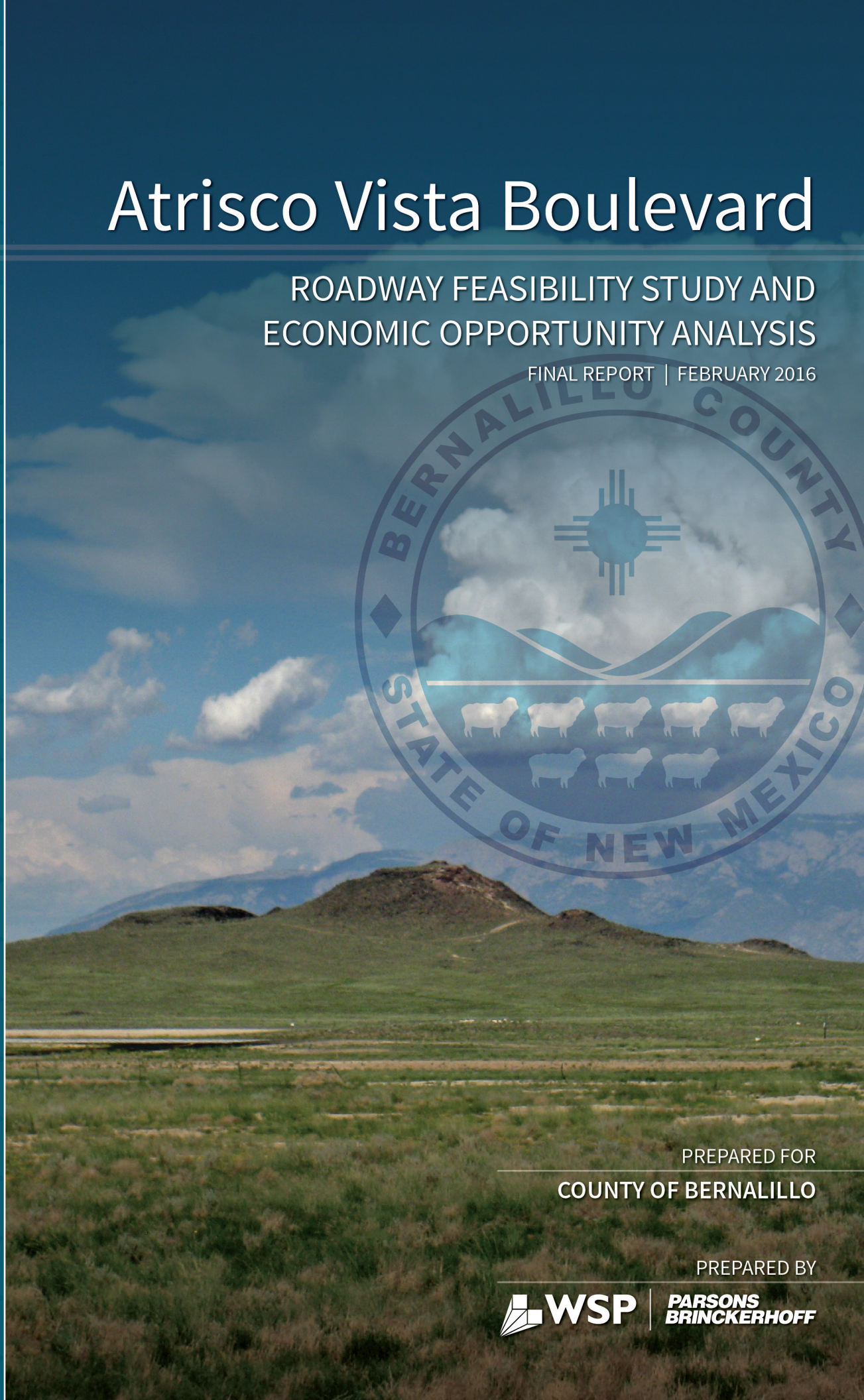
Atrisco Vista Boulevard

ROADWAY FEASIBILITY STUDY AND ECONOMIC OPPORTUNITY ANALYSIS

FINAL REPORT | FEBRUARY 2016



PREPARED FOR

COUNTY OF BERNALILLO

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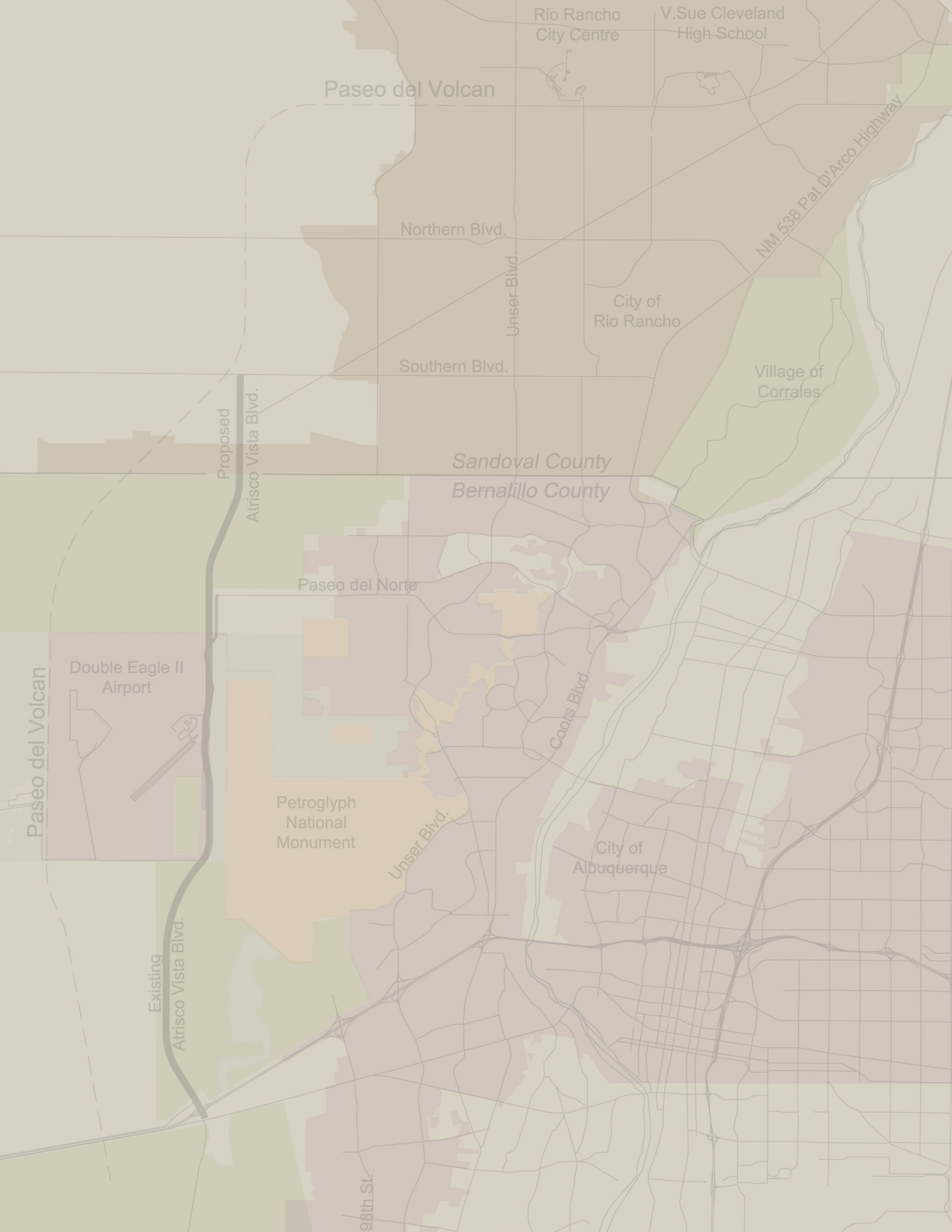

Rio Rancho
City Centre
V.Sue Cleveland
High School
Paseo del Volcan
NM 538 Pat D'Arco Highway
Northern Blvd.
Unser Blvd.
City of
Rio Rancho
Southern Blvd.
Village of
Corrales
Proposed
Atrisco Vista Blvd.
Sandoval County
Bernalillo County
Paseo del Norte
Double Eagle II
Airport
Paseo del Volcan
Coors Blvd.
Petroglyph
National
Monument
Unser Blvd.
City of
Albuquerque
Existing
Atrisco Vista Blvd.
98th St.

1.0 Study Purpose

The Atrisco Vista Boulevard Roadway Feasibility Study and Economic Analysis investigated three issues: 1) the feasibility and cost of extending Atrisco Vista Boulevard north from its current terminus at Paseo del Norte to Southern Boulevard in Rio Rancho; 2) the suitability of the property along Atrisco Vista Boulevard for large-scale industrial development; and 3) the economic opportunities and benefits that could result if additional industry is located within this corridor. The study investigated the area along the existing Atrisco Vista corridor from I-40 to Paseo del Norte, plus the proposed extension area between Paseo del Norte and Southern Boulevard. The study was sponsored by Bernalillo County as part of an ongoing effort to achieve a better job/housing balance by attracting and locating major employment centers in the metro area west side, as well as help inform discussions of funding priorities for transportation investments on the far west side of the metropolitan area.

The study evaluated

FEASIBILITY AND COST TO EXTEND THE ROADWAY 5.5 MILES

SUITABILITY OF PROPERTY FOR LARGE-SCALE INDUSTRIAL DEVELOPMENT

POTENTIAL ECONOMIC OPPORTUNITIES AND BENEFITS OF THE ROADWAY EXTENSION

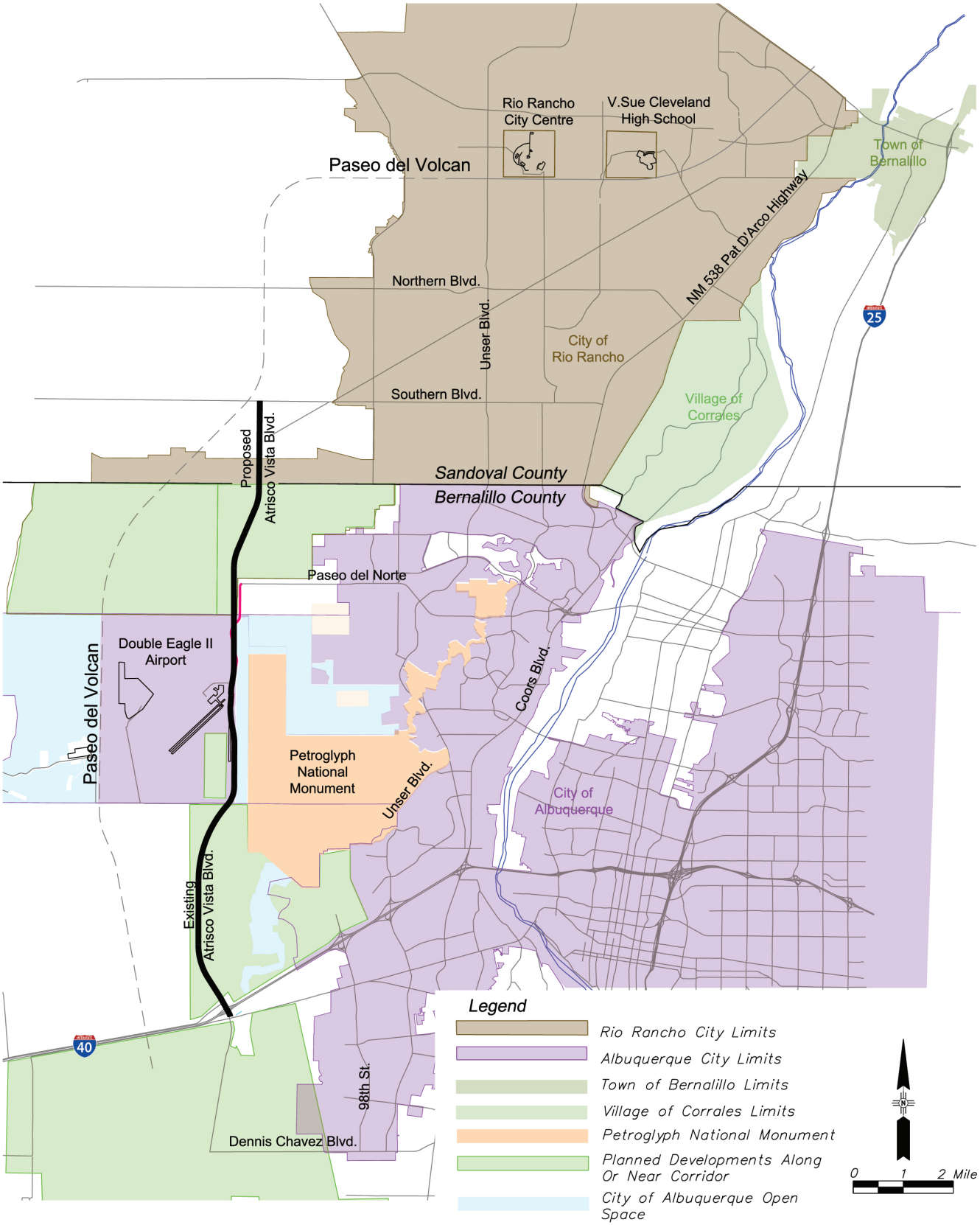
Transportation challenges facing the Albuquerque Metropolitan Planning Area are partly rooted in the distribution of major employment centers and major population areas. According to information published in the 2040 Metropolitan Transportation Plan (2040 MTP), the ratio of jobs-to-housing east of the Rio Grande was 1.39 compared to 0.56 west of the Rio Grande in 2012. The imbalance in jobs/housing is a major contributor to the congestion that affects the east-west river crossings within the metro area. With almost four times as many jobs located east of the Rio Grande compared to the area west of the river, the majority of residents living on the west side must cross the river to access employment. To achieve a better jobs/housing balance, regional planners and officials are investigating opportunities to attract and locate major employment centers on the metro west side. The Atrisco Vista corridor presents one opportunity to improve the jobs/housing balance. With an existing roadway and interchange already in place, and ample land available for major industrial development, the Atrisco Vista corridor has the potential to support industrial development and increase employment and economic activity west of the Rio Grande and near large concentrations of housing. This document summarizes the findings of an investigation of the conditions that influence the suitability of this corridor for major industrial sites and the economic opportunities the corridor may provide. The study was sponsored by Bernalillo County and managed by the Mid-Region Council of Governments.

Background

Atrisco Vista Boulevard is an existing street on the Albuquerque metro Westside that extends from Dennis Chavez Boulevard south of Interstate 40 to Paseo del Norte north of the interstate (see Exhibit 1). The segment of Atrisco Vista north of I-40 is the only existing north-south arterial street west of the escarpment. However, the existing road terminates at Paseo del Norte, thereby limiting access to and from the City of Rio Rancho and nearby unincorporated areas of Sandoval County. By extending Atrisco Vista approximately 3.5 miles north to Southern Boulevard in Rio Rancho, direct access to Rio Rancho's arterial street system is achieved and mobility is improved within the Westside areas of both Bernalillo County and Sandoval County.

The existing route of Atrisco Vista has been in place for many years. The route was originally designated as Paseo del Volcan but was recently changed as a result of an environmental impact statement (EIS) completed for the overall corridor. The purpose of the EIS was to investigate a continuous route for Paseo del Volcan between I-40 and US 550. It included the existing alignment of Atrisco Vista as one of several alignment alternatives for the portion of the corridor in Bernalillo County. Because of proximity to the Double Eagle II runways, major cultural resources in the area that were ultimately designated as Petroglyph National Monument, and challenges in constructing a freeway-to-freeway interchange at I-40,

Exhibit 1: *Vicinity Map*



the alignment that follows Atrisco Vista was not chosen as the preferred route. The preferred alternative selected for Paseo del Volcan was approximately 2 miles west of Atrisco Vista. Subsequently, the existing roadway was renamed Atrisco Vista around 2011 to distinguish it from the future PDV corridor.

As development on the metro west side continues to advance westward, Atrisco Vista remains a logical corridor to focus some of the expected growth and development. The attractiveness of the Atrisco Vista corridor for industrial uses is demonstrated by the success of two major manufacturing industries — Temper-Pedic and Shamrock built in 2007 and 2008 respectively — and the continued investment and expansion of Double Eagle II Airport. The roadway also provides access to the Southwest Aeronautic Math and Sciences Academy located on the southern portion of the Double Eagle II Master Plan, the Shooting Range Park, and City of Albuquerque Fire Training site. In addition to the existing developments, two large master-planned communities, including Westland North and Paradise West, are adopted along the segment of Atrisco Vista between I-40 and Paseo del Norte. Collectively, these two master planned areas and Double Eagle II Airport occupies a significant portion of the developable lands along the existing roadway. However, these master plans remain in the very early stages of development and their long-term impact is still unknown. Moreover, the Paradise West Master Plan faces significant challenges and has had little activity since its adoption. Nonetheless, the existing segment of Atrisco Vista and its extension north to Southern Boulevard are included in the 2040 MTP.

Although limitations along the corridor are present — both from the master-planned communities and the Double Eagle Airport — significant swaths of developable land suitable for industrial development are available. As discussed above, attracting and locating more jobs on the metro west side is essential for the long-term welfare of the region. Most of the major employment centers in Albuquerque and Bernalillo County region are located east of the Rio Grande — i.e., the North I-25/Journal Center, Uptown, Downtown, Sandia National Labs, Kirkland Air Force Base, Albuquerque Sunport, UNM, and CNM. As the population balance of the metropolitan area continues to shift westward, the commuter routes that connect to these employment centers have become severely congested. Projections by MRCOG show this congestion will become much worse in the coming decades. The development of major employment centers on the west side will help balance traffic flows and obtain more capacity from the existing street system.

Extending Atrisco Vista Boulevard will help address this jobs/housing imbalance, but also offers the region an opportunity to diversify local industry. The region has historically been dependent on federal funding — specifically related to Sandia National Labs — but with those funds becoming increasingly more difficult to access, new economic opportunities can help move the region away from its dependence on federal and other public funding. The professional and technical service industry continues to grow and a developed Atrisco Vista corridor can capitalize on this momentum by diversifying the local economy and supporting growth in newer, industrial sectors. Tempur-Pedic and Shamrock demonstrate the value of the corridor as a manufacturing and distribution hub and the future master-planned communities provide potential workforce housing and represent the momentum continuing to gather as a development destination in the region.

One of the first steps in the analysis of opportunities provided by Atrisco Vista is an assessment of the roadway itself, in particular the feasibility and cost of extending and improving the existing street. The findings of the analysis are discussed in the following section.

2.0 Roadway Feasibility and Cost

The study assessed the feasibility and cost of improving and extending Atrisco Vista Boulevard to Southern Boulevard in Rio Rancho. Because Atrisco Vista already has an interchange at I-40, and a new, quality two lane road was recently constructed from I-40 north to Double Eagle II Airport, the primary investment and cost to extend this roadway is limited to the northernmost 5.5 miles of the corridor. Engineering estimates determined the cost for design, right-of-way purchase, and construction of a high-end two lane roadway would be approximately $16M. This investment would result in a direct and efficient connection between southern Rio Rancho and western Albuquerque with direct interstate access — a feature that is essential to attracting new industry.

The engineering estimates

RIGHT-OF-WAY	$5.4M
DESIGN & CONSTRUCTION	$9.9M
TOTAL	$15.3M

The feasibility assessment of Atrisco Vista was conducted in two steps. First, a sketch planning level review of the corridor was conducted to determine if major constraints exist that could limit the ability to extend and widen the existing street. The second step consisted of an estimate of right-of-way needs and cost to extend the existing 2-lane roadway to Southern Boulevard and to widen the overall roadway to a total of four traffic lanes. For both steps, data collection was limited to readily available and apparent data. No new data collection was performed.

Atrisco Vista currently exists as a two lane arterial street with twelve foot travel lanes and six foot shoulders from I-40 north to the entrance of Double Eagle II Airport. This portion of the roadway was recently reconstructed by the City of Albuquerque Aviation Department; thus, the existing pavement and typical section south of Double Eagle II Airport is in good condition. The apparent right-of-way for this segment is approximately 156 feet.

Atrisco Vista Boulevard approximately 0.5 miles north of I-40

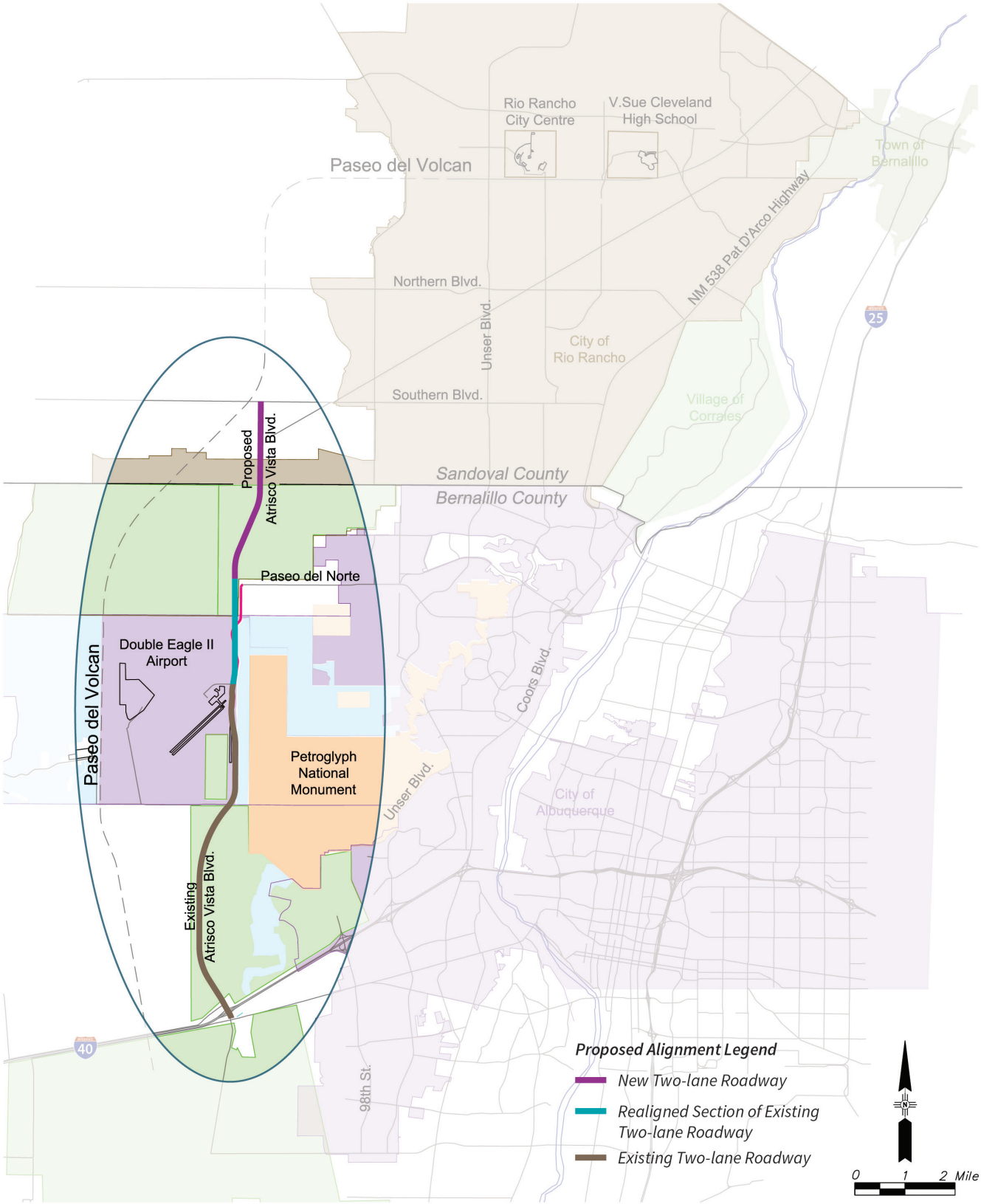
North of Double Eagle II to the existing terminus at Paseo del Norte, the roadway is generally poor. The roadway lacks shoulders, the alignment includes two horizontal curves that are not optimal for a major route, and an adequate roadside clear zone does not exist. The pavement surface appears to be in good condition, although it is unknown if the pavement section is adequate to handle higher traffic volumes and heavy trucks. The right-of-way in this section varies from 156 feet from Double Eagle II Airport north to 40 feet for the last 0.6 miles south of Paseo del Norte.

