



U.S. Department of Energy

Categorical Exclusion Determination Form

Proposed Action Title: Construction and Operation of the Laboratory for Translational Research Capability (4274X)

Program or Field Office: Office of Science - ORNL

Location(s) (City/County/State): Oak Ridge, Tennessee

Proposed Action Description:

Efforts have been underway in recent years to revitalize the ORNL Campus by construction of new facilities and demolition and removal of old structures and buildings no longer needed to support the Office of Science (SC) mission. The proposed action would repurpose brownfield space for construction and operation of a new state of the art laboratory facility to support DOE ongoing and future research and development missions and goals.

The proposed action would consist of siting, construction, modification, and operation and decommissioning of a new facility for small-scale research and development projects; conventional laboratory operations and small-scale pilot projects. The Laboratory for Translational Research Capability will host modern laboratories with supporting infrastructure; conference spaces and offices in support of DOE research and development activities at ORNL, within a single modern facility which promotes operational efficiencies and will facilitate the retirement of aging and less efficient facilities currently in use.

Appropriate storm water pollution controls would be installed and inspected prior to beginning excavation, soil removal, and other construction activities. Water spray would be utilized to control airborne dust emissions if needed, and runoff would be monitored and regulated to prevent uncontrolled non-storm water discharges to storm drains and/or waters of the state.

General construction wastes would include but are not limited to concrete, metal, wood, roofing material, glass, empty packaging, and excavated spoil material. It is understood that some excavated soil may contain radiological and/or chemical contaminants and field screening methods will be used to identify contaminated soils which are encountered during excavation and construction activities. Contaminated soils would be segregated and managed in accordance with an approved project waste management plan. All nonhazardous and nonradioactive waste material would be disposed at an approved sanitary landfill site. ORNL involvement in the disposal of hazardous and/or mixed waste would include characterizing, packaging, and certifying the waste to ensure that it meets the acceptance requirements of the receiving organization. Construction planning will incorporate appropriate best management practices wherever ground-disturbing activities are planned, including but not limited to soil characterization, additional storm water controls, and waste segregation and containment.

DOE, pursuant to 36 CFR 800.4(C) and in accordance with the Programmatic Agreement Among the Department of Energy Oak Ridge Office, the Tennessee State Historic Preservation Officer, and the Advisory Council on Historic Preservation Concerning the Management of Historic and Cultural Properties at the Oak Ridge National Laboratory (Section VII.A.2.e), has determined that the proposed action for the construction of the Laboratory for Translational Research Capability within the Oak Ridge National Laboratory Historic District will not adversely affect the visual integrity of the Oak Ridge National Laboratory Historic District. DOE shared this determination with the Tennessee State Historic Preservation Office, who agreed with DOE's decision. The correspondence between the two offices is attached.

Because the proposed construction designs are compatible with adjacent historic properties, no historic properties would be adversely affected by the proposed action, and discovery of any archeologically or historically significant artifacts would be reported to the Tennessee Historic Preservation Office in accordance with the Programmatic Agreement for ORNL.

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National Historic Preservation Act Historic Preservation Plan, Oak Ridge National Laboratory, Oak Ridge, Tennessee, ORNL/TM-2004/62, April 2004.

Categorical Exclusion(s) Applied:

B3.6 - Small-scale research and development, laboratory operations, and pilot projects

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR Part 1021.

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The above description accurately describes the proposed action, which reflects the requirements of the CX cited above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

Program Point of Contact: Martha J. Kass
Martha J. Kass, DOE-OSO
Director, Operations and Oversight Division

Date Determined: 9/17/2019

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Policy 451.1), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer: Peter R. Siebach
Peter R. Siebach, DOE-SC-CH
DOE-OSO NEPA Compliance Officer

Date Determined: 9/24/2019



TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

May 17, 2019

Ms. Katatra C. Vasquez
Department of Energy
PO Box 2001
Oak Ridge, TN 37831

RE: DOE / Department of Energy, New TRC Building at Oak Ridge National Laboratory, Oak Ridge, Roane County, TN

Dear Ms. Vasquez:

Pursuant to your request, this office has reviewed documentation concerning the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Based on the information provided, we concur that the project area contains a cultural resource eligible for listing in the National Register of Historic Places. We further concur that the project as currently proposed will not adversely affect the Oak Ridge National Laboratory Historic District as long as the new construction meets the conditions put forward in your project submission which include the new building being no taller than three(3) stories, being clad in brick, and having a flat roof.

