NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

(13) 17

. Name of Property	
istoric name: Clinton Engineer Works Townsite	
ther name/site number: Oak Ridge Historic District (Preferred)	
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. Location	
treet & number: Bounded by East Dr., W. Outer Dr., Louisiana, & Tennessee	Aves.
not for publication	: <u>N/A</u>
ity/town: Oak Ridge vicinity	· <u>N/A</u>
tate: TN county: Anderson code: 001 zip code:	37830
. Classification	
wnership of Property: Private/Public-Local	
ategory of Property:	
umber of Resources within Property:	
Contributing Noncontributing	
<u>3714</u> <u>1363</u> buildings	
sites structures	
objects	

umber of contributing resources previously listed in the National Register: $\underline{\text{N/A}}$

ame of related multiple property listing: <u>Historic and Architectural Resources</u> f Oak Ridge

l. State/F	ederal Agency	Certification		~ _	.7	1.0
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7.: Description	* * * * * * * * * * * * * * * * * * *
rchitectural Classification:	
Other: see text	SEP 2 1991
	
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Materials: foundation <u>concrete</u> roof <u>asphalt</u> walls <u>cemesto</u> other <u>wood</u>	- -
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. Statement of Significance	
ertifying official has considered the significance elation to other properties: National .	e of this property in
pplicable National Register Criteria: A, C	•
riteria Considerations (Exceptions) :G	
reas of Significance: Community Planning and Devel Architecture Military History	elopment
eriod(s) of Significance: 1942-1959	
ignificant Dates : 1942, 1947, 1959	•
ignificant Person(s): N/A.	
ultural Affiliation: N/A	
rchitect/Builder: Skidmore, Owings, Merrill Stone and Webster Engineering Fi See continuation sheet for other	
tate significance of property, and justify criterial areas and periods of significance noted above.	ia, criteria considerations,
See continuation sheet.	
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Major Bibliographical References	SEP	5	1991	1
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revious documentation on file (NPS): N/A				.,
preliminary determination of individual listing (36 CFR 67) requested. previously listed in the National Register previously determined eligible by the National Register designated a National Historic Landmark recorded by Historic American Buildings Survey # recorded by Historic American Engineering Record #	has	bee	n	
rimary Location of Additional Data:				. •
State historic preservation office Other state agency Federal agency Local government University Other Specify Repository:			•	
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0. Geographical Data				
Creage of Property: approximately 3500 acres TM References: Zone Easting Northing Zone Easting Northing A 16 742300 3788120 B 16 750570 3994000 C 16 752150 3991850 D 16 745080 3987130 See continuation sheet.				
erbal Boundary Description: X See continuation sheet.				
oundary Justification: X See continuation sheet.				
1. Form Prepared By				-
ame/Title: Kimberley A. Murphy rganization: Thomason and Associates Date: 4/9	5/91			
treet & Number: P.O. Box 121225 Telephone: (515)	383-	0227	
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947. The Chicago design firm of Skidmore, Owings, and Merrill was hired by the lederal government to create a secret townsite that could house the operating last Tennessee. CEW was a codename given to the site where industrial plants lirst atomic bomb.

The original reservation contained nearly 59,000 acres (92 square miles) of land between Black Oak Ridge and the Clinch River. The townsite took up only about 12 quare miles and was divided into several residential neighborhoods laid out long the eastern slope of Black Oak Ridge. The streets follow the topography of the many ridges and gulleys that make up the city's natural landscape. The houses are well spaced and located at various angles to the street to allow for privacy not to facilitate utility hookups and coal delivery. The houses sit on irregular ots that average less that half an acre in size.

riginally planned to house only 13,000 people, the ultimate population of Oak idge reached 75,000 by the war's end. Each section of town is characterized by ouses built in one of several different plans. The neighborhoods and the types f houses located in them illustrate the many phases of construction between 1943 nd 1945. The neighborhoods of Pine Valley, Elm Grove, and Outer Drive were built uring the first phase of construction and contain semi-permanent cemesto houses Types A - H) that were originally designed to last only for a maximum of twenty-There are also a few post-war ranch-style houses eighborhoods that were constructed under the direction of AEC after the war nded. The houses in the far east end of town were built in the second phase of onstruction and originally included two cemesto types and hundreds of temporary ouses brought in from TVA projects. The TVA houses were later replaced by postar houses constructed under Title VIII and Title IX of the Federal Housing Act. he final phase of construction included the temporary houses located between ennsylvania and Louisiana Avenues. Pennsylvania Avenue marked the division etween east and west, "permanent" and temporary. Dormitories, apartments, railers, barracks, and hutments were used throughout all phases of construction ntil the end of the war (see cover form).

ousing assignments were made according to the applicant's military rank or, if he applicant was a civilian, according to his or her importance to the project. Ommissioned officers, scientists, engineers, and other important personnel were pused in the cemesto neighborhoods of Pine Valley, Elm Grove, and Outer Drive. In the project in trailers and barracks until their accommodations were ready. The project grew, new neighborhoods with temporary dwellings were added to be commodate a growing influx of scientists and engineers. Aside from rank, the project grey in the project grey with separate trailer camps and hutment areas to black workers.

ne shortage of adequate housing did not end with the coming of peace. The

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remporary townsite became a permanent city after the war, although it continued to be owned and operated by a federal agency, the newly-created Atomic Energy Commission. Under the direction of the AEC, SOM wrote a Master Plan for the City of Oak Ridge. Dilapidated housing was removed and replaced by privately-built nouses under Titles VIII and IX of the FeederalHousing Act and fifty new ranch nouses (Models 31 - 34) were constructed in the cemesto area. In 1951, the jovernment released lands to be sold to church congregations and twenty-eight thurches were constructed between 1951 and 1959. There was no private ownership of houses, however, until 1956, when the first houses were released for sale. By 1958, 90% of the residents in Oak Ridge owned their homes, making it possible for Oak Ridge to incorporate in 1959.

