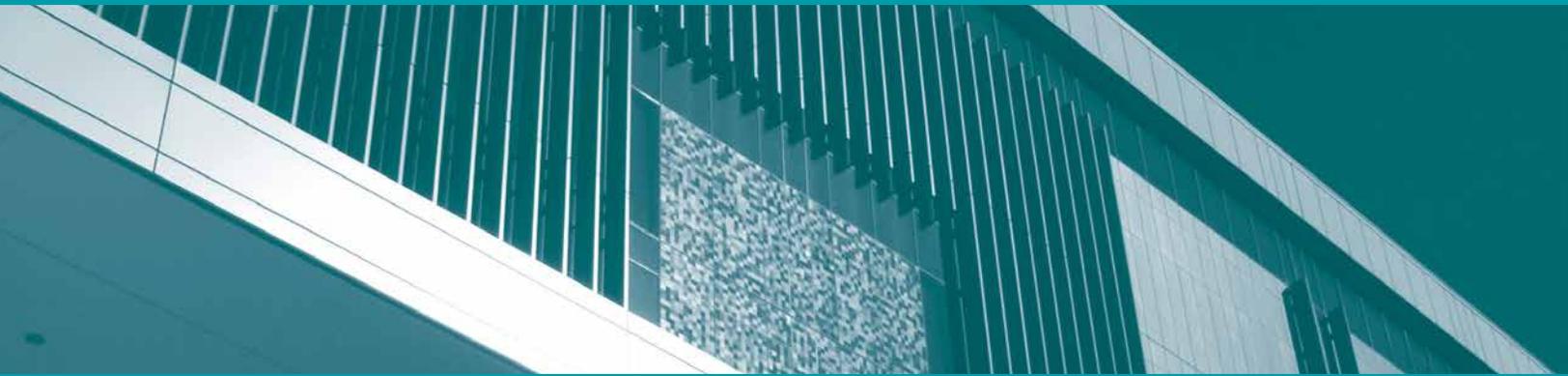


Chapter 3

Protecting Our Existing Major Employment Base



Chapter

3



Healthcare, mining and defense-related industries comprise a sizable portion of the regional economy. County actions have, and will continue, to provide an environment where employers can operate and expand.

Protecting our existing employment base and fostering opportunities for this local employment base to grow is a major objective our Economic Development Plan. We must provide an environment where our existing employers can easily expand, as well as pursue their business interests without undue interference, regulation or taxation.

The tables below show the Top 10 private employers in the region today, followed by the Top 10 public employers.

An examination of the top 10 private employers and the top 10 public employers in the previous tables indicates employment in the region can be divided into three primary em-

TOP PRIVATE EMPLOYERS

Employees	Organization
9,600	Raytheon Missile Systems
6,272	Banner–University Medicine
5,530	Freeport McMoRan Inc.
5,500	Walmart
3,860	Carondelet Health Network
3,162	TMC Healthcare
2,413	Corrections Corporation of America
2,346	Fry's Food Stores
2,200	ASARCO
1,900	Afni Inc.

TOP PUBLIC EMPLOYERS

Employees	Agency
11,251	The University of Arizona
8,580	State of Arizona
8,406	Davis-Monthan Air Force Base
7,060	Pima County
6,770	Tucson Unified School District
5,739	US Customs and Border Protection
5,477	Fort Huachuca
4,595	City of Tucson
4,350	Tohono O'odham Nation
2,464	Southern Arizona Veterans Affairs Healthcare System
1,895	Arizona Air National Guard

ployment areas; first is healthcare with over 15,700 employees and second mining, still presently employing 7,700, even in a down commodity cycle. The third major employment category is military, with Davis-Monthan Air Force Base (DMAFB) and the 162nd Wing of the Arizona Air National Guard (AZ ANG) and the Army facility at Fort Huachuca with nearly 15,000 employees. Based on these three broad employment areas, our efforts to protect the existing employment base must be primarily focused on these sectors, as well as for the top private employer and the top public employer, Raytheon Missile Systems and The University of Arizona. These sectors and employers deserve specific focus for protecting the existing major employment base of Pima County.