This office has no objection to the implementation of this project as currently planned. *If project plans are changed or previously unevaluated archaeological resources are discovered during project construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.* Questions and comments may be directed to Casey Lee (615 253-3163). We appreciate your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/cjl



Department of Energy

Office of Science
Integrated Support Center

9800 South Cass Avenue
Lemont, Illinois 60439

P.O. Box 2001
Oak Ridge, Tennessee 37831

May 9, 2019

Ms. Casey Lee
Tennessee Historical Commission
Department of Environment and Conservation
2941 Lebanon Road
Nashville, Tennessee 37243-0442

Dear Ms. Lee:

**NATIONAL HISTORIC PRESERVATION ACT (NHPA), SECTION 106 COMPLIANCE,
NOTIFICATION OF PROPOSED UNDERTAKING FOR THE CONSTRUCTION OF THE
TRANSLATIONAL RESEARCH CAPABILITY (TRC) FACILITY AT THE OAK RIDGE
NATIONAL LABORATORY (ORNL), OAK RIDGE, TENNESSEE**

The NHPA Historic Preservation Plan for ORNL; ORNL/TN-2004/62 approved by the State Historic Preservation Office on February 23, 2005, outlines a strategy to fulfill obligations for the protection of historic properties and archeological resources; while at the same time, facilitating the effective completion of ongoing site mission activities. This includes the removal of obsolete or contaminated facilities, adaptive reuse of existing facilities wherever feasible, and construction of new facilities in order to meet site mission needs.

As part of meeting the requirements of the NHPA, an intensive architectural and historic survey of the ORNL complex was completed in December 1993 (final version, January 1994). The results of this survey were presented in the report *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*. The report approved by your office, recommended boundaries for the ORNL Historic District. The Department of Energy (DOE) Office of Science (SC) proposes to construct and operate a new laboratory facility within a Brownfield area located in the historic district at ORNL in Oak Ridge, Tennessee. The ORNL Historic District was initially identified and determined eligible for listing in the National Register of Historic Places (NRHP). It contains buildings that were constructed between 1943 and 1965 and historically served as the core of research facilities on ORNL's main campus.

The proposed new facility, TRC, will host modern laboratories with supporting infrastructure, conference spaces, and offices in support of DOE research and development activities at ORNL, within a single modern facility, which promotes operational efficiencies. The proposed design of the facility will draw inspiration from the historic buildings in the ORNL Historic District. The material palette of brick, preformed concrete, metal panels, and aluminum-framed windows will be consistent with the materials historically found throughout the district.

Over the past several years the ORNL campus has undergone substantial revitalization with new construction, renovation, and repurposing of existing facilities, and demolition of structures that are excess to DOE Mission needs. Accordingly, DOE-SC has made it a priority to utilize Brownfield sites for new construction whenever feasible. Pursuant to 36 Code of Federal Regulations 800.4 and in


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accordance with the Programmatic Agreement among the DOE Oak Ridge office, the Tennessee State Historic Preservation Officer and the Advisory Council on Historic Preservation Concerning the Management of Historic and Cultural Properties at ORNL, Section VII.A.2.e, DOE has determined that the proposed undertaking for the construction of the laboratory for TRC will not adversely affect properties eligible for listing in the NRHP.

The enclosed project summary, Section 106, Architectural and Historic Review for the Proposed Construction of the Laboratory for TRC within the ORNL Historic District, Oak Ridge, Tennessee, includes additional information about the proposed undertaking.

If there are any questions or additional information is required, please contact me at (865) 576-0835.

Sincerely,


Katatra C. Vasquez
Cultural Resources Management Coordinator

cc w/enclosure:

Amy Fitzgerald, City of Oak Ridge
Christopher Wilson, Advisory Council on Historic Preservation
Lloyd Stokes, ORHPA
Eric Boyle, DOE Federal Preservation Officer
DOE Information Center

cc w/o enclosure:

Geoffrey G. deBeauclair, M2, SC-OR
Mildred S. Lopez-Ferré, SE-30, SC-OR
Kenneth R. Tarcza, M-1, SC-OR
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Daniel K. Hoag, SC-OSO
Johnny O. Moore, SC-OSO
Wesley D. Goddard, ORNL
Ernest L. Ryan, Jr., ORNL

Section 106 of the National Historic Preservation Act

Project Summary

Architectural and Historic Review for the Proposed Construction of the Laboratory for Translational Research Capability within the Oak Ridge National Laboratory Historic District, Oak Ridge, Tennessee

Prepared by Elizabeth Heavrin, MHP
Cultural Resource Analysts, Inc.

for UT-Battelle, LLC, on behalf of the
U.S. Department of Energy

February 26, 2019

The Department of Energy Office of Science (DOE-SC) proposes to construct and operate a new laboratory facility within a brownfield area located in the main campus at Oak Ridge National Laboratory (ORNL) in Oak Ridge, Tennessee. Over the past several years the main ORNL campus has undergone substantial revitalization with new construction, renovation and repurposing of existing facilities, and demolition of structures that are excess to DOE Mission needs. Accordingly, the DOE-SC has made it a priority to utilize brownfield sites for new construction whenever feasible. The new facility, Translational Research Capability (TRC), will host modern laboratories with supporting infrastructure, conference spaces, and offices in support of DOE research and development activities at ORNL, within a single modern facility which promotes operational efficiencies.

