Journal of the Arkansas Academy of Science

Volume 8 Article 19

1955

Delimitation and Analysis of the Little Rock Central Business District

James E. Vance Jr.
University of Arkansas, Fayetteville

Follow this and additional works at: https://scholarworks.uark.edu/jaas

 Part of the Urban, Community and Regional Planning Commons

Recommended Citation

Vance, James E. Jr. (1955) "Delimitation and Analysis of the Little Rock Central Business District," *Journal of the Arkansas Academy of Science*: Vol. 8, Article 19.
Available at: https://scholarworks.uark.edu/jaas/vol8/iss1/19

This article is available for use under the Creative Commons license: Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0). Users are able to read, download, copy, print, distribute, search, link to the full texts of these articles, or use them for any other lawful purpose, without asking prior permission from the publisher or the author.
This Article is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in Journal of the Arkansas Academy of Science by an authorized editor of ScholarWorks@UARK. For more information, please contact scholar@uark.edu, uarepos@uark.edu.

DELIMITATION AND ANALYSIS OF THE CENTRAL BUSINESS DISTRICT OF LITTLE ROCK, ARKANSAS

James E. Vance, Jr.

UNIVERSITY OF ARKANSAS

The trade function of cities, although divided among a number of types of centers in the "city retail structure",[1] is most highly developed and most concentrated in what has come to be known as the Central business District. This district, which hereinafter I shall take the liberty of calling by the short designation of CBD, is not all the retail structure of the city, but it is its core. An understanding of the CBD is essential to an understanding of the trade structure of the urban region. When weighing our knowledge of commercial patterns within the city, we may well use our knowledge of the CBD as a touchstone. Geographers have for some time used the term central business district when discussing urban land-use patterns, but have they used it on the basis of knowledge or of conjecture?

Several years ago, a thorough investigation of the literature and work of urban geographers, in which the author participated at Clark University, resulted in the conclusion that the CBD was a name rather than a well understood feature in our profession, and for that matter in those other groups concerned with urban studies. This was a conclusion that has much wider application than to the CBD alone. In urban geography indefiniteness, lack of qualitative evaluation, and absence of broadly applicable measures are serious weaknesses. In part to establish standard measures, tested techniques of research, and broad standards of urban land use, and in part to learn more about this core of urban trade, Raymond Murphy at Clark organized a full-scale investigation of the CBDs of American cities.[2] From this project detailed information was obtained on the CBDs of nine cities widely distributed among the major geographic regions of the United States,[3] and also a general picture of the characteristics of the CBDs of very nearly all American cities with an urbanized-area[4] population of 150,000 to 250,000.[5] I should like to utilize our previous work as a base for a consideration of the CBD of Arkansas' primary trade center, Little Rock. This application is facilitated by the general plan of the original project: to develop techniques of delimitation and analysis that may be applied in studying cities of comparable size so that those studies will yield a body of data susceptible to regional comparison.

DELIMITATION TECHNIQUE

The commercial core has been studied in most of our larger cities. In fact the planning reports that have been produced for our larger urban places usually establish such a district. However, anyone familiar with this planning literature will be aware of the impossibility of comparison among these districts. To illustrate this difficulty of judging one city's commercial area in relation to that area in another city we might well consider two extreme examples. The planning department in Worcester, Massachusetts has conducted a thorough study of the local CBD and, on the basis of land values, has delimited a district that comprises around ten normal-size blocks. Against this very restricted concept we may place the CBD that the planning department in Denver conceives for that city. The Denver CBD is drawn by the local planners to include several hundred blocks,

---

[1] Proudfoot, N. J., "City Retail Structure", *Economic Geography*, Vol. 13, 1937, pp. 425-428.

[2] The author had the opportunity to participate in this project and to serve as its principal field investigator.

[3] Worcester, Massachusetts; Roanoke, Virginia; Mobile, Alabama; Grand Rapids, Michigan; Tulsa, Oklahoma; Salt Lake City, Utah; Tacoma, Washington; Sacramento, California; Phoenix, Arizona.

[4] Urbanized areas as defined in the 17th U. S. census, 1950.

[5] A series of three articles presenting the conclusions of the study will be published in *Economic Geography*, Vol. 30 (July and October, 1954, January, 1955.)

Published by Arkansas Academy of Science, 1955

using criteria that lump all non-residential uses as central business. Although Denver is slightly more than twice as large as Worcester, is a much more important trade center, and is a growing city in contrast to the static nature of the New England city, it seems doubtful that Denver and Worcester are actually so radically different in CBD development. I do not wish to question the accuracy or the usefulness of these planning studies. For the city concerned these studies are usually invaluable. However, for the student who desires to gain a picture of the CBD as a common functional area in American cities, it is virtually impossible to use such locally oriented studies.

This disparity in criteria and in delimited CBDs that exists in American cities led us to conclude that any understanding of the general nature of these districts would require as a preliminary step the establishment of standardized criteria for the delimitation of uniformly based CBDs. After much experimentation and field testing, we arrived at a program of mapping and statistical analysis that we believe yields satisfactory districts in diverse geographical regions, cities with different functions, and cities of varying size. I wish now to present a summary of this technique for CBD delimitation and then to proceed to its application to Little Rock.

After much trial and discussion, it was decided that land use provides the most generally applicable measure for the delimitation of CBDs. This decision did not intend to suggest that land use provides the only measure, but rather that the other measures, such as land value, trade indices, rent indices, pedestrian flow, and others, are extremely difficult to apply over a wide range of cities. Often the basic data are not available, and if available are seldom consistent among all cities. Land use, in distinction to the other measures, is available on a uniform base to anyone who is willing to engage in the necessary field work. By establishing a set technique for land-use mapping and use classification, we were able to secure a set of land-use maps that were susceptible to comparison.

