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APARTMENT BUILDING INCOME-EXPENSE ANALYSIS
Can management control rising construction and building operating costs? Here's one inflation fighter you must not ignore.

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BRIEFING
THIS ISSUE

ATMOSPHERE: THE SECRET OF A SUCCESSFUL SHOPPING CENTER (THIS MONTH'S COVER)

Peter C. Read, CPM

The successful shopping center is one that incorporates good salesmanship on the part of its merchants along with top-flight organization on the part of ownership and management, writes CPM Peter C. Read. Among the ingredients that spell out success are attractive displays, courteous personnel, regulated hours, constant cleaning and easy parking. The regulator controlling all these facets and many more is, of course, the management team. Seen on our cover this month is the unique design of the piazza of the Guildford Town Centre located in North Surrey, B.C.

NET GROUND LEASE ANALYSIS FOR DECISION-MAKING PURPOSES

William M. Shenkel, CPM

Dr. Shenkel concludes his four-part study on the varied capacities computer programming offer to real estate investment planners. He examines three methods of determining annual yield: first, with a conventional land purchase; second, with a long-term net ground lease; and last, a project constructed on leased land with the fee owner subordinating his interest to a first leasehold mortgage. The complex elements demanded in such an analysis can be quickly provided by computer programming, thereby aiding the real estate consultant in determining which financial arrangement may best satisfy varied investment motives.
RAPID TRANSIT: CONCEPT FOR URBAN SUCCESS

George W. Jernstedt

Mr. Jernstedt examines several transit developments around the world and points to how they are functioning not merely as modes of transportation but as elements in stimulating city growth and redevelopment. Using systems in Toronto and Stockholm, he illustrates how multi-functional design of station areas for convenient residential and commercial facilities has led to city growth. He then urges cities in this country to adopt similar developments to aid in the orderly, progressive growth of urban areas.

THE ARNHEIM & NEELY CASE: A DILEMMA FOR THE REAL ESTATE INDUSTRY

Robert P. Lawry

The ramifications of the recent suit against the Pittsburgh-based management firm of Arnheim & Neely by the Department of Labor are discussed in this report by one of the attorneys for the defendants. In the recent decision by a federal court, real estate management firms may be held responsible for the payment of minimum wages to employees in every building they manage so long as two or more employees working for the firm anywhere are held to be engaged in interstate commerce.

EDITORIAL: ENVIRONMENT—LIFE OR DEATH

Lloyd D. Hanford, Sr., CPM

Mr. Hanford takes note of recent warnings being issued around the world that unless we immediately bring an end to water, air and land pollution, the earth will shortly cease to support life. He calls for better land use as well as for complete cooperation between all officials and individuals to combat this imminently-threatened situation.

COMPUTERIZED FUTURE FOR PROPERTY MANAGEMENT

Sidney Glassman, CPM

Establishing the varied procedures in a computer program to handle the tasks of accounting and bookkeeping in the management office are outlined in this report by CPM Sidney Glassman. He presents a step-by-step case history of how one management office carefully and successfully made the gradual transition from manual to computer systems with the aid of a knowledgeable service bureau, and offers suggestions as to how other firms may set up similar stages.

PARKING PROBLEMS NEED PROFESSIONAL ANSWERS

B. B. Berman

While parking facilities are sometimes forgotten until “the last moment” by building designers, today a full-service parking facility calls for as much consideration as the office or apartment it serves. As areas compete on the basis of the number of parking spaces available, the design of a garage calls for serious thought on the part of city officials and all those involved in city development.
Atmosphere: The Secret of a Successful Shopping Center

by Peter C. Read, CPM

Ask 100 shoppers what they like about a shopping center and they will give 100 different answers. The truth is that no single factor spells success for any shopping center but rather a composite of many. They may, however, be defined by a single word—Atmosphere—where each important component may be identified with the letters that spell this magic word:

A Is for Aesthetic Appeal
T Is for Tenant Mix
M Is for Merchandising
O Is for Owner Participation
S Is for Safety and Security
P Is for Promotions
H Is for Hours of Shopping
E Is for Easy Parking
R Is for Regular Cleaning
E Is for Efficient Management

Aesthetic Appeal

The dictionary defines “aesthetic” as “belonging to the appreciation of the beautiful.” Can a shopping center be described as beautiful? Can it be beautiful and functional? Yes, it can; it should be pleasing to the eye of the beholder as well as functional. If first impressions have the greatest impact, it is the well-displayed and attractively packaged commodity that will catch the eye. The successful shopping center should, therefore, present an attractive view to the potential customer when he first sees it. His first reaction should be, “That looks like a nice place to shop.”

Aesthetic appeal in a shopping center can relate to use of contrasting materials, textures or forms, to color, to layout and design, to landscaping, to furnishings and to lighting. It can be simple or elaborate. This is the architect’s field but he must appreciate that his design creates the necessary eye appeal that first attracts customers to the center.

To be functional the design must be compatible with minimum operating costs.

Tenant Mix

The successful shopping center must provide what the consumer demands, and today that means one-stop shopping in its broadest sense. Satisfactory one-stop shopping should provide a good cross-section of stores offering the kinds of merchandise the trading area demands. Food stores, clothing stores and their related accessory stores, together with a variety of services such as banks, insurance, real estate, shoe repair, cleaners, laundromat, beauty salon and barber shop, and restaurant or coffee-shop facilities for family eating make up the tenant mix.

Having established the required mix, based on a comprehensive market study, as well as the quality level of the various stores, the next major consideration is the placement of these stores within the center, which must be compatible with space requirements. Prime consideration has to be given to the placement of consumer “shopper goods,” i.e., clothing and apparel stores, in the main traffic areas. The establishment of a fashion center as a focal point has great impact since it has particular appeal to the woman shopper. Other types of stores retailing “non-shopper” goods can be located in lesser traffic areas. It should be remembered that 85 to 90 percent of all retail purchases are made by women so the tenant mix and placement of stores should be established with that fact in mind.

Merchandising

Despite the merchant’s best intentions and determination to succeed, a store full of goods will not sell itself. The store operator must understand and apply the principles of good merchandising. This
is a big subject of its own and cannot be covered in detail here. However, three most important principles are: 1) presentation of the merchandise; 2) knowledge of the merchandise; and 3) service to the customers.

The presentation of merchandise may be broken down into two aspects: window displays and store layout. The first impression a customer gets is from the display of goods in a store window. Think how many people go window shopping. How many get the urge to buy when they see things attractively displayed? Certainly, customers do not pause to look in a window that is overcrowded, jumbled and badly illuminated. The merchant must keep these factors in mind when creating his window display. First the customer must be attracted to the store and then be impelled to enter.

Once inside, the display of merchandise must be attractive and easily accessible. Stock must also be held in depth. Make the customer want to buy and return to buy again.

Today's merchants must be creative, innovative and willing to experiment. Our fast-changing world, with its resultant changes in social life, education, earning power and consumer demands, leaves no place for those who stand still.

There is nothing more frustrating to a customer and more calculated to kill a sale than a merchant or one of his staff who is unable to answer a simple question like "Can I wash it or must it be dry-cleaned?" A vague reply such as "I guess it will wash all right" or "I don't know" will inevitably lose the sale. A merchant must know the qualities of the goods he sells and be aware of possible alternatives in his stock. More important, he must ensure that his sales staff also knows the merchandise. In establishing his stock, he must know his consumer demands and his competition. He should endeavor to complement the department stores rather than compete with them.

Nothing is more calculated to boost a customer's ego than to be treated as a VIP when entering a store. To be removed from the common herd for a moment does wonders. This perhaps appears extreme but it is the goal that every merchant should strive for. In this computer age everything seems impersonal and dehumanized; the independent merchant and his staff are one last stronghold where personalized service can still be given to the customer. Courtesy, patience, an understanding of a customer's needs and a good knowledge of the products sold all add up to customer service. Helpful sales staff will always attract customers and boost sales.

O Is for Owner Participation

To be successful a shopping center must be a joint venture by the merchants and the owner. If the center as a whole prospers, so do the merchants and the owner. The old concept that the owner builds the premises, leases them and then sits back and collects the rent is archaic and impractical. An owner's participation in a shopping center has several facets.

At the outset he should organize a merchants association and provide guidelines for its successful operation. He should contribute to the association's fund as generously as possible. The stimulus for the association should be provided through the center's manager, or its promotion manager if it is large enough to employ one. The involvement of the owner, through his manager, must be continuous and energetic.

Generally speaking, merchants in a shopping center have neither the time and the inclination nor the necessary experience to organize and direct center-wide promotions. It is, therefore, up to the owner to create a center image and be the ombudsman to all merchants—large or small—to iron out their problems and conflicts to the advantage of the center as a whole. Through the manager, the owner should establish effective promotional programs and through the medium of the merchants association, and with its approval, promote the center as a whole.

The healthy center shows steadily in-
creasing sales volumes and by establishing a regular system of sales reporting, the owner can keep an eye on sales trends of all the merchants. These trends can be checked against local or national averages to gauge the degree of success being attained. If any business in the center shows weakness, then the owner must investigate to determine the cause. He should draw the merchant’s attention to the situation and discuss with him steps that can be taken to improve his sales. If necessary, the owner should move a tenant out before he reaches the point of insolvency.

The owner must also watch local trends in sales, in merchandising, in customer habits and, of course, for competition created by new centers. For example, it may reach the point that in order to maintain a favorable trading position, the owner will have to give the center a facelift by installing new store fronts or enclosing an open mall.

The owner who does not participate in his center may be likened to Rip Van Winkle who slept while the world passed him by; when he wakes up, his center may no longer be attracting customers.

S IS FOR SAFETY AND SECURITY

The safety of a customer and her family when shopping is of paramount importance. Most safety precautions are common sense but all too often are overlooked by those who are completely familiar with a center. Most safety features of a shopping center can be incorporated in the initial design but where a hazard is subsequently discovered, immediate steps must be taken either to remove it or to provide adequate warning.

Common hazards are low curbs around flower beds or planters, plate glass windows located alongside of entrance doors, steep steps without handrails, badly defined treads in stairs, smooth surfaces which become slippery when wet, low branches on trees, projecting signs, sharp edges and corners on planters, benches and other mall furnishings. Protect your customer from these hazards and you will have a relaxed customer who will be inclined to stay longer and buy more.

Inevitably, there will be accidents so it is in the center’s interests to have a simple, efficient system of reporting them on a standardized form for the management, insurance company and any other interested parties.

Shopping centers are faced with continuing and increasing security problems. The degree of security provided depends on a number of considerations, such as location, layout of the center, local police protection, etc. Generally speaking, local police are not in a position to do more than make arrests or investigate specific complaints relating to theft, shoplifting, vandalism or traffic accidents. The general policing of a center has to be done by a security patrol. Usually security is a cost borne by the common area maintenance budget.

The number of men required at any one time depends on circumstances prevailing. There should be a sufficient number on duty to control the situation, whether it relates to traffic congestion or large crowds but a center should never begin to give the impression of being a miniature police state. Obviously on occasions such as Halloween, the security forces need to be boosted to prevent vandalism. However, as a general rule, a center must at all times maintain the image of being a nice place to shop without being jostled or having your purse snatched. To achieve this image, security patrols should be as inconspicuous as possible, but at the same time would-be troublesome elements should be aware that security action is being taken. The use of closed-circuit television enables one man to monitor many areas at one time and certainly achieves the “inconspicuous” effect without loss of control.

P IS FOR PROMOTION

The successful center is the one that is promoted. Much of the atmosphere of a center is attained by having constant activity taking place in the malls; it creates excitement and interest. If you
The vitality of a shopping center—such as the Guildford Town Center in North Surrey, British Columbia, shown here—depends on the establishment of a consumer-pleasing atmosphere on the part of both merchants and management.
can get customers to say, “Let’s shop at Center, there’s always something interesting going on there.” then a big step has been taken towards success.

Center promotions should be aimed at attracting people to the center; then it is up to the individual merchants to attract them into the stores.

A promotion is only as successful as the support given it by the merchants. This support is gained by having a healthy merchants association, and the strength of this association lies in good communication between the owner/manager and the merchants and among the merchants themselves. In particular, there must be complete accord with the major department store if there is one in the center.

The key to a good promotion is good planning. Regular meetings of the merchants association, backed up by regular bulletins, will ensure that good communication is maintained. The three “C’s” provide a good guideline to any promotion: Coordination, Communication, Cooperation.

Details of how and what to plan for promotions would fill a book. There are, however, some basic principles to be followed:

1. Obtain maximum impact with minimum cost. Expensive, spectacular presentations often attract no more people than simple, low-cost promotions.
2. Make use of as many local organizations, service clubs and charities. For every person you use, there will always be a string of relatives who’ll come to boost them. It creates good will.
3. Women are the principal shoppers but direct some promotions toward their husbands. They hate shopping, but put on a boat show, trailer show, fishing or hunting equipment show and they will be happily occupied while their wives shop.
4. Above all, be original. Don’t repeat what another neighboring center has just done—it will more than likely be a dismal failure.

Of course there are regular seasons which require major promotions—spring, summer, back-to-school, and Christmas—around which you weave the magic of excitement with new concepts, ideas and materials. Between these major promotions should be continuous, lesser ones, involving art shows, car shows, fire department displays, boy scouts, girl scouts, displays, bands, square dancing groups and so on. It is a constant challenge to be original but aim to have your center known as the place “where the action is.”

H IS FOR HOURS OF SHOPPING

It is most important that all stores in a shopping center remain open for business during regular agreed shopping hours. The customer will quickly take her business elsewhere if she finds that her one-stop shopping is hampered because some stores are closed. The consumer market today demands six-day shopping with stores being open at least one night a week. The trend is toward being open every night and in some areas seven-day shopping has become the rule. The permitted hours of business are regulated by local law but in many places there are only limited restrictions.

Department stores in some centers still cling to a five-day week even when all other retail outlets are open six days a week. This in itself presents a problem in many centers. For the most part individual merchants are willing to stay open six days a week but their efforts are severely restricted when the department store stays closed on one day. Inevitably, if a customer visits the center when the department store is closed, she probably will not return. Customers cannot be bothered to remember that at such and such a center the department store is closed Monday while at another it is closed on Wednesday. They are more likely to patronize the center where all the stores are open at the same times.

The specific hours a center remains open on any one day must relate to local customer demands and shopping habits.
In some areas experiments have been made in opening late in the morning and staying open late every evening. Part of the consideration for this trend was the question of transportation. One-car families are not mobile until the husband returns home from work; therefore, late afternoon or evening shopping is more convenient.

It is the customer who keeps returning to a center who brings the dollars. Make sure the door is open at all reasonable hours to welcome her.

E Is For Easy Parking

Easy parking is the first thing to have impact on the customers. A customer who is frustrated by difficult parking will be in a poor frame of mind when approaching the stores. She will be tense and angry instead of relaxed and prepared for leisurely shopping. Dented fenders, scratched doors and body work resulting from difficult parking all cause frayed tempers quickly. Trying to squeeze in more cars per acre than is practical creates more headaches than it saves. Inadequate width in parking stalls, inadequate turning space in the access lanes and improper angles for parking all contribute to difficult parking.