1. War-time Housing

All cemesto houses (A, B, C, D, and E) were originally constructed between California and Pennsylvania Avenues. The F, G, and H houses were added in late 943, after the initial phase of development was completed. None of the cemesto nomes were built with basements, although almost all have had basements added. A single house took only two hours to build; one house was completed every thirty ninutes, and thirty to forty were being occupied daily. All of the single family nomes that were built during the war in the original townsite are cemesto houses. They were better built than other house-types constructed during the war and were expected to have a life-span of twenty-five years.

To alterations were made to any of the houses until 1956, when they were released for sale by AEC. The most widespread addition to all the cemesto houses was the mmediate digging of a basement. Other alterations include the addition of edrooms to the side or rear of the house, or the extension of the living area, which almost always faces the back, wooded side of the lot. About 20% of the emesto homes retain their original cemesto siding, although in many cases it has een painted. Many homeowners have applied aluminum or vinyl siding atop the riginal cemesto siding, with aluminum being the most popular. A few residences wave siding of asbestos or composition shingles. All of the houses have new roofs of asphalt shingles, as most modern roofs rarely last more than thirty years. In lany cases porches have been screened, glassed, or completely enclosed. Porches hat have been retained have sometimes been altered with wrought iron supports and rails. Some porches, however, are completely original and are missing only he ladder-style trellis. Original wood windows and doors have often been eplaced with the more economical storm windows and doors, although the original size and arrangement has usually been retained. In spite of the many exterior hanges to the fabric of the buildings, the forms that distinguish them as being vartime cemesto houses have not changed. A familiarity with the original haracteristics of the different types helps to classify even the most altered couses. Descriptions below are of original features and common major alterations. riginal numbers are given when known.

here are 692 A-houses remaining out of 700 that were built. Of these, 595 are onsidered contributing. The Type-A house is 32 feet wide by 24 feet deep, with

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net area of 768 square feet. The kitchen facade has four bays and the formal lacade has three bays, one of which is a picture window. Each house has a central interior chimney. The irregular floor plan consists of a living room and kitchen it one end of the house, with the bedrooms and bath at the other end. The porch extends from the living room. Four-light, wood frame casement windows are found in all A-houses. The A's are evenly distributed throughout the original townsite, between California and Pennsylvania Avenues.

ype-B units are 40 feet wide by 24 feet deep, with a net area of 960 square eet. The formal facade has four bays, with two picture windows often facing the lore scenic back yard. The Type-B cemesto is similar in plan to the A-house, with wo bedrooms on one end of the house. The B-house has a larger utility room and in added dining alcove. The windows in the B-house are also four-light, wood rame casements. Of the 794 remaining B-houses, 648 are contributing. 800 were riginally built throughout the townsite.

he C's are located throughout the original townsite. The Type-C cemesto is also of feet by 24 feet, with a 17 foot secondary wing on the primary facade that ouses the kitchen and utility room. Three bedrooms and a bathroom are located in the primary wing of the house. The main entrance leads to a foyer and large iving room with an adjacent rear porch. A secondary entrance services the itchen/utility room. The house has an interior end chimney and paired single-ight casement windows. The net area of the C-house is 1184 square feet.

he two types of D-houses, D-1 and D-2, are identical in plan. The D-houses were ften clad with cemesto on the main facade and an alternative material (usually hard wood) on the other sides. Most D's retain the original cemesto siding, but ave had a brick veneer applied to the lower sections of the front facade. Each nit consists of a living room with a wood-burning fireplace, a separate dining oom, three bedrooms, entrance hall, kitchen, bath, utility room and an open orch off the dining room. The main facade has six bays which include the formal ntry and a screened entrance into the utility room. The primary entrance is ecessed and leads to a foyer that joins a short hallway into the living and ining rooms, which face the back of the house. Three bedrooms are located at the ar end of the house, adjacent to the foyer. The secondary entrance is shaded by ertical wood screen and leads to the utility room and kitchen, in front of the iving/dining room. The roof line is sloped over the kitchen wing. There is an nterior chimney on the raised section of the roof. The D-2 is identical in plan o the D-1, with the exception of an added bathroom located in the dressing room f the master bedroom. The net area of both units is 1584 square feet. Until the houses were constructed, the D-type house was the most desirable during the war ecause it was the largest and had the most amenities. 477 D-type houses were uilt in Oak Ridge and 443 of these remain standing. 427 of the 443 houses that xist are contributing.

he F-houses were added to the original community and in the eastern sections of own when it became apparent that more housing was needed. Only 53 units were

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built, 49 of which are still standing. They too, are located randomly throughout the original townsite, sometimes near the top of the ridge on Outer Drive. Only two are non-contributing. Each unit measures approximately 54' by 44' and has a net area of 1620 square feet in addition to unfinished basement space. The L-shape plan consists of a dining room, utility room and kitchen with a secondary exterior entrance in the front wing. The main entrance in the ell-joint leads into a foyer with the living room in the main section. The side wing contains three bedrooms and a bathroom. There is an interior chimney in the rear of the nouse. Windows are paired casements with four lights. Because they were large, the F-houses were reserved for important military and civilian personnel.

Forty Type-G houses were built in East Village, the fourth neighborhood in SOM's plan. Roughly 24 by 28 feet with an area of 672 square feet, the G-house is the smallest of the cemesto homes. The interior space of the unit is divided into four roughly equal part containing a living room with a dining alcove, two pedrooms, bath and a kitchen. A two-bay open porch is located off the living coom. The front facade has three bays, with one picture window. All of the 40 original G-houses remain standing and of these 34 are contributing.

The H-house is also located in East Village. Slightly larger than the G-house, the H-house has three bedrooms. The interior space is identical to that of the 3-house, with an additional bedroom carved out of the living room. The house neasures 24 by 32 feet and has a net area of 768 square feet. The porch extends across the living room and added bedroom. Only ten H-houses were built and all are in good condition, with nine of them contributing.

The E-buildings are the only multi-family units of cemesto construction. Unlike the single-family cemesto houses, the E-houses were built in clusters. Three mits often form a central courtyard, or they might be lined up in rows. There are 90 E-buildings remaining of the original 137, and of these 86 contributing. They were built in the original community, in the neighborhoods of Pine Valley, Outer Drive and Elm Grove. Most are located in the area around East Cennessee Avenue, near lower California, Florida, Georgia, New York, Pennsylvania, and Vermont Avenues.

