NEW MEXICO STATE UNIVERSITY

MASTER PLAN 1992
FOR FACILITIES

PART IV, Section A:

EAST CAMPUS LAND USE
INTERCAMPUS TRAFFIC

OFFICE OF THE UNIVERSITY ARCHITECT
December 13, 1991
New Mexico State University
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FOREWORD

Development of the lands owned by New Mexico State University within the East Campus is essential in order to maintain the academic, social, and cultural ambience of the campus. The purpose of this plan is to present a long-range vision concerning the development of these lands and the activities which will take place within this area. These lands present a priceless opportunity for NMSU to continue its role as the university of choice in New Mexico by providing appropriate space in which to conduct educational, research, and public service activities.

James E. Halligan
President
Acknowledgment

We wish to express our gratitude to Dr. Halligan and Dr. Conroy and to all members of the university, alumni and students, who so patiently listened to our proposals and contributed their ideas to this Plan.

Martin Hoffmeister
University Architect
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EXECUTIVE SUMMARY
EXECUTIVE SUMMARY

The full time equivalent enrollment at New Mexico State University increased by 28.63% in the years 1975 through 1991. The actual headcount of students on the main campus is projected to increase from 18,749 in 1991 to 24,464 in the year 2000. The policy goal of the university is to increase the number of students living on campus to 5,831 in the year 2000 from the current number of 3,661. The number of employees in the year 2000 is projected to increase from the current number of 3,600 to 4,697. During the day there will be almost 29,000 people on the campus.

All these increases will exacerbate the already congested situation on University Avenue. The university recently acquired additional lands to the east of Interstate 25. Some of the present functions, new facilities and expansion of research and support facilities will take place, in the years to come, on the east side of the interstate. It is vital to the growth of the university and its academic development that a physical link be found to penetrate Interstate 25 to connect the old and the new campus. An underpass in the vicinity of Wells Street on the west side and Geothermal Drive on the east side of the interstate is proposed.

Increasingly there will be automobile, foot and bicycle traffic between the present and the developing east campus. At present the only major connector is University Avenue. The safety of the students and the staff will be jeopardized if an alternate route is not found. University Avenue serves as one of only three major east-west traffic arteries for the city of Las Cruces. The added traffic generated by the development of the east campus will clog the existing bottleneck on the southernmost arterial road. It is in the interest of both the university and the city to provide for an alternate route.
INTRODUCTION
On March 19, 1991 the New Mexico State University Board of Regents authorized the NMSU Administration to develop an agreement with the Bureau of Land Management (BLM) for the acquisition of 1,553.19 acres located on the East Mesa through a series of land exchanges and cash purchases. On April 26, 1991, the Commission on Higher Education and the State Board of Finance approved Phase I of this land exchange. NMSU plans to purchase all of the lands over the next five year period.

The geography of the academic area of this campus is determined by the ten minute rule. The ten minute rule requires that all classrooms and other teaching spaces be accessible from each other within ten minutes of walking time. This rule effectively delimits the extent to which the academic area can grow.

In the anticipation of future growth, and in order to avoid the congestion that urban campuses are subject to, the NMSU Administration and the Board of Regents acquired additional lands east of Interstate 25. These lands will serve to develop additional academic and support facilities and housing for NMSU students.

At present the main campus and the proposed east campus are separated by Interstate 25. In order to proceed with the future development of the campus, it is essential that a direct traffic link be constructed to carry traffic between the campuses. The present traffic situation is critical. Additional traffic generated by the east campus development cannot be permitted to further worsen the existing condition.

Safety issues involved in the intracampus circulation, be they pedestrian, bicycle or automobile, must also be considered.
PROJECTED GROWTH
ENROLLMENT AT NMSU MAIN CAMPUS, INCLUDING DONA ANA COMMUNITY COLLEGE (Headcount)

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>1991</th>
<th>PERCENT CHANGE</th>
<th>PROJECTED TO YEAR 2000*</th>
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<tr>
<td>NMSU</td>
<td>14,809</td>
<td>15,344</td>
<td>3.61</td>
<td>20,022</td>
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<tr>
<td>Dona Ana Community College</td>
<td>3,290</td>
<td>3,405</td>
<td>3.50</td>
<td>4,442</td>
</tr>
<tr>
<td>Total</td>
<td>18,099</td>
<td>18,749</td>
<td>3.59</td>
<td>24,464</td>
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</tbody>
</table>

