

OAK RIDGE
NATIONAL LABORATORY

MANAGED BY UT-BATTELLE
FOR THE DEPARTMENT OF ENERGY

ORNL/TM-2000/174

**OAK RIDGE NATIONAL
LABORATORY**

**FACILITIES
REVITALIZATION
PROJECT**

**PROJECT
MANAGEMENT
PLAN**

July 2000



ORNL-27 (4-00)

**OAK RIDGE NATIONAL LABORATORY
FACILITIES REVITALIZATION PROJECT
PROJECT MANAGEMENT PLAN**

July 2000

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U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-00OR22725**

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ACRONYMS AND ABBREVIATIONS

A/E	Architect/Engineer
ALD	Associate Laboratory Director
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CROET	Community Reuse Organization of East Tennessee
DOE	U.S. Department of Energy
EM	Environmental Management
ES&H	environmental, safety, and health
ESH&Q	environmental, safety, health, and quality
FRP	Facilities Revitalization Project
GPP	general plant project
LIP	line item project
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFI	No Further Investigation
NPL	National Priorities List
ORNL	Oak Ridge National Laboratory
PMP	project management plan
R&D	research and development
ROD	Record of Decision
S&M	surveillance and maintenance
SHEST	Safety and Health Evaluation and Support Team
SNS	Spallation Neutron Source
UT	University of Tennessee
WBS	work breakdown structure

EXECUTIVE SUMMARY

The Facilities Revitalization Project (FRP) has been established at Oak Ridge National Laboratory (ORNL) to provide new and/or refurbished research and support facilities for the Laboratory's science mission. The FRP vision is to provide ORNL staff with world-class facilities, consolidated at the X-10 site, with the first phase of construction to be completed within five years. The project will utilize a combination of U.S. Department of Energy (DOE), State of Tennessee, and private-sector funds to accomplish the new construction, with the facilities requirements to be focused on support of the *ORNL Institutional Plan*. This FRP Project Management Plan has been developed to provide the framework under which the project will be conducted. It is intended that the FRP will be managed as a programmatic office, with primary resources for execution of the project to be obtained from the responsible organizations within ORNL (Engineering, Procurement, Strategic Planning, etc.). The FRP Project Management Plan includes a definition of the project scope, the organizational responsibilities, and project approach, including detailed Work Breakdown Structure (WBS), followed by more detailed discussions of each of the main WBS elements: Project Planning Basis, Facility Deactivation and Consolidation, and New Facilities Development. Finally, a general discussion of the overall project schedule and cost tracking approach is provided.

1. PROJECT SCOPE

1.1 PROJECT VISION/MISSION

The overall vision of the Facilities Revitalization Project (FRP) is to provide ORNL staff with new world-class facilities, consolidated at the X-10 site, that lay the foundation for ORNL's scientific excellence into the twenty-first century. This vision is to be accomplished through a structured project approach to facilities planning, refurbishment and consolidation, and new construction in accordance with the DOE-approved *ORNL Institutional Plan*. The mission of the FRP team is to accomplish that vision within a five-year time frame, utilizing a combination of DOE, State of Tennessee, and private-sector financing in the most efficient manner, complying with all appropriate contractual, environmental, safety, and health (ES&H) regulations in every phase of the project.

1.2 FACILITIES REVITALIZATION PROJECT SCOPE

In support of the FRP vision/mission defined above, UT-Battelle intends to combine the project planning and execution infrastructure already in existence at ORNL with the expertise and experience of the new facilities construction recently completed by Battelle at Pacific Northwest National Laboratory. Under this strategy, the FRP is responsible for:

- Preparing an ORNL Strategic Facilities Plan that outlines the overall approach of the facilities development and reuse strategy and defines the unifying architectural and best energy management practices for the new facilities.
- Developing and implementing an exit strategy for nonstrategic ORNL facilities at X-10 or off-site locations (including Y-12), placing those facilities in a "cheap-to-keep" mode, and transferring those facilities to the appropriate DOE program for final disposition.
- Constructing new facilities that leverage investments from DOE and the State of Tennessee.
- Acquiring new facilities through innovative approaches, using private-sector funding for construction, followed by ORNL leasing of that new space.

Equally important, the FRP is NOT responsible for (1) routine divisional space management, allocation, and improvements; (2) ongoing Laboratory infrastructure capital improvements; and (3) overall site-wide land use planning. These responsibilities remain with the appropriate ORNL line organizations and the Facilities and Operations Strategic Planning organization, respectively.

1.3 PROJECT MANAGEMENT PLAN PURPOSE

This Project Management Plan (PMP) defines the project scope, organizational responsibilities, project approach, and project planning basis for the entire FRP effort and outlines the details of the planned facilities consolidation and new facilities construction activities. This includes the identification of principal project participants and stakeholders, an outline of overall technical and quality objectives, the general methods of accomplishment, and the approach to meeting all ES&H requirements associated with this work scope. Also provided is a preliminary, upper-level project schedule for execution of the FRP mission to provide an overall perspective on the time frame for this project. Follow-on, more detailed plans will be prepared covering specific topics (i.e., the ORNL Strategic Facilities Plan in September 2000) or individual projects [i.e., the Conceptual Design Reports for line item projects (LIPs)] as required for FRP execution. This PMP will be updated only when major changes in project scope or organizational roles and responsibilities have occurred.

2. ORGANIZATIONAL RESPONSIBILITIES

2.1 SUMMARY

This section will define the general responsibilities of various personnel and organizations to assure that both the new construction activities and the Laboratory consolidation activities are performed in the most safe, efficient, and economical manner.

2.2 UT-BATTELLE LEADERSHIP TEAM

The UT-Battelle Leadership Team (http://www-internal.ornl.gov/ornlhome/ut_battelle/utb_org.pdf) will provide the overall strategic direction for the FRP. It will also provide the necessary overhead and other funding sources for activities in support of the project objective. The Leadership Team will provide selected representatives to participate on the FRP Steering Committee (Section 2.8).