The Type-E house is a four-unit apartment building with two one-bedroom (E-1), ind two two-bedroom apartments (E-2). The E-1 units are one-story wings situated on either end of the two-story, E-2 units. The E-1 is approximately 18 by 28 feet and consists of a living room, bedroom, kitchen, bath, and small recessed porch. The net area is 504 square feet. The two-story E-2 units are approximately 22 by 20 feet with a net area of 800 square feet. The first floor consists of a living room and kitchen while two bedrooms and a bath are located on the second floor. When they were built, one hundred of these buildings had wood-burning fireplaces in each unit, with exterior end chimneys separating the one- and two-story units.

the two-story, multi-family K-houses are made up of two K-1 (one bedroom) units und two K-2 (two-bedroom) units. Each unit measures about 29 feet by 30 feet, for building size of roughly 29 feet by 60 feet. K-1 units, with 656 square feet,

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pen porch. The K-2 units on the second floor contain two bedroom, bath, and quare feet. The windows are single-light casement or fixed in wood frames. The nits are arranged so that the two-story porches flank a massed facade. The priginal number of K's that were constructed is not known, but fifty were surveyed and all are contributing.

The Type-L duplex is a two-story, two family unit. Each individual building contains one L-2 plan and one L-3 plan. The two units are massed together in an plan, with the L-2 perpendicular to the L-3. L-3, with a net area of 1134 cloor, with three bedrooms and bath on the second floor. The L-2 is smaller and limensions of the entire L-Type are 29' by 40'. The porch for the L-2 is nested in the ell, while the L-3 porch is located on the opposite side of the building. In the other houses, the windows are wood frame casements. Like the K's, it is not known how many L's were constructed. 57 of the 59 L's inventoried in the urvey are contributing.

he RB-1 and RC-1 TVA flattops are one story, single family, frame dwelling nits. The exterior walls were originally plywood over a wood frame and were ntended to last six years. The flattops were renovated after the war and many ow have wood, synthetic, or shingle siding. The foundations are of treated imber and are sometimes hidden by a wood lattice screen. Some have had basements dded, although it was not as common to dig a basement for these perceived temporary" structures as it was for the more permanent cemesto houses. There is row of six square fixed windows on each facade of the house. The RB-1 has a hree-light picture window next to the entrance and the RC-1 has a four-light indow. Each unit consists of a living room, two or three bedrooms, a storage loset, kitchen and bathroom with a stall shower. An electric range and electric eater were provided with each unit when they were first brought to Oak Ridge. he net area of the smaller RB-1 unit is 576 square feet. The three-bedroom RC-1 nit has a net area of 768 square feet. The Army borrowed hundreds of houses rom TVA. Some became dilapidated and were torn down after the war ended, others ere dismantled and used as housing at other TVA projects. 240 RB-1's were urveyed, 207 of them contributing. 97 of the 130 RC-1's that were surveyed are lso contributing.

undreds of temporary T, U and TDUs were brought in from federal housing projects ll over the country. 244 temporary T and U house were surveyed, 230 of which ere found to be contributing. The T and U houses are six bays long with extrances at either end. The T-houses are made up of two units, one with two edrooms and one with three. The U-houses are two, two-bedroom units. The T-is and U's are each six bays long with an entrance at each end, usually covered a small porch. There are two interior fireplaces, one in the middle of each it in the building. The windows are 1/1 wood sash and vary in size, depending the room in which they are placed.

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he TDUs (Temporary Dwelling Units) contain one to six units per building and ere built in many configurations. Most are located along Jefferson Avenue, and ear Robertsville Junior High School. One duplex form has eight bays, with an ntrance at each end of the front facade. Another eight-bay form has a band of our windows in the center, a door at either side, and then another window. indows are 6/6 wood sash, and original doors are wood paneled, with wood frame creened doors. Each unit has an interior concrete block chimney. Some duplex nits are joined to single units at either end by a covered porch. All have abled roofs with asphalt shingles. Some have cut-away porches on the rear acade, evident only in the roof shape. 262 of the 322 TDUs surveyed are ontributing.

wo types of temporary prefabricated single-family houses, designated S and V, re known to have been manufactured in Oak Ridge but none remain standing. They are similar in style and construction to the TVA houses but were in such poor ondition following the war that they were replaced by privately built homes.

ype A-1 Apartments have exterior walls of asbestos cement fiber-board on a wood rame. The foundation is of concrete block on concrete footings and the roof is ineral surfaced composition over insulation board and wood sheathing. Windows re paired four-light wood casement. There is a glass and aluminum entry porch a the central section that leads to a lobby. The building contains 65 units, ach having 321 square feet. Each unit is about 17 feet wide by 18 feet deep. Out f this living space is partitioned a bathroom and an efficiency kitchen.

he Type A-2 and A-3 efficiency apartments are located in two two-story apartment uildings near the Guest House on Madison Road and Michigan Avenue. The onstruction materials and methods are identical to the A-1 type. Each apartment uilding consists of one unit with a living room, two bedrooms, bath and fficiency kitchen, and 23 units with only one bedroom. Each unit measures 25 set wide by 14 feet deep and has a net area of 500 square feet. The main atrance to each building is marked by a large 24-light window that crosses both tories. There is a flat roof extension above the window and porch. All the A-ype apartment buildings are in excellent condition and are considered ontributing.

nere are fifteen Type N apartments are located in the Highland View sighborhood. Most are in poor condition, but because they retain their original orms, materials, and characteristics, they are contributing. These two-story mildings have foundations of concrete block and exterior walls of wood siding yer a wood frame. The roof is two-ply felt and two-ply composition over wood meathing. Two concrete firewalls divide each building into three sections, each ontaining 12 units, six on each floor. A two-story recessed porch runs the stire length of the building, with steps at either end. Each unit consists of living room, bedroom, bath and kitchen. Each unit is 23 feet wide by almost 24 set deep, with a net area of 578 square feet. The main entrance is to the dining soom from an exterior door from the porch.