Atrisco Vista Boulevard approximately 0.5 miles south of Paseo del Norte

The following assumptions were used for the roadway feasibility analysis and cost estimate:

- First, Atrisco Vista Boulevard is assumed to be a regional principal arterial as included in the 2040 MTP Long Range Roadway System. Principal arterials are routes intended to carry higher volumes and longer distance trips at moderate speeds within the metropolitan area. For this reason, the centerline

Exhibit 2: *Assumed Extension and Realignment of Atrisco Vista Boulevard*



alignment of the segment between the Double Eagle II Airport access driveway and Paseo del Norte was assumed to be realigned to be consistent with a 50 mph design.

- The alignment of the extension of Atrisco Vista Boulevard between Paseo del Norte and Southern Boulevard was set to follow an existing platted unpaved road approximately 1,600 feet east of the planned alignment for Paseo del Volcan. The assumed alignment is shown in Exhibit 2. This location provides adequate separation between the intersections of Southern Boulevard with Paseo del Volcan and Atrisco Vista Boulevard. In addition, following the existing platted road would minimize the new right-of-way needed for the extension of Atrisco Vista.
- Because of the realignment of Atrisco Vista between Double Eagle II Airport and Paseo del Norte, and the construction of a new roadway north of Paseo del Norte, new right-of-way would be needed for the entire length of this segment — a distance of approximately 5.6 miles. The right-of-way width for this segment was assumed to be 200 feet. This assumption was used as a conservative estimate due to the very early stages of the analysis.
- Two scenarios were considered. The first scenario assumes Atrisco Vista Boulevard is constructed as a continuous 2-lane roadway for the entire 12.5 mile length from I-40 to Southern Boulevard. Under this scenario, the costs for right-of-way and roadway construction are limited to the 5.6 mile segment between Double Eagle II Airport and Southern Boulevard. The second scenario assumes Atrisco Vista Boulevard is constructed to be a 4-lane roadway for its entire length. Under this scenario, no new right-of-way is needed between I-40 and Double Eagle Airport, but two new travel lanes are added. North of this point, the costs include right-of-way and construction for a 4-lane facility.
- The typical section of the 2-lane roadway scenario was assumed to include two 12-foot travel lanes and 8-foot shoulders. The 4-lane roadway scenario assumed four 12-foot travel lanes and 8-foot shoulders. Bicycle travel was assumed to use the shoulders. A separate 10-foot multi-use trail for pedestrians and recreational bicyclists was also assumed as an independent item. Drainage improvements were assumed to be roadside ditches and ponds, but were not estimated as a specific cost item.

The planning level review of the corridor segment between Double Eagle II Airport and Southern Boulevard did not identify any physical conditions that would limit the feasibility of extending Atrisco Vista Boulevard north to Southern Boulevard. The terrain and soil conditions do not present unusual challenges to constructing a new roadway. Likewise, there are no major drainage challenges. While the roadway alignment would cross six arroyos, none of these drainages appear to present an unusual constraint from either a cost or constructability perspective.

One factor that would need to be considered is the presence of lands designated as City of Albuquerque open space. The lands east of Atrisco Vista Boulevard

***Table 1:** Roadway Right-of-Way and Cost Estimates*

Roadway Segment	2-Lane Scenario	4-Lane Scenario	Multi-Use Trail	Right-of-Way Needed
I-40 Interchange	$0	$0	$0	None Needed
I-40 to Double Eagle II Driveway	$0	$11.5 M	$2.1 M	None Needed
Double Eagle II Driveway to Paseo del Norte	$3.6 M	$7.2 M	$0.6 M	40 Acres
Paseo del Norte to Southern Blvd.	$6.3 M	$13.0 M	$1.1 M	100 Acres
Right-of-Way Cost	$ 5.4 M	$ 5.4 M	Included	
Total Cost	$15.3 M	$37.1 M	$3.8 M	

Source: PB Analysis

Assumptions:

- *Roadway costs based on pavement area, earthwork, and major drainage structures*
- *60% contingency added to base costs for design and unknowns due to early stage of concept development*
- *Paved multi-use trail assumed at cost of $300K/mile*
- *Right-of-way cost assumed at average cost of $38.5K/acre*
- *Right-of-way acres include 10% for non right-of-way parcels*
- *Costs include NMGRT at 7.1875%*

between Double Eagle II Airport north to Paseo del Norte are public open space. As discussed above, eliminating the two sharp horizontal curves between the airport and Paseo del Norte and making a slight shift to Atrisco Vista Boulevard in this area to achieve a more favorable design and connection with Southern Boulevard may require acquiring open space lands for use as roadway right-of-way. If this cannot be accomplished, the roadway could remain west of the open space lands. This is a design detail that would be addressed in preliminary design studies.

The costs and right-of-way needed for each scenario are summarized in Table 1 below. The costs shown, as well as the right-of-way needs, are intended as early estimates for comparison and planning purposes only. A detailed engineering analysis is needed for more precise estimates.

3.0 Site Analysis

The study assessed site conditions, zoning, and access to key utilities within a one-mile swath centered on the Atrisco Vista corridor. The assessment of site conditions investigated terrain, soils, parcel size, floodplains, and other physical conditions that affect site suitability for large-scale development. Developable lands were separated into two categories — Grade A and Grade B lands. Grade A lands have suitable site conditions and ready access to utilities, and Grade B lands are developable, but have some limiting physical characteristics. The analysis found 900 acres of Grade A land are currently available and are "shovel-ready" for new development. Shovel-ready means the land has suitable site conditions, zoning, access to utilities, and roadway access. With rezoning, an additional 1,000 acres could also be classified as Grade A and shovel-ready.

The analysis found

900 acres

GRADE A, "SHOVEL READY" LAND

SHOVEL READY LAND INCLUDES

- SUITABLE SITE CONDITION
- PROPER ZONING
- ACCESS TO UTILITIES
- ROADWAY IN PLACE

The site analysis identifies the land most suitable for industrial development along the corridor by dividing the acreage into four categories as outlined in Table 2. For the purposes of this study, Grade A land is defined as having less than 5% slope, soil quality with very little or no limits on support capacity and no added costs to construction, and no FEMA floodplain area designation. Grade B areas have somewhat limiting soil conditions, such as limits on support capacity or added costs to construction, but are otherwise developable. Those acres that are Grade A with current access to utilities are considered "shovel-ready" land.

Table 2: Land Available for Industrial Development

Category	Acres	% of Corridor
Total Corridor Acreage	**8,910**	**100%**
Grade A with Utilities (Shovel-Ready)	1,075	12%
Grade A with Utilities Under Construction[1]	2,050	23%
Grade A with No Planned Utilities	270	3%
Grade B	980	11%
Total Developable Land	**4,375**	**49%**
Total Undevelopable Land	**4,535**	**51%**

Source: PB Analysis

The corridor contains 8,910 acres of land, of which 4,375 acres are developable (Grade A or Grade B). Of the developable land, 1,075 acres are shovel-ready and can immediately accommodate industrial development and 2,050 acres are Grade A with utilities under construction. As noted in Table 2, the owner of the land between I-40 and the southern boundary of Double Eagle II Airport is currently constructing water utilities in this area. This is expected to be complete in 2016; thus, a total of 3,125 acres of Grade A shovel-ready lands will be available in the corridor. An overview of the Grade A and Grade B land along the corridor can be found in Exhibit 3 on the following page.

While 3,125 acres can accommodate industrial development immediately or in the near future, approximately 70% of this land is constrained by Double Eagle II Airport, Paradise West or Westland masterplans that lie along the corridor. An overview of the areas that are master planned can be found in Exhibit 4 on page 10.

In total, 900 acres of land are shovel-ready or have utilities under construction and can currently be developed for industrial purposes. Table 3 shows the breakdown of these 900 acres among existing zoning or master-planned requirements. Land zoned "M-1" is planned for industrial/wholesale manufacturing purposes, and exists primarily in the Westland masterplan area at the southern end of the corridor. Land zoned "SU-1" is special use and primarily planned for

1 *According to information from WALH, utilities are under construction for the area between I-40 and DE II Airport. Thus, an additional 2,050 acres of Grade A shovel ready lands will soon be available.*

Exhibit 3: *Site Analysis*

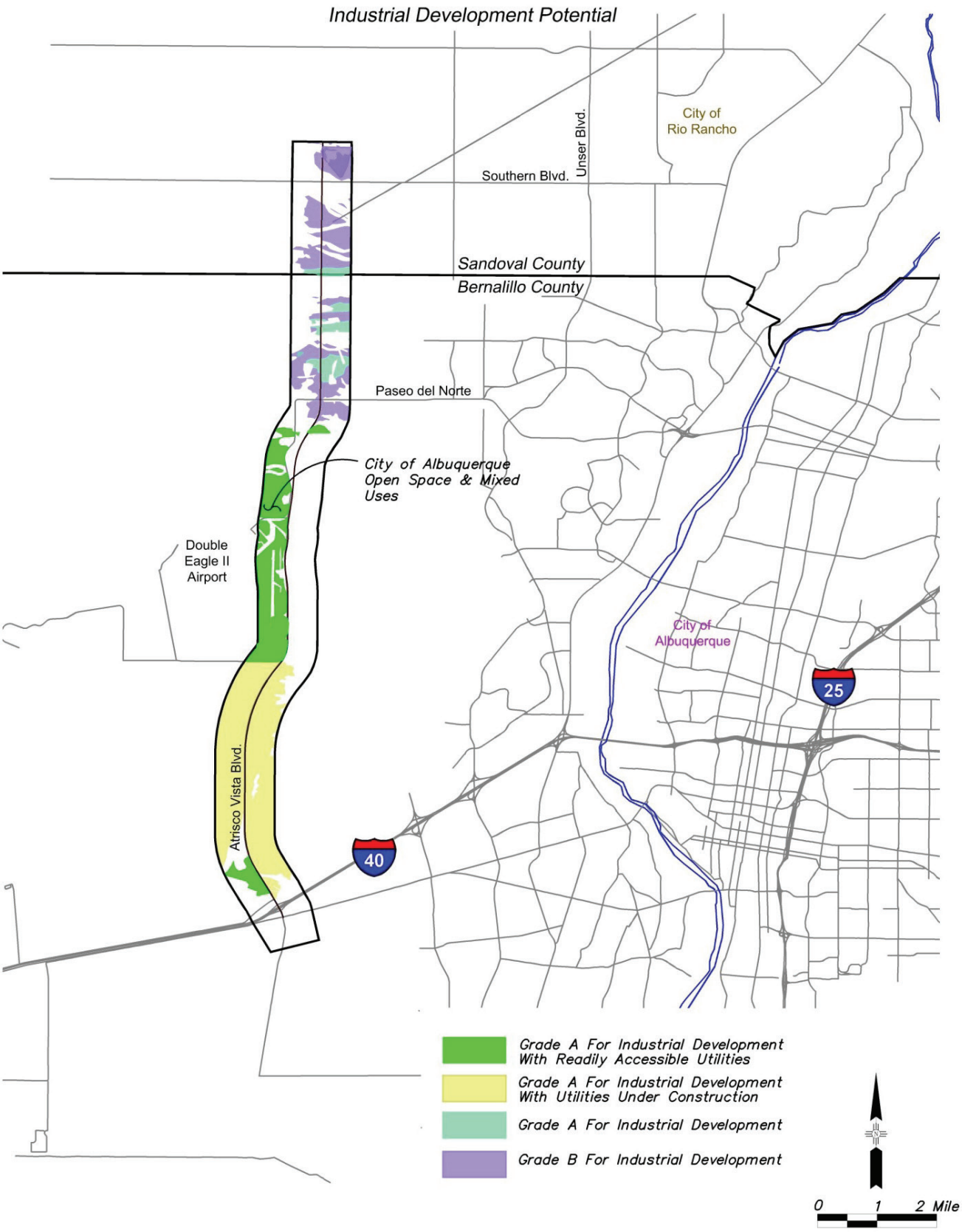


Exhibit 4: *Masterplans in Corridor*

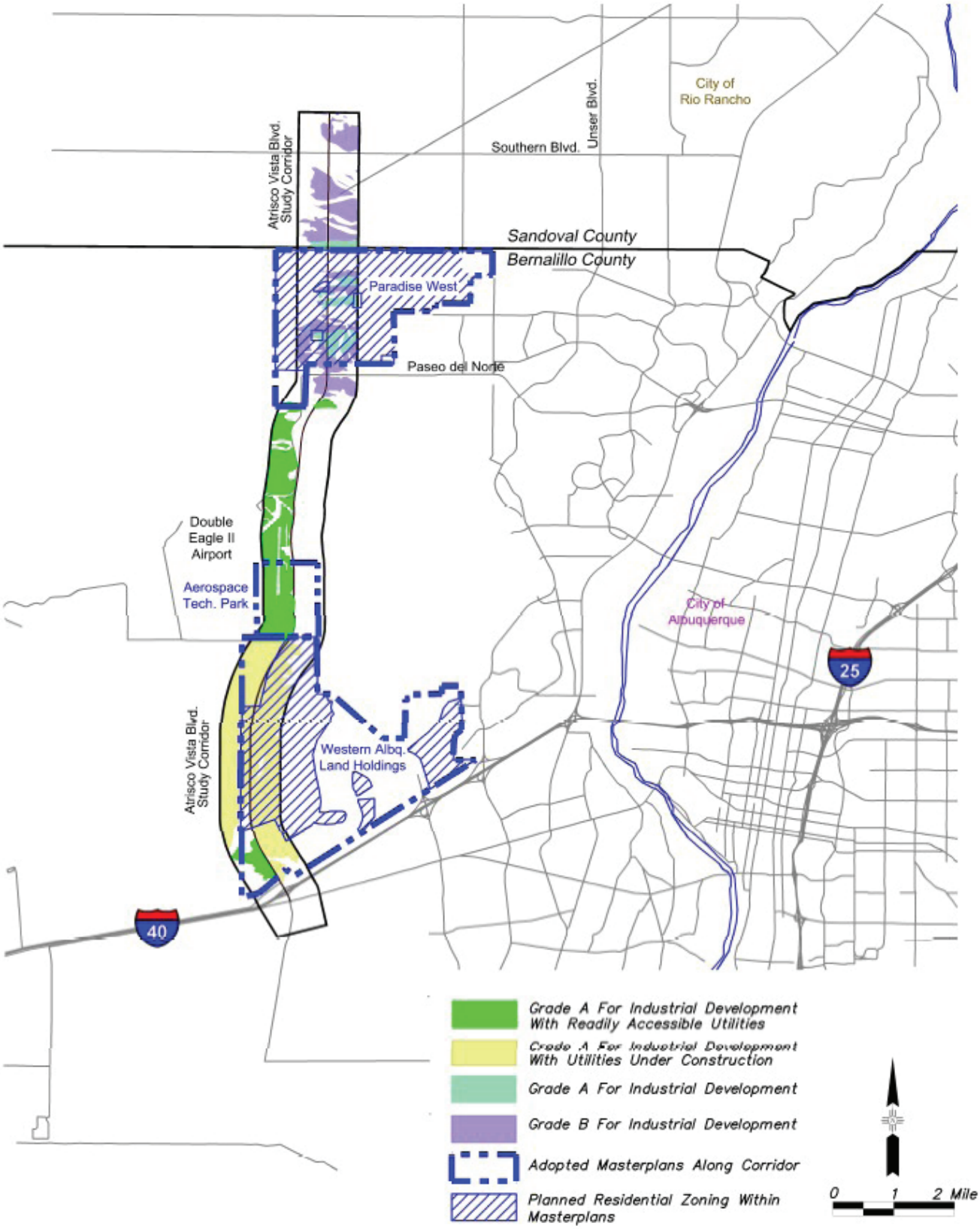


Table 3: Breakdown of Unconstrained, Developable Land

Category	Acres
Total Developable Industrial Land	**900**
Total Zoned or Planned M-1 or SU-1	**600**
Westland Masterplan M-1	340
Paradise West Masterplan M-1	20
ATP at DEII Airport Masterplan SU-1	160
State Land Office Zoned SU-1	80
Total Zoned or Planned A-1	**300**
Zoned "Holding" with no Masterplan	300
Total Grade A with Utilities (shovel-ready)	**255**
Total Grade A with Utilities Under construction	**645**

Source: PB Analysis

airport and related facilities in the Aerospace Technology Park at Double Eagle II Airport. There is also land in the corridor that is not included in any masterplans and currently zoned "A-1", which is a holding zone.

Of the 900 acres of Grade A land, there are two large areas of land within the corridor that are continuously unconstrained. As Atrisco Vista Boulevard runs north from the I-40 interchange, there exists 340 acres within Westland master-planned developments zoned for industrial use. An additional 300 acres are unconstrained by Westland and lie west of the Atrisco Vista Boulevard and south of Double Eagle Airport; these are the A-1 acres listed in the table above. The land running between Double Eagle and the Petroglyphs is constrained by its proximity to these sites, but 160 acres of developable land exists within the Aerospace Technology Park and the state land office owns 80 developable, SU-1 acres north of Double Eagle along Atrisco Vista, but south of the Sandoval County line. It is important to note that not all 900 acres of unconstrained land is shovel-ready – 255 acres have utility lines installed, and 645 acres have utilities under construction and will be developable in the near future. Although not yet shown in the public record, information from the land owner (Western Albuquerque Land Holdings) indicates these utilities are now in place. Thus, all 900 acres can be considered shovel-ready.

The Grade A shovel ready lands available within the Atrisco Vista corridor could be much greater if some of the lands planned for residential development are rezoned for M-1 uses. Approximately 1,000 acres of the portion of the Westland Masterplan within one-half mile of Atrisco Vista are planned for residential use. While it may not be desirable to rezone all of this property for M-1 or other similar zoning, a significant portion of this area could be rezoned. Consequently, the Grade A shovel-ready lands along Atrisco Vista available for industrial development is much higher than the 900 acres shown in Table 3.

In addition to the lands within the Atrisco Vista corridor, other master plans are nearby that further demonstrates the potential of the area. These include Santolina to the south, Estrella to the east, and Quail Ranch to the northwest.

4.0 Economic Development Analysis

The study assessed the economic competitive strengths and weakness of the Atrisco Vista corridor and the broader Albuquerque region that can be leveraged to attract new industry and employment to the west side. Key economic strengths of the region include attractive state corporate tax rates, availability of $50M in state deal-closing funds (LEDA), and the Job Training Incentive Program that helps cover a significant portion of employee training and wage costs. In addition, the region has an educated labor pool, numerous technical training institutions and resources, and a high quality of life.

In addition to its regional strengths, the Atrisco Vista corridor is conveniently located for distribution, has an existing roadway with an interchange at I-40, includes several existing industrial developments that demonstrate its suitability for large-scale development, and has ample shovel-ready land for new distribution and industrial centers.

Strengths

The Atrisco Vista corridor and broader Albuquerque region have many competitive advantages that can be leveraged to attract development. Regional economic strengths relate to the labor force, educational and training resources, quality of life, tax policy and local financial incentives. Many of these strengths are consistent with those outlined in the PDV report from September 2014; however, there have been positive economic trends since that time. Atrisco Vista Boulevard also boasts corridor-specific competitive advantages related to its location, physical composition of the road and early development success stories.

The strengths and weaknesses

Both PDV and AV are likely key in supporting long-term growth in the Albuquerque region. The regional, economic strengths, therefore, are advantageous to both potential roads. Strengths related to the regional economy include:

Financial incentives and resources. In 2013, New Mexico's state legislature passed the Corporate Tax Reduction Package, which made dramatic changes to its tax structure by reducing top corporate tax rates from 7.6% to 5.9% by 2018. This gives New Mexico the lowest effective corporate tax rate in the southwest U.S. for manufacturer's and other service providers and continues to reduce the tax rate annually to achieve its 2018 goal.[2]

Additionally, the state increased its Local Economic Development Act (LEDA) from $15 million to $50 million in the past year. The increase makes the state's deal-closing fund more competitive with benchmark states. Although the government cannot directly invest in companies through LEDA, the funds can be used for equipment, working capital, land, building or infrastructure needs.[3]

The Job Training Incentive Program (JTIP) provides classroom and on-the-job training and pays 50%-75% of employee training costs and wages. As an example, recently the JTIP board approved more than $637,000 in funding that will allow seven companies to create 140 jobs. Area Development Online, a national corporate site selection new organization, describes this program as "one of the most effective in the country."[4] With master-planned communities in place, the region can point toward more competitive tax rates and leverage greater financial incentives to attract large-scale development.

2 *Ernst & Young New Mexico Business Tax Competitiveness Study, January 2014*

3 *New Mexico Economic Development Department Website*

4 *New Mexico Direct Financial Incentives 2014, Area Development Online, www.areadevelopment.com*

Education and job training resources. In addition to these specific financial incentives, the city and state support a number of technical training programs. Nearly 40 technical, certificate, and training programs exist in the Albuquerque area, from post-secondary technical certificates to apprenticeship programs in carpentry.

Further, New Mexico's formal education institutions continue to grow and improve their programs. Central New Mexico Community College recently received a $3 million federal American Apprenticeship grant from the U.S. Department of Labor to set up the program with a goal of creating 300 IT apprenticeships in central New Mexico over a three-year period.[5] These types of apprenticeships may be able to directly feed into large-scale IT, shared services or back-office expansions along AV.

University of New Mexico (UNM) launched a new program semester called the Innovation Academy, which hosts a curriculum designed to teach students interdisciplinary workforce skills in addition to standard technical expertise, including leadership, higher-order thinking, and personal qualities and skills. In 2015 UNM was also designated as an Innovation and Economic Prosperity (IEP) University by the Association of Public and Land-grant Universities (APLU).[6] The designation acknowledges UNM as a leader in working with its state and regional public and private sector partners to support economic development, and unlocks opportunities for UNM to collaborate and learn from other member universities.

