Chapter 5  1945 - 1951

Aerial view of Brigham Young University Upper Campus - 1950

133
Franklin S. Harris resigned July 1, 1945 to become President of Utah State Agricultural College in Logan. Howard S. McDonald was appointed President of Brigham Young University the same day. Four years and three months later on October 30, 1949, he resigned and Christen Jensen was appointed Acting President, a position he had held previously when President Harris was away from campus. This time he served for one year and three months until February 4, 1951, when Ernest L. Wilkinson assumed the duties of President. Wilkinson had been appointed nearly five months earlier, but his law practice in Washington D.C. required his attention during this time (In This Brief Span, T. Earl Pardoe and Newburn I. Butt).

The terms of Howard S. McDonald and Christen Jensen were not very long in years, but they were unparalleled up to that time in rate of growth of the student body and campus buildings. The student body increased over two and one half times from 1,508 in 1945 to 5,429 in 1951 (BYU Enrollment Resume, Prepared by the Office of Institutional Research, Sept. 1971, BYU Archives). The floor area of campus buildings increased over three times from 286,379 gross square feet in 1945 to 859,683 gross square feet in 1951 (Physical Plant Construction Records). Nearly half of this increase was in the form of relatively small war surplus buildings of a very temporary quality.

These five and one half years were critical years in the life of the Brigham Young University. The effects of the war and limited financing were evident in campus buildings and grounds. Personnel of the Department of Buildings and Grounds who succeeded in maintaining this campus throughout these difficult years of growth did so with hard work and great faith in its future.
The Brigham Young University operated under a gradually increasing enrollment up to 1939 when it reached 2,894 students. With the outbreak of World War II in 1941, the enrollment dropped; and by 1943 it had descended to 1,155 (BYU Enrollment Resume, Prepared by the Office of Institutional Research, Sept. 1971. BYU Archives). Maintenance of the buildings and grounds was accomplished by a small force of full-time employees and student assistants. It was the practice up to that time that everyone worked on maintenance and construction, including the Superintendent. When student enrollment was low, it was not uncommon for faculty members to assist (Karl A. Miller, Superintendent of Buildings and Grounds).

With the end of the war and the enactment of the G. I. Bill in 1945, the enrollment began to increase at an unprecedented rate. By 1947 it was up to 5,441 (BYU Enrollment Resume, Prepared by the Office of Institutional Research, Sept. 1971. BYU Archives). Temporary buildings were moved to the campus to accommodate these students.

In just two years from 1945 to 1947, the gross floor area of campus buildings had been increased 200 percent (Physical Plant Construction Records). More maintenance personnel were employed; and with this increased number of personnel, an expanded organizational structure became necessary.

On January 20, 1947, Leland M. Perry was employed to head up this expanded organization. The following excerpts from a directive from President McDonald set forth the responsibilities of the new Superintendent and the Department of Buildings and Grounds.
The Superintendent, as head of the Department of Buildings and Grounds, shall be responsible for the following:

1. Installations, alterations, and maintenance of the campus communications systems, such as telephones, fire alarms, and the distribution of campus mail.
2. Custodial work in all campus buildings.
3. Landscaping, care and maintenance of all grounds, vacant lots, and other property owned by the University, including parking and campus police.
4. Maintenance, operation, alterations, and repair of all plumbing, heating, ventilating, and electrical systems on University property.
5. Mechanical shops operated by the University.
6. Carpenter Shop and mill operated by the University (This does not include academic shops).
7. Maintenance, repair, alterations, and up-keep of all University-owned buildings.
8. All new construction on University-owned property.
9. A central warehouse and receiving department for the University.
10. Engineering, design, and survey or inspection work pertaining to maintenance or new construction.
11. Perpetual inventory of all furniture and equipment of the University.
12. Custody, maintenance, and repair of all automotive and other mechanical equipment of the University.
13. Central key register and control for entire University.

The Superintendent shall organize such operating units in the Department of Buildings and Grounds for handling the operations of the Physical Plant as may be necessary, including the following:

Communications
Custodial
Grounds
Plumbing, Heating, and Electrical
Mechanical Shops
Carpenter Shop and Mill
Building Maintenance
Construction
Receiving, Warehousing, and Shipping
Each of the above units shall operate under the direction of a Supervisor to be appointed by the Superintendent with the approval of the President. The same individual may be appointed to head more than one unit, but the identity, functions, and duties of each unit must be maintained.

In addition to the above directive, a brief description of this new Department with names of supervisory personnel is included in a “Consolidated Report of the Physical Plant Department, Brigham Young University, from 1947 through 1957.” The following eight paragraphs from that report are included to provide additional information.

Leland M. Perry was appointed Superintendent of Buildings and Grounds Department January 20, 1947. Prior to this appointment he had been Project Engineer for the Federal Public Housing Authority on the construction of Wymount Village and similar housing in connection with educational institutions in the southern part of Utah. For a few months after the appointment as Superintendent of Buildings and Grounds Department, he maintained his offices in the building presently serving as Wymount Chapel and then moved into two rooms in the southeast corner of the basement of the Maeser Building.

In addition to Mr. Perry, the Buildings and Grounds staff was headed by Karl A. Miller, who had charge of Heating, Plumbing, and Electrical maintenance, and Lawns and Grounds; and Morris Snell, who had charge of general maintenance and new construction. During 1946 and 1947, Karl Miller supervised the installation of temporary boilers for heating Wymount Village and the installation of the first two boilers in the Central Heating Plant.