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Dormitories in Oak Ridge were built in an H-plan or an S-plan and were designed by Stone and Webster Engineering Corporation, the general construction contractors for the project. Each dorm was two stories tall and was usually fifteen bays long. Windows are 6/6 wood sash, and original doors were paneled wood with six lights. The buildings had hipped roofs with the monitor vents that signify almost all of S&W's buildings. Wood staircases on the end of each dorm provided exterior access to the second floor. Over 13,000 people lived in 93 dormitories that were concentrated in five locations throughout the reservation. Two to four people lived in each room. A section of Abilene Hall, an H-dorm, still exists in East Village and was used as a meeting place for the congregation of Kern Methodist Church from 1946-1950. It is included as a contributing building.

The largest concentration of dorms on the east end were those between Georgia Avenue and Tennyson Road, and Tennessee Avenue and the Turnpike. There were six 3-plan dorms, thirteen H-plan dorms, and one I-plan dorm. Also in the area were a cafeteria and laundry. Only Cheyenne and Charlotte Halls remain and the laundry is still in operation. Charlotte and Cheyenne remain intact and in nearly original condition. They are located near the center of town and serve as the Dak Ridge headquarters for Martin Marietta Energy Systems, Incorporated. These dorms have been well-maintained and are contributing. The third concentration of dorms was west of Robertsville School, extending on both sides of the Turnpike. There were twenty-six S-plans, twelve H-plans, three Hostess houses and a cafeteria. Twelve H-plan dorms were built on Jefferson Circle and made up the fourth area. The fifth area was almost adjacent, on Lincoln Road and Lincoln Circle. There were five H-plans and twelve S-plans. There is one S-dorm in this area that has been converted into a motel/boarding house. The building is in poor condition and does not contribute to the integrity of the historic district. With the exception of these 3-1/2 dorms (Abilene, Cheyenne, and Charlotte Halls), all dormitories were torn down in the post-war years.

o. Schools

The original Oak Ridge High School was located above Jackson Square. Adjacent to the school was the football field, later named Blankenship Field after the school system's first superintendent. Blankenship Field is a contributing structure into the district. The following schools are the only wartime schools that have not been demolished or replaced. All three are contributing.

Dine Valley School was built in 1943 at a cost of \$326,000 and is identical in plan to the demolished Cedar Hill School. The H-plan building was constructed on a concrete foundation with exterior walls finished with 2" cemesto panels on a mood framework. Nineteen rooms were built to serve a maximum of 610 students. Lach classroom was built with a bank of windows with forty fixed lights. The main entrance doors are wood and glass design with five horizontal panels and above the doors are transoms. Other original doors are metal frame with three vertical ights. At the rear is a brick addition designed to complement the original

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building. The school was converted to serve as the School Administration Building. Pine Valley School is located on New York Avenue, in the cemesto area.

Highland View School cost \$181,000 and was completed in 1944. The school was built to serve students living in T, U, and TDU style houses, east of Illinois Avenue. The building was constructed of wood with exterior mineral surfaced fiberboard and a concrete foundation. The school has twenty-five classrooms with a capacity of 765 students. The irregular plan is made up of three wings berpendicular to each other. Classrooms have exterior entrances with original wood, five-paneled doors. Windows are original wood frame, triple-hung sash. There is a small parking area in front of the school, with playgrounds and playing fields located on all sides of the school. The school is currently used by the Oak Ridge Children's Museum.

Slenwood School was built in 1944 with nineteen classrooms to serve 600 students. The school was designed with a large central section and adjacent lateral wings. The original building is one-story in height, of frame construction and rests on a concrete foundation. The gable roof is covered with asphalt shingles. The gym/auditorium is located directly behind the lobby and is constructed of concrete blocks. Each classroom has an exterior wood frame paneled door and transom. Window openings have six triple-hung wood sash windows in each classroom. The doors in the main entrance have been replaced by solid wood doors out original wood and glass double doors are still present in other exterior openings. The school is located on Audubon Road, in East Village.

c. Churches

Three Army chapels, Chapel on the Hill, East Chapel and West Chapel, were constructed on the original townsite. Chapel on the Hill is located in the ricinity of Jackson Square. The chapel is an example of the Army's 700 Series lesign. Of frame construction, the church is a three-bay, gable-front, cectangular plan building with a gable entry porch. There is a steepled bell-tower at the crest of the roof. The windows are original six-over six double-nung wood sash. The double paneled wood doors have a six-light transom above the frame. There is a round fixed-light window in the gable field above the entrance.

East Chapel and West Chapel were built identical to Chapel on the Hill. East Chapel in East Village remains in use; West Chapel was original located in West Village, near Jefferson Square, and has been demolished. Chapel on the Hill and East Chapel retain their original forms and are contributing.

1. Commercial buildings

There are two neighborhood centers that remain in original condition located in the neighborhoods of Elm Grove and Outer Drive. These centers are identical lesigns of frame construction with plate-glass storefronts on wood bulkheads. The storefronts are recessed below the roof to form a porch supported by square wood solumns. At both ends is an extended wing. One wing had a gable front with nine

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arge fixed-light windows. The opposite wing originally housed the neighborhood irehouse. These commercial centers continue to serve the neighborhoods with pecialty shops and services. Some of the original paneled wood doors have been eplaced with modern glass and metal doors. Aside from that, they have changed ittle since they were first constructed and even retain the original redwood iding. Both commercial centers are contributing.

he townsite's main commercial area was originally located in Jackson Square, a ommercial area made up of four related buildings of frame construction that ere connected by a covered walkway. Jackson Square storefronts were similar to hose in the neighborhood centers with large plate-glass windows on wood ulkheads. Original paneled wood doors have all been replaced by modern glass and etal doors. Although many of the merchants have changed, Jackson Square ontinues to serve the city as a major commercial district. Two of the four uildings retain enough of their original fabric and design to be considered ontributing. The two buildings on the west end of Jackson Square have been ltered with new siding (one ca. 1960 with brick veneer and one ca. 1975 with ertical wood siding) and are non-contributing.

