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FOOD DISTRIBUTION FACILITIES FOR SALT LAKE CITY, UTAH

Marketing Research Report No. 829

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Cooperative Extension Service, Utah State University.

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The study was conducted under the general supervision of William C. Crow, director, Transportation and Facilities Research Division, Agricultural Research Service. A. B. Lowstuter, architect, prepared and designed the architectural features of the facilities. James N. Morris, Jr., industrial engineer, conducted studies of operations of a sample of firms that were used to determine estimated cost of operations.

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Food Distribution Facilities for Salt Lake City, Utah

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SUMMARY

This report was written to assist Salt Lake City food firms and farmers in planning new facilities. Several firms are located in downtown Salt Lake City on land that could be used by businesses able to pay higher land rent. In order for many of these firms to benefit by modern handling and operational procedures, it is imperative they move from their present facilities.

Sixty-six independent food firms were included in a survey conducted by the U.S. Department of Agriculture (USDA), and certain information was ascertained from other food firms. The 66 firms handled an estimated 291,261 tons of food products in 1966. Selected costs for handling these products were \$2,846,425, or an average of \$9.77 per ton. Other costs were not included because they were not subject to change or could not be accurately estimated in old or new facilities. Farmers using a farmers' market in Salt Lake City were also included.

Plans developed for a new food distribution center for Salt Lake City call for construction of—

three multiple-occupancy buildings to house 19 fresh fruit and vegetable firms and four other food firms;

three single-occupancy buildings to house two fresh fruit and vegetable firms and one other food firm;

one farmers' market shed with 40 stalls; and
one office building to house the market management, brokers, and other market-related functions.

It is recommended that space be provided for allied industry that would find it advantageous to locate near food firms.

As planned, the multiple-occupancy buildings, designed for efficient food handling, have platforms running the length of the buildings at both front and rear. The front platforms are designed so they will be at truckbed height, and the rear

platform will be at railcar level. The single-occupancy buildings will be of a size and design to fit in with the overall master plan. The farmers' market shed will consist of stalls 10 feet wide and 12 feet deep and will have a 6-foot aisle extending lengthwise through the center of the building. Paved streets of sufficient width to minimize traffic congestion are planned throughout the development. Provision is also made for adequate parking and expansion areas to permit additions to facilities as needed. Land requirements for the proposed development are 28 acres for the market facilities and 17 acres for allied industry.

Five sites for the new food distribution center were evaluated and are discussed in the report. The cost of land for the new center is estimated to be \$280,000 for one site, which is located in the city and zoned industrial. Construction costs for buildings and other facilities in the center, and for associated costs, are \$2,575,312. The total cost of the proposed center is \$2,855,312.

Annual rentals are estimated at \$2 per square foot for the proposed multiple-occupancy buildings, \$2.14 per square foot for the single-occupancy buildings, and \$3.85 per square foot for the office building. Income from the farmers' market should be \$9,050 per year. Costs of land for allied industry would require tax payments and amortization. These costs would be borne by the developer until the area is occupied by suitable tenants.

Construction of a food distribution center would benefit wholesalers, employees, buyers, consumers, and the City of Salt Lake. In facilities designed especially for food handling, wholesalers could expect reduced operating expenses and employees would have better working conditions. Buyers should be able to obtain better quality merchandise and would enjoy other benefits, such as adequate parking and wider streets. Local producers would have improved farmers' market facilities for their produce, and consumers could expect better quality merchandise. Finally, local government agencies would find it easier to enforce fire, health, and sanitary regulations in the new center.

¹ Mr. Boles transferred to the USDA Economic Research Service in August, 1968; Mr. Blackmore retired in 1968.

BACKGROUND

The food industry in the United States is undergoing various changes. One of the significant changes is the trend for food firms to move to modern facilities that are planned for efficient operating methods. However, many firms are unable or unwilling to make such a move. This situation now faces some of the firms in Salt Lake City.

A number of food firms are now located in downtown Salt Lake City but could operate more efficiently in another area. These firms are in an area designated by the Downtown Planning Association, Inc., a local civic organization, as part of "Downtown Salt Lake City's Second Century Plan."

Leading members of the food industry in Salt Lake City realized that to operate efficiently, many of these firms should relocate. These businessmen and various local and State government officials requested the USDA to make a study of the food facility situation in Salt Lake City. The study was begun in February 1967.

The study has the following objectives:

- To analyze, insofar as possible, the food-marketing facilities in the Salt Lake City area.
- To estimate the major costs to food firms of handling food products in the facilities.
- To develop plans and designs for new facilities

and to consider possible sites to meet the present and future needs of food firms.

- To estimate costs of facility construction, land, possible operating expenses, and rental requirements.
- To estimate possible savings and other benefits from improved food-marketing facilities.

The report outlines plans for new and improved facilities that could be built to replace those now obsolete.

Data in this report were obtained from the Salt Lake City area Chamber of Commerce, Growers' Market Company, Carpenter and Stringham, architects, the Union Pacific Railroad, Pro-Utah, and Downtown Planning Association, Inc. Food firms were interviewed and operations of a sample of the firms were studied. Officials of the city, State, and Federal governments supplied other data and statistics.

Data relating to volume of commodities and handling and other costs are for the calendar year 1966. Other data in this report are also for 1966 unless otherwise designated.

Representatives of the Utah State University Extension Service interviewed firms included in this study that handled fish and seafood products.

Most figures are rounded in the text; exact figures from computation appear in the tables.

FOOD MARKETING IN SALT LAKE CITY

Salt Lake City, located in the heart of the intermountain region, is a center of manufacturing, mining, and commerce. The population of Salt Lake County was 383,035 in 1960.² In 1965 the population was 445,000, an increase of 16.2 percent.³

Salt Lake City is served by a number of main highways. Among these are U.S. 40, 50, 89, and 91. U.S. 30 is a short distance away and easy access is provided by Interstate 15. Much of the area's interstate system is completed, including parts of Interstate 15 and 80. The city has a very good network of wide and well-laid-out streets. Movement to any part of the city and surrounding area may be made with relative ease.

The area is served by three major railroads: the Denver and Rio Grande Railroad, the Union

Pacific Railroad, and the Western Pacific Railroad. Salt Lake City also has a modern municipal airport, and major and feeder airlines provide good air service.

Food firms operating in Salt Lake City serve a large area. The only city with comparable food-marketing activity within several hundred miles is Denver, Colo. Salt Lake City food firms serve Utah, and parts of Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Wyoming, and other western States.

For purposes of this report, the Salt Lake area is divided into three general districts that are pertinent to the locations of the food firms. These are "the central business district," "other Salt Lake City," and "outside the city." "The central business district" is bounded on the north by South Temple Street, on the east by Main Street, on the south by Ninth South Street, and on the west by Fifth West Street. "Other Salt Lake City" includes the rest of the city. "Outside the city" is the rest of the Salt Lake area, extending from Centerville on the north, the Wasatch mountains on the east, Draper on the south, and Magna on the west (see fig. 1).

² U.S. BUREAU OF THE CENSUS. U.S. CENSUS OF POPULATION: 1960. GENERAL SOCIAL AND ECONOMIC CHARACTERISTICS, UTAH. PC (1) 46C, 144 pp. Washington, D.C. 1961.

³ BUREAU OF ECONOMIC AND BUSINESS RESEARCH, UNIVERSITY OF UTAH (compiler). ECONOMIC INDICATORS OF METROPOLITAN SALT LAKE CITY AND UTAH. Salt Lake City Chamber of Commerce. 10 pp. May 1966.

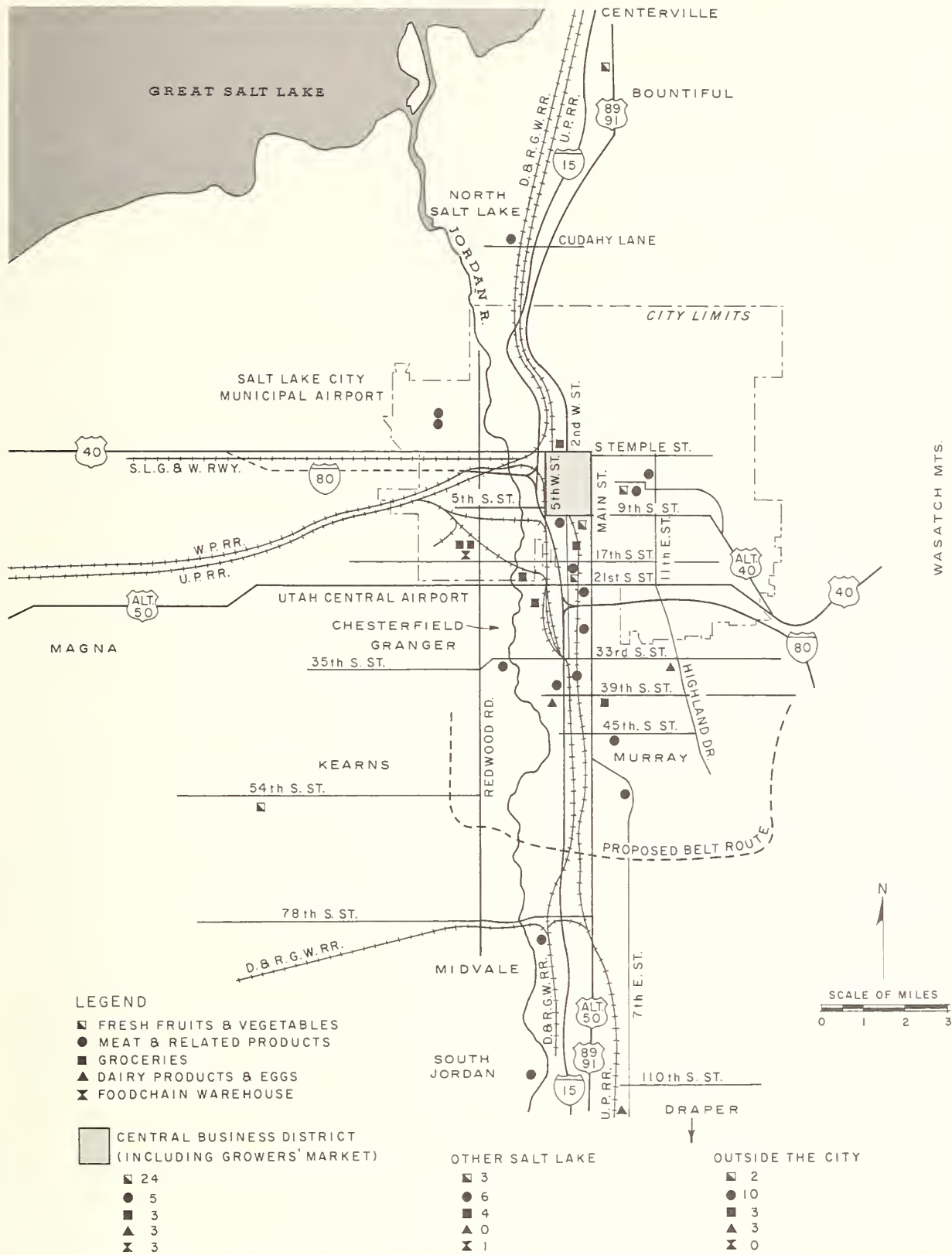


FIGURE 1.—Location of 66 food firms and four food chain warehouses in the Salt Lake area.

Food Firms

Sixty-six independent food firms are included in this study. All these firms are classified in one or another of the following groups: (1) Fresh fruits and vegetables, (2) meat and related products, (3) groceries, and (4) dairy products and eggs. In addition, four food chains having complete or partial warehousing operations in Salt Lake City are included but are classified separately from the independent food firms. Firms that conducted minor wholesaling activities but were primarily retailers and firms that operated as brokers are not included. Several slaughterers are also included; however, they are firms that performed a major wholesaling function as part of their operation. Firms handling fish and seafood are classified as meat and related products firms.

Thirty-five independent food firms and three food chains have operations in the central business district.

Most of the independent fresh fruit and vegetable firms have their principal operations in facilities owned by the Growers' Market Company. One food chain has its produce operations there. In further references, facilities owned by the Growers' Market Company will be called "the market."

The Growers' Market Company was organized to provide facilities and an orderly marketing system for Salt Lake area farmers to use in selling their fresh fruits and vegetables. An extensive building program in 1929 provided farmers' sheds, an office building, and a wholesale produce building. Since that time other buildings and additions have been constructed to house food firms.

The number of farmers engaged in the production of fresh fruits and vegetables in the Salt Lake area has declined considerably over the last several years. Furthermore, some growers in the area are marketing their products through other channels. These and other factors have resulted in a decreased use of the market.

Thirteen of the independent food firms and one foodchain included in the survey were located in "other Salt Lake City." One chain organization with facilities in the central business district also had facilities located in other Salt Lake City. There was a small concentration of firms in the area of 17th South Street and Redwood Road.