2.3 DIRECTOR OF FACILITIES AND OPERATIONS

The Director of Facilities and Operations (http://www-internal.ornl.gov/ornlhome/ut_battelle/fo_org.pdf) will be the overall approval authority for the FRP Project Management Plan. The Facilities and Operations Director will also (1) provide the necessary resources in support of the FRP and (2) present any FRP issues to the Leadership Team for discussion and resolution.

2.4 FACILITIES REVITALIZATION PROJECT TEAM

The Manager of the FRP will be accountable to the Director of Facilities and Operations for implementation of the FRP Project Management Plan. The Manager of the FRP will delegate certain responsibilities to those direct reports on the project team (Fig. 2.1). Specific responsibilities and deliverables include:

- Solicits and compiles facility needs from the Associate Laboratory Directors (ALDs) in conjunction with Facilities Strategic Planning.
- Develops and implements a Land Use and Lease Strategy for the acquisition of new construction.
- Develops an ORNL Strategic Facilities Plan.
- Develops a Private-Sector Financing Strategy and Letters of Intent for new facilities.
- Evaluates Bethel Valley Road options and integrates those options into the ORNL Strategic Facilities Plan.
- Develops specific Memoranda of Understanding (MOUs) and statements of work with key project participants and subcontractors in support of project objectives.
- Is responsible for placing surplus ORNL facilities in a safe, compliant condition that will be at a minimum cost with minimum utilities, maintenance, and surveillance ("cheap-to-keep" mode).
- Manages general plant projects (GPPs) and LIPs, State of Tennessee funded projects, and private-sector construction projects that are within the FRP scope.
- Acts as the liaison between the FRP Office and the Spallation Neutron Source (SNS).
- Serves as single point of contact between ORNL and the University of Tennessee (UT) School of Architecture and other subcontractors or consultants that support the project.

2.5 FACILITIES AND OPERATIONS STRATEGIC PLANNING

The Facilities and Operations Strategic Planning Organization (<http://svr1.cmo.ornl.gov/fosp/orgchart/orgchart.pdf>) is a key element to the success of the FRP. Changes in roles, responsibilities, accountabilities, and authorities will be kept to a minimum. The strategy is to build on, and continually improve, existing processes to support the project objective. Specific responsibilities and deliverables for Strategic Planning include:

- Reviews ORNL's space utilization, ORNL's mission, and immediate and future business requirements to determine a facility's need.

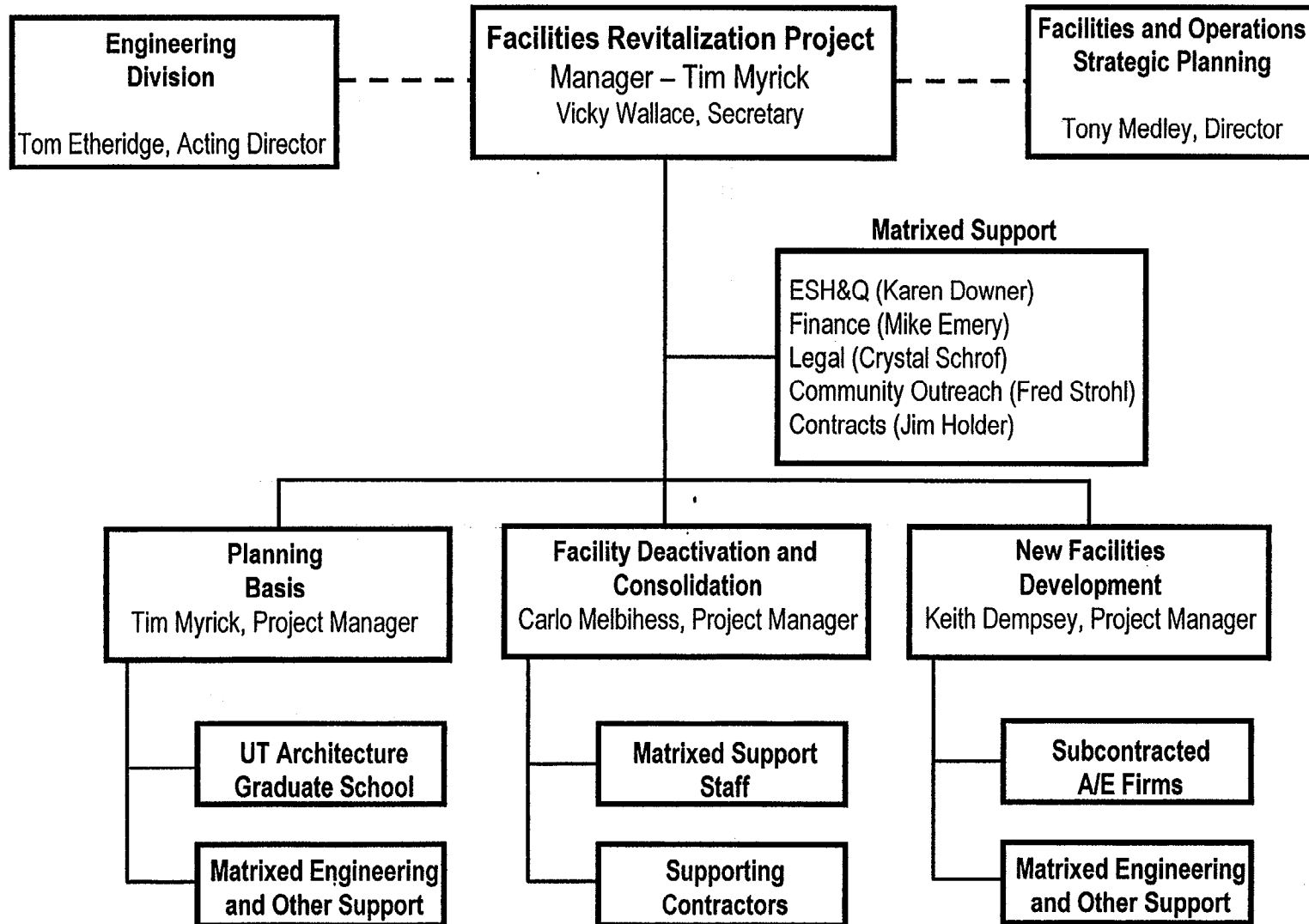


Fig. 2.1. Facilities Revitalization Project Team.

