ANALYSIS OF INDUSTRIAL LAND USE AND ZONING IN AUSTIN, TEXAS

Prepared by the City of Austin's

Planning and Zoning Department



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Table of Contents

Introduction	3
The Austin Context	4
Environmental Justice, Racial Segregation, and the 1928 City Plan	4
Research and Development	6
Annexation of Industrial Property	7
National Trends and Best Practices in Sustainable Industrial Development	7
San Francisco, California	8
Philadelphia, Pennsylvania	9
Los Angeles, California	10
Portland, Oregon	12
Current State of Austin's Industrial-Zoned Land	13
Industrial Land Uses	16
Property Values	17
Zoning Cases	17
The Imagine Austin Comprehensive Plan	20
Geographic Distribution & Transport	20
Vacancies and Undeveloped Land	20
Building and Annexation Over Time	20
Workforce Considerations	21
Workforce Master Plan	21
Job Totals for Austin's Industrial-Zoned Land	23
An Industrial Cluster Typology for Austin	24
Key Considerations	26
Conclusion	28
Trends	28

Recommendations	
Appendix I: Maps	
Base Zoning Districts	
Industrial Clusters – Land Use	
Industrial Zoning District Cases	
Industrial Clusters - Loss of Industrial Zoning	
Imagine Austin Jobs Centers	
Freight Transport Network	
Developed & Vacant Industrial Zoning	
Industrial-Zoned Properties Decade Annexed	
Industrial-Zoned Properties Year Structure Built	
2001 Zoning Layer with 2002 US Census Data	
2018 Zoning Layer with 2017 US Census Data	
Industrial Zoning Study: Case Study Area	
Appendix II: Industrial Cluster Case Studies	
North Research Boulevard	
North Burnet/Gateway	
Tech Ridge	
US 290 East	
Near East	
US 183	
St Elmo	
Ben White	

Introduction

Austin, like many growing cities across the country, is experiencing pressure to convert industrially used and zoned land to mixed-use commercial and residential redevelopment and development. *Imagine Austin* (2012), the City's comprehensive plan, envisions "a city of complete communities...defined by amenities, transportation, services, and opportunities that fulfill all Austinites' material, social, and economic needs." One component of a complete community is employment opportunities for residents of all skill and education levels. In 2017 there were a total of 624,417 employees citywide. In the city's industrial-zoned properties, there were 75,244 employees, representing 12% of the citywide total.¹

In 2013, the American Planning Association (APA) published *Sustainable Urban Industrial Development (PAS Report* 577) to assist planners and policy makers with strategies to promote sustainable urban development while safeguarding job-producing industrial land. *PAS Report* 577 concludes that industrial land often provides manufacturing jobs that are good for the economy. These jobs have high rates of unionization and STEM (science, technology, engineering, and math) jobs with higher than average salaries. Cities like Los Angeles found that when industrial businesses and jobs leave the city, it not only redirects economic value and revenues to other cities, it potentially leaves residents with fewer and often lower paying employment opportunities.²

This internal study grew out of the Planning and Zoning Department's (PAZ) observation of an increase in zoning cases requesting changes from industrial zoning to commercial-mixed-use or multi-family zoning in south and southeast Austin. This sparked internal conversations as to whether this was a localized or citywide occurrence. The result of these discussions was to conduct this study.

This report provides a deeper analysis into the Austin context, current trends and best practices, the current state of industrial land, and future workforce and affordability considerations. Based on the best practices research and GIS analysis, staff identified trends affecting industrial clusters across Austin and developed a number of recommendations and considerations for decision makers. Most

¹ U.S. Census Bureau. (2019). LEHD Origin-Destination Employment Statistics (2002-2017). Washington, DC: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program. Retrieved on November 29, 2019 at https://onthemap.ces.census.gov

² Department of City Planning and the Community Redevelopment Agency of the City of Los Angeles. (2007). Los Angeles' Industrial Land: Sustaining ad Dynamic City Economy. Retrieved November 7, 2019, from https://planning.lacity.org/odocument/f6a208f7-e0d3-4896-a6dc-8cec5fa97d86/attachment_b.pdf

notably the identification of cluster typologies and their associated policy implications. The findings and recommendations can be found starting on page 24.