It is also believed these existing major employers are positioned to add significant employment in the near term. Discussions with regard

According to a 2011 Bloomberg Government Study, Tucson is the seventh top recipient city of federal defense dollars – nearly \$5 billion annually – and Tucson is the number one ranked city in Arizona for federal defense monies. Three of our four major employers receive significant federal dollars.

A. Raytheon: 1) Eliminating Urban Encroachment, 2) Roadway Relocation, 3) Buffer, 4) 46kV Power Line Relocation

Raytheon Missile Systems is our largest private area employer with a total of 13,500 employees; 9,600 of which are located in Pima County. The County is working aggressively on strategies to protect and allow Raytheon to possibly expand in Tucson.

In 2010, our region received a significant shock when Raytheon Missile Systems made a

Raytheon Missile Systems is our largest private area employer with a total of 13,500 employees; 9,600 of which are located in Pima County

to national defense and weapons technology, as well as world events in the fight against terrorism, all point to potential significant employment increases at Raytheon Missile Systems. Given the attractiveness of DMAFB for pilot training activity, it is also likely there will be significantly increased mission opportunities for DMAFB, as well as the 162nd Wing of the AZ ANG given the national shortage of pilots for the US Air Force (USAF).

On the other hand, Raytheon, DMAFB, the 162nd Fighter Wing of the AZ ANG and The University of Arizona are vulnerable to reduced federal spending. Having any of these major employers suffer any type of mission or job reduction will hurt the entire economy of Pima County. While their economic wellbeing may depend largely on forces outside of the regional and State economy, Pima County needs to ensure we are doing everything possible to support the stability and job growth of these major employers.

reasoned, business-based decision to expand operations and build a new facility in Huntsville, Alabama. This action was the result of a number of factors, one of which related to the inability of Raytheon to expand due to lack of space and facilities in their current operating environment. We cannot ensure future growth, nor can we control the adverse impacts of possible funding cuts. However, there are actions we can take to try to protect existing jobs and lure new ones. If there is future consolidation or expansion of Raytheon operations based elsewhere, we want to ensure our region is the most attractive location for those consolidated jobs.

1) Eliminating Urban Encroachment

Over the years, Raytheon has been threatened with urban encroachment. This threat from residential development immediately south of Raytheon was removed by the County's acquisition of 382 acres of property as discussed



Raytheon has been a vital employer and community partner for the metro Tucson area since 1951.

previously in Chapter 1. Acquisition of this private property, however, is only a first step in protecting Raytheon's existing business base, as well as facilitating possible Raytheon expansion in the future if such opportunities arise.

2) Roadway Relocation

The relocation of Hughes Access Road to further buffer Raytheon's production facilities; a project that was completed in 2015.

3) Buffer.

This buffer is divided into two components: 1) providing necessary safety and operating arcs for existing Raytheon production facilities and 2) providing an additional buffer to provide for significantly expanded production capability and the development of new operating production units. The County is actively participating in land acquisition/ exchange negotiations between the USAF and the Tucson Airport Authority (TAA) for further buffer protection and to ensure Raytheon's long-term occupation and lease of Air Force Plant 44.

4) 46kV Electrical Power Transmission Line Relocation.

Raytheon's existing production facilities operate under a waiver provision approved by the US Department of Defense (DOD). These facilities are required to have specific safety buffers where public highways and major public utilities cannot be located, and if located under a previous standard, the production facilities are allowed to continue to operate only with a waiver. This means production can be limited, curtailed or eliminated if waivers are not granted by the USAF or DOD.