PROPOSED ACTION

ORNL intends to issue a design/build contract for the TRC. Development of the final design package for the TRC will be within the scope of that contract. The Conceptual Design Report, completed by ORNL, establishes the size and scope of the project and provides a preliminary vision for the building's overall appearance and design, in accordance with the schematic architectural vocabulary for the ORNL campus established in the ORNL Master Plan and in consideration of the building's location within the National Register of Historic Places (NRHP)-listed ORNL Historic District. As described in the performance specifications, the goal is "creation of an open collaborative research campus, which reflects in its physical form the history, transitions, ideals, and identity of ORNL," with focus on sustainability and flexibility of design. Although plans and renderings included in the Conceptual Design Report may be altered during the final design process (subject to ORNL's approval), the report presents ORNL's guiding philosophy for the building and its general character, stating that the building is to be developed in consideration of adjacent historic properties and nearby recent construction.

The proposed conceptual design drawings show a building that is set back from Central Avenue so that its façade is in line with the flanking buildings. The proposed laboratory is three stories tall with a mechanical equipment penthouse set back from the façade and side elevations rising an additional 14 ft above the primary roofline. The façade of the rectilinear, flat-roof building presents a large, two-story, glass curtain wall at the recessed entry at the northeast corner; large bands of nearly full-height windows separated by horizontal bands of brick define the floors on the remainder of the façade and the side

elevations. Metal panels will screen the mechanical equipment on the roof and wrap to the rear of the building, sheathing a central projection that extends from the solid brick surface of the main block. Loading bays and a utility yard are located towards the rear of the west elevation.

The performance specifications for the project call for the exterior material and color palette to be approved by ORNL and to be consistent with recently constructed or existing facilities in the campus area where the project is being constructed so as to not detract from, but rather enhance, the architectural character of nearby structures within the ORNL Historic District. Specifically, they require that exterior masonry, stone, brick, and precast materials are to be consistent with those utilized on Buildings 4100, 5100, and 5300, all recently constructed buildings within the Central Campus, or other ORNL approved materials of compatible color and texture. Metal paneling will be approved by ORNL and will be consistent with the Central Campus color palette, with clear anodized aluminum frame window systems. The goal is to create a building that is clearly of modern design but maintains a similar look and feel of other facilities within the ORNL Historic District.

PROJECT LOCATION

The proposed location of the TRC is a brownfield site located in the 3500 Area of the ORNL Central Campus (Figures 1-5). The proposed construction site, on the south side of Central Avenue between Third and Fifth Streets, is situated between Buildings 3500 and 3525 in a predominantly empty lot previously occupied by Buildings 3546 and 3550 (now demolished). This site is within the boundary of the NRHP-eligible ORNL Historic District, which is discussed at length later in this report.

AREA OF POTENTIAL EFFECTS

As described above, the proposed project includes construction of a new laboratory building on a brownfield site within the Central Campus of ORNL. As such, the area of potential effects (APE) has been defined as the project footprint and its immediate viewshed. Given the nature of the project and its location within the ORNL Historic District, the assessment of effects will primarily focus on the proposed project's effect on the character of the historic district as a whole.

HISTORIC PROPERTIES WITHIN THE APE

The project area is located in the ORNL Historic District. The ORNL Historic District was initially identified and determined eligible for listing in the NRHP in 1994. It contains sections of the 3000, 4000, and 5000 Areas that were developed between 1943 and 1965 and historically served as the core of research facilities on ORNL's main campus. It represents the most intact portion of the original national laboratory as it first developed after World War II, and it retains the only extant Manhattan Project resources at ORNL. It is within this historic core of the ORNL campus that the temporary, frame buildings of the Manhattan Project's X-10 site began to be replaced with brick research/laboratory facilities as ORNL evolved into a permanent, government-sponsored national laboratory. The majority of contributing resources within the district are two- to three-story, flat-roof research/laboratory facilities and offices with corrugated metal or brick exteriors, sometimes exhibiting simple detailing that includes simple embellishments at their entrances, windows, and rooflines, as well as a very simple modern institutional aesthetic (Hearnes et al. 2018:567-568).

The proposed construction site is located on the south side of Central Avenue and consists primarily of empty space which includes the former locations of Buildings 3546 and 3550 (demolished). Building

