

INSTITUTE OF CURRENT WORLD AFFAIRS

ERL - 3
Oak Ridge, Or,
Birth of a City.

32 West 73rd Street
New York, N. Y. 10023
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Mr. Richard H. Nolte
Institute of Current World Affairs
366 Madison Avenue
New York, N. Y.

Dear Mr. Nolte:

Oak Ridge, Tennessee is unique. Many people, indifferent to that overworked adjective, say, "Okay, so much for Oak Ridge, what about cities?" Actually, because its history and existence are so exceptional, because Oak Ridge at age 25 is trying hard to be a "normal" city, because an exception often illustrates the norm, or at least standards and goals that are considered normal, I found Oak Ridge fascinating. So this is the first of several newsletters.

More and more, cities are being created arbitrarily, often for special purposes. Still, going out and building a city is not quite the kind of thing people or governments do after breakfast without guidelines, goals, or even mountains of paper justification.

Oak Ridge was born to house people working on the machinery and materials of the atomic bomb and then the nuclear age. It happened very fast. The site was surveyed in the summer of 1942, and the federal government bought the land in September. The few people living on the "reservation" were moved out, and construction began the following January. By the time the atomic bomb was dropped, three years later, there were 75,000 people living in Oak Ridge. Today there is a stable population of 30,000.

The Manhattan Engineering District needed a large tract of isolated land, protected from the outside world for reasons of safety (since no one really knew what risks were involved), and security. They needed access to substantial amounts of water and electrical power, & a climate conducive to year-round construction. Access to the site had to be controlled, but nearby transportation to the outside world was also necessary.

The land purchased is part of the great valley system of Tennessee, a long valley well protected by ridges and hills, between the Cumberland and the Great Smokies mountains, close enough to Knoxville for transportation purposes, and within the TVA power system. The Clinch River supplies water as well as acting as a natural boundary. Less than 1,000 people were living inside the selected 92 square miles.

Most Oak Ridgers today are surprised to learn, or be reminded, that Oak Ridge is a planned city. The first "plan" happened so fast old-timers (anybody who was there during the war counts today as an old-timer), think it doesn't count as a plan. It does, and it has determined much of the physical character of Oak Ridge. A Master Plan was drawn up in 1948.

"The reservation" is naturally divided into three smaller valleys. The city itself nestles in the northeast section between two parallel and rather steep ridges. The plants were placed deep in hidden valleys, further isolated for safety and security. The paved road running through the valley, widened and renamed "The Oak Ridge Turnpike", became the main drag, around which the linear city was built. The name "Oak Ridge" comes from Black Oak Ridge, as the hilly outer drive area of the present city was called. The name was thought to sound rural and inconspicuous. Nobody knew where or what "Oak Ridge" was, and that was just the way the Army wanted it.

It is important to remember that the entire project was a step into the unknown. Many scientists were skeptical about the feasibility of building the three plants: X-10, the original graphite reactor, now the Oak Ridge National Laboratory; K-25, the gaseous diffusion plant; and Y-12, the electro-magnetic plant that now does a variety of nuclear work. No one knew quite how the town was going to function or what facilities would be needed.

Early in January of 1943 the firm of Skidmore, Owings & Merrill was given a topographical map of an unidentified area and asked to design a town of 3,000 houses with commercial facilities for a population of about 13,000. Location and purpose of town secret. Oh, and by the way, they were told, a minimum amount of grading equipment will be available, even though it is a hilly site. And do it in three days. John Merrill recently recalled that the Army Corps of Engineers took just two hours to approve the hastily drawn plan, and then wanted to know how fast the planners could get to the site. Merrill said he didn't know, because he didn't know where the site was. As the train pulled out of Penn Station in New York, the planners found out they were going to Knoxville.

Once they got to the reservation construction proceeded at such a pace that no blueprints were made (no time), and field operations were directed from the original sketches. In late summer of '43 the plan was expanded to anticipate a population of 42,000. Personnel needs at the three operating plants were re-evaluated the following year and the plan shifted westward to accommodate 62,000. People who lived within 80 miles of the site did not qualify for housing at all. Still, at war's end there were 75,000, including scientists, engineers, operating personnel, administrators and construction workers. Oak Ridge was about nine miles long and two miles wide, slightly larger than Manhattan Island.