It is best not to have the region's largest private employer operating under waiver conditions; hence, the relocation of the roadway, the acquisition of additional buffers and now the relocation of electrical transmission mains. The existing Hughes Access alignment carries two 46kV electrical transmission lines that provide electrical service to Raytheon and areas significantly beyond the Raytheon property. Not only was the road relocation necessary to eliminate a waiver requirement, but the 46kV transmission mains were relocated. Pima



Davis-Monthan Air Force Base employs nearly 10,000 people in the region and makes a \$1.5 billion economic impact. Pima County and other community partners intend to provide the support the Base needs to remain in Tucson and continue to grow.

County and the public electric utility, Tucson Electric Power, have agreed to share the cost of relocating these facilities outside of Raytheon's existing operating areas and future buffer areas. This will ensure Raytheon can continue to operate its existing facilities and potential expanded facilities without any future waiver from the USAF or DOD.

B. Davis-Monthan Air Force Base – P4 Process and Mission

Military installations provide significant economic impact and employment benefits within our region. In Fiscal Year (FY) 2014, DMAFB alone provided an economic benefit to the community of nearly \$1.5 billion; employing almost 10,000, 2,900 of which are civilians, and creating 4,200 indirect additional jobs in Pima County. Over 20,000 military retirees in the region account for just over \$500 million of this impact.

In the past, our community has been concerned over national base closure options as they could affect DMAFB. Thus far, DMAFB remains un-

touched by military base closings. However, it is possible federal budget constraints, including sequestration, will continue to adversely impact the military in general and the continuing missions of the existing military facilities in Pima County. A cohesive, region-wide effort must convey the message to military and political leadership that the continuation of viable operations for our military installations is essential and supported by the community.

In June 2015, the *Arizona Daily Star* completed an extensive special report regarding the Base. The report highlighted the need to increase our advocacy for DMAFB and develop a stronger strategy than we have used in the past. Those strategies suggested by the *Arizona Daily Star* should be seriously considered by all participants in supporting Davis-Monthan, including the DM-50, Southern Arizona Defense Alliance, and the various jurisdictions that support DMAFB and have engaged to provide the highest level of community support for any military installation in the country. Davis-Monthan's assets are too important to ignore. We must

provide the level of community, institutional and jurisdictional support necessary to ensure DMAFB remains here and grows here.

To address the need to reduce overall operating costs, the USAF has recently initiated the Community Partnership Program where discussions are being held with local jurisdictions to find ways to share costs or potentially modify community operations to allow the USAF to operate more efficiently and focus on its military responsibilities. Pima County and many of our regional partners are working to do our part to ensure DMAFB and the 162nd Wing of the AZ ANG can operate at the most efficient level possible.

While the community supports DMAFB and the 162nd Fighter Wing of the AZ ANG (discussed in Section C below), concern has been expressed over adverse noise impacts. In addition, the DMAFB Departure Corridor has been threatened with urban encroachment; which, if

participation in completing this ICEMAP plan. We will actively engage in the process, as well as continue to aggressively take the necessary steps to protect our third largest employer.

Leased Land Acquisition

Today, there are 99 acres of private property inside the boundary of DMAFB that are leased on an annual basis to the USAF. In addition, there are approximately 133 acres of State Trust land within the boundary of DMAFB. The annual cost of these leases to the USAF exceeds \$380,000. These leased properties should be purchased and leased at no cost to DMAFB to continue their operations. This action would lower the operating cost of keeping DMAFB open for military uses; something that will be increasingly important as federal and defense spending reductions become real. Although the voters of Arizona approved an exchange mechanism to protect millions of dollars in military installations by exchanging State Trust lands,

DMAFB provides an economic benefit of nearly \$1.5 billion; employing almost 10,000; 2,900 of which are civilians, and creating 4,200 indirect additional jobs

allowed, would diminish the military capability of the installation. The County, in the 2004 bond issue, allocated and spent \$10 million to purchase lands in this departure corridor.

