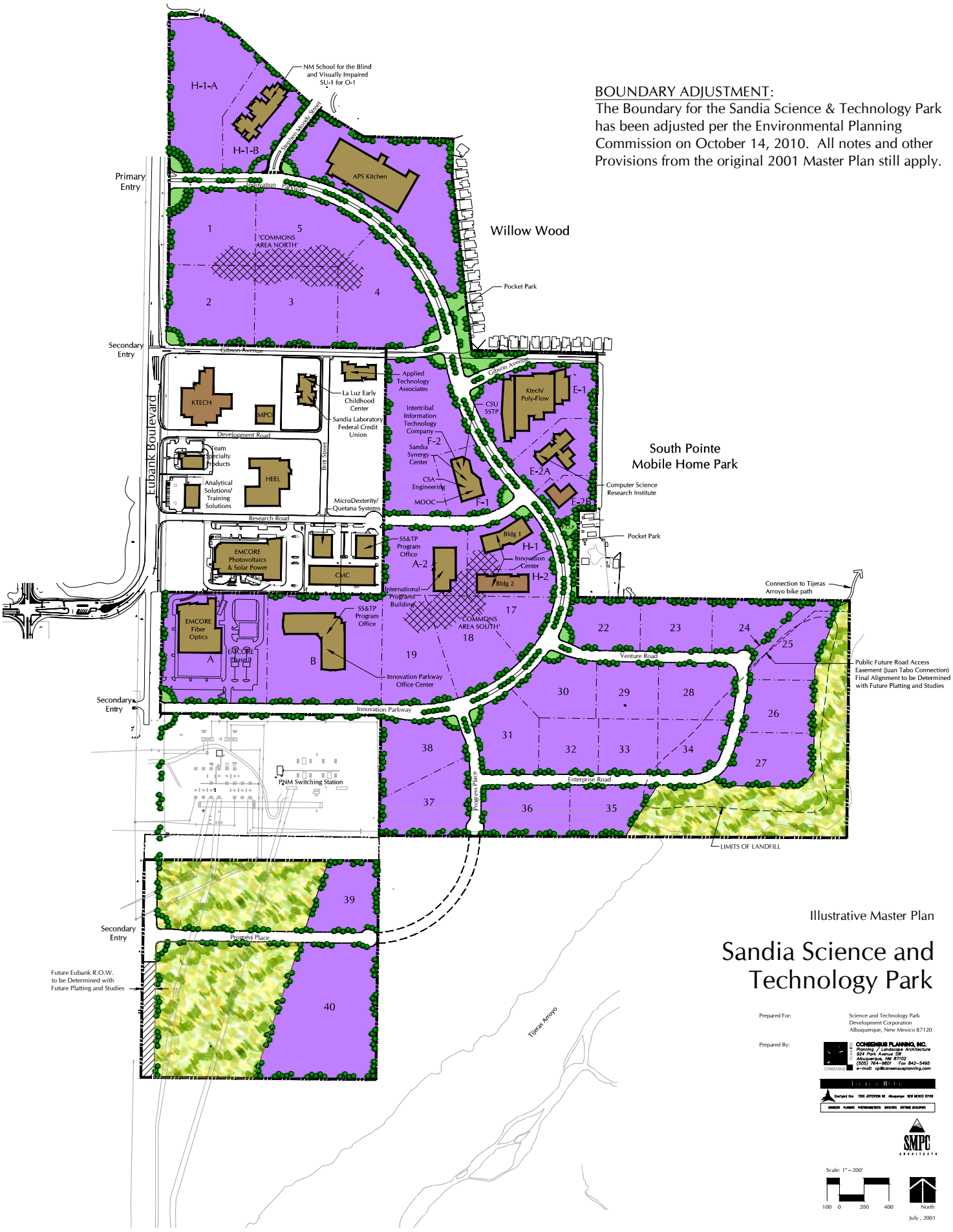
Master Development Plan

Approved June, 2001



SANDIA SCIENCE &
TECHNOLOGY PARK


BOUNDARY ADJUSTMENT:
The Boundary for the Sandia Science & Technology Park has been adjusted per the Environmental Planning Commission on October 14, 2010. All notes and other Provisions from the original 2001 Master Plan still apply.
H-1-A
H-1-B
NM School for the Blind and Visually Impaired
SU-1 for O-1
Stephen Wright Street
Primary Entry
Innovation Parkway
APS Kitchen
Willow Wood
'COMMONS AREA NORTH'
Pocket Park
Secondary Entry
Gibson Avenue
Eubank Boulevard
KTECH
MPCI
Applied Technology Associates
La Luz Early Childhood Center
Sandia Laboratory Federal Credit Union
Intertribal Information Technology Company
Development Road
Team Specialty Products
Analytical Solutions/ Training Solutions
HEEL
Britt Street
Sandia Synergy Center
CSA Engineering
MOOC
MicroDexterity/ Quetana Systems
Research Road
EMCORE Photovoltaics & Solar Power
CMC
SS&TP Program Office
International Programs Building
'COMMONS AREA SOUTH'
EMCORE Fiber Optics
EMCORE Phase II
Innovation Parkway Office Center
PNM Switching Station
Progress Place
Enterprise Road
Venture Road
Ktech/ Poly-Flow
CSU SSTP
South Pointe Mobile Home Park
Computer Science Research Institute
Bldg 1
Bldg 2
Innovation Center
Connection to Tijeras Arroyo bike path
Public Future Road Access Easement (Juan Tabo Connection) Final Alignment to be Determined with Future Platting and Studies
LIMITS OF LANDFILL
Future Eubank R.O.W. to be Determined with Future Platting and Studies
Tijeras Arroyo
Illustrative Master Plan
Sandia Science and Technology Park
Prepared For:
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SMPC ARCHITECTS
Scale: 1" = 200'
100 0 200 400
North
July , 2001

Sandia Science & Technology Park
Master Development Plan
Amendment 4/12/05

Approval

Bob Pawlan 4/29/05

City of Albuquerque Planning Director Date

FOR Richard Dineen

1. Section 5: Design Standards, Page 45, Parking Area Setbacks, 4th bullet. Parking area setback:

   - Parking areas shall be setback as follows:

     - 25 feet from the right-of-way line of the Primary Loop Road (Innovation Parkway)
     - 15 feet from the right-of-way line of Secondary Roads
     - 25 feet from the property lone of residential zones
     - 6 feet (each side) from the property line of adjacent properties, for a total combined setback area of 12 feet

2. Section 5: Design Standards, Page 48, Screening/Buffering, 5th bullet. Parking lot screening:

   - Walls, earthen landscaped berms, or evergreen landscaping (representing a minimum of 60% of the landscape provided), or a combination thereof, 2½ to 3 feet in height shall be provided to screen parking areas adjacent to streets. Walls, if used, shall be designed to integrate with building materials and colors.

3. Section 5: Design Standards, Page 39, Streetscape. New bullet:

   - The street trees along Innovation Parkway shall be Modesto Ash/Fraxinus velutina 'Modesto'. Accent trees shall be provided at intersections and shall include Goldenrain Tree/Koelreuteria paniculata, Flowering Pear/Pyrus calleryana, or Cockspur Hawthorn/Crataegus persimilis 'Crusader'.

APPROVALS

Project #1001031
EPC #01110-00000-00120/01128-00000-00121
DRB #~~0145~~-00000-00787
01450

This site plan is consistent with the Master Development Plan approved by the Environmental Planning Commission on March 22, 2001 and Conditions of Approval have been met.

[signature]	9/7/01
Planning Department	Date
[signature]	8-17-01
Transportation Development	Date
[signature]	8/14/01
City Engineer/AMAFCA	Date
[signature]	6-20-01
Utility Development	Date
[signature]	6/20/01
Parks and Recreation Department	Date

DSfor 8-20-01

SANDIA SCIENCE & TECHNOLOGY PARK

ACKNOWLEDGEMENTS

Science and Technology Park Development Corporation - Board of Directors/Officers
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Mary Lee Martin
Berna V. Facio
Paula M. Maes
John D. Emery
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New Mexico State Land Office (NMSLO)
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Harry Relkin, Assistant Commissioner, Community Dev.
Don Britt, Assistant Commissioner, Commercial Resources
Will Gleason, Manager, Planning & Dev.

BUILD New Mexico/New Mexico Development Foundation
James K. Trump, Jr., Executive Director

We would like to thank the Department of Energy and the New Mexico State Legislature for funding this Master Development Plan.

We would like to give special recognition and thanks to Dan Hartley and Sherman McCorkle for their vision and leadership in founding the Sandia Science & Technology Park.

SANDIA SCIENCE & TECHNOLOGY PARK

ACKNOWLEDGEMENTS

Master Development Plan Design Team

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Harry Relkin, NMSLO
Bill Robertson, SMMLP
Bruce Stidworthy, Bohannan Huston
James Topmiller, Bohannan Huston
Eric Wrage, Bohannan Huston

Stakeholders

Albuquerque Economic Development (AED)
New Mexico Economic Development Department
Department of Energy (DOE)
Economic Development Administration (EDA)
Next Generation Economy Initiative (NGEI)
Sandia National Laboratories (SNL)
Technology Ventures Corporation (TVC)
EMCORE PhotoVoltaics
EMCORE Optical Devices
EMCORE Fiber Optics
Team Specialty Products (TSP)
Analytical Solutions
Training Solutions
MicroDexterity Systems
PicoDyne
Cooperative Monitoring Center (CMC)
District 9 Coalition of Neighborhoods

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SANDIA SCIENCE & TECHNOLOGY PARK

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1. EXECUTIVE SUMMARY

SANDIA SCIENCE & TECHNOLOGY PARK
"THE GATEWAY TO ALBUQUERQUE'S HIGH-TECH ECONOMY"

PURPOSE

This Master Development Plan covering the approximately 217 acres of the Sandia Science & Technology Park (SS&TP) provides an overall framework for the continuing development of the Park. The SS&TP is a unique opportunity for the enhancement of Albuquerque's high-technology economy and provides for a research park located in direct proximity to Sandia National Laboratories (SNL), encouraging co-location of researchers in a congenial collaborative environment. The Sandia Science and Technology Park is a public/private partnership committing the landowners and the other parties to the Park to build out their vision of a large science and technology research park in a campus-style setting in the South Eubank corridor.



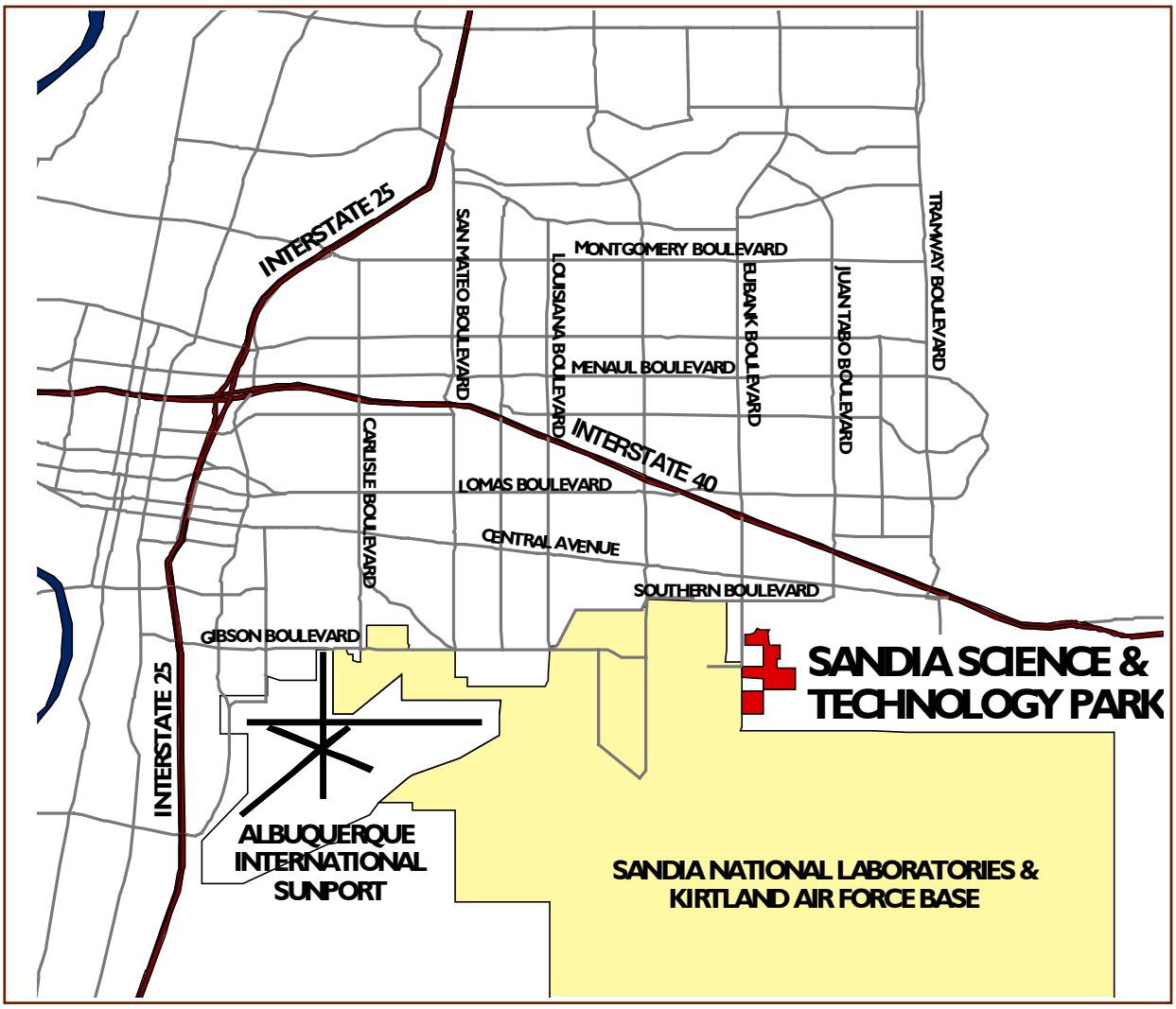
EMCORE

The parties are further committed to the development of the Sandia Science and Technology Park with the understanding that its success will positively impact New Mexico's economy and the Albuquerque regional economy. It is anticipated that technology-based companies and their suppliers will locate facilities within the SS&TP to jointly pursue commercial activities with SNL and the other area research institutions and companies. The result will be new and better jobs for New Mexicans.

The development of the Sandia Science and Technology Park serves a unique public purpose that is not replicated elsewhere in the Albuquerque Metropolitan Area. The unique role of the SS&TP is based on its location immediately adjacent to SNL, a distinct advantage for the commercialization of technology ventures sponsored by SNL. The Park provides a site for SNL technology partners and suppliers to locate and/or expand facilities in close proximity to the highly specialized technology and highly trained staff of SNL. The development of the Sandia Science and Technology Park meets many other public purpose goals as well, as described below.

GOALS AND OBJECTIVES

- Create a unique science and technology research park in close proximity to Sandia National Laboratories and the Department of Energy facilities in the South Eubank Corridor.
- Strengthen the economic base of the greater community through the provision of new, high paying, high technology jobs.
- Partner with both private and public entities in a model relationship for future industrial park development.



Regional Vicinity

- Fulfill the City of Albuquerque's goals with respect to infill development and steering new development to sites already within the City's utility service area.
- Fulfill the City of Albuquerque's goals and policies with respect to creating mixed-use urban environments where residential, commercial, and industrial activities are located in close proximity to each other to reduce vehicle trips and encourage wise use of limited resources.
- Provide opportunities to leverage federal dollars with local matching funds to achieve improved infrastructure in the area.
- Enhance Sandia National Laboratories' role in partnering with the local community to diversify the economy through new private sector job creation opportunities.
- Provide locations for high-technology businesses to locate in Albuquerque to enhance and expand the industry clusters already developing in the region.
- Fulfill the City of Albuquerque's goals for the development of a prototypical, expedited, predictable, and fair development approval process to encourage investment by the private sector.



NEIGHBORHOOD CONTEXT

- Provide for a coordinated development strategy governing a large area owned by separate landowners in order to create a cohesive and well-planned Park.

- Provide for a campus-style research park with potential for collaboration between companies and public entities.

- Create an overall Master Development Plan that establishes a framework for future Park development, with design guidelines and common entry and landscape design as unifying elements.

- Develop a strategy for the eventual build-out of the Park considering the provision of infrastructure and the realities of separate land ownership and the phased development needs of the Park.

- Create opportunities for state-of-the-art information connectivity and premium power to service the specialized high-technology businesses likely to locate in the Park.

- Provide a "ready to go" development setting for swift location of new businesses to accommodate the fast-track site development needs of today's economy.

- Provide a marketable development opportunity for landowners to encourage participation in a common planning process while maintaining land values.

- Provide opportunities for Albuquerque Public Schools and the State Land Office to develop landholdings within the Park in order to benefit public education opportunities in New Mexico.

BACKGROUND & HISTORY

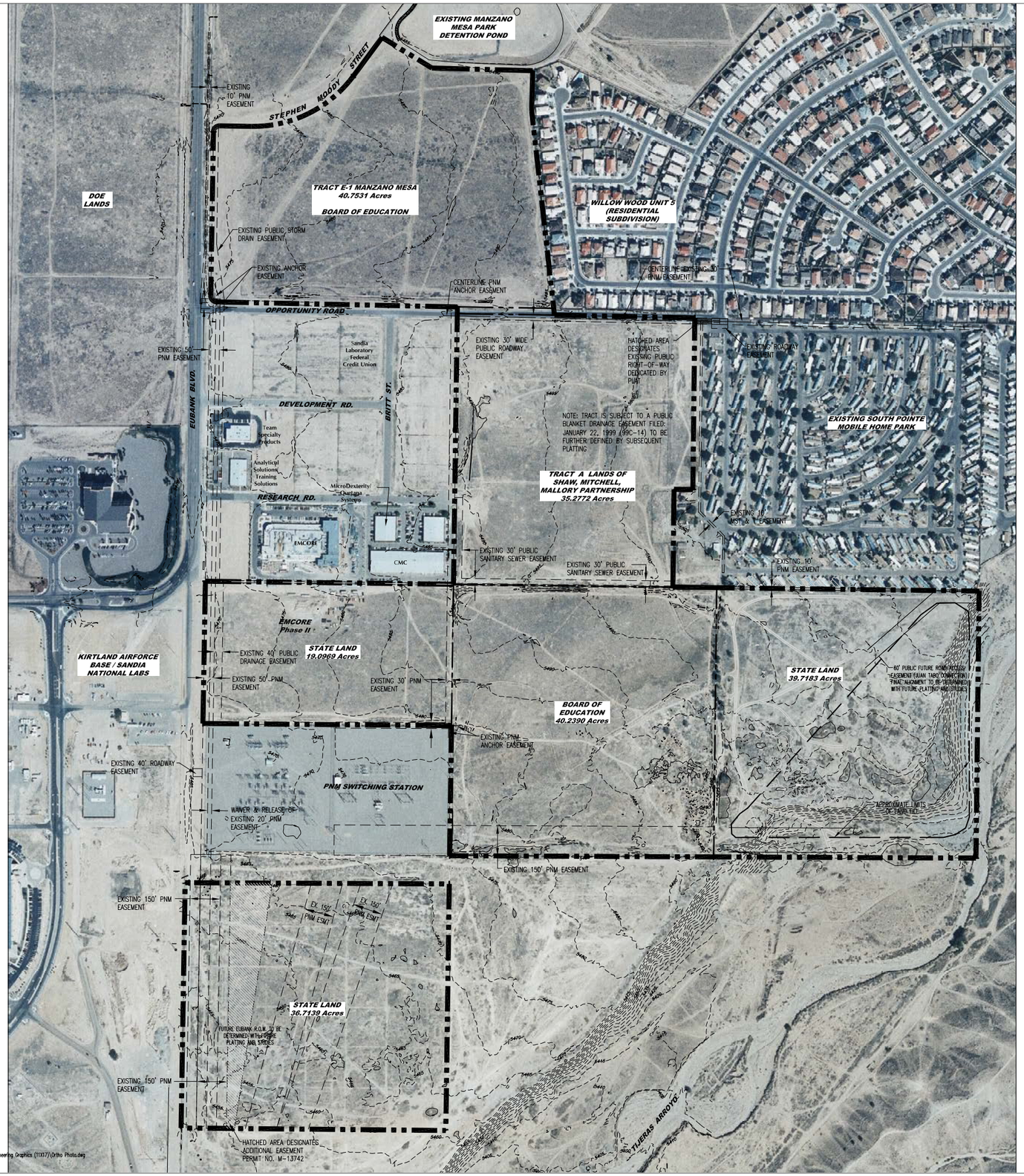
The idea of creating a high-tech research park in Albuquerque began in 1996 when several companies approached Sandia National Laboratories seeking space to physically locate near Sandia in order to enhance their partnership with the Labs. Since locating on Kirtland Air Force Base was not feasible, land east of the Labs along Eubank Boulevard and south of Central Avenue was proposed as a location for a new research park.

In December 1996, Sherman McCorkle and Dan Hartley hosted a breakfast meeting with Albuquerque community leaders to propose the idea of a research park located near Sandia Labs. The idea for the Park received wide community support. Erik Pfeiffer, Director of Economic Development for the City of Albuquerque, pledged State funding dollars granted to the City in order to do a market survey and conceptual design for the proposed Park. The survey found that a science and technology park in Albuquerque would help attract companies to the area that are interested in working with Sandia as well as other technology institutions and universities nearby.

In October 1997, under the leadership of Dan Hartley, Sandia Vice President for Laboratory Development, a Sandia Science & Technology Park program office was set up to bring the concept of a park to reality. Mr. Hartley asked Jackie Kerby Moore, from Sandia, to run the program. Shortly thereafter, the landowners, representatives from the local economic development agencies, and community stakeholders met



Team Specialty Products



N

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1"=200'

LEGEND

- SANDIA SCIENCE & TECHNOLOGY PARK BOUNDARY
- TRACT BOUNDARIES
- 5305 EXISTING CONTOURS
- EASEMENT

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Aug 27, 2001 - 2:19pm

Ortho Photo

Sandia Science and Technology Park

Prepared For:

Science and Technology Park
Development Corporation
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to decide how to work together to create the Park. Over the next year, Mr. Hartley and Ms. Moore gave more than 100 presentations on the Park to various groups throughout the state, including educational institutions; government officials and agencies; economic development groups; local neighborhood associations; and industry partners to make them aware of the plans for the Park.

In April 1998, with the concept of a research park associated with a national laboratory still in its infancy, the National Academy of Sciences held a symposium in Washington, D.C. that focused on the SS&TP. The discussion centered on the Park as a location for Sandia industry partners that would encourage and strengthen their collaborations with Sandia by enabling easy access to the R&D facilities and personnel located at the Labs.

In May 1998, the SS&TP was officially founded when EMCORE broke ground on their new 50,000 square foot facility in the Park.

In July 1999, Technology Ventures Corporation formed the Science and Technology Park Development Corporation (STPDC) to manage the development of the Park. The STPDC, a nonprofit organization, has a board of directors made up of members from the local community.

In February 2000, the landowners in the SS&TP - Albuquerque Public Schools; the New Mexico State Land Office; and the Shaw, Mitchell, and Mallory Limited Partnership - together with Sandia National Laboratories, the City of Albuquerque, and the STPDC, entered into a Memorandum of Understanding (MOU) whereby the landowners agreed to develop their land into a campus-style, pedestrian-oriented, high-technology park focused on attracting high-technology companies that either have a working relationship with Sandia or the potential to establish such a relationship. As a signatory to the MOU, the City of Albuquerque agreed to pursue an expedited land use and infrastructure approval process for the Park. Sandia agreed to provide a program team to support the Park. The Park will benefit Sandia National Laboratories, as it will help Sandia commercialize technology developed in the process of meeting its national defense mission. The Park will also help to bring funds into the laboratory through Cooperative Research and Development Agreements (CRADAs) and licensing agreements with its industry partners. This program team from Sandia is officially on executive loan from Sandia to the STPDC. The STPDC agreed to pursue funding for a master development plan for the Park. The Department of Energy, though not a signatory to the MOU, is a partner in the Park and has provided much of the funding for the development.

To date, the SS&TP has received over $2.25 million in funding, including $1 million from the U.S. Economic Development Administration for fiber optic infrastructure; $700,000 from the City of Albuquerque for road and sewer improvements; $200,000 each from the Department of Energy and the New Mexico State Legislature for the Master Development Plan; and $150,000 from the State/City for a Market Survey and Conceptual Design.

Currently, there are nine tenants in the SS&TP employing 588 people. The Park is expected to create between 6,000 and 12,000 high-tech, high-paying jobs for the Central New Mexico community over the next 10-20 years.

MEMORANDUM OF UNDERSTANDING

On February 28, 2000, six parties signed a Memorandum of Understanding (MOU) that set forth the process for the Master Development Plan for the Park, for a marketing and referral system for future Park tenants, for an expedited City of Albuquerque development approval process for the Park, for continued participation by the individual landowners in the broader public purpose goals for the Park, and that set forth the terms and conditions that would govern the Park until such time as a Master Development Plan was approved. A copy of that Memorandum of Understanding is included as Appendix B of this document.

The parties to the agreement include: the Mayor of the City of Albuquerque; President of the Board of Education for Albuquerque Public Schools; the Assistant Commissioner for the New Mexico State Land Office; the General Partner for the Shaw, Mitchell, Mallory Limited Partnership; a Vice President of Sandia National Laboratories; and an Officer of the

Science and Technology Park Development Corporation. These landowners and agencies have agreed to participate in the planning and development of the Sandia Science and Technology Park as set forth in this Master Development Plan.

An integral part of the MOU is the expedited approval process through the City of Albuquerque (see below for more information on the Expedited City Review and Approval Process). The Master Development Plan provides the framework for overall approval of the land use, zoning, and infrastructure concepts for the Park. This will greatly increase the STPDC's ability to market the SS&TP to potential employers interested in locating at the Park.

EXPEDITED CITY REVIEW and APPROVAL PROCESS

The MOU signed by the landowners and interested parties to the SS&TP on February 28, 2000 set forth an expedited approval process for City review of SS&TP projects (see Appendix B for more detail on the MOU). The anticipated process is also described below, with some additional detail on specific plan elements, that are still in keeping with the original spirit of the MOU. An Approval Process Checklist and Reference Guide provides the minimum standards required by the Master Development Plan (see Appendix A).

The Master Development Plan process provides a framework for the overall approval of the land use and infrastructure requirements for the Park, along with an expedited process for the approval of site development and subdivision requests, as identified in the memorandum signed by the City's chief administrative officer (see Appendix A). Key elements of the expedited process include:

- The Master Development Plan will identify overall land use, design guidelines, transportation, utility, drainage, and telecommunications needs of the Park.

- The Master Development Plan and infrastructure necessary for development will be reviewed and approved by the City's Environmental Planning Commission (EPC) and the Development Review Board (DRB). After the initial approval by the EPC and the DRB, neither the Master Development Plan nor individual end-user projects within the SS&TP will be reviewed by the DRB or EPC, unless major amendments to the Plan are necessary or unless a platting or vacation action is required (plats and vacation of easements or rights-of-way require review by the DRB only; vacation actions for public easements or rights-of-way require a public hearing).

- Administrative approval authority for all SS&TP site development requests will be assigned to the City Planning Department Director.

- The Master Development Plan requires the master developer and/or landowners to administer an internal infrastructure cost-sharing formula which assigns a fixed cost or fixed cost percentage for each parcel based upon its prorated share of on-site and off-site infrastructure. Payment of any costs associated with the approved Master Development Plan and for construction of site specific infrastructure for a parcel shall be deferred until the building occupancy stage of the project, after approval of a development request by the City's Planning Department Director. The end-user will build their required infrastructure in order to obtain a certificate of occupancy. No additional hearings before the EPC or DRB are required to obtain this approval, except in cases of major amendment to the overall Master Development Plan as noted above.

- In addition, the City of Albuquerque shall pursue the timely implementation of approved capital improvement projects that support the SS&TP. As part of the Master Development Plan's infrastructure requirements, the City of Albuquerque's capital improvements in the vicinity of the SS&TP will be identified by the City, and shall include but not be limited to Eubank Boulevard from Central Avenue to the KAFB entry and a portion of the storm drainage infrastructure.

- City staff, EPC, DRB, and the Development Review Committee (DRC) shall implement the approval process described above with the goal of expediting and streamlining the process wherever possible.

- End user applicants within the SS&TP shall sufficiently demonstrate compliance with the approved Master Development Plan and accompanying infrastructure requirements at the time of their parcel-level application to satisfy the Planning Director in order to proceed to building permit. Applicants recognize that their share of the Plan infrastructure must be identified by the City, planned, designed, and constructed in order to complete the building permit and certificate of occupancy process outlined above. Typically, the required infrastructure will be determined at the building permit review stage.

MASTER DEVELOPER

At the time of this Master Development Plan, there is no Master Developer for the Park. Rather, the landowners and other agencies have bound themselves together through the Memorandum of Understanding to achieve the Park's common goals. However, a Master Developer is seen as a desirable outcome of the planning for the Park, in that development of individual sites will be more easily coordinated if a unifying entity with contractual control of the Park is present. Towards this end, the Science and Technology Park Development Corporation (STPDC, a non-profit organization providing coordination of the Park and its interested parties) issued a Request for Qualifications for interested Master Developers, and subsequently, issued a Request for Proposal to assess the level of interest and capabilities of responding developers. Regardless of whether or not a Master Developer is ultimately responsible for the Park, this Master Development Plan shall still govern future development of the site as envisioned by the MOU.

NEIGHBORHOOD ISSUES

Staff members from the STPDC have met with neighborhood groups for the past few years regarding development of the SS&TP, and the response has been generally positive. These neighborhood groups include the Willow Wood Homeowner's Association and the District 9 Coalition of Neighborhood Associations, which represents South Pointe Mobile Home Park and Mirabella Homeowner's Association. It is anticipated that future meetings with the neighborhoods will be held to discuss various issues as the Master Development Plan goes through the approval process and the Park begins to develop. In addition, the adjacent neighborhoods will be notified in the case of any proposed major amendments to the Master Development Plan.



2. EXISTING CONDITIONS

LAND USE AND ZONING

Existing zoning on the SS&TP site is IP and County A-1. The SS&TP falls within the Developing Urban area as designated by the Albuquerque/Bernalillo County Comprehensive Plan. The goal of the Master Development Plan is to have the entire Park site zoned IP, consistent with adjacent zoning and recent requests for a zone map amendment for the EMCORE site.

The County portion of the SS&TP was the subject of two petitions for annexations and establishment of zoning; one for the 40 acre Albuquerque Public School tract (Manzano Mesa, Tract E-1) and one for the 40 acre and 35 acre tracts owned by the State Land Office. The EPC recommended approval of both annexations to the City Council (January - February, 2001) and it is anticipated that the annexation requests will be before the City Council early Summer, 2001 for final action. The annexation and establishment of zoning requests were evaluated for consistency with applicable City-adopted plans and policies including the Albuquerque/Bernalillo County Comprehensive Plan, Trails and Bikeways Facility Plan, Resolution 270-1980, Resolution 54-1990, and Resolution 91-1998 (R-70).

The immediate area around the SS&TP is emerging as a major activity center that will include many opportunities for employment, residential, commercial, and community uses. Substantial changed neighborhood conditions exist in this area and support the development of the SS&TP. Numerous zone map amendments, annexations, and site plan approvals have occurred in this area over the past 3-4 years. Manzano Mesa, a master plan area comprising commercial, office, park, and multi-family and single family residential uses, has been developing at a rapid pace with a variety of projects. Tract E-1, Manzano Mesa Master Plan, is zoned IP and is incorporated into the SS&TP.

SURROUNDING USES

Office/Industrial

EMCORE Corp, a high technology user located within the SS&TP and serving as its current anchor, recently received approval by the City Council for annexation and establishment of IP zoning on a 20 acre parcel to the south. The request also included approval of a master development plan. The plan is for a multi-million dollar expansion of its Albuquerque operation, which involves the manufacture of material for semiconductors. Adding to its existing 50,000 square foot building, Phase 1 will include a two-story, 36,000 square foot building. It is anticipated to create 200 new jobs. Phase 2 will include a 58,000 square foot building, anticipated to create another 400 new jobs. Existing businesses adjacent to the Park include Team Specialty Products (TSP), Analytical Solutions, Training Solutions, MicroDexterity Systems, Quetana, and Cooperative Monitoring Center.

Commercial Uses

Two major commercial developments have occurred in this area. CostCo Wholesale retail store (within Manzano Mesa), comprising 152,000 square feet, recently opened just north of Southern Boulevard and adjacent to Eubank Boulevard. In this case, the EPC approved a zone map amendment from SU-1 for Limited IP purposes to SU-1 for C-2 (Z-99-136). Home Depot is located north of CostCo and has been in operation for two years. It went through the City approval process in 1994 (Z-94-45).

Residential Uses

Residential development in Manzano Mesa has included Willow Wood and Mirabella, both single family residential communities to the east of the SS&TP. In addition, a zone map amendment is being requested by GSL Properties, Inc. on the property just to the north of the SS&TP. This request involves a rearrangement of land uses to allow office development adjacent to the SS&TP



Manzano Mesa Elementary

on the north and relocates the multi-family residential further to the north. The site plan proposes a total of 504 dwelling units.

Community Uses

Located north of the SS&TP, Manzano Mesa Community Park is zoned SU-1 for Community Park and Related Uses and has been developing for the last four years. Manzano Mesa Multi-Generational Center, to be located in the northeast corner of the Park, is currently planned to start construction in January, 2001. Albuquerque Public Schools is also planning a new elementary school north of the SS&TP, which is scheduled to be open in Fall, 2003.

PERMISSIVE USES

The land uses listed below are consistent with the City of Albuquerque Zoning Code. There are several permissive uses under the IP zone that will be prohibited at the SS&TP in order to create a world class, high technology, office park. The following list includes the permissive uses allowed at the SS&TP within the IP zone. Note that the Design Standards must still be met in order for development to occur, in addition to approval of any proposed uses by the Architectural Control Committee (see Section 5, page 39).

- Auditorium, place of assembly
- Bottling plant
- Club
- Cold storage plant
- Golf course or golf driving range
- Hospital for animals
- Ice plant, wholesale
- Institution, including library, museum, school, day care center, but not disciplinary institutions or hospitals for human beings
- Laboratory - experimental, testing, or medical, provided all activities are conducted within a completely enclosed building. Noxious fumes, odor, or dust shall not be emitted from the premises
- Machine shop
- Manufacturing, assembling, treating, repairing, or rebuilding articles except those conditional or otherwise limited in this zone and the M-1 zone or specifically listed as permissive or conditional in the M-2 zone, provided manufacturing is conducted within a completely enclosed building
- Metal stamps, tool and die making
- Office
- Office machine equipment sales and repairs
- One dwelling per premises for a watchman or caretaker on the same premises with commercial or industrial use
- Park and ride temporary facilities
- Parking lot related to another use permitted in this zone, as regulated in the O-1 zone, including off-site or shared parking facilities for Park tenants
- Point-of-Presence Utility Enclosure (POP)
- Printing, publishing, lithographing, blueprinting, or photostating
- Public utility use or structure and fire stations
- Retail sales of the following goods, plus incidental retailing of related goods and incidental service or repair:
  - Books, magazines, newspapers, except no adult book stores or adult uses
  - Cosmetics, notions, gifts
  - Drugs, medical supplies
  - Flowers and plants
  - Food and drink, for consumption on premises
- Sales and display rooms or buildings for wholesalers, distributors, warehouses, or manufacturers
- Services:
  - Banking, loaning money, drive-in facilities
  - Barber, beauty
  - Clinic
  - Day care center
  - Dry cleaning, laundry, clothes pressing

- Health gymnasium
- Hotel including incidental uses
- Photography, except not adult photo studio

- Sign, on-premises only (see Section 5: DESIGN STANDARDS for detail on signs)
- Sheet metal working
- Swimming pool
- Warehouse
- Wholesaling
- Wireless telecommunications facility (see Section 5: DESIGN STANDARDS for detail)

Prohibited Uses

- Railroad right-of-way and incidental facilities
- Automobile sales, rentals, service, repair, dismantling, and storage
- Pawn shops
- Car washing
- Off-site signage
- Community residential program or emergency shelter
- Motels

LANDFILL and SURFACE DUMPING

A portion of the SS&TP includes the old South Eubank Landfill, generally located along the Tijeras Arroyo east of Eubank. The landfill was operated by the City of Albuquerque from the mid-1950s to 1970s. Site reconnaissance has been conducted to determine the extent of the landfill, and it is anticipated that some level of landfill mitigation measures will be undertaken in the future in order to reclaim more land within the SS&TP for development purposes. The Master Development Plan recognizes that areas found to be most impacted by the landfill may be in later phases of development, and/or may be restricted from certain types of development in the future when more detailed survey work has been completed.

