

## H. Sigma Mesa Planning Area

### 1. General Description

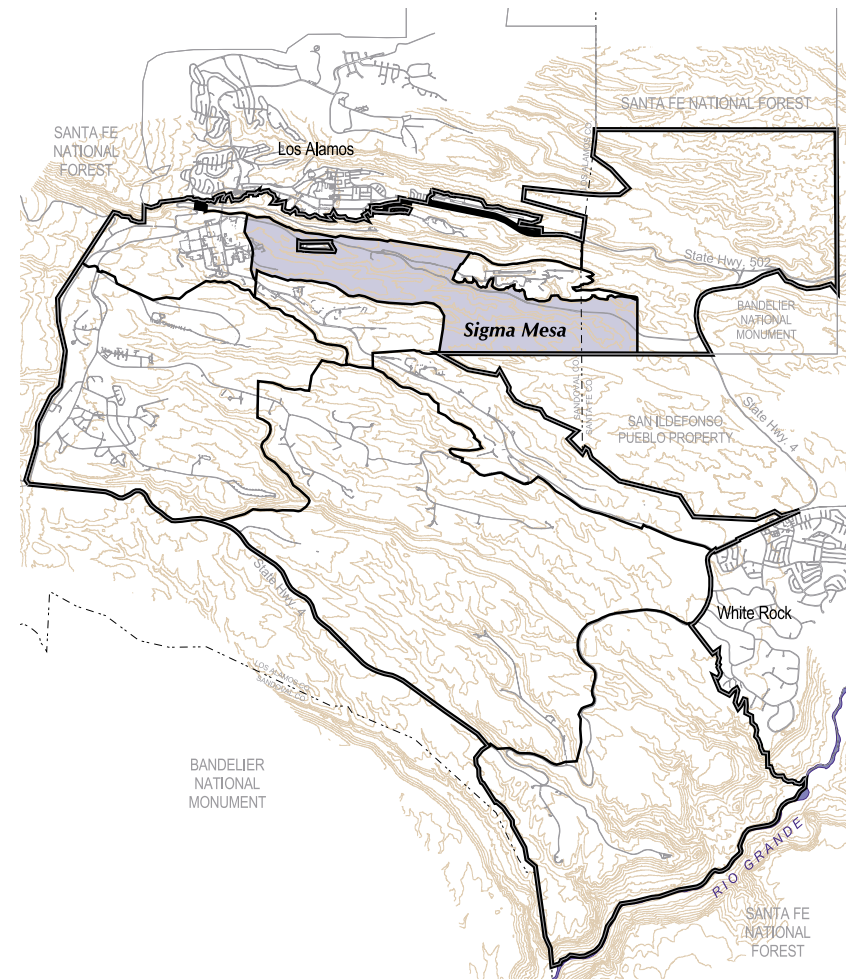
The Sigma Mesa Planning Area is bordered by the Omega West and LANSCE Mesa Planning Areas on the north, the Land Transfer Area on the east, Pajarito Corridor West Planning Area and San Ildefonso Pueblo on the south, and the Core Planning Area on the west. East Jemez Road runs east-west through the planning area. TAs-18, -46, -51, -54 and -65 comprise this planning area.

Sigma Mesa Planning Area is essentially reserve land. The predominant Laboratory work done in this planning area is physical/technical support. There is also a small area used for high explosives R&D. Unique to this planning area is the privately owned 25-acre inholding where the Royal Crest Mobile Home Park is located.

The following assumptions will guide the physical planning of the Sigma Mesa Planning Area for the next 10 years:

- *Support facilities are to be consolidated to the Sigma Mesa Planning Area. This consolidation will enable the Laboratory's support services subcontractor, Johnson Controls Northern New Mexico (JCNNM), to work more efficiently.*
- *The Rack Assembly and Alignment Complex on Sigma Mesa, although not currently used, is presently being maintained for future programmatic needs, but will be reevaluated as appropriate.*
- *The Advanced Hydrotest Facility (AHF) will impact the Sigma Mesa Planning Area. Tunnels, roads and support facilities may be required in this planning area.*

Map VI-H1: Sigma Mesa Planning Area Key Map



## 2. *Opportunities and Constraints*

The following opportunities and constraints affect physical planning in the Sigma Mesa Planning Area.

### **Physical Constraints**

Federally protected species habitat and buffer zones have been identified in the central sections of this planning area. There are delineated floodplains and wetlands found along the Sandia and Mortandad Canyon floors north of Sigma Mesa. Development within this planning area will be severely limited by slope constraints and four seismic fault zones.