The greater community is concurrently cultivating a business environment that is more open to innovation and entrepreneurship through a number of partnerships and collaborations. Innovate ABQ is a startup incubator project currently being developed at the core of Albuquerque's innovation district, Innovation Central. In 2013 the Albuquerque City Council approved a $2 million bond issuance to kick-off construction of the seven-acre site, and in 2015 Bernalillo County committed another $1 million grant to the program. The city of Albuquerque also opened the Trep Center, a widely accessible satellite information center for entrepreneurs looking for physical and digital resources. The non-profit ABQid owns a $1.83 million contract from the city and at least $2 million in private sector funds to develop, implement, and promote support activities for entrepreneurial systems and businesses in the community.[7]

Educated labor pool. Job training, educational, and technical resources support a regional population with an already well-balanced mix of educational attainment that is generally higher-educated than state and national averages. In Bernalillo and Sandoval Counties, 24% have only a high school degree or equivalent, compared to 28% nationally. Additionally, 40% of the population over 25 years of age possess some degree (Associate's, Bachelor's, graduate, or professional), compared to 38% nationally. Among those with Bachelor's degrees, over one-third in Bernalillo and Sandoval Counties earned a Science and Engineering degree, outpacing New Mexico; the U.S. Science and Engineering degrees provide important technical skills for economic development in general, but particularly for business startups in technology. Potential companies have a strong local labor pool to pull from when building their workforces and a multitude of resources to continue to develop them.[8]

Positive trends in business attraction. In 2015, approximately 10 companies relocated or expanded into Albuquerque, forecasting over 2,000 new jobs to be added over time. Previously, Albuquerque lagged behind other benchmarked cities, but has markedly improved over the past year. Notably, GandyDancer built a rail trans-loading facility in South Valley near Rio Bravo that will service the BNSF line, Rust Medical Center expanded to include a new patient center, Flagship Food Group established its new distribution and manufacturing HQ, Comcast has a new customer support center, and United Poly Systems developed a new manufacturing facility, all in Albuquerque.[9]

Key economic indicators trending upward. Over the past year, key economic indicators have shown positive trends, suggesting that economic activity in the region is growing. Albuquerque showed a 1.5% increase in job growth and a 3.6% increase in gross receipt taxes from August 2014 to August 2015. In the same period, housing permits increased 45%.[10]

These job growth trends are most positive in professional and business services, construction, education and health services, and leisure and hospitality industries. The growth in these industries demonstrate that industry

5 *Albuquerque Business Journal Editorial, September 15th, 2015*

6 *"UNM's Innovation Academy Takes Off, Albuquerque Business Journal, November 5th, 2015*

7 *City of Albuquerque Economic Development Department website*

8 *US Census Bureau, 2014 American Community Survey 1-Year Estimates*

9 *Albuquerque City Economic Development and Chamber of Commerce websites*

10 *City of Albuquerque Department of Economic Development Economic Dashboard*

within the region is diversifying and no longer relying as heavily on federal and state jobs. This is an important development as federal grants continue to decline, specifically at Sandia National Labs.[11]

Quality of life remains strong. As noted in the PDV report, New Mexico is a tax-friendly state. A 2013 Kiplinger report called it the "9th most tax-friendly state in the US." New Mexico also boasts the lowest property tax in the country, as noted by the Tax Foundation's 2012 State Business Tax Climate Index. According to the Council for Community and Economic Research (C2ER), Albuquerque housing prices are 28% lower than the national average, making up for slightly above-average prices for general goods, services and utilities.

The weather in Albuquerque is a key component to the quality of life in the region as the area sees 310 sunny days per year and 25% more hours of sunshine than the US average. From a business operating perspective, the good weather complements the competitive tax structure in assuring predictable operating costs.

These regional, economic strengths apply to both PDV and AV. In addition to the regional strengths, corridor-specific strengths exist along AV related to its location, site analysis and long-term planning considerations, such as:

Convenient location for distribution. East-west and north-south interstate highway access is just miles from the AV corridor. Additionally, a new rail trans-loading facility opened in South Valley near Rio Bravo, as mentioned above. Improved rail access and convenient highway access creates transportation advantages for potential industrial development along the corridor.

The road and highway interchange already exist. Approximately 75% of a fully built-out corridor from Paseo del Norte to Southern Boulevard already exists – reducing the cost to complete the corridor. Further, the interchange with I-40 also already exists, which would be a major public investment if not yet available.

The presence of Shamrock and Tempur-Pedic on the southern portion of the road demonstrates that industrial development in this area can succeed and that the city is willing to invest to bring industrial development to the area.

Future development along the corridor is planned. Future master-planned communities such as Paradise West and Westland are expected to develop along the corridor, adding land for residential units and other development. These communities will also bring infrastructure development, vitality and new tax revenue to the area that can support future industrial development.

Additionally, these master-planned communities and the extension of Atrisco Vista Boulevard align with the following themes and goals of the MTP Futures 2040 long-range plan: future development in regionally-identified activity centers, commercial corridors, and transit nodes; balancing the distribution of jobs and housing by bringing employment west of the Rio Grande; reducing the development footprint by reducing the amount of new land consumed; and due to limited federal funding, maximizing the functionality of the existing transportation system.[12]

Availability of shovel-ready land for large scale distribution and industrial development. Most importantly, developable land along the corridor exists for immediate development. Although much of the land is constrained by the Double Eagle II and the master-planned communities that already have development plans, 900 acres of shovel-ready land with utilities or with utilities under construction are available for development within a half-mile of the Atrisco Vista centerline. This is equivalent to 18 Tempur-Pedic sites.

Weaknesses

While the physical landscape of the corridor and socioeconomic environment support distribution, manufacturing, and back-office facilities, several factors exist that could undermine the region's ability to attract business in these industries. Many of these challenges are economic-related and will impact PDV and Atrisco Vista similarly:

Weak industrial sector outlook. Over that next five to ten years, the U.S. manufacturing industry is projected to contract by 0.5% annually, and the transportation and warehousing industries are projected to grow at less than 1% per year.[13] Slow growth in these industries nationally means less business activity to compete for, and the level of competition between Albuquerque and its benchmark cities[14] to attract these industry participants could intensify.

11 *Deirdre Firth Interview, September 24, 2015*

12 *Futures 2040 Metropolitan Transportation Plan*

13 *Bureau of Labor Statistics*

14 *Peer cities are based on similar population, geographic location, transportation access and are situated near university/educational resources; includes Austin, TX; Colorado Springs, CO; El Paso, TX; Oklahoma City, OK; Salt Lake City, UT; Tucson, AZ*

Lack of rail access. Despite the new trans-loading facility, there still remains a shortage of rail in the area. Better rail access would save shipping costs both for distribution and to acquire production materials. Although access to the interstates provides convenient local and regional distribution, the lack of rail presents significant hurdles to a wider distribution network.

Certain economic trends remain unfavorable in the region. Although employment growth remains about the same as Albuquerque's peer cities, unemployment rates still outpace the US average.[15]

Further, the reduction in New Mexico's effective tax rate is not nearly as advantageous for businesses that do not qualify for key statutory credits, such as the state's high-wage job credit. Businesses that do not qualify for these credits would pay a 9.5% effective tax rate – higher than Arizona, California, Colorado, Nevada and Utah.[16]

Potential developable land in the corridor is constrained. While AV can target large industrial and manufacturing, many areas of the corridor are restricted. The corridor lies in the middle of multiple master-planned communities that have significant areas already designated for residential development, and is bordered by the Double Eagle II Airport and the Petroglyph National Monument.

Opportunities and Threats

In the context of this analysis, opportunities represent the elements the corridor can exploit to its advantage, while threats represent elements in the broader environment that could make attracting development unpredictably challenging.

To attract future development, one key area Atrisco Vista can leverage and exploit is the success of Shamrock and Tempur-Pedic. The success and durability of these industrial facilities demonstrate the potential of the area. Infrastructure exists on the southern end of the corridor as it supports these facilities and they each are approaching 10 years of successful operations. Further the "front" of developed moving westward is illustrated by public and private stakeholder commitment to the master-planned communities. These communities represent future economic vitality of a currently untapped area. Moreover, the current road, interchange and swaths of shovel-ready infrastructure demonstrate the existing opportunity exists and that the space can accommodate development of all types.

Threats can be seen or unforeseen. Unforeseen threats may include an economic downturn or recession, which halts business expansion. As technology continues to advance, such as Amazon, distribution and logistics companies may be less in demand; the easily accessible transportation network surrounding the Atrisco Vista location may no longer be as valuable if technology changes certain industries. More predictable threats may include responses from peer cities. Texas, for example, boasts an enormous deal-closing fund and likely has the resources to offer incentives that New Mexico cannot match. In extreme instances the seen and unforeseen threats can come at once: during a recession the number of business expansions and relocations across the country reduce significantly and those areas flush with financial incentive flexibility will likely leverage this strength to ensure business attraction. Albuquerque and its surrounding region must leverage their own strengths to overcome its competitive disadvantages.

15 City of Albuquerque Department of Economic Development Economic Dashboard

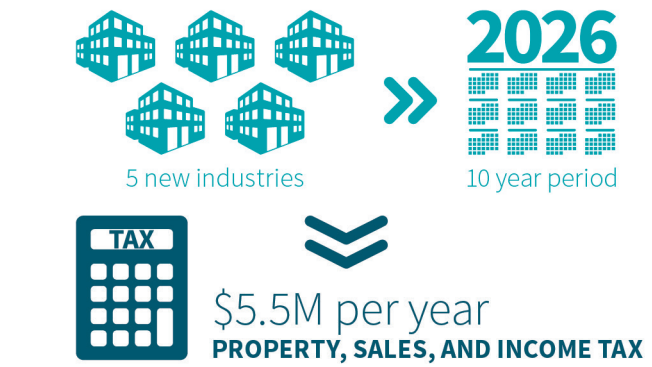
16 Ernst & Young New Mexico Business Tax Competitiveness Study, January 2014

5.0 Return on Investment

The study assessed the potential return on investment for industrial development that locates within the Atrisco Vista corridor. This was performed using the Tempur-Pedic development as a case study. Tempur-Pedic is located on a 50-acre parcel that had a value of $40K prior to development. When the 750,000 ft.^{2} facility opened in 2007, the assessed value increased to $34.7M and provided 150 permanent jobs. New taxes generated by this facility are approximately $425K in annual property tax and $140K in sales tax. In addition, approximately $300K in state income tax is generated by its employees for a total of approximately $825K in new tax revenues each year. In addition to recurring taxes, site development and construction of Tempur-Pedic generated hundreds of construction jobs with a payroll over $40M.

The Atrisco Vista corridor provides access to shovel ready land that could house the equivalent of dozens of sites similar to Tempur-Pedic. Assuming five new and comparable industries locate to this corridor over a 10 year period, approximately $5.5M of new property tax, sales tax, and income tax could be generated each year after full build-out.

The case study reveals



For the Atrisco Vista corridor, industrial development will create returns for the city, county, and state. While there are public infrastructure costs as well as other costs that are not all known, the returns can be estimated using current development in the area. In this case, the Tempur-Pedic site is used as a benchmark to estimate returns on industrial development. The subsequent analysis defines "return" as resulting new property taxes, sales, and income taxes.

Projections for industrial development use the same methodology as the PDV report, and are based on details of the Tempur-Pedic project in 2006 and resulting property values and jobs created. This 50-acre parcel had a value of approximately $40,000 in 2005. When the 750,000 square foot facility opened in 2007, the assessed value increased to $34.8 million, and Tempur-Pedic had 150 employees housed there. Based on this and other data sourced from public records, Table 4 shows the potential property tax revenue from the facility as of the 2014 assessment. Table 5 estimates sales taxes derived from the discretionary income of employees at the facility.

The analysis shows that this size and type of facility could generate $425,000 per year in property taxes and about $140,000 per year in sales taxes for various units of government. Assuming an average New Mexico income tax rate of 4.0%, the state income tax generated by these employees would be approximately $300,000 per year. This is a total of $865,000 in new tax revenues per facility built.

If these revenue assumptions are applied across the 18 conceptual development sites represented by the 900 acres of developable industrial land along the AV corridor, a total of $7.7 million in property taxes, $2.5 million in sales taxes, and $5.4 million in personal income taxes could be generated per year at full build-out. Corporate income taxes would add to these potential public revenues, but are not addressed in this report.

In addition to recurring tax revenues per development opportunity, the state and region would also see a financial impact during construction of each facility. Also using the Tempur-Pedic facility construction as a model

***Table 4:** Potential Tempur-Pedic Property Taxes (2014)*

Property Taxes	Amount
Total Assessed Value	$35.7m
Net Taxable Value (1/3 of Assessed)	$11.9m
Tax Rate	0.0358
Total Potential Property Tax	$425k

Source: Bernalillo County Tax Assessor Website

***Table 5:** Breakdown of New Sales Tax Revenue per Site*

Breakdown of Each New Site	2014
Average Salary, Hourly Employees	$50k
Total Employees	150
Estimated Total Annual Payroll	$7.5m
Discretionary Spending by HH Income	26%
Estimated Total Annual Discretionary Spending	$1.95m
Sales Tax Rate – New Mexico	5.125%
Total New Sales Tax – State of New Mexico	100k
Sales Tax Rate – Bernalillo County	1.125%[16]
Total New Sales Tax – Bernalillo County	$20k
Sale Tax Rate – City of ABQ	0.937% [16]
Total New Sales Tax – City of ABQ	$20k
Total New Sales Tax – All Jurisdictions	$140k

Source: Albuquerque Business Journal, Experian Research, Tempur-Pedic Interview

for future construction, one can estimate the revenue impacts based on the following assumptions:

- Cost of building and equipment: $100m
- Construction jobs: 1,243
- Construction payroll: $40m
- Construction schedule: 2 years

Each year of building construction, therefore, could create over 620 jobs (mostly temporary construction jobs) and $20 million in worker income. This additional income would yield about $5.2 million in discretionary income, resulting in approximately $374,000 in annual sales tax for New Mexico and local governments. State personal income tax from these workers could be estimated at $800,000 per year, aside from income taxes and NMGRT. Since the PDV report, sales tax has increased slightly for Bernalillo County and is updated in this analysis.

Again using the same approach as the PDV report, revenue streams can be projected over a 10-year period by assuming each Tempur-Pedic site is completed every two years. Table 6 estimates annual tax revenue in the first 10 years of a conceptual development scenario. It is important to note that this analysis relies on many assumptions – specifically that future site development will look like and have similar impacts as the Tempur-Pedic site development.

In conclusion, while there are significant assumptions being made in this analysis, there are substantial potential returns in full development of industrial properties along the corridor. When excluding construction and temporary jobs, every new industrial site comparable to Tempur-Pedic that is built, the region will realize approximately $865,000 in new tax revenues per year.

17 Rates have changed slightly since the PDC report, but the overall new sales tax revenue potential remains the same based on rounding

***Table 6:** Projected New Tax Revenue from Industrial Development*

Year	Total New Facilities	Property Tax	Sales Tax (perm)	Sales Tax (temp)	Income Tax	New Revenues
1	0	$ -	$ -	$ 374,000	$ 800,000	$ 1,165,000
2	1	$ 425,000	$ 140,000	$ 374,000	$ 1,100,000	$ 2,039,000
3	1	$ 425,000	$ 140,000	$ 374,000	$ 1,100,000	$ 2,039,000
4	2	$ 850,000	$ 280,000	$ 374,000	$ 1,400,000	$ 2,904,000
5	2	$ 850,000	$ 280,000	$ 374,000	$ 1,400,000	$ 2,904,000
6	3	$ 1,275,000	$ 420,000	$ 374,000	$ 1,700,000	$ 3,769,000
7	3	$ 1,275,000	$ 420,000	$ 374,000	$ 1,700,000	$ 3,769,000
8	4	$ 1,700,000	$ 560,000	$ 374,000	$ 2,000,000	$ 4,634,000
9	4	$ 1,700,000	$ 560,000	$ 374,000	$ 2,000,000	$ 4,634,000
10	5	$ 2,125,000	$ 700,000	$ 374,000	$ 2,300,000	$ 5,499,000

Source: PB Analysis

Notes: Analysis does not take into account inflation or salary increases and assumes facility construction is performed one at a time.

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Appendix I

SUPPORTING INFORMATION FOR
SITE ANALYSIS AND ECONOMIC ANALYSIS

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Appendix I: Supporting Analyses

Appendix I provides detailed and supporting information through a series of analyses, including:

1) A Full Site Analysis – to assess the physical condition of the corridor land and to identify the areas along the corridor that can accommodate development today and in the future.
2) A Workforce and Demographic Analysis – to evaluate the current workforce supply and resources, as well as demographic trends expected in the Albuquerque region over time.
3) A Quality of Life Analysis – to outline quality of life conditions in the region that are helpful to attract economic development.
4) A Site Selection Analysis – to review priorities for targeted industries in their site selection criteria and the city, state and Atrisco Vista corridor's ability to meet those needs.
5) An Economic Analysis – to identify trends in targeted industries, assess the economic strengths and weaknesses of the AV corridor, benchmark these strengths and weaknesses against competing MSA's, and measure the tax revenue implications of corridor development.
6) A Roadway Development Feasibility Analysis – to evaluate the feasibility of roadway improvements between the I-40 interchange and a future connection at Southern Boulevard; this is covered in the main report.

These analyses are presented in detail below.

1.1 Full Site Analysis

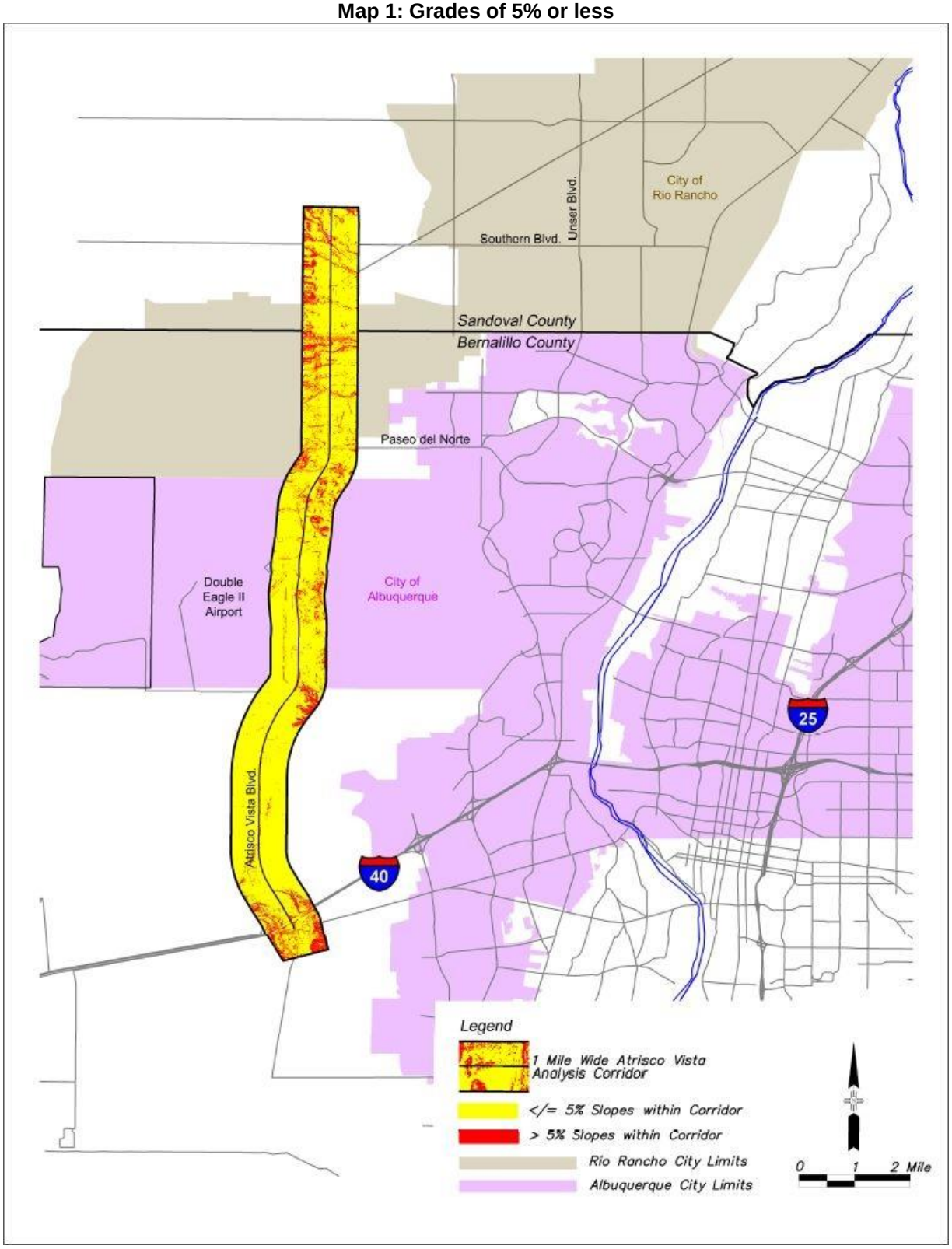
The site analysis outlines the attributes of the corridor, defined as one-half mile from the centerline of the alignment in each direction (1 mile wide). This analysis establishes a baseline corridor profile and documents the quantity of raw land available for large scale industrial uses.

Physical Attributes of Corridor

A. The grade of adjacent lands and acres with a grade of 5% or less

Land with grades of less than 5% can accommodate industrial use. In total, there exist 5,225 acres in the corridor with a grade of 5% or less, or 59% of the corridor. Of the over 5,200 acres with slopes of 5% or less, approximately 4,500 acres are in Bernalillo County and just under 700 acres are in Sandoval County. In total, 61% of the land in Bernalillo County has less than a 5% grade and 47% of the Sandoval County land has less than a 5% grade.

Map 1: Grades of 5% or less



C. The soil regime and what type of land use is it conducive to

In addition to the slope of the land, the soil type and quality can also impact the potential for development. To assess the quality of the soil regime in the corridor, this analysis divides the soil into three categories:

- Undesirable: Very limited support capacity
- Marginal: Some limits on support capacity and some added costs to construction
- Quality: Very little or no limits on support capacity and no added costs to construction

Industrial development can occur on Quality and Marginal soil, but the Marginal soil would present some construction challenges. Overall, there are 4,670 acres of Quality soil, 3,370 acres of Marginal soil and 760 acres of Undesirable soil in the corridor.