he original Guest House, now the Alexander Inn, is located adjacent to Jackson quare. The Guest House is based on the H-plan dormitories that were built hroughout town. The building is of frame construction on a poured concrete oundation. Lobby windows are fixed multi-light bay windows. Other windows are aired six-over-six wood sash windows. There is a three-bay full-height gabled orch on the main (E) facade. A two-story concrete block addition was constructed n the 1950s to the rear of the building. The original tennis courts are located cross the street and are well maintained. The Alexander Inn is a contributing

he Oak Ridge Municipal Swimming Pool on Providence Road is the second ontributing structure in the district. The pool was built by the Corps of ngineers in 1945 when they concreted the bottom and sides of a small lake. When t was constructed, the pool was the largest spring-fed pool of its kind

OST-WAR BUILDINGS IN THE OAK RIDGE HISTORIC DISTRICT

. Post-war Housing

ne need for adequate housing had not lessened by the time the AEC took over Oak idge operations in 1947. Because Oak Ridge was to become a permanent city, new ouses and apartments were constructed immediately. Among the plans were "50 new ouses" to be constructed throughout the cemesto area. These houses were designed SOM under the direction of AEC. forty-two of these houses, Models 31, 32, 33, 1d 34 were surveyed, thirty two are contributing.

del 31 is a one-story, single family frame dwelling unit on a concrete slab oundation with siding of asbestos or wood shingles, or wood weatherboard. The

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gable roof is covered with asphalt shingles. The formal entrance is recessed and often faces the back of the house. Another entrance to the dining room is the more common street entrance. The windows are aluminum double-hung sash. Each ranch-style unit is 54' wide by 23' deep and contains 1197 square feet. The plan consists of an L-shaped living-dining room, kitchen, utility room, three bedrooms and a bath.

Model 32 is a two-story, single family frame unit on a concrete foundation with a concrete basement. The exterior walls are clad with asbestos or wood shingles, or wood siding and the gable roof is covered with asphalt shingles. Entry is from a recessed porch on the corner of the house. There are four casement windows arranged horizontally on the primary facade. The house has an interior chimney. Each unit consists of a living-dining room, kitchen and utility room on the first floor, and three bedrooms and a bath on the second floor. Each unit measures about 32' by 21' and contains 1229 square feet.

Model 33 is similar to Model 32. It is a two-story single family unit on a concrete slab foundation with exterior walls of asbestos or wood shingles, or wood siding. The main entrance is into the basement, and there is a large, four-part window that fills the space above the door to the roof. There are four casement windows arranged horizontally in the front facade with a lateral extension and a fifth window. Each unit measures 37' by 22' and contains a living-dining room, kitchen, half-bath and utility room on the first floor, and four bedrooms and a bath on the second floor. The plan has an area of 1442 square

fodel 34 is a one-story, single family frame unit on a concrete slab foundation with asbestos or wood shingles, or wood siding. Each unit is 38' by 33', contains 1209 square feet and consists of an L-shaped living-dining room, kitchen, utility room, three bedrooms and a bath. The house has metal casement windows and a gable roof covered with asphalt shingles. An entry porch with a flat roof is located on the primary facade and is supported by metal poles.

SOM also designed two Garden Apartment designs for AEC, Redwood and Southill, on the south side of the Turnpike, west of Illinois Avenue. The Redwood Apartments are concrete and redwood on a concrete block foundation with a flat composition toof. Each unit has a carport and the two-bedroom units have a patio. The one-bedroom units are located on the first floor and have 638 square feet. The second floor two-bedroom units have 1081 square feet. The buildings are characterized by a lack of exterior decorative detailing. Window openings are metal sash findows grouped in banks of six. Rows of horizontal casement windows punctuate ome of the exterior walls.

he Southhill Garden Apartments are two and three story concrete block walk-up partment buildings on a concrete slab foundation with a composition roof. The acade is divided into four sections separated by stairs and porches or alconies. Windows are fixed metal design. Each unit consists of a living-dining oom, kitchen, two bedrooms, a bath, and a porch and has a net area of 984.

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The TVA flattops in East Village were replaced with houses built under Title VIII of the FHA. These houses are variations of a Ranch plan. They are all one-story, three-bay, frame residences on concrete foundations with gable roofs. Almost all have attached carports. One style has a large nine-light, aluminum frame picture window in one of the front bays. A similar style has the same picture window with only six lights. On a third style there is a small gable front wing with a sash window and a recessed entry in the ell. Original siding appears to have been composition or wood shingles and composition panels. Most have been reclad with a siding.

The neighborhood located near Grove Center is a Title IX development. The houses in this neighborhood are different from any other in Oak Ridge because they do not look like they were built under government contract. The basic form resembles the Colonial Revival cottages that were popular immediately prior to World War II. Almost all are one story, two- or three-bay frame structures on concrete block foundations. Some of the houses have a front-gable wing in the facade with picture window that is identical to those used in the cemesto houses: one lixed-light picture window with three-light stacked windows on either side. The houses that did not have the front gable had a flush picture window. Window and loor frames are aluminum, and some window openings are shaded by metal awnings. Ilmost all are clad with aluminum or composition siding. Outbuildings include letached frame garages.

. Schools

several schools were built following the war but like the wartime schools have been extensively remodeled. A new high school was constructed in 1952, and tobertsville School was renovated in the same plan as the high school. These are he only contributing post-war schools located in the district. The old high chool, which was located in Jackson Square served as Jefferson Junior High chool until the new JJHS was constructed in 1967. The old building was torn down t that time, but the original football field, Blankenship Field, remains as a ontributing structure.

ak Ridge High School was built in 1951 for \$2,980,000. There are 32 classrooms or a pupil capacity of 1,500. The high school consists of 4 buildings arranged n two groups connected by a 265 foot enclosed glass corridor. The four buildings ave approximately 191,000 square feet. The entire school is built of reinforced oncrete with brick over masonry walls, concrete floor slabs with the second loor supported be open web steel bar joists and concrete block and pyrobar artitions. All buildings have aluminum projected windows, hollow metal frames, ood doors with extruded aluminum frames and wood doors and entrance ways. The ircular E and F buildings were built in 1963. Recent renovations have been done o the interior of the building only, and the some of the glass in the connecting orridor has been replaced by insulating panels.

he main classroom building ("A" building) is a 2-story structure 564' long by 4' wide. Classroom windows run the entire length of the building on both the ront and back facades. In the primary entrance, facing Providence Road, are

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three sets of double doors. A covered sidewalk leads from the street to the entrance. Connected to the west end of "A" building is "B" gym, a two-story brick structure with a band of windows in the upper floor. "E" and "F" buildings are located behind the main building and are both two-story, brick structures built in a circular plan. Windows are single vertical lights spaced at approximately forty foot intervals. "C" and "D" buildings make up the second group of buildings. "C" building houses the auditorium and cafeteria and is located at the bottom of the connecting staircase, facing the Turnpike. "D" building is a classroom building adjacent to the auditorium and cafeteria.