Eighteen of the independent food firms were located outside the city. One chain located in the central business district had other facilities outside the city.

The 66 independent firms and the four food chains included in this study handled an estimated 713,100 tons of direct receipts in 1966 (table 1). No further reference will be made to food chains because they have modern facilities or have definite plans to relocate in the near future.

Fresh Fruits and Vegetables

Twenty-nine fresh fruit and vegetable firms are included in this study. These firms handled an estimated 179,300 tons of direct receipts in 1966. Approximately 93 percent of this volume was received by truck. Most of the remaining volume was received by rail. Air receipts were relatively minor.

The 24 fresh fruit and vegetable firms in the central business district handled an estimated 107,600 tons of direct receipts. Three firms in other Salt Lake City and two firms outside the city handled an estimated 71,700 tons of direct receipts.

Six firms renting space in the market are classified as trucker-jobbers. The primary activity of the trucker-jobbers was to take trailer lots of a general line of produce to various points in the intermountain area. Their usual mode of operation was to buy products during 2 or 3 market days and to make one or two trips each week to their distribution area. These firms buy approximately 61 percent of their volume from other Salt Lake City food firms. About 14 other trucker-jobbers bought regularly from the market; however, none of these firms rented space and are not included in the study.

TABLE 1.—*Estimated volume and percentage of food shipped by truck and by rail to five types of food firms in Salt Lake City, 1966*

Type of food firm	Volume of food received			Percentage of food received		
	Truck	Rail	Total	Truck	Rail	Total
Independent food firms:						
Fresh fruits and vegetables.....	167, 524	11, 734	179, 258	93. 5	6. 5	100
Meat and related products.....	56, 252	2, 737	58, 989	95. 4	4. 6	100
Groceries.....	28, 711	4, 725	33, 436	85. 9	14. 1	100
Dairy products and eggs.....	19, 313	265	19, 578	98. 6	1. 4	100
Total.....	271, 800	19, 461	291, 261	93. 3	6. 7	100
Food chain organizations.....	370, 183	51, 658	421, 841	87. 8	12. 2	100
Grand total.....	641, 983	71, 119	713, 102	90. 0	10. 0	100

In addition to the food firms, a number of Salt Lake area farmers use the market to sell their products during the growing season.

Meat and Related Products

Twenty-one firms were classified as meat and related product handlers. These firms handled an estimated 59,000 tons of direct receipts in 1966. Approximately 56,300 tons were received by truck from suppliers outside the area and from such local sources as livestock auctions. The remaining 2,700 tons were received by rail.

Five of these firms were located in the central business district and handled 17,400 tons of direct receipts. Six were located in other Salt Lake City and handled 9,000 tons. Ten were located outside the city and handled 32,600 tons. Firms outside the city are located throughout the area, from North Salt Lake to South Jordan.

Eight of the meat and related products firms were engaged in slaughtering. Most of the other firms did some processing, such as boning, breaking, sausage manufacturing, and consumer packaging.

Groceries

Ten grocery firms were included in this study. An estimated 33,400 tons of direct receipts were handled by these firms in 1966. About 86 percent of this volume was received by truck and the remaining 14 percent by rail.

Three grocery firms were located in the central business district and handled an estimated 13,400 tons of direct receipts. Four firms were in other Salt Lake City and three were outside the city: these seven firms handled 20,000 tons of direct receipts.

Several of the grocery firms conducted a cash-and-carry business. Some were institutional suppliers and others handled specialty products. Some of the firms did processing and packaging.

Most of the grocery volume sold in the Salt Lake area in 1966 was handled by two large firms. These firms had modern facilities and operations, therefore, they were not included in the detailed analysis of this report.

Dairy Products and Eggs

Six firms were classified as dairy products and egg handlers. In 1966, these firms moved an estimated 19,600 tons of products through their facilities. Truck receipts were about 88 percent and rail receipts 12 percent of the total products handled.

Three firms were located in the central business district and handled 10,300 tons of products. The other three firms were located outside the city and handled 9,300 tons of products.

Four dairy product and egg firms did processing, such as egg grading. Two firms were creameries and processed milk. All firms also sold products to retailers.

Present Facilities

A wide variety of facilities were being used by Salt Lake City food firms. Many firms were operating in modern one-story warehouses that were built specifically for the handling of food. Others, however, operated in old and inadequate buildings. Many of these buildings were multistory and, in some cases, were built for other uses.

The 66 independent food firms included in this study had approximately 748,500 square feet of floor space, or an average of 11,300 square feet each. About 78 percent of this space was at the first-floor level. (Single-level operations are widely used in the Salt Lake area.) Approximately 273,700 square feet of space was refrigerated and 41,400 square feet was devoted to offices. The remaining 433,400 square feet of space was used for platforms, sales areas, processing rooms, general storage, and various other functions. See table 2 for other space data and for tenure status regarding the 66 firms.

Fresh Fruits and Vegetables

The market.—Twenty-one fresh fruit and vegetable firms had their main operation in the Growers' Market in the central business district. Three warehouses housed the fresh fruit and vegetable firms, two sheds the farmers' market, and an office building provided space for the market manage-

TABLE 2.—Tenure status and use of space by 66 independent food firms in Salt Lake City, 1966

Type of food firm	Tenure status			Space occupied			Space use			
	Rent	Own	Total	First floor	Other floors	Total	Average space used per food firm	Refrigerated	Office	Other
	No.	No.	No.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.
Fresh fruits and vegetables	23	6	29	163, 740	55, 000	218, 740	7, 543	53, 695	14, 616	150, 429
Meat and related products	4	17	21	244, 175	68, 750	312, 925	14, 901	199, 994	15, 290	97, 641
Groceries	4	6	10	142, 500	27, 780	170, 280	17, 028	12, 500	8, 000	149, 780
Dairy products and eggs	1	5	6	31, 800	14, 750	46, 550	7, 758	7, 520	3, 488	35, 542
Total	32	34	66	582, 215	166, 280	748, 495	11, 341	273, 709	41, 394	433, 392

ment, brokers, a restaurant, and other tenants (fig. 2).

The three warehouses were built for the use of fresh fruit and vegetable firms; however, time and many resulting changes have made most of these facilities obsolete. The office building, considered adequate, still leaves much to be desired when compared with a modern building. Figure 3 illustrates the buildings used in the market.

The two farmers' sheds are each 20 feet wide

and approximately 555 and 575 feet long. These sheds, including the superstructures, are constructed of reinforced concrete. The platforms are about 18 inches high—not nearly high enough for the trucks that most farmers use to bring their products to the market (fig. 4).

Warehouse No. 1 was occupied by five fresh fruit and vegetable firms. In addition, the produce operation for a food chain was housed in this building.

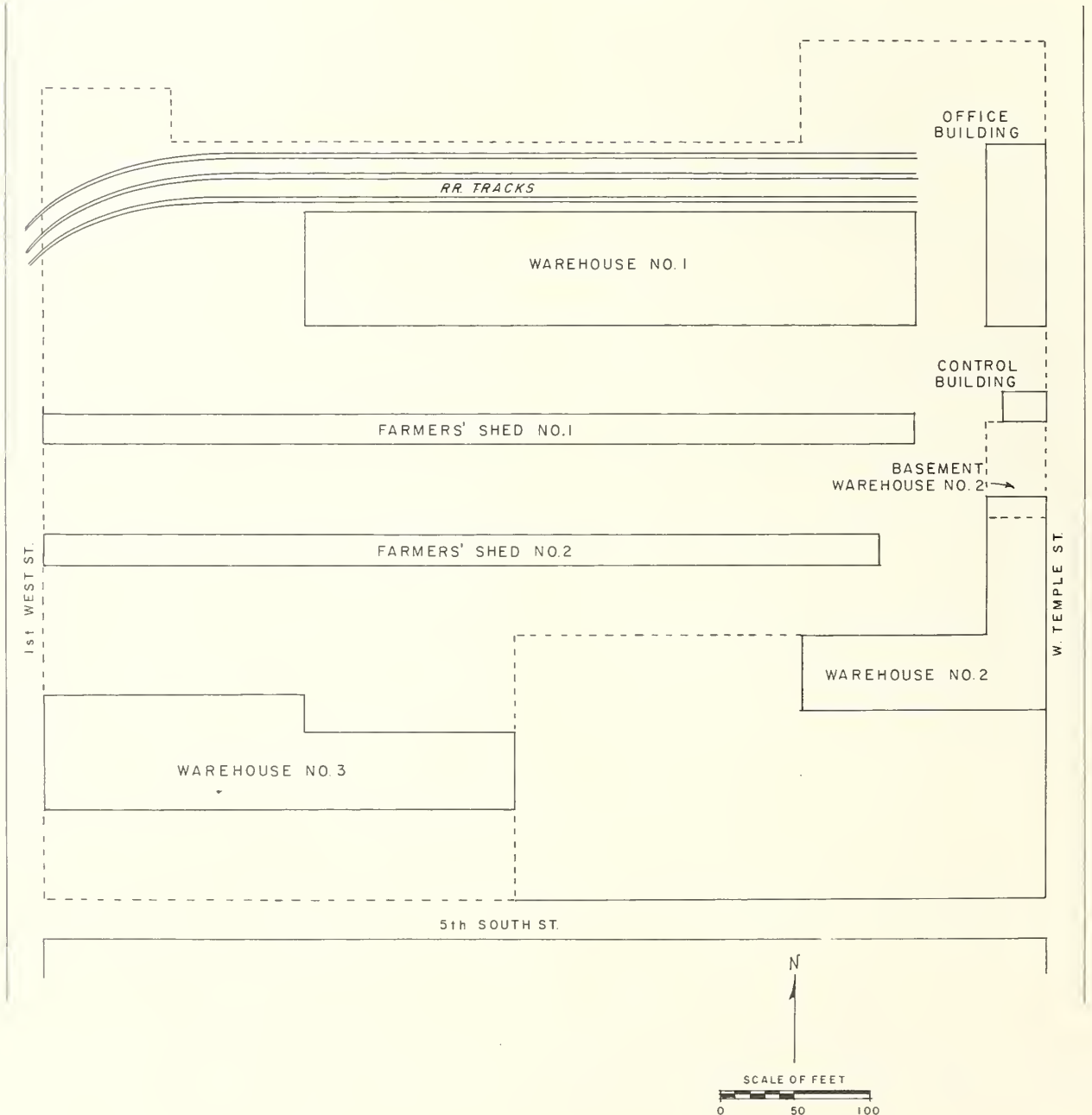


FIGURE 2.—Facility layout of the Growers' Market.



FIGURE 3.—Buildings in the Growers' Market:
 (A) Warehouse No. 1..... BN-33218
 (B) Warehouse No. 2..... BN-33219
 (C) Warehouse No. 3..... BN-33222
 (D) Office building..... BN-33227



FIGURE 4.—Farmers' shed in the Growers' Market.

BN-33223

The warehouse is 400 feet long and 75 feet wide. It is divided into 20 sections. Each section is 20 feet wide, with 60 feet of depth enclosed at first-floor level. The platforms are 45 inches high and are 9 feet wide at the front and 6 feet wide at the rear. Each section has a full basement that extends under both the front and rear platforms. Ceiling heights are approximately 10 feet on each floor. Sixteen of the sections have two upper floors, both 20 feet wide and 60 feet deep, and each of the other four sections have one upper floor. Each of the 16 sections has 5,400 square feet of floor space, including the platforms, and each of the four sections have 4,200 square feet of floor space. Total space in the building is 103,200 square feet.⁴

The number of sections occupied by food firms ranged from one to nine, according to each firm's requirements. Each firm had the use of one or more elevators and some firms had conveyors. This building offered 32,600 square feet of refrigerated space and 2,800 square feet of office space.

The area between the rear of the building and the property-line fence is only about 45 feet wide. Large trailer-trucks are often unloaded here and are parked at right angle to the platform. When a truck is being unloaded, the area is blocked. This area has three sets of railroad tracks (fig. 5).

Warehouse No. 1 faces one of the farmers' sheds approximately 60 feet away. Large trailer-trucks are not usually able to load or unload in front of the warehouse during regular market hours (fig. 6).

⁴ Space occupied by the food chain is not included in table 2.



BN-33221

FIGURE 5.—Trailer-truck parked at the rear of warehouse No. 1 in the Growers' Market.

Six fresh fruit and vegetable firms were located in warehouse No. 2. This building has a first floor with 12,250 square feet of floor space, a partial second floor and two mezzanines with 3,100 square feet of floor space, and a partial basement with 2,600 square feet of floor space.