Based on conversations with the City Environmental Health staff, it is understood that the City is initiating a landfill survey and mitigation plan with an environmental engineering consultant during 2001. This project will look at all of the City's landfills and make recommendations for monitoring, remediation, and/or distances that future development should consider as buffer zones. After the consultant's work is finished, the City's Environmental Health Department shall prepare a Landfill Management Plan that will include plans for methane gas generation monitoring or mitigation. Monitoring well installation or other monitoring/mitigation measures shall be at the City's cost, if required. The City and landowners in the area are cooperating on sharing of information and will develop a Landfill Management Plan with concurrence from all parties.

In addition to the landfill, there has also been a long history of surface dumping at the Park site. Many of the properties within Phase 2 of the Master Development Plan have been disturbed and contain illegally dumped refuse such as old appliances and furniture. Clean-up efforts of the surface dumping areas are being planned in a cooperative effort between the State Environmental Department, Bernalillo County Sheriff's Department, City Environmental Health, and the landowners. The landowners have currently been working with the Bernalillo County Sheriff's Department to help prevent further trespassing and dumping on the site. All areas containing debris will be cleaned up prior to site development, and increased activity in the area will help to prevent future illegal dumping in the area.

BIOLOGICAL SURVEY

A 100% survey of approximately 300 acres encompassing all of the SS&TP and some adjacent lands was completed on October 3, 2000. The primary objective was to assess the area for State or Federal species of concern. No species of concern were observed at the site. A list of observed species is on file with the Project Team.

The Burrowing Owl (Athene cunicularia) was the most likely species of concern that could be found on these parcels. The Burrowing Owl is declining in most of the Western United States. However, Kirtland Air Force Base (KAFB) has a stable population. The Burrowing Owls on KAFB primarily use the burrows of Prairie Dogs (Cynomy gunnsioni) as their nests. There were no Burrowing Owls observed during the surveys. However, many of the Burrowing Owls may have left the area for migration south, and the ones that remain are very secretive during the fall season.

There were observations of prairie dogs and/or their burrows on most of the parcels within the SS&TP so

habitat for Burrowing Owls is present in the area. If Burrowing Owls are subsequently observed on a site slated for construction, a U.S. Fish and Wildlife Permit for relocation of the birds and/or eggs must be obtained. There are several local organizations that will relocate the birds and eggs to another safe location, and construction can proceed.

The land areas within the Park are dominated by desert grassland habitat with some dryland shrubs and a few scattered elms and poplar trees located in low-lying areas. All of the areas have been highly disturbed and there are no naturally vegetated areas that need to be preserved in this location.

CULTURAL RESOURCE EVALUATION

A Class II Cultural Resource Investigation was completed for the proposed SS&TP. A cultural resource records search of the New Mexico Cultural Resource Information System (NMCIS) files revealed that no archaeological or historical properties have been previously identified within or in direct proximity to the proposed project. A review of the New Mexico Register of Cultural Properties and the National Register of Historic Places indicates that no nominated properties occur within or in close proximity to the project. The closest nominated property listed on the New Mexico Register of Cultural Properties is the Luna Lodge (HPD No.1694) at 9019 Central Avenue NE, on the north side of Central Avenue between Wyoming Boulevard and Eubank Boulevard. It is clear that the proposed project will have no direct or indirect effect on any historic buildings or structures. There are no buildings or other structures within the project area.

The Class II (archaeological reconnaissance) involved a series of random transects across the various project land units. It is estimated that the reconnaissance resulted in the inspection of 10 to 20 percent of the land surface within the project area. Most areas with potential for intact cultural resources (i.e., the edge of Tijeras Arroyo, low elevations in the grassland plain, and undisturbed land areas) were inspected. The reconnaissance revealed that much of the project area has been subject to previous disturbance, and that large sections of the project in the south and southeastern sectors were formerly a landfill. The archaeological reconnaissance failed to identify any intact cultural features within the project area, with the exception of an abandoned two-track road that crosses the north sample unit. No cultural resources were identified in the Class II study within the project area. However, six roads were identified in the 1881 Plat map and 1936 aerial photography of the area. Three of the roads were destroyed by later land fill operations and the other three roads could still be present. These roads are of historic interest, but it is unlikely that they would require any treatment other than survey documentation.

The archaeological reconnaissance indicates that few or no important cultural resources are present in the project study area. A systematic Class III archaeological survey would be needed to verify this assumption, but it is clear that the cultural resource preservation and density within the project area is low to absent.

A Class II Cultural Resources Investigation for the proposed SS&TP, Bernalillo County, New Mexico report, Report No. 272, will be delivered to the State Historic Preservation Office (SHPO) when the Master Development Plan has been finalized. In summary, the preliminary cultural resource evaluation for the SS&TP indicates that the project should have little or no effect on the cultural-historical properties of the area. There are numerous cultural resources along the edges and floor of Tijeras Canyon, but cultural resource density in the open grassland marginal to the arroyo, such as the project area, are very infrequent.

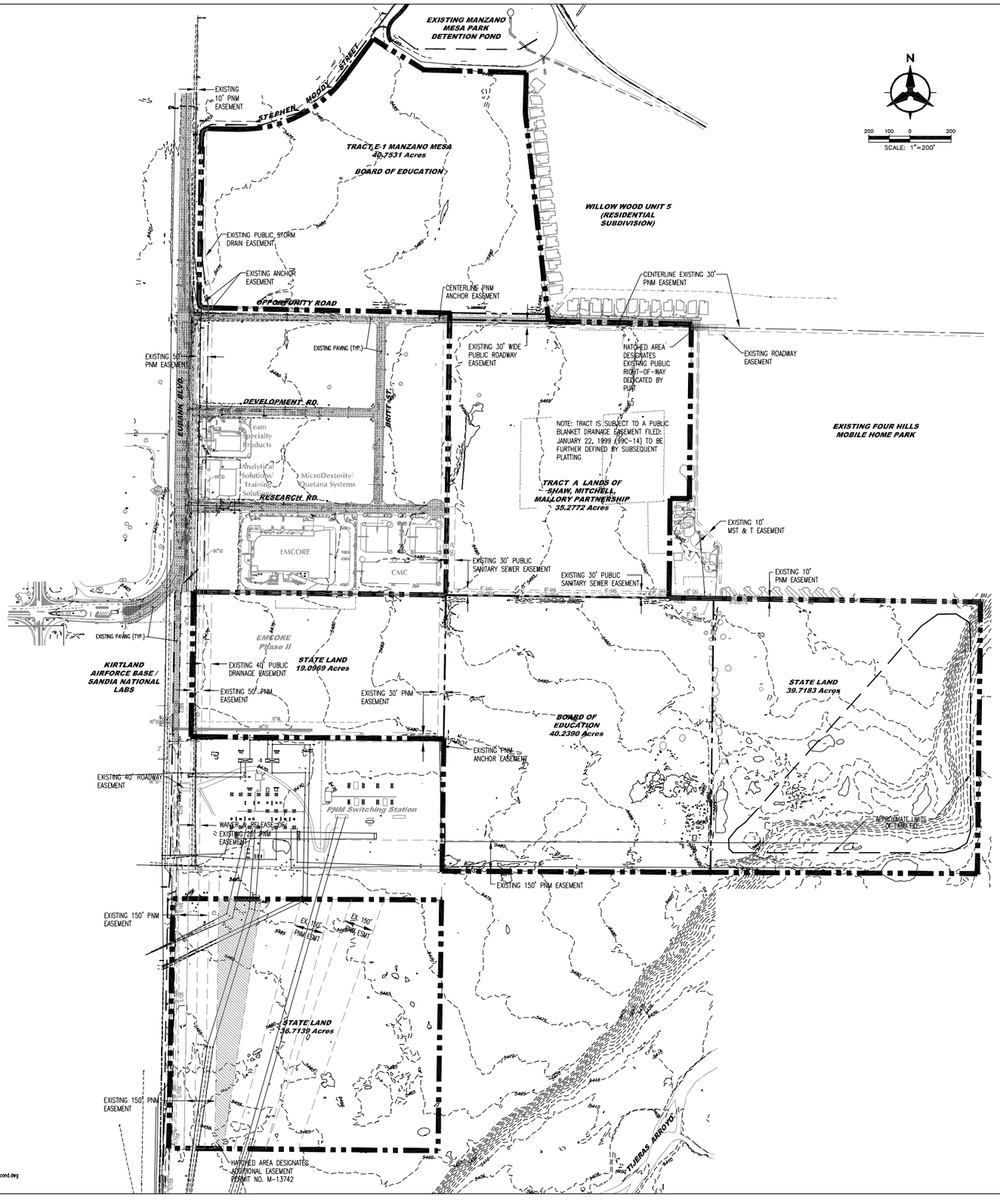
PHYSICAL CHARACTERISTICS

Soils

Based on information from the Soil Conservation Services' Soil Survey of Bernalillo County, the site consists of a number of soil types, primarily:

- "Tijeras gravelly fine sand loam" – This soil type is commonly referred to as decomposed granite. Runoff is moderate. Potential for water erosion is also moderate.

- "Embudo gravelly fine sand loam" — This soil type is also commonly referred to as decom-



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Existing Conditions Map

Sandia Science and Technology Park

Prepared For:

Science and Technology Park
Development Corporation
Albuquerque, New Mexico 87120

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ENGINEERS PLANNERS PHOTOGRAMMETRICS SURVEYORS SOFTWARE DEVELOPERS

posed granite. Runoff is medium. Potential for water erosion is moderate.

- "Madurez-Wink association" – This is a fine sandy loam soil with slow runoff and moderate to severe wind erosion potential.

These soils are common to the Northeast Heights area, and are suitable for development purposes.

Existing Vegetation and Ground Slopes

Existing vegetation on the site consists almost exclusively of a light covering of native grasses. Some small trees and higher-water use vegetation exists along the path of the runoff from the South Pointe Mobile Home Park. Much of the site has been scarred by vehicular use on existing dirt roads criss-crossing the site.

Typical ground slopes range between 1 and 3 percent from east to west. Extremely steep slopes of approximately 50 percent (2 feet horizontally for every 1 foot vertically) are found along the edge of the Tijeras Arroyo.

EXISTING DRAINAGE INFRASTRUCTURE

The most important drainage feature in the region is the existing and planned large diameter South Eubank Storm Drain (jointly funded by the City of Albuquerque and Albuquerque Public Schools). Phase 1 construction of this City storm drain project, which runs in Eubank and Stephen Moody from the Manzano Mesa Park Detention Pond to the Tijeras Arroyo, is complete. Phase 2 is currently under construction, and runs from the Manzano Mesa Park Detention Pond north up Elizabeth Street to Central Ave. The large majority of SS&TP drains to this existing storm drain.

EXISTING WATER and SANITARY SEWER INFRASTRUCTURE

The primary existing waterline in the vicinity of the SS&TP is a 14" waterline in Eubank. The 14" waterline is connected to a 30" transmission line near Southern Boulevard, and extends from that point south, approximately to Research Road. The EMCORE project is responsible for extending that line south to Innovation Parkway, and along Innovation Parkway to the east side of the EMCORE project. In addition, there are 8" or 10" distribution water lines in Gibson Avenue, Britt Street, Development Road, and Research Road. There is also an existing 10" waterline in the South Pointe Mobile Home Park (MHP) which terminates near its southwest corner.

The primary sanitary sewer line for the area is 21" diameter, and runs down Eubank along the entire frontage of the property, and drains to the Tijeras interceptor line. In addition, there is an existing sewer line in Opportunity Road that carries wastewater from a portion of the Willow Wood Subdivision. Another sewer line carries wastewater from the MHP west to the east end of Research Road, and down Research Road to Eubank. Development Road also contains a sanitary sewer line which conveys local wastewater from the adjacent lots to the 21" line in Eubank.

EXISTING TRANSPORTATION FACILITIES

Immediate Vicinity of SS&TP

Clearly, the primary roadway in the area is Eubank Boulevard. Eubank Boulevard is currently a four-lane undivided facility from Southern Boulevard south to the Base Entrance. From the Base entrance south approximately to Innovation Parkway, Eubank Boulevard is paved to a width of 24 feet, primarily to provide paved access to a secondary base entrance. With the exception of the east side of Eubank Boulevard between Opportunity Road and Research Road, there is no curb and gutter or sidewalk along Eubank. Opportunity Road is the only other paved facility within the SS&TP. Opportunity Road is approximately 24 feet in width with no curb and gutter or sidewalk.

Surrounding Region

Eubank Boulevard from Southern Boulevard north to the I-40 interchange is six lanes wide, the majority of the reach contains a median to allow for left turn lanes, as well as curb and gutter and sidewalk on both sides. Juan Tabo Boulevard is a four lane urban arterial from Southern Boulevard to Central Boulevard, and six lanes from Central Boulevard north to the I-40 interchange. Southern Boulevard provides a vital connection from Eubank Boulevard to Juan Tabo Boulevard. Currently, Southern Boulevard is only one-lane in each direction.

Existing Roadway Easements and Rights-of-Way

Existing right-of-way for Eubank Boulevard on the east side of the centerline is 78 feet. On the west side of the centerline there is 30 feet of right-of-way. The City has recently begun to design improvements to Eubank. The improvements will most likely consist of widening the road to provide three lanes each direction, with a median, bicycle lanes, and sidewalks or wide trails on each side of the road, with proposed right-of-way width expansion on the west side of Eubank Boulevard.

The portion of the anticipated Eubank extension, south of the EMCORE project, will be constructed and platted in Phase 2. It is understood that continued public Eubank right-of-way to the south of the SS&TP boundary is necessary, and as such is identified on the Illustrative Master Plan in order to ensure the provision of access to the surrounding area in the future.. However, the removal of Eubank from the "southeast loop road" concept of the Major Street Plan removes the impetus for an extension of Eubank beyond Progress Place as a "major street facility". Further, since the nature and timing of the development of the lands south of the SS&TP and KAFB/Sandia Labs is very speculative at this time, the right-of-way width for the Eubank reach south of Progress Place and potentially, south of the KAFB/Sandia Labs entry, should be determined at the time of platting in this Phase 2 area. The Master Development Plan proposes that physical construction of Eubank Boulevard end at Progress Place, until these areas become better defined.

Steven Moody Road is a 68 foot right-of-way, currently with no improvements. The existing right-of-way is sufficient for proposed improvements. However, the alignment of the existing right-of-way will have to be adjusted to allow for the proposed intersection of Stephen Moody and Innovation Parkway. A small amount of additional right-of-way may need to be dedicated to accommodate the new intersection.

Opportunity Road is currently a 60 foot right-of-way. The existing right-of-way is sufficient for anticipated improvements.



3. MASTER PLAN CONCEPT

INTRODUCTION

The SS&TP provides an opportunity seldom realized in this area to create a unique, high technology, research park through cooperation between landowners and other parties. The Master Plan Concept is the result of several months of meetings and brainstorming sessions between these various entities, as well as other business leaders in the community, architectural massing studies, fly-throughs, etc. Meetings to discuss various concepts were also held with numerous members of City, County, and State government. As such, the Master Plan Concept is presented here with great enthusiasm and momentum.



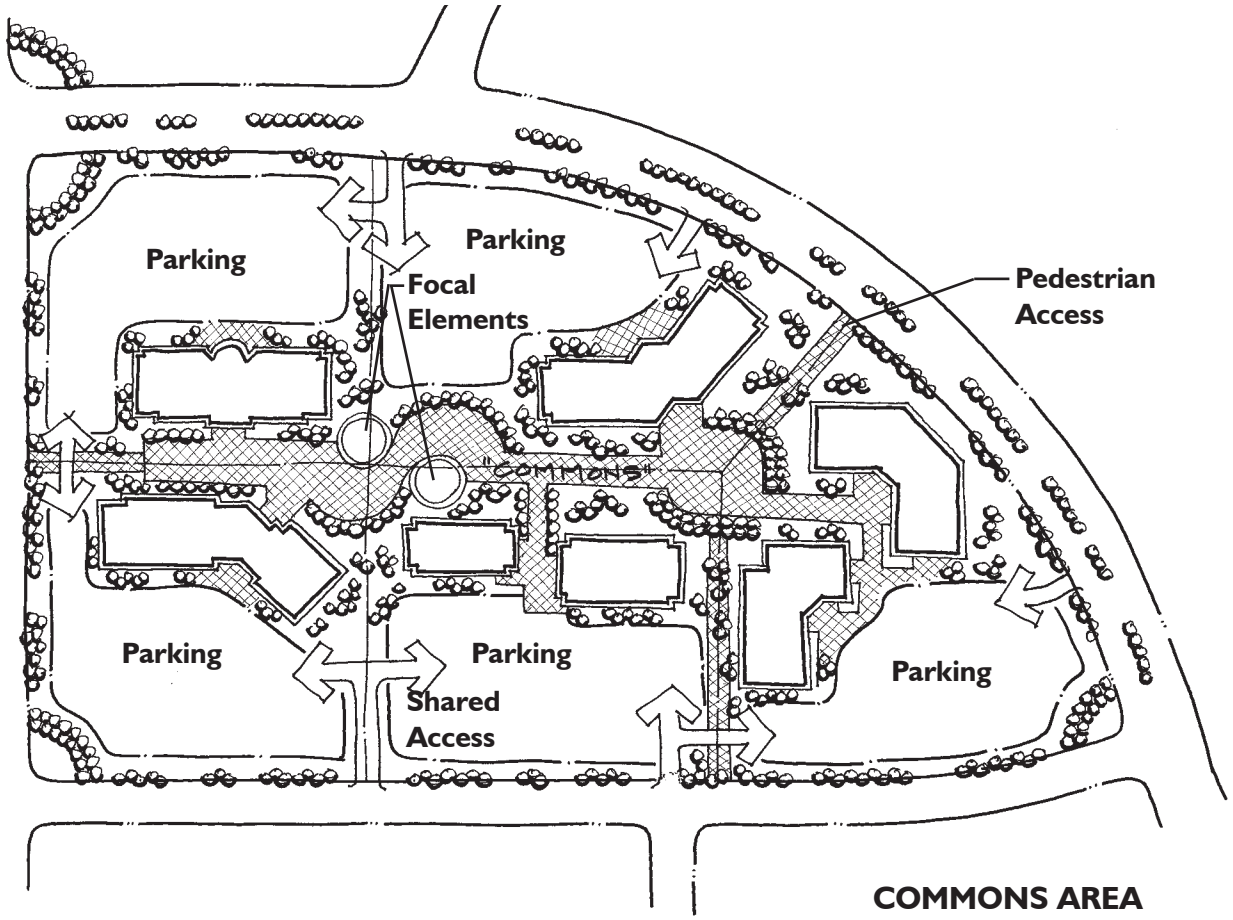
Design Character Sketch

The Park site is comprised of 13 tracts (11 tracts to be platted in Phase 1) and is envisioned to be divided into numerous smaller lots (see Illustrative Master Plan on page 21). At this time, the lots are conceptual and remain flexible in size in order to respond to potential user's needs. Once the Master Development Plan is approved by the EPC and the DRB, individual site plans will not require review or approval by either body unless major amendments to the Master Development Plan are necessary or unless a platting or vacation action is required. In the case of a plat or vacation action, the review will be by the DRB only. In the case of a major amendment, which will be determined by the Planning Director, the proposal will require review and approval by the EPC, and notification to the adjacent neighborhoods including Willow Wood Homeowner's Association and the South Pointe and Four Hills Mobile Home Parks. In addition, the EPC may review the Master Development Plan to determine consistency in the application of the master plan principles.

DESIGN GOALS

Key design goals were created by the consultant team in order to express the ultimate vision for development of the SS&TP. They are as follows:

- Create a premier high technology park that will benefit the greater community of New Mexico
- Create opportunities for synergy and interaction between tenants
- Create a campus environment that supports pedestrian activities and alternative modes of transportation
- Design a network of trails, buffers, and sidewalks which emphasizes pedestrian and bicycle access and circulation, removed from vehicular circulation
- Provide a symbolic and physical link to Sandia National Laboratories



COMMONS AREA

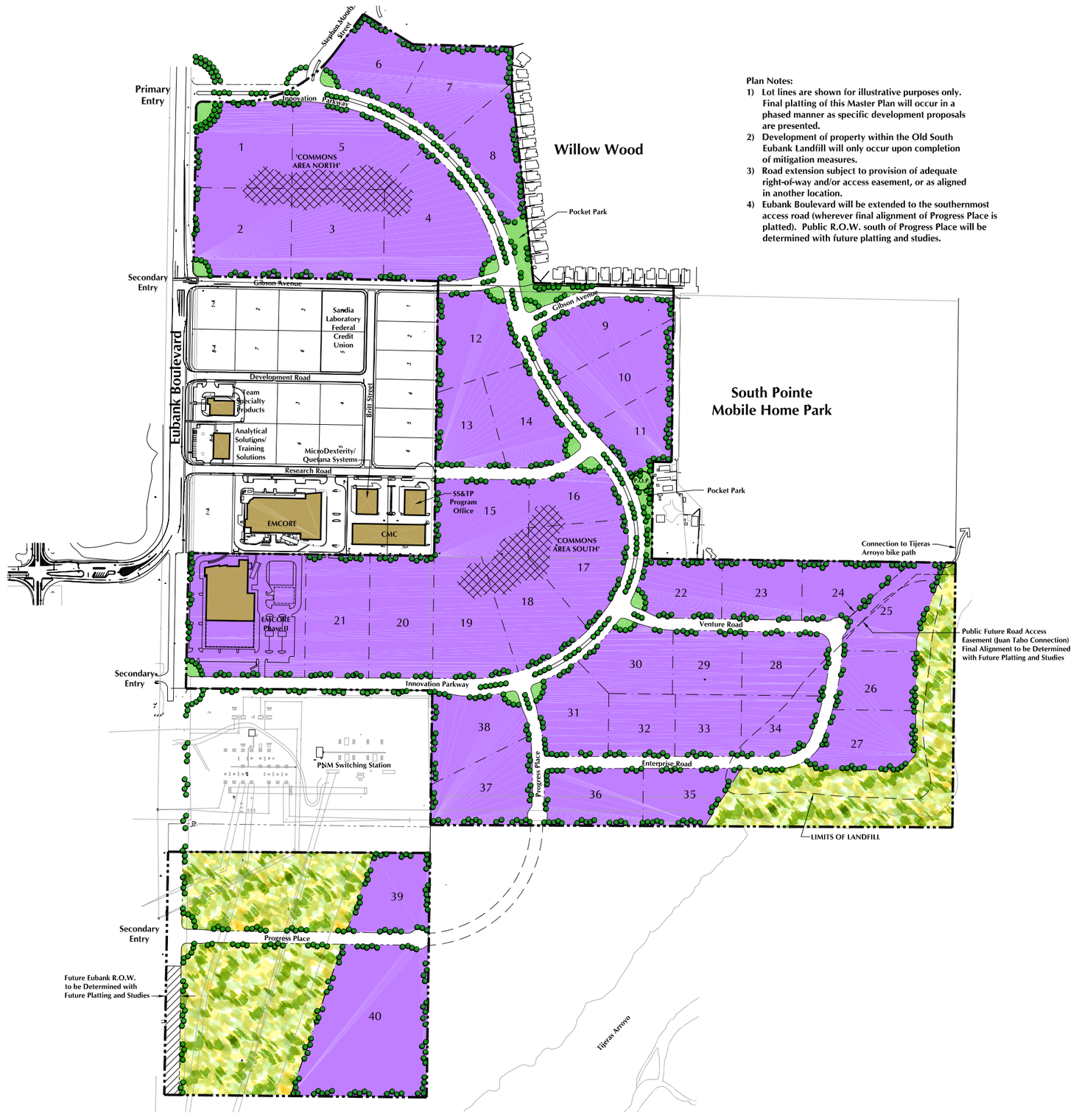
- Highlight views to the Sandia and Manzano Mountains
- Explore new building technologies and solutions
- Visually buffer all parking areas with landscaping and berming and allow for off-site, shared parking facilities
- Reclaim vacant, underutilized land and enhance the natural environment

COMMONS PRINCIPLES

An integral part of the SS&TP design concept is the creation of a campus-style research and development park. In order to achieve this design concept, the Master Development Plan includes commons areas (see the Illustrative Master Plan on page 21 for the location of these Commons Areas and Section 5: DESIGN STANDARDS for more detail on required elements).

These are areas where buildings should be grouped together and faced inward. Pedestrian accessibility will be the premium design goal for these areas. The following concepts form the underlying principles for the two Commons Areas:

- Pedestrian-oriented plazas linking all buildings
- Reciprocal cross-access easements between lots allowing for vehicular circulation between lots
- Provision of focal elements, such as artwork, water features, etc., to define specific areas
- Variety of seating opportunities, both formal and informal
- Pedestrian access to the perimeter of the site for connection to park-wide trail network



Plan Notes:

1) Lot lines are shown for illustrative purposes only. Final platting of this Master Plan will occur in a phased manner as specific development proposals are presented.
2) Development of property within the Old South Eubank Landfill will only occur upon completion of mitigation measures.
3) Road extension subject to provision of adequate right-of-way and/or access easement, or as aligned in another location.
4) Eubank Boulevard will be extended to the southernmost access road (wherever final alignment of Progress Place is platted). Public R.O.W. south of Progress Place will be determined with future platting and studies.

Illustrative Master Plan

Sandia Science and Technology Park

Prepared For:
Science and Technology Park Development Corporation
Albuquerque, New Mexico 87120

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SMPC ARCHITECTS

Scale 1"=200'

100 0 200 400 North

July, 2001

- Significant landscaping to provide shade, create visual interest, frame and define areas, etc.
- Option to provide retail/restaurant component adjacent to the "Commons"
- Large gathering areas for company functions, parkwide events, etc.
- Opportunities to create synergy between companies

ARCHITECTURAL CHARACTER

All landscape and building design should be complementary to each other. They should work in concert to project a "building in a park" image. This does not imply the use of water thirsty plant materials. Conversely, the Master Development Plan encourages the use of xeriscape landscape concepts contrasted to a limited quantity of lush landscaping. The contrast of these two extremes creates an exciting and dynamic relationship. This dynamic contrast has proven to be highly successful in desert environments around the country. This approach is not only attractive, but it is also environmentally responsible.

The Master Plan Concept is designed to encourage pedestrian activities such as outdoor gathering spaces and reading areas. It is a goal of the Master Development Plan to create a physical environment that stimulates creativity. One of the proven methods is to encourage dialogue and interaction between workers. This type of cross-pollination of ideas should be developed on individual company sites. Also, individual companies are strongly encouraged to interact in a similar manner with neighboring businesses.

The SS&TP encourages new building designs to "be a good neighbor" and establish a visual and symbolic dialogue with neighboring structures. This can be accomplished through the use of compatible forms, massing and/or colors. Shared landscaping can also be an important "unifier" by creating visual "linkages" between buildings.

Every building should be unique and express the special character of its function and the nature of the business and aspirations for the future. However, while achieving uniqueness, it should also respect and harmonize with surrounding architecture. It should also use materials, details, forms or colors to pay homage to this very special place, New Mexico.

The success of the architecture within the Park will rely on the dynamic contrast and balance between individual building expression and the ability of new structures to interact visually with neighboring buildings to create a strong sense of unity and community.

DESIGN CHARACTER CONCEPTS

The SS&TP provides a unique opportunity for new development in Albuquerque. Due to the special nature of the SS&TP, much attention will be given to its progress by the greater community. All building design, regardless of function or budget, should be inspired and become a visible symbol of our high goals and aspirations. Each building design should express the unique nature of its function. Included in this section are sketches which illustrate a high technology design character.

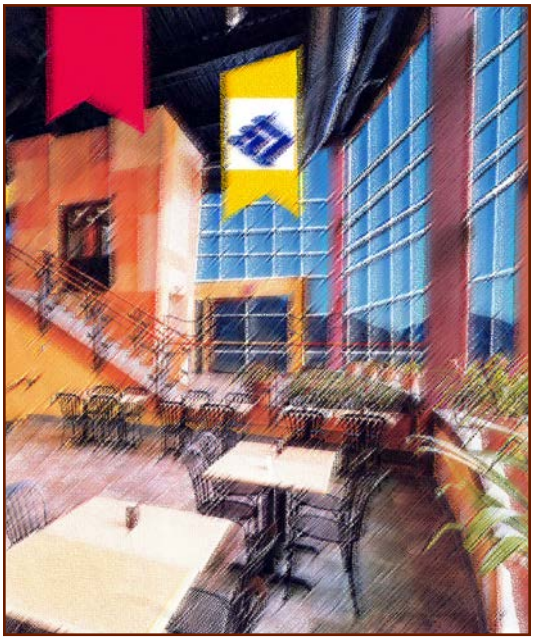
The ancient history of New Mexico is rich and should influence the building design. We are in a very special



Design Character Sketch









DESIGN CHARACTER SKETCHES

position. Albuquerque stands with one foot firmly planted in a distant past and the other foot stretched out to an exciting future filled with discovery and invention. The blending of ancient and futuristic design vocabularies adds a unique and dynamic quality that will set the SS&TP apart from other science and technology parks.

TRAILS

The City's Trails & Bikeways Facility Plan identifies a planned primary trail along Southern Avenue and proposes a secondary trail located along Eubank Boulevard from the KAFB north gate. The Pedestrian Facilities Plan (see page 27) shows a connection through the SS&TP between Eubank Boulevard and an existing mountain bike trail along the Tijeras Arroyo and south of the South Pointe Mobile Home Park to the east. The existing bike trail connects to Juan Tabo Boulevard. In addition, a 9-foot trail is planned along Eubank Boulevard as part of the EMCORE expansion project.

A trail connection will be created between the existing trail through the SS&TP to Eubank Boulevard. The trails are intended to serve regional bicycle commuters and local residents. They can either be located within rights-of-way for roads or in separate trail easements. The trail will most likely need to line up with the road and access easement along the southern boundary of the EMCORE Phase 2 site. The trails will be designed to be 10 feet in width, and will comply with the AASHTO 1999 Guide for the Development of Bicycle Facilities (see Section 5: DESIGN STANDARDS for more detail on trail design issues). All trail design issues will be coordinated with the City's designated Trails Planner.

CIRCULATION

Vehicular, pedestrian, and bicycle circulation within the SS&TP and surrounding areas is a significant design and planning issue. The intent of the Master Development Plan is for the SS&TP to be pedestrian/bicycle-friendly and to promote a 'campus-like' environment (see Pedestrian Facilities Plan on page 27).

Pedestrian and bicycle circulation within the SS&TP will be accomplished through a system of trails and sidewalks. Six foot wide sidewalks are being proposed on the opposite side of the street from the 10 foot trails. Pedestrian links shall be included between all building entries and street side trails or sidewalks. In addition, connections shall be made to existing offsite facilities along Eubank Boulevard and the Tijeras Arroyo, and up through Manzano Mesa Park and the adjacent neighborhood to facilitate access to the SS&TP and Sandia National Labs.

Primary Access to SS&TP - Eubank Boulevard, Southern Boulevard to KAFB Entry

The importance of Eubank Boulevard to the employers and employees of this area can not be understated. Currently, and for the foreseeable future, Eubank is the only access of significance to SS&TP. At the time of this report, Eubank Boulevard is under contract negotiations between the City and a consultant to begin design of a new six-lane facility with raised median. Construction completion of this facility is anticipated for Fall, 2002. The Master Development Plan anticipates the terminus of Eubank to be linked with the southernmost entry to the Park at Progress Place.

The portion of the anticipated Eubank extension, south of the EMCORE project, will be constructed and platted in Phase 2. It is understood that continued public Eubank right-of-way to the south of the SS&TP boundary is necessary, and as such is identified on the Illustrative Master Plan in order to ensure the provision of access to the surrounding area in the future.. However, the removal of Eubank from the "southeast loop road" concept of the Major Street Plan removes the impetus for an extension of Eubank beyond Progress Place as a "major street facility". Further, since the nature and timing of the development of the lands south of the SS&TP and KAFB/Sandia Labs is very speculative at this time, the right-of-way width for the Eubank reach south of Progress Place and potentially, south of the KAFB/Sandia Labs entry, should be determined at the time of platting in this Phase 2 area. The Master Development Plan proposes that physical construction of Eubank Boulevard end at Progress Place until these areas become better defined.

Gibson Corridor

The much anticipated Gibson Corridor - the east/west connection of Interstate 25 and Interstate 40, largely along the existing Gibson and Southern road

alignments and extending to Juan Tabo at Southern Boulevard - is still many years from completion. An Environmental Assessment has been completed, but is still under review. Completion of this major roadway will provide significant traffic relief for area motorists, including those from the SS&TP.

Primary Access within SS&TP- Innovation Parkway

Innovation Parkway is the central spine of the whole SS&TP. It is the primary access point into the Park from Eubank Boulevard. Innovation Parkway will primarily be a two-lane facility with a raised median between lanes. The lanes will be 18 feet wide between curbs. In order to assist the Fire Department's approval of this reduced lane width (typically, a single lane is 20 feet in width), the median will utilize roll curb which permits an emergency response vehicle to pass over the curb, when necessary. A short length of Innovation Parkway, estimated to be from Eubank to just beyond Stephen Moody, will be a four-lane facility in order to transition the double left turn lanes (southbound Eubank to eastbound Innovation Parkway) at the Eubank/Innovation Parkway intersection to the two-lane roadway proposed southeast of Stephen Moody. Parking along the driving lanes will be prohibited in order to assure this roadway's main purpose of collecting and distributing traffic to the internal properties of the SS&TP.

The northern terminus of Innovation Parkway will be located at the existing intersection of Stephen Moody and Eubank. However, in order to create a main entry unique to the SS&TP and to develop a geometrically satisfactory intersection with Stephen Moody, the existing alignment of Stephen Moody will be revised to create a tee intersection with Innovation Parkway. The proposed tee intersection has the added benefit of providing a continuous central spine or loop roadway. Replatting of adjacent APS lands will be necessary to accomplish this goal. Platting of this intersection will occur when Innovation Parkway is platted. The existing signal at the intersection of Opportunity and Eubank would then be relocated to the new intersection of Innovation Parkway and Eubank Boulevard.

The intersection of Eubank/Innovation Parkway will be a significant facility due to the large volumes of traffic on both roadways, likely to require three southbound lanes, two left turning lanes (southbound to eastbound), and three northbound lanes. Potentially, further study may show the need for an acceleration lane for left turning Innovation Parkway traffic at Eubank (westbound to northbound). Additional right-of-way may be required in the vicinity of this intersection to permit the needed work.

