



FRANK LLOYD WRIGHT STUDIO

Oak Park, Illinois

The Frank Lloyd Wright Studio in Oak Park, Illinois was the scene of some of the most productive and creative design work that Mr. Wright did in his whole career. This month's limited edition signed print by Ladd P. Ehlinger is a view of the south facade of the drafting room portion from what was originally perceived to be the side yard by the clients that entered the building.

actually the side street to this corner lot. Immediately behind and attached to the studio was Wright's house fronting on Forest Avenue, built earlier when he was the head draftsman at the Adler & Sullivan architectural firm. To the right of Wright's house was his mother's house, also on Forest Avenue, the first built in this total complex.

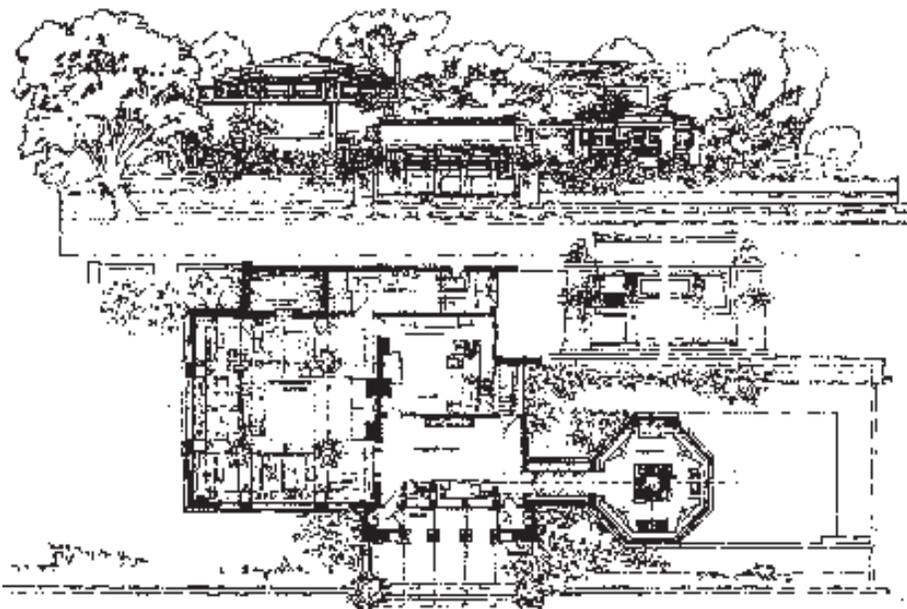
The plan of the studio is articulated with multiple different shapes and spaces. The drafting room to the left is a square on the first level, with an octagon on the second level and an octagonal opening in the second floor connecting the two levels. The private office and lobby / secretarial area adjoin on the right with a stair to the basement, and a corridor leading to another octagonal shaped space - the conference room. The conference room is actually a story and a half tall with the upper level coves framing the windows also octagons, but rotated 22.5° or a half an octagonal side, with respect to the lower octagon. Connecting to Wright's house

between the house and the studio. There are fireplaces in the drafting room, Mr. Wright's office and the conference room.

The construction is masonry on the lower walls to about midway up the first level, with wood shingles from there up. The drafting room roofs are pitched shingle and the entry through Wright's office are "flat". The entry has columns in antis (between walls) that are of masonry with some of Wright's strangest ornament ever at the base and capital. There is a dichotomy to the entry - two doors left and right from the central entrance. All of the interior finishes are plaster wall surfaces with extensive wood trim and wood cabinetry throughout. Fine brickwork surrounds the fireplaces.

The entire ensemble is somewhat disjointed and lacks the unity of the projects produced within it. But it is a seminal building, a "workshop" if you will, that Wright devised to test design theories in the flesh. Some of his apprentices relate that he was always redesigning the furniture and fixtures in his office in particular, but also those in the remainder of the studio.

Wright occupied the studio from 1895 to 1914, when he fled the country to Europe with his client's wife, Mrs. Mamah Cheney. Evidently, the six children's proximity and vaunted disruption of his work by coming into the studio to play, his mother's closeness, and his concentration upon domestic or house design, contributed to a massive mid-life crisis and a wandering eye. After the divorce, the studio was converted to apartments, which provided some income to Catherine Tobin Wright and the children. Wright moved to Wisconsin and built Taliesin, his studio, farm and residence. Wright's studio and the connecting house are now owned by the National Trust and have been beautifully restored to the pre 1914 era. It is well worth the trip to see them.