Briefly stated, the mapping technique was established in three stages. The first stage was determining which of the multitude of central uses were truly central business as distinguished from adventitious uses found in the CBD. I cannot at this time present a full break-down of the hundred-odd land uses commonly found in the CBD. Broadly speaking, the central-business uses were those of retail trade, service trades, and most of the office uses that deal with the ultimate customer. Certain uses commonly found in the CBD were excluded by the definition that central business is business which is oriented toward serving the entire trade area of the city and all economic, social, and ethnic segments of that trade area population. Thus, ethnic shopping centers, which characterize many cities of the north and west were excluded as were the institutional types of offices, such as oil-company headquarters, telephone-company exchanges, insurance-company home offices, and other office industries. In the same way, the definition excluded wholesaling because it deals with a restricted patronage; governmental land uses because they are not business in the usual conception of that term; fraternal and other restricted membership organizations for the obvious reason that they are not open to all; and finally, manufacturing because its location in the CBD is quite often determined by the morphology of the city rather than by any site requirements.

Once having established the line between the sheep and the goats of the CBD, the second stage was that of developing mapping techniques for these two land-use classifications. Here a weakness of many existing studies had to be avoided ---their two-dimensional nature. That is, they present a picture of first-floor use alone. The CBD as a functional district of the city is, more than any other district, characterized by height. To exclude a consideration of height, in our minds, destroys much of the value of existing studies. But to map the CBD in three dimensions is not easy. Anyone who has engaged in field mapping realizes that three dimensions are almost impossible to record accurately on a single map, yet the field mapper cannot easily handle several maps in the course of his labors. To overcome this operational difficulty, we settled on the use of profiles. These profiles can be constructed prior to going into the field, using lot-line maps with a scale of two hundred feet to the inch. These are rather generally available for cities. The X-axis of the profile can be laid off from the information available on the lot- line maps so that the building lines are established.

In the field it is an easy matter to determine the Y-axis value by observation, simply by counting stories. To simplify our work, we settled on a uniform height for stories, concluding that excessively high floors were essentially no more useful than the average height of 8 to 10 feet.

On the profiles of land use, once having established the X and Y values, there was a grid of small block on which it is possible to record the various uses. The use classification established in stage one was then applied to the establishments found in the city, and when the work was completed in the field the result was a set of profiles which had two uses: first, to separate the central business from all other uses, a separation that had height as well as areal extent; and second, to set down a detailed picture of the hundred common land uses of these districts.

The third stage in the mapping technique was that of transferring the profile data to a set of land-use maps for each story. For convenience, and on the basis of observation that land use does not usually change above the second floor, all use above the second story was generalized on a single upper-story map. Thus, the culmination of the mapping techniques was the production of a set of three height-divided land-use maps.

With a detailed picture of the existing uses within the central part of the city based on a standard classification of these uses, we possessed a foundation on which to delimit the CBDs of a number of cities. However, a foundation does not become a structure without some plan, and there was no existing plan for delimiting the CBD in a number of cities. Experimentation with the many techniques which have been established by planners for setting off the CBD, and with those which we could visualize as offering a possible measure, led to the adoption of a dual yardstick. The two criteria may be called the Commercial-Space Index and the Commercial-Intensity Index. The use of two criteria seemed desirable to avoid including land that had a single tall building in central use in the midst of a large area of non-central use, or land that had a large area of central use but an extensive utilization of this area.

In applying these criteria it was necessary to decide what magnitude of area would be considered the basic unit. The two alternatives of any importance were the lot and the block. The lot offered a detailed and sensitive unit for delimitation, but it also suffered from the difficulties of not being a uniform and readily recognizable unit for individual workers, and of producing a very discontinuous CBD with many enclaves and exclaves. The block forms a unit that is not so accurate a base for the CBD, but one that is obvious to all workers in urban areas. It tends to result in the delimitation of a continuous district. For these reasons, considering fully the lack of sensitivity, we decided on the use of blocks as the unit for computing the two criteria.

The criteria themselves deserve some discussions. The Commercial-Space Index is essentially a measure of the difference in absolute development of central business. It is merely a reduction of the total central business space[6] within a block to an index number. This is done by dividing the central-business space by the ground area of the block. Thus, a block with 200,000 square feet of central business space and a ground area of 50,000 square feet would have a Commercial-Space Index of 4.00. The conversion to index figures facilitates the comparison of blocks of differing size.

The Commercial-Intensity Index might be called the measure of the relative importance of central business within the block. It is an index figure derived from the division of the central-business space by total space within the block. Thus, a block with 200,000 square feet of central business and a total space in all uses of 400,000 square feet would have a Commercial-Intensity Index of .50. This conversion facilitates comparison of blocks with different ground areas.

Experimentation and observation of the relationship of index values to obvious CBD blocks, to marginal CBD blocks, and to obviously non-CBD blocks resulted in the adoption of two crucial values of these indices. These crucial values separating CBD blocks from non-CBD blocks were 1.00 for the Commercial-Space Index and 0.50 for the Commercial-Intensity Index. All blocks with indices at or exceeding these values were considered to be part of the CBD whereas all blocks that failed to reach these crucial values in one or both the indices were excluded from the district.

[6] Space includes the ground area of the block with all floor-space in upper stories to give a cubic volume of the block. Thus space means all area that is available for any use.

ADJUSTMENTS OF THE PRELIMINARY DELIMITATION

The two delimiting criteria, when applied to cities on a block-unit basis, resulted in a generally satisfactory delimitation of CBDs. By satisfactory I mean both with regard to subjective cross-checking, an operation that is both necessary and we believe defensible when working in a humanistic rather than a physical scientific field; and with regard to the utility of the resulting delimited district. Obviously, in analysis it is necessary to find a measure of central-business concentration that, when applied, produces an analysis unit that conforms to the well-accepted and demonstrable peripheral gradation of CBDs outward from a center or peak point.[7] To use a CBD measure that resulted in a stringy or dissected district when such was not the observable characteristic of the district would be falling prey to the common beast of scholarship, allowing statistical objectivity to overcome utility and reason.