The report is organized into six sections:

- **1.** The Austin Context: review types of industrial uses in Austin and the policies and workforce demographics that have shaped these uses.
- **2.** National Trends and Best Practices in Sustainable Industrial Development: review national best practices and peer city strategies for preserving and strengthening industrial land uses.
- **3.** Current State of Austin's Industrially Zoned Land: review trends in industrial land use such as acreage over time, geographic distribution, vacancy rates, and zoning cases.
- **4.** Workforce Considerations: review the Travis County Workforce Master Plan and job totals Austin's Industrial Zoned Land.
- **5.** An Industrial Cluster Typology for Austin: identify industrial clusters to determine if they are currently providing industrial jobs, appropriate for more industrial development, or transitioning to mixed-use commercial and residential redevelopment.
- 6. Conclusion: summarizes and concludes report findings.

The Austin Context

Prior to World War II, industrial facilities were often woven into the urban core of cities in multi-story buildings located along or near major shipping routes such as rivers, canals, ports, and rail lines. As cities became increasingly designed around the automobile and mass production, the industrial character of buildings began to shift to large footprints surrounded by parking lots adjacent to major roadways. Like many Sunbelt cities, Austin had modest amounts of industrial development along rail lines, but experienced substantial post-war growth that shifted industrial tracts to highways and major roadways. Austin's industrial land use patterns vary from many cities because of its history of policy-driven racial segregation beginning in the late 1920s and its concerted economic development effort to expand the city's economic base with advanced technology manufacturing beginning in the late 1950s and early 1960s. The following sections summarize the policy trends that led to the industrial zoning conditions on the ground today.

Environmental Justice, Racial Segregation, and the 1928 City Plan

Austin's discriminatory 1928 comprehensive plan, *A City Plan for Austin, Texas*, concentrated communities of color and "undesirable industry" east of present-day IH-35, formerly East Avenue, through the establishment of the "Negro District". This district was the only part of the city where people of color could access schools and other public services and it was the area with the fewest

zoning restrictions. The zoning plan, established in 1931, permitted industrial and "unrestricted" uses in East Austin, intermixed with the residences of Austin's communities of color. The segregation and concentration of people and industrial uses was further perpetuated by redlining. This was the practice of denying government-backed mortgages in districts defined as "hazardous," which closely followed the boundaries of the "Negro District". This discrimination was further exacerbated by a 1986 switch from "cumulative zoning" (where any land use would be allowed up to the one zoned – with industrial being the highest) to "restrictive zoning". This led to industrial facilities being the only compliant use on industrially zoned land, which made it difficult for owners of residential uses on industrial zoned land to secure home equity loans, which made it more difficult to maintain and sell residential property in East Austin, furthering disinvestment.³

In 1997, East Austin activist organizations like PODER and El Pueblo lobbied city leaders to establish the East Austin Overlay district which:

- Allowed land to be rezoned consistent with its existing use,
- Minimized incompatible uses, and
- Provided notification to residents whenever a new use is proposed that is more intense than a commercial one.

Concurrent with the adoption of the East Austin Overlay, was the establishment of the city's Neighborhood Planning Process. The first City of Austin initiated of these plans gave East Austin residents a stronger voice in zoning decisions for their neighborhoods. As the rezoning associated with planning processes (through the Neighborhood Plan Combining Districts [NP]) were adopted by Council they removed the planning areas from the regulatory control of the East Austin Overlay and rezoned of many industrial-zoned sites to non-industrial zones. While this new focus on smart growth in East Austin came with cleaning up industrial sites, it also came with development pressure that threatened to displace families and businesses. Industrial uses are commonly located on large underdeveloped parcels because of the operational requirements, which presented a greater opportunity for large scale infill redevelopment projects.

³ Walsh, E., & Sletto, B. (2007). East Austin Environmental Justice History. East Austin Environmental Justice Project: A Community Partnership.