- Facilitates the process to determine which buildings to vacate.
- Works with ORNL research staff to determine critical research activities and capabilities that require relocation and works with the FRP team to find suitable space to relocate.
- Documents what facility modifications are necessary to relocate critical activities and occupants.
- Performs the final facility inspection and authorizes space charge termination when appropriate.
- Obtains DOE funding for required facilities modifications and relocations and provides this to the FRP Manager.
- Administers space charge back program.
- Identifies buildings that are surplus to ORNL and funds the disposition process.

2.6 FACILITIES AND OPERATIONS ENGINEERING DIVISION

The primary roles of Engineering Division (http://www-internal.ornl.gov/ORNL_Eng/) will be to (1) provide technical expertise in the development of functional design requirements and final specifications for all new construction activities covered under the FRP scope and (2) assist, and in some cases manage, the deactivation efforts of surplus facilities. Specific responsibilities and deliverables include:

- Provide matrixed project managers, designers, and Architect/Engineer (A/E) support on an as-needed basis to support the FRP.
- Provide procurement and contract support on an as-needed basis.
- Provide expertise in best energy management practices, as well as use recommendations for environmentally friendly construction material (recycled) that can be incorporated in the new facilities design in the most efficient and economical manner.

2.7 RESEARCH AND DEVELOPMENT (R&D) AND SUPPORT DIVISIONS

The R&D and Support Divisions are critical components for success of the FRP. It is essential that these divisions share the FRP vision, that staff members provide clear and accurate information with regard to their own space utilization, that they provide innovative ideas and options with regard to their own consolidation potential, and that they support the proper implementation of ESH&Q principles in execution of the project. Specific responsibilities and deliverables of the R&D and Support Divisions include:

- Work with Facility and Operations Strategic Planning and FRP personnel to develop a comprehensive facility consolidation and construction plan.

- Plan and coordinate the movement of personnel, laboratories, and equipment from the facilities that are being vacated. Work with R&D staff to assure minimum impact to operations.
- Identify issues and potential constraints and communicate them to the FRP Manager.
- Work with the appropriate environmental compliance representatives to assure that environmental and waste management issues are proactively addressed.
- Provide appropriate interface with Bechtel Jacobs Company LLC on EM-related issues.
- Communicate priorities to R&D staff regarding vacancy timing.
- Assign property representatives to expedite disposition of controlled and expense items.
- Maintain operational control of the facility (via the current building manager) until final disposition.
- Assure that operational and compliance issues do not occur during the facilities construction or transition process, utilizing the Safety and Health Evaluation and Support Team (SHEST), as appropriate.
- Assist with identification of surveillance and maintenance (S&M) activities necessary after facility shutdown.

Organization charts for the R&D, ESH&Q, and Facility Operations directorates, which identify all of the involved R&D and Support Divisions involved directly or indirectly in the FRP execution, are available at the following URLs:

Biological and Environmental Sciences

http://www-internal.ornl.gov/ornlhome/ut_battelle/bes_org.pdf

Energy and Engineering Sciences

http://www-internal.ornl.gov/ornlhome/ut_battelle/ees_org.pdf

Environment, Safety, Health, and Quality

http://www-internal.ornl.gov/ornlhome/ut_battelle/eshq_org.pdf

Facilities and Operations

http://www-internal.ornl.gov/ornlhome/ut_battelle/fo_org.pdf

National Security

http://www-internal.ornl.gov/ornlhome/ut_battelle/ns_org.pdf

Physical and Computational Sciences

http://www-internal.ornl.gov/ornlhome/ut_battelle/pcs_org.pdf

2.8 FACILITIES REVITALIZATION PROJECT STEERING COMMITTEE

The primary purpose of the FRP Steering Committee is to provide guidance and review and approve documents, procedures, and significant milestones as defined in the FRP schedule. The committee will participate in the resolution of disputes that may arise on the project. Generally, the steering committee shall provide overview for the FRP activities. At the discretion of the steering committee chairman, items that cannot be resolved in this committee will be brought to the UT-Battelle Leadership Team for resolution.

Jeff Smith – Chairman
Herb Debban
Lee Riedinger
Tim Myrick
Steve Porter
Billy Stair
Greg Turner
Tony Medley
Jon Coddington (UT)

2.9 SUBCONTRACTOR SUPPORT

The UT College of Architecture will initially assist the FRP in producing the master plan and development concepts for the new ORNL campus. Other subcontractors may be selected during the project time line to assist with planning and/or implementation of the FRP scope and will be managed within the appropriate program element as described in the following sections.

3. PROJECT APPROACH

3.1 PROJECT APPROACH, SEQUENCING, AND WORK BREAKDOWN STRUCTURE

The overall approach to project execution is to apply a structured, but graded, process to the two major components of the FRP: Existing Facilities Consolidation and New Facilities Construction. Current approved policies and procedures will be applied for the DOE-funded portions of the project (both facility transfers and capital construction) with modifications of those processes implemented for the private-sector and State of Tennessee financed facilities improvements, as appropriate. Discussion of those expected process steps is provided in Sections 5 and 6 of this PMP.

The ultimate goal of the FRP is to have existing strategic facilities at the X-10 site refurbished, and new facilities constructed, to allow consolidation of ORNL staff from off-site locations (including Y-12) back to X-10 and to provide much improved research and

support infrastructure for the future of ORNL. The basic sequence of steps involved in reaching that end point is outlined in Fig. 3.1. Obviously, each of the high-level steps in that sequence diagram will involve detailed planning and implementing processes, with technical and schedule interfaces between activities. Discussions of those details (as much as are known at this time) are provided in Sections 4 through 6.

To guide the FRP project planning efforts, a basic WBS has been established and is presented in Fig. 3.2. This WBS will be followed in the definition of work scope and the tracking of cost/schedule commitments for the FRP. Changes to the WBS will be routinely made, as required to accommodate the project execution. Only if major WBS elements are added or eliminated will those changes be documented in a revision to this PMP. A brief description of the content of each second-level WBS element is provided as follows, with details contained in Sections 4 through 6.

