OAK RIDGE
NATIONAL LABORATORY
MANAGED BY UT-BATTELLE
FOR THE DEPARTMENT OF ENERGY

ORNL/TM-2001/210

Oak Ridge National Laboratory Parking Lot and Traffic Flow Plan

October 2001

UT-BATTELLE
ORNL-27 (4-00)

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ORNL/TM-2001/210

OAK RIDGE NATIONAL LABORATORY PARKING LOT AND TRAFFIC FLOW PLAN

October 2001

Prepared by
OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37831-6302
managed by
UT-Battelle, LLC
for the
U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-00OR22725

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act of 1990
AMCL	Advanced Materials Characterization Laboratory
ATLC	Atomic Trades and Labor Council
BJC	Bechtel Jacobs Company, LLC
CSB	Computational Sciences Building
DOE	U.S. Department of Energy
ETF	Engineering Technology Facility
FRP	Facilities Revitalization Project
GAAT	Gunite™ and associated tank
JICS	Joint Institute for Computational Sciences
ORCAS	Oak Ridge Center for Advanced Studies
ORNL	Oak Ridge National Laboratory
PPA	Property Protection Area
ROB	Research Office Building
RSC	Research Support Center
SME	Subject Matter Expert
SWSA	Solid Waste Storage Area
WAG	Waste Area Grouping
WBS	Work Breakdown Structure

1. FACILITIES REVITALIZATION PROJECT INTEGRATION

1.1 INTRODUCTION

Oak Ridge National Laboratory (ORNL) is in the process of upgrading its infrastructure to provide world-class facilities to accomplish its mission of scientific research. Revitalization of the ORNL campus is a key initiative of ORNL's prime contractor, UT-Battelle, LLC. The Facilities Revitalization Project (FRP) will replace and upgrade a wide variety of buildings and equipment, including specialized experimental laboratories, user facilities, hot cells, and a large complement of office space and associated utility systems. While conducting the FRP, various areas of ORNL's physical facilities will be temporarily impacted, including parking areas and traffic flow into, as well as within, the Laboratory. This Parking Lot and Traffic Flow Plan (the Plan) addresses the many activities that must be implemented in a well-coordinated fashion to properly mitigate the impact to employees and visitors conducting daily business at ORNL.

1.2 OVERALL FACILITIES REVITALIZATION PROJECT PLAN AND SCHEDULE

The FRP mission is to consolidate facilities at the main ORNL site, with the first phase of construction to be completed in 5 years. The facilities revitalization approach is to provide new, integrated facilities constructed in close proximity to the existing ORNL strategic research facilities utilizing a combination of U.S. Department of Energy (DOE), State of Tennessee, and private sector financial resources. These facilities will be constructed in an integrated campus layout that allows the free flow of scientific research among multidivisional teams, with consistent architectural themes regardless of construction funding source.

ORNL has developed a Master Plan that outlines a phased approach to the facilities revitalization effort, with primary emphasis in the first 5 years being establishment of the East Campus infrastructure, construction and refurbishment of critical mission-oriented research facilities, and consolidation of research staff from ORNL facilities at Y-12.

The second phase of the facilities upgrade program will be completion of the East Campus core construction, consolidation of off-site staff to the main ORNL site, and primary development of the ORNL West Campus for environmental and life sciences research. Figure 1 is a representation of planned development in the East Campus area, much of which will take place in the existing main parking lot and is the driver for the initial changes in the parking and traffic flow reconfiguration. Figure 2 is a high-level schedule of pianned construction in support of FRP objectives.

1.3 PARKING LOT AND TRAFFIC FLOW STRATEGY

The Parking Lot and Traffic Flow Plan strategy is to provide new parking lots in and around the ORNL campus to replace most of the space taken by construction activities. To the extent possible, the objective is to allow private vehicle parking throughout the campus in close proximity to employee work locations.

While all new lots cannot be placed in as close proximity to existing Laboratory buildings as the current lots, large lots will be placed at both ends of the Laboratory and should be adequate for most work locations. Every attempt is being made to provide as much parking as possible, although it is not feasible

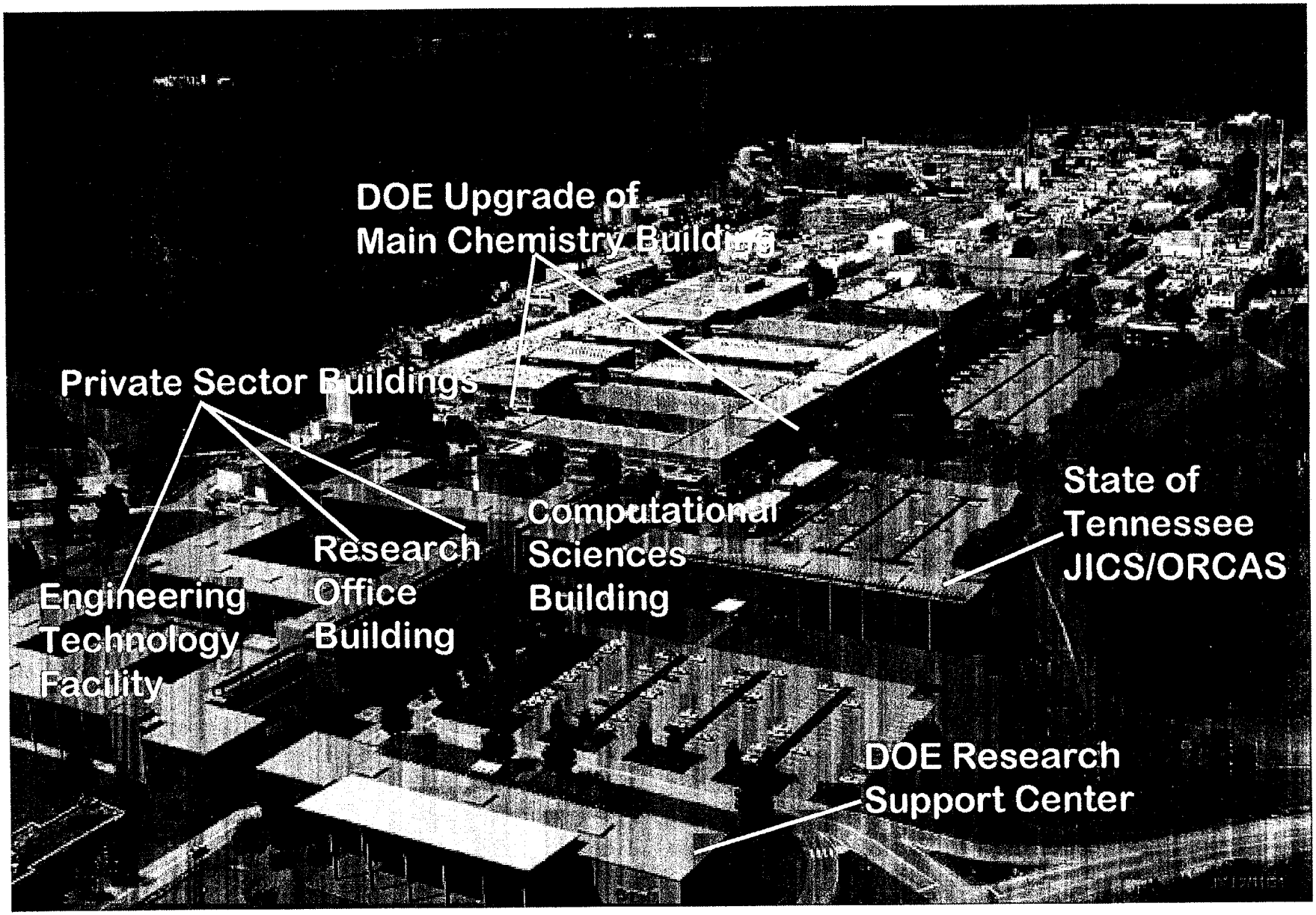

Fig. 1. ORNL East Campus in FY 2003.

