NM STATE ALAMOGORDO

New Mexico State University Alamogordo
Facilities Master Plan 2023-2028

Final January 26, 2023

Architectural Research Consultants, Incorporated

4906-A Alameda Blvd, NE, Albuquerque, NM 87113 505-842-1254 https://arcplanning.com

Acknowledgements

NMSU-A Advisory Board

Judy Rabon *APS Board President, District 1*

Amber Ross *APS Board Vice President, District 5*

Carol Teweleit *APS Board Secretary, District 4*

Angela Cadwallader *APS Board Member, District 2*

Amanda Jewell *APS Board Member, District 3*

NMSU-A Leadership Team

Ken Van Winkle *Associate Vice Chancellor, Branch Executive Director, External Relations / Economic Development*

Mark P. Cal *Vice President for Academic Affairs, Associate Campus Director*

Antonio A. Salinas Jr. *Vice President for Business and Finance*

Anne Ricksecker. *Vice President for Student Success (retired 11/22)*

NMSU Facilities & Services Team

Heather Zack Watenpaugh *University Architect / Campus Planning Officer*

Dickie Apodaca *Project Development and Engineering*

Moises Morales II *Project Development and Engineering*

Other NMSU-A Staff / Interviewees

Jose Guzman *Facility Manager*

Albert Borunda *Facilities Staff*

David MacWilliams *Division Head - Arts & Sciences*

Sherrell Wheeler *Director - Online Quality Assurance*

Ramona Becker *Information Technology & Communications*

Maria Saenz *Pathways and Career Education / Academic Support Center*

Emily Anderson *Library Services*

Gregg Hillis *Division Head - Career & Technology*

Jesslyn Langley *Program Operations Director / Student Services*

Alamogordo Public Schools

Kenneth Moore *Superintendent*

Colleen Tagle *Deputy Superintendent of Support Services*

Architectural Research Consultants, Incorporated

John P. Petronis *Project Director*

Andy L. Aguilar *Project Manager*

Liza Miller *Socioeconomic and Demographic Analysis*

Jay Petronis *Graphics*

Ailene O'Byrne *FCA Team Director*

Ann Marie Allen *Facility Evaluator*

Matthew Tran *Facility Evaluator*

Contents

The electronic version of this report contains clickable bookmarks, hyperlinks, and interactive elements for supported PDF viewing applications. Example:

*See **Introduction** for a description of document contents and project objectives.*

List of Exhibits

List of Abbreviations and Acronyms

Acronym	Definition
AA, AAS, AS	Applied Science Degree
AACC	American Association of Community Colleges
ACS	US Census American Community Survey
ADA	Americans With Disabilities Act
CIP	Capital Improvement Project
CNA	Certified Nurse Assistant
Covid	Coronavirus Respiratory Disease (SARS-CoV-2)
CR	Classroom
CPTED	Crime Prevention Through Environmental Design
FCA	Facility Condition Assessment
FCI	Facility Condition Index
FICM	Education Facilities and Classification Manual (Codes)
FMP	Facilities Master Plan
FTE	Full-Time Equivalent
FY	Fiscal Year
GO	General Obligation (Bond)
GSF	Gross Square Feet
HC	Headcount; Tally of the Number of People Present
HED	(NM) Higher Education Department
HLC	Higher Learning Commission
HVAC	Heating, Ventilation, and Air Conditioning
I&G	Instructional and General (Square Footage)
ID	Identification
IT	Information Technology
MACC	Maximum Allowable Construction Cost
NASF	Net Assignable Square Feet
NCES	National Center for Educational Statistics
NM	State of New Mexico
NM HED	New Mexico Department of Higher Education
NMAC	New Mexico Administrative Code
PNM	Public Service Company of New Mexico

Acronym	Definition
RUR	Room Utilization Rate
SF	Square Feet
SOR	Station Occupancy Ratio
STB	Severance Tax Bond
STEM	Science, Technology, Engineering, and Math
STU	Student Services Building
SUR	Station Utilization Rate
TBD	To Be Determined
TPC	Total Project Cost
UNM GPS	UNM Geospatial and Population Studies
US	United States
WICHE	Western Interstate Commission on Higher Education
WRH	Weekly Room Hours
WSCH	Weekly Student Contact Hours

This page is intentionally blank.

Introduction

This document is a Facilities Master Plan (FMP) for New Mexico State University Alamogordo (NMSU–A). It is the result of a collaborative planning effort by NMSU–A administrators, faculty, and the NMSU–A Advisory Board, in cooperation with the New Mexico State University Facilities and Services Department.

An FMP examines how the campus and its facilities may evolve to address the long-term needs of students, faculty, and staff. The final NMSU-A plan seeks to develop and communicate the college's long-range development strategy and capital needs to meet expected program requirements and enrollment growth from 2022 to 2026.

The plan is divided into three parts:

- Introduction
- Plan overview that discusses:
  - Background information about mission and programs
  - Site and facilities
  - Service area demographics and economy and impact on enrollment
  - Existing space use
  - Stakeholder input
  - Capital planning strategy to address identified needs
- Appendices that provide additional information regarding:
  - Facility planning decisions
  - Online survey response
  - Facility condition assessment (and also included as a separate report)
  - Instructional space utilization data
  - Service Area Demographic and Economic Scan

Ex-01: *NMSU-A Campus Overlooking the Sacramento Mountains*

This page is intentionally blank.

Plan Overview

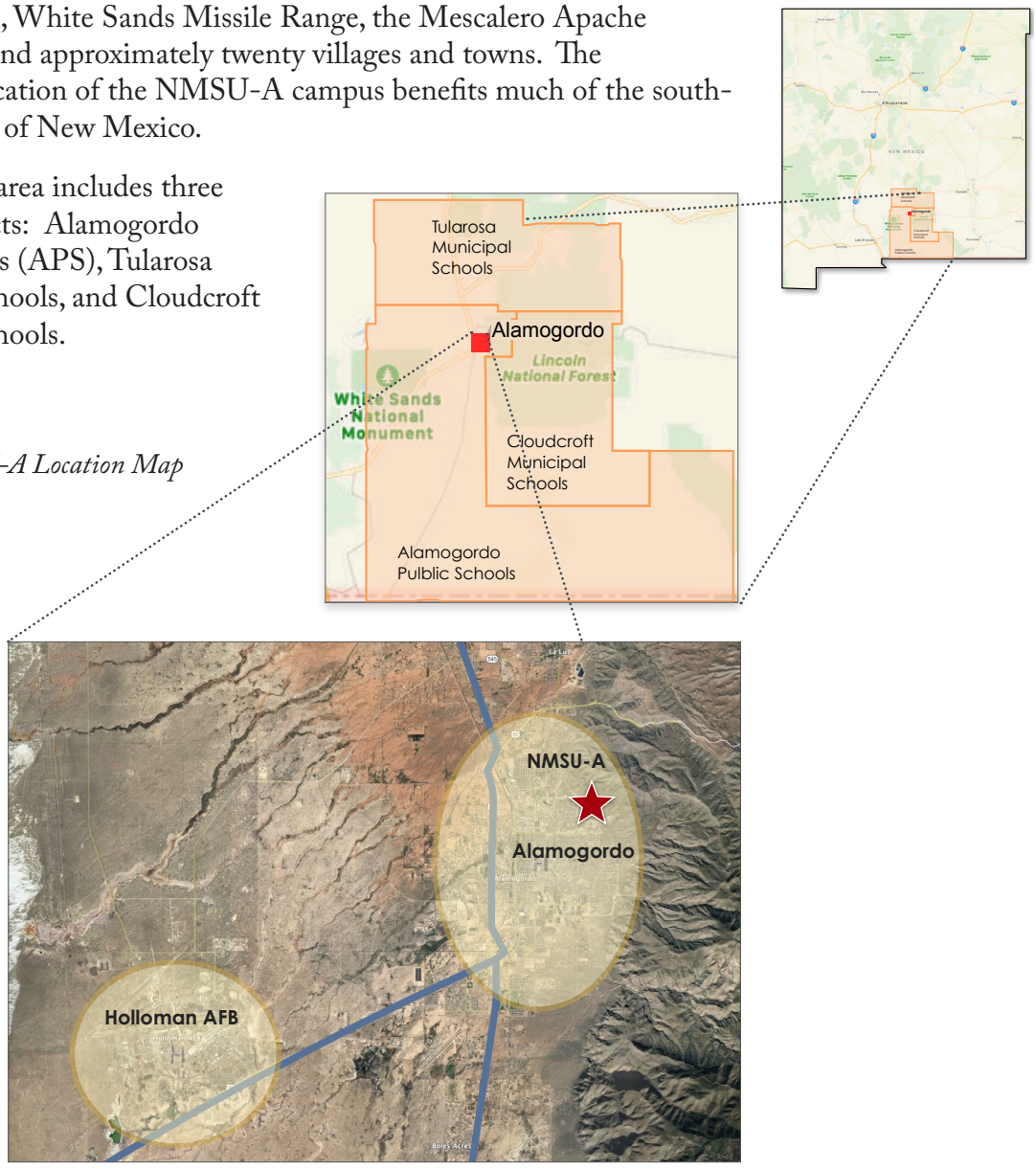
Background

Location

The NMSU-A campus is located in the foothills of the Sacramento Mountains, overlooking the city of Alamogordo and the Tularosa Basin. The service area of the school includes Holloman Air Force Base (HAFB), White Sands Missile Range, the Mescalero Apache Reservation, and approximately twenty villages and towns. The convenient location of the NMSU-A campus benefits much of the south-central region of New Mexico.

See *Ex-02*

The service area includes three schools districts: Alamogordo Public Schools (APS), Tularosa Municipal Schools, and Cloudcroft Municipal Schools.



Ex-02: *NMSU-A Location Map*

History and Organization

Established in 1958, NMSU-A's initial enrollment consisted of 278 students who attended nightly classes at the Alamogordo High School campus. NMSU-A's objective was to provide post-secondary educational services to military and civilian personnel from Holloman Air Force Base, as well as students from the local non-military population.

NMSU-A originally offered only traditional two-year education courses, later evolving to provide occupational/technical programs and courses for personal enrichment. In cooperation with NMSU-Las Cruces Distance Education, NMSU-A also provides bachelor completion programs for other specialties.

While students value the long-established core courses, some also seek alternatives to a traditional liberal arts education. NMSU-A continues to adapt and makes an ongoing effort to keep programs and curricula flexible to accommodate the community's varied and expanding educational needs.

NMSU-A is accredited by the Higher Learning Commission (HLC).

Governance / Funding

NMSU-A is a branch of New Mexico State University and is governed by the Board of Regents through an operating agreement between the university and the three school districts in Otero County. The community college Advisory Board, comprised of representatives of Alamogordo Public Schools, approves the budget, initiates mill levy and bond issue elections, and advises the college on program needs. The Board of Regents sets tuition and personnel policies, determines curricula and degrees, and handles all records, funds, receipts, and disbursements for the community college.

The college pays for operating expenses from state-appropriated funds, property tax within the the City of Alamogordo, federal education funds, special grants, and tuition paid by students.

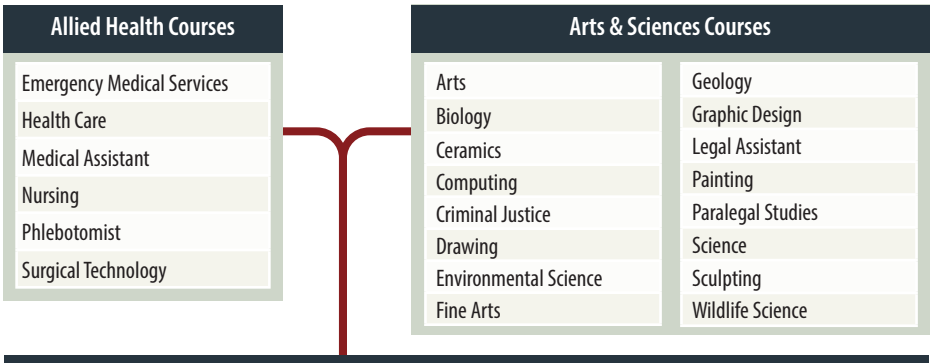
Mission / Organization / Programs

The mission of New Mexico State University at Alamogordo is to provide quality learning opportunities for individuals in the diverse communities it serves. NMSU-A prepares its students to be lifelong learners versed in critical and creative thinking, clear communication, goal-oriented planning, social responsibility, and poised for academic and career success.

See Ex-03

NMSU–A offers a variety of certificate and associate of Applied Science degrees (AA) within its Allied Health, Arts & Sciences, and Career and Technology departments.

Ex-03: *NMSU-A Organization, Degrees, and Certificates*



Degrees and Certificates

Arts, Associate	Business Management, Associate of Applied Science (Accounting/ Bookkeeping)	Education, Associate (Secondary Science)
Science, Associate	Business Management, Associate of Applied Science (Administrative Support Concentration)	Engineering Technology, Associate of Applied Science (Electronics)
Fine Arts, Associate Degree	Automotive Diagnostic Specialist, Certificate	General Engineering, Associate of Science
Computer Science, Associate of Applied Science	Engine Performance/Transmissions Specialist, Certificate	Engineering Technology, Associate of Applied Science (Biomedical Equipment; Electronics)
Criminal Justice, Associate	Automotive and Hybrid Technology, Associate of Applied Science	General Management, Certificate
Fine Arts, Associate	Engineering Technology, Associate of Applied Science (Biomedical Equipment)	Business Management, Associate of Applied Science (General Management)
Science, Associate	Prebusiness, Associate	Information Technology, Associate of Applied Science
Fine Arts, Associate	Business Management, Associate of Applied Science Degree (Accounting/Bookkeeping; Administration Support; General Management)	Leadership Skills, Certificate
Science, Associate	Early Childhood, Associate	Photo Voltaic Entry Level Grid-Tie, Certificate
Art and Graphic Design, Certificate	Education, Associate (Elementary; Secondary Mathematics; Secondary Science)	Photographic Technology, Certificate
Graphic Design, Associate of Applied Science	Education, Associate (Elementary)	Advanced Renewable Energy Systems, Certificate
Legal Assistant, Certificate	Education, Associate (Secondary Mathematics)	Renewable Energy Systems Technology, Associate of Applied Science
Fine Arts, Associate		Social Work, Associate
Paralegal Studies, Associate of Applied Science		Photo Voltaic Entry Level Grid-Tie, Certificate
Science, Associate		Welding, Certificate
Fine Arts, Associate		
Science, Associate		
Accounting/Bookkeeping, Certificate		

Site and Facilities

Site Context

NMSU-A owns approximately 511 acres of land in the foothills of the Sacramento Mountains, spanning both sides of Scenic Drive in Alamogordo, New Mexico.

See Ex-04

Gerald Champion Regional Hospital is nearby, located north of the campus along Scenic Drive. General residential and mixed commercial development zones are on the west and northwest near Scenic Drive and surrounding streets. The New Mexico Air and Space Museum is on the east and shares an access road with the campus.

Site Topography

The majority of the land that NMSU-A owns is vacant and unsuitable for development due to its steeply-sloped terrain. The developed portion of the campus covers about 36 acres, with most buildings occupying 24 acres on the northeast side of Scenic Drive. This region slopes downward at a modest 11% grade. The campus extends on the other side of Scenic Drive occupying gently sloping lands with one major campus building—The Tayes Center / Advanced Technology Center. An arroyo bisects the campus with one campus building that spans the arroyo like a bridge.

See Ex-05

Existing Building Inventory

NMSU-A's campus encompasses 12 buildings totalling about 209,000 gross square feet (GSF).

The majority of NMSU-A's buildings are older than 30 years (83% of them, representing 75% of overall building square footage). The average age of the buildings is 38 years with the oldest at 54 years (the Classroom Building) and the youngest at 16 years (Academic Support).

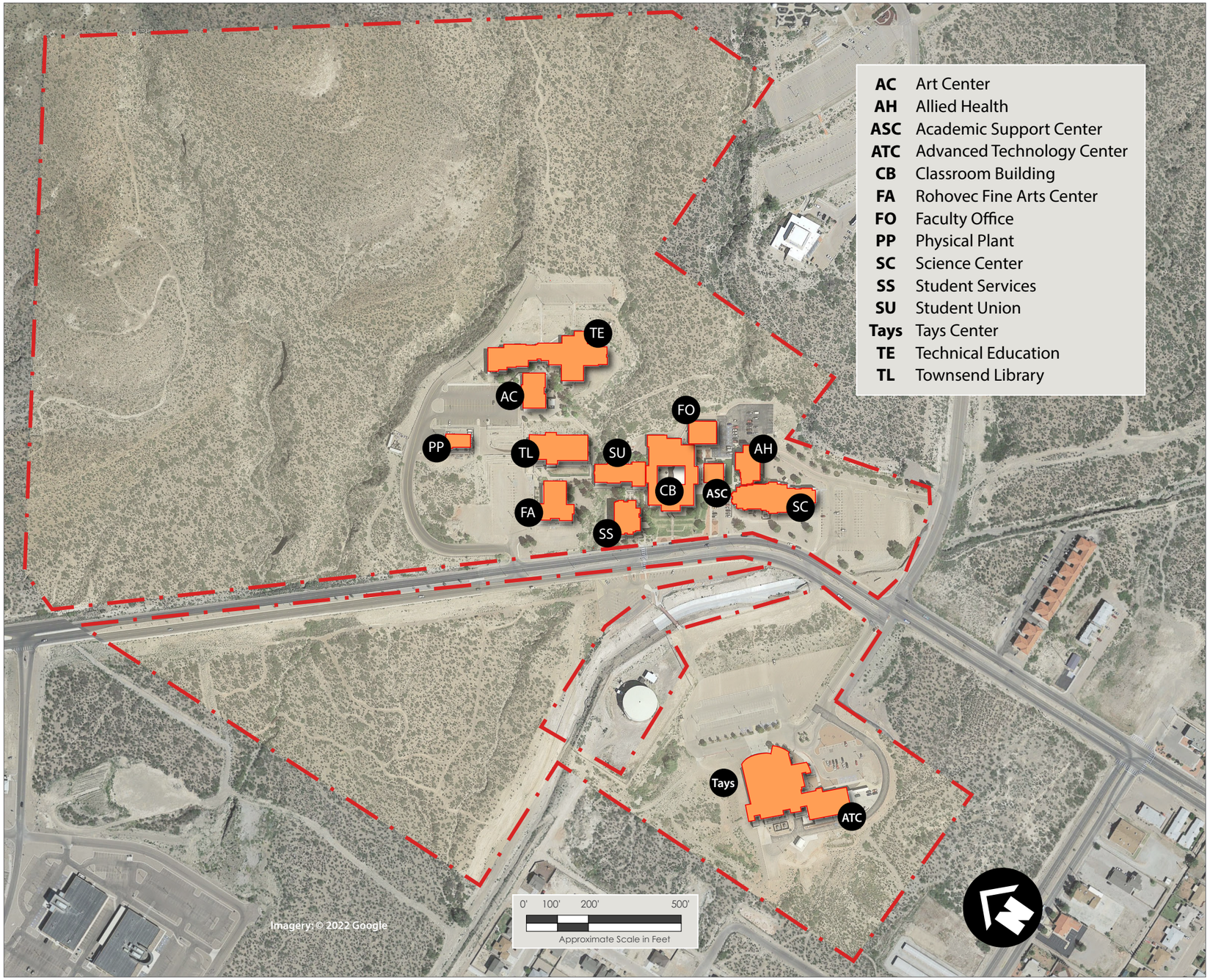
See Ex-06

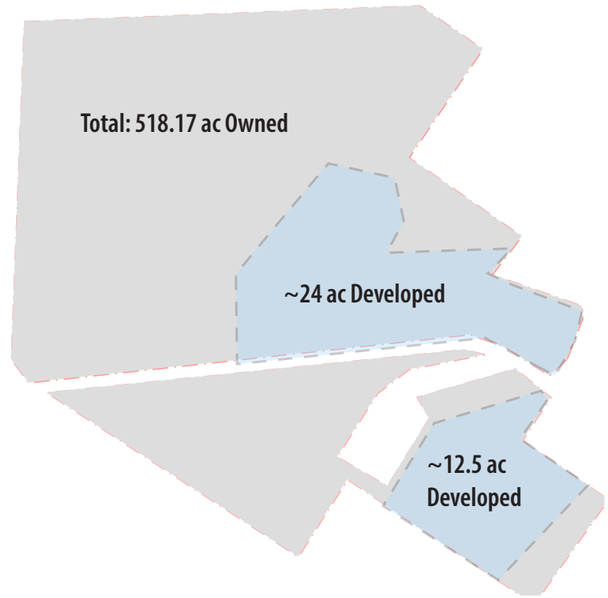
Condition of Buildings and Site

The planning team conducted facilities condition assessments (FCAs) on all of the campus buildings. The FCA is an assessment of existing building and site conditions that an ARC-trained evaluator and/or architect conducts. The standard FCA process considers condition of the site and physical plant, as well as the adequacy of the space to meet its required function.

Analysis of the assessment indicates that the majority of NMSU-A's buildings have been well maintained and are in good or satisfactory condition. Seven of the buildings, comprising 79% of NMSU-A's building square footage, achieved a rating of "good" condition ("B"). These buildings show no major deficits, but could benefit from routine upgrades and improvements.

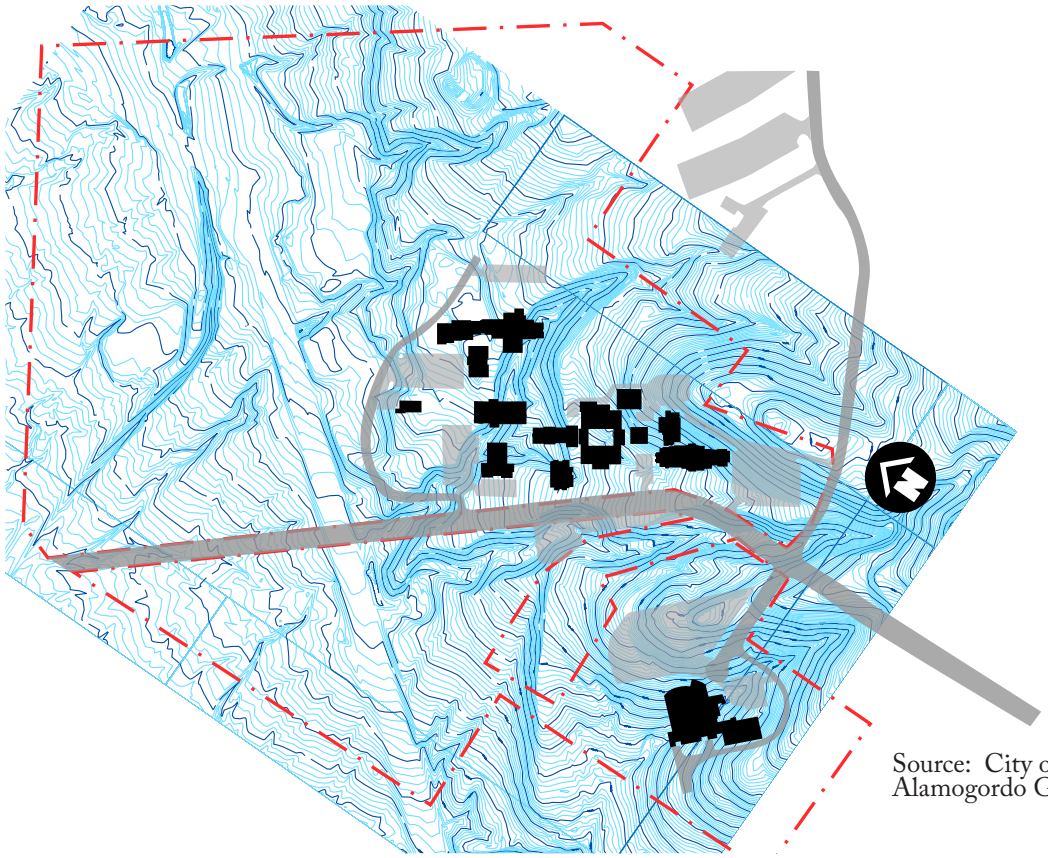
Ex-04: Map of NMSU-A Campus





This page is intentionally blank.