3.1.1 WBS 1.1 - Project Planning Basis

This WBS element is designed to capture all of the upper-level planning for the FRP, to the point that strategic decisions are made to allow project execution under the other two primary work elements: Facility Deactivation and Consolidation (Element 1.2) and New Facilities Development (Element 1.3). Under this work element, the FRP Project Management Plan (Element 1.1.1) is prepared and issued, as well as the overall master plan for the FRP, the ORNL Strategic Facilities Plan (Element 1.1.2). Other critical work elements include the development of Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and National Environmental Policy Act (NEPA) documentation (Element 1.1.3) associated with the ORNL site and its relationship to this project. The remaining WBS elements deal with any strategic decisions that must be made to allow the three principal methods of accomplishment for new facilities construction to proceed: use of Private-Sector Financing (Element 1.1.4), State of Tennessee Constructed Facilities (Element 1.1.5), and DOE Capital Projects (Element 1.1.6).

3.1.2 WBS 1.2 - Facility Deactivation and Consolidation

The Facility Deactivation and Consolidation WBS will capture ORNL's consolidation efforts and identify the disposition path of facilities that are determined surplus. This will include the Inventory of Existing Facilities Use and Conditions (Element 1.2.1). An overall Facility Consolidation Plan will be developed capturing the ALDs' prioritized needs to relocate staff from Y-12 to X-10 and for consolidation efforts within the X-10 site (Element 1.2.2). For a facility that is determined surplus through the facility consolidation effort, one of two disposition paths will be used: (1) Facility Deactivation (Element 1.2.3) where a facility will be put in "cheap-to-keep" mode and transferred to DOE's Environmental Management Program (DOE-EM) if the criteria are met, or (2) Facility Transition (Element 1.2.4) to another subcontractor or to an entity such as the Community Reuse Organization of East Tennessee (CROET).

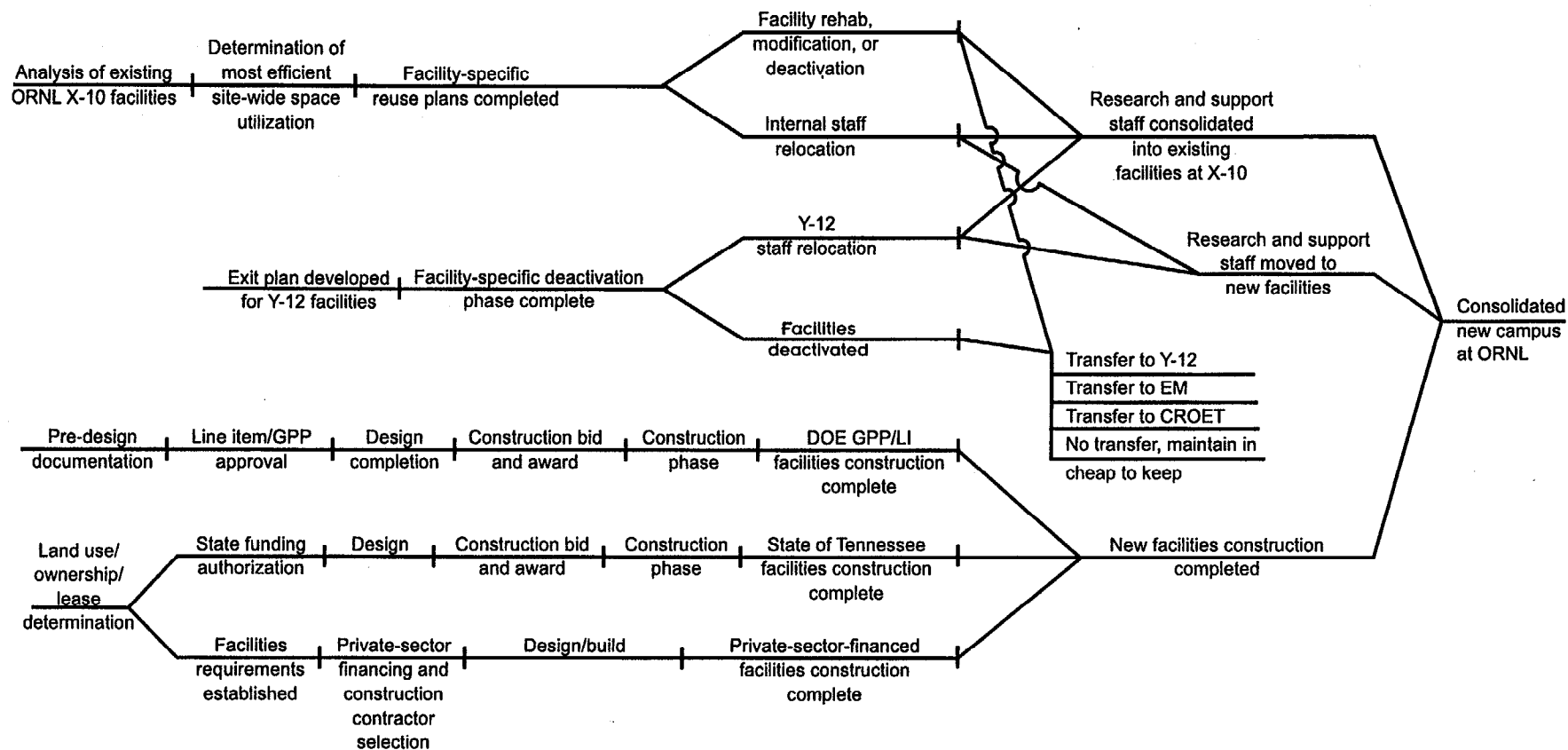


Fig. 3.1. Sequence diagram for the Facilities Revitalization Project.