The southern terminus of Innovation Parkway will occur at Eubank, near the northwest corner of the PNM Switching Station. This intersection may require traffic signal control with continued development of the area, but this may not occur for some years. The need for signalization would be established by an appropriate engineering study.

The portion of Innovation Parkway along the southern frontage of the EMCORE project will be constructed in conjunction with the EMCORE project in the near future.

Opportunity Road – A Neighborhood Concern

Currently, a significant concern with traffic circulation in the region is Sandia National Labs and KAFB traffic using Opportunity Road to cut-through the adjacent Willow Wood Subdivision to get to and from Juan Tabo quickly. By offsetting the intersection of Opportunity with Innovation Parkway, an opportunity is seized to discourage cut-through traffic via Opportunity.

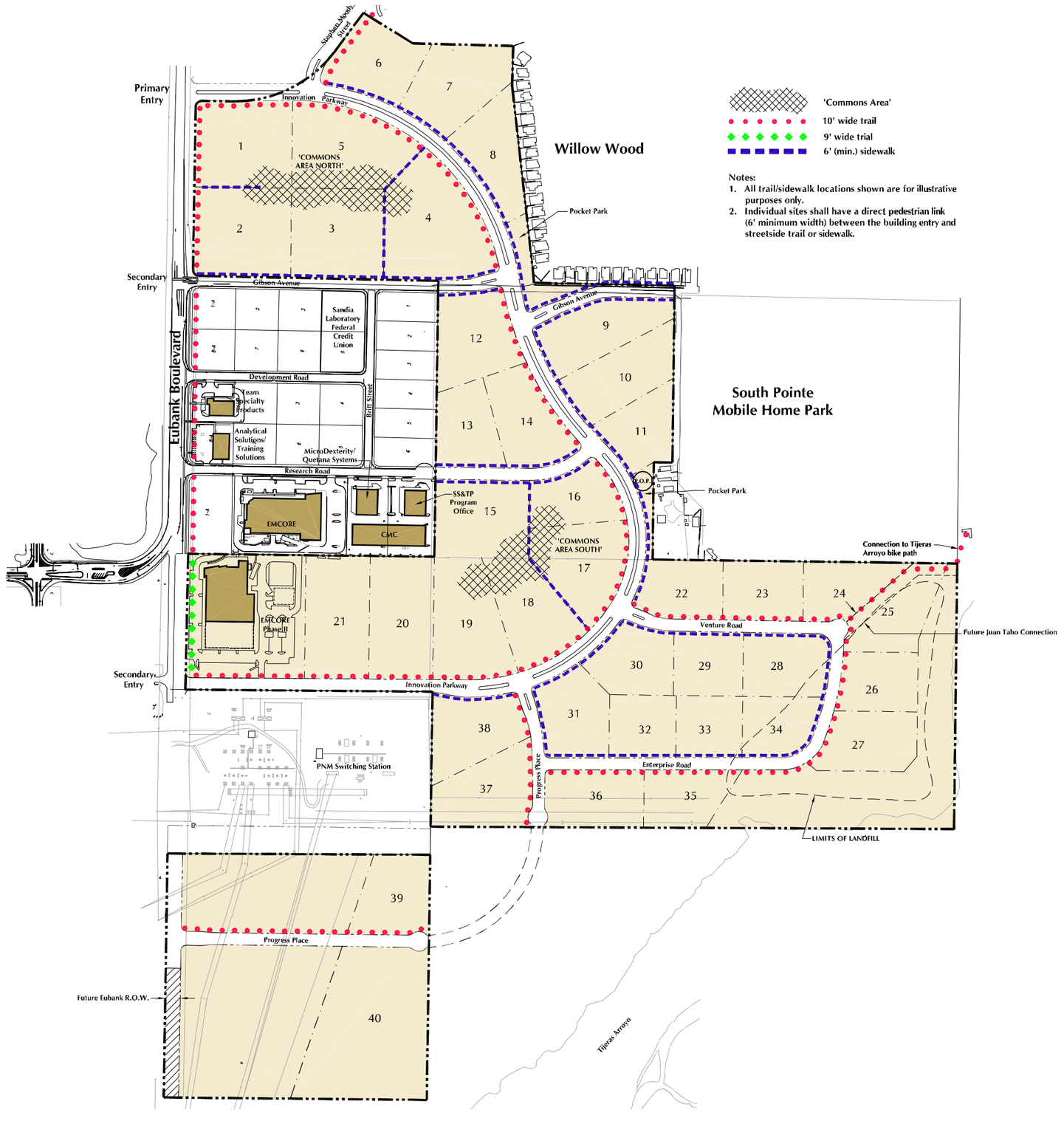
Progress Place

Progress Place is an interior Phase 2 circulation road, which in the future may connect the main portion of the Park with the State Land tract south of the PNM Switching Station (containing Lots 39 and 40). Currently, the lands required to make the connection are not part of the Master Development Plan area. Cul-de-Sacs or other means are proposed for the termini of Progress Place, until such time as negotiations with this adjacent landowner are complete.

Other SS&TP Roadways

All of the roads within the SS&TP other than Innovation Parkway are proposed to have the following characteristics:

- 60 foot right-of-way
- 40 foot face-to-face streets with curb and gutter on both sides



Pedestrian Facilities Plan

Sandia Science and Technology Park

Prepared For:
Science and Technology Park
Development Corporation
Albuquerque, New Mexico 87120

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SMPC ARCHITECTS

Scale 1" = 200'

100 0 200 400 North

July, 2001

- A 6 foot sidewalk on one side and a 10 foot trail on the other side.
- Landscaping on both sides of street

There is a sufficient number of grid-like streets in SS&TP, accessing Eubank Boulevard and each other, to provide a reasonable distribution of traffic to the roads in SS&TP (see proposed road cross-sections in Section 4: LANDSCAPE MASTER PLAN, page 33).

Potential Relocation of Eubank Gate

It is anticipated that the existing Eubank Gate will be relocated to a south location (near Progress Place) in the next 10 years, hopefully to match up well with the intersection of Progress Place. This will significantly increase traffic on the lower reach of Eubank Boulevard.

PARKING

The Master Development Plan provides parking both on-site for the individual parcels and off-site, shared parking in some of the areas that may be impacted by the landfill or utility easements. Areas for bicycle parking will be distributed throughout the SS&TP at each building development.

ALTERNATIVE TRANSPORTATION

Enhanced transit stops will be located adjacent to pedestrian access routes to provide shelter, seating, and lighting for transit users. Bus bay pull-outs will be located along Innovation Parkway.

Bicycle lockers, showers, and changing rooms for employees of the SS&TP shall be provided to promote alternative transportation use. Bicycle racks will be conveniently located near building entrances, but not within pedestrian parkways or landscape areas (see Section 5: DESIGN STANDARDS for more detail on bicycle and transit facilities).

TRANSPORTATION DEMAND MANAGEMENT PROGRAM

Transportation Demand Management Programs (TDMP) are designed to increase transit use through incentive programs, organized employee programs, and more. Clearly, the concepts behind the TDMP are desirable and beneficial. However, they are especially suited to a single, large, motivated employer, where control of the program can be placed in a single staff manager for the entire employee base.

In contrast, the Master Development Plan anticipates many individual employers locating at the SS&TP over the course of many years and with highly varied workforce counts (see Section 6: INFRASTRUCTURE AND ENGINEERING for discussion on transit facilities). Due to the difficulty this presents in organizing and maintaining a complicated TDMP, a commitment has been made at this time to participate in a future TDMP that is established and organized by an outside interested party. The Master Development Plan further encourages the City to review options and to consider taking the initiative for a TDMP at the Park and other adjacent employment centers, similar to current City programs in the Downtown and Uptown areas.



4. LANDSCAPE MASTER PLAN

INTRODUCTION

The key to creating a high quality environment for the Sandia Science and Technology Park will be the development of an overall landscape master plan. The environmental value, as well as aesthetic value of landscaping in an arid region can not be overestimated.

Recognizing the increased public awareness of water conservation, these Guidelines promote the use of native and naturalized plant species that perform well in an arid environment (see Appendix C: GENERAL PLANT PALETTE). Major roadways shall be predominantly landscaped with native and adapted species and will serve as a demonstration project for the rest of the development.

DESIGN GOALS

Specific plant materials will be used for a variety of purposes, including the following:

- Buffer/screen - plant materials will be used to buffer certain facilities from noise and winds, and screen views to/from objectionable elements;
- Shade/climate control - shade trees will be used extensively throughout parking areas and pedestrian activity areas to provide a welcome retreat during the hot summer months;
- Define uses or activities - trees and shrubs will be used to define outdoor pedestrian activity areas;
- Highlight specific features - trees and shrubs will be used to frame elements, provide foreground and background interest, etc.;
- Sensory stimulation - fragrant and flowering trees and shrubs are used to stimulate the senses of sight, smell, and touch; and
- Education - areas of the Park will be planted to serve as an educational tool to educate people about the native landscape.

STREETSCAPE

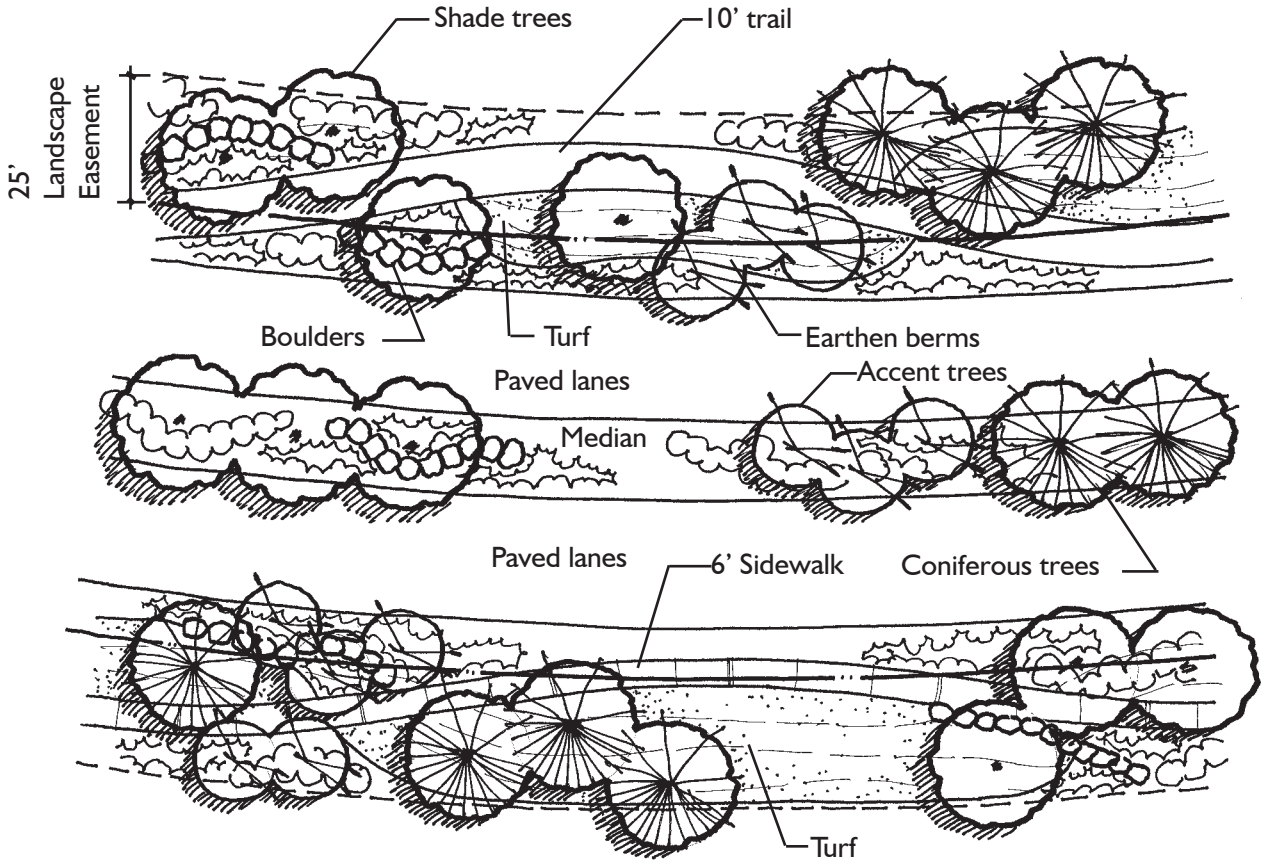
The use of large deciduous trees will form the primary theme for the streetscape at the SS&TP. These trees will frame the street section and create a sense of place within the Park. The streetscape will be punctuated with massings of flowering trees and shrubs which will add a unique textural quality to the landscape. Within the significant parking and building setbacks, contouring of the groundplain will create a naturalistic progression of earthen berming and swales. This will create opportunities to screen parking areas and harvest water. The formal use of native turf grasses will highlight entry zones and provide view corridors into sites at specific locations. By providing turf on bermed areas, the turf will be elevated to take full advantage of its visual quality.

NATURALISTIC AREAS

Several areas within the Park present opportunities to create naturalistic landscapes with native vegetation, and provide wildlife habitat. Scarred areas adjacent to the Tijeras Arroyo and in the significant utility corridors at the south end of the site will be re-established with native grasses, shrubs and trees. The natural areas create an opportunity to provide passive park-like development in the form of rustic trails and seating areas.

PARK AMENITIES

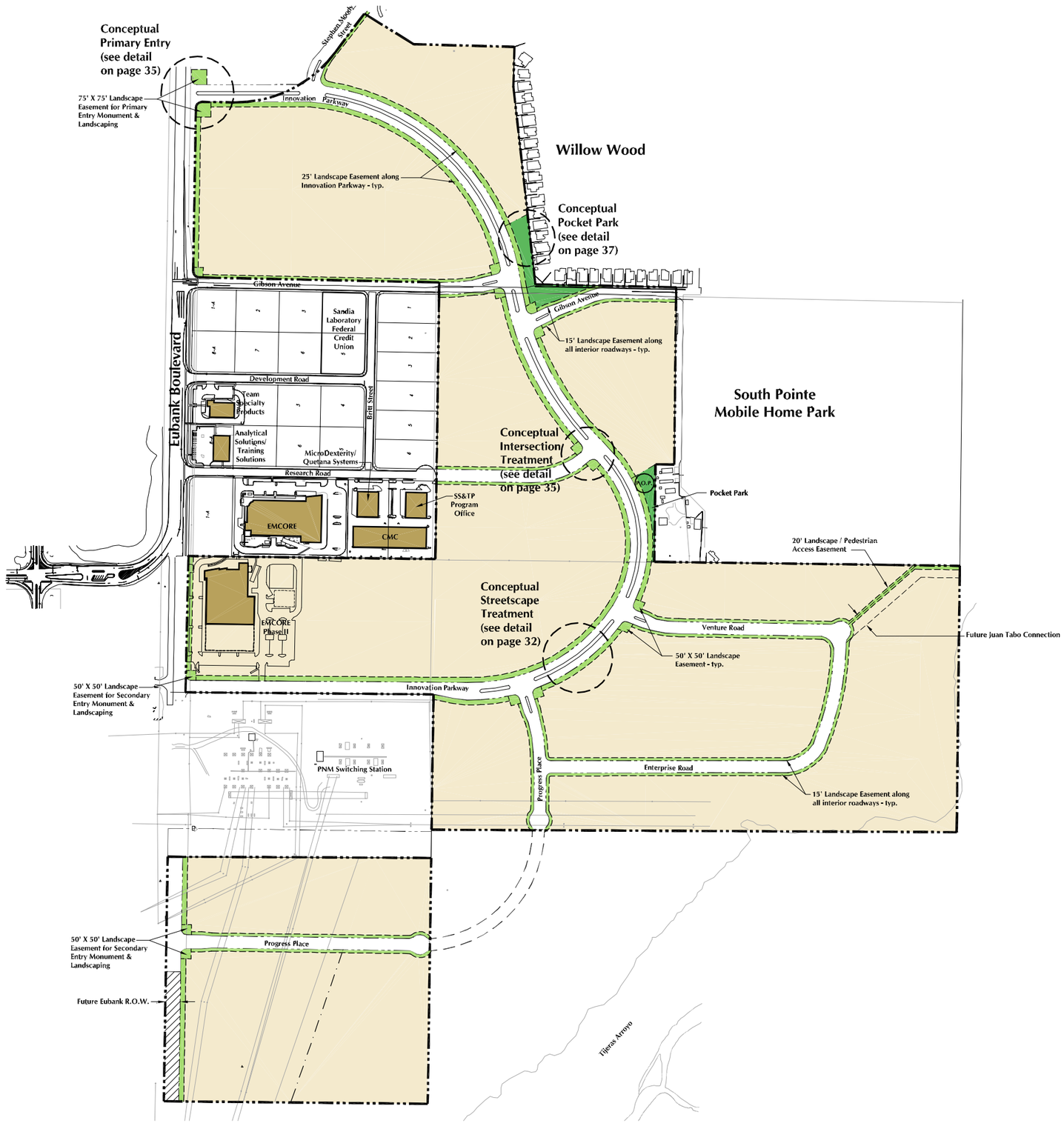
Amenities that enhance the pedestrian experience will be provided within common areas throughout the Park. Seating opportunities will be provided along pedestrian trails and sidewalks in the form of fixed



CONCEPTUAL STREETSCAPE TREATMENT

benches, informal turfed berms, and seatwalls. Picnic tables, trash receptacles and bicycle racks will be provided in pedestrian gathering areas within the street corridor and at the pocket parks. A trail network (see Pedestrian Facilities Plan) will provide opportunities for walking, jogging, and bicycling throughout the Park. Bus stops/shelters will be provided along Innovation Parkway, and have direct connection to the street-side sidewalks. Bus routes and shelter locations will be coordinated with the City of Albuquerque Transit Department.

The close proximity of the development to the Manzano Mesa Community Park provides additional recreational opportunities. Manzano Mesa Park, upon complete build-out, will have baseball/softball fields, soccer fields, tennis courts, basketball courts, sand volleyball courts, and children's play areas. The Manzano Mesa Multi-Generational Center is slated for construction during 2001, and will provide functions and activities for the surrounding community. A trail connection along Stephen Moody will provide access to Manzano Mesa Park, and to the future bike trail along the south boundary. This trail was designed to accommodate bicycle commuters from north/east developments who need access to Sandia National Labs.



Landscape Master Plan

Sandia Science and Technology Park

Prepared For:

Science and Technology Park
Development Corporation
Albuquerque, New Mexico 87120

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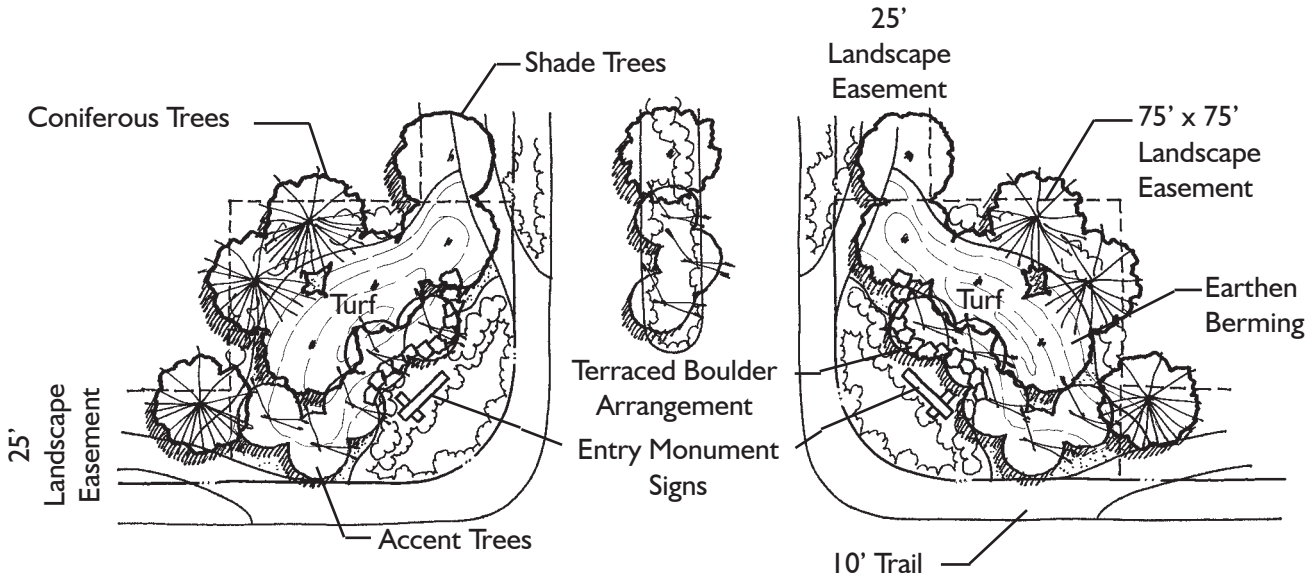
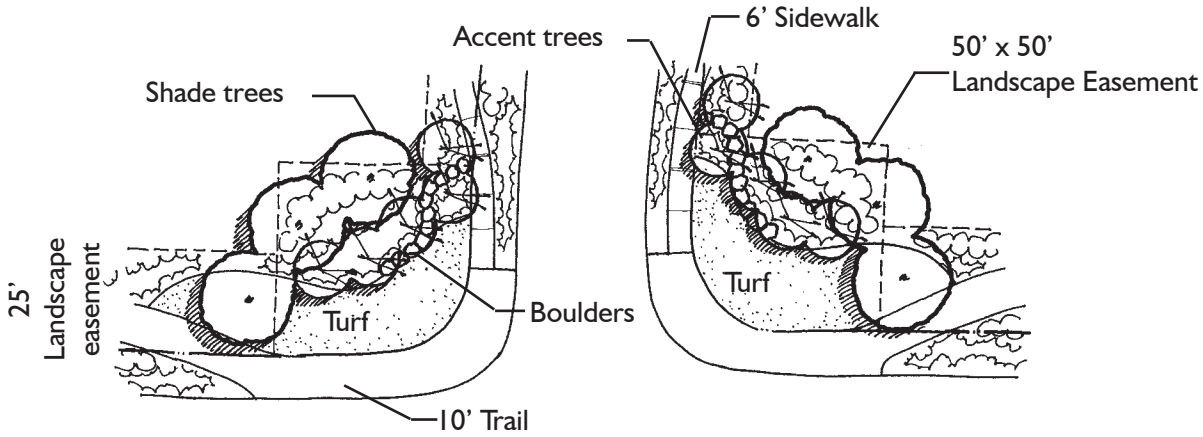


CONCEPTUAL PRIMARY ENTRY



CONCEPTUAL INTERSECTION TREATMENT

POCKET PARKS

Two small "pocket" parks have been established within the SS&TP (see page 37, Conceptual Pocket Parks North and South). These pocket parks will be designed to provide locations away from the office for employees to relax, meditate, or recreate in a passive setting. Seating areas will be provided for individual use or for larger groups to allow for interaction. Picnic tables, drinking fountains and litter receptacles will be provided for those who wish to enjoy their lunches outdoors. The parks will include open turf areas for recreation, which will be balanced with shade trees and shrubs for passive activities.

The northern pocket park (1.45 acres) is located at the northwest corner of Innovation Parkway and Gibson Avenue, wrapping around the corner of the Willow Wood subdivision. The densely landscaped park will provide a buffer between Willow Wood and the SS&TP.

The southern pocket park (.72 acres) is located along Innovation Parkway, adjacent to the South Pointe Mobile Home Park. Included in this park will be the Point of Presence (POP) utility enclosure, which will be the primary access point for originating telecommunications service on to the fiber backbone. The enclosure will be 30' x 40' with a metal trellis attached on two sides to allow for climbing plant materials. The enclosure will be screened by a dense planting of trees and shrubs. In order to further minimize the impact of this enclosure on the park, turf block will be used for the vehicle parking area.

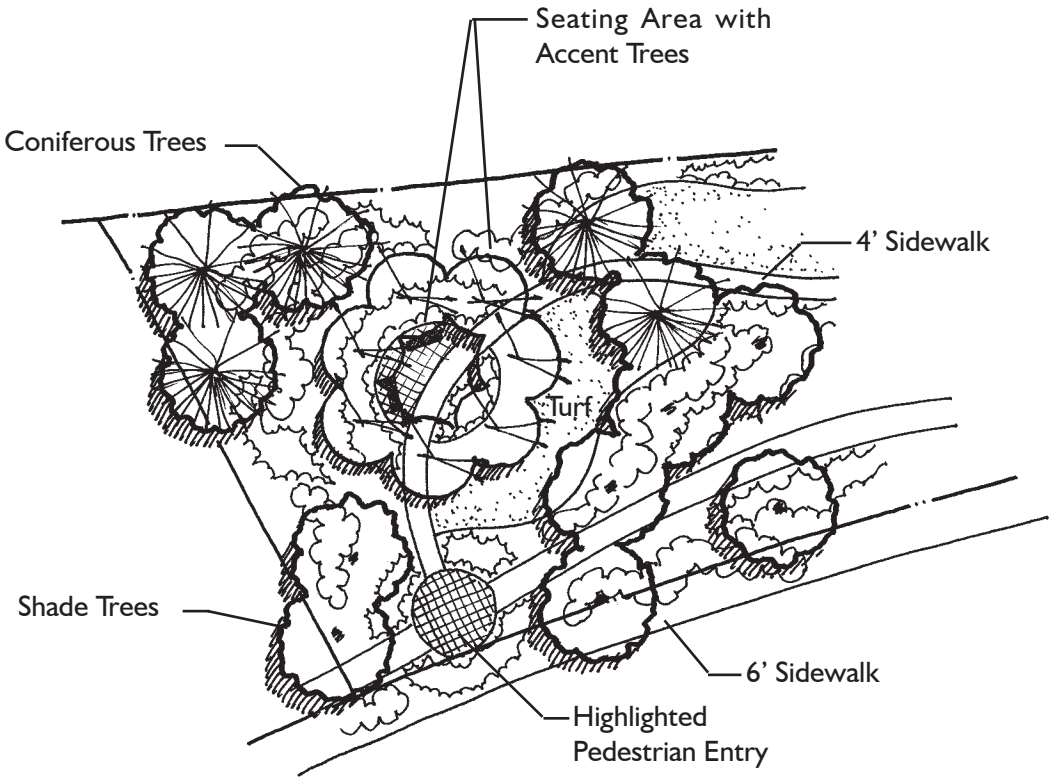
IRRIGATION SYSTEM

The irrigation system serving the streetscape and other common areas will be a fully automated system with a centralized computer control system. Satellite controllers will be placed at strategic areas and linked back to the central system. Irrigation components will be selected for use with non-potable water sources to allow for future connection to potential treated water systems. Backflow prevention will be provided per local codes to protect the potable water system from the irrigation system.

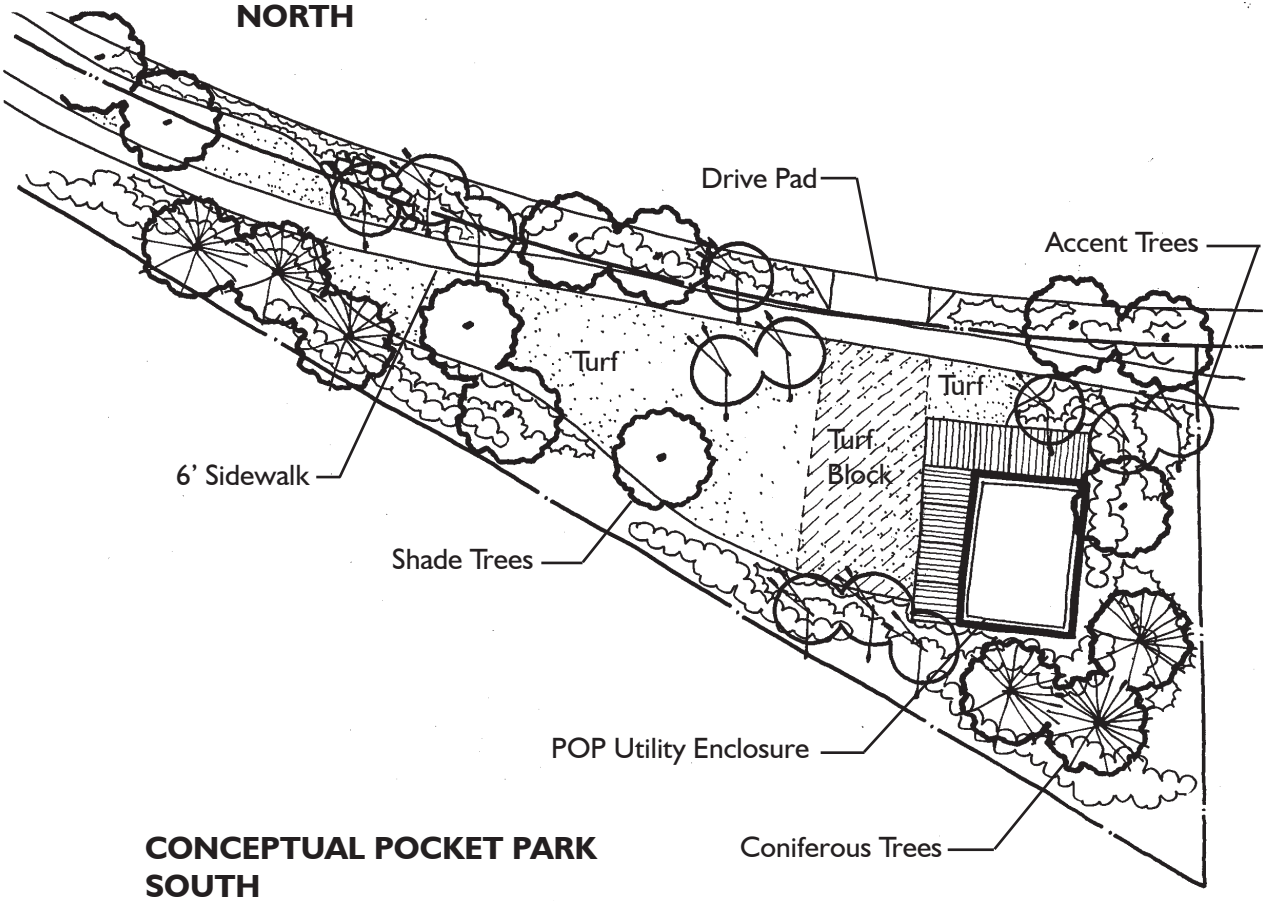
Turf areas will be irrigated with pop-up rotary sprinklers with high efficiency nozzles. Trees, shrubs and groundcovers will be irrigated with a combination of hard pipe and poly pipe feeding single and multi-outlet drip emitters. The entire irrigation system will be state-of-the-art to maximize water efficiency.

LANDSCAPE MAINTENANCE

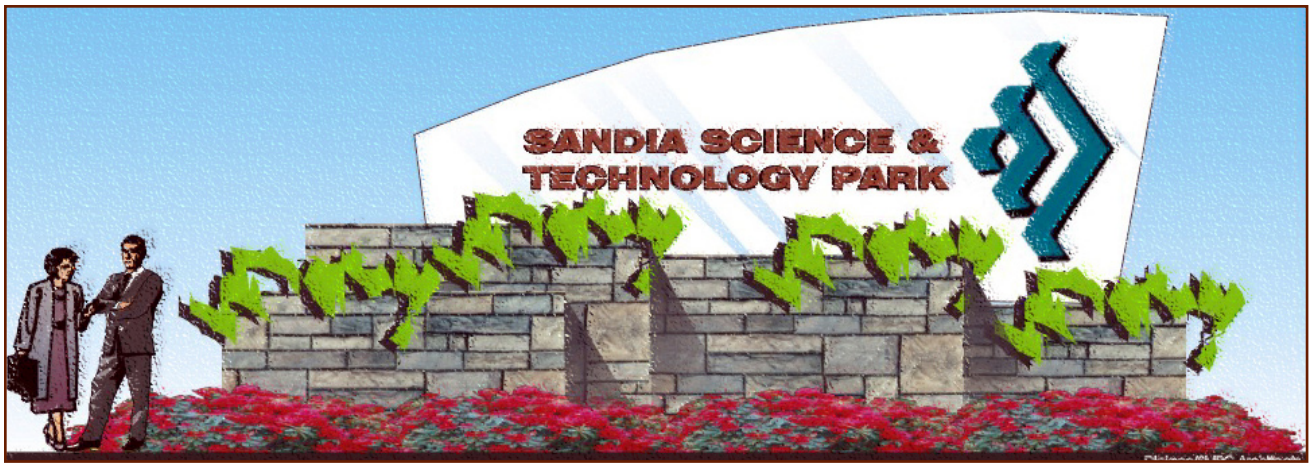
The landscape for the streetscape and common areas within the Park is designed to require minimal levels of maintenance. Plant materials will be native or adapted to the region, requiring minimal water and maintenance. All plantings and landscape elements, such as benches, litter receptacles, signs, etc., within these common areas shall be maintained by the Master Developer and/or an association of lot owners and tenants.



CONCEPTUAL POCKET PARK NORTH



CONCEPTUAL POCKET PARK SOUTH



PROJECT ENTRY

ENTRY FEATURES

The entries into the Park and individual sites will be accented with specialty landscaping consisting of massings of large shade trees, evergreen trees, and flowering ornamental trees. The groundplain will be established with a combination of evergreen shrubs and colorful flowering shrubs. Moderate-sized fields of low-water use turf will be used to create a more formal appearance and transition to an entry monument. The use of native and adapted trees and shrubs will demonstrate a commitment to a water conservative and sustainable landscape.

The project entry feature is designed to symbolize the boldness of new ideas (see Project Entry sketch above). It is meant to be a dynamic and powerful statement. It introduces turquoise into the color scheme which is one of the "branded" colors for the Park and pays homage to a native stone that has enriched our ancient New Mexican culture. The entry feature theme will be repeated throughout the project in individual building signage, materials, and color.



5. DESIGN STANDARDS

INTRODUCTION

These Design Standards are established to provide planners and designers with a design framework to accomplish the following:

- Create an attractive built environment that promotes opportunities for personal interaction, which allows for increased flow of information.
- Define a common image for architectural and landscape design, while still providing a broad palette for unique innovation.

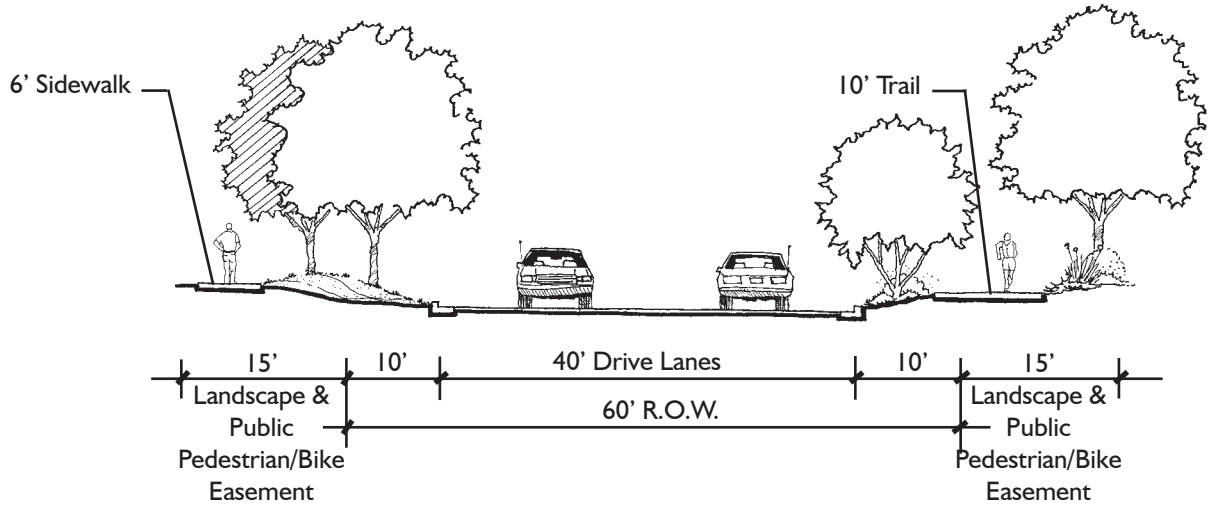
ARCHITECTURAL CONTROL COMMITTEE

An Architectural Control Committee (ACC) will be established by the STPDC and/or a future Master Developer, and be responsible for the enforcement of the following design standards. Rules and procedures shall be created to govern the performance of the ACC.