With four minor exceptions, the preliminary delimitation of the CBD through use of the two indices was satisfactory. To overcome these classes of problems it was necessary to adopt special rules covering the exceptions. Briefly stated these rules covered: (1) the exclusion of the few exclaves of central business near the CBD, (2) the inclusion of the few enclaves of non-CBD blocks, (3) the inclusion of most governmental land-use blocks, and (4) the inclusion of most blocks partially covered by governmental uses. I shall not take the time today to outline these rules, but rather shall satisfy the requirement of honesty by citing the fact that the delimitation technique used required those minor adjustments to produce a homogeneous and continuous CBD. As in the case of the delimiting indices, the rules were applied uniformly so the resulting districts in the cities studied were delimited on a consistent base.

THE CENTRAL BUSINESS DISTRICT OF LITTLE ROCK

The application of the mapping and delimitation techniques to Little Rock results in the establishment of the CBD shown on Figure 1. In general outline, this is the area bounded on the north by the Arkansas River; on the east by Scott Street; on the south by two-block sections of 8th Street, 7th Street, and 6th Street respectively between Scott and Broadway; and on the west by Broadway with one block deviations to either side thereof. The resulting district comprises 33.5 blocks with approximately 70 acres, or a volume of more than 52 million cubic feet. Within this area the mean value for the Commercial-Space Index is 1.73. This may be interpreted in another way as representing an average density of central business equal to a uniform covering of all ground area within the district to a height of one and three quarters stories. The mean value of the Commercial-Intensity Index for the whole CBD is .75, which again may be interpreted as representing three-quarters of all available space in central business.

When we consider these mean values as brought out in Little Rock, the distinction between the CBD of a city and its outlying business areas becomes more sharp than would be the case on a straight land-use basis. In the first place, the size of the district contrasts markedly with any other commercial area within the urban complex. No other business district would aggregate so much as 70 acres. Another sharp contrast is that in height. In general, commercial development outside the CBD is notably one story in character, and particularly so when the mean value of height is used. The commercial intensity shows far less contrast between central and outlying districts -- in both, the percentage of space in business is great. However, the combination of these three measures serves to distinguish central business districts from outlying districts.

In establishing the CBD of Little Rock, several unusual situations were encountered. Little Rock is one of only two cities (the other being Sacramento) out of the ten studied that contained an enclave of non-CBD blocks totally surrounded by CBD blocks. The two adjacent blocks that failed to satisfy the minimum criteria were included under the application of the special rule covering surrounded non-CBD blocks. Again Little Rock was exceptional in the matter of governmentally used blocks. The concentration of municipal and county buildings at the northwest of the district extended the boundary in a jog in that direction.

The district established through the indices and the application of the special rules, which is shown on Figure 1, is characteristic in shape for a city

[7] The peak point is the place within the CBD where the greatest focusing of pedestrian flow is found. Usually this point is surrounded by the highest land values in the city.