Figure 1 - Racial Concentration and Redlining in the City of Austin (1934)

Research and Development

Historically, Austin's economy had two primary sectors: government and education. The Austin History Center cites the establishment of the University of Texas' Balcones Research Center (now named the J.J. Pickle Research Campus) at the location of a former federal World War II magnesium plant northwest of Austin as the original site of Austin's tech boom. In the late 1950's business leaders began a deliberate economic development effort to expand the city's economic base with advanced technology manufacturing as a way to expand the city's economic base and leverage the science research programs at the University of Texas. A recruiting effort began to specifically target manufacturing companies of electrical and scientific equipment. One of the first to arrive was Tracor in 1962 which was followed by IBM in 1967, Texas Instruments in 1969, Motorola in 1974, the launch of UT's IC² Institute in 1977, Microelectronics and Computer Consortium (MCC) in 1982, and Dell in 1984. Motorola opened facilities near U.S. 183/Ed Bluestein in the mid-1970s, as well as in Oak Hill Area in 1986. 3M opened a 220,000 sq./ft. manufacturing plant on U.S. 183/Research Boulevard in 1982. As a side note, the former 3M facility at 620 and 2222 was labs and offices.

Annexation of Industrial Property

Like many cities, Austin gained industrial tracts that were formerly outside the city as the city grew and properties were annexed. The *Austin Tomorrow Comprehensive Plan* (1979) and *Imagine Austin* encouraged annexation of industrial land on the periphery of the city. In *Austin Tomorrow*, the policy guidance for annexation states that, "there is little difference between industry and commerce located within or on the periphery of the city and they should be included in the *ad valorum* tax base."⁴

National Trends and Best Practices in Sustainable Industrial Development

Like Austin, many US cities are experiencing pressure to convert industrial land to mixed-use commercial and residential redevelopment. Some scholars argue that this is because of a prevailing trend towards smart growth development. Smart growth is an urban planning framework that encourages walkable mixed-use development to limit sprawl and revitalize cities. Leigh and Hoelzel argue that the smart growth framework narrowly defines uses that are seen as sustainable and commonly overlooks the value of industrial uses.⁵ The authors conducted a comprehensive study of cities that initiated industrial land preservation policies and found significant amounts of urban deindustrialization. Academic literature also describes a link between gentrification and industrial displacement. Lester and Hartley conducted a quantitative analysis of 20 large cities and find that residential gentrification plays a catalytic role in speeding up the loss of manufacturing jobs relative to non-gentrifying areas.⁶

Efforts to reduce industrial conversion, such as explicit local policies to preserve industrial land and jobs while also pursuing smart growth, illustrate how challenging it is to attract new manufacturers and prevent further industrial decline in urban areas. Pursuing smart growth and sustainable urban industrial development requires approaches that explicitly safeguard productive industrial land and discourage industrial sprawl.

⁴ City of Austin, Texas. (1977). Austin Tomorrow comprehensive plan. Austin, TX: Department of Planning.

⁵ Leigh, N. G., & Hoelzel, N. Z. (2012). Smart growth's blind side: Sustainable cities need productive urban industrial land. Journal of the American Planning Association, 78(1), 87-103.

⁶ Lester, T. W., & Hartley, D. A. (2014). The long term employment impacts of gentrification in the 1990s. Regional Science and Urban Economics, 45, 80-89.

As Austin considers future rezoning of industrial land to nonindustrial uses, these case studies from San Francisco, Philadelphia, Los Angeles, and Portland present current and forthcoming policies that balance job preservation and limit sprawl.

San Francisco, California

San Francisco has a long history of attempting to preserve industrial land, while also encouraging expansion of office space for growing economic sectors such as technology and professional services.

The amount of industrial land in San Francisco shrank from 14% of its land area to 4.5% between 1948 and 2012.⁷ In 2004 the city recognized that more restrictive zoning was required to protect its industrial sector and grow middle-income jobs. The city created Production, Distribution and Repair (PDR) districts, which only allow office, retail, hotel and other nonindustrial development when ancillary to PDR uses. Over the years, the planning department experienced challenges enforcing regulations due to tech and professional services firms allegedly illegally occupying buildings zoned for manufacturing, automotive repair, warehousing, and the arts.⁸ Office tenants can pay a considerable amount more than PDR tenants so the policy requires additional oversight to make sure brokers and landlords lease to compliant tenants.