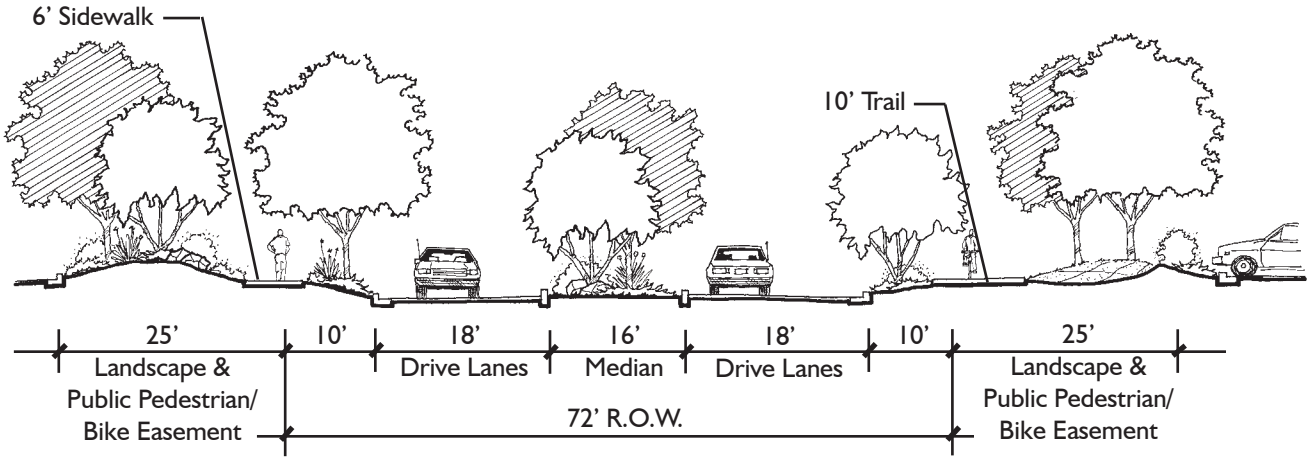
STREETSCAPE

The development of a bold and dynamic entry and streetscape is essential to defining an image for the SS&TP that places it at the forefront of today's technological explosion. The streetscape will provide a unifying element that weaves its way through, and ties together the vast development potential of the project.

- Easements shall be provided, in addition to the dedicated right-of-way, to provide additional flexibility for entry monumentation landscaping, trail/sidewalk development, other pedestrian amenities, and opportunities for screening and water harvesting. Easements shall be as follows, and as identified on the Landscape Master Plan (page 33):
  - 25 feet on each side of Innovation Parkway (with the exception of the area adjacent to the PNM Switching Station and current development of EMCORE Phase 2.
  - 15 feet on each side of Opportunity Road, Research Road, Venture Road, Enterprise Road, and Progress Place.
  - 75 feet by 75 feet at the intersection of Eubank Boulevard and Innovation Parkway (north) for development of the primary entry.
  - 50 feet by 50 feet at the intersection of Eubank Boulevard and Innovation Parkway (south) for development of the secondary entry.
  - 50 feet by 50 feet at internal intersections to provide for highlighted landscape improvements.
  - 20 feet wide in the approximate location between Lots 24 and 25 to provide a trail connection to the Tijeras Arroyo Trail.
- Street trees shall be provided at an average spacing of 20 feet on-center along Innovation Parkway, and at an average spacing of 30 feet on-center on all other roads. Trees shall be provided in medians at an average spacing of 50 feet on-center (only includes landscapeable length of median).
- Including tree coverage, living plant materials shall cover a minimum of 75 percent of the landscape area.
- The street trees along Innovation Parkway shall be Modesto Ash/Fraxinus velutina 'Modesto'. Accent trees shall be provided at intersections and shall include Goldenrain Tree/Koelreuteria



TYPICAL STREET SECTION
(as approved by the City Traffic Engineer)



INNOVATION PARKWAY SECTION
(as approved by the City Traffic Engineer)

**Trails and sidewalks may meander in and out of the street rights-of-way. The public pedestrian/bike easement width shall vary, but generally will not exceed 25 feet. Right turn lanes may require an additional public roadway easement from adjacent property.*

paniculta, Flowering Pear/Pyrus calleryana, or Cockspur Hawthorn/Crataegus persimilis 'Crusader'.

- Low water use turf shall be provided at a minimum of 20 percent and a maximum of 40 percent of the landscape area.
- Materials for the separation of turf and planting beds may be concrete, brick, or similar quality material. Steel edging is not allowed.

PARKING

The intent of the standards for the development of parking areas is to: mitigate heat/glare through the provision of landscaping; minimize the visual impact of parking areas; and provide accessible, safe circulation within and adjacent to the parking areas.

- Parking space standards shall be per the City of Albuquerque's Zoning Code.
- A minimum of one parking space per 200 square feet of net leasable space on the

ground floor and one parking space per 300 square feet of net leasable space in the basement areas and on all floors above first floor is required for office and retail parcels. More parking spaces are desirable in today's new economy where more employees are included in smaller building spaces. Some of the additional parking to meet tenant demand can be located in remote parking lots for employees. Off-site parking can also be provided in certain easement and landfill areas where buildings cannot be located. Surplus parking can exceed the minimum standard, plus 10 percent, due to potential for remote parking and requirements to break up large parking areas and provide suitable landscaping. No maximum parking limit is established with this Plan.

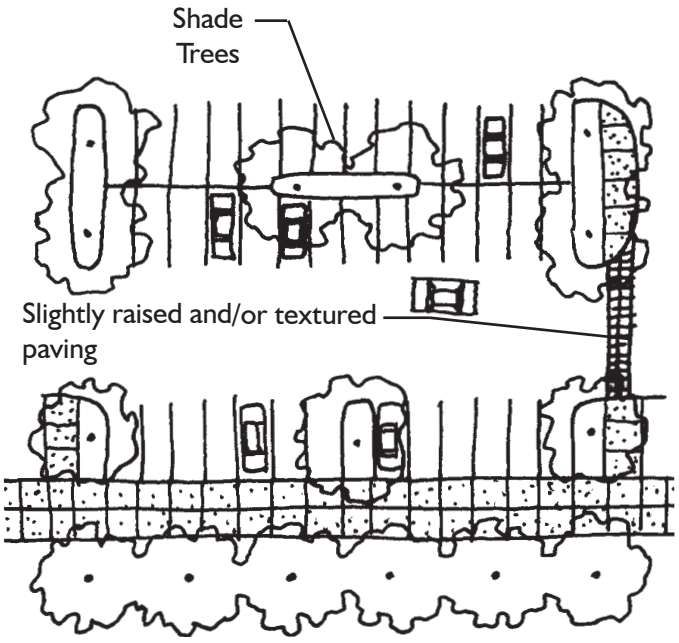
- Large parking areas shall be broken into smaller parking areas of 100 or fewer spaces, with landscaped medians a minimum of 12 feet wide.

- ADA-compliant parking shall be located adjacent to main building entries.

- Clear pedestrian connections shall be provided through parking areas at a minimum width of 6 feet and shall be clearly demarcated with slightly raised and/or textured paving where they cross vehicular entrances and drive aisles. Shade trees shall be provided along pedestrian walks at approximately 25 feet on center.

- Sidewalks and/or pedestrian paths that are perpendicular and at the front of parking spaces shall be protected from overlapping cars by permanently anchored tire stops, bollards, or raising the walkway to provide for a 6-foot wide, clear pedestrian area.

- Landscaped islands shall be distributed throughout parking areas. Parking areas shall include at least one tree for every six parking spaces, and the maximum distance from any parking space to a tree shall be 50 feet. Trees located within 8 feet of the perimeter of the parking area may be counted toward this requirement, but may not be used to fulfill street tree requirements. A minimum of 75 percent of parking lot trees shall be large canopied deciduous trees to provide shade during the summer months and reduce shading during the winter months.



PARKING LOT LAYOUT

- Parking shall be distributed among several parking courts on each site and shall be placed behind buildings or be screened from surrounding neighborhoods. Screening may include earth berms, perimeter or retaining walls, landscaping, or buildings.

- Car / vanpool preferred parking shall be provided near building entrances and shall be clearly demarcated.

BICYCLE FACILITIES

Providing convenient bicycle facilities to encourage non-vehicular travel to the SS&TP will be integral to the Plan's goal of supporting alternative modes of transportation to the SS&TP.

- Bicycle parking for employees shall be provided to promote alternative vehicle use. One bicycle rack space per 20 parking spaces is re-

quired, and shall be conveniently located near building entrances, but not within pedestrian pathways or landscape areas.

- A covered and secured bicycle storage area that is a minimum of 200 square feet shall be provided for each building over 35,000 square feet.

- A convenient shower facility available to bicyclists and other employees shall be provided for each building over 50,000 square feet.

SITE LANDSCAPE

The landscape environment serves to enhance the visual dynamic of the development and aid in reinforcing the street edge and pedestrian environment. The plant palette for the SS&TP (see Appendix C: PLANT PALETTE) will provide for year-round color and interest, and reflect the natural beauty of New Mexico. Landscape elements, such as street furniture, lighting, bollards, and graphic pylons shall be used to reinforce the street edge. A clear theme and image for the SS&TP will be established through the use of these materials, as well as consistent paving materials, plantings, signage, etc.

- Landscape plans must comply with the City's Water Conservation Ordinance and Pollen Ordinance.

- A minimum of 15 percent of the site area (minus building square footage) shall be devoted to landscape materials.

- Trees shall be provided at an average density of 1 tree per 1500 square feet of landscape area.

- A mixture of drought tolerant species and lawn areas shall be used at landscaped areas and in conformance with the City's Water Conservation Ordinance. Live plant materials shall cover a minimum of 75 percent of all landscaped areas.

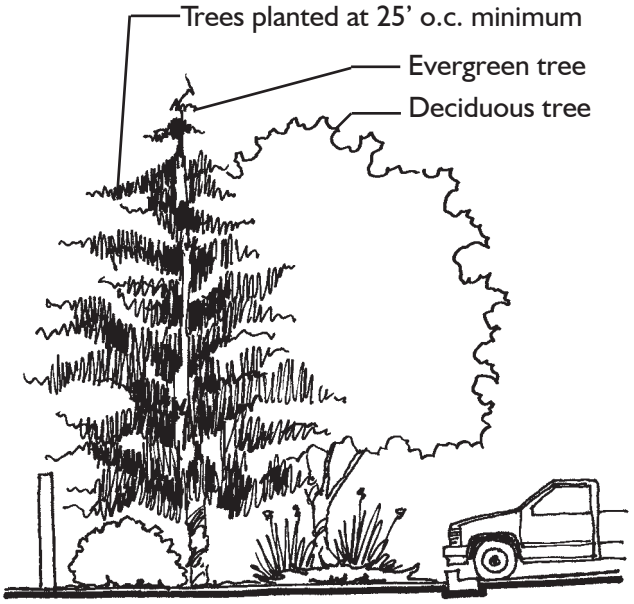
- Landscape headers shall be used to separate turf and planting beds. Headers may be concrete, brick, or other similar quality material.

- Gravel mulch, cobble, bark, and similar materials are acceptable as a top dressing for landscape areas, however, they are not to be considered a focal landscape element.

- An automatic underground irrigation system is required to support all site landscaping. The system shall be designed to avoid overspraying onto walks, buildings, fences, etc. Irrigation components shall be checked periodically to ensure maximum efficiency.

- All plant material shall be maintained by the Owner in a living, attractive condition. All areas shall be maintained free of weeds.

- A 10-foot wide landscape buffer shall be provided along property lines which abut residential zones and the PNM Switching Station. Within the required setbacks, trees shall be planted at a minimum spacing of 25 feet. Selected trees shall be capable of reaching a minimum height of 25 feet at maturity. Seventy-five percent of the trees shall be coniferous (evergreen).



BUFFERING

- Minimum plant material sizes at the time of installation shall be as follows:

  - Canopy trees - 2" caliper B&B
  - Evergreen trees - 8 foot minimum height
  - Accent trees - 1 1/2" caliper B&B
  - Shrubs and groundcovers - 1 gallon minimum

- Low water use turf shall be provided at a maximum of 40 percent of the landscape area. High water use turf, if used, shall be limited to no greater than 20 percent of the landscape area.

SITE PLANNING

The intent of the following guidelines is to create pedestrian-friendly environments for employees and visitors. A goal is to enhance the opportunities for interaction and the exchange of ideas.

- As individual parcels are created, cross access easements shall be provided between adjoining parcels.

- An outdoor patio space (minimum 250 square feet) with shade trees and/or shade structure that is integrated with the building architecture, tables, and seating shall be provided for any buildings greater than or equal to 10,000 square feet, with the exception of buildings that are adjacent to a Commons Area.

- Patios, plazas, courtyards, and other outdoor activity or seating areas shall be shaded (25 percent minimum, 50 percent maximum) from summer sunlight by tree canopies and/or shade structure that is architecturally integrated with the building.

- A sidewalk with a minimum width of 8 feet shall be provided along the front of buildings that are less than or equal to 35,000 square feet. A sidewalk with a minimum width of 15 feet shall be provided along the front of buildings that are greater than 35,000 square feet. These sidewalks shall be shaded with architecturally integrated awnings, portals, or canopies, or by trees planted at intervals of 25 feet in planters with a minimum interior dimension of 5' x 5'.

- Pedestrian connections (minimum 6-foot clear path) shall be provided from each building to the internal circulation system and to adjacent roadways. Shade trees shall be provided along the pedestrian connection at an interval of 25 feet in planters that have a minimum interior dimension of 5' x 5'.

- A continuous sidewalk with a minimum width of 6 feet shall be located around the perimeter of buildings that are greater than 4,000 square feet.

- Paving of primary pedestrian connections and primary outdoor activity areas shall use patterned, stained or integrally colored concrete, and/or concrete inlaid with tile.

- Asphaltic paving shall only be used in parking/service areas and bicycle trails. The design of all trails shall comply with the AASHTO 1999 Guide for the Development of Bicycle Facilities, and shall be coordinated with the City's designated Trails Planner.

- Stabilized crusher fine surfaces may be considered for secondary pedestrian pathways or plazas.

- Perimeter walls, if provided, shall comply with the City's Design Manual for Subdivision Access and Perimeter Walls. The use of chain-link, razor or barbed wire, wood fencing, or plastic vinyl fencing is not permitted.

COMMONS AREAS

The Commons Areas are intended to be attractive, lively, pedestrian-friendly, and a useful asset to the community. The plaza may include pedestrian places, bicycle storage, ATMs, kiosks, and/or support for other activities to encourage multi-modal transportation and a community friendly environment.

Individual developers of parcels adjacent to the Commons Areas are required to set aside a certain area of the parcel for the development of the Commons Area. The cost allocation per parcel will be based on the parcel acreage and the floor area ratio (FAR). These funds will be placed in an account held by the STPDC or a tenants' association until 75% of the cost to develop the Commons Area is achieved. If a master developer is ultimately chosen by the STPDC, that individual will be responsible for developing the two Commons Areas. The Commons Areas will be maintained by a tenants' association.

- For parcels that are adjacent to one of the two Commons Areas, the area set aside for the Commons Area shall be 10 percent of the building square footage. This area shall be illustrated on the individual building site plan, and subsequently, on the subdivision plat.

- Reciprocal cross-access easements between adjacent lots shall be provided on subdivision plats.

- Pedestrian pathways from the building to the Commons Area shall be 20-foot minimum width. Pedestrian pathways from the perimeter of the Commons Area to the Park's trail/sidewalk network shall be 10 feet in width.

- Shade trees shall be provided on the Commons Area at a density of one tree per 1,800 square feet of landscape area.

- Parking lots between buildings and the Commons Area shall not be permitted.

POCKET PARKS

- The landscape plans for the pocket parks must comply with the City's Water Conservation Ordinance and Pollen Ordinance.

- Sidewalks through the pocket parks shall be a minimum of 6 feet wide.

- A minimum of 50 percent and a maximum of 75 percent of the site area shall be covered with turf grasses for recreational activities.

- Trees shall be provided at an average density of 1 tree per 1500 square feet of landscape area.

- Minimum plant material sizes at the time of installation shall be as follows:

  - Canopy trees – 2" caliper B&B
  - Evergreen trees – 8 foot minimum height
  - Accent trees – 1-1/2" caliper B&B
  - Shrubs and groundcovers – 1 gallon

- Landscape headers shall be used to separate turf areas and planting beds. Headers shall be 6" x 6" concrete, or other similar quality material.

- Gravel mulch, cobble, bark, and similar materials are acceptable as top dressing for landscape areas, however, they are not to be considered a focal landscape element.

- An automatic underground irrigation system is required to support all landscaping. The system shall be designed to avoid overspray onto walks, buildings, fences, etc. Irrigation components shall be checked periodically to ensure maximum efficiency.

- All plant material shall be maintained by the Association in a living, attractive condition. All areas shall be maintained free of weeds.

- Each pocket park location shall contain, at a minimum, the following site furniture:

  - Litter receptacles (2)
  - Drinking fountains (1)
  - Bench seating (24 linear feet)

- In addition, the north pocket park shall include, at a minimum, a 6-station exercise course.

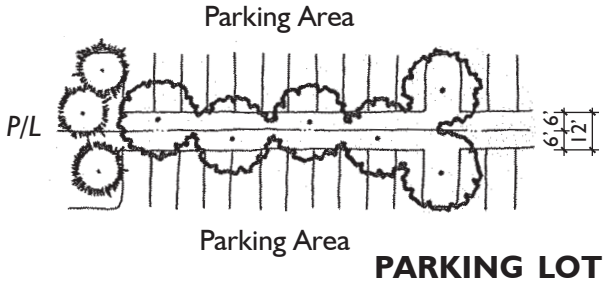
SETBACKS

The use of building and parking area setbacks is required to provide space for the creation of visually

attractive streetscapes throughout the Sandia Science and Technology Park. Required within these setbacks will be pedestrian walkways, screening devices, and landscape improvements.

- Buildings shall be located according to the following minimum setback dimensions:
  - 50 feet from the right-of-way line of Primary Loop Road (Innovation Parkway)
  - 35 feet from the right-of-way line of Secondary Roads
  - 60 feet from the property line of residential zones
  - 25 feet from the property line of other adjacent properties

- Parking areas shall be setback as follows:
  - 25 feet from the right-of-way line of the Primary Loop Road (Innovation Parkway)
  - 15 feet from the right-of-way line of Secondary Roads
  - 25 feet from the property line of residential zones
  - 6 feet (each side) from the property line of adjacent properties, for a total combined setback area of 12 feet



PARKING LOT SETBACKS

ARCHITECTURE

In general, all buildings shall comply with the current City of Albuquerque Zoning Code. However, in cases where the SS&TP requirements exceed the Zoning Code, the SS&TP standards will govern.

Development Densities

Infrastructure for the SS&TP Park is currently master planned for an overall Floor Area Ratio (F.A.R.) of .25. Individual sites should be planned accordingly.

Building Heights

Building height limits will be enforced in accordance with the City of Albuquerque Zoning Code for the O-1 zone.

Building Entrances

- The major public entry to each building should face the "fronting street" that is established by the business address. Provisions for a second "frontdoor" should be provided to access the Commons area, if applicable.

- The front facade of all buildings shall have architecturally integrated awnings, canopies, or portals along the entire facade length that provide shade and shelter to pedestrians, and a sense of arrival. Alternatively, shade trees may be provided at intervals of 25 feet in planters with a minimum interior dimension of 5' x 5'. Special consideration shall be given to roof structures, including materials.

- Entries shall be clearly defined and connect to pedestrian linkages.

- Entryways shall be distinguished by lighting in order to enhance the perception of surface variety.

Service/Loading Areas

- It is assumed that most, if not all, buildings in the Park will have a service and/or a loading area. All service functions should be screened from view on all sides. This includes but is not limited to; exterior refuse facilities, mechanical equipment, storage yards, and loading docks. Screens should be visually solid and be compatible with the overall building design, color, and primary materials. Gates shall be opaque; chain link gates are not permitted.

Context

- New buildings should be designed to harmonize with adjacent buildings.

Building Articulation/Design

- Buildings should convey an image appropriate to a state-of the-art research facility.

- Buildings should be sensitive to the local character of the region and the vernacular elements of buildings.

- Edge treatments shall "step down" to relate to the scale of pedestrians: reduce the scale of the building edge by stepping down to the street. It is encouraged that building masses be arranged in order to cast shadows on each other to emphasize the contrast of light and shaded surfaces at corners and edges.

- Buildings shall employ variety in structural forms to create visual character and interest. Avoid long, unarticulated facades. Facades should have varied front setbacks, with wall planes not running in one continuous direction for more than 100 feet without a change in architectural treatment (i.e., 3 foot minimum offset, fenestration, material change, etc.)

- Columns, arcades, corner articulation, overhangs, awnings, marquees, gutters and scuppers, breezeways, and soffits shall be carefully dimensioned and detailed to provide a human scale and visual interest.

- Extended architectural detailing on the ground floor in an elevational band from 0 to 10 feet, such as a change in color or texture, the architectural expression expansion joints as reveals, door and window articulation and architectural accents, is required in order to enhance the pedestrian level experience.

- ATMs shall be architecturally integrated with building design.

- Drive-through facilities shall be shaded with architecturally-integrated canopies.

- No generic franchise building elevations or canopies are permitted.

Equipment

- All roof top equipment and appurtenances shall be below the top of the parapet, or architecturally screened with a visually-solid surround that is compatible with the predominant building materials and color. Roof penetrations that are not architecturally screened with a visually-solid surround shall be painted to match roof color or general building color. All ground-mounted equipment shall be architecturally screened and enclosed, with the top of the equipment below the top of the screen. This includes but is not limited to: water meters, gas meters, electric meters, exposed conduit, cabling and wiring.

Portable Buildings

- All plans for portable buildings must be submitted to and approved by the Architectural Control Committee. All portable buildings, both temporary (buildings on site for less than 1 year) and permanent (buildings on site for more than 1 year) must be completely screened from view with dense landscaping. Permanent portable buildings must be finished to match the primary materials of the overall building.

Materials and Colors

Buildings should convey solidity and durability and employ high quality materials. Materials and colors should pay homage to the vernacular architecture of the area. Acceptable materials include: stucco, concrete (sand blasted or finished surface), stone, split face block, burnished block, glass curtain wall, glass block, brick, exterior ceramic tile, and EIFS. Architects shall use those materials traditionally used in the Albuquerque or New Mexico area.

- Acceptable colors include those taken from the native New Mexican landscape palette, such as: Sand, Terracotta and Sage Green. Colors shall be the inherent color of rather than from application of color (painted), except when used as an accent color.

- Prohibited building materials include the following:
  - Plastic or vinyl building panels, awnings, or canopies
  - exposed, untreated precision block or wood, chain-link, or barbed wire fences
  - highly reflective surfaces
  - metal paneling
  - materials with high maintenance requirements

- Special consideration shall be given to roof structures. The use of contrasting colors between roofs and walls is encouraged to further differentiate the planes of building masses.

- Accent colors and materials can bring out detailing to better articulate or give scale to a building. These include the colors of glazed tile, wood trim, tile roofing, paint, metal, etc. Accent colors at stairs, balconies, and perimeter walls are to be compatible with streetscape and perimeter walls.

- The entry monument theme shall be repeated throughout the SS&TP relative to color and materials.

Sustainability

- Green architectural design is encouraged. The Park promotes the use of sustainable design principles, environmentally-responsible building concepts, and earth friendly products.

Plan Arrangement Opportunities

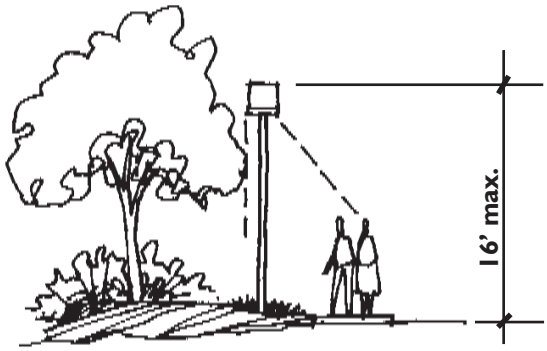
- Open courtyard designs shall be employed in order to form transitions between parking areas and building facades. Building access and entries must be easily accessible from the surrounding buildings and should be visible from the street through open passages (such as garden courts).

LIGHTING

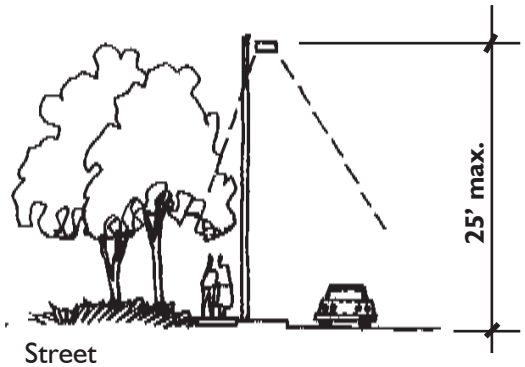
A consistent theme for the lighting fixtures within the streetscape and common areas of the Park will contribute significantly to the Park's overall aesthetic character. Safety and security should be the primary design consideration, as well as the daytime appearance of the light fixtures.

- Lighting shall be fully shielded horizontal lamps so that no fugitive light may escape beyond the property line and no light source shall be visible from the site perimeter.

- Height standards for light fixtures are as follows:
  - Streetlights shall not exceed 25 feet
  - Parking area light fixtures shall not exceed 20 feet

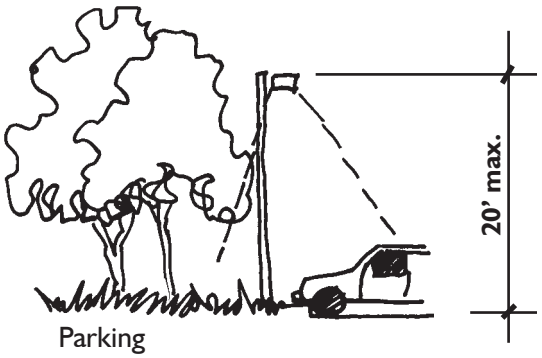


Pedestrian



Street


Pedestrian



Parking

LIGHTING

- Lighting fixtures for walkways and entry plazas shall not exceed 16 feet

- Controlled, directional lighting should be used to highlight public spaces and walkways. The use of walkway level lighting, such as wall pocket lights of bollard lights, is encouraged to accent pedestrian areas.

- Fixture style and design should be compatible and consistent with the lighting design of other projects within the development.

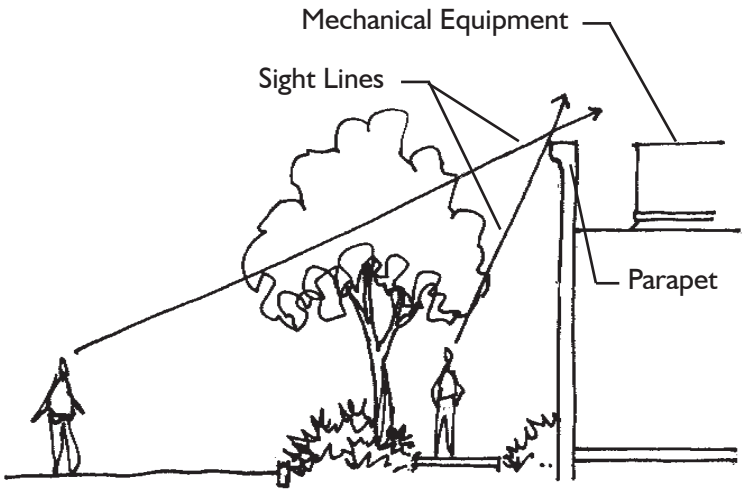
- The pattern of light pooling from each fixture shall avoid glare or reflection on adjacent properties, buildings, or roadways.

- Exterior lighting fixtures should relate stylistically to the architecture of the adjacent buildings.

- Uplighting fixtures to highlight trees, walls and architectural features shall be limited to 100 maximum wattage per fixture, and shall be designed to comply with the New Mexico Night Sky Protection Act.

SCREENING/BUFFERING

- Mechanical equipment and refuse enclosures, whether on roof areas or at street level, shall be fully screened from pedestrians or motorists. Screening shall be compatible with materials and design of the building.



SCREENED MECHANICAL

- Loading areas shall be screened from public view by walls, trellises, or landscaping. Passenger loading areas do not require screening.

- The use of chain link, razor or barbed wire, wood fencing or plastic vinyl fencing is not permitted.

- Refuse enclosures shall be adjacent to the building and screened with walls of the same material as the building itself.

- Walls, earthen landscaped berms, or evergreen landscaping (representing a minimum of 60% of the landscape provided), or a combination thereof, 2 1/2 to 3 feet in height shall be provided to screen parking areas adjacent to streets. Walls, if used, shall be designed to integrate with building materials and colors.

SIGNAGE

The following signage criteria creates a sense of arrival to the development and establishes a quality visual impact.

- The Master Developer shall provide entry monument signs (the only free-standing signs allowed) for the project to create a sense of arrival and to contribute to the unique identity of the project. These signs shall be within easements at locations described below, and shall be maintained by the Master Developer. A primary entry statement shall be located at Eubank Boulevard and Innovation Parkway (north). Secondary entry statements shall be located at the Eubank intersections of Opportunity Road, Innovation Parkway (south), and Progress Place.

- Individual sites are allowed one monument-style sign per street frontage. The sign shall not exceed 50 square feet in area, or 4 feet in height, and shall be architecturally integrated with the building color and materials. In addition, materials similar to those used at the primary project entries shall be used, although individual expression is allowed.

- Directional signs may be provided, at the discretion of the Master Developer, to direct visitors to particular businesses. Directional signs shall not exceed 20 square feet in area, or 4 feet in height.

- All signage at the project entries shall be coordinated in order to have the same appearance (height, size, color, material, text height and style, etc.).

- No sign may overhang a right-of-way or property line.

- No sign shall intrude upon any architectural features, including windows, columns, moldings or any decorative features.

- Building mounted signs shall consist of individual channelized letters. With the exception of logo images, no illuminated plastic panel signs are allowed.

- Building mounted signs shall not exceed an area of 6 percent of the façade to which it is attached. Maximum letter size shall not exceed 5 feet in height, and maximum logo size shall not exceed 5' x 5'.

- Signs which are directly spotlighted may be used provided there is no glare on the street or upon adjacent property or that the light does not distract motorists.

- Signs should identify only the name and business of the occupant or of those offering the premises for sale or lease.

- Prohibited signs include the following: those consisting of banners, pennants, ribbons, streamers, strings of light bulbs and spinners (except during holiday season or special thematic event); brashly colored signs with moving or flashing lights; signs which are animated in any manner; portable signs; off-premise signs referring to a business or merchant not doing business on the premise where the sign is displayed.

PUBLIC ART

In order to create an exciting and pleasant pedestrian environment, developments are encouraged to integrate artwork into the design of all public spaces, both indoors and out. Consideration of integrating artwork into the design of bus shelters, outdoor furniture, information kiosks, yard walls, entry portals, plaza fountains, vertical element, etc. is encouraged, instead of standing artwork in isolation, away from such usable elements. Future developments are encouraged to make use of the City of Albuquerque's '1% for the Arts' program, as well as to consider opportunities for private endowments or sponsorships to allow artistic enhancements throughout the Park.

WIRELESS TELECOMMUNICATIONS FACILITIES

Wireless telecommunications facilities are allowed within the Park, however, the visual impact of these facilities should be minimized by architecturally integrating them with proposed buildings, structures, and landscaping. The following standards are consistent with the City Zoning Code. Where conflicts exist between these Design Standards and the Zoning Code, the more restrictive shall apply.

- The maximum height for a co-located facility is 75 feet.

- Antenna, if used, shall be integrated into the building architecture.

- No free-standing cell towers, antenna, or roof mounted wireless telecommunications facilities shall be permitted.



6. INFRASTRUCTURE & ENGINEERING

DRAINAGE MASTER PLAN

Previous Drainage Management Plans

There are a number of existing drainage reports, master drainage plans, and drainage studies which address the drainage conditions within the SS&TP vicinity. These governing documents are as follows:

- The South Eubank Storm Drainage Analysis, (dated November 1995, prepared by Smith Engineering Company).
- Amendment #2 to the South Eubank Storm Drainage Analysis, (dated November 2, 1998, prepared by Smith Engineering Company)
- The Manzano Mesa Master Drainage Plan, (dated August 1996, prepared by Smith Engineering Company)

This Master Drainage Plan conforms to these plans.

Existing Drainage Infrastructure

The most important drainage feature for the SS&TP is the existing and planned large diameter South Eubank Storm Drain. Phase 1 of this storm drainage project, which runs from the Manzano Mesa Park Detention Pond to the Tijeras Arroyo, is complete. Phase 2 is currently under construction, and runs from the Manzano Mesa Park Detention Pond north up Elizabeth Street to Central Ave. The large majority of SS&TP currently drains to this existing storm drain.

Drainage From Existing Tracts

All of the land within the SS&TP, with the exception of the approximately 40-acre State Land Office (SLO) lands holding the existing landfill, generally drains via surface runoff from east to west. Flows are conveyed across the tracts by natural sheet flow and shallow concentrated flows within existing natural swales. Again, with the exception of the above SLO tract, none of the lands within the SS&TP are impacted by offsite drainage. Flows from the SS&TP lands drain to Eubank, where they are picked up by the Phase 1 South Eubank Storm Drain. For the far southern portion of the site, small amounts of drainage may cross the Eubank alignment and enter the base via sheet flow and shallow concentrated flows.

The existing South Pointe Mobile Home Park (MHP), located east of the SMM Partnership Tract A, currently drains to the southwest corner of the MHP and south across the SLO lands, directly to the Tijeras Arroyo in a non-engineered fashion. There is no existing drainage downstream easement for this MHP drainage. This drainage runs to the southwest corner of the SLO tract, where flows join the offsite drainage from the MHP. The combined flows then drain directly to the Tijeras Arroyo.

The western half of the approximately 20-acre SLO tract located north of the existing PNM switching station is currently being developed by EMCORE. The drainage plan calls for the site to drain to a large pond on the south side of the site. The controlled discharge from the pond drains to a new storm drain to be constructed with the EMCORE project. The new storm drain will tie to the South Eubank Storm Drain and extend east to the edge of the EMCORE site. The eastern half of the tract drains to a small pond located adjacent to the EMCORE project. That pond also drains to the new storm drain.

Proposed Conditions

The significant proposed drainage management concepts and goals are as follows:

- Minimize or eliminate large, dedicated ponds that reduce buildable area
- Minimize expensive public and private storm drainage infrastructure

- Water harvesting within parking lot islands and other landscape areas are encouraged.

- Individual tracts will drain to the streets or public storm drains, to the greatest extent possible and/or practical.

- All development within the SS&TP will conform to this master plan's drainage requirements.

- Where the sites can not drain to the street, private ribbon channels, with easements, will be constructed to convey drainage to proposed public storm drains or to public streets.