The first floor of warehouse No. 2 is at ground level and products are loaded or unloaded by several different methods. Among these are the use

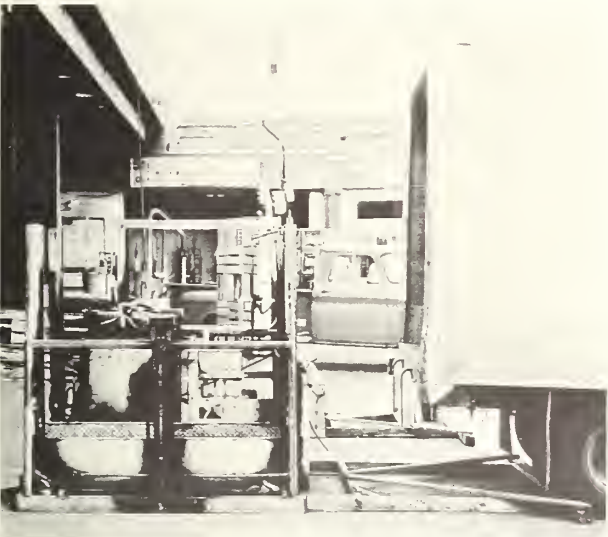
of trucks equipped with hydraulic rear tailgate-platforms. Another method is an adjustable electric platform, shown in figure 7. The use of hand labor is also common for loading and unloading trucks at this building.

The six firms in this warehouse used refrigerated space totaling 5,125 square feet and office space totaling 1,200 square feet. Total space for the building, including the apartment space, is 18,750 square feet.⁵ Ceiling heights are approximately 10 feet on each floor. An elevator is installed in the section of the warehouse that has the basement area. Most of the second floor and mezzanines are used for office space or dry storage. Some of the second floor, however, is devoted to processing.



BN-33220

FIGURE 6.—Front of warehouse No. 1, facing one of the farmers' sheds, in the Growers' Market.



BN-33226

FIGURE 7.—An adjustable electric platform for loading and unloading food from vans.

⁵ One food firm located in warehouse No. 2 had space away from the market. This space is included in table 2.

There are no rail connections to this building and rail receipts must be carted from team tracks.

The street area in this building is often congested. This congestion is the result of the "L" shape of the building and the proximity of farmer's shed No. 2.

Ten fresh fruit and vegetable firms had their primary operation in warehouse No. 3. Three firms whose main facilities are outside the market also rented storage space in this building. Warehouse No. 3 is a relatively modern building (fig. 8). It is constructed of brick and block and has both front and rear platforms. However, the ten-foot ceiling heights would preclude the use of certain types of handling systems.



BN-33229

FIGURE 8.—Interior of one of the units in warehouse No. 3 in the Growers' Market.

Warehouse No. 3 consists of two segments. One is 55 feet wide and 155 feet long and the other is 75 feet wide and 150 feet long. Both segments have platforms 45 inches high; the front platforms are 9 feet wide and the rear platforms 6 feet wide. Both are divided into sections of varying dimensions. The smaller segment has four sections, each 20 feet wide, and three sections, each 25 feet wide; all seven sections are 40 feet deep. The larger segment has six sections, each 20 feet wide, and one section 30 feet wide; all seven sections are 60 feet deep.

This building has no rail connections and rail receipts must be carted from team tracks.

The firms in warehouse No. 3 had 800 square feet of refrigerated space and 600 square feet of office space. Total space in the building is 20,000 square feet. Truck parking at this warehouse is no problem.

The six trucker-jobbers who rented space in the market operated out of warehouse No. 3. Two of the other firms located in this warehouse specialized in one line of produce and the other two carried a general line of fresh fruits and vegetables.

Farmers' market activity in Salt Lake City is conducted in facilities owned by the Growers' Market Company. At its peak, the farmers' market was used by hundreds of local farmers to sell their products. But as a result of various changes in marketing habits, a decline in production, and a decline in the number of farmers selling on the market, farmers' market activity has been reduced considerably.

During the market seasons of 1964, 1965, and 1966, an average of 26 farmers rented stalls on a monthly basis and about 118 rented on a daily basis. Interviews with a number of these farmers indicated their interest in continuing to sell products on the market.

Although the amount of fruits and vegetables grown by Salt Lake area farmers has declined through the years, considerable production is still evident. Farmers in the four counties surrounding Salt Lake City (Davis, Morgan, Salt Lake, and Weber) harvested approximately 4,000 acres of vegetables, 2,200 acres of tree fruits and berries, and 750 acres of potatoes in 1964. See table 3 for acreage of crops grown in the different counties.

TABLE 3.—*Acreages of fruits and vegetable crops grown in four counties surrounding Salt Lake City, 1964*¹

County	Vegetables	Tree fruits and berries	Potatoes	Total
	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres</i>
Davis.....	1, 594	889	541	3, 024
Morgan.....	4	4	13	21
Salt Lake.....	1, 438	503	25	1, 966
Weber.....	940	791	172	1, 903
Total.....	3, 976	2, 186	751	6, 914

¹ U.S. BUREAU OF THE CENSUS. 1964 UNITED STATES CENSUS OF AGRICULTURE PRELIMINARY REPORT. Series AC 64-P1, 6 pp. (Reports for Davis, Morgan, Salt Lake, and Weber Counties.) 1966.

The central business district (excluding the market).—Three fresh fruit and vegetable firms were located in privately owned facilities in the central business district outside the market. One of these firms, however, rented storage space in the market. One firm was located directly across from the market on West Temple Street. The other two firms were located across First West Street from the market.

One firm occupied a modern single-level building with truck load-out doors on one side and at the rear. The ceiling height in the building is approximately 12 feet. Sufficient truck docking space

is available, so parking is no problem. This building has a railroad track at one side. Another firm occupied two buildings. Both have ceilings approximately 10 feet high. These buildings were converted from other uses and neither is served by rail. One building has a basement and one an adequate loading platform.

The third firm was located in a building with a first floor and a basement. The building has a long platform at the front for loading and unloading. Ceiling heights are approximately 10 feet. Adequate room for positioning trucks at the platforms is available. There are no rail tracks at this building.

The firms in these four buildings had 2,800 square feet of refrigerated space, 1,860 square feet of office space, and 11,900 square feet of other space. Total space in these buildings is 16,560 square feet.

Other Salt Lake City and outside the city.—Five fresh fruit and vegetable firms were located in privately owned facilities in other Salt Lake City and outside the city. Two firms located outside the city were in Bountiful and Kerns. Four rented storage space in the market.

Four of these five firms were located in buildings suitable for food handling, but the other was in a building that had been constructed for a completely different type of activity. Three buildings are single level and two have partial second floors. One building has both a front and a rear platform; two have enclosed truck docks; and two have truck load-out doors at the front. Ceiling heights ranged from 10 to 20 feet. All facilities have sufficient areas for positioning trucks for loading and unloading. The buildings occupied by two of the firms are serviced by rail tracks.

The five firms occupied 28,000 square feet of refrigerated space, 8,900 square feet of office space and 64,500 square feet of other space—a total of 101,400 square feet. (This total does not include storage space rented in the market.)

Meat and Related Products

The central business district.—Five meat and related products firms were in the central business district—for the most part, in good facilities (fig. 9). The buildings occupied by all of these firms were constructed for use by food firms.

Only one building has more than one floor. The meat firm owning and occupying this building leased part of it for activities other than food handling; however, only the space used by the meat firm is included in space calculations. Ceiling heights in these buildings are approximately 12 feet. Only one firm in this group received products by rail. This firm was the only one to have rail tracks at its facility. All buildings in this group have truckbed height platforms for loading and unloading. Only one firm was somewhat limited in space for positioning trucks for loading or unloading.



FIGURE 9.—A meat and related-products facility in the central business district.

BN-33224

The five meat and related products firms used 18,400 square feet of refrigerated space, 2,100 square feet of office space, and 11,100 square feet of other space, or a total space of 31,600 square feet.

Other Salt Lake City.—Six meat and related products firms located in other Salt Lake City occupied various types of facilities. Two firms were in a wooden building that was built for use by the military. The other four firms were in modern buildings constructed for the operations being conducted in them.

All buildings in this group are single-level. Two buildings have platforms for loading and unloading. Ceiling heights range from 10 to 12 feet. The wooden building housing two of the firms is the only one served by rail.

The meat and related products firms had 16,300 square feet of refrigerated space, 1,300 square feet of office space, and 14,700 square feet of other space. Total space for the six firms was 32,300 square feet.

Outside the city.—Ten of the meat and related products firms were located outside the city. All of these firms were engaged in slaughtering or processing, or both. Most were located in good facilities. One firm had part of its operations in a building away from its main plant.

Since all of these firms were engaged in slaughtering or processing, most occupied specialized buildings. Only two of the firms operated in multistory buildings: one of these buildings has processing and storage operations on the upper floors and the other has office space only on the second floor. One firm had rail tracks at its fa-

cility; this firm and one other were the only two firms in this group that received products by rail. Five of the firms had facilities with platforms or truck load-out doors at truckbed height. The other five firms were located in one-level facilities.

This group of firms used a total of 165,300 square feet of refrigerated space, 12,000 square feet of office space, and 71,800 square feet of other space. Total space used by all 10 firms was 249,100 square feet.

Groceries

The central business district.—Three grocery firms were located in the central business district. These firms had good buildings, modern in construction and design (fig. 10).

One firm conducted another type of business in its facility, but only the space used for food handling is included in space calculations. All facilities are single-level with platforms for loading and unloading. Ceiling heights ranged from 12 to 18 feet. Adequate space for positioning trucks is available. One building has rail tracks.

The facilities occupied by the grocery firms in the central business district had only 1,500 square feet of refrigerated space, 3,400 square feet of office space, and 45,400 square feet of other space: a total of 50,300 square feet of space.

Other Salt Lake City and outside the city.—Four grocery firms were in other Salt Lake City and three were outside the city. Most of these seven firms were in modern or very good facilities.

Two facilities have either a basement or a second floor. Five buildings have platforms or load-out door at truckbed height. The other two buildings'



FIGURE 10.—A modern grocery facility in the central business district.

BN-33225



FIGURE 11.—A modern dairy products and egg facility serving the Salt Lake City area.

BN-33228

first floors are at ground level. Ceiling heights range from 10 to 18 feet. Sufficient room is provided for positioning trucks for loading and unloading. Only two of the buildings are served by rail tracks.

The seven firms in these facilities had 11,000 square feet of refrigerated space, 4,600 square feet of office space, and 104,400 square feet of other space: a total of 120,000 square feet of space.

Dairy Products and Eggs

Three dairy products and egg firms were located in the central business district and three were outside the city. Most were in modern facilities (fig. 11).

Three of these buildings have either a second floor or a basement or both. Platforms or truck

load-out doors are at truckbed height. Ceiling heights range from 10 to 18 feet. Sufficient room is provided for positioning trucks for loading or unloading. No buildings in this group are served by rail tracks, but one firm did receive some tonnage by rail at team tracks.

Total refrigerated space used by these firms in these buildings occupied 7,500 square feet. Office space occupied 3,500 square feet, and other space occupied 35,600 square feet. Total space used was 46,600 square feet.

Sources of Products Handled

Salt Lake City independent food firms receive products from all over the United States, Mexico, and other foreign countries.

For the purpose of this report the products received and handled by the food firms are defined as:

(a) Direct Receipts.—The total amount of products transported to the dealers' facility from outside the area or from local sources.

(b) Interdealer transfers.—The amount of products transported from one firm's facility to another. This includes the tonnage of products bought by one firm from another. "Truck jobbers," who operate from facilities within the area, may buy a load from one or more food firms and move the products to customers within or outside the area. This operation is also referred to as "second handling" by some members of the food industry.

(c) Total volume handled.—This is the total direct receipts plus the total interdealer transfers.

(d) Receipts from local producers.—Direct receipts from farmers and processors in the Salt Lake Valley area.

(e) Receipts from "other Utah" (which excludes Salt Lake area), California, and other States and areas (which exclude California and Salt Lake area).—Direct receipts from producers and processors located in these areas.

California was by far the largest supplier of products to Salt Lake City food firms; it was the source of about 45 percent of direct receipts. The next largest supply area was other States and areas, with 33 percent of direct receipts. Receipts from other Utah were 12 percent, and local producers accounted for about 10 percent. Interdealer transfers amounted to approximately 11 percent of direct receipts. Sources of products handled, by different types of food firms, are given in table 4.

Fresh Fruits and Vegetables

Fresh fruit and vegetable firms received about 58 percent of their direct receipts from California. Ten percent came from local producers and from other Utah. Texas and the neighboring States each supplied about 9 percent. Eastern States ac-

counted for almost 8 percent. The remaining volume of 6 percent came from other States and areas. Among those supplying a significant volume were Oregon, Washington, Hawaii, and Mexico.

Interdealer transfers were approximately 13 percent of direct receipts. Firms classified as trucker-jobbers purchased most of the interdealer transfer tonnage.