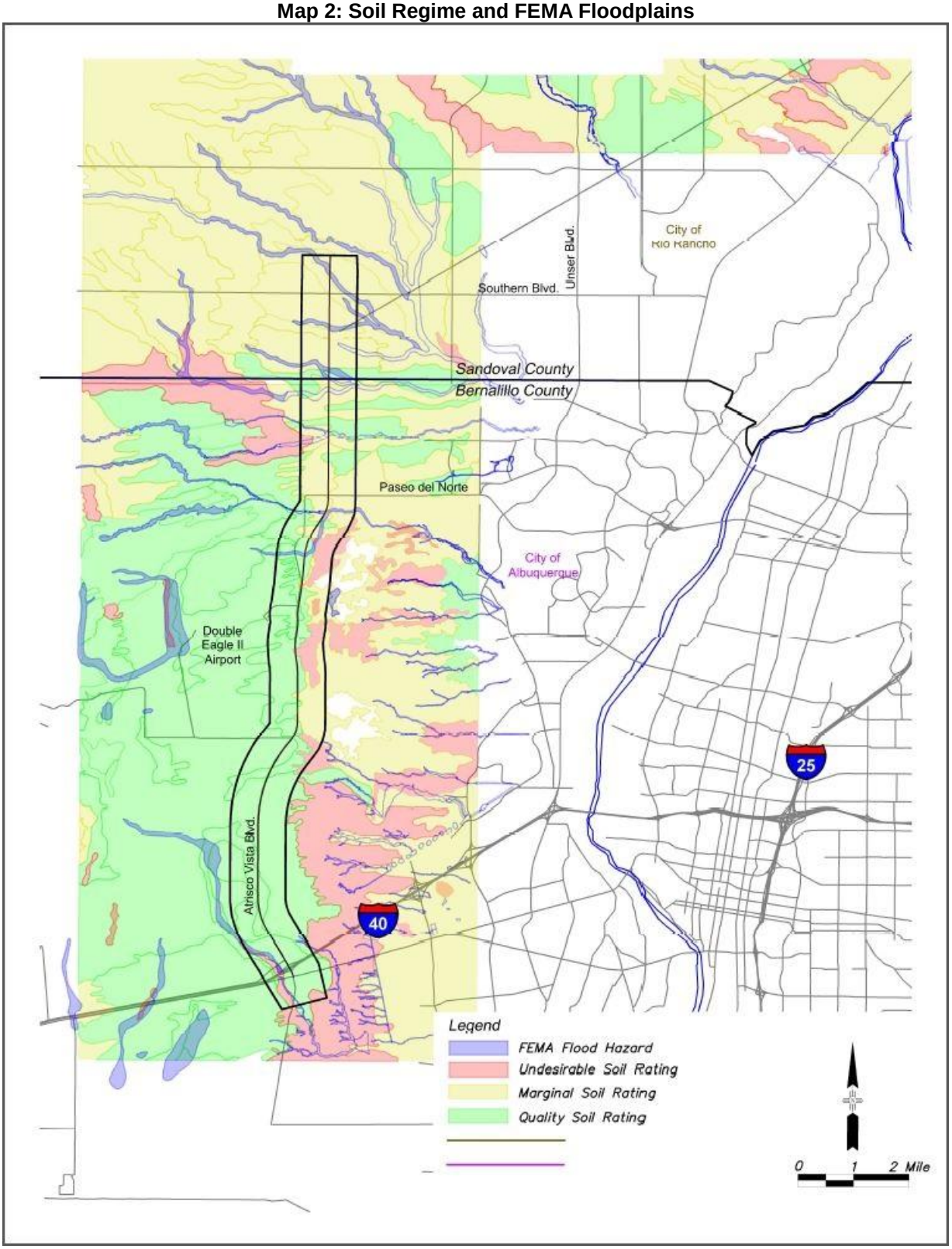
Table 1 details soil regime and total acreage, which is illustrated on Map 2.

D. Location of FEMA floodplains in the study area

Designated FEMA floodplains can also prohibit development. These designated areas are identified by FEMA as special hazard areas of high risk that require flood insurance coverage. These zones prohibit development due to flood risks. However, limited FEMA floodplains exist throughout the AV corridor, covering less than 470 acres, or 5% of the land in the corridor.

Map 2 illustrates the soil regime and FEMA floodplains, which are detailed in Table 1 below.

Map 2: Soil Regime and FEMA Floodplains



After considering slope, soil quality and FEMA floodplain locations, there are 3,245 total acres of Grade A land, defined as having less than 5% grade, Quality soil and are not restricted by FEMA floodplains.

Most of these acres exist south of Paseo del Norte. There are an additional 980 acres of Grade B land, defined as having less than 5% slope, Marginal soil and are not restricted by FEMA floodplains. These acres are most dense on the northern end of the corridor between Paseo del Norte and Southern Boulevard. Table 1 provides a summary of the physical attributes of the corridor.

Table 1. Physical Attributes of Corridor Land

Category	Acres	% of Corridor
Total Corridor Acreage	8,910	100%
Soil		
Total Quality soil	4,670	52%
Total Marginal soil	3,370	38%
Total Undesirable soil	760	9%
Grade		
Less than 5%	5,220	59%
Greater than 5%	3,690	41%
Floodplains		
FEMA Floodplains	470	5%
Non-FEMA Floodplains	8,440	95%

Notes: Total corridor acreage is 8,910; acreages are rounded
Source: PB Analysis

A. Number of Acres of Grade A Land for Industrial Development

As noted above, Grade A is defined as acres within the AV corridor with topography of less than 5% slopes, Quality soil and is not located within a flood hazard. Grade B is defined as acres within the AV corridor with topography of less than 5% slopes, Marginal soil and are not within a flood hazard. To further demonstrate the potential development of acreage within the corridor, this analysis divides Grade A land into 3 groups:

- Grade A land with utilities ("shovel-ready")
- Grade A land with utilities under construction
- Grade A land with no planned utilities

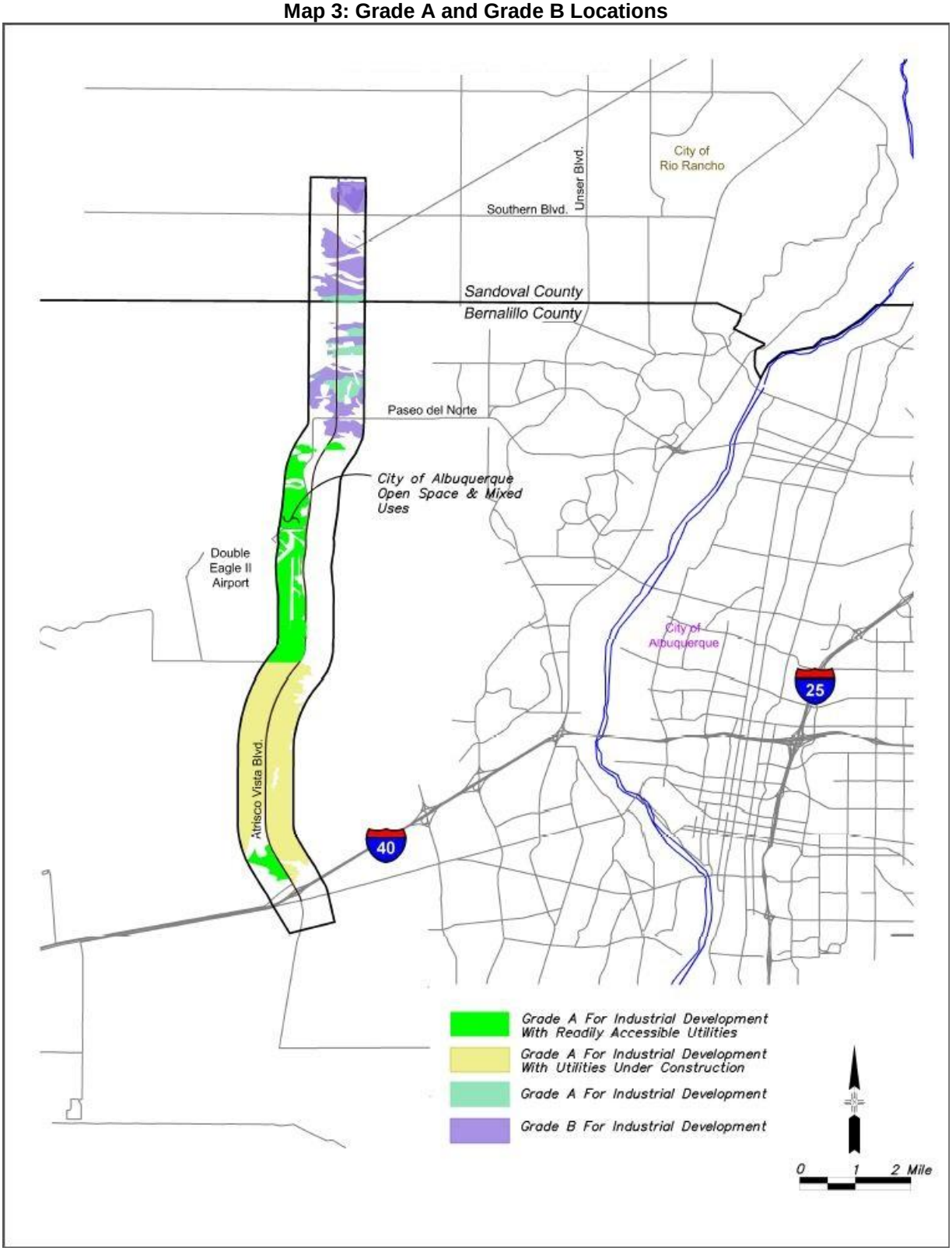
As outlined in Table 2, 12% of the corridor is shovel-ready, 23% of the corridor includes Grade A land with utilities under construction and 3% of the corridor includes Grade A land, but with no planned utilities. An additional 11% of the corridor is considered Grade B. Overall, almost 4,400 acres, or 49% of the corridor can accommodate industrial use.

Table 2. Land Available for Industrial Development

Category	Acres	% of Corridor
Total Corridor Acreage	8,910	100%
Grade A with utilities (shovel-ready)	1,075	12%
Grade A with utilities under construction	2,050	23%
Grade A with no planned utilities	270	3%
Grade B	980	11%
Total Developable Land	4,375	49%
Total Un-developable Land	4,535	51%
Notes: Total corridor acreage is 8,910 acres *Source: PB Analysis*		

Map 3 illustrates the locations of Grade A and Grade B land along the AV corridor.

Map 3: Grade A and Grade B Locations



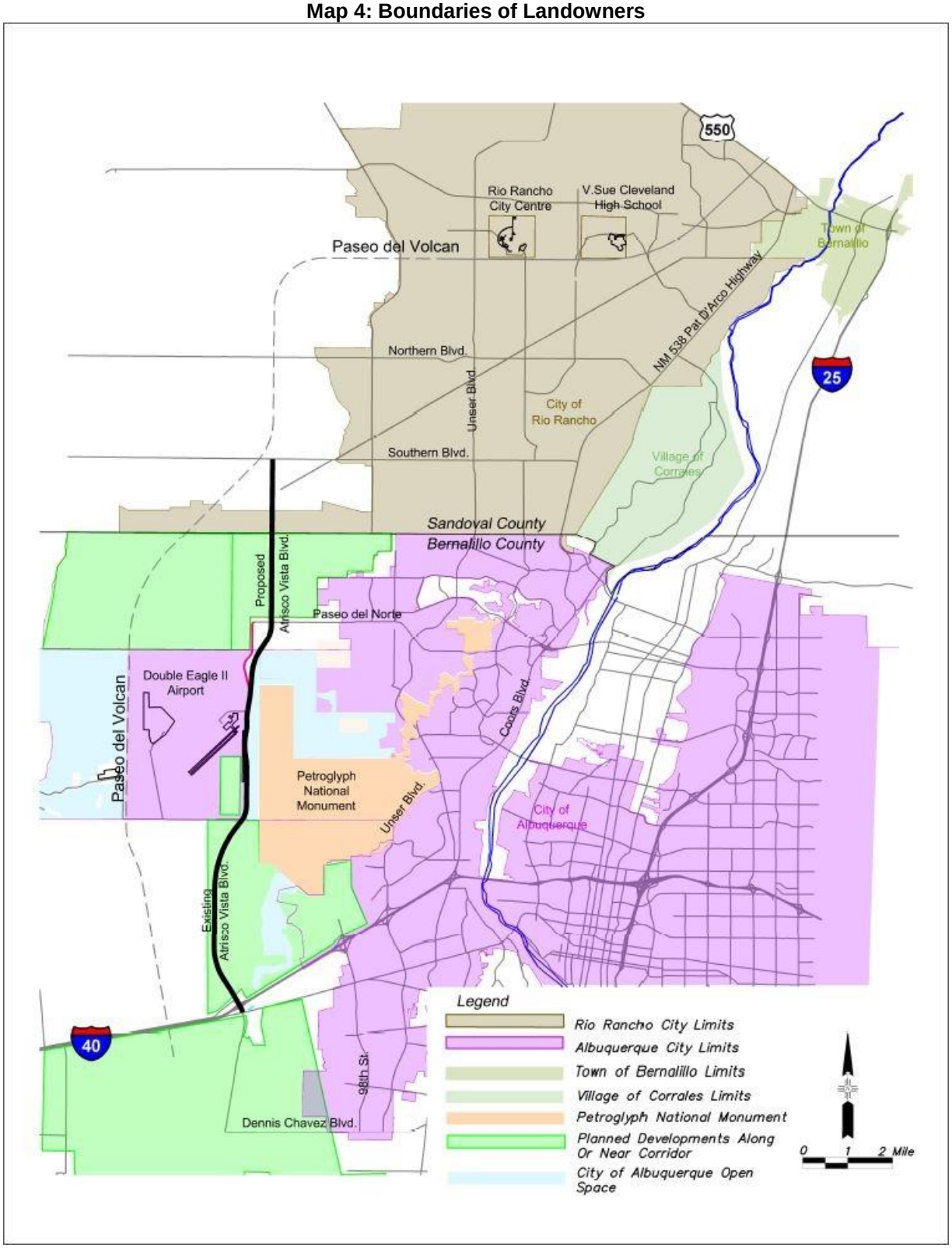
B. Ownership of the acres

While Map 3 illustrates shovel-ready, Grade A and Grade B land, Map 4 outlines the different landowners and the acres they own throughout the corridor. Bernalillo County is divided among the following landowners: Western Albuquerque Land Holdings (WALH), City of Albuquerque, New Mexico State Land Office, Ranch Joint Venture, and Petroglyph National Monument. Overall, the landowner acreage in Bernalillo County is broken down as follows:

- Western Albuquerque Land Holdings (WALH): 2,310 acres
- Double Eagle II Airport: 570 acres
- New Mexico State Land Office: 490 acres
- Petroglyph National Monument: 400 acres
- City of Albuquerque (not within the Double Eagle II Airport): 810 acres

Sandoval County is divided into approximate 1,500 small (half or one-acre) parcels owned by many different landowners. The small, fragmented sites in Sandoval County would not accommodate large-scale industrial development unless they are assembled. In any case, the land is much steeper and not ideal for industrial development.

Map 4: Boundaries of Landowners



C. Zoning and adopted plan regulations

In total, there are 900 acres of land that are shovel-ready or have utilities under construction and can be developed for industrial purposes. Table 3 shows the breakdown of these acres among existing zoning or master-planned requirements.

Land zoned “M-1” is planned for industrial/wholesale manufacturing purposes and exists primarily in the Westland masterplan area. There exists 340 acres within Westland zoned for industrial at the northwest corner of the masterplan, just south of Double Eagle II Airport. There are 160 acres of land zoned “SU-1” at the Aerospace Technology Park at Double Eagle II Airport for airport and related facilities, and another 80 acres of land zoned “SU-1” in the State Land Office that are suitable for industrial development. Approximately 300 acres along the west side of the southern part of the corridor are not included in any masterplans and are currently zoned “A-1”, which is a holding zone. These acres are also potentially developable for industrial uses.

Significant acreage within the corridor lie within master-planned communities and are zoned for residential development. Approximately 1,300 acres lie within the Paradise West Master Plan area, and 1,500 acres lie within the Westland Master Plan area, totaling 2,800 acres of potential residential development.

Table 3. Zoning of Developable Acreage within AV Corridor

Category	Acres
Total Developable Industrial	900
Total Zoned or Planned M-1 or SU-1	**600**
Westland masterplan M-1	340
Paradise West masterplan M-1	20
ATP at DEII Airport masterplan SU-1	160
State Land Office zoned SU-1	80
Total zoned or planned A-1	**300**
Zoned "holding" with no masterplan	300
Source: PB Analysis	

D. Current and / or future access to utilities

Access to utilities is covered above in the “Grade A” section.

E. Logistics

1. **Access to the interstate highway system.**
2. **Travel time to key points on the interstates as well as other major highways in the metro area.**
3. **Travel time to the Albuquerque Sunport and the City Air Freight Facility.**
4. **Summary of available traffic counts and forecasts of the area.**
5. **Rail access and travel time to the closest major intermodal facilities.**
6. **Trucking terminals with full truck load service (FTL) and less than truck load service (LTL).**
7. **Travel time and amount of fuel required to reach the nearest deep water sea port on the pacific (that would be the port of LA/Long Beach), the Gulf (Houston, Port Author), and the Atlantic (Jacksonville Florida).**
8. **Average charge per mile to ship a ton of freight by air, rail, and truck.**

An important strength of the Atrisco Vista corridor is its access to key destinations in the region. In measuring distance and travel times to various destinations, three points along AV are considered: the AV / I-40 interchange, the AV / Paseo del Norte intersection, and the AV / Southern Boulevard intersection. While travel times vary based on the origin, the corridor is conveniently located to these key transportation access points no matter the origin, as outlined by Table 4 below.

Table 4. Access Interstates, Travel Times to Key Destinations

Origin / Destination	AV / I-40		AV / PDN		AV / Southern Blvd.	
	Miles	Minutes	Miles	Minutes	Miles	Minutes
Transportation Destinations						
I-25	10	0:11	12	0:20	15	0:22
I-40	0	0:0	8	0:13	14	0:17
Albuquerque Sunport	16	0:16	29	0:29	30	0:36
Belen Freight Terminal (rail yard)	45	0:46	55	0:60	61	0:64
UNM Regional Trauma Hospital	12	0:15	21	0:30	26	0:34
Source: PB Analysis						

Access to both interstates is very convenient from all points along the corridor and as noted in the PDV report, a Tempur-Pedic business manager described the access as a key advantage to the location. In addition to providing key access for shipments and distribution, the interstate access also ensures easy commutes for workers. This was another point highlighted by the Tempur-Pedic manager, who called the commute “a breeze”, as it is a reverse commute, away from the city in the morning and into the city at the end of the work day.

Access to the Albuquerque Sunport is also convenient from the AV corridor and both full truck load (FTL) service and less than truck load services (LTL) companies / terminals exist near the Sunport.

In manufacturing and distribution facilities, there will be heavy machinery use, large equipment and chemicals that are managed on a daily basis. These types of operations possess serious risk to employees. However, another advantage of the AV location is that it offers easy-access to safety and emergency services. A UNM Regional Trauma Hospital is just 12 miles from the AV/I-40 intersection and 26 miles from the AV/Southern Blvd section.

As noted in all interviews with city officials, economic development organizations, landowners and current business managers in the region, location is a key asset for the AV corridor, particularly for potential manufacturing and distribution facilities. In addition to the convenience of local locations, the AV corridor also sits approximately halfway between the Port of Los Angeles and the Port of Houston. Details on travel times to these ports and fuel required to reach them can be found in Table 5 below.

Table 5. Travel Times and Fuel Used to Access Nearest Seaports

	Miles	Time	Fuel (gallons)
Port of Los Angeles	831	13:11	140.8
Port of Houston	910	14:23	154.3
Source: PB Analysis			

The assumptions behind the travel time calculations can be found in Table 6 below.

Table 6. Travel Time Assumptions

Assumptions		Travel Times per Mile	
Interstate travel speeds	65 mph	Interstate	0.92 mins
Atrisco Vista travel speed	50 mph	Limited access arterial	1.20 mins
Urban arterial speed	35 mph	Urban arterial	1.71 mins
Downtown arterial speed	25 mph	Downtown street	2.40 mins
Intersection delay	0.5 mins	Time at intersection	0.50 mins
Fuel used*	5.9 mpg		

Source: Loaded 18-wheeler, www.truckinginfo.com

One drawback to the region is the lack of rail access. In fact, the Tempur-Pedic business manager noted that the lack of rail access increases the costs of shipping and acquiring productions materials. The cost of freight transportation varies by mode, and typically, the costs of moving goods by airplane and truck is significantly more expansive than by rail. In 2008, the Center for Climate and Energy Solutions compared the cost of shipping goods by truck and rail, which is outlined in Table 7.

Table 7. Shipping Costs Breakdown – Truck and Rail (2013)

Category	Truck (2008)	Truck (2013)	Rail (2008)	Rail (2013)
Fuel	37%	38%	25%	22%
Labor	35%	34%	30%	32%
Depreciation	0%	0%	11%	12%
Interest	0%	0%	2%	2%
Equipment	0%	2%	6%	5%
Materials and Supplies	0%	0%	5%	5%
Lease/Purchase Payments	12%	10%	0%	0%
Repair and Maintenance	5%	9%	0%	0%
Fuel Taxes	3%	0%	0%	0%
Other	8%	7%	22%	22%

Note: Percentages are illustrative and not a definitive breakdown; categories with 0% may exist in the "Other" category
Source: American Association of Railroads, 2015. American Transportation Research Institute, 2014

Given that fuel and labor costs fluctuate, it is difficult to pinpoint an exact cost per ton, per mile for each. However, based on data collected by the Department of Transportation in the early 2000s, the costs of shipping by air are approximately ten times more expensive than shipping by truck and trucking shipping costs are approximately ten times more expensive than shipping by rail.[1] Although the highway network accesses far more territories, rail can save shipping costs, particularly over great distances.

This year, GandyDancer opened a new $5 million New Mexico Transloading facility in southeast Albuquerque. This facility will service the BNSF railroad and support large-scale freight operations, but is not particularly convenient to the AV corridor. A second facility has pulled permits and will start construction. While lack of rail is a disadvantage for the location, the increase in rail activity is moving the region in the right direction.

[1] Costs were estimated by dividing total shipping costs by mode over total ton miles shipped by mode

1.2 Identify Demographics for Workforce Training

Understanding the socioeconomic characteristics of the region is important to understanding the opportunities and challenges of a large-scale economic development endeavor. The workforce residing in the Albuquerque metro area is growing and holds many of the attributes sought by manufacturing and distribution businesses. This section provides an overview of the region's population and workforce characteristics, as well as types of education programs and training resources available.

A. Population by level of education

Table 8 below uses the latest available data to provide a snapshot of the region's educational attainment compared to state and national levels.

Table 8. Population by Level of Education by Geography (2014)

Category	United States	New Mexico	Bernalillo & Sandoval Counties
Population 25 and over	213,725,624	1,373,822	548,082
No high school degree	27,992,034	217,112	62,105
Percent of total	*13.1%*	*15.8%*	*11.3%*
High school degree or equivalent	59,249,552	362,284	133,357
Percent of total	*27.7%*	*26.4%*	*24.3%*
Some college, no degree	44,799,481	321,721	132,160
Percent of total	*21.0%*	*23.4%*	*24.1%*
Associate's degree	17,429,531	109,771	44,470
Percent of total	*8.2%*	*8.0%*	*8.1%*
Bachelor's degree	39,864,014	206,947	99,784
Percent of total	*18.7%*	*15.1%*	*18.2%*
Graduate or professional degree	24,391,012	155,987	76,206
Percent of total	*11.4%*	*11.4%*	*13.9%*
Source: U.S. Census Bureau, 2014 American Community Survey 1-Year Estimates			

Overall, of residents 25 years of age and older in Bernalillo and Sandoval Counties:

- 32% possess a Bachelor's degree or higher, compared to 30% nationally
- 32% attended some college or hold an Associate's degree, compared to 27% nationally
- 24% have only a high school degree or equivalent, compared to 28% nationally
- 36% have either a high school degree or equivalent or no degree, compared to 41% nationally

Employers considering expanding or relocating their businesses desire an area with a workforce that is both adequately sized and properly qualified. There are both strengths and weaknesses in the educational composition of the Albuquerque area. Almost one-third (32%) of the population possesses a Bachelor's degree or higher, and the other two-thirds (68%) either has some college, holds an Associate's degree, or has no college education at all. The mix of educational attainment presents certain advantages for manufacturing and distribution businesses. For measure, Tempur-Pedic currently employs 120 hourly-wage workers and 30 salaried employees whose education levels likely reflect these positions. The balance of high-school graduates and higher-educated population within the region's labor supply, therefore, likely fits the needs of target industrial facilities.

B. Success stories of local public and private schools

In order for a region to maintain a sizable pool of qualified workers, it must provide institutions and programs capable of developing skills marketable to potential employers. Fortunately, the region can point to several recent educational success stories that support the improvement of its workforce. The following are examples of specific, local programs that have succeeded in recent years at providing skill-building opportunities to the local workforce.