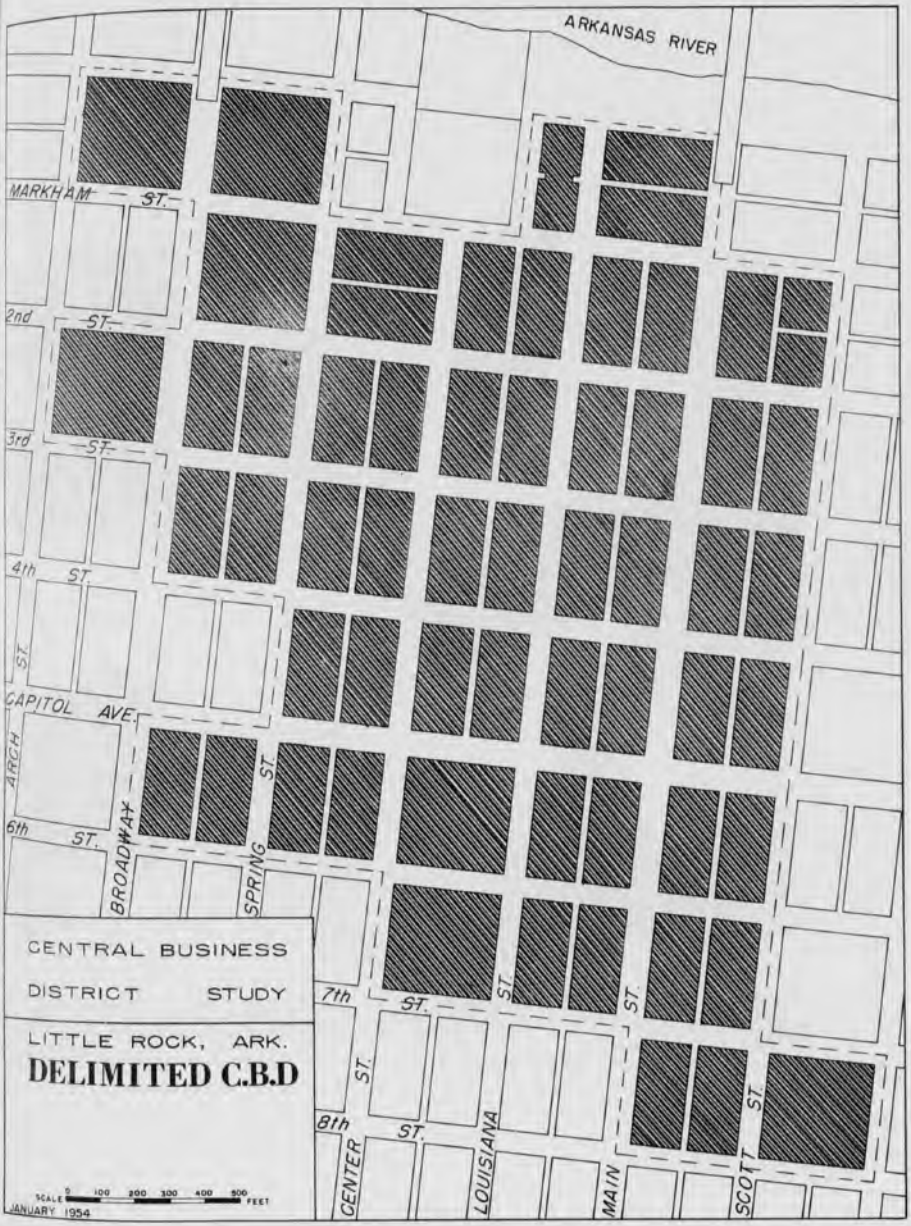

ARKANSAS RIVER
MARKHAM ST.
2nd ST.
3rd ST.
4th ST.
CAPITOL AVE.
6th ST.
ARCH ST.
BROADWAY
SPRING ST.
7th ST.
8th ST.
CENTER ST.
LOUISIANA ST.
MAIN ST.
SCOTT ST.
CENTRAL BUSINESS DISTRICT STUDY
LITTLE ROCK, ARK.
DELIMITED C.B.D
SCALE 0 100 200 300 400 500 FEET
JANUARY 1954

Figure 1

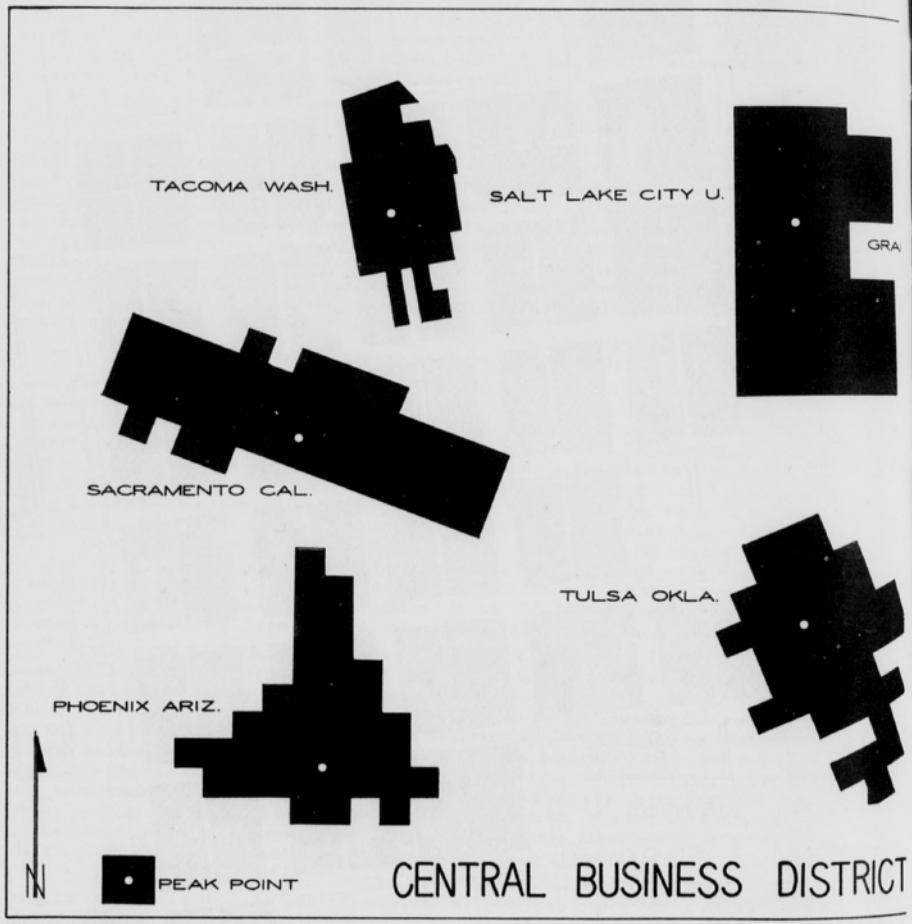
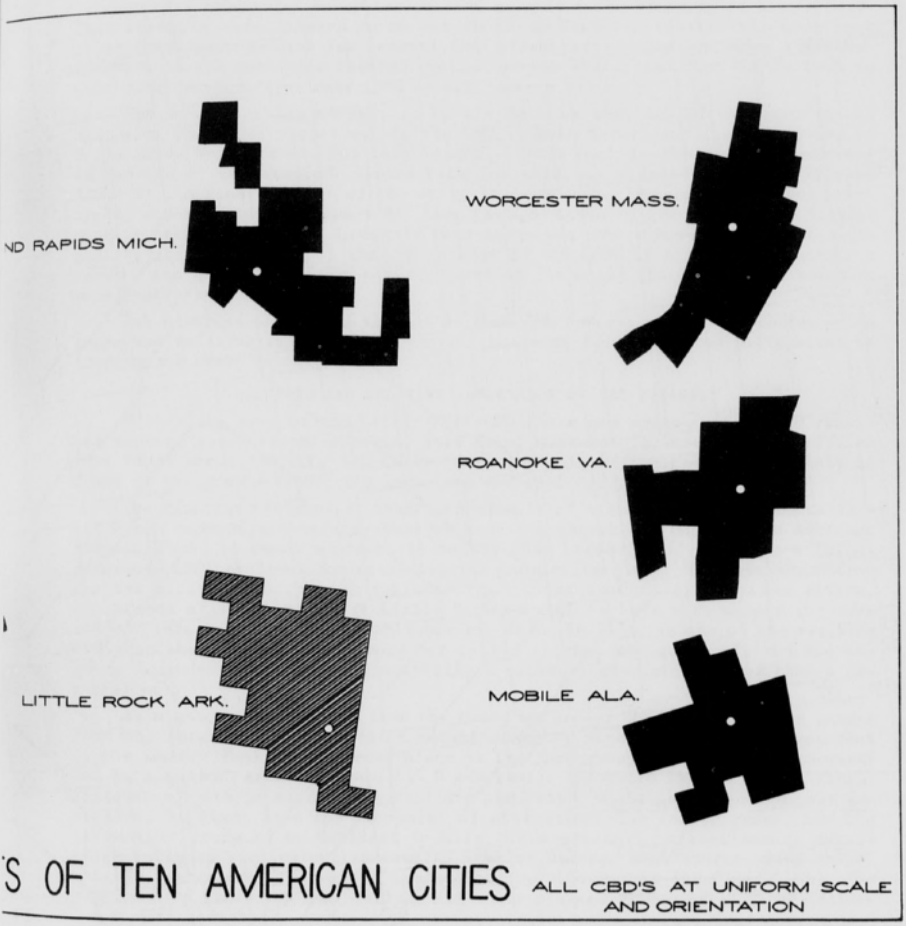