Meat and Related Products

The firms handling meat and related products received about 37 percent of direct receipts from other Utah. Thirteen percent came from local producers. Most of this volume from areas in Utah was accounted for by firms engaged in slaughtering that bought most of their livestock or poultry from auctions or farmers in Utah.

Approximately 13 percent of direct receipts came from the Eastern and Southern States. Most of this volume was poultry products from the big poultry-producing areas in the Southern States. Another 12 percent came from the Midwest, which produces most of the livestock and meat products in the United States. California accounted for about 12 percent of direct receipts; almost all of this tonnage was frozen products. The remaining 13 percent of direct receipts came from neighboring States and Washington and Oregon.

Interdealer movement for meat and related-products firms was about 6 percent of total direct receipts. Most of this tonnage was meat products bought from firms that did slaughtering.

Groceries

The grocery firms bought only 1 percent of their products from local sources. They obtained approximately 55 percent of their direct receipts from California. Much of this volume was canned products. The Midwest was the source of about 16 percent of direct receipts. Approximately 20 percent came from neighboring States, Texas, Washington, and Oregon. The remaining 8 percent came from Eastern States or other areas. A small part

TABLE 4.—Sources of products handled by 66 independent food firms in Salt Lake City, 1966

Type of food firm	Source of products						Total volume handled
	Local producers	Other Utah ¹	California	Other States and areas ²	Total direct receipts	Interdealer transfers	
	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Fresh fruits and vegetables.....	9, 411	8, 177	103, 759	57, 911	179, 258	23, 491	202, 749
Meat and related products.....	7, 567	21, 677	6, 973	22, 772	58, 989	3, 590	62, 579
Groceries.....	342	-----	18, 312	14, 782	33, 436	4, 291	37, 727
Dairy products and eggs.....	13, 165	5, 516	500	397	19, 578	25	19, 603
Total.....	30, 485	35, 370	129, 544	95, 862	291, 261	31, 397	322, 658

¹ All of Utah except for local producers in the Salt Lake area.

² Excludes local producers, other Utah, and California.

of this remainder came in as imported products from foreign countries.

Interdealer transfers amounted to about 13 percent of direct receipts.

Dairy Products and Eggs

Dairy products and egg firms obtained over 67 percent of their volume of direct receipts from local producers. These firms also received about 28 percent of direct receipts from other Utah. Most of this volume was eggs and milk purchased from local farmers or farmers in other parts of the State. The remaining 5 percent came from California and neighboring States.

Purchases from other local firms were very minor—less than 1 percent of direct receipts.

Distribution of Products

The 66 independent food firms included in this study had a wide area of distribution for their products. This area covered Utah, all the surrounding States, and parts of Montana and Oregon. Products were sold outside this area but the amount was insignificant. These firms distributed approximately 65 percent of their volume within

the Salt Lake City metropolitan area. Twelve percent went to other parts of Utah and the remaining 23 percent went to neighboring and other States. See table 5 for details of distribution.

Sales to these areas varied considerably among the commodity groups. In the Salt Lake City metropolitan area, sales ranged from about 42 percent for the dairy products and egg firms to approximately 81 percent for the grocery firms. Sales to other Utah ranged from about 10 percent for grocery firms to 20 percent for dairy products and egg firms. Products moving to neighboring States and other States ranged from 10 percent for grocery firms to about 37 percent for dairy products and egg firms.

Products were sold to various types of customers. For the purpose of this report, customers are assigned to four classifications: foodchains, independent retail food stores, institutions and restaurants, and others. Table 6 gives the details of sales to the customer groups.

The independent food firms in Salt Lake City deliver most of their sales to customers. Little use is made of cartage firms or hired delivery trucks. Customers pick up about 18 percent of their purchases at the firms' warehouses (table 7).

TABLE 5.—Distribution areas for products sold by 66 independent food firms in Salt Lake City, 1966

Type of food firm	Within Salt Lake City		Salt Lake area ¹		Other Utah ²		Neighboring States ³		Other States		Total volume
	Volume	Percentage of total	Volume	Percentage of total	Volume	Percentage of total	Volume	Percentage of total	Volume	Percentage of total	
Fresh fruits and vegetables	70,924	39.6	38,100	21.2	20,385	11.4	39,265	21.9	10,584	5.9	179,258
Meat and related products	33,676	57.1	11,426	19.4	7,754	13.1	6,133	10.4	-----	-----	58,989
Groceries	18,609	55.6	8,321	24.9	3,277	9.8	3,229	9.7	-----	-----	33,436
Dairy products and eggs	6,617	33.8	1,875	9.6	3,912	20.0	5,594	28.6	1,580	8.0	19,578
Total	129,826	44.6	59,722	20.5	35,328	12.1	54,221	18.6	12,164	4.2	291,261

¹ Excludes Salt Lake City.

² Excludes Salt Lake City and Salt Lake area.

³ States bordering Utah are Arizona, Colorado, Idaho, Nevada, and Wyoming.

TABLE 6.—Types of customers served by 66 independent food firms in Salt Lake City, 1966

Type of food firm	Foodchains		Independent retail food stores		Institutions and restaurants		Others		Total volume
	Volume	Percentage of total	Volume	Percentage of total	Volume	Percentage of total	Volume	Percentage of total	
Fresh fruits and vegetables	47,457	26.5	52,136	29.1	30,920	17.2	48,745	27.2	179,258
Meat and related products	15,901	26.9	31,083	52.7	8,896	15.1	3,109	5.3	58,989
Groceries	3,409	10.2	16,953	50.7	13,072	39.1	2	0	33,436
Dairy products and eggs	4,061	20.8	7,779	39.7	1,508	7.7	6,230	31.8	19,578
Total	70,828	24.3	107,951	37.1	54,396	18.7	58,086	19.9	291,261

TABLE 7.—Methods of distribution used by 66 independent food firms in Salt Lake City, 1966

Type of food firm	Delivered by wholesaler		Delivered by cartage firms		Picked up by customer		Total
	Volume	Percent- age of total	Volume	Percent- age of total	Volume	Percent- age of total	
	Tons	Percent	Tons	Percent	Tons	Percent	
Fresh fruits and vegetables	139,699	77.9	2,450	1.4	37,109	20.7	179,258
Meat and related products	55,146	93.5	1,000	1.7	2,843	4.8	58,989
Groceries	22,745	68.0	0	0	10,691	32.0	33,436
Dairy products and eggs	10,683	54.6	7,065	36.1	1,830	9.3	19,578
Total	228,273	78.4	10,515	3.6	52,473	18.0	291,261

Selected Costs Incurred by Food Firms

Certain costs incurred by food firms may be affected by firms' moving from antiquated to modern facilities. Some of these costs are measurable, such as cartage, avoidable delay, handling labor, handling equipment, facilities rentals, public warehouse charges, and distribution costs. But, whereas some of these costs may be affected only slightly by moves to new facilities, others may change considerably. In Salt Lake City, many food firms have highly efficient operations. There is very little avoidable delay and off-premise storage. Rents are quite low in many cases.

Some nonmeasurable costs would certainly be affected by a move to modern facilities, but these cannot be accurately estimated and included in a cost analysis. Such factors as inconveniences, poor sanitation, and poor working conditions in old and inadequate facilities add to the cost of handling food products.

Some costs of doing business would be approximately the same regardless of the facilities in which firms operate. These costs are primarily in the areas of management and sales.

Several of the firms included in this study did a considerable amount of processing, packaging, or other substantial altering of products. For such firms, that part of labor, space, and rental cost,

and other cost attributed to altering the product, are not included in the cost estimates.

Rents and Off-Premise Storage Costs

Rents for facilities and costs of off-premise storage were obtained from food firms at the time data were collected. When a food firm owned its facility, the operator was asked to estimate what a reasonable rental for the building would be.

Approximately 382,000 square feet of space was devoted to wholesale operations and the rental cost was estimated to be \$349,300, or \$0.91 per square foot. The average cost per ton for the 291,300 tons of products moved through these facilities was \$1.20. Off-premise storage was required for about 3,300 tons of products at a cost of \$4,700, or \$1.41 per ton. Details of rental cost and off-premise storage by commodity are shown in table 8.

Handling and Interdealer Transfer Costs

In Salt Lake City, handling and interdealer transfer costs include the costs of handling and transporting products from the time they arrive in the city until they leave a dealer's facility. These costs include a minor cost for cartage, avoidable delay, and handling equipment. The interdealer transfer cost is the cost for moving products from one food firm to another.

TABLE 8.—Estimated rental costs for facilities and off-premise storage for 66 independent food firms, Salt Lake City, 1966

Type of food firm	Rental cost			Off-premise storage cost			Total
	Volume	Per ton	Total	Volume	Per ton	Total rental cost	
	Tons	Dollars	Dollars	Tons	Dollars	Dollars	
Fresh fruits and vegetables	179,258	.76	135,953	-----	-----	-----	135,953
Meat and related products	58,989	1.92	113,047	2,889	1.25	3,620	116,667
Groceries	33,436	2.07	69,360	-----	-----	-----	69,360
Dairy products and eggs	19,578	1.58	30,970	414	2.54	1,050	32,020
Total or average	291,261	1.20	349,330	3,303	1.41	4,670	354,000

Cartage cost includes the cost of labor for loading and unloading products and transporting them from either team tracks or public warehouses. For some firms, inbound trucks are subjected to avoidable delay because of traffic congestion at certain hours. Many firms, because of location, are not subjected to this cost.

Handling labor includes labor for unloading trucks and railcars at dealers' facilities, handling products within the facilities, and loading products for delivery.

Handling equipment cost is relatively minor in Salt Lake City. Most firms have little mechanical handling equipment. However, several firms have elevators that add considerably to equipment cost.

The estimated combined cost for handling and for interdealer transfers of the 291,300 tons of direct receipts in present facilities is \$1,290,300, or \$4.43 per ton (table 9).

Distribution of Products

Costs for delivering products to customers was estimated for the tonnage food firms moved with their own vehicles, including the tonnage sold to other food firms that was delivered by truck. These costs included estimated vehicle cost and labor cost for drivers and helpers.

The total estimated cost for delivery of products was \$1,202,147, or an average of \$4.13 per ton (table 10).

Summary of Selected Costs

Selected costs for this analysis were estimated at \$2,846,425, or \$9.77 per ton for the 291,300 tons handled. Table 11 gives the estimated cost and per ton cost for each of the commodity groups.

Nonmeasurable Costs

Inconveniences and poor working conditions caused by inadequate facilities, traffic congestion causing delay in unloading or loading out, and, in some cases, substandard sanitation, add to the total cost of handling food products. Police and fire protection are also examples of costs that can be affected by the kind of facilities used and their location.

Many food firms are now operating at locations in the city that could be used for other types of business activity paying higher land rentals. Most food firms conduct most of their business by phone or deal with buyers interested only in food products. Therefore, location downtown or on a heavily traveled thoroughfare is not necessary. Relocation of these wholesalers to a lower cost land area would release potentially high-income property for other uses. The cost of this potentially high-income property may or may not be reflected in present rents.

TABLE 9.—Combined costs for handling and interdealer transfers,¹ estimated for 66 independent food firms, Salt Lake City, 1966

Type of food firm	Volume	Costs for handling and interdealer transfers	
		Per ton	Total
	<i>Tons</i>	<i>Dollars</i>	<i>Dollars</i>
Fresh fruits and vegetables_	179, 258	3. 21	575, 212
Meat and related products_	58, 989	6. 89	406, 236
Groceries_	33, 436	5. 58	186, 469
Dairy products and eggs_	19, 578	6. 25	122, 361
Total or average_	291, 261	4. 43	1, 290, 278

¹ The interdealer-transfer cost is the cost for moving products from one food firm to another.

TABLE 10.—Estimated costs of delivering products for 66 independent food firms in Salt Lake City, 1966

Type of food firm	Volume	Cost	
		Per ton	Total
	<i>Tons</i>	<i>Dollars</i>	<i>Dollars</i>
Fresh fruits and vegetables_	179, 258	4. 06	727, 023
Meat and related products_	58, 989	4. 63	273, 414
Groceries_	33, 436	3. 42	114, 340
Dairy products and eggs_	19, 578	4. 46	87, 370
Total or average_	291, 261	4. 13	1, 202, 147

TABLE 11.—Total selected costs¹ estimated for 66 independent food firms in Salt Lake City, 1966

Type of food firms	Volume	Cost	
		Per ton	Total
	<i>Tons</i>	<i>Dollars</i>	<i>Dollars</i>
Fresh fruits and vegetables_	719, 258	8. 02	1, 438, 188
Meat and related products_	58, 989	13. 50	796, 317
Groceries_	33, 436	11. 07	370, 169
Dairy products and eggs_	19, 578	12. 35	241, 751
Total or average_	291, 261	9. 77	2, 846, 425

¹ Include costs for rents and off-premise storage, handling and interdealer transfers, and distributing products.

