of industry to sub-areas of the metropolitan region, were consulted. Because of the danger of misinterpreting projections for small areas by industry, the actual data are not available for publication. However, if worker-density norms of 30 per acre for manufacturing and 15 for wholesaling are applied to the projected increases for Industrial Districts A-West, A-East, and B-West, the demand for manufacturing and wholesaling land aggregates to 345 acres for the period 1960-1980, or an absorption rate of roughly 17 acres per year.

The Port of Portland, in developing their Swan Island and Mocks Bottom industrial district, has priced this land at the upper end of the industrial land price scale--about $40,000 per acre. They have been quite satisfied with the indicated demand for this land and feel that the area should be fully developed about 1970, which would indicate an annual absorption rate of about 50 acres a year. In my opinion, this rate is sustained in part from relocations due to expressway acquisitions. Since most of the industrial land which will be affected by expressway takings has been already acquired, this generator of demand will not be a factor in the future.

Based on the above considerations, it would appear that the annual absorption rate for industrial land (including wholesaling) would be in the neighborhood of 15 to 25 acres. It can, therefore, be inferred that, because it takes about five years to complete a renewal project, industrial projects could be between 75 and 125 acres (this does not imply that this acreage would be in contiguous areas). In a 20 year Community Renewal Program, it is conceivable to envisage four projects that would make between 300 and 500 acres of land available to industry. However, any serious

attempt to estimate the demand for acreage in connection with an industrial renewal project would need some indication of the price at which the land would be offered. An interim plan for the South Auditorium renewal project indicated a price of $1.50 per square foot, or about $65,000 an acre. There is, in other words, a considerable latent demand for central sites if the price is low enough. Conversely, the demand will evaporate if the price for land is too far above alternative locations.

Conclusions and Recommendations

Portland's efforts to retain her share of industrial activity should be considered an uphill struggle. The days when central cities were virtually unchallenged as sites for industry are long past, and it thus becomes necessary for these cities to initiate aggressive programs to maintain their industrial position. As yet, there does not appear to be as much suburbanization of industry in the Portland area as in other metropolitan areas, which gives the city time to initiate preventive rather than palliative measures. Urban renewal represents one means by which the industrial plant may be improved and expanded. These renewal programs should be pursued in two main directions.

1. Preserve and maintain the locational advantages of existing industries and industrial areas. Efforts should be made to assist existing industry to solve problems common to central sites: lack of land for expansion, congestion and parking problems, high cost of land, unattractive and inefficient environment, etc. This program might involve spot acquisitions and general public improvements plus a system of determining specific and current complaints which firms give as hampering their in-city operations.

2. Make available new industrial sites within the city. These sites should be strategically located, well designed as industrial districts, integrated within the City's overall plan, and priced within the capabilities of the potential users.

Among the specific recommendations are:

1. The Northwest and near Eastside areas (mentioned in the Industry Phase I preliminary report produced by the CRP staff) should be surveyed to delimit promising industrial renewal areas on the basis of such factors as:

a) the degree of blight
b) locational qualities (e.g., proximity and access to expressway system)
c) type of existing land use
d) assessed value
e) probable acquisition costs
f) relocation problems, etc.

2. On the completion of the initial survey, further information should be obtained for the most promising areas on the basis of rehabilitation and/or clearance programs. The end result would be the selection of a number of areas as prime prospects for industrial renewal which the Portland Development Commission could then take under advisement.

3. Should the resources be available, it is highly recommended that a study of the distribution and wholesaling functions of the City and Metropolitan area be undertaken. These activities are unusually important in the Portland area economy and deserve study so that their efficiency might be improved, if possible, by governmental programs. Attention should be paid to the question of which firms are central-site oriented and thus potential industrial renewal prospects. Possibly other governmental units and the Chamber of Commerce might want to participate in the project.

4. Selection of potential industrial renewal sites would be governed by certain policy decisions. If the selection is made on the basis of least acquisition costs, those areas with vacant lots and primarily residential structures would be prime prospects. If the removal of industrial blight is the major concern, more acquisition costs could be expected. These two strategies need not be mutually exclusive, but a clear understanding of the basic goals of the industrial renewal program is necessary.

5. It might be worth the time and trouble to determine what happens to the properties vacated by firms moving to new quarters within and outside the City. Does the development of new sites hasten blight because firms relocate and leave obsolete buildings vacant in older areas?