Good planning by experts in the field of traffic engineering will produce easy parking in which even the most apprehensive driver will feel at home. Quick and easy access to the various blocks of parking so that traffic back-ups are kept to a minimum is essential.

The average customer does not carry a compass! Inevitably, in a large center some customers lose their sense of direction and on returning to the parking lot, fail to find their car and are convinced it has been stolen. A variety of methods may be used to identify parking by blocks. Letters of the alphabet, color coding, symbols, etc., may be used and should be installed in locations high enough above the parking lot to be seen by customers as they leave the malls to return to their cars. The parking areas should be well illuminated and identifying signs should be visible by day or night.

Adequate directional signs are also essential. Where there is a parcel pick-up in a center, directional signs should guide the customer easily to such a place. She then wants to find her way out of the center with the least confusion possible and leave by an exit which leads her easily into the traffic stream in the direction she wishes to travel home.

R Is For Regular Cleaning

The cleanliness of any premises has a strong psychological impact on people. If a child drops a candy wrapper to the ground in the mall of a shopping center, the mother will usually make the child pick it up if there is no other litter on the ground. However, if there is already litter and debris all about, then no effort will be exerted to pick up anything that is dropped. It is surprising how many out-of-town visitors to a center will go out of their way to find the center manager and compliment him on the cleanliness of the center.

Regular cleaning is essential. This means not only sweeping, cleaning, scrubbing and picking up litter before the center opens each day but a continuous pick-up program by the maintenance crew throughout the day. All litter and gum should be cleaned from the mall areas or else these surfaces will develop a permanently scruffy appearance. The maintenance crew should be equipped with putty knives and instructed to pick up litter or gum whenever they see it. Only in this way will the center's standard of cleanliness remain high.

Another aspect of cleaning is the weeding and cultivation of landscaped areas and planters. Removal of weeds, dead flowers and grass clippings will ensure a neat and tidy appearance at all times.

As already mentioned, a center design must be functional. Good design can greatly facilitate cleaning by planning for maximum use of mechanical cleaning machines. Cleanliness is a contributing factor in aesthetic appeal.

A planned and regular clean-up pro-
gram, designed for maximum efficiency without interfering with customers, will do much to enhance the feeling that the center is a pleasant place at which to shop.

E IS FOR EFFICIENT MANAGEMENT

Assuming proper feasibility studies and market surveys have been made and that population trends, traffic patterns and trading-area potential have been fully analyzed, then the shopping center will have been constructed in the most advantageous location. At the outset the planning must be carried out by a team comprising the developer, architect, financier and manager. Of this team the architect and manager can make or break a center at its inception. If they work well together, the design will be appealing but at the same time practical and capable of economic operation. Too little thought to proper facilities for efficient management may affect the center throughout its entire life.

Poor management is reflected not only in the appearance of a shopping center but also in the attitudes of the merchants and their staff. If the management is not effective, then the whole atmosphere of the center is affected in all its various elements already described.

The manager must be skilled as an administrator, a promoter and a public relations man. It is a challenging and demanding vocation. One single factor contributes more to the efficient operation of a center than anything else and that is effective communication. Communication with the staff, through planned programs and clear, concise instructions; with the merchants, through the merchants association meetings, bulletins and personal contact; and with the public, through advertising on radio, television and in newspapers.

Common area maintenance, which covers the physical operation of a center, must be effectively and economically carried out. All merchants in a center contribute to the costs and it is therefore incumbent on management to prepare proper budgets and control them. Regular maintenance programs must be instituted to cover cleaning, sweeping, landscape maintenance, building maintenance (both preventive and remedial), and parking area maintenance (including repainting of lines, sign maintenance and surface repairs). In regions where snow is a factor, arrangements should be made with equipment operators to be on call for immediate snow clearing. A definite plan for snow removal is essential since a center without a clear parking lot might as well close its doors.

Close liaison with the merchants is necessary at all times to help them with their problems and to encourage them to participate in center promotions.

Efficient management is the effective control of everything that happens in a center. It is the thermostat that controls the atmosphere. It is, therefore, most important that the management staff be of a high calibre and that there be sufficient personnel so that at no time is any aspect of management neglected. Equally important is the use of good quality mechanical equipment for maintaining the physical property which will save time and labor and keep costs to a minimum.

Atmosphere is a nebulous entity, but nevertheless, it is the secret of a successful shopping center. Don't pollute, dilute it or ignore it! The atmosphere may be good, bad or indifferent. It is up to the owner and his management to ensure that it is as near perfect as man can make it. It may be the difference between success and failure.

Peter C. Read, CPM, is presently director of property management for Crosvenor-Laing (B.C.) Ltd., and is responsible for the administration of several shopping centers and an industrial park in British Columbia. Before coming to Canada in 1950, he was an appraiser in England. Since then he has held positions with the Assessment Department of Internal Revenue and the Central Mortgage & Housing Corp. of Canada. Mr. Read is also a member of the International Council of Shopping Centers and of the Board of Governors of the Real Estate Institute of British Columbia.
Net Ground Lease Analysis
For Decision-Making Purposes

by William M. Shenkel, CPM

This is the fourth in a series of articles by William M. Shenkel, CPM, on analysis by computers. Each of the articles* has shown how the computer may be used to analyze real estate investments. Most of the cases are arranged so that virtually every property manager may make use of computer analysis. Service bureaus, real-time arrangements, and terminal units bring the computer within range of most offices. Tables prepared for this article are derived from lengthy computer runs reproduced by typewriter terminal units. Using the full capabilities of computers will enable property managers to judge the best combination to realize investment objectives.

Rapid and accurate computer calculations—programmed to guide investment decisions—give the real estate industry a powerful tool. Accordingly, this article illustrates a computer program that shows the effect of a net ground lease on annual yields. To indicate the significant financial relationships, this computer analysis initially deals with three cases: first, a conventional purchase of land with a building financed under a long-term mortgage; second, using the same facts, a long-term net ground lease with the mortgage secured only by the leasehold interest and, third, a project constructed on leased land with the fee owner subordinating his interest to a first leasehold mortgage.

The article then relates the income required to meet minimum investment yields under a given mortgage and net ground lease. In both instances data are arranged to show the relative influence of variables important to the decision-making process. Thus, computer analysis may help guide an investment decision based on income and cash flow projections, given the circumstances of each investment.

From these data a secondary objective may be gained. That is, given an investment objective and the lease or purchase alternatives, principles can be established to guide real estate investment and, further, the factors that seem to stand out as determinants of investment yields.

Such an approach demonstrates a single—but significant—point: the professional consultant may consider a virtually unlimited, yet realistic, number of investment combinations. To be sure, many experts regularly consider and report financial analyses as shown in this article. But with computer assistance, it is possible to consider a range of investment conditions and the relevant combinations of mortgages, depreciation methods and net ground leases, which calculations are ordinarily too tedious, time-consuming and subject to error using only desk calculators.

In reviewing each table, the reader is cautioned not to be guided by specific interest rates, land-building ratios or personal income tax rates used in each table. Data are introduced only to demonstrate a technique and not to report current investment conditions. The model described permits a change in each variable to meet individual requirements. Also, the calculations are completed so rapidly

that it is economical to try several com-
binations to find the best investment prop-
osition. Thus, with objectives of the in-
vester fairly well defined (i.e., investors
may variously stress capital gains, tax loss
offsets, or annual dollar yield), the pro-
gram shows which financial arrangement
will best satisfy investment motives how-
ever varied.

In this respect it would be difficult to
over-emphasize the value of computer-
programmed analysis. Indeed, the author
has noted—even over the few months in
which these articles have been published
—a rapidly growing interest in computer
investment analysis. New software pro-
grams and computer-programming assist-
ance, apparently, are increasingly directed
not only to housekeeping functions and
routine accounting applications, but to
analytical procedures that help guide the
most efficient use of capital funds.

In fact, it is believed that computer real
estate analysis is being adopted so rapidly
that the models suggested here will soon
be superceded by more sophisticated
techniques that employ linear program-
ning, probability analysis and calculus.
Several research projects are underway in
the Department of Real Estate and Urban
Development, University of Georgia, that
will probably lead to more advanced
models.

LAND PURCHASE AND MORTGAGE FINANCING

The first investment model shows the
change in yield and cash flow for a de-
velopment under a land purchase and first
mortgage against the fee interest. The
model produces yield and cash flow in-
formation for four depreciation methods.
To calculate these results, mortgage tables
are produced showing annual interest and
principal payments—one for a land pur-
chase-mortgage development and two for
the net ground lease examples. In total, a
mortgage table and four cash flow tables
are produced for each model showing
yield projections over 10 years. Because
the land-building ratio is changed to show
the importance of this variable, 30 tables
were printed for this article. Computer
time (CPU) for these calculations totalled
two minutes and a typing or printing time
of 108 minutes. Data were printed on an
IBM typewriter terminal unit, Model 2741,
using the conversational programming
system, which is a subset of PL/1 com-
puter language. (The probable calculating
time for these tables using a desk calcu-
lator is several days.)

The main point to be made is that vari-
ables may be changed to suit individual
circumstances. Again, varying investment
requirements may be entered into the cal-
culations so as to give the best or ideal
investment combination. It will be noted
that the variables represent investment
projections for only 10 years. In making
projections, experienced consultants will
consider the most probable investment
results. Even if these projections tend to
be subjective, surely they are better than
throwing darts at a wall.

INVESTMENT ASSUMPTIONS

To show the more important relation-
ships, certain simplifying assumptions have
been made. While these relationships may
not prevail for every community and while
market conditions may depart from the
assumptions adopted here, it will be
realized that any reasonable combination
may be entered. Hence even though the
final results for any of the assumptions
may not hold true for each particular case,
the illustrations show important relation-
ships that affect investment decisions. Con-
sequently, the method of analysis is be-
lieved valid for similar investments,
though the variables differ for each case.

Table 1 summarizes the facts used in
this analysis. The assumed variables repre-
sent figures that must be entered on the
typewriter terminal to produce each table.
A brief comment on these variables shows
the significance of ratios reproduced in
succeeding tables.

Table 1 is based on a projected property
value of $3,000,000. Initially, for the first
set of relationships, the land has an esti-
mated value of $750,000, and the building,
with a value of $2,250,000, has an eco-
nomic life of 50 years.
TABLE 1. INVESTMENT VARIABLES UNDER PURCHASE AND LEASE ALTERNATIVES

<table>
<thead>
<tr>
<th>Investment Assumptions</th>
<th>Purchase and Mortgage</th>
<th>Lease without Subordination</th>
<th>Lease with Subordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage</td>
<td>$2,000,000</td>
<td>$1,500,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Mortgage Interest Rate</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
</tr>
<tr>
<td>Beginning Year of Mortgage</td>
<td>1969</td>
<td>1969</td>
<td>1969</td>
</tr>
<tr>
<td>Length of Mortgage</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Building Value</td>
<td>$2,250,000</td>
<td>$2,250,000</td>
<td>$2,250,000</td>
</tr>
<tr>
<td>Building Life in Years</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Net Income Before Depreciation and Taxes</td>
<td>$300,000</td>
<td>$300,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>Rent</td>
<td>-</td>
<td>$60,000</td>
<td>$60,000</td>
</tr>
<tr>
<td>Personal Income Tax Rate</td>
<td>.30</td>
<td>.30</td>
<td>.30</td>
</tr>
<tr>
<td>Beginning Equity</td>
<td>$1,000,000</td>
<td>$750,000</td>
<td>$250,000</td>
</tr>
<tr>
<td>Depreciation Method*</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

* Depreciation Code: 1 = straight line; 2 = sum of years digits; 3 = double declining balance; 4 = 1.5 declining balance.

TABLE 1

Cash flow analysis is partly a function of the loan-to-value ratio, assumed as two-thirds of the property value, or $2,000,000, in Case 1. The $1,500,000 mortgage for Case 2 represents two-thirds of the building value. In the third model the land is acquired under a long-term, net ground lease; hence, the loan is limited to $2,000,000 since the leased fee owner has subordinated his interest to the leasehold mortgage.

Other assumptions of Table 1 are necessary for the calculations that follow: the first mortgage interest rate is based on 8 percent. It is assumed that the mortgage starts at the beginning of the year 1969 and continues for 25 years. To calculate the depreciation, a building value of $2,250,000 is assumed for the three cases. The net income of $300,000 constitutes a 10 percent return on the total property value. The rent expense under the lease program constitutes an 8 percent return on the land value of $750,000. For this example, a personal income tax rate of .30 was entered and remained unchanged for each calculation. In actual practice this allowance, or any of the other assumed investment conditions, may be changed according to particular investor requirements. In some instances, for example, the corporate net income tax rate would be appropriate.

The equity interest at the beginning of the mortgage must be entered to show the accumulative equity interest—a result of annual mortgage principal payments. To simplify this explanation, no change in property value was considered. The program calculates yield for four depreciation schedules for each of the three cases. That is, the model reproduces four tables based upon different depreciation methods for each of the three cases of Table 1.

CASE 1: LAND PURCHASE AND MORTGAGE

Table 2 summarizes financial information under a conventional mortgage of the fee estate. For this analysis double declining depreciation is used though the computer also calculates data for three other depreciation methods. Other assumptions of the first column in Table 1 are also entered. Though the computer calculates data over 10 years, to save space only four selected years are shown in Table 2.

In addition, the computer calculates the net income as a percentage of the original equity plus accumulated principal pay-
The table at hand, these ratios were reproced for every set of variables. In model produces each ratio as a standard comparative meaning. But note that the favorables results: 51.1 percent in year one found that the first year gives the most to cash flow (shown in percent), it By computing the ratio of taxable income percent to 5.99 percent by the tenth year. From line 14) ranges downward from 9.70 percent. The calculation for the first year is summarized below:

Net Income ...................... $ 300,000
Original Equity ................ $1,000,000
Mortgage Principal
Payments, 1st Year .......... +26,182

Total Equity End of 1st Year $1,026,182
Return on Equity ............ .29

Table 2 lists information so that several ratios may be calculated. Note that the first three items report net income after the total mortgage payment: $114,764. On line four, mortgage principal is added which, in effect, constitutes a deduction of the interest expense. Subtracting the depreciation allowance gives the taxable income over the 10-year term—shown here as $50,946 in the first year and $106,097 in the tenth year. With a 30-percent income tax rate, the after-tax income is shown in line eight. Cash flow, defined as the return after taxes and total mortgage payments, ranges from $99,480 in the first year downward to $82,935 at the end of year ten.

Suppose now that the client pursues a single objective: He wants to minimize taxable income and at the same time to maximize the cash flow as shown in line eleven. The best choice would probably be an investment that gives the lowest ratio between (1) taxable income as a percent of equity and (2) cash flow as a percent of equity. The computer print-out, which is shown in summary form in Table 2, shows these ratios for each year. Note that in line 13, the taxable income as a percent of equity starts at 4.96 percent and increases to 7.66 percent at the end of year ten. Cash flow, on the other hand, (taken from line 14) ranges downward from 9.70 percent to 5.99 percent by the tenth year. By computing the ratio of taxable income to cash flow (shown in percent), it is found that the first year gives the most favorable results: 51.1 percent in year one compared to 127.88 percent in year ten.