The USAF has selected DMAFB to develop an Installation Complex Encroachment Management Action Plan (ICEMAP) as part of the enterprise-wide Air Force Encroachment Management Program. As exemplified by the \$10 million investment cited above and in the leased land program discussed below, Pima County has taken and continues to take, progressive steps to mitigate the impacts of encroachment on DMAFB. Encroachment is a primary reason for closure of bases. As Pentagon budgets continue to shrink and Base Realignment and Closure processes are initiated, we must take the necessary steps to place our military installations in the best possible position to compete for new assignments instead of being vulnerable to closure. DMAFB leadership has requested Pima County support and

the processes and procedures that have been implemented to effectuate this voter referendum simply do not work. Of the \$380,000 annual cost to the USAF to lease property inside the boundaries of DMAFB, approximately \$54,000 was for a commercial State Land lease. When contacted to discuss purchase of this property on behalf of the USAF, the Arizona State Land Department recognized the need to lower the annual lease cost and converted this commercial lease to a Special Land Use permit that now costs the USAF only \$2,400 per year.

In addition, the County has worked with the Governor's Office and the Arizona Department of Emergency and Military Affairs (DEMA) to secure funding to purchase certain private properties inside the boundaries of DMAFB. A \$250,000 grant from the Military Installation Fund has been approved to purchase priority properties located within the Base. The County will purchase these properties and lease them to DMAFB at the nominal rate of \$1 per year.

Currently, the County continues to negotiate with these private property owners. We hope to expand funding by reapplication for additional funding to the Military Installation Fund for the purchase of these private properties. The first priority area for these purchases is land within the Quantity Distance Arcs related to the DMAFB Munitions Storage Area.

The County hopes to complete the acquisition of all of these properties for the benefit of DMAFB by Fall 2017.

Increased Pilot Training

The primary flying mission at DMAFB is training and operating A-10 aircraft. With USAF plans to retire the A-10 being seriously considered, the number of employees at DMAFB may temporarily or permanently decrease. A General Accounting Office report on the decommissioning of the A-10 Aircraft pointed out the flaws of replacing this aircraft without a tested replacement aircraft that can perform the same function. Hence, the life of the A-10 has been extended, and additional flying and pilot training missions are being considered for DMAFB and the 162nd Fighter Wing of the AZ ANG.

As has been reported by numerous sources, the US Military faces a critical shortage of trained pilots; training programs need to be significantly increased to meet this shortage. Hence, it is likely the F-16 Pilot Training Mission at the 162nd Fighter Wing of the AZ ANG will be increased, as well as specific training missions assigned to DMAFB for similar aircraft. A long-term view is needed for base preservation, regardless of which type of aircraft enters the USAF or military inventory, including the F-35. Because of their close proximity to the Barry M. Goldwater Range (BMGR), DMAFB and the 162nd Fighter Wing of the AZ ANG will be very attractive locations to host future military flying operations, as training and sustainment of operational proficiency can both be conducted efficiently and effectively.

Preserving Flight Corridors and Training Sites

DMAFB, working with the County to take advantage of our knowledge and experience in open space planning as demonstrated in the

Sonoran Desert Conservation Plan, is pursuing a Readiness and Environmental Protection Integration (REPI) Program grant for DMAFB departure corridors and other flight corridors necessary to transit from DMAFB to the BMGR. It is important to realize that DMAFB operations expand beyond its boundaries; base personnel utilize flight corridors and training sites to conduct a wide variety of missions. Hence, the County has partnered with DMAFB to assist in securing REPI grant funds to acquire development restrictions within the five priority areas identified by the base. Prevention of incompatible land uses and encroachment on the base and its corridors are necessary to protect and maintain full mission capabilities and reduce existing constraints or limitations on DMAFB training and operations. DMAFB staff submitted their first REPI grant application in the amount of \$8.65 million, with a Federal REPI request of \$4.9 million and matching County contribution of \$3.75 million, based on properties acquired by the County using 2004 voter-approved bond funds for encroachment prevention acquisitions within the DMAFB departure corridor. These bond funded acquisitions are not only assisting DMAFB with maintaining their mission capabilities through encroachment mitigation, but are also assisting in attracting federal funding to further this effort. If successful in the application process, REPI funding will be used to purchase lands or secure easements over properties to ensure compatible land uses within their first priority area, which encompasses the departure corridor to the southeast. The County will actively partner with DMAFB to assist their staff in subsequent REPI submittals for further funding in their designated priority areas, with the end goal of maintaining and protecting local flight paths and corridors to the BMGR.