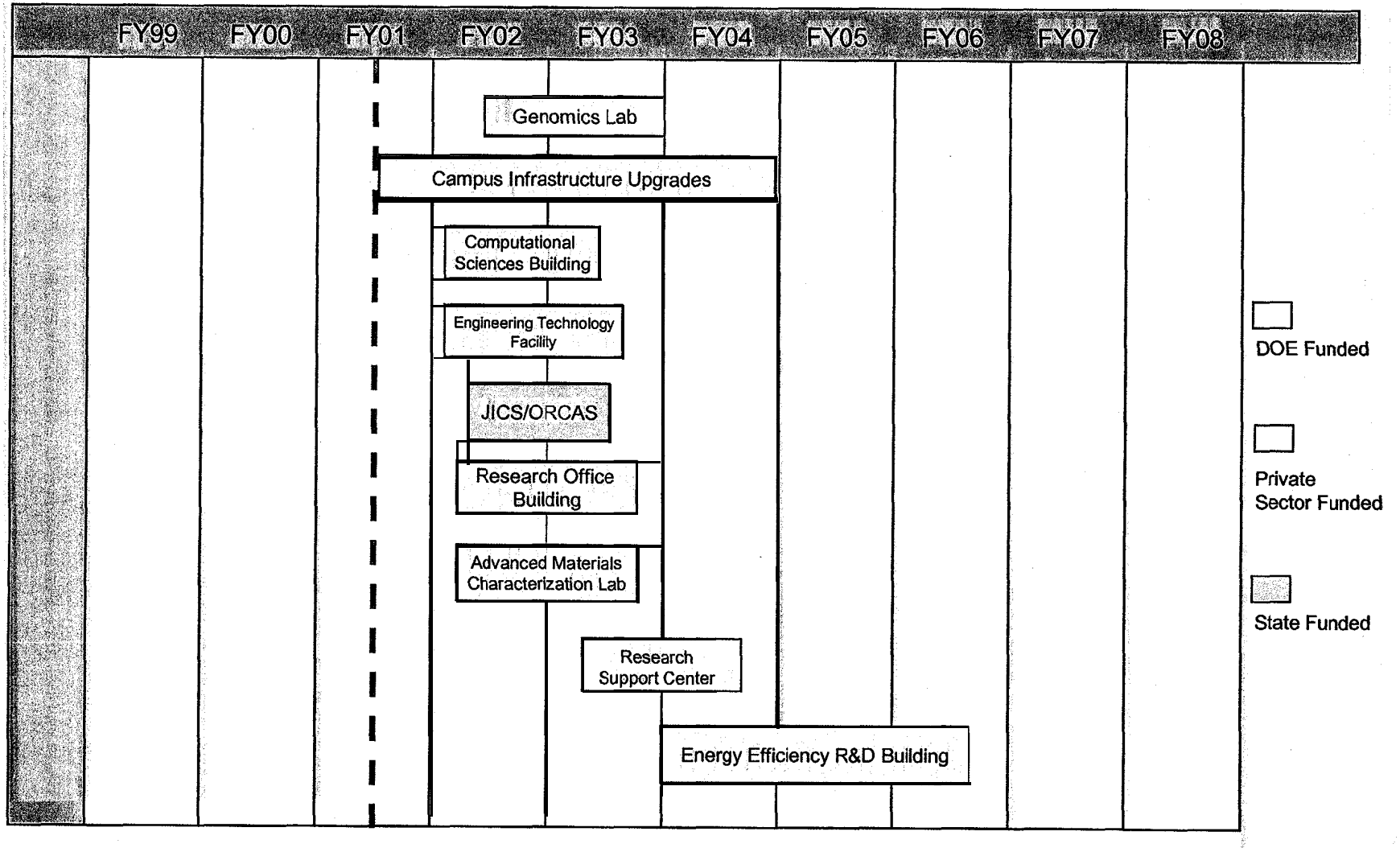

Fig. 2. Integrated schedule of DOE, State, and private sector facilities and parking lot construction at ORNL.

or necessary to replace 100% of the parking places that currently exist in close proximity to work areas, particularly since only 80% of current spaces are utilized by the downsized ORNL population.

The strategy for meeting parking and traffic needs during facility revitalization construction includes several actions: (1) build new permanent parking lots and install traffic control features, (2) identify short-term and incidental parking for enhanced staff productivity, (3) relocate government vehicles to maximize staff parking, (4) designate a Parking and Traffic Flow Manager, (5) establish an advisory council of stakeholders, (6) encourage carpooling, and (7) develop and implement a communications plan to keep ORNL staff informed of upcoming parking lot and traffic flow changes.

1.4 WORK BREAKDOWN STRUCTURE

A Work Breakdown Structure (WBS), as shown in Fig. 3, has been developed to organize the work required to complete the Parking Lot and Traffic Flow Project. The organization chart for the project is shown in Fig. 4. Tasks have been identified to accomplish the objectives of all aspects of the plan. The WBS provides a tool for assigning responsibilities, tracking progress of the various required activities, and collecting costs, at the appropriate level of detail.

1.5 SCHEDULE

An integrated schedule for the FRP, including new parking and key events, has been developed to identify the most significant aspects of the overall activity (Fig. 5). The key elements impacting the parking lot requirements/schedule include the construction and occupancy of the private sector buildings, the Joint Institute for Computational Sciences (JICS) building (State), and the Research Support Center (DOE). These activities will eliminate the main parking lot near 4500 North, requiring new major perimeter parking areas to be constructed. These new lots, the expansion of the 4500 North lot, and the 6026 Area lots, are required to be available before the existing major lots can be eliminated. Therefore, it is critical to maintain an integrated schedule of these activities to provide required parking. Key elements of the FRP impacting parking lot construction schedule are described below.

- Private sector buildings include the Computational Sciences Building (CSB), Research Office Building (ROB), and the Engineering Technology Facility (ETF). Construction of these new facilities will eliminate 741 existing parking spaces that will be replaced with new lots in front of 4500 North and in the 6026 Area. Removal of seven trailers from the 6026 Area will be required.

- The Joint Institute for Computational Sciences (State) and Research Support Center (DOE) building construction will eliminate approximately 423 existing parking spaces. An open quadrangle with limited parking for visitors will be developed between these facilities. Additional parking spaces will be provided as near as possible for conferences and users.

- Infrastructure improvements and additions will be critical activities for the new buildings and will impact construction activities in the existing parking areas. These activities will be the initial drivers for closure of parking areas in the 4500 main parking lot.

1.6 BUDGET

The budget for the overall Parking Lot and Traffic Flow Project includes estimated costs for each of the major WBS elements. Included in these elements are the capital funds for new construction, overhead