On their face, these figures have little comparative meaning. But note that the model produces each ratio as a standard procedure for every set of variables. In the case at hand, these ratios were repro-
duced for 30 tables over 10 years for a total of 300 examples. Accordingly, from these data, the investor may select the arrangement that most nearly meets his projected goals.

Since the purpose of this analysis is to compare yield results under a lease as opposed to land purchase, the data of Table 2 may serve as a standard to judge similar calculations under a net ground lease proposal. To show the effect of a lease, all other investment conditions remain unchanged.

**CASE 2: NET GROUND LEASE WITHOUT SUBORDINATION**

Table 3 summarizes yields for the same investment, assuming a net ground lease and a leasehold mortgage without subordination of the fee interest to the first mortgage. The assumptions for this case are listed in the second column of Table 1. Note that by leasing land, the initial equity is reduced to $750,000 and the required mortgage is lowered to $1,500,000, representing two-thirds of the building value. The $60,000 rent constitutes an 8 percent return to the fee owner.

This case more nearly meets certain investment objectives. For instance, if the investor wishes to increase the difference between taxable income and cash flow, Case 2 is preferred over Case 1. Compared to the preceding example, the taxable income of Case 2 is reduced to $30,710 compared to $50,946 for Case 1 (for the first year).

Based on the equity at the end of the first year, taxable income represents a 4 percent return as shown in Table 3. At the same time cash flow as a percent of equity (for the first year), compared to Case 1, increases from 9.70 percent to 11.94 percent. However, note that this favorable position is at the expense of dollar income which is reduced from $99,480 to $91,860.

It will also be observed that cash flow as a percent of equity falls sharply by the end of the tenth year. The use of accelerated depreciation tends to increase the proportion of taxable income so that by the end of the tenth year taxable income and cash flow tend to be equal—7.6 percent and 7.45 percent.

It will be observed further that the net ground lease of Case 2 calls for an equity investment of $750,000, which at the end of the first year increases by the amount of the mortgage principal. After the rent deduction, the return on equity for the first year is 31 percent.

**CASE 3: NET GROUND LEASE WITH SUBORDINATION OF THE FEE**

With subordination of the fee interest to a first mortgage on the leasehold interest, the relationships noted in Case 2 are even more pronounced. Table 4 shows yield relationships, assuming that the mortgage relates to the total property value of $3,000,000. Because the owner of the fee has subordinated his interest to the leasehold mortgage, it is assumed that the mortgage will be based on two-thirds of
TABLE 3. YIELD EXPERIENCE UNDER A NET GROUND LEASE AND LEASEHOLD MORTGAGE

(WITHOUT SUBORDINATION OF THE FEE)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. Net Income</td>
<td>$300,000</td>
</tr>
<tr>
<td>2. Less Rent</td>
<td>-60,000</td>
</tr>
<tr>
<td></td>
<td>$101,073</td>
</tr>
<tr>
<td>4. Add Mortgage Principal</td>
<td>+19,637</td>
</tr>
<tr>
<td>5. Less Depreciation</td>
<td>-90,000</td>
</tr>
<tr>
<td>6. Taxable Income</td>
<td>$30,710</td>
</tr>
<tr>
<td>7. Less Personal Income Tax</td>
<td>-9,213</td>
</tr>
<tr>
<td>8. After Tax Income</td>
<td>$21,497</td>
</tr>
<tr>
<td>9. Add Depreciation</td>
<td>+90,000</td>
</tr>
<tr>
<td>10. Less Mortgage Principal</td>
<td>-19,637</td>
</tr>
<tr>
<td>11. Cash Flow After Taxes and</td>
<td>$91,860</td>
</tr>
<tr>
<td>Mortgage Payment</td>
<td></td>
</tr>
<tr>
<td>12. Equity at End of Year</td>
<td>$769,637</td>
</tr>
<tr>
<td>13. Taxable Income as a Percent of</td>
<td>4.00</td>
</tr>
<tr>
<td>Equity (6)/12</td>
<td></td>
</tr>
<tr>
<td>14. Cash Flow as a Percent of</td>
<td>11.94</td>
</tr>
<tr>
<td>Equity (11)/12</td>
<td></td>
</tr>
<tr>
<td>15. Ratio of Taxable Income</td>
<td>33.43%</td>
</tr>
<tr>
<td>Percent to Cash Flow</td>
<td></td>
</tr>
<tr>
<td>Percent (13)/(14)</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 3

Because the original equity is reduced to $250,000 with no change in income, the return on equity is 87 percent. The end of the tenth year this proportion decreases to 38 percent.

In essence, the ground lease may be considered equivalent to a loan of $750,000, at 8 percent (the rent expense). Hence, the subordination feature permits the owner to reduce the equity to the lowest possible amount. Because the mortgage interest and rent (in percentage terms) are less than the yield on the mortgage, principal payments are included as part of the increasing equity. Over 10 years, the return on equity, in this sense, decreases substantially by the tenth year.

If the objective is to increase cash flow as a percent of equity and at the same time have the lowest proportion of taxable income as a percent of equity, the net ground lease subordinated to a first mortgage on the leasehold interest is the best alternative. For example in the first year, a tax loss of $9,054 is caused largely by a combination of rent, mortgage, interest and accelerated depreciation. With mortgage interest of $159,053.81 at the end of the first year and with a net income of $300,000, an income tax liability does not arise until the third year.

Hence, Table 4 shows a negative taxable income and a cash flow that as a percent of equity increases to 19.8—that the highest proportion shown in Tables 2, 3 and 4 ($54,764/$276,182). In addition, by the end of the tenth year taxable income as a percent of equity increases to 7.26 percent while cash flow decreases to 6.45 percent. The change in the relationship between taxable income and cash flow is particularly pronounced after the seventh year.

In comparison to Cases 1 and 2, Case 3 shows the least cash flow in absolute dollars. Item 11 of Table 4 indicates that cash flow from the first year, $54,764, decreases to $40,935 at the end of the tenth year. These amounts are considerably lower than comparable figures for Cases 1 and 2.

It is worthwhile to review the percentage of taxable income and cash flow expressed as a percentage of the equity investment. Table 5 shows the variation in these data for the first and tenth year under the investment circumstances shown in Table 1. With this type of information, the effect of varying investment alternatives are summarized for each type of de
precipitation. Or conversely, given an investment alternative, the effect of the depreciation method on the yield calculation may be readily determined.

For example, under the land purchase and first mortgage, assuming the investment conditions of Table 1, straight line depreciation gives a taxable income of 9.35 percent of the equity interest. The cash flow allowance, as defined in Table 1, decreases from 8.38 percent to 5.61 percent by the tenth year. The lowest proportion of taxable income for this investment option is found under the declining balance depreciation for the first year. The cash flow allowance of Table 5 is also maximum at this point.

The best investment, judged on the basis of the lowest percent of taxable income and the highest percent of cash flow, is found with the double declining balance and a lease with subordination of the fee. This position gives the highest rate of return with the lowest equity investment. The sum-of-the-years digits method is a close second. The ratios for the tenth year in both series, however, are less than results of some other combinations.

**Land-Building Ratios**

The depreciation discussion has dealt with investments in which the land value is approximately 25 percent of the total property value. The next question is to show how these relationships (summarized in Table 5) change as the proportion of land value increases. Most observers would probably agree that investment incentives under accelerated depreciation are greater for investment combinations giving the lowest possible proportion of land value to total investment. But this conclusion does not necessarily hold for land which becomes subject to a net ground lease. In fact, the data strongly suggest that net ground leases are preferred for investments calling for relatively high proportions of land value.

Suppose, for instance, that the investment proposition calls for a land value of $1,500,000 and a building value of $1,500,000. Such an investment, let us say, follows the assumptions of Table 1. But in this case, double the land value given in that table and lower the building value from $2,250,000 to $1,500,000. The total property value of $3,000,000 remains unchanged. Thus, the only investment circumstance changed is the relationship between the land and building value. By making such variations, it is possible to suggest investment relationships that follow from relatively high land values.

The computer calculations for this example follow the print-outs summarized in Table 5. To show the change in taxable income and cash flow under relatively high land values, only the results for the first year are shown in Table 6. Conclusions may be drawn from this table for each of the three investment options.

1. **The Land Purchase Option.** The first case relates to a property value of $3,000,000 with a mortgage totaling $2,000,000 and with a building value of $1,500,000; thus the beginning equity is $1,000,000. The percent of taxable income is the highest under straight line depreciation methods (10.81 percent). Double declining balance shows the lowest percent of taxable income (7.89) and yet the highest percent of cash flow (8.81). In dollars, taxable income ranges from $110,946 in

---

**Table 4. YIELD EXPERIENCE UNDER A NET GROUND LEASE AND LEASEHOLD MORTGAGE**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>4</th>
<th>7</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Net Income</td>
<td>$300,000</td>
<td>$300,000</td>
<td>$300,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>2. Less Rent</td>
<td>-60,000</td>
<td>-60,000</td>
<td>-60,000</td>
<td>-60,000</td>
</tr>
<tr>
<td>3. Less Annual Mortgage Payment</td>
<td>-185,236</td>
<td>-185,236</td>
<td>-185,236</td>
<td>-185,236</td>
</tr>
<tr>
<td>4. Add Mortgage Principal</td>
<td>+26,182</td>
<td>+33,257</td>
<td>+42,245</td>
<td>+53,661</td>
</tr>
<tr>
<td>5. Less Depreciation</td>
<td>-90,000</td>
<td>-79,626</td>
<td>-70,448</td>
<td>-62,328</td>
</tr>
<tr>
<td>6. Taxable Income</td>
<td>$9,054</td>
<td>$8,395</td>
<td>$6,561</td>
<td>$6,097</td>
</tr>
<tr>
<td>7. Less Personal Income Tax</td>
<td>0</td>
<td>2,519</td>
<td>7,968</td>
<td>13,829</td>
</tr>
<tr>
<td>8. After Tax Income</td>
<td>$9,054</td>
<td>$5,877</td>
<td>$10,593</td>
<td>$32,268</td>
</tr>
<tr>
<td>9. Add Depreciation</td>
<td>+90,000</td>
<td>+79,626</td>
<td>+70,448</td>
<td>+62,328</td>
</tr>
<tr>
<td>10. Less Mortgage Principal</td>
<td>-26,182</td>
<td>-33,257</td>
<td>-42,245</td>
<td>-53,661</td>
</tr>
<tr>
<td>11. Cash Flow After Taxes</td>
<td>$54,764</td>
<td>$52,246</td>
<td>$46,796</td>
<td>$40,935</td>
</tr>
<tr>
<td>12. Equity at End of Year</td>
<td>$276,182</td>
<td>$368,503</td>
<td>$485,773</td>
<td>$634,734</td>
</tr>
<tr>
<td>13. Taxable Income as a Percent of Equity (6)/(12)</td>
<td>3.28</td>
<td>2.85</td>
<td>5.47</td>
<td>7.26</td>
</tr>
<tr>
<td>15. Ratio of Taxable Income Percent to Cash Flow Percent (13)/(14)</td>
<td>16.53%</td>
<td>16.07%</td>
<td>56.76%</td>
<td>112.61%</td>
</tr>
</tbody>
</table>

*See Table 1 for assumptions supporting this Table.*
the first year to $138,425 in the tenth year. Comparable figures for cash flow are $81,480 and $73,237.

2. Lease Without Subordination. In this example, the value of the mortgage is reduced to $1,000,000; the beginning equity is $500,000. Thus, a building of $1,500,000 is financed by a first mortgage and equity investment while the land of $1,500,000 is leased for an annual rental of $120,000. All other assumptions of Table 1 remain unchanged for this case.

The effect of the lease with a leasehold mortgage secured only by the building and leasehold interest is to increase the percent of taxable income and at the same time considerably increase the proportion of cash flow. Again, straight line depreciation results in the highest taxable income, while double declining balance gives virtually the same taxable income of 7.89 percent. Table 7, a reproduction of the computer print-outs for the first year, shows these calculations.

Note that the taxable income of $40,743 represents 7.89 percent of the equity at the end of the first year, $513,091. At the same time cash flow is calculated from the same base: the cash flow of $75,240 represents 14.67 percent of the total equity investment at the end of the first year.

But using the same standards of comparison, the lease with subordination gives even greater leverage. These results follow because the subordination feature, by assumption, encourages the lender to increase the mortgage to $1,500,000 which covers the building investment. The combination of the mortgage and lease gives 100 percent financing.

The taxable income, expressed as a percentage of the equity at the end of the first year, which is merely the accumulated mortgage principal payment, is relatively high: 156.39 percent. While this taxable income is reduced substantially by accelerated depreciation, it is not as significant as the results of Table 1. Apparently, the proportion of building value is not sufficient to give a negative income for a tax purpose.

If the cash flow is the significant variable, the combination of a lease with subordination and relatively high land value gives substantially higher cash flow allowances. The data indicate that a double declining balance and a lease with subordination under the assumptions used here constitute the highest percent of cash flow for the first year.

These results are shown only in summary form. The computer analysis produces tables showing detail for each year over the ten-year span for the twelve combinations (three development plans and four depreciation schedules). So while these figures may not agree with current investment conditions, the main point is fairly clear: computer calculations are so rapid, totalling one minute for 30 tables.

<table>
<thead>
<tr>
<th>Investment Alternatives</th>
<th>Depreciation Method</th>
<th>1.5 Declining Balance</th>
<th>2.0 Declining Balance</th>
<th>Sum of the Years Digits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Straight Line</td>
<td>1st Year 10th Year</td>
<td>1st Year 10th Year</td>
<td>1st Year 10th Year</td>
</tr>
<tr>
<td></td>
<td>Cash Flow Percent</td>
<td>8.38 5.61</td>
<td>8.38 5.10</td>
<td>9.48 5.99</td>
</tr>
<tr>
<td>Ground Static Lease</td>
<td>Taxable Income</td>
<td>9.04 9.27</td>
<td>9.85 10.12</td>
<td>4.00 7.61</td>
</tr>
<tr>
<td></td>
<td>Cash Flow Percent</td>
<td>10.18 6.95</td>
<td>10.18 6.44</td>
<td>11.94 7.45</td>
</tr>
<tr>
<td>Lease With Subordination</td>
<td>Taxable Income</td>
<td>13.02 9.99</td>
<td>13.06 11.17</td>
<td>3.26 7.26</td>
</tr>
<tr>
<td></td>
<td>Cash Flow Percent</td>
<td>15.92 5.63</td>
<td>15.91 5.12</td>
<td>19.93 6.45</td>
</tr>
</tbody>
</table>

1See Table 1 for data supporting this table.