*Projection based on 3% per year increase.
Source: Director of Institutional Studies, NMSU
PROJECTED GROWTH

The present enrollment at NMSU (1991) is 15,344 students. When we include Dona Ana Community College, the total on-campus student enrollment is 18,749. Using a conservative figure of 3% annual growth in enrollment, the projected enrollment for the year 2000 is 24,464 students on the main campus. The projected number of students housed on the campus will be equal to 30% of NMSU enrollment, or 5831.

The projected sustained growth will affect NMSU in two ways:

1. The policy of the Board of Regents to try to house up to 30% of students on campus will necessitate development of housing on the east side of Interstate 25.

2. The ten minute rule will lead to the development of a new academic quadrangle. Since the lands west of Interstate 25 have been allotted to expanding the research park and other academic uses, a whole new campus must be developed east of Interstate 25.

The above projections are conservative. It is possible that a more rapid development will take place due to the popularity of this university.

As funding, planning, design and construction take years to accomplish, today is the time to plan for future expansion and traffic circulation if we are to provide for future generations of students.
## STUDENT HOUSING ON NMSU CAMPUS

(Number of Beds)

<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th>PROJECTED TO YEAR 2000</th>
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</thead>
<tbody>
<tr>
<td>Students Housed</td>
<td>3,661</td>
<td>5,831</td>
</tr>
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</table>

Source: Director of Institutional Studies, NMSU

NOTE: 56 Housing Units will be constructed in 1992
COMPARISON OF WICHE HIGH SCHOOL GRADUATE PROJECTIONS WITH NMSU ENROLLMENTS
MAIN CAMPUS AND DONA ANA BRANCH COMMUNITY COLLEGE

Thousands

YEARS


12 14 16 18 20 22 24

HS GRADS NMSU ACTUAL HEADCTS

NMSU PROJECTIONS

SOURCE: WICHE & NMSU
LAND OWNERSHIP
LAND USE
NEW MEXICO STATE UNIVERSITY
LAND OWNERSHIP

NMSU OWNS

NMSU ACQUIRING

SURFACE RIGHTS ONLY THIS AREA
LAND OWNERSHIP
LAND USE

The historic development of the campus has taken place on lands owned by NMSU which are located in the University Avenue and Interstates 25 and 10 triangle. Until this March, the lands east of the Interstate 25 primarily consisted of the area around the golf course. Recent acquisition added lands towards Tortugas Mountain, popularly known as "A" mountain. Additional acquisitions of land southwest and south of the mountain are planned to be completed in the next five years.

The present use of land already owned west of the Tortugas Mountain include a Hazardous Waste Transfer Facility, the Physical Science Laboratory antenna range, Entomology Facilities, the Lineman Training Facility (75 acre easement), Rodeo Arena and associated storage, a campus-wide storage area (80 fenced-off acres), the Technology Transfer Greenhouse, Geothermal Resources and the Gerontological TIGRE Facility. Adjacent to those lands are the Tortugas Mountain Top Astronomical Observatory and Communication Facility.

Included in the plan for development of the east campus lands are facilities supporting academic curricula, additional student housing, possible expansion of the golf course, and agriculture related activities. It is possible that a College of Veterinary Medicine with its associated research and teaching facilities will eventually be located here. Also, transferring some of the athletic facilities from the main campus is being considered. As no direct access to the lands is available, execution of these plans depends on the development of a direct link to the main campus from the eastside of Interstate 25.
The research currently taking place on the lands under discussion is hindered by the difficulty of access; the facilities cannot be utilized to full capacity for this reason. The traffic congestion will worsen considerably when Dripping Springs Road is paved and utilities are extended. Consequently, development of the lands east of the Tortugas Mountain will accelerate.

There are presently facilities on the main campus that could be relocated to the east campus, if deemed necessary. These could include Dona Ana Community College, Physical Science Laboratory, New Mexico Department of Agriculture and others. At present the difficulty of access prevents such relocations.

