V. EXISTING CONDITIONS

Regional Overview

Los Alamos National Laboratory is located in north-central New Mexico, an area of enchanting natural beauty enriched by the interweaving of Native American, Hispanic, and Anglo-American cultures.

The very old and the very new are juxtaposed within the immediate environs of the Laboratory; pueblos where traditional ceremonies and customs are still honored, old high-mountain Hispanic villages, and the ruins of prehistoric Native American cultures are found nearby.

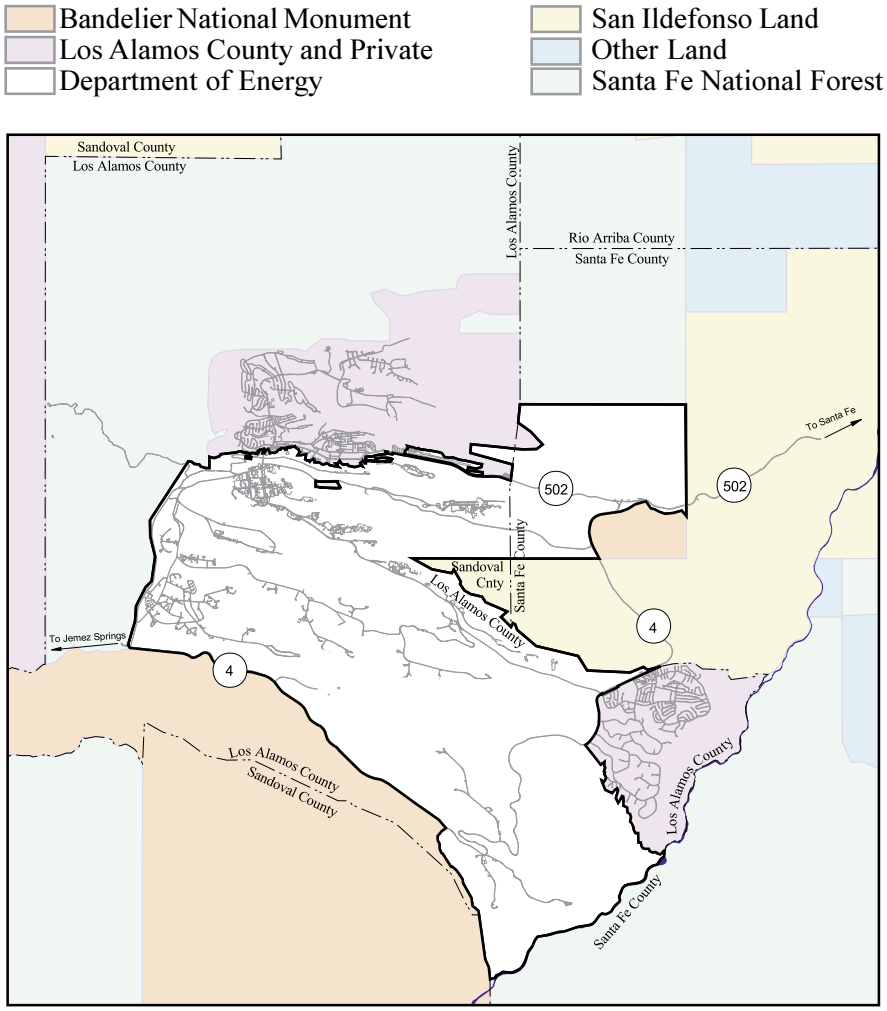
North-central New Mexico is dominated by the Jemez Mountains to the west and Sangre de Cristo Mountains to the east. These two ranges flank the Rio Grande Valley, which bisects the state from north to south.

The northern portion of New Mexico depends heavily on tourism, recreation, agriculture, and the state and federal governments for its economic base. The Laboratory and its associated support service sub-contractors are the largest industrial employers in the region.

Laboratory activities directly influence four major communities in New Mexico – Los Alamos, Santa Fe, Espanola and Albuquerque. The Laboratory draws employees, contractors and resources from throughout the region.

Infrastructure requirements for roads and utilities are intimately tied to the regional systems in this area. The Laboratory is a major influence in the economic, social and environmental management of the region.

Figure V-1: Surrounding Land Ownership



Regional Factors Affecting Planning and Development

People in and around Los Alamos are concerned with several local issues that merit brief review to permit a better grasp of general planning concerns affecting the region. These issues include concerns about environment, economic development, tourism, housing, schools, public services, and transportation and are often manifested as disputes about appropriate land use decisions.

1. Laboratory Related Economy

The Laboratory and its associated support service subcontractors are the largest industrial employers in Northern New Mexico. The Laboratory directly or indirectly creates about 29% of the region's jobs, and its positive impact on the Northern New Mexico economy is commensurate with this fact. In FY99, the Laboratory's estimated operating budget was $1.5 billion. The total economic impact of the Laboratory in 1997 was $4.1 billion for the overall New Mexico economy and $3.4 billion for the three counties of Rio Arriba, Santa Fe, and Los Alamos. This represents 4.8% of the total New Mexico economy and 30.1% of the three county economies. Tourism, recreation, agriculture, and the state and federal governments complete the predominant economic generators in the region.

2. Economic Development

Generally, area residents have been supportive of the Laboratory and its activities. This attitude has been fostered by the Laboratory's positive economic benefits that have accrued during the past four decades.

Efforts to identify additional land for industrial development that could complement programs at the Laboratory are ongoing. These efforts constitute an attempt to continue to diversify the local economy. Two projects-the research development park adjacent to the Laboratory and DOE-sponsored transfer of particular Laboratory lands to other public entities–will be discussed in greater detail later in this document.

3. Transportation

Currently, over 50% of Laboratory and contractor employees commute to the site. This has regional impacts on transportation, planning and development. Highways provide primary access to the Laboratory from the Rio Grande Valley and Albuquerque. The Los Alamos Airport, now owned by Los Alamos County, hosts scheduled air service between the town site and Albuquerque. There are also several privately sponsored commuter flights between the two communities. Commuter van service is available from Albuquerque, Santa Fe, and Española to Los Alamos, but private vehicles provide the bulk of transportation to and from "the Hill." Los Alamos has no rail service. The Laboratory supported the State of New Mexico's sponsored park and ride mass transportation (bus) system in November 1998. The service was interrupted early in 1999, but plans to reinstate the service are ongoing. The Laboratory will continue to cooperate with the county, state and federal transportation agencies to continue to develop regional transportation and transit systems.

4. Adjacent Landowners

It is in the Laboratory's best interest to continue its cooperation with Los Alamos County, the U.S. Forest Service, Bandelier National Monument, San Ildefonso Pueblo, and other neighbors to attain mutually beneficial land use planning goals, Figure V-1. The Laboratory's planning efforts should be coordinated with the efforts of these other entities whenever feasible.

5. Environmental Stewardship

Public concerns continues about environmental compliance throughout the DOE complex. People who live in Los Alamos and the surrounding region value the quality of life that distinguishes this area. The Laboratory must continue to demonstrate that it can and will comply with all applicable federal and state environmental regulations.