Table 5
TABLE 6. EFFECT OF INCREASING LAND VALUE ON INVESTMENT YIELDS
UNDER LAND PURCHASE AND GROUND LEASES DEVELOPMENT:

<table>
<thead>
<tr>
<th>Depreciation Method</th>
<th>Land Purchase</th>
<th>Lease Without Subordination</th>
<th>Lease With Subordination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent of Taxable Income</td>
<td>Percent of Taxable Income</td>
<td>Percent of Taxable Income</td>
</tr>
<tr>
<td>Straight Line</td>
<td>10.81</td>
<td>7.94</td>
<td>13.73</td>
</tr>
<tr>
<td>1.5 Declining Balance</td>
<td>9.35</td>
<td>6.38</td>
<td>10.81</td>
</tr>
<tr>
<td>2.0 Declining Balance</td>
<td>7.89</td>
<td>6.01</td>
<td>7.89</td>
</tr>
<tr>
<td>Sum of Years Digits</td>
<td>8.00</td>
<td>6.78</td>
<td>8.12</td>
</tr>
</tbody>
</table>

1With the exception of the land value (which is doubled in this case), figures shown here are derived from assumptions of Table 1.

TABLE 7. COMPUTER ANALYSIS FIRST YEAR
BASED ON TABLE 6 DATA

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td>$300,000</td>
</tr>
<tr>
<td>Less Rent</td>
<td>$268,600</td>
</tr>
<tr>
<td>Less Annual Mortgage Payments</td>
<td>$87,382</td>
</tr>
<tr>
<td>Add Annual Mortgage Principal</td>
<td>$13,091</td>
</tr>
<tr>
<td>Less Depreciation</td>
<td>$60,000</td>
</tr>
<tr>
<td>Taxable Income</td>
<td>$40,473</td>
</tr>
<tr>
<td>Less Personal Income Tax</td>
<td>$12,142</td>
</tr>
<tr>
<td>Income After Tax</td>
<td>$28,331</td>
</tr>
<tr>
<td>Add Depreciation</td>
<td>$60,000</td>
</tr>
<tr>
<td>Less Mortgage Principal</td>
<td>$13,091</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>$75,240</td>
</tr>
<tr>
<td>Net Income</td>
<td>$300,000</td>
</tr>
<tr>
<td>Total Return</td>
<td>$180,000</td>
</tr>
<tr>
<td>Original Equity</td>
<td>$500,000</td>
</tr>
<tr>
<td>Add Mortgage Principal</td>
<td>$13,091</td>
</tr>
<tr>
<td>Equity</td>
<td>$513,091</td>
</tr>
</tbody>
</table>

Return on Equity
($513,091-$313,091) 35.0%
Taxable Income
($40,473/$513,091) 7.89%
Cash Flow
($75,240/$513,091) 14.67%

3For assumptions of this table, see text.

TABLE 8. REQUIRED INCOME FOR PROPOSED NET GROUND LEASE INVESTMENT: FIRST YEAR

<table>
<thead>
<tr>
<th>Required Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax percent return on investment: $5,100.00</td>
</tr>
<tr>
<td>Lease rent:</td>
</tr>
<tr>
<td>Annual mortgage payment: $2,000.00</td>
</tr>
<tr>
<td>Personal income tax payment: $1,946.39</td>
</tr>
<tr>
<td>Total required income: $14,682.30</td>
</tr>
</tbody>
</table>

Recapitulation

<table>
<thead>
<tr>
<th>Required income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less deductible expenses: $13,934.99</td>
</tr>
<tr>
<td>Rent (including advance rental): $2,000.00</td>
</tr>
<tr>
<td>Depreciation:</td>
</tr>
<tr>
<td>$6,666.67</td>
</tr>
<tr>
<td>Taxable income:</td>
</tr>
<tr>
<td>$3,080.64</td>
</tr>
<tr>
<td>Less personal income taxes: $1,846.39</td>
</tr>
<tr>
<td>After tax income:</td>
</tr>
<tr>
<td>$1,234.26</td>
</tr>
</tbody>
</table>

2See text for data assumptions. Totals may not add perfectly because of rounding.

used in this analysis, that real estate managers, counselors and consultants may calculate the best opportunity for real estate development. In this way the risk of real estate investments may be closely correlated with the returns believed commensurate with a given risk. Additionally, investment objectives may be compared directly with projected investment results.

REQUIRED RATE OF RETURN

Graduated rents of a net ground lease complicate yield projections for the holder of a leasehold interest. Yet computer analysis will easily convert investment facts to a form useful for the decision-making process. Ideally the computer program will show the income required each year of the lease and for different combinations of mortgage financing and depreciation methods.

Consider a lease proposed for the development of a resort site where the fee owner proposed to grant a lease over 15 years with rents graduated over the first five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Rents</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>$1,000</td>
</tr>
<tr>
<td>Second Year</td>
<td>$1,000</td>
</tr>
<tr>
<td>Third Year</td>
<td>$2,000</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>$2,000</td>
</tr>
<tr>
<td>Fifth to the Fifteenth Year</td>
<td>$4,000</td>
</tr>
</tbody>
</table>

The income required by the tenant is based on a depreciation period of 15 years—equivalent to the lease term. Financing terms are quite favorable; a
TABLE 9. REQUIRED INCOME CALCULATION UNDER A 
NET GROUND LEASE DEVELOPMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>Required Income</th>
<th>Deductible Expenses</th>
<th>Depreciation</th>
<th>Taxable Income</th>
<th>Personal Income Tax</th>
<th>After Tax Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>$14,682.30</td>
<td>$11,601.66</td>
<td>$6,666.67</td>
<td>$3,080.64</td>
<td>$1,848.39</td>
<td>$1,232.26</td>
</tr>
<tr>
<td>1971</td>
<td>13,406.26</td>
<td>12,452.35</td>
<td>6,666.67</td>
<td>1,358.17</td>
<td>814.90</td>
<td>543.57</td>
</tr>
<tr>
<td>1972</td>
<td>13,648.82</td>
<td>12,290.64</td>
<td>6,666.67</td>
<td>1,232.26</td>
<td>795.92</td>
<td>436.57</td>
</tr>
<tr>
<td>1973</td>
<td>18,911.50</td>
<td>12,115.52</td>
<td>6,666.67</td>
<td>6,795.98</td>
<td>4,077.59</td>
<td>2,718.39</td>
</tr>
<tr>
<td>1974</td>
<td>16,195.99</td>
<td>13,925.86</td>
<td>6,666.67</td>
<td>2,700.13</td>
<td>1,362.08</td>
<td>908.05</td>
</tr>
<tr>
<td>1975</td>
<td>16,504.09</td>
<td>13,720.46</td>
<td>6,666.67</td>
<td>2,783.63</td>
<td>1,670.16</td>
<td>1,113.45</td>
</tr>
<tr>
<td>1976</td>
<td>16,837.76</td>
<td>13,498.01</td>
<td>6,666.67</td>
<td>3,339.75</td>
<td>2,003.85</td>
<td>1,335.90</td>
</tr>
<tr>
<td>1977</td>
<td>17,199.13</td>
<td>13,257.10</td>
<td>6,666.67</td>
<td>3,942.03</td>
<td>2,365.22</td>
<td>1,576.81</td>
</tr>
<tr>
<td>1978</td>
<td>17,590.49</td>
<td>12,996.19</td>
<td>6,666.67</td>
<td>4,594.30</td>
<td>2,756.58</td>
<td>1,837.72</td>
</tr>
<tr>
<td>1979</td>
<td>18,014.33</td>
<td>12,713.63</td>
<td>6,666.67</td>
<td>5,300.70</td>
<td>3,180.42</td>
<td>2,120.28</td>
</tr>
<tr>
<td>1980</td>
<td>18,473.36</td>
<td>12,407.62</td>
<td>6,666.67</td>
<td>6,065.74</td>
<td>3,639.44</td>
<td>2,426.30</td>
</tr>
<tr>
<td>1981</td>
<td>18,970.48</td>
<td>12,076.20</td>
<td>6,666.67</td>
<td>6,894.28</td>
<td>4,136.57</td>
<td>2,757.71</td>
</tr>
<tr>
<td>1982</td>
<td>19,506.86</td>
<td>11,717.28</td>
<td>6,666.67</td>
<td>7,791.58</td>
<td>4,674.95</td>
<td>3,116.63</td>
</tr>
<tr>
<td>1983</td>
<td>20,091.93</td>
<td>11,328.57</td>
<td>6,666.67</td>
<td>8,763.36</td>
<td>5,258.01</td>
<td>3,505.34</td>
</tr>
<tr>
<td>1984</td>
<td>10,723.39</td>
<td>10,907.60</td>
<td>6,666.67</td>
<td>-184.21</td>
<td>0</td>
<td>-184.21</td>
</tr>
</tbody>
</table>

1For assumptions of this table, see text.

TABLE 9

loanto-value ratio of 50 percent, an interest rate of 8 percent and a 15-year term. With a $100,000 improvement and a personal income tax rate of 60 percent, what is the required annual income to earn a 10 percent return on the $50,000 investment after personal income taxes?

The computer program, in this instance, prints the monthly mortgage payments, and the annual allocation to interest and principal showing the annual balance remaining. In this case, the annual mortgage payments totalled:

Mortgage Payment $5,733.91
Interest, 1st Year $3,934.99
Principal, 1st Year $1,798.92

For the first year, the required income based on these conditions would be $14,682.30. Since the lease requires an advance rental payment of $1,000 and an investment of $50,000, a 10-percent return on the initial investment would be $5,100. The computer calculates this sum according to the data of Table 8.

Table 8 shows the calculation for only the first year. Since the lease calls for graduated rent payments and since the mortgage and depreciation factors change annually, these items must be tabulated to show results for each year under varying assumptions.

Table 9 gives the computer print-out for the annual results over the 15-year term, under straight line depreciation. With this information revenue projections may be compared to income required to meet selected investment objectives. In addition, the same table is reproduced for the three other depreciation schedules. Moreover, the assumptions of this case may be readily revised to account for differing mortgage terms and rent schedules. Similarly, the investment required may be changed to suit particular
projects. For the project under consideration, these tables were reproduced for three other financing arrangements and for four depreciation methods in each case.

The flexibility of these programs is demonstrated by the variables listed to operate this program. Again these variables are entered on the typewriter keyboard, using the conversational programming system and direct typewriter print-out.

**Computer Input Variables**

- Length of the lease (in years)
- Depreciation period (in years)
- Loan-to-value ratio (in decimal)
- The mortgage interest rate (in decimal)
- The life of mortgage (in years)
- The value of the leasehold improvement (in dollars)
- Year the investment begins
- Personal income tax rate (in decimal)
- The value of improvement at the end of the lease
- A desired rate of return (in decimal)
- Year the lease payments become constant

Graduated lease payments for each year

Though not shown here, a second part of this program calculates the leasehold interest and the leased fee interest based on reversionary value of the improvement plus the reversionary value of the land. It may be readily appreciated that this program calculates not a final answer but a series of projections from which the most likely example may be selected to fit a given investment proposal.

It should be fairly clear that this type of analysis, this type of detail and this degree of accuracy would be virtually impossible without computer assistance. And while this particular program may not meet the general case, conversational programming is sufficiently flexible to permit such programs to be written for a client’s special needs. To the extent that computers are widely employed for real estate analysis (and this eventuality seems inevitable), the role of the real estate counselor, his efficiency and, to be sure, the value of his services will increase.

**CONCLUSION**

Net ground leases, with respect to yields, introduce two additional variables: (1) annual rent and (2) the proportion of land value to total property value. Indeed, the economic effect of the lease is highly comparable to a mortgage; the rent substitutes for interest and the relative land value substitutes for the loan-to-value ratio.

Computer analysis, to the extent that a net ground lease operates like a mortgage, is even more helpful to determine the effect on cash flow and taxable income. For instance, the yield and cash flow positions appear more favorable under a net ground lease for investments with relatively high land values. The data suggest that computer analysis permits a comparison of investment projections with investment objectives.

The illustrations presented in the latter part of this paper show how computer analysis may be used to calculate “required” income. Programming flexibility is such that commonly encountered proposals may be analyzed as needed to indicate investment results over time. If this approach seems warranted, project feasibility may be indicated by comparisons of income projections with the income required to satisfy a desired yield.

The final point should be fairly obvious: increasingly, real estate analysis is reaching a higher plane; investors and others may enjoy large-scale benefits from data processing of investment variables. The real estate community, as stressed by this series of articles, has the urgent obligation to refine further investment analysis. Computers cover a broad range of problems that will contribute to the most efficient use of land, of limited capital and management expertise. Certainly, property managers may anticipate greater and more intensive use of their experience by the mass processing of financial data and by subjecting income data to analytical, electronic data processing, which trend will surely affect the small and large office alike.

The author acknowledges the contribution of Mr. Allan S. Eidson, graduate student of the Department of Real Estate and Urban Development, University of Georgia, who helped prepare tables for this article.

William M. Shenkel, CPM, is chairman of the Department of Real Estate and Urban Development, College of Business Administration, at the University of Georgia, Athens. He currently is serving as IREM’s Research Committee chairman.
"Transportation planning is the largest single influence in the growth of a community."
Rapid Transit: Concept for Urban Success

by George W. Jernstedt

Public transportation was a gold mine in the early years of this country's growth. Private investment in transit helped to solve problems and make a contribution to that growth and consequently made a handsome profit.

Today, most of our transit operations are termed deficit-ridden, but this does not have to be the case. As our cities have grown bigger, our thinking has not kept pace—we haven't thought big enough. We have looked narrowly down the "track" as if we had on horse blinders.

Public transportation can again be a "gold mine" if we directly relate the transit of people to their environment, to their working and living conditions, to their recreational and educational facilities, and to many other factors. New levels of living comfort, convenience and economy will create new values. We must and can extract a much higher performance level from our transit interchanges—the principal reason for the transit system. We have more than enough technology to move ahead right now. This does not mean further technological development should be curtailed but that effective use should be made of what is available immediately.

How will this be accomplished? Since the movement of people and goods regulates the development of a community, how well the transportation planning is integrated into the total environmental planning is the largest single influence in the growth of the community. These factors are recognized in our cities today but we usually wait until there is a crisis in public transportation before taking major action.

Perhaps one of the things that is missing is the establishment and acceptance of meaningful objectives. If everyone in the community agrees that they want the community to grow and they set high enough objectives, they ought to be able to agree that they must continually upgrade the performance factors in the community that will cause growth, particularly in public transit. For the past 30 or 40 years, there has been no appreciable improvement in public transportation as the main thrust of growth in most of our cities and smaller communities and, consequently, we have had a random growth that has created insufficient values to support the cities. We must establish an objective of continually upgrading public transportation and improving the way we live in the surrounding environment. During 1967 and 1968 the city of Toronto spent approximately $1.5 billion for construction, 90 percent of which was at transit-station areas.

There are many ways to achieve improvement in performance—through research, development and demonstration, all of which are now being reactivated in the field of public transportation. However, there is another way that we can learn how to improve in almost any field and do it more quickly. That is by looking at our competitor and taking advantage of his work. We must constantly be on the alert to what improvements are made by our competitors. Everybody has a competitor. In the field of transportation we ought to know what is going on around the world.

Looking at a competitor has one serious pitfall: it is difficult to concentrate on those things which our competitor does better than us. We tend to note areas where we are more advanced.

Here are two examples of what I mean. We may believe that this country has the best buses in the world. However, the buses in Europe are a pleasure to ride in and, in some respects, are more comfortable than ours. We consider we have the best telephone system in the world but in parts of Sweden, for example, phones have an emergency button...
to get the police, health service or fire department—you do not need a coin to place such a call.