In 2014, San Francisco reformed the strict requirements allowing vacant and marginally occupied buildings in PDR districts to be redeveloped into properties that may contain up to 66% non-PDR commercial space. The ratio is designed to create a cross-subsidy to underwrite the manufacturing space through a bonus for additional office development beyond what is currently allowed. Construction of new manufacturing space is generally not financially feasible without subsidy, while new office development can be highly profitable, especially in a real estate and job market like San Francisco. A City staff report acknowledges the strong growth of the PDR sector but attributed some of that growth to the demand in services created by the growth of the technology and tourism sectors.⁹ This reform was met with considerable opposition from PDR tenants and others fearing gentrification. Opponents felt that this amendment to PDR zoning would lead to further industrial displacement and drive up prices.

⁷ Lester, T. W., & Hartley, D. A. (2014). The long term employment impacts of gentrification in the 1990s. Regional Science and Urban Economics, 45, 80-89.

⁸ Dineen, J. K. (2016, March 14). Offices intruding on SF space zoned for industrial use. Retrieved November 7, 2019, from https://www.sfchronicle.com/bayarea/article/Offices-intruding-on-SF-space-zoned-for-6889809.php

⁹ City of San Francisco, Planning Commission. March 13th 2014. Executive Summary of Planning Code Text Changes (document # 2013.1896T) http://commissions.sfplanning.org/cpcpackets/2013.1896T).

http://charlottechamber.com/emerging-industry/a-robust-manufacturing-region/ (Accessed November 7, 2019).

San Francisco is an extreme case of industrial land loss, but Austin can learn from San Francisco's long history of trial and error with PDR zoning. Specifically, the importance of oversight if zoning is used to preserve industrial land and the potential use of a cross-subsidy model to encourage the construction or preservation of manufacturing uses in a desirable market.

Philadelphia, Pennsylvania

Industrial land in Philadelphia represents 21% of the total land area or 17,800 acres. In 2010, the City of Philadelphia completed a comprehensive analysis of existing industrial land with the goals of expanding and retaining industry, protecting employment opportunities, and rationalizing the City's supply of industrially-zoned land to meet the needs of Philadelphia businesses.¹⁰ The conclusions of the study informed the city's comprehensive land development code rewrite and provided additional strategies for retaining and expanding industry.

The report recommended three new policy typologies based on land use and site characteristics that could inform future zoning, planning, capital investments, and economic development investments. These typologies include:

- Industrial Protection Areas: intended for employment-rich industrial districts to remain industrial by prohibiting nonindustrial uses, coordinating capital and infrastructure to support long-term viability, and providing strong enforcement to disallow land uses inconsistent with industry.
- Industrial Intensification Areas: intended for areas that have potential to accommodate denser and more productive industry uses through zoning certainty, planned infrastructure improvements, and master planning to coordinate public and private sector investment.
- **Transitioning Areas:** intended for areas that are not suitable for continued industrial uses due to lack of adequate infrastructure or are adjacent to incompatible land uses such as residential communities. In these areas, it may be appropriate to rezone to other uses or industrial mixed-use that allows low-impact industrial uses to intermingle with commercial and residential.

In 2012, Philadelphia modified its zoning code to allow for zoning categories that matched the policy typologies. For transitioning areas, two new industrial mixed-use categories were permitted; however, the zones did not initially mandate a mixture of uses. In 2015, the Philadelphia City Council

¹⁰ Interface Studio, LLC. (2010). *An industrial land use and market strategy for the City of Philadelphia: Industrial Land Atlas* (Draft). Prepared for City of Philadelphia and Philadelphia Development Corporation. Retrieved November 6, 2019, from http://www.slideshare.net/ CityOf-Philadelphia/pimlus-atlas-final-september-2010

recognized the industrial mixed-use categories might encourage properties to completely convert to residential uses. Councilors revised the language to require new developments reserve a minimum floor area for industrial uses that is equal to at least 50% of the ground floor area of the project, or require non-residential uses and parking equal to at least 60% of the total ground floor area of all buildings on the lot.¹¹

As Austin continues to experience pressure to convert industrial land to nonindustrial uses, it could learn from Philadelphia by analyzing the land use and site characteristics of industrial-zoned properties to determine whether sites are currently providing jobs, located in an area ideal for more industrial development, or in areas that may be transitioning to mixed-use commercial and residential redevelopment.