6 Housing

Housing supply and demand, housing choices and affordability, and the selection of new areas for future housing development are always topics of concern to local residents and the Laboratory. The high cost and lack of available housing impacts the Laboratory's ability to recruit and retain top quality staff. The Laboratory needs to identify steps to support development of more diverse housing.

Figure V-1: Omega Bridge

Facilities

In 1943, development of Los Alamos National Laboratory began with the construction of a little more than 93,000 square feet at a cost of approximately $1.8 million as shown in Figure V-2. Currently, the Laboratory occupies over 7.8 million gross square feet of facility space with an estimated replacement value of roughly $3.5 billion.

A short tour through TA-03 demonstrates quickly what this facilities analysis shows. The current overall state of Laboratory facilities is well below acceptable national facilities standards. As Figure V-3 on Current Facility Condition shows, approximately 47% of current Laboratory space is rated in “Poor” or “Fail” condition.

The primary reason for the poor condition of facilities at Los Alamos is the fact that 54% of the facilities are over 40 years old and were built prior to the adoption of modern design and energy consumption codes and standards. These facilities have served the Laboratory well but now need replacement or rehabilitation.

Without such actions, these older facilities will continue to require costly maintenance and repair. The end result of not addressing these aging and failing facilities will be decreased facilities reliability and ultimately major declines in employee productivity. The Laboratory’s investment in facilities is quite literally an investment in the Laboratory’s major asset - the workforce.

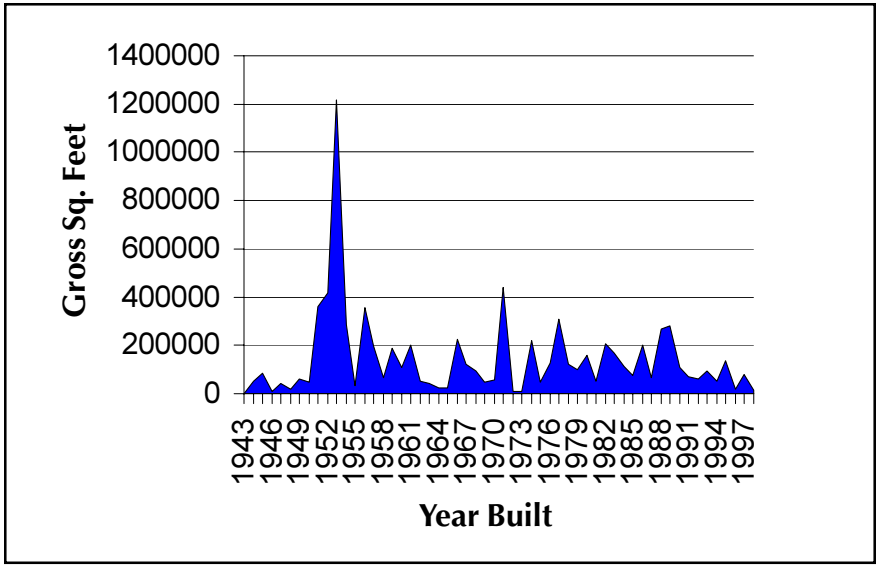


Figure V-2: Historic Laboratory Construction

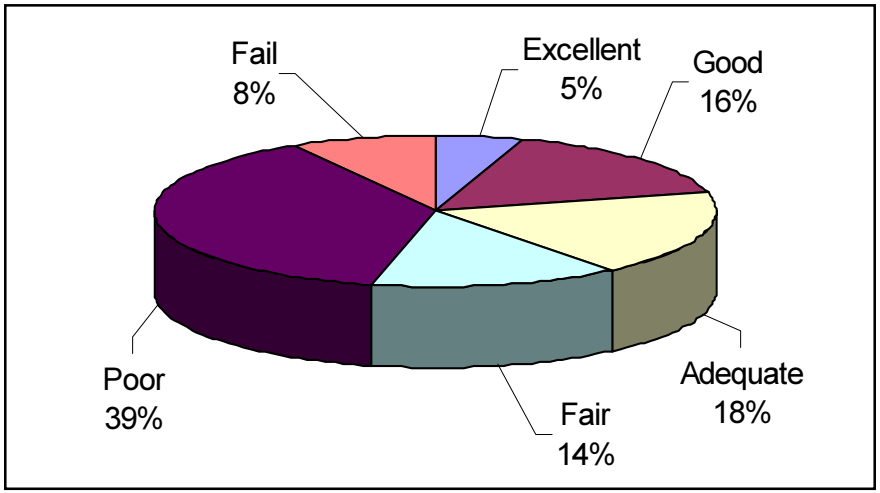


Figure V-3: Current Facility Condition

The Laboratory Facility Condition Model (Fig. V-4) depicts the history of facility aging at Los Alamos National Laboratory and the natural decline of facilities over time. In the early 1950s over 2 million square feet of Laboratory space were constructed-approximately 25% of the Laboratory's facilities. As this group of facilities ages, the Laboratory's overall facilities ratings decline with it. It was not until the late 1970s that the 1950s era facilities began to move into the marginal condition labeled Fair. These spaces are now declining into the Poor and Fail categories. As Fig. V-5 indicates, the issue of substandard space is a relatively recent and rapid phenomenon. By 2010, over 50% of the existing facility space at Los Alamos National Laboratory will be in the Fail category.

Not only are failing facilities a recent problem, but the large quantity of facilities reaching this condition at the same time threatens to overtake the Laboratory's ability to address the growing problem. The replacement value of the currently rated Fail space is estimated at about $200 million. The estimated backlog of maintenance and repair on these older facilities is $750 million.

The situation is exacerbated by current funding constraints. Traditional Congressional line-item funding is an extremely long and inflexible process. Given the quantity and speed with which replacements or renovations will be needed, the line-item process is unlikely to be able to respond on a timely basis. Critical to accomplishing the scale of facilities improvements needed is the ability to use alternative funding strategies. Congressional approval to use third-party financing and other public-private funding strategies is crucial to the successful revitalization of the Laboratory. DOE currently does not have the ability to use alternative funding for capital improvement projects.