If you look for them, Merrill's skeletal planning decisions are visible in Oak Ridge today. Most of them were logical and soundly based in geography, two qualities many communities planned in leisure ignore. The Turnpike served as an effective dividing line. South of it, on flat land, were wartime service facilities, warehouses, storage yards, and the Administration building, which still stands. The residential town was, for the most part, built north of the road. Single family housing high in the hills, multiple dwellings further down, dormitories and commercial structures near the road. In the first sketch the Townsite main shopping area (now called Jackson Square), was about in the middle of the plan, set on a rolling hill directly opposite the Administration building. The high school perched higher on another hill directly behind the Townsite. Ah-h-h, symmetry, the Army watching the stores and the schools in much the same way Lincoln watches Washington and what happens at the Capitol. The east-west proportion along the Turnpike, however, was thrown out of whack by the need to expand both housing and facilities. Eventually, a second dormitory city and business center were built further west, for there was no longer room in the completely planned Townsite area. Basic to the pattern and unduplicated in the second area, were the hospital (which expanded continuously throughout the war), and the Army Guest House (now a privately-owned motel.)

Single family and up to four-family apartment units were deliberately planned in neighborhood fashion around elementary schools and small shopping-recreation centers. Those neighborhoods were more than a gesture of good will, good planning and friendly thinking. Transportation and distribution were simplified greatly by keeping primary, daily need facilities within walking distance. They did, of course, help create a community instead of just a construction camp, in a sea of red mud.

The 3,700 permanent, that is "permanent-for-twenty-years-let's-cross-our-fingers-and-hope" housing units were built out of prefabricated cemesto boards from designs made by the John R. Pierce Co. For emergency housing, and even in comparison with post-war housing built according to normal building standards, the Cemestos were remarkably civilized, well planned, sturdy, and spacious. Among other things, they had fireplaces. Because speed and efficiency were watchwords in construction, many remember the amusing sight of a parade of chimneys preceding housing up and around the hills.

The houses were sited gracefully along the natural contours of the ridges. Little earth was moved. To shorten the distances for plumbing and utility lines, the houses were turned around so that kitchens backed on to the road. Almost all the houses thus faced either woods or vistas, instead of neighbors. Some of the views from the top of the ridge are spectacular.

Theoretically, housing was assigned on the basis of family size and need, reflecting to a lesser degree the head of family's skills, status or income. Scientists found themselves living next door to construction workers, and other unlikely combinations, but they all adjusted to the situation. Still, people remember that Army brass seemed to occupy the ridge houses with the best views. The Manhattan Engineering district supervised the housing assignments.

Much, if not most of the housing constructed during the war was substandard. Ultimately there were 90 dormitories; they may have provided hotel-type services for 50¢ a day, but they were barracks nonetheless. There were almost 6,000 so-called "TVA flattops," construction shacks built of plywood, heated with coal stoves. Some were built on the site, a good many were dismantled and shipped by truck to Oak Ridge from other job sites, a few as close as the Norris Dam, others from as far away as Michigan and Indiana. There were more than 4,000 trailers. And there were over 1,000 "Victory Cottages" known more realistically as "hutments." They were primitive shelters - no glass windows, no running water, no toilets, no winter heating.

In connection with hutments, it is necessary to insert an unpleasant fact. During the second World War it was still the policy of the federal government to "observe local custom" with regard to matters of race. There were no Negroes living in the Oak Ridge area prior to the war. The manpower needs of the secret MED project were great, and it was necessary to get labor by any means. Just how the Negroes came is a matter beclouded by history, conscience and dismay. Some laborers came because the jobs were available, others were caught in the manpower pool. Some may have been shanghaied. However they came, once there, the Negro laborers worked hard, just like everyone else. A few officials, now near - ing retirement age, remember and say, almost mechanically, "It was a matter of expediency. But we asked them how they wanted their work camp, and they said 'Separate.'" The Negro work camp was located south of the Oak Ridge Turnpike, away from the residential districts. If the maps I've seen are correct it was almost entirely hutments.

No one in the outside world knew for sure that a city was being built behind the gates of the "Clinton Engineering Works." People behind the gates, working on an unknown and unexplained secret project, had no reason to think of Oak Ridge as a city. All they could see was an enormous, constantly muddy, construction camp. If the stores and recreation facilities all looked like modified barracks, it was with good reason. The Chapel on the Hill looked exactly like an army chapel. The temporary buildings looked it. The plan, schematic at best, consisted of laying out facilities, functions and streets so that at the end of the war Oak Ridge could become a city without ripping out everything and starting over from scratch. If it is hard for old timers to think back on that physical chaos as having been planned, it is not unreasonable. For some reason "planning" makes people think of prim hedges,

paved walks, and formal gardens. Along with most other signs of completion (not really planning at all), they were conspicuously absent in war time Oak Ridge. Especially sidewalks.