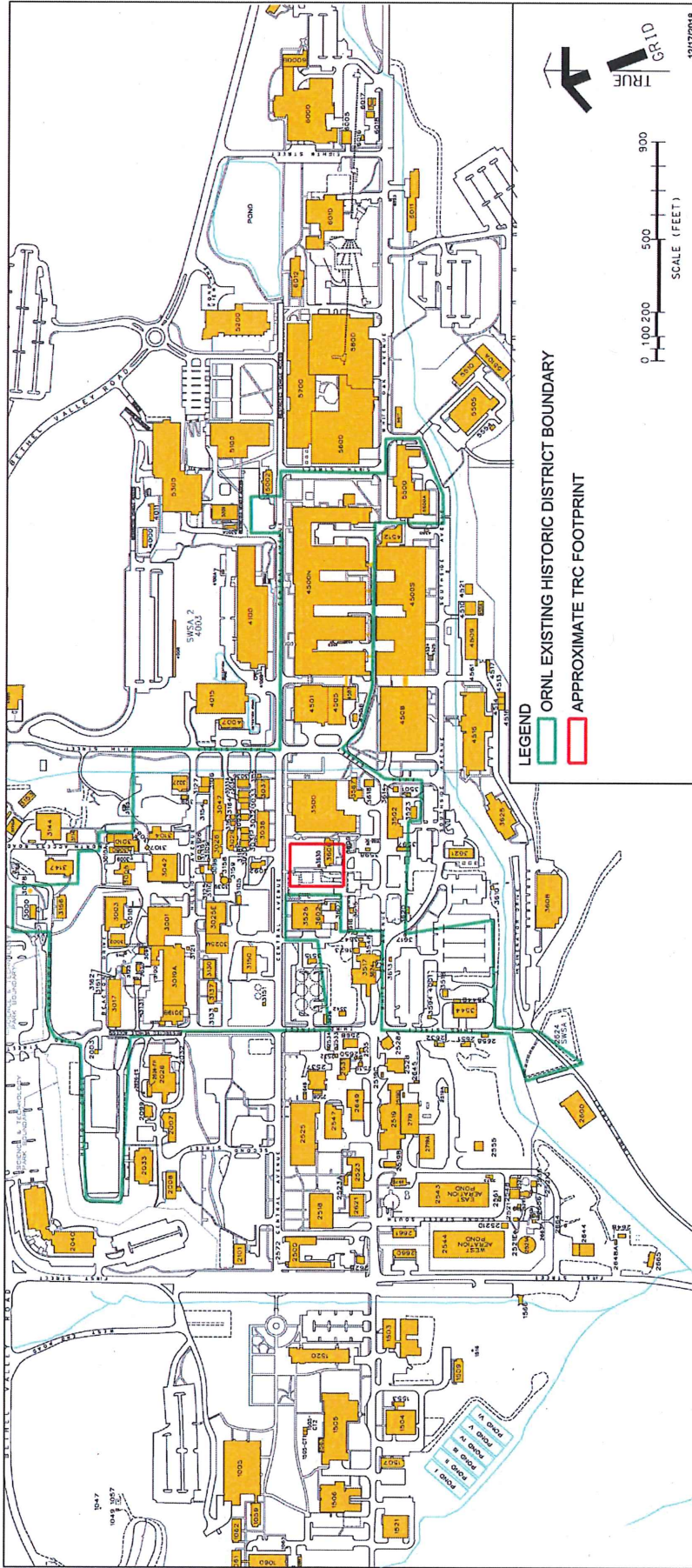


Figure 1. ORNL site plan depicting the proposed TRC location within the ORNL Historic District.