Now to some examples of public transportation around the world.

Toronto has a fairly new rapid transit system, which opened in 1953. Primary new development in that city has been concentrated in a cross configuration where the subway tracks run through the city. The highly developed commercial and residential areas are centered around the Yonge Street subway while the High Park residential highrise development east of the city is concentrated along the Bloor Street subway. Further east on the same line is a total-electric apartment city which sprang up from a deteriorating neighborhood after the subway came. Similar developments all along the subway right-of-way and in the heart of the central business district make it quite clear that where the transit system goes, development and redevelopment follow close behind.

Toronto has made two important extensions to its original transit system and plans are being drawn for another $100 million extension.

Montreal's rubber-tired rapid transit also has proven the value of a clean, well-designed system. It has sparked a redevelopment similar to Toronto's.

Stockholm is another good example. It started to cope with the problem of increasing density in the central city in the 1930s. Operating on the theory that people go where transportation is available, the city planners designed a rapid transit system that would link the central city with a series of carefully planned satellite cities. The first links of the transit system were completed in 1957 and additions have been made ever since.

Today there are 18 satellite cities surrounding Stockholm ranging in size from 10,000 to 50,000 inhabitants; all are built around transit stops. No apartment building is located more than a quarter of a mile from a transit stop and some are located at one. No city is more than a 30-minute transit ride from downtown Stockholm. Note should be taken that in Stockholm these centers are multi-functional. They are not just living areas or shopping areas.

When the existing satellite cities reach their planned density, new spokes are added to the transit system. Transportation is made available at the next location and new cities begin.

Transit service is good. In rush hours trains run every two minutes and the system handles 700,000 passenger trips a day. The total transit environment—cars, stations, approaches—is attractive and well-maintained. Ninety percent of the people who travel to downtown Stockholm do so by the transit system despite the fact that Sweden has the world's highest per capita ownership of private automobiles outside of the United States.

Since 1930, the population of metropolitan Stockholm has risen from 600,000 to 1,250,000; yet the city has managed to avoid urban congestion, ghettos, pollution, the decay of central city and the many other ills that usually come with rapid growth. Residents of Stockholm generally attribute this to the transit system, which became what they intended it to be—the instrument for directing and managing the growth of their capital city.

Somewhat similar success stories can be told of Moscow, Paris, Munich, West Berlin and, presumably, one day, of San Francisco, Washington, D.C., Atlanta, Pittsburgh and many others. But why is there a delay here in the United States
where the need is the greatest? One of the main reasons, perhaps, is that the transportation story has not been told effectively to the people nor have we planned effectively. We have not shown how transit is a critical factor in the development and redevelopment of our cities. Now it is time, however, for public transit to guide the rebuilding of our cities and become profitable again.

Baltimore, in conjunction with HUD, has hired a team of authorities to study some of these factors and to weigh them against the construction cost of a transit system there. The costs for building a 71-mile system in Baltimore include those for right-of-way, construction and vehicles and for development and testing; a 35-percent factor was added for price escalation between the time the studies were conducted and actual construction would take place. All items amounted to about $1.7 billion. Adding the present worth of operating and maintenance, the total cost is approximately $2 billion.

Benefits to the city from such a system include higher tax revenues from land put to a more productive use than as parking lots as well as from improvements around transit stops. A rapid transit system would reduce the cost of maintaining buses, freeways and feeder streets as residents used the transit system. Finally, decreased unemployment would result as locked-in ghetto residents could get out to where the jobs are.

Benefits will accrue to the users of the transit system in the form of savings on automobile operating expense, parking and insurance, and in time, all of which contribute millions of dollars. Even non-users will benefit as thoroughfares become unclogged, saving time and money also.

The totals for these less tangible factors alone as the Baltimore study finds them are $2.6 billion or 127.7 percent of the cost. Added to this are revenues from fare-box collections and other interest benefits. For every dollar Baltimore puts into its rapid transit system, the study finds, it will surely be easily paid back in less than 20 years.

These benefits are conservatively stated by the consultants. They do not take into account the new technology and planning which can be applied right now. We can develop major activity centers at transit interfaces more effectively than our competitors abroad by taking what they have taught us and add what we know, creating values that will make transit pay for itself many times over.

Perhaps what we have tried to do in the past could be likened to putting up an elevator before the building and then adding rooms and floors to the building in a haphazard fashion. Fortunately for the elevator, its need is confined to a
A transit system must link living and working cores, evidenced here in the new vistas opening to Toronto residents resulting from its new transit development.

single building system so its application is easily justified and controlled.

Consider, for instance, the modern stations being constructed for the BART system in San Francisco; most everybody will still have to walk in the rain or cross a street to get there. Instead of costing money, they could make money and improve the environment. A wonderful, big step forward has been taken; however, even the architects are aware of some of the major deficiencies. Maule and Burchard, in an article in The Journal of The Franklin Institute, summed it up by saying, "... The fact is that American metropolises need integrated systems (total environment) right now. Systems engineers are almost certainly able to design them now, yet we know of no system in advance planning in the United States that promises this or which goes much further than to think in urban, suburban, or simply downtown terms."

We have the available technology. Our hardware systems are equal to, or superior to, anything in Europe or Japan. Nothing new or startling is proposed, just a better combination, a better system of utilizing the factors affected by transportation.

We know how to do this sort of planning but have only done so in extremely few locations, such as the Pan American Building in New York City. Even in these cases, we have paid little regard to improving personal mobility. Have you ever walked from the vertical elevators to the horizontal elevators (subway) at the PanAm Center? It's just as difficult as a maze. Some day we will be able to get from our vertical elevators to our horizontal elevators just by crossing a lobby.

Let's look at our shopping centers. I call them museum pieces. The most valuable piece of land for improving personal environment is the rooftop of the main building, which is usually undeveloped. Customers have to walk in the rain or snow and avoid automobiles as they move through the parking lot to the center. Basically one function is located at these centers.

This same philosophy is generally carried out at our transit stops. Most transit interfaces are in what I term "no-man's-land." They are in the middle of everything and yet they are no place. This must be changed to create increased mobility and convenience for large numbers of people.

With our capability, we can plan an overall system that would increase land values at a greater rate than previously possible. The large pedestrian areas and multi-function activities of European projects can be duplicated. This might be termed the "new town" approach based upon improved rapid transit instead of the automobile.

There is one place we can exceed the yield of European systems. The conventional steel-wheel system cuts wide swaths through the urban areas. With the new
rubber-tired systems, we can secure multiple use of this land to further reduce walking and increase the return to cities.

In the next decade at least 10 major new rapid transit systems will be built. These will result in at least 250 new potential station developments. The five existing major systems in this country are all planning on increasing in size and adding new lines which will add at least 50 more stations. Surprisingly enough, even old stations can be considered for redevelopment. These total about 200 so that totally there exists a potential of over 500 new centers.

A good example of what might be termed a "passed over" area is the Prudential Center in Boston which is located over the transit system and the Massachusetts Turnpike. This area has started to "turn around" and is on the move again; the rapid transit station is two blocks away from the various Prudential buildings so one has to walk in the snow to get to the Center.

Let's create a typical example of a "passed over area" which is present in most of our cities. Development is not occurring there and the neighborhood has many problems. What can happen if a transit system is run right through the neighborhood? In the past, only a transit station would have been built in "no-man's-land," as I mentioned before. We have a greater opportunity to create, for example, low-income housing right on top of the stations. This will increase the capacity of the neighborhood and it will not be necessary for people to be displaced. As the neighborhood begins to turn around, other housing can be reduced and parks and playgrounds added. Once the momentum has started, other developments will follow. The people of the neighborhood will take pride in their area since they are intimately a part of the rebuilding of their city. Many people will have access to job improvement for the first time in other areas of the city because of transportation facilities.

We can improve the environment of the transit system both at the interface and along the track. As a by-product, the systems of movement will be better. Perhaps we should call them mobility systems. If we are to attract an appreciable number of passengers from automobiles, we have to provide greater convenience than the transit system of the past. Wherever possible we must eliminate walking in rain or snow.

Transit systems must be planned as systems—every interface a multi-function activity center with apartment living at the stations and private homes in surrounding areas. The kind of planning that is done must be not only at single interfaces or stations; they must be related with each other. A school can be located at one station and a family living complex at or near another so that children can go to school without crossing the street. This
One result of a rapid transit development is downtown revitalization, drawing people from all quarters of a metropolis, as does the new Toronto Civic Center pictured here.

program would take advantage of unused capacity on transit in the opposite direction of rush-hour traffic.

Some people will be able to live and work in or near these transit centers and not have to use an automobile for every move they make. This separation of the automobile and the individual is an improvement for both. The automobile is still the most effective means of personal transportation but unless it is kept separate from people in certain areas, both lose their effectiveness.

The development cost of land and facilities, based upon data from Toronto, is shown in the table on the following page.

The transit system cost apportioned to developing a station area of one square mile, for example, could be $10 million, which would be high for an elevated transit expressway and very low for a tunneled, conventional steel-wheel system.

Of course, not all stations have the same high development opportunity, but it is true that rapid transit can be justified more readily when it is considered with the environment development as indicated in the above data.

What are the benefits of rapid transit environment development?
1. Continuous transportation, vertical and horizontal.
2. Unusual convenience at interchanges (zero interface).
4. Separation of vehicles and pedestrians, to the advantage of both.
5. Better land use.
6. Increase in value of "passed over" areas.
7. Station centers related to one another.
8. Reduced transit trips.
Land acquisition is obviously the critical element. The federal government, in some cases, will provide a means to obtain the necessary land. Money is already available for advanced land acquisition and the new law would include additional land around stations. But the new law might also have an additional step. The land would have to be reappraised five years after construction and 50 percent of the increase would be paid back into the fund, up to the extent of government financing. As you can see, there still would be plenty of value left to pay for local costs.

As an alternate, we should look into a new method of private land acquisition in which the land owner could become a limited partner and would be more interested in participating in the development of a project.

For low-income housing, a station area plan might be developed primarily around living units and schools. Such a station would be placed on land classed as "passed over," which could be procured by a local authority, although the buildings and facilities would be constructed by private interests.

When we have demonstrated simply and effectively how to use rapid transit as a key to urban development and redevelopment, public transportation will again become a gold mine. In Toronto their first system of 4½ miles attracted over $2 billion of new construction for every mile of the system in the first 10 years. Land values along the right-of-way tripled in two to five years and, at major stations, went up as much as 10 or 12 times.

If private industry and government get together and plan new urban centers, we can readily surpass these records. We have enough technology to start now. The alternative is to pour massive federal aid after the damage is done to a city. Unfortunately, for the next few years, some of this will have to be done to rectify the omission of previous decades. We do urgently require contract authority or a federal Mass Transit Trust Fund but I hope at the same time that industry and government will be working together to solve the problem on a more profitable and permanent basis.

George W. Jernstedt is director of transportation activities for Westinghouse Electric Corp., for which firm he has worked in various engineering and administrative capacities since 1936. He holds the Westinghouse Order of Merit, the highest honor the company bestows on its employees. Mr. Jernstedt includes among his many activities the International Union of Public Transport, the Institute for Rapid Transit, and the Pennsylvania Governor's Committee for Transportation.
The Arnheim & Neely Case: A Dilemma for the Real Estate Industry

by Robert P. Lawry

On December 17, 1969, in Pittsburgh, Pennsylvania, Federal District Court Judge John Miller entered judgment in a case which may have an effect on every real estate management operation in the country. In Shultz v. Arnheim & Neely the court decided that Arnheim & Neely, a Pittsburgh-based real estate management firm, was liable to the janitors, elevator operators and other employees engaged in maintenance, custodial and operational activities at various apartments and office buildings managed, but not owned, by Arnheim & Neely under the minimum wage provisions of the Fair Labor Standards Act, as presently amended. This case broke new ground in Federal Wage and Hour Law* and its impact on the real estate industry has yet to be fully assessed.

BACKGROUND

In order to understand the implications and significance of the Arnheim & Neely case, it is necessary to review briefly some historical aspects of the Fair Labor Standards Act. Prior to 1961 the focus of the Federal Wage and Hour Law was solely on individual employee activity. The provisions of the Act applied exclusively to employees who were themselves engaged in interstate commerce or in the production of goods for interstate commerce.

In 1961 Congress expanded coverage by introducing a new “enterprise” concept into the Fair Labor Standards Act. Under the new concept all the employees of an “enterprise” working in an “establishment” were covered under the Wage and Hour Law if two or more employees working therein were engaged in interstate commerce or in the production of goods for commerce. An “enterprise” was defined in the Act as “related activities performed (either through unified operation or common control) by any person or persons for a common business purpose.” An “establishment” was soon judicially defined to mean “a separate place of business.”

As was made perfectly clear by the legislative history, the purpose of this “enterprise” amendment was to guarantee equality of treatment to employees who worked side-by-side with “covered” employees for the same employer but who, because of the tasks assigned them, did not qualify for coverage since they were not themselves involved in “commerce.” The focus, despite rhetoric to the contrary, was now moving away from employee activity. The 1961 amendments marked a clear attempt to take hold of large business operations that were paying some employees a minimum wage and others below the minimum wage and to force the employer to treat all of his employees alike for purposes of the Wage and Hour Law.

The Labor Department was uncertain as to how the enterprise amendment affected real estate operations. Since the problem was still reducible to individual employee activity in separate buildings, real estate management firms were not adjudged to be peculiarly affected by the amendment, except that they too would have to pay employees according to the terms and provisions of the Act if, in any single place of business, they had two or more interstate employees.

In 1966, an additional amendment to the enterprise sections of the Act broadened its scope even more and as the Shultz v. Arnheim & Neely case demon-

* Throughout this report the terms “Federal Wage and Hour Law” and the “Fair Labor Standards Act” will be used interchangeably.
strates, in the opinion of the Labor Department (and now at least in the opinion of one Federal Judge), real estate management firms are suddenly responsible for the payment of minimum wages to employees in every building they manage, so long as two or more employees working for the firm anywhere are so held to be engaged in interstate commerce or the production of goods for commerce. The 1966 amendment was simple enough: it merely dropped the necessity for having two or more employees in each building engaged in commerce and substituted the broader requirement that, so long as there were two employees anywhere so engaged, all of the employees of the firm would be covered.

LEGAL ISSUES IN ARNHEIM & NEELY

The task of converting a real estate management firm into an enterprise responsible for the payment of wages to maintenance and other custodial employees was accomplished in a legal sense by the court’s answers to a number of legal questions; these were presented to it jointly by counsel for the government and for Arnheim & Neely together with counsel for the Institute of Real Estate Management, intervenor defendant in the Arnheim & Neely case. Because of the importance of the case and the potential effect on the real estate industry in the entire country, the Institute was permitted to intervene as a full-party defendant; the case was limited, however, to the facts of the Arnheim & Neely operation.