In 1946 and 1947 Morris Snell had charge of the construction of the Central Heating Plant building, Knight-Mangum Hall, which was then known as Campus Dormitory, and the moving and setting up of temporary buildings for the Press Building and the Old Bookstore (Physical Plant Building). Morris Snell died near the completion of Knight-Mangum Hall and Carr Greer, who had been doing the civil engineering work on roads, walks, buildings, and facilities, was placed in charge of the Buildings and Grounds shops.

Robert B. Hellewell, who had joined the staff in 1946 as Manager of Wymount Village, was placed in charge of Custodial work in all academic buildings in 1947, which at that time, in addition to the buildings on the Lower Campus, consisted of the Maeser, Library, Brimhall, Smith Memorial, Stadium House, Health Center, Bookstore, Press, North, and Industrial Arts Building.
The Buildings and Grounds shops began operations in 1947 in temporary buildings which the general contractor had used during the construction of Wymount Village. The Carpenter Shop, headed by Evard J. Larsen, was set up in a temporary building with a dirt floor. The Paint Shop, headed by Elmer Lindberg, used the small temporary building which is presently situated between the Speech Center and the Temporary Office Building. It also had only a dirt floor. Vern Thomas, who had charge of Payrolls, Receiving and Warehousing, also used a temporary building. Lynn Rogerson was placed in charge of the newly formed Motor Pool and Heavy-duty equipment, such as it was, and used a Tropical Hut, reinforced with a canvas over the top, as a “shop.”

In 1947, Mr. Perry arranged for the transfer of a few pieces of woodworking machinery and several trucks from the Wymount Village project to the University at no cost and these formed the basic equipment of the Carpenter Shop and the Motor Pool for several years. Within the first year the Carpenter Shop building was rearranged and a concrete floor was added, which greatly improved the comfort and utility of this building.
In 1948, a new 40 X 120 foot Quonset building with a concrete floor was acquired. The north portion of this building was used by Receiving and Warehousing, which had been transferred from Buildings and Grounds to the Treasurer’s Office, and the Motor Pool was given the south 40 feet of the building. About the same time a temporary barracks building was acquired and placed in line with and to the south of the Carpenter Shop. This building was the new home of the Paint Shop. The intervening space between the two buildings was covered by a roof, outfitted with racks and used for lumber storage.

From 1947 to 1951 when Ernest L. Wilkinson was appointed President, the Department of Buildings and Grounds experienced no major changes in organization other than the following: The distribution of campus mail was transferred to the Treasurer’s Office and the management of Wymount Village to the Dean of Students late in 1947, and the Central Warehouse and Receiving was transferred to the Treasurer’s Office in February of 1948.

Automotive

Twenty-six dormitory buildings at Ogden, Utah, were surplused by the government and moved to the Brigham Young University campus by contract under the direction of Leland M. Perry, project engineer for the Federal Public Housing Authority. The boilers and all underground steam lines, which were not a part of this contract, were disassembled and set up on the BYU campus by Buildings and Grounds personnel under the direction of Karl A. Miller. The only automotive equipment the BYU crew had to work with was a Ford dump truck, a GMC pickup truck, and a caterpillar tractor. A large flat bed trailer was secured from the government which was towed by the BYU dump truck and made it possible to haul much of the equipment associated with the Heating Plant. A “cherry picker” was loaned to the BYU crew by the Motor Pool of the Ogden Arsenal, which was a great help in loading the heavy materials.

Mobile equipment to maintain and operate the rapidly expanding campus was difficult to obtain because of the shortages brought on by the war and because of insufficient funds to purchase what was available. Considerable war surplus equipment came to BYU in the years following the end of the war; and even though much of it was not always suited to the job to be done and was not always in the best of condition, it was all that could be obtained, and the resourceful men of the Buildings and Grounds Department made the best of what they had.

Following are some of the first items obtained through war surplus: three pickup trucks, one dump truck, one flat bed truck, a D4 caterpillar tractor, and an electric welding unit. At a later date, a fork lift was also obtained through war surplus, and for several years, additional equipment continued to be made available to BYU. A backhoe and other urgently needed equipment were purchased from University funds before 1951.

Personnel 1945-1951

140
Security

Security on campus from 1945 to 1947 was little more than an attempt to maintain University standards. Elmer Miller, a faculty member, was assigned to tap students on the shoulder when dancing too closely or to remind them of the standards whenever one was bent or broken. In 1947 Golden Hardy, who drove a truck for the Buildings and Grounds Department, was also assigned to write parking citations when he saw a vehicle illegally parked. This procedure was, of course, rather ineffective as there was no follow-up when citations were ignored and there was no formal procedure for appeals (Interview with Golden Hardy by M. Ephraim Hatch, November 17, 1973).

In the early 1950’s, workmen, while cleaning the botany pond, found approximately 32 wallets had been discarded there. The ensuing investigation by the Provo Police Department and members of the BYU Dean of Students Office disclosed that almost all of them had been stolen from people while attending activities in the Fieldhouse. This and other factors caused the administration to become greatly concerned about protection of University and personal property from theft and vandalism as well as protection of persons coming to the campus. It became rather obvious that a full-time officer should be employed. It was not until after Ernest L. Wilkinson was appointed President, however, that a full-time Security officer was hired (BYU Security Office Records).

Campus - 1945-1951

Campus Planning

Campus planning is evidenced in a limited way down through the years. The school paper published the following statement in 1898:

We would suggest that a careful and well prepared plan of the grounds be made, so that every step that is taken towards its improvement may be taken in the right direction (The White and Blue, April 15, 1898, Vol. 1 No. 13, p. 3).

Ten years later in 1907, three years after the first ground was purchased on the Upper Campus, another reference was made to Master Planning.