TACOMA WASH.
SALT LAKE CITY U.
GRA
SACRAMENTO CAL.
TULSA OKLA.
PHOENIX ARIZ.
N
PEAK POINT
CENTRAL BUSINESS DISTRICT

FIGURE TWO



'S OF TEN AMERICAN CITIES ALL CBD'S AT UNIFORM SCALE AND ORIENTATION

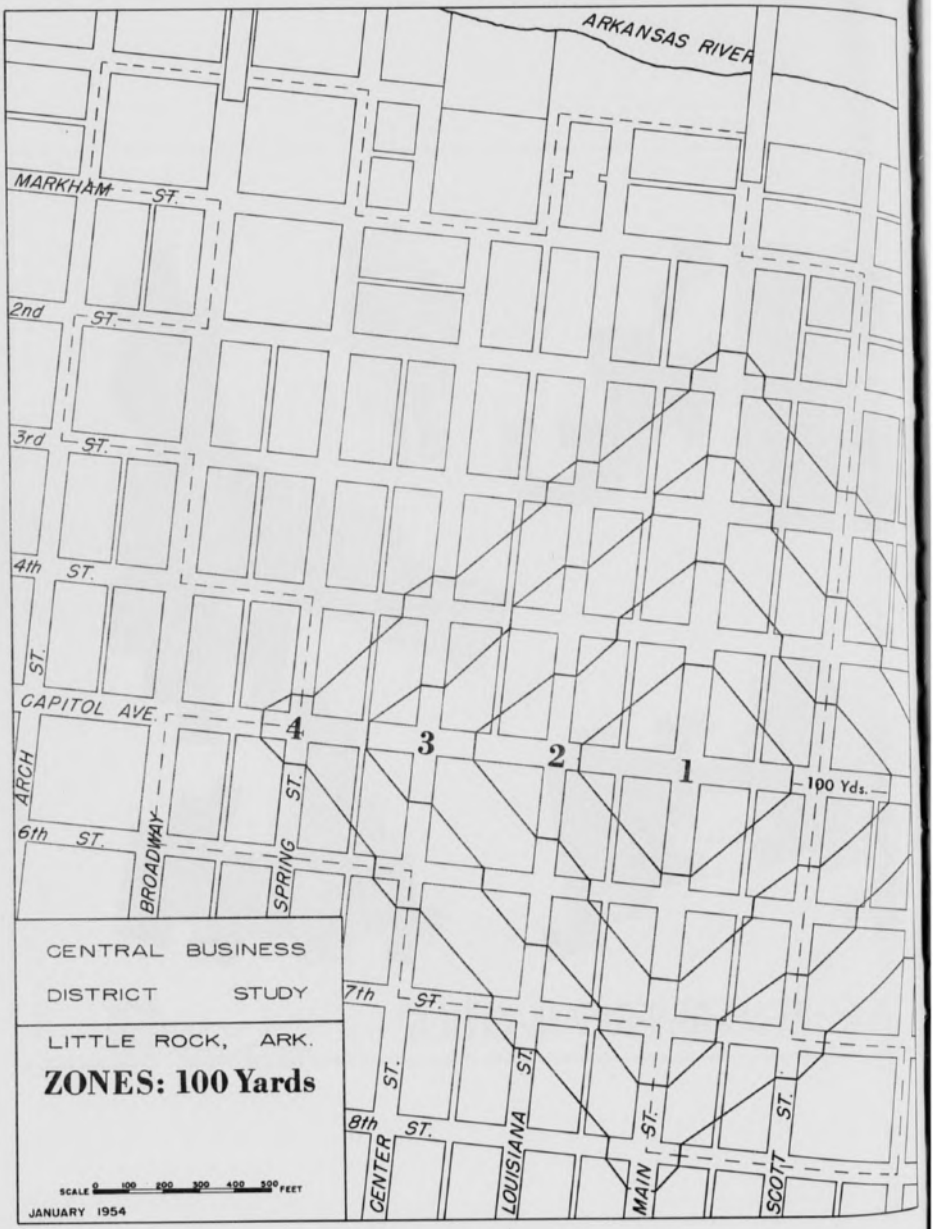

ARKANSAS RIVER
MARKHAM ST.
2nd ST.
3rd ST.
4th ST.
CAPITOL AVE.
6th ST.
7th ST.
8th ST.
ARCH ST.
BROADWAY
SPRING ST.
CENTER ST.
LOUISIANA ST.
MAIN ST.
SCOTT ST.
4
3
2
1
100 Yds.
CENTRAL BUSINESS DISTRICT STUDY
LITTLE ROCK, ARK.
ZONES: 100 Yards
SCALE 0 100 200 300 400 500 FEET
JANUARY 1954

Figure 3

with a regular grid pattern of streets. Such a street pattern tends to result in the formation of a CBD with a generally rectangular outline, having as a boundary a jogged or saw-tooth edge. This outline contrasts sharply with the shape in the older random-patterned cities of the Northeast. There the outline usually is one of a major street and its bordering blocks, as shown on Figure 2.