- **Innovation Central**
  Innovation Central is a new high-tech research and business district, catalyzing collaboration between the University of New Mexico, The Science and Technology Corporation (STC.UNM), local government, and the local business community. In addition to being the focal point for innovation in Albuquerque, the district will act as a hub for community activities, educational programs, and arts and entertainment. Innovation Central extends roughly in a one-mile radius in all directions, with the new Innovate ABQ incubator at its core and several other projects in planning, including a mixed-use entertainment project, a Bus Rapid Transit service, and redevelopment of the historic railroad yard for a 27-acre mixed-use project.

- **Southwest Aeronautics, Mathematics, and Science (SAMS) Academy**
  The SAMS Academy, prepares students in grades 7 through 12 through an Integrative Science, Technology, Engineering and Math (STEM) educational model with an Aeronautics focus. Part of the school's mission is to equip students with the reading, writing, mathematical, scientific, and problem solving skills necessary for success in post-secondary education and high-tech, aviation related careers. The school's proximity to Double Eagle II Airport in addition to its two flight simulators have made the SAMS Academy a major destination for teenagers and young adults pursuing careers in aeronautics, with admissions waiting lists recently topping over 1,000 students.

- **Central New Mexico Community College (CNM)**
  Formerly a technical and vocational institute, CNM became an accredited two-year college in 2006 and now serves as the community college for the Albuquerque metropolitan area. CNM is the second largest postsecondary institution in New Mexico with a student body of 35,000 and the majority of students enrolled in college-credit courses. Among CNM's 47 associate's degree and 52 certificate programs is a strong emphasis on STEM fields, including applied technologies, business and information technology.

  Recently, CNM received a $3 million federal American Apprenticeship grant from the U.S. Department of Labor to set up the program with a goal of creating 300 IT apprenticeships in central New Mexico over a three-year period.[2] Additionally, the Department of Workforce Solutions and the Higher Education Department plans to launch a "Students Work" portal, which will allow students to search for internships and provide a way for businesses to look for interns who can fit their needs.

- **STC.UNM (formerly known as the Science & Technology Corporation at UNM)**
  STC.UNM is a nonprofit corporation formed and owned entirely by UNM and located on UNM's south campus at the Science & Technology Park. As a critical stakeholder in Innovate ABQ, STC has proximity to research and development and laboratory facilities, and STC students and researchers have helped create a number of technology-based companies in the area. STC also collaborates with researchers at New Mexico's two national labs, Sandia National Laboratories and Los Alamos National Laboratory, to produce business-oriented technology solutions. STC's stated mission is to understand the potential market applications of the wide range of

[2] Albuquerque Business Journal Editorial, September 15th, 2015

technologies developed at UNM and to efficiently get them to companies that can commercialize them.

- **Innovation Academy (iA)**
  UNM launched a new program this Fall semester called the Innovation Academy, which hosts a curriculum designed to teach students interdisciplinary workforce skills. These include leadership skills, such as supervising, team building, goal setting, planning, decision making and ethical judgement, and higher-order thinking, such as critical thinking, problem-solving and creative thinking. The program aims to develop personal qualities and skills reflective of emotional intelligence in addition to standard technical expertise.[3]

- **UNM Innovation and Economic Prosperity University**
  The Association of Public and Land-grant Universities (APLU) designated the University of New Mexico as an Innovation and Economic Prosperity (IEP) University in 2015. The designation acknowledges UNM as a leader in working with its state and regional public and private sector partners to support economic development through a variety of activities, including innovation and entrepreneurship, technology transfer, talent and workforce development, and community development. The designation qualifies UNM to apply for specific IEP awards and share strategies and methods in a "learning community" with other participants and member universities.

C. Population with degree critical to economic development

The local educational institutions and programs that support and develop the workforce as well as the types of degrees earned will help shape the industries clusters that grow in a region. Table 9 below examines the population 25 years of age and older with at least a Bachelor's degree, comparing degrees held in each category in the Albuquerque area with state and national totals.

Science and engineering are important skills for economic development as these degrees provide skills critical for business start-ups, particularly in technology. In Bernalillo/Sandoval County, 10% of the population with post-secondary degrees earned a degree in Engineering, outpacing both New Mexico (9%) and the US (8%). Overall, 37% of Bernalillo/Sandoval County earned a Science and Engineering degree – also a higher composition of the total than New Mexico and the US. These technical skills are a key component to the labor force, which the region can leverage to attract small business. Additionally, 17% of the region earned a post-secondary degree in Education, higher than the US average (13%). Although not as relevant to manufacturing and distribution or technology, this group may prove critical in future development of education and technical programs as well as improving high school graduation rates, a benefit to the workforce and greater community in years to come.

Bachelor's degrees in Business (17%), however, are below the US average (20%). This smaller pool of business graduates puts the area at a disadvantage when trying to supply relocating and expanding companies with management talent. The shortage of management talent was displayed when Tempur-Pedic expanded in Albuquerque, as it was forced to recruit all 30 salaried workers from out-of-state.

[3] https://stc.unm.edu/unms-innovation-academy-launches-innovative-program/

Table 9. Population by Field of Bachelor's Degree for First Major (2014)

Category	United States	New Mexico	Bernalillo & Sandoval Counties
Total	64,255,026	362,934	175,990
Science and Engineering	22,277,659 35%	133,585 37%	65,489 37%
Computers, Mathematics and Statistics	2,839,305 4%	13,567 4%	6,312 4%
Biological, Agricultural, Environmental Sciences	3,943,346 6%	26,729 7%	11,790 7%
Physical and Related Sciences	2,109,399 3%	17,017 5%	7,395 4%
Psychology	3,018,445 5%	15,582 4%	7,643 4%
Social Sciences	4,941,702 8%	26,524 7%	13,594 8%
Engineering	5,004,316 8%	32,195 9%	17,851 10%
Multidisciplinary Studies	421,146 1%	1,962 1%	904 1%
Science and Engineering Related Fields	5,922,912 9%	31,650 9%	17,035 10%
Business	13,116,144 20%	56,519 16%	29,493 17%
Education	8,345,701 13%	59,085 16%	29,493 17%
Arts, Humanities, and Other	14,592,610 23%	82,095 23%	39,994 23%
Literature and Languages	2,760,995 4%	16,875 5%	8,341 5%
Liberal Arts and History	3,242,151 5%	17,348 5%	8,043 5%
Visual and Performing Arts	2,600,701 4%	18,272 5%	7,817 4%
Communications	2,470,219 4%	10,661 3%	6,557 4%
Other	3,518,544 5%	18,939 5%	9,236 5%

Source: U.S. Census Bureau, 2014 American Community Survey 1-Year Estimates

D. Population with certificate/training critical to economic development

Some employers seek employees who possess specialized training in a particular field or trade, but may not have an advanced degree. Albuquerque's many vocational training programs have produced a sizable pool of candidates for a variety of industries. The following table provides a summary of job seekers in the Albuquerque MSA who registered with the New Mexico Department of Workforce Solutions as of August 2014 and self-identified as having formal training related to a given industry or occupation.

Table 10. Candidates Available in Albuquerque MSA with Relevant Training, by Occupation

Occupation	Candidates
Construction & Extraction	1,111
Office & Administrative Support	810
Transportation & Materials Moving	504
Sales & Sales Related	423
Production	378
Installation, Maintenance & Repair	359
Healthcare	358
Architecture & Engineering	240
Business & Financial Operations	210
Computer & Mathematical	156
Life, Physical & Social Sciences	138
Education, Training & Library	126
Building & Grounds Cleaning/Maintenance	106
Legal	30
Source: New Mexico Department of Workforce Solutions, PB Analysis, 2014	

While a comprehensive analysis of the entire population is not available, these figures provide a high-level overview on the number of individuals trained and residing in the Albuquerque region who are specifically seeking careers in each field. The data suggests that businesses catering to construction, administrative support, and transportation/logistics can expect the largest pool of trained workers, compared to other industries.

E. Resources available to develop critical skills

The technical and vocational programs, such as those completed by job seekers in Table 10 above help the labor force develop critical skills. The Albuquerque metropolitan area is home to over 30 educational and training providers spanning the public, non-profit, and for-profit sectors. These providers offer many unique degree, certificate, and vocational training curricula relevant to a range of industries and employers. Table 11 below summarizes the educational and training providers in the area.

Table 11. Educational and Training Resources in the Albuquerque Metropolitan Area

Provider	Affiliation	Course Offerings
Two-year, Technical and Community Colleges (4)		
Workforce Training Center, CNM	Public	Associate's, post-secondary certificate
Southwestern Indian Polytechnic	Public	Associate's, post-secondary certificate
Central New Mexico Community College	Public	Associate's, post-secondary certificate
Carrington College	For-profit	Associate's, post-secondary certificate
Four-year or Graduate Universities (3)		
University of New Mexico – Valencia	Public	Certificate, associate's, bachelor's, graduate
University of New Mexico – Main Campus	Public	Certificate, associate's, bachelor's, graduate
Webster University	Private	Graduate
Business and Technical Certificate Programs (10)		
Albuquerque Career Institute	For-profit	Post-secondary certificate
CompUSA Training	For-profit	Certificate
Culinary Business Academy	For-profit	Post-secondary certificate
Global Knowledge Center	For-profit	Post-secondary certificate
International Institute for Counter Terrorism	For-profit	Post-secondary certificate
Workforce Innovative Training	For-profit	Certificate
Dona Ana Community College of NMSU	Public	Certificate
UNM EMS Academy	Public	Certificate
UNM Continuing Education	Public	Certificate
American Century University	For-profit	Post-secondary certificate
Apprenticeship Programs (21)		
Trade	**# Programs**	
Carpentry	4	
Electrical	7	
Masonry	5	
Plumbing/pipefitting	4	
Mechanical	3	
Other	9	
Source: New Mexico Department of Workforce Solutions, PB Analysis, 2014		

In addition to these academic and vocational institutions and programs, the state of New Mexico provides several training-related incentives for businesses, including the following:

- **Jobs Training Incentive Program (JTIP)**
  JTIP is a highly-flexible state program that provides on-the-job and classroom training. The state may reimburse up to 50% of trainees' wage up to 1,040 hours for companies located in urban areas, and up to 65% in rural areas. JTIP is available to new or expanding companies that manufacture a product or non-retail company that generates more than half of its service revenue from outside the state.[4]

- **Out of state tuition waiver for relocating employees**

[4] New Mexico Direct Financial Incentives 2014, Area Development Online, www.areadevelopment.com

Both the University of New Mexico (UNM) and Central New Mexico Community College (CNM) will make in-state resident tuition rates available to relocating employees and their families who qualify for admission

The educational make-up of the labor force combined with the types of degrees earned in the region and the additional resources offered to develop workforce skills create an attractive environment for employees in a variety of industries. Although the population with a high-school degree lags behind the US average, technology companies and start-ups can leverage an above-average volume of science and engineering graduates. A key drawback, however, to the composition of the labor force is the abundance of manager and executive-level talent. A smaller percentage of post-secondary degrees are in business – and while the Tempur-Pedic facility recruited their entire hourly-wage staff locally and described this talent pool as "incredible," they had to look out of state for the salaried staff.

Outside of formal technical and vocational programs, efforts by the community to foster a stronger entrepreneurial business environment has increased in past years. The city, counties, and other private and public organizations have worked together to focus on innovation and community development. The following are examples of these efforts and programs:

- **Trep Center, at Patrick J. Baca city library**
  The city of Albuquerque opened a satellite resource center for entrepreneurs at the city library within the innovation district. The Trep Center is a physical and digital resource where people can obtain information on starting a business, connect with other entrepreneurs, and learn about anything entrepreneurial that the innovation district has to offer. People can make an appointment to work one-on-one with a trained librarian, or come in during designated times. The Downtown entrepreneur campus may seem daunting to some, so the Trep Center acts as an accessible resource for anyone.

- **Innovate ABQ**
  Innovate ABQ is a multi-purpose, seven-acre project being developed at Innovation Central's core in Albuquerque. Effectively a startup incubator, Innovate ABQ leverages the research capabilities of the University of New Mexico with Albuquerque's entrepreneurial and business community to build new businesses, help existing businesses grow, and attract strong researchers and entrepreneurs to the area.

  While just getting off the ground, Innovate ABQ has generated significant support from major local stakeholders. In 2013 the Albuquerque City Council approved a $2 million bond issuance to help kick-off construction of Innovate ABQ at the former First Baptist Church site in Albuquerque's East Downtown. In 2015, Bernalillo County committed a $1 million grant to the program, with at least $250,000 to be spent on construction or renovation.

- **ABQid**
  ABQid is a non-profit that operates in collaboration with individuals and small companies to grow Albuquerque's entrepreneurial systems and businesses. It develops, implements, and promotes support activities for the community, and provides intensive mentorship and a customer-driven business development strategy. The city approved a contract for $1.83 million over three years from the recently created Economic Development Action Fund in support of the Accelerator program. ABQid is also leveraging at least $2 million in private sector funding to support the growing entrepreneurs in the program.[5]

[5] City of Albuquerque Economic Development Department website

1.3 Quality of Life

Attracting large-scale business investment requires amenities that will keep employees happy, healthy, and engaged to work for a company (in a certain location) long-term. Quality of life is a very important consideration, and Albuquerque shines in this area. As such, below is an overview of the key quality of life attributes of the region. This will become more critical to future efforts to market directly to prospective developers / investors and can be refined for those efforts.

While the topography and quality of labor pool should be attractive to industrial businesses, the quality of life in New Mexico – and particularly the Albuquerque region – should attract workers. From a local perspective, weather, a low cost of living, easy commutes and a plethora of educational, technical and vocational resources shape the high quality of life.

Albuquerque sees ~25% more hours of sunshine per year than the US average, which accommodates a variety of outdoor activities and rarely – if ever – interrupts plans or travel. The region, which is lined by the Sandia Mountains to the east and desert to the west, was ranked by USA Today as the 3rd best place to watch a sunset. Further, the Albuquerque cost of living index is 8% lower than the US average. Housing prices, which are 8% lower than the US average, drive the low cost of living. Groceries, health care and transportation also measure lower than the US average, while goods and services and utilities measure slightly above.[6]

In addition to weather and cost of living, daily commutes around the Albuquerque area tend to be easy – particularly to and from the AV area. A Tempur-Pedic manager described the commute as "a breeze," and added that the value of the easy commute is a major advantage to recruiting local talent for employment. The many educational, technical and vocational resources in the Albuquerque region provide residents a variety of outlets to further their careers or transition to new ones. Based on the well-rounded quality of life, FDI Intelligence ranked Albuquerque among America's mid-sized cities of the future in 2013.

More broadly, additional quality of life advantages exist as resident of New Mexico. From a cost of living perspective, New Mexico was ranked the 9th most tax-friendly state, according to a 2013 Kiplinger Report. As a state, it also boasts the lowest property taxes in the country. In terms of recreation, New Mexico is home to 12 world-class ski resorts that each see over 200 inches of snowfall per year. Outdoor activities are popular because of the temperate weather, but also enjoyable because of the clean air – the American Lung Association described New Mexico communities as "having some of the cleanest air in the nation."

From a cultural and diversity standpoint, New Mexico is nearly unmatched. In 2010, New Mexico was found to be the state with the 2nd highest percentage of bilingual speakers in the 2010 US census. Nearly one-third of the state speaks Spanish and an additional 4% speak Navajo. Indian reservations scatter across the state and influence local economies and cultures. Travel & Leisure magazine picked Santa Fe as its top-ranked cultural getaway in 2012, which is home to the Sante Fe Indian Market and Canyon Road Art Market, among other cultural attractions. In Albuquerque, 47% of the population identifies as Hispanic or Latino, and the National Hispanic Culture Center there offers art exhibitions and programs in a variety of creative fields, including music, dance and film that celebrate New Mexico's diversity.

The combination of weather, cultural and diversity, cost of living advantages and educational resources locally and state-wide provide important competitive advantages for the region to draw business and new workers.

[6] Council of Community and Economic Research, 2010 base year data

1.4 Site Selection Criteria/Best Fit

Companies base location decisions on a number of criteria, many of which regard their production model, distribution methods, markets, and technical complexity of their products.

A. Critical elements when searching for a new location

A competitive and scalable new (or expanding) business will value a number of regional attributes when selecting a new location, including:

- Labor supply – to ensure new employees have the necessary skills to succeed in the business
- Site readiness and infrastructure (including access to water and utilities) – to ensure business operations can begin quickly
- Size of the facility/footprint – to ensure the building and area accommodates business operation needs
- Lease and labor costs (including factors such as impact fees) – to minimize the cost of business
- Housing/executive housing supply for new employees – to attract new workers
- Business subsidies or other incentives – to maximize the financial outcome of locating in one region over another

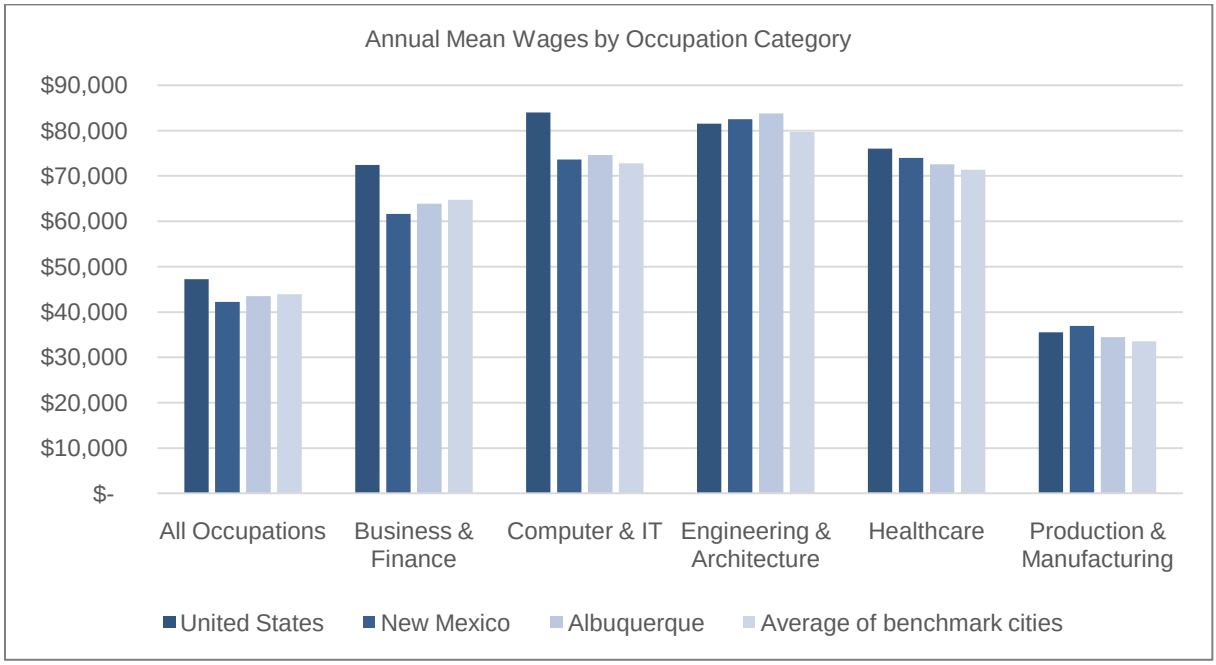
Those elements that can be quantified and benchmarked across peer cities are analyzed in detail below.

Income by industry at MSA level
Average annual wages in the Albuquerque MSA are competitive with its peers across a variety of occupations. Table 12 below compares average incomes across various occupation categories in Albuquerque, compared to benchmark MSAs, State, and national averages.

Table 12. Annual Mean Wages by Occupation Category May 2014

Geography	All Occupations	Business & Finance	Computer & IT	Engineering & Architecture	Healthcare	Production & Manufacturing
United States	$47,230	$72,410	$83,970	$81,520	$76,010	$35,490
New Mexico	$42,230	$61,610	$73,630	$82,530	$73,980	$36,940
Austin MSA	$48,150	$70,760	$81,160	$83,800	$72,020	$32,950
Colorado Springs MSA	$46,520	$70,530	$83,690	$81,640	$75,000	$35,520
El Paso MSA	$36,410	$59,600	$57,930	$78,360	$68,350	$28,150
Oklahoma City MSA	$43,270	$62,670	$66,650	$82,490	$67,860	$33,820
Salt Lake City MSA	$46,730	$64,620	$74,520	$74,490	$72,350	$35,390
Tucson MSA	$42,540	$60,060	$72,680	$77,300	$72,610	$35,240
Average MSA (excl. ABQ)	$44,135	$65,283	$74,279	$80,266	$72,273	$34,188
Albuquerque MSA	**$43,520**	**$63,920**	**$74,580**	**$83,780**	**$72,530**	**$34,430**

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics May 2014



Cost of living

Cost of living varies greatly by state, region and city. Indices such as regional Consumer Price Index (CPI) attempt to measure the differences in costs of goods and services across different regions, and can influence a company's decision making process. Higher cost of living likely means higher wages and higher costs of goods produced and transported locally.

The table below compares the overall cost of living and sub-categories in Albuquerque and benchmark MSAs to State and national levels. Numbers below 100 represent costs that are below the national average, while numbers above 100 are higher than average. While Albuquerque is competitive overall at eight percent below the national average, all benchmark MSAs are also below the national cost of living average, as outlined in Table 13.

Table 13. Cost of Living Index and Sub-Categories, ABQ vs. Benchmarks

Geography	Cost of Living Index	Goods & Services	Groceries	Health Care	Housing	Transportation	Utilities
United States	100	100	100	100	100	100	100
New Mexico	99	100	100	98	99	99	98
Austin	92	98	89	106	81	101	97
Colorado Springs	90	94	95	102	81	95	91
El Paso	78	88	100	94	49	98	78
Oklahoma City	82	95	91	98	55	102	79
Salt Lake City	93	104	92	93	86	95	81
Tucson	90	102	98	105	67	101	89
Average (excl ABQ)	88	97	94	100	70	99	86
Albuquerque	**92**	**104**	**96**	**99**	**72**	**95**	**102**

Source: Council for Community and Economic Research, 2010 base year data

Albuquerque's overall cost of living is slightly above the benchmark MSA average. While it is very competitive with the benchmark MSAs in most categories, only Salt Lake City has an overall higher cost of living than Albuquerque. Albuquerque utility costs are the only category far above the benchmark MSA average. Low housing costs drive the cost of living in Albuquerque below the national average, and although these costs are also below the benchmark MSA average, only Tucson and El Paso have lower housing costs than Albuquerque (and these cities drive the low overall MSA average). In addition to low relative housing costs, no other benchmark city has lower transportation costs.

Unionization and right to work issues

New Mexico is not a right-to-work state, and over 30 statewide unions in New Mexico represent workers in fields including transportation, construction and trade, aerospace, and education. Despite a union presence, there are no existing manufacturers in the state with unionized workers. As of 2014, there are just 43,000 workers in New Mexico that are members of unions (5.7% of total workforce), the 10th lowest nationally in number of unionized workers. When including workers covered by unions (those represented by unions but are not members, such as teachers or trade workers), the state has 56,000 union workers, or 7.4% of the total workforce.[7]

B. General assessment of infrastructure needs and costs

Infrastructure is another important criteria for prospective businesses. Atrisco Vista currently exists as a two lane arterial street from I-40 north to Paseo del Norte. The road south of Double Eagle II Airport is generally in good condition because of a recent reconstruction by the City of Albuquerque Aviation Department, but the roadway north of Double Eagle II Airport is in poor condition.

