

FEASIBILITY STUDY

FOR

WALDO HALL

Oregon State University
Corvallis, Oregon

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Portland 13, Oregon

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1. PURPOSE OF STUDY

Feasibility of the building for present purpose in view of the requirements of general utility.

2. SUMMARY

General feasibility and advisability of rehabilitation for present use or conversion for other uses.

3. VALUE OF SITE

Consideration of the site with respect to the value of the site for a modern and more efficient structure.

APPENDIX OF BUILDING

Yield Hall was built in the year of 1907, for the housing of students. The original cost was \$76,000.00, plus \$11,000.00 from College funds. When completed, the building had 115 rooms for students, plus a kitchen, dining room, parlors, offices, laundry and scientific laboratories for work in Research Science and Art.

FEASIBILITY STUDY
FOR
WALDO HALL

OREGON STATE UNIVERSITY
CORVALLIS, OREGON

I. PURPOSE OF STUDY

Waldo Hall is a dormitory housing 302 students and has many deficiencies from a standpoint of type of construction, Building Code requirements, Fire Marshal's requirements and general requirements for public health and safety.

In order to determine whether to rehabilitate and determine its use, or exercise other alternatives, a feasibility study is presented herewith for the following:

A. Present Use:

Suitability of the building for present purpose in view of Code requirements and general utility.

B. Other Use:

Economic feasibility and suitability of rehabilitation for present use or conversion for other uses.

C. Value of Site:

Consideration of the site with respect to the value of the site for a modern and more efficient structure.

II. HISTORY OF BUILDING

Waldo Hall was built in the year of 1907, for the housing of students. The original cost was \$76,000.00, plus \$11,000.00 from College funds. When completed, the building had 115 rooms for students, plus a Kitchen, Dining Rooms, Parlors, Office, Laundry and Scientific Laboratories for work in Domestic Science and Art.

Below is a list of maintenance repairs and rehabilitation items completed for the building:

1939 - The following is a quotation by M. C. Phillip, Superintendent of Physical Plant, in a report "Repairs and Incidental Improvements", dated February, 1939: "This building is 32 years old, the wiring is antiquated, insufficient, and about burned out, has been condemned by the State Fire Marshal, and a continual source of complaint from the occupants. The gutters are rusted out and leaking, the sewer which is tile and runs under the floor through the length of the building is broken down. It is unsanitary and dangerous and should be replaced by a cast iron sewer main. The shower and toilet rooms are also unsanitary because the plumbing is worn out. The water main is rusted; it has been patched a number of times, but should be replaced."

The building's wiring was supplemented with new wiring, including panels on all floors, two double wall outlets and two overhead lights in each room.

New cast iron sewer main constructed under building to the west and new water main.

New copper gutters installed on roof.

Installed new plumbing in Toilet and Shower Rooms.

Painting and decorating.

1944 - Repainted rooms and decorated Parlors.

1946 - North end converted to rooms for 50 girls. Two Sleeping Rooms, Dressing Room, Study Room, Smoker, Shower and Wash Room. Installed showers and wash basins. Refinished floors and woodwork. Installed gong and fire doors leading from each section.

1949 - Interior repainted.

1952 - Lounges plastered and painted.

1955 - New Wash Rooms and Stair Hall. New Stair Hall installed in north part of building for fire escape facility allowing removal of old outside iron fire escape.

1958 - Lounge and Office remodeled and redecorated. Interior trash chute discontinued, and trash chute installed on outside of building.

1959-1961 - Rebuilt Bathroom Floors.

1962 - Shored up second floor in old kitchen area. This area was stripped of finish to expose the framing. Ten joists were found structurally unsound and unsafe.

Second floor Bathroom floor repaired for leaks.

III. CONSTRUCTION OF EXISTING BUILDING

Waldo Hall is a four-story building with a full floor area of attic.

The building would be classified in the Building Code, City of Portland, and the Uniform Building Code, Pacific Coast Building Officials Conference, as Group H occupancy, Dormitories, and is Type V construction classification, which is the lowest type building classification.