A final general comment on the CBD of Little Rock -- that of overall size -- deserves mention. Reference to Figure 2 will bring out the relative size of the local CBD. Although Little Rock is the second smallest of the cities studied (only Roanoke is smaller), it possesses a CBD larger in area than that of the largest city studied -- Worcester, a city exactly twice as large as Little Rock. This relative size appears to be due to three factors: that Little Rock is a major trade center quite far removed from other cities of major size, that Little Rock is the centrally located capital of the state; and that Little Rock is more a new western-type city than an old eastern city.

The most striking anomaly in Little Rock is the lack of symmetry in the district. The major street within the CBD is Main Street and the peak point of focus is on Main Street. For this reason, Little Rock is the most asymmetrical if the ten cities studied. Explanation for this one-sidedness may possibly be found in the reorientation of the city. It is a rather generally accepted principle, and our studies support it, that the CBD tends to grow toward the highest quality residential area. In Little Rock there has been a movement of this high-quality area from south of the CBD to west of the CBD. If this be the causative factor, the asymmetry of the district west of its major thoroughfare is somewhat more understandable.

Two detailed aspects of the Little Rock CBD deserve special attention -- the types and relative importance of central business found, and the differences in location of these business types.

THE TYPES AND RELATIVE IMPORTANCE OF CBD BUSINESS

Within the area of the Little Rock CBD there are approximately 400 retail and service trade establishments. This total does not include the many offices that roost about the CBD, and it excludes the only office use that commonly is found on the ground floor, the insurance and real estate office.

The district contains at least one example of all but six of the 65 different types of central business that we have encountered in mapping ten American cities. Thus, it seems appropriate to say that Little Rock possesses a fully-developed CBD, at least for cities in its population class. No doubt our metropolitan cities would furnish business types found in none of these ten cities, but places of similar size to Little Rick do seem to have very nearly the same range of retail and service establishments. This, in fact, is one of the striking features that can be noted among our cities -- that the goods offered and the goods demanded seem to have essentially a national character rather than a regional one.

As might be anticipated from the broad nature of the class, service trades form the largest single group of establishments, with 69 units (17.4 per cent of the total). Ranking in second place is the food group, including restaurants and bars, with 63 establishments (15.9 per cent). The third largest group, clothing stores, with 58 establishments (14.4 per cent), might be considered most important, at least from the viewpoint of attraction. The fourth group, and the only other group to be dominant in size, is a catchall, miscellaneous retail which includes such establishments as jewelry stores, book storee, pawn shops, etc. In Little Rock this group includes 51 establishments (12.9 per cent). The ranks behind these top four include all other classes of commerce in the following order: household, automotive, variety (department stores, drug stores, and Five and Ten's, parking, amusement, financial, transportation, and hotel land use. It should be emphasized that several of these broad classes, such as automotive or parking, are not characteristic of the CBD, and their lower position within the district does not reflect a lower position within the retail structure of the city as a whole. In fact, finding automotive or parking land use within the CBD serves to emphasize the wide importance of these uses.

Breaking these broad classes of commercial establishments down into the individual types of stores, we find that the most common type of business in the Little Rock CBD is that of selling prepared food. Restaurants of all sorts make

up nearly 9 per cent of all businesses. Other important businesses are personal-service establishments such as barber and beauty shops (7.8 per cent), women's clothing stores (5.8 per cent), jewelry stores (4.3 per cent), parking (4.0 per cent), cleaning, pressing and tailoring and shoe repairing (3.7 per cent), men's clothing (3.7 per cent), household appliance sales (3.5 per cent), sporting goods and hobby stores (3.5 per cent), and bars (3.5 per cent). Oddly enough, some of the enterprises that are commonly thought of as numerous in the CBD do not prove to be so. In this class would be banks, hotels, department stores, and book stores. They may well be considered as characteristic of the CBD because they are found almost exclusively there, but even in the center these types are not numerous.

In summarizing the business types found in the Little Rock CBD, it should be emphasized that the range of these types is normal for a city of the size class. Only ten business types comprise more than 3 per cent of the establishments, but these ten uses make up nearly half of all the businesses (47.6 per cent). On the other end of the scale there are 49 different types of commerce that make up the other half. Thus, Little Rock demonstrates strikingly the nature of CBDs, that of wide variety and choice in business establishments rather than a great number of all but a few types. This small, individual representation is understandable when we realize that any city of 100,000 does not need a great number of hotels, newspapers, banks, or department stores, but it would not be much of a trade center if it did not have at least one of each of these types.

THE SIZE OF BUSINESS ESTABLISHMENTS IN THE LITTLE ROCK CBD

Although it would be desirable to evaluate land uses and individual establishments on the basis of their sales or rent, such data are seldom available. A possible, allbeit rough, alternative is that of size of the establishment in area rather than in sales. It is obvious that the space given over to an enterprise is a measure of its economic stature. In Little Rock it has been possible to compute the mean size of all units of land use, and by comparing the various uses to this mean some ranking of individual importance is obtained.

The mean size for the land-use units in Little Rock's CBD is 6,400 square feet. This figure is as high as it is mainly because some land-use units are very large. The use with the greatest mean is that of hotels, which average 12.7 times the overall mean. Other uses that average well above the mean are department stores (6.8 times), fraternal organizations (3.9 times), public utility offices (3.3 times), banks (2.4 times), and furniture stores (2.3). In general, most governmental, organizational, and theatrical units are above the mean. On the other end of the scale, most of the miscellaneous retail types, food types, clothing types, and service trades are below the mean.