The parties, in an unusual procedural manner, were able to agree on the facts of the case to be presented to the judge and even to the phrasing of the legal questions that the court had to answer. Below is a brief summary of Judge Miller’s determination of the legal issues as presented to him:

1. Despite the fact that, as a matter of economic reality, the employees involved were dependent upon the owners of the buildings rather than the real estate management firm for their livelihood, the court held Arnheim & Neely to be the “employer” of the “employees” involved because Arnheim & Neely exercised extensive day-to-day control over the employees. Prior cases had held that real estate management firms could be employers under circumstances similar to those existing in the present case, but the defendants had agreed that the employer-employee relationship had to be reexamined in the light of the enterprise amendments. The court rejected this argument outright and held further that it saw no difficulty with the proposition that both the owner and the real estate management firm could be employers under the Act. The court expressed no opinion on the liability of the owners since that issue was not properly before it.

2. In attempting to fit the definition of enterprise to the activities of Arnheim & Neely, the court held that each building constituted a separate place of business for Arnheim & Neely and that the unification of the firm’s direction was sufficient to create a vast enterprise of clerical people at the home office and all maintenance and custodial people at each building.

3. The court went on to hold that the clerical people in the home office were engaged in interstate commerce by the fact that they worked on billings and other materials which necessitated the use of interstate facilities such as the telephone and the mails.

4. As part of the enterprise test, it was
necessary to prove that a certain dollar volume of business was transacted. Prior to February 1, 1967, that figure was set at $1 million. After February 1, 1969, the gross business figure was set at $250,000. Contrary to the arguments of the defendants in Shultz v. Arnheim & Neely, the court held that this dollar figure was not to be computed by the gross commissions paid to the management firm but was to mean the entire gross rental figure collected by the firm, even though the management firm acted merely as a conduit to pass a substantial portion of this money to the building owners. Prior to the Arnheim & Neely case, there had been a split in judicial opinion on this issue but since the figure is now set at $250,000, only the very smallest management firms would be affected by a reversal of this issue.

5. The court did hold one issue in Arnheim & Neely's favor. Prior to the 1966 amendments, the court indicated that, insofar as the enterprise coverage was concerned, the custodial and maintenance people in each building were not engaged in interstate commerce under the facts presented. Therefore, there was no liability to these employees prior to the effective date of the 1966 amendments, which was February 1, 1967.

**Possibilities on Appeal**

Lawyers for Arnheim & Neely and the Institute of Real Estate Management are presently in the process of preparing an appeal of the decision to the Third Circuit Court of Appeals. Because of the ramification for all real estate management firms if the Shultz v. Arnheim & Neely decision stands, the Institute, with the support of Arnheim & Neely, felt that the case ought to be brought before the Federal Appellate Courts in order to obtain a clear ruling, so that future planning can be conducted with some security as to the applicable law. Obviously, it is impossible to predict the outcome of the appellate proceedings. Aside from the legal issues involved, there is a social and political dimension to the case, which is not unimportant in considering the eventual outcome: in an age of wars on poverty, minimum wage cases are bound to be spotlighted.

Despite the fact that real estate management firms may be held liable to the employees involved in maintenance and custodial services at various buildings owned by others, there is an implicit assumption that future contracts with the owners will spell this out as the owner's obligation, and thus the management firm will not be financially damaged. This implication, however, fails to take into account past obligations nor the delicate problem owners will now face if they decide to hire management firms to manage their buildings rather than performing such activities themselves. If an owner is not obliged to pay the minimum wage because his building, and the employees working therein, are not engaged in interstate commerce or in the production of goods for commerce, he may decide from an economic standpoint that he is better served by not hiring a management firm. In the final analysis, these extra-legal considerations will not be the ultimate factors. A final judicial decision must be made on the basis of the language of the enterprise amendments and the intention of Congress in passing them.

As this article was being readied for publication, it was learned that the opinion of a United States District Court judge in the Eastern District of Virginia
in the case of Shultz v. Falk apparently concludes that Arnheim & Neely was wrongly decided. In factual circumstances very similar to those which existed in Arnheim & Neely, the court held in Falk that the requisite dollar figure necessary to meet one of the "enterprise" tests was to be computed by gross commissions and not by gross rentals. The court also expressed the opinion that the management firm involved in Falk was not an "enterprise" nor were those engaged in maintenance and custodial tasks at the managed buildings "employees" of the management agent.

The exact relevance and value of Falk for purposes of appellate argument in Arnheim & Neely is yet to be fully assessed by defense attorneys involved in the latter case. Nevertheless, it is significant that an apparent split of judicial authority already exists in analyzing and applying the "enterprise" amendments to real estate management firms.

It will be several months before legal briefs are filed and an oral argument is held before the Third Circuit Court of Appeals in the case of Shultz v. Arnheim & Neely. There is no telling how long after that it will take before the Circuit Court makes its determination. Then, of course, there is always the possibility of an appeal to the United States Supreme Court no matter the outcome before the Third Circuit.

Meanwhile, real estate management firms are faced with a delicate and difficult decision concerning cooperation with the Labor Department officials in their attempt to enforce the Fair Labor Standards Act. Each situation, both as a matter of current economics and future business planning, poses a unique business problem. Each firm will have to consult its own counsel and make its own decision as to how to react to government pressures which will no doubt increase due to the Arnheim & Neely decision. Counsel will no doubt be strengthened in any decision to resist by the existence of the decision in Shultz v. Falk. It is hoped, however, that a speedy appellate determination in the case of Shultz v. Arnheim & Neely will produce a clear answer to the legal questions involved and thus assist the real estate industry in resolving its current Wage and Hour dilemma.

* There is a strong belief that the government will appeal the Falk decision, but at this writing no official action has been taken nor has any opinion been expressed by the government on whether or not it intends to appeal the case.

Robert P. Lawry is an associate with the Pittsburgh law firm of Eckert, Seamans & Cherin, which firm is representing the Institute of Real Estate Management in the Arnheim & Neely case. He received his LLB degree from the University of Pennsylvania in 1966 and a Diploma in Law from Oxford University, England in 1967. Mr. Lawry is the author of a Law Review article on the legal aspects of internal disputes between local and international unions.
The most critical news of recent months relates to the strangulation of civilization resulting from our frivolous excesses in the use of natural resources. This heavily-documented alarm is being sounded by every authority on ecology, biology, geology, chemistry, medicine, sociology and economics. They warn that continued and accelerated abuses of the laws of nature and men will dooms human habitation on this planet within a very few decades. The situation is far more urgent than the ravages of war, pestilence or famine.

An honest inventory of what we are doing to our environment should impress us with the imminence of the doom we are relentlessly creating. Each year we are filling our thin atmospheric band of life-supporting oxygen and nitrogen with increasing millions of tons of insoluble pollutants. Clean drinking water is critical to life yet pollution of the limited water supply is rapidly depleting this elixir. Edible fresh and salt-water fish annually are being destroyed by the millions because of water pollution. The almost uncontrolled use of pesticides is rapidly reducing desirable bird and animal life. Thousands of acres of agricultural lands are being converted to urban use, critically diminishing our already marginal supply of food. Bad planning, outdated building and housing codes and weak code enforcement are turning our communities into over-populated, unsafe mixtures of residential, business and industrial neighborhoods.

The outpouring of petroleum, wood-processing and chemical wastes into the atmosphere and waterways must be stopped immediately as should the dumping of bottles, cans, plastics and other insolubles across our lands. Air pollution can be halted by adequate control of all internal combustion engines such as automobiles, boats, airplanes and other petroleum-burning equipment; we must be willing to sacrifice speed and power for these goals.

One of our most serious dilemmas is that we seek to prolong human life while populations continue to grow at an explosive rate. Population growth must be slowed down by eliminating all incentives for large families and by sound sex education programs. Our present food supply is inadequate for the hundreds of millions of people that now walk this earth. We must create and rigidly enforce planning, zoning and other laws to stop the unnecessary conversion of agricultural lands to other uses.

Urban land uses must be planned for maximum population densities and not for the selfish benefit of a select few. Our population problems are intense and complex but they can be solved by understanding and education as well as by offering economic and social opportunities for all.

Solving the physical aspects of air and water pollution may be relatively simple compared with the problems involved with the relationships between people and the land and between people themselves. None of these problems can be treated alone if we are to establish an environment which will sustain human life for more than a few decades.

The aesthetic values of regaining a healthful environment are not to be overlooked. The joys of living are a distinct pleasure of man. National and state park systems must be preserved and expanded. The wanton destruction of forests and the needless filling of shorelines and bays for commercial purposes must be stopped.

The picture is dark but not hopeless if people are prepared and willing to do something about this situation without further delay. Suffice it to say that unless all branches of government, industry and the people themselves join hands to reverse all of the destructive environmental trends, we cannot look forward to many more years of life on this planet. Time is against us but we can win if we retain some sensible austerity and endure some necessary sacrifices.

ENDORITICAL:

Environment: Life or Death

by Lloyd D. Hanford, Sr., CPM

Lloyd D. Hanford, Sr., CPM, is one of the principals of Hanford-Freund & Co., San Francisco. He was 1958 national president of IREM, and he is currently faculty director of IREM's Course III and Editor of the Journal of Property Management.
Computerized Future
For Property Management

by Sidney Glassman, CPM

In the past five years, more and more property management companies have either partially or fully computerized their management-accounting operations. Almost all firms of any moderate size have probably considered this possibility. What have been the factors motivating this consideration?

Ten years ago, there was a hard push by many computer-hardware firms to get into the real estate management field. They had the hardware and felt all that was necessary was to adapt existing systems and programs to property management. Unfortunately, the companies and personnel involved did not know the real estate business at all nor did they know its accounting techniques and problems. The enormous gap between expertise in computer operations and real estate management operations held no terrors for the computer salesman. As experience has shown to those hardy souls who pioneered the field, this early venture proved frustrating and extremely costly. However, out of this experience grew a body of knowledge and a group of people who could capitalize on the current push to computerization which has developed in the past few years.

The relatively late development in application of computer know-how to property management has also been a product of other considerations. First, what is the minimum size at which it becomes economical to computerize and second, what phases of the operations can be most easily computerized. A further and very important sophistication has been the realization of certain tangible and intangible benefits that could be realized from computerization.

Most of the early applications of data processing to property management occurred in those firms that also had a large mortgage service operation. The latter operation easily lent itself to data-processing, and it was a relatively short step from there to property management data processing, particularly for those firms who purchased their own equipment and needed to utilize computer time. However, here we will concern ourselves only with the choices for property management firms. The following analysis and discussion will deal with the pressures in a moderate-size company leading to computer application and the type of feasibility study that may point to conclusions and recommendations.

Most feasibility studies will yield the fact that many tasks of a repetitive nature presently performed by secretarial and bookkeeping personnel could be efficiently and accurately assumed by a computer. Companies face the inevitable problem of replacing present "efficient" staff over periods of time or of adding staff as their operations expand—not an easy task in the current labor market.

The problem of preparing monthly current financial statements as well as having other operating data produced on a timely and current basis is becoming increasingly difficult as companies grow. Manual systems, with good controls, have inherent problems of overlapping and duplication of work. Speed and accuracy of reporting cyclical peak and repetitive summaries to management become more and more difficult without some kind of automation. With data processing, growth and expansion can be easily accommodated without commensurate increases in personnel.

Knowledge of the tenant and the market is becoming increasingly important for professional management. Information on family size, income, where they work, where they come from, number of cars, etc., is as important as rent rolls to market-
conscious real estate developers. The development of tenant profiles for existing buildings as well as new construction is an effective tool in pinpointing the market. While the problem of securing this data is not directly connected with accounting functions of data processing, it is relatively simple to resolve by computerization.

Per unit, per room and per square foot cost data are easily developed on a continuing basis from routine disbursement and income data. Also, management executives need to have the data in summary form for ease of analysis and decision making. As the firm expands, these pressures mount.

It is imperative to weigh carefully all advantages and disadvantages before proceeding to a plan for computerization. The first question that presents itself is usually one regarding the size and efficiency of present operations and how rapidly the company is growing. The second question is whether to own or lease equipment or to use a service bureau. Unless a company is extremely large or also has substantial mortgage servicing business, the cost of an in-house computer, whether purchased or leased, is considerably more than that of a service bureau.

The third question relates to how much of the operation to convert to data processing. If the operation is of moderate size—3,000 or 4,000 units and growing—it is good practice to plan to computerize the entire operation eventually. However, this may be staged over a period of several years. The staging and planning of this phasing-in is of great importance.

The least expensive facet of conversion is that of disbursements and it is also the easiest to set up. In this case, account numbers are prepared for each category and subcategory of expense (see chart) and then a voucher or other form of data transmittal is prepared for the service bureau. This form breaks down the expense by building and category of expense and is usually coded by the property manager or purchasing agent.

The service bureau should also handle payroll and be knowledgeable from an accounting point of view of the problems inherent in payroll operations and particularly of property management operations. If given a summary of the income account by the management firm, the computer can come up with a finished operating statement. This statement can have a monthly budget and a year-to-date budget as well as the actual monthly and year-to-date figures.

The most costly and complicated part of property management data processing is the income side, assuming management will require maximum information from the accounting system. Most firms need rent control information, tenant rent history, rent increases, move-in and move-out data, delinquency and vacancy controls. Other incomes such as garage, maid service, etc., are separate, individual transactions; therefore, the transactions, though largely repetitive, have enormous areas for error. Also, there are many more income transactions than expense transactions.

The need for forms and controls also is much greater and more complex in handling income than in disbursements. Form design and controls, training and education of personnel are more important here, particularly since the income has been traditionally handled by resident managers, rent clerks, etc., while the disbursement side is usually handled by bookkeepers and other accounting personnel. The need for obtaining cooperation from employees cannot be over-emphasized,
# CHART OF ACCOUNTS

<table>
<thead>
<tr>
<th>INCOME</th>
<th>EXPENSES</th>
<th>SWIMMING POOL</th>
<th>DEBT PAYMENTS</th>
<th>UTILITIES</th>
<th>REPAIRS &amp; MAINTENANCE</th>
<th>SUPPLIES</th>
<th>REIMBURSABLE EXPENSES</th>
<th>TAXES</th>
<th>GENERAL OPERATING EXPENSE</th>
<th>ACCRUED EXPENSES</th>
<th>CAPITAL IMPROVEMENTS</th>
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## Debt Payments
- 20100 Mortgage Interest
- 20120 Mortgage Principal
- 20140 Ground Rent
- 20160 Replacement Reserve
- 20170 Financing Fees
- 20180 Other Loans

## Payroll
- 21205 Clerical
- 21210 Doorman
- 21215 Engineer
- 21220 Garage
- 21225 Grounds Keeper
- 21230 Maid
- 21235 Less Maid Service Reimbursed
- 21240 Maintenance
- 21255 Porter
- 21260 Rental Clerk
- 21265 Resident Manager
- 21270 Swimming Pool
- 21275 Telephone Operators
- 21280 Security
- 21285 Reimbursed Payroll Expense

## Payroll Taxes
- 21300 Federal Unemployment
- 21330 F.I.C.A.
- 21350 State Unemployment

## Group Hospitalization
- 21410 Building Group

## Administrative
- 30100 Audit Fee
- 30105 Auto & Travel
- 30110 Credit Reports
- 30115 Donations
- 30120 Dues & Subscriptions
- 30130 Insurance
- 30140 Leasing Expenses
- 30150 Legal Expenses
- 30155 Management Fee
- 30160 Meetings
- 30165 Misc. Administrative
- 30173 Postage
- 30180 Rent
- 30185 Stationery & Printing
- 30193 Storage
- 30197 Vault Rental

## Utilities
- 30410 Electricity
- 30420 Fuel
- 30430 Gas
- 30440 Sewer
- 30450 Telephone
- 30460 Water

## Repairs & Maintenance
- 30510 Appliances
- 30520 Building & Bldg. Equipment
- 30530 Electrical
- 30540 Elevator
- 30550 Grounds
- 30560 Heat & Air Conditioning
- 30570 Plumbing
- 30580 T.V.