Robertsville Junior High School was originally built in 1943 and essentially rebuilt in 1952 at a cost of \$1,763,000. Construction in 1952 included four buildings and a gymnasium. "A" building is a two-story brick classroom building. Vindows extend the full length of the building on both stories, divided only by brick piers. "A" building is connected to "D" building by a 56' corridor. "C" building contains the kitchen and cafeteria. A new gym was built south of "C" building in recent decades and is constructed of concrete block on concrete lootings.

:. Churches

The following churches were all constructed following the war and are considered contributing.

Kern Memorial Methodist Church, 451 East Tennessee Avenue. The church was one of the first built in post-war Oak Ridge and was constructed in 1951. It is made up of two contributing buildings, each two stories high constructed of concrete block in a style similar to the Mission style. The sanctuary building is three bays by seven bays and has narrow fixed light windows in concrete surrounds. There is a concrete belt course above the windows. The building has a low pitch pable roof with asphalt shingles. There are brick dentils below the roof line and a sculpted cross rises from the crest of the roof. The non-contributing two-story education building was built in 1961 and has a flat roof with brick dentils and aluminum frame fixed light windows. Concrete block colonnades join the buildings together at the front and back to form an interior courtyard. A concrete block bell tower rises from the front breezeway. The bell tower has screens of open concrete blocks. There is a pre-war graveyard adjacent to the property.

St. Stephen's Episcopal Church, 212 North Tulane. St. Stephen's was built in 1951 on two acres of land purchased from the government. It was designed by A.D. fackintosh, an associate with the Knoxville firm of Barber and McMurray and constructed by John A. Johnson and Sons Company, who built many projects in Oak lidge. The Gothic-style church is a two-story H-plan structure of coursed stone reneer. On the front (west) facade, is an inlaid Celtic cross of stone above the louble paneled wood door. The slate roof is steeply sloped. The nave of the hurch is lit by four-light metal frame casement windows grouped in sets of hree. There is a two-story meeting hall connected to the sanctuary by a one

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story hyphen.

lalvary Baptist Church, 154 North Jefferson Circle. This congregation grew out of George Jones Memorial Church (Wheat Church), near K-25. Reorganized as Calvary Paptist, they purchased the Jefferson Circle lot in 1951 and built a small block building that is now part of education building. What is now the church building was probably built around 1955. The one-story, three-by-six bay church has a gable roof with asphalt shingles and a decorative steeple. There is a four-bay worch with square fluted columns on the main (west) facade. Arched windows are netal frame design. The original section has metal frame casement windows. The naneled doors have semi-circular windows.

Mary's Catholic Church and School, 321 Vermont Avenue. The original church ras designed by Bealer and Wilhoit and built by Baskerville Builders of Knoxville in 1950. The two-story building is constructed of brick. There are three sets of double doors on the main (south) facade set in concrete surrounds. Above the loors is a large structural glass block band that runs the width of the doors. There are vertical five-light metal frame casement windows on both sides of the muilding. The original church has been converted to the school gymnasium and uditorium. The school is a one-story brick building. Classrooms have structural class block inserts above a band of three metal-frame casement windows. The two-tory east building has four concrete panels with double metal frame windows in each story. The parish was founded in 1943 when services were held in theaters, ecreation halls and rented buildings. The school opened Sept 11, 1950 and the irst Mass was held December 10, 1950. The present church building was built in 962 and is non-contributing.

'irst Christian Church, 203 Michigan Avenue. This congregation moved to its resent location on Michigan Avenue in September, 1954. The one-story gable-ront brick building is built over a full basement in a T-plan. The church is hree by four bays and has a gable roof of copper and a wood steeple. The paneled cod entry doors have a Neo-Classical surround with a broken pediment. There are wo-stained-glass windows with shutters on either side of the entry. Church indows are stained glass with concrete sills.

irst United Methodist Church, 1350 Oak Ridge Turnpike. Built in 1952, the church s similar in style to the adjacent St. Stephen's, with Gothic and Tudor nfluences. The sanctuary is a two-story irregular-plan building with grey stone eneer. The gable roof has slate shingles. There is a castellated bell tower ith a copper roof above the entrance on the west side of the sanctuary. Windows re paired four-light casement windows in castellated concrete surrounds. The ssembly hall, choir room, youth recreation room, and classroom space were added n 1965 in the same style as the original section.

ighland View Church, 138 Providence Road. Built in 1955, this one-story brick nurch has a decorated arch facade with solid double doors and a gable field of tained glass. The gable roof is covered with asphalt shingles. There are narrow ixed-light windows in the sides of the sanctuary. The meeting hall at the rear

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of the church has a hipped roof with an extended carport on the east side.

Beth El Synagogue, 203 West Madison. The Jewish Center was built 1952 with International style influences. The two-story building of concrete block has a very low pitch gable roof. Casement windows are of black metal frame. The main entrance is on the south side of the building and has a curved exterior wall.

Initarian Church, 1500 Oak Ridge Turnpike. The Unitarian Church is a modern steel frame structure built in 1956. The exterior wall treatment is rusticated pink and gray brick. The concave endwalls of gray brick have large metal frame windows in tubist designs. Exterior sidewalls have five pink brick piers separated by floor-to-ceiling metal frame casement windows. There is a classroom addition joined to the west side of the building with a brick and class hyphen. The main entrance is through double glass doors into this section.