HOW THE MARKET CAN BE IMPROVED

Some food firms expressed satisfaction with their present locations and facilities, but others were not satisfied with their layout or the crowded conditions in and around their building.

Many food firms in the city have recognized the expense of operating in inefficient facilities and have moved into new buildings or are in various stages of planning or constructing new facilities. These firms have relocated at various points throughout the city or area.

In order that all Salt Lake City food firms may enjoy the benefits of modern methods of operation, it is imperative that many other firms move from their present location. Some improvements can be made in present facilities. However, many problems—crowded streets, lack of rail connections, low ceiling heights, narrow or no platforms, and lack of room for expansion—cannot be eliminated where many of the firms are now located.

If these firms relocate, each can build or rent an individual facility in one of various locations in the Salt Lake area, or they can relocate as a group in one market area. Locating together in one market area offers many advantages. Facilities could be built at a lower initial cost. Building facilities together could mean better utilization of land, better service by rail and truck lines, possibly lower rates for insurance, and more attractive financing.

The most satisfactory solution to present facility problems is to build new facilities of the design, type, and arrangement required to meet present needs and anticipated future needs. The locating as a group is essential to the success of the plan.

Kind and Amount of Facilities Needed

Based upon the findings of this study, it is recommended that facilities be planned for 26 food firms, 25 of which are included in this study.⁶ Of these 26 firms, 21 handle fresh fruits and vegetables. The recommendation also includes five other food firms handling various types of products. The firms handling products other than fresh fruits and vegetables will be referred to as "other food" firms in the remainder of the report.

The facilities needed by these firms should be met by the following:

1. Three multiple-occupancy buildings housing fresh fruit and vegetable or "other food" firms.
2. Three single-occupancy buildings, two housing fresh fruit and vegetable firms and one housing an "other food" firm.
3. A farmers' market in a shed-type structure.
4. An office building to house the food center's offices, brokers' offices, a restaurant, and other market-related functions.

⁶ Nineteen of these firms are located in the central business district.

5. Railroad house tracks behind buildings.
6. Paved streets at least 200 feet wide where buildings face each other. Other streets at least 50 feet wide to permit a smooth two-way traffic flow.
7. Space for expansion of facilities as additional room is needed by occupants.
8. Parking for approximately 500 vehicles in addition to the loading and unloading space at the platforms of buildings.
9. An area for allied industry.

Actual construction should be based on the space needed by responsible tenants who will sign firm agreements to lease the facilities. Overbuilding at the start of the project should be avoided so that there will be no unoccupied space.

Multiple- and Single-Occupancy Buildings

Food firms would occupy two types of buildings. One type would be occupied by one wholesaler requiring a large amount of space. The other type would be occupied by two or more wholesalers requiring a smaller amount of space. These will be referred to as single-occupancy and multiple-occupancy buildings throughout the remainder of the report.

The three multiple-occupancy buildings recommended for the proposed development are designed to have certain basic features. Each building is to be made up of a row of store units of a standard size and design. Each is to have 14-foot platforms at the front and rear enabling firms to use modern materials-handling equipment. The plan provides for each front platform to be 45 inches above the pavement for loading and unloading trucks. Since the plan provides for railroad tracks at the rear of the building, the rear platform should be 55 inches above the rails to accommodate refrigerated railcars. The strip between the rail tracks should be paved so that the rear platform can be used for unloading trucks when the track area is not occupied by railcars, and so that the area can be more thoroughly cleaned by mechanical cleaning equipment. Vertical rubber bumpers should be provided along the top edge of the platforms to prevent damage from backing trucks. Steps for pedestrians should be set into the front platform at intervals of approximately 100 feet. Ladders should be provided along the rear platform at the same intervals. The enclosed area of a standard unit in the multiple-occupancy building should be 25 feet wide and 72 feet deep, with a minimum ceiling height of 21 feet. The 14-foot platforms at the front and rear of the unit would give an overall depth of 100 feet. A 14-foot-deep mezzanine over the front platform may be used for either office or storage area. A utility tunnel could be provided under the

rear platform to house refrigeration equipment and utility lines and connections. Each unit would have 1,800 square feet of enclosed first floor space, 700 square feet of platform space, and 350 square feet of space over the front platform. Total space for each standard unit would be 2,850 square feet (excluding the utility tunnel).

Floors in the standard unit should be concrete, with a nonskid surface. The live load capacity of the floor should be 350 pounds per square foot, and

the main floor should be sloped to drains. Electrical outlets should be provided where needed.

An 8- by 8-foot overhead door should be provided at the front of the unit and a door for pedestrians beside it. An 8- by 8-foot sliding door should be provided at the rear of the unit. The layout of a standard unit is shown in figure 12.

One of the advantages of the type of multiple-occupancy building recommended is the flexible arrangement of its interior space. A firm may

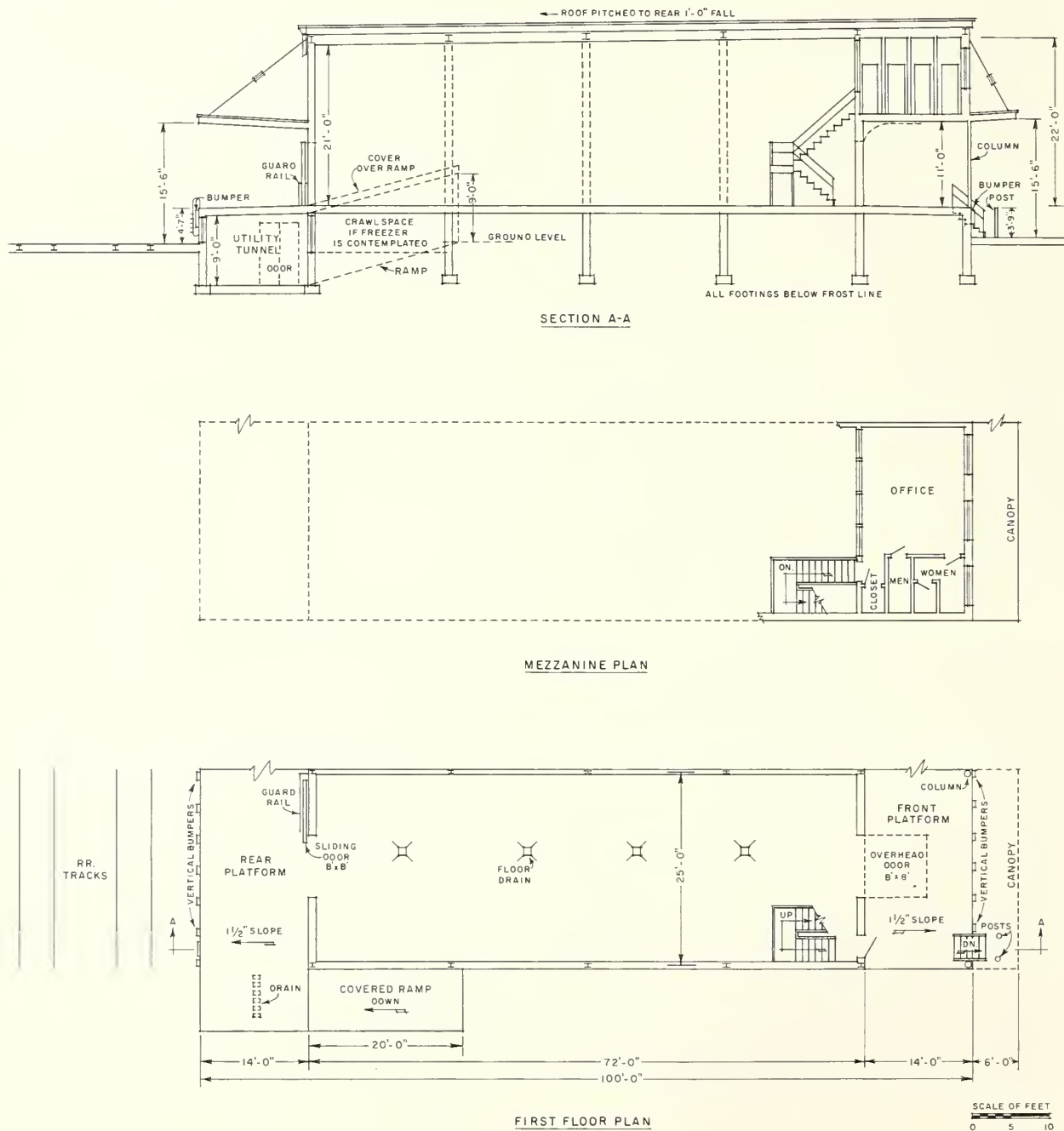


FIGURE 12.—Layout of a standard unit in a multiple-occupancy building designed for food firms.

occupy one or more standard units, according to its space requirements. To maintain flexibility, the partitions between individual operations in the building should be temporary.

The three single-occupancy buildings should be of a size and design that will fit in with the overall master plan. The internal design and layout can be tailored to the occupants' needs. Ceiling heights in these buildings also should be at least 21 feet to permit the use of modern handling methods.

Certain facility requirements vary considerably among food firms and should be provided by the individual firm. Each tenant should provide his own heating equipment and design his offices to his particular needs. Refrigeration requirements depend upon the specific commodity handled and the nature of the firm's operation; therefore, refrigeration should be planned and installed by the individual firm. Equipment and other installations provided by each tenant should be types that would not restrict the flexible arrangement of the building's interior.

It is recommended that the 21 fresh fruit and vegetable firms be provided for in two multiple-occupancy and two single-occupancy buildings. These firms would need 20 standard units in one multiple-occupancy building and eight units in the other. Total floor space, including the mezzanines over the front platforms, would be 79,800 square feet. Two "other food" firms would share the multiple-occupancy building with the eight units planned for fresh fruit and vegetable handlers. The two single-occupancy buildings would contain 45,000 square feet of space. Space proposed for the 21 fruit and vegetable firms is 28,265 square feet less than these firms occupied in 1966. The reduced space requirements can be attributed to the more efficient use that can be made of space in modern single-level facilities.

The five "other food" firms would require one single-occupancy building, three units in the multiple-occupancy building planned for fresh fruit and vegetable firms, and a multiple-occupancy building with 4 units.

Two of the five "other food" firms would occupy the three units in the multiple-occupancy building planned mainly for fresh fruit and vegetable firms. Two others would be housed in the separate multiple-occupancy building. These two firms handle meat and meat products and if they are to meet inspection requirements, they cannot occupy a building housing other types of food handlers. The master plan permits considerable expansion of this building if other meat wholesalers should desire to locate in the food center at a later date.

The one single-occupancy building would have 25,000 square feet of single-level floor space and would have an equal area for expansion. Total space for the "other food" firms would be 44,950 square feet. This is 11,300 square feet more space than these firms occupied in 1966.

The standard units for the two firms sharing the multiple-occupancy building with the fresh fruit and vegetable firms would have the same design and space as the multiple-occupancy building previously described. The standard units occupied by the two meat firms would also have the same overall dimensions but could be modified to meet the needs of the individual firm and to satisfy Federal and State inspection requirements.

The Farmers' Market Shed

A shed containing space for 40 individual stalls should be provided to accommodate farmers desiring to use this type of facility. Approximately 60 parking spaces are to be assigned to this part of the development (they can be used by others when the farmers' market is not in operation).

The farmers' market shed would consist of a platform 45 inches high, 200 feet long, and 30 feet wide. The shed would have a roof 18 feet 9 inches above the pavement that extends 6 feet beyond the platform. Continuous steps 22 inches high should extend the full length of the shed on both sides. A layout of the shed is shown in figure 13.

Stalls in the shed should be 10 feet wide and 12 feet deep. A 6-foot-wide center aisle would run the length of the shed. (A farmer desiring more space could rent two or more adjacent stalls.) Main entrances and exits would be at each end of the shed.

Office Building

It is recommended that a single-level office building be constructed to house various market-related functions. This building should be near the entrance of the market.

As planned, this building would contain approximately 6,000 square feet of space. This space would include 880 square feet for the food center offices, 2,080 square feet for brokers offices, and 1,880 square feet for restaurant and other service activity; the remaining 1,160 square feet would be used for hallways, restrooms, and storage.

Fencing

Fencing may be provided around the market to aid in the regulation of operating hours and the protection of tenants' property.

Market fencing should be at least 8 feet high, topped with barbed wire, and provided with gates at suitable locations. Fencing has not been included in cost data, but is estimated at \$3.50 per linear foot.

Acreage Required and Arrangement of the Proposed Facilities

It is recommended that a master plan for the market center be adopted and that the buildings be arranged so as not to interfere with the orderly future development of the remaining area.