Oak Ridge did have services. The reasoning was simple. For security reasons there was no "easy come, easy go" through the gates. Physical conditions were not always gracious. To make life palatable at all the pie had to be sweetened in a variety of ways. Everything belonged to the government. Everything. Through its management contractor, the Roane Anderson Company (named for the two counties the "reservation" straddles) the government took care of everything. Roane Anderson took the blame, any left over praise went to the army. RA levied and collected the artificially low rents, kept the sewers working, supervised the other contract services, and, to its enduring fame, patched and mended. If the screen door needed fixing, if the stove didn't work, they sent three men up to fix it. (I don't know why, but every story insists it was three men - even for a light bulb!)

Physical maintenance is less interesting than psychological maintenance and the development of social institutions and organizations. A school system, accredited by Anderson County, but run by the MED was set up immediately. Its academic standards were high, though, as Dr. Blankenship remembers, it was impossible to estimate pupil attendance, it grew so fast.

Church groups emerged quickly and naturally. Facilities were so cramped a number had to use the movie theatre for services. Mercifully there are no statistical reports on the effects of Betty Grable posters on the attention spans of parishoners. They are still talking about them though.

The population of Oak Ridge was uniformly young and uprooted. It was not a random group - just the opposite, it was an entirely purposeful collection. The range of skills, training, backgrounds, and interests was broad nonetheless. In a real way Oak Ridge was homogeneous - everyone was from someplace else and stuck in a hectic situation. There were no social traditions, no local customs, no barriers to participation. By 1945 there were 55 social groups and clubs behind the gates. The list runs, alphabetically, from the African Violet Society and Alcoholics Anonymous all the way to the Young Republicans. The tendency to organize has stayed with Oak Ridge, at last count there were more than 240 separate groups.

The Army built a great many social facilities - bowling alleys, movie theaters, and recreation halls. They were administered by the Recreation and Welfare Association which eventually had a staff of 283 people. R&W generated its own operating capital through the unsubtle but effective method of administering the beer monopoly. 75,000 people on a closed reservation, working hard, in a warm climate drink a lot of beer. As long as the

gates surrounded Oak Ridge, the Recreation and Welfare Association had funds available to encourage and sustain many activities that ordinarily would need large subsidies, or not form at all. The musicians found each other quickly. Dr. Waldo Cohen, an eminent and energetic biologist, who brought his cello with him when he first came organized quartets initially. Discovering that there were enough musicians for a symphony, he went to see the R&W people about money to buy a few extra instruments. He remembers that "All the Lieutenant said was, 'How do you spell oboe?'"

Child care on a routine and emergency basis for children of the middle class as well as the poor is a new and coming trend today. It happened in Oak Ridge almost a quarter of a century ago. The reason, given the nature of the place, is obvious and compelling. Oak Ridge's founding generation was young and, as mentioned, isolated. There were no grandmothers. Of course, after the war when the gates came down and they all came to visit, they were called "mothers-in-law." There were no cousins or maiden aunts. If a mother, or especially a working mother, got sick, work at the plants was immediately affected. Two kinds of child care were established: regular day care and emergency care. It was a necessary experiment in socialism.

East Tennessee is moonshine country, something I didn't learn from my reading. Everyone swears that the Army ripped out stills built before the war. But if you wanted it, it was available. One man told me, "I was from the South. The taste didn't bother me at all." The man sitting next to him piped up, "Well, I'm from Wisconsin, and it was awful stuff. I stuck to beer."

The world and most of the people living and working there found out what was happening in Oak Ridge when the atomic bomb was dropped August 6, 1945. A pretty girl sat down next to me on an airplane and told me all about herself. An airlines stewardess, she was on her way home, to a town outside Knoxville - Oak Ridge. When I said that I was going there, too, she assumed I was a scientist (me?). It seems that she is part of Oak Ridge's history. She was born 12 hours after the bomb was dropped, and the wire services carried the story. "It may sound crazy to you," she said, "to identify with a bomb, but it was Oak Ridge's greatest moment. After all, that's what it was all about."


The Atomic Energy Commission came into existence on the first of January, 1947, inheriting along with the nuclear energy programs of the Manhattan Engineering Districts the three atomic cities: Oak Ridge, Richland, Washington, and Los Alamos, New Mexico. While the Army can under wartime conditions create and operate cities for strategic purposes, there was no historical precedent for continued operation by a civilian peacetime agency. One scholar pointed out that, "Practically speaking, the atomic cities exist for much the same purpose as any ordinary municipality, except that in providing local services such as fire protection, water treatment and distribution, etc., upkeep and maintenance of public

grounds, roads, streets ... they also assist the national government on its production and utilization of atomic energy for the common defense and general welfare." And they belonged to the "national government." For a variety of reasons it quickly became clear that the AEC wished and actively wanted Oak Ridge to become independent. The administrative problems alone were enormous. A former chairman of the AEC once said, "One of the main troubles with being in the town planning business is that city management and atomic energy are two entirely unrelated sciences."