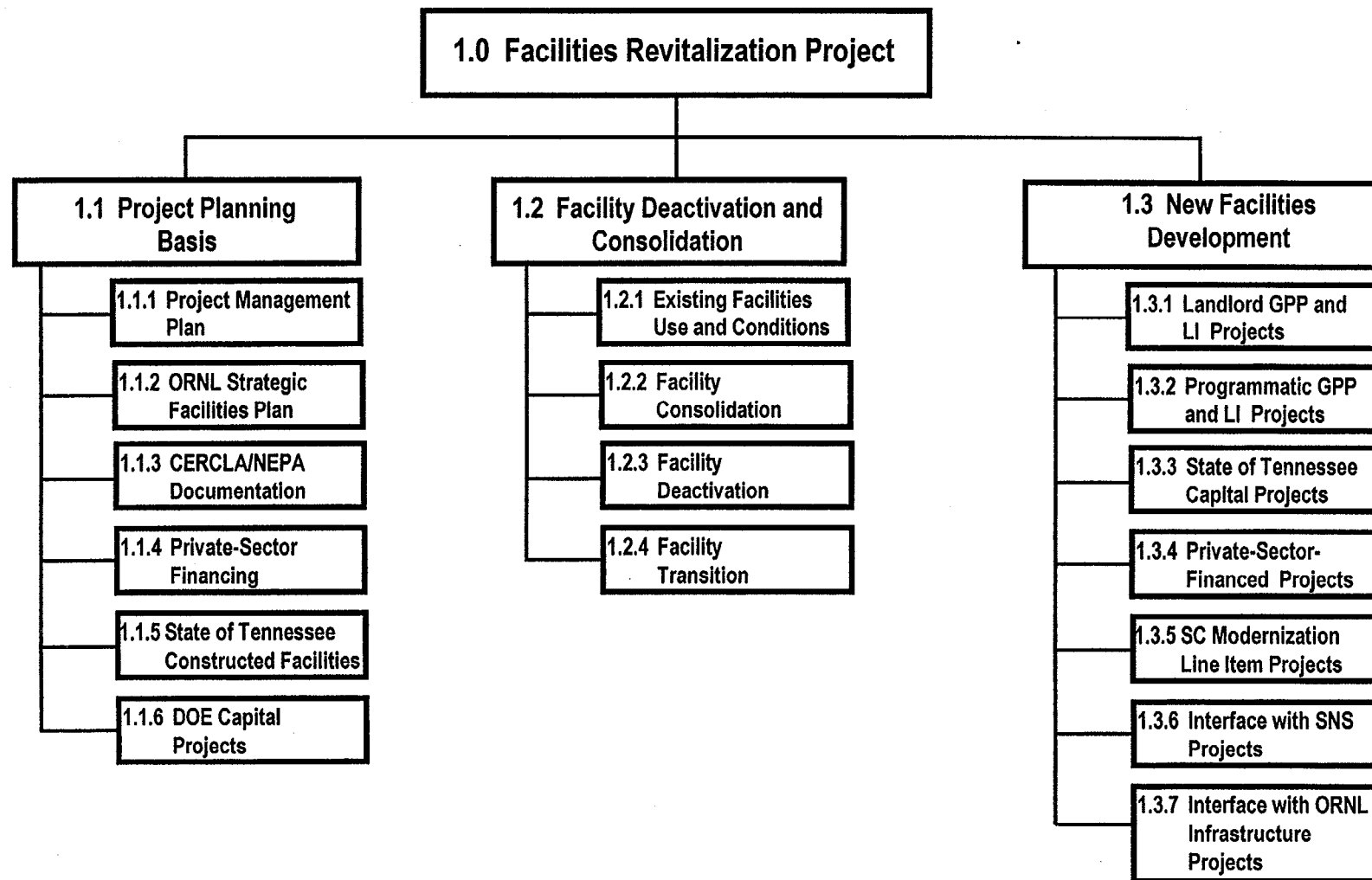


Fig. 3.2. Third level WBS for the Facilities Revitalization Project.

3.1.3 WBS 1.3 - New Facilities Development

The New Facilities Development WBS element will be used to track project planning and execution for each of the seven types of facilities development funding expected to be used for the FRP. These include Landlord and Programmatic GPPs and LIPs (Elements 1.3.1 and 1.3.2), State of Tennessee Capital Projects (Element 1.3.3), Private-Sector-Financed Projects (Element 1.3.4), and the proposed Office of Science Modernization Line Item (Element 1.3.5). Important interactions with companion construction efforts at and adjacent to ORNL will also be captured through this WBS, the most important of which include the Interface with the SNS Project (Element 1.3.6) and the Interface with ORNL Infrastructure Improvement Projects (Element 1.3.7).

4. PROJECT PLANNING BASIS

As stated earlier, this WBS element is designed to accomplish all of the upper-level planning requirements for the FRP, to the point that strategic decisions are made to allow project execution under the other two primary work elements: Facility Deactivation and Consolidation (Element 1.2) and New Facilities Development (Element 1.3). Fig. 4.1 outlines the WBS elements to the fourth level, identifying the primary planning topics and key deliverables that will be addressed under this WBS.

In addition to the Project Management Plan (developed under WBS 1.1.1), the primary planning document guiding the consolidation and construction of new facilities at ORNL will be the ORNL Strategic Facilities Plan (WBS 1.1.2). This plan, outlined in Appendix A, will contain a current site description, including an inventory of current facilities with their condition and use. Based on that inventory, and detailed prioritized facility needs and consolidation input from the ORNL ALDs, an overall plan for staff and facilities consolidation will be developed and summarized. Arising from that consolidation planning effort, and input from the ALDs on new facilities needs, an understanding will evolve as to the number and type (i.e., administrative, laboratory) of new buildings required to support the Laboratory's mission. The new facilities listing will identify the basic size, function, and special requirements of each facility, as well as the type of funding to be employed in accomplishing the construction (DOE, State of Tennessee, private-sector). Critical to the private-sector construction option will be the development of an acceptable land use and facilities lease strategy, which will be outlined in the plan. Following identification of the scope of facilities consolidation and new construction, the ORNL Strategic Facilities Plan will present the master plan for siting of facilities and integration of those facilities into the X-10 site. The master plan will (1) address the architectural and energy management elements of an integrated campus, (2) include the ES&H considerations to be addressed during facilities development, and (3) outline the most viable options for project planning and Laboratory growth. One aspect of the growth strategy to be addressed is the option to relocate a portion of Bethel Valley Road. The ORNL Strategic Facilities Plan will also include a summary-level preliminary cost and schedule for implementing the FRP.

