

MECHANICAL ENGINEERING



Fig. 1. Mechanical Engineering, 1932. A "U" shaped building of concrete and steel, sheathed with Madison sandstone rubble, some of the last stone to be taken from the west-side quarries. [series 9/6 Mechanical Engineering, x25-586]

Mechanical Engineering was the first significant building erected after the University decided to move engineering from Bascom Hill to the Camp Randall site. It was built in 1929, and encloses an older shop building within its "U" shape.

Even with the completion of the 1910 addition to the 1900 Engineering Building on Bascom Hill, the post WW I burst of enrollment in the school of engineering, caught the department off guard. Due to lack of funds the engineering department, with a freshman enrollment which doubled between 1916 and 1920, could build nothing but the Randall shop building, which alleviated the worst crowding of the heavy machinery and equipment laboratories. This shop building was significant in a number of ways. It was twenty thousand square feet of relatively inexpensive (\$65,000) laboratory space for a very cramped department. Most importantly the Randall shop building (known as "old sawtooth" for its distinctive roof design), established a precedent for the location of the engineering campus. The old engineering building had been built on Bascom Hill before any coherent general plan for the campus existed. A 1920 examination of the Bascom Hill site by state architect Arthur Peabody, yielded the opinion that because of the steep terrain the site could be expanded enough to provide for no more than fifteen years of enlarged enrollment. This was insufficient for the regents.¹

The 1908 Laird, Cret and Peabody plan for the campus had set aside a large area for engineering on University Avenue between Charter and Randall Streets. In a triumph of the vision and influence of dean Charles Bardeen and his associates in the medical school, this site became the location of the hospital and medical college buildings. As a result Arthur Peabody developed and the regents



Fig. 2. Mechanical Engineering, from the air c. 1931. This view clearly shows the old engineering shop building surrounded by the new building. University Avenue is the street in the foreground. The Forest Products Lab at the left was in the process of reverting to the university, and became Mining and Metallurgy. This photo was used on the cover of the buildings dedication program June 22, 1931. [series 9/6, Mechanical Engineering, jf-54]

approved a new site for the engineering campus on the north end of Camp Randall, south of University Avenue, between Breese Terrace and Randall Street. Only the Forest Products Laboratory building was located there and it would be suitable as an engineering building when it reverted to the university. The Randall shop building was built on this site. The contract was let to L. B. Gilbert for \$42,767, on June 9, 1920. It was ready for classes in the fall of 1920. This shop building did nothing for the rest of the overcrowded college of engineering, and made no provision for expansion.

In 1925 as a result of these continuing deficiencies, engineering dean Turneure appointed an engineering construction committee to plan the removal of engineering from the Bascom Hill building to the Camp Randall site. The result of this committee's work was the mechanical engineering building. The committee relied heavily on the expertise of architect Peabody, who was working in a familiar style, the "modern" Italian Renaissance, which featured a central section flanked by long wings at both ends. The committee consisted almost entirely of engineering professors, who were generous with the space and facilities needed by their fields. A striking feature of the design was that it completely enveloped the old sawtooth shop building [see Fig. 2].²

By spring 1927 the project planning was advanced enough to present to the state legislature. This presentation was made to the Finance Committee of the legislature by university president Glenn Frank. The presentation was so successful that the legislature of 1927 appropriated \$250,000 for a mechanical engineering building. This was not nearly enough money for the project envisioned by the university. The 1928 legislature added another \$327,000, as well as \$55,200 for tunnels and foundations, bringing the total appropriation for the building to \$632,200. Planning continued throughout 1928 and most of 1929. The university business manager published the request for bids on July 9, 1929. Seven bids were tabulated on August 6, 1929.

Because of some peculiarities of the construction business at that time, the cheapest siding material for the building was Madison rubble sandstone, a material that had been used with excellent effect on both the Van Hise dormitories, and the recently completed field house. The lowest bid by J. H. Findorff & Son, was well over the budgeted amount. Mr. Peabody held meetings with the contractor and worked out ways of reducing the bid. These alterations succeeded in reducing the cost of the building to the amount of the appropriation.

On August 30, 1929, the executive committee of the regents voted to award the general construction contract for the mechanical engineering building to J. H. Findorff and Son for \$512,812. Because the money from the state was not yet available, the contracts were not signed until September of 1929, and not approved by the governor (Walter Kohler) until April 2, 1930. The ground breaking took place the following day.³ Construction proceeded smoothly through the summer and fall of 1930. Findorff's contract called for completion by summer 1931, and he met this deadline.

The formal dedication of the building took place on June 22, 1931 at 4 PM. Speeches were made by president Glenn Frank, engineering dean Turneure, and governor Phillip La Follette.⁴

The new building established an impressive presence on the new site. It is three stories in height, in a huge 'U shape, facing University Avenue, and the wings pointing to the south. [See Fig. 2] The structure is of concrete faced with Madison rubble sandstone on the wings, Bedford limestone on the north face, and terra cotta trim overall. A small amount of dressed Madison stone, some of the last of that material available, was used on the third floor of the front. The center section is 238 feet long, and has a red tile hipped roof. The legend "Mechanical Engineering" is incised in the stone entablature. The wings are 210 feet long with flat built up roofs. The wing roofs contained skylights in the areas above drafting rooms and some laboratories. In all the building provided 101,000 square feet of space (including the old shop area), but not including the basement or center section attic, which initially remained unfinished storage space.

The interior of the building was relatively plain, befitting a building used primarily for laboratories of an industrial kind. Principal among the aesthetic touches that survived were a soaring entrance hall that occupied the first two floors of the front of the center section. At the dedication there was an airplane hanging in that space. The rest of the center section first floor contained lecture halls (for 150 students), a lounge, and locker facilities. The center section also contained conference rooms and offices and two huge drafting rooms, lit by the bank of windows overlooking University Avenue.

The entire east wing's lower level was also two stories high. This was not for art's sake but to ensure ceiling space for very tall equipment that was part of the steam and gas engine's lab equipment. The ceiling was equipped with a travelling crane for moving heavy machinery. The third floor of the east wing contained seven class rooms and a drafting room lit by skylights. The west wing held foundry, machine, carpenter and pattern shops. On the west wing third floor were the forge room, welding laboratory, with skylights, and the sheet metal laboratory. The Engineering library was housed in the upper floors of the building until the construction of the Wendt Library in the 1970s.

When the engineers moved into the new building in the fall of 1931, the space evacuated by the engineering department on Bascom Hill, and in the old shop building at 600 North Park, was taken over by the department of Manual Arts, and eventually by the school of education.

The mechanical engineering building has been much modified over the sixty five years of its life, as engineering advances were made, and requirements changed. A nuclear reactor and a solvent facility were installed in the east wing in 1959 and 1960. The west wing was remodelled in 1978. The majestic lobby was divided into two floors in June 1981. The old 1920 sawtooth shop section remains in use in the center of the building. The site on the north end of Camp Randall is now nearly completely covered by the engineering department, as envisioned seventy five years ago, by Mr. Peabody and dean Turneure.

1) *Regent's Minutes*, June 9, 1920, *The Wisconsin Engineer*, April 1920 p. 20-261, March 1943 p. 5; Regent's Report, 1910 p. 150;

2) *Wisconsin Alumni Magazine*, June 1930, p. 348, January, 1929 p. 110; *Wisconsin Engineer*, April 1920; *Regent's Minutes*, August 30, 1929; Dedication brochure, University Archives Mechanical Engineering subject folder.

3) *Wisconsin Alumni Magazine*, June 1930, p. 348.

4) *Wisconsin Alumni Magazine*, June 1931, p. 351.