A topographical map is underway. It is planned that this map will be of value in making plans for the erection of University buildings on Temple Hill (The White and Blue, 1907, Vol. 11, p. 41).
About this same time the architectural firm of Ware and Treganza made a very brief master plan of the Upper Campus. Only two buildings, the Maeser and the Grant, were located by that study. President Harris (1921-1945) located new buildings one at a time without reference to a master plan (Interview with George H. Smeth, faculty member from 1938 to 1941, by M. Ephraim Hatch, December 6, 1973). Fred L. Markham, architect for the Joseph Smith Building in 1939, relates the following experience:

In the design of the Joseph Smith Building, you will note that the north façade of the building is more elaborate than you would normally think of as the back of a building. At that time, I felt that the campus would have to go to the north, so I set that design anticipating that there would be, at some future time, a large open court, or a quadrangle such as later has been developed (Interview with Fred L. Markham by M. Ephraim Hatch, November 1, 1973).

This illustrates the need at that time for a master plan. It was not, however, until Howard S. McDonald was appointed President that serious steps were taken to develop a comprehensive campus master plan and a program of building construction. Just nine days after his appointment, minutes of a Dean’s Council Meeting and a Faculty Meeting refer to a “building program.”

At the suggestion and request of the President, Christen Jensen as Senior Dean was asked to conduct the session in order that the President might be free to present matters about which he had been devoting attention recently. Among those problems of departmental budgets, the building program, freedom of teaching with the view in mind that this is a typical Mormon institution… (Dean’s Council Meeting, July 8, 1945, 2:30 p.m)

President Howard S. McDonald met with us in his official capacity for the first time… Various matters of proposed expansion along with immediate needs of the school were mentioned as having been presented to the Dean’s Council in the meeting preceding this one (Faculty Minutes, July 9, 1945).

In December of 1945, just a few months after his appointment, President McDonald sent Wesley P. Lloyd and Fred L. Markham on a trip across the country to obtain information for the development of a campus master plan and the design of future University buildings. Eighteen days were required for this trip which took them to universities in Minnesota, Michigan, Massachusetts, Washington D.C., New York, Indiana, Nebraska, Idaho, and Washington. At about this same time, an engineering firm was engaged to prepare a topographic drawing with 100 foot grid superimposed, to aid in locating buildings and utilities. Out of this trip and the topographic survey, the master plan, dated 1946, was developed (Interview with Fred L. Markham by M. Ephraim Hatch, November 1, 1973).
A most interesting account of this experience is related by Brother Markham. Referring to the 1946 plan, he said:

This is one of the first sketches of the campus at that time. You will notice that the Eyring Science Center is shown. A home economics building appears directly across the mall from the Eyring. We show it extending along the brow of the hill towards the Maeser. This particular scheme was abandoned early due to the fact that it concentrated too much structure on a small area of campus. You will note that to the north a building is indicated at the top of the old stadium, and one beyond near where the Alumni Building is located. Across the mall is another building of fairly good size and another beyond that. One other difference, we had not developed a satisfactory road system. There was a road that came up Twelfth North, straight to the hill, which was very steep. It crossed the area where the baseball diamond is located,
1946 Master Plan of Brigham Young University campus prepared by Fred L. Markham, Architect
then turned to the left and came up in line with the Jesse Knight Building. It continued into the center of the campus and turned south about in line with the west edge of the library. It shows in this 1930 photograph of upper campus. That road was the major entrance to the campus from the north, but President Harris didn’t want traffic to come in from that side. He insisted the main access should be from the corner of Eighth North and Second East. It soon became evident, however, that a north entrance to the campus was mandatory. The administration building complex was to be located about where the Clark Library now stands. The administration building was spotted north and a little east of the Eyring Science Center. It was a three-building development with the main administration building on axis. South of it was a business service building, and to the north, a structure for student-related activities. This east-west axis extended to the west, establishing the location of the step structure which connects the upper and lower levels of the campus. Those are shown in the 1946 plan. This axis also tied the campus visually to 150 East and later to University Avenue. This suggests another early decision, which has been a major determinant in the evaluation of all BYU campus planning. Lacking firm parameters established by campus size based on a student body size and academic offerings on property ownership, a pattern for growth became imperative. The level hill top extending to a point above the ancient lake had suggested such a pattern. The high flat delta was selected for academic building development. The ground area east of Temple Hill extending northward was set for student housing. The lower areas west of the hill extending north was established for a physical education plant, practice, and playfields. The three ground uses have continued extending roughly parallel to each other to the north with only a few variations (Interview with Fred L. Markham by M. Ephraim Hatch, November 1, 1973).

Mr. Markham was then asked if there was any thought of a maximum student body size at that time (1946). He went on to explain:

Well, there was thought of it, but no one moved to make a decision. I recall in one meeting of the Executive Committee, we were asked how the plan was developing and what should be done to expedite it. I suggested that before we set the area of the campus together with the number and type of buildings, it would be tremendously helpful if it was determined the size to which the school might grow, and in particular, how many students? The Committee members looked at each other, and finally Brother Stephen L Richards suggested, “Well, Brother Markham, let’s put it this way. We want to provide for as many L.D.S students as
want to come.” And that was our guideline. Through the administration of President McDonald, we discussed maximum enrollment a number of times and had several different figures to work with. During this period, 1946, we were planning for nine or ten thousand students (Interview with Fred L. Markham by M. Ephraim Hatch, November 1, 1973).