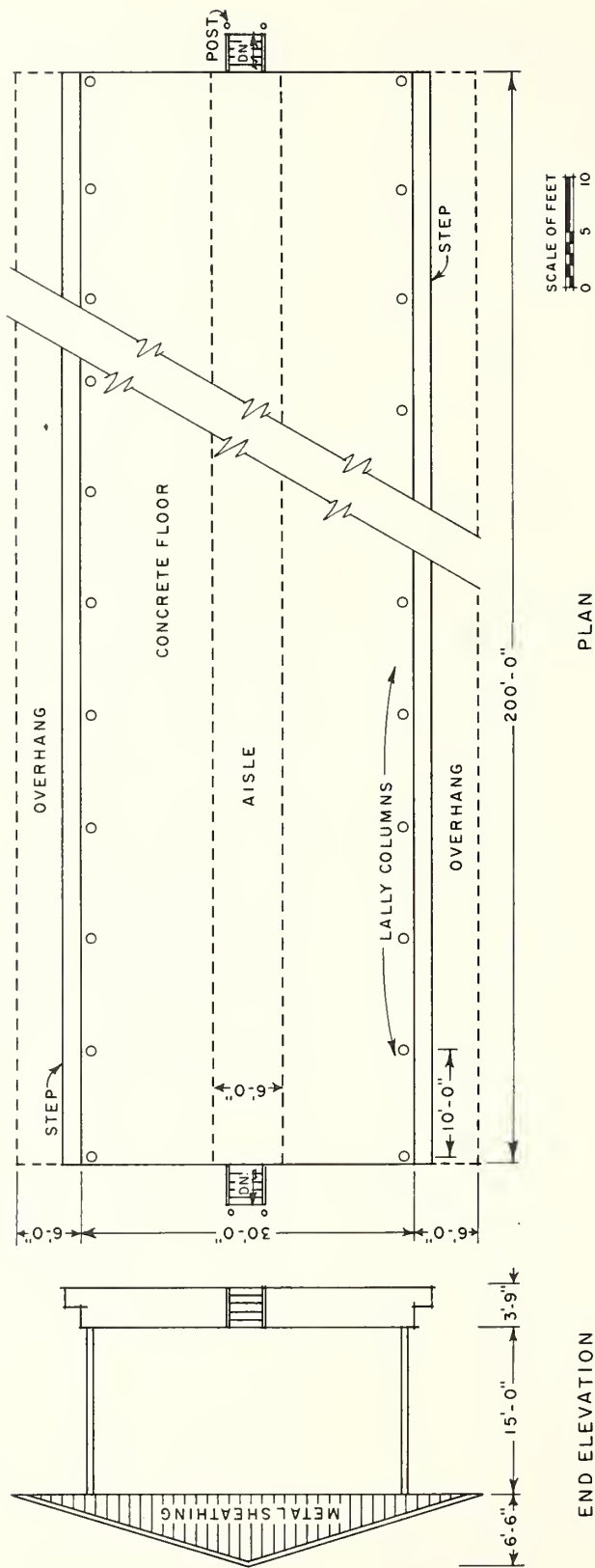


FIGURE 13.—Layout of a farmers' market shed in proposed food distribution center for Salt Lake City area.

The arrangement of buildings will depend on the shape of the site selected. The location of access streets and rail tracks also influences the location of buildings. To assure efficient operation of the food center, the facilities must be arranged for maximum coordination of functions. Space for expansion should be provided adjacent to each wholesale building. Buildings of similar size or shape should be alined to avoid wasted space and to provide for standard street widths. Streets should permit an uncongested flow of traffic through the food center and should be wide enough for trucks to maneuver. Good access from the center to primary highways and streets is important. Parking should be convenient, but should not interfere with loading and unloading operations at the facilities.

Approximately 28 acres would be required to provide for the facilities and expansion recommended. At least 17 acres should also be provided for allied industry.

Figure 14 illustrates an arrangement of facilities on one of the sites that will be discussed later in the report. This arrangement is intended to serve as a guide for firms that may become tenants in the proposed development.

Selecting a Site

Potential sites were suggested by food firms, railroads serving the area, and others interested in modern facilities for Salt Lake City food firms. The suggested locations were examined and each site was analyzed.

Five sites are shown in this report. All are on or near present and proposed highways, and are located on or near rail lines. Land prices range from \$5,000 to \$15,000 per acre, according to location and improvements. Because of the nature of land in the areas where all sites are located, piling or surcharging will presumably be necessary before buildings can be constructed.

The problem of land assembly may be complicated when business dealings must include a number of separate owners of small parcels. Therefore, if possible, the total acreage needed should be purchased from a single owner or a small number of owners who are willing to sell.

Sites are numbered one through five and the order given does not indicate a preference of one site over another. They are shown in figure 15.

Site No. One

Site No. one is located just west of Redwood Road and is within the city limits. It contains approximately 46 acres in two tracts. Additional acreage would be available in the immediate area. The site is bounded on the north by the Union Pacific Railroad and Western Pacific Railroad main line. One tract is bounded on the east by Redwood Road, on the south by a property line,

and on the west by the proposed relocation of Orange Street. The other tract is bounded on the east by the proposed relocation of Orange Street, on the south by Fifth South Street and on the west by the proposed Interstate Highway 215. This site is approximately $2\frac{1}{4}$ miles from Temple Square. Access is good to highways leading out of the city and to streets serving various parts of the city. Since the site is located on the main line of two railroads, no problem would arise in obtaining rail connections to the proposed development. All utilities would be available and the property is zoned for commercial and light industrial use.

Site No. Two

Site No. two is located approximately $2\frac{1}{3}$ miles west of the city. It contains 470 acres and is owned by one firm. It is bounded on the north by California Avenue extended, on the east by a property line, on the south by Twenty-first South Street, and on the west by Fifty-six West Street. The site is approximately $6\frac{1}{2}$ miles from Temple Square. Access to highways leading out of the city and to streets serving the city is by Twenty-first South Street. Rail connections could be brought in from main line railroad tracks just to the north of the site. All utilities except sewers are available and the site is zoned for industrial use.

Site No. Three

Site No. three is just west of Redwood Road and within the city limits. Considerable warehousing and manufacturing are now conducted in this area, including food wholesaling and processing. The site has approximately 290 acres. It is bounded on the north by Seventeenth South Street, on the east by Swaner Road, on the south by Twenty-first South Street, and on the west by an extension of Thirty-second West Street. This site is about 4 miles southwest of Temple Square. Access to major highways and streets would be by Twenty-first South Street. The site is adjacent to the proposed belt route that will be constructed through the western part of the city. Rail access would be available from tracks that serve businesses just north and east of the site. All utilities would be available and the area is zoned for industrial use.

Site No. Four

Site No. four is in the northern section of the city. The site contains 124 acres and is owned by one firm. It is bounded on the north by State Route 249, east and south by property lines and on the west by Redwood Road. This site is approximately $3\frac{1}{2}$ miles northwest of Temple Square. Access to major highways and street is by Redwood Road and Interstate 15. Major rail lines are available just east of the site and rail access would be no problem. All utilities are available and the area is zoned for industrial use.

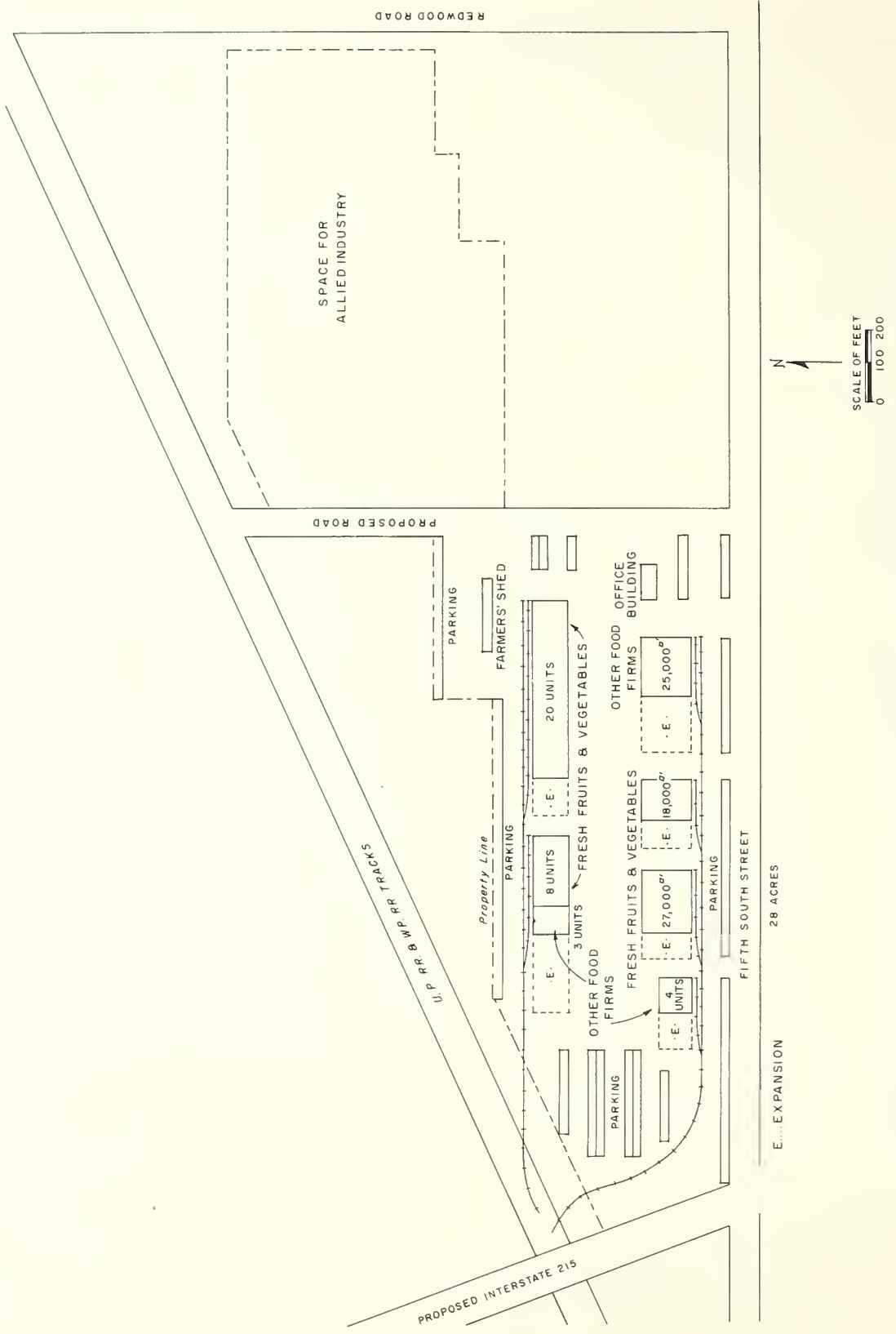


Figure 14.—Suggested arrangement of facilities on one site proposed for new Salt Lake City food distribution center.