City management may purport to be a science, but the creation of civic institutions needed by a municipality, even when the physical facilities exist, borders on being an art, albeit unstudied. The City of Oak Ridge was not incorporated under the laws of the state of Tennessee until 1959.

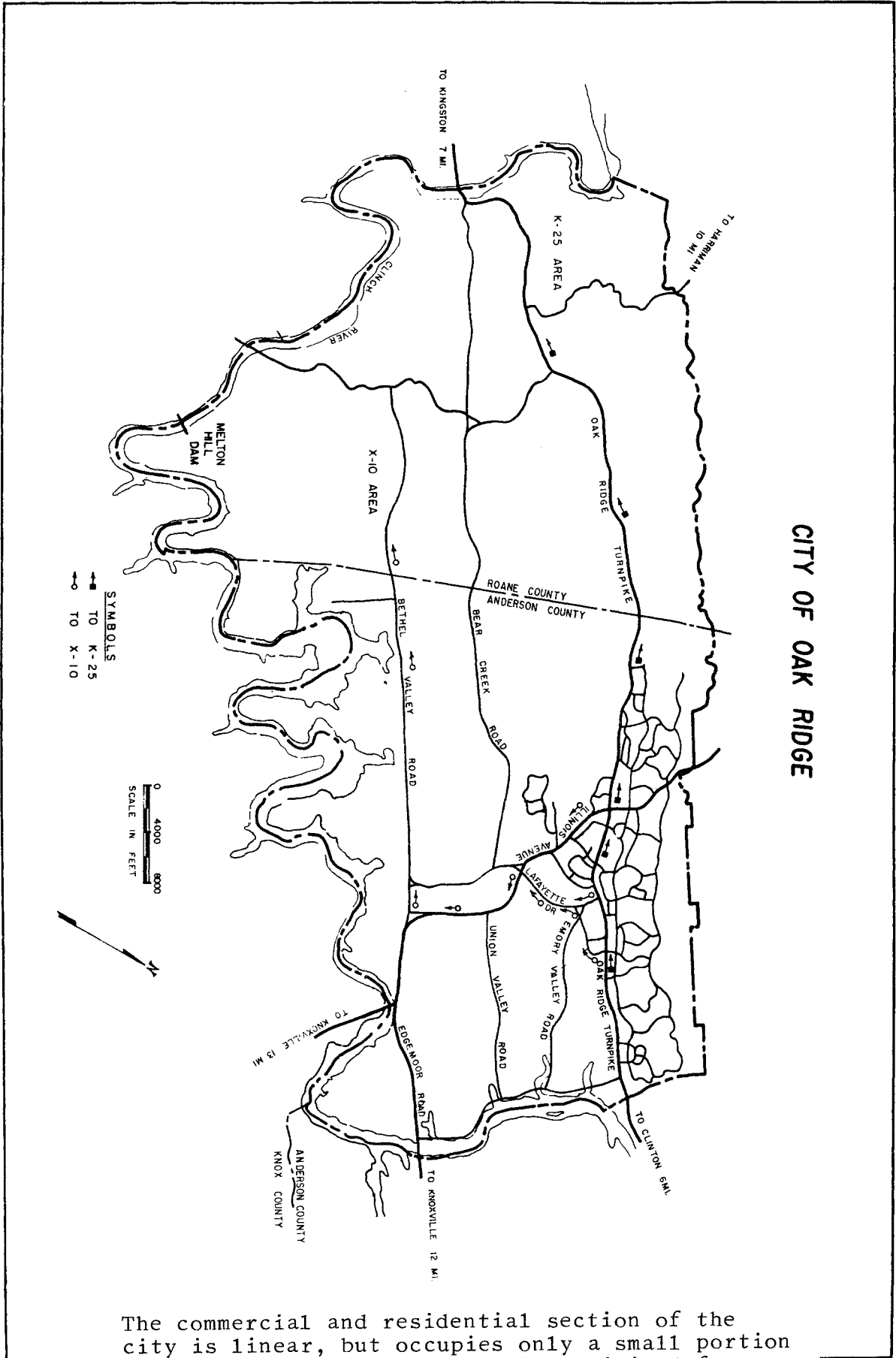
Movie serials end each installment with questions about the next exciting episode. In that great tradition: Can a town without a past find happiness in the real world of home ownership and taxes? Even if low, are taxes ever loveable? Can a city of 30,000 or less support a symphony orchestra? Did the federal government solve the problem of segregation? How do scientists and engineers deal with politics and political behavior?

Sincerely,



Eden Ross Lipson

Received in New York April 14, 1967.



The commercial and residential section of the city is linear, but occupies only a small portion of the municipal land. This is a civil defense map, the arrows show how to get to shelter spaces.