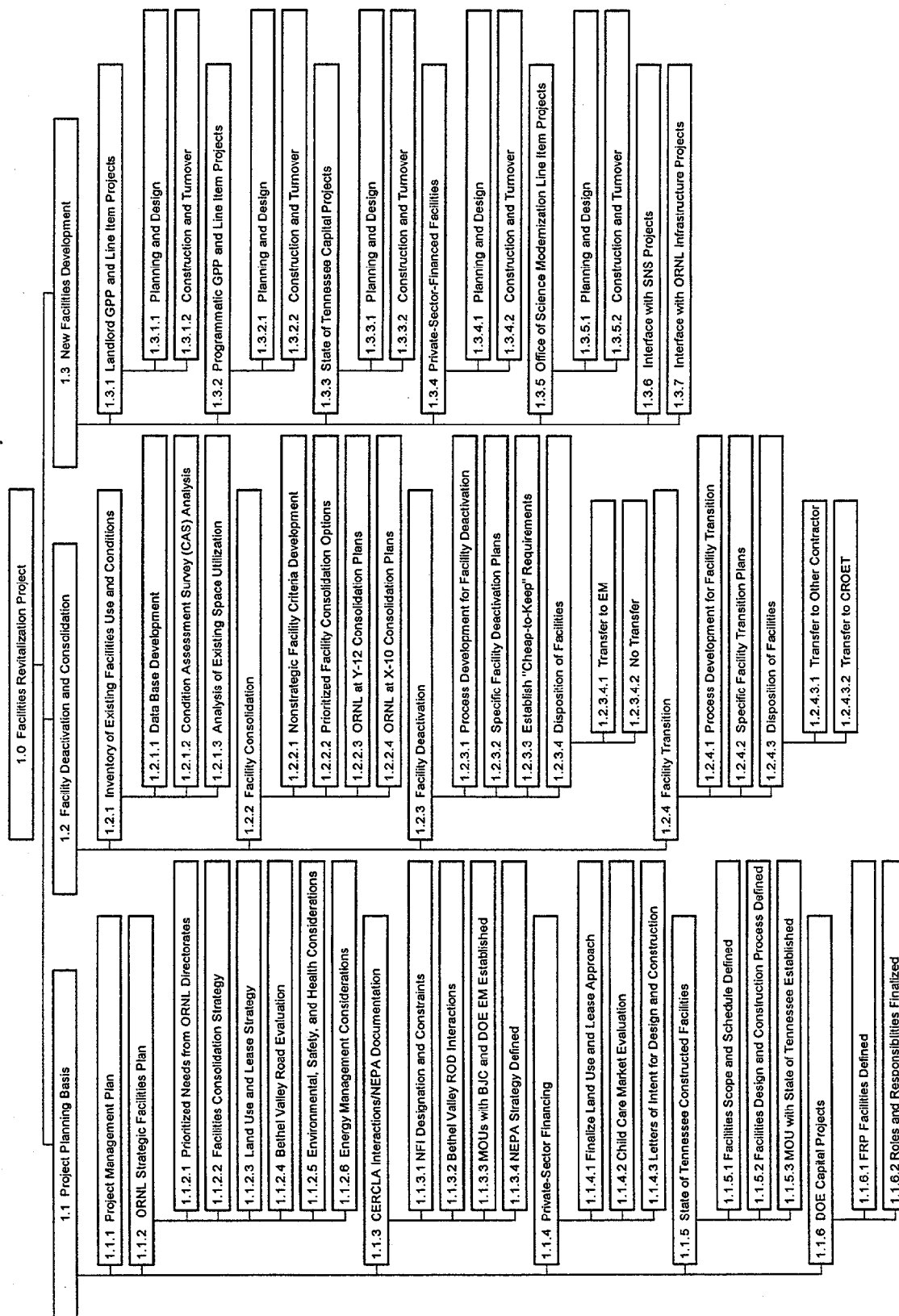


Fig. 4.1. Fourth level WBS for the Facilities Revitalization Project.

In parallel to the drafting of the ORNL Strategic Facilities Plan will be the accomplishment of specific task elements that support the plan. These include (1) resolution of the CERCLA status and associated restrictions for new facilities development at ORNL and determination of the appropriate NEPA analysis for the proposed action (WBS 1.1.3), (2) determination of the viability and specific approach for private-sector construction of facilities (WBS 1.1.4), (3) definition of the scope and process to be employed for State of Tennessee constructed facilities (WBS 1.1.5), and (4) definition of the use of DOE GPP and LIP funds for the FRP and the roles/responsibilities of DOE and UT-Battelle staff in executing those capital projects.

The key CERCLA determinations to be made in concert with DOE-EM and Bechtel Jacobs Company organizations include:

- Determining the status of the National Priorities List (NPL) and No Further Investigation (NFI) designations for key locations on the ORNL site and understanding the constraints that designate places for future development,
- Determining the status of the Bethel Valley and Melton Valley Records of Decision (RODs) on ORNL's facilities consolidation and development plan and becoming specifically involved as a major stakeholder in that decision-making process in the coming year, and
- Determining the need for and scope of facility or site-specific MOUs with Bechtel Jacobs Company and/or DOE-EM related to the FRP execution.

In parallel with the CERCLA evaluations, the appropriate level of NEPA documentation for the project will be determined and the process initiated through the submittal of the first-step Environmental Assessment Determination. Follow-on documentation will be prepared by DOE, as required, with the full support of the FRP team.

For the private-sector construction option expected to be critical to new facilities development, specific efforts to be made under this WBS element include (1) finalizing the land use strategy and facility lease approach for buildings to be constructed adjacent to the current ORNL site and (2) completing an ORNL-specific child care market evaluation to determine the viability of providing that capability close to the ORNL site. Based on the results of these efforts, specific letters of intent are expected to be developed and signed.

For State of Tennessee or DOE constructed facilities, the approaches for development of those facilities are more straightforward, as both governmental agencies have well-defined processes for construction project execution. For the FRP, under this WBS element, the principal issues to be addressed revolve around how those processes will be integrated with private-sector facilities construction, what specific facilities are to be built through these funding sources, and how specific roles and responsibilities will be shared among UT-Battelle, DOE, and state personnel. Where appropriate, specific MOUs will be established (particularly with the state) to clearly define the roles and commitments of each party.