Elenwood Baptist Church, 200 South Alabama Road. This Neo-Classical Revival style church was built in 1958. The two-story church is of six-course brick construction. There is a full height, three-bay portico with Roman Doric columns, molded cornice, modillions and a gable pediment on the main (west) facade. A tall steeple rises from the pediment and is topped with a cross. Entry from the porch is through central double Bible-paneled wood doors with a Neo-Classical surround, transom and a broken pediment. There are single Bible-paneled wood doors with decorative molded crowns flanking the central doors. There are large arched wood frame windows in the sanctuary. The rear wing has six-over-six double hung wood sash windows.

New York Avenue Church of Christ, 219 New York Avenue. This church is a onestory, brick building composed of two sections built in 1951. There are parapets on the gable ends with concrete coping. In the front (east) gable field of the sanctuary building, there is a triptych of concrete and glass. There is a casement window in each of the flanking arches, with the middle arch of concrete. There is a courtyard with an iron gate between the two buildings. In the back of the courtyard, and between the two buildings is a two-story bell tower with a cound screen. Both buildings have shallow wall buttresses and paneled wood doors.

Seventh Day Adventist Church, 638 Pennsylvania Avenue. This church was built in 956 as the First Church of the Nazarene. It is a one story, three-by-six bay, prick building with a gable roof of asphalt shingles. There are double Bible-baneled wood doors with a five-light transom in the main (west) facade. There is also a three-bay porch supported by square columns. The fixed-light wood frame rindows have granite sills.

Robertsville Baptist Church, 251 Robertsville Road. This is a brick church built a. 1951 with a low pitch gable roof and a modern decorative vented steeple opped with a cross. There is a rear classroom addition with metal frame casement rindows. A brick wall extends from the front (north) end of the church that appears to form a patio.

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Wesleyan Methodist Church, 280 Royce Circle. This church is a simple brick structure built in 1959 with a raised gable above a central entrance that is supported by iron I-beams. Two lateral wings extend from the central entrance vestibule. Each wing has aluminum frame, one-over-one sash windows.

Frinity Methodist Church, 300 Robertsville Road. This building was constructed in 1950 of brick and has a parapet roof with concrete coping and brick dentils. There is a square bell tower on the south side of the church with recessed double wood doors topped by a recessed window and a castellated roofline. There is a ca. 1980 addition to the west end of the church and a detached ca. 1960 educational building north of the church.

Church of God, 145 Iroquois. This brick church was built ca. 1952 with influences of the Tudor style. The brick walls are buttressed and the windows and doors are topped by triangular transoms. Double Bible-paneled doors are located in the main (east) facade. Windows are metal frame casements. A pre-war graveyard is adjacent to the church property.

Dak Ridge Bible Church, 184 Raleigh Road. This church is a one-story brick building constructed ca. 1955 with a low-pitched roof and decorative steeple. There is a small entry porch supported by square columns on the west side of the thurch.

1. Commercial buildings

Post-war commercial development occurred along the Oak Ridge Turnpike and South Illinois Avenue, which was completed in the mid-1950s. There was some commercial development in these areas in the 1950s, however, it has undergone extensive alteration and does not contribute to the integrity of the district. Most of the commercial development on these streets occurred in the 1970s and 1980s. Both of these areas are located outside the Oak Ridge Historic District and help to lefine its boundaries. They do not contribute to the development of the area luring its period of significance.

2. Social and Public buildings

wo contributing union halls were constructed in the 1950s in the original section of the town, both on the west end. The Oil, Chemical, and Atomic Workers ocal #3-288 (OCAW) building was constructed ca. 1952. The building is onstructed with a brick veneer on a pored concrete foundation. A concrete belt ourse extends along three sides of the building. On the primary and west facades re brick piers with an aluminum canopies. Both facades have one-over-one orizontal sash windows. There are also five-light jalousie windows on the econdary facades.

he International Brotherhood of Electrical Workers Local #270 (IBEW) is a two-tory, brick, rectangular-plan building constructed in 1954. Windows in the rimary (N) facade are of structural glass block and those in the east facade are

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single-light casement windows. The entrance doors are of paneled wood and glass. The gable roof is covered with asphalt shingles.

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rchitect/Builder Clinton Builders Corporation
Oak Ridge Development Company
Glencoe, Incorporated

'rincipal Construction Subcontractors working with Stone and Webster Engineering Corporation:

John A. Johnson Company (NYC) Clinton Home Builders (Charlotte, NC)
O'Driscoll and Grove, Incorporated (NYC) Foster and Creighton Company (Nashville)
A. Farnell Blair (Decatur, Ga) Rock City Construction Company (Nashville) Bethlehem Steel Company (Bethlehem, Pa) Bristol Steel and Iron Work (Bristol, Tn) C.O. Struse and Company (Philadelphia) Ralph Rogers Company (Nashville) Transit-Mix Concrete Corp. (NYC) Tennessee roofing Co (Knoxville) Watson-Flagg Engineering Co. (NÝC) Rockwood Sprinkler Co (Worcester, Ma) D.W. Winkleman (Syracuse, NY) Drainage Contractors, Inc (Detroit) Sullivan, Long, & Haggerty (Bessemer, Al) Harrison Construction Company (Pittsburgh) Fluor Corporation (San Francisco) Hanley and Co. (Chicago)

Townsite housing Townsite housing Townsite housing Townsite buildings Townsite buildings Townsite buildings Structural steel Structural steel Masonry Crushed stone Concrete Roofing Electrical work Sprinkler systems . Water and sewer Water and sewer Water and sewer Grading, drainage Cooling towers & equipment installation

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The Oak Ridge Historic District is significant under criterion A for its association with the Manhattan Project during World War II. The district is significant under criterion C for SOM's innovative planning of the townsite and the firm's utilization of new materials and construction methods in it's housing lesigns. Oak Ridge represents the early work of SOM as well as its first of many government contracts. The city meets criteria consideration G because its significance in the context of World War II has been achieved within the last fifty years.