## Supplies
- 30610 Electrical
- 30620 Hardware
- 30630 Janitor
- 30650 Miscellaneous
- 30660 Paper Products
- 30670 Plumbing

## Redecoration
- 30710 Contractor, Interior Painting
- 30720 Paint, Interior
- 30730 Painters, Interior
- 30740 Contractor, Exterior Painting
- 30750 Paint, Exterior
- 30760 Painters, Exterior
- 30770 Tenant Alterations (not reimbursable)

## Services
- 30810 Building Cleaning
- 30820 Extermination
- 30825 Laundry
- 30830 Music
- 30840 Security
- 30850 Service Contracts, Other
- 30860 Snow Removal
- 30870 Trash Removal
- 30880 Uniforms
- 30890 Window Cleaning

## Swimming Pool
- 30910 Contract
- 30920 Repairs
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- 40124 Displays
- 40140 Evening Star
- 40150 Roll Call
- 40160 Signs
- 40170 Washington Post
- 40180 Other

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- 40210 Less Recovery
- 40220 Tenant
- 40230 Less Recovery
- 40240 Common Area Charges

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- 40320 Miscellaneous
- 40330 Personal Property
- 40340 Real Estate

## General Operating Expense
- 40400 Equipment Rental
- 40410 Furniture Rental
- 40420 Miscellaneous
- 40430 Motor Vehicle
- 40440 Garage Expense
- 40450 Shopping Arcade Expense

## Accrued Expenses
- 50100 Insurance
- 50200 Real Estate Taxes
- 50400 Mortgage
- 50600 Audit Fees

## Capital Improvements
- 50500 Capital Improvements
- 50600 Model Apartment
and here, again, the experience and expertise of the service bureau is invaluable.

The decision to computerize should be made when the management company has all phases of its operation under tight control and no crisis situation prevails. The management company also ought to be at the point where it can project its operational growth past the stage where it becomes impractical to continue with a manual or partially manual system. At such time, the transition to computers can be made in an orderly manner without pressure, with the possibility of overlapping manual operations with an automated system for a month or two.

As an example, we can outline the timetable and procedures for one company with approximately 10,000 units. Automation consultants were hired to conduct an independent study of the feasibility of computerization of the management operation. Because they were knowledgeable in the field of real estate (most of the staff were certified public accountants) and could easily orient themselves to our particular company operations, a successful property management program was achieved. Their study was addressed to the following factors:

1. Whether or not to computerize. If yes, then:
   2. Whether to have an in-house computer or use a service bureau.
   3. Whether to computerize all at once or a partial program.
   4. Staging of the program.
   5. Estimated costs, including the set-up.
   6. Cost per unit norm and over-time as volume grows.
   7. Personnel saving—change of job descriptions—immediately and as volume increases.
   8. Savings on space and office equipment.
   9. Intangible benefits.

The initial survey took approximately 30 days, with two weeks devoted to an investigation and discussion with key personnel and also in observing job functions. The survey was done by a company which had intimate knowledge of service bureau operations and was competent in the field of real estate management operations and accounting as well as in data processing.

The report was reviewed by management, and detailed analysis and recommendations were made by management which further refined those of the report. The management report and recommendation could be quantified more closely than the consultant report because of the better awareness of current costs and personnel.

As a result of this synthesis, the following procedure was agreed upon:

1.) January 1: Proceed with forms design, computer programming and employee training for cash disbursements with a view to conversion in 60 days. (A service bureau which does not have the experience in property management operations may need a much greater length of time in this phase of conversion.)

2.) March 1: 60-day double run by computer and manual, then elimination of manual.

3.) June 1: Forms design and programming and employee training on income side to be completed 60 days after disbursements are completed on computer.

4.) July 1: Proceed with new job descriptions, job training and re-allocation of work loads.

5.) August 1: Run income into computer for a group of buildings as test for 60 days.
6.) October 1: Run all buildings on computer.

The entire operation, absorbing one phase before continuing to the next, took one year from survey to computerization. Before we proceeded beyond the point of no return, we had to make sure we could live with the service bureau, with the timetable and with our monthly operating requirements.

Data is fed into the computer daily. We close on the 25th or 26th of a month and in four days after the month's end we have financial statements. These are reviewed by management and run for investors by the 6th or 7th of the following month. They are mailed out to them on the 10th.

Our service bureau met this timetable smoothly and comfortably. If “bugs” had developed, we might have remained on disbursements-only for a longer period of time. This again emphasizes the importance that the computer partner to be knowledgeable in the fields of real estate management and accounting.

It is important to note that the company was operating rather smoothly on a manual system with nearly the same timetable. However, a look one year or more into the future had shown risks and problems including: a manual system dependent on certain key personnel; more units with resultant add-on personnel; more equipment and space necessary for these extra employees; more training time, etc. All of these reasons led us to computerization before we actually began to experience any problems.

We were also able to build speedy access to certain peripheral information mentioned earlier, such as tenant profiles, tenant histories, etc., which should enable us to respond quickly to changing market conditions and changing structure of tenant composition.

Finally, in the relatively new area of continually keeping track of commercial leases, the computer can be of immeasurable assistance. Yearly escalation clauses, as well as keeping lease expiration dates in the fore-front of commercial management and leasing people, is one of the prime by-products of tenant history print-outs.

Though form and system design must be tailored or adapted to the individual requirements of each property management firm, there is now sufficient expertise in this field to make the transition without the former trepidations and expectancy of problems that characterised computerization in earlier years.

Sidney Glassman, CPM, is vice president of Charles E. Smith Management Co., Washington, D.C., and is in charge of residential management. He is an economic and real estate market consultant as well as a lecturer in real estate market analysis at American University.
Parking Problems Need Professional Answers

by B. B. Berman

Parking has been the step-child of the construction industry ever since the advent of the gas buggy and the death of the old hitching post. For more than 50 years it has remained a "last minute" consideration when building any type of housing structure and as a result more parking facilities have been demolished and rebuilt than any other form of construction.

This has been and will continue to be a waste of time, material and manpower and produces only a second-rate facility in the long run. Architects, engineers and spec writers must become thoroughly familiar with what it takes to come up with a parking facility that utilizes a piece of property to its fullest extent; that complements the structure it serves in traffic flow, convenience and safety; that takes into consideration the clientele it is to serve; that plans illumination and landscaping not only for today but for years to come; and an unbelievable number of other facets vital to the construction of an efficient parking facility.

Because of today's more affluent society, parking problems have mushroomed in the last 25 years to a point where parking has actually become a major problem in all cities. It has reached the point where something definite and constructive has to be done to alleviate the many problems involved.

These problems cannot be solved by a novice. They must be solved by someone who has grass-roots experience and knows the thousands of areas that must be considered before a piece of property is ever touched.

A few years ago competition for the motorist's business was not as intense as it is today and motorists had multiple parking choices. Today, shopping centers, motels and downtown stores are finding that motorists shun parking facilities that are difficult to maneuver, preferring to take their business to a competitor who has thought of their comfort.

Retail business, industry, sports, air terminals and schools have all moved to suburbia because of the inadequacy of city parking. While it is a major problem today, it will sound the death knell of all city activity if government, city planning, engineering, codes and ordinances, finance and administrative forces do not get together for a totally unselfish appraisal of what is happening.

The shopping center concept didn't just happen. It has been accomplished by the creative thinking of experts in the fields of professional development, architecture, market analysis, legal, engineering, site planning, traffic and parking engineering, landscape architecture and merchandising, all working together on a venture that has become the economic revolution of the century.

Some parking facilities now in use and many on the drawing board seem to ignore the physical dimensions and maneuvering requirements of the vehicles which must use them. Their inadequacy seems to stem from an over-emphasis on "space efficiency" or from lack of knowledge of parking dimensions and maneuvering capabilities of today's vehicles.

Granted, it doesn't seem to make sense to require from 250 to 450 square feet to park a vehicle which occupies from 60 to 125 square feet. Each car space may cost from $1,000 to $5,500 per car where the land value is high. But a parking facility is valueless if it has inadequate space to enter, park and exit comfortably.

Design capabilities and limitations; car sizes and maneuverability; turning circles and practical operating dimensions are basic considerations in designing a facility for self-parking—whether it be for an apartment, shopping center or office.

The motoring public is volatile, proven
by the mass migration from "downtown" shopping to "neighborhood shopping centers," all brought about by someone who built a better mousetrap. "Available parking space" is no longer enough. It must be within easy walking distance of the shopping area; it must be convenient to get in and out of; it must be easy to park and space and attractive in appearance.

The appearance of a parking facility has probably been one of the major causes for much obsolescence—because architects or designers have a tendency to "nail down" as permanent fixtures such things as lighting and landscaping, without taking into consideration the possibility of expansion. Very often the entire parking space is not striped for its fullest capacity, awaiting confirmation of the demand, while lights are installed and landscaping completed that couldn't possibly serve in an expanded design. This is a common error that can be avoided with proper designing and placement of lighting and landscaping areas.

If cities are to retain their economic stability, they are going to have to do something about parking. Economically they are going to have to go to highrise or subterranean parking. Ramp parking need not be the ugly duckling of the parking industry any more. With the elegant prestressed concrete designs, metal panels and other decorative construction materials available today, parking can help give a new face to the downtown sections of most big cities.

The idea of beautifying the city and doing away with the parking lot per se has and will continue to meet with strenuous opposition because of the efficiency with which these lots have and are being run, as well as their ability to get the most out of every single square foot of space. The lot personnel know the lot like their own image in the mirror and the characteristics of their patronage. As a result they accomplish the maximum use of their lot. Is there any reason why these same men could not be equally successful in a multistoried operation? I think not if the proper planning and research went into it.

Parking continues to be a matter of economics and service. It requires, in many instances, private enterprise and government agencies working together for the common good of the public, the city and the investor. In most larger cities, a continuous survey of traffic and parking needs is being made so current figures on supply and demand are usually available. With such statistical background, a qualified group could come up with some imaginative answers that are becoming more and more urgent every day if downtown business is to survive and prosper.

By qualified group, I'm thinking of a group which consists of all the elements that would or could possibly be involved in the parking problem: architects, building contractors, off-street parking authorities, city planners, highrise and subterranean engineers and, above all, a number of parking and highway contractors. Materials and equipment change as rapidly as the type, size and quality of parking so it takes people working at the grass roots level to come up with the practical application.

Until the problem is approached in this total aspect, we will continue to have unsatisfactory results. It is too vast a project for one man or one trade to make the full complement of determinations—it will take a roundtable of diversified trade experts to begin to approach the solution.

It is going to take a tremendous amount of stimulating imagineering to bring the buying public back to the concept of "downtown" shopping. Radical surgery is needed at the time the downtown parking problem has its face lifted. Physical and mechanical objects deteriorate with age and cities are no different than humans or machinery.

Some serious thinking is going to have to go into the new parking facility concept of "how to keep the downtown shopping area perennially young and attractive." This same theory applies to neighborhoods as well. You can't let an area go to pot and hope to have it retain its image of youth and vitality. Keeping an area strong and economically sound through the years is the nearest thing to perpetual motion there is on this earth and until all cities realize that this is a continuous never-ending project of keeping its facade young, beautiful and effectively useful, the problems will remain with us.

B. B. Berman is president of the Parking and Highway Improvement Contractors Association, Inc. He received his education in Upper Darby, Pa., and was associated with the Government Printing Office in Washington, D.C., until 1954. He currently heads a California firm called Arnds Packaged Parking, which handles all phases of parking design.
New Products

WHEN REQUESTING INFORMATION, PLEASE REFER TO KEY NUMBER
SEND INQUIRIES TO: JOURNAL OF PROPERTY MANAGEMENT, 155 E. SUPERIOR, CHICAGO 60611

3-1 EQUIPMENT LOCK
The Cordex Anti-Theft Machine Lock from Componentry Research and Development Enterprises, Inc., is designed to protect any mountable office machines or equipment, television sets, motors, or tools. Locked by key, it secures items in four or more places depending on the position and number of mounting holes. After installation of the lock, the protected machine may still be swiveled 360 degrees so that it can be used from any position on a desk or stand.

3-3 TERMITE BULLETIN
The National Pest Control Association has published a booklet entitled “Termites and All About Them,” created to provide the public with knowledge about one of the most costly insect pests known to man. Treating its habits, damage, and means of control, this booklet will be provided along with a list of the Association’s membership.

3-4 POWER INVERTER
The Terado Corporation’s Sentinel Model 50-107 is designed to automatically intercept power failure and supply the necessary voltage through a storage battery and inverter with capacities to 1,000 watts. Equipment such as clocks, timers, burglar alarms, closed-circuit TV, cash registers, exit lights, and emergency equipment can be kept in operation in spite of power failure. Various capacities from 15 watts to 1,000 watts can be supplied with controlled Hz frequency or without frequency control.

3-5 FLOORING CATALOG
Azrock Floor Products has available its 1970 catalog of resilient flooring products. Containing full-color illustrations of all colors and patterns in Azrock vinyl asbestos and asphalt floor tile, feature strip, and cover base, the 16-page catalog also includes general information on sizes, gauges, uses, installation, light reflectance values, and brief specifications.

3-6 AIR CONDITIONING UNITS
Climatrol Industries, Inc. announces a line of single-package 935-1 air conditioning units in four basic models—2, 3, 4, and 5 nominal tons. These are available in capacities from 23,000 to 59,000 Btuh. Additionally, six models in 50 Hz and eight models in 60 Hz are available. Removable panels provide access to all components. Included in all models are centrifugal blowers on evaporator side, mild ambient control, crank case heaters, service valves, and filter-dryers.

3-7 ENVIRONMENTAL CONTROLS
Honeywell’s precision environmental controls are featured in a handbook published by the firm’s Apparatus Controls Division. Along with a full line of sensors and controllers for temperatures and humidities as well as recorders and programmers, the 12-page handbook covers motors to operate valves and dampers and also steel cabinets to house the components. Also offered are schematics showing typical control installations for individual or multiple-environment chambers simultaneously handling both temperature and humidity (or other variables).

3-8 PORTABLE WASHER
Fast Action Clean Model 93 is a portable, high-pressure, gas-driven washer introduced by the Action Manufacturing & Engineering Corp. No electrical requirements or pressurized water system is needed. Output is 500 PSI at 3 gallons per minute from any water source. The unit is controlled by two manual valves at the control handle and metered chemical solutions connect by plastic tube to the housing.
WHERE ARE YOU GOING IN THE 70's?