Figure 3.1 (upper right) shows local DMAFB departure flight paths and air Military Training Routes (MTRs) that access the BMGR. DMAFB's highest priority areas are located in close proximity to the Base and within the departure corridor to the southeast, shown in **Figure 3.2** (lower right).

Other priority areas are located further from the Base, southeast and southwest of Tucson,

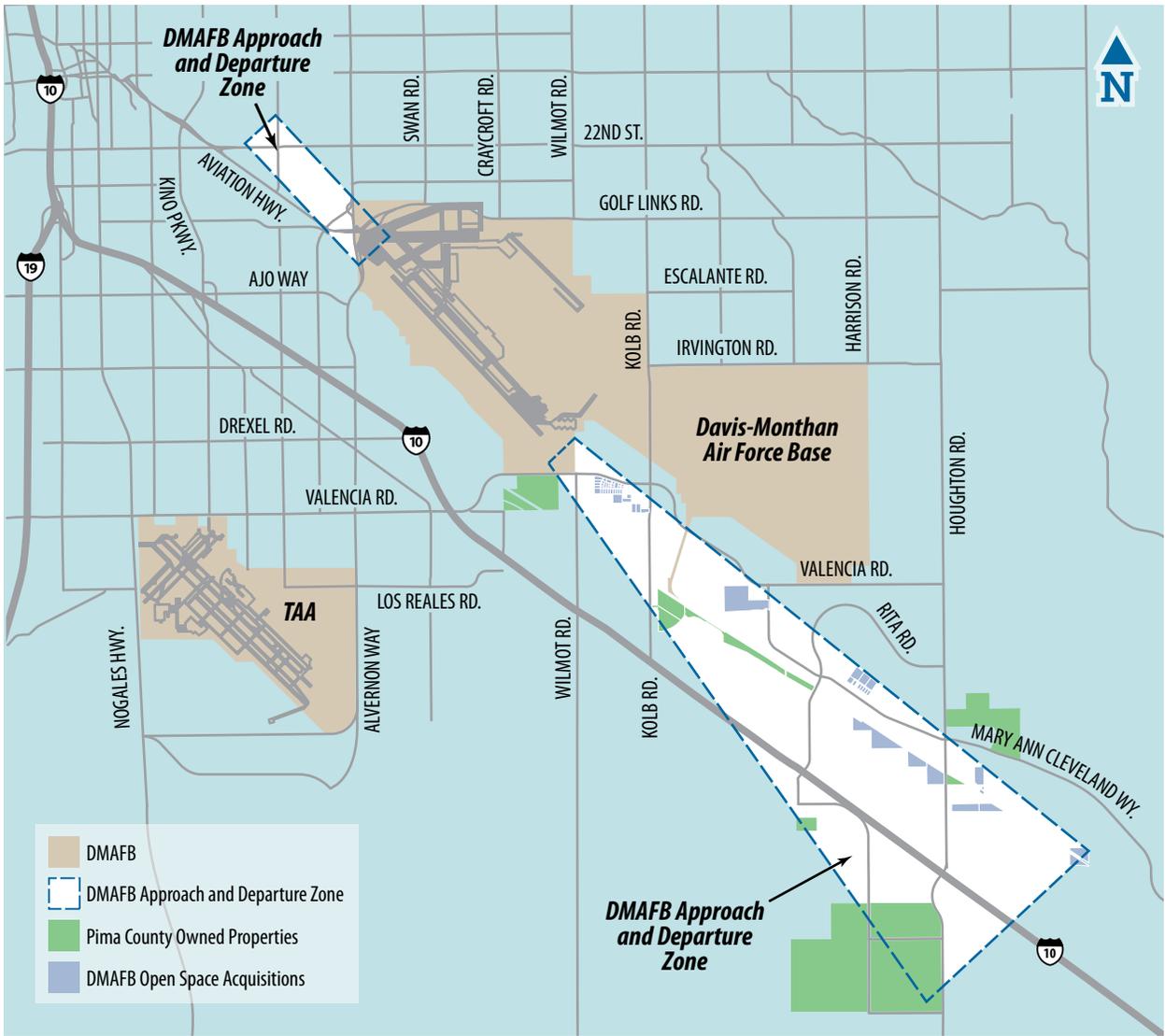


FIGURE 3.1

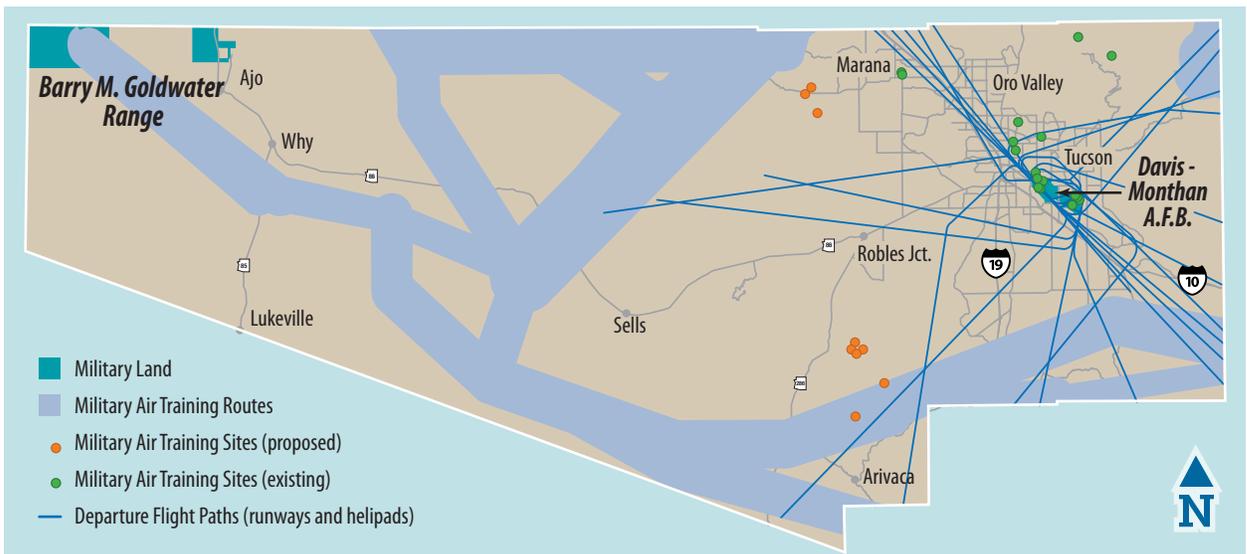


FIGURE 3.2

but necessary corridors within the MTRs to the BMGR. To provide required local matching funds to supplement federal REPI grants and leverage other federal funds, the County will, at the next General Obligation Bond issue placed before the voters, include \$10 million for this purpose in a question related to preserving and protecting existing and future missions of DMAFB.

Aircraft Preservation and Regeneration

The climate in Arizona is well known for preserving and extending the life of military aircraft that are no longer necessary for a specific program and/or mission but may be regenerated at some point if the functionality of the stored aircraft is necessary to provide for national defense.

The 309th Aerospace Maintenance and Regeneration Group (AMARG), more commonly known as the “Boneyard,” has been a fixture of DMAFB for decades. It manages more than 4,500 aircraft sent for storage or maintenance, a service provided to all branches of the US

Military. The AMARG is divided into two areas: 1) the Reclamation Area and 2) the Storage and Maintenance Area. Many of the stored aircraft can be returned to operational status in a short period of time, if needed. It is clear the mission of this military aircraft storage and reclamation function requires expansion. In addition, this function requires experienced engineers and technicians qualified in military aircraft storage and repurposing. Therefore, it is incumbent on the County to assist this unit of the USAF to expand the current facility and to assist in providing trained technicians and civilian personnel to make this military aircraft storage and redistribution center operate at optimal levels.