Los Angeles, California

The Los Angeles metropolitan area is the largest manufacturing center in the country. Over half a million people are employed in the manufacturing sector—roughly one fifth of the city's workforce.¹² However, a mismatch exists between the industrial proportion of the workforce and the industrial proportion of land. Only 9% of Los Angeles' 469 square miles is currently zoned for industrial uses – and removing the land reserved for LAX and the Port of Los Angeles, the number shrinks to just under 6%.¹³

In 2007, the Department of City Planning and the Community Redevelopment Agency of the City of Los Angeles produced a memorandum on the status of industrial land to provide staff with short and long-term recommendations on how to best implement the city's adopted policies for preserving job producing areas. The industrial land was categorized into four policy typologies:

- **Employment Protection Areas**, defined as areas where industrial zoning should be maintained, and residential uses are not appropriate.
- Industrial Mixed-use Districts, defined as areas that should remain predominantly industrial districts, but which may support a limited amount of residential use.
- **Transition Districts**, defined as areas where the viability of industrial land has been greatly compromised by land conversion to non-industrial uses and thus this transition to other uses should be continued.

¹¹ City of Philadelphia, Philadelphia Code 14-700, 2018).

¹² Brown, S. S. D. (2019). Hybrid-industrial zoning: a case study in Downtown Los Angeles (Doctoral dissertation, Massachusetts Institute of Technology).

¹³ Ibid.

• **Correction Areas**, defined as areas where earlier land use decisions have resulted in inappropriate land use patterns and thus a change in zoning to correct existing land use conflicts should be encouraged.

One criticism of the memorandum was that it did not result in comprehensive plan updates, zoning code updates, or land use policy. Rather, it reaffirmed existing policy and directed planning staff how to handle applications for use conversion on a case-by-case basis which diminishes the strength of these policies.¹⁴

In October 2019, the city's Department of City Planning released new proposed zoning rules for its downtown. These proposed regulations are a part if the broader Downtown Community Plan or DTLA 2040 planning process and are expected to be adopted in late 2020. Among the proposed new zoning districts will include the city's first zoning tool to explicitly permit the colocation of industrial and residential uses: hybrid-industrial zoning. Unlike Philadelphia and San Francisco, Los Angeles will require that a certain amount of square footage of all new residential development in the hybrid-industrial zone be reserved for jobs-producing uses. Masters candidate, Sarah Brown, did a comprehensive analysis of the proposed zoning district to anticipate potential opportunities and challenges with the proposed code and concluded:

- Industrial mixed-use zones should consider requiring industrial space in new construction. By requiring, not just permitting, a mixing of uses, this can ensure that the tool delivers on its goal of job-retention and does not function as a de facto residential zoning change.
- Form, height, and design guidelines should not preclude certain types of industrial uses. This can help avoid the industrial conversion likely to accompany new residential development.
- Industrial mixed-use should synchronize land use tools with economic development programs. This is similar to Philadelphia's recommendation of industrial intensification, which requires more than zoning to encourage industrial expansion and redevelopment.
- When considering where to assign industrial mixed-use zones, planners should not just look backward at areas of highest transition, but also use risk indicators to proactively anticipate where protective measures may be needed most.

¹⁴ Ibid.

As Los Angeles and Austin face similar challenges associated with rapid growth, both cities struggle to stay ahead of regional trends accelerating the loss of industrially zoned and used sites which can lead to transactional, case-by-case decision making. With the expected adoption of DTLA2040, Los Angeles will be the first city to comprehensively require job producing uses as a percentage of all new residential development in hybrid-industrial zones. As Austin considers ways to encourage job producing uses, requiring industrial uses in transitioning areas may be an additional tool to consider. However, Brown cautions, such tools must be carefully calibrated with the needs of existing industrial uses in order to prevent industrial conversion—a trend that is presently affecting some of Austin's established industrial areas.