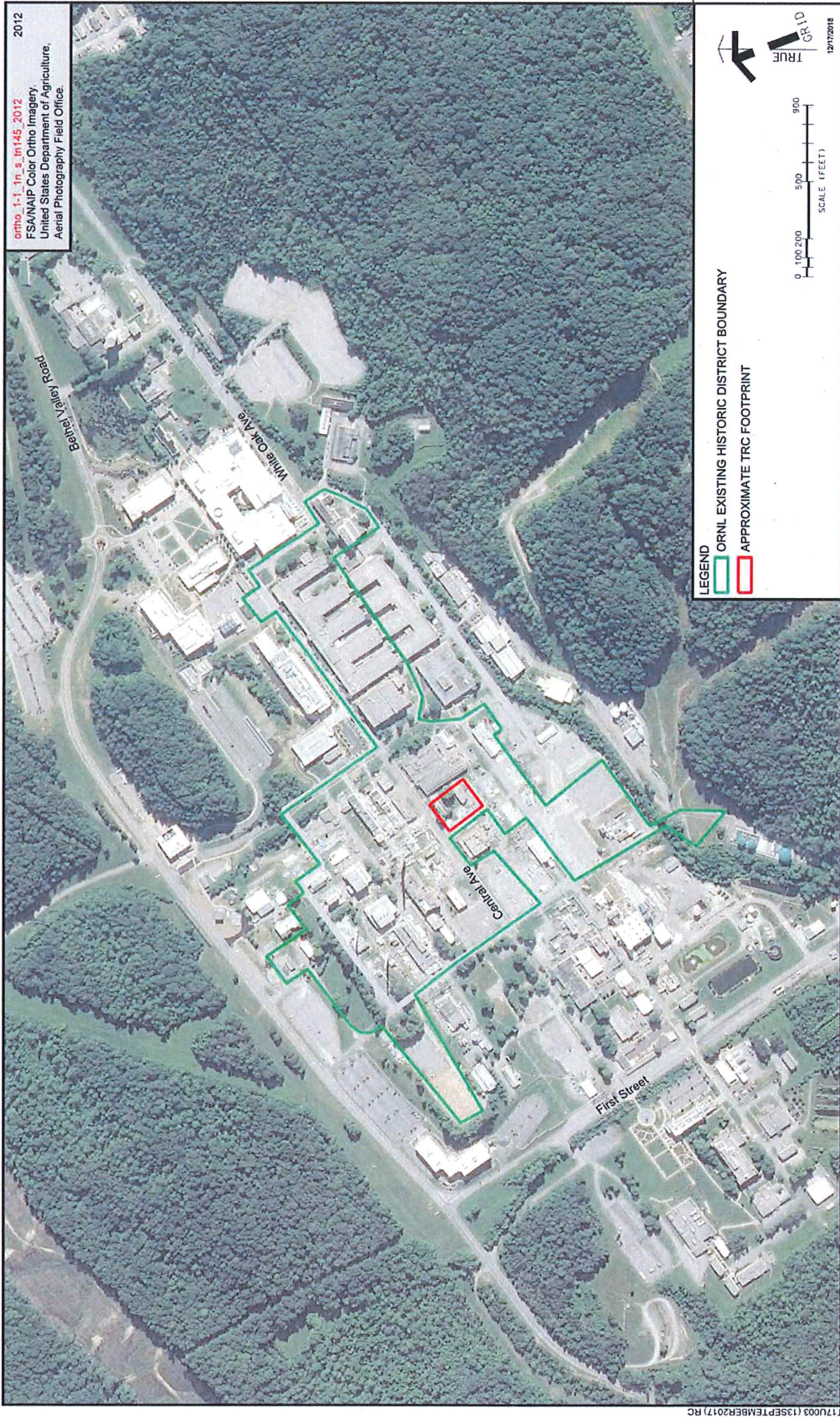


Figure 2. Aerial photograph depicting the proposed TRC location within the ORNL Historic District.