The exterior walls are of masonry construction. The interior framing is of wood. The roof is framed of wood, solid sheathed and roofed with asphalt shingles; flashings are of galvanized iron; gutters of copper. Interior partitions are of wood studs. Flooring is wood covered with asphalt tile in general and ceramic tile in the Bathrooms. Interior finish is wood lath and plaster.

Exterior windows are the original wood double hung sash with sash weights, cords and metal pulleys. Interior doors and frames are of wood. Doors have glass transoms, of which the glass has been replaced with thin plywood. The doors are paneled with wood and glass, and are 1-3/8" thick.

Heating is direct radiation with steam supplied from the central heating plant.

Wiring consists of numerous types: exposed knob and tube, non-metallic sheathed cable, armored metallic cable, thin tube metal conduit and ridged metal conduit.

IV. DEFICIENCIES

A. Area:

The gross area of Waldo Hall is as follows:

First Floor	19,351 sq. ft.
Second Floor	19,251 sq. ft.
Third Floor	17,401 sq. ft.
Fourth Floor	<u>17,401 sq. ft.</u>
	73,404 sq. ft.

Portland Building Code

Allowable Area for Building One Story in Height Without Division Wall:

Group H Occupancy. Type V Construction	5,000 sq. ft.
With one hour construction	10,500 sq. ft.
Maximum Height of Building	2 stories

Waldo Hall for present day Building Code classification is greatly in excess of building area, and is two stories over the allowable height for Type V Construction.

B. Structural:

In Item II above, History of Building, it is noted that in 1962, the old kitchen was stripped of finish exposing the structural frame. Ten joists were found to be structurally unsafe, and a temporary shore was constructed for support.

The extent of such structural deficiencies are unknown, and would not be known until the structural frame was exposed.

All partitions should be properly fire stopped. There is evidence that there is a deficiency of fire stopping.

C. Stairways:

One stairway should lead to the roof. No such stairway does.

Stairways should be enclosed. Stairways are open, except the north stairway.

Stairways should lead directly to the outside. Only the north stairway leads to the outside. Stairway enclosure shall be not less than one hour construction with incombustible treads and risers. Existing stairways are all of combustible materials.

D. Corridors:

No dead end corridors are permitted by Code. All three floors above the first floor have dead end corridors.

Corridors should have minimum of one hour construction. There is no fire-rated construction in the entire building. All corridor doors should have 1-3/4" thickness at any point. Existing doors are paneled and glazed, and are 1-3/8" thick. No transoms are allowed. Existing doors have glazed transoms.

E. Attic:

Code requires draft stops in attics. The existing attic is entirely open for the full area.

F. Exterior Windows:

The exterior double hung wood windows are in very bad condition; many hardly operational, some cannot be made tight. When one window was pulled down at the meeting rail, the rail actually bent indicating dry rot under the paint. The pulleys are worn out. Sash box covers have been left out in many cases and are exposed to the weather.

G. Flashings:

Roof flashings have been painted numerous times for protection, however, rust is evident throughout indicating the life of the metal is about fulfilled.

H. Hardware:

The original door hardware is still in use. Cylinder locks have been added. In general, the hardware is in bad condition, especially the door butts which in many cases are worn out.

I. Plastering:

The entire interior of the building is plastered with wood lath and plaster. This is a bad and serious deficiency. Wood lath and plaster is sub-standard for modern buildings. The existing plastering is far below the standard for this

type of plastering. The lath is installed almost tight which does not provide a key. Lath should be a minimum 1/4" apart. A full 1/2" should cover the lath. The existing plaster is a skim coat of about 1/4".

The existing plaster has no fire rating, and is, in fact, a fire hazard considering the tinder dry wood lath and lack of proper fire stopping.

J. Toilet Floors:

The toilet floors have been replaced during the life of the building with ceramic tile. These floors leak and are a constant maintenance item, and this condition undoubtedly has contributed to a condition of rot.

K. Electrical:

Some of the existing wiring methods are sub-standard. There is a deficiency in the number of outlets for use. In general, the electrical system is obsolete and sub-standard.

L. Mechanical:

The original piping, fittings and radiation are still in use, and are a maintenance item. There is no temperature control system. In general, the mechanical work is obsolete and sub-standard.