In an attempt to meet the rapid growth of the student body after the war, many temporary frame buildings were moved onto the campus from military bases that were being phased out. These buildings were located in accordance with the “three corridor” basic plan that had previously been established, that is, athletic on the west, academic in the middle, and student housing on the east. In 1947, a Campus Parking Plan, page 42, was developed by Ernest Reimschussel, a faculty member. Campus planning was especially active at that time. The 1946 plan was later modified and firmed up into the plan dated 1948, page 43.

Campus buildings that were located from the 1946 and 1948 plans are as follows:

- Knight Mangum Hall
- Central Heating Plant
- Eyring Science Center
- Herald R. Clark Building
- Smith Fieldhouse
- Heritage Halls
- All Temporary Buildings

The following quotation from the “Y” News is evidence of a rapidly moving campus building program:

In the past the faculty and I have deeply appreciated the understanding given us by students while we experience our “growing pains.” We ask for this cooperation and understanding again this year. Work is forging ahead on our extending ten year program (Y News, October 2, 1947).
Parking Plan for BYU campus prepared by Ernest Reimschussel, 1947

Campus 1945-1951
Grounds Improvements

The rapid growth of the student body after World War II and the installation of numerous surplus buildings required considerable construction of roads, walks, and parking lots, both permanent and temporary. Landscaping was completed around the Eyring Science Center and in the Wymount Village. Lighting of streets and walks at various campus locations was completed during the six-year term of President Howard S. McDonald.

Six Tennis Courts (South of the Fieldhouse), 1949

A battery of six concrete tennis courts were constructed below the hill south of the Smith Fieldhouse in 1949. This location had proven to be ideal for physical education and they have been well used through the years (Universe, April 9, 1949, p.9).

Fred L. Markham prepared plans and Christianson Brothers of Salt Lake City did the flat concrete work. The Physical Plant Department performed the engineering, installation of drains, grading, the installation of concrete foundations, and the construction of fences (Consolidated Report of the Physical Plant Department, Brigham Young University, 1947 through 1957).

It was intended that more than six courts would be built. According to the account in the local school paper, insufficient land was the reason that more were not built at that time.

The six tennis courts now built figure to be all that will be up for a while. The school has been unable to arrange for the purchase of the adjacent land necessary to construct the ten originally planned. (Universe, March 30, 1950, p.6)
This aerial photograph was taken in 1949 when the Science Building (Eyring Science Center) was under construction. Most of the war surplus buildings were on campus and in use at this time. The student enrollment was 5,652.

(ByU Enrollment Resume, Prepared by the office of Institutional Research, Sept. 1971. BYU Archives.)
BYU Campus, south side - 1950
The temporary building in the “Raymond Park” grove of trees includes the Bookstore, Press, and Dining Hall.

Campus 1945-1951
151
This 1950 aerial photograph includes the Smith Fieldhouse construction at left center at its beginning. The Science Building (Eyring Science Center) is nearing completion, and the utility tunnel from the Science Building to the Fieldhouse is under construction.

Campus 1945-1951
BYU Campus - 1950

Social Hall and Knight Mangum Hall at lower left. Central Heating Plant at bottom. Wymount Village lower right. Raymond Park at center of picture with Eyring Science Center beyond the trees. Joseph Smith Building, Grant Building, Maeser Building and Brimhall Building in background. The temporary structures just below the center of the picture were the shop buildings of the Buildings and Grounds (Physical Plant) Department until 1962.

Clem Bonnett kept his horses in the barn located in the center of this photograph up to 1941.

Campus 1945-1951
Buildings - 1945-1951

Social and Knight Mangum Hall - 1946

Gravel had been excavated from the hillside south of the present Central Heating Plant for many years prior to the development of the Upper Campus. During the depression in the early 1930’s, the National Youth Administration (NYA) constructed a shop building on this site for training youth in the repair and maintenance of cars and trucks. Later in 1943 this property with the building was purchased by BYU to utilize in the Industrial Arts Department (History of Industrial Education Department, 1887-1941, by William H. Snell, BYU Archives). At this time it consisted of two large rooms on the south and several smaller rooms on two levels on the north.

It was decided to use it as a women’s dormitory rather than for Industrial Arts. Very little remodeling was done to the building to equip it for women’s housing. The girls hung drapes across the large room to divide it off into smaller sleeping areas. This was not a very satisfactory facility, but it was used in this manner for three years until 1946 when construction began on a dormitory structure designed by Fred L. Markham, architect. Morris Snell supervised the construction of this addition which extended west of the NYA building on up the hillside in three levels. This facility when
completed, adequate for 288 women students, was called the Campus Dormitory (Housing Office Record). Later additions included a kitchen, a dining room, a cold storage facility and a laundry. The lower part of this structure, the original NYA Building, was then designated as the Social Hall (Banyan, 1949, p. 18).

Completion of this dormitory construction was slow due to material shortages during and after World War II. It was finally completed and on May 26, 1954, the name of Knight Mangum Hall was given to it. This name was selected out of gratitude to the Knight and Mangum families for the financial assistance given to the University down through the years (The Y News, May 23, 1946, p. 1).

The 13th LDS Ward met in the Social Hall for some years prior to 1952. The Music Department used these rooms for band and orchestra rehearsal prior to construction of the Fine Arts Center in 1964.

In 1963 the students were relocated to other housing and the Language Training Mission moved into this facility which provided them with both housing and study space (Language Training Mission Office Records). The building was remodeled for student use in 1976 when the missionaries were relocated to the new Missionary Training Center.