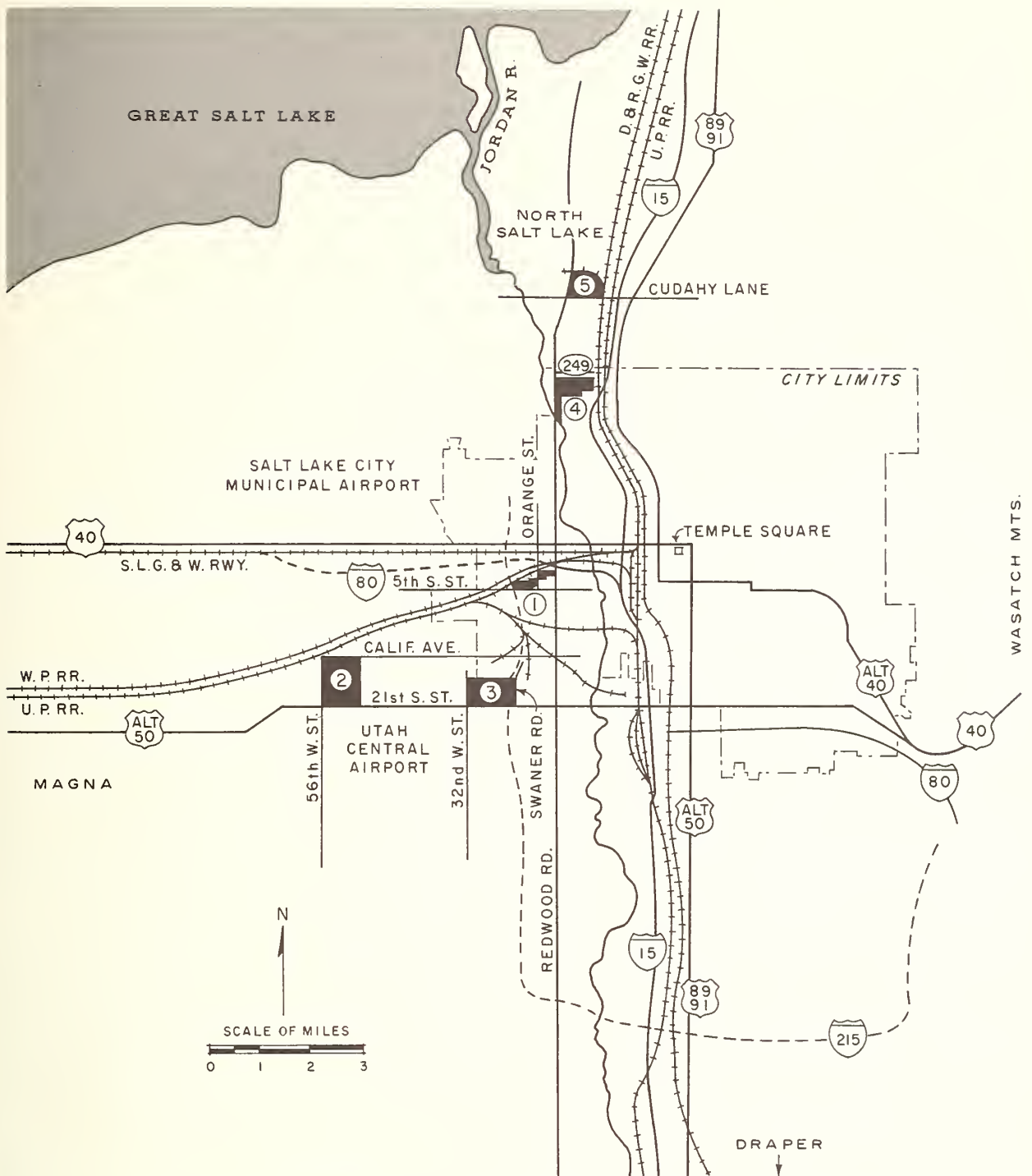


FIGURE 15.—Five potential sites for proposed food distribution center for Salt Lake City.

Site No. Five

Site No. five is north of the city and just south of the corporate limits of north Salt Lake. This site contains approximately 155 acres. It is bounded on the north and east by rail tracks, on the south by Cudahy Lane, and on the west by Redwood Road. It is about 5 miles northwest of Temple Square. The access to highways out of Salt Lake City is by Interstate Highway 15, which is just east of the site, and access to the city is by Redwood Road. Since rail tracks bound the site on two sides, rail connections would be no problem. All utilities would be available and the site is zoned for industrial use.

Estimated Investment in Land and Facilities

The proposed food distribution center for Salt Lake City would involve two major items of cost—land and facilities. Cost may vary considerably, according to the site selected and the type of construction. The estimated costs are for facilities previously described and constructed on site No. one. *These costs are intended as guides and should not be substituted for estimates by local contractors.* The total investment cost, derived in this section, is used to estimate the cost of debt service, taxes and insurance, and subsequent rentals required for the proposed development.

Land

The actual cost per acre of any of the sites discussed cannot be definitely determined until an option to buy is signed. In the estimate of total investment cost for the proposed food center, a land cost of \$10,000 per acre was used. This amount is approximately the value of the land in condition for construction contained in tract one of site No. one.

Facilities

The cost of facilities is estimated from construction indices for Salt Lake City dated July 1967, and from recent construction costs in the area.

Building cost estimates are for the basic structure of a "light mill" type of construction.

Paving cost estimates have been prorated among the structures to ensure a fair division of the cost of streets and parking. Paving costs assume 7 inches of gravel or crushed rock foundation, 4 inches of macadam base, and 2 inches of asphaltic concrete surface.

All utility connections (including electric connections) are underground. Sewers (sanitary and storm) are prorated among the structures in the same way as streets and parking areas. Rail tracks, switches, and floodlights are prorated to users.

Included in costs are a 6-percent architect's fee, a 6½-percent construction loan, and a 10-percent contingency fund.

The rate for the construction loan (6½ percent) is for the total cost of the loan and is not an interest rate.

Total Investment Cost

The estimated costs of construction and land for the proposed food distribution center are as follows:

Buildings:	
35 units in 3 multiple-occupancy buildings with 2,850 sq. ft. per unit (including the area over the front platform) @ \$24,125 per unit.....	Dollars 844,375
Ramps at the end of each multiple-occupancy building (access to utility tunnel).....	2,550
3 single-occupancy buildings, 70,000 sq. ft. @ \$9.65 per sq. ft.....	675,500
1 farmers' shed, 6,000 sq. ft. @ \$2.50 per sq. ft.....	15,000
1 office building, 6,000 feet @ \$12 per sq. ft....	72,000
Other facilities:	
27 floodlights @ \$150.....	4,050
Paving (blacktop combination)—103,398 yards @ \$3.50 per sq. yd.....	361,893
Sewers:	
4,390 feet of 12-inch sanitary, @ \$2.25 per linear foot.....	9,878
4,891 feet of 15-inch storm, @ \$2.25 per linear foot.....	17,118
Tracks (house tracks and associated lead-in), 4,462 feet @ \$10.50 per linear foot and 375 feet @ \$9.75.....	50,507
Switches (railroad), 6 @ \$3,500.....	21,000
Cost of buildings and other facilities....	<u>2,073,871</u>
Associated costs:	
Architect's fee—6 percent of construction cost	124,432
Cost of construction and architect's fee....	<u>2,198,303</u>
Construction loan—6½ percent of construction and architect's fee.....	142,890
Cost of construction—architect's fee and construction loan.....	<u>2,341,193</u>
Contingency fund—10 percent of construction, architect's fee, and construction loan..	234,119
Total cost of buildings, other facilities, and associated costs.....	<u>2,575,312</u>
Cost of 28 acres of land @ \$10,000 per acre	280,000
Total investment.....	<u>2,855,312</u>

Ownership and Management of New Facilities

There are several ways in which the proposed food distribution center could be financed. Some of the more common means are (1) private corporations, (2) public benefit corporations, (3)

direct public ownership, (4) farmer cooperatives, or (5) a combination.⁷

Private Corporation

A private corporation usually is organized for profit, but it may be operated as a nonprofit organization. To form a private corporation, the incorporators usually obtain a charter from the State. This charter defines the power of the corporation and its officers and directors. It also specifies what the stockholders' rights shall be and how they shall exercise control.

When a private corporation is operated for profit, there are usually no restrictions on the sale of voting stock to any individual because of his occupation or profession or on the number of shares of voting stock that may be held by any one individual. Stockholders normally have one vote in corporate affairs for each share of voting stock held.

A major advantage of a private corporation is the ability of the board of directors to make decisions quickly and without the delay found in other types of organizations. Quick decisions on major policy matters sometimes make the difference between success and failure of an organization. In addition, when the period of amortization expires, the entire investment belongs to the stockholders; tenancy changes have no effect upon stock ownership; and transfer of stock is unrestricted. The major problem of corporate ownership is that a substantial financial equity is necessary.

When a private corporation is operated on a nonprofit basis, the sale of shares of voting stock usually is restricted. A nonprofit market corporation probably would restrict the sale of stock to farmers, truckers, wholesalers, and others directly concerned with the operation of the market and would base the amount of stock sold to one individual or firm on the amount of facilities used. In some cases, eligible purchasers of voting stock would also be required to purchase a specified number of shares of nonvoting stock. Through these restrictions on stock sales, the number of stockholders' votes and the voice in management exercised by any one shareholder are limited. Under the laws in some States, nonprofit corporations are referred to as cooperative corporations or societies.

Many modern markets are owned and operated by private corporations. In some of these corporations, the principal stockholders are food wholesalers. In others, the corporation may be a railroad company or some other company primarily organized for another type of business.

Public Benefit Corporation

Public authorities created by State or local governments to construct and operate market facilities are usually organized as public benefit corporations.

A public benefit corporation is a nonprofit agency. As such, rentals and other charges do not exceed the amount needed to pay the costs of operation, amortize the original investment, and maintain a limited reserve for contingencies. Since under public ownership the revenues would be considered public funds, the reserve fund could not be paid to lessees as dividends. However, the possibility exists that reserve funds might be appropriated for other public uses while bonds remained outstanding, unless reserves are specifically committed to redemption of bonds.

Public benefit corporations usually have the power of eminent domain, which can be useful in the acquisition of a site. Such corporations usually finance market improvements through the sale of revenue bonds. This type of financing normally is not a full obligation of a State or a political subdivision. Since these revenue bonds may be tax exempt, the interest cost could be lower. A public agency, such as a market authority, is more likely than private ownership to provide for future expansion and to work toward a complete wholesale food distribution center. A market authority may or may not be required to pay taxes to the community in which it is located.

Market authorities also have certain limitations, especially in the financing and management of the facilities. They may find it difficult to raise funds through revenue bonds unless considerable equity funds are provided in some way or the bonds are guaranteed by the city, county, or State. Some State or city governments have appropriated part of the funds needed for land acquisition and original construction. The continuity of management may depend on the continuance of a State or municipal government administration in office. As a whole, market authorities do not have as complete freedom of operation as is possible under private ownership.

Direct Public Ownership

Some food market facilities have been financed, constructed, and operated by States, counties, or municipalities. Several States and municipalities have enabling legislation covering the improvement or establishment of produce markets.

Direct State ownership and operation usually can be differentiated from ownership and operation by a State market authority by the methods of financing used and the delegations of authority made by the State legislature. Although a number of States have appropriated funds and otherwise assisted market authorities with financial problems, they do not usually underwrite the total cost of a market constructed by an authority, nor have the States always assumed responsibility for

⁷For a more detailed discussion of these methods, see CLOWES, HARRY G., ELLIOTT, W. H., and CROW, W. C. WHOLESALE FOOD MARKET FACILITIES, TYPES OF OWNERSHIP AND METHODS OF FINANCING. U.S. Dept. Agr. Market. Res. Rpt. No. 160, 96 pp., illus. 1957.

the operation of these markets. Direct State ownership entails a market facility financed in whole or in part by an appropriation of State funds. If the financing is not accomplished entirely by this method, the State is usually obligated for the balance, unless this balance is obtained through grants or donations. Also, the State is responsible for maintenance and other expenses involved in the operation of a State-owned market.

Municipal ownership of a wholesale food market is comparable in many of its basic aspects to direct State ownership. Some municipalities are authorized in their charters to construct and operate food markets. Three methods are usually open to municipalities for financing a market program: (1) Issuance of municipal bonds, (2) issuance of revenue warrants, and (3) loans from public corporations. In most cities the issuance of bonds for such purposes must be approved by a majority of the qualified electorate voting in a referendum. States may finance, construct, and operate wholesale food-market facilities because legislative bodies feel that improved facilities, in themselves, will serve the public interest. Facilities constructed with municipal or county funds would necessarily be owned by the county or municipality.

Farmer Cooperatives

A farmer cooperative operates for the mutual benefit of its members or stockholders as producers or patrons. It is usually incorporated, owned, and controlled by member agricultural producers. The association is operated on a cost basis, after allowing for the expenses of operation and maintenance, any other authorized deductions for expansion, and a necessary reserve. In a cooperative, the financial benefits accrue to its clients, whereas in a commercial enterprise such benefits accrue to those who have invested their money in the business and have bought stock. In the marketing of farm and food products and the purchasing of supplies, cooperatives usually own and operate such facilities as they deem necessary.

Agricultural cooperatives, which comply with rather rigid requirements, are accorded special treatment under the Federal income tax laws. In some States, farmer cooperatives are exempt from payment of State income tax; however, cooperatives pay property taxes and other taxes paid by businesses, as required by law.

Combinations

Food distribution centers have been established by combining two or more of the types of ownership and operations previously described. For example, in Philadelphia a food distribution center has been developed by a nonprofit corporation on land owned and put in condition for building by the city. Many of the buildings are privately owned and are on land purchased from the city.

Methods of Financing

It would be possible to use two or more methods of financing new food distribution facilities in Salt Lake City. The entire project could be constructed and operated by a single group or agency, or various parts could be constructed and operated by different groups or agencies. For example:

1. Food wholesalers could form a corporation and lease or purchase land and build facilities.
2. The city or State could purchase the land and put it in condition to build, then lease it to tenants.
3. The city or State could build the multiple-occupancy buildings and lease them to tenants; however, special enabling legislation would definitely be required.
4. The farmers' market might be built by a cooperative association.

Revenue Required and Source of Revenue

Revenue required for amortization and operation of the proposed food center would vary according to the method used to finance the project. Amortization charges could be considerably lower if the development were made by a local government agency or authority. A corporation with substantial assets could expect better financing arrangements than one with limited assets. It is not feasible in this report to illustrate all possible means of financing.