The entrance was on Chicago Avenue at the bottom of the plan below, which was

are the vault for the important documents, and a stair to accommodate level changes

INSULATION REALLY DOES SAVE ENERGY

In December 1993, E&A reroofed its Metairie office building of 1,500 square feet and its adjoining storeroom of 300 square feet. When originally built in 1976, the 4 ply smooth surface asphalt on fiberglass felts built up roof system was placed directly on the sloped plywood roof deck with no roof deck insulation. The ceilings were insulated with 6" thick foil faced fiberglass batts (R19) placed directly upon the suspended ceiling tiles. The exterior walls are of non insulated tinted non reflective glass, from 30" above the floor to the top 9' with the walls below filled with 4" thick foil faced fiberglass batts (R11). Insulated glass was not readily available at an affordable price in those days, but the building has a 5.5' overhang designed by orientation to shield the glass except in the winter months, when one wants the sun to shine in the glass.

The building originally had roof top HVAC units that were not the energy efficient types that are manufactured today. Both units had been changed to the energy efficient type four years before the roof system was changed.

The original roof system had a reflective coating over the top flood coat of asphalt. The life of the roof system would probably have been extended beyond the almost 18 years that it had, but for the raccoons. The building adjoins a drainage canal that teems with wildlife -- herons,

egrets, alligators, turtles, fish and raccoons. The raccoons gnawed a hole in the roof cant at the perimeter edge and built a nest in the overhang. This produced a large leak that went unnoticed, being hidden by tree foliage for quite some time, thereby producing a lot of fungus rot. When discovered, it was fixed, but the raccoons returned and created a new leak through the repair to return to the nest that we had also cleaned out. They built a new nest. This prompted a call to the animal control folks, who provided a trap that caught the entire family. Naturally, this damaged the roof membrane in the area around the nest,

are lay-in type or recessed incandescent, both of which we have.

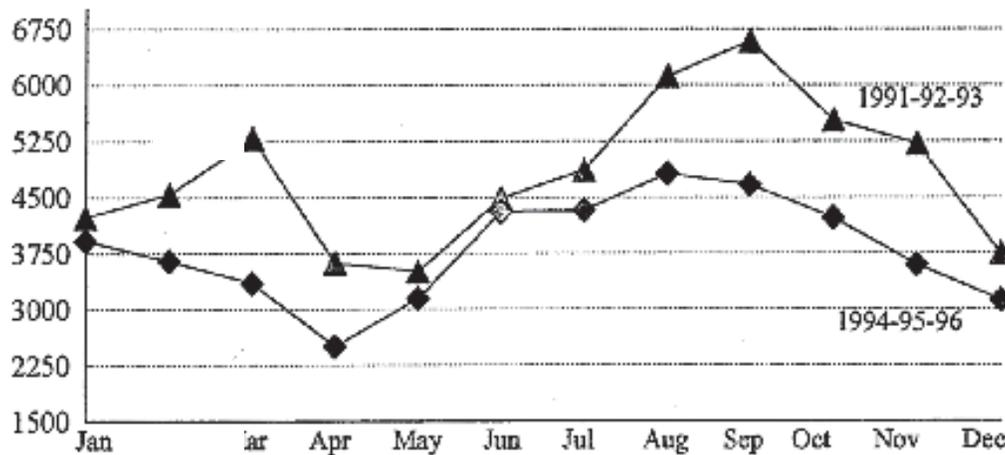
We raised the height of our perimeter parapet by the total thickness of the insulation (3") to maintain the proper cant to membrane relationship. The HVAC units and other penetrations were also raised. The insulation consisted of 2-1/2" of polyisocyanurate (R16.67) foam and 1/2" of perlite board (R1.32) on top of the foam board immediately under the roofing membrane. The polyisocyanurate was chosen because it is virtually nonabsorptive in addition to having a good R value. In the event of an inadvertent future roof leak,

we didn't want to ruin the insulation. The perlite board was chosen for the same reason of non-absorptiveness even though it doesn't have as good of an R value because it can withstand concentrated loading

(people walking, tool boxes, etc.) without crushing like the polyisocyanurate would were it installed by itself.

Adding the insulation to the reroofing added approximately \$1.277 per square foot of roof are of 2,187 SF, or \$2,793 to the cost of the reroofing at the time.

The average savings per year amount of 12,085 kilowatt hours (KWH) and at the rate per KWH of \$0.95, this amounts to an average savings of \$1,148.00 per year. Dividing this into the cost, one gets one's money back in 2.43 years -- well worth the investment.



KWH used per month (3 year averages)
2200 Houma Blvd., Metairie, LA 70001

as well as the rafters which had to be "sistered", or reinforced, in the overhang.

This damage prompted the desire for a new roof a little sooner than what would have occurred otherwise. Once the decision was made, however, we wanted to maximize energy savings if possibly, by adding roof deck insulation. We had noticed that we were experiencing heat losses in the winter and heat gain in the summer by air transmission around the lights in the ceiling. One cannot place insulation directly over the lights as they will get overheated and possibly begin a fire. So there are gaps in the insulation above any ceiling if the lights