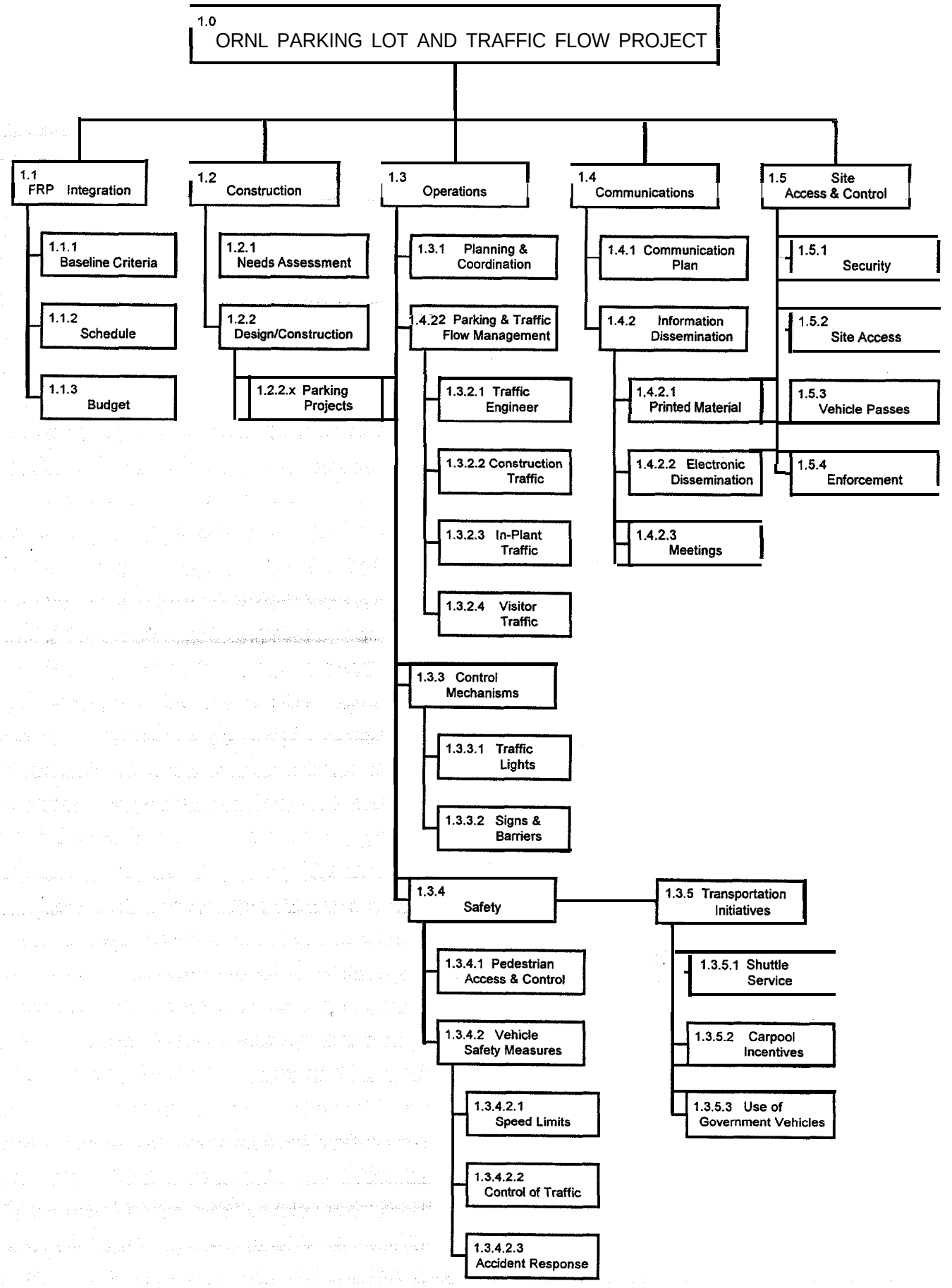

Fig. 3. Work Breakdown Structure for the ORNL Parking Lot and Traffic Flow Project.

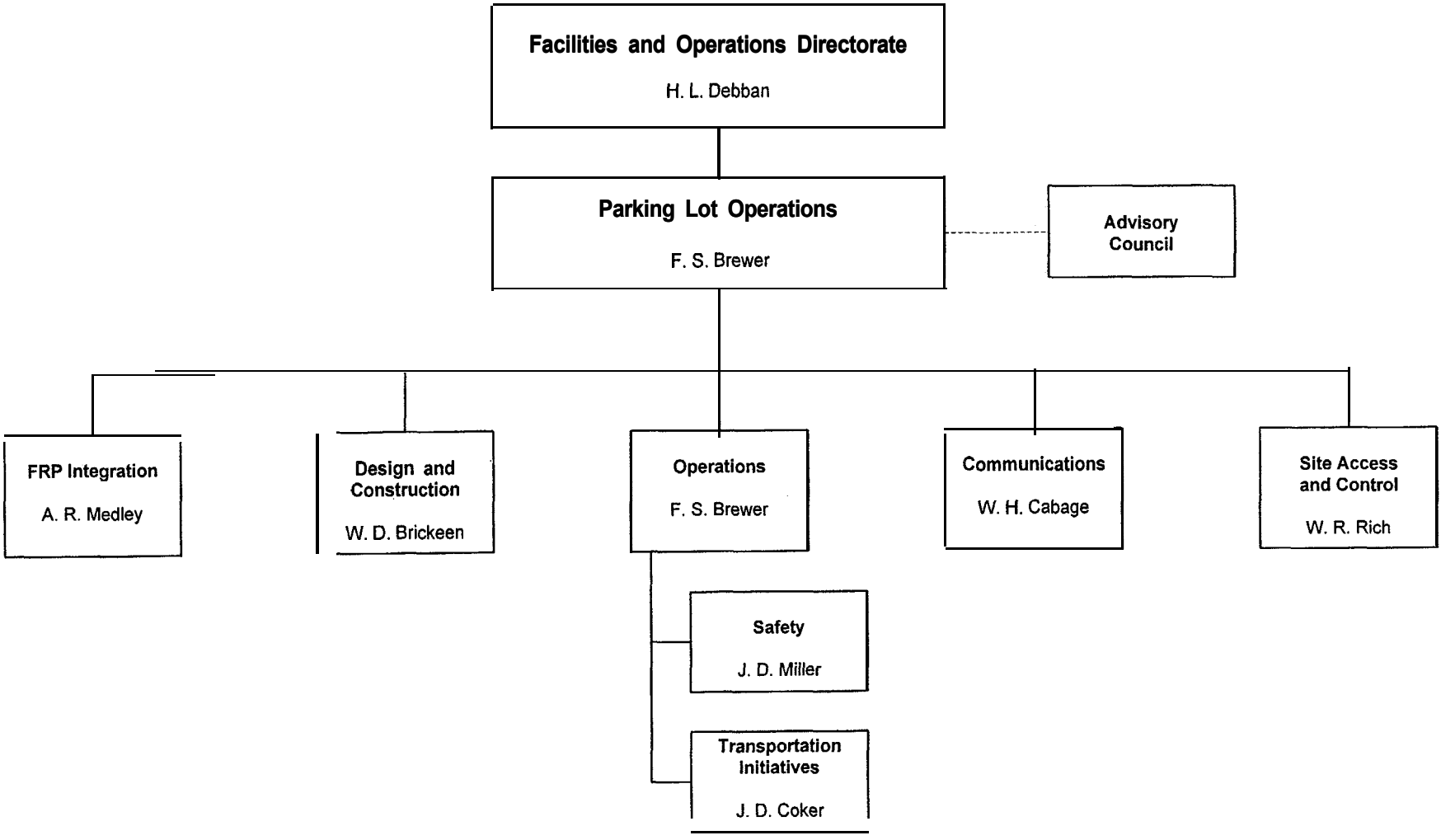

Fig. 4. Parking Lot and Traffic Flow Project organization chart.