3. COMMERCIAL LAND NEEDS

Before proceeding with this discussion, it will be necessary to make clear that we are considering the commercial needs of the City of Portland with the assumption that the City's population (exclusive of gains by annexations) will remain essentially constant. The expected greater densities of some areas--multifamily construction, the development of vacant lots, and somewhat more intensive use of residential land--will be offset by freeway takings and conversion of residential areas to non-residential uses. Quite likely any change--either up or down--would be within a range of five percent. The relatively static overall picture, of course, may conceal dramatic changes in individual areas, but these changes are beyond the scope of this discussion.

The activities making up the generalized land-use category called commercial are highly diverse, with often conflicting trends. Consequently, a forecast of the need for commercial land is best approached by breaking up the overall category into a number of components in terms of functions and characteristic locations. The anticipated needs can then be discussed in terms of each of these types.

Commercial Functions

Convenience Goods and Services
Shopping Goods and Services
Offices, and Business and Professional Services
Medical and Dental
Automobile and Related Activities

Locations

CBD - Core	
CBD - Frame	
Regional Shopping Centers	Planned
Community Shopping Centers	or
Neighborhood Shopping Centers	Unplanned
Strip, Commercial Streets	
Highway Oriented Uses	
Isolated Sites	

The listing of functions is somewhat less complete than the types of locations--other somewhat less important functions might be added. Most of these functional types have certain locational preferences, although they may be found in more than one type of location. Each of the functional types will be discussed in terms of its characteristics and its future prospects.

Convenience Goods and Services

These goods and services are characterized by their frequency of purchase and their standardized nature. Supermarkets, drug stores, and dry cleaning establishments are common representatives of this category. Since they must be convenient to their customers, most of whom usually live within two miles, they are located in accordance with the population distribution and density. Neighborhood shopping centers--planned and unplanned--are made up of these establishments, although they are also found in the higher ranked shopping centers.

Future Prospects. Since the city is essentially built-up and little population change is expected, there should be a limited demand for convenience goods commercial sites. In certain areas, some small shopping centers may be built; but the overall picture is for little if any demand. Indeed, because of lower incomes and declining populations, some neighborhoods may have a surplus of these kinds of commercial establishments.

Shopping Goods and Services

These goods and services are characterized by the consumer's tendency to make a comparison shopping expedition in terms of price and style. Until recently, most of these establishments were located in the CBD; but as the Lloyd Center so well illustrates, they are now a feature of the larger shopping centers. They can also be represented in highway oriented locations as exemplified by automobile rows and furniture stores.

Future Prospects. The CBD's floor space in retailing is capable of handling a considerably higher business volume than it has now. No other regional or community shopping centers will probably be built in Portland, although some neighborhood type centers may be built. In summation: the amount of building will be small and difficult to identify by a particular neighborhood area.

Automobiles and Related Activities

Before the war, automobile agencies tended to concentrate in automobile rows near the downtown district. After the war, however, a decentralization pattern led by General Motors has developed with most of the new agencies going into suburban locations. No increase in dealerships in Portland is expected; in fact, there may well be some decline in the W. Burnside auto row. Service stations have been built in a significant volume in the past ten years according to building permit data. The two principal reasons--shifts in traffic patterns due to freeway construction and entrance of new companies into the marketing area--would seem to be a less prominent factor in the future.

Future Need. Relatively small and scattered.

Medical and Dental

Within this group we find a locational dichotomy. The general specialist has generally located in clinics convenient to his customers and which offer client parking facilities. These clinics are largely in suburban locations (especially in higher income areas). The highly skilled specialist working in a narrower field remains in a central location because his market represents the area's population (even regional population), and he serves patients referred to him by suburban doctors who are reluctant to treat the more difficult cases requiring special treatment.

Future Need. The Real Estate Research Corporation reports on the South Auditorium project and on the anticipated extension both point out a surplus of space in CBD medical buildings. The space need for centrally oriented specialists should be taken care of by existing buildings (unless closer investigation should reveal these buildings are unsuitable for one reason or another). Most of the clinic construction will take place in middle and upper income suburban locations.

Offices, Business and Professional Services

This category includes office functions of all kinds: headquarter offices, financial institutions, professional and business services (e.g., lawyers and accountants, etc.). The office function has had a historical tendency to prefer central sites (either the CBD frame or core) and it appears that for the nation as a whole there has been no significant decentralizing trend similar to that found in retailing and manufacturing.