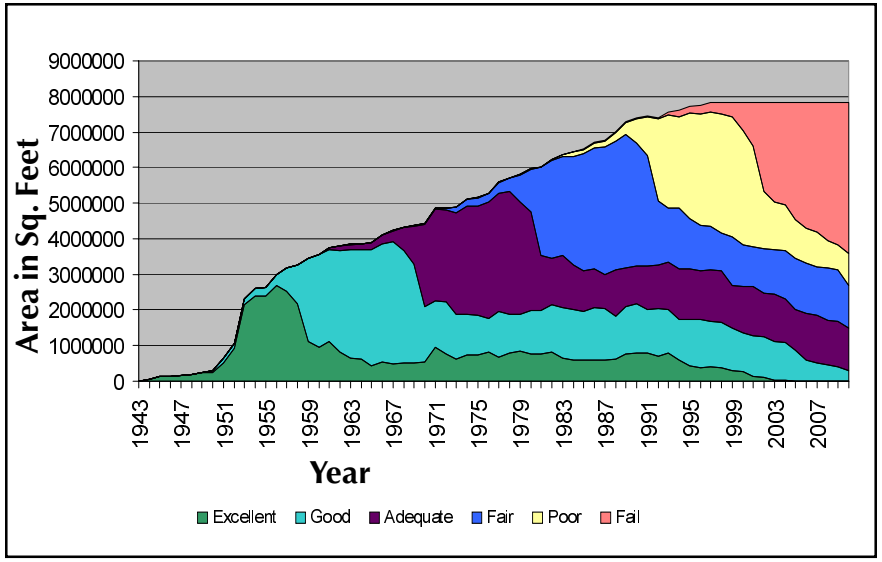


Figure V-4: Laboratory Facility Condition Model

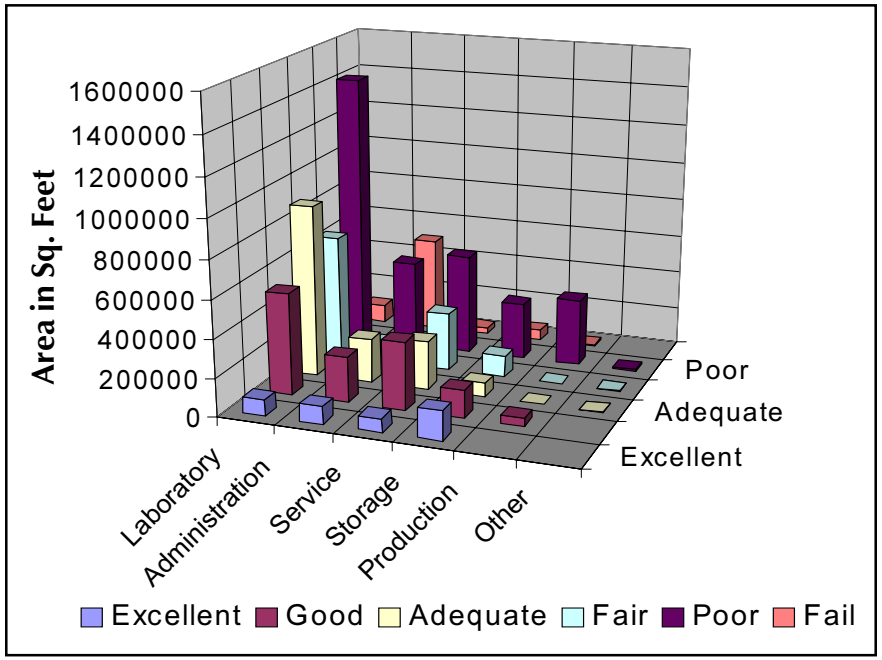


Figure V-5: Laboratory Facility Use and Condition

On-Site Planning Considerations

1. On-Site Population

Laboratory workers and the programs and services in which they work make up the basic, common denominator for determining physical facility needs. The Laboratory projects that the on-site population will remain between 12,000 to 13,000. Current geographic distribution of the on-site population density is indicated in the On-site Population Density Map, V-1.

Employees fall into various categories of employment and are employed by different entities. Most Laboratory employees are employed directly by the University of California. Other personnel are supplied by employers such as Johnson Controls Northern New Mexico (JCNNM), Protection Technologies Los Alamos (PTLA), and several employee contract companies.

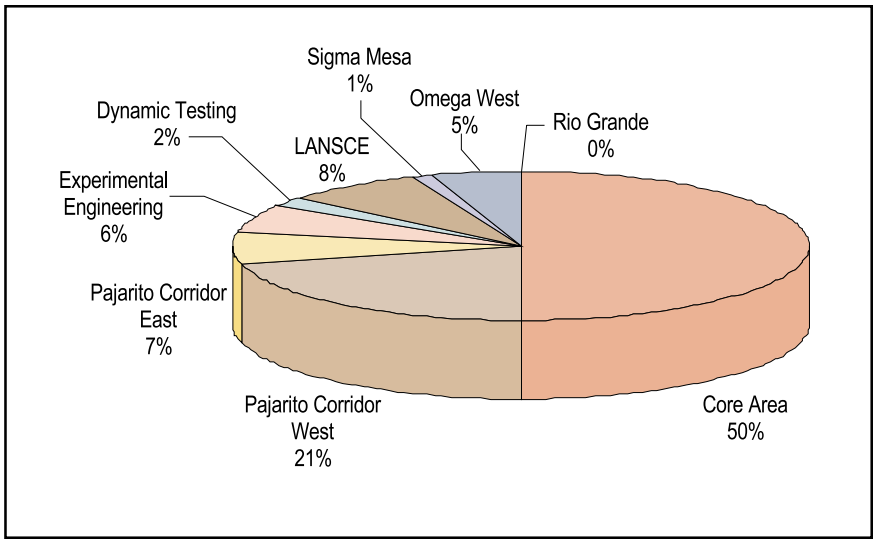
On-site population counts are increased by other personnel because of the Laboratory's increased interface with private sector research and development. Various scientific and engineering enterprises also have a presence in Los Alamos County. Other populations are on the site as a result of providing services to the Laboratory, for example, the post office, parcel delivery companies, Los Alamos County employees, and utility companies. Some of these individuals have security badges, indicating the frequency of their presence on-site. The above types of personnel are not included in the on-site Laboratory population statistics.

Table V-1 presents 1999 Laboratory population statistics by employer. These figures are not constant and are based on the consensus at a particular time.