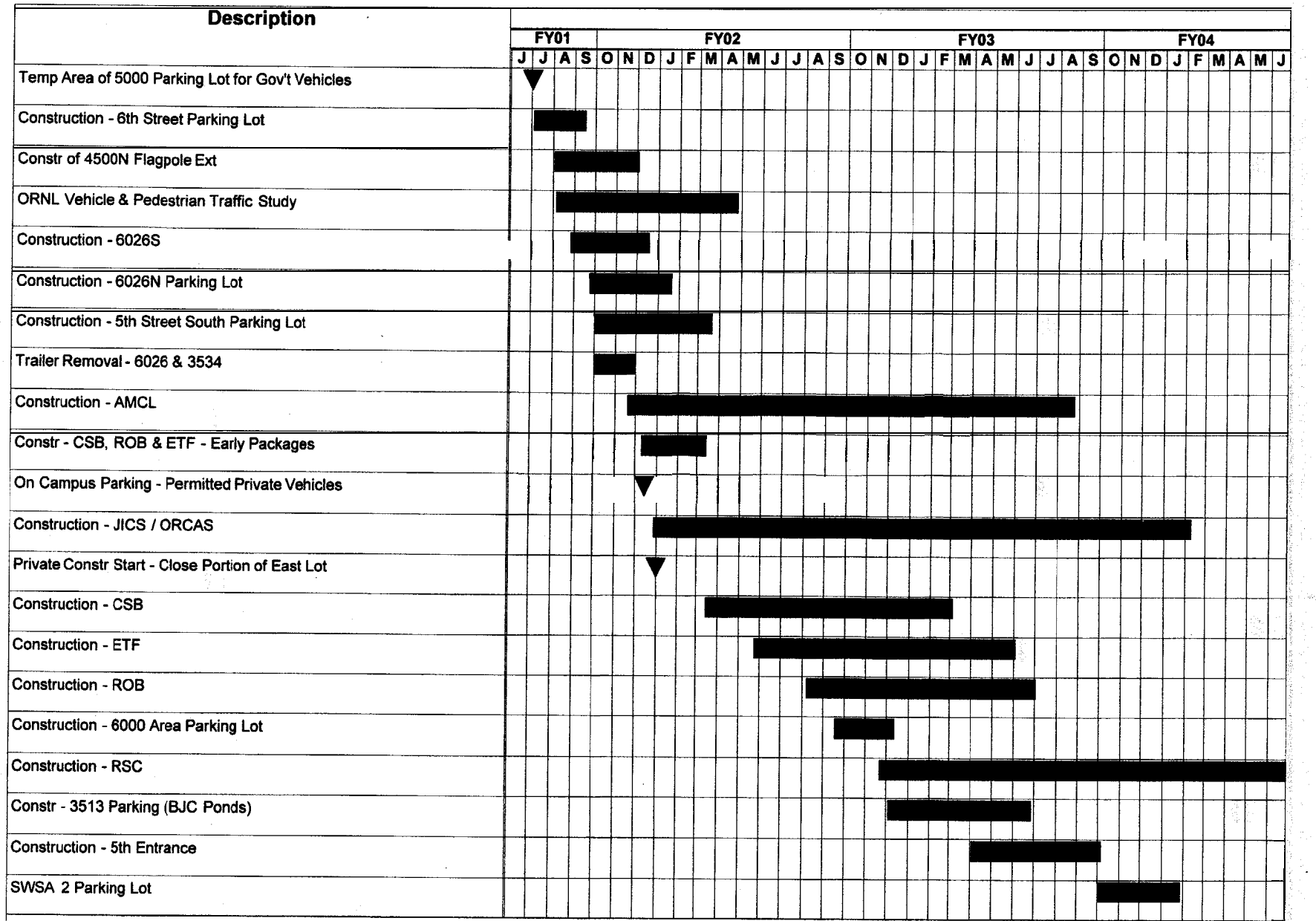

Fig. 5. Parking lot and FRP construction integrated schedule.

funds for support activities, and noncapital miscellaneous parking lot improvements and traffic flow rearrangements. New construction requirements are based on the parking lot requirements determined from inventory surveys and the relocation of personnel due to the FRP. Operational budget requirements are based on transition time frames from the current traffic and parking to the new layouts and traffic flow resulting from the FRP. The major budget categories and funding requirements through FY 2006 are shown in Table 1.

1.7 BASELINE CRITERIA

Parking locations and needs and traffic flow within the ORNL campus will be significantly impacted by implementation of the FRP. The activities being initiated to meet the resulting changes and requirements are based on the key scheduled events included in the overall integrated schedule and the following baseline assumptions:

- To the maximum extent feasible, new parking will be located within the campus to support the "Open Campus." Small lots will be developed as close as possible to work areas. Major parking lots will be located in the East and West Campuses within walking distance to work areas.

- Parking permits will be issued for designated parking near work areas for visitors, handicapped parking, key personnel, personnel with medical restrictions, and assigned mission-specific government vehicles.

- New parking demand and supply have been determined by surveys of existing space availability and usage and the amount eliminated due to new construction. Parking requirements are based on three-fourths of a space per employee. Parking space requirements include an additional 5% for summer employment and 10% for surge capacity such as conferences, meetings, etc. A 10% addition for visitors/short-term parking (2-hour maximum) has also been factored into the requirement.

- Total numbers and building locations of personnel requiring parking space have been determined by survey data and the schedule for relocation of personnel into new facilities. The numbers of off-site personnel to be relocated (e.g., ORNL at Y- 12 personnel) are also included.

- Paved and lighted parking lots will be constructed using a Fixed Unit Price Subcontractor. The construction schedule will provide new space as required to replace space lost to construction of the private sector, State, and DOE buildings.

- The number of available parking spaces will be enhanced to the maximum extent possible by encouraging "carpooling." The goal is to have 250 carpools with at least 2 people per vehicle. Special parking will be provided for carpools.

- Construction parking areas will be provided within reasonable proximity to construction sites and will be of sufficient size to accommodate need.

- A site traffic flow plan will be developed and maintained to guide the overall strategy for vehicle movement within ORNL.

- During normal work hours (i.e., 6:00 A.M. to 6:00 P.M., Monday through Friday), Fifth Street will be opened to Bethel Valley Road to provide additional access to the interior of the Laboratory. For at least an interim period, the DOE-OR Office of Safeguards and Security will require vehicular access to the site to be restricted during other-than-normal work hours.

Table 1. Parking Lot and Traffic Flow Project Budget FY 2002-06

($1,000s)

WBS	Total		FY01		FY02		FY03		FY04		FY05		FY06		COMMENTS
	GPP	OH	GPP	OH	GPP	OH	GPP	OH	GPP	OH	GPP	OH	GPP	OH	
1.1 FRP		150				30		30		30		30		30	
1.2 Parking Lot Construction															
1.2.2.1 6th Street	100		100												
1.2.2.2 4500N	500		550		-50										
1.2.2.3 6026S	1100		620		480										
1.2.2.4 6026N	550		55		495										
1.2.2.5 5th / South	300		35		265										
1.2.2.6 6000 Area	200								200						
1.2.2.7 White Oak															
1.2.2.8 4500S	100						100								
1.2.2.9 5th 4508	35				35										
1.2.2.10 4th 3525	25				25										
1.2.2.11 7000 Entrance	150				150										
1.2.2.12 7000 East		35		35											
1.2.2.13 3513/3524	850						850								
1.2.2.14 GAAT		75				75									
1.2.2.15 SWSA 2	350								350						
1.2.2.16 5th Street Entrance	540		40						500						
1.2.2.17 NW Lot, 1st	500										500				New ADS
1.2.2.18 Sidewalks	200				100		100								
1.3 Operations															
1.3.1 Planning & Coordination															
1.3.2 Parking/Traffic Mgmt.		150		70		35		15		10		10		10	
1.3.2.1 Traffic Engineer		45		45											Include traffic calm Bethel Valley Rd.
1.3.2.2 Construction Traffic		70				70									
1.3.2.3 In-Plant Traffic		60				60									
1.3.2.4 Visitor Traffic		10				10									Temporary routing signs
1.3.3 Control Mechanisms															
1.3.3.1 Traffic Lights	450						450								Fifth Street plus two additional
1.3.3.2 Signs/Barriers		150				100		50							
1.3.4 Safety															
1.3.4.1 Pedestrian Access		100				100									Temporary lighting, crosswalks
1.3.4.2 Vehicle Safety Measures															
1.3.4.2.1 Speed Limits		10				10									
1.3.4.2.2 Traffic Control		100				100									Turn lanes, etc.
1.3.4.2.3 Accident Response		20		20											
1.3.5 Transportation Initiatives															
1.3.5.1 Shuttle Service		32				32									
1.3.5.2 Carpools		20				20									Vehicle moves
1.3.5.3 Gov't. Vehicle Use		10				10									
1.4 Communications		20				10		5		5					
1.5 Site Access & Control		20				10		5		5					
TOTALS	**5950**	**1077**	**1400**	**170**	**1500**	**672**	**1500**	**105**	**1050**	**50**	**500**	**40**		**40**	

- The number of government vehicles will be reduced. Total reduction will be determined based on frequency of use, trips per week, and total mileage per vehicle per division. Specific-use vehicles will be maintained within the campus near the division site of use. Spaces will be assigned for mission-specific vehicles adjacent to facilities. Other vehicles will be located in a pool lot (Northwest Lot).

- Use of shuttles from perimeter lots during peak hours will be evaluated.

- Parking near conference centers will be provided as part of the East Campus development.

2. PARKING CONSTRUCTION

2.1 NEEDS ASSESSMENT

The need for new parking areas and the number of spaces required are based on a report prepared by Barge Waggoner Sumner & Cannon entitled *ORNL Facilities Revitalization Plan -Parking, Transportation, and Landscape Improvements,* dated January 30, 2001. The number of new spaces includes approximately 15% additional spaces for surge and temporary parking and 5% for summer employment parking. The total demand increases from 1356 to 2274 spaces. This demand is being met by construction of new lots phased to replace existing parking eliminated due to construction of new facilities and relocation of personnel. Tables 2 and 3 and Fig. 6 provide detailed information of supply and demand needs.