Ex-05: *NMSU-A Site Topography*



Source: City of Alamogordo GIS

Ex-06: *NMSU-A Building Inventory*

NMSU-Alamogordo							
Facility ID	NMSU Building	Name	Alternate Name	Year Built	I and G %	NASF	GSF
ASC	292V	Academic Support		2006	98%	3,060	4,327
AC	292S	Art Center	Henry Campbell Art Center	1982	100%	6,013	6,609
CB	292G	Classroom Building		1968	67%	17,403	19,190
FO	292L	Faculty Office	Faculty Office Building	1975	100%	4,849	5,417
PP	292T	Physical Plant		1985	98%	3,673	3,999
FA	292M	Rohovec Fine Arts Center	Rohovec Fine Arts Theatre	1975	100%	8,605	9,321
SC / AH	292U	Science Center	Reidlinger Science Center / Allied Health	1986	100%	35,626	39,593
SS	292H	Student Services	George Fettinger Student Services Building	1992	28%	15,425	17,505
SU	292J	Student Union	Student Union Building	1975	100%	7,267	9,595
Tays / ATC	292C	Tays Center	Tays Special Events Center / Advanced Technology Center	1996	37%	45,184	47,471
TE	292N	Technical Center	Professional Technical Education Building	1982	100%	27,315	30,354
TL	292Q	Townsend Library		1982	100%	13,791	15,395
					Total	188,211	208,776
					Count	12	

Three buildings, comprising 10% of NMSU-A's building square footage, attained a rating of "satisfactory" condition ("C"), indicating a need for capital investment to bring them up to current standards, building codes, current ADA requirements, and address recommended cyclical systems renewal. Two of the buildings (Classroom Building and Faculty Office) ranked as borderline or poor, indicating a need for major capital investments to achieve functional/physical condition adequacy.

See Ex-07 to Ex-09

The condition assessment identified about $21.84 million in total capital improvements. The majority of the work is to address renewal of facility building systems. ARC recommends about $8.13 million of this work be done over the next five years if possible.

***Ex-07:** NMSU-A Facility Condition Assessment Summary by Category*

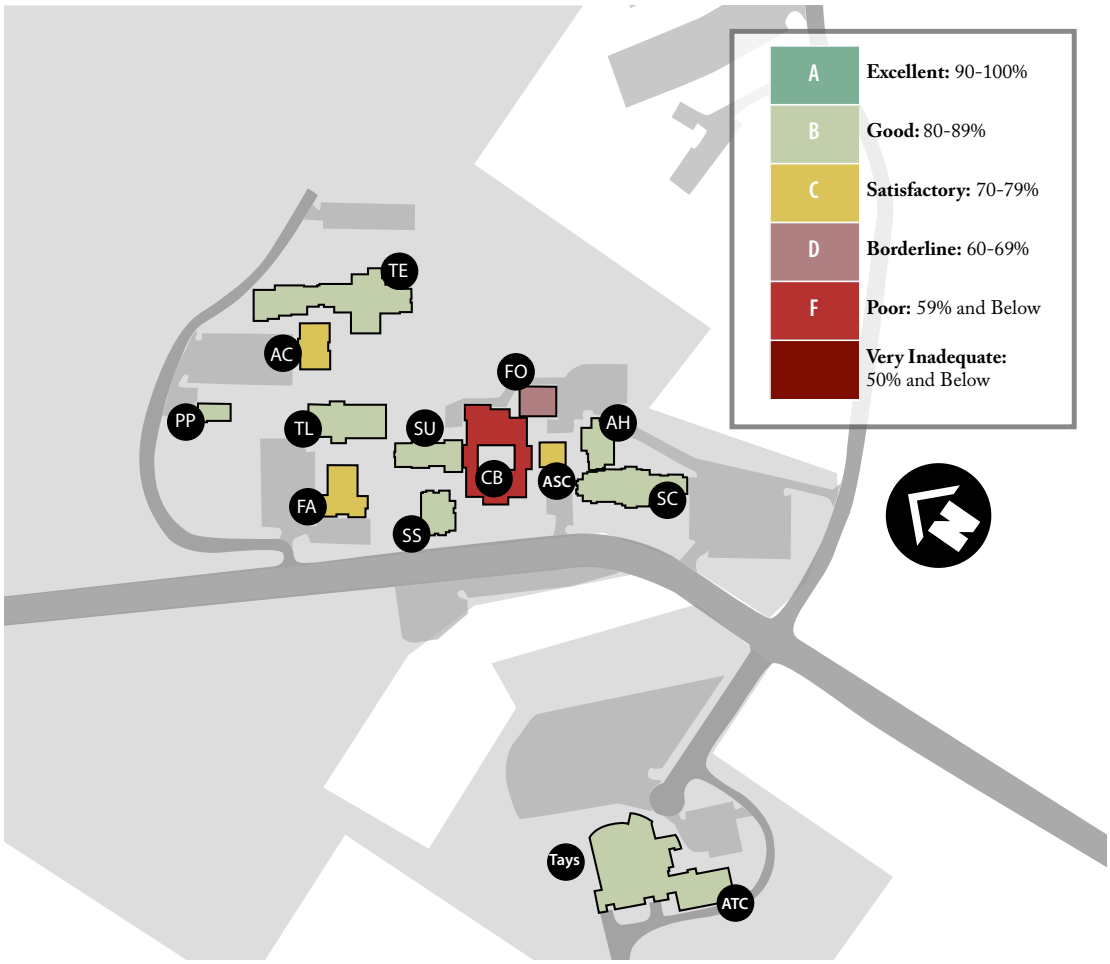
Category	Estimated Cost	% Total
1. Health and Safety	$5,134	0.02%
2. Code Compliance	$674,538	3.09%
3. ADA Compliance	$1,243,333	5.69%
4. Facility Renewal	$19,789,203	90.61%
8. Demolition/Removal	$128,495	0.59%
Total	**$21,840,703**	**100%**

***Ex-08:** NMSU-A Facility Condition Assessment Summary by Building*

NMSU Building	Facility ID	Facility	GSF	ARC %	ARC Tier		FCI Score		Project Budget	5-Year Recommendation
292V	ASC	Academic Support	4,327	78.70%	C	Satisfactory	0.0395	Good	$1,248,437	$37,190
292S	AC	Art Center	6,609	72.70%	C	Satisfactory	0	Good	$551,227	Replace*
292G	CB	Classroom Building	19,190	47.50%	F	Poor	0.1988	Poor	$1,656,097	Replace*
292L	FO	Faculty Office	5,417	69.90%	D	Borderline	0.0117	Good	$377,321	Replace*
292T	PP	Physical Plant	3,999	86.50%	B	Good	0.0896	Fair	$59,338	$59,338
292M	FA	Rohovec Fine Arts Center	9,321	75.90%	C	Satisfactory	0.3359	Poor	$3,568,801	$519,877
292U	SC / AH	Science Center / Allied Health	39,593	83.30%	B	Good	0.0006	Good	$2,802,577	$5,889
292H	SS	Student Services	17,505	88.30%	B	Good	0.4041	Poor	$1,846,533	$1,491,763
292J	SU	Student Union	9,595	86.50%	B	Good	0.398	Poor	$2,308,791	$828,787
292C	Tays / ATC	Tays Center / Advanced Technology Center	47,471	85.90%	B	Good	0.2282	Poor	$4,132,496	$2,668,494
292N	TE	Technical Center	30,354	85.90%	B	Good	0.3556	Poor	$2,922,657	$2,409,698
292Q	TL	Townsend Library	15,395	81.50%	B	Good	0.031	Good	$366,429	$104,942
		Totals	**208,776**						**$21,840,704**	**$8,125,978**

* Recommend replacement as part of capital strategy (see Ex-17)

Ex-09: *NMSU-A Facility Condition Assessment Summary Map*



Section A.3 in the Appendix includes a website link for detailed information about the results of the condition assessment, including:

- A history of the building and when it may have been renovated and remodeled
- Assessment scores for its site, and physical plant assessment, and adequacy/environment
- Narratives describing the characteristics for each category and system for the building

Site and Building Security

The strengths and weaknesses of a facility's physical environment affect campus safety, and are central considerations in an initiative called Crime Prevention Through Environmental Design (CPTED) that strives to heighten functionality and encourage desirable behavior. NMSU factors CPTED's principles into its planning efforts, which include natural surveillance, natural access control, and territoriality. The NMSU-A campus is in a relatively remote location on the eastern edge of the city, nestled in the foothills of the Sacramento mountains and surrounded by vacant and undeveloped territory. These conditions provide a clear line of visibility and a protective security buffer against intrusions.

Security guards monitor the campus from 10 a.m. to 11 p.m., security cameras surveil interior and exterior locations for suspicious activity, and local police support is available when necessary.

The campus offers numerous access points and exterior doorways, which collectively may represent a security weakness. NMSU-A planners have taken these matters into consideration and anticipate structural demolitions and replacements to modernize the campus and improve security. The planning team also recommends installing an electronic access system at building entrances and other important spaces to more easily monitor and control the inflow of students, faculty, staff, and visitors.

Access and Parking

Scenic Drive bisects the campus, with the original development and majority of the campus located on the east, or uphill side, and the Tays Center and Advanced Technology Center on the west.

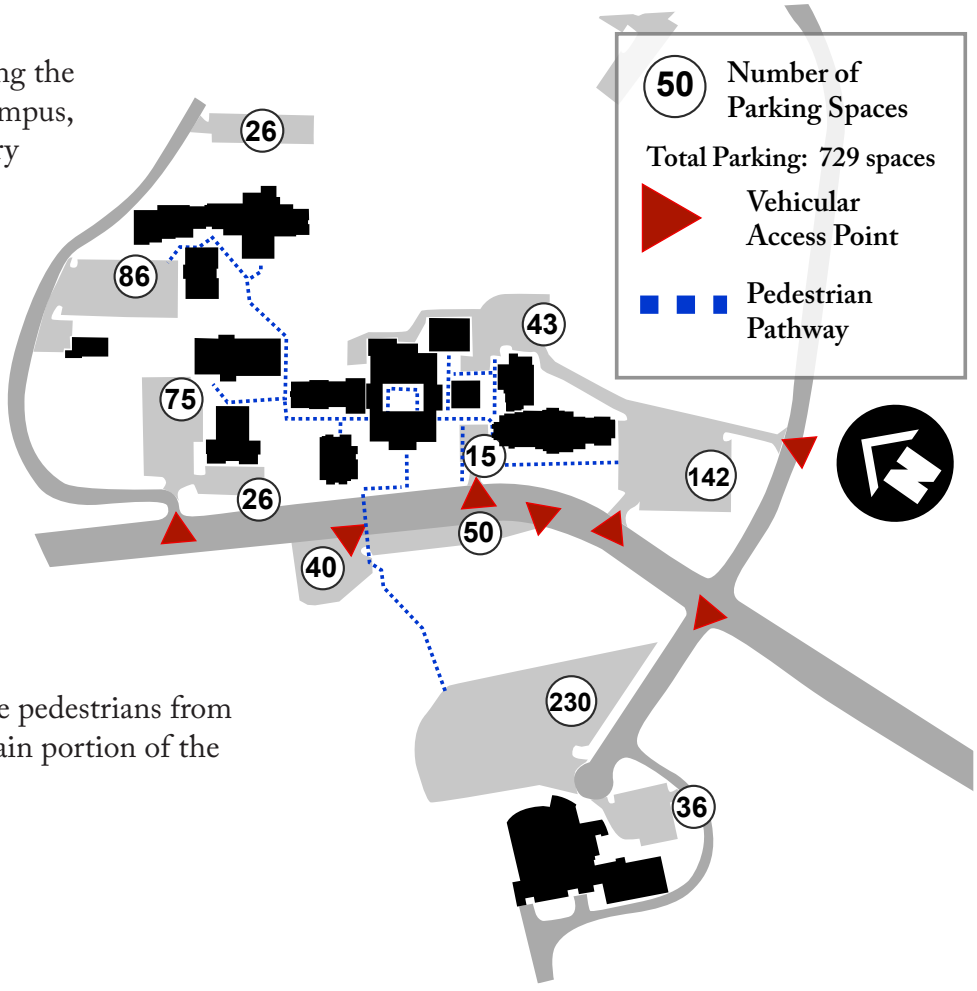
See Ex-10

The site layout provides serval points of access on the eastern side of the campus, while a single access route on the west leads to the Tays Center and ATC.

Parking is distributed along the perimeter of the upper campus, with a large supplementary lot across from the Student Services building on the west side of Scenic Drive. Separate parking lots on the west side of Scenic Drive serve the Tays Center and ATC. The current configuration provides enough parking spaces to meet anticipated demand.

Interior pathways separate pedestrians from vehicular traffic on the main portion of the campus on the east.

Ex-10: *NMSU-A Access and Parking*



Electrical

Public Service Company of New Mexico (PNM) provides electrical power to the campus through four PNM-owned meters. NMSU-A owns the entire medium-voltage infrastructure past the metering points. This includes nine point-of-common-coupling transformers, three switches, and the interconnecting duct banks.

NMSU-A supplies all labor and material to repair or replace medium voltage equipment, and anticipates no future electrical expansion at this time. PNM has also installed 15 kW of photovoltaic panels on the roof of the Classroom building.

Natural Gas

New Mexico Gas Company supplies the campus's natural gas, which is distributed to the twelve main buildings through four metering sites.

Domestic Water and Sanitary Waste

City of Alamogordo supplies domestic water and sanitary waste services to the campus. The City of Alamogordo is also responsible for the maintenance and inspection of all six campus fire hydrants and the three fire hydrants along Scenic Drive.

Storm Water Drainage

Three holding ponds collect storm water runoff, which eventually drain into arroyos located throughout the campus.

Energy Management

Computrol Energy Management System manages building energy except for the Rohovec and Henry Campbell Arts Centers. This system controls building HVAC and lighting. Future plans anticipate expanding service to the Rohovec and Henry Campbell Arts buildings.

Communication Services

Lumen Technologies (formerly known as CenturyLink) provides telecommunication services to the campus.

Enrollment

Historic Enrollment

NMSU-A's enrollment has declined since 2011, reflecting both national and regional higher education trends. Enrollment headcount has declined by 2,522 students (-72%) since 2011. Full Time Equivalent (FTE) enrollment has declined by 1,313 students (-76%) over the same period.

See Ex-11 and Ex-12

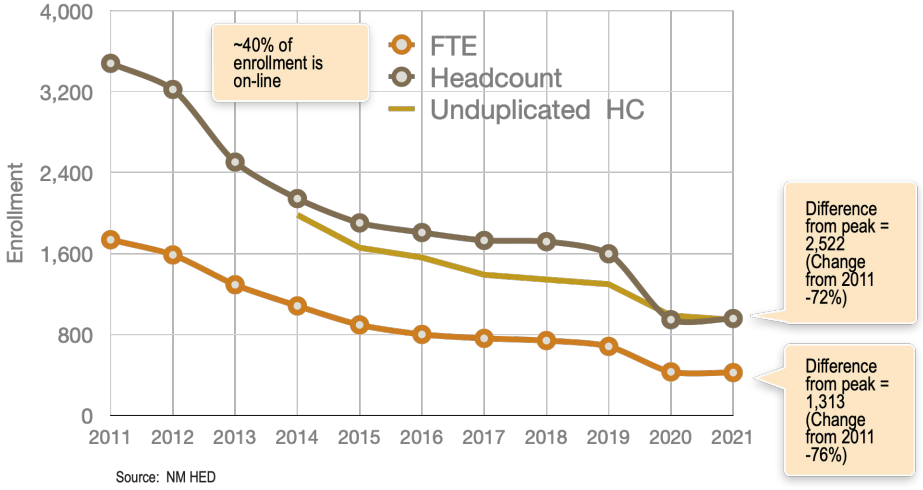
About 40% of the current enrollment is online, made up of students who attend classes remotely.

National studies indicate the following general causes for the decline of higher education enrollment:

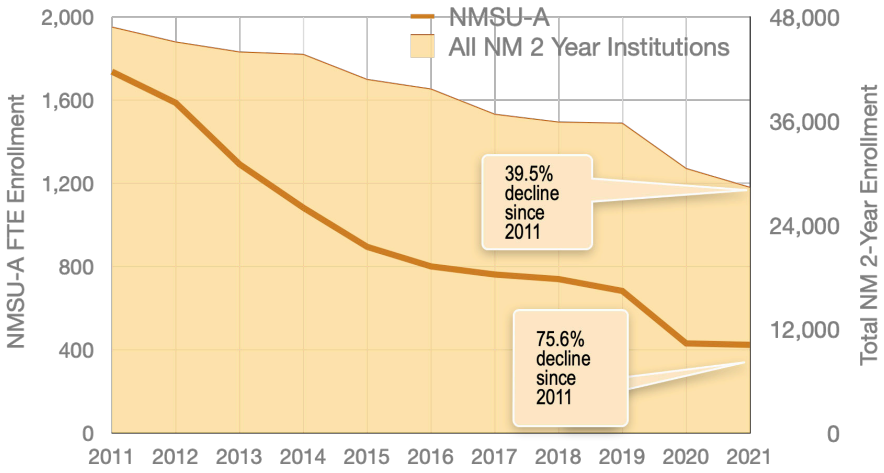
- Flat or declining number of high school graduates
- Focus on careers and job placement
- General aging of the population
- More part-time students
- Class schedules that do not align with many student needs

NMSU-A's leadership attributes the school's significant decline in enrollment in 2020 to a recent NMSU policy change that prevents Main Campus students from attending NMSU branch campuses.

Ex-11: *NMSU-A Historic Enrollment Trend 2011-2021*



Ex-12: *NMSU-A FTE Enrollment Trend 2022-2021 Compared to all 2-Year Higher Education Institutions FTE Enrollment*



Source: NM HED
*Not including Native American schools without full 2009-2020 data

Service Area Scan: Demographics and Economy

Two nearby military installations help stabilize demographic and economic conditions in Alamogordo and Otero County as a whole. However, low federal wages and various characteristics of the installations are not sufficient to significantly improve community indices or ultimately to stem declines in birth rates. Low wages pervasive across all industries undercut positive trends and metrics in unemployment and income.

Nevertheless, county population growth has been strong, and the Geospatial and Population Studies of the University of New Mexico (UNM GPS) forecast continued growth, though at a lower rate than estimated three years ago. Recent population growth stems in part from discrete military expansion in the area. But no additional expansions are on the horizon, and that particular inflow of new residents will cease.

Prevailing demographic trends are likely to further erode enrollment. Each segment of the population will experience varying rates of growth. For example, as communities age and experience fewer births, demographic measures will reflect an increase in higher age ranges and a decrease in school-aged populations.

*See **Section A.5** for a more detailed discussion of area economy and demographics information*

Even a hypothetical influx of new military personnel would not mitigate the effects of an aging community, as it has in recent years. The older population will begin to expand the disparity in the representation of younger age groups. Populations of people in age groups below 40 are all projected to undergo limited growth.

Future Enrollment Target

NMSU-A has prepared an enrollment management plan that specifies strategies for enrollment, recruitment, retention, and robust operation. The plan cites opportunities for enrollment growth, including:

- The Career and Technology arena, where students can earn degrees and move directly into the workforce in areas that provide stable employment. This population is made of up students of various ages, often in an effort to retrain for a career in a new field.
- Dual credit and early college population, which includes students working to advance more quickly toward a traditional degree or a workforce certificate.
- Enrollment of more American Indian and White students, which would bring the student population more in line with that of Otero County and increase enrollment overall.
- Further retention of Hispanic and American Indian students presents another opportunity to sustain and improve the level of the local population.

NMSU-A administrators note that a reasonable enrollment target to maintain for future planning is 10,000 credit hours. That equates to a headcount enrollment of about 800 (~600 FTE enrollment) with about 40% continuing to be online students. Fall 2022 enrollment was 1,028 students and 6,928 sudent credit hours.

Space Use

Functional Use

Instructional use (general classrooms and instructional laboratories) as defined by FICM category comprises 43% of the total assignable space, and is the largest proportion of space type on NMSU-A's campus.

See Ex-13 and Ex-14

Buildings devoted primarily to instructional use make up three-quarters of all campus buildings.

Comparison to Peer Colleges

One broad measure of space utilization is the total amount of space (gross square feet, or GSF) divided by the total number of full-time equivalent students (FTE). The lower the number, the better the use of space. Based on a 2019 Summer Hearings report by the NM HED, NMSU-A has 444 GSF/student, the fourth highest I&G GSF of the 16 two-year higher institutions in the state.

See Ex-31 in Section A.4

Instructional Utilization

Analysis of instructional use indicates that NMSU-A has substantial capacity to accommodate additional students. Given the enrollment declines the campus has experienced, these results are consistent with expectations.

See Ex-15

NMSU-A has 69 instructional spaces classified either as a general classroom or instructional laboratory. Forty of these spaces are currently scheduled (58% of the total). Some instructional spaces (i.e., the Classroom Building with 15 instructional spaces) are not scheduled due to the poor condition of the building.

While New Mexico has not established instructional use targets, ARC analyzed the Fall 2019 (representing pre-COVID enrollment demand) scheduled instructional use based on various state utilization studies that represent the range of commonly adopted higher educational utilization standards.

Of those scheduled for use, the peak occupancy of instructional space is between 4:00 p.m. to 6:00 p.m., Monday through Thursday, reflecting course scheduling to accommodate working adults. The average Station Occupancy Ratio (SOR) of instructional space is 38%, a measure that indicates the percentage of instructor-desired seats occupied when the room is scheduled. The generally accepted target for this metric is 65 to 80% depending on the type of space.