Included in the land use plan is an area, south of the mountain, set aside for future development. This designation serves two purposes:

1. The east campus development will encompass a period of time between 50 to 100 years. This space will provide land for future developments which are impossible to predict at this time.

2. It provides a wilderness area for study and recreation by the university and the community.
NEW MEXICO STATE UNIVERSITY
EXISTING LAND USE - EAST CAMPUS

1. PSL/NMSU ANTENNA RANGE AT TORTUGAS MTN ("A" MTN)
2. VETERINARY ENTOMOLOGY LABORATORY
3. "A" MOUNTAIN HAZARDOUS WASTE TRANSFER STATION
4. ELECTRIC POWER RESEARCH FACILITY
5. NMSU GOLF COURSE
EXISTING AND PROJECTED TRAFFIC
EXISTING AND PROJECTED TRAFFIC

The current 24-hour traffic counts on University Avenue exceed 20,000 vehicles, a peak load of 29 per minute. The 24-hour count is projected to exceed 30,000 vehicles by the year 2000. University Avenue will become a more congested and dangerous place to be. The new plan of the City Council calls for development of a University Avenue Corridor, resulting in an increasing conflict of pedestrian, bicycle and automobile traffic.

More traffic, generated by the east campus, added to University Avenue will increase the danger to pedestrians and inconvenience to the city, university and Interstate 25 exit traffic.

The university is planning a major research park, Arrowhead Research Park, which will generate additional traffic on University Avenue. This is projected to generate 6 to 10 thousand vehicles per day (based on 3000 employees entering and leaving the Park).

The Pan American Center and the Aggie Memorial Stadium generate traffic for concerts and sporting events. The 13,007 seating capacity of Pan Am Center may generate a peak load of 6,500 vehicles per hour at the time of events. The 31,000 seating capacity of the Aggie Memorial Stadium can generate a peak load of 15,000 vehicles in approximately an hour.

University Avenue, and to a lesser extent Stewart and Wells Streets, serve as short cuts to the Tortugas, Mesilla Park and Mesilla communities on the west side. As Las Cruces grows, as it will with the implementation of the Santa Teresa border crossing and the development of Maquiladora industries, additional traffic will be generated, further congesting University Avenue and the campus streets.
NEW MEXICO STATE UNIVERSITY
TRAFFIC COUNTS