Table 2. East Campus employee parking supply

Date	Activity	Change	Parking spaces
04/01	Current parking capacity		1923
09/01	Sixth Street-west side	+ 37	1960
09/01	White Oak Avenue	+ 16	1976
10/01	GAAT Area parking	+ 63	2039
10/01	7000 Area parking (east end)	+ 51	2090
11/01	6026 South side parking	+ 301	2391
11/01	4500N Flagpole parking	+ 181	2572
12/01	6026 North side parking	+ 123	2695
12/01	Private sector construction (CSB, ETF, ROB)	-741	1954
04/02	4508 Area parking	+ 14	1968
04/02	Fifth Street – Southside Avenue	+ 125	2093
04/02	Joint Institute for Computational Sciences construction	- 330	1763
05/02	Advanced Materials Characterization Laboratory construction	- 100	1663
06/02	7000 Area berm construction	- 80	1583
06/02	7000 Area parking (Portal 7072 west end)	+ 46	1629
12/02	4500S Southside Avenue	+ 36	1665
12/02	3525 Parking area	+ 10	1675
02/03	Quadrangle area	+ 60	1735
04/03	Research Support Center construction	- 93	1642
06/03	3513 Parking	+ 500	2142
01/04	Waste Area Grouping (WAG) 2 parking (4500N)	+ 137	2279
06/04	6000 Area – North side White Oak Avenue	+ 54	2333

Table 3. East Campus employee parking demand

Date	Activity	Change	Parking spaces
04/19/01	Current demand		1356
04/19/01	Surge and temporary parking	+ 150	1506
04/19/01	Summer parking peak (May-August)	+ 75	1581
01/30/03	Computational Sciences Building	+ 99	1680
01/30/03	Joint Institute for Computational Sciences	+ 83	1763
04/30/03	Engineering Technology Facility	+ 128	1891
07/30/03	Research Office Building	+ 258	2149
07/30/03	Surge and temporary parking	+ 50	2199
07/30/03	Summer parking peak (May-August)	+ 25	2224
01/30/04	Research Support Center	+ 50	2274

2.2 CONTINGENCY PARKING PLANS

In order to ensure availability of required parking for the FRP, contingency plans are being developed for temporary or other permanent locations for parking.

These measures will include alternate parking area development and operation of shuttle buses from more remote locations. Areas currently under review include the northwest area parking, areas in the West Campus, and additional areas along White Oak Avenue on the east side of the campus. Shuttle bus operation will consider centralized pickup locations inside the Laboratory perimeter fence and route schedules to accommodate various shifts.

Parking for construction personnel is also being reviewed with the private sector representatives for development of temporary parking areas. Locations being considered include the visitor overlook area and the scrap metal area. In addition, the developer is considering shuttle bus support as part of this planning.

2.3 CONSTRUCTION

Construction of major parking lots, street improvements, and traffic controls will be performed as multiple tasks through a Fixed Unit Price Subcontract. Some smaller parking areas will be improved utilizing Facilities and Operations personnel. Refer to Fig. 5 for the parking lot construction schedule and Fig. 7 for locations of new parking lots.

2.3.1 Major Parking Lots

Major parking lots will be constructed in the East and West Campuses to provide the majority of parking spaces. These lots will be located to provide maximum parking with the minimum increase in walking distance to areas of work. These lots will be paved and lighted and connected to the campus work areas with sidewalks. The new parking areas will be located as shown in Fig. 7.

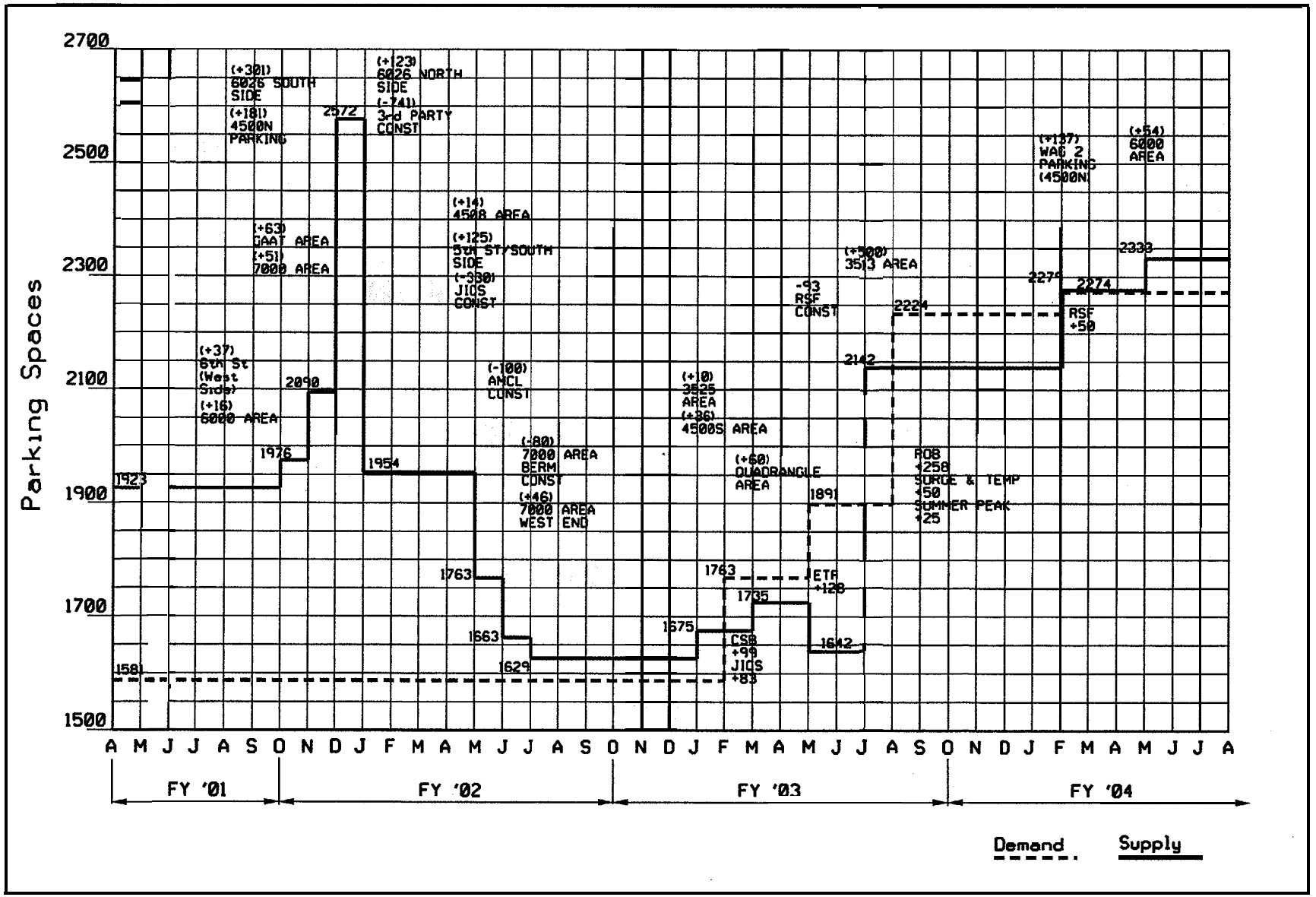

Fig. 6. Parking space supply/demand.

Three major lots will be developed. The areas are 4500 North, the 6026 Trailer Complex, and the present Bechtel Jacobs Company, LLC (BJC) Surface Impoundments (3513/3524), which will provide approximately 1105 new spaces. These lots will be paved and connected to work areas by sidewalks to minimize traffic/pedestrian interference. Crosswalks and traffic controls will be provided at key locations. The Cannon and Cannon traffic engineering report will recommend specific actions.

2.3.2 Incidental Lots

The incidental lots will provide visitor parking near buildings during the normal business day. Designated parking, such as for handicapped, medical, short-term (2-hour), key personnel, and minimal numbers of mission-specific government vehicles, will be provided.