M. General:

In general, in the opinion of the authors of this report, the building is sub-standard in construction and sub-standard as far as living conditions are concerned. The building is a fire hazard and is sub-standard from a standpoint of safety for occupants.

V.

FIRE MARSHAL'S REPORT

Below is the report from the State Fire Marshal:

STATE OF OREGON
FIRE MARSHAL DEPARTMENT
111 Labor and Industries Building
Salem 10

November 8, 1962

Mr. Milosh Popovich
Dean of Administration
Oregon State University
Corvallis, Oregon

Dear Dean Popovich:

The proposed survey of Waldo Hall, as outlined in our letter of October 2, 1962, has been completed and the results and our recommendations are presented below for the consideration of the proper officials.

The survey revealed that Waldo Hall has many deficiencies common to structures of similar design and age, such as inadequate corridor wall and ceiling separations, lack of fire and draft stops in walls and partitions, dead end corridors, inadequate exit facilities from the upper floors, inadequate protection of stairway enclosures, insufficient exit and emergency lighting facilities, undivided attic areas, and some evidence of unsound interior construction.

The proposed changes in the floor plans on both first and second floors do not alter the fact that the construction in the other portions of the building is so far below present day accepted safety standards that in our opinion a number of substantial changes must be initiated in event of continued occupancy. We are listing our recommendations below:

1. Install an approved protected stairway to the outside on the south end of the building to replace the existing sub-standard fire escape.
2. Redesign the two existing interior stairways in such a manner that both leads to the outside to grade level in place of discharging through the first floor lobby as at present.
3. Install additional exit and emergency lights where necessary, in order to comply with the requirements of approved Codes.

4. Redesign self-closing devices on all fire doors in order that the doors will close automatically in case of fire, such devices to be of an approved type.
5. Install an approved type automatic sprinkler system throughout entire building to include attic section.
6. Replace all plain glass in lower floor corridor doors with wire-glass.
7. Replace glass transom sections above room doors with fire resistive material.
8. The entire structure should be thoroughly checked by a qualified engineer for structural soundness.

In the event that officials decide to bring the building up to the foregoing listed minimum requirements, you may be assured that this office will cooperate to the best of our ability in studying and conferring with your staff, the plans for the proposed remodeling.

Very truly yours,

WALTER G. KORLANN
State Fire Marshal

J. W. Gault
Deputy

John F. Pickett
Deputy

VI. FEASIBILITY OF USE

A. Present Use:

In view of the great number of deficiencies from the point of view of structure, interior finish, stairways, corridors, fire ratings, electrical and mechanical, it would not be economical or practical to continue Waldo Hall in its present use. If it is continued in its present use, the following items should be done to bring it to minimum Building Code and Fire Code standards:

1. The top two stories should not be occupied.
2. The entire four floors and attic should be provided with an approved automatic sprinkler system.
3. All exterior windows should be replaced with new windows.
4. Dead end corridors should be eliminated.
5. All stairways should be rebuilt of one hour construction, enclosed, treads and risers built of incombustible material and lead to the outside on the first floor.
6. All corridor doors should be replaced, transoms omitted and made one hour rated.
7. All corridors should be altered for one hour fire rating.

B. Other Use:

The economic feasibility and suitability of rehabilitation for present use or conversion of other uses is not economically sound. The deficiencies are so numerous and corrections so costly, it is not recommended. If minimum corrections are made, the building would still be sub-standard and obsolete.