NOTE: REFER TO TRAFFIC COUNT TABULATION
<table>
<thead>
<tr>
<th>LOCATION</th>
<th>24 HR COUNT</th>
<th>PEAK HOUR ENDING</th>
<th>DATE OF COUNT</th>
<th>ESTIMATED FOR 2000</th>
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<tr>
<td>University Avenue</td>
<td></td>
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<tr>
<td>Valley-El Paseo</td>
<td>13,157</td>
<td>1,167 - 08:45</td>
<td>Apr '90</td>
<td>17,167</td>
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<td>El Paseo-Espina</td>
<td>21,131</td>
<td>1,746 - 17:30</td>
<td>Apr '91</td>
<td>27,572</td>
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<tr>
<td>Espina-Solano</td>
<td>24,328</td>
<td>N.A.</td>
<td>Sep '90</td>
<td>31,743</td>
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<td>Locust-I.H. 25</td>
<td>20,564</td>
<td>N.A.</td>
<td>Sep '90</td>
<td>26,832</td>
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<tr>
<td>I.H. 25-Telshor</td>
<td>18,447</td>
<td>N.A.</td>
<td>Nov '89</td>
<td>24,070</td>
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<td>El Paseo, Union Avenue</td>
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<tr>
<td>Boutz-University</td>
<td>9,834</td>
<td>809 - 17:15</td>
<td>Jun '91</td>
<td>12,831</td>
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<td>University-College</td>
<td>14,337</td>
<td>1,264 - 16:00</td>
<td>Oct '90</td>
<td>18,707</td>
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<td>Stewart-I.H.10 Frontage</td>
<td>16,305</td>
<td>1,307 - 15:45</td>
<td>Feb '91</td>
<td>21,275</td>
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<tr>
<td>Frontage-Stern Drive</td>
<td>15,077</td>
<td>1,205 - 15:45</td>
<td>Feb '91</td>
<td>19,672</td>
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<tr>
<td>Stern Drive-South Main</td>
<td>16,391</td>
<td>1,378 - 08:45</td>
<td>Feb '91</td>
<td>21,387</td>
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<td>Stewart Street</td>
<td></td>
<td></td>
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<tr>
<td>El Paseo-Espina</td>
<td>3,711</td>
<td>510 - 08:30</td>
<td>Jun '91</td>
<td>4,842</td>
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<tr>
<td>Cholla Road</td>
<td></td>
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<tr>
<td>I.H.10-I.H.25</td>
<td>3,031</td>
<td>369 - 17:45</td>
<td>Mar '91</td>
<td>3,955</td>
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<tr>
<td>Las Alturas Drive (Access Road)</td>
<td></td>
<td></td>
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<tr>
<td>Cholla-Mission Bell</td>
<td>2,991</td>
<td>N.A.</td>
<td>Dec '89</td>
<td>3,903</td>
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<td>Mission Bell-University</td>
<td>4,176</td>
<td>N.A.</td>
<td>Mar '90</td>
<td>5,449</td>
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<tr>
<td>Standley-Wells</td>
<td>642</td>
<td>75 - 12:00</td>
<td>May '91</td>
<td>838</td>
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<td>Wells-Stewart</td>
<td>3,592</td>
<td>N.A.</td>
<td>Jan '90</td>
<td>4,687</td>
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<td>Stern</td>
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<td>Tortugas-Salopek</td>
<td>3,054</td>
<td>N.A.</td>
<td>Aug '90</td>
<td>3,985</td>
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<td>Espina</td>
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<td></td>
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<td></td>
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<tr>
<td>Boutz-Farney</td>
<td>10,332</td>
<td>909 - 17:45</td>
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<td>13,481</td>
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<td>Farney-University</td>
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<td>N.A.</td>
<td>Jan '90</td>
<td>12,456</td>
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<td>College-Gregg</td>
<td>6,842</td>
<td>723 - 12:30</td>
<td>Jun '91</td>
<td>8,927</td>
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NOTE: Traffic counts were obtained from files of the City of Las Cruces Planning Department.
N.A. = Not available.
* Projections based on 3% per year increase, same as enrollment projections.
PROPOSED SOLUTIONS
NEW MEXICO STATE UNIVERSITY
PROPOSED TRAFFIC SOLUTION
PHASE I
PROPOSED SOLUTIONS

The campus of New Mexico State University is entrance-poor. Additional entrances need to be constructed. The Master Plan for the university calls for the following:

**Phase I** - Construction of an underpass beneath Interstate 25 and Las Alturas Road, located between Stewart and Wells Streets on the westside as recommended by the Interstate Highway Access Study. By relocating Wells Street to bend northeast and intercept the proposed underpass traffic, the major part of the traffic will channel into divided Wells Street, and not add to already busy Stewart Street traffic.

The underpass proposed should have two lanes in either direction and a provision for pedestrian, bike and jogging paths. The cost of this underpass is estimated in the Las Cruces Interstate Highway Access Study at $1,459,000.00 for only a two-lane road. The projected growth of the campus dictates additional lanes.

**Phase IIa**. - Construction of an underpass beneath University Avenue on Triviz Street. This underpass will channel traffic from the city directly into the main campus without adding to the University Avenue traffic. The cost of this underpass is estimated at approximately 2 million dollars.

**Phase IIb.** - Development of an interchange on Interstate 10 in the vicinity of Cholla road. This interchange is part of the Las Cruces Interstate Highway Access Study, prepared for Las Cruces Metropolitan Planning Organization (March, 1991). It will help the Arrowhead Research Park traffic and also serve as an alternate entry into the campus.

A direct access from westbound Interstate 10 at University Avenue into College Drive is being studied for feasibility.
NEW MEXICO STATE UNIVERSITY
PROPOSED TRAFFIC SOLUTION
PHASE II
APPENDIX
On November 1, 1938, the United States of America, on behalf of the General Land Office (now known as the Bureau of Land Management [BLM]), issued Patent No. 1099600 to the Regents of the Agriculture College of New Mexico (now known as NMSU) for 2,089.7 acres in the Organ Mountains. The Patent specifies that this land is to be used for recreational or educational purposes.