Smaller lots of 10 to 150 spaces will be strategically located around buildings based on availability of suitable space. These lots may be graveled temporarily with paving to be added later, based on available funding.

2.3.3 Demolition of Existing Facilities, Structures, Incidentals

Demolition will include removal of fencing and the guard portal at the Fifth Street entrance, removal of 6026 and other miscellaneous trailers, utility disconnects, and minor building structures.

Demolition will also be required to remove trailers from various locations planned for new parking lots. Waste storage B-25 boxes will also require relocation. The new Fifth Street entrance will require movement of fencing and demolition of a guard portal and rotary gate.

2.4 CONSTRUCTION ACTIVITIES

2.4.1 New Construction

New construction will include additional paved and lighted parking lots as shown in Fig. 7, modifications to the Fifth Street entrance from Bethel Valley Road, and traffic control devices, including signals and signage as required. Locations of signage and traffic controls will be determined in the traffic study (see Sect. 3.2, Traffic Flow Management Engineering).

2.4.2 Fifth Street Entrance

The Fifth Street entrance will be modified by extending Fifth Street through the existing North Parking Lot to intersect with Bethel Valley Road. Traffic signal control will be installed, if recommended.

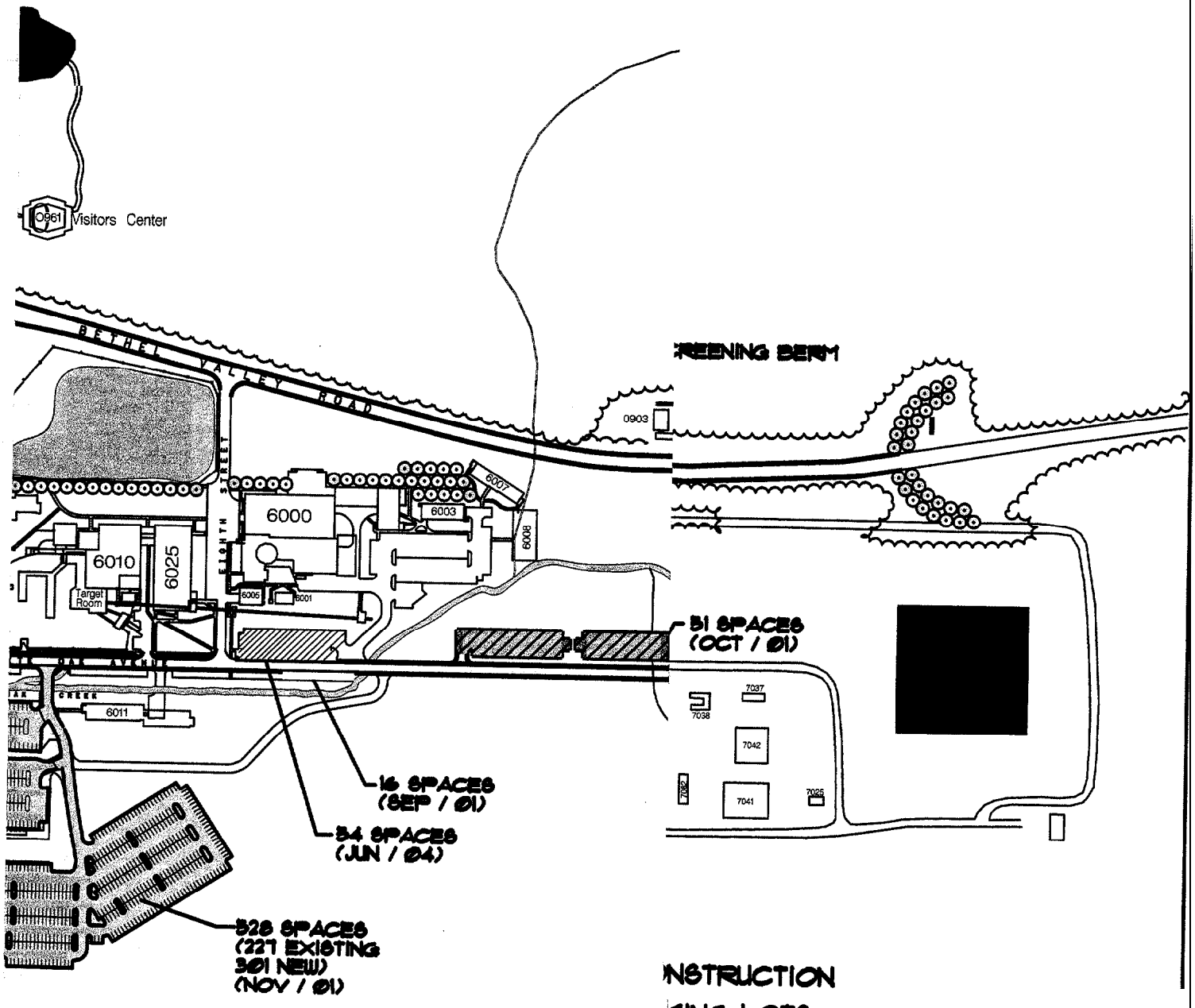

Fig. 7. Parking lot constructi

3. OPERATIONS

3.1 PLANNING AND COORDINATION

3.1.1 Director of Infrastructure Planning

The Director of Infrastructure Planning is responsible for the development of the Plan. The Director is also responsible for development and implementation of the ORNL Capital Improvements Program and has overall responsibility for the infrastructure upgrades, including proposed parking and road improvements, outlined in this Plan.

3.1.2 Parking Lot and Traffic Flow Manager

The Parking Lot and Traffic Flow Manager is responsible for the implementation of the Plan. Responsibilities are to (1) provide line ownership of parking lots and ensure satisfaction and safety while meeting the Laboratory Agenda, (2) ensure sufficient parking places are available in locations convenient for employees, (3) ensure that vehicle and pedestrian flow to and within the parking lots is satisfactory, (4) oversee the parking permit process, (5) provide for ongoing maintenance of parking lots, and (6) provide leadership for the newly established Parking Lot and Traffic Flow Advisory Council.

3.1.3 Parking Lot and Traffic Flow Advisory Council

An Advisory Council of stakeholders has been established. The mission of the council members as stakeholders is to provide an avenue for sharing strategies and communicating information while addressing parking needs during facility revitalization. The Advisory Council's Charter (see Appendix A) outlines the mission, objectives, membership, and deliverables of the Advisory Council.

3.1.4 Communication

The Communications and Community Outreach Directorate will provide a representative to the Advisory Council and will keep ORNL staff, retirees, construction personnel, and the community informed of parking lot and traffic flow developments.

3.1.5 Security

The Laboratory Protection Division Security Department will provide a representative to the Advisory Council and will provide site access control, parking policy enforcement, and traffic policy enforcement.

3.1.6 Safety

The Operational Safety Services Division will provide a representative to the Advisory Council and will ensure pedestrian safety and vehicle controls are identified and implemented.

3.1.7 Transportation

Representatives from the appropriate organizations will be included on the Advisory Council to provide guidance on transportation issues, including shuttle and taxi services, carpooling, and use of government vehicles.

3.2 TRAFFIC FLOW MANAGEMENT ENGINEERING

When the ORNL campus is opened to private vehicular traffic, significant changes will occur to the traffic volume, campus directional flow, and vehicle parking locations. A Traffic Engineer will evaluate activities regarding these changes. A phased master vehicle traffic and pedestrian traffic control plan will be developed from this evaluation based on the ORNL FRP. This traffic plan will be required prior to opening of the campus. Major elements of the traffic engineering activities will include traffic flow management and control mechanisms.

A Traffic and Pedestrian Access Study for open campus and parking lot modifications is being developed by Cannon and Cannon, Inc., an engineering firm with expertise in traffic engineering. This study will develop recommendations for modifications to the traffic and pedestrian flow resulting from significant changes brought about by the new parking lot locations.

The study is being conducted in two phases, The first phase is evaluation of the impacts to vehicle traffic and pedestrian flow due to the new parking lot locations, new buildings construction, utility modifications, and street changes for the FRP. The second phase will evaluate the vehicle traffic and pedestrian flow upon occupancy of the new buildings at the completion of FRP construction.