SITE PLAN

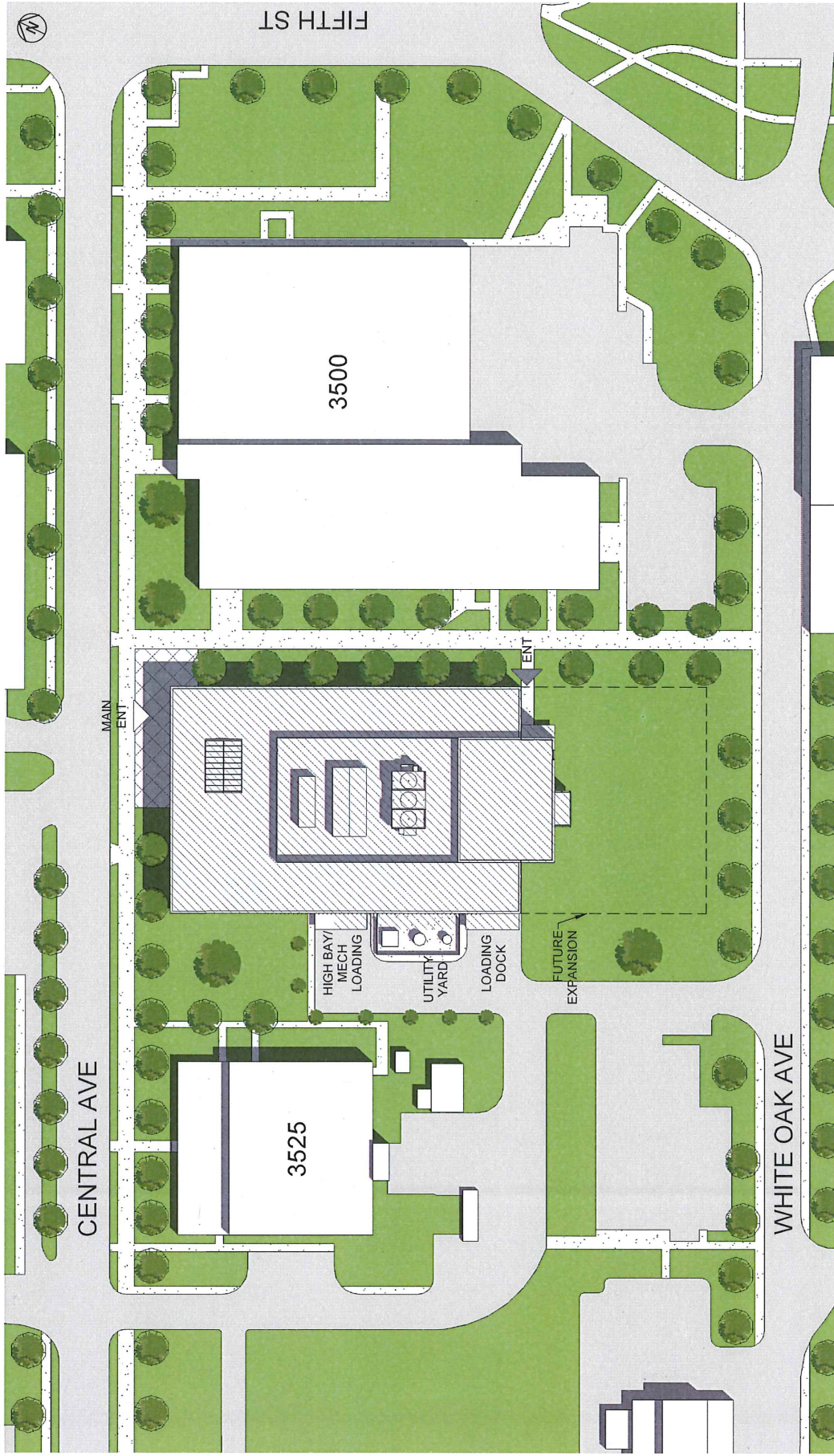


Figure 3. Proposed site plan for the TRC.



Figure 4. Birdseye view of ORNL Central Campus with the project location marked with a star.



Figure 5. Detailed birdseye view of ORNL Central Campus with the project location marked with a star.

3550 was a one-story, wood-frame building constructed in 1943 as a Chemistry Laboratory. Considered a contributing resource in the ORNL Historic District, Building 3550 was documented in accordance with a Memorandum of Agreement between the State Historic Preservation Officer, the Advisory Council for Historic Preservation, and ORNL officials prior to its demolition (Carver and Slater 1994:253; Thomason 2004:44). Although located within the ORNL Historic District, Building 3546 was determined not eligible for inclusion in the NRHP by Architectural and Historical Reviews conducted during 1994 and 2004, and was subsequently demolished. Building 3606 remains on the site and will be demolished prior to construction. This building was constructed in 1983 as an Instrumentation Development Facility. Due to its age, it was not addressed by previous cultural resource investigations and is not eligible for listing in the NRHP. Demolition of this building has already been reviewed by DOE and addressed in a project-specific categorical exclusion determination.

The proposed construction site for the new facility is bounded by and adjacent to Buildings 3500 and 3525. Building 3500 is included in the original ORNL Historic District boundary. Building 3525 was excluded from the original boundary, as shown on Figures 1 and 2, but subsequent reviews have recommended that the building be included as a contributing resource in the historic district. It should be noted that the ORNL Historic District boundary is currently under review by DOE in consultation with the Tennessee Historical Commission (THC); however, it is fully expected that the project area and its immediate surroundings, including Buildings 3500 and 3525, will be included within the revised historic district boundary.

Building 3500 (Instrumentation & Controls Division Offices and Research Facility) is located near the intersection of Central Avenue and Fifth Street to the east of the project area (Figure 6). It is comprised of two sections: a one-story section built in 1951 and a two-story section with a high bay built in 1960. The original section of the building is a one-story rectangular block with brick exterior, continuous poured concrete foundation, and a flat roof of built-up tar and gravel with cast concrete coping. The façade, or north elevation, features two double-leaf entries that each feature double-leaf, full-light steel doors sheltered by a fabric awning. Cast concrete blocks, set into the brick of the façade, surround the entry and connect with bands of cast concrete that extend above and below a bank of windows that extends between the two façade entries. The windows, comprised of four sets of three windows divided by brick, feature three-light aluminum sashes with a two-light awning sash set above a stationary light.

The two-story addition to Building 3500 reflects a compatible design featuring a brick exterior, a continuous poured concrete foundation, and a flat built-up tar and gravel roof with cast concrete coping. The primary façade entry of the building is located on a small, two-story projection that is flush with the original portion of the façade; the remainder of the façade of the two-story section is recessed behind the depth of the lobby. The façade entry features double-leaf full-light aluminum doors flanked by full sidelights and is sheltered by a fabric awning. The entrance is set off by cast concrete blocks and panels. The building features three-light metal awning windows throughout. Similar to the one-story section, banks of windows in pairs and groups of four extend along the first and second floors of the two-story section of Building 3500. Bands of cast concrete extend above and below both of these banks of windows (Hearnese et al. 2018:219-220).



Figure 6. Overview of the façade of both sections of Building 3500.

Building 3525 (High-Rad Level Examination Laboratory) is located along the south side of Central Avenue to the west of the project area (Figure 7). Oriented to the north, this building is a multi-story, five-bay, flat-roof structure clad in brick and supported by a concrete foundation. The building features precast stone coping encompassing the roof. A single story wing is located on the façade (north) elevation. The façade features a prominent, central, double-leaf entrance filled by aluminum frame commercial glass doors and framed by concrete panels and a slight concrete panel projection. Flanking the entry are two windows to either side filled by ribbons of four-light metal sashes, possibly awning windows. Concrete panels fill the areas between the façade windows which are framed at the top and bottom by horizontal bands of concrete or stone. The same decorative pattern wraps around to the east elevation of the one-story façade wing, with two windows filled with four-light sashes similar to those of the façade. The larger, main block of Building 3525 has large vents on the east elevation and single-leaf and double-leaf entries filled with metal doors on both side (east and west) elevations (Hearnes et al. 2018:251).