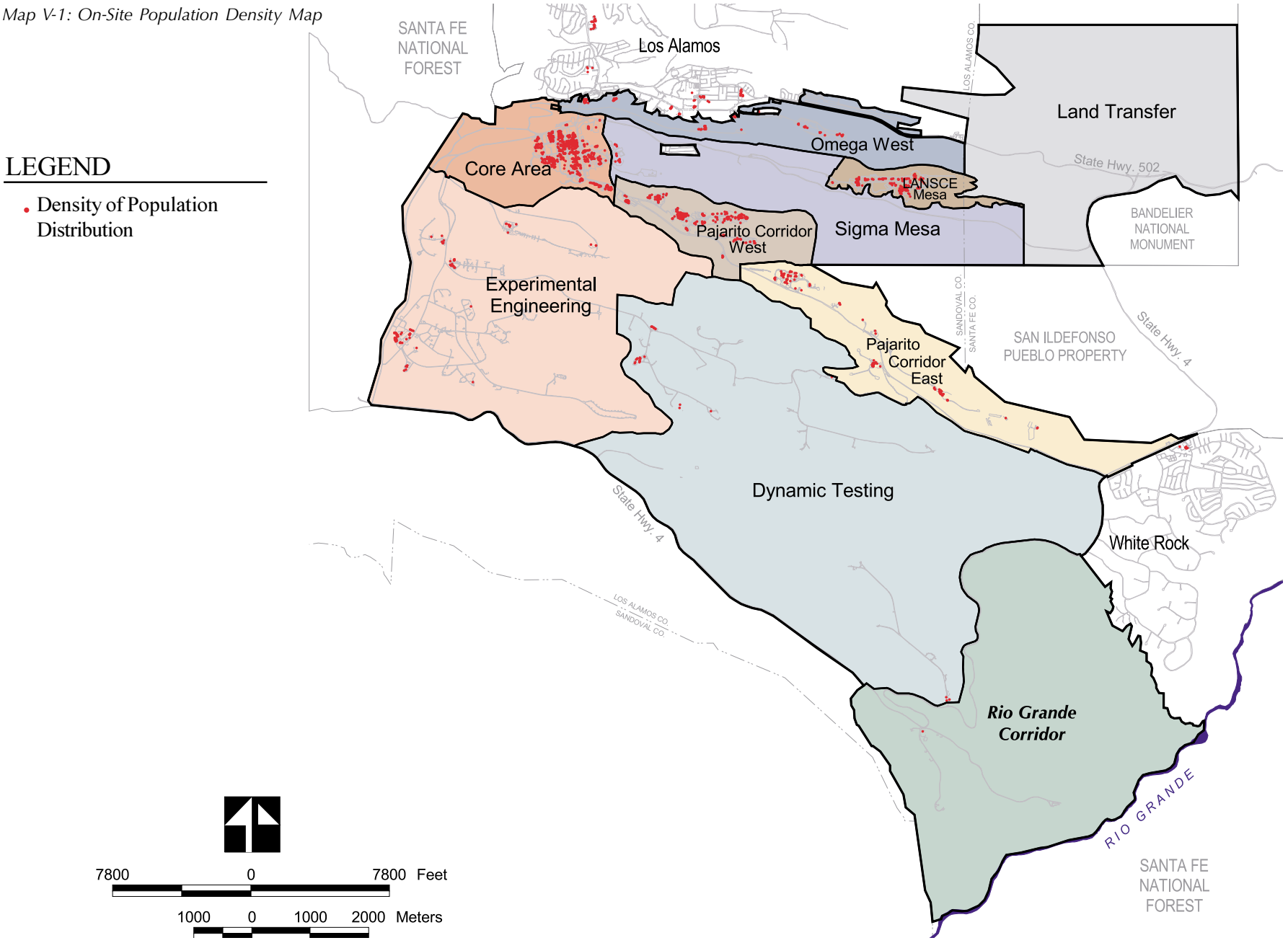
Table V-1: 1999 Laboratory Population

Personnel	Workforce
Laboratory (nonstudent)	6,974
Laboratory (students)	1,709
Affiliates	811
Special Program Guests	263
Johnson Controls Northern NM	1,381
Protection Technology	347
Contract Labor	1,178
Total Workforce	**12,663**

Figure V-4: Population by Planning Area



Map V-1: On-Site Population Density Map



2. Physical Constraints

Many of the plan recommendations contained in Section VI, The Plans are a direct outgrowth of the development opportunities and constraints inherent in the environment. The natural characteristics that were mapped and analyzed and that constitute major determinants of site opportunities and constraints include topography, slope, soils, vegetation, geology and seismology, climate, endangered species, archaeology and cultural resources, and surface hydrology.

a. Natural Resource Management Plans

Natural Resource Management Plans are an integral part of the planning process at Los Alamos National Laboratory. They apply to the entire site rather than to individual projects, thereby affecting all planning and development.

DOE is responsible for the natural resources at the Laboratory as a Natural Resources Trustee (DOE 1996). The Record of Decision for the 1999 Site Wide Environmental Impact Statement requires the Laboratory to create an Integrated Resource Management Plan. In order to fulfill this responsibility, DOE and the University of California are implementing a Natural Resources Management Program integrating natural resources management activities that include:

- Biological management
- Forest management
- Threatened and endangered species habitat management
- Groundwater protection
- Watershed management
- Air quality management

Results of these ongoing programs are reported in annual surveillance reports and other Laboratory documents.

b. Topography and Slope

Los Alamos is located on the Pajarito Plateau. The plateau has been deeply eroded by runoff, resulting in a series of mesas separated by canyons, many of which are several hundred feet deep. See Map V-2: Topography Map.

Much of the Laboratory's land is unbuildable. Within the Laboratory, steep slopes and deeply cut canyons severely constrain development. Over 25% of the Laboratory site has canyon side slopes which are 20% or greater. Conversely, many portions of the broad mesa tops and canyon floors have slope gradients of 0%-5%. Facilities siting must also be based on a consideration of slopes in terms of safety (i.e., stability, landslides, and rockfalls) and development costs.

c. Soils

All soils at the Laboratory have limitations for building, some of which are exceedingly difficult to overcome. There are 28 soil types within the Laboratory boundaries. Refer to the *Soil Survey of Los Alamos County, New Mexico* in Volume II of the *CSP 2000* for the suitability of soils for various types of development. Development on soils with severe limitations is discouraged.

d. Vegetation

Plant diversity within the Laboratory site is extensive and varies with the localized topography, elevation gradients, and microclimates. Seven major overstory vegetation types exist throughout the 4,900-foot gradient in the county. See Volume II of the *CSP 2000* for additional vegetation information.

The ability of the habitats to absorb new structures should be evaluated before facilities are sited. Sites should be engineered to prevent excessive erosion. Site plans should incorporate landscaping with native species to maintain continuity with the natural environment and to conserve water.