Recommendations for consideration resulting from the first phase of this study are listed below. These recommendations will be reviewed with the Parking Lot and Traffic Flow Advisory Council for appropriate implementation.

- Construct an eastbound-to-southbound right turn lane at Bethel Valley Road and First Street.
- Install a three-phase, full-actuated traffic control signal at Bethel Valley Road and Fifth Street.
- Eliminate parking at the southeast corner of the Bethel Valley Road and Fifth Street intersection or evaluate constructing a sidewalk along the east side of Fifth Street to minimize pedestrian traffic crossing vehicular traffic entering the campus from Fifth Street.
- Implement a four-way stop at Fifth Street and Central Avenue.
- Place the existing traffic control signal on full flash and evaluate resulting operations at the Bethel Valley Road and ORNL main entrance.
- Place the existing traffic control signal on full flash and evaluate resulting operations at the Melton Valley Access Road and Bethel Valley Road intersection.
- Construct new sidewalks and traffic calming devices in critical pedestrian crossings that have vehicle traffic.
- Install advance “Signal Ahead” signs for all traffic signals on Bethel Valley Road.

3.3 PARKING AND TRAFFIC FLOW MANAGEMENT

The overall campus traffic flow will be reviewed considering each major area and the interfacing points of traffic from each area feeding to the major entrances/exits. On-campus, construction, and visitor traffic influences will be integrated into an overall plan for traffic flow management.

3.4 PARKING MANAGEMENT

Designated Vehicle Parking will include appropriate spaces for the various needs of ORNL staff and visitors, including the following:

- **Handicapped Spaces.** These spaces will be consistent with Americans with Disabilities Act (ADA) requirements for each area based on numbers of spaces in the lots and the occupancy of the buildings.

- **Medical Spaces.** These spaces will be determined by current procedures based on the needs of ORNL staff.

- **Visitors (2-Hour Limit Parking).** These spaces will be determined, as appropriate, on percentage of need in main parking lots.

- **Employee Parking – Incidental Parking Spaces.** Incidental parking spaces are small parking areas, 5 to 20 spaces, some of which will be installed by on-site maintenance craft personnel. Approximately 40 spaces located in the main East Campus area have been completed. Depending on the scope of work, installation of these incidental parking spaces may become part of the work package of the contractor installing the larger parking lots. Other areas are being evaluated for additional opportunities. Also, approximately 97 spaces located in the 7000 Area will help with the loss of the 7012 Parking Lot located off of Bethel Valley Road, which will be closed due to planned landscaping.

- **Government Pool Vehicles.** Government vehicles will be relocated to the 7000 Area to maximize staff parking close to work areas. Spaces for mission-specific vehicles will be assigned adjacent to facilities.

- **Construction Parking.** Construction parking areas will be designated in the current construction parking on the west end along First Street, in the Northwest Lot, in the overflow parking area north of the main entrance, and in the scrap metal yard area.

3.5 CONTROL MECHANISMS

Based on the overall traffic flow plan, various types of traffic control mechanisms will be installed. Mechanisms to be considered include, but are not limited to, traffic lights at major intersections and pedestrian crosswalks, turn lanes, signs and barriers, and traffic calming features.

3.6 SAFETY

3.6.1 Pedestrian Movement

3.6.1.1 Sidewalks

- The extension of the 4500 North "Flagpole" Lot will integrate sidewalks into the design, with particular attention to cutouts and sloping to meet all applicable Physically Challenged (handicapped) and ADA access requirements. (This is to be universally applied to all sidewalks or ramps during the design phases.)

- The construction of the Sixth Street Lot will need attention due to removal of the existing sidewalk. The sidewalk that diagonally intersects the south end of Wing 5, 4500 North, and the sidewalk exiting the 4500 North main lobby to the existing parking area on Sixth Street will need to be closed for rerouting pedestrians around the construction area. Plans should be made to reinstall this sidewalk once the new spaces are established.

- Pedestrian traffic along White Oak Avenue in the 6000 Area must be kept clear of vehicular traffic. A new sidewalk that will tie into the sidewalk at White Oak and Southside Drive will be constructed on the south side of White Oak Avenue to enable pedestrians to avoid crossing traffic until reaching the 5500 Area.

  Extra parking spaces are planned for construction where the 3534 trailers are to be removed. Once these spaces are established, consideration should be given to the installation of a sidewalk along the north side of Southside Drive to help route pedestrians to the existing sidewalk at Fifth Street.

- Once the 6026 lot expansion nears completion, alternative routes will be constructed for pedestrian flow between this lot and the lower 4000 Areas.

- Because traffic flow from Bethel Valley Road along Fifth Street will be authorized, a sidewalk east of Fifth Street will be required for pedestrian traffic.

3.6.1.2 Crosswalks

The provision of crosswalks will be considered in the design and layout of new or modified parking lots. The primary issues will be the need to (1) define the safest locations for pedestrian access to/from the parking lots and (2) provide adequate physical markings to best enable drivers to identify and use caution at these points.

3.6.1.3 Signage

The need for increased or revised signage is anticipated during construction phases of the corresponding parking lots to improve awareness and enhance vehicle and pedestrian safety. Provisions for establishing and maintaining needed signage will be detailed and addressed in the contractor's traffic control plan.

3.6.2 Vehicle Movement

3.6.2.1 Speed Limits

The posted speed limit for streets providing access to those areas planned for construction is currently 25 miles per hour. The need to modify this limit will be dictated by the varied construction activity (i.e., roadside exposure to people or mobile equipment or the likelihood of encountering slow-moving equipment on the streets). The potential for such issues should be addressed in the contractor's traffic control plan.

3.6.2.2 Traffic Control

All elements of required controls should be identified and included in a comprehensive traffic control plan developed to cover a respective project for parking lot construction or modification.

3.6.2.3 Emergency Response

Ongoing planning for new or modified parking lots (particularly those more remote from the campus) will provide for an unobstructed means to summon emergency response.

3.7 TRANSPORTATION INITIATIVES

3.7.1 Shuttle and Taxi Service

Shuttle and taxi service will be evaluated and provided, as required, to meet the needs of staff parking in distant lots.

3.7.2 Carpooling

Car-pooling will be encouraged, and participants will be rewarded with up-close parking spots available in all lots. The number of available parking spaces will be enhanced to the maximum extent possible by encouraging carpooling, with a goal of having 250 carpools with at least 2 people per vehicle.

Information on carpooling has been made available on a Web site for employee interface, and a Web page is operational. Plans are to have a registered, computerized system and car-pool passes or verified stickers. Additionally, the Communication and Community Outreach Organization has a developed Share-A-Ride Contract List for specific areas (e.g., West Knoxville, Blount County, Clinton/Norris, Kingston/Harriman, etc.), and details of the Carpooling Program will be developed.

3.7.3 Government Vehicles

The current fleet will be reduced to maximize staff parking. Total reduction will be determined based on need (i.e., frequency of use and total mileage per vehicle per division). Specific-use vehicles will be maintained within the campus near the division site of use. Other vehicles will be located in a pool lot (Northwest Lot).

4. COMMUNICATIONS

4.1 COMMUNICATION PLAN

A representative of the Communications and Community Outreach Directorate is developing the Communication Plan to provide information on key events impacting ORNL parking and building access control. The Parking Lot and Traffic Flow Advisory Council will provide updated information for the on-going weekly *ORNL Today* communications. Security will provide information for building access control.

A general communication plan has been developed to keep ORNL staff, retirees, construction personnel, and the community informed of parking and traffic flow initiatives.

4.2 METHODS OF DISSEMINATION

According to the Communication Plan, information will be disseminated by means of (1) weekly *ORNL Today* news items; *(2) ORNL Reporter* articles; (3) brochures and maps, both distributed and posted; (4) mailings and media releases; (5) a Web site; and (6) all-hands meetings.