Dak Ridge is most significant for its association with and dependence upon one of the most important scientific and engineering feats of the twentieth century. The Manhattan Project was the largest scientific endeavor ever undertaken by private or federal interests. The Manhattan Project encompassed the combined work of scientists and engineers from around the world, with experimentation carried out across the United States, Canada, and Great Britain. J. Robert Depenheimer, Enrico Fermi, Ernest O. Lawrence, Arthur Compton, James B. Conant, and General Leslie Groves are only a few of the luminaries associated with the project. With the Manhattan Project, atomic energy was taken from theory to practice in less than two and a half years. This is especially remarkable considering that the characteristics of the atom as we know it today were fully understood only a few years prior to the beginning of World War II. The importance of Oak Ridge in scientific and engineering fields has been recognized by the American Society of Mechanical Engineers, the American Nuclear Society; and other scientific organizations.

Dak Ridge reflects the wartime efforts of the government, working with and directing private firms, to build and manage a totally secret community of 75,000 residents with the sole purpose of successfully completing of the goal of the Manhattan Project: the development of the atomic bomb. The problems of constructing a townsite in a remote area in complete secrecy in an astonishingly. short period of time were tackled with the use of building methods and materials that had heretofore been untried on such a grand scale. The coordination of the Army and the federal government with construction firms, engineers, planners, and management firms was a grand feat in itself that was carried out expertly by commanding General Leslie Groves and Colonel K.D. Nichols, district engineer for the project and Groves' right hand. Oak Ridge was the most secret, complex, and pest planned of the three "atomic cities" and retains more of its original buildings than do the other two cities (see cover form). The townsite and the plants were heavily dependent upon each other: neither could have existed without the other. Employment at the plants was a prerequisite for housing on the townsite and residency in Oak Ridge was required of all operational personnel.

The city's construction under intense wartime pressure represents the military's ability to overcome seemingly unsurmountable obstacles for the sole purpose of leveloping the atomic bomb. The successful construction and operation of Tennessee's fifth largest city under a shroud of complete secrecy is testimony to the extreme importance of the Manhattan Project. The city is an example of the

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expedience with which the government directed the work of private firms to completely design and build a temporary yet livable city for 75,000 people in less than three years. The prefabricated designs by SOM that utilized new and alternative materials for reservation buildings reflect the dexterity with which the designers coped with wartime shortages.

Sittle has been written about the process of planning and building Oak Ridge, or any of the communities born of the Manhattan Project, perhaps because of the project's top-secret nature, or because so much of the wartime documentation was classified well into the 1960s and 1970s. The government expended billions of dollars on other defense projects that included the construction of numerous military bases, munitions factories, and other war-related industries that all required support towns. These towns were not as secret and have been perhaps more accessible to study than the atomic cities. Wartime planning of these towns often took the form of site planning, which stopped short of the creation of a comprehensive plan. A notable example of this failure to carry out an efficient olan is Willow Run, Michigan, an industrial city created in late 1941 to build 3-24 bomberss. Although the plan for the town was carefully conceived, the pressures of war resulted in the construction of flimsy and inadequate housing. Peak employment at the plant was reached in June 1943 but the much-publicized "Bomber City" was not ready for occupancy until July 1943, with no commercial facilities available until February 1944. In American City Planning Since 1890, 1el Scott notes that "except where the government assumed complete control, as in the supersecret towns...at Oak Ridge, Tennessee, Richland, Washington, and Los Alamos, New Mexico, city planners were rarely able to do more than advise local officials or prepare plans for particular housing developments." Within this context, it was only in Oak Ridge, Richland, and Los Alamos that military, jovernment, and civilian interests were able to produce and construct successful town plans that have resulted in viable modern cities. Of these three cities, Oak Ridge was the most complex and required the most planning, as it contained three nuge industrial plants and a supporting townsite. Oak Ridge is the only one of the three that reflects its wartime plan that was expanded in 1948. Los Alamos and Richland were both planned by the Army Corps of Engineers and today exhibit some characteristics of their 1948 Master Plans by W.S. Kruger and Associates (for Los Alamos) and Graham, Anderson, Probst, and White (for Richland).

30M's founding members, notably Louis Skidmore and John Merrill, were personally involved in planning Oak Ridge, their first large-scale government project. It is remarkable that under the blanket of strict security, the firm designed a livable city without knowledge of its location or its exact size until well into the project. The new prefabricated materials and construction techniques utilized in planning this secret city are discussed in Section E of the MPDF. SOM designed the functional requirements of a rapidly growing city in addition to the actual ayout of the townsite. The Oak Ridge project led to other government contracts that included the Air Force Academy Chapel. SOM went on to become one of the wentieth century's most prolific architectural firms.

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The Manhattan Project was one of the most important contributors to the modernization of the Clinch River Valley. TVA introduced electricity to the valley during the Depression. The Manhattan Project utilized 18,000,000,000 kilowatts per year (20% more than New York City) of that electricity to introduce scientific industry and technology to the valley. The project generated millions of dollars of revenue in the surrounding communities. Retail sales in Clinton alone rose over 850%. Thousands of local workers were employed at the plants and on the townsite. The influx of the 81,000 people needed to operate Oak Ridge transformed the area from a sparsely populated valley dependent upon a static agrarian economy to an industrial and technological corridor that remains vital today (see cover form).

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Oak Ridge Historic District Page # 1

erbal Boundary Description: Because of the large size of the historic district, he boundary is shown as the solid black line on the accompanying property map f the City of Oak Ridge. Map scale is 1':800'. The boundary is defined on the orth by properties along Outer Drive, on the east by properties along East rive, on the west by properties along Jefferson Avenue and Louisiana Avenue, and n the south by properties along or to the north of the Oak Ridge Turnpike.

oundary Justification: The Oak Ridge Historic District includes the area north f the Oak Ridge Turnpike that was designed by SOM to house Manhattan Project ersonnel during World War II. This area best represents the wartime townsite and ontains a relatively low number of non-contributing resources. The district also ontains the post-war development that occurred following the war while the city as under the jurisdiction of the Atomic Energy Commission. These buildings are ontributing because they were built prior to the incorporation of the city. The istrict boundaries were also established by the growth of modern urban evelopment along the Oak Ridge Turnpike.

l inch = approximately 2 miles