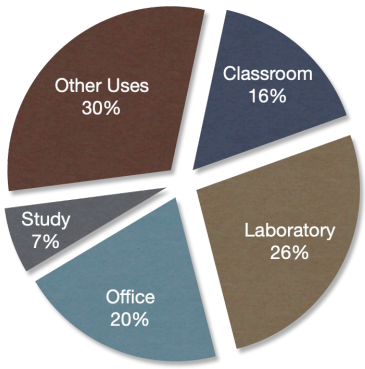
The blended Room Utilization Rate (RUR, the average number of hours per week an instructional room is scheduled) is 16.6, based on 70 possible hours per week, as compared with a metric of 30-40 hours per week. The average Station Utilization Rate (SUR, the average hours

Ex-13: *NMSU-A Primary Functional Use*

Ex-14: *NMSU-A Space Distribution by FICM Code*

FICM	Assignable Area	ASF	% Total	% Assignable
100	Classroom Facilities	23,592	12.5%	16%
200	Laboratory Facilities	38,547	20.4%	26%
300	Office Facilities	29,699	15.7%	20%
400	Study Facilities	9,483	5.0%	7%
500	Special Use Facilities	6,097	3.2%	4%
600	General Use Facilities	29,601	15.6%	20%
700	Support Facilities	7,463	3.9%	5%
800	Health Care Facilities	1,046	0.6%	1%
	Subtotals	**145,528**	**76.9%**	**100.0%**
WW	Circulation Area	27,310	14%	
XX	Building Service Area	7,323	4%	
YY	Mechanical Area	9,035	5%	
	Subtotals	**43,668**	**23%**	
	Total	**189,196**	**100%**	
	Reported Gross Square Feet	**222,712**		
		Net/Gross	**65.3%**	

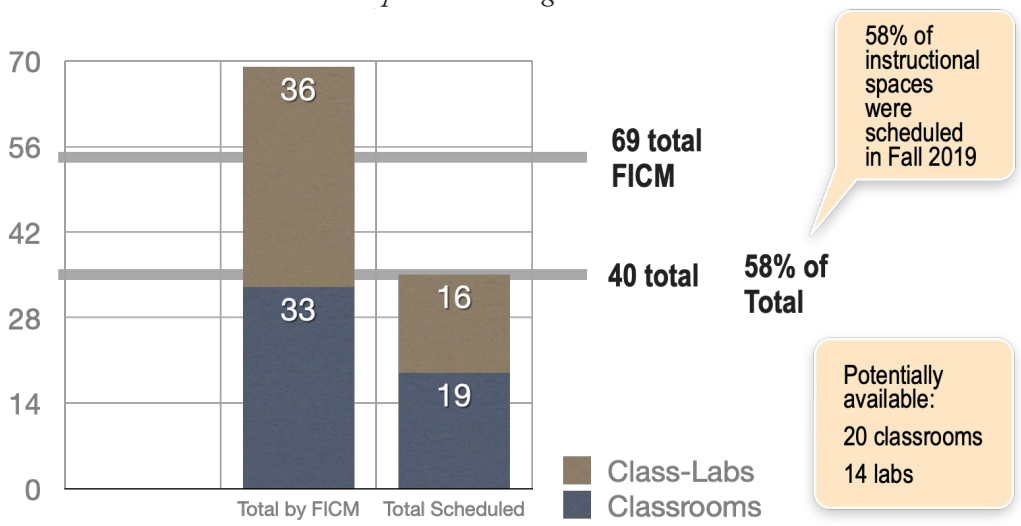
NMSU Alamogordo Campus
Assignable Area
by FICM Category*



per week a station is scheduled) is 6.3 hours compared to a metric of 21 to 30 hours per week, depending on when a station is scheduled.

Given the enrollment decline and the number of unscheduled rooms, NMSU-A's existing capacity is sufficient to accommodate current and expected enrollments. There are two opportunities to improve instructional utilization: remove existing instructional buildings in poor condition (i.e., the Classroom Building, and Art Center) and replace with a facility properly sized and configtured to meet changing program demands and optimize overall space use; and to potentially share some of the existing instructional areas with the local school (discussed in next section).

Ex-15: *NMSU-A Instructional Space Scheduling*



Source: NMSU AiM database, and NMSU-A Fall 2019 classroom scheduling data

Opportunities to Share Space with Alamogordo Public Schools (APS)

NMSU-A is currently in discussions with Alamogordo Public Schools (APS) to relocate some or all of Alamogordo High School to the NMSU-A campus and either share space or partner in the construction of new buildings.

Initial discussions have centered on the possibility of a phased implementation of the relocation of the high school. The process could potentially include leasing the Technical Education Building (Protech) and Tays Center / Advanced Technology Center, with dual use of other campus buildings.

If leadership from the university and the high school find a mutually beneficial arrangement that earns broad community support, the combined effort could optimize the site and building utilization, and promote NMSU-A as an attractive destination for continued education.

Stakeholder Input

Web-Based Survey

A web-based questionnaire posed five questions about the programs, facilities, and site of the NMSU-A campus, and collected 63 validated responses. Responses to the questions indicate:

- Desired program changes: Expanding and supporting trades, arts, and additional support activities
- Campus facilities liked the most: Patio/courtyard, and Campbell Art Building
- Site or Building Changes Suggested: Provide food services, demolish and improve the Classroom Building, and upgrade the Art Building
- Most important physical improvement needed: Renovate and refurbish existing buildings

*See **Section A.2** for more detailed survey response*

Stakeholder Interviews

The planning team held interviews with NMSU-A program directors and administrative staff members to understand existing functional organization and issues. Primary issues identified in these interviews include:

Facilities

- Biggest issue is the aging buildings on the campus
  - Classroom Building was built in 1968
  - Three others in 1975
  - Several in 1982
  - 40 to 50 year old buildings with poor ADA / a lot of structural shifting
- Highest priority is demolishing the 1960s era Classroom buildings and replacing them with a new consolidated facility
  - Demolishing the Arts building is part of the overall concept
  - Intent is not to expand but rather to replace aging facilities and consolidate/gain efficiencies
- Partnering with Alamogordo Public Schools is seen as an opportunity to utilize excess space on the campus
  - The concept has support from HED and LFC
- Rohovec Theatre renovation is funded (exterior work by the state / interior work will be done with NMSU-A funds)
- NMSU-A is focusing its available funding on updates to HVAC systems
- Science labs and Allied Health labs are in good shape

- Facilities Building needs additional space for storage, plus some secure yard space
- The facilities team would like to eventually replace the chiller/boiler systems due to the constant need to replace system components, as well as the lack of qualified maintenance personnel and difficulty in obtaining outside contractors to service the systems
- Information Technology
  - IT infrastructure has been improved over the past couple of years and is in good shape / are working to replace older computers, move to VOIP and upgrading to faster Wi-Fi 6 networking protocol
  - IT team would like a better staging area / workbench area; IT offices are tight
  - HVAC is not sufficient to cool IT spaces - have to use extra AC units in server rooms
- The PACE area (adult ed) in Tays has no student hangout/study/lobby space - would like a place for students with limited transportation to hangout between classes
- Desire better faculty offices (would be part of new classroom building)
- Back-of-house spaces at the Library do not function well - could be improved
- Many areas of the campus need bathroom upgrades
- Tays locker rooms need some repairs to showers, and floor at Tays is uneven and of VCT; Desire is to upgrade to a multi-purpose gym floor
- Leadership would like to improve/increase renewable energy capacity campuswide; Currently have solar panels on the faculty office building (will need to be relocated if the building is demolished)
- Kitchen area at deli needs a sanitizer - unclear if there is a place to put one
- Healthcare programs would like a laundry facility somewhere in the health building

Site

- Foothills location is beautiful and landscaping is well tended
- Site has significant ADA challenges due to the terrain
- There has been a lot of structural shifting as well
- Site seems to drain well but some sidewalks are getting undermined due to erosion
- Drainage is a concern around the Tays Center

Security

- Site is still on an all-key system - would like to go to an electronic keycard system
- Need to address Crime Prevention Through Environmental Design (CPTED)

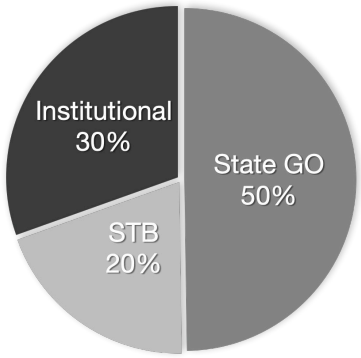
Capital Planning Strategy

Capital Resources

NMSU-A uses a variety of sources to address capital requirements: statewide higher education general obligation (GO) bonds, severance tax bond (STB) distributions, institutional funds, and local GO Bond funding.

Over the last 10 years, NMSU-A has activated approximately $12.8 million of capital resources (see ***Ex-16***). New Mexico community colleges have the ability to ask voters to approve a general obligation bond issue—a form of debt financing based on local property tax assessments. NMSU-A is considering a $10 million or $20 million local GO Bond as part of a November 2024 election.

Ex-16: *NMSU-A Ten-Year Capital Funding Sources*



Higher education institutions submit their capital project requests to the Higher Education Department (HED) for review and potential recommendation. The process is competitive amongst all other higher education institutions, with approval and funding priorities based on the criteria set forth in NMAC 5.3.9.8. HED's priorities favor projects that improve infrastructure and do not add any additional square footage. HED requires a 25% local match, or justification for waiving per NMAC 5.3.9 for 2-year institutions. For total project costs that exceed the community college's match contribution capabilities, NMSU will work with NMHED and provide a justification for waiver.

Capital Strategy 2023-28

The 2021-2026 capital plan aims to address basic facility renewal needs throughout the campus and improve space use utilization.

See Ex-17 to Ex-19

Approximately $12.8 million of planned improvements will address building envelope problems, repair and upgrade HVAC equipment, and mend roofing needs. These projects respond to HED funding priorities 4 through 8 and include a 26% match from local institutional funds.

The plan proposes to replace the Classroom Building with an academic building embodying a high quality educational setting with state-of-the-art technologies (HED priority 2) primarily using local GO Bond funding with a state match.

Constructing the proposed new Academic Building would enable NMSU-A to demolish the aging Art Center and Faculty Office Buildings and more effectively use the available space. New building construction would also provide an opportunity to improve campus security by removing vulnerable entrance points that requiring access control. The proposed partnership with APS could help NMSU-A significantly reduce the overall square footage of its campus, leasing unused space that the high school may need.

Ex-17: NMSU-A Five-Year Capital Strategy

HED Funding Priorities Criteria

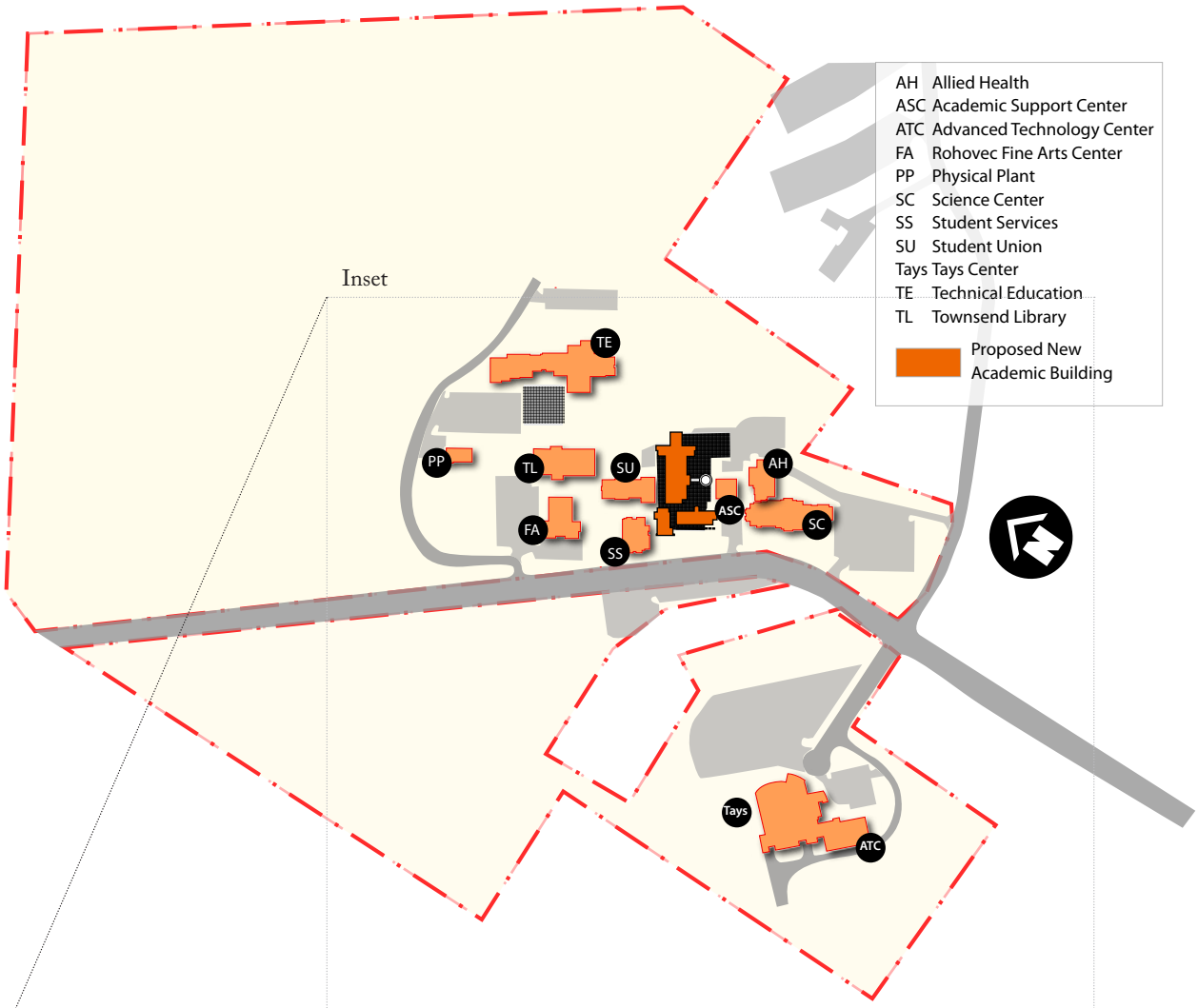
1. Strongly related to instructional programs/support institutional mission
2. Provide high quality educational settings / up-to-date technologies
3. Necessary to accommodate enrollment growth
4. Address major health and safety problems / eliminate physical barriers for handicapped persons (ADA)
5. Unforeseen conditions that may result in major property deterioration
6. Renovate facilities / make wise use of existing resources
7. Improve utility Systems or building energy efficiency / result in reduction of energy costs
8. Projects with no other available or appropriate funding

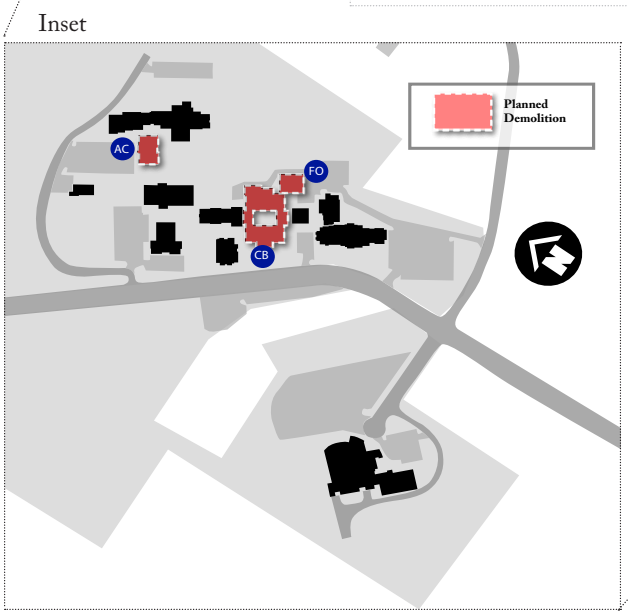
NMSU-A Capital Plan Priorities

Project Name	$ Millions					% Local Match	Year Funding Received	HED Priority Criteria							
	STB	State GO	Local GO	Local Match	Total			1	2	3	4	5	6	7	8
1. Classroom Building demolition (Faculty Building/Campbell Arts Center)*	$0.00	$5.00	$0.00	$1.75	$6.75	26%	2024-2025					◆	◆	◆	◆
2. Classroom Building Replacement	$0.00	$7.00	$10.00	$3.00	$20.00	15%	2024-2025	◆	◆		◆	◆		◆	
3. Chiller/Boiler repair and replacement campus-wide Including HVAC renovations, replacement and repairs (Protech Building)	$1.00	$0.00	$0.00	$0.35	$1.35	26%	2025-2026					◆	◆	◆	◆
4. Building Envelope Improvements (Protech Building and campus-wide) including windows, doors and stucco repairs	$0.50	$0.00	$0.00	$0.18	$0.68	26%	2025-2026					◆	◆	◆	◆
5. Chiller/Boiler repair and replacement campus-wide Including HVAC renovations, replacement and repairs (Reidlinger Science Ctr./Allied Health)	$0.00	$1.00	$0.00	$0.35	$1.35	26%	2026-2027*					◆	◆	◆	◆
6. Tays Special Events Center Repairs, including HVAC and Roof	$0.00	$0.50	$0.00	$0.18	$0.68	26%	2026-2027					◆	◆	◆	◆
7. Electronic Access Control for all campus buildings	$1.125	$0.00	$0.00	$.375	$1.5	25%	2027-2028				◆		◆		
8. Building Envelope Improvements (Tays Special Events Center) including windows, doors and stucco repairs	$0.00	$1.00	$0.00	$0.35	$1.35	26%	2028-2029					◆	◆	◆	◆
9. ADA / Code Compliance (Site)	$0.5625	$0.00	$0.00	$0.1875	$.75	25%	2029-2030				◆		◆		
10. ADA / Code Compliance (Facilities)	$0.00	$1.125	$0.00	$0.375	$1.50	25%	2030-2031				◆		◆		
Total	**$3.188**	**$15.63**	**$10.00**	**$7.098**	**$35.91**	**20%**									

*Candidate for NM HED all of higher education institutions (HEI) request for demolition funding

Ex-18: *NMSU-A Five-Year Capital Campus Plan*





Ex-19: *NMSU-A Planned Building Demolitions*

Appendices

A.1 Facility Planning Decisions

The recommendations in this report result from a planning process involving administrative and educational personnel with periodic briefings to the Advisory Board. A professional planning consultant guided and facilitated the course of events. The roles, responsibilities, and flow of decision-making for capital outlay planning include:

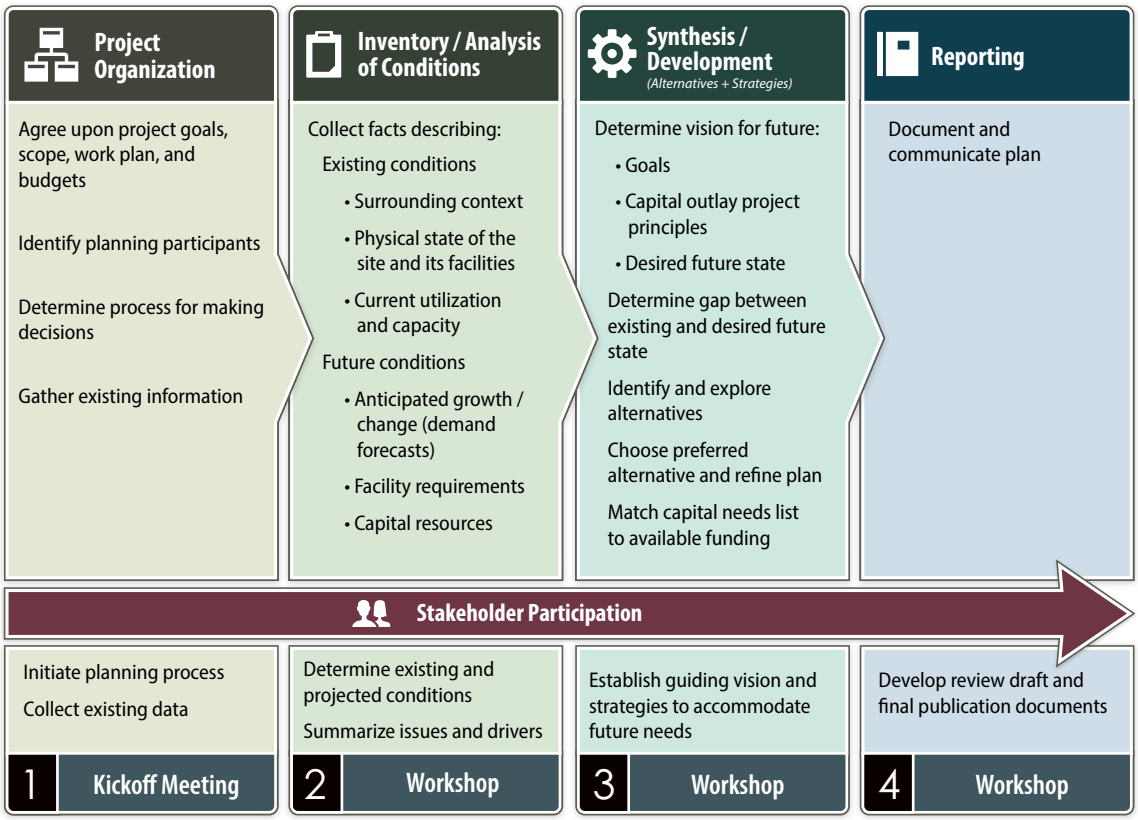
- Advisory Board – Roles of the Advisory Board include counseling participants and consenting to capital outlay recommendations that the administration has made. The members of the Advisory Board reviewed draft versions of the NMSU-A Campus Facility Master Plan, provided feedback on the plan and the planning process, and ultimately approved the final version of this plan.
- Associate Campus Director – The role of the Associate Campus Director is to establish an ongoing planning process, organize the parties involved in the effort, and make recommendations to the advisory board regarding future courses of action. The campus executive officer receives assistance in this endeavor from the campus finance officer.
- Planning Consultant – The planning consultant acts as an advisor to the campus president. The consultant's role is to facilitate the planning process by developing a database of existing and projected conditions. The consultant also develops preliminary concepts regarding future courses of action and prepares verbal and written presentations that describe this information.

The planning consultant organized the planning process in four steps:

See Ex-20

- Project Organization – First, the planners identified existing plans, reports, organizational charts, space allocation standards, utilization data, and other data relevant to the study. The planners met with campus representatives to discuss the planning proposal and identify project goals and issues. This step determined participants in the study and established a decision-making framework. Participants reached an agreement on the project work plan, schedule and proposed budgets.
- Inventory Analysis of Conditions – Next, the planners collected information about existing and projected future conditions using questionnaires, interviews, and on-site evaluations. Information included facilities data, user data, facility conditions and use data, office and educational space utilization projections, and space requirement projections.
- Development of Alternatives and Strategies – Then participants explored various development scenarios to accommodate present and future programs. They chose an option as the basis for developing a Capital Improvement Plan. The planners developed capital project recommendations based upon the information collected in the preceding steps.
- Prepare Report – Finally, participants developed the final report, which met New Mexico Higher Education Department guidelines.

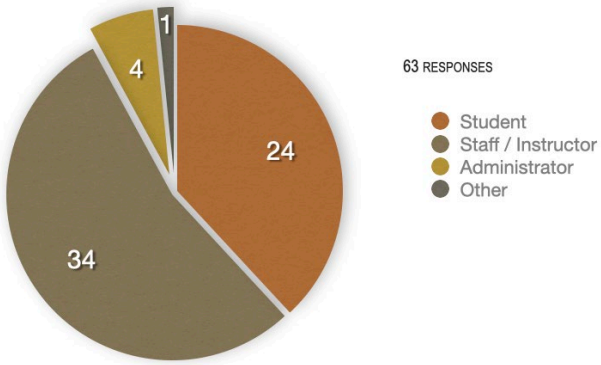
Ex-20: *NMSU-A Campus Master Planning Process*



A.2 Online Survey Response

Planners solicited input from students, faculty, staff members, and administrators via an online survey from February 16 to April 15, 2022. The survey provided participants an opportunity to answer five campus-related questions, and gathered 63 complete and validated responses.