Future Prospects. Reports by the City Planning Commission and the Real Estate Research Corporation on the urban renewal projects both forecast an increased demand for new office space. The decision to locate the new Federal building in the CBD, Georgia Pacific's large new headquarters to be built, and the construction of a number of other new office buildings are good indications that the office function will continue to be concentrated in the CBD core or frame locations. Since the S. Auditorium project will satisfy the need to 1970, and the proposed Extension until about 1975, there would not appear to be a significant demand left to be satisfied by 1980. A post-war trend has seen small offices--especially business services--moving out of the CBD core to CBD frame locations. Part of this demand may be served by the urban renewal projects, but some of it will continue on an individual basis. Building permit data for the past ten years reveal a limited amount of construction in other parts of the city exclusive of the Lloyd Center area (where there will probably be further office facilities constructed.)

Conclusions and Recommendations

There will be little demand for commercial land until 1980 that is not satisfied by current or contemplated renewal programs, large-scale private developers such as the Lloyd Corporation, or scattered developments on a smaller scale designed to satisfy local needs.

The CBD will continue to be the principal center of office functions and its decline in retail sales should gradually bottom out. Growth of high rise apartments in the immediate vicinity, urban renewal projects, and the emergence of Portland State College, the proposed Graduate Center, and the Medical Center should be positive factors in the future stability of the CBD. The fact that the CBD lies in an interceptor position between the fast-growing western areas and the Lloyd Center gives it some advantage. Aggressive merchandizing and better parking facilities will be needed; however, actually, in terms of the city's finances, it is fortunate that the area's only really large shopping center was built within the municipal limits.

Volume II of the Metropolitan Planning Commission's Commercial Patterns should be closely reviewed. The results of the Census of Business will also furnish very important data (I believe 1958, the last census-of-business year, happened to give a somewhat misleadingly unfavorable picture for Oregon).

One specific study, which might be undertaken if the resources are available, should investigate developments in the CBD frame. The CBD core has already been the objective of an intensive investigation. Further work on the CBD frame would complement the existing study and give valuable information on developments within the area, especially as they relate to the characteristics of firms which have moved into or out of the area.

There is one aspect of the commercial land use situation which presumably would be of considerable interest as far as future urban renewal programs are concerned. Blight is an all too common characteristic of the older shopping centers and the former street-car, strip commercial developments. This problem has not been mentioned, previously, simply because there is no easy or feasible cure in sight to my knowledge for the following reasons:

1. Many of these retail centers were built to serve a mass transit oriented public which has now switched to the auto.

2. Many of the neighborhoods served by these retail establishments have lost population, and the remaining population is characterized by declining incomes and purchasing power.

3. Many of the buildings are often obsolete; parking is inadequate; and vehicular congestion a problem.

4. Many of the merchants are running marginal operations.

5. Financing for improvements on the private market will be difficult to obtain.

6. The physical layout of these centers and strips make them difficult to handle on their own.

Consequently, it is recommended that no direct action be attempted now--probably the effort will not bring a sufficient return. However, these areas should be periodically examined and efforts made to assist in the thinning-out process, the conversion of some stores to other uses (possibly offices), and the provision for off-street parking facilities. A close watch should be kept to see how other communities are handling this common problem. It would be better, however, if Portland left the task of innovating and experimenting in this area to other cities.

4. RESIDENTIAL LAND NEEDS

Introduction

The importance of residential land use needs little elaboration if for no other reason than the fact that it is the predominate land use of the city. At this time, however, it is one of the most difficult land uses for which to make a forecast. Not only are the usual pitfalls to predictions present, but the uncertainty is increased because of the emergence of certain governmental programs which may have a significant but as yet unknown impact. Thus, the very urban renewal program for which a forecast is commissioned is, in certain ways, a further handicap to forecasting. The extent of these programs and their degree of success can only be hazarded at this time.

Selected Aspects of the Portland Housing Market--1960

As an aid to a better understanding of the Portland housing market, a number of tables were prepared from 1960 Census of Housing data. They are not intended as a complete analysis, but rather as a selected tabular inquiry to complement the Phase I CRP report on population and housing, and as a preliminary base on which to place recommendations for forecasting.

Tables 2 and 3 present data on family income and on value of owner occupied housing units for Portland, the Portland SMSA, and all United State's SMSA'S. It would have been preferable to compare Portland with the rest of the urban area (without the rural fringe areas) but this would have involved too many additional calculations. Consequently, because the City is such an important part of the Metropolitan total, there is less difference between Portland and the Portland SMSA than would be anticipated.

Table 2 shows that distribution of family income is roughly the same in Portland as the comparison areas for owner occupied housing units (except for a slightly greater concentration in the low income brackets). The most important finding, however, is the renter occupied income distribution. Over a quarter of Portland's renters had incomes of less than $2,000, and over 50 percent had incomes of less than $4,000. The housing problem in Portland is clearly dominated by the rental segment of the market.