The viewshed to the north of the project area and north of Central Avenue includes Isotope Circle, a complex of ten multi-story, flat-roof, steel-frame, metal-clad buildings constructed in 1951 for the development and production of radioisotopes for biological, medical, and industrial applications; Buildings 3025E and 3025M, two adjoining, multi-story brick buildings constructed in 1950/1951 to serve as the Irradiated Materials Examination and Testing Facility Solid State Offices and Laboratories, respectively; and utilities buildings and extensive infrastructure to support these facilities (Figure 8; see Figures 4 and 5). Topography within the district rises to the north of Central Avenue, with the aforementioned buildings built on a hill above the project area, and the National Historic Landmark (NHL) Graphite Reactor (Building 3001) and other early processing facilities located further north near the highest point north of Hillside Avenue.



Figure 7. Overview of north elevation of Building 3525.



Figure 8. View of the north side of Central Avenue across from the project area, including Buildings 3025E and 3025M (left).

The nearest substantial building on the north side of Central Avenue is Building 3038 (Radioisotope Laboratory), a one-story, five-bay, flat-roof building with an exterior of brick (Figure 9). Brick pilasters form distinctive bays along the building's exterior. The building exhibits concrete coping along the roof's edge. Building 3038 features double and single-leaf entries along its façade (north) elevation filled with single- and four-light metal pedestrian doors, four sheltered by flat metal awnings. One of the façade entries is filled with larger, hinged six-light industrial doors. There are no windows present on this building (Hearnes et al. 2018:189).

Much of the area to the south of the project area is currently defined by open space and parking lots (see Figures 4 and 5).

While the project will be visible from areas north and south, its place within the ORNL Historic District is best evaluated within the context of the Central Avenue corridor, as most observers will see the building when driving or walking along this main thoroughfare through the ORNL campus (Figures 10 and 11). Development along this corridor extends to the east side of Fifth Street to include Building 4501 (Radiochemistry Laboratory), a three-story concrete and brick building with a concrete foundation, flat roof of gravel and tar, and an exterior of six-course common bond brick (Figure 12); and Building 4500N (Central Research and Administration North), a two-story, brick, concrete, and steel building consisting of an office section running parallel to Central Avenue (the "Head House") and five perpendicular wings with additional offices and research laboratories (Figure 13). Both buildings are contributing resources in the ORNL Historic District, and Building 4500N is considered individually eligible for its significant role as the center of research activity as ORNL emerged as a permanent national laboratory following World War II (Hearnes et al. 2018:271-275). East of Fifth Street, the area to the north of Central Avenue is not



Figure 9. Overview of east and south elevations of Building 3038.



Figure 10. View along Central Avenue looking east from the project area.



Figure 11. View along Central Avenue looking west from the project area.



Figure 12. West elevation of Building 4501.



Figure 13. North (façade) elevation of Building 4500N.

included in the ORNL Historic District boundary, but includes compatible modern development including a parking structure and Building 4100, constructed in 2011. Building 4100 shares characteristics with the proposed building including a flat-roof, rectilinear form; a brick exterior with precast concrete detailing; bands of aluminum windows; and a mass set off by metal panels (Figures 14 and 15).