5. FACILITY DEACTIVATION AND CONSOLIDATION

5.1 OVERVIEW

The FRP strategy is to consolidate Laboratory operations into a set of core facilities at the X-10 site and transfer nonstrategic, uneconomical, or underutilized facilities that no longer support ORNL's mission to other parties. The WBS Element 1.2 (Fig. 4.1) covers this work scope and is further discussed as follows. The transfer of excess facilities could mean transfer to another contractor for alternate use, transfer to CROET, or, if the criteria are met, transfer of excess facilities to the DOE-EM Program. Facilities determined surplus that cannot be transferred must be placed in a state of minimum cost, with the minimum utilities, maintenance, and surveillance.

5.2 INVENTORY OF CURRENT FACILITIES (WBS 1.2.1)

The Melton Valley site, the Bethel Valley site, and Copper Ridge combined (also referred to as the X-10 site) contain approximately 3.4 million gross square feet of building space. In addition, approximately 1.4 million gross square feet of building space is at the Y-12 site and is used by the Laboratory. Specific building data for ORNL facilities will be compiled from existing data bases into a single project-specific data base that will be used to help develop exit and consolidation strategies for ORNL (WBS 1.2.1.1 through WBS 1.2.1.3). Some of the data bases to be accessed during this process include: (1) the Facilities Information Management System, (2) the Space Allocation Management System, and (3) the Condition Assessment Survey System.

5.3 FACILITY CONSOLIDATION (WBS 1.2.2)

The FRP will work in conjunction with Facilities and Operations Strategic Planning, the ESH&Q organizations, and the R&D divisions to develop a comprehensive facility consolidation plan. The strategy of the overall plan will be to relocate ORNL staff from the Y-12 site and other remote locations, such as Commerce Park, to the X-10 site and to consolidate existing operations within the X-10 site.

The first step in the consolidation process will be to develop a list of criteria that each facility will be evaluated against to assist the FRP project team in the identification of nonstrategic buildings that should be vacated and placed in a state of minimum cost with minimum utilities in support of FRP objectives (WBS 1.2.2.1). Based on feedback from the ALDs, recent exit strategies, internal FRP assessments, and input from other key stakeholders, consolidation options for Y-12 and X-10 will be generated and prioritized. Once the consolidation options are prioritized, an overall Y-12 consolidation plan will be created, funded, and implemented (WBS 1.2.2.3). This will be a near-term deliverable since much of the information and scope has already been developed through recent efforts.

The second deliverable will be a comprehensive consolidation plan within the X-10 site that will relocate staff and activities out of high-cost, substandard, nonstrategic space and into newly renovated long-term strategic facilities or new facilities constructed as part of the FRP scope (WBS 1.2.2.4). This plan will take a much broader look at space utilization across ORNL at the X-10 site and will be a much larger challenge.

5.4 FACILITY DEACTIVATION (WBS 1.2.3)

A draft process will be developed to deactivate buildings deemed surplus through the facility consolidation planning process (WBS 1.2.3.1). This process will be piloted with the first facilities selected to be deactivated. Lessons learned and process improvement data will be collected and incorporated into a final process that will be applied to other facilities to be deactivated in the future.

For each facility to be deactivated, a specific facility deactivation plan will be generated (WBS 1.2.3.2). The general purpose of the deactivation plan will be to identify a structured process and sequencing of activities in support of vacating staff and placing the specific facility in "cheap-to-keep" mode. "Cheap-to-keep," by definition, means placing excess facilities in a state of minimum cost, with minimum utilities, maintenance, and surveillance. Facilities shall be placed in the most economical status that is consistent with safe operations. "Cheap-to-keep" requirements will be defined globally in this document and then modified for specific facility needs and conditions (WBS 1.2.3.3). Typical "cheap-to-keep" system configurations include water systems isolated, ventilation shut down, discharge stacks capped, adequate facility piping freeze protection provided, etc. Once a facility is vacated and placed in "cheap-to-keep" mode, the facility will require S&M to ensure the safety and health of staff and the public or to prevent environmental damage prior to transfer to the DOE-EM Program under the ORNL-FM-002 procedure. Noncontaminated facilities that are ineligible for transfer to the EM Program shall also be placed in "cheap-to-keep" mode until options and funding for ultimate disposition are determined.

5.5 FACILITY TRANSITION (WBS 1.2.4)

A draft process will be developed to transfer to other contractors facilities that are deemed surplus through the facility consolidation planning process (WBS 1.2.4.1). This process will be piloted with the first facilities to be transferred. Lessons learned and process improvement data will be collected and incorporated into a final process that will be applied to other facilities to be transferred in the future.

For each facility to be transferred, a specific facility transition plan will be generated (WBS 1.2.4.2). The general purpose of the transition plan will be to identify a structured process and sequence of activities in support of vacating staff and transferring the facility to another contractor. Disposition paths of facilities could include transfer to other on-site contractors such as Bechtel Jacobs Company (WBS 1.2.4.3.1) or to other entities such as CROET (WBS 1.2.4.3.2.)

6. NEW FACILITIES DEVELOPMENT

6.1 OVERVIEW OF NEW FACILITY ACQUISITION AND CONSTRUCTION PROCESS

One of the agreements in the contract between DOE and UT-Battelle for operating and managing ORNL included a commitment to the revitalization of the site. This revitalization activity includes construction of new facilities funded from a variety of sources including federal, state, and/or private-sector financing. This work scope is covered under WBS Element 1.3 (Fig. 4.1). The intricacies of transferring federal land to state or private-sector control on a long-term or permanent basis will be based on agreements signed with DOE. The authorities having jurisdiction over construction activities on those sites are expected to comply with the laws and other regulations governing activity on sites of the type involved. ES&H oversight will be the responsibility of the authority having jurisdiction. Project management plans will be prepared for each project detailing the requirements appropriate for each.