Turning to the value of owner occupied housing units, the first part of Table 3 represents the entire standing stock, while the second part is limited to those houses built in the year 1959. Notice that while the Portland income distribution corresponded

Table 2--Family Income and Occupancy, 1959

Family Income	Portland	Portland SMSA	United States SMSA's
Owner Occupied			
Number of Units	79,731	167,497	20,036,123
Less than $2,000	13.6%	12.2%	10.6%
$2,000 - $3,999	12.8	11.7	11.5
$4,000 - $5,999	20.3	20.6	20.0
$6,000 - $7,999	21.6	23.2	21.5
$8,000 - $9,999	14.2	14.6	14.5
$10,000 - $14,999	12.1	12.4	14.8
$15,000 or more,	5.4	5.3	7.1
	100.0%	100.0%	100.0%
Renter Occupied			
Number of Units	51,625	80,190	13,963,921
Less than $2,000	28.2%	26.6%	20.8%
$2,000 - $3,999	23.7	23.0	22.8
$4,000 - $5,999	22.1	23.9	24.9
$6,000 - $7,999	12.7	14.3	15.5
$8,000 - $9,999	6.0	6.4	7.9
$10,000 - $14,999	6.0	4.5	6.1
$15,000 or more	1.3	1.3	2.0
	100.0%	100.0%	100.0%

Source: U. S. Census of Housing 1960, Metropolitan Housing, Final Report HC(2)-141

Table 3--Value of Owner-Occupied Housing Units

	Portland	Portland SMSA	United States SMSA's
Value of all Units, 1960			
Number of Units	79,731	167,497	17,267,354
Less than $5,000	4.6%	5.7%	5.6%
$5,000 - $7,499	14.4	13.8	9.0
$7,500 - $9,999	23.9	20.6	12.6
$10,000 - $12,499	22.5	20.7	16.3
$12,500 - $14,999	14.8	14.6	15.8
$15,000 - $17,499	8.2	9.2	12.9
$17,500 - $19,999	4.0	5.2	9.0
$20,000 - $24,999	3.9	5.1	9.1
$25,000 or more	3.7	5.1	9.7
	100.0%	100.0%	100.0%
Value of all Units built in 1959			
Number of Units	875	5,157	809,151
Less than $5,000	0 %	0.8%	1.7%
$5,000 - $7,499	0.9	1.4	1.8
$7,500 - $9,999	16.5	5.6	4.5
$10,000 - $12,499	13.7	10.1	10.2
$12,500 - $14,999	15.9	19.8	18.2
$15,000 - $17,499	10.9	18.2	18.0
$17,500 - $19,999	11.5	13.3	13.4
$20,000 - $24,999	15.6	15.7	15.0
$25,000 or more	15.0	15.1	17.2
	100.0%	100.0%	100.0%

Source: U. S. Census of Housing 1960, Metropolitan Housing, Final Report HC(2)-141

Table 4--Value-Income Ratio and Condition of Structure By Household Composition for Owner Occupied Housing Units, Portland

	ALL UNITS	MALE HEAD, WIFE PRESENT			FEMALE HEAD		ONE PERSON	
		UNDER 45	45 to 65	OVER 65	UNDER 65	65 AND OVER	UNDER 65	65 AND OVER
Value-Income Ratio								
Number of Units	79,731	22,637	25,797	10,554	4,464	2,587	4,387	5,762
Ratio								
1.4 or less	38.4%	46.6%	52.8%	21.9%	25.8%	20.1%	17.7%	3.2%
1.5-1.9	20.4	27.8	22.7	14.8	17.3	13.1	12.6	3.2
2.0-2.4	11.4	14.8	10.6	10.9	13.2	8.8	11.1	4.4
2.5-2.9	6.4	5.9	5.1	9.9	9.1	8.9	8.5	3.7
3.0-3.9	6.7	2.6	4.3	14.8	10.3	8.6	12.0	10.7
4.0 or more	15.4	2.2	4.1	26.7	21.3	30.1	32.6	68.8
Not computed	1.3	0.1	0.4	1.0	3.0	2.4	5.5	6.0
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Condition of Structure								
Number of Units	83,231	23,037	26,742	11,198	4,692	2,762	4,809	6,302
Condition								
Sound	91.7%	93.6%	94.2%	92.3%	87.6%	86.1%	88.0%	85.5%
Deteriorating	7.2	5.8	5.2	6.9	11.0	12.5	9.6	11.8
Dilapidated	1.1	0.6	0.6	0.8	1.4	1.4	2.4	2.7
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U. S. Census of Housing 1960, Metropolitan Housing, Final Report HC (2)-141