C. Value of Site:

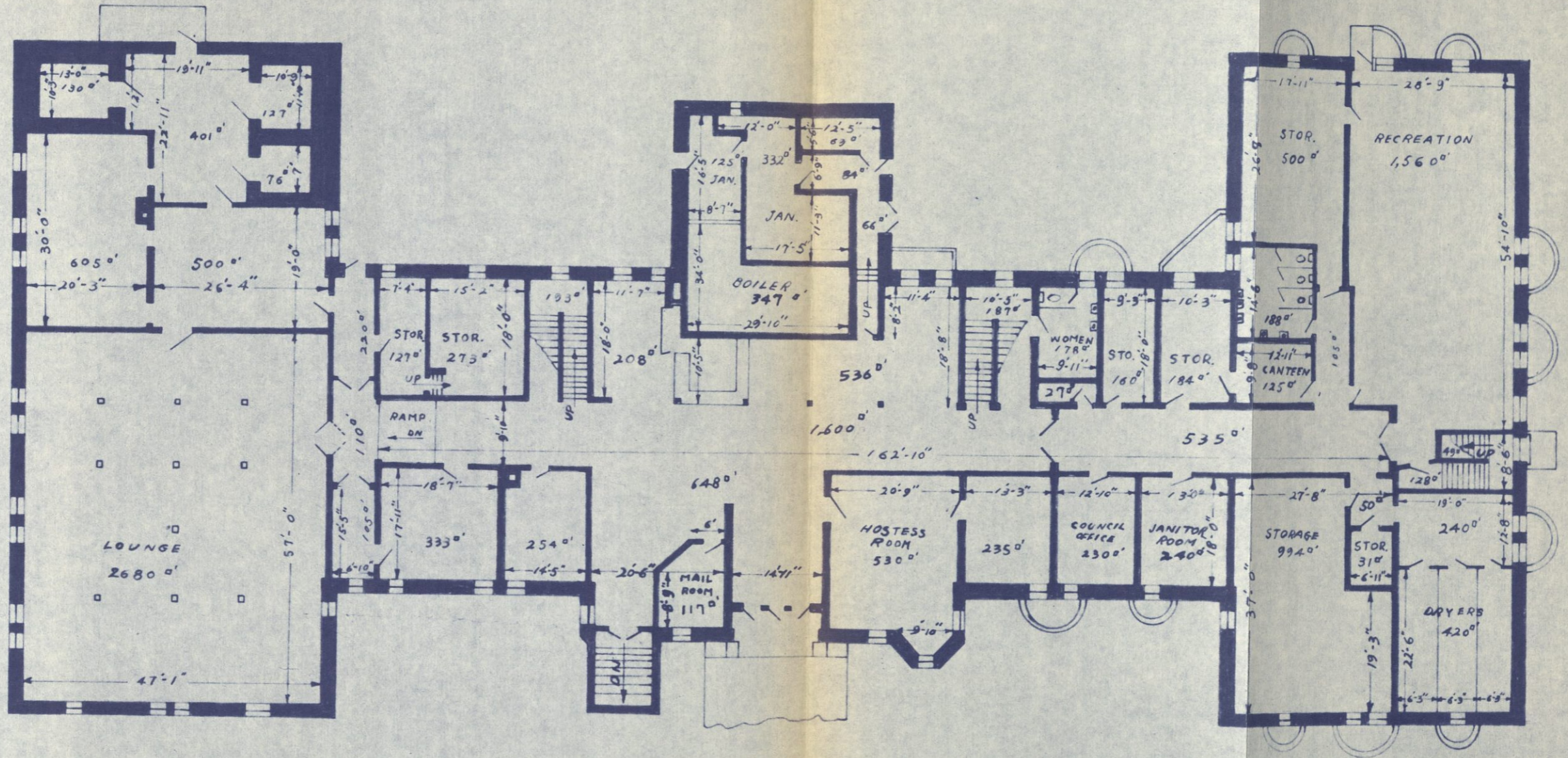
In the opinion of the authors of this report, the site is too valuable for other uses to undergo costly rehabilitation and major alteration. The following is a quotation from Louis

A. DeMonte, University Planning Consultant:

"The site of Waldo Hall will, I am confident, be an important part of the expansion of the campus of Oregon State University to meet its projected increased enrollment.

Coleman and Bell Fields should be relocated and these sites developed to their maximum capacity for academic buildings. To extend the academic core visually from the Union and Library areas to this future academic area, I believe it mandatory that the site of Waldo Hall be developed as open space. There can then appropriately be a heavy concentration of academic buildings on the sites of the present fields.

It is my recommendation that Waldo Hall not be rehabilitated or converted, because by so doing it will encourage continued use of the building for many years. The retention of Waldo Hall will be to the detriment of good campus planning."



AREA SUMMARY - GROSS	
FIRST FLOOR	19,351 Sq. Ft.
SECOND FLOOR	19,251 Sq. Ft.
THIRD FLOOR	17,401 Sq. Ft.
FOURTH FLOOR	17,401 Sq. Ft.
TOTAL	73,404 Sq. Ft.