- The SS&TP has restricted allowable discharge rates. Peak flow rates will be mitigated using on-site detention ponds and control structures.

- Public storm drains will be constructed throughout the site such that all streets within the Park are restricted to the depth of street flow at the top of curb height and the energy grade line within the right-of-way.

The Illustrative Master Plan identifies primary streets and potential lot configurations. The street system is anticipated to remain through out the project life, however, the lot lines shown should be construed only as conceptual, for reference and subject to change as individual developments arise.

Lots 1-8 have an allowable discharge of 167cfs in the 100yr storm. This will allow free discharge from that portion of the SS&TP provided that the developed impervious area (including public streets) does not exceed 90% of the total area. The Manzano Mesa Master Drainage Plan defines allowable discharge for this portion of the SS&TP.

Lots 20, 21, 39, and 40 will follow the guidelines provided in Amendment #2 to the South Eubank Storm Drainage Analysis, which indicates that those areas may discharge 1.3cfs/acre to the South Eubank Storm Drain. Lots 20 and 21 will require onsite ponds that will drain to the proposed storm drain in Innovation Parkway. Similarly, Lots 39 and 40 will require onsite ponds that will drain to the proposed storm drain in Progress Place.

This Drainage Master Plan proposes to construct a new storm drain from the southwest corner of the existing MHP and south through the SS&TP (the SLO lands) directly to the Tijeras Arroyo. This new storm drain would accept flows from the MHP, as well as accept fully developed flows from Lots 23-29 and 33-34. Pipe sizes for the storm drain outfall may be reduced if an agreement for ponding on MHP lands is made between the MHP and the SS&TP. A new outfall line, energy dissipation structure, and easements to the Tijeras Arroyo will be required. Phasing of the Park will allow deferral of this new line to Phase 2. This phase begins to develop the eastern SLO lands (Lots 22-36), and thus the storm line is not required until that time.

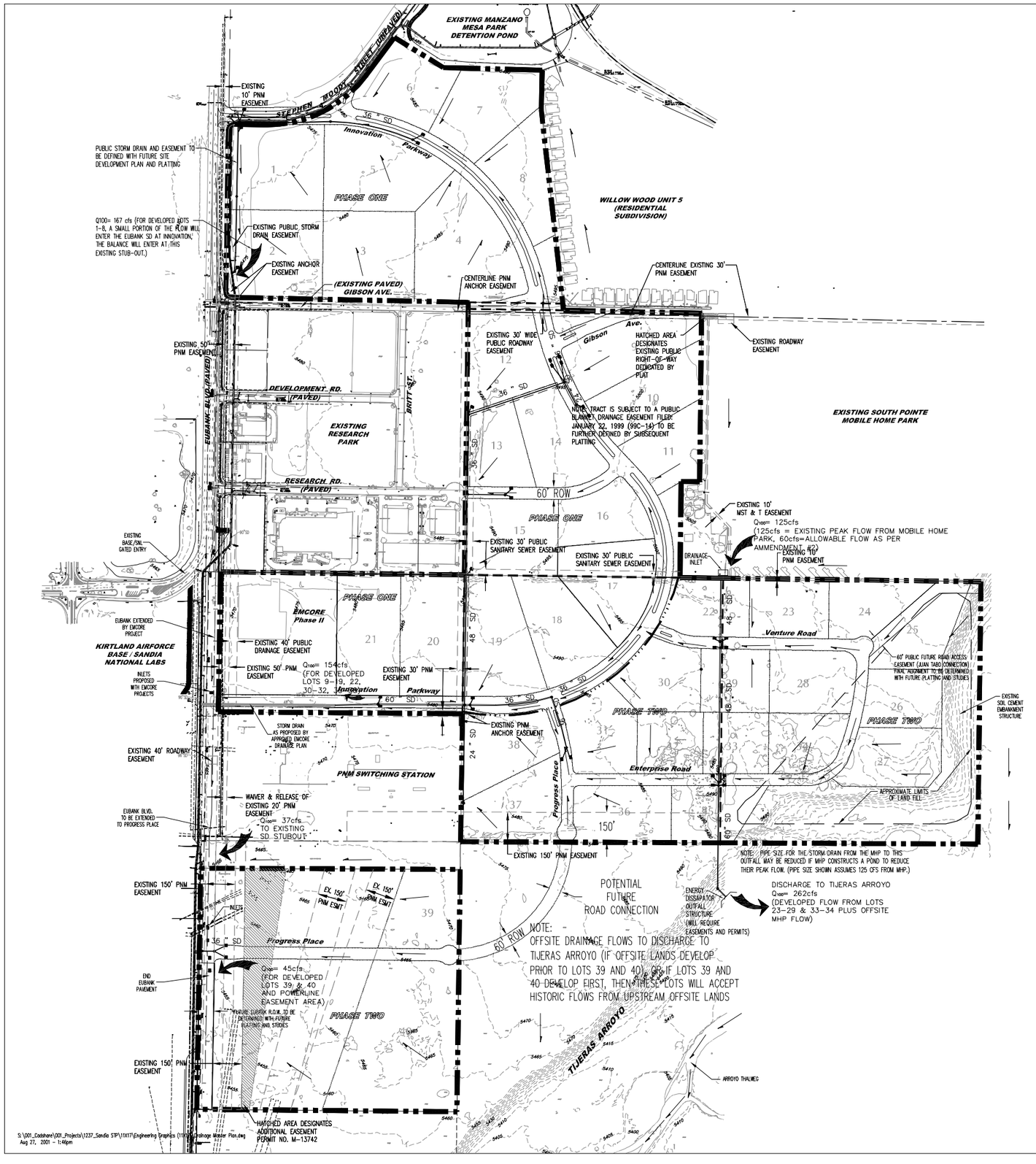
Allowable discharge rates for all of the remaining lands (Lots 9-19, 22, 30-32, and 35-38) within the Park are defined by Amendment #2 to the South Eubank Storm Drainage Analysis, with a minor modification. This plan proposes to modify Amendment #2 by allowing the MHP to have free discharge to the new storm drain (discharging MHP and site flows to the Tijeras Arroyo) described in the paragraph above. This modification has a number of advantages:

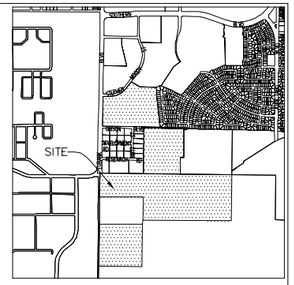
- No land within the Park will have to be encumbered for massive dedicated public ponding areas and instead, reduces the ponding requirements sufficiently to allow ponding within the developments (parking and driveway areas, landscaping areas, etc.).

- Lots 23-29 and 33-34 get free discharge, this is an advantage since ponding over the existing landfill areas has the potential to increase methane gas generation.

- Lots 9-19, 22, 30-32, and 35-37 have a less restrictive allowable discharge rate, which will allow those lots to have smaller ponds than would otherwise be required.

This Drainage Master Plan provides a safe, innovative, and economical solution to drainage management requirements of the SS&TP.





VICINITY MAP
L-21-Z , M-21-Z

LEGEND

- SANDIA SCIENCE AND TECHNOLOGY PARK BOUNDARY
- PROPOSED STORM DRAIN
- 5301 EXISTING CONTOURS
- EXISTING ELECTRICAL POLE
- EASEMENT
- EXISTING STORM DRAIN MANHOLE
- EXISTING ANCHOR
- EXISTING FIRE HYDRANT
- EXISTING FLAGPOLE
- EXISTING SIGNS
- EXISTING IRRIGATION BOX
- EXISTING PULLBOX
- EXISTING TRAFFIC BOX
- EXISTING UNKNOWN UTILITY
- EXISTING TRANSFORMER
- PROPOSED DROP INLET & PIPE
- PROPOSED SD MH
- EXISTING STORM DRAIN
- WATER BLOCK
- PHASE LINE
- DRAINAGE FLOW ARROWS



NOTES:
1. NEW STORM DRAIN LINES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. EXACT PIPE SIZE AND EXTENT OF STORM DRAIN WILL BE REFINED WITH SUBSEQUENT SUBMITTALS
2. LOT LINES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY

Master Drainage Plan

Sandia Science and Technology Park

Prepared For:
Science and Technology Park Development Corporation
Albuquerque, New Mexico 87120

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TRAFFIC IMPACT / AIR QUALITY SUMMARY

General

The following section reviews and summarizes the key elements of traffic and transportation in SS&TP and vicinity. A detailed traffic impact study has been prepared and submitted to the City Transportation Development staff for review.

History of Studies in Area

The traffic and transportation issues associated with the build-out of SS&TP are significant. The larger area surrounding the SS&TP- bounded by Opportunity on the south, Eubank, Juan Tabo and Interstate 40 on the north- has been the recent and past subject of multiple traffic impact studies. The list of studies begins with the Manzano Mesa Master Plan of the early 1990s for APS, includes Home Depot and CostCo commercial projects, and ends with the recent submittal of a study for the Apartment project on Eubank, just south of Southern Boulevard. The Manzano Mesa Master Plan set the stage for establishing and dedicating the rights-of-way for much of the region, especially Southern and Eubank Boulevards.

Perhaps the most significant study, however, was the Gibson Corridor studies that were just recently prepared to support the funding and design of this future major east-west roadway. The road is planned to form an interstate connection between Interstate 40 and Interstate 25. The road is not anticipated in the near future, but is anticipated within 10 years.

Adopted Long Range Roadway System

The City/MRGCOG Long Range Roadway System identifies Eubank and Southern Boulevards as principal arterials. However, Eubank Boulevard, south of the SS&TP, has been deleted as a principal arterial from the Long Range Roadway System due the recent elimination of the so-called Southeast Loop road (i.e., the extension of Eubank across the Base and Tijeras Arroyo).

Impacts to Existing Street Network

1. ***Eubank Boulevard***

   A review of the Regional Vicinity Map reveals the terminus nature of Eubank Boulevard into the SNL/Base facility. These two major employers and vehicular trip generators, especially when combined with the significant traffic volumes of the existing and proposed tenants of the SS&TP, produce a dramatic impact on Eubank Boulevard. In its current four-lane, deteriorated condition, this arterial street is no match for the anticipated vehicular volumes produced over the life of the SS&TP, nor does it meet the quality of entry desired for the SS&TP.

   Recognizing this fact from the information provided by previous studies and actual experiences, and as a partner in the development of SS&TP, the City of Albuquerque staff requested and obtained authorization from City Council to begin design of the required ultimate six-lane roadway. Design efforts may begin sometime in Spring 2001, while construction may be complete in Fall, 2002.

   It is anticipated that development at the SS&TP will precede this Eubank construction effort, but only moderately so given the normal timeframes for master plan approval, building and site design and approvals, and actual building construction.

   The portion of the anticipated Eubank extension, south of the EMCORE project, will be constructed and platted in Phase 2. It is understood that continued public Eubank right-of-way to the south of the SS&TP boundary is necessary, and as such is identified on the Illustrative Master Plan in order to ensure the provision of access to the surrounding area in the future.. However, the removal of Eubank from the "southeast loop road" concept of the Major Street Plan removes the impetus for an extension of Eubank beyond Progress Place as a "major street facility". Further, since the nature and timing of the development of the lands south of the SS&TP and KAFB/Sandia Labs is very speculative at this time, the right-of-way width for the Eubank reach south of Progress Place and potentially, south of the KAFB/Sandia Labs entry, should be determined at the time of platting in this Phase 2 area. The Master Development Plan proposes that physical construction

of Eubank Boulevard end at Progress Place, until these areas become better defined.

2. ***Southern Boulevard (Future Gibson Corridor)***
   Currently, Southern Boulevard, between Eubank and Juan Tabo, is a confused roadway. Due to intermittent and separated development, this reach is mixed with old and new construction, pavement on the north side here and on the south side elsewhere. Practically all of the new recent construction is being constructed to ultimate six-lane configuration and materials to match its future designation as a major arterial corridor. Southern Boulevard, west of Eubank, is still a minor street and will remain so until Gibson comes through.

Improvements to this reach of Southern Boulevard (to provide its ultimate section) over the life of the SS&TP build-out, as funds are generated, is essential to maintaining adequate transportation network capacities in the area.

It is hoped that the SS&TP will give needed encouragement and incentive to the funding effort for the Gibson Corridor project, such that this project could potentially occur within 10 years. The completion of this project would bring many benefits, but not the least of which is greater access and needed traffic relief to the vicinity of the SS&TP.

Other Roadway Considerations
The traffic study analyzed multiple intersections in the vicinity. Many of these intersections are shown to have little capacity for additional traffic volumes without additional area-wide infrastructure construction, such as Southern Boulevard and future Gibson east-west connection. Note that the extension of Progress Place between Lots 36-37 and 39-40 on the Illustrative Master Plan is subject to acquisition of right-of-way or easement.

Internal Circulation
Although discussed in more detail in the Circulation section of this Master Development Plan, the traffic impact analysis reviewed internal street traffic volumes. The determination is then made that Innovation Parkway has adequate capacity as a two-lane facility. A raised, landscaped median is also part of that street's cross-section.

Air Quality
The consultants met with Air Quality/Environmental Health officials regarding the SS&TP Master Development Plan submittal. It was felt that there was no need for another new AQIS study in an area already well studied in recent projects. It was stated that individual sites and users may need to meet with the Environmental Health to discuss emission regulations.

TRANSIT FACILITIES

Reliable public transportation is becoming an increasingly essential element of our community's overall transportation network as a means to combat traffic congestion and air quality deterioration. In many ways, SS&TP provides excellent opportunity for enhanced SunTran transit service to this region of Albuquerque (see Section 3: MASTER PLAN CONCEPT for discussion on Transportation Demand Management Programs, page 29).

- The immediate vicinity of the SS&TP holds many large employers. Besides the Park's eventual employment base, the SNL and KAFB have large work forces.

- These employees are concentrated or clustered, at the end of a major multi-lane City transportation corridor (Eubank Boulevard).

- SunTran already has a successful long-running transit line along Eubank Boulevard, with existing transit facilities in place.

However, large employment concentrations alone may be insufficient if ancillary uses, such as retail uses and restaurants, are not available to minimize the need for auto use during the day. The SS&TP strongly encourages development of such ancillary uses, as well as necessary pedestrian and bicycle facilities to minimize the auto dependence even further.

Effective promotion and encouragement of transit use via master planning includes:

- Mixed land uses

- Street landscaping and attractive transit stop design that screens those waiting for transit service from street traffic

- Strategic placement of transit stops that minimize user travel from building to transit stop (quarter-mile maximum is desirable)

- Site design that promotes access and connections to transit facilities

With these kinds of incentives to transit use, more employees will consider transit and individual employers in the Park will be more inclined to provide their own incentives and opportunities for use of public transportation to their employees.

Current Service

As stated previously, transit (bus) service and stops currently exist on Eubank from the Base to the Paseo del Norte and beyond. SunTran officials have indicated that today, this service is underutilized and therefore has capacity for additional ridership.

Proposed Service

Preliminary discussions with SunTran identify Innovation Parkway as the probable transit route, looping back onto Eubank after passing through the SS&TP. Concerns over actual versus anticipated ridership from the SS&TP employees suggest that SunTran will monitor increases in transit use and base service decisions on actual trends.

In the initial development(s) of Phase 1, it is probable that transit service to the SS&TP will only be provided from existing Eubank Boulevard facilities.

Transit facilities design will be based on the goals and concepts presented in the previous section.

PNM TRANSMISSION FACILITIES

Existing Service and Supply, and Constraints

Electric power service for the near future development of SS&TP is immediately available from existing PNM facilities adjacent to SS&TP, although most of the existing multiple overhead transmission lines, crisscrossing primarily the southern portion of the SS&TP, are not available for direct connection. Generally, these existing facilities will be protected in place without modification.

Additionally, these existing lines and their easements significantly restrict land uses under and adjacent to these power lines. SS&TP will design the Master Plan to conform to the constraints presented. However, minor uses within the easements may be possible, such as drainage ponding, limited yard storage uses and parking. Individual developments will consider the opportunities that may be possible and coordinate with PNM.

Proposed Utility Corridors

As stated previously, all existing corridors and facilities will be protected and remain in place. Generally, new extensions of power, gas, communications and cable lines will be extended underground and looped through the site in 10-15 foot wide public utility easements located on the private side of the street right-of-lines. Due to the addition of fiber optic backbone utilities throughout the Park, slightly larger utility easements and/or additional easements may be required.

Existing Switching Station

The existing switching station, when constructed, was located far from existing homes and other development. However, with the advent of the SS&TP, this large unsightly facility must be screened in a reasonable, economical manner. SS&TP will work with PNM to develop perimeter screening of this facility.

PREMIUM POWER GOALS: DISCUSSIONS WITH PNM

A series of meetings have been held between the SS&TP Project Team and the PNM to discuss current and future power needs and goals of the Park. There is a desire to provide a reliable quality power supply to the high-technology end-users of the Park. PNM is providing assistance to the SS&TP in identifying ways to increase both the supply and quality of power to the Park.

Future Additional Supply

PNM is already planning an extension of the Four Hills Line to the SS&TP during 2001. This extension will bring a second radial line into the Park with a line capacity of 6-7 MW of load. If the current expansion of the EMCORE facility continues, and the anticipated growth at SS&TP occurs as planned, PNM will also be investigating the addition of a new substation in the vicinity of the Park. A detailed analysis of the need for a substation will be conducted in 2001, with

construction possible in the 2002-2003 timeframe if warranted. A two transformer substation will support approximately 33 MW of load.

Recommendations for Premium Quality Power at SS&TP

It can be extremely expensive to provide a uniform level of premium power across the entire 217 acres of the SS&TP, and this level of quality would not be needed for typical office uses or commercial vendors such as banks or restaurants. High-technology industrial users do need reliable quality power supplies, and there are many ways to achieve that goal. Typically, the most cost effective means of enhancing power quality and reliability is to make an adjustment at the "tool level", i.e., within the manufacturing facility rather than at the substation.

PNM has provided some suggestions for those customers who need a reliability greater than 99.99% (manufacturing processes that cannot tolerate service sags or interruptions). Special utility equipment and/or some form of energy storage device is recommended in these instances, and may include:

- Undergrounding lines
- Installation of auto-throwover switches
- Dual feeds (redundancy)
- Super fast static transfer switches
- Installation of plant-sized energy storage devices

If the end-user has highly sensitive manufacturing processes, they should engage a reputable power quality specialist during the design phase of their project with special attention given to:

- Grounding
- Isolating critical equipment so that they would only have to power-condition part of their load, if they experience unacceptable levels of power quality from the utility
- Avoiding known power sensitive components, and buying equipment meeting the International Sematech specifications.
- Not installing distributed generation without consultation with the local utility.

International Sematech Power Standards Recommendations

In 1999, a multi-organizational research project was undertaken to determine the immunity of semiconductor equipment to voltage sag events. The project also looked at new global standards that have been adopted to define voltage sag immunity requirements for such equipment. Efforts of the project focused on three main areas: equipment testing, power quality workshops, and SEMI standards (SEMI is an international trade association representing semiconductor equipment and materials suppliers). Major findings from the above-described work are as follows:

- New global standards have been passed and published that considered the real electrical environment seen by semiconductor equipment.
- The result will be improved tool ride-through and equipment immunity for the semiconductor industry.
- Solutions are available through use of selective power conditioning and embedded designs to meet the standard.

Embedded solutions involve fixing the individual "weak links" components of a tool in order to increase the overall ride-through of the entire system. Embedded solutions are attractive, since they in theory do not require add on power conditioning equipment, but instead involve using more robust or improved components in the tool design. This is consistent with the advice provided by PNM for power users in high-technology manufacturing environments.

Tips for achieving these imbedded solutions that meet SEMI standards are listed below:

- Tip 1: Wire load devices in a phase-to-phase configuration where possible.

- Tip 2: Avoid mismatched equipment voltages.
- Tip 3: Use universal input switching power supplies in every location possible.
- Tip 4: Avoid the use of AC powered "ice cube" general purpose relays.
- Tip 5: Do not use phase monitoring relays in the interlock circuit.
- Tip 6: Utilize a non-volatile memory.
- Tip 7: Do not overload DC power supplies.
- Tip 8: Use a targeted voltage conditioning approach.
- Tip 9: Use robust inverter drives.

PNM has offered to meet with potential end-users at the SS&TP to provide further assistance in meeting the reliability and quality power standards of today's sophisticated manufacturers.

TELECOMMUNICATIONS - FIBER BACKBONE PROJECT

An important element in the success of the SS&TP is the planning and design of a fiber backbone project to support potential high technology businesses. A conceptual infrastructure route design is provided for illustrative purposes only (see the Conceptual Telecommunications - Fiber Backbone Network Plan, page 61). A number of specific network variations will be considered prior to the acceptance of a final design for construction. However, the basic principles described in this section will be the basis for the final design. While fiber will be placed in underground conduits emanating from a centralized facility in the Park, the sizes and number of those facilities, as well as the exact routes, will be determined by additional planning.

The network is designed with an access duct and 12 single mode fibers into each of the proposed lots shown on the Illustrative Master Plan (see page 21). Lot 15, at the end of Research Drive, was used as the Telecommunications Hub Facility for illustrative purposes. However, the location of the hub may change to another lot within the Park. The proposed design does not include duct/fiber on Research Drive, Britt Street, or Development Road, but does allow for the addition of facilities along these roads and for the future attachment of these lots. It is recommended that these existing roads be included into the final design. The budget impact will be minimal and the use of Research Road as a primary artery will provide a more robust architecture. The construction utilizing "direct bore" techniques would be very straightforward with minimal disruption to the area.

The proposed infrastructure is designed to be within the "greenbelt", an area within the lots, adjacent to the proposed and existing roads rather than within the roadways. The size of the infrastructure required for a fiber only backbone is optimal for several construction methods including ploughing which will be the most cost-effective.

The proposed design accommodates access to various other carriers and service providers including access to Sandia Labs. The design allows for a base level of redundancy and will accommodate more sophisticated redundancy as the need is identified. The route as proposed includes only a single access into each lot.

The "Telecommunications Hub Facility" is the primary access point for originating service onto the fiber backbone. Secondary Hub Facilities can be identified (and is strongly recommended as the network evolves). The "hub" facilities can be stand-alone buildings or can be a prepared space within a proposed building. As designed, services can be originated from any location attached to the network. This includes provisioning point to point dark fiber between any points on the network.

The basic requirements for this space are as follows:

Telecommunications Hub Facility

A telecommunications equipment room is a special-purpose room that provides space and maintains a suitable environment for the communications equipment. Equipment rooms contain active electronics, entrance facilities, cross connect facilities, and building termination facilities and are designed and built to

stringent requirements because of the cost, size and complexity of the equipment involved.

General Requirements

- Equipment room design and installation must comply with all local, state, and federal building codes

Architectural Requirements

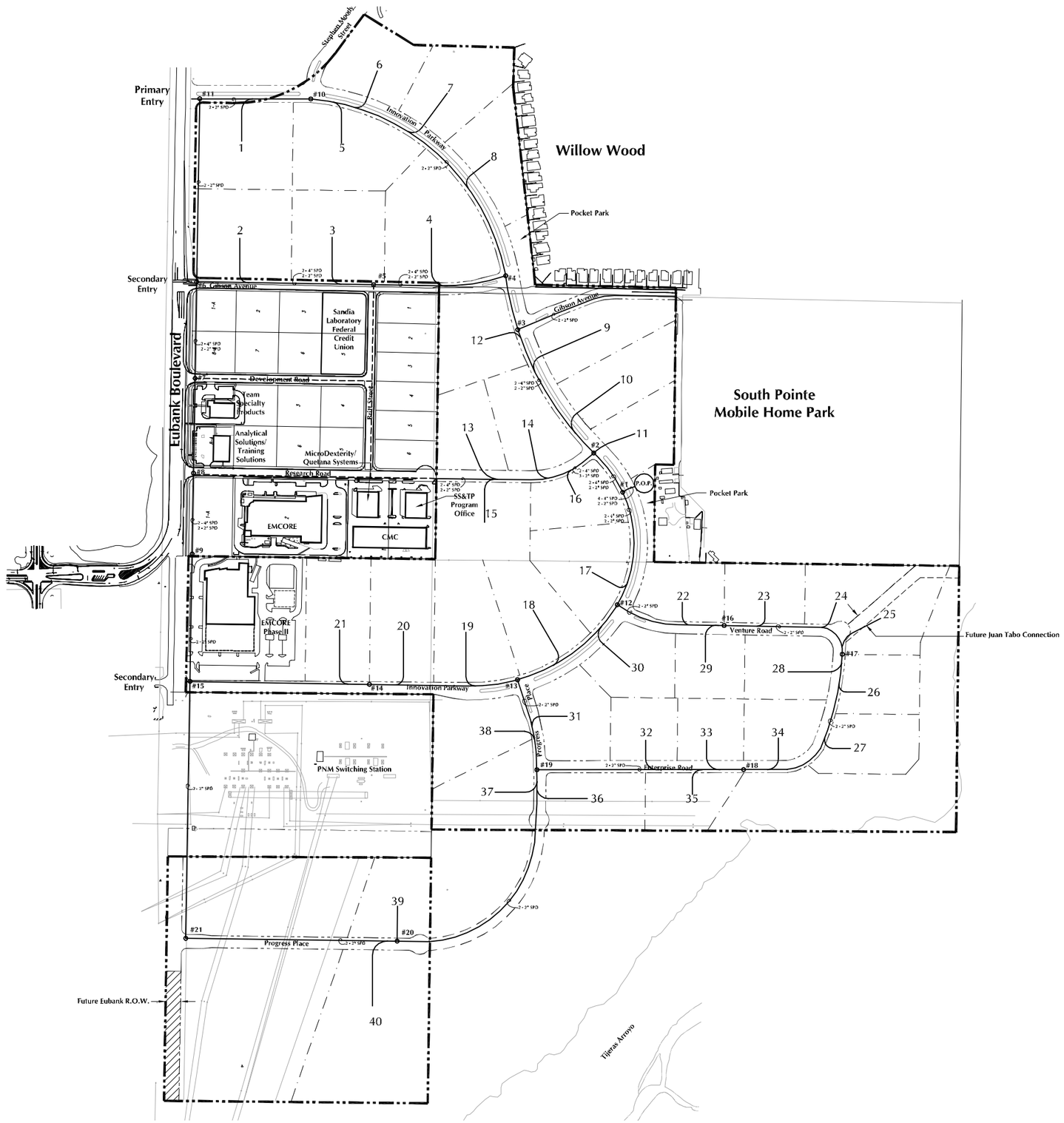
- Room must be at least 20' X 30' (irregular or lesser dimensions must be reviewed prior to construction)
- Finished ceiling height must be at least 9 AFF
- Ceiling protrusions must be placed to assure a minimum clear height of 8'-2"
- The rated distributed floor loading must be greater than 100 lbf/ft2
- Floors must be static free (use asphalt/linoleum tile or equivalent)
- Door to room must be at least 36" W x 80" H and must be installed with a lock
- Door to room must not have door sills or center posts
- Door must be placed towards the corner of the room and open outwards from room (or as permitted by code) if door cannot open outward, it must be removable

Mechanical Requirements

- The equipment room must be serviced off of the general buildings environmental systems or by stand-alone systems at the discretion of the builder. Minimum requirements would dictate that cool air be ducted into the room and would preferably maintain the following specifications 24 hours a day, 7 days a week:
- Relative humidity in the equipment room would be maintained with in the range of 30 and 55 percent.
- Temperature in the room would be maintained between 64 and 75 degrees F.
- Ventilation in room must accomplish at least one air change per hour.
- Furnish and install a Viking TotalPac pre-action system for fire protection that ties in with the building's wet sprinkler system.

Electrical Requirements

- Provide a 200 amp, 208/120V, transient voltage surge suppression panelboard (TVSS) manufactured by Current Technologies, or others. This panelboard will exclusively service the active communications equipment. All lighting and convenience outlets must be fed from other distribution panelboards.
- Lighting in the equipment room must be provided and should allow for approximately 50 foot-candles of illumination.
- Locate lighting fixtures a minimum of 8'-2" AFF.
- Provide a minimum of two (2) 120V, 20 ampere duplex receptacle convenience outlets.
- Provide emergency lighting.
- Provide (number to be determined) PVC conduits with pull tape from the equipment room to the property line. Coordinate placement of conduits with the outside plant conduit system. Conduit must be installed a minimum of 24" below finished grade with electrical bends (no "plumbers" 90-degree bends) and must be labeled "For Communication Use Only" Conduit must be clean and free of debris and must be capped to prevent infiltration of water, mud, and rodents.
- See Telecommunications Bonding and Grounding below for additional requirements.
- A generator will likely be required. Adequate space should be allocated adjacent to the telecommunications room. Provide 1-4" conduit



LEGEND

- SS&TP Telecommunications Point of Presence
- Backbone Architecture / Single Plastic Duct (SPD) Routing
- Conduit Sizing (2 - 2" SPD, 2 - 4" SPD)
- Hand Holes (Splice Boxes)
- Recommended Route for Additional Conduit to Augment Existing Private Facilities

Notes:

1. All SPD routing and hand hole locations are conceptual and intended for illustrative purposes only.
2. The sizes and numbers of fiber facilities, as well as the exact routes, will be determined by additional planning.
3. As designed, each property shall be served by a single 2" conduit (SPD).
4. Additional access ducts may be added dependent upon need.
5. The Point of Presence (P.O.P.) shall serve as the Minimum Point of Entry (MPOE) for access to SS&TP private backbone.
6. The P.O.P. shown is a conceptual location only. The actual P.O.P. may be installed in any location within the SS&TP subject to lot owner agreements.
7. Hand Holes shall be 2'Wide X 3'Long X 3'Deep splice boxes.
8. SS&TP backbone, as proposed, is in "greenbelt" adjacent to roadway.
9. SS&TP backbone, as proposed, provides for redundant routing.
10. Lot lines are illustrative. Actual fiber route may change depending on the final lot and road configuration.

Conceptual Telecommunications - Fiber Backbone Network Plan

Sandia Science and Technology Park

Prepared For:

Science and Technology Park Development Corporation
Albuquerque, New Mexico 87120

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SMPC ARCHITECTS

Scale 1" = 200'

100 0 200 400 North

July, 2001

from the telecommunications room to area demarced for the generator.

Telecommunications Bonding and Grounding

Telecommunications bonding and grounding is additional bonding and grounding installed specifically for communications systems. From a safety code standpoint, the NEC and ANSI/NFPA 780 already cover such bonding and grounding. However, these codes are established primarily for safety. There are many situations where these codes can be interpreted and/or implemented in different ways. Some of these ways may not be as suitable as others for equipment reliability and performance. Telecommunications bonding and grounding serves to minimize electrical surge effects and hazards, augments electrical bonding, and lowers the system ground reference potentials. This does not replace the requirements for electrical power grounding, but supplements them with additional bonding that generally follows communications pathways.

Scope of Work

- Provide an insulated Telecommunications Main Grounding Busbar (TMGB).

- Provide a 2/0 AWG braided insulated copper bonding conductor from the TMGB and bond directly to the electrical service ground.

Products

- The TMGB must be 1/4" thick by 4" tall by 20" long and must be wall mounted attached with wall mount brackets and insulators. Product should be similar to Newton Instrument Company model # B-6142

Execution

- Install TMGB and bond to the electrical service ground with a copper bonding conductor. The ground potential reference between the TMGB and the electrical service ground must be less than 0.1 ohm.

UTILITIES

The SS&TP site is already well served by an existing utility system backbone infrastructure, representing gas, power (electric), communications, municipal water and sanitary sewer service. Extensions from this existing infrastructure are anticipated to serve the SS&TP (see Master Utility Plan, page 65). Primary utility corridors are within or adjacent to the proposed streets, although utility easements extending through tracts are also expected in several areas.

A water and sanitary sewer serviceability letter has been received from the City Utility Development Division that essentially requires utilities as proposed in the SS&TP Utility Master Plan.

Sanitary Sewer

Sanitary sewer service originates from the existing 21" interceptor line in Eubank. From this interceptor, 8" lines will be extended easterly into the site at various locations corresponding to proposed and existing street access points. One existing line reach extending from the Mobile Home Park to the Eubank interceptor, will be abandoned in place and rerouted to proposed street alignments, due to its current alignment in rear areas of the proposed lotting/tracts arrangement. Please refer to the Master Utility Plan exhibit for further description.

A water and sanitary sewer serviceability letter has been received from the City Utility Development Division that essentially requires that service requirement as proposed in our master plan.

All lines will be public, and owned by the City of Albuquerque.

Water Service

Water service will be provided via looped extensions from existing City water lines in Eubank Boulevard (14" line) and Gibson Avenue (10" line). The site's location near and slightly beyond the bottom of a water zone (Zone 5E) ensures high system pressures, perhaps in the range of 100 psi or slightly greater. Typically, 8" and 10" water lines will be extended throughout the site, primarily in street right-of-ways, and looped to existing lines to provide greater flow volumes for fire protection and system redundancy. A short 16" extension is necessary in Eubank, south of the base entry, and extending to the Innovation Parkway intersection. An additional 10" water line extension in Stephen Moody, to the north perimeter of the SS&TP, is also necessary. This line will be extended by future projects along Stephen Moody.

All lines will be public, and owned by the City of Albuquerque.

Other Utilities

The Eubank Boulevard right-of-way contains the other primary service facilities - existing gas lines and communications lines, including fiber optics, which will be extended into the project.