Two scenarios were considered to develop the infrastructure costs. The first scenario assumes Atrisco Vista Boulevard is constructed as a continuous 2-lane roadway for the entire 12.5 miles length from I-40 to Southern Boulevard. The second scenario assumes Atrisco Vista Boulevard is constructed to be a 4-lane roadway for its entire length. The scenarios can also be considered in phases, the 2-lane scenario would be Phase I and construction of the additional 2 lanes would comprise Phase II. The option of including a multi-use trail is also considered for either scenario

The costs and right-of-way needed for each scenario are summarized in Table 14 below. The costs shown, as well as the right-of-way needs, are intended as early estimates for comparison and planning purposes only. A detailed engineering analysis is needed for more precise estimates.

Table 14. Roadway Right-of-Way and Cost Estimates

Roadway Segment	2-Lane Scenario	4-Lane Scenario	Multi-Use Trail	Right-of-Way Needed (acres)
I-40 Interchange	$0	$0	$0	None Needed
I-40 to Double Eagle II Driveway	$0	$11.5 M	$2.1 M	None Needed
Double Eagle II Driveway to Paseo del Norte	$3.6 M	$7.2 M	$0.6 M	40 acres
Paseo del Norte to Southern Blvd.	$6.3 M	$13.0 M	$1.1 M	100 acres
Right-of-Way Cost	$ 5.4 M	$ 5.4 M	Included	
Total Cost	**$15.3 M**	**$37.1 M**	**$3.8 M**	
Source: PB Analysis				

In addition to the corridor itself, utility needs also exist throughout the corridor. As shown in Table 2, 1,075 acres exist with utilities and new utilities are under construction that will serve an additional 2,050 acres. In total, therefore, just 35% of the 8,910 acres of developable land will have access to utilities by the time the utilities in construction are completed. While there are too many variables to accurately

[7] Bureau of Labor Statistics, January 2015

estimate the cost of utilities for the remaining acres, given the scope of this paper, it is known that the city, county and state invested approximately $8-$9 million for utilities to serve the Tempur-Pedic facility.

C. Number and importance of shovel-ready/certified projects

While infrastructure needs exist along the corridor, and utility needs are particularly apparent in Sandoval County, shovel-ready sites with utilities exist throughout Bernalillo County. As already noted, 1,075 acres (10% of the AV corridor) are "shovel-ready," which is defined as Grade A land with access to utilities. All of these acres exist in Bernalillo County, mostly just east of the Double Eagle II Airport within the City of Albuquerque. In Sandoval County, there are 60 acres of Grade A land but no utilities readily accessible or under construction. Additionally, the parcels are on half- to one-acre plots of land, which are not large enough to accommodate industrial use unless aggregated.

D. Satisfaction of other businesses in the corridor

Although shovel-ready sites currently exist throughout the corridor, the physical readiness of the corridor does not ensure business satisfaction with the location. Tempur-Pedic and Shamrock Foods operate at the southern portion of Atrisco Vista Boulevard near I-40, and business managers at these facilities are most qualified to speak to the advantages and disadvantages of doing business in the corridor, given the nearby location of their operations. In talking to a business manager at Tempur-Pedic for the Paseo del Volcan corridor study, several areas of satisfaction and some areas of dissatisfaction were identified:

Areas of satisfaction:

- Labor pool for hourly employees (to work on the manufacturing line)
  - At the time, Tempur-Pedic employed 120 hourly employees that were recruited from the local labor pool, and was very satisfied with their performance
- Location
  - Albuquerque facility supports all business west of the Mississippi and proximity to interstate highways is advantageous for business operations
- Elevation
  - Albuquerque's elevation is helpful for some of the chemical processes that go into Tempur-Pedic's manufacturing; less water is needed and reaction time is quicker, creating a less expensive process
- Quality of life
  - Weather and activities are an attraction for employees; when necessary, it was not difficult to recruit salaried employees from out-of-state
  - Reverse commute made getting to work easy for most employees who lived east of the facility

Areas of dissatisfaction

- Difficult to find quality salaried employees
  - At the time, Tempur-Pedic employed 30 salaried employees, many of which had to be recruited from out-of-state – possibly a repercussion of the low-levels of graduate business degrees in the region
- Difficult to distribute to greater Northwest
  - Reaching Washington and Oregon presented challenges; infrastructure was not in place
- No rail car availability
  - All logistics done by trucks; rail would lower cost of transportation
- State and local government not aggressive enough in attracting new business
  - Economy too dependent on government jobs and change has been slow

Overall, the Tempur-Pedic manager praised the hourly workforce, the location and quality of life in Albuquerque. There was genuine enthusiasm around locating the manufacturing facility in Albuquerque,

even 7 years after it opened. He seemed surprised, however, that more businesses hadn't developed in the area. While he also listed some areas of dissatisfaction, only the lack of aggression by local government to bring more economic development to the area was mentioned with much zeal.

E. Current site selection needs and trends that may impact site marketability

Other site selection needs and trends impacting site marketability can vary by industry and function. Albuquerque Economic Development, Inc. identified and performed marketability analysis on ten target industry clusters that should be targeted for future growth and investment, and these industries are analyzed further in Section 2.5.

For a broader view of what various industries prioritize in site selection, the following table weights different site selection categories for different industries on a 100 point scale. Across the board, workforce talent is identified as the leading driver for site selection, above or equal to regulations and business environment. This suggests that businesses are willing to negotiate or sacrifice factors such as living environment and even business environment and regulations in order to be near, or attract, a highly competent workforce.

Table 15. Key Location Drivers for Major Site Selection (Weighted on 100-point Scale)

Location Driver	International Headquarters	Shared Services Center	Software Development	Financial Services	Life Sciences R&D/Production
Business Environment	15	10	10	20	15
Regulations	15	15	10	20	15
Market	-	-	5	10	10
Talent	25	35	30	20	30
Sector Specialization	10	10	20	10	15
Infrastructure/Connectivity	20	20	15	10	10
Living Environment	15	10	10	10	5
Source: Site Selection Magazine, The World's Most Competitive Cities 2013					

Life Sciences, R&D and Production expansions and relocations value local talent highest when considering site selection. Albuquerque's pool of post-secondary degrees in science and engineering, therefore, might be a strong selling point when attempting to lure businesses from these industries. Meanwhile, the high quality of life in Albuquerque may be a less important factor, except for a company looking to relocate its International Headquarters.

A shared services center manages multiple internal business functions, such as finance, HR, customer support and IT. Companies looking to expand or relocate shared services value the local talent pool, infrastructure and connectivity when assessing a new location. The shovel-ready sites would provide strong appeal to this type of business, as well as the increased power capacity of the region, which now has excess capacity to support large data centers and industrial users. This type of facility is also a likely target for AV, as detailed in Section 2.5.

Economic incentives also help drive a company's location choice. Major incentives currently in place for manufacturing companies are listed in Table 16.

Table 16. State Business Incentive Programs

Incentive Program	
Industrial Revenue Bond	Technology Jobs Tax Credit
Job Training Incentive Program	Alternative Energy Product Manufacturers Tax Credit
Manufacturers Investment Tax Credit	Child Care Tax Credit
High Wage Jobs Credit	Lottery Scholarship Program
Rural Jobs Tax Credit	
Source: Albuquerque Economic Development, Inc	

These incentives and credit programs are common across benchmark cities; however, when combined with the reduced effective tax rates passed in 2013, these statutory credits can make New Mexico's effective tax rate (ETR) the lowest of 8 surrounding southwest states. The High Wage Jobs Tax Credit and Jobs Training Incentive Program are recognized as some of the most effective in the country, as noted by Area Development Online, a national corporate site selection news organization. The program was further touted by the Tempur-Pedic business manager. Given limited and economic development constraints, the region must leverage its differentiating strengths to be successful in business attraction.

1.5 Economic Analysis

It is often preferable to locate business operations where there are support services and potential business partners that can streamline operations and accelerate growth. Understanding what existing industry clusters or businesses are in this area will help reveal what types of business might find this corridor particularly attractive. This analysis addresses competitive strengths and weaknesses of the site from an economic development lens.

A. Inventory type of supportive industries in the Metropolitan Statistical Area (MSA), such as industrial gas suppliers, analysis labs, parts suppliers, industrial machinery supply and repair companies, and machine shops. This is usually determined by providing a copy of the list of industry clusters and attendant firms for the MSA.

As industry clusters concentrate and grow, a market for attendant firms is created to support those industry clusters through supplies, utilities, repair, human resource training, etc. These markets have evolved over time to support the variety of industry clusters in Albuquerque. As defined by Albuquerque Economic Development, Inc., the local industry clusters include:

- Aerospace and aviation
- Solar technologies
- Microsystems and nanotechnologies
- Semiconductors and electronics
- Directed energy and optics
- Bioscience
- IT and software
- Film and digital media
- Media industries
- Technology programs

Manufacturing and distribution represent much of the business within these industry clusters. As a result, a sub-market of supportive industries already exists for industrial industries. Developing the AV corridor will create more activity and business within this sub-market. Table 17 outlines current companies in the Albuquerque area that can support potential manufacturing and distribution industries.

Table 17. List of Local Supportive Industries

Large Manufacturers	Industrial Gas Suppliers	Lab Testing Facilities	Repair Companies	Parts Suppliers	Machinery Supply
• Academy Corp • Air Products • Aspen Avionics • Boeing • Cabot Superior MicroPowders • Clariant • CTS Electronic Components • CVI Laser • Honeywell • Intel • Ktech Corp • Lectrosonics • Eclipse Aerospace • Emcore • Ethicon-Endo • Surgery • Mega Corp • OsoBio • Sennheiser • SUMCO USA • Thomas & Betts • Unirac • US Coton • UTC Aerospace Systems ISR	• New Mexico Nitrogen, LLC • Nitrogen 2 Go • Matheson Tri-Gas • Air Products and Chemicals • Linde Gas North America • AAA Gas Company • Los Lunas LP Gas • JW Fields Freon	• Assaigai Analytical Laborites • Vibrant Corporation • Grandin Testing Lab • Native Air Co • Kramer & Associates • Compliance Services & Testing	• Aeroparts Manufacturing & Repair • AERO Mechanical Industries • Allstate Hydraulics • Solutions Today • Elite Power and Recovery • Shiloh Maintenance Center	• SUMMIT Electric Supply • Mesa Equipment & Supply • Albuquerque Pipe & Pump Supply • Betatron Electronics • Concise Motion Systems • Quality Suppliers	• Southwestern Industrial • Speedy • Geo S Thompson Co. • Motion Industries

Source: Albuquerque Economic Development, Inc

Manufacturing represents 4.3% of current jobs in the Albuquerque MSA[8] and aerospace / aviation manufacturing is the predominant manufacturing industry followed by producers of electronic components, laser optics and semiconductors, and others. The value in the variety of local manufacturing production is that it creates a diverse market of attendant industries that are able to support different types of manufacturing. For instance, Albuquerque is home to several gas and parts suppliers, lab facilities and repair companies able to serve a broad set of manufacturing industries. This base of supportive industries likely will not differentiate Albuquerque from competitors that also boast manufacturing industry clusters, but can still be highlighted as valuable when luring business development.

B. Review locations and expansions in the Southwest in order to identify the most active industries.

[8] New Mexico Workforce Connection, August 2015

Albuquerque is geographically and demographically similar to other southwest cities, and often competes with them to attract the same industries as their city strengths and weaknesses are similar. One way to gain an understanding of a city's appeal is by benchmarking its success in attracting business over time against other cities.

Table 18 illustrates the location and expansion information for Albuquerque's southwest benchmark cities: Austin, TX; Colorado Springs, CO; El Paso, TX, Oklahoma City, OK; Salt Lake City, UT; Tucson, AZ. The benchmark cities are chosen based on population and geographic similarities as well as their locations near education institutions. The data in Table 18 is a representative list taken from city and economic development organizations' websites, but it is likely not exhaustive. However, it provides some insight to the active industries in Albuquerque and its peer cities as well as the number of jobs the expansions and relocations are expected to create.

Each line-item in the table represents a company that expanded or relocated in the last two years. The "Industry" column represents the broad industry of the company and the "Type of Facility" column represents the type of facility the company is developing. Of the ~70 data points listed in the table, over a quarter of the expansions and relocations are Cybersecurity, Medical Technology, Technology or IT – the most of any industry. After technology, industries expansions and relocations are very diverse: 7% are in healthcare, 9% are in energy, and 7% are in aerospace and aviation. About one-third of the expansions and relocations are made up of unique industries, such as sports, media, and gaming and are identified as "Other," which demonstrates the diversity of industries active in Albuquerque and its peer cities.

Although the industries expanded and relocating are diverse, the types of facilities being developed are more concentrated. Manufacturing facilities represent nearly one-quarter of the facilities planned for development, while over one-third are office centers, which include call centers, customer support, data and HR centers. 9% of the facilities are planned for software development or software services that will be used to support the high volume of technology industries expanding and relocating, and 18% are either division or corporate headquarters.

The types of facilities being developed also directly impact the number of jobs created. It is important to note that the number of jobs created is forecasts only, and actual jobs created often fall short of forecasts. Moreover, the job forecasts often occur over long periods of time, rather than by the facility-opening. In 2015, Albuquerque gained 10 relocations or expansions that in total forecast over 2,000 jobs.

Table 18. Key Relocations and Expansions in Southwest Cities

City	Relocation / Expansion	Year	Industry	Type of Facility	Jobs Created
Albuquerque	Expansion	2015	Transportation	Transloading	200
Albuquerque	Expansion	2015	Customer Management	Customer Support	250
Albuquerque	Expansion	2015	Customer Management	Customer Support	400
Albuquerque	Expansion	2015	Financial	Office	300
Albuquerque	Expansion	2015	Healthcare	Patient Center	122
Albuquerque	Expansion	2015	Cybersecurity	Office	50
Albuquerque	Expansion	2015	Financial Services	Office	100
Albuquerque	Expansion	2015	Manufacturer	Manufacturing	25
Albuquerque	Expansion	2015	Telecommunications	Customer Support	450
Albuquerque	New HQ	2015	Food and Beverage	Manufacturing HQ	125
Albuquerque	New HQ	2014	High-Technology	Manufacturing	5
Albuquerque	Relocation	2014	Technology	Customer Support	150
Albuquerque	Expansion	2014	Financial Services	HR Center	200
Albuquerque	Relocation	2014	Technology	Software Dev	100
Austin	New HQ	2015	Clean Technology	HQ	30-40
Austin	Expansion	2015	Sales Consulting	Office	25
Austin	Expansion	2015	Financial Services	Office	35

City	Relocation / Expansion	Year	Industry	Type of Facility	Jobs Created
Austin	New HQ	2015	Retail/Restaurant	HQ	TBD
Austin	Expansion	2015	IT	Office	TBD
Austin	New HQ	2015	IT	HQ	100
Austin	Expansion	2015	IT	Office	TBD
Austin	Expansion	2014	Financial Services	Office	800
Austin	Relocation	2014	Medical Manufacturer	HQ	110
Austin	Expansion	2014	Technology	Software Svcs	170
Austin	Expansion	2014	Technology	Software Dev	300
Austin	Expansion	2014	Technology, IT	Sales	30
Austin	Expansion	2014	Technology	Software Dev	75
Austin	Expansion	2014	Healthcare	Software Dev	600
Colorado Springs	Expansion	2015	Aerospace/Defense	Manufacturing	2100
Colorado Springs	Expansion	2015	Wind Energy	Wind Turbine Farm	14
Colorado Springs	Expansion	2015	Warehouse/Distribution	Distribution	80
Colorado Springs	Expansion	2014	Financial Services	Office	15
Colorado Springs	Relocation	2014	Retail	Warehouse	19
Colorado Springs	Expansion	2014	Market Research?	HQ	120
Colorado Springs	Expansion	2014	IT	Call Center	280
Colorado Springs	Relocation	2014	Non-profit/Sport	HQ	25
El Paso	Expansion	2015	Technology	Office	1,100
El Paso	Expansion	2014	Energy	Manufacturing	193
El Paso	Expansion	2014	Insurance	Call Center	300
El Paso	Expansion	2014	Retail	Call Center	450
Oklahoma City	Expansion	2015	Aerospace Defense	Division HQ	900
Oklahoma City	Expansion	2015	IT	HQ	423
Oklahoma City	Expansion	2015	Energy	Office	TBD
Oklahoma City	Expansion	2014	Back Office Services	Data Center	500
Oklahoma City	Expansion	2014	Arts and Crafts	Retail Store	TBD
Oklahoma City	New HQ	2014	Oil and Gas Equip	Manufacturing	TBD
Salt Lake City	Expansion	2015	Transportation/Distribution	Distribution	129
Salt Lake City	Expansion	2015	Healthcare	HQ	291
Salt Lake City	Expansion	2015	Healthcare	Office	145
Salt Lake City	Expansion	2015	Retail	Manufacturing	160
Salt Lake City	New NQ	2015	Financial Services	Sales HQ	500
Salt Lake City	Expansion	2015	Technology	Office	425
Salt Lake City	Expansion	2015	Retail	Office	164
Salt Lake City	Expansion	2014	Packaging	Manufacturing	60
Salt Lake City	Expansion	2014	Medical Technology	Manufacturing	1,000
Tucson	Expansion	2015	Telecommunications	Customer Support	1,125
Tucson	Expansion	2015	Retail	Distribution	400
Tucson	Expansion	2015	Healthcare	Office	220
Tucson	Expansion	2015	Healthcare	Healthcare Center	150
Tucson	Expansion	2013-14	Alternative Energy	Operations	183
Tucson	Relocation	2013-14	Bioscience	Operations	40
Tucson	Expansion	2013-14	Aerospace/Aviation	Maintenance/Storage	100
Tucson	Expansion	2013-14	Mining	Operations	50
Tucson	Expansion	2013-14	Aerospace/Defense	Software	55
Tucson	Relocation	2013-14	Nanotechnology	HQ	40
Tucson	Relocation	2013-14	Food Distributor	Transport/Logistics	30
Tucson	Relocation	2013-14	Aerospace/Defense	Manufacturing	50
Tucson	Expansion	2013-14	Optical	Manufacturing	30
Tucson	Relocation	2013-14	IT	Call Center	500
Tucson	Expansion	2013-14	Design/Fabrication	Manufacturing	114
Tucson	Relocation	2013-14	Light Bulbs / Energy	Manufacturing	25
Tucson	Expansion	2013-14	Contact Center Mgmt	Call Center	510

Note: All companies "attracted" to city for new facility included in Relocation category; list is representative, does not cover all expansions and relocations

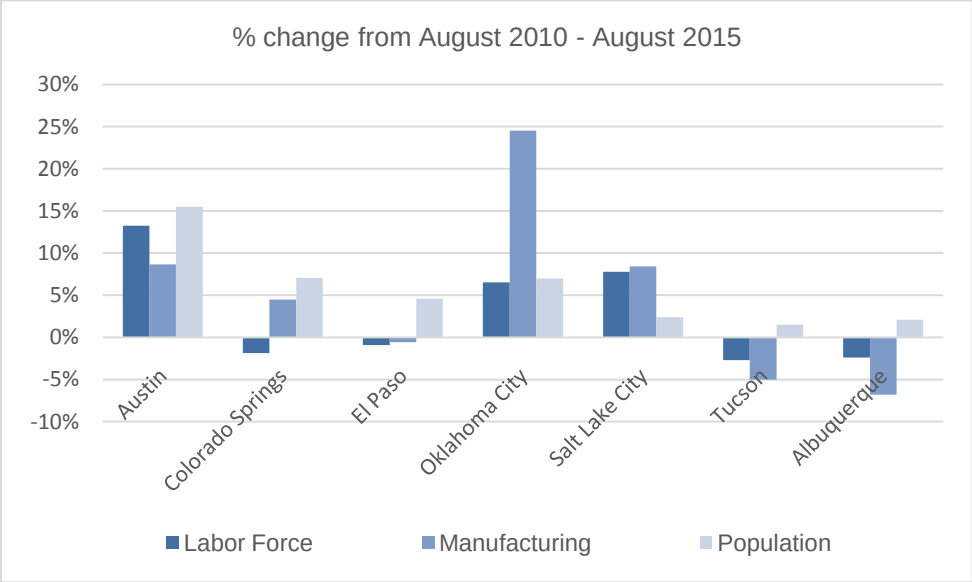
City	Relocation / Expansion	Year	Industry	Type of Facility	Jobs Created
Source: City economic development and chamber of commerce websites					

The expansion and relocation activity from Table 18 does not capture loss of jobs in any industry and an active manufacturing sector that is expanding and relocating in Tucson does not necessarily mean that the overall Tucson manufacturing sector is growing. Table 19 below breaks down macroeconomic trends from August 2010 to August 2015 for total labor force and manufacturing jobs.

Table 19: Trends of Active Industries, August 2010 – August 2015

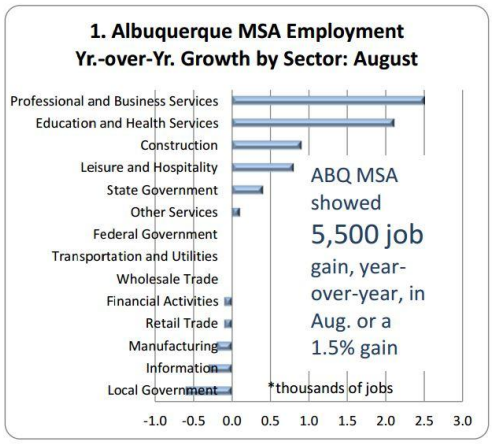
MSA	Labor Force	Manufacturing
Austin	13%	9%
Colorado Springs	-2%	4%
El Paso	-1%	-1%
Oklahoma City	7%	25%
Salt Lake City	8%	8%
Tucson	-3%	-5%
Albuquerque	**-2%**	**-7%**

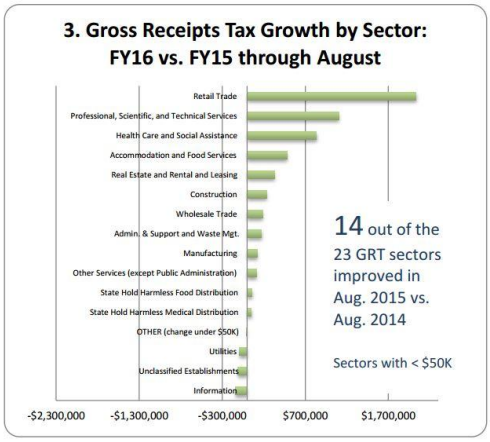
Note: Warehouse/distribution and customer service not shown as BLS data does not break out these sub-industries by MSA
Source: Bureau of Labor Statistics

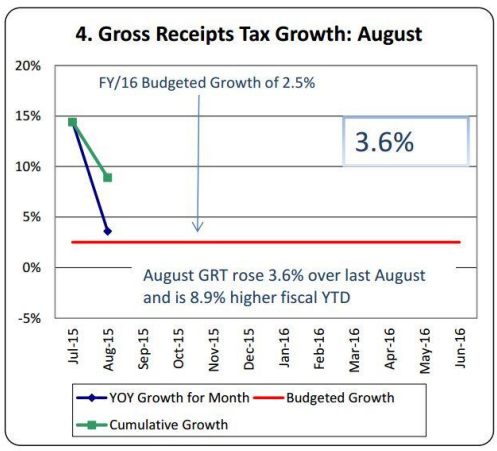


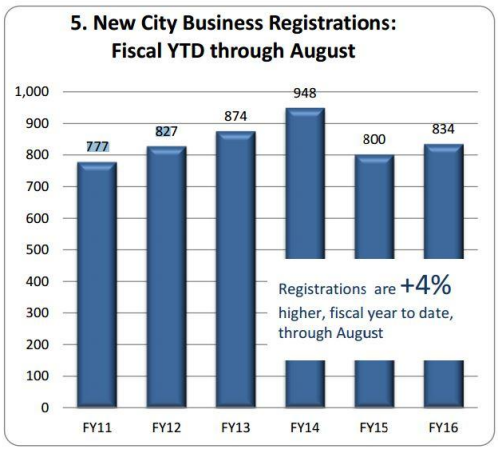
As the table and chart above indicate, despite some manufacturing activity in the past few years, manufacturing jobs in Albuquerque have declined since August 2010 by 7%, the most compared to other benchmark cities. Tucson and El Paso have both experienced a decline in manufacturing over the same period, but very little in comparison to Albuquerque when taking into account the changes in labor force. Total workforce has declined by 2% in Albuquerque, 3% in Tucson, 1% in El Paso, and 2% in Colorado Springs. Growth in manufacturing among other peer cities, including Austin, Colorado Springs, Oklahoma City, and Salt Lake City, may create challenges for Albuquerque to overcome its local decline when pursuing manufacturing businesses to populate the AV corridor. However, projections do indicate a growing population in the Albuquerque area, demonstrating the ability to support industry growth. The labor force recently saw an uptick from 2014 to 2015 after years of decline. Nonetheless, when compared to its peer cities, the trends do not rate very favorably.