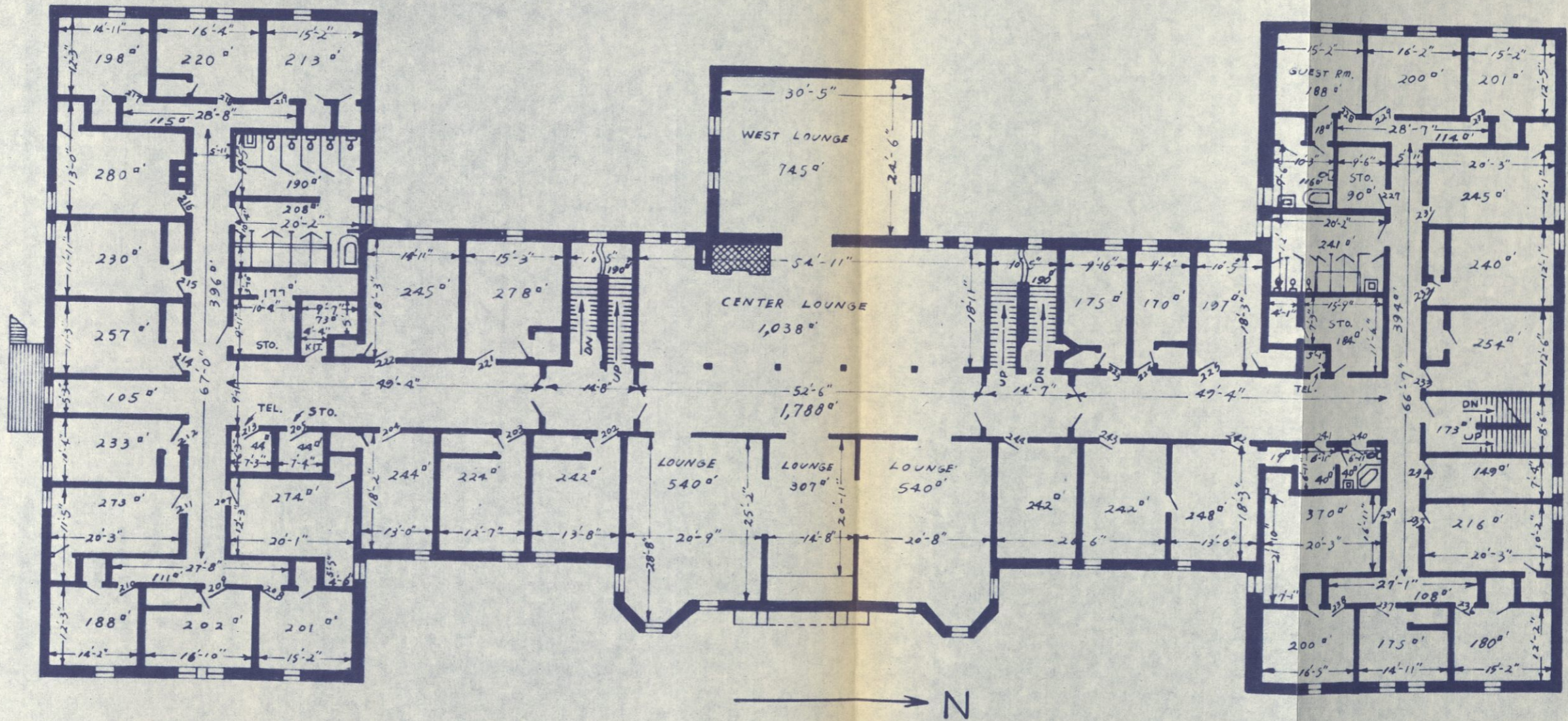
→ N
 USABLE SQ. FT. 17,160
 GROSS SQ. FT. 19,351