On September 9, 1954, mining claims totalling approximately 80.32 acres were located off of Dripping Springs Road near the base of "A" Mountain. Parts of this land have been mined for sand and gravel since that time.

On February 17, 1960, Roger Ernst, Assistant Secretary of the Interior, issued Public Land Order 2051 withdrawing 1,393.19 acres of public land for use by the New Mexico College of Agriculture and Mechanic Arts (now known as NMSU) for research purposes in connection with federal programs. This withdrawal has been administered by BLM. NMSU has since constructed certain research and educational facilities on this land located west of "A" Mountain.

On March 24, 1967, NMSU granted authorization to BLM to construct a road and recreational facilities within the 2,089.7 acres owned by NMSU in the Organ Mountains. BLM has since developed a paved access road, constructed the Aguirre Springs Campground, and established and developed the Pine Tree National Recreational Trail and portions of the Baylor Pass National Recreation Trail on this land.

On October 28, 1988, Congress passed Public Law 100-559, Title V, authorizing the "A" Mountain Land Exchange. This law authorizes the exchange on an equal value basis of the 2,089.7 acres owned by NMSU for 1,553.19 acres owned by BLM. Section 502 of Public Law 100-559 provides that land acquired by NMSU under this land exchange shall be used for the purposes of promoting directly or indirectly educational, scientific, and research activities, including those activities currently authorized under Public Land Order 2051, or promoting the utilization of the natural geothermal resources located within the boundaries of the lands transferred.

On March 19, 1991, the NMSU Board of Regents authorized the NMSU Administration to develop an agreement with BLM for the acquisition of BLM's 1,553.19 acres through a series of land exchanges and cash purchases. On April 26, 1991, the Commission on Higher Education and the State Board of Finance approved Phase I of this land exchange.

On May 1, 1991, Manuel Lujan, Secretary of the Interior, and Carl Faubion, President of the NMSU Board of Regents, will culminate Phase I of the land exchange authorized by Public Law 100-559. The United States of America, on behalf of BLM, will issue a Patent to NMSU for 726.3 acres of BLM's land. The Regents of NMSU will issue a Quitclaim Deed to BLM for 2,089.7 acres of NMSU's land. NMSU will also pay BLM $17,220 under Phase I of the land exchange.

BLM is continuing its negotiations with the mining claimants regarding their claims on the 80.32 acres referred to above. If BLM successfully completes an exchange of land for these mining claims, NMSU hopes to acquire this land also.

In addition, NMSU hopes to purchase from BLM approximately 746.57 remaining acres withdrawn by BLM for use by NMSU as authorized by Public Law 100-559. NMSU hopes to purchase all of 1,553.19 acres of BLM's land over the next five years.
DRAFT

Las Cruces Metropolitan Planning Organization
Las Cruces, New Mexico

Las Cruces Interstate Highway
Access Study

New Interchange Recommendations Report

Barton-Aschman Associates, Inc.

In Association with:
Southwest Land Research, Inc.
Molzen-Corbin Associates

March, 1991
CITY OF LAS CRUCES, NEW MEXICO
INTERSTATE HIGHWAY ACCESS STUDY

NEW INTERCHANGE
IH-25/GEOTHERMAL DRIVE
GRADE SEPARATION
Stewart/IH 25

Existing Configurations:

- IH 25 is a four lane divided freeway.
- Stewart is a two lane undivided roadway.
- Stewart is discontinuous across IH 25.

Proposed Conditions:

- Grade separate Stewart from IH 25.
- Continue Stewart across IH 25.

Advantages:

- Stewart will be continuous across IH 25.
- Access will be provided across IH 25 for NMSU students and faculty.

Disadvantages:

- Overpass will be very close to the University interchange.

Cost: $1,459,000

Recommendations:

- Implement improvements as specified.
# CREDITS

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<th>Text</th>
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<tr>
<td>Analysis</td>
<td>Dietrich Braun</td>
</tr>
<tr>
<td>Drawings</td>
<td>Luis Campos</td>
</tr>
<tr>
<td>Graphics</td>
<td>Sally McKee</td>
</tr>
<tr>
<td>Consultation</td>
<td>Ben Woods</td>
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<td></td>
<td>Owen Lockwood</td>
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