### **Operational Constraints**

Most of the Sigma Mesa Planning Area is undeveloped. The western portion of TA-60 is used for physical/technical support functions. This support includes some of Johnson Controls Northern New Mexico operations; a sanitary landfill; and sand, gravel, and concrete operations.

The Rack Assembly and Alignment Complex occupies approximately 12 acres in the Sigma Mesa Planning Area. Although not currently in operation, it must remain on standby as part of the Nevada Nuclear Readiness Program.

The Royal Crest Mobile Home Park is a 25-acre privately owned inholding in the northern section of the planning area. San Ildefonso Pueblo borders the planning area on the south. These neighboring land ownerships could pose adjacency issues.

The western section of the Sigma Mesa Planning Area falls within the safety analysis report (SAR) area of the Sigma Building in TA-03, which creates development and adjacency restrictions for this sector of the planning area. The bulk of the remaining area falls within the SAR areas created by nuclear materials activities that occur at TA-55 and TA-35. Work within SAR areas is restricted to Laboratory and Laboratory contractor personnel only. There are several potentially contaminated sites in this planning area that may require environmental restoration.

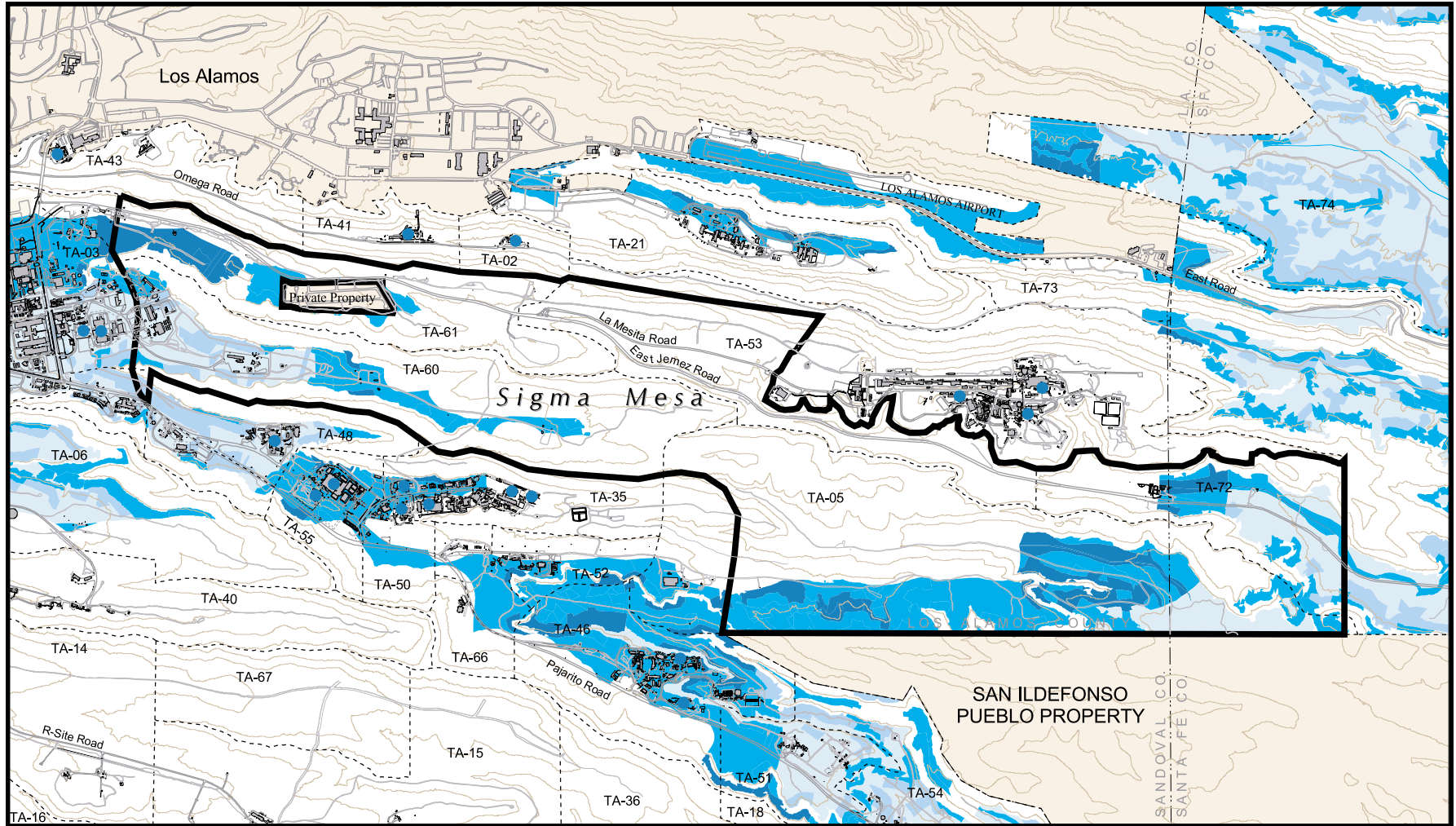
The Los Alamos County Sanitary Landfill occupies most of the northwestern portion of this planning area. There are plans to close this operation. Redevelopment of the landfill site is unlikely because of poor soil compaction, potential settlement because of refuse material decomposition, and landfill-generated gases such as methane.