roughly to the nation's metropolitan areas, the value of all homes was markedly below that of the nation's SMSA's. Only about 20 percent of Portland's homes were valued at $15,000 or more, compared to the nation's metropolitan areas proportion of 40 percent. Conversely, about 43 percent of Portland's homes were valued at less than $10,000, compared to the national metropolitan average of 27 percent. What accounts for this discrepancy? Part of it is probably due to the higher home ownership rate in Portland which seems to result in more lower income groups owning homes than other cities which would find these same groups renting. Other reasons might be advanced: lower land values compared with areas such as New York City or California. I suspect, however, after all possible explanations have been examined, there would still be a residual difference which could be explained only in terms of Portlanders disinclination to put a substantial proportion of their income in housing. Notice, however, the closer correspondence between Portland and the nation in terms of the homes built in 1959. The only major deviations occur in the $7,500-$9,999 and $15,000 to $17,500 categories. These discrepancies may be due to a sampling, or typographical error.

Turning to an index used to indicate ability to pay for owner-occupied housing, Table 4 gives the value-income ratio by household composition. The traditional rule of thumb has been 2.5; in other words, households can generally afford a home valued at two-and-a-half their annual income. As in the case of the renters, this rule of thumb needs considerable qualification. It is, in fact, of dubious value in many instances, since it takes no account of the 1) age of the householder; 2) the household composition; 3) their asset position; 4) use of income before rather than after taxes, etc. Notice how poorly, in general, the overall total distribution represents individual household categories. Those households with male head under 45, or 45 to 65, have low income-value ratios (the 45 to 65 category has over 50 percent of households with ratios of less than 1.5), while the older households, the female heads, and one person households have relatively high ratios. On the basis of ability to pay, the income-value ratios would suggest that a significant potential existed to upgrade the housing quality of the majority of those households with a male head under 65. Many of the families in the 45 to 65 category are reluctant to increase their housing costs because of a propensity to spend money on other goods and services, the expense and difficulties of moving to quarters they could afford, and neighborhood ties, all of which may prevent a move.

Also given in Table 4 is the condition of structure by household composition. These data indicate the most severe problem of substandard housing (relatively speaking) is associated with one person households, female head households, and households with heads over 65. This is the hard core of owner occupied substandard

Table 5--Gross Rent
and Gross Rent as a Percentage of Income by Household Composition, Portland.

	All Units	Male Head, Wife Present			Female Head		One Person	
		Under 45	45 to 65	Over 65	Under 65	65 and Over	Under 65	65 and Over
Gross Rent								
Number of Units	51,625	12,630	6,030	2,335	5,069	845	14,426	8,280
$29 or less	6.8%	0.3%	1.0%	2.1%	0.6%	1.4%	12.1%	18.8%
30 - 39	8.5	1.3	3.0	2.9	1.1	1.8	16.2	17.3
40 - 49	7.8	3.2	5.0	5.6	3.8	5.9	11.3	14.4
50 - 59	11.9	5.7	10.6	11.3	12.6	12.7	15.3	16.1
60 - 69	11.9	10.4	10.4	12.9	14.9	19.4	13.6	8.6
70 - 79	12.9	15.2	14.1	14.4	17.2	12.3	11.4	8.2
80 - 99	21.4	35.1	25.4	22.5	29.4	19.7	12.1	8.4
100 -119	9.3	18.3	12.4	10.6	11.5	10.2	3.2	1.8
$120 or more	5.5	7.8	10.2	9.6	6.4	6.8	1.9	2.1
No Cash Rent	4.0	2.7	7.9	8.1	2.5	9.8	2.7	4.3
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Gross Rent as Percent of Income								
Number of Units	51,625	12,630	6,030	2,335	5,069	845	14,426	8,280
9% or less	7.9%	7.0%	15.3%	6.2%	2.4%	2.5%	10.7%	3.1%
10-14	16.1	25.0	25.9	12.8	7.5	6.2	15.0	4.3
15-19	17.2	25.8	21.8	12.2	12.5	11.1	16.2	6.8
20-24	12.2	16.7	10.1	13.7	14.1	11.8	13.2	7.1
25-34	14.4	12.9	9.1	18.3	19.7	13.6	13.7	17.4
35% or more	25.6	9.5	9.2	28.3	37.4	44.6	25.4	53.3
Not computed	6.1	3.1	8.6	8.5	6.4	10.2	5.8	8.0
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U. S. Census of Housing 1960, Metropolitan Housing, Final Report HC (2) - 141

Table 6--Condition of Structure and Number of Units per Structure
Renter Occupied, Housing Units, Portland, 1960