Persumably, the proposed food center would be constructed by a private corporation and facilities would be leased to the occupants. *Such assumptions are not intended to suggest the most desirable arrangement, nor are they intended to exclude other arrangements: they are presented so that some estimate of operating expenses may be included in this report.*

Financing and operating cost will be considered under three categories: (1) Management and upkeep, (2) taxes on real estate, and (3) debt service.

Management and Upkeep

Management expenses for the market are based on reports of other wholesale food centers and estimates of such costs in Salt Lake City. These costs include the essential functions that must be carried on for the successful operation of the food center. Some variance from these specific costs would be expected.

The costs for management of the proposed food distribution center include the salaries of the manager and his staff, auditing and legal services, office rental allowance, advertising and promotion, office supplies and equipment, communications, utilities, and general market sanitation. The cost of management is estimated to be \$33,700 annually.

Costs of upkeep consist of insurance and maintenance costs. Insurance rates were obtained from local underwriters and are based on the type of building proposed and the operations that it would contain.

Fire and extended coverage insurance, computed at \$0.50 per \$100 of insurance per year, is based on 80 percent of the primary facility cost. Liability insurance covering bodily injury and property damage for the proposed food center would be \$0.46 per 100 square foot of building, with a limit of \$300,000 per accident. Total cost for fire and extended coverage and liability insurance would be \$7,220 per year.

Maintenance costs are estimated to be 0.75 percent of the cost of buildings and other facilities and would be approximately \$15,550 per year.

A reserve or contingency allowance of 10 percent is included to provide for any increases in these costs. This reserve would amount to \$5,650 annually. Annual management and upkeep cost for the proposed food distribution center is estimated as follows:

	<i>Dollars</i>
Management:	
Manager and staff-----	13, 500
Auditing and legal services-----	1, 500
Office rental allowance-----	3, 500
Advertising and promotion-----	1, 000
Office supplies and equipment-----	600
Communications-----	600
Utilities-----	4, 000
General market sanitation-----	9, 000
Total-----	<u>33, 700</u>
Upkeep:	
Insurance—fire, extended coverage, and liability-----	7, 220
Maintenance-----	15, 550
Total-----	<u>22, 770</u>
Contingency-----	5, 650
Total cost-----	<u>62, 120</u>

Real Estate Taxes

Real estate taxes are given for the estimated cost of land and facilities. The tax rate used is that for the year 1966, when the total property tax levy in Salt Lake City was 98.80 mills per \$1 on assessed value of property.⁸ To provide for a possible increase in the tax levy or assessed value, a reserve of 10 percent is included. The annual real estate taxes for the proposed development, with the 10 percent reserve, is \$62,060.

Debt Service

Debt service is the item that makes up the greater part of the cost of operating the proposed food distribution center. The proportion of the total investment that might be borrowed through a

mortgage loan, and the terms of the loan, would be determined by the availability of money and interest rates at the time. Facilities of the type proposed should not be obsolete in less than 25 to 30 years and should be useful for a much longer time. These facilities are of a design that with minor alterations could be converted for use by other types of industries.

With private financing of the proposed development, funds could be obtained from first and possibly second mortgage bonds and equity capital. The first mortgage might be the source of 65 percent of the required investment and 20 to 25 percent might be acquired from a second mortgage. The remaining 10 to 15 percent would have to be equity capital.

At the time this report was written, it was impossible to determine the proportion of capital to be obtained from different sources, or the terms of loans. In order to determine an annual debt service, certain assumptions were made. One assumption was that 65 percent of the required investment would be secured through a first mortgage at 6 percent, 25 percent through a second mortgage at 7 percent, and 10 percent through equity capital at 8½ percent. The average interest rate would be 6½ percent.

Creditors would probably demand a debt-service reserve. The reserve might be 10 percent of the annual amortization charge and could be discontinued when a full year's amortization charge is accumulated. The estimated annual income for debt service would be \$234,100. The amortization charges assumes a 6½ percent annual interest rate for 25 years, or \$81.98 per \$1,000 of investment. The total annual income required for debt service and the 10 percent reserve would be \$257,490.

Total Annual Revenue Required

The amount of revenue required to finance and operate the proposed food distribution center would be \$381,670 per year. In table 12, these costs are prorated among the firms in the multiple-occupancy buildings, the firms in the single-occupancy buildings, the tenants of the farmers' market, and the tenants of the office building.

In these computations the firm responsible for the development of the food center is expected to defray the costs of the allied industry sections until these are rented by suitable tenants. Rents to tenants moving into these areas could be adjusted to compensate for the expense of holding the areas.

Management and upkeep costs have been prorated or allocated to the different buildings based on the area occupied by these buildings. Costs of operation for individual businesses occupying these facilities are not included.

Source of Revenue

Presumably, the revenue required for the operation of the proposed food distribution center will

⁸ SALT LAKE AREA CHAMBER OF COMMERCE and UTAH TAXPAYERS ASSOCIATION (compilers). METROPOLITAN SALT LAKE AND UTAH TAX SURVEY. 5 pp. (n.p.) 1966.

TABLE 12.—*Estimated annual income required for operation of the proposed food distribution center for Salt Lake City, 1966*

Building group	Management and upkeep	Taxes	Debt service	Total
Three multiple-occupancy buildings (35 units)-----	<i>Dollars</i> 32,545	<i>Dollars</i> 32,475	<i>Dollars</i> 134,735	<i>Dollars</i> 199,755
Three single-occupancy buildings-----	24,480	24,335	100,970	149,785
Farmers' shed-----	1,430	1,480	6,140	9,050
Office building-----	3,665	3,770	15,645	23,080
Total-----	62,120	62,060	257,490	381,670

be derived from facility rentals. This includes rents of the food firms' facilities, the farmers' market shed, and the office building. Minor sources of income could be derived from such sources as public telephones and vending machines, but these are not included in the computations.

Annual rents for firms occupying the multiple-occupancy buildings would have to be \$2 per square foot of floor space. This rent includes all first-floor space and the space over the front platform. Rents for the single-occupancy buildings are calculated at \$2.14 per square foot of floor space. Rents for the office building should average approximately \$3.85 per square foot, including the space occupied by the food distribution center management. The total revenue required from the farmers' market shed would be approximately \$9,050 per year.

Benefits and Effects of Improved Facilities

Firms planned for in the proposed food distribution center for Salt Lake City could expect reductions in their costs of operations from relocating in modern, improved facilities. Three areas of selected costs have been analyzed and estimated saving or increase have been noted. The three areas are (1) handling, (2) interdealer transfers, and (3) rents. Other savings and benefits would result from these improvements, but no estimates of them have been made as they are the result of intangible factors.

One firm classified as an "other food" firm in the recommendation was not included in the survey. Present cost and potential saving are not given for this firm.

Handling

Handling is the area with the greatest potential for saving in the proposed facilities. The recommended facilities provide for handling commodities on one floor of buildings adapted to the use of modern handling equipment, with platforms of railcar and truck-bed height.

The potential savings in handling can be

achieved by using modern materials-handling equipment and improving methods of operation. Commodities received in boxes or cartons could be stacked on pallets in railcars or trucks, or on the loading platform, and then moved to storage by forklift trucks or pallet transporters. Products could be moved in a similar manner to display areas or to the platforms for shipping out. Small firms might not be able to utilize highly mechanized equipment efficiently, but could enjoy considerable saving by using pallets and pallet jacks and by improving methods of operation, which is possible in the proposed facilities.

The 21 fresh fruit and vegetable firms could save an estimated \$1.11 per ton and the four "other food" firms included in this analysis could save \$1.69 per ton in handling cost. The other food firm not included in the cost analysis should have similar reductions in its handling cost. Total estimated savings in handling would amount to \$180,900 annually. (See table 13 for details.)

TABLE 13.—*Costs of handling and equipment in present and proposed facilities for 25 food firms,¹ Salt Lake City, 1966*

Commodity group	Present cost	Proposed cost	Saving
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
Fresh fruits and vegetables--	421,777	261,155	160,622
Other food firms-----	77,722	57,430	20,292
Total-----	499,499	318,585	180,914

¹ These costs do not include those of one "other food" firm that is expected to move to the new facilities, of farmers renting space in the farmers' shed, or of tenants using the office building.

Interdealer Transfers

A saving in the interdealer handling could be effected because of the concentration of food firms. Most firms would be located in the same multiple-occupancy building or within a short distance of each other. In a multiple-occupancy building, transfers between firms could be made on the jointly used platform.

The 21 fresh fruit and vegetable firms could save an estimated \$21,500 in interdealer transfer cost.

Rents

Rents would increase considerably in the proposed facilities when compared with present rents. Higher rents must be borne in order to enjoy the benefits made possible by modern facilities. Rents for the 21 fresh fruit and vegetable firms would be \$156,300 higher per year and for the four "other food" firms, \$15,130 higher per year. Similar increase in rents would be expected for the other food firm not included in the analysis. (See table 14 for details.)

TABLE 14.—Rents in present and proposed facilities for 25 food firms,¹ Salt Lake City, 1966

Commodity group	Present cost	Proposed cost	Increase
Fresh fruit and vegetable firms.....	Dollars 99, 600	Dollars 255, 900	Dollars 156, 300
"Other food" firms.....	24, 770	39, 900	15, 130
Total.....	124, 370	295, 800	171, 430

¹ These costs do not include those of one "other food" firm that is expected to move to the new facilities, of farmers renting space in the farmers' shed, or of tenants using the office building.

Summary of Savings

Estimated savings for the food firms included in the plans more than compensate for increases in rentals. Annual savings using private funds for financing and operation are estimated at approximately \$31,000 (table 15). The total includes an estimated savings of \$180,900 on handling and equipment costs and \$21,500 on interdealer-transfer costs. Rentals would increase approximately \$171,400. Distribution costs would be approximately the same in the new facilities as in the old; therefore, they are not considered in this section.

TABLE 15.—Summary of reductions¹ in estimated costs in proposed food facilities for 25 food firms,² Salt Lake City, 1966

Commodity group	Handling and equipment	Inter-dealer	Rents	Savings
Fresh fruits and vegetables.....	Dollars -160, 622	Dollars -21, 500	Dollars 156, 300	Dollars -25, 822
Other food firms.....	-20, 292	0	15, 130	-5, 142
Total.....	-180, 914	-21, 500	171, 430	-30, 964

¹ Minus sign (-) indicates reduction in costs.

² These costs do not include those of one "other food" firm that is expected to move to the new facilities, of farmers renting space in the farmers' shed, or of tenants using the office building.

Other Benefits

All of the savings and benefits that could result from the development and operation of a new food distribution center cannot be measured in dollars. These benefits would affect not only the food firms and other tenants of the center, but also producers, buyers, market employees, transportation agencies, consumers, the city, and other municipalities in the area.

In the new facilities, selling hours could be regulated, thus reducing operating costs. Then, a larger market area could possibly be served from a strategically located food distribution center.

Producers could expect increased returns from improvements in the operation of the various price-making and price-reflecting forces in the market. Eliminating many inefficient features of the present market would tend to cause some of the saving to be passed back to the producer in the form of higher prices.

Market employees should show improved morale and efficiency as a result of the improved working conditions. Less strenuous labor would be required in facilities designed for the proper handling equipment. Further inventory control should be simplified in a one-level facility. Over a period of time, labor productivity would probably increase, resulting in increased earnings per hour. Improved parking facilities would also serve workers in the market. The completion of a food distribution center could improve the general environment in which employees work.

The grouping of food firms by commodities in multiple-occupancy buildings, the wide streets, and the adequate parking areas should enable market shoppers to patronize various commodity sections with greater ease and in less time. Reducing time required for marketing should reduce purchasing costs to buyers.

Transportation agencies could serve the market better in the proposed facilities. The lack of rail service at many present facilities may put the railroads at a disadvantage. Also, truckers hauling products to and from the new market would benefit by being able to unload or load directly at facilities without the delays caused by traffic congestion and inadequate parking.

Redevelopment programs of the city would benefit by being able to provide an area for displaced food dealers or allied industry to relocate. It would be possible to control traffic better in new facilities and to enforce fire, health, and sanitary codes.

The relocation of many of the food firms would permit the areas they now occupy to be used for other types of business activity. These areas are particularly desirable locations for many types of retail outlets, office and other types of commercial buildings, and for certain types of service businesses.

Consumers would benefit by the development of

the food distribution center because they could expect to receive food products in better condition.

One of the most important benefits to be derived from a new market is its potential for keeping many firms from being forced out of business or forced to locate outside the metropolitan area.

Through the new market, Salt Lake City food firms faced with the possible necessity of relocating should be able to enjoy modern, efficient facilities with the least possible increase in rental costs. This project could also provide a desirable location for firms in allied industries.