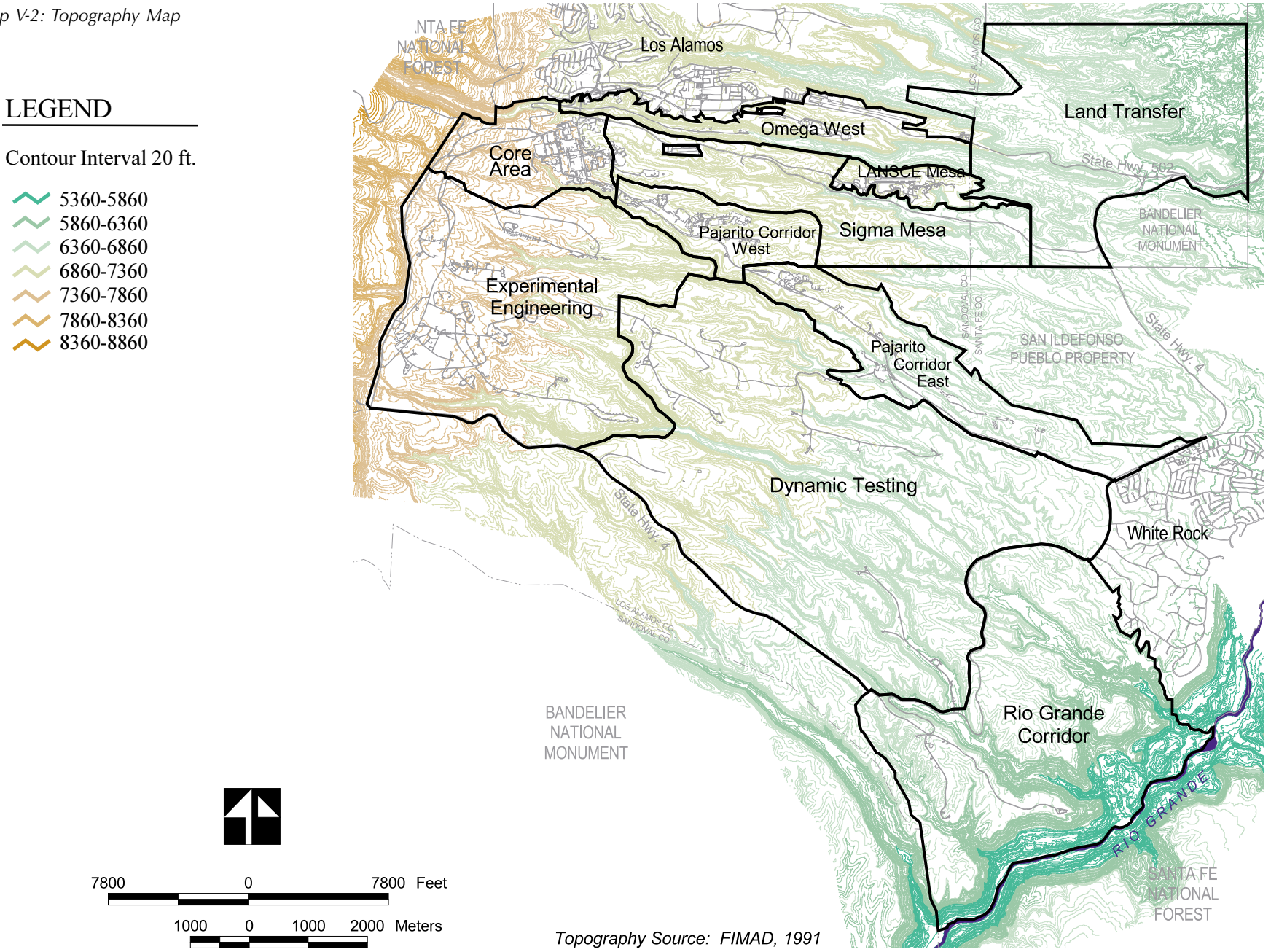
e. Climate

In general, climate at the Laboratory does not have a major planning impact. Los Alamos has a temperate mountain climate with four distinct seasons.

The average annual precipitation (rainfall plus the water-equivalent of frozen precipitation) is 47.6 cm (18.7 in.). Los Alamos winds are generally light, having an annual average of 2.5 m/s (5.5 mi/h). However, the period from mid-March to early June is apt to be windy.

Lightning is very frequent in Los Alamos. In an average year, Los Alamos experiences 61 thunderstorm days a year, about twice the national average.

Map V-2: Topography Map



Topography Source: FIMAD, 1991

f. Geology and Seismology

Los Alamos National Laboratory lies atop the Pajarito Plateau, which was formed by cataclysmic volcanic eruptions approximately 1.2 million years ago. Slope stability within the Laboratory is extremely variable. Steep canyon walls are susceptible to massive failures, posing rockfall hazards and long-term stability problems at mesa edges.

Los Alamos is located in a moderate seismic zone when compared to other areas of the country. Twenty-five faults and four seismic source zones within the Los Alamos region have been identified as potential seismic sources significant to the Laboratory in terms of ground shaking. Ground motion accompanies all earthquakes and is the primary effect that must be considered in the design and construction of Laboratory facilities.

Because of the close proximity to the Pajarito fault system, including the Pajarito, Guaje Mountain and Rendija Canyon faults, surface rupture must be considered in the siting of facilities. Surface rupture is a low probability event and generally accompanies larger earthquakes with Magnitude 6 and above. Nevertheless, siting new facilities over known faults with significant existing displacement should not be done.

The Laboratory has mapped the locations of faults in the area enclosing TA-55 on the east and TA-03 on the west and is in the process of mapping other areas of the Laboratory. For facility siting and new construction, fault zones capable of surface rupture should be treated in a fashion similar to the special study zones of California, site-specific fault investigations for new construction should be conducted, and siting new facilities over the trace of a potentially active fault should be avoided. Guidelines for siting facilities with respect to faults are being developed.

Los Alamos National Laboratory has evaluated its building inventory for potential seismic risks. The seismic risk for each building was based on a combination of seismic vulnerability and consequence of failure. Consequence of failure was based on building occupancy and/or hazard category. The risk score for an individual building could range from 0 to 100. Consistent with DOE guidance, buildings with risk scores greater than a given threshold were designated as being Exceptionally High Risk. The 25 buildings at Los Alamos identified as Exceptionally High Risk are shown in Table V-2. The results of this evaluation are provided in *Los Alamos National Laboratory, Supporting Documentation, Implementation of Executive Order 12941.*

Table V-2: Potential Seismic Risk, Exceptionally High Risk Buildings

Building Number	Building Name
03-29	CMR Laboratory
03-30	General Warehouse
03-38	Administration/Shops C105318
03-39	Tech Shop
03-43	Administration Building
03-66	Sigma Building
03-70	Parks & Refuse Office
03-123	Theoretical Office Building
03-132	Computer Building
03-200	Office Building
03-207	J. R. Oppenheimer Study Center
03-215	Physics Analytical Center
03-216	Weapons Test Support
03-422	Office Building
08-21	Office Building
35-27	Nuclear Safeguard
35-87	Laboratory OfficeBbuilding
43-39	DOE-LAAO Hq. Building
46-24	Laboratory & Office Building
50-01	Radiation Liquid Treatment
53-06	Accelerator Tech building
55-39	Educational Support
55-01	Administration Building
55-02	Support Office Building
59-01	Occupational Health Laboratory

g. Threatened and Endangered Species

Federal agencies must comply with the 1973 Endangered Species Act (ESA) as amended. The Los Alamos National Laboratory Threatened and Endangered Species Habitat Management Plan (HMP) has been developed to protect federally listed threatened and endangered species on or near Los Alamos National Laboratory.

The HMP defines habitats for threatened and endangered species. These areas are designated as an Area of Environmental Interest (AEI) on maps in that document. The designated AEIs have both core and buffer areas. The core area designates the necessary habitat for a species and has the highest level of protection. The protective elements of the buffer are related to preventing core degradations primarily from light and noise disturbances. Areas that are not designated as AEIs are presumed to have little or no impacts to endangered or threatened species.

h. Surface Hydrology

The Rio Grande is the master stream of the region and drains an area of more than 14,000 square miles in Northern New Mexico and southern Colorado. Many drainage areas originate in or pass through the Laboratory, Los Alamos town site, and the White Rock areas.

Mesa-top locations are generally free from any risk of flooding; however, storm water and snowmelt runoff concentrate in the site's deep, narrow canyons, thereby increasing the risk of flooding for any facilities constructed on the canyon bottoms. The floodplains and wetlands in the canyon bottoms are cautionary zones for siting buildings.

Floodplains are protected under Executive Order 11988. This order emphasizes reductions in the risk of flood loss; tries to minimize the impact of floods on human safety, health and welfare; and aims to restore the natural and beneficial values of floodplains.