	All Units	Male Head, Wife Present			Female Head		One Person	
		Under 45	45 to 65	Over 65	Under 65	65 and Over	Under 65	65 and Over
Condition of Structure								
Number of Units	51,625	12,630	6,030	2,335	5,069	845	14,426	8,280
Condition								
Sound	70.0%	82.2%	80.4%	83.6%	77.7%	82.8%	59.3%	51.8%
Deteriorating	25.4	15.3	15.7	13.1	16.7	14.1	35.5	41.3
Dilapidated	4.6	2.5	3.9	3.3	5.6	3.1	5.2	6.9
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Units in Structure								
Number of Units	51,625	12,630	6,030	2,335	5,069	845	14,426	8,280
Units in Structure								
1	32.6%	58.8%	47.6%	27.3%	39.0%	34.6%	12.1%	12.5%
2	6.5	9.3	9.1	8.0	7.4	8.8	3.4	3.7
3-4	9.2	9.9	8.2	9.5	15.1	10.1	7.4	8.1
5-19	21.7	13.7	16.6	20.8	19.7	23.0	30.2	24.5
20+	30.0	8.3	18.7	34.4	18.8	23.5	47.0	51.2
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U. S. Census of Housing 1960, Metropolitan Housing,
Final Report HC (2) - 141

housing without the financial resources (and occasionally a loss of interest) to improve their dwellings.

Table 5 gives a closer look at the rental situation for the City of Portland in 1960 by giving data on gross rent (which includes utilities) and the proportion of total income accounted for by gross rent outlays. Since the stage in the family life cycle, the marital status, and the age of the renter are important variables determining the amount and importance of rent in the householder's budget, they are given (to a somewhat limited extent) by stratifying by household composition. As these tables are read, please remember that the size of the household will, of course, have a bearing on the rentals paid. Smaller households--especially one person households--will obviously need less room and consequently pay a lower rent. Notice the variance in the distribution of the total compared to individual household types.

Perhaps more important than the gross rent paid is an understanding of how much of the income goes to rent. The traditional rule of thumb is 20 percent. Notice, however, the lack of concentration about the two classes closest to 20 percent for the total income distribution. Twenty percent, from the standpoint of proper statistical analysis, is an unsatisfactory average because of a lack of concentration about the presumed average. When the kind of household composition is included, then the rule of thumb is even more inadequate--if not misleading. This is especially true of households with heads over 65, or female, or one person. The most extreme example being the one person household over 65 where over 70 percent of the households spend more than 20 percent of their income for rent. These data indicate the difficulty inherent in attempting to induce these households to upgrade their housing. From the standpoint of their personal finances, the money simply isn't available.

Table 6 gives the condition of structure and number of units per structure by family composition for renter occupied housing units. Notice the unsound substandard housing units have a rate three times as large as for owner occupied housing. As in the case of owner occupied units, the female head and single person households have the highest proportion of substandard housing, and these are numerically, as well as relatively, important. A surprising finding is the fact that age of the household head seems to make little difference in terms of the soundness of the rental unit. Also given is the number of units in the structure which reveals the tendency of older persons, female head, and one person households to occupy units in structures of five units or more.

The above tables should demonstrate the fact that there is no single real estate market. One way of viewing the market

involves the division of the overall market into its components. A suggested means of doing this follows in outline form.

COMPONENTS of the Residential Market

Family Composition

Young couples--childless or with pre-school children
Middle aged couples--with school age children
Older couples--children no longer living at home
Retired couples
Single persons--young or middle aged
Single persons--elderly
Single persons--one or more children
Mixed families--persons of various relations

Socio--Economic Status
upper income
middle income
lower income
minority groups

Type of Housing
high rise apartments
walk up apartments
garden apartments
single family homes

Location

Close-in
City
Suburban

Each type of family has certain housing needs which are generally filled by certain types of accommodations and certain locations. Families with two or more children, for example, represent a negligible potential market for close-in high rise apartments.

Conclusions and Recommendations

As stated previously, the residential land-needs are especially difficult to predict at this time. If any phase of the land-needs forecast requires the help of consultants, it is the residential segment. It is interesting to note that many of the reports prepared by consultants for other cities never really attempt to forecast the entire residential market. Instead, they tend to concentrate almost exclusively on close-in housing. The only report which attempts to deal with the entire city is the one prepared by Real Estate Research Corporation for the city of Syracuse.*

*A similar study for Denver using the same techniques was also done by Real Estate Research Corporation.

Should it not be possible to retain a consultant for the residential sector, the staff--with some coaching--could probably prepare an extimate modeled after the Syracuse report, which would be reasonably acceptable to the HHFA.