OREGON STATE UNIVERSITY
WALDO HALL

SCALE $\frac{3''}{64} = 1' - 0''$

JULY, 1961

FIRST FLOOR

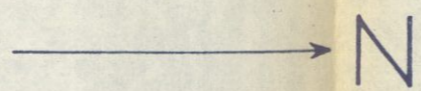
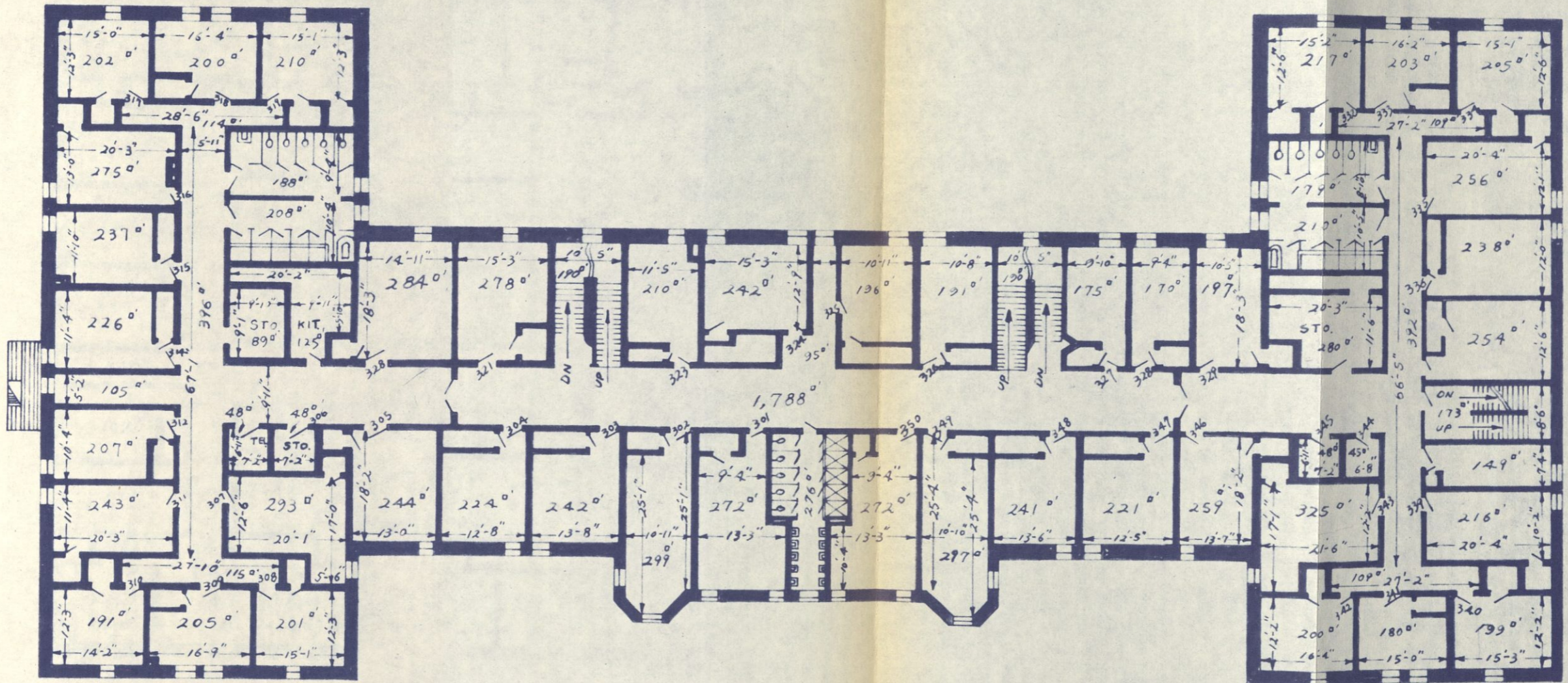


USABLE SQ. FT. 16,147
 GROSS SQ. FT. 19,251

OREGON STATE UNIVERSITY
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SCALE $\frac{3''}{64} = 1'-0''$