Activities triggering the Laboratory's review of potential floodplain impacts are as follows:

- Construction within a floodplain
- Alteration of a stream course
- Significant increase in the water flow into a floodplain (e.g., large new development with numerous impervious surfaces.)
- Removal of large amounts of vegetation in a floodplain

Wetlands are protected under the Clean Water Act and Executive Order 11990. Any excavation or fill activity in a wetland requires a Laboratory (ESH-20) review. Depending on the extent of the excavation and fill, a permit may be required. Vehicle access in a wetland must also be reviewed by the Laboratory. Other activities requiring Laboratory review of wetlands include any significant change (increase or decrease) in effluent discharge to a National Pollutant Discharge Elimination System outfall, elimination of an outfall, and discharge to a new outfall. These activities may require a wetland assessment.

i. Archeology and Cultural Resources

At present, approximately 80% of Laboratory lands have been surveyed for cultural resources. The Laboratory uses the DOE's definition of cultural resources, which includes archeological sites and artifacts dating to the prehistoric, historic and ethnohistoric periods; standing structures that are over 50 years old and that represent a major historical theme or era; cultural places and sacred objects that have importance to Native Americans; and to American folklife traditions and art.

The Laboratory site and surrounding areas contain examples of all of these types of cultural resources. These include the material remains of over 10,000 years of prehistoric human occupation, the historic occupation of the Pajarito Plateau beginning in the 1400s and the Laboratory buildings and structures associated with the Manhattan Project and the Cold War. Almost three-quarters of cultural sites are found on mesa tops, which are the preferred locations for Laboratory development today.

Under Section 106 of the National Historic Preservation Act (NHPA), all proposed work must be evaluated for its potential to adversely impact significant cultural resources, and appropriate measures must be taken to mitigate impacts. Over 1,400 archeological sites have been recorded at the Laboratory to date, and approximately 500 of 2000 facilities are potentially significant historic properties. The Laboratory recently received a Save America's Treasures Grant for restoration of V Site, a complex of wooden buildings within TA-16. The buildings were used for high explosives (HE) research and development at the end of World War II and contributed to the creation of the first atomic bomb, the "Trinity" device.

Figure V-2: Candy Kettle for the Trinity Device

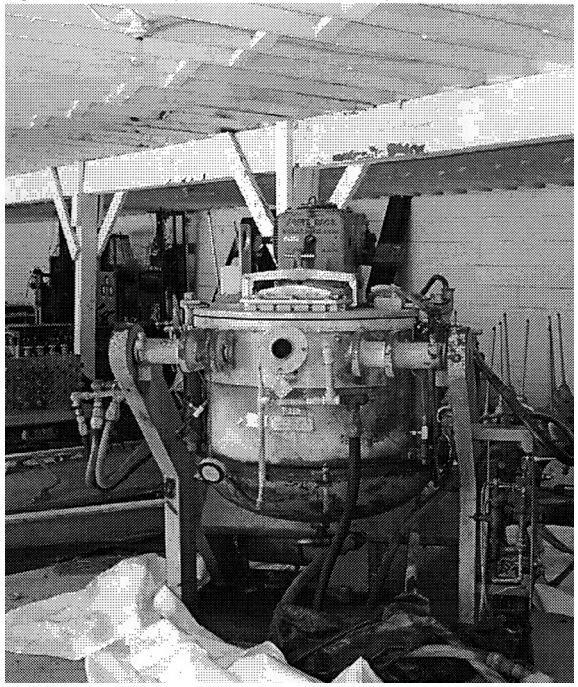


Figure V-3: The Manhattan Project, V Site

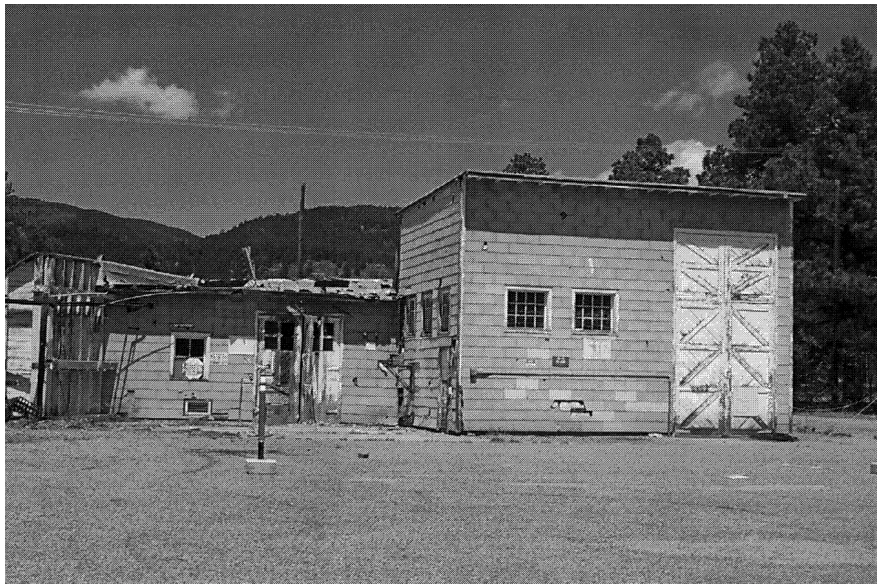
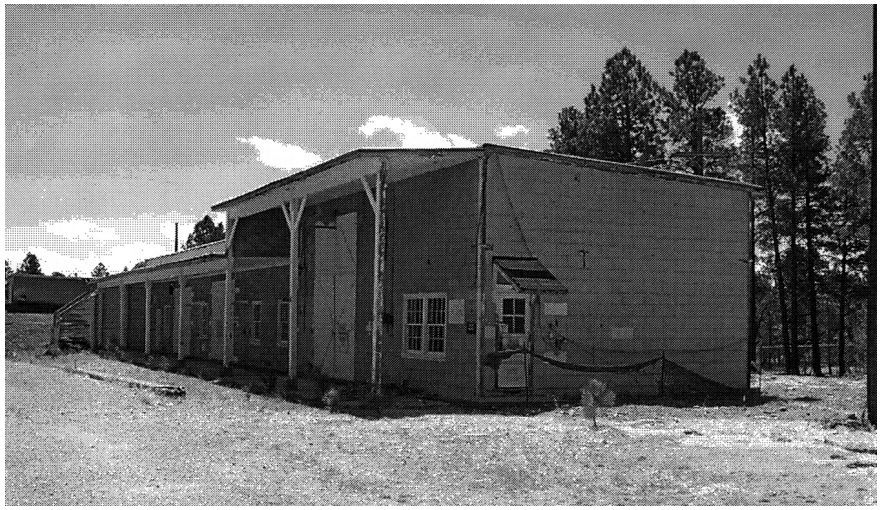


Figure V-4: The Manhattan Project, V Site



3. Operational Constraints

a. Radiological Zones

Radiological hazard areas should be considered in the planning process. Information on specific locations can be obtained from the Environment, Safety, and Health's (ESH) Radiation Protection Program Office. Radiation hazard areas are not "development exclusion zones." Neither construction nor new operations are precluded, but the reasonableness of the proposed activity must be considered. For example, a new storage facility might be ideally located within one of these areas adjacent to a facility that needs new storage. The most important objective is to ensure that the use is compatible with the hazard concerns and that documentation for the decision is provided.

b. Blast Buffer Zones

Explosives research, development, and testing uses require large, isolated, exclusive, and consolidated reservations of land. Carefully controlled access is required to maintain safety, security, and environmental compliance. These areas require buffers to minimize adverse impacts on surrounding lands. Only specialized facilities and approved personnel are permitted, in accordance with ES&H procedures.

c. Radio Frequencies

Many operations, programs, and experiments occurring at the Laboratory are adversely affected by AM radio transmissions. Therefore, for safety and other operational reasons, AM transmissions are not allowed to originate on Laboratory property. Any new radio frequency broadcasts at the Laboratory must be coordinated with the frequency manager in the Telecommunications Group (CIC-4).

d. Hazardous Waste

At Los Alamos, the number of potentially contaminated sites is approximately 2,100. Much of the investigative work on these sites has been completed; as a result, many sites have been found not to be contaminated and are being removed from the total list of sites without further action. At many of the remaining sites, accelerated cleanup has been completed or has begun. A small percentage of sites, currently estimated at less than 10%, will need to go through the entire corrective action process, a task that is expected to take until 2009 to complete.