A projection of the anticipated age distribution within the city--similar to those prepared by the State Board of Census--would be especially helpful to the undertaking of a residential land needs forecast.

The segment of the residential market which has already received the most attention is the close-in, high rise apartment market. Both the South Auditorium and the South Auditorium Extension reports by Real Estate Research Corporation include the estimated demand until 1970. The demand for this type of housing should be satisfied in the immediate future by these projects, several private developments on the west side, and the Lloyd Corporation and another developer in that area. If anything, care should be taken to avoid an oversupply of these units. The market can only satisfy a limited demand for this type of housing--which is the cream of the residential market. A number of projects in other cities have badly overestimated the demand for these high rent accommodations.

In my judgment, should present trends continue, Portland will have an increasing share of the urban area's "problem housing" groups. These include low income groups, racial minorities, and the aged--all unable for one reason or another to afford or maintain satisfactory housing. The middle and high income "child centered" families will be concentrated in the suburbs. Programs, such as middle income housing, are needed to retain the middle income group within the city. Innovations in residential design, such as modern row houses or atrium houses which conserve space, should be promoted--perhaps in conjunction with the cooperation of Portland's architects. Faculty and students at Portland State College offer a potential group which might be receptive to these new (for Portland) ideas.

5. SUGGESTIONS FOR UPDATING LAND USE TRENDS

One of the major gaps in our understanding of the development and structure of urban areas has been the lack of data on a time series basis. These data would be useful to further our understanding of urban growth and change, establish trends, and serve as the basis for crude forecasts by extrapolation. Economists have long worked with time series as a foundation to their analyses of the economy. It is often more important for forecast purposes to know the present trends rather than the present pattern of land uses, since the present pattern may give misleading impressions. For example, estimates of land requirements for the future based on existing norms (e.g., acres per 1000 population) may simply be averaging the old and new standards.

Building permits offer one source of time series data. They have the advantage of being available without the problems of data collection. The City of Portland Building Permit Department compiles a monthly list of all building permits over $25,000. Information given includes the value, the use, and the address. For permits valued over $100,000, the floor space has been included. The number of units for each apartment building is not given, however. It is estimated that copying and tabulating these data would take about two man days per year. Should the building permits be assigned to census tracts or locations within the city, more time would be needed. This type of job lends itself to filling in slack work periods (it need not be done at once) and can be performed by any clerk who has been properly instructed.

Classification System

One of the principal decisions necessary to the setting up of the program would be the establishment of a classification system which would enable the individual compiling the data to decide to which category a given permit should be assigned and which kinds of construction projects would be classed as unimportant and could thus be ignored. Emphasis should be placed upon important projects and the exclusion of chaff which has a tendency to clutter the analysis and increase the work of completion. This, of course, raises the question of what is important and how it can be logically defined? The following variables should be considered in this connection.

Size--already defined (to some extent) by $25,000 limit

Type of Use--construction of additional docks would not be particularly relevant, for example

Effect upon Neighborhood--changes in uses would be especially important

Trend Indicators--key land uses which generally preceded development

Traffic Generation Characteristics

The final classification system should be consistent with the Metropolitan Planning Commission's land use classification (or some variation thereon).

Problems

1. The classification system has already been identified as a major problem. unless different arrangements were made, the program would be dependent on the building permits department designation of use. Such categories as store, office, or shop are not too helpful. This might be changed at our request.

2. The additions and alterations class accounts for a significant share of total construction. A method of adequately handling these permits would have to be devised.

3. While relatively complete information is available for Portland, comparable data are not currently available for the remainder of the urban area. The highly significant information on Portland's share of building, over time, by different categories, is thus not available.

As an experiment, in the nature of a trial run, building permits (over $25,000) were transcribed and tabulated for the ten year period, 1954-1963, for the City of Portland. The results are available in the original work sheets and have been summarized in Table 7 (for commercial only). The classification used was not meant as definitive. Service stations, for example, were included to satisfy a curiosity as to the number built. The really large permits have been identified separately or by name where possible. The perennial classification bugaboo makes an appearance here. Should the Equitable Building be classed under banks or offices (I would have placed it under offices). Even this table, in its incomplete and perhaps debatable form, furnishes much more useful information than a single category total simply labeled commercial.

Conclusions and Recommendations

Perhaps one of the principal reasons why more time-series data have not been collected by planning offices in the past has been due to the lack of an immediate "pay off" and the time and trouble which must be invested to insure a well designed and smoothly functioning program. Once this initial period is over, however, the time needed for updating will be small and the benefits well

Table 7--Building Permits[1], 1954-1963

Value and Number for Selected Commercial Categories, Portland.