In 1972 there was 40,086 square feet of floor space in the Knight Mangum Hall and 23,541 square feet in the Social Hall (Space Utilization Office, Inventory of Buildings).
Animal Science Laboratories - 1946

A 24 acre tract of land was purchased from Sidney Cluff in 1946 to provide the Animal Husbandry Department with a facility where farm animals could be kept. This land is located on 2230 North between University Avenue and 150 East. At the time of purchase there was nothing more on the ground than a house, a barn, and a chicken coop. A number of buildings have been moved from the main campus to the farm, and several semi-permanent buildings have been constructed. Water and sewer lines have been installed along with other site improvements to make this facility functional and safe as an Animal Science Laboratory. Many of the war surplus buildings that were moved from the main campus to make way for new permanent construction were relocated to this farm. At the present time there is 53,408 square feet of floor space in this entire project including the Poultry Laboratory.

Residence construction in the vicinity of this farm was rapid for several years, and it was decided to relocate the dairy herd and other objectionable phases of the project to a 700 acre farm that was purchased in Spanish Fork. At the present time a limited number of animals are kept at the North Canyon Road laboratory, used primarily for research and demonstration. In addition to the animal sheds, corrals, etc., there is a meat processing facility complete with walk-in coolers for instruction in meat cutting, curing, etc. (Construction Record, Physical Plant Planning Office. Space Utilization Office, Inventory of Buildings. History of Animal Husbandry, BYU, by C.Y. Cannon, Professor Emeritus, Animal Sciences. Seymour Mikkelsen, Foreman at the farm from June 1, 1956 to February 1, 1966).

Animal Science Laboratory buildings as seen from North University Avenue, looking east toward Rock Canyon

Buildings 1945-1951

156
Wymount Chapel (B30) - 1946

In 1946 a building that was later called the Wymount Chapel, B-20, of 3,321 square feet was moved to the campus to serve as a construction office for the Wymount Village project (Inventory of Buildings, Space Utilization Office). This building was located north of what was then the future site of the Central Heating project (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957). B30 was razed in 1981 to make way for the future Crabtree Building.

Wymount Village - 1946-47

At the end of World War II the student enrollment increased at a very rapid rate. In 1946-47, 26 two-story barracks buildings of 6,284 square feet each were moved to the campus to house these students (Space Utilization Office, Inventory of Buildings). Twenty of these buildings were remodeled to provide 200 apartments, and six of these buildings were set up as dormitories to accommodate about 300 men students. All 26 buildings were moved from the Ogden Arsenal and re-erected on the campus by the Federal Public Housing Authority. The government agency paid all moving costs and the cost of remodeling and erection of the buildings on the new site. The University furnished the land, installed the water, sewer, and power distribution systems and installed the sidewalks and paved roadways. The government’s cost ran over $800,000 and the University’s cost approached $100,000. This group of buildings became Wymount Village on the University campus. A seventh dormitory building (D-7) was later moved from the Ogden Arsenal to the Village at the expense of the University and used for a time as a girl’s dormitory before the completion of Heritage Halls (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).
Carpenter and Mechanical Shops (B20) - 1947

In 1947 an army surplus building of 2,000 square feet was moved onto the campus to a location northwest of the Central Heating Plant (Inventory of Buildings, Space Utilization Office). This building served the Federal Public Housing Authority during construction of a Wymount Village and later the Brigham Young University as a Carpenter Shop and Mechanical Shop for the Physical Plant Department until 1962 when a new Physical Plant Building was completed (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Wymount Dining Hall (B16) - 1947

In 1947, an 8,941 square foot army surplus building was moved to the campus (Space Utilization Office, Inventory of Buildings). It was not until 1971 when a new Engineering Building was to be constructed on that site that this old army surplus frame building was removed. For 24 years, this structure served the University, housing many and varied functions including: a student cafeteria, security office, engineering drafting classrooms, biochemistry research laboratories, and storage chemicals (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Physical Plant and A.F.R.O.T.C. Building (B15) - 1947

An 8,000 square foot, one-story war surplus building was moved to the campus in 1947. This structure served many purposes over a period of 23 years. The bookstore, the ROTC, and Physical Plant Administrative Offices were at one time located in this building. In the spring of 1968, this structure was removed to prepare a site for the future Widtsoe Building (Consolidated Report of the Department of Physical Plant, BYU, 1947 through 1957).

Religion Office Building (B22) - 1947

In 1947 an army surplus building of 2,700 square feet was moved onto the BYU campus to a site later occupied by the Widtsoe Building (Space Utilization Office, Inventory of Buildings). This building served, at first as the Health Center and later as a religion faculty office building. In 1968 it was removed to make way for the Widtsoe Building (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Buildings 1945-1951

159
Physical Plant Stores (B19) - 1947

In 1947 a frame army barracks building of 2,346 square feet was acquired (Inventory of Buildings, Space Utilization Office). In 1952, when the second metal Quonset (B-21) was built for the Physical Plant Motor Pool, the frame building (B-19) was relocated to a site west of the Central Heating Plant south of the carpenter shop. This building served as a Physical Plant Shop Office for some years, and later, as a warehouse for Physical Plant materials (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

North Building -1947

A large one-floor building in the shape of the letter ‘E’ was moved onto the campus from a war surplus source. The North Building included 21,556 gross square feet divided into faculty offices, classrooms, and business laboratories (Space Utilization Office, Inventory of Buildings). After many years of heavy usage, it was sold and removed to make way for the J. Reuben Clark Library Building, which was completed in 1964 (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).
Industrial Arts Shop Building - 1947

The Industrial Arts Shop Building with 5,626 square feet was moved onto campus from a war surplus source in 1947 (Space Utilization Office, Inventory of Buildings). The site chosen for this structure was just east of the Clark Library Building (now the Harold B. Lee Library) and, of course, it was necessary to remove it when the Clark Library was built in 1961. The William H. Snell Building, which was completed in 1960, provided a new home for the academic functions that had been carried on in the temporary Industrial Arts Building (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Press Building - 1947