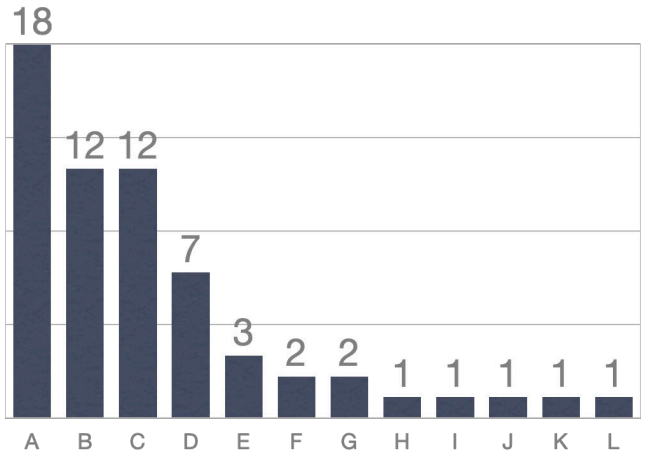
Ex-21: *Online Survey Responses*



Ex-22: *NMSU-A Detailed Survey Results*

Ex-22-1

Question 1 - What kinds of instructional program changes would you like to see to help NMSU-Alamogordo better serve students and the community?*

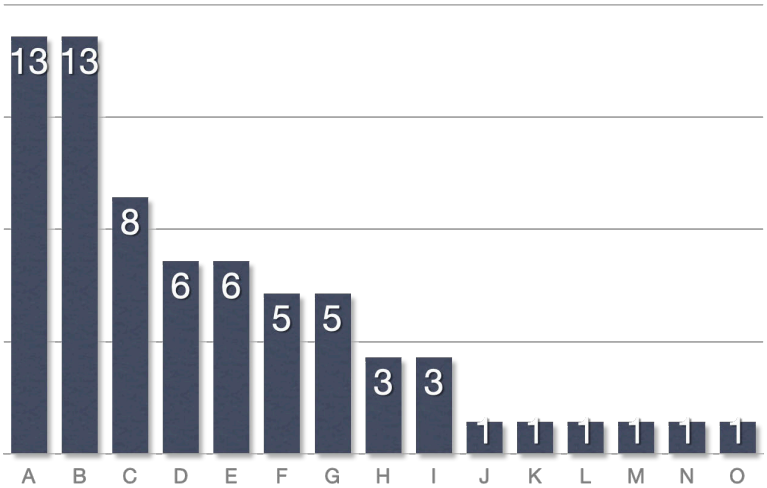


A. Expand / Support Trades
B. Improve / Support Arts
C. More Student Support / Activities
D. More / Variety Course Offerings
E. Additional Training
F. Offer Horticulture
G. Provide More Tutoring
H. Teach Overloads
I. Instructors Actively Recruit
J. Longer Library Hours
K. More Evening Classes
L. Offer Fun Classes

*May include multiple ideas from a single responder. Some responders did not answer all questions)

Ex-22-2

Question 2 - What campus facilities or spaces do you like the most (for example, certain buildings, classrooms, offices, support spaces, courtyards, etc.)?*

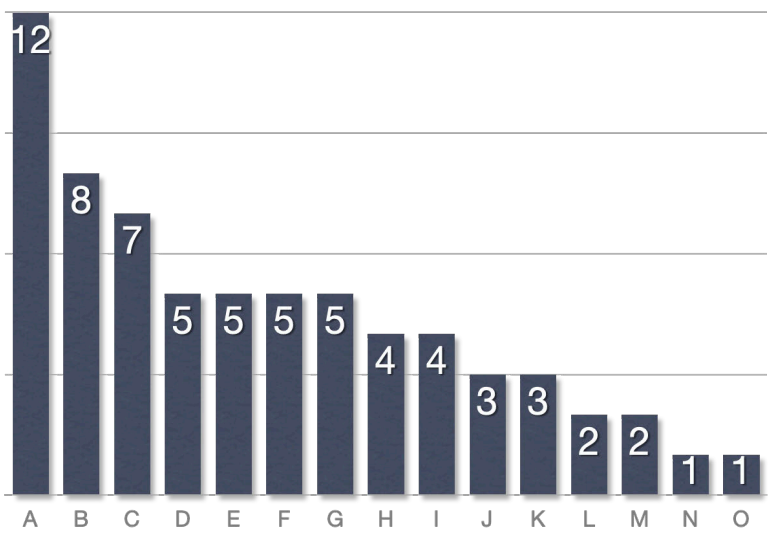


A. Patio / Courtyard
B. Campbell Art
C. Science Bldg
D. ProTech /Technical Ed Bldg
E. Library
F. Glass House
G. Student Union
H. Allied Health
I. Tays Event Center
J. Student Services
K. Cafeteria / study area
L. Academic Support Center
M. PACE
N. Testing Center
O. Rohovec

*May include multiple ideas from a single responder. Some responders did not answer all questions.

Ex-22-3

Question 3 - What physical building- or site-related changes do you recommend to improve the quality of life for students, staff, faculty, administration, visitors, and the community? *

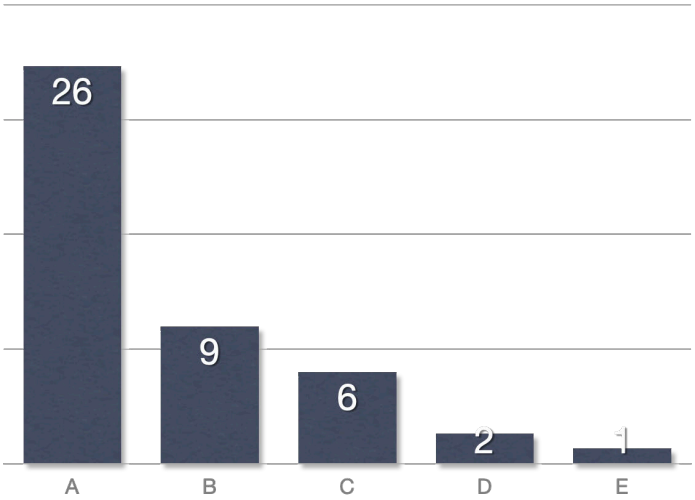


A. Provide Food Service / Vending
B. Demolish / Improve Classroom Bldg
C. Upgrade Art Bldg
D. Improve Heating and Air Conditioning
E. Update Building Technology
F. Expand / Upgrade Student Center
G. Upgrade Glass House
H. Improve ADA accessibility
I. Upgrade Theater Building
J. Improve Public Art/ Landscaping / Outdoor Amenities
K. Enhance Tays Center
L. Improve Uitlization of Science Center
M. Improve Library
N. Improve Safety / Security / Lighting
O. Upgrade ProTech

*MAY INCLUDE MULTIPLE IDEAS FROM A SINGLE RESPONDER. SOME RESPONDERS DID NOT ANSWER ALL QUESTIONS. "NON-PHYSICAL" SINGLE RESPONSES IN "OTHER"

Ex-22-4

Question 4 - What do you think is the one most important physical building- or site-related improvement for NMSU-Alamogordo to complete over the next 10 years?*

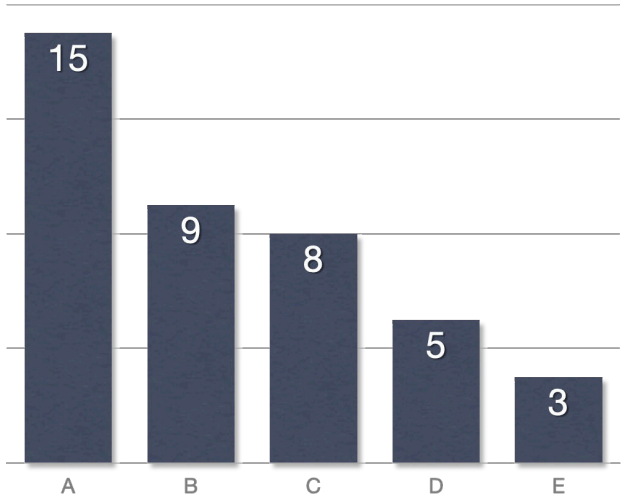


A. Renovate / Refurbish Existing Buildings
B. Improve / Expand Art Offerings
C. Improve HVAC
D. Provide Food Service / Vending
E. Provide Campus Bookstore

*MAY INCLUDE MULTIPLE IDEAS FROM A SINGLE RESPONDER. SOME RESPONDERS DID NOT ANSWER ALL QUESTIONS.

Ex-22-5

Question 5 - Please provide any other comments or thoughts you have that may impact the NMSU-Alamogordo Long Range Facilities Master Plan*



A. Renovation related
B. Attitude / Lack of Respect
C. Do not demolish Campbell/ Art Bldg
D. Add more / different curriculum
E. Share with High School

*May include multiple ideas from a single responder. Some responders did not answer all questions. "Non-physical" single responses in "Other"

A.3 Facility Condition Assessment

ARC conducted a condition assessment of the 12 NMSU-A campus facilities totalling approximately 209,000 GSF.

Prior to the assessment, ARC collected and reviewed relevant information about the facilities, including: building and site plans, history of capital improvements, work order history, replacement cost data, and other relevant reports or available reports. The ARC planning team met with the facility managers to discuss facility or building system issues and integrated the results from mechanical and electrical system assessments conducted by Bridgers & Paxton Consulting Engineers (August 2021).

ARC conducted an on-site assessment that included visual inspection of all site features and building elements and spaces. The results of the assessment includes a web-based application and separate report that documents the condition for each building and site. Each report includes:

- An executive summary that describes repair, renovation, and maintenance needs for the site, building, HVAC, and roof, as well as how well the building supports its assigned activities and programs.
- An ARC condition rating score, which is a composite-weighted scoring method that reflects the observed conditions for the site, building, and functional adequacy.
- Facility condition index (FCI) scores are based on a national scoring system that applies only to building condition. The FCI score is ratio of the cost of repairs to the building within the next five years divided by the replacement cost of the building (insurance) based on the age and condition of each building system with respect to its expected life cycle.
- A list of capital improvement projects (CIPs) and associated cost to rectify observed deficiencies coded by major, secondary, and tertiary categories that describe the nature of the project to assist in information searches and the prioritization process. CIP costs are based on national cost guides adjusted to Albuquerque location conditions, and experience of CNM construction history.
- Digital photographs
- Composite digital site plans showing the location of recommended capital improvements

Ex-23: *NMSU FCA Report Excerpt*

More Detail Available from:

https://arcforms.info/https://arcforms.info/nmsu2021fca/login.php
(login credentials required)

A.4 Instructional Space Utilization Data

Ex-24: *Instructional Utilization Metrics Used for Instructional Space Analysis*

Term		Metrics (Range)		
WSCH	**Weekly Student Contact Hours** The time in which the student is involved in direct face-to-face instructional contact.			
WRH	**Weekly Room Hours** Hours a classroom is scheduled for use. *Calculation: Days in Class x Time in Class*		70.0 Hours	14 hours per day / 5 days per week)
RUR	**Room Utilization Rate** Average number of hours per week a group of rooms is scheduled. *Calculation: WRH / Classrooms*	Classroom	30-45 Hours	60%-65% of available hours
		Lab	15-24 Hours	
SUR	**Station Utilization Rate** Average number of hours per week a station is scheduled. *Calculation: RUR x SOR*	Classroom	24-30 Hours	
		Lab	15-24 Hours	Depending on discipline
SOR	**Station Occupancy Ratio** Proportion of stations scheduled for use when the room is scheduled. *Calculation: (WSCH / Stations) / (WRH / Classrooms)*	Classroom	65-70%	
		Lab	80%	

Source: Architectural Research Consultants, Incorporated

Ex-25: *NMSU-A Instructional Space Utilization Table*

New Mexico State University - Alamogordo
Utilization Metrics - Fall 2019

Select a semester: Fall 2019

Click here to toggle on and off room type breakouts.
Abbreviation* descriptions lie in the Calculations Key below.

Campus	WRH*	WSCH*	Rooms Scheduled	Stations Available	SOR*	RUR*	SUR*
Alamogordo	662.58	5,548.27	40	876	38.24%	16.56	6.33
Classrooms	328.47	3,204.94	19	489	37.91%	17.29	6.55
Labs	254.11	1,675.83	16	263	40.12%	15.88	6.37
Offices	46.50	524.50	2	48	47.00%	23.25	10.93
Physical Education	10.00	62.50	1	16	39.06%	10.00	3.91
Assembly	20.00	70.00	1	30	11.67%	20.00	2.33
All Building Totals	662.58	5,548.27	40	876	38.24%	16.56	6.33

Building	WRH*	WSCH*	Rooms Scheduled	Stations Available	SOR*	RUR*	SUR*
HENRY CAMPBELL ART CENTER	60.02	267.83	3	30	44.62%	20.01	8.93
Labs	60.02	267.83	3	30	44.62%	20.01	8.93
PLANETARIUM	7.50	127.50	1	17	100.00%	7.50	7.50
Labs	7.50	127.50	1	17	100.00%	7.50	7.50
PROFESSIONAL TECHNICAL EDUCATION BLDG	145.43	1,332.00	13	282	42.22%	11.19	4.72
Classrooms	76.02	912.00	7	166	50.59%	10.86	5.49
Labs	65.91	409.50	5	86	36.12%	13.18	4.76
REIDLINGER SCIENCE CENTER	251.37	2,434.92	15	386	37.64%	16.76	6.31
Classrooms	144.87	1,676.42	9	268	38.86%	16.10	6.26
Labs	106.50	758.50	6	118	36.21%	17.75	6.43
TAYS SPECIAL EVENTS CENTER	198.26	1,386.02	8	161	34.74%	24.78	8.61
Classrooms	107.58	616.52	3	55	31.26%	35.86	11.21
Labs	14.18	112.50	1	12	66.11%	14.18	9.38
Offices	46.50	524.50	2	48	47.00%	23.25	10.93
Physical Education	10.00	62.50	1	16	39.06%	10.00	3.91
Assembly	20.00	70.00	1	30	11.67%	20.00	2.33
All Building Totals	662.58	5,548.27	40	876	38.24%	16.56	6.33

Room Type Notes
Classrooms are composed of Assembly and Classroom room types.
Class Laboratories are composed of Shop and Class Laboratory room types.
Open Laboratories are composed of Open Lab Service and Open Laboratory room types.
- Athletic or PE room type rooms are excluded from the breakout calculations above.

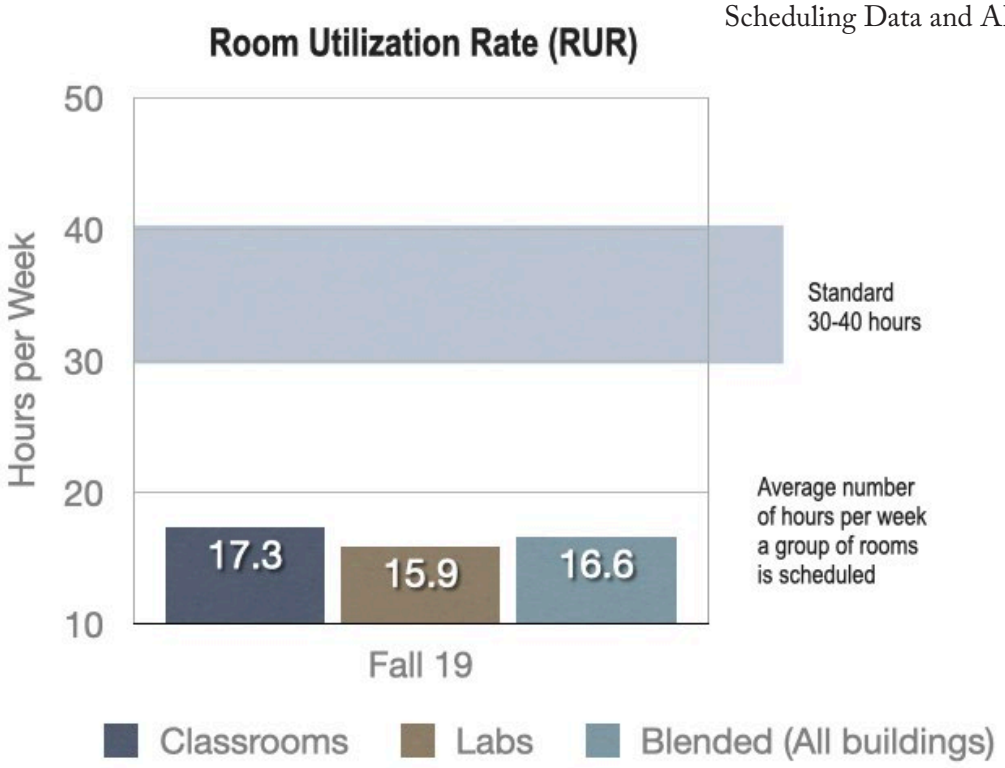
*Any discrepancy between a facility's totaled Rooms Scheduled or totaled Stations Available amount and the sum of line items breakouts under that room type is due to courses being offered in non-Classroom and/or non-Lab room types (Office, Physical Education, or Assembly).

Source: ARC: https://www.arcforms.info/nmsualamo2022suite/use_analysis/campus_metrics.php

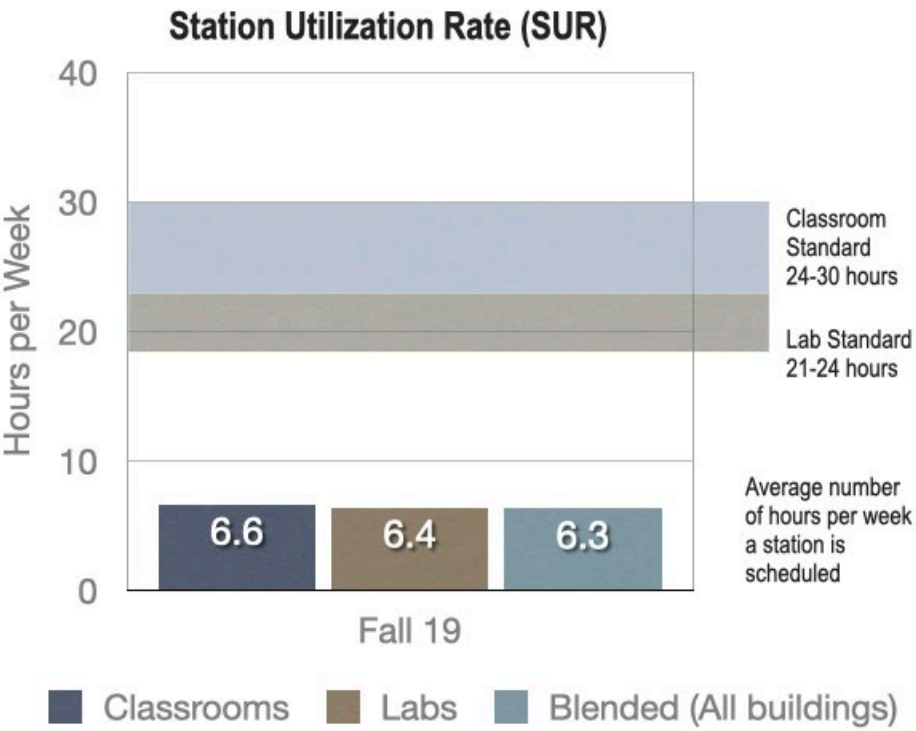
Ex-26: *NMSU-A Instructional Utilization Metrics*