The retail types which characterize the heart of the district tend to be the larger representatives of their class. The smaller retail establishments are more generally located toward the margin of the district. Office buildings, as distinguished from individual offices, form large units within the CBD averaging 3.3 times the mean for all uses.

It is rather interesting to find that the uses which epitomize urbanism -- hotels, department stores, banks, furniture stores, and office buildings -- do bulk large in the CBD. Only clothing establishments, among business types important in our minds for large cities, falls below the mean. The many types of commerce that fill out the picture so as to make the trade center important to diverse customers tend to be small in size.

THE DIFFERENCES IN LOCATION WITHIN THE CBD OF THE BUSINESS TYPES

For the geographer, the physical structure of the CBD, the siting of the various land uses within the district, and the dynamic aspects of the urban morphology that are found in the CBD, hold more interest than the inventory of classes of commerce outlined above. The physical structure of the CBD is most basically one of annular gradation outward from a point. This point is that place within the CBD where the greatest degree of centrality or focus is to be found. Without going into the allied fields of land economics or merchandising, it should be apparent that commerce depends upon the greatest possible access to customers, and this access is different in the several parts of the central area.

Thus, the structure of the CBD tends to develop in accordance with two principles of land economics, a differential exists in the need for centrality among the various business types, and a differential also characterizes these businesses with regard to their ability to purchase centrality.

Some businesses such as cigar stores, drug stores, or other "impulse-sales" stores cannot survive without extreme centrality, and thus the cost of a peak-point site is figured in the overhead. Other stores such as department stores, movie theatres, or large clothing stores may desire high centrality but cannot obtain the amount of space required within a practicable overhead at the very peak point of centrality. Still other stores such as furniture stores, stores requiring customer parking, or automotive sales establishments require so much space that they must settle economically for the marginal location. In summary it may be said that the price system of centrality operates to create the annular structure of the CBD around the peak point of focus. This peak point is generally characterized by the highest volume of pedestrial flow rather than vehicular flow, for the obvious reason that motorists must become pedestrians to become shoppers.

In Little Rock the peak point of focus for pedestrians is found at the intersection of Main Street and Capitol Avenue. By constructing concentric bands based on walking distance along radiating and parallel streets, it is possible to analyze the annular structure of the city's CBD. Figure 3 shows such bands based on a unit of 100 yards' walking distance outward from the peak point. Inventorying the central-business types within these successive bands, we obtain a picture of change in use, or horizontal zonation.

The innermost band, that is, an area generally 200 yards across, centered at the peak point, is characterized by two uses -- the sale of clothing and the sale of drugs. Women's clothing stores make up the largest group, followed by general clothing stores and clothing specialty stores.

The second band, that between 100 and 200 yards from the intersection of Capitol and Main, is dominated by what we class as variety stores. Here the largest single use is in department stores, reflecting the need of these stores for centrality but their inability to secure sufficient space within the first band. Five-and-Ten-Cent stores, shoe stores, appliance-sales establishments, and office-supply sales are other uses that are found to have their greatest concentration in this zone.

The third zone in Little Rock, between 200 and 300 yards from the peak point, corresponds rather well to the general pattern in American cities by serving as the financial district. Here the banks, office buildings, brokers, and personal-service establishments show their greatest concentration. This financial zone also has a pattern that is characteristic of our cities -- it is the site of the largest number of men's clothing stores. It seems that the tie between financial-office uses and men's clothing is one of symbiosis. The only other significant use of this zone is that of furniture stores, which is an atypical use and probably results from the tendency of furniture stores in Little Rock to locate in a separate retail center away from the CBD. Thus the few stores in the CBD do not establish a true pattern.

The final zone for which it is possible to inventory land use within the CBD, that from 300 to 400 yards from the peak point, is by far the largest because of the fact that these are concentric and thus increasingly larger zones. Here the most striking feature is the concentration of food uses. Restaurants, bars, liquor stores, and super-markets have their greatest concentration within the CBD. The development of bars within this zone ties in with several other uses that concentrate here, pawn shops, movies, jewelry stores, pool parlors, and shooting galleries, to make of this peripheral zone the transient and lowest-grade shopping area. The low-grade character is further emphasized by the clustering here of "army and navy stores." This fourth zone of Little Rock follows the typical pattern by serving as the site of the greatest concentrstion of hotels and automotive uses. Lower land value is emphasized by the concentration in the fourth zone of the parking lots that are within the CBD.

Analysis of the concentric zones in Little Rock brings out rather well the horizontal zonation of land uses representing the final result of the price system of centrality. It should be emphasized that in general the peak point of a

city tends to shift over the years. Little Rock shows the shift that characterizes ports or river towns, a shift away from the water and at a right angle to it. The local CBD had an earlier center farther north on Main Street, first at the intersection of Markham, and then progressively farther south until the present peak point at Fifth was reached. It is common to find that the wake of the center is taken over by low-grade commerce and establishments catering to transients. Such is the case here, with two of the three bus stations, most of the pawn shops, and the associated food and amusement establishments. In a similar manner, the advance line of the highest-value part of the district tends to develop into uses that require prestige but cannot pay for high centrality. Specialty shops, office buildings, and professional offices take up the vanguard. In Little Rock, where the pull on the peak point is generally south and west, these vanguard uses are found predominantly in these two directions.