The airmen supporting the 355th Fighter Wing are an excellent resource for employers for our region. Pima County operates the Veterans One-Stop center that helps veterans obtain benefits, services and jobs. We will continue to focus on maximizing job opportunities for any reduced staffing or returning veterans to ensure they can be productive in the community as they return to civilian status.



Davis-Monthan Air Force Base provides an annual \$1.5 billion economic benefit to our community.



The Arizona Air National Guard 162nd Fighter Wing trains hundreds of U.S. and foreign pilots every year.

C. Arizona Air National Guard – 162nd Fighter Wing – New Entrance and Munitions Handling and Storage Facility

The AZ ANG has made an impact in this community for more than 50 years, supports more than 1,895 jobs, and provides an annual economic benefit of over \$270 million.

The 162nd Fighter Wing trains United States and partner nation F-16 fighter pilots; provides persistent, armed MQ-1 Intelligence, Surveillance and Reconnaissance and Incident Awareness and Assessment around the globe; supports NORAD Aerospace Control Alert directives with 24/7 immediate response aircraft in the defense of North America; and delivers an integrated realistic training environment for United States and partner nation deployments to enhance unit combat capability and readiness.

The AZ ANG installation at Tucson International Airport (TIA) requires additional and updated access to address current Department of Defense force protection measures and congested traffic flow on Valencia Road during peak entry and exit hours. A plan to lease land access and construct a modern gate off Park Avenue is currently moving forward and will greatly improve safety and security for both the AZ ANG and the community.

Operations of the 162nd Fighter Wing require that some munitions be transported from DMAFB to TIA over publicly traveled roadways. While these munitions are relatively insignificant compared to most munitions loaded on fighter aircraft, they ideally should be stored at the operational site of the AZ ANG for use on training missions. Approximately 50 acres of the expanded Raytheon buffer are



The Arizona Air National Guard has made a home in Pima County for more than 50 years. The Guard employs nearly 1,900 people and makes a \$270 million economic impact in the region annually.



ARIZONA AIR NATIONAL GUARD

Pima County has helped to secure a 50-acre section of the Raytheon buffer area as a munitions storage area for the Air National Guard. The storage area in closer proximity to Guard facilities would eliminate the need to transport munitions to the Guard facility over public roadways. A proposed new entry gate on Park Avenue also would help alleviate congestion along Valencia Road.

being reserved for a new Munitions Handling and Storage Facility, which will increase efficiency and safety for AZ ANG operations.

Release of munitions storage is tied to an ongoing Environmental Impact Statement (EIS) for the second runway at TIA, and this EIS is scheduled to be completed in September 2018. This munitions storage area will also have an internal roadway connecting a munitions storage area to the AZ ANG base inside the secured perimeter of the Airport. Once land rights have been obtained, it will be up to the AZ ANG and the National Guard Bureau to secure funding for the munitions storage area. The location of the facility has been planned with Raytheon, enabling their joint ability to add capacity where overlapping safety arcs provide for the most efficient use of land resources.

The County will continue to pursue both the new entrance and the munitions storage area and assist the AZ ANG in obtaining these significant and vital improvements to their existing base facilities. Hopefully, both these improvements will allow the air pilot training mission of the AZ ANG to be expanded.

Pima County has been, and continues to be, a strong advocate for the 162nd Fighter Wing and its future missions. This includes the potential

securing of F-35A allied pilot training in Tucson. We are committed to making wise community investments to protect and provide maximum operational flexibility for the AZ ANG.