Data gathered since 1970 in a comprehensive environmental monitoring and surveillance program indicate that no contamination that threatens the health or safety of local residents is known to exist on private property.

The Laboratory Environmental Restoration (ER) Project is governed primarily by the corrective action process prescribed in the Resource Conservation and Recovery Act (RCRA), but it is also subject to other applicable laws and regulations and to Laboratory policies.

The New Mexico Environment Department administers RCRA in New Mexico. The ER Project must respond to RCRA requirements for assessing and cleaning up sites at active hazardous waste treatment and storage units.

Other applicable federal acts are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Environmental Policy Act (NEPA). Federal and state statutes, executive orders, DOE orders and Secretary of Energy notices also guide hazardous waste remediation at the Laboratory.

e. Airspace

Although not strictly a constraint to development, the airspace constraints could affect any initiative requiring an aerial survey of the Laboratory as a step in the development process. For planning purposes, all airspace within 12,500 vertical feet above sea level inside Laboratory boundaries is safety-restricted airspace. No aircraft can enter this restricted air space without prior approval from the Laboratory.

4. Constraints and Development Opportunities Maps

Physical and operational constraints maps portray the opportunities and limitations related to development at the Laboratory.

a. Constraints Scores and Rationale

To develop the constraints maps, physical and operational issues that affect development were characterized and mapped for the entire Laboratory site. Then individual constraints were scored on a four-point scale, the various constraints were overlaid using a GIS-based mapping program. The resulting maps depict four constraint categories: no, slight, moderate, or severe constraints. Any specific location on the constraints map may have more than one constraint score associated with it; however, the highest constraint score at that location represents the constraint "level."

The following Operational and Physical Constraints tables, (V-3, V-4, V-5), explain the constraints, constraint scores and scoring rationale that are represented on Map V-3 Site Wide Physical Constraints and on Map V-4: Site Wide Operational Constraints.

Table V-3: Constraint Level

CONSTRAINT SCORE	CONSTRAINT LEVEL
0	No constraints
1	Slight constraints
2	Moderate constraints
3	Severe constraints

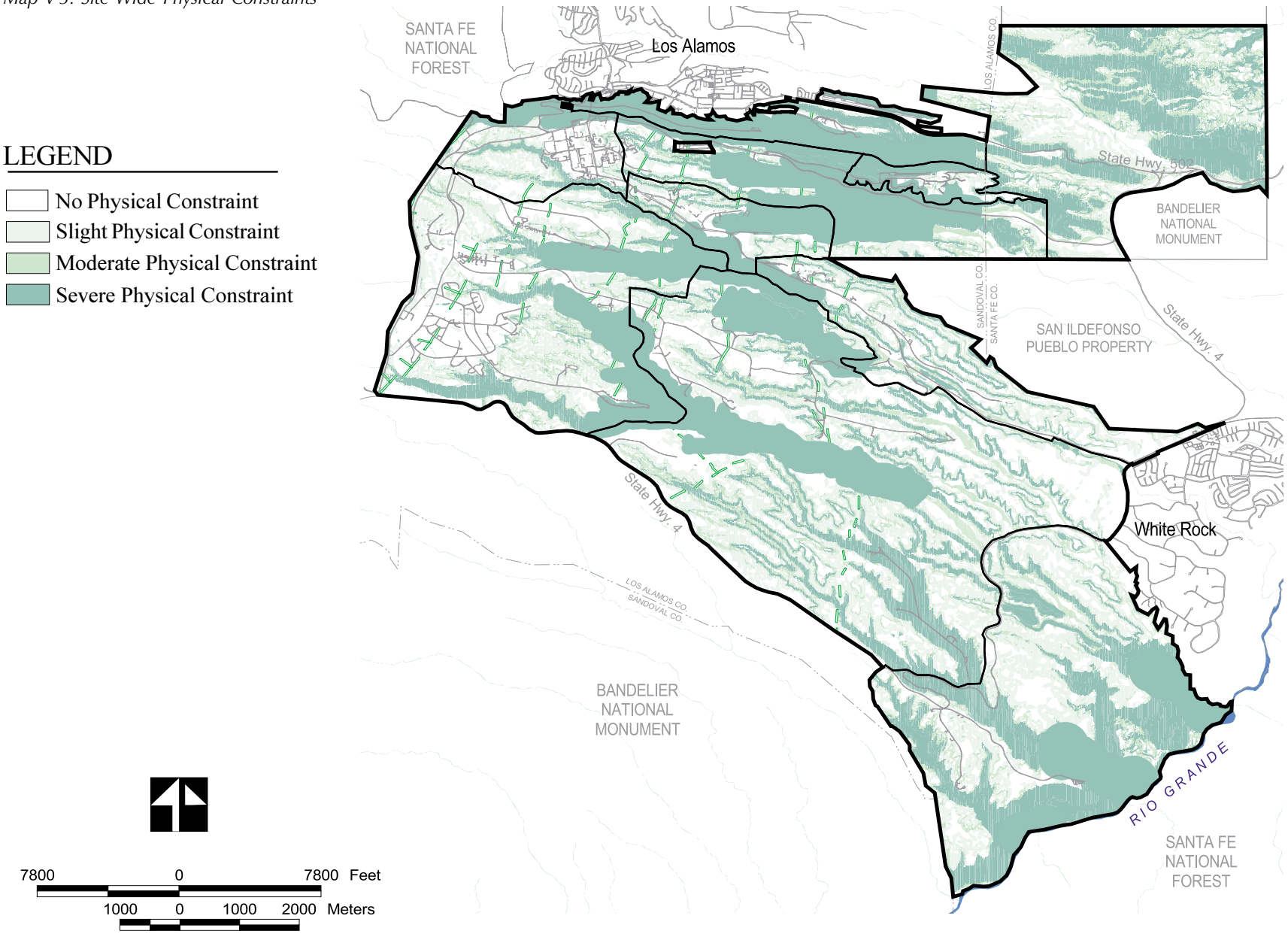
b. Physical Constraints

Table V-4: Physical Constraints

CONSTRAINT	SCORE	RATIONALE
Slope 0%-5%	0	Development can be easily sited.
Seismic/fault lines	1	Nuclear facilities are not permitted on faults. Other facilities can be sited on or set back from faults per Engineering Sciences and Applications Division requirements.
Slope 6%-9%	1	Minimal engineering and cost to overcome.
Slopes 10%-19%	2	Facilities can be engineered to overcome constraint at a moderate cost.
Threatened and Endangered Species Habitat Buffer	2	The buffer is meant to protect the core area and is not as constrained as the core. May be seasonal.
100-Year Floodplains and Streams	2	Development may occur within 100-year floodplain, provided impacts are mitigated. Because these places can be engineered to overcome constraint, this particular environmental concern should not be overly weighted.
Slopes 20%+	3	Can be engineered to overcome constraint, but at a high cost.
Threatened & Endangered Species Habitat Core	3	Critical to survival of endangered and threatened species. No development without mitigation.
Wetlands	3	Permit requirements.