Source: Fall 2019
Scheduling Data and ARC

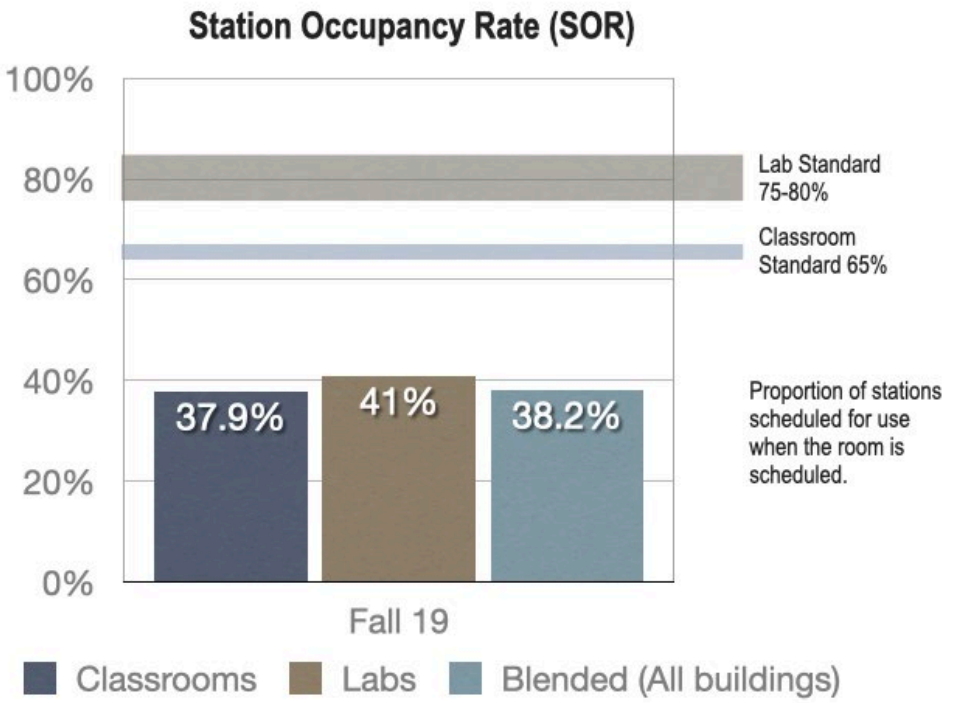
Ex-26-1



Ex-26-2

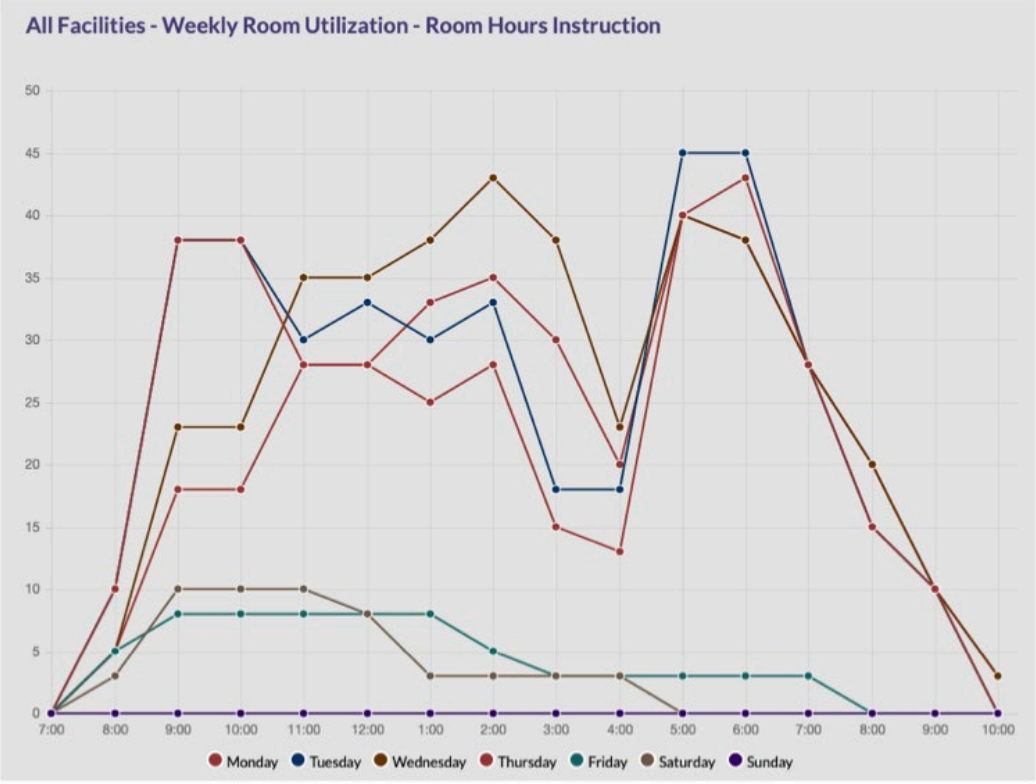


Ex-26-3



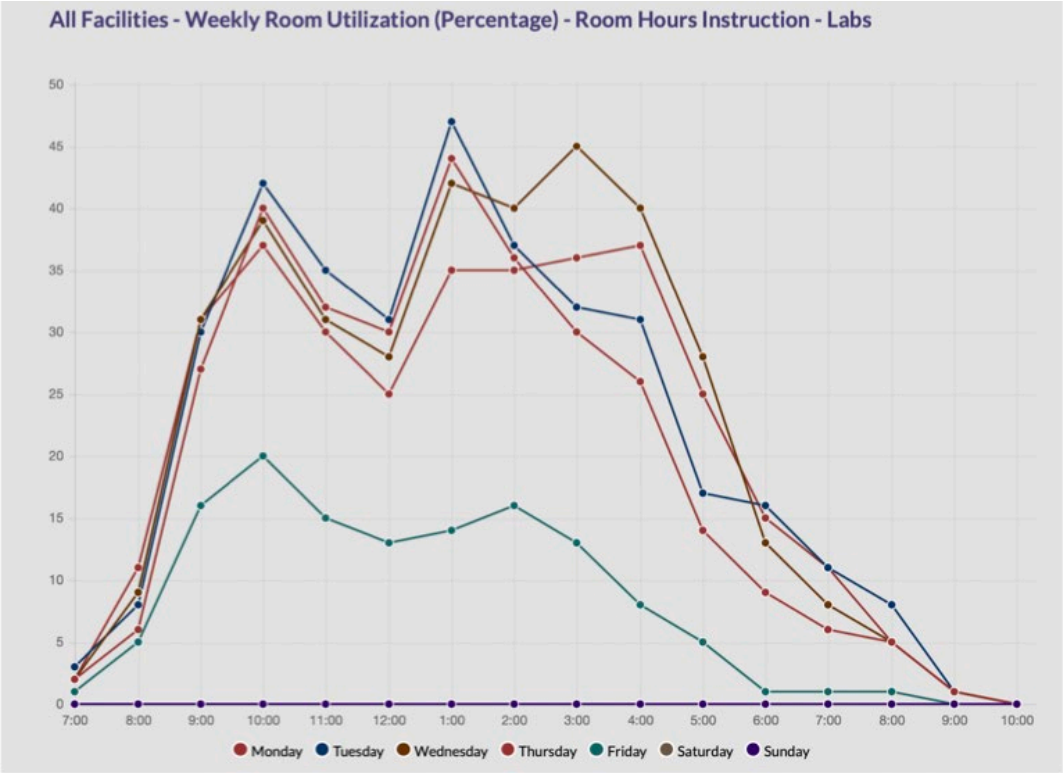
Ex-27: *NMSU-A Weekly Room Utilization*

Source: ARC



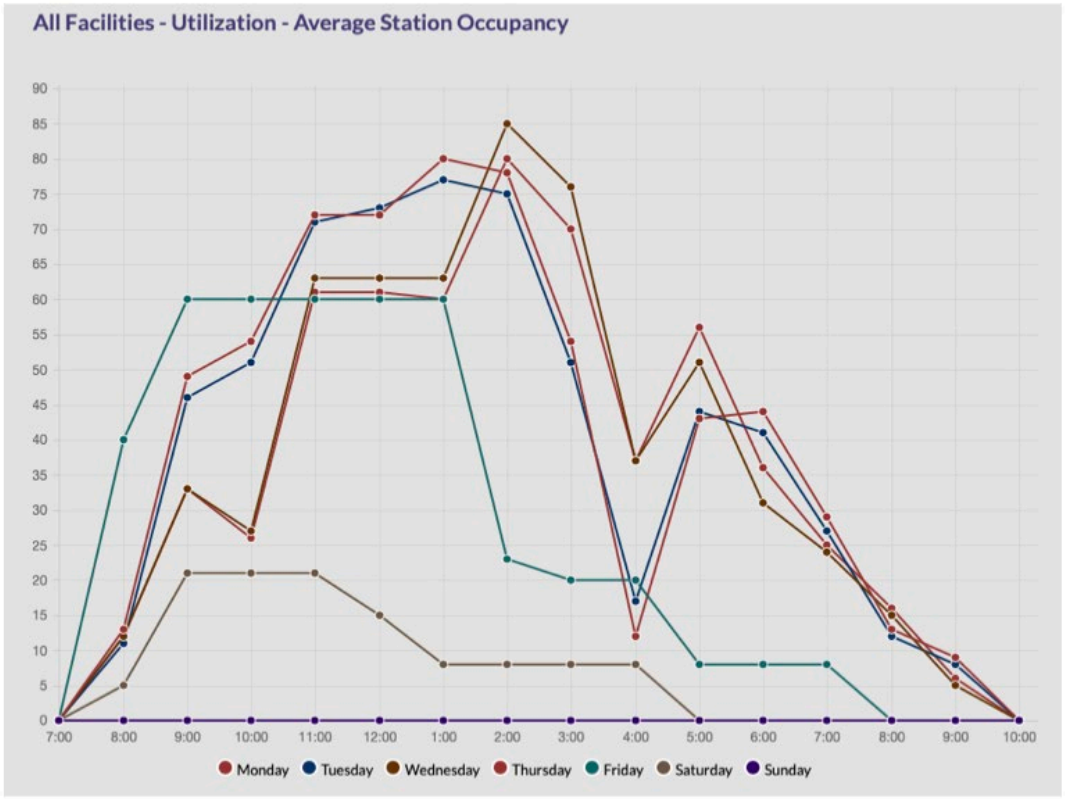
Ex-28: *NMSU-A Weekly Room Utilization – Room Hours Instruction, Laboratories*

Source: ARC



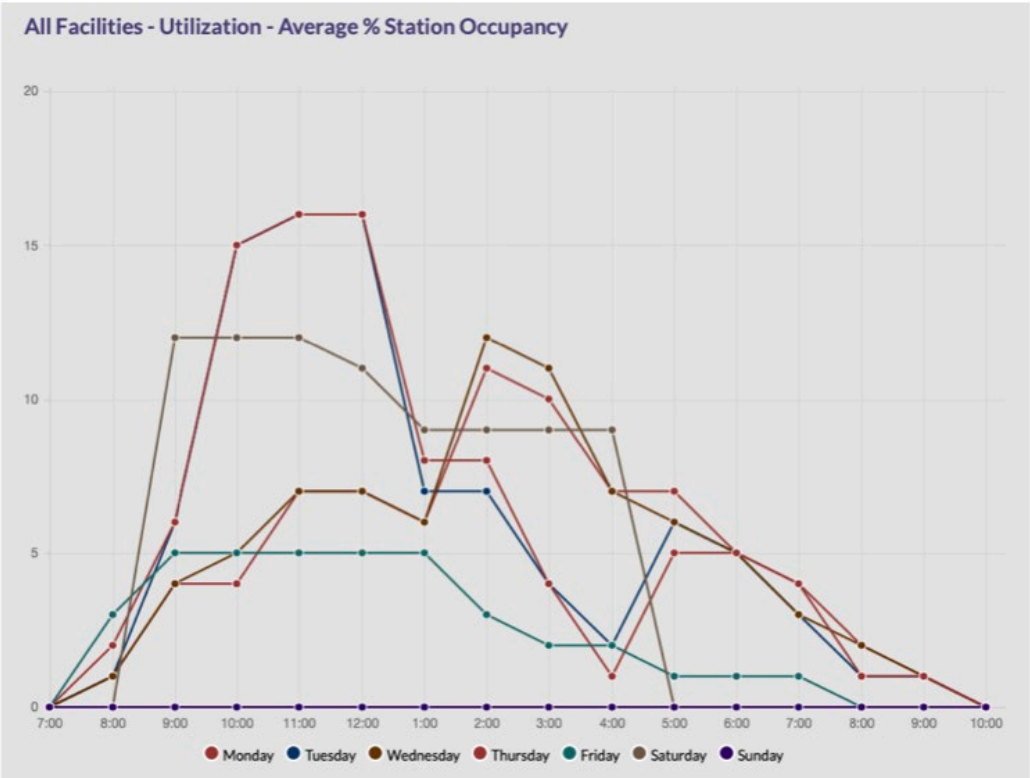
Ex-29: *NMSU-A Average Station Occupancy*

Source: ARC

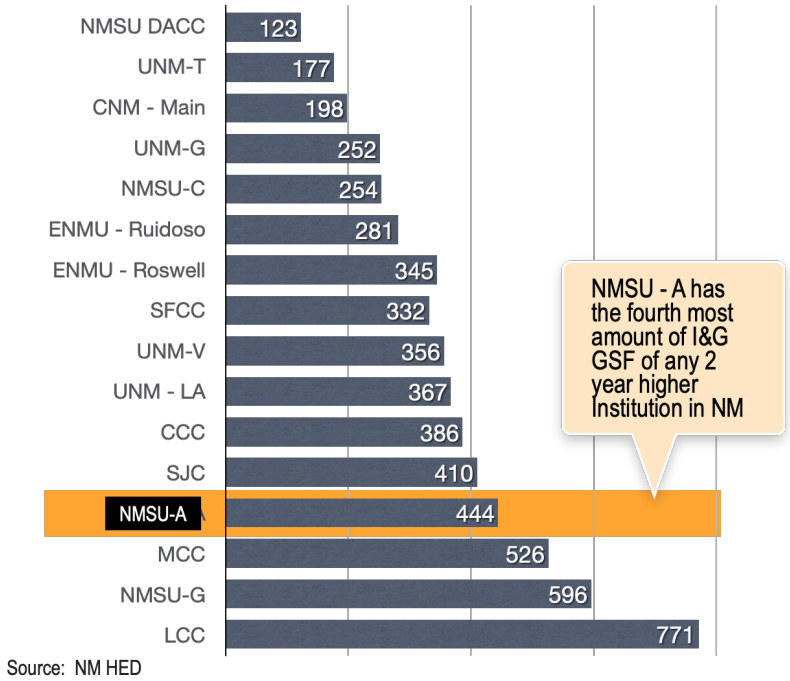


Ex-30: *NMSU-A Average Percent Station Occupancy*

Source: ARC



Ex-31: *I&G GSF / Student FTE of Selected NM Community Colleges* *******



**Minus on-line FTE of Selected NM 2 -Year Colleges, 2018*

Source: NM HED 2019 Summer Hearing Report

A.5 Service Area Demographic and Economic Scan

Population Trends

- Current UNM / GPS projections from 2020 show strong growth for Otero County into 2040, gaining over 5,000 in total population in the coming two decades (from 67,278 in 2020 to 72,340).
  - Alamogordo and Otero are aging more slowly than many areas in NM, though older populations are growing and are projected to continue doing so to 2040
  - Aging population and declining births will result in outsized growth in higher age ranges and limited growth in school-aged populations
  - Populations of people in age groups below 40 are all projected to see limited growth
  - Few children and young people projected to be added in future population growth, most growth is expected to occur in age groups far above NMSU-A's current student demographic
- Births and birth rates will remain a strong driver of enrollment and both are falling sharply. Falling birth rates result in fewer children for a given population size and can produce falling numbers of births—even in growing populations impacting public school and higher education enrollments.
- Both Alamogordo and Otero have large populations of residents between the ages of 20 and 29, reflecting region's military base and position as higher education hub.
- The Western Interstate Commission on Higher Education (WICHE) projects total United States high school graduates to increase by 2015, and then decline by 2030. WICHE projects New Mexico High School graduates to mirror national trends by increasing from 20,401 in 2016 to 21,383 in 2025, and then to decline to 18,591 in 2030.
- The National Center for Educational Statistics (NCES) projects that the nationwide number of high school graduates will increase at a rate of 5% between 2012-13, eventually reaching 3.7 million in 2025-26. However, NCES projects high school graduates in New Mexico will increase at a lower rate of 3.2% in this period (18,590 to 19,850).

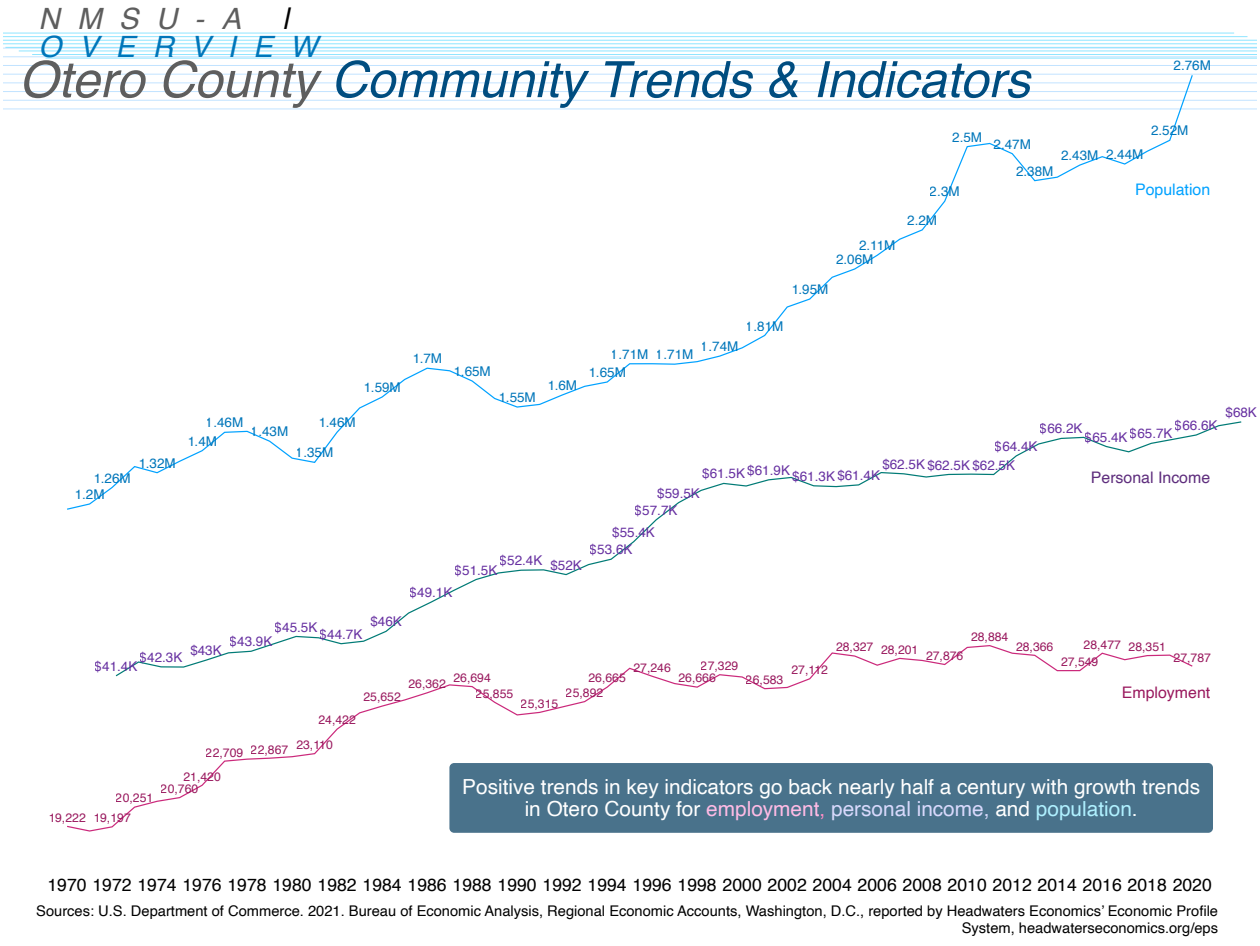
Economic Trends

- Alamogordo economy remains steady, even throughout challenging phases nationwide with COVID.
- Healthcare assistance, social assistance, and educational services are the top industries dominating Alamogordo's workforce.
- Low wages across all industries in Otero County represent a constraint on growth and are likely contributing to an out-migration of younger people, which feeds growth constraints in population, economy, and housing.
- Government and military presence is a significant driver of the economy.

- The two large military installations in the area provide a level of economic stability for Alamogordo and Otero County as a whole.
- Due to low federal wages and various other characteristics of the installations, the stabilization is not sufficient to significantly improve community indices or, ultimately to stem declines in birth rates.
- However, low wages, a young population, and the temporary nature of many postings, the military presence does not impart as great a level of economic and societal stability as some installations, such as Los Alamos National Labs where lab jobs and programs support extremely high wages, educational attainment levels, and economic resilience and the associated youth retention, high birth rates, and in-migration that bolster population stability and growth and ultimately drive local enrollment.

Ex-32: *Economic and Demographic Scan Presentation*

Ex-32-1



Ex-32-2

NMSU-A
OVERVIEW

Otero County Trends & Indicators Overview

		Otero County	Compared to NM	Compared to US
Trends	Population, *% change, 2000-2020*	*9%*		
change, 2000-2020	Employment, *% change, 2000-2020*	*2%*		
	Personal Income, *% change, 2000-2020*	*56%*		
	Average Earnings per Job, *% change, 2000-2020*	*34%*		
	Per Capita Income, *% change, 2000-2020*	*43%*		
Wages	Avg. Earnings per Job	$58,276		
	Per Capita Income	$40,602		
	Services, Avg. Annual Wages	$42,312		
	Non-Services, Avg. Annual Wages	$43,049		
	Government, Avg. Annual Wages	$50,250		
Stability	Unemployment Rate, change 2000-2020	2.9%		
	Unemployment Rate	8.3%		
Structure	Proprietors (self-employed), % of Jobs	19.7%		
	Non-Labor Income, % of Personal Income	48.9%		
	Services, % of Jobs	54.3%		
	Non-Services, % of Jobs	9.9%		
	Government, % of Jobs	35.8%		
	Net inflow of labor earnings of inter-county commuters	-0.3%		

-200% -150% -100% -50% 0% 50% -200% -100% 0% 100%

Ex-32-3

Positive trends overall but many indicators lag behind state and national averages suggesting constraining factors on growth in the area

	Economic Indicators	Otero County	Compared to NM
TRENDS	Population, *% change, 2000-2020*	*9%*	
change, 2000-2020	Employment, *% change, 2000-2020*	*2%*	
	Personal Income, *% change, 2000-2020*	*56%*	
	Average Earnings per Job, *% change, 2000-2020*	*34%*	
	Per Capita Income, *% change, 2000-2020*	*43%*	
Wages	Avg. Earnings per Job	$58,276	
	Per Capita Income	$40,602	
	Services, Avg. Annual Wages	$42,312	
	Non-Services, Avg. Annual Wages	$43,049	
	Government, Avg. Annual Wages	$50,250	
Stability	Unemployment Rate, change 2000-2020	2.9%	
	Unemployment Rate	8.3%	
Structure	Proprietors (self-employed), % of Jobs	19.7%	
	Non-Labor Income, % of Personal Income	48.9%	
	Services, % of Jobs	54.3%	
	Non-Services, % of Jobs	9.9%	
	Government, % of Jobs	35.8%	
	Net inflow of labor earnings of inter-county commuters	-0.3%	

-250% -200% -150% -100% -50% 0% 50% 100%

Positive change across all main indicators locally

..some still lag behind state averages

Wages & earnings lower than average in all sector categories

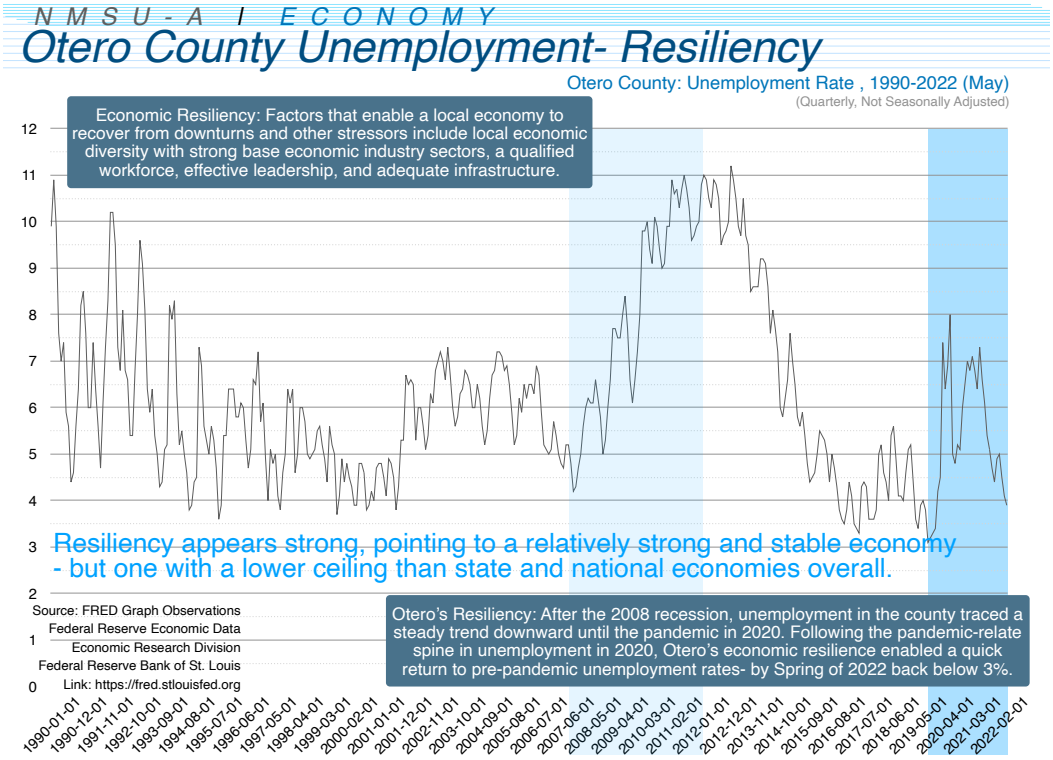
Stability index less meaningful in turbulence of 2020

High non-labor income

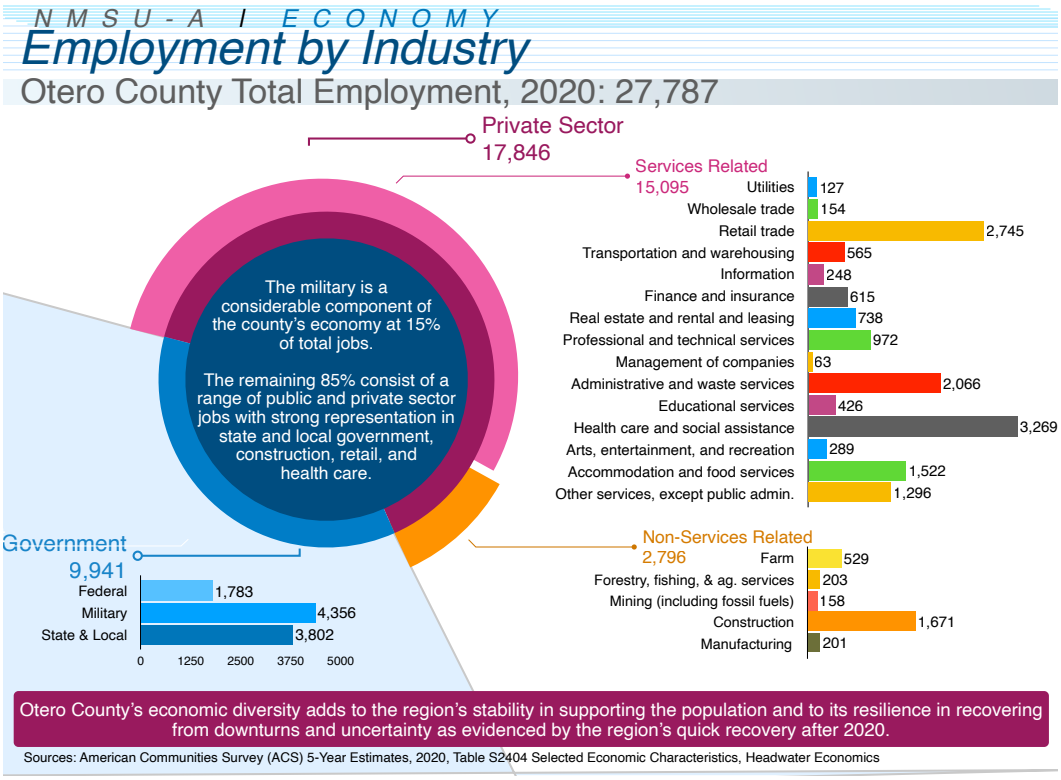
High government jobs share

* Non-labor earnings include investment earnings and some federal benefits: often an indicator of the size of the retiree population in a workforce