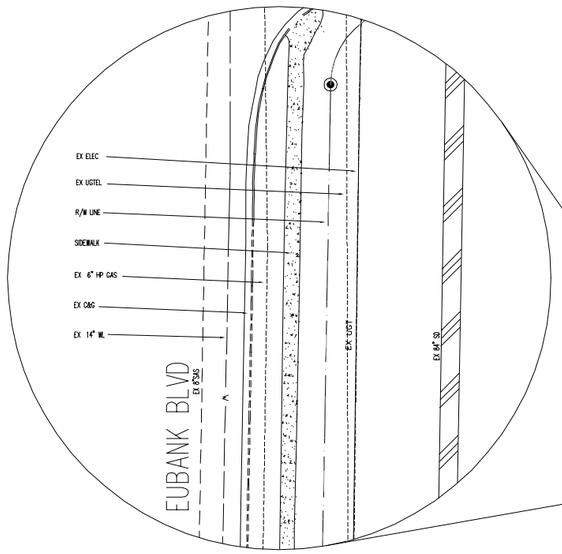
INFRASTRUCTURE REQUIREMENTS FOR INDIVIDUAL DEVELOPMENT PROJECTS

This section outlines the general framework for determining and implementing infrastructure requirements for individual development projects. The SS&TP Master Development Plan is approved without initial requirements for complete installation of infrastructure to serve the SS&TP. Generally, the infrastructure required for a proposed development site within the SS&TP is that minimal amount required to:

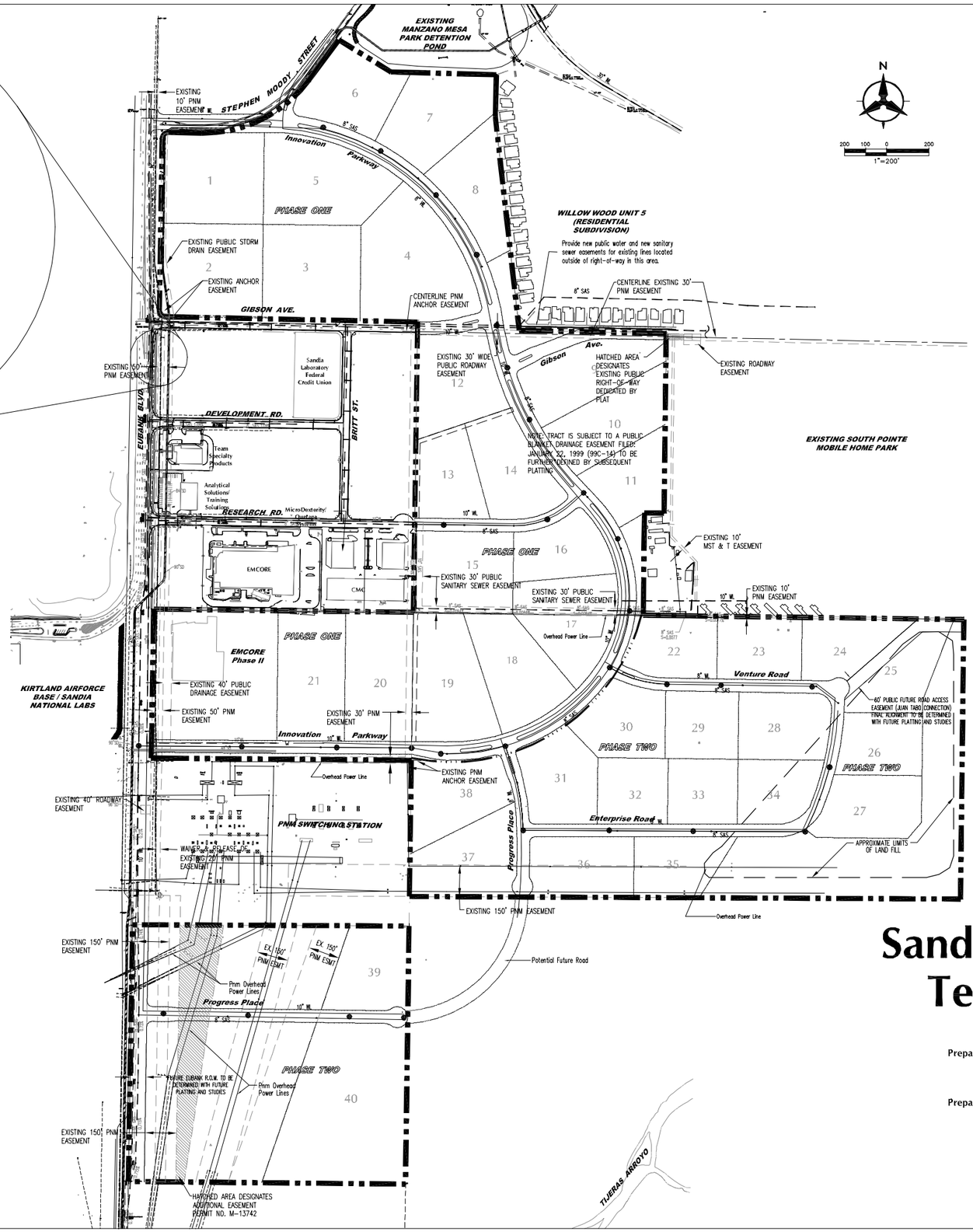
- Provide basic infrastructure to the proposed development site (water, sanitary sewer, storm drainage, road/access)
- Cover the site's street frontage with the infrastructure extension
- Extend infrastructure, as required, to adjacent or upstream properties in order to permit their future development in accordance with the Master Development Plan
- Comply with the approved Offsite Transportation Mitigation agreement

The cost of infrastructure construction is the obligation of the proposed development. Additional guidelines include:

1. The approved Master Development Plan shall guide the extent and nature of the required infrastructure.
2. On a 60 foot right-of-way street, minimum required roadway infrastructure will typically require a minimum 24 foot wide, two-lane paved section, extended from an existing paved roadway to and across the tract requesting building permits, or as required by the "Minimum Roadway Infrastructure Matrix," whichever is greater.
3. Any roadway construction with the Innovation Parkway or Gibson Avenue right-of-way will require construction of the full cross-section. Additionally, construction of Gibson Avenue, or any part of Gibson, will require the complete reconstruction of the Gibson/Innovation Parkway intersection and closing of the old roadway in accordance with the Master Plan.
4. Water, sanitary sewer, and storm drain infrastructure must also be extended from existing facilities in or adjacent to the SS&TP to and across the tract requesting building permit.
5. Temporary facilities are not permitted unless approved by the City Engineer.
6. Infrastructure may be constructed under a Procedure "A" subdivision improvement agreement form.
7. Infrastructure requirements will generally be established during the building permit process. A "preliminary determination of infrastructure" is encouraged and may be obtained upon request of the City Engineer.
8. All required infrastructure must be complete and accepted by the City prior to certificates of occupancy for the building.
9. In some cases, looped waterlines may be required to provide sufficient fire protection and so may require additional infrastructure construction.
10. The normal City water and sewer pro rata process is not available or applicable to the SS&TP.
11. This incremental infrastructure extension process does not preclude the SS&TP's construction of infrastructure in advance of development.



TYPICAL EUBANK UTILITIES
SCALE: 1" = 20'



NOTES:

1. New extensions of power, gas, communications and cable lines will be extended underground and looped through the site in 10'–15' wide public utility easements located on the private side of street right–of–way lines, and coordinated with PNM for detailed design requirements.

2. The Master Plan identifies primiary streets and potential lot configurations. The street system is anticipated to remain through out the project life, however, the shown lots should be construed only as conceptual, for reference and subject to change as individual development arises.

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Master Utility Plan

Sandia Science and Technology Park

Prepared For:

Science and Technology Park
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Albuquerque, New Mexico 87120

Prepared By:

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12. Eubank Boulevard is an existing paved roadway, and is further programmed for reconstruction to the six-lane facility with bike lanes by the City in the near future.

13. The reach of Eubank (east half) between Innovation Parkway (at the PNM Switching Station) and the southernmost point of the SS&TP shall be the responsibility of the SS&TP and required in the development of Phase 2 properties.

14. If the infrastructure identified in the off-site transportation mitigation agreement has been constructed by the City or other party, the equivalent off-site transportation mitigation infrastructure will be identified by the City Engineer in 2001 dollars.



7. PHASING PLAN

DEVELOPMENT PHASING

Development, platting and construction phasing of the SS&TP is anticipated and planned. Two primary phases are identified in this Master Development Plan (see Phasing Plan, page 71). Phase 1 is the northern properties of SS&TP, comprising Lots 1-16, the EM-CORE Phase 2 expansion (approved by separate plan) and Lots 17-21. This is a logical first phase because it lies closer to existing infrastructure than the remaining property and has fewer encumbrances.

Coincidently with the Phase 1 of the SS&TP Master Development Plan, the City will be pursuing funding, design and construction of Eubank Boulevard improvements.

Phase 2 is the southern lands of the SS&TP, comprising Lots 22-40. Issues regarding the existing landfill developability and funding for infrastructure extensions (or simply waiting on infrastructure to come to this phase over time) are the essential elements involved in identifying these lands as the second phase.

However, even within these two primary phases, development, platting and infrastructure construction will occur in a piecemeal, phased fashion, and generally in a north-to-south manner. Typically, potential site purchasers will identify a site for development that may or may not be adjacent to existing infrastructure and platted. If infrastructure is not available, then extensions will be required to provide just that necessary infrastructure. If platting of the selected land has not occurred, then platting to create a lot will be necessary. This will be repeated on a regular basis until the build-out of the SS&TP.

All infrastructure and platting will comply with this Master Development Plan. Minor changes to the Phasing Plan are permissible and can be approved, as necessary, by the Planning Director. Appropriate areas of Phase 2 may be started prior to the full buildout of Phase 1.

INFRASTRUCTURE FUNDING, CONSTRUCTION, and COST SHARING

The STPDC and the landowners have a preference for working with a Master Developer for the build-out of the Park due to the many advantages this provides for infrastructure funding, construction, and cost-sharing. If a Master Developer is agreed to by all parties, that Developer can manage the financing, construction, and equitable distribution of cost-shares for infrastructure accordingly. In addition, portions of the backbone infrastructure can be installed in advance, allowing for a more seamless process for the build-out of the Park. The Master Developer will build the infrastructure in accordance with the approved Master Development Plan, with construction of infrastructure occurring prior to the time of issuing the certificate of occupancy (see section on Expedited City Review and Approval Process, page 8).

However, since the Master Development Plan precedes the presence of a Master Developer, and since the Memorandum of Understanding for the Park anticipated infrastructure funding and cost-sharing if necessary, the following general summary has been prepared for a methodology that could be utilized to manage phased infrastructure occurring over many parcels owned by separate landowners. It is included here as an example only, actual agreements may differ so long as the goal of an equitable cost-share system is established.

Basic assumptions of this example program are that (1) all infrastructure in the SS&TP, within reasonable area limits and in reasonable amounts, benefits all the properties in the Park (i.e., there are simultaneous advantages to all owners for improvements anywhere within the Park boundaries); and (2) that all lands within the Park will have generally similar land values (except for the obvious differences based on location, frontage, and infrastructure availability). It is suggested

then that a reasonable basis for cost sharing is by the proposed Phases 1 and 2 area acreages and proportional shares of infrastructure requirements.

The infrastructure requirements and cost-sharing program would have to be administered by a coordinator either within the STPDC or within a landowner group. (Note that if a Master Developer is in place, all of the following steps will be replaced by an internal process to one entity.) An accounting ledger would be established by the coordinating entity to track credits, disbursements, and assessments. Based on the site selected by a new SS&TP tenant and on the requirements of the Infrastructure Master Plans in place, the following approximate guidelines could be used to set up a manageable program. (Example only, subject to revision)

1. All required infrastructure to serve that site (in accordance with City policies and adopted plans) would be identified, designed, constructed, and funded by the purchaser prior to the time of certificate of occupancy.

2. Prior to design efforts beginning, the coordinating entities will confirm and agree to the infrastructure construction proposed. (The coordinator will have preliminary estimates of the infrastructure costs prepared for informational and budgetary purposes).

3. After receiving final actual construction costs (post-construction), the coordinator would revise the accounting ledger to credit the Purchaser with the amount fronted to install the infrastructure. Other benefitted properties within the SS&TP could then be assessed on a prorated, per acre basis for their proportionate share of the costs of the constructed infrastructure.

4. The benefitted properties are not required to reimburse the original Purchaser until they are developed, so costs are always deferred until the time of building permit.

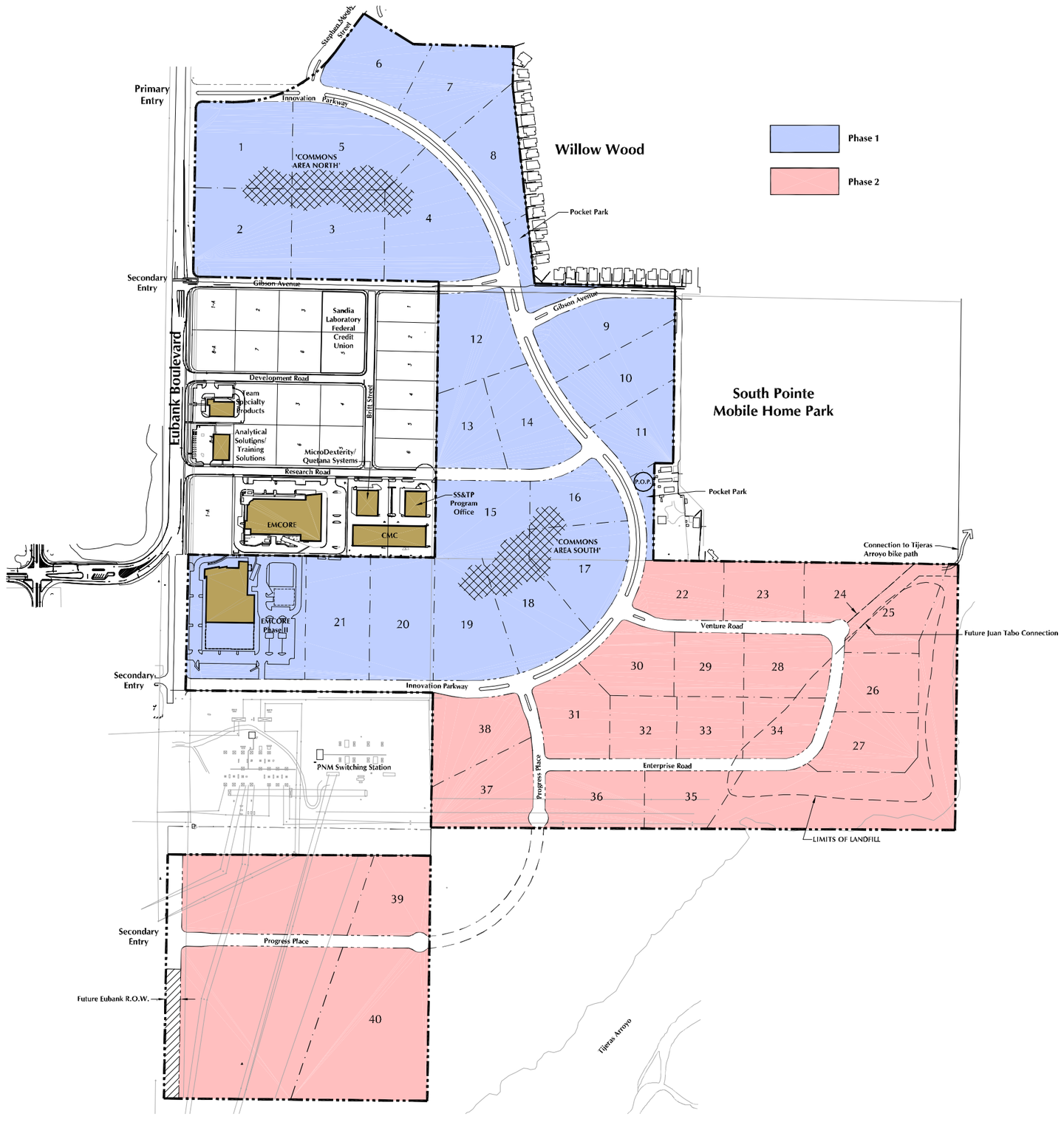
5. Arrangements can be made to escrow or deposit excess reimbursements collected until further construction is required, and to protect against distributing funds inappropriately.

6. If a Purchaser ends up constructing less infrastructure than the total amount due for that lot's full build-out assessment, due to unique lot configuration or other reasons, then the Purchaser could pay the difference to the coordinator for other future infrastructure.

7. With each new transaction, the coordinator would need to update and revise the accounting ledger in order to maintain accuracy, current status, project history, and related items.

Required traffic mitigation for SS&TP properties, once finalized through negotiations with the City, must be constructed prior to the time of building occupancy. The acreage for any method established for infrastructure cost-sharing in Phase 2 shall reflect appropriate consideration for usable versus unusable lands.

An agreed upon methodology for coordinating the infrastructure assessments (such as the example described above) shall be established with the consent of all parties to the MOU only if a Master Developer is not present subsequent to final approval of the Master Development Plan, and prior to the first building permit within the approved Park. If a Master Developer is present, the basic steps outlined in the Expedited City Review and Approval Process (page 8) shall be followed.



Phasing Plan

Sandia Science and Technology Park

Prepared For:

Science and Technology Park
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SMPC ARCHITECTS

Scale 1" = 200'

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North

July, 2001

APPENDIX A: APPROVAL PROCESS

This section includes a memorandum from the Mayor's Office dated May 21, 2001 that outlines the approval and infrastructure improvement processes, and an approval process checklist and reference guide. These documents should be referenced by City staff and Park users as the SS&TP develops and new projects are proposed.

City of Albuquerque

Office of the Mayor/CAO

INTER-OFFICE CORRESPONDENCE **May 21, 2001**

TO: Robert McCabe, Planning Director
Larry Blair, Public Works Director

FROM: Lawrence Rael, Chief Administrative Officer

SUBJECT: Sandia Science & Technology Park Development Approvals

On February 28, 2000 the City executed a Memorandum of Understanding (MOU) for development of the Sandia Science and Technology Park (SS&TP) with the following parties or their assigns:

1. Albuquerque Public Schools
2. New Mexico State Land Office
3. Sandia National Laboratories
4. Science and Technology Park Development Corporation
5. Shaw Mitchell, and Mallory Limited Partnership.

In accordance with the MOU, the Sandia Science & Technology Park will prepare a Master Plan which will identify major public infrastructure necessary for the development of the SS&TP

Park. Pursuant to the terms of the MOU, "a pre-approved pro-rated infrastructure cost-sharing formula" is required but shall not be subject to City review, approval, and administration. The developers and/or landowners of the Sandia Science & Technology Park will be responsible to prepare and internally administer among themselves the pro-rated infrastructure cost-sharing formula and payments.

Also pursuant to the MOU, the following approval process shall be used to expedite all subsequent development approvals within the Sandia Science & Technology Park:

1. The Planning Director shall approve all site development plans. Pre-design meetings with the Planning Director are encouraged.

2. The DRB shall review for approval all required subdivision plats in a "minor subdivision" process (i.e., no public hearing) unless the subdivision is more than ten lots or a vacation action is required, in which case the review and approval shall be processed as a "major subdivision".

3. No infrastructure improvements or financial guarantys shall be required as a condition of subdivision plat approval or site development plan approval.

4. All infrastructure improvements, including but not limited to off-site traffic mitigation measures and rights-of-way acquisition, normally identified and required

at the time of subdivision plat approval or site plan approval, shall instead be identified and required at the time of building permit review or Design Review Committee ("DRC") review. However, at any time in this process prior to building permit review or DRC review a developer or landowner may request a "preliminary determination of required infrastructure" for due diligence purposes from Public Works.

5. The "final determination of required infrastructure" improvements shall be identified by the Public Works Department on the building permit plans. The building permit plans shall also state that **"Satisfactory completion and acceptance of all ~~the~~ required infrastructure shall be a condition of issuance of a Certificate of Occupancy."**

6. The Planning Department shall not issue a Certificate of Occupancy until and unless the City Engineer has issued a Certificate of Completion and Acceptance for all the infrastructure requirements. Temporary Certificates of Occupancy shall not be issued.

7. Each developer or "or landowner" of the Sandia Science and Technology Park shall be required to execute a "Procedure A" Subdivision Improvements Agreement with the City for any required infrastructure improvements wherein developer and/or

landowner shall agree to construct all required infrastructure, and also agree that developer will not be entitled to a Certificate of Occupancy until the City Engineer has accepted all required infrastructure.

8. Nothing herein is intended nor shall it be construed to prohibit construction of infrastructures prior to building permit review provided that the required City processes are followed.

APPROVAL PROCESS CHECKLIST AND REFERENCE GUIDE

The following checklist and reference guide is intended to assist the Planning Director and City Engineer, and ultimately Building Permit plan reviewers, in evaluating projects for compliance with the SS&TP Master Development Plan. The items listed below are the minimum requirements that projects must demonstrate compliance with. However, in order to understand the spirit and the intent of the SS&TP, reviewers are strongly encouraged to refer back to the specific referenced sections in the Master Development Plan. In many cases, the items are presented here out of context and, therefore, page references are given to allow the reviewer access to more information. An approval process diagram is also included in this section which details the specific level and type of review required. Significant amendments to the Master Development Plan require approval by the Environmental Planning Commission, and notification to the adjacent neighborhood associations.

3. EXISTING CONDITIONS

PERMISSIVE LAND USES *(pages 12-13)*

- Auditorium, place of assembly
- Bottling plant
- Club
- Cold storage plant
- Golf course or golf driving range
- Hospital for animals
- Ice plant, wholesale
- Institution, including library, museum, school, day care center, but not disciplinary institutions or hospitals for human beings
- Laboratory - experimental, testing, or medical, provided all activities are conducted within a completely enclosed building. Noxious fumes, odor, or dust shall not be emitted from the premises
- Machine shop
- Manufacturing, assembling, treating, repairing, or rebuilding articles except those conditional or otherwise limited in this zone and the M-1 zone or specifically listed as permissive or conditional in the M-2 zone, provided manufacturing is conducted within a completely enclosed building
- Metal stamps, tool and die making
- Office
- Office machine equipment sales and repairs
- One dwelling per premises for a watchman or caretaker on the same premises with commercial or industrial use
- Park and ride temporary facilities
- Parking lot related to another use permitted in this zone, as regulated in the O-1 zone, including off-site or shared parking facilities for Park tenants
- Point-of-Presence Utility Enclosure (POP)
- Printing, publishing, lithographing, blueprinting, or photostating
- Public utility use or structure and fire stations
- Retail sales of the following goods, plus incidental retailing of related goods and incidental service or repair:
  - Books, magazines, newspapers, except no adult book stores or adult uses
  - Cosmetics, notions, gifts
  - Drugs, medical supplies

- Flowers and plants
- Food and drink, for consumption on premises

- Sales and display rooms or buildings for wholesalers, distributors, warehouses, or manufacturers
- Services:
  - Banking, loaning money, drive-in facilities
  - Barber, beauty
  - Clinic
  - Day care center
  - Dry cleaning, laundry, clothes pressing
  - Health gymnasium
  - Hotel including incidental uses
  - Photography, except not adult photo studio
- Sign, on-premises only (see Section 5: DESIGN STANDARDS for detail on signs)
- Sheet metal working
- Swimming pool
- Warehouse
- Wholesaling
- Wireless telecommunications facility (see Section 5: DESIGN STANDARDS for detail)

3. MASTER PLAN CONCEPT

TRAILS *(page 25)*

- Trail design meets 1999 AASHTO Guide for the Development of Bicycle Facilities
- Coordination with City's Trail Planner

ALTERNATIVE TRANSPORTATION *(page 29)*

- Enhanced transit stops (shelter, seating, lighting) located adjacent to pedestrian routes
- Bus bay pull-outs along Innovation Parkway

4. LANDSCAPE MASTER PLAN

IRRIGATION SYSTEM *(page 36)*

- Automated irrigation system
- Backflow prevention device

LANDSCAPE MAINTENANCE *(page 36)*

- Maintenance responsibility statement

5. DESIGN STANDARDS

STREETSCAPE - *Easements (page 39)*

- 25 foot easement on each side of Innovation Parkway (exception is area adjacent to the PNM Switching Station and EMCORE site phase 2)
- 15 feet easement on each side of Opportunity Road, Research Road, Venture Road, Enterprise Road, and Progress Place
- 75 x 75 feet easement at Eubank/Innovation Parkway primary entry (north)
- 50 x 50 feet easement at Eubank/Innovation Parkway secondary entry (south)

- 50 x 50 feet easement at internal intersections
- 20 feet wide easement between Lots 24 and 25

STREETSCAPE - ***Plant Materials (pages 39-40)***

- Street trees 20 foot on-center average along Innovation Parkway
- Street trees - 30 foot on-center average along other streets
- Median trees - 50 foot on-center average
- 75% landscape area covered with living plant material
- Low water use turf - 20% minimum and 40% maximum of landscape area

PARKING ***(pages 40-41)***

- One parking space per 200 square feet of net leasable area on the ground floor for office and retail uses, and one parking space per 300 square feet of net leasable area in the basement areas and on all floors above the first floor - additional remote parking allowed (no parking maximum required)
- Large parking areas broken into smaller parking areas of 100 or fewer parking spaces
- Landscape medians - 12 feet minimum in width
- ADA compliant parking adjacent to main building entrance
- Pedestrian connections through parking areas - 6 foot minimum width with slightly raised and/or textured paving where it crosses vehicular entrances and drive aisles
- Shade trees along walkways - 25 foot on-center
- Parking lot trees - 1 per every 6 parking spaces
- Maximum distance from any parking space to a tree - 50 feet (trees within 8 feet of parking lot perimeter may be counted, but not to be used to fulfill street tree requirements)
- 75% of parking lot trees to be large canopied deciduous trees
- Parking distributed among several parking courts on each site, placed behind buildings or screened from surrounding neighborhoods
- Demarcated car/van pool preferred parking near building entrance
- Bicycle spaces - 1 per 20 parking spaces, located near building entrances

BICYCLE FACILITIES ***(pages 41-42)***

- Covered, secured bike storage area (minimum 200 square feet) for each building over 35,000 square feet
- Bike racks located near building entrances
- Shower facility for each building over 50,000 square feet

SITE LANDSCAPE ***(pages 42-43)***

- Compliance with Water Conservation Ordinance and Pollen Ordinance
- 15% of site area (minus building square footage) devoted to landscape materials
- Tree density - 1 tree per 2,000 square feet of landscape area
- 75% of landscaped area covered with live plant material
- Landscape headers to separate turf and planting beds
- Automatic underground irrigation system
- Statement of maintenance responsibility by Owner
- 10 foot minimum landscape buffer along property lines abuting residential development and the PNM Switching Station

- Landscape buffer trees - 25 foot on-center average
- Landscape buffer trees - 25 feet minimum height at maturity
- Landscape buffer trees - 75% coniferous
- Minimum plant sizes:
  - Canopy trees - 2" caliper B&B
  - Evergreen trees - 8 foot minimum height
  - Accent trees - 1 1/2" caliper B&B
  - Shrubs and groundcovers - 1 gallon minimum
- Low water use turf - 40% maximum of landscape area
- High water use turf - 20% maximum of landscape area

SITE PLANNING ***(pages 43)***

- Cross access easement between adjoining parcels
- Outdoor patio space (minimum 250 square feet) with tables and seating; exception for buildings located adjacent to the Commons Area
- Plazas, courtyards, and other outdoor activity/seating areas - 25% minimum, 50% maximum shading by tree canopies or shade structure which is architecturally integrated with the building
- Sidewalk (8 foot minimum) along front of buildings less than or equal to 35,000 square feet
- Sidewalk (15 foot minimum) along front of buildings greater than 35,000 square feet
- Sidewalks shaded with architecturally integrated portals or canopies, or planted with shade trees at intervals of 25 feet in planters with a minimum dimension of 5' x 5'
- Pedestrian connections (6 foot minimum clear path) provided from each building to the internal circulation system and to adjacent roadways
- Shade trees provided along pedestrian connection at an interval of 25 feet in planters with a minimum inside dimension of 5' x 5'
- Continuous sidewalk (6 foot minimum) located around perimeter of buildings greater than 4,000 square feet
- Primary pedestrian connections and outdoor activity areas - patterned, stained, or integrally colored concrete and/or concrete inlaid with tile
- Asphaltic paving only in parking/service areas and bicycle trails
- Compliance of perimeter walls to the City's Design Manual for Subdivision Access and Perimeter Walls

COMMONS AREAS ***(pages 43-44)***

Individual developers of parcels adjacent to the Commons Areas are required to set aside a certain area of the parcel for development of the Commons Area. The cost allocation per parcel will be based on the parcel acreage and the floor area ratio (FAR). These funds will be placed in an account held by the STPDC or a tenants' association until 75% of the cost to develop the Commons Area is achieved. If a master developer is ultimately chosen by the STPDC, that individual will be responsible for developing the two Commons Areas. The Commons Areas will be maintained by a tenants' association.

- Adjacent to Commons Area North
- Adjacent to Commons Area South
- Commons Area on site plan (10% of building square footage per parcel)
- Commons Area easement on plat
- Reciprocal cross-access easement between adjacent lots

- Pedestrian link from perimeter of Commons Area to Park trail/sidewalk network (10' min. width)
- Pedestrian access from building to Commons Area (20' min. width)
- Shade tree density - 1 tree per 1,800 square feet of landscape area
- No parking lots between building and Commons Area

POCKET PARKS ***(page 44)***

- Comply with Water Conservation Ordinance and Pollen Ordinance
- Sidewalks through pocket parks - 6 foot minimum width
- Turf grasses - 50% minimum, 75% maximum
- Trees - average density of 1 tree per 1500 square feet of landscape area
- Minimum plant material sizes at time of installation:
  - Canopy trees – 2" caliper B&B
  - Evergreen trees – 8 foot minimum height
  - Accent trees – 1-1/2" caliper B&B
  - Shrubs and groundcovers – 1 gallon
- Landscape headers (6" x 6" concrete, or other similar quality material) to separate turf areas and planting beds
- Automatic underground irrigation system
- Statement of maintenance responsibility
- Site furniture:
  - Litter receptacles (2)
  - Drinking fountains (1)
  - Bench seating (24 linear feet)
- In addition, the north pocket park shall include, at a minimum, a 6-station exercise course.

SETBACKS ***- Buildings (pages 44-45)***

- From Innovation Parkway right-of-way line - 50 feet
- From Secondary Roads right-of-way - 35 feet
- From property line of residential zones - 60 feet
- From property line of other adjacent properties - 25 feet

SETBACKS ***- Parking Areas (page 45)***

- From Innovation Parkway right-of-way line - 25 feet
- From Secondary Roads right-of-way - 15 feet
- From property line of residential zones - 25 feet
- From property line of other adjacent properties - 15 feet

ARCHITECTURE ***- Development Densities (page 45)***

- F.A.R. - .25

ARCHITECTURE ***- Building Heights (page 45)***

- In accordance with O-1 zone

ARCHITECTURE ***- Building Entrances (page 45)***

- Architecturally integrated awnings, canopies, or portals along the entire front facade or shade trees provided at intervals of 25 feet in planters with a minimum interior dimension of 5' x 5'
- Entries clearly defined and connected to pedestrian linkages
- Entry lighting

ARCHITECTURE - *Service Areas (page 45)*

- Screened from view by shrub planting, walls, or solid fencing
- Screen visually solid and compatible with overall building design, color, and materials
- Opaque refuse enclosure gate; no chain link

ARCHITECTURE - *Building Articulation (page 45-46)*

- Building elevation to step down at street edge
- Variety in structural forms
- Dimension and detail columns, arcades, corner articulation, overhangs, awnings, marquees, gutters and scuppers, breezeways, and soffits
- Extended architectural detailing on ground floor in an elevational band from 0 to 10 feet such as change in color or texture, architectural expression expansion joints as reveals, door and window articulation and architectural accents
- Architecturally integrated ATMs, if provided
- Drive through facilities shaded with architecturally integrated canopies

ARCHITECTURE - *Equipment (page 46)*

- Roof top equipment, appurtenances, and penthouses placed below the top of the parapet and architecturally screened with a visually solid surround compatible with predominant building color
- Roof penetrations not architecturally screened with visually solid surround to be painted to match roof color or general building color
- Architecturally screened and enclosed ground-mounted equipment with the top of the equipment below the top of the screen

ARCHITECTURE - *Portable Buildings (page 46)*

- Screened from view with dense landscaping
- Permanent portable buildings to match primary materials of overall building

ARCHITECTURE - *Materials and Colors (page 46-47)*

- Colors - native New Mexican landscape palette
- Colors - inherent color of the material rather than applied (or painted) color, except when used as accent
- Entry monument theme color and materials to be repeated throughout the site

ARCHITECTURE - *Plan Arrangement (page 47)*

- Open courtyard designs for transitions between parking areas and building facades

LIGHTING *(page 47-48)*

- Fully shielded horizontal lamps
- Height standards:
    - Streetlights - 25 foot max.
    - Parking area - 20 foot max.
    - Walkways and entry plazas - 16 foot max.
- Light patterns to avoid glare or reflection on adjacent properties, buildings, or roadways
- Uplighting fixtures, if used, limited to 100 maximum wattage and designed to comply with the New Mexico Night Sky Protection Act

SCREENING/BUFFERING ***(page 48)***

- Mechanical equipment - screened from public view with materials and design compatible with building
- Refuse enclosures - adjacent to building and screened from public view with materials and design compatible with building
- Loading areas - screened from public view by walls, trellises, or landscaping
- Walls or landscaped berms 2 1/2 to 3 feet in height to screen parking areas adjacent to streets
- Walls, if used, designed to integrate with building materials and colors

SIGNAGE ***(pages 48-49)***

- Entry monument signs installed and maintained by master developer or tenant association
- Primary entry statement within 75 x 75 foot easements at Eubank/Innovation Parkway (north)
- Secondary entry statements within 50 x 50 foot easements at Eubank/Opportunity Drive; Eubank/Innovation Parkway (south); and Eubank/Progress Place
- One monument sign per street frontage on individual sites, architecturally integrated with building color and materials
    - 50 square feet in area, or 4 feet in height
    - Materials similar to those used at primary project entries
- Directional signs - 20 square feet in area or 4 feet in height max.
- Project entry signage consistent in height, size, color, material, text height and style
- Building mounted signs - individual channelized letters
- Building mounted signs - max. 6 % of facade; 5 feet max. height; 5 x 5 foot max. logo size

WIRELESS TELECOMMUNICATIONS FACILITIES ***(page 49)***

- Height for co-located facility - 75 foot max.
- Antenna, if used, integrated into building architecture

6. INFRASTRUCTURE & ENGINEERING

GRADING/DRAINAGE ***(pages 51-54)***

- Comply with Master Drainage Plan concepts
- Controlled discharge on some parcels
- Grading sensitive to future development on adjacent sites
- Drainage infrastructure extended through site for upstream properties
- Managed offsite upstream flows
- Public or private easements provided

PUBLIC INFRASTRUCTURE ***(pages 55-56)***

- Comply with street networks and utility extensions identified in transportation and utility master plans
- Required infrastructure identified
- Extend utilities and road improvements (in most cases, half street improvements will be satisfactory) to, through, and across the site, as necessary
- Comply with approved Offsite Transportation Mitigation agreement
- Public and/or private easements provided

INDIVIDUAL DEVELOPMENT PROJECTS - INFRASTRUCTURE REQUIREMENTS ***(pages 64, 67)***

- Basic infrastructure provided
- Street frontage covered with infrastructure extension
- Infrastructure extended to adjacent or upstream properties
- 60' right-of-way - minimum 24' width, 2-lane paved section or "Minimum Roadway Infrastructure Matrix," whichever is greater
- Full roadway cross-section with any contruction in Innovation Parkway or Gibson Avenue rights-of-way
- Complete reconstruction of the Gibson/Innovation Parkway intersection and closing of the old roadway with construction of any part of Gibson
- Water, sanitary sewer, and storm drain infrastructure extended from existing facilities in or adjacent to Park and to and across tract requesting building permit
- Required infrastructure completed and accepted by City prior to C.O.
- The reach of Eubank (east half) between Innovation Parkway (at PNM Switching Station) and the southernmost point of the SS&TP shall be the responsibility of the SS&TP and required in Phase 2 development

APPENDIX B: MEMORANDUM OF UNDERSTANDING

This section includes the Memorandum of Understanding (MOU) between the City of Albuquerque; Albuquerque Public Schools; New Mexico State Land Office; Shaw, Mitchell, Mallory Limited Partnership; Sandia National Laboratories, and the Science and Technology Park Development Corporation. It also includes the City Council Resolution 28-2000 approving the MOU, providing for participation by the City Council in implementing the agreement, and reinforcing the City Council's legislative policy to seek funding for improvement of the SS&TP.

Memorandum of Understanding

for the

Sandia Science and Technology Park

Parties to this Agreement:

Albuquerque Public Schools
City of Albuquerque
New Mexico State Land Office
Sandia National Laboratories
Science and Technology Park Development Corporation
Shaw, Mitchell, and Mallory Limited Partnership

Executed: February 28, 2000

SANDIA SCIENCE &
TECHNOLOGY PARK

EXECUTIVE SUMMARY
Sandia Science and Technology Park
Memorandum of Understanding

The Memorandum of Understanding is among landowners and parties interested in the planning and development of the Sandia Science and Technology Park (SS&TP). The SS&TP is a proposed research park located in direct proximity to Sandia National Laboratories, encouraging co-location of researchers in a congenial collaboration environment. Development of the SS&TP according to the terms of this agreement will: • maximize the financial return to participating landowners; • support Sandia's research and technology transfer missions; and • support the job creation efforts and the City's infill program.