5. SITE ACCESS AND CONTROL

5.1 SECURITY

UT-Battelle must ensure appropriate levels of protection are provided for DOE security interests under the operational purview of the Laboratory. To facilitate this, the main Laboratory area, which is now behind a fenced perimeter, is a DOE-designated Property Protection Area (PPA). PPAs are areas established to protect against damage, destruction, or theft of government-owned property. More secure areas within the Laboratory are designated for the protection of specific DOE security interests, such as classified matter, special nuclear materials, etc. As stewards of all forms of U.S. government properties situated at ORNL, federal and contractor employees working at the Laboratory are responsible for assuring the security of DOE property and facilities. In accordance with guidelines contained within DOE Manual 5632.1C-1, *Manual for Protection and Control of Safeguards and Security Interests,* graded protection must be afforded DOE security interests. While some access controls may be necessary at the site boundary to mitigate potential threats accruing from recent world changes, adding definitive access controls at the building level is also prudent. In providing graded or layered protection for DOE security interests, as well as the site populace, emphasis must continuously be placed on Site Access and Control, Vehicle Pass Assignments, and Enforcement. Compensatory measures to be applied in each of these areas are depicted below.

5.2 SITE ACCESS

Many rules relevant to authorized access to the site remain. Signs prohibiting trespassing within the ORNL PPA are required to be posted at the site perimeter. Vehicles and hand-carried items entering or leaving shall remain subject to random inspection to deter and detect introduction of Prohibited Articles onto the site and the unauthorized removal of government assets from the Laboratory. Employees and guests will still have to possess and appropriately display a badge to enter the site and while they are within the facility. Also, ORNL Protective Force roving patrols will ensure a Security Police Officer presence within the Laboratory to both deter and detect unauthorized intrusions onto federal property and to provide an armed response capability,,when necessary.

In establishing access controls at the boundaries of buildings at ORNL, proximity card readers will be utilized as the principal access control device. The "Revised Access Control" project previously approved by both the DOE ORNL Site Office and DOE-ORO was modified somewhat because of events occurring on September 11, 2001. Still, the reconfiguration of security at the Laboratory remains a major performance expectation for ORNL as part of a DOE-established critical outcome for UT-Battelle.

A new state-of-the-art site access control system has been procured for the Laboratory to accommodate a revised access control configuration in which access controls will be applied at building boundaries in addition to at the outer site perimeter. New card readers (using proximity card read technology) and proximity card stock were acquired, proximity card issuance to ORNL staff completed, and card reader installations completed during Phase I of the project, which concluded on September 30, 200 1. This project will continue into a second phase in FY 2002 until the new access control system is fully installed. Based upon new thinking, which has developed since events of September 11, 2001, the following revised site access controls will soon be in effect at ORNL:

- The site boundary may soon be extended to establish portals on Bethel Valley Road to provide enhanced protection for DOE security interests, site structures, and for the site populace.

- Outer site perimeter portals will be staffed by the ORNL Protective Force to ensure only properly badged personnel or bona fide visitors are granted vehicular access to the site.

- During normal work hours (6:00 A.M. to 6:00 P.M., Monday through Friday), access controls will be removed from interior main campus vehicular portals, and members of the ORNL Protective Force will no longer staff these portals. To ensure a more secure posture during other-than-normal work hours, some vehicle portals will be "closed" during these time periods.

- New signage will be in place at both new site perimeter portals and existing interior perimeter portals indicating that "No Trespassing" is allowed and that "Only Properly Badged Personnel Are Authorized Beyond This Point."

- Occupied buildings within the East Research Campus and all areas throughout the site in which DOE security interests are residing will be equipped with new proximity card readers, which will be used to control building access and internal security area access for selected security areas.

- Some private vehicles will be authorized drive-in privileges to facilitate parking in new parking lots being constructed within the campus; restrictions will still be placed on private vehicle access in some more sensitive areas of the Laboratory. For instance, to curtail private vehicle transit through sensitive areas, new signage indicating that "Government Vehicles and Authorized Private Vehicles Only Past This Point" will be used at strategically selected points in the Central Research Campus wherein significant DOE security interests and a number of Contamination Areas currently reside.

- All ORNL staff, visitors, and assignees will be required to possess and properly (and prominently) display badges at all times while within the site. Badges will be displayed above the waist and below the neck on outer garments.

- Facility managers will be required to ensure that on-site buildings remain locked when unattended and that key resources (i.e., selected telecommunications closets, etc.) remain locked at all times.

- Parking of private vehicles inside existing security fences will be approved consistent with evolving security requirements.

5.3 VEHICLE PASS ASSIGNMENTS

Parking spaces will not be available within the current fenced interior area of the Laboratory for everyone; a plan was devised for the organizational allocation and subsequent issuance of new ORNL parking permits to a set number of private vehicle operators. Initially, approximately 300 ORNL parking permits will be issued via ORNL directorates to employees residing in buildings within and in close proximity to the 4500 North and South Complex. These parking permits will be issued as heightened security conditions allow and, ultimately, private vehicles will be able to park throughout ORNL without a parking permit on a first-come, first-served basis similar to the current parking scheme in the West Research Campus.

Intended recipients of the initial ORNL parking permits have been required to provide name, badge number, organization, name of present automobile insurance carrier, and e-mail address prior to permit issuance by the Laboratory Protection Division. Also, parking permit recipients are to be notified via e-mail as to the specific guidelines applicable to those afforded the behind-the-fence parking privilege. Parking in improved lots outside the current interior fence line (e.g., the lots behind Building 6010) will not require a parking permit.

5.4 ENFORCEMENT

The ORNL Protective Force will have primary responsibility for both traffic and parking enforcement within the confines of the Laboratory. The Protective Force will issue traffic and parking violation notices, when required, for moving traffic offenses (e.g., speeding, failure to yield, running a stop sign, etc.) and for parking-related incidents (e.g., parking in other-than-designated parking spaces, parking on seeded areas, obstruction of traffic, etc.). The Protective Force will also investigate minor traffic incidents. The Oak Ridge Police Department will perform major traffic accident investigations.

Traffic and parking violation notices written by the ORNL Protective Force will be routed through the ORNL Security Department to UT-Battelle or other appropriate senior management officials for information and action as deemed appropriate by the cognizant management official. Loss of drive-in/on-site parking privileges is a probable outcome for repeat traffic or parking rule offenses.

APPENDIX A

Parking Lot and Traffic Flow Advisory Council Charter

Parking Lot and Traffic Flow Advisory Council Charter

Mission Statement

The mission of council members as stakeholders is to provide a medium for sharing strategies and communicating information while addressing parking needs during facility modernization construction.

Objectives

The objectives of the council members will include, but are not limited to, the following:

- Representing the interests of their organizations or groups.
- Assisting in the development of parking plans that will allow staff to park in the current fenced area (including parking permit process).
- Ensuring availability of sufficient employee parking places in convenient locations as current parking is removed for construction of new buildings.
- Ensuring that traffic flows to and within the parking lots are satisfactory.
- Ensuring safety of traffic flow.

Membership

The Parking Lot and Traffic Flow Advisory Council is composed of stakeholders and Subject Matter Experts (SMEs) as follows:

- Infrastructure Planning Division, Parking Lot and Traffic Flow Manager (Faye Brewer)
- Security (Bill Rich)
- Infrastructure Planning Division (Tony Medley)
- Human Resources (Dave Rupert)
- BJC Contractor Interface (Dirk Van Hoesen)
- Transportation Services Department (Jerry Coker)
- Engineering (Bud Brickeen)
- Operational Safety Services Division (Doug Miller)
- Atomic Trades and Labor Council (ATLC) (Jeff Reasor)
- Communications and Community Outreach Staff Member (Bill Cabage)
- Energy and Engineering Sciences Directorate (Bob Shelton)
- Physical Sciences Directorate (Greg Gruzalski)
- Biological and Environmental Sciences Directorate (Susan Masingo)

Additionally, the Parking Lot and Traffic Flow Advisory Council will need to interface with the Land and Facilities Use Committee.

Deliverables

The deliverables of this council include

- Development of a parking and traffic flow plan by May 30,200 1, to ensure sufficient parking places during the construction of new buildings.
- Provision of a communication path to keep ORNL staff informed of parking lot developments during the construction phase and after facilities are occupied.

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