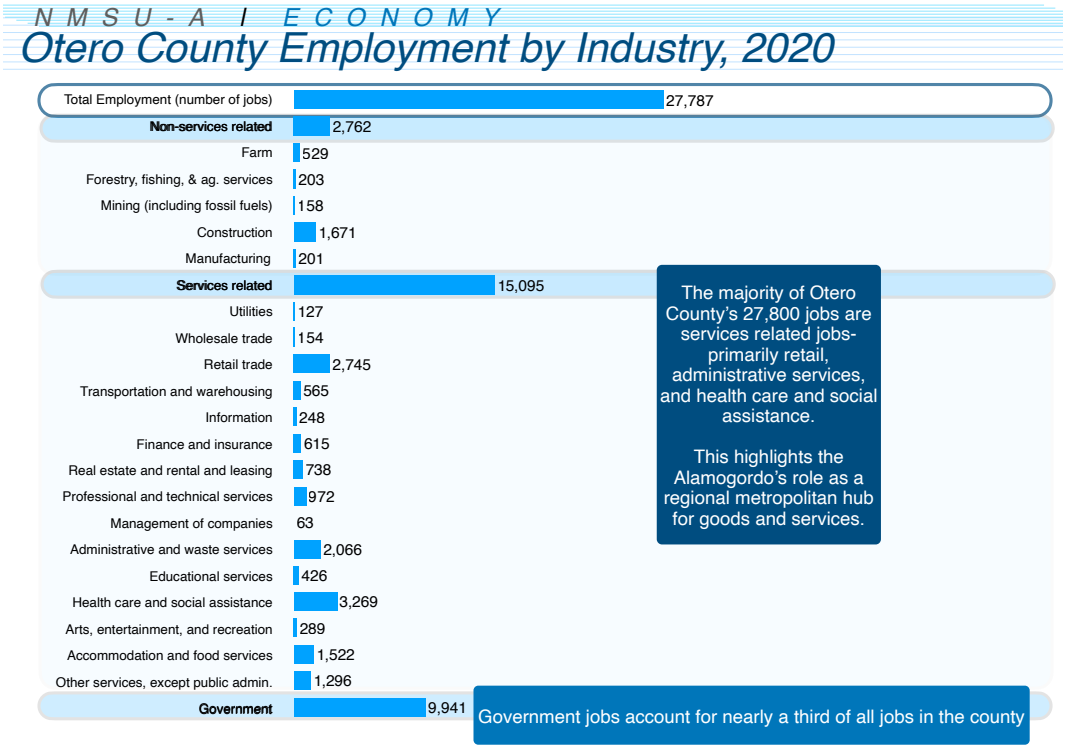
Ex-32-4


NMSU-A | ECONOMY
Otero County Unemployment- Resiliency
Otero County: Unemployment Rate , 1990-2022 (May)
(Quarterly, Not Seasonally Adjusted)
Economic Resiliency: Factors that enable a local economy to recover from downturns and other stressors include local economic diversity with strong base economic industry sectors, a qualified workforce, effective leadership, and adequate infrastructure.
Resiliency appears strong, pointing to a relatively strong and stable economy - but one with a lower ceiling than state and national economies overall.
Source: FRED Graph Observations
Federal Reserve Economic Data
Economic Research Division
Federal Reserve Bank of St. Louis
Link: https://fred.stlouisfed.org
Otero's Resiliency: After the 2008 recession, unemployment in the county traced a steady trend downward until the pandemic in 2020. Following the pandemic-relate spine in unemployment in 2020, Otero's economic resilience enabled a quick return to pre-pandemic unemployment rates- by Spring of 2022 back below 3%.

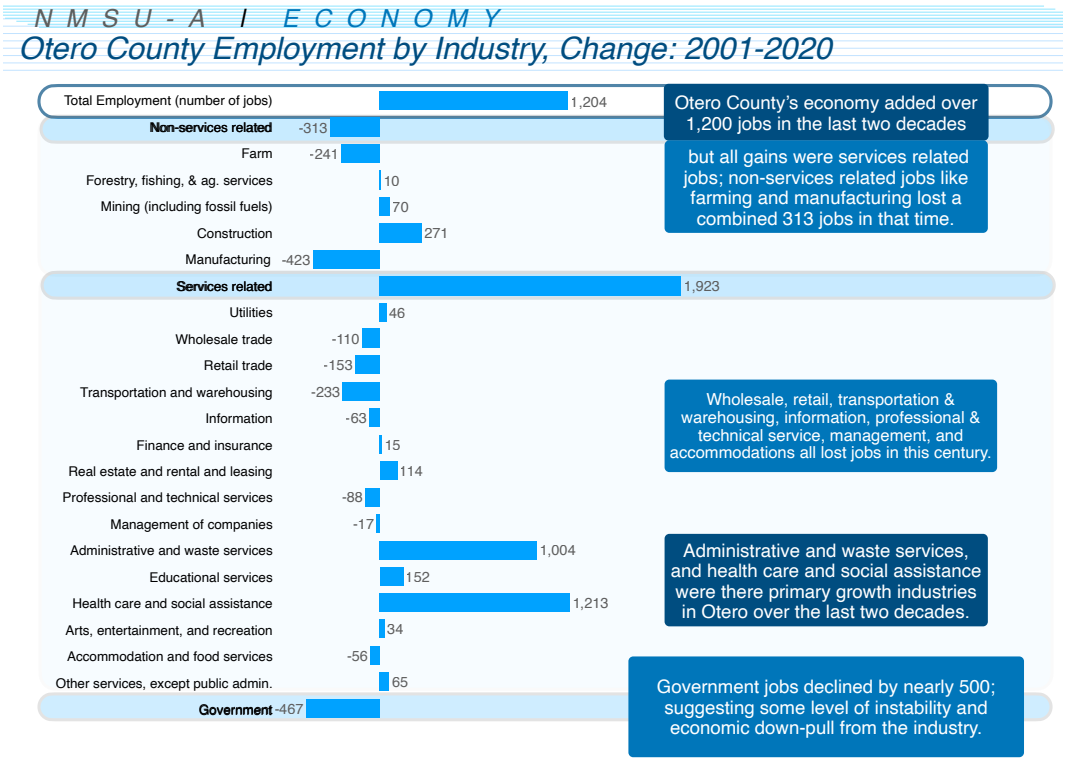
Ex-32-5


NMSU-A | ECONOMY
Employment by Industry
Otero County Total Employment, 2020: 27,787
Private Sector
17,846
Services Related
15,095
Utilities 127
Wholesale trade 154
Retail trade 2,745
Transportation and warehousing 565
Information 248
Finance and insurance 615
Real estate and rental and leasing 738
Professional and technical services 972
Management of companies 63
Administrative and waste services 2,066
Educational services 426
Health care and social assistance 3,269
Arts, entertainment, and recreation 289
Accommodation and food services 1,522
Other services, except public admin. 1,296
The military is a considerable component of the county's economy at 15% of total jobs.
The remaining 85% consist of a range of public and private sector jobs with strong representation in state and local government, construction, retail, and health care.
Government
9,941
Federal 1,783
Military 4,356
State & Local 3,802
0 1250 2500 3750 5000
Non-Services Related
2,796
Farm 529
Forestry, fishing, & ag. services 203
Mining (including fossil fuels) 158
Construction 1,671
Manufacturing 201
Otero County's economic diversity adds to the region's stability in supporting the population and to its resilience in recovering from downturns and uncertainty as evidenced by the region's quick recovery after 2020.
Sources: American Communities Survey (ACS) 5-Year Estimates, 2020, Table S2404 Selected Economic Characteristics, Headwater Economics

Ex-32-6


NMSU-A | ECONOMY
Otero County Employment by Industry, 2020
Total Employment (number of jobs) 27,787
Non-services related 2,762
Farm 529
Forestry, fishing, & ag. services 203
Mining (including fossil fuels) 158
Construction 1,671
Manufacturing 201
Services related 15,095
Utilities 127
Wholesale trade 154
Retail trade 2,745
Transportation and warehousing 565
Information 248
Finance and insurance 615
Real estate and rental and leasing 738
Professional and technical services 972
Management of companies 63
Administrative and waste services 2,066
Educational services 426
Health care and social assistance 3,269
Arts, entertainment, and recreation 289
Accommodation and food services 1,522
Other services, except public admin. 1,296
Government 9,941
The majority of Otero County's 27,800 jobs are services related jobs- primarily retail, administrative services, and health care and social assistance.
This highlights the Alamogordo's role as a regional metropolitan hub for goods and services.
Government jobs account for nearly a third of all jobs in the county

Ex-32-7


NMSU-A | ECONOMY
Otero County Employment by Industry, Change: 2001-2020
Total Employment (number of jobs) 1,204
Non-services related -313
Farm -241
Forestry, fishing, & ag. services 10
Mining (including fossil fuels) 70
Construction 271
Manufacturing -423
Services related 1,923
Utilities 46
Wholesale trade -110
Retail trade -153
Transportation and warehousing -233
Information -63
Finance and insurance 15
Real estate and rental and leasing 114
Professional and technical services -88
Management of companies -17
Administrative and waste services 1,004
Educational services 152
Health care and social assistance 1,213
Arts, entertainment, and recreation 34
Accommodation and food services -56
Other services, except public admin. 65
Government -467
Otero County's economy added over 1,200 jobs in the last two decades
but all gains were services related jobs; non-services related jobs like farming and manufacturing lost a combined 313 jobs in that time.
Wholesale, retail, transportation & warehousing, information, professional & technical service, management, and accommodations all lost jobs in this century.
Administrative and waste services, and health care and social assistance were there primary growth industries in Otero over the last two decades.
Government jobs declined by nearly 500; suggesting some level of instability and economic down-pull from the industry.

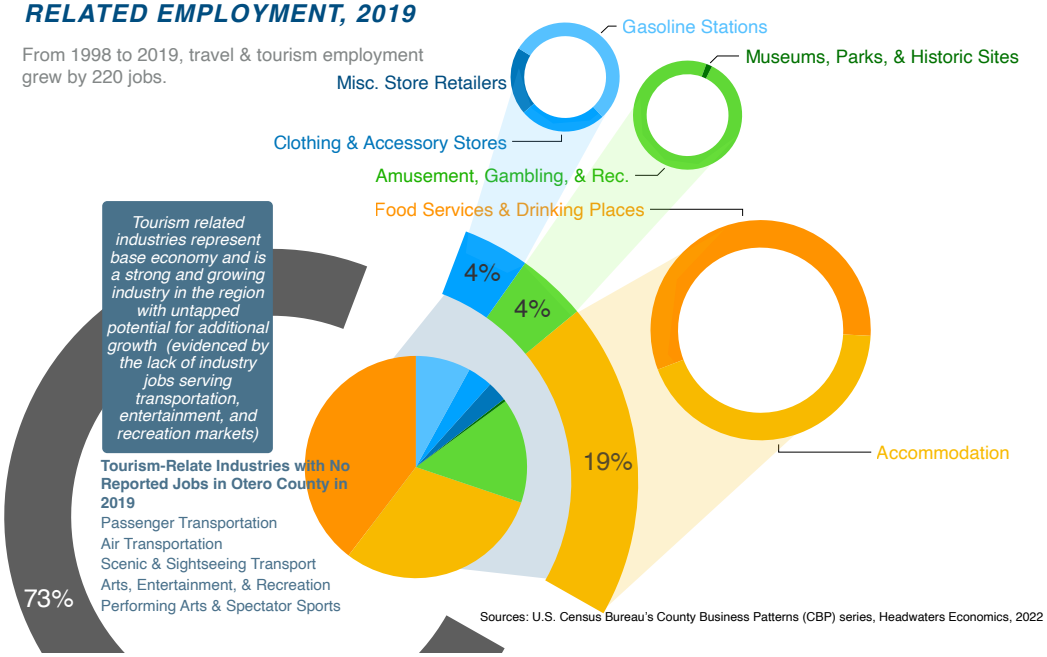
Ex-32-8

N M S U - A | E C O N O M Y

Base Jobs & Growth Potential Highlight: Tourism

OTERO COUNTY: TOURISM RELATED EMPLOYMENT, 2019

From 1998 to 2019, travel & tourism employment grew by 220 jobs.



Sources: U.S. Census Bureau's County Business Patterns (CBP) series, Headwaters Economics, 2022

Ex-32-9

N M S U - A | E C O N O M Y

Drivers: Major Employers

To a large extent, Alamogordo serves as a support community for Holloman AFB and White Sands Missile Range, but also supports agriculture and emerging tech.

Otero County Major Employers

- Holloman Air Force Base
- White Sands Missile Range
- Alamogordo Public Schools
- Inn of the Mountain Gods
- Wal-Mart Super Center
- Gerald Champion Regional Medical Center
- City of Alamogordo
- NMSU-Alamogordo
- Otero County
- New Mexico School for the Blind and Visually Impaired
- Zia Therapy Center, Inc.
- Lowe's Signature Market
- Lowe's Home Improvement Warehouse
- Home Depot
- The Lodge at Cloudcroft
- First National Bank
- PreCheck

Source: - Otero County Economic Development Council, Inc. (OCEDC)

Otero County Target Industries:

- Department of Defense/Aerospace
- Film Production
- Desalination & Water Treatment Technologies
- Back Office
- Agriculture

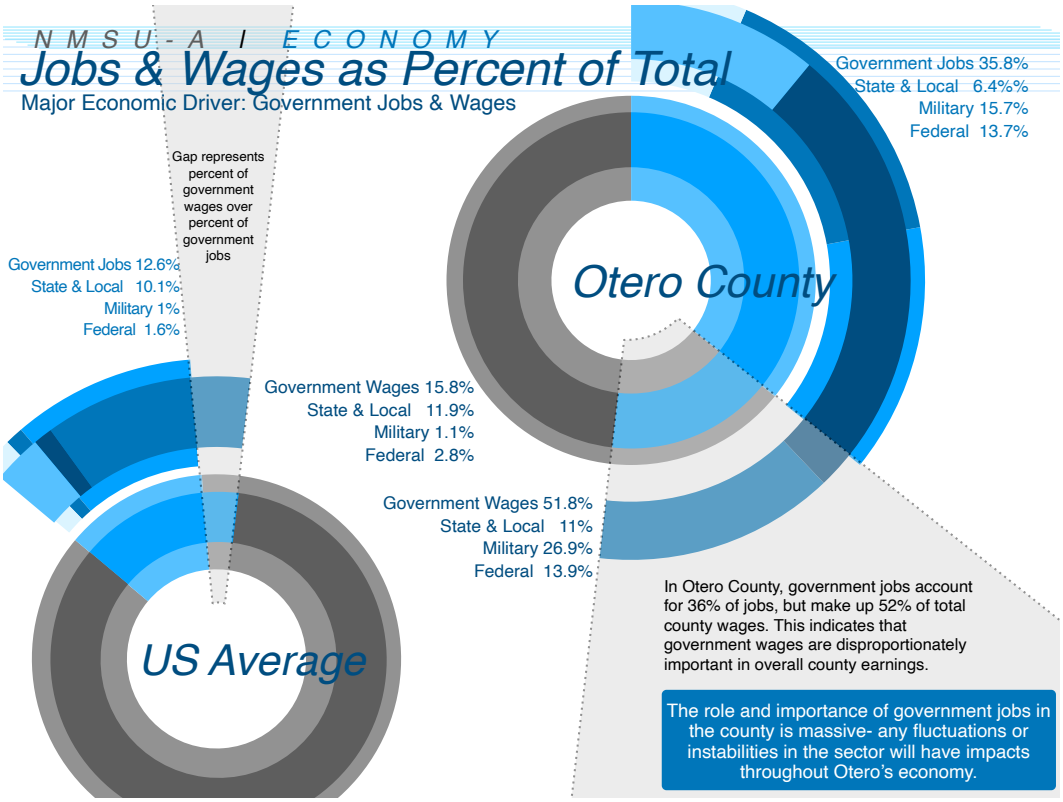
Back Office support includes activities such as IT departments, human resources, accounting, loan processing, technical support, billing, and accounts payable and receivables.

NMSU-A Provides Otero County with a "well educated and skilled workforce, access to customized training programs offered by the Alamogordo Branch of New Mexico State University and access to high speed/high bandwidth telecommunications."

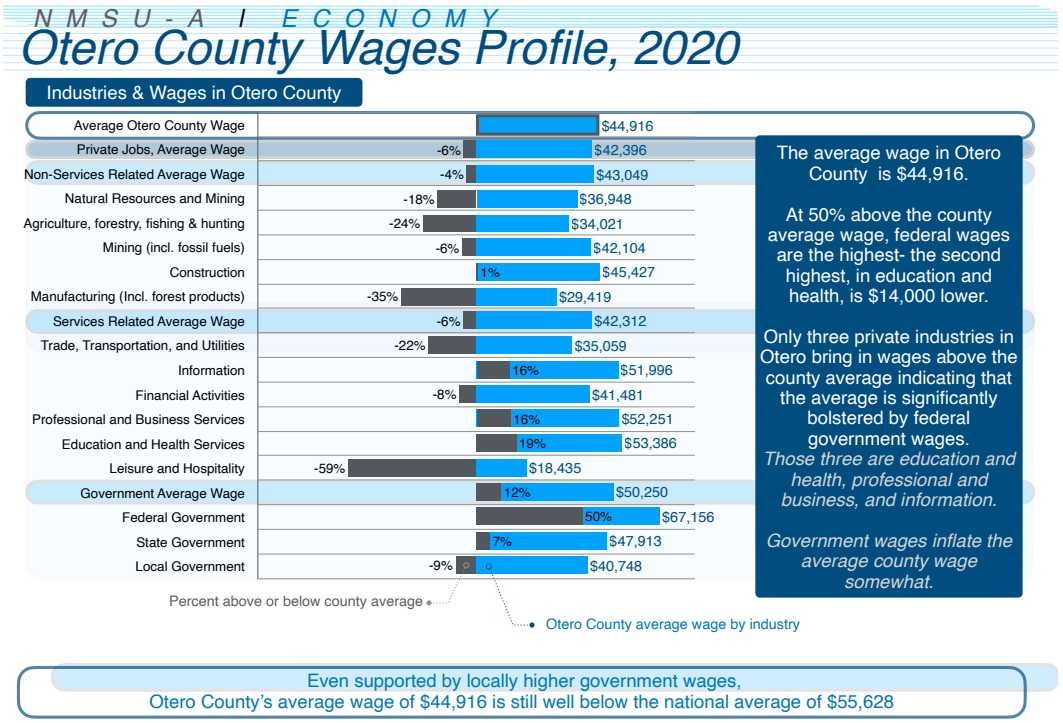
- Otero County Economic Development Council, Inc. (OCEDC)

NMSU-A is integral to Otero County's economic development goals and capacity including housing the Brackish Groundwater National Research and Development Facility (BGNDRF) which aims to shore up the region's water supply, to its many agriculture programs, to general educational and business development support across the region's target industries.

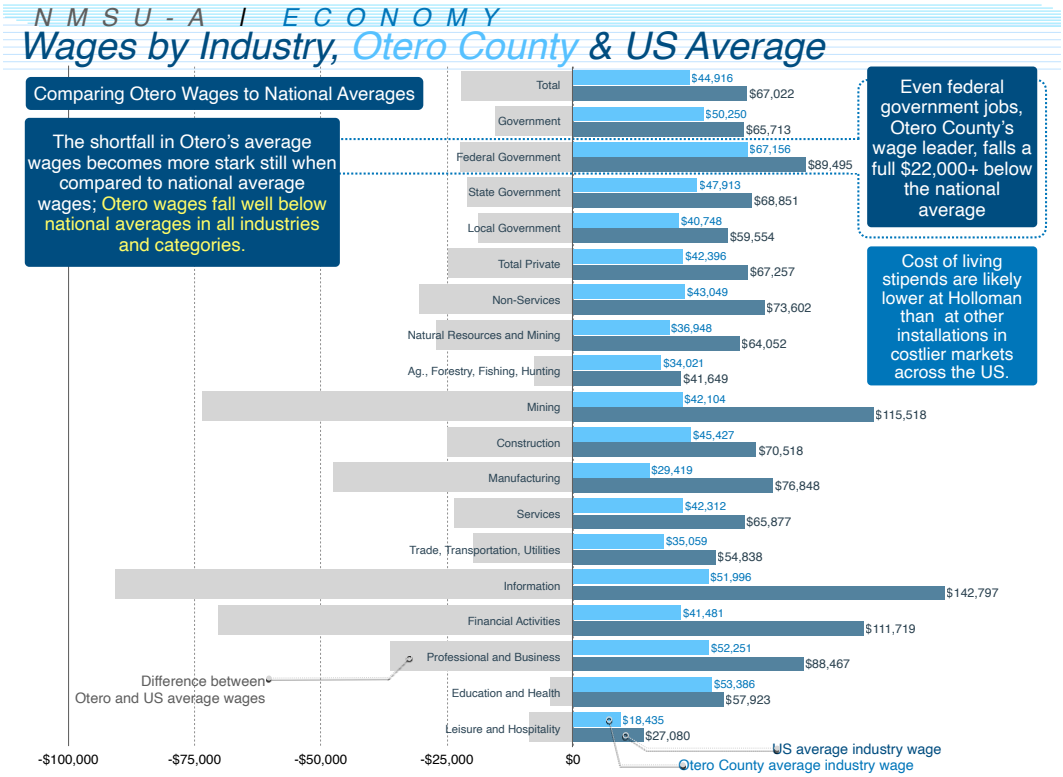
Ex-32-10



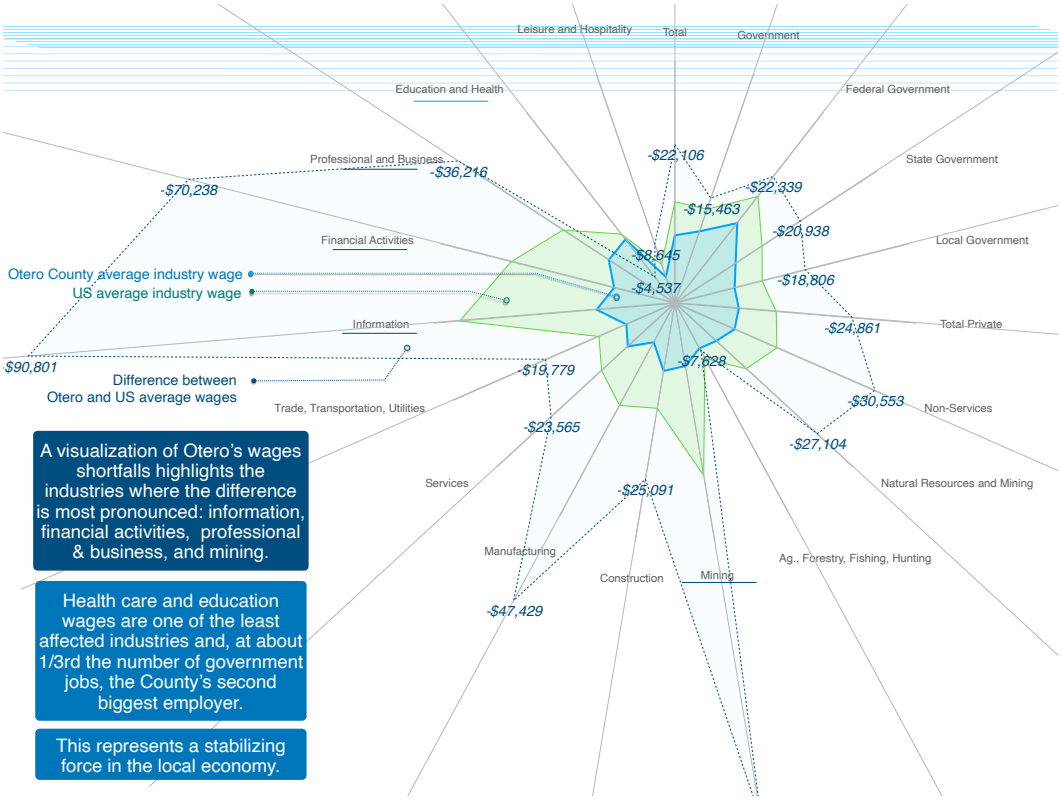
Ex-32-11



Ex-32-12



Ex-32-13

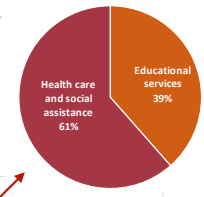


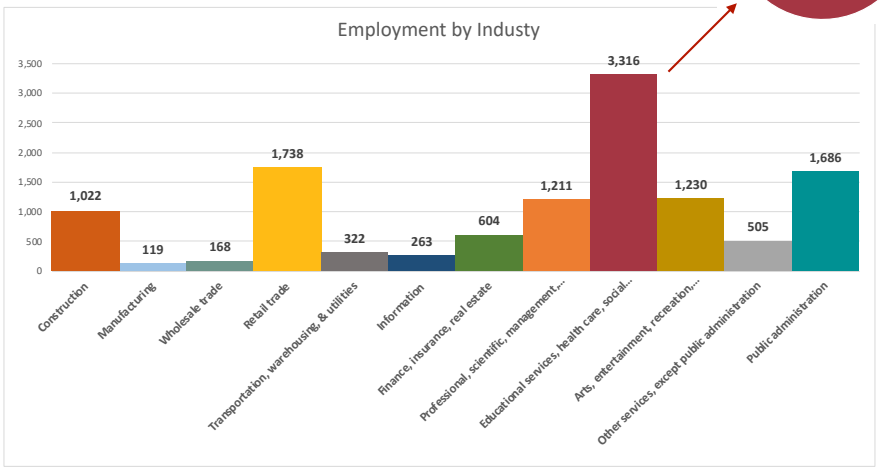
Ex-32-14

NMSU-A | EMPLOYMENT AND ECONOMY

Employment by Industry

- In the largest employment industry, 61% of workers are employed in health and social assistance sector.