In 1947, the Federal government surplused a building of 2,080 square feet to Brigham Young University. It was moved from Ogden and located southeast of the Harold R. Clark Building (Space Utilization Office, Inventory of Buildings). This structure, with minor additions, provided shelter for the University Press until 1968 when the permanent press building was constructed on 1700 North Street (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Temporary Metal Buildings “Butler Huts”

In 1948, several years after the end of World War II, six metal barracks buildings were surplused by the United States Government and utilized in the expansion program of the campus. These buildings each measured 20 by 48 feet, for a total of 960 square feet (Space Utilization Office, Inventory of Buildings). Four of these buildings were erected with connecting corridors on the present site of the Wilkinson Center. These buildings served the Speech and Dramatic Arts Department. The other two metal buildings were located in different parts of the campus. All of these buildings were located in different parts of the campus. One served as a chemistry laboratory, and the other for the high school band. All of these buildings were moved from one place to another as various needs arose. Many functions were housed in them, including those mentioned above, storage for ROTC uniforms and equipment, laboratory for the Landscape Architecture Department, classroom, and electric shop. They have been known as Band Cottage, Science Cottage, Speech Center, and B-18 Electrical Shop (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).
Little Carnegie Hall (B29) - 1948

In 1948, a lava block building measuring 20 feet by 64 feet, with eight rooms on each side of a central corridor, was constructed northwest of the Central Heating Plant (Space Utilization Office, Inventory of Buildings). Each room was large enough for a piano, and it was intended that this facility provide music practice rooms for the students. Sound isolation between practice rooms was not good, especially with the windows open for ventilation; but the need was so great that these rooms were used constantly from 7:00 in the morning until 10:00 at night, except Sundays. This sturdy little structure was called “Little Carnegie Hall” by Karl Miller, by which it has been known ever since (Karl A. Miller, Physical Plant Department, BYU).

After the Fine Arts Center was completed in 1964, this building was used for teaching assistant offices and laboratory space for the Industrial Arts Department.

Receiving Warehouse (B32) - 1948

In 1948, a 40 by 100 foot metal Quonset building was purchased and erected northwest of the Central Heating Plant. The north portion of this building was used originally by the Receiving Department as a warehouse. The south 40 feet served as a motor pool garage until that function moved to another quonset hut (B21) in 1952. A new building was constructed for receiving on Wyview Drive in 1968. B-32 was then remodeled into Engineering Laboratory space (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957). When the Clyde Building was constructed for Engineering in 1973, B32 was used for other academic purposes.
George Albert Smith Fieldhouse - 1951

Up to 1947, BYU basketball games had been played in the women’s gym and the men’s gym at the lower campus, the Springville and Provo High School gym, and in the University of Utah fieldhouse. By 1947, interest had developed among students, faculty, and townspeople sufficient to justify a recommendation by President McDonald to the Board of Trustees that authorization be granted for the construction of a fieldhouse at Brigham Young University. Edwin R. Kimball was very active in gaining support for this project. On March 5, 1947, President McDonald received authorization from the Board of Trustees to plan a fieldhouse to be constructed with public contributions and an appropriation of $500,000 from the Church (Brigham Young Universe, April 20, 1950). The Expenditures Committee, however, did not appropriate this money until March 10, 1950 (Souvenir Program of fieldhouse, Archives, UA 551 Box 1 Item 24).

Fred L. Markham was the architect for the George Albert Smith Fieldhouse, which was completed in 1951 with 87,374 square feet of floor space. This first building included a basketball playing floor with seating for 1,236 in permanent chair seats, 4,138 in permanent bleachers, and 4,858 in temporary or movable bleachers. There were two gymnasiums, dressing rooms, classrooms, faculty offices, and several specialized teaching facilities for wrestling, boxing, and physical therapy, etc.

Many difficulties were encountered in the construction of this building, including a high water table, slow steel delivery, and the necessity of extending the heat tunnel down to the Fieldhouse site. The first major event held in this new fieldhouse was the inauguration of President Ernest L. Wilkinson. The first major sports event was a 72-68 basketball victory over the University of Arizona.

George Albert Smith, eighth president of the LDS Church, had an intense love of character-building athletic activities and was instrumental in obtaining approval for the fieldhouse building named after him. The structure was designed after the old “fieldhouse” concept to allow physical education and conditioning during all seasons in an indoor environment.

In 1958, more faculty offices were constructed in space available within the building. Due to the constant use of this building for large events and for assemblies of various kinds, it was soon found necessary to leave the temporary bleachers up all the time, which prevented use of the dirt surface below the indoor fieldhouse for activities. A large one-room addition was constructed at the west end of the fieldhouse in 1959 to replace this fieldhouse function. A small ticket office was added to the north side of the building in 1962 and a 39,414 square foot addition was constructed on the east side of the fieldhouse in 1964, bringing the total floor area to 213,650 square feet. In 1973, the temporary bleachers were removed and all dirt surfaces were covered with a plastic material ideal for athletic activities.
At this same time, a second floor was constructed in the west end of the original structure to house weightlifting and related activities. Remodeling was done again in 1977; an addition for women’s intercollegiate athletic facilities in 1981; remodeling (and fire restoration) in the east gym for gymnastics and weight training facilities in 1986; and the renovation and expansion of the training and locker rooms in 1995.
Completed Smith Fieldhouse - 1951

Buildings 1945-1951
165
Interior of Smith Fieldhouse - 1951

Buildings 1945-1951

166
Student Assembly in Smith Fieldhouse - 1963

Buildings 1945-1951
167
Carl F. Eyring Physical Science Center - 1950

The dedication of the Physical Science Building in 1950 was part of the Diamond Jubilee held at the University after 75 years of existence. Plans were made by Wayne B. Hales under the direction of Acting President Christen Jensen for the entire week, beginning Sunday, October 15, with a concert by BYU Music Department on Monday, October 16, Founder’s Day Celebration ending Friday, October 20, with a Diamond Jubilee Ball. The Dedication services were held in the foyer of the Science Building where President George Albert Smith offered the Dedicatory Prayer on October 17, 1950.

