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Barbara Scollin, grandniece of Major General Kenneth D. Nichols continues her series on his life.

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Ample reasons, most notably leadership skills, personality traits and qualifications, led to choosing General (then Colonel) Kenneth D. Nichols as Deputy District Engineer and subsequently as District Engineer of the Manhattan Engineer District (MED). In this capacity he had supervision of the research and development connected with, and the design, construction and operation of all plants required to produce plutonium-239 and uranium-235, including the construction of the towns of Oak Ridge, Tennessee, and Richland, Washington.

The responsibility of his position was massive as he oversaw a workforce of both military and civilian personnel of approximately 125,000; his Oak Ridge office became the center of the wartime atomic energy's activities. He also was responsible for internal security operations in the production facilities that helped keep the development of the atomic bomb secret.

In this tenth installment of several articles covering the life and accomplishments of Kenneth D. Nichols, we see his role in infrastructure and housing as Oak Ridge TN is built "from scratch."

Two prior "start from scratch" assignments (see 5<sup>th</sup> article) dwarfed in comparison with Colonel Kenneth Nichols' next assignment to build a site at Oak Ridge for the Manhattan Project. His and Colonel James C. Marshall's visit and selection of the Elza site July 1-3, 1942, of 26,000 acres grew to a possible 80,000 acres by the time Lt Col Groves visited the site with Marshall on July 24<sup>th</sup>. Ultimately, the U.S. government acquired 59,000 acres.

Nichols recalls, "During the war, some 75,000 people were housed [at Oak Ridge] in dormitories and family housing. To accommodate this population, we had to construct from scratch and then operate a whole city's infrastructure, a sewage system, water supply, and roads, and created fire and police departments as well as provide theaters, churches, stores, libraries, schools, offices, cafeteria, hotel, laundry service, etc."

The Oak Ridge [Elza] site was chosen for several reasons:

- The TVA providing power,
- Ample water from the Cinch River,
- Natural valleys and ridges providing necessary isolation and boundaries,
- Railway for transporting supplies and material,
- Sufficient acreage for building four proposed plants, and,
- A trained Knoxville workforce of construction workers was available.

Moving to Oak Ridge on October 3, 1943, Colonel Nichols transferred the Manhattan Engineer District from New York City to the Clinton Engineer Works (CEW). His main focus was on the production facilities for the bomb, but practical considerations for the workforce also had to be addressed. Nichols recalls, "Administering Oak Ridge proved a fascinating, demanding and difficult problem throughout the war... The overall policy I was determined to establish was that Oak Ridge approximate a normal midwestern town – at least as normal as conditions at a secret installation under Army control would allow. I resisted all efforts to introduce novel ideas advanced by some people, including such things as a unified religion, self-government, and experimental educational methods.

"More headaches for me were generated per dollar spent in the construction and operation of the town than for any of the production plants. ... Handling personnel on a construction job or in an operating plant was one thing, but being responsible for the men, women and children in a government-owned town of which the best that can be said for the form of government is that it was a benevolent dictatorship was another matter."

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Infrastructure, especially adequate roads and bridges was key to production as well as everyday life. The road around CEW was inadequate to support the volume of commuter traffic (over 40,000 workers were commuting into Oak Ridge daily). A local judge threatened to close the Solway bridge, so the governor's help was needed. Governor Cooper was personally invited to Oak Ridge by Colonel Nichols; General Groves made a point of being there as well.

Then the unexpected happened. Nichols explained: "[Starting] at the Andrew Johnson Hotel [in Knoxville] ... accompanied by police escort, our motorcade ... was passing four huge LeTourneau scrapers bound for the K-25 plant site. At that moment, the lead police car blasted its siren. This startled one of the LeTourneau drivers, and as our car passed his scraper, it toppled off the edge of the road and down the steep bank. The scraper rolled over a couple of times, the driver scrambling to stay on the top side. When it stopped, he scrambled up the hill. Quite a spectacle!

"I promptly ordered our driver to stop and went back to see if the man was injured. Miraculously, he wasn't. I invited him to meet the governor. As we headed on our way, the governor commented, 'If that was staged for me, don't do it again. I am fully convinced that you need better access roads."

Later that evening, another unexpected event occurred at the Nichols' residence while entertaining the governor and special guests. Jackie Nichols' specially carved ice punchbowl sprang a leak and was spouting bourbon. (In a 'dry' county, the bourbon alone could have been problematic, but Nick had done his homework on the punch. The TN Secretary of State suggested, "Make it real good and no one will ask about the contents".)

The governor exclaimed, "Now I have seen everything... You have a most impressive town and fantastic plants, but this caps everything. I've never in my life seen bourbon flowing so freely." The governor finally smiled for the first time that day and Nichols recalls, "As a result of his visit, we had little trouble negotiating with the state for road improvements and a completely new access road. Also, we later came to an understanding with the county judge about his bridge."

Homes were built by a competitive contract bidding process, 1000-2000 at a time, one every thirty minutes (fully furnished). Homes consisted of multi-family units (2,833 in total), as well as flat-top units (3,373), 90 dormitories (with 13,368 rooms) and 5,000 trailers and hutments (tent-like structures). The architect-engineer designing the homes was Skidmore, Owings & Merrill. Town layout & planning including design of communal facilities was by Stone and Webster.