Do you worry like an owner? Can you map your property's success for its full economic life? More than basic practical know-how, IREM provides the professional skills to solve your building's ills from planning to maintenance.

For more information and an application, write to:

THE INSTITUTE OF REAL ESTATE MANAGEMENT of the National Association of Real Estate Boards
155 East Superior Street
Chicago, Illinois 60611

COURSE ONE: PRACTICAL METHODS FOR SUCCESSFUL PROPERTY MANAGEMENT

The individual with some background in real estate is introduced to the practical methods of professional management through its "operating" techniques and "strategic" analytic skills. The former include rent collection, purchasing, bookkeeping, physical maintenance. The latter—as essential—is the ability to analyze the status of a property in the light of local conditions, projecting its highest and best use, and determining its long-term value. Topics include: Management Agreement & Fees — Accounting, Insurance — Merchandising Rental Space & Leasing — Real Estate Economics — Neighborhood Analysis-Property Analysis—Rehabilitation, Modernization, Conversion.

Limited to 90 students; tuition: $225.

COURSE TWO: ANALYSIS AND MANAGEMENT OF INVESTMENT PROPERTY

Strategic problems are here defined in terms of the protection and enhancement of the real estate investment. Participants are guided in the development of the feasibility study and the management survey for both residential and commercial properties. Learn how to examine a property before a commitment is made, and once it is, know how to tailor solutions to the problems of your specific project. Topics include: Investment Theories & Practices — Tax Considerations & Problems — Use of Comparables — Neighborhood & Regional Analyses — Economics of Alternates—Operating Statements & Budgets — Cash Flow Projection.

Limited to 90 students; tuition: $225.

COURSE THREE: EXECUTIVE MANAGEMENT SEMINAR

(Developing maximum potentials in Investment Properties)

In seminar, the student is taught to prepare the management survey. Perhaps the most professionally demanding, useful service that a manager can render, the survey seeks to place an income-producing building into proper perspective in terms of its physical condition, management program, immediate and area-wide environs, and potential as a money-making operation. The conclusions of a survey point out what best an owner might do to enhance the value of his investment and realize maximum potential profit. An actual property is studied; data is supplied for the building and surrounding region and a class site inspection is made.

Limited to 60 students; tuition: $175.

COURSE FOUR: OFFICE BUILDING DEVELOPMENT, LEASING, AND MANAGEMENT

IREM's newest course concerns itself with the development of an office building, from the "idea" stage through the leasing, merchandising, and management of the complete working unit. Through the "Management Plan," a program is formulated considering market and property analyses, an income and expense study, proper means of financing—all to best fulfill ownership requirements. Medical and special purpose buildings are examined as well as the renovation of older buildings. Topics include: Economics of Office Buildings—Merchandising, Promotion, & Advertising—Accounting & Monetary Control Procedures—Parking—Security Systems—Maintenance.

Limited to 90 students; tuition: $225.
3-9 TRASH CHUTE
Aeroil Products Company has announced the availability of the 30" Trash Chute. Available in 4' sections, complete with self-locking chains for support, the chutes are designed for contractors' use in removing debris from construction sites; they may also be used by demolition crews dumping trash directly into trucks.

3-10 FIRE ALARM CONTROL PANELS
Control panels have been introduced by Pyrotronics, Inc., for non-coded automatic fire alarm systems. Offering solid-state circuitry and modular construction, the single-zone version can be expanded by the addition of a simple module. Both the one- and two-zone versions are designed to operate numerous highly sensitive ionization detectors, thermostatic heat detectors, and up to five photo-electric smoke and infrared flame detections on each supervised zone.

3-11 INFRARED HEATERS
From the Infra-Red Radiant Co., Inc., come two gas-fired infrared heaters for area or spot heating, both indoors and outdoors. Mounted at heights from 10' to 15', the units operate on the infra-red radiant energy principle, so that there is little drying of the air's moisture content, according to manufacturer. Features include cast-iron rayheads, porcelain-enamelled burner frames, and aluminum reflector shades. Models 24HBS and 36HBS have 24,000 and 36,000 Btu/hr. input ratings.

3-12 TILE COLOR CHARTS
The 21st edition of Color Comparison Charts for vinyl asbestos and asphalt floor tile has been published by the Asphalt and Vinyl Asbestos Tile Institute. These are simplified guides showing the commercial equivalents of various manufacturers' color lines and patterns, for use in the selection of resilient tile by style and color.

3-13 PORTABLE PERMANENT BUILDINGS
A catalog from the "Parking" division of Henges Interiors, Inc., introduces the 1970 model line of Portable Permanent Buildings for use as guard houses, toll booths, cashier booths, in-plant offices, etc. The buildings are shipped assembled, wired, and ready to use and feature ribbed, anodized aluminum, extruded frame, diamond embossed, anodized aluminum panels inside and out, and lowered window sills. Additional options are air conditioning, tinted and/or insulated glass, safety glass, and extended canopy roofs.

3-14 WASHFOUNTAINS
A washfountain from the Bradley Washfountain Co. features a lightweight, non-porous bowl of Bradglas polyester fiberglass-reinforced molded construction. The 54" diameter circular models serve up to eight users with a single set of plumbing connections. Bowls and pedestal panels are furnished in a variety of contemporary harmonizing colors and all units are equipped with integral foot control.

3-15 WOOD/VINYL WINDOWS
Wood and vinyl house-type windows for factory-built housing has been introduced by the Malta Manufacturing Co., Inc. Vinaline II units are available in a range of sizes, offering single hung, sliders, oriel, studio, picture windows and bay windows. For mobile homes, double wide, apartments, and homes, they are completely assembled and ready to install; screens are included.
Help is available through IREM’s monthly research report, REAL ESTATE MANAGEMENT OPERATING TECHNIQUES AND PRODUCTS.

These reports contain a wealth of operating data and product information collected and presented specifically for managers in the real estate field and their maintenance personnel.

Each month a different topic is discussed in detail, often using comparative data on the many products, processes or methods available which apply to the topic; illustrations are used.

These research reports are now in their 25th year of publication, and our years of experience have led us to the consistent selection of topics vital to property management. The subject matter is discussed in meaningful terms, in the language of the real estate industry.

The reports are published on sturdy paper stock (8 to 16 pages each month) with saddle stitching, making them durable enough to withstand hand-to-hand circulation among the management and maintenance staffs. Pre-punched holes facilitate easy binder storage for quick reference.

At present, 50% of JOURNAL subscribers find it wise and useful to also receive the reports on a regular monthly basis... ...it’s the smart thing to do because that way this valuable tool comes to you for only $10.00 per year... less than 84¢ per copy.

Non-subscribers and subscribers not currently receiving the research report can purchase any remaining back issue for $1 each. Subscribers can convert their subscriptions to include the reports along with their current JOURNAL subscription. On the tear-off coupon at the bottom of this page, you’ll find listed some recent reports. Why not pick out those most useful to you and send in $1 per report along with the coupon? We’re sure you’ll like these useful, informative publications and want to keep them coming as a regular part of your up-to-date information library.

Enclosed is a check for Bulletins marked below, at cost of $1 each (U.S. funds)
Return to: Institute of Real Estate Management, 155 East Superior St., Chicago, Ill. 60611

☐ #210 ASPHALT DRIVEWAYS AND PARKING AREAS
☐ #229 SAFETY GUIDELINES FOR SELF-SERVICE PARKING LOTS
☐ #231 TECHNIQUES FOR ATTACKING SNOW REMOVAL
☐ #234 PROPER MAINTENANCE PAINTING PROCEDURES
☐ #235 GUIDELINES FOR PLANNING LAUNDRY ROOMS
☐ #236 A NEW LOOK AT FLOORING COSTS
☐ #237 THE CARE OF YOUR APARTMENT—THE TENANT’S HANDBOOK
☐ #240 WHAT IS NEW IN FLOORING & PAINTING
☐ #241 FLUORESCENT LIGHTING SYSTEMS
☐ #242 NEW DIMENSIONS IN THE USE OF HARDBOARD PANELING AND VINYL PIPE
☐ #243 TOTAL ENERGY SYSTEMS—WHERE DO WE STAND?
☐ FREE: SEND COMPLETE BULLETIN INDEX FREE OF CHARGE

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ADDRESS

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☐ Convert my subscription to include Bulletin Service and send pro-rated bill to cover remaining subscription period.
3-16 EXHAUST FANS
Direct drive, ball-bearing exhaust fans in 12", 16" and 18" diameters are available from the Builder Products Division of Emerson Electric Co. For farm or industrial applications, the fans have 1/20, 1/15, and 1/12 hp motors and can be mounted to discharge horizontally, vertically or at any angle. Specifications and illustrations for these and the full line of ceiling fans, oscillators, air circulators and attic fans are contained in a 12-page brochure.

3-17 FIRE EXTINGUISHER
Developed by Walter Kidde & Co., Inc., a pressurized-water fire extinguisher features a plastic valve that permits charging with pressurized air and automatically vents excess pressure developed during charging or exposure to heat. The manufacturer recommends the use of this portable 2½-gallon extinguisher to fight fires involving wood, paper, rubbish, and textiles in offices, apartments, stores, motels, loading docks. Stream of water solution is 30 to 40 feet.

3-18 TELEPHONE BOOTHs
A color brochure to aid in selection and planning of telephone centers is available from Burgess-Day Division, Acoustics Development Corporation. Designed to provide acoustical privacy and comfort without doors or fans, the booths may be used in limited space situations. Complementary colors are shown and wall, pedestal, and floor mountings described. Stand-up and seated models are featured.

3-19 FLOOR MAINTENANCE SYSTEM
For use on resilient tile, terrazzo, and quarry tile floors, the "Metafin" system of Multi-Clean Products, Inc., consists of a stripper, a sealer, a finish, and a cleaner. The sealer and floor finish utilize metal-containing polymers which, advises the manufacturer, are in effect "hardeners". This system is designed to minimize maintenance and improve a floor's durability.

3-20 SPACE ALARM SYSTEM
Pinkerton's, Inc., has added its TR-200C series to its line of "Radar-Eye" space alarm systems. The series supplies power to remotely located detector antennas which flood designated areas with three-dimensional microwave barriers. Flood-lights, audio and/or silent signals, or any combination of warning devices can be employed. The alarm operates on regular AC current or in case of power failure functions on standby power supplied by a battery which is part of the unit.

3-21 STRIPER ATTACHMENT
Dri-Spray, Division of Equipment Development Inc., has introduced its paint line striper attachment for all types of painted-line striping—parking lots, floors, warehouse/industrial areas, safety lanes, etc. The attachment can paint both straight and curved lines with the width of the stripe varied at the operator's option. A conventional spray nozzle with swivel tip and airless hand gun mounts to the attachment.

3-22 FIBER GLASS PANEL
Johns-Manville Corrulux Products has introduced a 4-page, 2-color booklet on Pyro Plus PP-25, a translucent fiber glass panel. Pyro Plus PP-25 is said to meet most local and national building codes and is intended for use in schools, public malls, and industrial buildings where maximum fire protection is required. Flame spread ratings are given as well as examples of possible applications.

3-23 MERCURY VAPOR LAMP BALLASTS
Radiant Industries' "Indactor" is an electronic device which replaces the core and coil ballast for lighting mercury vapor lamps. These solid-state, miniaturized line-voltage control units weigh from 4 to 6 pounds. They are available in 175 and 400 watt standard sizes, and 120 to 277 volt inputs. Applications include street and other exterior lighting and interior lighting for industrial and commercial uses.

3-24 MAT CATALOG
The R. C. Musson Rubber Company's 1970 Architects' Catalog has 48 pages of descriptions and specifications for stair coverings, rubber and vinyl mats, matting and aluminum mat frames for commercial, industrial, and multiple residence applications.

3-25 INDUSTRIAL SWEEPER
Hammond Industries, Inc., has announced its industrial "air" sweeper, designed for use on industrial floors, warehouses, parking lots, sidewalks, etc. The sweeper operates on an air flow system which requires no filters. It picks up litter, sand and dust—wet or dry—claims manufacturer. The SP 100 sweeper is designed to clean over 100,000 sq. ft. per hour and climb 15-degree ramps.

A Tee-M Storage System Completes the Picture

The Tee-M Twins, Judi and Pat Babine demonstrate the new Double Depth, double capacity TM 1030-DD

MODEL DESCRIPTION

Standard Tee-M Units for 30 gallon cans

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<tr>
<td>TM 200</td>
<td>2 cans</td>
<td>27&quot;x55&quot;x 49&quot;</td>
<td>350 lbs.</td>
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<td>TM 300</td>
<td>3 cans</td>
<td>27&quot;x55&quot;x 74&quot;</td>
<td>450 lbs.</td>
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<td>TM 400</td>
<td>4 cans</td>
<td>27&quot;x55&quot;x 97&quot;</td>
<td>600 lbs.</td>
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<td>TM 500</td>
<td>5 cans</td>
<td>27&quot;x55&quot;x121&quot;</td>
<td>750 lbs.</td>
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Special units for 55 gallon drums

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<td>TM 4430-DD</td>
<td>4 cans</td>
<td>54&quot;x55&quot;x 49&quot;</td>
<td>650 lbs.</td>
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<td>TM 6630-DD</td>
<td>6 cans</td>
<td>54&quot;x55&quot;x 74&quot;</td>
<td>750 lbs.</td>
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<td>TM 8830-DD</td>
<td>8 cans</td>
<td>54&quot;x55&quot;x 97&quot;</td>
<td>875 lbs.</td>
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<td>TM 1030-DD</td>
<td>10 cans</td>
<td>54&quot;x55&quot;x121&quot;</td>
<td>1,000 lbs.</td>
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Architects and building managers across the Nation have found many advantages in standardizing on a Tee-M Storage System. Unsightly trash cans do not mar the beauty of a building or its grounds. Animal intrusion is prohibited. The rolling shutter of a Tee-M unit means ease of operation. Owners enjoy improved cost effectiveness: since trash pick-ups are less and trash cans themselves last longer, due to protected use, savings in maintenance spending are greater, particularly when spread over a period of time. Thus a Tee-M Storage System is far more economical than an expensive trash hauling system.

The Wilson Corporation
PRECISION ROLLING DOORS SINCE 1876
P. O. Box 599, Dept. JPM, Norfolk, Va. 23501

Nothing bothers the property manager more than a vacant apartment or office. Collecting no rent disturbs him the same way an idle machine tool disturbs a factory manager. The factory manager has been able to turn to the computer to solve his problem. The computer can tell him that there are labor, inventory, maintenance, or schedule problems that cause a machine to be idle.

But the property manager couldn’t turn to the computer to find out whether vacancies were the real problem, or just a symptom... until now! Chicago Tabulating Service, Inc. and its affiliates have spent over two years training the computer to aid the property management industry just like the computer has already been trained to aid the manufacturing and service industries. The new approach, Real Estate Management & Control System (REMCS) provides timely information to the profit conscious property manager, and is available in over eighteen states through local computer service centers (see next column).

Small and large property management firms alike may purchase the REMCS service through their local computer companies by paying a small fee per apartment, per month. The service includes complete...

What can be wrong in Westewoode Gardens?... ask the computer.

For brochure write:
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