The Physical Science Building was built on Temple Hill north and east of the Joseph Smith Building. It was not to be used for science classes alone, but for many other subjects. It was built to allow easy remodeling if and when changes became necessary.

The building was in the planning stages for three years, but actually it was a 15-year dream come true for Dr. Carl F. Eyring, dean of the College of Arts and Sciences for nearly 30 years. Dr. Eyring was the force behind the building project. He was the representative of the University during the entire construction.

The building was designed by Fred L. Markham, architect. Christiensen Brothers were the general contractors. Ground breaking was May 11, 1948. The building was essentially built to house the geology, chemistry, and physics departments. However, eight other departments were assigned parts of the building (Diamond Jubilee Dedication Program, Vol. 1, 1950, archives).

The classrooms in the building were somewhat unusual. Three large and six small amphitheater rooms were built with a sloping floor which would have the proper angle so students could look down on demonstrations (Kiefer B. Sauls, BYU Treasurer, personal interview by Karl A. Miller). A Foucault pendulum attached 42 feet above to show the rotation of the earth was located in the foyer of the building (Banyan, 1954, p. 124). Weather recording instruments were also placed in the foyer. This was the first building on campus to have an elevator.

The building was first named the Physical Science Center. Later, on May 26, 1954, it became known as the Carl F. Eyring Physical Science Center. Thirteen rooms and areas within the building were named for other noted scientists.

In the dome of the building was located an astronomical observatory and telescope. Mr. Hyrum B. Summerhays and his wife, Colleen, donated $25,000 toward a planetarium which was installed on the east side of the dome. The name given was the Sarah Berret Summerhays Planetarium (Banyan, 1958, p.391, Universe, March 7, 1958). During the same year, 1958, the Maeser Statue was placed in front of the Eyring Science Center (Universe, November 3, 1958). An underground
Physics research laboratory was constructed on the north side of the building. It was completed on November 22, 1968. Architect Ashworth designed the underground addition.

Like all other buildings on the campus, this building has undergone many changes. Some of the original rooms have been completely altered, partitions have been constructed and others have been removed. As was intended by the designers, changes to the building have been relatively inexpensive due to the way utility lines were installed and the general structural design of the building. A major renovation occurred in 1995 to upgrade the old, outdated building that was unsafe and in violation of governmental regulations. Utilities were inadequate and fume hoods created major ventilation problems.
Completed Eyring Science Center

Buildings 1945-1951

171
Creamery-Laundry Building (B31) - 1949

A pre-fabricated Quonset building was erected north of the Central Heating Plant in 1949. This 7,600 square foot building housed the BYU laundry and the creamery until 1964 when a new creamery was built and 1968 when a new laundry was built (Space Utilization Office, Inventory of Buildings). The building was then remodeled and converted to laboratory space for Industrial Education. It has functioned in this capacity to 1973 (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Utilities 1945 - 1951

Heating Plants for Temporary Buildings - 1946

Soon after the end of World War II in 1945, the government surplused army buildings to various universities. The Brigham Young University was the recipient of a number of these structures. Twenty six two story barracks buildings were moved onto the campus for student housing; and several smaller one-story buildings were moved to the campus where they housed various functions, including bookstore, faculty offices, and health center.

Four oil fired steam boilers were surplused at the Tooele Ordinance Depot in 1946. These boilers were moved to the Brigham Young University campus and set up in temporary buildings to provide heat for the dormitories and other surplus buildings until the two large “Henie” boilers could be set up in the Central Heating Plant, which was under construction at that time. Three of these four boilers were located at a site north and east of the present (1973) Central Heating Plant. The fourth boiler was set up in a temporary structure at a site very near the northeast corner of what would be the site for the Martin Building.

A crew from the shop was taken to Ogden by Karl A. Miler. G. Lloyd Hobbs, who had been added to the staff the year before, proved to be a great help. George Miller, a faculty member, James Baird and Harold Christensen, who were students, were members of the crew who were taken from Provo. The University was very fortunate to secure the services of two welders, William Spears, and his son Everett, who materially helped in getting the system ready.

Another problem was added to the perplexing ones already being solved. John L. Lewis and his nationwide coal strike finally affected Provo. The gas supply was cut off which was a product from coke ovens at Ironton. It became necessary to
install oil fired units in all the places using gas. Oil fired units were very difficult to secure because other establishments were faced with the same problem. Oil tanks had to be secured for each unit and oil hauled to keep them filled. It was expected that all of this extra work would be done by the maintenance shop.

These temporary boilers were dismantled and removed in 1947 when the Central Heating Plant capacity was increased and steam lines were connected to these temporary structures. One of the steam boilers was moved to the Welfare Cannery located on Sixth South and Sixth East in Provo (Karl A. Miller, Superintendent of Buildings and Grounds).