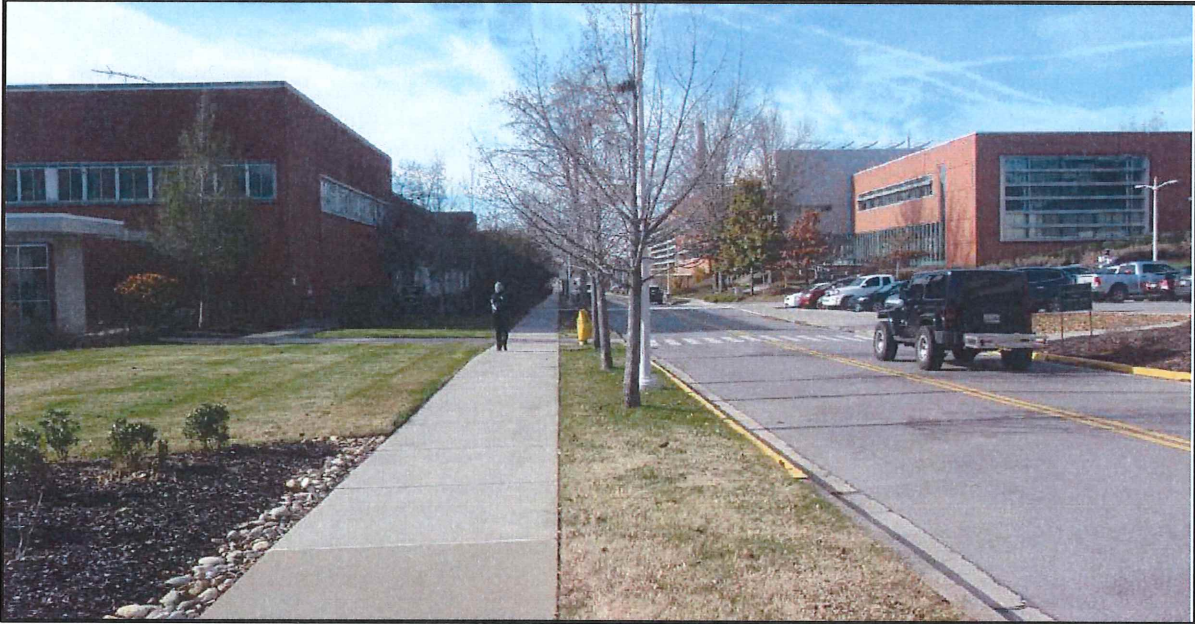


Figure 14. View west along Central Avenue showing Buildings 4500N (left) and 4100 (right).



Figure 15. View east along Central Avenue showing Buildings 4501 and 4500N (right) and 4100 (left).

DISCUSSION

The conceptual design of the new TRC, to be located within the ORNL Historic District, has been developed in consideration of the Secretary of the Interior's Standards for Rehabilitation found in 36 CFR 68.3(b), namely Standards 9 and 10:

(9) New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

(10) New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The proposed project will not directly impact any contributing elements of the ORNL Historic District. It will be infill construction on a brownfield site. The one building that will require removal is nonhistoric and noncontributing to the district. The project also will not negatively affect historic spatial relationships within this part of the district; rather, it will restore density to this part of the district that was previously impacted by demolitions and is currently characterized by open spaces that were not present historically. The proposed building's setback from the street and from adjacent buildings will be consistent with the historic buildings along the Central Avenue corridor, maintaining the key organizing principles that define the streetscape.

Like other recent construction at ORNL, the TRC will draw inspiration from the historic buildings in the ORNL Historic District but will not mimic them. The building will present a rectilinear, flat roof form like many of the historic office and laboratory buildings developed in the 1950s and 1960s. The primary mass will be three stories tall. While taller than the immediate adjacent buildings, there are several buildings of similar height within the historic district, including Building 4501, located to the east along the Central Avenue corridor, and Building 3025M, located north and uphill from the project area within its immediate viewshed north of Central Avenue. The overall building footprint, too, is well within the range found within the immediate vicinity, being comparable to adjacent Building 3500 and much smaller than Building 4500N to the east. Thus, the massing of the proposed building is in keeping with the overall character of the district and will contribute to the rhythm created by buildings of various heights and sizes along the Central Avenue corridor.

The material palette of brick, preformed concrete, metal panels, and aluminum-framed windows is consistent with the materials historically found throughout the district. Final material selections will require approval by ORNL and are expected to be clearly modern but compatible with the historic materials in terms of color, scale, and finish. The use of bands of brick and windows to clearly articulate the three stories of the laboratory is a design element seen in several historic buildings, while the use of glass curtain walls is a modern feature that differentiates this building from its historic counterparts.

DETERMINATION

DOE, pursuant to 36 CFR 800.4(C) and in accordance with the Programmatic Agreement Among the Department of Energy Oak Ridge Office, the Tennessee State Historic Preservation Officer, and the Advisory Council on Historic Preservation Concerning the Management of Historic and Cultural Properties at the Oak Ridge National Laboratory (Section VII.A.2.e), has determined that proposed action for the construction of the Laboratory for Translational Research Capability within the Oak Ridge

National Laboratory Historic District will not adversely affect the visual integrity of the Oak Ridge National Laboratory Historic District. The proposed construction designs are compatible with adjacent historic properties.

REFERENCES

Carver, Martha and Margaret Slater

1994 *Architectural/Historical Assessment of the Oak Ridge National Laboratory, Oak Ridge Reservation, Anderson and Roane Counties, Tennessee*. Prepared for the Oak Ridge National Laboratory, Oak Ridge, Tennessee, managed by Martin Marietta Energy Systems, Inc. for the U.S. Department of Energy. DuVall & Associates, Inc., Cultural Resources and Environmental Services, Nashville, Tennessee.

Hearnes, Hallie, Elizabeth Heavrin, Jennifer Leeds, and Sarah Reynolds

2018 *Historic Architectural Resource Survey, Oak Ridge National Laboratory, Roane and Anderson Counties, Tennessee*. Prepared for Oak Ridge National Laboratory, managed by UT-Battelle, LLC for the U.S. Department of Energy. Cultural Resource Analysts, Inc., Knoxville, Tennessee.

Thomason and Associates

2004 *National Historic Preservation Act Historic Preservation Plan*. ORNL/TM-2004/62. Prepared for the Environmental Protection and Waste Services Division, Environmental Protection Services, Oak Ridge National Laboratory, managed by UT-Battelle, LLC for the U.S. Department of Energy. Thomason and Associates, Nashville, Tennessee.