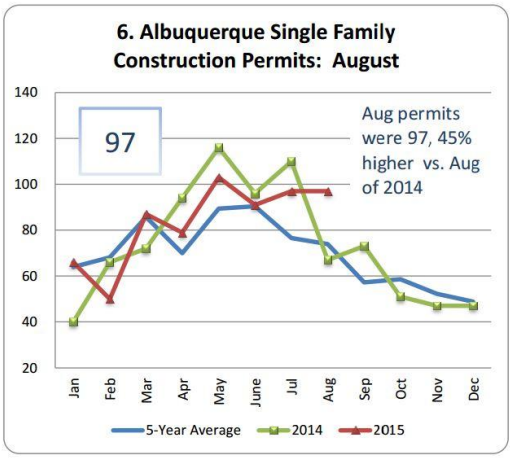
According to the city of Albuquerque's economic dashboard from its Economic Development Department website, the region's economy is improving and growing. Albuquerque MSA showed 5,500 job gain year-over-year in August (a 1.5% gain), and has added 10,000 jobs since the economic recovery in 2012. From August 2014 to August 2015, 14 out of 23 gross receipts tax (GRT) sectors improved with total GRT growing 3.6%. New city business registrations are 4% higher and single family construction permits are 45% higher during the same time period. Lastly, Albuquerque's median homes sales price is up 3.2% to $189,950, which is still about 8% lower than national median home prices.











Source: City of Albuquerque Economic Dashboard

C. Assess the economic development strengths and weaknesses of the corridor to gain a general understanding of which active industries would fit the best.

As the main report outlines in detail, the AV corridor boasts significant strengths that are balanced by some key weaknesses. An overview of these strengths and weaknesses with additional data and details can be found below.

Strengths

- **Transportation access**
  - Highway interchanges with I-40 already exist at the southern end of Atrisco Vista Boulevard, so cost to build is relatively low.
  - AV intersects with I-40 and is conveniently located to I-25, the Albuquerque Sunport and other freight facilities as outlined in Table 4. The AV corridor also provides less congested "back door" access to Rio Rancho from the south.
- **Low labor costs and operating cost predictability**
  - Albuquerque labor costs are cheaper than US averages among all occupations, and specifically within industrial industries

Table 20: Wage Data, May 2014

Mean Wage Data	US		Albuquerque	
Occupations	Hourly	Annual	Hourly	Annual
All occupations	$22.71	$47,230	$20.92	$43,520
Industrial Production Mgrs.	$48.87	$101,640	$44.40	$92,360
Distribution / Storage Mgrs.	$44.80	$93,180	$41.42	$86,150
First Line Supervisors of Prod/Ops	$28.39	$59,060	$27.74	$57,710

Note: State and MSA data does not exist by industry
Source: Bureau of Labor Statistics

  - Albuquerque experiences more than 300 days of sunshine annually, air quality is consistently ranked among the best, risk of natural disasters is extremely low. Temperate climate and lack of natural disasters ensures business can operate 365 days a year without interruption
- **Competitive tax structure for companies and successful incentive programs**
  - Changes to the tax structure in 2013 created a more attractive economic environment for prospective industries. These changes significantly lowered New Mexico's effective tax rates (ETR), creating a much more competitive business environment state-wide and locally. Before considering statutory credits available to taxpayers (investment tax credits, wage credits, R&D credits), New Mexico's manufacturing and services ETR's decreased by 47% and 6%, respectively, after the 2013 legislative changes. Despite the significant tax reductions, however, New Mexico's ETR still ranks 6th out of 8 for manufacturing and 8th out of 8 for services compared to surrounding western states.

Table 21. Effective Tax Rates, Before High-Wage Credits

State	Manufacturers			Services		
	2011	2013	% change	2011	2013	% change
Arizona	6.9%	5.8%	(15.1%)	10.3%	8.3%	(19.3%)

California	6.0%	5.8%	(3.5%)	10.2%	9.7%	(4.2%)
Colorado	5.8%	6.2%	7.1%	7.7%	8.2%	5.9%
Nevada	6.9%	6.8%	(2.0%)	6.9%	6.7%	(2.3%)
New Mexico	**17.9%**	**9.5%**	**(46.9%)**	**13.4%**	**12.6%**	**(6.3%)**
Oklahoma	9.9%	10.0%	1.5%	12.0%	12.4%	3.2%
Texas	10.8%	10.9%	1.4%	7.9%	8.1%	2.7%
Utah	6.6%	6.8%	3.0%	6.9%	7.0%	2.8%
Avg w/o NM	*7.0%*	*7.0%*	*(0.7%)*	*8.0%*	*7.9%*	*(2.0%)*
Source: Ernst & Young New Mexico Business Tax Competitiveness Study, January 2014						

- However, after the statutory credits, New Mexico maintained the most competitive ETR's compared to the 8 benchmark states analyzed for both manufacturing and services.

Table 22. Effective Tax Rates, After High-Wage Credits

State	Manufacturers			Services		
	2011	2013	% change	2011	2013	% change
Arizona	4.4%	4.2%	(4.2%)	9.0%	8.0%	(11.8%)
California	5.8%	5.6%	(3.6%)	9.8%	9.4%	(4.3%)
Colorado	5.7%	6.1%	7.2%	7.5%	8.0%	6.0%
Nevada	5.7%	5.6%	(1.8%)	6.3%	6.1%	(2.1%)
New Mexico	**8.1%**	**3.3%**	**(59.5%)**	**3.4%**	**6.1%**	**81.0%**
Oklahoma	9.0%	9.2%	1.7%	12.0%	12.4%	3.2%
Texas	10.8%	10.8%	0.6%	7.9%	7.9%	0.0%
Utah	5.5%	5.7%	3.9%	6.5%	6.7%	2.9%
Avg w/o NM	*6.3%*	*5.3%*	*(0.9%)*	*7.6%*	*7.6%*	*(0.9%)*
Source: Ernst & Young New Mexico Business Tax Competitiveness Study, January 2014						

- In addition to a competitive, corporate tax structure, the region offers a Job Training Incentive Program (JTIP) that is considered one of the most effective in the country. The JTIP is a state program that provides on-the-job training for qualified employees. The state reimburses for up to 50% of trainees' wages up to 1,040 hours for companies located in urban areas and 65% for companies in rural areas.

  Area Development Online, a national corporate site selection magazine, described the program as "one of the most effective in the country." A Tempur-Pedic business manager also referenced JTIP as a popular program and one that he has benefitted from greatly.

- **Population and education trends/resources**
  - Locally, population is projected to grow 1.3% annually in Bernalillo County and 2.3% annually in Sandoval County through 2040; this outpaces New Mexico statewide projections of 1.1% annually through 2040. The population growth in the region may steady the decline in the labor force as well, which would help support new business relocating to the Albuquerque area.[9]

  - Currently, 88% of the 25 and over population in Bernalillo and Sandoval Counties have a high school degree or higher, more than in New Mexico or the broader US. 32% of the total 25 and older population in the two-county area earned a Bachelor's degree or higher, compared to just 27% in New Mexico and 30% of the US, and over 70% of this population received a degree critical to economic development, such as education, business, or science and engineering as their first major. Although room for improvement

[9] Bureau of Labor Statistics

remains in educating Albuquerque's youth, educational attainment outperforms the US average in key categories, and there is a particular focus in degrees that may prove critical to economic development.[10]

- Additionally, an array of education and training resources exist to provide potential employees necessary technical training, including 22 apprenticeship programs, 4 two-year technical and community colleges, 3 four-year or graduate universities (including both UNM campuses) and ten business and technical certificate programs currently exist in Albuquerque as well as UNM's new Innovation Academy, and an effective Job Training Tax Credit incentive for employers as noted in Section 2.2.

- **Availability of shovel-ready sites**
  - There currently exists 1,075 acres (12% of the corridor) that are shovel-ready; they are Grade A for development with utilities. An additional 2,050 acres (23% of the corridor) are Grade A with utilities under construction.
  - A total of 900 acres along the corridor are either zoned for industrial use, master-planned for industrial use, or have no industrial restrictions and can be developable for industrial purposes.

- **Power capability sufficient for large data centers and other industrial users**
  - Power companies in the Albuquerque region are no longer capacity constrained. According to Albuquerque Economic Development, Inc., data centers and other back-office facilities had not previously located in the Albuquerque metro area because local power companies were at capacity. However, excess capacity now exists to support the development of these facilities.
  - Utility lines already exist to support the existing facilities of Tempur-Pedic, Shamrock, and Double Eagle II Airport. This reduces the cost significantly for new projects considering developing in the area.

- **High quality of life**
  - As outlined in detail in Section 2.3, the AV corridor offers a working location in an area with a high quality of life, which includes beautiful weather, low cost of living, diversity and culture, easy daily commutes, a plethora of outdoor, recreational activities, clean air, and a relatively low tax burden.

- **Supported by the Futures 2040 MTP long-range plan**
  - The recently released 2040 MTP long-range plan emphasizes a number of themes and goals for the region that align with the opportunities of the AV corridor. The plan highlights future development in regionally-identified activity centers, commercial corridors, and transit nodes; seeks to balance the distribution of jobs and housing by bringing employment west of the Rio Grande; and due to limited federal funding, it hopes to maximize the functionality of the existing transportation system. Because the southern portion of the road is already constructed, the cost to build is relatively low and there are limited financial constraints in the cost to build.

- **Catalytic effect of nearby, activity centers and large master-planned communities**
  - The AV corridor exists near a number of designated activity centers including Cordero Mesa business park and Aerospace Technology Park at Double Eagle II, and a number of master planned communities that are either in place or being developed in the area including Santolina, Estrella, Quail Ranch, and the Upper Petroglyphs. These projects can help spur growth and economic activity in the AV corridor.

[10] 2014 American Community Survey

- **New transloading facilities will increase rail activity**
  - A new $5 million New Mexico Transloading facility in southeast Albuquerque will be the area's first railroad facility for large-scale freight operations such as moving fluids, building materials, and heavy equipment. It will service the BNSF railroad. A second facility has pulled permits and will start construction.

- **Recent growth in projects**
  - Federal funding has declined recently, and growth in the professional and technical services sector has helped to diversify the region's dependence on federally funded employers like Sandia National Laboratories.
  - Construction in Albuquerque has picked up and a number of new projects are being built, indicating a stronger rebounding economy.
  - Notable expansions in Albuquerque in 2015 include a new patient center at Rust Medical Center, a new customer support center for Comcast, and new manufacturing facilities for United Poly Systems and Flagship Food Group.

- **Recently competitive deal-closing funds**
  - New Mexico, like other states, maintains a deal-closing fund to lure relocating and expanding businesses on top of program credits and incentives. However, until recently, the $3m New Mexico deal-closing fund was very small compared to neighboring states. In 2014, it was funded at $15 million. For fiscal year 2015, the New Mexico Economic Development Department received an appropriation of $50 million to help in the recruitment and retention of companies and jobs. While the government cannot directly invest in companies through the Local Economic Development Act (LEDA) closing-fund grants, the funds can be used for equipment, working capital, land, building or infrastructure needs.

Weaknesses

- **Weak national manufacturing sector outlook**
  - Over the next 5 to 10 years, the US manufacturing industry is projected to contract by 0.5% annually, and additionally, the transportation and warehousing industries are projected to grow at 0.7% per year. Slow growth in these industries nationally means less business activity to compete for, and the level of competition between Albuquerque and its benchmark cities to attract these industry participants will increase.

- **Land constraints for expansion**
  - Expansion along the Atrisco Vista corridor is constrained on the east by Petroglyph National Monument and on the west by Double Eagle Airport II, as well as the various planned communities, such as Westland and Paradise West. This may constrain future growth opportunities.

- **Lack of rail access**
  - Rail can help save shipping costs both for distribution and to acquire production materials. Although access to interstates provides convenient local and regional distribution, the overall lack of rail presents significant hurdles to a wider distribution network.

- **State relies heavily on tax credits**
  - Although the reduction in New Mexico's tax rate improved the tax burden significantly, it is not nearly as advantageous for businesses that do not qualify for statutory credits. Manufacturers that do not qualify for this credit would pay a 9.5% effective tax rate, higher than Arizona (5.8%), California (5.8%), Colorado (6.2%), Nevada (6.8%) and Utah

(6.8%). Other service-related companies would also pay lower effective tax rates than New Mexico (12.6%) in each of the above states as well.

- **Gaps in incentive programs**
  - An incentives benchmark later in Appendix I outlines a few gaps in Albuquerque's incentive program when compared to peer cities, particularly around performance-driven incentives and industry-focused incentives.

D. Make recommendations of target industries that best match the strengths of the region.

The balance of strengths and weaknesses will be more appealing to certain industries than others. While a food distributor may value the access to transportation, a law firm will not. Key corridor strengths that will drive industry attraction include:

- Access to transportation
- Cost predictability
- Labor supply of hourly workers
- Above-average concentration of post-secondary degrees critical to economic development
- After-credit effective tax rate for manufacturers and services
- Job training programs
- Topography and size of shovel-ready land

The convenient access to transportation, particularly to the interstate highways and Albuquerque Sunport suggest a warehouse/distribution center to be a fit for the area. Strong supply of quality hourly labor supports a manufacturing facility, or distribution/warehouse facility. The concentration of post-secondary degrees in science and engineering could support professional / business services or a data center. The new state tax structure and land attributes, such as the size, distance from downtown, ideal weather for uninterrupted operations and existing nearby industries are all strengths that support these industries.

Given the high-level of recent relocations and expansions in Albuquerque's benchmark cities, call centers, data centers and back-office/shared services centers also present an industry target opportunity for the AV corridor. Data centers, in particular, seek access to reliable utilities (and there is currently excess capacity of power in the region), a technically proficient labor pool, weather neutral locations secure from natural disasters and low-cost real estate.

These industries require space, access to transportation and low, predictable costs – all competitive advantages of the AV corridor. In 2007, Tempur-Pedic developed a manufacturing plant and Shamrock foods developed a distribution center along the corridor. Both still operate successfully today suggesting the regions' ability to accommodate manufacturing and distribution facilities with labor supply, access to transportation, costs and quality of life to attract and maintain employees.

E. Examine trends in each target industry and their growth factors to market to those industries now and in the future.

The Bureau of Labor Statistics projects manufacturing to decrease by 0.5% annually through 2022 and decline as a portion of the total US employment market. Despite the decline, manufacturing will still comprise a significant portion of the US market. Only retail trade, healthcare and social assistance, accommodation and food services, and government represent larger employment markets in the US.

The transportation / warehousing industry's projected US growth rate is expected to increase from 0.4% annually between 2002 and 2012 to 0.7% annually through 2022. Although positive, this growth rate is still lower than the total US employment market (1%). Within the transportation and warehousing industry exists a specific sub-industry target – warehousing and storage, which is expected to grow at 1.6% between 2012 and 2022.

Administration and support service is a sub-industry of the professional services industry, which is projected to grow at 1.8% -- up from 0.5% from 2002 to 2012. While the broader professional services industry annual growth rate increases by ~50% during 2012 to 2022 from the prior decade, the administration and support services sub-industry annual growth rate increases even more significantly, as outlined in Table 23 below.

Table 23. Target Industry Metrics, Total US

Industry	2004		2012		2022		'02-'12 CAGR	'12-'22 CAGR
	Jobs	% of Mkt	Jobs	% of Mkt	Jobs	% of Mkt		
Manufacturing	14.5m	10.2%	11.9m	8.2%	11.4m	7.1%	-2.4%	-0.5%
Trade/Transportation/Utilities	25.5m	17.9%	25.5m	17.6%	27.3m	17.0%	0.0%	0.7%
Transportation/Warehousing	4.2m	2.9%	4.4m	3.0%	4.7m	3.0%	0.4%	0.7%
Warehousing and Storage	0.5m	0.4%	0.7m	0.5%	0.8m	0.5%	2.8%	1.6%
Professional/Business Svcs	16.4m	11.5%	17.9m	12.3%	21.4m	13.3%	1.2%	1.8%
Admin/Support Svcs	7.4m	5.2%	7.7m	5.3%	9.2m	5.7%	0.5%	1.8%
Source: Bureau of Labor Statistics								

F. Assess support required to generate start-up companies in target industries.

The target industries outlined above are typically large – both by geographic network and by footprint. They require large spaces and networks that span regions, states, countries and often the entire globe. These types of industries often also require enormous access to capital to expand or relocate, and for these reasons, there exist significant barriers to entry in these industries for a start-up. However, attendant firms and technology services that support these industries are more suitable as potential start-ups and should be expected to grow in demand if AV attracts the target industries outlined above.

Albuquerque offers a wealth of resources for entrepreneurs and start-ups in a variety of industries, including potential start-ups related to the target industries, such as:

1) State Support and Incentives
   - Small Business R&D Tax Credit – businesses in which R&D are at least 20% of expenditures can take an exemption from the state's portion of gross receipts and compensating taxes and a credit to offset withholding taxes for a period of 3 years
   - Angel Investment Tax Credit – the credit is 25% of a qualifying investment, up to $25,000
   - The Loan Fund – provides loans, training and business consulting to entrepreneurs throughout the state and Navajo Nation
   - ACCION New Mexico – non-profit that increases access to business credit, makes loans and provides training to help emerging and existing entrepreneurs
   - WESST – statewide small business development and training organization committed to growing New Mexico's economy by cultivating entrepreneurship; provides training, technical assistance and access to capital
   - Enchantment Land Certified Development Corporation – provides competitive long-term loans with low down payments to finance assets such as buildings, land and machinery
   - Capital Certified Development Corporation – provides business financing solutions throughout New Mexico, specifically for buying, building or remodeling commercial and industrial buildings
   - New Mexico Angels – invests in early-stage companies in New Mexico to help accelerate growth
   - State facilitates free support from Sandia laboratory technicians

2) Local Educational and Technical Resources

- Central New Mexico Small Business Development Center – grassroots economic development organization providing assistance to owners of small businesses and to individuals considering starting a business that offers no-cost, one-on-one business consulting and low-cost entrepreneurial training
- STEPS – provides one-on-one advice, coaching and connections to small business resources that serves all of Bernalillo County
- STC.UNM (formerly the Science and Technology Corporation at UNM) – University of New Mexico's technology transfer arm that works with investors, entrepreneurs, investors and other constituents to assist in the formation of start-up companies based on UNM technologies
- Technology Ventures Corporation – formed by Lockheed Martin to help start-up companies commercialize technology coming out of Sandia National Laboratories and actively recruits venture capital firms to locate in New Mexico and assists entrepreneurs with fundraising efforts
- The Bioscience Center – incubator for entrepreneurs and start-up companies in biotechnology and related fields to use for lab space and to develop their business
- New Mexico Technology Council – member-driven association of businesses, organizations and tech professionals working together to promote the growth and success of New Mexico's technology business sectors
- Sandia National Laboratories – offers access to the Labs' science, people and infrastructure with a focus on emerging technologies that support Sandia's mission for the US Department of Energy and National Nuclear Security Administration to bring new technologies to the market
- Trep Center – satellite resource center at the city library for people to obtain information on starting a business, connect with other entrepreneurs, and learn about anything entrepreneurial that the innovation district has to offer
- Innovate ABQ – startup incubator and hub for research and innovation activities and programs at the core of Innovation Central, Albuquerque's new high-tech research and business district
- ABQid – non-profit that develops, implements, and promotes support activities for entrepreneurial community, and provides mentorship and business development strategy

In recent years, the city of Albuquerque has focused efforts and resources to foster an "innovation economy" and support entrepreneurs. These efforts include accelerator programs, resource centers, grants and matching funds.

As mentioned in Section 1.2, the Association of Public and Land-grant Universities (APLU) designated the University of New Mexico as an Innovation and Economic Prosperity (IEP) University in 2015. The designation acknowledges UNM as a leader in working with its state and regional public and private sector partners to support economic development through a variety of activities, including innovation and entrepreneurship, technology transfer, talent and workforce development, and community development.

While Albuquerque is not yet considered a start-up hub similar to a city like Austin, it does offer a wealth of resources to entrepreneurs. The region's recent investments in strengthening its business environment will begin to manifest itself. Attracting large-scale industrial business can create a business-to-business supportive market locally, and the programs and labs should help develop this market, particularly in technology.

G. Identify average employment number per site in target industries.

In addition to growing a local business-to-business market, attracting industrial business to the AV corridor will create hundreds – or even thousands – of new jobs. The Tempur-Pedic facility on Atrisco Vista Blvd created 150 new jobs, 80% of which were filled with local talent. Industry standards typically indicate about one new job per 500 SF of industrial manufacturing space and one new job per 300 SF of

retail and office space. However, these numbers can fluctuate based on the specific business and operations. As the tables below outline, manufacturing and warehouse/distribution are likely to be much larger facilities, but create far fewer jobs per SF.

Table 24. Manufacturing Jobs per Site

Company	Year	City	Space	Jobs	SF per Job
Tempur-Pedic	2007	Albuquerque	750,000 SF	150	5,000
Food byproduct processing*	2013	Albuquerque	170,000 SF	100	1,700
Renewable energy products*	2013	Albuquerque	200,000 SF	400	500
Average					~2,400
**Sample projects that did not develop*					
Source: City Economic Development Websites					

Table 25. Warehouse/Distribution Jobs per Site

Company	Year	City	Space	Jobs	SF per Job
Retail warehouse and distribution*	2005	Albuquerque	1,000,000 SF	600	1,666
Shamrock Foods	2007	Albuquerque	180,000 SF	175	1,028
Average					~1,350
**Sample projects that did not develop*					
Source: City Economic Development Websites					

Table 26. Call/Server/Back Office Center Jobs per Site

Company	Year	City	Space	Jobs	SF per Job
Apogee Retail, LLC	2014	El Paso	25,000 SF	100*	250
VXI Global Solutions	2014	Tucson	31,000 SF	200	155
Average					~200
**Sample projects that did not develop*					
Source: City Economic Development Websites					

While the tables above provide estimates of gross square feet per employee, building configurations and operations vary widely. Experience in the area (based on Tempur-Pedic and Shamrock Foods) indicates that 150 to 175 employees per 50-acre site is an appropriate estimate of employment density for manufacturing and distribution facilities.