	1954 Value & Number		1955 Value & Number		1956 Value & Number		1957 Value & Number		1958 Value & Number		1959 Value & Number		1960 Value & Number		1961 Value & Number		1962 Value & Number		1963 Value & Number	
Offices	1,400,000[2]	8	2,351,320	10	1,781,320	9	1,450,000	18	528,930	7	808,000	7	2,437,000	26	8,818,220[9]	12	6,214,190	12	1,378,755	13
Medical-Dental Clinic	225,000	6	473,700	5	372,000	7	351,800[4]	2	210,000	5	87,500	2	573,800	7	214,800	2	321,000	5	900,000[12]	3
Hotel-Motel	---	0	65,000	1	425,000	4	1,247,750[5]	2	4,798,500[6]	9	1,427,500	7	6,106,000[8]	2	2,148,108	5	1,530,260[10]	4	800,000	1
Stores	910,000	5	240,000	2	370,655	10	157,000	3	22,161,315[7]	9	410,000	9	2,059,680	19	1,218,500	10	1,221,204	12	831,312	10
Service Station	50,000	2	---	0	196,000	7	177,000	7	255,500	9	300,000	10	471,000	14	338,000	9	121,000	3	188,000	6
Automobile & Related	295,000	3	30,000	1	131,800	3	25,000	1	490,000	2	350,000	6	673,800	6	40,000	1	1,841,700[11]	8	314,000	6
Banks	158,000	1	75,000	1	312,000	3	200,000	1	413,580	4	166,000	2	50,000	1	35,000	1	800,000	5	3,341,500[13]	4
Eating & Drinking	215,000[3]	2	---	0	150,000	1	43,800	1	36,320	1	162,000	6	---	0	90,000	2	247,486	5	150,000	3
Warehouse and Shop-Office	377,885	5	511,000	5	1,063,915	15	1,364,385	8	1,150,000	7	896,000	7	817,700	5	703,620	10	1,065,000	10	1,486,750	11
Wholesale	1,145,000	10	1,156,330	14	1,343,000	12	2,250,000	10	680,000	7	1,279,000	10	618,130	11	602,400	9	494,785	7	1,571,494	10
Other	90,000	2	380,000	3	176,500	3	546,805	9	1,248,410	7	83,000	3	236,500	2	---	0	914,000	23	2,043,000	6

1 Permits over $25,000 only
2 Office $700,000
3 Restaurant $190,000
4 Medical Clinic $325,000
5 Hotel $1,207,750
6 Hotel $4,000,000
7 Lloyd Center $21,300,000
8 Hotel $6,026,000
9 Office $6,368,500
10 Hotel $1,314,000
11 Parking Garage $1,500,000
12 Medical Clinic $700,000
13 Office Building $2,954,500

worth the effort. The building permit information published by the Metropolitan Planning Commission has such broad non-residential categories as to be ineffective for useful trend analysis. One of the objectives of this program would be the information it would make available to prospective investors who could use this as a basis for making investment decisions. Consequently, the results should be widely disseminated by publishing them in the Real Estate Trends with office files available to interested parties.

In sum, it would appear that it would be well worth the effort to attempt this program on a trial basis for a year or so to see how it works out and the extent the results are found useful by other agencies and individuals. If my schedule allows, I might be able to do further work on this independently as a pilot project, as a personal interest on my own time.

Addendum

While on the topic of time series analysis and monitoring trends, it may be of interest to note the results of an "Economic Posture" study done for the city of Philadelphia. A consulting firm was commissioned to provide a listing and discussion of economic indicators suitable for taking the so-called "economic pulse" of the city and region. They were restricted to assembling in their report (for convenient reference) only those data which had already been collected by federal, state, or local governments. As an indication of their results, which were essentially a series of tables, a listing of these tables is provided below. Not all of these tables would be available in Portland.

THE PHILADELPHIA "ECONOMIC POSTURE" STUDY TABLES

Personal Income
Personal Consumption Expenditures
Retail Sales
Number of New Housing Units (Including Public Housing)
Number of Residential Building Permits
Valuation of Building Permits
New Residential Housing Units by Type (single, double, multiple) and Planning Analysis Section*
Dwelling Units Changes
Private Construction, and Public Construction and Conversion-Demolition
Number of and Valuation of New Non-Residential Building Permits
Number and Valuation Building Permits for Additions and Alterations, Residential--Nonresidential
Manufacturing Plant and Equipment Expenditures
Manufacturing Plant and Equipment Expenditure by Industry Type

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