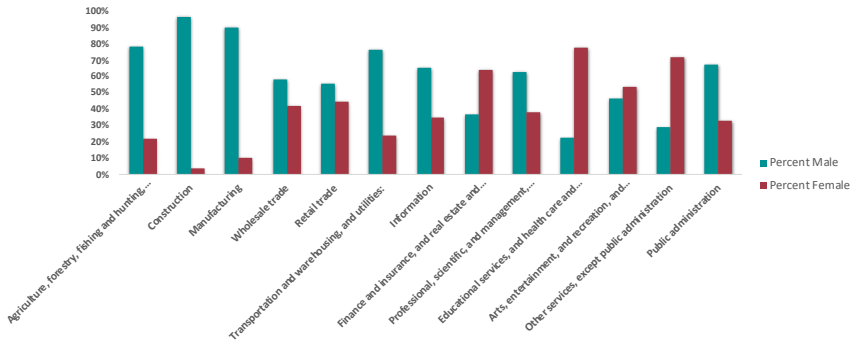


Sources: American Communities Survey (ACS) 5-Year Estimates, 2020, Table S2404 Selected Economic Characteristics

Ex-32-15

NMSU-A | EMPLOYMENT AND ECONOMY

Employment Industry by Sex

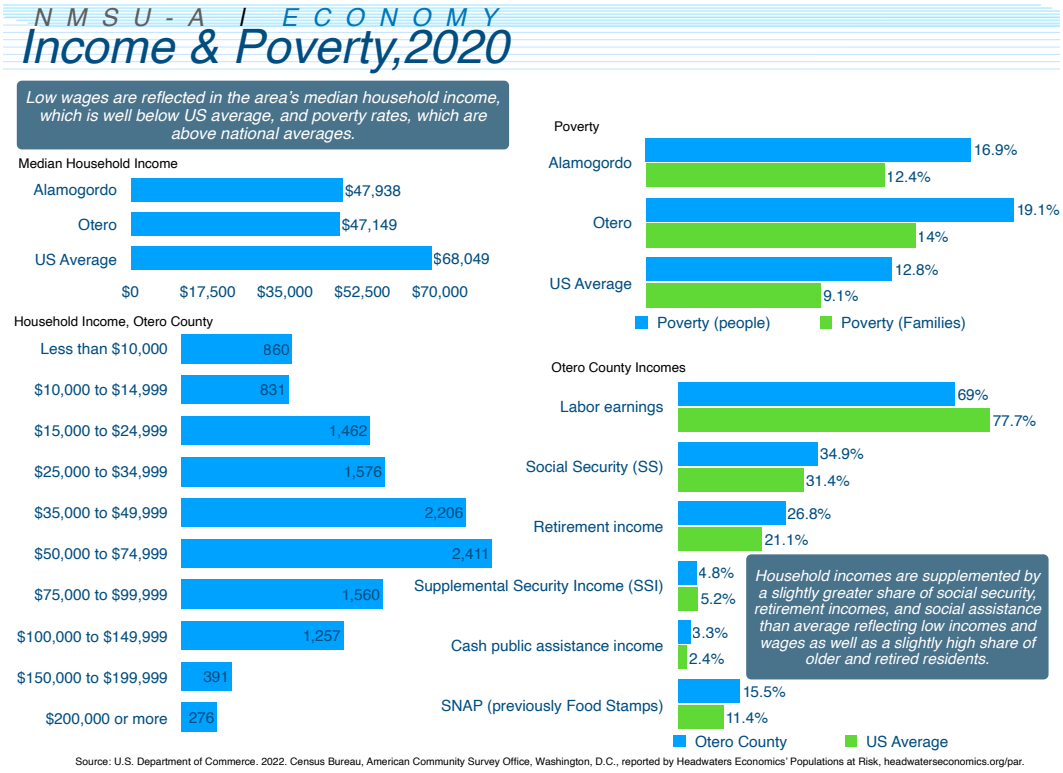


- Majority of the male population in Alamogordo is employed in the construction, manufacturing, and agriculture, forestry, and fishing industry.

- Majority of the female population in Alamogordo is employed in the educational and health care service, finance and insurance, and general service industry.

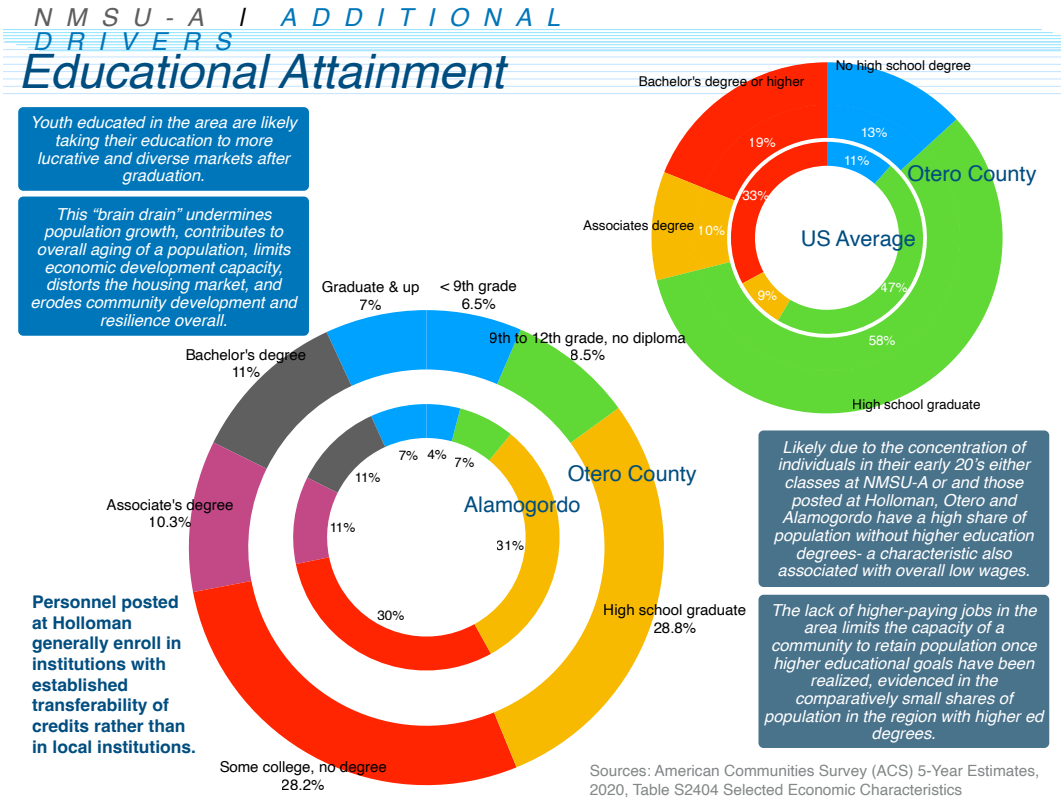
Sources: American Communities Survey (ACS) 5-Year Estimates, 2020, Table S2404 Selected Economic Characteristics

Ex-32-16



Source: U.S. Department of Commerce. 2022. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Populations at Risk, headwaterseconomics.org/par.

Ex-32-17



Sources: American Communities Survey (ACS) 5-Year Estimates, 2020, Table S2404 Selected Economic Characteristics

Ex-32-18

NMSU-A / ECONOMY

Military Impact: Employment & Spending

In-depth analysis of the local economic impact of Holloman and White Sands from 2013 shows that in all, each installation represented between 2% and 3% of the regional total for jobs and incomes in the various categories.

Though it is a significant driver of the economy, the military presence does not impart as great a level of economic and societal stability as some installations, such as Los Alamos National Labs where lab jobs and programs support extremely high wages, educational attainment levels, and economic resilience and the associated youth retention, high birth rates, an in-migration that bolster population stability and growth and ultimately drive local enrollment.

EXHIBIT 5.2 IMPACTS OF MILITARY EMPLOYMENT AND SPENDING ON THE JLUS REGION BY INSTALLATION, 2013

	Military & Civilian Appropriated	Contractor, Construction & Local Procurement	Totals	% Regional Total
HOLLOMAN AFB				
Employment (job number)				
Direct	5,440	1,170	6,610	
Indirect	0	230	230	
Induced	1,710	310	2,020	
Total	7,150	1,720	8,870	1.7
Labor Income (thousands of $)				
Direct	476,927	59,078	536,005	
Indirect	0	8,254	8,254	
Induced	55,039	10,617	65,655	
Total	531,966	77,949	609,915	2.5
Industry Output (thousands of $)				
Direct	1,220,892	140,098	1,360,990	
Indirect	0	26,364	26,364	
Induced	187,725	34,660	222,385	
Total	1,408,617	201,121	1,609,738	2.2
WSMR				
Employment (job number)				
Direct	2,920	5,940	8,860	
Indirect	0	1,500	1,500	
Induced	1,310	1,850	3,150	
Total	4,230	9,290	13,510	2.5
Labor Income (thousands of $)				
Direct	284,486	305,420	589,906	
Indirect	0	53,061	53,061	
Induced	46,394	66,122	112,516	
Total	330,880	424,603	755,483	3.1
Industry Output (thousands of $)				
Direct	537,489	671,038	1,208,527	
Indirect	0	153,837	153,837	
Induced	144,922	210,003	354,925	
Total	682,411	1,034,878	1,717,289	2.4

Source: Impacts modeled in IMPLAN v. 3.1.1001. Author's calculations.
Note: Numbers may not add up due to rounding.

IMPACT OF FORT BLISS, HOLLOMAN AFB AND WHITE SANDS MISSILE RANGE ON JOBS, INCOME AND INDUSTRY OUTPUT IN SUPPORT OF THE SOUTHERN NEW MEXICO-ELPASO COUNTY JOINT LAND USE STUDY(JLUS), 2015

Ex-32-19

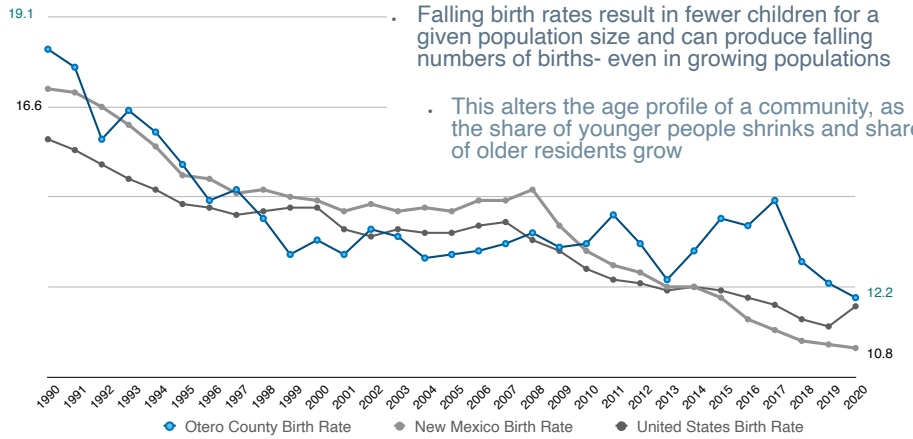
NMSU-A / ECONOMY 27

Otero Birth Rate

Birth Rate is the number of births per 1,000 total population annually

In Otero County, New Mexico, and the US overall, birth rate has fallen dramatically in the past 30 years.

- Falling birth rates result in fewer children for a given population size and can produce falling numbers of births- even in growing populations
- This alters the age profile of a community, as the share of younger people shrinks and shares of older residents grow



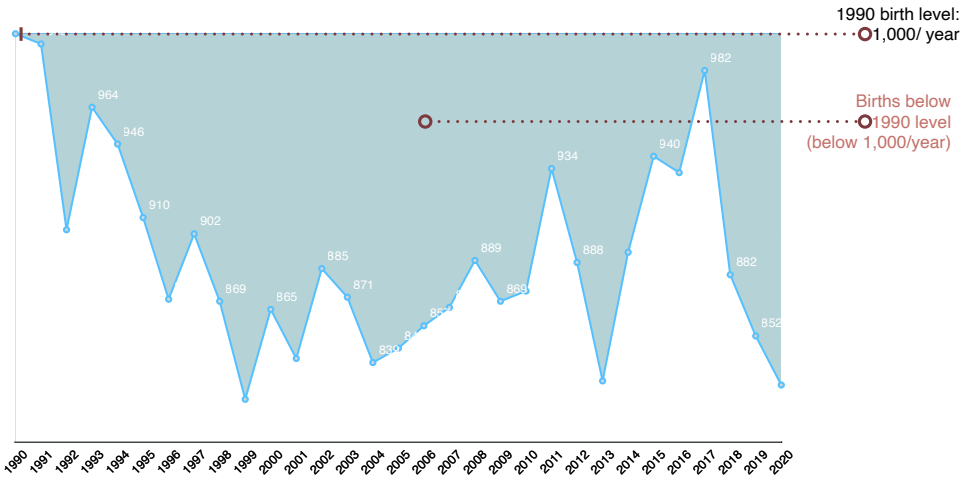
Ex-32-20

N M S U - A | D E M O G R A P H I C S 28

Otero Births

Otero County's birth rate has fallen from 19.1 in 1990 to 12.2 in 2020.

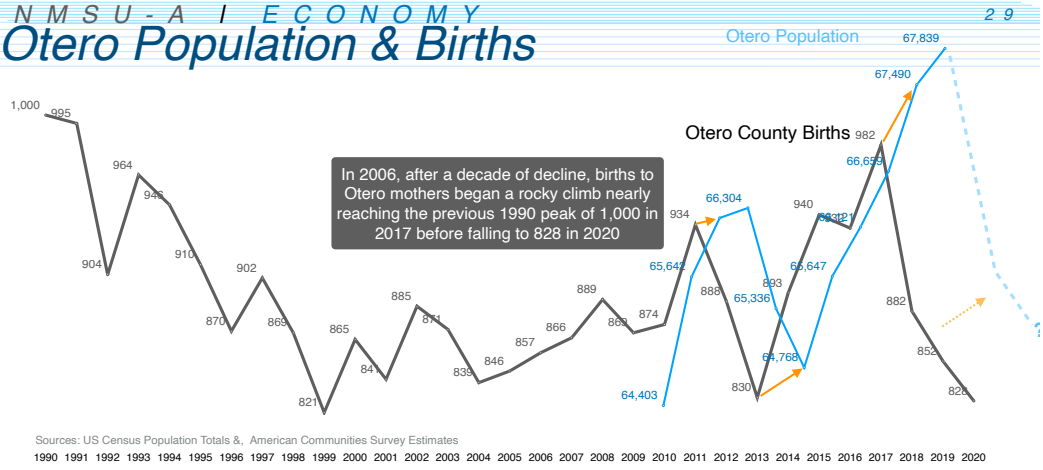
This correlates with a decline in the number of total births per year for Otero County from **1,000 in 1990** to **828 in 2020** representing a total "loss" of 3,328 additional residents over the intervening 30 years had births remained at the 1990 level of 1,000 per year.



Ex-32-21

N M S U - A | E C O N O M Y 29

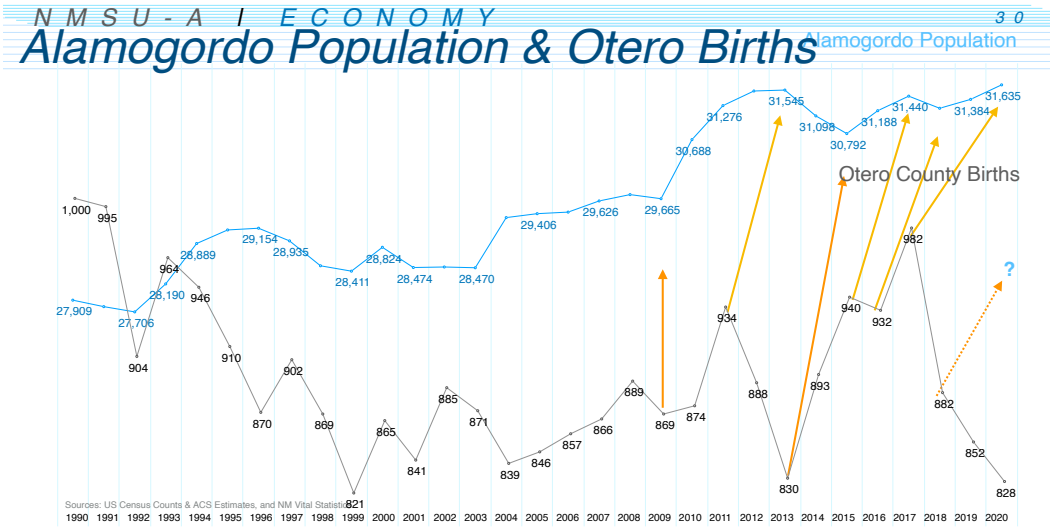
Otero Population & Births



In Otero County, birth trends show reliable correlation to trends in total population over the past decade (i.e., population trends align with birth trends but with a 1-2 yer lag time from 1-4 years) that can be expected to reliably inform future trends.

- Given the slight lag from births to population trend behaviors, the data indicate that population may begin declining in the next few years at a rate similar to the decline in births seen after 2016, though this is not expected.

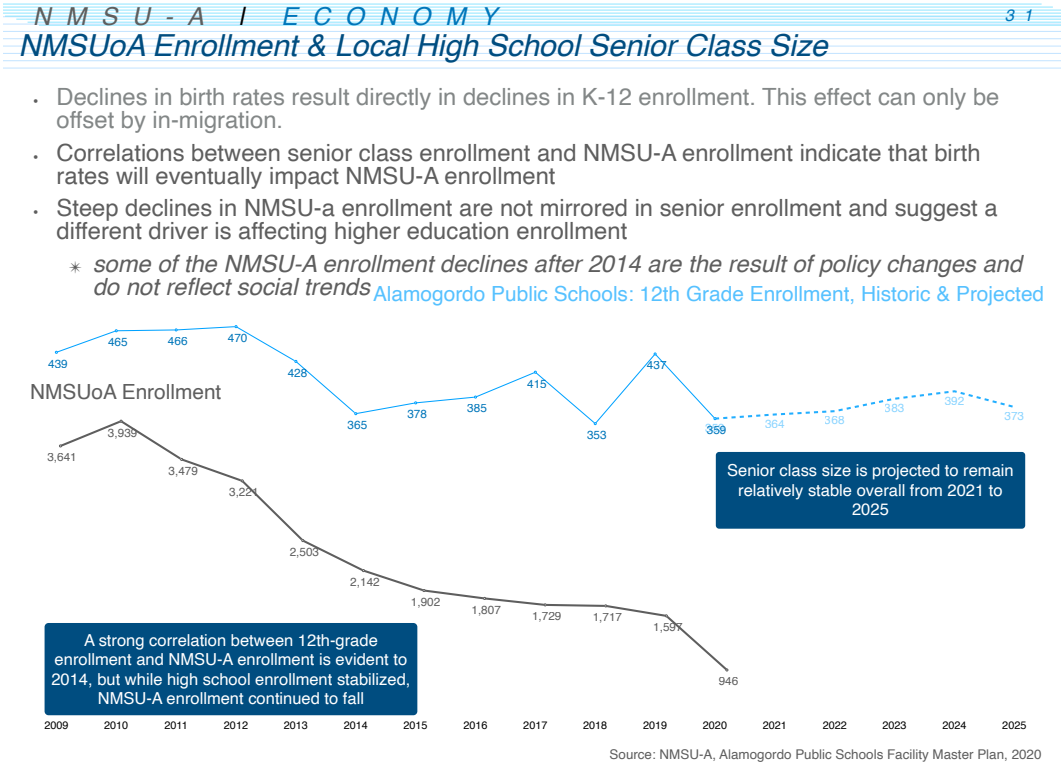
Ex-32-22



Alamogordo's population growth trends with county births as well and since 2009 has begun exhibiting the lag time seen in the County population's relationship to birth trends.

Like the county's, the city's population has trended up in recent years and could begin to turn down reflecting recent birth trends

Ex-32-23



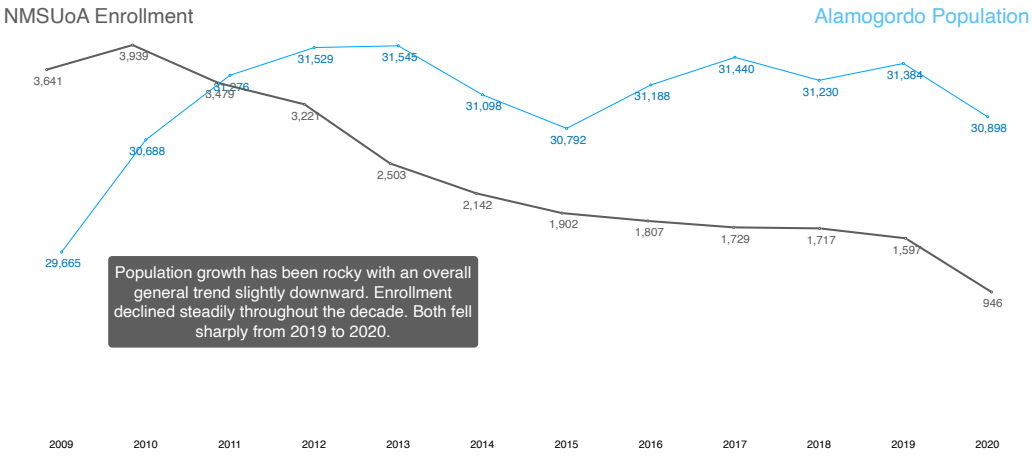
Source: NMSU-A, Alamogordo Public Schools Facility Master Plan, 2020

Ex-32-24

N M S U - A / E C O N O M Y 3 2

NMSUoA Enrollment & Alamogordo Population, 2015 - 2020

The correlation between overall population growth and NMSU-A enrollment is less direct than to senior class levels, but still evident. Future growth trends are likely to influence enrollment, but the effect will be determined on how growth affects the composition of the population by age.