A second aspect of the structure of the central area is that of vertical zonation. This differentiation with height is a peculiar characteristic of the CBD -- no other retail area shows this "altitudinal zonation" to any marked degree. The vertical change in use can be studied in Little Rock by considering the successive layers, the individual floors. In broad outline, the space within the CBD is predominantly ground floor with 45.4 per cent (23,800,000 cubic feet) so located. The second story accounts for nearly one-quarter (24.0 per cent, 12,600,000 cubic feet) and all upper stories supply the remaining three-tenths (30.4 per cent, 16,000,000 cubic feet) of this space within the CBD.

On a closer look at the space division according to height, it appears that the uses which characterize the ground floor are many, but consist predominantly of retailing, with some admixture of service trades. Once above the ground floor, however, the number of uses drops sharply (41) as opposed to 75 on the ground floor), a reduction that is even more marked in the upper stories (27 uses). In addition, the predominance in use changes from retailing to vacancy, residence, offices, and fraternal organizations. Thirteen uses, only one of which (department stores), is retail, make up 60 per cent of the space. Of these 13 the significant uses, in order of rank, are: vacant space (10.4 per cent); offices (9.0 per cent); department stores (8.6 per cent); hotels (6.4 per cent); rooming houses (6.0 per cent); and fraternal uses (5.3 per cent); or a total of 45.7 per cent of the space. The upper stories display still less variety in use with hotels (25.6 per cent) and offices (25.1 per cent) comprising half the use. Other significant uses of upper story space are department stores (12.6 per cent), vacant space (8.3 per cent), fraternal organizations (3.3 per cent), and rooming houses (2.4 per cent) or a total for these six uses of 77.3 per cent.

In summary, it can be shown in Little Rock that there is a marked change with height. The first floor is the *domaine par excellence* of retailing, but the upper stories are either a continuation of ground floor uses, as in the case of department stores or hotels; or else are offices, rooming housing, organizations, and vacant space.

The presence of vacancy above the street deserves some attention. Our studies have shown that there are three types of vacancy -- upper-story vacancy, peripheral vacancy, and core vacancy. It is our belief that these types serve as a rough index to the health of the CBD. The most serious type in relation to this health is core vacancy on the ground floor. Little Rock has little of this. However, the innermost zone does show the greatest amount of vacancy (36.7 per cent of the total vacancy and 11.5 per cent of the zone space) caused largely by the poor use of upper stories. Again the outermost zone shows a considerable amount of vacancy (33.2 per cent of the total vacancy and 6.8 per cent of the zone space). Thus, it seems that Little Rock's CBD is not as healthy as it might be, being characterized by upper-story vacancy, the least serious sort, and peripheral vacancy, the intermediate stage. The combination of these two types of vacancy indicates that the little Rock CBD suffers either from decay of past use or competition from outside business areas. The combination of these two probably is the case.

A comparison of the horizontal and vertical zonation in Little Rock presents both similarities and contrasts. The cost of space seems to account for the fact that certain uses, personal service, offices, fraternal, and residence, seek either upper story sites in the heart of the district or ground floor sites at the edge. Contrary to common thought, another similarity is that of unit size.

The units become progressively smaller with movement outward from the center or upward at the center. The largest units are those on the ground floor at or very near the peak point. Still another similarity is the entrance of greater amounts of non-retail use with this movement outward or upward. Thus, in many ways it may be said that the CBD is rather like a geologist's laccolith, its gradation of uses takes place both horizontally and vertically.

The contrasts between horizontal and vertical zonation show up most strongly in the matter of retailing. Those enterprises that cannot support the site charges for high centrality tend to move outward but not upward. It appears that the cause for this may lie in the fact that retail stores wish to be obvious to the passers-by even if there are fewer of them than there might be at the center. Offices, on the other hand, appear to need centrality more than obtrusiveness, so they are located in upper stories close to the center. It should be pointed out that offices in all the cities studied are concentrated not at the center itself but away from it a short distance. This may well stem from the fact that the ground floor uses associated with the office district, banks, brokers, and other financial establishments, cannot afford the extreme cost of street-level sites at peak point. Another factor that may contribute to the concentration of offices away from the center is that office buildings form the largest single buildings within the CBD, and thus a few such structures provide a major part of the office space. Their type of centrality may be thought of as existing within a single building or a few adjacent buildings rather than in the CBD as a whole.

Another sharp contrast in the vertical and horizontal zonation shows up in the matter of business types. The outer parts of the CBD have a wider variety of uses, both business and non-business, than are found at the center. The upper stories in all zones, however, show a marked decrease in the number of uses.

CONCLUSIONS

The application to Little Rock of a standard method of delimitation worked out in nine cities in other parts of the country has afforded an opportunity to begin the study of the retail structure of Arkansas trade centers. Much more might be done in this field that would yield interesting and valuable information. There can be no doubt, after the appraisal of Little Rock, that that city is a fully developed trade center with the structure and diversity of commerce that characterize such centers. This is to be expected, and no resident would question either Little Rock's dominance in the commerce of the State of Arkansas nor its status as a fine example of the regional trade center.

Much more might be said about Little Rock, particularly with regard to the details of the business uses at the edge of the CBD -- the spread outward from this district in both annular and radial patterns, the influence of the rigid skeleton of past development on the CBD, and the symbiosis that exists among the various functions and business types in the district. However, time is limited. I should like to conclude by suggesting that the geographers of Arkansas think along the lines of detailing the picture of the commercial structure of our state. We may be certain that Little Rock is the focal point and major element in this structure, and do we know much more about the structure itself.

How well developed are subsidiary centers such as Fort Smith, Jonesboro, Fayetteville, etc., and what part do they play in the overall pattern of trade within the state? An integral part of any such broad study of trade centers should be a study of their dependencies, trade areas. I hope in the future to suggest ways of attacking this correlative. In addition, much remains to be done in Little Rock. The CBD is only one of the city's retail areas. The others deserve consideration. Still more, we might consider what is the "shadow effect" of Little Rock on North Little Rock, Benton, Pine Bluff, or Conway.