Description of the Parties, their Concerns, and their Agreements

Albuquerque Public Schools – believes the SS&TP will maximize its financial return and will use proceeds from the sale, lease, or venture development of its land for a public purpose such as school site acquisition and/or school construction. This purpose cannot become secondary to overall goals of the SS&TP. APS seeks an equitable referral system for prospects and a fair mechanism for allocating infrastructure development costs.

New Mexico State Land Office – believes that the linkage of the SS&TP to the planned Mesa del Sol development will be beneficial to the trust in which its land is held.

Shaw, Mitchell and Mallory Limited Partnership - seeks to develop their tract pursuant to the purposes enumerated in this MOU, and subject to its Master Development Plan approved by the COA.

U.S. Department of Energy – although not a signatory to the agreement at this time, DOE is supportive of the agreement and the SS&TP.

Sandia National Laboratories – has agreed to appoint a champion of the Park at the level of Vice President, and will provide funding for staff for marketing and development of the Park through the Science and Technology Park Development Corporation.

Science and Technology Park Development Corporation – a non-profit group formed by Technology Ventures Corporation with the explicit purpose of developing and marketing the SS&TP, will: actively recruit technology companies and refer them to landowners through an equitable referral system; facilitate the development of Park infrastructure; make best efforts to secure funding for a Master Development Plan.

City of Albuquerque – a landowner by virtue of its publicly owned and managed rights-of-way, has a vested interest in the success of the SS&TP due to the Park's potential contribution to economic development and diversification, including the development of high technology clusters. The City agrees to institute an expedited, predictable, and fair approval process for all sites within the SS&TP once a Master Development Plan is approved.

In addition, all landowners agree to the following:

- To comply with a set of architectural and design standards.
- To participate in the SS&TP Marketing Plan and Referral Process wherein Sandia/STPDC will actively recruit its research partners and provide exclusive referrals to SS&TP landowners.
- To participate in the development of a master plan.
- To make their land available to prospects that fit the description for potential tenants.

Description of Potential Tenants

- SNL technology partners who have entered into Cooperative Research and Development agreements or other agreements with Sandia for the furtherance of joint research;
- Critical suppliers to Sandia who provide services and materials in furtherance of Sandia's primary mission;
- Non-critical suppliers who provide services or materials to Sandia for its pursuits other than its primary mission; and
- All other companies who have or may potentially have a business association with or supply materials to Sandia or the companies listed above.

The term of this agreement is for one year, is binding on successors (within the authority of the public landowners to make such commitment), and allows for participation of owners of other, contiguous parcels of land.

Memorandum of Understanding for the Sandia Science and Technology Park

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Memorandum of Understanding for the Sandia Science and Technology Park

I. Background

Introduction

The purpose of the Memorandum of Understanding (MOU) is to commemorate the interests, activities, and terms of agreement between the three landowners and the other interested parties for the planning, development, use and management of the Sandia Science and Technology Park (SS&TP) located in southeast Albuquerque, New Mexico. This MOU is viewed as an interim step towards achieving final development of the SS&TP.

Description of the SS&TP Vision

The general vision for the SS&TP is a large campus-style technology center. The land comprising the SS&TP is owned by three landowners, who as of the date of this MOU have begun conversations to identify mutual needs and commitments, all with the interest of maximizing the real estate value and income potential of their property and enhancing Albuquerque's economic base. They have also discussed with representatives of the other interested parties, Sandia National Laboratories (SNL), City of Albuquerque (COA), the Department of Energy (DOE), and the Science and Technology Park Development Corporation (STPDC) the advantages of joining together to collaborate for the joint or individual development of each of their properties in furtherance of the SS&TP.

The parties are further committed to the development of the SS&TP with the understanding that its success will positively impact New Mexico's economy and more specifically its Central Region including Albuquerque. It is anticipated that technology-based companies will locate facilities within the SS&TP to jointly pursue commercial activities with SNL and the other area research institutions. The result will be new and better jobs for New Mexicans.

The development of the SS&TP serves a unique public purpose that is not replicated elsewhere in the Albuquerque Metropolitan Area. The unique role of the SS&TP is based on its location immediately adjacent to SNL, which is an advantage for commercialization of technology ventures sponsored by SNL. The SS&TP provides a site for the SNL technology partners to locate and expand their facilities in close proximity to SNL's specialized technology and highly trained staff. The development of the SS&TP meets several other public purpose goals, including:

- Strengthening the economic base of the community through the provision of new high technology jobs;
- Partnering with both public and private entities in a model relationship for future industrial park development;
- Fulfilling COA's goals with respect to infill development and steering new development to sites already within COA's service area;
- Providing opportunities to leverage federal dollars with local matching funds to achieve improved infrastructure in the area; and
- Enhancing SNL's role in partnering with the local community to diversify the economy through new private sector job creation opportunities.

The parties execute this MOU with the understanding that its terms will further the development of a dedicated project for the placement of buildings oriented to technology and development in a campus style environment that will primarily focus on attracting companies with the following business uses:

- SNL technology partners who have entered into Cooperative Research and Development Agreements (CRADAs) and other business agreements for the furtherance of joint research, including licensing agreements.

- Critical suppliers who provide services and materials in the support of the SNL primary national mission on behalf of the US Government.

- Non-critical suppliers who provide services and materials for the support of SNL in its pursuits other than those deemed in the interest of the primary national SNL mission as noted above.

- Other companies who have or may potentially have a business association with or supply materials or services to Sandia and the companies noted in this paragraph.

All parties recognize that Albuquerque Public Schools (APS), Department of Energy (DOE), City of Albuquerque (COA), and the New Mexico State Land Office (NMSLO), being public entities as well as landowners or potential landowners within the SS&TP, are subject to certain obligations to manage their properties in accordance with the applicable law. Descriptions of the interests of the involved parties are described in more detail below. It is recognized that both public and private entities are parties to this MOU, and each is governed by its own unique set of regulations and objectives affecting the level and type of participation allowed.

II. Parties Involved in the SS&TP

Albuquerque Public Schools (APS)

APS owns the largest tract of land within the SS&TP. On January 18, 1990, the City of Albuquerque approved the current zoning for the Manzano Mesa subdivision, a 480-acre tract of land east of Eubank Boulevard. The zoning for this land was subject to three conditions of approval relating to allowable uses within the employment areas of the site, and to platting requirements.

A description of the land subject to this MOU is attached hereto and incorporated herein as Attachment A. At this time, the land subject to the MOU is Tract E-1 of the Manzano Mesa subdivision, a 48.8766 acre size parcel, currently zoned "SU-1 for Limited IP Uses" and a parcel of land known as APS Vacant Land Parcel #4 containing 40 acres. Additional Manzano Mesa parcels adjacent to Eubank Boulevard (Tracts G-3, H, and I-1) shall be allowed to be added to the MOU property in the future if desired by APS, or may be developed separately.

Mr. Charles Atwood, the APS Director of Real Estate, articulated the following interests and concerns on behalf of APS and the use of such land for the purpose of the SS&TP:

- APS, through its governing Board of Education, hereinafter known as the Board, will consider the broad concept of the SS&TP. The Board understands and supports the concept of strategically leveraging SNL's ability to attract the local presence of technology-based companies as a benefit to the development of the Manzano Mesa subdivision.

- The APS Board has agreed to reserve Tracts E, G-3, and H Manzano Mesa, and a south parcel known as APS Vacant Land Parcel #4 from sale or marketing until December 31, 1999. The purpose of the reservation is to allow the parties to this MOU the opportunity and time to discuss, negotiate, and execute this MOU. However, only Tract E and APS Vacant Land Parcel #4 are included in the MOU at this time to allow APS the opportunity to evaluate the effectiveness of the agreement.

- The APS Board of Education enacted by Board action, effective for one year as of January 1, 1999, a moratorium reserving the noted land for one calendar year. The Board's collective intent is to allow for the SS&TP development. Should this MOU not be executed by the parties, prior to December 31, 1999, the Board will review the status of the development of the SS&TP, and then decide its future participation in the process.

- APS will support an effort to gain public funding (from City, State, and Federal programs) to build the needed infrastructure for the development of the SS&TP. APS has already provided significant infrastructure improvements in the area, and will support efforts by others to do the same.

- APS insists on establishing a time line and schedule for the planning and development of the SS&TP, referring to the Board's moratorium with an expiration of December 31, 1999. This will help the Board in justifying their participation in the SS&TP and this MOU . APS will not commit its land to the SS&TP if it does not accomplish the Board's goal to market and sell its property for the highest justifiable economic return. Proceeds from the sale, lease and/or venture development of the Manzano Mesa tracts is used for a public purpose such as school site acquisition and/or school construction. This is the Board's primary mission, which cannot become secondary to overall goals of the SS&TP.

- The APS tracts have acquired (through Subdivision Improvements Agreements and other contractual agreements), a substantial development advantage over other nearby tracts (particularly with regard to drainage) that shall not be diminished by its participation in the SS&TP.

- APS, being the largest landowner, requests that this MOU address the need for an equitable referral system to provide all MOU landowners an equitable opportunity to compete for agreements with parties seeking to build or lease in the SS&TP.

- APS also requests that SNL provide, within this MOU, a commitment to use its best efforts to get its partners to invest into the SS&TP and to help acquire other public funds for investment in SS&TP infrastructure. APS sees a significant financial risk by agreeing to limit the development of its land for the SS&TP, unless there is strong evidence by SNL, the other landowners, and the City of Albuquerque that they are also committed to the SS&TP.

APS has also emphasized its need to comply with state regulations and statutes governing the marketing and sale of its property.

New Mexico State Land Office (NMSLO)

The Commissioner of Public Lands for the State of New Mexico who is the executive officer of the NMSLO, manages the land described in Attachment A, which land is held in trust pursuant to the New Mexico Enabling Act and State Constitution. The Commissioner believes that development of the SS&TP, as anticipated herein, will serve the interests of the trust he represents. In particular, the Commissioner believes that the linkage of the SS&TP to the planned Mesa del Sol development south of the SNL lands and Kirtland Air Force Base (KAFB) will be very beneficial to the trust.

- The NMSLO has invested significant efforts to develop the Mesa del Sol property. The land that borders KAFB on its northern boundary is dedicated to industrial and manufacturing activities. Taking the larger view, the NMSLO sees the potential for a natural land use linkage between Mesa del Sol and the SS&TP.

- Between the SS&TP on the north, and Mesa del Sol on the South, lies KAFB, which is generally undeveloped and populated by several scientific and technological facilities, including the former DOE inhalation research laboratory now leased to the Lovelace Respiratory Research Institute (LRRI). As a southern point of entry to the Base, a secured entrance gate borders on the northern Mesa del Sol boundary with a road that provides a link to the KAFB and SNL facilities.

- The NMSLO supports SNL's ability to leverage its technology project base to bring its partners into the SS&TP. Given the limited size and potential higher property values within the SS&TP, Mesa del Sol provides a key opportunity for those partners seeking real estate for larger or additional industrial, administrative and manufacturing uses better suited outside the SS&TP.

- The NMSLO and SNL are presently finalizing a separate MOU which will commemorate and help effectuate the above.

The Department of Energy (DOE)

DOE, through its Albuquerque Operations Office Director of Property and Administrative Services Division, has offered the following in order to facilitate the SS&TP initiative:

- Along with the other parties to this Memorandum of Understanding, the DOE understands and supports the purpose of the SS&TP initiative being undertaken and has in fact provided some of the funding in order to assist in the promotion of the SS&TP.

- The DOE supports the initiative described in this MOU and will support development efforts by the parties to this MOU. The DOE will participate to the extent possible consistent with current DOE mission requirements, applicable policy, statutes, and regulations.

- The parties to this MOU acknowledge that DOE is currently pursuing plans to develop a new office building on its own land. The DOE is willing to share its current plans with the other parties to this MOU and further acknowledges that DOE's plans will support the purpose of the SS&TP and in fact may provide an advantage for the parties herein and may further the objectives of the SS&TP.

The Shaw, Mitchell and Mallory Limited Partnership

Shaw, Mitchell and Mallory Limited Partnership, Geneva Mitchell Managing General Partner (the "Mitchell Partnership"), is the owner of a tract described as Tract "A", Plat of Tracts "A" and "B", Lands of Shaw, Mitchell, Mallory Partnership, dated November 1998, and recorded on January 22, 1999 as Document No. 1999008790 in Book 99-C, page 14, Plat Records, Bernalillo County, New Mexico (the "Mitchell Tract"), which is under contract to Brown & Associates, Inc. (Ron Brown), and which tract is incorporated herein for use as part of the SS&TP. Mr. Bill Robertson of First Commercial Real Estate Services, Inc, is authorized agent. Brown & Associates submitted a Master Development Plan to the Development Services Division of the Planning Department for the City of Albuquerque.

- On January 21, 1999, the Environmental Planning Commission (EPC) voted to approve the Master Development Plan. In approving the requested development, the EPC enumerated certain standards and conditions that must be met as a minimum for any future development of the Mitchell Tract, referred to as the Sandia Technology Center.

- Through the efforts of Brown & Associates or otherwise, the Mitchell Partnership seeks to develop the Mitchell Tract pursuant to the purposes enumerated in this MOU, and subject to its Master Development Plan approved by the COA. The Mitchell Partnership supports the concept of using SNL's leverage to attract its partners to purchase or lease real estate within the planned SS&TP. As is the case with the other landowners, the Mitchell Partnership seeks a fair and equitable referral system for potential customers of its development.

- The Mitchell Partnership also agrees with the need to set minimum architectural and design standards for the development of the SS&TP. It further agrees that the landowners should agree at a minimum to a marketing and referral plan that provides a common vision and message for the development of the SS&TP.

APS wishes to note that some of the conditions of approval imposed on the Mitchell Tract by the City EPC are not desirable for imposition throughout the SS&TP, and specifically not desirable for the APS Manzano Mesa tracts. Therefore, the Mitchell Tract Master Development Plan

conditions are not accepted as the basis for design guidelines for the balance of the SS&TP, and will apply only to the Mitchell Tract.

City of Albuquerque (COA)

The City is a landowner within the SS&TP by virtue of its publicly owned and managed rights-of-way within the area. These rights-of-way are primarily comprised of roads and utility or drainage easements. The COA has a vested interest in the successful outcome of the SS&TP due to the role it plays on behalf of economic development, economic diversification, and development of high technology clusters that benefit the City's overall economic health.

- In return for the City's participation in this MOU, the City receives the following advantages: economic diversification and development, private sector partnerships with SNL and KAFB which protect the City's economy from the rise and fall of federal spending in the community, improved economic quality of life for Albuquerque citizens, more efficient use of in-fill land within the City's existing service area without the need for the costly extension of services, reduction in cross-City automobile use and concurrent improvements in air quality as a result of more residents living near their place of employment, increased property tax and gross receipts tax revenues resulting from construction and development of the SS&TP, and the opportunity to receive "matching funds" or grants/loans from the state and federal governments to help stretch their scarce infrastructure dollars.

Sandia National Laboratories (SNL)

Sandia National Laboratories represents a significant national investment in technological capability that spans the spectrum from people that are in demand around the globe for their expertise to world-class facilities that are not readily accessible to most research organizations. Cross-fertilization of ideas has long been known to be at the crux of a healthy and innovative research enterprise, and such cross-fertilization is enabled by physical proximity. Sandia, because of the concentration of its expertise and facilities, is the major attraction to technology companies to locate in the SS&TP. At all management levels, Sandia has committed to being a proactive proponent of the SS&TP, both within SNL, within the Albuquerque community, with its more than 300 research partners, and with companies nationwide that express an interest in working with Sandia.

The Science and Technology Development Corporation (STPDC)

The Science and Technology Park Development Corporation is a nonprofit group formed at the request of Sandia by Lockheed Martin's Technology Ventures Corporation with the explicit purpose of developing and marketing the Sandia Science and Technology Park. The STPDC will broaden the industrial base, foster creation of jobs in technology-related businesses and generate new sources of economic benefit within central New Mexico and the City of Albuquerque. The STPDC will manage the SS&TP with staff on loan from SNL.

STPDC seeks to collaborate with the MOU landowners to provide this location with the following characteristics:

- That the MOU landowners provide real estate for the development of the SS&TP, that conveys a quality, professional image suitable for a campus-style technology park.

- That the MOU landowners agree to minimum architectural and design standards to assist in the achievement of these characteristics.

- That the MOU landowners agree on criteria for tenants in the SS&TP.

III. Memorandum of Understanding Terms of Agreement

The STPDC requests the MOU landowners to agree to the following, and in the case of the public landowners, to the extent allowed by their respective authorities:

- All the parties to this MOU shall mutually agree upon a set of architectural and design standards that comply with all national, state, and local laws as attached hereto and incorporated herein as Attachment B. These guidelines will serve for the interim until final standards are developed and agreed to as part of the development of the SS&TP master development plan envisioned by this MOU.

- That the MOU landowners agree to participate in the SS&TP marketing and referral plan as enumerated and incorporated herein as Attachments C & D.

- DOE personnel assert that DOE is currently in the process of obtaining approvals and funding for the construction of its new office building on a portion of the Eubank Tract, which adjoins the SS&TP. Plans for the remaining portion of the tract, after the building is complete, are yet to be determined. However, DOE personnel agree to consider the objectives identified in this MOU for future uses. Accordingly, DOE will participate to the extent possible under the appropriate legal authority, with the marketing and referral initiatives outlined in the MOU. DOE however shall not be considered a signatory to this MOU. Should DOE wish to, in the future, be considered as a party to the referral process as outlined in Attachment D to this MOU, DOE will seek admittance as specified within the terms of this MOU.

- It shall be only with the written unanimous consent of all signatories to this MOU, that any subsequent landowners or other interested parties be allowed to participate as a party to this MOU. Such participation is conditioned upon the requirement that there be no economic detriment to any such prior signatories. For purposes of receiving SNL landowner referrals pursuant to STPDC referral process as specified in this MOU, the subsequent included parties shall be considered for only those referrals occurring after the date of the written unanimous consent for their individual inclusion as a party to this MOU.

- Existing signatories are allowed to add additional parcels of land to the SS&TP provided they are contiguous to the SS&TP and subject to the other conditions of this MOU.

- That the MOU landowners, to the extent allowed by their respective authorities, agree to withhold the development and use of their real estate described in Attachment A for the use of the SS&TP as described in this MOU.

- That the MOU landowners will provide a representative to participate in the master development plan and the subdivision improvement agreement process and selection of a master developer as undertaken by STPDC. The MDP and SIA must be unanimously approved by all signatories to the MOU.

- In the interim period prior to completion of an SS&TP master development plan, the MOU landowners may jointly or independently pursue and transfer their real estate interest subject to this MOU to one party to function in the role of a prime developer for the landowners' property. Such developer shall agree to adhere to the terms and conditions of this MOU.

- That the MOU landowners agree to the following terms:

    - That the land uses by the SNL technology partners and critical suppliers, as defined herein, are preferred in the SS&TP pursuant to the marketing and referral plan attached hereto as Attachments C and D.

    - That participation in the SS&TP does not preclude the landowners from selling, leasing, or otherwise conveying their property to financially qualified buyers or users that have not been referred by STPDC, so long as such buyers or users comply with terms and uses of this agreement consistent with the vision of the SS&TP at page one and two of this MOU. In the case of competition between an STPDC referral and other buyers, the STPDC referral shall have preference provided it can financially and contractually perform within thirty (30) days of the other entity's offer. If the STPDC referral cannot perform in this timely manner, the landowner may proceed with conveyance or lease to others without opposition or interference from SNL or STPDC, consistent with the terms of this MOU.

In consideration for agreeing to this MOU, STPDC agrees to the following:

- To provide the Marketing Team participation as previously referred for the duration of this MOU or until the parties to this agreement transfer their interest in the real property subject to this MOU to a prime developer or developer's association of the SS&TP. It is envisioned that this developer or developer group shall assume the duties of the STPDC Marketing Team.

- To actively encourage companies to locate within the SS&TP by executing the marketing and referral plans enumerated in Attachments C & D.

- To make best efforts to recruit at least 3 tenants that are technology companies or others interested in developing technology with SNL to locate in the SS&TP.

- To provide exclusive referrals pursuant to the referral plan enumerated in Appendix D to only those MOU landowners who have agreed to the terms of this MOU as indicated by their signatures affixed to this MOU.

- To work with the Federal, State, and City government officials to assist in securing financing for SS&TP infrastructure improvements within the next four (4) years.

- To make best efforts to secure funding to provide an approved Master Development Plan and an accompanying Subdivision Improvement Agreement (SIA) for the entire SS&TP with a written commitment for an expedited approval process from the COA. To make best efforts to secure funding to provide an RFP for a Master Developer or a developer's group or association for the SS&TP, along with a selection/procurement process that includes representatives of all MOU landowners in the selection process. Moreover, to provide a methodology for accountability between STPDC and the MOU landowners such that questions or issues arising regarding effectiveness or implementation of any item within this MOU may be equitably and expeditiously resolved.

- Within 120 days of approval of this MOU, the STPDC will present to the MOU signatories for review and approval an action plan for implementation of the MOU.

In consideration to agreeing to this MOU, SNL agrees to the following:

- To provide a Vice President level "Champion" who will promote the park concept both within Sandia as well as to the outside world.

- To provide the funding necessary to support the "Marketing Team," which will be on loan to the STPDC.

- To commit to having an SNL presence within the SS&TP (office or research staff space within a building in the SS&TP to show commitment to the park).

- To actively encourage its partners to locate within the SS&TP by executing the marketing and referral plan enumerated in Attachment C and D.

In consideration to agreeing to this MOU, the City of Albuquerque agrees to the following:

- The COA will pursue an expedited land use and infrastructure approval process for the Sandia Science & Technology Park (SS&TP), using existing city ordinances.

- This process will provide a framework for overall approval of the land use and infrastructure requirements for the park, and an expedited process for the approval of site development and subdivision requests by implementing the following: The Development and Adoption of the SS&TP Master Development Plan (MDP) and SS&TP infrastructure requirements.

- The MDP will include over-all land use, design guidelines, transportation, utility, drainage and advanced telecommunication requirements for the SS&TP.

- The MDP and infrastructure necessary for the MDP development will be reviewed and approved by the City's Environmental Planning Commission (EPC) and the Development Review Board (DRB). After the initial approval by the EPC and the DRB, neither the MDP nor individual projects within the SS&TP will be reviewed by the DRB or EPC, unless major amendments are necessary. Administrative approval authority for all SS&TP site development requests will be assigned to the City Planning Department Director.

- The SS&TP MDP will include a pre-approved, infrastructure cost-sharing formula which assigns a fixed cost or fixed cost percentage for each parcel based upon its prorated share of on-site and off-site infrastructure. Payment of costs associated with the approved MDP and site specific infrastructure for a parcel will be deferred until the time of approval of a development request by the City's Planning Department Director.

- The COA will pursue the timely implementation of approved capital improvement projects (CIP) that support the SS&TP. As part of the MDP's approved infrastructure requirements the COA capital improvements in the vicinity of the SS&TP will be identified, and city commitments will be secured regarding the scheduling and construction of those improvements.

- The City of Albuquerque and other MOU parties will collaborate by sharing information, studies, maps or other information that is relevant to tracts of property participating in the agreement and where such data has been submitted to the City of Albuquerque and/or the County of Bernalillo for review and processing. In the case of proprietary information, it may be shared by the MOU parties at each MOU party's sole discretion.

Time Frame for MOU:
The term of this MOU shall commence upon signed acceptance by all of the parties as provided within this MOU, and shall be effective for one year thereafter. At the end of the initial term, this MOU will be automatically renewed for an additional twelve (12) month period unless, or until, one of the parties, in writing at least thirty (30) days prior to the expiration of the initial or renewal term notifies the other parties in writing of its intent to terminate the MOU.

Termination:
The parties to this MOU may, by mutual agreement, terminate this MOU prior to the term as set forth in this MOU. All rights, duties and obligations to the MOU will expire at that time.

Binding of Successors of Property within the SS&TP
All of the landowners, with the exception of DOE which has limited authority, within the SS&TP currently have the ability to sell or lease bulk tracts of land to any qualified buyer. During the interim period prior to an approved master development plan for the SS&TP being in place, and prior to a master developer or development association being in place, there is risk of land sales or leases to third parties that are not bound by this agreement. This chance for change in ownership is greater for the private landowners (who have carrying costs associated with holding their land) than it is for the public landowners. Assurances must be made that any agreement signed on behalf of land included within the SS&TP binds future owners of participating tracts as well as original signers of the MOU.

Parties wishing to participate later, subsequent to the execution of this MOU: provision should be made to allow such participation so long as there is no economic detriment to the current parties to this MOU.

Effective Date of the MOU:
The following conditions for the execution of the MOU are required for the commencement of this MOU:

- The signatures of all the parties to this MOU must be obtained within 30 days of the signature of the initial signing party.

- Should any party to this MOU refuse to sign this MOU within this 30-day execution period, this MOU shall be deemed void and non-binding on any of the parties, including those who may have previously signed the MOU.

- The term of this MOU shall begin upon the date of the final signature of all parties as described within this MOU, so long as such signing occurs within 30-day execution period.

Entire Agreement
This MOU contains the entire agreement of the parties and there are no other promises or conditions in any other agreement whether oral or written. This MOU supersedes any prior written or oral agreements between the parties.

Amendment
This MOU may be modified or amended, if the amendment is made in writing and signed by all parties to the MOU.

Severability
If any provisions of this MOU shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of the MOU is invalid or unenforceable, but that by limiting such provision it would be come valid or enforceable, then such provision shall be deemed to written, construed, and enforced as so limited.

Waiver Of Contractual Right
The failure of any party to this MOU, to enforce any provision of this MOU shall not be construed as a waiver or limitation of that party's right to subsequently enforce and compel strict compliance with every provision of the MOU.

Applicable Law
The laws of the State of New Mexico shall govern this MOU.

Liability
As between the parties, each party shall be solely responsible for any and all liability arising from personal injury, including death, or damage to property arising from the act or failure to act of the respective party or of its officials, agents, and employees pursuant to this MOU. The liability of each party shall be subject to the immunities and limitations of the Tort Claims Act, Sections 41-41-1 et seq. NMSA 1978, and of any amendments thereto.

Hold Each Other Harmless
The parties shall hold each other harmless and against any and all claims, actions, suits, or proceedings of any kind brought for or on account of any section or failure to act of the other party pursuant to this MOU, and subject to the provision of the above noted previous paragraph.

Binding Effect - Appropriations
The obligations of the parties to perform their respective duties under this MOU are subject to and conditional upon the appropriations by the governing bodies of each of the parties of funds necessary to permit each party to perform their duties.

Equal Opportunity Compliance
The parties to this MOU agree to abide by all federal and state laws and regulations pertaining to equal employment opportunity. In accordance with those laws and regulations, the parties to this MOU agree to assure that no person in the United States shall, on the grounds of race, color, national origin, sex, sexual preference, age or handicap, be excluded from participation in, be denied the benefits of or be otherwise subjected to discrimination in performance of this Agreement.

Notices:
Send inquiries concerning this MOU to:

Albuquerque Public Schools -	Chuck Atwood, Real Estate Director Albuquerque Public Schools P.O. Box 25704 Albuquerque, NM 87125	Phone: (505) 765-5950 Ext. 267 Fax: (505) 768-1583
New Mexico State Land Office -	Harry Relkin New Mexico State Land Office P.O. Box 1148 Santa Fe, NM 87504-1148	Phone: (505) 827-5760 Fax: (505) 827-5766
Shaw, Mitchell and Mallory Limited Partnership -	Bill Robertson Associate Broker First Commercial Real Estate 6201 Uptown Boulevard NE Suite 202 Albuquerque, NM 87110	Phone: (505) 881-9810 Fax: (505) 881-9838
City of Albuquerque -	Erik Pfeiffer Director Office of Economic Development City of Albuquerque P.O. Box 1293 Albuquerque, NM 87103	Phone: (505) 768-3270 Fax: (505) 768-3280
Sandia National Laboratories -	Lenny Martinez Vice President, Defense Programs Products and Services Sandia National Laboratories MS 0867 P.O. Box 5800 Albuquerque, NM 87185-0867	Phone: (505) 845-8973 Fax: (505) 284-2464
Science and Technology Park Development Corporation -	Jackie Kerby Moore Program Manager Science and Technology Park Development Corporation 10520 Research Road SE Albuquerque, NM 87123	Phone: (505) 845-8107 Fax(505) 844-1389

Signatures:

- The parties to this MOU, by their signature, each attest that they have authority to enter into this MOU and agree to the terms and conditions within this MOU.
- The parties include representatives from COA; APS; NMSLO; Shaw, Mitchell and Mallory Limited Partnership; SNL; and STPDC.

By: _____ Date: 2/28/00
Jim Baca, Mayor
City of Albuquerque

By: _____ Date: 2/28/2000
Richard Toledo, President
Board of Education
Albuquerque Public Schools

By: _____ Date: 2/28/2000
Harry Relkin, Assistant Commissioner
New Mexico State Land Office

By: _____ Date: 2/28/00
Geneva Mitchell, Managing General Partner
Shaw, Mitchell and Mallory Limited Partnership

By: _____ Date: 2/28/00
Dan Hartley, Vice President
Sandia National Laboratories

By: _____ Date: 2/28
Randall B. Wilson, Officer
Science and Technology Park
Development Corporation

Attachment A. Description of the real estate subject to this MOU.

- Albuquerque Public Schools:

  1. APS Vacant land property No.4:
     SE1/4,NW1/4,Section 33, Township 10-North, Range 4-East, New Mexico Principal Meridian, State of New Mexico, County of Bernalillo, containing 40.0 acres.

  2. Tract E, Replat for Tracts A through J, Manzano Mesa Subdivision, City of Albuquerque—Bernalillo County, New Mexico, Folio 112, Volume 91-C, filed June 5, 1991, Records of Bernalillo County, New Mexico containing 48.8766 acres.

- New Mexico State Land Office:

  1. Parcel 1, a 35 acre parcel located in the NW ¼ NW ¼ of Section 33, Township 10 North, Range 4 East.

  2. Parcel 2, a 20 acre parcel located in the N ½ SW ¼ NW ¼ of Section 33, Township 10 North Range 4 East.

  3. Parcel 3, a 40 acre parcel located in the SW ¼ NE ¼ of Section 33, Township 10 North, Range 4 East.

- Shaw, Mitchell, and Mallory Limited Partnership

  1. Tract lettered "A" of the LANDS OF SHAW, MITCHELL, MALLORY PARTNERSHIP, Albuquerque, Bernalillo County, New Mexico, as the same is shown and designated on the plat of tracts "A" and "B" thereof, filed in the Office of the County Clerk of Bernalillo County, New Mexico, on January 22, 1999, in Plat Book 99C, folio 14.

  2. The acreage of this parcel is approximately 35.2742 acres

Attachment B. Description of the SS&TP design guidelines for the terms of this MOU.

The attached design guidelines are incorporated into this MOU, with the following exceptions:

- Design Guideline #16 – Deleted; and therefore not in effect.

DESIGN GUIDELINES - CRITERIA

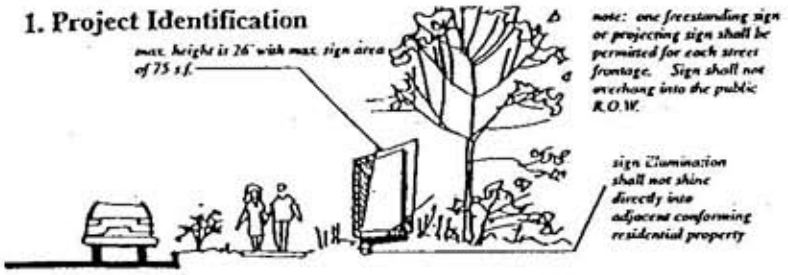
The purpose of Design Criteria is to provide a framework to ensure a character quality and visual appearance to the site and surrounding neighborhoods. These criteria address the issues of setbacks, screening, lighting, signage, landscape and drainage, creating a desirable visual image for the Sandia Technical Center. These standards are to be used as a supplement to the City of Albuquerque Comprehensive City Zoning Code and other pertinent City ordinances.

All buildings and structures within the site shall comply with all applicable City of Albuquerque zoning and building requirements as well as other local applicable codes.

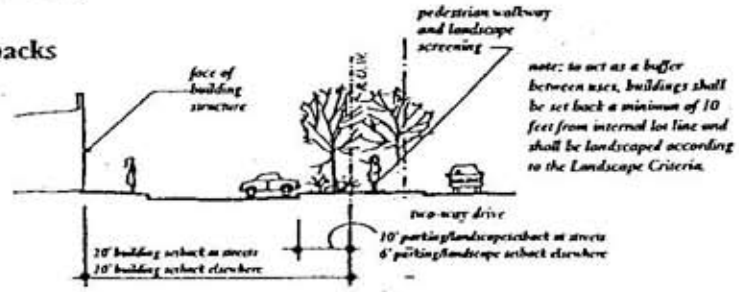
Internal Streets and Intersections

Internal intersections are treated consistently creating a strong visual impact and project identity and provide access to other parcels. The interior roadways shall be improved by the developer and dedicated to the City of Albuquerque. Private drives are those which provide access within the tracts and are not dedicated to the City.

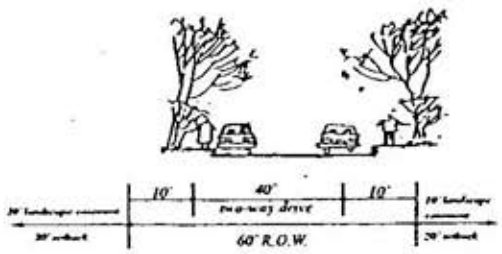
1. Project Identification



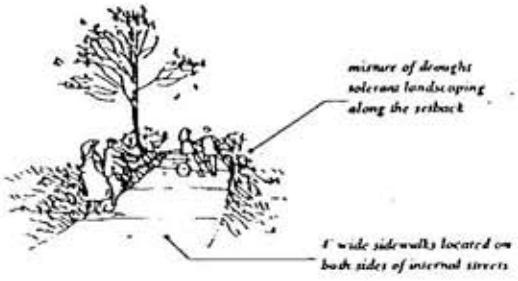
2. Setbacks



3. Internal Streets

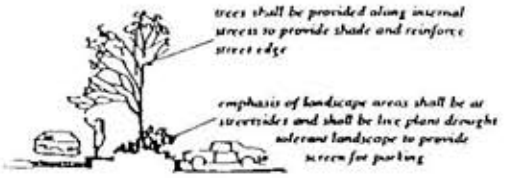


4. Pedestrian Connection



5. Landscaping

note: intersections shall be coordinated to be similarly landscaped in order to unify the development

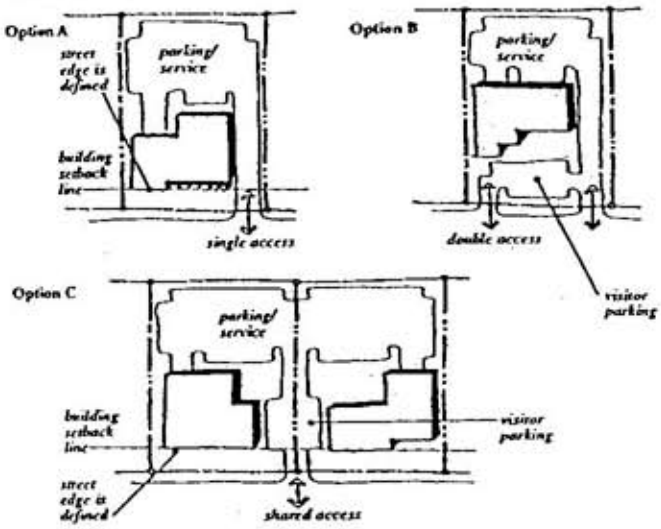


Site Design

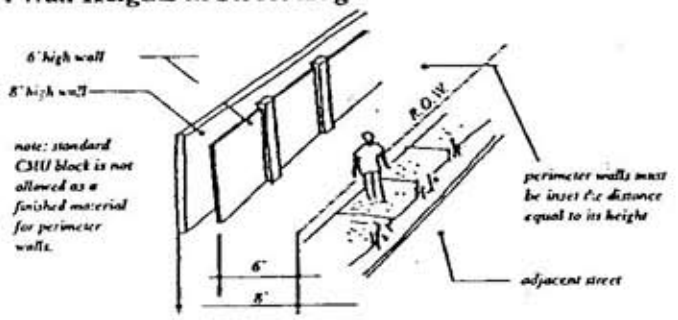
Site development plans for building permits shall incorporate the design criteria in order to achieve the desired character and integration of the site. Building setbacks as well as landscape setbacks have been identified and help to reduce the visual impact of a building on adjacent neighborhoods. The overall land use concept maintains office/warehouse use as permissible on lot sizes of at least an acre.