• *Areas of 1 acre or less, whether a constraint score of 0, 1, or 2, were incorporated into the surrounding larger parcels. In most cases, these areas are changing slopes.*

Map V-3: Site Wide Physical Constraints



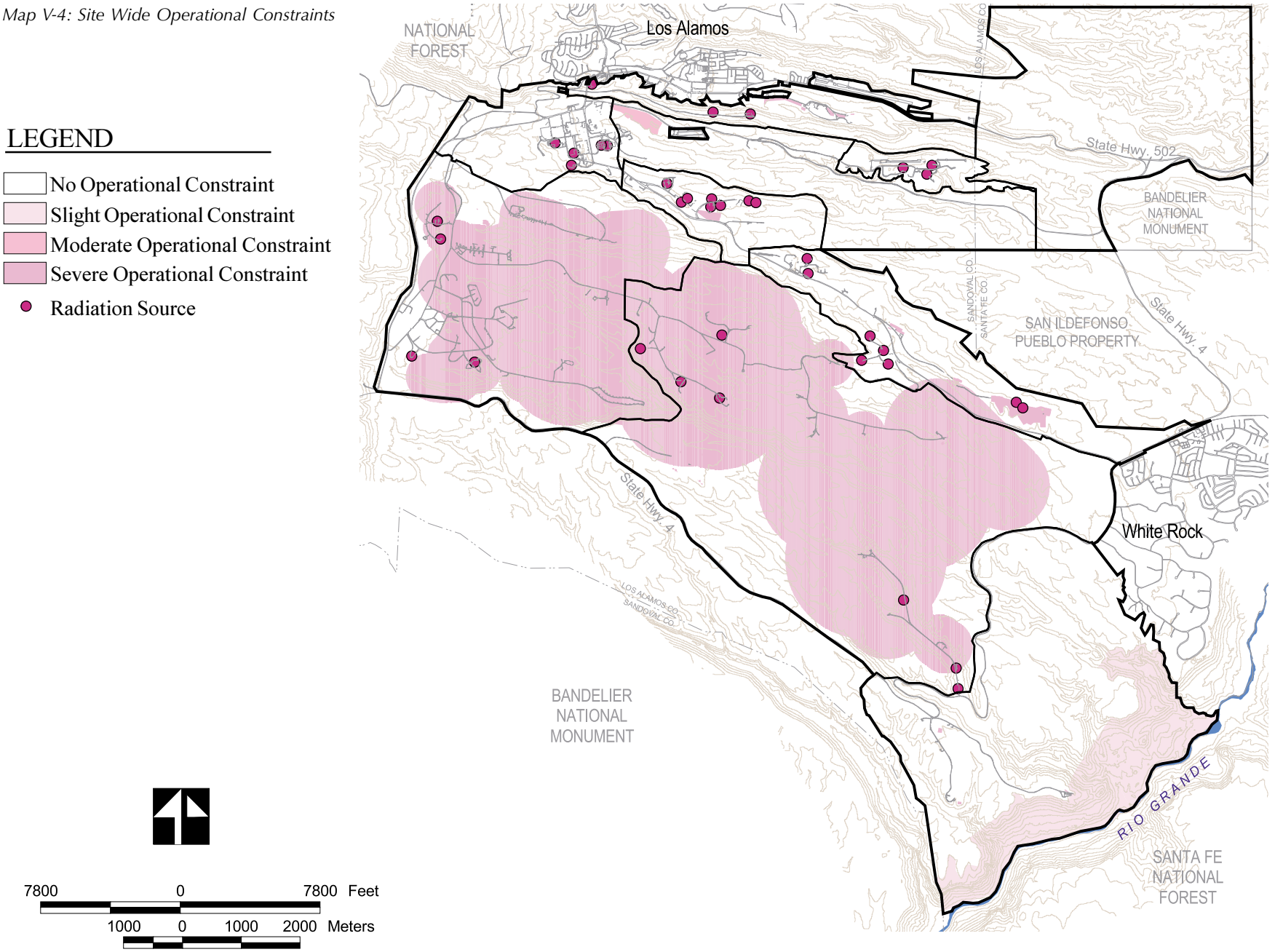
c. Operational Constraints

Table V-5: Operational Constraints

CONSTRAINT	SCORE	RATIONALE
Radiological Sources*	NA	Need authorization to be in area not open to the general public – only affects non-Laboratory development.
White Rock Canyon Reserve	1	DOE retains ownership of this 1000-acre reserve, but Department of Interior (Bandelier National Monument) will be the lead agency.
Sanitary Landfill	2	Costly site preparation is likely.
Hazardous Waste	3	These sites may contain hazardous contaminants that may affect human health and the environment and may be costly to clean up.
Blast Buffer Zones	3	Only specialized facilities and approved personnel permitted in accordance with ES&H procedures.

* *Currently includes only radiation safety point sources, which are not analyzed in the operational constraints map. They are included for information on Map V-4, Site Wide Development Opportunities.*

Map V-4: Site Wide Operational Constraints



d. Development Opportunities Maps

The development opportunities areas shown on Map V-5: Site Wide Development Opportunies are created from the combination of the physical and operational constraints maps discussed before. This map depicts all areas without constraints and with only slight and moderate constraints. Areas that include one or more severe constraints – those with an individual score of 3 – which would be due to the presence of unique operational or natural resources or activities, are identified as sites with unique development considerations.

- Areas with unique development considerations possess at least one of the following attributes: material disposal site, blast buffer zone, threatened and endangered species habitat core, wetlands, or slopes greater than 20%.

- Locations with constraint level scores = 0, 1 or 2 do not contain the unique operational and/or physical considerations discussed immediately above. These locations are analyzed to determine the cumulative effects of constraints on potential development and are ranked. The ranking is based on the sum of all constraint scores at each location, (see Table V-6).

Table V-6: Development Opportunities

DEVELOPMENT OPPORTUNITIES SCORE	RANKING
0	Excellent Development Potential
1	Good Development Potential
2-3	Fair Development Potential
4+	Poor Development Potential

The recommendations based on these scores are for general planning purposes only and should not be used as substitutes for standard site specific investigations and applicable regulations.

Map V-5: Site Wide Development Opportunities