H. Identify other MSA competing for target industries.

As referenced earlier in the report, the benchmark cities were identified based on their similarities in population and geography, transportation access and university and educational resources. Additionally, these cities are seeking to grow similar local industry clusters as Albuquerque, placing them in direct competition with Albuquerque to attract business.

The table below depicts exactly where Albuquerque and each benchmark city's industry clusters overlap. It is important to note that not identifying an industry cluster does not preclude a city from recruiting businesses in those industries. In fact, given the recent economic downturn and slow industrial national growth, cities will generally seek to attract any company/industry they can as a vehicle to jumpstart their economy, create jobs and add tax revenue. The "X" in Table 27 indicates industries each city has publicly targeted, according to local government websites.

Table 27. Industry Clusters Among Benchmark Cities

	ABQ	Austin	Colorado Springs	El Paso	Oklahoma City	Salt Lake City	Tucson
Aerospace & Aviation	X		X		X	X	X
Solar	X						

Energy	X	X		X	X	X	
Manufacturing		X	X	X		X	X
Biosciences/Tech		X	X	X	X	X	X
Technology/IT	X	X	X	X		X	X
Data Centers				X			
Cust. Support Centers		X	X				
Distr., Transp., Logistics					X	X	X
Optics	X						X
Source: City Economic Development Websites							

As Table 27 indicates, Life Sciences/Tech and Technology/IT are particularly popular industry clusters among benchmark cities, as well as Aerospace/Aviation, Energy, and Manufacturing. Although this data should not discourage Albuquerque from pursuing the target industries that fit best in the AV corridor and into the city economy, it should be aware of the demand these industries create among peer cities.

I. Identify economic incentives that other areas have used for target industries

This section will outline the following:

- *State and City incentives.*
- *Gaps in incentive programs.*
- *Competitive advantages with regard to progressive state or city incentives in NM/ABQ.*

One way Albuquerque can differentiate itself in trying to attract development is through attractive state and local economic incentives. A summary of New Mexico / Albuquerque state and local incentives as well as its peer cities and states is outlined below:

1. State and City Incentives[11]

a) New Mexico / Albuquerque

- NM Deal Closing Fund: $50m
- High Wage Jobs Tax Credit
  - Tax credits equal to 10% of the combined salary and benefits package for the year in which the job is created, and for the 4 qualifying periods following to companies that hire employees at $40K+ in rural areas and $60K+ in urban areas
- Manufacture's Investment Tax Credit
  - Tax credit of 5.125% of the value of qualified equipment and other property used in operations. The credit can be applied against compensating, gross receipts or withholding tax up to 85% of the total
- Rural Jobs Tax Credit
  - $1,000 credit for each qualifying job the employer creates, for four consecutive years in communities of <15,000 residents and two consecutive years in non-MSA communities of >15,000 residents
- Technology Jobs Tax Credit
  - A 5% basic (an additional 5% credit also exists) credit of the qualified expenditures on qualified research at a qualified facility (credit amount doubles in rural New Mexico)
- Job Training Incentive Program
  - Provides classroom and on-the-job training paying from 50-75% (depending on job skill level, pay scale, location) of employee training costs and wages for an expanding or relocating business for up to 6 months
- Single Sales Factor for Manufacturers

[11] All data related to benchmark cities remains the same as the September 2014 PDV Report

        - Five year phased-in election for manufacturers to utilize a single sales factor income apportionment methodology
    - Corporate Income Tax Reduction
        - Reduces top corporate tax rate from 7.6% to 5.9% over five years
    - Industrial Revenue Bonds
        - Communities can issue industrial revenue bonds (IRBs) to exempt a substantial portion of a company's property taxes on land, buildings and equipment – the amount of the exemption varies by community
        - IRBs also provide a complete exemption for compensating taxes on equipment, generating ~6% savings
    - Alternative Energy Product Manufacturer's Tax Credit
        - Tax credit of up to 5% of capital expenses for qualifying alternative energy manufacturers
        - Credit can be applied against gross receipts, compensating, withholding tax and may be carried forward for up to 5 years
    - Small Business R&D Tax Credit
        - Businesses in which R&D is at least 20% of expenditures can take an exemption from the state's portion of gross receipts and compensating taxes and a credit to offset withholding taxes for a period of 3 years
    - Angel Investment Tax Credit
        - An investor can claim 25% credit of qualifying investment up to $25,000 for up to 2 investments per year and invest in the same business for 3 years
    - Aircraft Manufacturing / Maintenance Tax Deduction
        - Gross receipt tax exemption to an aircraft manufacturer selling a plane
        - Deduction from gross receipts tax for maintaining, refurbishing or modifying commercial or military aircraft
    - Film Production and Investment Loans
        - 25% tax rebate on production expenditures subject to taxation by the state

b) Arizona/Tucson

- AZ Deal Closing Fund: $25m
- Qualified Facility Tax Credit
    - Provides a refundable Arizona income tax credit to taxpayers who are expanding or locating a Qualified Facility (corporate headquarters, commercial research and manufacturing) in AZ
- Computer Data Center Program
    - Provides a Transaction Privilege Tax (TPT) and Use Tax exemptions at the state, county and local levels for up to 20 years on qualifying purchases of CDC equipment
- Quality Jobs Tax Credit
    - Provides tax credits to employers creating a minimum number of net new quality jobs and making a capital investment in AZ
    - Offers up to $9k of AZ income or premium tax credits spread over a 3-year period for each net new quality job
- Foreign-Trade Zones
    - Federally-approved FTZ companies receive a permanent tax reduction up to 72.9%
- Military Rescue Zones
    - Manufacturers, assemblers, fabricators of aviation or aerospace products / services in these zones qualify for property tax reductions up to 75% for five years, state income tax credits up to $10k for each new qualified employee and certain exemptions from the sales tax
- Renewable Energy Tax Incentive Program

        - Up to 10% refundable income tax credit and reduction on real and personal property taxes up to 73.7% for solar, wind, geothermal, other renewable energy companies that expand or relocate in AZ
    - Arizona Job Training Program
        - Provides qualified employers cash assistance of up to $8k per employee in rural areas and up to $5k per in urban areas
        - Funding for this program is scheduled to terminate at the end of 2015
    - Small Business Capital Investment Tax Credit Program
        - Up to 35% income tax credit on investment over 3-year period for investors who make capital investments in small businesses certified by the AZ Commerce Authority
    - Research and Development Income Tax Credit
        - Refundable and non-refundable income tax credits for investments in R&D activities – tax credits range from 24% to 34%
    - Arizona Innovation Accelerator Fund
        - $18.2m loan participation program to stimulate financing to small businesses and manufacturers
    - Commercial/Industrial Solar Tax Credit
        - Businesses installing a solar energy device at an AZ facility may be eligible for an income tax credit of up to $50k per year
    - Government Property Lease Excise Tax (GPLET)
        - Negotiation with government agencies to remove business obligation to pay property taxes and instead negotiates an excise tax and lease rate
    - Primary Jobs Incentives
        - Electrical, plumbing, mechanical, grading permit and site review permit fees waived and up to 100% construction sales tax allocated to job training, off site, public infrastructure improvements and/or impact fee offsets for target industries creating 25+ new primary, non-retail jobs at required salary rate, invest $5m in facilities and pay 75% of employee health costs
    - Reduction in State Corporate Income Tax Rate
        - Corporate income tax rate decreasing from 6.97% to below 4.9% by 2017
    - Impact Fee Deferral
        - Impact fees for roads, parks, and public facilities may be deferred until the certificate of occupancy is received in exchanged for a negotiated contribution to the City Housing Trust Fund
    - "Sales Factor" Change
        - Allows companies to calculate corporate-income taxes based solely on in-state sales if they made an investment of $1 billion or more in a new project

c) Texas/Austin/El Paso

- TX Deal Closing Fund: $140m
- Industrial Revenue Bonds
    - Gives public entities the authority to form Industrial Development Corporations (IDC) that can issue bonds to finance land, depreciable property, inventory, raw materials, R&D costs and job training
    - Debt service paid by business under the lease terms
- Skills Development Fund
    - Assists community and technical colleges to finance customized job training
- Skills for Small Business Program
    - Funds tuition fees up to certain maximums for new and incumbent employees toward job training for companies with less than 100 employees
- TX Enterprise Zones
    - Zones based on poverty criteria outlined by US Department of Commerce

        - State incentives include a refund of state sales and use taxes paid at the qualified business site during designation period – refunds dependent on size of capital investment
    - Defense Economic Readjustment Zone Program
        - Encourages business development in areas impacted by defense base closures
        - Provides refund of state sales and use taxes paid on building materials, machinery and equipment, labor costs
    - TX Enterprise Fund
        - Flexible fund allocated by state to provide financial resources to help strengthen the state's economy
        - Capital investment, job creation, wages generated, financial strength of applicant, business history, industry sector all considered as part of application
    - Emerging Technology Fund (ETF)
        - Financial support from the state to expedite the development and commercialization of new technologies
    - Texas Product / Business Fund
        - Provides financing to existing companies that manufacture products or do business within the state
        - Direct, asset-based loans with a variable interest rate tied to LIBOR
    - Texas Capital Fund
        - Financial support to promote growth in rural non-entitlement areas generally defined as cities with <50,000 residents
    - Texas Leverage Fund
        - Allows communities to leverage future sales tax revenues to support job creation and retention, by providing financing to local businesses for industry expansion or recruitment, industrial parks establishment, community project financing
    - Solar Energy Franchise Tax Exemption
        - Corporation in TX engaged solely in manufacturing, selling, or installing solar energy devices exempted from franchise tax
    - R&D Tax Credit
        - Companies engaged in qualified research activities in TX may choose between accepting a sales tax exemption or a franchise tax credit for materials, software, and equipment used for R&D
    - Relocation Expense Deduction
        - Companies may deduct from apportioned margin relocation costs incurred in relocating their main office or other principal place of business to TX from another state
    - Renewable Energy Franchise Tax Deductions
        - Taxable entity may deduct from its apportioned margin 10% of the amortized cost of a solar energy device, wind energy, or for the equipment associated with a clean coal project
    - Sales and Use Tax Exemptions may apply to:
        - Manufacturing Machinery and Equipment
        - Natural Gas and Electricity
        - Data Centers
        - Telecom, Internet & Cable TV
        - R&D
        - Companies that owned abated property
        - TX Moving Image Industry

d) Colorado/Colorado Springs

- Job Growth Incentive Tax Program

        - Performance based job creation program which provides a state income tax credit to businesses undertaking job creation project that would not occur in CO without this program and have met certain requirements
    - Strategic Fund
        - Provides a cash incentive commitment to businesses that have met certain requirements
        - Businesses may receive funding if it creates net new full-time permanent jobs in CO that are maintained for at least one year
    - Business Loan Funds
        - Supports economic expansion to rural areas
    - Economic Development Commission Funds
        - Assists with existing business expansions and new company relocations
    - Colorado Venture Capital Authority
        - $50m for seed- and early-stage capital investments in CO businesses
    - Advanced Industries Accelerator Programs
        - Various financial and grant programs aimed at support statewide advanced industries, including: advanced manufacturing, aerospace, bioscience, electronics, energy and natural resources, infrastructure engineering, technology and information
    - Aircraft Manufacturer New Employee Credit
        - Qualified companies can earn state income tax credit of $1,200 per new employee
    - Biotechnology Sales and Use Tax Refund
        - Taxpayer-friendly means to recover the sales and use taxes paid in preceding year on equipment and supplies purchased to conduct biotech R&D
    - On-the-Job and Customized Training
        - Provides training assistance for the expansion of existing companies and the development of new firms, or for companies undergoing major technological change (companies must be non-retail in nature to qualify)
    - Vocational Training Funding
        - Tax credit of 10% of employer investment in a qualified school-to-work program
    - Local Sales Tax Exemptions for Qualifying Companies
        - Construction materials: 50% rebate on city's 2% general fund portion
        - Business personal property: 50% rebate on city's 2% general fund portion (10 new jobs – 4 year agreement; 100 new jobs – 10 year agreement; 500 new jobs – 15 year agreement)
        - Alternative rates of tax on machinery and equipment based on amount of equipment purchased

e) Oklahoma/Oklahoma City

- OK Deal Closing Fund: $5m
- Quality Jobs Program
    - Quarterly cash payments that does not exceed 5% of newly created gross taxable payroll to qualifying companies
- Small Employer Quality Jobs Program
    - Annual cash payments for up to 5% of new taxable payroll for up to 7 years for qualifying companies
- 21st Century Quality Jobs Program
    - Pays business cash back, up to 10% of payroll for up to 10 years for the creation of 10 jobs with high average wage
- Customized Industrial Training
    - Reimburses many, if not all, of the costs associated with employee start up training for firms expanding or relocating to OK
- Technological Assistance

        - Technological Extension Program delivers modernization services to small and medium-sized manufacturing firms
    - Five Year Ad Valorem Tax Exemption
        - Exemption for new, expanded or acquired manufacturing, R&D or specific computer/data processing service facilities as well as real estate, machinery and equipment used directly in the manufacturing process.
        - Requires minimum capital investment of $250k
    - Oklahoma Strategic Investment Program (SIP)
        - Discretionary incentive fund designed to help companies looking to expand or relocate to Oklahoma City – city version of the Quality Jobs Program
    - Enterprise and Foreign Trade Zones
    - Small Business Assistance Loan Program
        - Loans up to $100k at competitive rates and flexible terms to be used for acquisition, construction and renovation, purchase of machinery and equipment, inventory, and working capital
    - Enterprise Community Revolving Loan Fund
        - Provides loans of up to $100k to assist small business within the Oklahoma City Neighborhood Revitalization Strategy Area

f) Utah/Salt Lake City

- Economic Development Tax Increment Financing (EDTIF)
    - Assists relocation and expansion
    - Post-performance tax credits based on new state revenues
- Industrial Assistance Fund (IAF)
    - Cash awards for post-performance per job or capital investment
- Industrial Development Bonds
- Job Training Programs
    - Custom Fit Trainings
    - Incumbent Worker Training
    - Short-Term Intensive Training
- Foreign Trade Zones
- Salt Lake City Economic Development Loan Fund
    - Low-interest loans available to local businesses

2. Gaps in Incentive Programs

While New Mexico / Albuquerque offer many similar incentives as well as their own unique incentives, there also exist some gaps in New Mexico / Albuquerque's incentive programs compared to its benchmarks, including:

a) Various Small Business Programs
- Small Business Assistance Loans (OK)
- Venture Capital Authority (CO)
- Innovation Accelerator Fund (AZ)
- Small Business Capital Investment Tax Credit Program (AZ)
- NM/ABQ small business programs (R&D and Angel Investment Tax Credits) provide some incentives in these areas

b) Programs Targeting Key Industries
- Computer Data Center Program (AZ)
- Sales and Use Tax Exemptions for Targeted Industries (TX)
- Property Tax Reductions for Targeted Industry Products (AZ)
- Advanced Industries Accelerator Programs (CO)
- New Employee Credits for Targeted Industries (CO)

- NM/ABQ incentives geared to manufacturers

c) Fewer Post-Performance Incentives
   - EDTIF and IAF link incentives to performance (UT)

If financially feasible, New Mexico / Albuquerque should work to close these gaps so it can market their incentives as the most competitive in the southwest region. Since 2014, New Mexico increased appropriations to the LEDA fund from $15m to $50m. This increase in deal closing funds is a step in the right direction. In the increasingly intense economic development race, closing these gaps is important for attracting business and developing the corridor.

3. Competitive advantages with regard to progressive state or city incentives in NM/ABQ

In marketing their own incentive program, New Mexico / Albuquerque can highlight the areas that do differentiate their programs. The Job Training Incentive Program, as previously referenced in this report as well is the improved state tax structure and the highly-regarded film industry in Albuquerque represent three such examples of areas New Mexico / Albuquerque stand out compared to their peers, as outlined in more detail below:

a) The Job Training Incentive Program is widely regarded as one of the most effective in the country

b) In 2013, the state legislature significantly reduced effective tax rates for businesses
   - Single sales factor for manufacturers
   - After statutory credits are applied, NM maintains the lowest effective tax rate compared to surrounding / benchmark states
     - Wage threshold for the high-wage tax credit set to increase in 2015, which may undermine the competitive advantage

c) The film industry has been a recent boom locally and can be leveraged in attracting new business
   - Film Production and Tax Rebates and Investment Loans

J. Assess facilities and educational resources available for employee continual training (e.g., on-site training, vocational schools and universities nearest to the site, or within the MSA)

Another area Albuquerque can continue to differentiate itself as an industrial business destination is through its educational resources and employee training. The JTIP has been covered already as a highly effective job training offering. However, additional educational resources exist that should appeal to industrial prospects. As outlined in section 2.2., Albuquerque is home to over 30 educational and training providers, including:

- Two-year technical and community colleges
  - Workforce Training Center, CNM
  - Southwestern Indian Polytechnic
  - Central New Mexico Community College
  - Carrington College
- Four-year or graduate universities
  - University of New Mexico (Main and Valencia Campuses)
  - Webster University
- Business and technical certificate programs

  - Albuquerque Career Institute
  - CompUSA Training
  - Culinary Business Academy
  - Global Knowledge Center
  - International Institute for Counter Terrorism
  - Workforce Innovative Training
  - Dona Ana Community College of NMSU
  - University of New Mexico (EMS Academy and Continuing Education)
  - American Century University

- Apprentice Programs

  - Carpentry (4), Electrical (7), Masonry (5), Plumbing/Pipefitting (4), Mechanical (3), Other (9)

Thousands of people throughout the Albuquerque area have recently utilized available training resources and are now seeking to leverage the training into a new position or career. Among the nearly 5,000 job seekers currently in the Department of Workforce Solutions system, 2,500 have training in construction, administrative support, transportation and production – all areas related to target AV industries. Although it is not known what type of experience and training the Tempur-Pedic production workers had, they came from a similar pool (job seekers with experience) and have outperformed the Tempur-Pedic manager's expectations.

K. Using the information collected in the various Economic Development Analysis tasks, develop a conceptual frame work capable of quantifying development value, employment growth, incomes, tax benefits, and other direct economic impacts from the AV. Quantification of impacts will be based on assumptions of business (re)locations, net absorption, and other factors, but will illustrate the potential economic benefit of roadway

For the Atrisco Vista corridor, industrial development will create returns for the city, county, and state. While there are public infrastructure costs as well as other costs that are not all known, the returns can be estimated using current development in the area. In this case, the Tempur-Pedic site is used as a benchmark to estimate returns on industrial development. The subsequent analysis defines "return" as resulting new property taxes, sales, and income taxes.

Projections for industrial development use the same methodology as the PDV report, and are based on details of the Tempur-Pedic project in 2006 and resulting property values and jobs created. This 50-acre parcel had a value of approximately $40,000 in 2005. When the 750,000 square foot facility opened in 2007, the assessed value increased to $34.8 million, and Tempur-Pedic had 150 employees housed there. Based on this and other data sourced from public records, Table 28 shows the potential property tax revenue from the facility as of the 2014 assessment. Table 29 estimates sales taxes derived from the discretionary income of employees at the facility.

The analysis shows that this size and type of facility could generate $425,000 per year in property taxes and about $140,000 per year in sales taxes for various units of government. Assuming an average New Mexico income tax rate of 4.0%, the state income tax generated by these employees would be approximately $300,000 per year. This is a total of $865,000 in new tax revenues per facility built.

If these revenue assumptions are applied across the 18 conceptual development sites represented by the 900 acres of developable industrial land along the AV corridor, a total of $7.7 million in property taxes, $2.5 million in sales taxes, and $5.4 million in personal income taxes could be generated per year at full build-out. Corporate income taxes would add to these potential public revenues, but are not addressed in this report.

Table 28: Potential Tempur-Pedic Property Taxes (2014)

Property Taxes	
Total Assessed Value	$35.7m
Net Taxable Value (1/3 of assessed)	$11.9m
Tax Rate	0.0358
Total Potential Property Tax	$425k
Source: Bernalillo County Tax Assessor Website	

Table 29: Breakdown of New Sales Tax Revenue per Site

Breakdown of Each New Site	2014
Average Salary, Hourly Employees	$50k
Total Employees	150
Estimated Total Annual Payroll	$7.5m
Discretionary Spending by HH Income	26%
Estimated Total Annual Discretionary Spending	$1.95m
Sales Tax Rate – New Mexico	5.125%
Total New Sales Tax – State of New Mexico	100k
Sales Tax Rate – Bernalillo County	1.125%
Total New Sales Tax – Bernalillo County	$20k
Sale Tax Rate – City of ABQ	0.937%
Total New Sales Tax – City of ABQ	$20k
Total New Sales Tax – All Jurisdictions	$140k
Source: Albuquerque Business Journal, Experian Research, Tempur-Pedic Interview	

In addition to recurring tax revenues per development opportunity, the state and region would also see a financial impact during construction of each facility. Also using the Tempur-Pedic facility construction as a model for future construction, one can estimate the revenue impacts based on the following assumptions:

- Cost of building and equipment: $100m
- Construction jobs: 1,243
- Construction payroll: $40m
- Construction schedule: 2 years

Each year of building construction, therefore, could create over 620 jobs (mostly temporary construction jobs) and $20 million in worker income. This additional income would yield about $5.2 million in discretionary income, resulting in approximately $374,000 in annual sales tax for New Mexico and local governments. State personal income tax from these workers could be estimated at $800,000 per year, aside from income taxes and NMGRT. Since the PDV report, sales tax has increased slightly for Bernalillo County and is updated in this analysis.

Again using the same approach as the PDV report, revenue streams can be projected over a 10-year period by assuming each Tempur-Pedic site is completed every two years. Table 30 estimates annual tax revenue in the first 10 years of a conceptual development scenario. It is important to note that this analysis relies on many assumptions – specifically that future site development will look like and have similar impacts as the Tempur-Pedic site development.

Table 30: Projected New Tax Revenue from Industrial Development

Year	Total New Facilities	Property Tax	Sales Tax (perm)	Sales Tax (temp)	Income Tax	New Revenues
1	0	$ -	$ -	$ 374,000	$ 800,000	$ 1,165,000

2	1	$	425,000	$	140,000	$	374,000	$	1,100,000	$	2,039,000
3	1	$	425,000	$	140,000	$	374,000	$	1,100,000	$	2,039,000
4	2	$	850,000	$	280,000	$	374,000	$	1,400,000	$	2,904,000
5	2	$	850,000	$	280,000	$	374,000	$	1,400,000	$	2,904,000
6	3	$	1,275,000	$	420,000	$	374,000	$	1,700,000	$	3,769,000
7	3	$	1,275,000	$	420,000	$	374,000	$	1,700,000	$	3,769,000
8	4	$	1,700,000	$	560,000	$	374,000	$	2,000,000	$	4,634,000
9	4	$	1,700,000	$	560,000	$	374,000	$	2,000,000	$	4,634,000
10	5	$	2,125,000	$	700,000	$	374,000	$	2,300,000	$	5,499,000

Notes: Analysis does not take into account inflation or salary increases and assumes facility construction is performed one at a time; Source: PB Analysis

In conclusion, while there are significant assumptions being made in this analysis, there are substantial potential returns in full development of industrial properties along the corridor. When excluding construction and temporary jobs, every new industrial site comparable to Tempur-Pedic that is built, the region will realize $865,000 in new tax revenues per year.