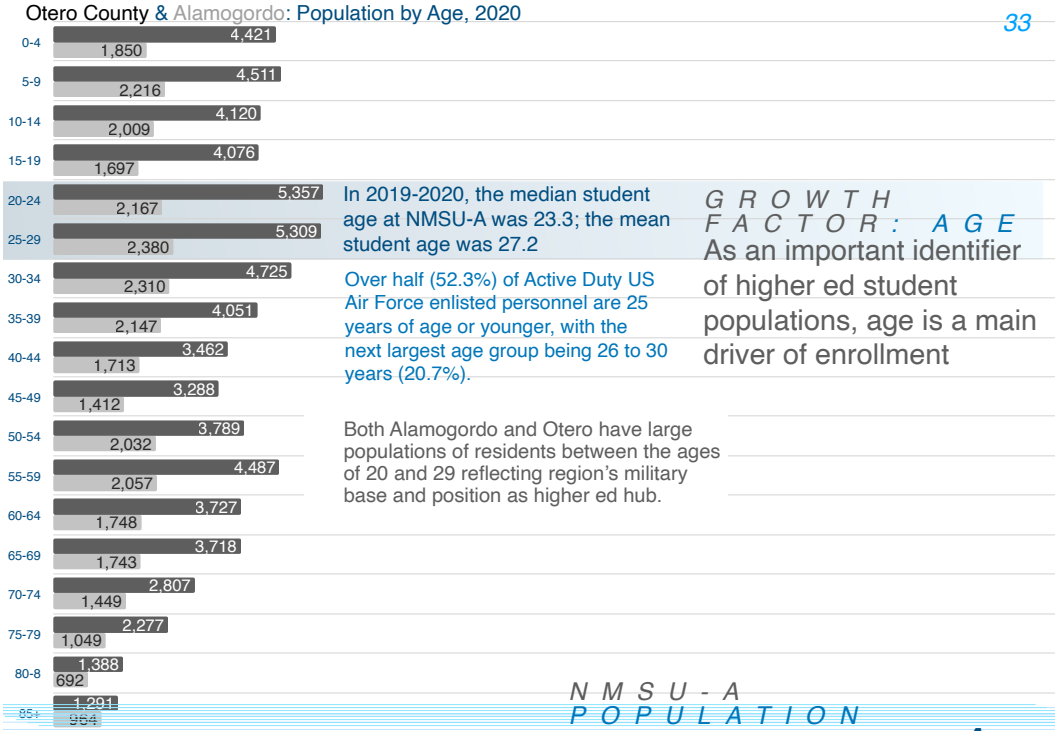


Sources: American Communities Survey (ACS) 5-Year Estimate, 2015-2020

Ex-32-25

Otero County & Alamogordo: Population by Age, 2020

33



In 2019-2020, the median student age at NMSU-A was 23.3; the mean student age was 27.2

Over half (52.3%) of Active Duty US Air Force enlisted personnel are 25 years of age or younger, with the next largest age group being 26 to 30 years (20.7%).

Both Alamogordo and Otero have large populations of residents between the ages of 20 and 29 reflecting region's military base and position as higher ed hub.

G R O W T H F A C T O R : A G E

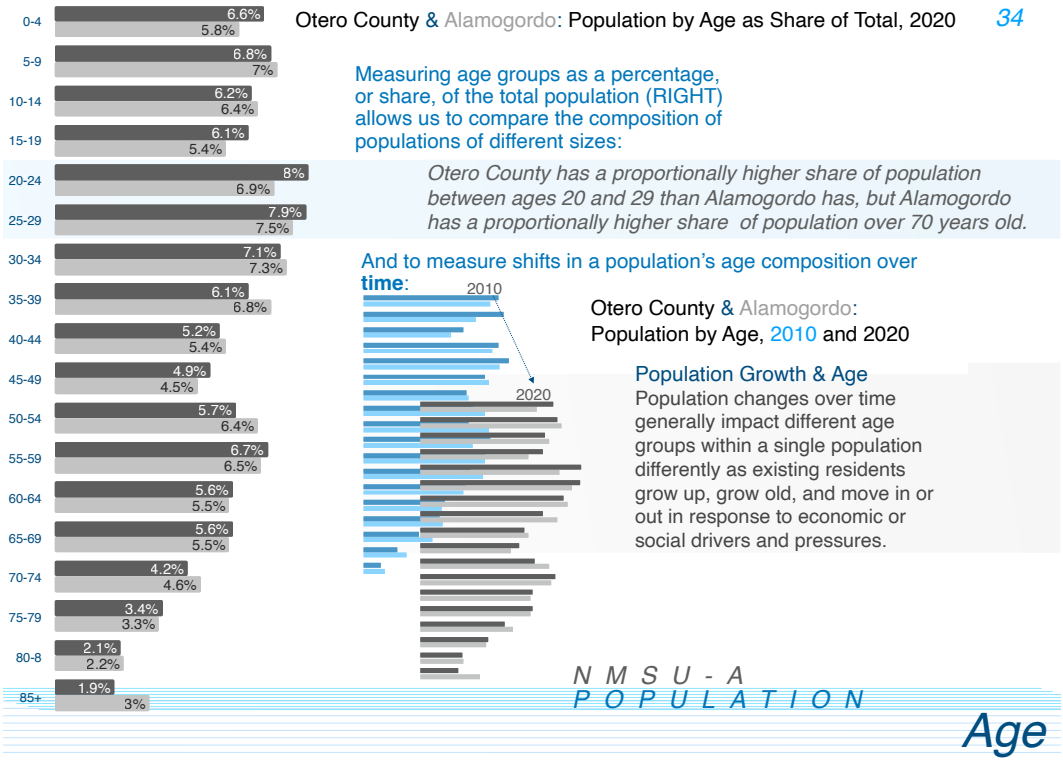
As an important identifier of higher ed student populations, age is a main driver of enrollment

N M S U - A P O P U L A T I O N

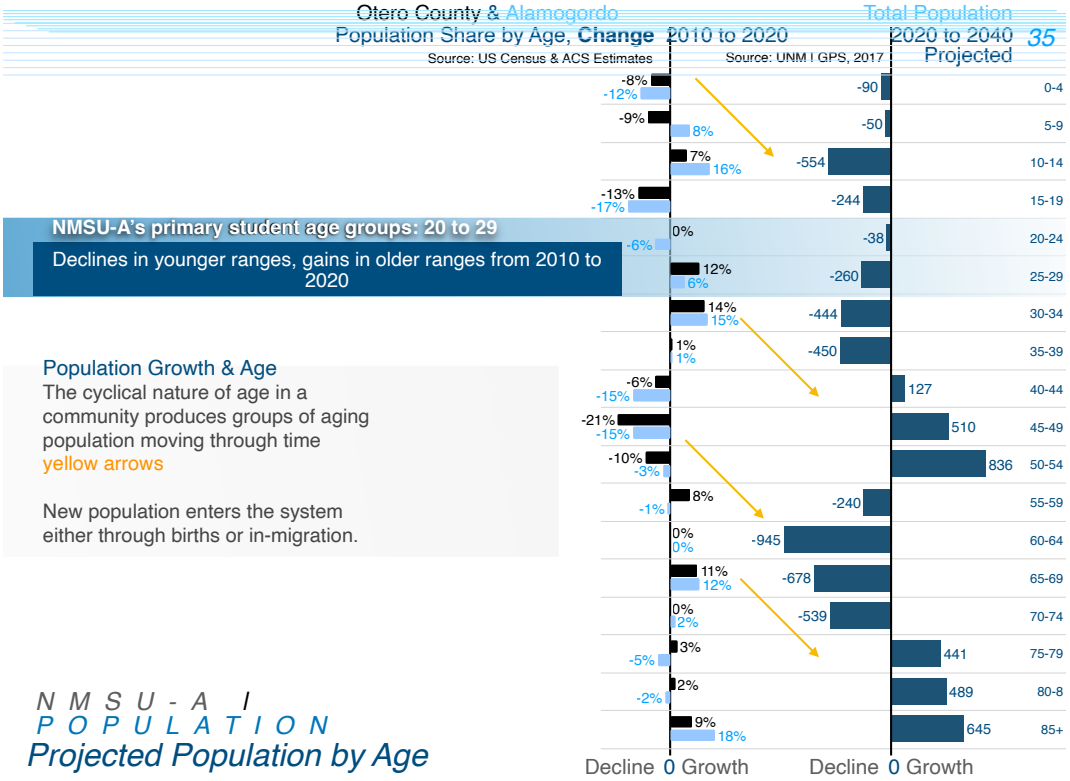
Age

Source: US Census & ACS Estimates and NMSU-A Consumer and Student Achievement Information, and Profile of the Military Community, DoD, 2018

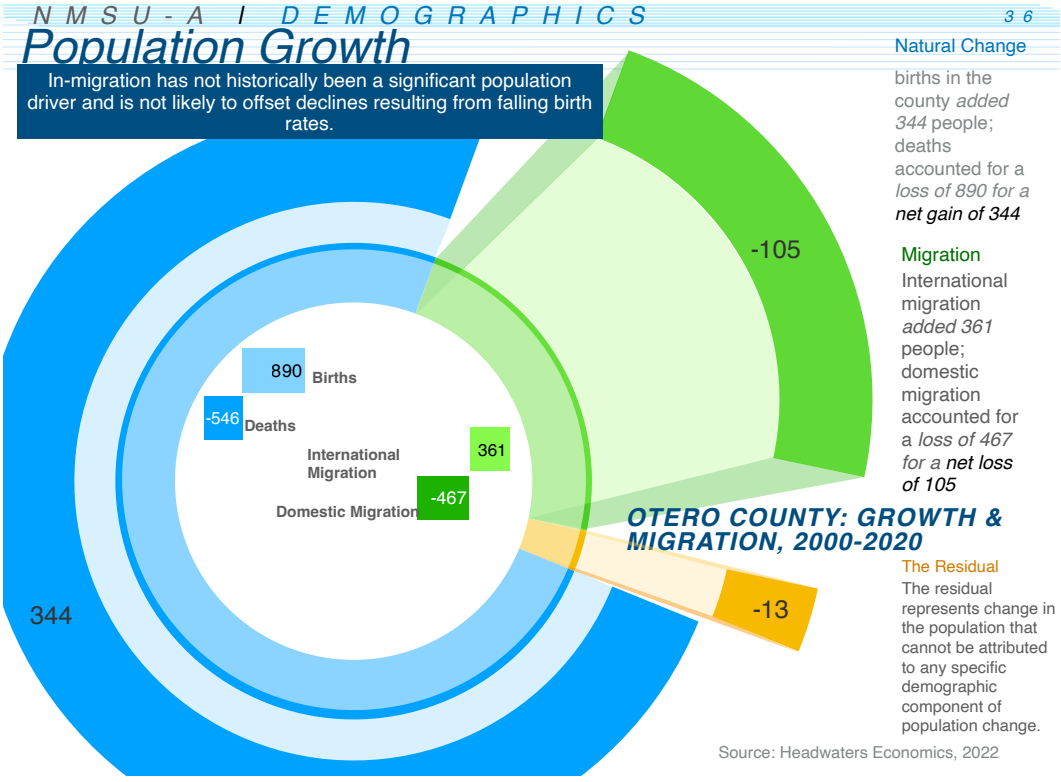
Ex-32-26



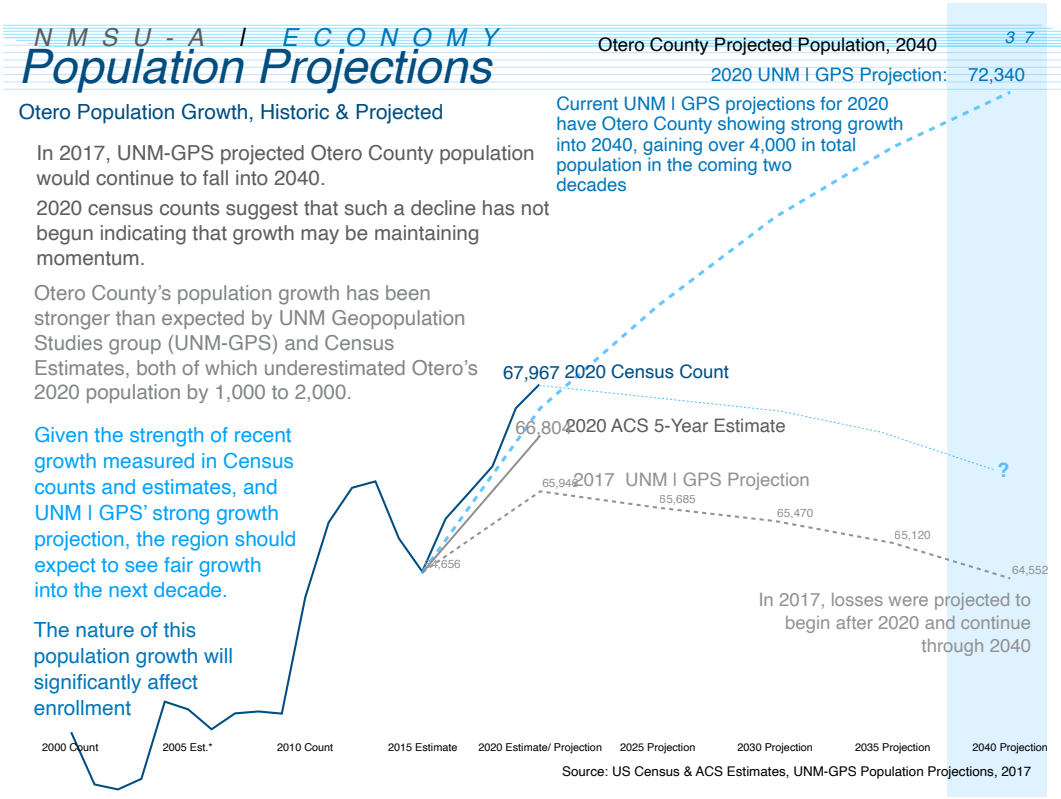
Ex-32-27



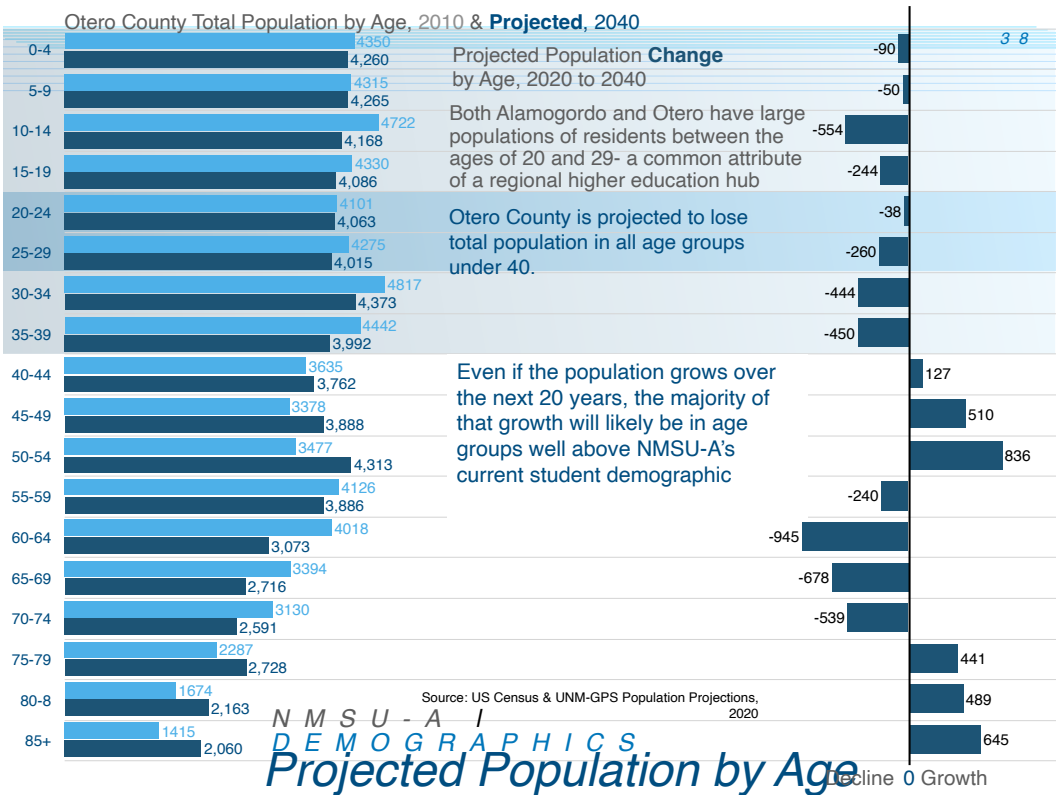
Ex-32-28



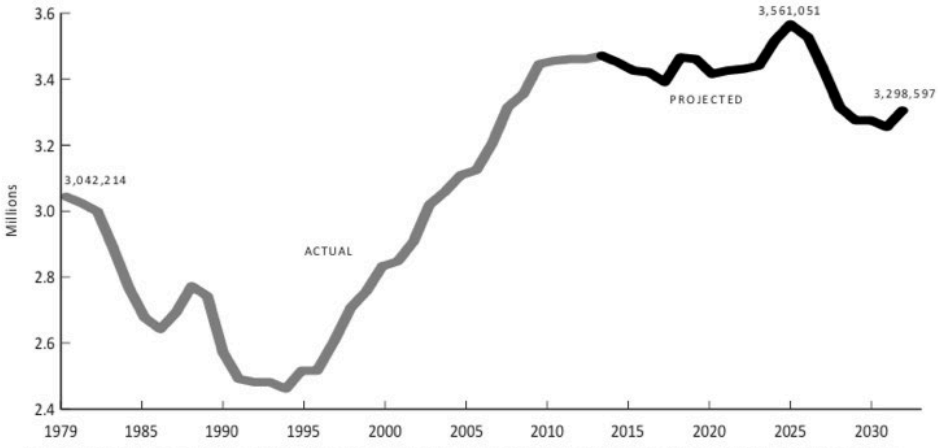
Ex-32-29



Ex-32-30


Otero County Total Population by Age, 2010 & **Projected**, 2040
0-4 4350 4,260
5-9 4315 4,265
10-14 4722 4,168
15-19 4330 4,086
20-24 4101 4,063
25-29 4275 4,015
30-34 4817 4,373
35-39 4442 3,992
40-44 3635 3,762
45-49 3378 3,888
50-54 3477 4,313
55-59 4126 3,886
60-64 4018 3,073
65-69 3394 2,716
70-74 3130 2,591
75-79 2287 2,728
80-8 1674 2,163
85+ 1415 2,060
Projected Population **Change** by Age, 2020 to 2040
-90
-50
-554
-244
-38
-260
-444
-450
127
510
836
-240
-945
-678
-539
441
489
645
Both Alamogordo and Otero have large populations of residents between the ages of 20 and 29- a common attribute of a regional higher education hub
Otero County is projected to lose total population in all age groups under 40.
Even if the population grows over the next 20 years, the majority of that growth will likely be in age groups well above NMSU-A's current student demographic
Source: US Census & UNM-GPS Population Projections, 2020
N M S U - A
D E M O G R A P H I C S
Projected Population by Age
Decline 0 Growth

Ex-33: *Total US Public and Private High School Graduates (Actual and Projected), 1979 to 2032*

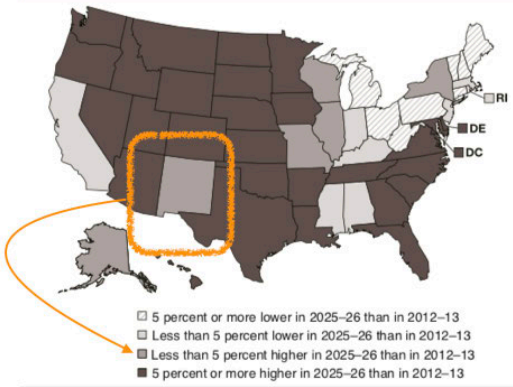


Source: William J. Hussar and Tabitha M. Bailey. "Projections of Education Statistics to 2024: Forty-Third Edition", Table 9 (1979 to 2012). And, Western Interstate Commission for Higher Education, "Knocking at the College Door", 2016 (2013 to 2032).

Ex-34: *Actual and Projected Enrollment for All Degree-Granting Postsecondary Institutions, Fall 2000 to Fall 2025*

STATE AND REGIONAL (PUBLIC SCHOOL DATA)

Projected percentage change in the number of public high school graduates, by state: School years 2012–13 and 2025–26



NOTE: Includes graduates of regular day school programs. Excludes graduates of other programs, when separately reported, and recipients of high school equivalency certificates. Calculations are based on unrounded numbers. Mean absolute percentage errors of public high school graduates by state and region can be found in table A-14, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Dropout and Completion Data File," 2012–13; and State Public High School Graduates Projection Model, 1980–81 through 2025–26. (This figure was prepared April 2016.)

High school graduates by state

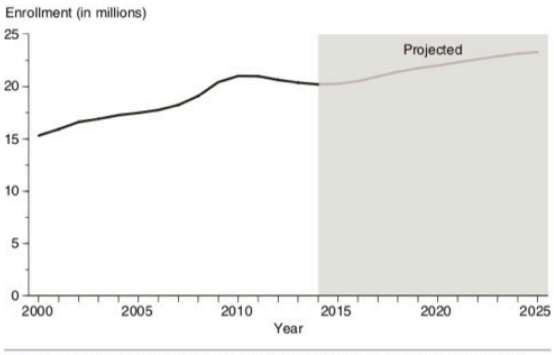
The number of public high school graduates is projected to be higher in 2025–26 than in 2012–13. This plays out differently among the states.

- ▲ High school graduates are projected to be higher in 2025–26 than in 2012–13 for 34 states and the District of Columbia, with projected high school graduates
  - 5 percent or more higher in 28 states and the District of Columbia; and
  - less than 5 percent higher in 6 states.
- ▼ High school graduates are projected to be lower in 2025–26 than in 2012–13 for 16 states, with projected high school graduates
  - 5 percent or more lower in 8 states; and
  - less than 5 percent lower in 8 states.

Total enrollment in degree-granting postsecondary institutions

- ▲ increased 32 percent from 2000 to 2014 (15.3 million versus 20.2 million), a period of 14 years; and
- ▲ is projected to increase 15 percent, from 2014 to 2025 to 23.3 million, a period of 11 years.

Actual and projected numbers for total enrollment in all degree-granting postsecondary institutions: Fall 2000 through fall 2025



NOTE: Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) Spring 2001 through Spring 2015, Fall Enrollment component; and Enrollment in Degree-Granting Institutions Projection Model, 1980 through 2025. (This figure was prepared April 2016.)

Source: Institute of Educational Sciences - National Center for Educational Statistics, Projections of Educational Statistics to 2025

This page is intentionally blank.

Architectural Research Consultants, Incorporated
4906-A Alameda Blvd, NE, Albuquerque, NM 87113 505-842-1254 https://arcplanning.com

22116.0000