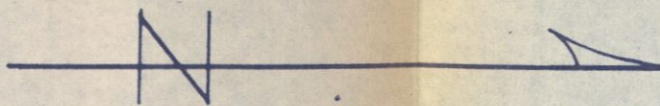
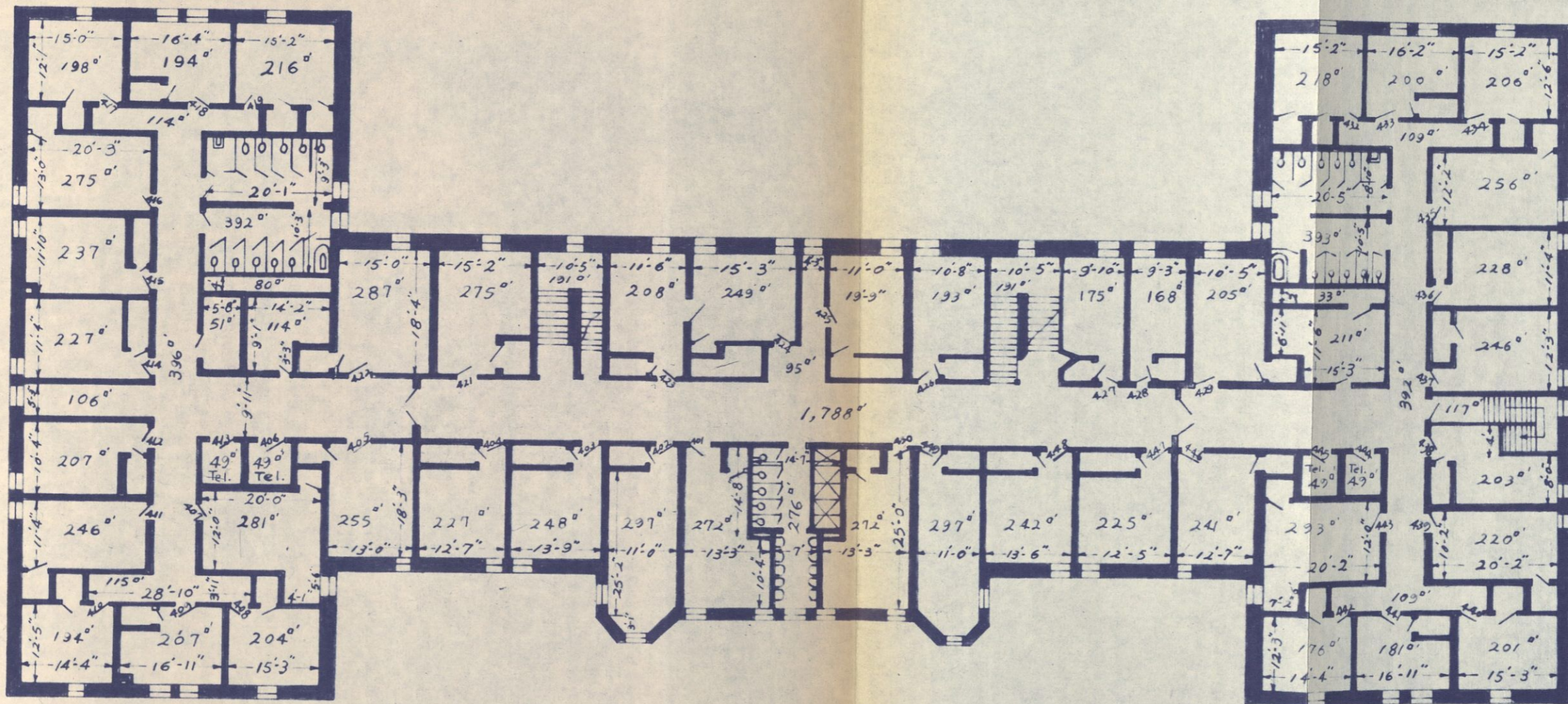
Aug., 1961
SECOND FLOOR



USABLE SQ. FT. 15,204
 GROSS SQ. FT. 17,401

OREGON STATE UNIVERSITY
WALDO HALL

SCALE $\frac{3''}{64} = 1'-0''$
 AUG., 1961
THIRD FLOOR



USABLE SQ. FT. 15,203
 GROSS SQ. FT. 17,401

OREGON STATE UNIVERSITY
 WALDO HALL

SCALE $\frac{3''}{64} = 1'-0''$

JULY, 1961
 BUILDING NUMBER 102
 FOURTH FLOOR