Central Heating Plant - 1946

The Central Heating Plant first phase (1946) was a 15,350 square foot building on two levels, designed by Joseph Nelson, architect, and constructed at the southeast corner of the campus under the supervision of Morris Snell, a Physical Plant employee (Construction Records, Physical Plant Planning Office).

Two “Henie” boilers of 250 horsepower each were surplused by the Ogden Arsenal and installed in this new heating plant. These boilers were oil fired. The space provided for coal storage and handling as well as the space for future boilers were used for storage and campus maintenance shop functions. A year after their installation, coal handling facilities were installed and these boilers were converted to coal.

In 1949, contracts were let for the installation of a new Union boiler in the number one position in the Central Heating Plant. This boiler with a capacity of 36,000 pounds of steam per hour was equipped with a coal pulverizer. An additional coal and ash handling structure was built west of the heating plant and, at this same time, utility tunnels were extended to major buildings on the campus from the Central Heating Plant. Coal for the Central Heating Plant was trucked in each day from the Church Welfare Coal Mine east of Price, Utah. For standby and to provide extra heat during peak loads, two oil fired cyclotherm boilers were constructed over the north coal deck and sheltered with a temporary frame shed.
Central Heating Plant with ash silo on the left - 1946

Utilities 1945-1951
174
“Henie Boilers” in background - oil storage tank in foreground

Utilities 1945-1951

175
Utility tunnel from Eyring Science Center to the Smith Fieldhouse

Utilities 1945-1951
177
Water, Sewer and Electricity

As new buildings were constructed and as war surplus buildings were moved in, it became necessary to extend water, sewer, and electrical lines to them. Much of this was done from 1945 to 1951 either by Physical Plant personnel or by contractors under the supervision of the Physical Plant Department (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Heating Line Extensions

The following quotations present a concise statement of heating utility extensions during the period 1945 to 1951:

A reinforced concrete walk-through tunnel was constructed from the Central Heating Plant westward to the south side of the Press Building. A branch tunnel was constructed south from this tunnel to the Campus Dormitory (Knight-Mangum Hall) and steam lines were run to these points. Steam supply and condensate return lines were extended east and north from the Central Heating Plant to supply heat to Wymount Village. Heat lines were also extended westward from the Wymount Village main to heat the Wymount Chapel, Receiving Quonset, Shops, and Speech Center. From the main heat tunnel, steam lines were run to Wymount Dining Hall, the Press, the Old Bookstore, and Student Health Center. Lines were also run from the heat tunnel northward in the street to the North Building and Industrial Arts Building. All of these lines to the temporary buildings were buried in the ground because of their temporary nature, except lines to North Building, which are in a box.

While the work was underway on the Carl F. Eyring Physical Science Center, the heat tunnel was extended westward from the point south of the Press Building to the west side of the Science Building, and the steam supply and condensate return were taken to that point. At the same time, the heat tunnel was extended northward along the west side of the Science Building to take care of future expansion.

The same year, 1949, the heat tunnel was extended from the west side of the Eyring Science Center to the north side of the Heber J. Grant Library Building with connections to the Joseph Smith Memorial Building and the Brimhall Building. Also, the north branch of the tunnel was extended from the north side of the Science Building north and then west to the George Albert Smith Fieldhouse. With the completion of the tunnel extensions, all principal buildings on the Upper Campus were tied to the Central Heating Plant.

The Buildings and Grounds Department installed the wiring in the tunnels and placed conduits for the later installation of high voltage distribution circuits. The piping in the tunnels was either done by the Physical Plant Department or under its supervision.

Utilities 1945-1951

178
In 1956, construction was started on a major conversion of the Central Heating Plant and distribution system from steam to High Temperature Water. This project, which was under the supervision of the Physical Plant Department, included the installation of two 50-million Btu boilers in the No. 2 and No. 3 positions in the Central Heating Plant. This required removal of the Old Henie steam boiler, which had occupied the No. 3 position. The 36,000 pounds of steam per hour Union steam boiler continued in service under this program to supply steam to Wymount Village, Heritage Halls, the Creamery-Laundry, the Shops, Speech Center, and Motion Pictures Building, and to furnish high pressure steam for experimental work in the Engineering Laboratory Building. Heritage Halls, which presently are supplied by a separate steam line from the Central Heating Plant, will be converted to High Temperature Water in a later expansion project of the system, according to present plans.

Under this conversion program, all of the distribution lines had to be dismantled and reinstalled to provide adequate supports, new expansion joints and additional insulation. In some cases additional lines were installed to increase capacity. Underground vaults to accommodate conversion equipment were constructed adjacent to buildings where space could not be provided in the building itself. Provision was made to heat the Heber J. Grant Library Building, the Brimhall Building, and the Maeser Building from the Central Heating Plant by the installation of a steam converter in the old gas-fired heating plant on the south hillside. A separate converter was installed in the Smith Building (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Telephone

In 1946, the campus telephone system consisted of a manually operated switchboard, situated in the Maeser Building, with about 148 telephone extensions in the principal offices. Each Dean and Department Head had a telephone, but in most cases members of the faculty and staff had only one telephone to be shared by a group. With the completion of the Eyring Science Center, the telephone switchboards were moved to a space on the second floor of that building and the service was converted to the dial system.

A telephone system was set up in Campus Hall, later named Knight Mangum Hall, to serve the occupants of this dormitory. Service was later extended from this switchboard to Heritage Halls and to Knight Hall and Allen Hall on the Lower Campus. In 1951, the housing switchboards were moved to the same room which housed the academic boards in the Eyring Science Center, but they were operated as a separate system (Consolidated Report of the Physical Plant Department, BYU, 1947 through 1957).

Utilities 1945-1951

179