6. Site Layout Concepts

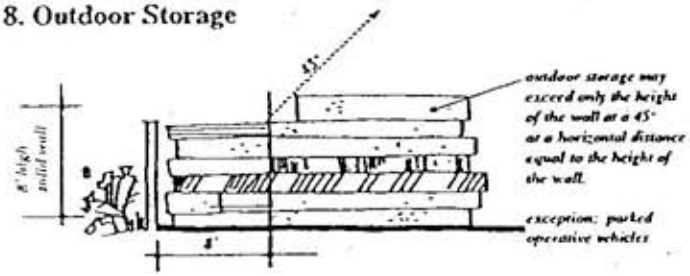
The following options are recommended for building/site layout. Building footprints are encouraged at the building setback line to give definition to the street and complex while parking at the back of the lots are visually screened.



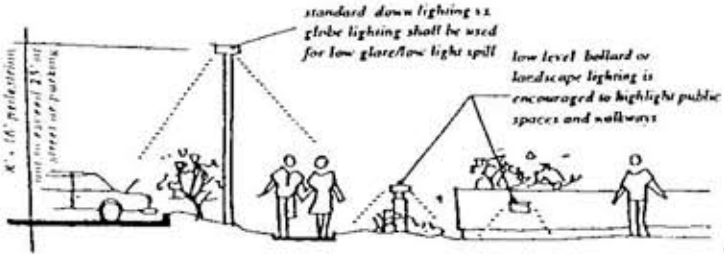
7. Wall Heights at Street Edge



8. Outdoor Storage



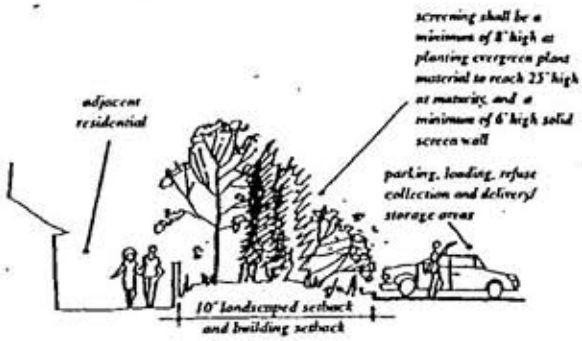
9. Site Lighting



10. Landscaping

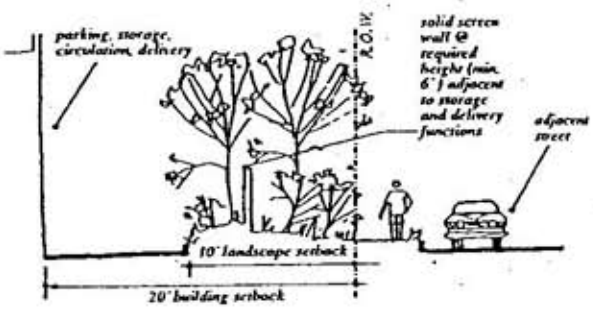
This development is designed to include landscaping as a unifying system. Drought tolerant landscape shall be used, not only for minimizing water use, but to relate to the desert environment of New Mexico. A mixture of drought tolerant species and lawns can be combined at landscaped areas. Live plant materials shall be used extensively - gravel, colored rock, bark and similar materials are generally not acceptable as groundcover. An irrigation system is to be designed as part of the landscaping and should avoid overspraying roadways, buildings and walls.

11. Screening at Residential Edge

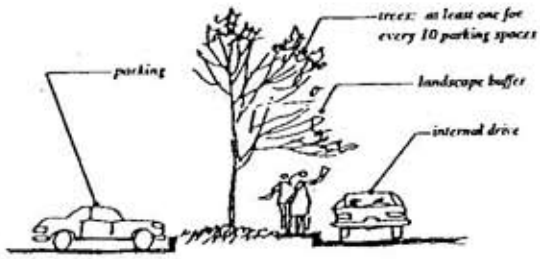


note: the use of barbed or concertina wire is not permitted where visible such as on the top or outside of fences or walls. Security measures should be from the use of appropriate (i.e. pyracantha) plantings

12. Screening at Street Edge

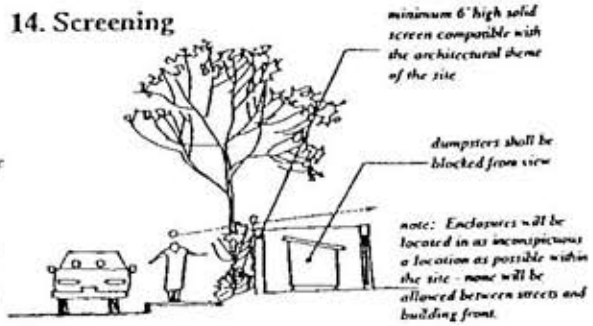


13. Off-Street Parking



note: one parking space for each three employees on the largest shift or one space for 1,000 sf of net leasable area, whichever is greater (one bicycle parking space is required for every 20 spaces required for automobiles).

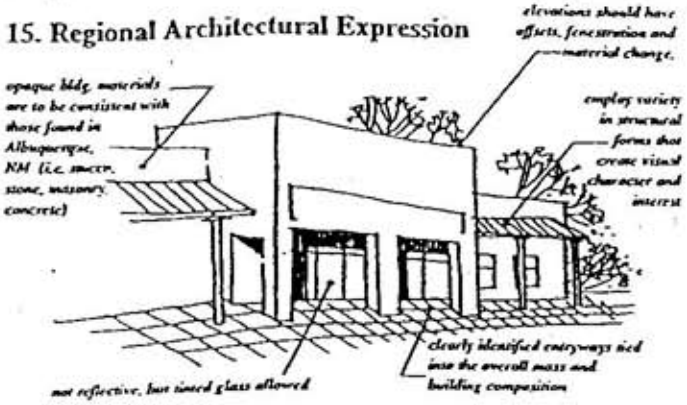
14. Screening



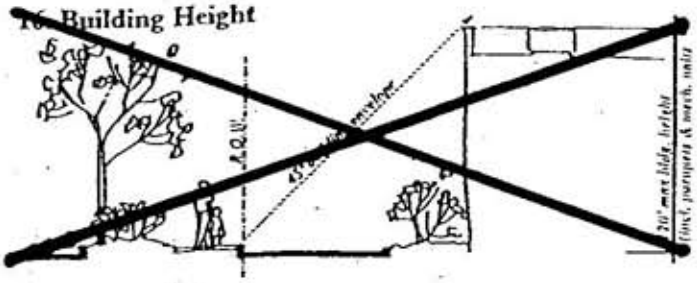
Architectural Expression

Building layouts shall provide continuity for the development and compatibility with adjacent buildings and streets. These controls are important to prevent any building from not fitting in with the design of the overall complex. All building design and exterior building treatments shall be architecturally compatible within individual site developments buildings and between buildings on separate sites. In this regard, the first project approved and developed will establish the architectural design direction for all subsequent buildings. This is not to imply that all buildings be identical, but should be designed to promote architectural harmony and compatibility in the development. Buildings should have a regional expression, integrating building height, massing and color.

15. Regional Architectural Expression



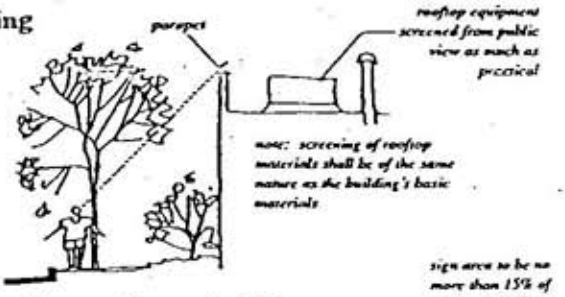
16. Building Height



Design Guideline #16 - Deleted; and therefore not in effect.

As per MOU Attachment B, page 16

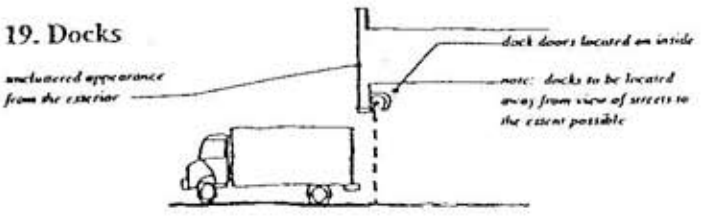
17. Screening



18. Building Signage Opportunities



19. Docks



Drawings are conceptual in nature and set forth the design criteria for illustrative purposes only and are not to be taken literally.

STPDC Year 2000 Marketing Plan

The STPDC has an established and integrated marketing plan to actively and aggressively bring the Sandia Science and Technology Park (SS&TP) to national attention as a premier research park, and to identify and recruit tenants that are consistent with the vision of the Park.

Briefings

Briefings encompass prepared materials to respond to requests for information, tours, personal meetings with representatives of organizations that fit the Park's vision for its tenants, and proactive marketing of specific offerings. Briefings target the following four groups:

- **Requested by Prospects.** The STPDC is committed to honoring every request from prospective tenants for information about the Park, including providing prepared briefing packages, in-person briefings, and tours of the site as appropriate.
- **Sandia Technical Partners.** Sandia has about 300 formal R&D partners. The staff of the STPDC will market the Park to all of those partners. In addition, as soon as there is a multi-tenant building available in the Park, the STPDC staff will formally and explicitly market this building to partners, both through general mailings and through follow-up with specific partners that have indicated particular interest in such a building.
- **Industry VIPs.** In a targeted and focused effort, Sandia Vice Presidents and Directors meeting with potential research partners as well as with decision-makers from existing research partner organizations will continue to reinforce the benefits of location in the Park. Technology Ventures Corporation also meets frequently with technology companies and will describe the benefits of the Park and offer to arrange a briefing for interested individuals. It is anticipated that at least ten briefings will be made in 2000 to specific industry VIPs through referrals from Sandia and TVC.
- **AED Prospects.** The STPDC will work with Albuquerque Economic Development to identify and brief potential tenants on the benefits of location in the Park. In 2000 it is anticipated that the partnership between STPDC and AED will result in at least four briefings to targeted prospective tenants for the Park.

Conference

Sandia has earmarked sufficient funding to provide major support for a conference in 2000. The conference will serve to increase the visibility of the Park as an important means of enabling technology transfer.

National/Local Media Coverage

Research parks cater to organizations with very specific needs. Those needs can be met only by the best and the brightest in a given field. Sandia brings physical proximity to the best and the brightest to Park tenants. It is critical, however, to the success of the SS&T Park that national awareness of the Park as a location for first-rate research and fluid technology transfer be raised to a level that organizations interested in locating in a research park automatically think of it. The STPDC will continue to bring national and local attention to the Park, in particular targeting the most respected and prominent organizations that carry particular importance within the research community.

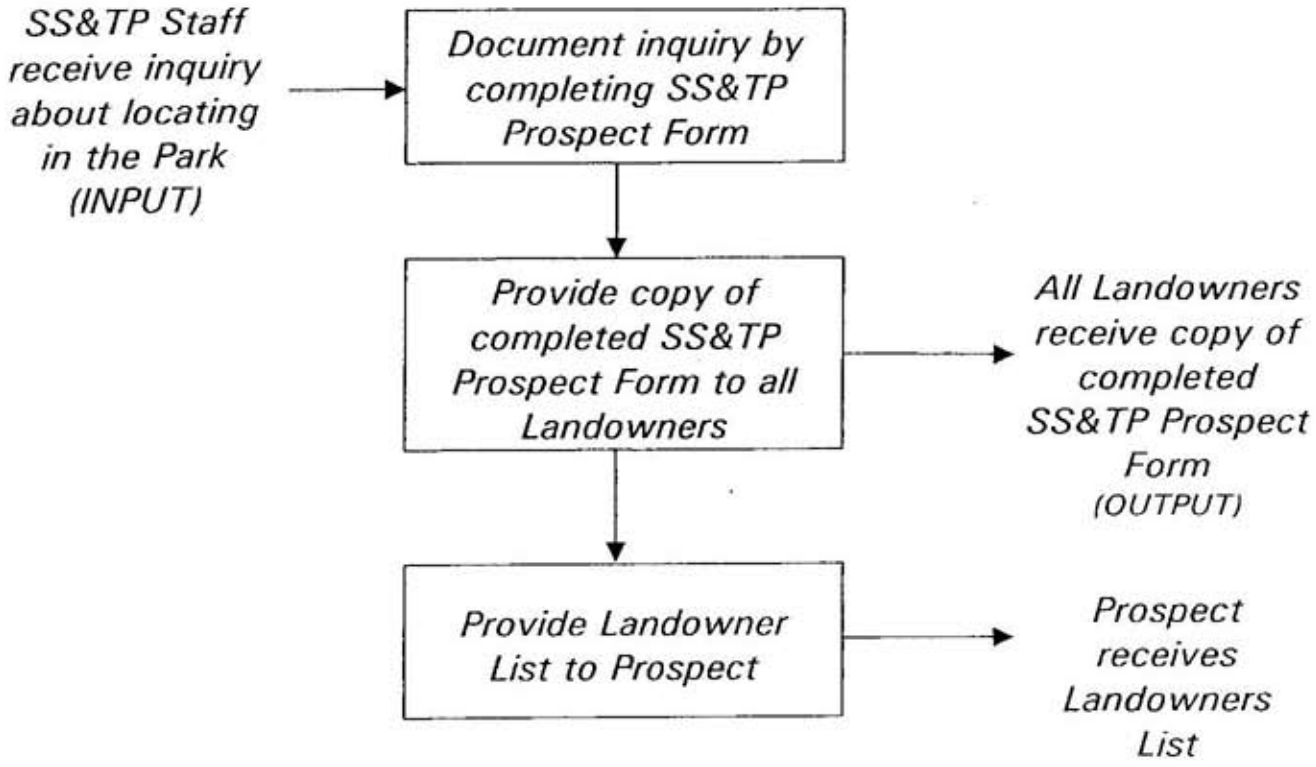
Trade Shows

This element of the overall marketing plan is used in a focused and deliberate way to maximize the potential for raising the general awareness of the nation about the Park, and for attracting potential tenants for the Park. In 2000, STPDC staff will attend three trade shows: one on microelectronics, one on robotics, and the New Mexico Technology Showcase.

Attachment D - Description of the Referral Plan to be implemented by the STPDC marketing Team

Referral Process
Sandia Science and Technology Park (SS&TP)

The following process will be used by the SS&TP staff when receiving an inquiry from a prospect about locating in the SS&TP:



The use of this Referral Process will ensure that:

- *All inquiries from Prospects are documented on the SS&TP Prospect Form.*
- *All Landowners will receive completed SS&TP Prospect Forms from all inquiries.*
- *Prospects will receive a list of Landowners and ways to contact them.*
- *Note: Landowners follow up with Prospects as they choose. Prospects follow up with Landowners as they choose.*

CITY of ALBUQUERQUE

FOURTEENTH COUNCIL

COUNCIL BILL NO. R-28 ENACTMENT NO. 33-2000

SPONSORED BY: Michael Brasher/ Hess Yntema/ Mike McEntee Greg Payne/ Brad Winter/

RESOLUTION

APPROVING THE MEMORANDUM OF UNDERSTANDING (MOU) AMONG THE PROPERTY OWNERS FOR DEVELOPMENT OF THE SANDIA SCIENCE AND TECHNOLOGY PARK; PROVIDING FOR PARTICIPATION BY THE CITY COUNCIL IN IMPLEMENTING THE AGREEMENT; AND REINFORCING THE COUNCIL'S LEGISLATIVE POLICY TO SEEK FUNDING FOR IMPROVEMENT OF THE PARK.

WHEREAS, the City of Albuquerque is a signatory to a MOU relating to the development of the Sandia Science and Technology Park; and

WHEREAS, the purpose of the MOU is to jointly plan, develop, manage, and support the development of the Sandia Science and Technology Park (SSTP); and

WHEREAS, the Council wishes to formally approve the MOU and become an active participant in implementing the MOU; and

WHEREAS, the Council further wishes to reinforce it s legislative policy decision to seek state and federal funds for improvement of the Park.

BE IT RESOLVED BY THE COUNCIL, THE GOVERNING BODY OF THE CITY OF ALBUQUERQUE:

Section 1. The MOU relating to the development of the Sandia Science and Technology Park between the City of Albuquerque, Don Morgan Real Estate, Shaw, Mitchell and Mallory Limited Partnership, the Albuquerque Public Schools; New Mexico State Land Office, Sandia National Laboratories, and Science and Technology Park Development Corporation is hereby approved by the Council and attached to this Resolution.

Section 2. The City of Albuquerque agrees to evaluate all needed infrastructure, such as streets, water, appropriate storm drainage facilities,

[+Bracketed Material+] - New
[-Bracketed Material-] - Deletion

wastewater, and telecommunications infrastructure which will be necessary for development of the Park. The evaluation will include a complete build-out of South Eubank and the segment of Southern between Eubank and Juan Tabo, N.E.

Section 3. The President of the City Council will designate two Councillors and a member of the Council Staff to participate in implementing the Agreement.

Section 4. The Council further wishes to reinforce the policy decision of its Legislative Committee to seek federal and state funding for infrastructure improvements to serve the Park.

[+ Bracketed Material +] - New
[-Bracketed Material-] - Deletion

Fourteen:r-28.

PASSED AND ADOPTED THIS 23rd DAY OF February, 2000

BY A VOTE OF: 8 FOR 0 AGAINST.

Yes: 8

Excused: Griego

Michael Brasher, President

City Council

APPROVED THIS 24th DAY OF March, 2000

Bill No. R-28

Jim Baca, Mayor

City of Albuquerque

ATTEST:

City Clerk

[+Bracketed Material+] - New
[-Bracketed Material-] - Deletion

APPENDIX C: GENERAL PLANT PALETTE

Trees

Cercis occidentalis	Western Redbud
Chilopsis linearis	Desert Willow
Crataegus crusgalli 'Inermis'	Hawthorn
Cupressocyparis leylandii	Leyland Cypress
Fraxinus oxycarpa spp.	Ash spp.
Fraxinus velutina spp.	Ash spp.
Gleditsia triacanthos inermis	Honey Locust
Koelreuteria paniculata	Golden Raintree
Malus spp.	Crabapple
Pistachia chinensis	Chinese Pistache
Platanus wrightii	Arizona Sycamore
Populus acuminata	Lanceleaf Cottonwood
Populus fremontii	Cottonwood
Prosopis glandulosa	Honey Mesquite
Robinia x ambigua	Idaho Locust
Robinia neomexicana	Rose Locust
Robinia pseudoacacia	Black Locust
Pinus edulis	Pinon Pine
Pinus flexilis	Limber Pine
Pinus nigra	Austrian Pine
Pinus sylvestris	Scotch Pine
Pyrus calleryana	Ornamental Pear
Thuja spp.	Arborvitae

Shrubs

Amorpha fruticosa	False Indigo
Arctostaphylos uva-ursi	Kinnikinnick
Artemisia spp.	Sage
Artiplex canescens	Fourwing Saltbush
Baccharis salicina	Desert Broom
Berberis spp.	Barberry
Berberis thunbergii	Barberry
Buddleia davidii nanhoensis	Butterflybush
Caesalpinia gilliesii	Bird of Paradise
Caryopteris clandonensis	Blue Mist Spirea
Ceratoides lanata	Winterfat
Chamaebatiaria millefolium	Fernbush
Chaenomeles japonica	Flowering Quince
Chrysothamnus nauseosus	Chamisa
Cornus alba	Dogwood
Cornus stolonifera	Redtwig Dogwood
Cotoneaster spp.	Cotoneaster
Cowania mexicana	Cliffrose
Cytisus scoparius	Scotch Broom
Dasylirion wheeleri	Sotol
Elaeagnus pungens	Silverberry

Ephedra viridis	Mormon Tea
Ericameria laricifolia	Turpentine Bush
Euonymus alata 'Compacta'	Burning Bush
Fallugia paradoxa	Apache Plume
Forestieri neomexicana	New Mexico Olive
Genista hispanica	Spanish Broom
Genista tinctoria	Summer Broom
Hesperaloe parviflora	Red Yucca
Hibiscus syriacus	Rose of Sharon
Juniperus spp.	Juniper
Lagerstroemia indica	Crape Myrtle
Ligustrum japonicum	Waxleaf Privet
Mahonia aquifolium 'Compacta'	Oregon Grape
Mahonia repens	Creeping Oregon Grape
Nandina domestica	Nandina
Nolina microcarpa	Beargrass
Nolina texana	Beargrass
Opuntia spp.	Cholla
Photinia fraseri	Photinia
Potentilla fruticosa	Shrubby Cinquefoil
Prunus besseyi	Western Sand Cherry
Prunus x cistena	Dwarf Plum
Psorothanmus scoparia	Broom Dalea
Raphiolepis indica	India Hawthorn
Rhus spp.	Sumac
Ribes aureum	Golden Currant
Rosa rugosa	Rugosa Rose
Rosa woodsii	Woods Rose
Rosmarinus officinalis	Rosemary
Salvia greggii	Cherry Sage
Santolina chamaecyparissus	Lavender Cotton
Spartium junceum	Spanish Broom
Spiraea spp.	Spirea
Syringa vulgaris	Common Lilac
Vauquelinia californica	Arizona Rosewood
Vitex agnus-castus	Chaste Tree
Yucca baccata	Datil
Yucca glauca	Soapweed

Ground Covers and Perennials

Achillea millefolium	Yarrow
Agave parryi	Century Plant
Artemisia frigida	Fringed Sage
Artemisia ludoviciana	Prairie Sage
Baccharis Starn 'Thompson'	Thompson Coyotebush
Cerastium tomentosum	Snow-in-Summer
Chrysanthemum maximum	Shasta Daisy
Cosmos bipinnatus	Cosmos
Cotoneaster dammeri spp.	Cotoneaster

Delosperma cooperi	Purple Iceplant
Delosperma nubigenum	Yellow Iceplant
Dyssodia acerosa	Wild Marigold
Echinacea purpurea	Purple Coneflower
Eschscholzia californica	California Poppy
Gaillardia x grandiflora	Gallardia
Helianthus annuus	Sunflower
Helianthus maximilliaia	Maximillian Sunflower
Hemerocallis hybrids	Daylilies
Iris hybrids	Bearded Iris
Juniperus horizontalis spp.	Juniper
Kniphofia uvaria	Red Hot Poker
Liatris punctata	Gayfeather
Linum perenne	Blue Flax
Lobelia cardinalis	Cardinal Flower
Lupinus spp.	Lupine
Mahonia repens	Creeping Mahonia
Mirabilis multiflora	Four O'Clock
Oenothera sp.	Evening Primrose
Papaver nuducale	Iceland Poppy
Penstemon spp.	Penstemon
Perovskia atriplicifolia	Russian Sage
Psilostrophe tagetina	Paperflower
Ratibida columnifera	Coneflower
Rudbeckia hirta	Black-eyed Susan
Salvia azurea grandiflora	Blue Sage
Salvia greggii	Autumn Sage
Santolina chamaecyparissus	Lavender Cotton
Senecio longiflora	Silver Groundsel
Solidago hybrids	Goldenrod
Sphaeralcea coccinea	Scarlet Globemallow
Teucrium chamaedrys	Trailing Germander
Thymus serphyllum	Creeping Thyme
Verbena bipinnatifida	Fern Verbena
Verbena rigida	Purple Verbena
Zauschneria californica	Hummingbird Plant
Zinnia grandiflora	Desert Zinnia

Vines

Campsis radicans	Trumpet Vine
Euonymus fortunei	Wintercreeper
Parthenocissus inserta	Woodbine
Parthenocissus quinquefolia	Virginia Creeper
Parthenocissus tricuspidata	Boston Ivy
Rosa banksiae	Lady Bank's Rose
Wisteria sinensis	Wisteria

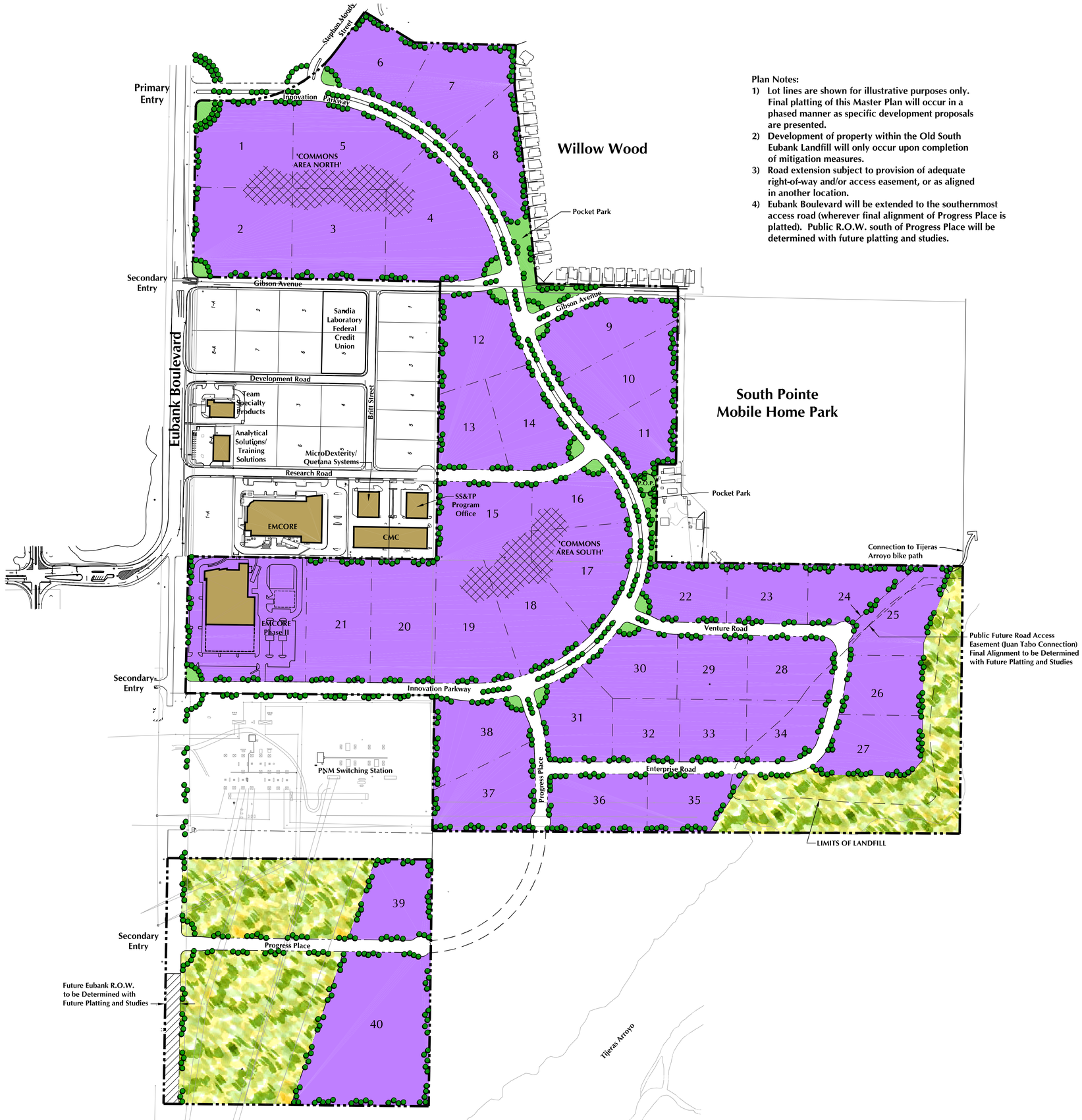
Turf/Ornamental Grasses

Agropyron smithii	Western Wheatgrass
Bouteloua curtipendula	Sideoats Grama
Bouteloua gracilis	Blue Grama
Buchloe dactyloides	Buffalograss
Festuca ovina glauca	Blue Festuca
Helictotrichon sempervirens	Blue Avena
Hilaria jamesii	Galleta
Pennisetum aloeecuroides	Hardy Fountain Grass
Poa pratensis	Kentucky Bluegrass
Sporobolus cryptandrus	Sand Dropseed
Sporobolus wrightii	Giant Sacaton



SANDIA SCIENCE & TECHNOLOGY PARK

Program Office
10520 Research Road SE
Albuquerque, NM 87123
(505) 845-8107



Plan Notes:

1) Lot lines are shown for illustrative purposes only. Final platting of this Master Plan will occur in a phased manner as specific development proposals are presented.
2) Development of property within the Old South Eubank Landfill will only occur upon completion of mitigation measures.
3) Road extension subject to provision of adequate right-of-way and/or access easement, or as aligned in another location.
4) Eubank Boulevard will be extended to the southernmost access road (wherever final alignment of Progress Place is platted). Public R.O.W. south of Progress Place will be determined with future platting and studies.

Illustrative Master Plan

Sandia Science and Technology Park

Prepared For:

Science and Technology Park
Development Corporation
Albuquerque, New Mexico 87120

Prepared By:

CONSENSUS PLANNING, INC.
Planning / Landscape Architecture
924 Park Avenue SW
Albuquerque, NM 87102
(505) 764-9801 Fax 842-5495
e-mail: cp@consensusplanning.com

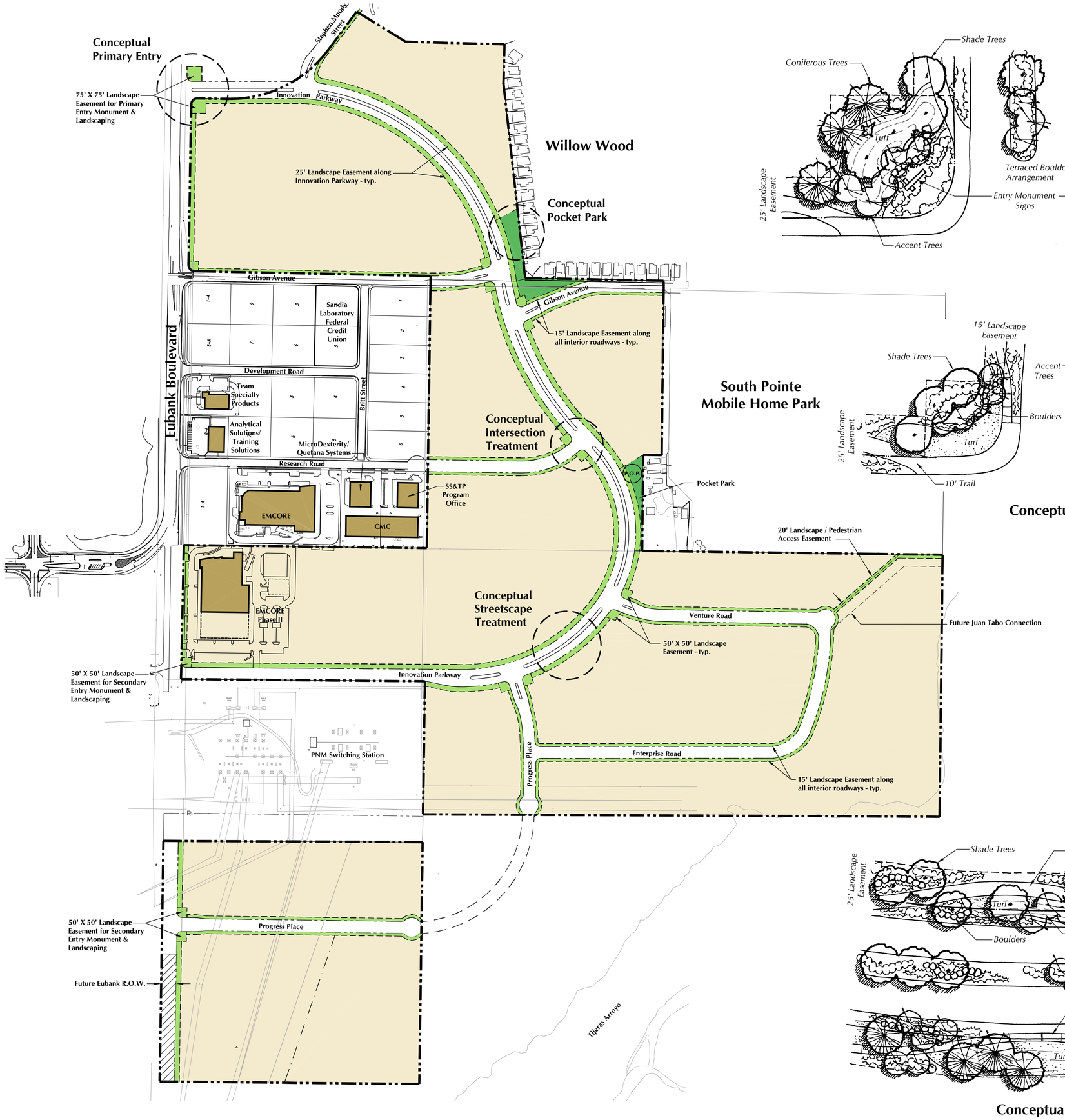
Bohannan Huston
Courtyard One 7500 JEFFERSON NE Albuquerque NEW MEXICO 87109
ENGINEERS PLANNERS PHOTOGRAMMETRISTS SURVEYORS SOFTWARE DEVELOPERS

SMPC ARCHITECTS

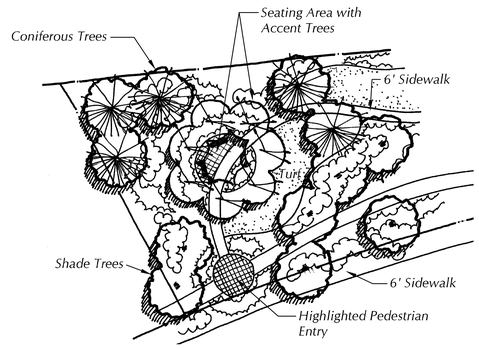
Scale 1" = 200'

100 0 200 400 North

July, 2001

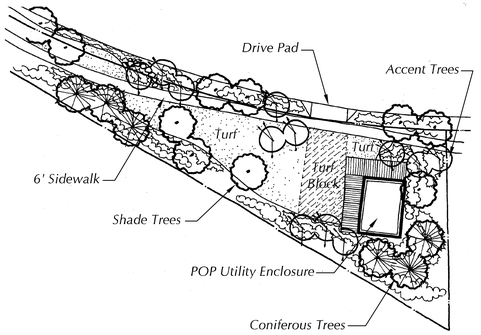


Conceptual Primary Entry



Conceptual Pocket Park North

Conceptual Intersection Treatment



Conceptual Pocket Park South

Conceptual Streetscape Treatment

Landscape Master Plan

Sandia Science and Technology Park

Prepared For:

Science and Technology Park Development Corporation
Albuquerque, New Mexico 87120

Prepared By:

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