6.2 ANALYSIS, ASSESSMENT, AND PLANS

For federally funded facilities, the documents typically generated include Life Cycle Cost, Value Engineering, Environmental Assessment, Safety Assessment, Quality Assurance Assessment, and Risk Assessment. These documents will be prepared for new facilities funded through the congressional budget process.

The need for these or similar documents for facilities constructed with funds provided by the State of Tennessee will be assessed and provided as required. The code authority is the State Fire Marshall from the Department of Commerce and Insurance.

Facilities constructed on land that has been leased or transferred to private concerns from the federal government for the purpose of constructing new facilities to be leased back to the government will not be subject to unique requirements. Analyses required by federal and/or state law for new construction in the private sector will be prepared and submitted as required.

6.3 QUALITY ASSURANCE

It is anticipated that facility renovations and new facilities of the type planned for this revitalization project will fall under Standard Industrial Quality. Any specific Quality Assurance requirements involving program requirement, personnel training and qualification, quality improvement, documentation and record keeping, work process, design, procurement, inspection and testing, and independent assessment will be recorded in the procurement specifications.

6.4 BASELINE, PROJECT, AND CONFIGURATION CONTROL

Baseline documentation will continue to be provided for federally funded facilities in funding documents such as the Project Data Sheet and the project-specific Execution Plan. Project and Configuration Control will be developed in the specific Execution Plan in accordance with the appropriate DOE orders.

The State of Tennessee has several funding mechanisms available including, but not limited to, grants and line item appropriation. The project baseline and control vary with the funding source and will be developed on a project-by-project basis consistent with state requirements. Generally, the requirements are listed in the Designers Manual published by the State Department of Finance and Administration, Capital Projects Management.

Baseline requirements for privately financed facilities will be established in the procurement documents issued by UT-Battelle. Schedule requirements will be established in the contract documents and will be controlled by incentive and/or liquidated damage clauses. Lease rates for facility space and maintenance will be established in the contracting process. The control and expenditure of construction funds is the responsibility of the private company providing the facility and will not be monitored by UT-Battelle.

6.5 DESIGN AND DESIGN REVIEWS

Design for federally funded facilities will be executed in accordance with existing policies and procedures for GPPs or LIPs.

Design and design review/control for State of Tennessee funded projects will be executed in accordance with the State of Tennessee requirements as noted above.

Design and design review of privately financed facilities are the responsibility of the organization under contract to UT-Battelle to provide the facility. ORNL review of the documents will be limited to functional considerations contained in the contract documents. The responsibility to comply with codes, standards, and other legal requirements will be defined in the contract documents.

6.6 CONSTRUCTION MANAGEMENT

For federal, state, or privately funded facilities, management of day-to-day procurement and construction activities associated with the project is the responsibility of the organization under contract to UT-Battelle to provide the facility.

For federally funded facilities, construction oversight requirements are established in the contract between DOE and UT-Battelle. The ORNL SHEST, in accordance with the Integrated Safety Management System Program approved by DOE, provides the primary

safety and health oversight. The ORNL Construction Field Representative provides quality verification and coordination with site support organizations.

For state and privately funded facilities, ES&H requirements will be established consistent with Occupational Safety and Health Administration and U.S. Environmental Protection Agency regulations. Oversight responsibilities will be established in contract documents between UT-Battelle and their contractors. The ORNL project manager or his designee will make periodic visits to the site to observe compliance with these requirements and to observe the quality of ongoing construction activity.

6.7 PROJECT CLOSEOUT/TRANSITION TO OPERATIONS

For federally funded projects, closeout and transition to operation will comply with established policies and procedures.

For state and privately funded projects, closeout and transition activities will be defined in the contract documents.

7. PRELIMINARY PROJECT SCHEDULE

The Preliminary Project Schedule (Fig. 7.1) has been developed for the activities envisioned to define and implement the revitalization of ORNL facilities. Activities required to support the total project are being further identified on the project WBS chart. When finalized, all activities will be placed on a master schedule and associated budgets assigned.

Cost and schedule for the ORNL funds authorized for this project will be monitored and reported by SAP. Detailed schedules for individual construction projects will be developed, tracked, and reported as noted above in baseline, project, and configuration control.

This revitalization project has definite bounds as identified in the project WBS. Once the existing facilities are modernized and the new facilities identified and constructed, this project will be considered complete. Additional facilities and upgrades will be required in the future, but they will be handled on an individual basis.

Activity	FY00						FY01	FY02	FY03	FY04	FY05	FY06
	Apr	May	Jun	Jul	Aug	Sep						
Project Planning												
FRP Project Management Plan												
ALD Prioritized Needs												
Land Use Strategy Determination												
Private-Sector Financing Strategy												
Prioritized Existing Facilities Consolidation Options												
ORNL Strategic Facilities Plan												
Design/Construct												
New Visitors Center												
Laboratory for Comparative and Functional Genomics												
Joint Institute for Neutron Sciences												
Joint Institute for Computational Sciences												
Joint Institute for Biological Sciences												
Oak Ridge Center for Advanced Studies												
Probable Out year DOE Line Items (Computational Sciences Facility, Support Services Facility, Advanced Materials Characterization Facility, and Laboratory Upgrades in 4500)												
Probable GPP Facility Upgrades (Nanoscience, Computer Upgrades, Security Perimeter Upgrades, Electrical System and Water Upgrades, and Bethel Valley Road Upgrade)												
Private-Sector-Financed Facilities												

Fig. 7.1. Preliminary project schedule for the Facilities Revitalization Project.

APPENDIX A
Draft Outline of the
ORNL Strategic Facilities Plan

Draft Outline of the ORNL Strategic Facilities Plan

- I. Executive summary
- II. Introduction
- III. Facilities Revitalization Project scope
- IV. Current site description
 - A. Inventory of current facilities and use
 - B. Prioritized facilities consolidation options
- V. New facilities needs and options
 - A. Prioritized new facilities requirements
 - B. DOE, State of Tennessee, and private-sector-financed project availability
- VI. ORNL Strategic Facilities Plan
 - A. Overall site plan, including options for growth
 - B. Environmental, safety, and health considerations
 - C. Identification of unifying themes
- VII. Preliminary FRP cost and schedule
- VIII. Conclusions and recommendations
- IX. Appendix