### **Development Opportunities**

Significant development opportunities are available in the southeastern section of TA-60. The mesa top is relatively flat, has few existing structures, and would require minimal environmental restoration to prepare for new development. The area is ideal for consolidation of physical/technical support functions because of its proximity to the Core Planning Area. However, utilities would have to be extended from the western developed areas.

The Borrow Pit east of the Royal Crest Mobile Home Park is a second potential site for relocation of warehousing, shipping, and receiving functions currently in TA-03.

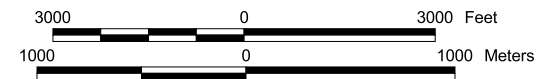
Map VI-H2: Sigma Mesa Planning Area Development Opportunities Map



LEGEND

- Technical Area Boundary
- Non Dept. of Energy Property
- █** Planning Area
- Unique Operational and/or Physical Considerations Exist
- Excellent Development Potential
- Good Development Potential
- Fair Development Potential
- Poor Development Potential
- Radiation Source

Areas of one acre or less are incorporated into the surrounding larger areas.



### 3. *Projects for Sigma Mesa Planning Area*

Proposed, planned or budgeted projects noted below and on the facing summary map, VI-H3, for this planning area were identified through Laboratory documents or by stakeholders during the Comprehensive Site Plan 2000 process. The symbol *NS* stands for project “Not Shown” on the summary map.

#### **Consolidation of JCNNM**

- ① Planned consolidation of support facilities (JCNNM relocation) to Sigma Mesa.
- ② Proposed cleanup of outside storage to create developable space for other uses.

#### **Development of AHF Capabilities**

- ③ Proposed subsurface tunnels for Advanced Hydrotest Facility (AHF) from LANSCE to Dynamic Testing Planning Area.
- ④ Proposed AHF firing site.
- ⑤ Proposed new road to link AHF firing site with TA-53 and TA-55.

#### **Transportation Development**

- ⑥ Planned eastern section of the loop road around TA-03, which is needed before Sigma Mesa development can begin.
- ⑦ Proposed upgrade of East Jemez Road from NM State Highway 4 to Diamond Drive to address increased traffic volumes and improved circulation.
- ⑧ Proposed Pajarito Road to East Jemez Road north-south connector road to reduce security conflicts and provide safety/emergency access.
- ⑨ Proposed second bridge to Los Alamos town site to improve regional traffic circulation.
- ⑩ Upgrade and extend Eniwetok Drive for improved safety/emergency access.
- ⑪ Proposed access to new services at the Borrow Pit in order to reduce truck traffic on East Jemez Road and within TA-03.

- ⑫ Construct grade separation at intersection of new road serving AHF facilities and new road linking Pajarito Road with East Jemez Road.

#### **Security Development**

- ⑬ Open discussions with appropriate stakeholders re. the relocation and purchase of trailer park to solve safety concerns and gain approximately 100 developable acres.

#### **Infrastructure Revitalization**

*NS* Ongoing utility revitalization activities as noted in Site Wide Planning Area section.

- ⑭ Planned correction of approximately 1-mile section of natural gas line east of private trailer park.

#### **Facilities Revitalization**

*NS* Potential replacement, removal or upgrade of poor or failed facilities that compose 7% of facilities in the planning area.

#### **Quality Environment Enhancement**

- ⑮ Potential visual buffering of storage yards with landscaping when east section of TA-03 loop road is built.

#### **Regional Cooperation**

- ⑯ Coordinate replacement of landfill site to a regional site in the Rio Grande Valley negotiated with Los Alamos County and other agencies.