June Adamson, neighbor to Colonel Nichols, reflected on him and the early planning of Oak Ridge, "He was a very nice man, there is no other way of putting it. He was fair, he was smart, it's because of him that the town is laid out the way it is. If Groves had had his way... he would have bulldozed down the valley and gotten rid of all the trees and never mind what kind of houses, he didn't care. Nichols cared, he wanted this to be a real community, and it's thanks to him that it is laid out as it is."

Nichols did decide not to raze the hills and ridges in the residential areas. He later reflected, "I ... was glad that we had laid out the town along the ridges instead of the lower and flatter areas. Perhaps this cost a bit more than absolutely necessary (certainly more than Groves would have liked), but I know it more than paid off both in morale and in recruitment of professional workers during and after the war. The icing on the cake, as far as I am concerned, is that four decades later, residents live in Oak Ridge by choice, and some who came in the early days still were there forty years later."

The Nichols were the first to move to Olney Lane (111 Olney Lane was one of 700 type D homes built at Oak Ridge each costing \$6,691). Jackie recalls, "Conforming to the terrain, streets were laid out in pleasing curves. Five different housing plans were situated according to the best features of the building sites, but there were neither curbs nor sidewalks. Instead, wooden board walks curved through the woods between dwellings forming a solid footpath. ...

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"Every day, long lines of trucks delivered prefab houses, painted like colorful Easter eggs, and off-loaded them onto building sites with ample yards. As if by magic, plumbing and electricity were hooked up and within hours, somebody from somewhere moved in to do something in the Manhattan Project. Until all the building was complete, the noise, mud and traffic was unbelievable.

- "...There was no dryer, but there was an ample coal bin into which coal was routinely delivered. Hardwood floors, venetian blinds, eggshell painted walls and ceilings made the house light and cheerful.
- "... CEW was operated by a contract (Roane-Anderson Company) which supplied all the required service functions such as transportation, housing and education; hospital and medical services were furnished by the military... [Actually Roane-Anderson "organized and operated the bus lines, garbage collection, the school system, the hospital, management of all the housing, the hotel, the fire department, central eating facilities, and practically everything else pertaining to town operation, including delivering coal to individual houses" according to General Nichols in his book "The Road to Trinity, A Personal Account of How America's Nuclear Policies Were Made".]

"Oak Ridge residents were all young, healthy, and fertile. There was no shortage of pregnant women or young toddlers. There was, however, a shortage of food, fuel, fun and a marked shortage of grandmothers. Whereas the men were totally immersed in their work, wives and mothers in this secret city managed a sort of 'bring daddy home' household. It was reported that a sign in a master bedroom read: 'Daddy Sleeps Here – Sometimes!'"

By mid-1945, Nick and Jackie were caring for their newly adopted babies Kenneth David ("David") Nichols, Jr., and Jacqueline Ann ("Jan") Nichols and were very happy parents. Kind neighbors on Olney Lane such as Patricia Gates helped with baby-sitting when Nick and Jackie were out of town. Patricia Gates recalls, "From Nick... I learned about taking time out for your children. He and Jackie adored their babies, Jan and David, and we were pleased when they trusted us to take care of those babies when they had to travel. Nick was always concerned with all the children in Jackie's family... No matter how heavy his responsibilities, he always found time for family."

Neighbors on Olney Lane became lifelong friends with Nick and Jackie: George and June Adamson, Dr. Arthur and Betty Compton, Ambassador Patricia Gates Lynch Ewell, Frances Smith Gates, and Colonel Pete and Fran Weil.

Colonel Nichols' time was always in demand, at home and at his office "The Castle on the Hill".

Next up: Building Oak Ridge "from scratch," Part 2

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Thank you, Barbara Rogers Scollin, grandniece of General Kenneth D. Nichols. This series has been most enlightening. The events described in such detail makes the Oak Ridge of the Manhattan Project come to life!

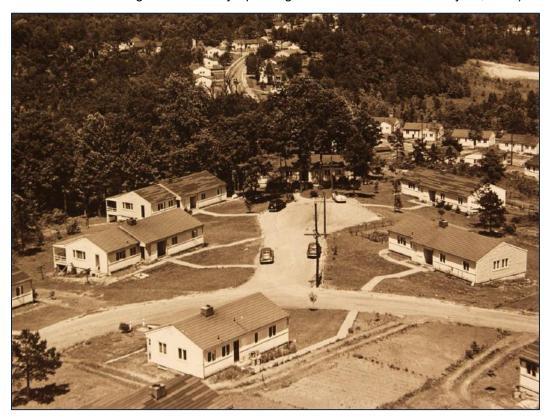
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Colonel Kenneth Nichols introduced to Military officer and others (unknown).

Oak Ridge, TN, World War II. Photo by Ed Westcott. (Courtesy: Emily (Westcott) & Don Hunnicutt)

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Aerial view of housing at Oak Ridge c. 1944 (Courtesy Atomic Heritage Foundation)

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The Nichols' residence 1943-1946 at 111 Olney Lane Photo by Ray Smith (Courtesy of Ray Smith)