D. The University of Arizona – State Funding

The UA, with 11,251 employees and 10,484 in Pima County, is our region’s second largest employer and a key element in the infrastructure that builds and shapes our economy. The UA has an \$8.3 billion statewide economic impact. The University educates individuals and creates economic activity through the research, translation and commercialization activities of students and faculty. These activities are critical in supporting existing companies, attracting new businesses and creating new sectors in our economy and, at the same time, provide a capable workforce generating innovative ideas for new business activities.

Providing necessary supporting infrastructure to encourage regional employment cen-

ters requires time and investment. While the regional infrastructure is in the process of being developed at the Aerospace, Defense and Technology Research and Business Park, to increase high-wage jobs in the TIA area, the infrastructure found at the UA Tech Park needs incremental improvement to attract the high-wage employers they are seeking.

The Tucson Tech Corridor, or the extended UA Tech Park, however, is in a position to provide high-tech industry jobs if we work with existing landowners to foster the necessary investment and cooperation. The corridor, anchored by the UA Tech Park and the Port of Tucson, connects a number of existing and emerging employment centers of significant importance in the southern metropolitan area. These centers include the UA Tech Park, the UA Tech Park at The Bridges, Banner-University Medical Center–South on Ajo Way, and the Logistics and Intermodal Center at the Port of Tucson. The Offshore Group, the largest employer in Sonora and a major industrial park developer in Mexico, is also



The Pima County Workforce Investment Board Biotechnology Career Expo at the University of Arizona’s BIO5 Institute. The expo is for youth and teens who are interested in talking with biotechnology employers and educators.

headquartered in the Tucson Tech Corridor.

Public investment and infrastructure needs associated with each of these facilities are different and should be tailored to the very specific needs of the employment center in the communities in which they are located. Infrastructure needs vary from traditional public infrastructure such as streets, highways and utilities, to nontraditional infrastructure investments, such as land acquisition and development of incubator building space. Based on an analysis of public infrastructure necessary to support rapid and continued job employment development at the UA Tech Park, it is estimated it will cost \$28.1 million to make this facility fully development ready.

The UA, Campus Research Corporation and other entities are prepared to fund \$10.6 million of this cost. Some of this investment has already been made, including construction of a new road to the Solar Zone and a well and water distribution system.

Pima County has also supported development of the UA Tech Park at The Bridges with infrastructure capital investments related to Regional Flood Control District and County wastewater facilities. These investments total over \$16 million. The Bridges, located adjacent to Kino Boulevard between TIA and the UA, is an ideal location for growing startup technology firms translating UA research into practical job applications.

ACTION ITEMS

- 3.1** Secure buffers for Raytheon expansion by 2018.
- 3.2** Continue to actively support DMAFB and their continuation of the A-10 mission and any future mission for DMAFB. Actively support additional F-16 squadrons being relocated and based at DMAFB, as well as a remoted piloted aircraft mission.
- 3.3** Create the County staff position of Navigator to coordinate strategies and regional support activities for DMAFB.
- 3.4** Actively pursue acquisition of leased private properties within DMAFB and State Trust land to reduce operational land leasing costs of DMAFB. Also, pursue a REPI grant to further protect the DMAFB departure corridor as well as the flight corridors from DMAFB to the BMGR.
- 3.5** Continue to actively support the AZ ANG and continuation and expansion of its domestic and international flight pilot training missions at TIA.
- 3.6** Support the AZ ANG main entrance relocation to improve safety and operation security of the facility. Set aside approximately 50 acres of expanded Raytheon buffer for AZ ANG purposes primarily related to munitions storage and arming of AZ ANG aircraft engaged in pilot training.
- 3.7** Support funding initiatives for the UA and oppose further reductions in State funding of Arizona's university and community college systems.
- 3.8** Actively support capital investments in technology transfer activities at the UA related to primary employment growth, including the UA Tech Park and UA Tech Park at The Bridges.
- 3.9** Continue to pursue the development of startup building space for the growth of UA-based technology-to-market deployment through the development of innovation buildings. The purpose of the innovation buildings will be to facilitate and incubate startup technology companies transferring research to practical applications and job development.