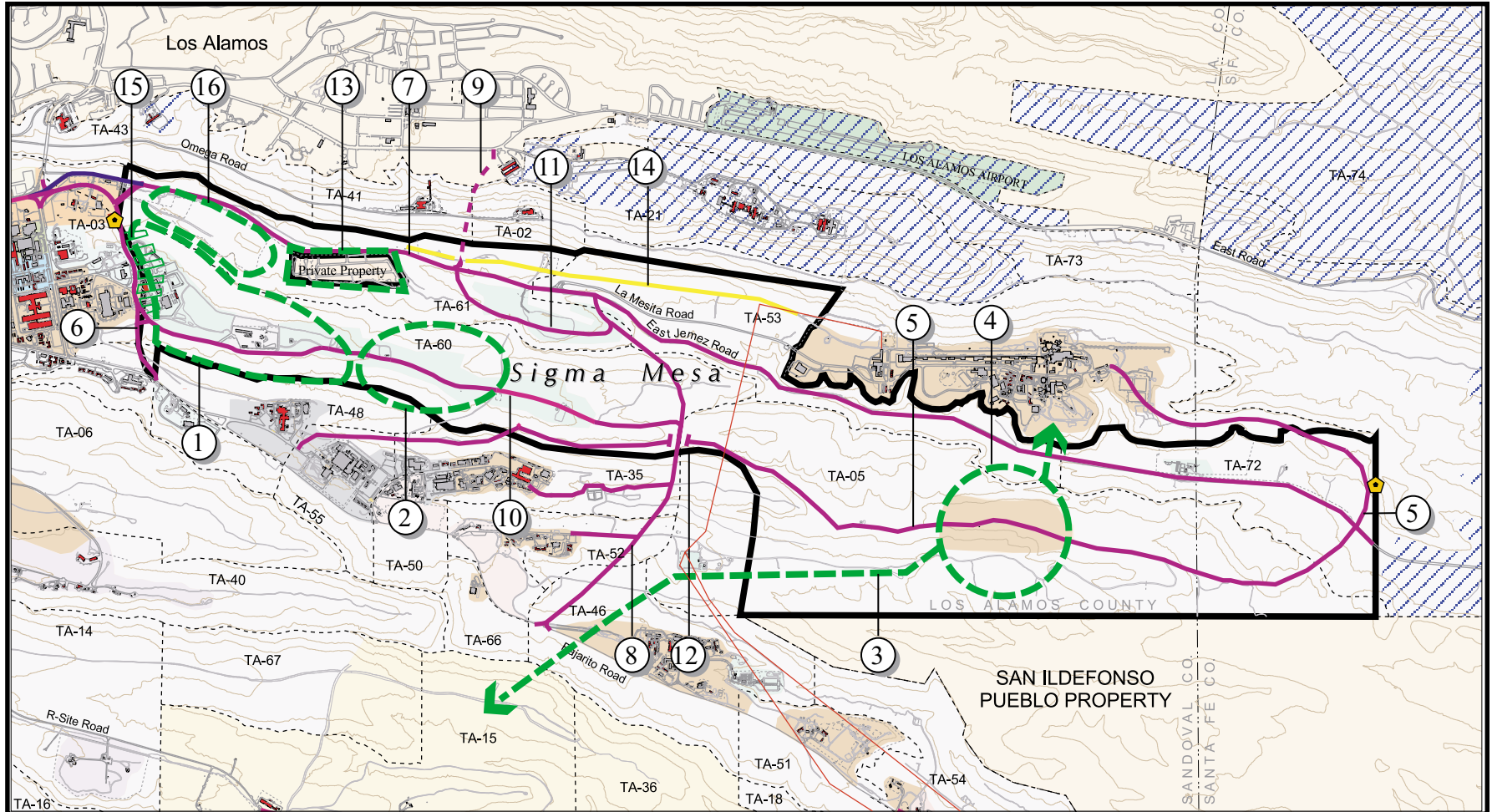
#### **CSP 2000 Issues for Sigma Mesa Planning Area**

Important CSP issues that need discussion for continued refinement of this planning area:

- *Timing and process for support facilities consolidation.*
- *Evaluation of AHF development options and NEPA effects on options.*
- *Development of a site wide transportation plan and evaluation of its effects on security, environment and transportation/traffic circulation on the Laboratory and region.*



Map VI-H3: Sigma Mesa Planning Area Summary Map



LEGEND

Administration	Physical/Technical Support	Planning Area	Proposed Guard Gate
Airfield	Public/Corporate Interface	Fair or Poor Buildings	
Experimental Science	Research Park	Area of Interest	
High Explosives R&D	Reserve	Electric Line 115 kV	3000      0      3000 Feet 1000      0      1000 Meters
High Explosive Testing	Theoretical/Computational Science	Gas Pipeline	
Non-DOE Property	Waste Management	Long Range New or Improved Roads	
Nuclear Materials R&D	Land Transfer Tracts	New or Improved Roads	