Portland, Oregon

According to Portland's 2004 *Citywide Industrial Land Supply*, Portland's industrial districts make up 15,500 acres, or roughly 17% of the city's total land area. In 1980, Portland adopted a new comprehensive plan that included a policy establishing industrial sanctuaries to encourage the growth and preservation of the city's manufacturing base. The industrial sanctuary policy was implemented by segregating industrial uses from nonindustrial ones. This was primarily accomplished through zoning regulations limiting the number and scale of nonindustrial land uses allowed within industrial districts. Despite the narrow allowance for nonindustrial uses in industrial areas like Central Eastside. By concentrating residential zoning to the major corridors of the industrial district, the areas maintained their industrial core while accommodating some residential development.

During the 1990s and early 2000s only 2% of Portland's industrial land was rezoned to nonindustrial districts, significantly less than other U.S. cities.¹⁵ Since 2001, Portland's industrial areas closest to the urban core, like Central Eastside, have become increasingly attractive to other uses like technology and professional offices.¹⁶

Portland's *Central City 2035 Concept Plan* and proposed updates to its comprehensive plan both contain amendments to the industrial sanctuary policy as it pertains to the city and specifically for Central City industrial areas (Central Eastside and Lower Albina Districts).

¹⁵ Leigh, N. G., & Hoelzel, N. Z. (2012). Smart growth's blind side: Sustainable cities need productive urban industrial land. Journal of the American Planning Association, 78(1), 87-103.

¹⁶ City of Portland. (2019, November 26). Portland's central eastside: An Industrial Sanctuary. [Blog post]. Retrieved from https://www.portlandoregon.gov/bps/article/491196

The proposed policies continue the city's approach of protecting industrial sanctuaries for industrial land uses, while recognizing that urban industrial districts may play a different role than other industrial districts located elsewhere in the city. These policies highlight opportunities to support a broader mix of employment generators and higher employment densities in these close-in industrial areas.

As Austin evaluates future industrial zoning policies, it could look to Portland as an example of a city that has successfully maintained most of its industrial land through its industrial sanctuary policy, while permitting mixed-use zoning along the main streets that run through industrial areas. Portland's recent changes to their policy also demonstrate a need to evaluate the highest and best use for industrial districts in the urban core – which may be suited for higher employment densities due to their strategic location.

Current State of Austin's Industrial-Zoned Land

This study looked at parcels with an industrial base zone (IP, LI, MI, R&D, W/LO), parcels with a reported general land use of industrial, and approved zoning cases that went to or from an industrial base zone. Industrial base zones include:

- IP Industrial Park: This zone is intended for a limited commercial service use, research and development use, administrative use, or manufacturing use that meets strict development and performance standards and is generally located on a large site or in a planned industrial center.
- LI Limited Industry: This zone is intended for a commercial service use or limited manufacturing use generally located on a moderately-sized site.
- **MI Major Industry:** This zone is intended for a commercial service use, research and development use, administrative use, or manufacturing use generally located on a large site planned for major industrial development.
- **R&D Research and Development**: This zone is intended for a research use located on a site with a campus-style design. An R&D district designation may be applied to testing services, research warehousing services, or research assembly services. An R&D district use may not include fabrication, processing, manufacturing, refining, or resource extraction.
- W/LO Warehouse/Limited Office: This zone is intended for an office or warehouse use for a building trade or other business that does not require a highly visible location or generate substantial volumes of heavy truck traffic that generates low or moderate vehicular trips, and that requires less access than a retail use.

Data used for the study included the following GIS layers:

- City of Austin's official GIS zoning layer
- Development Services Department internal land use layers (for 2018 and 2014)
- The city-maintained layers for zoning cases from the AMANDA permit database.

	Parcels	Area (Acres)	% of Total Area
Industrial Zoning Districts	2454	11657	6.6%
All Other Zoning Districts	212183	164434	93.4%

*2018 Austin Land Use & Zoning Data

As of 2018, there were 2,454 parcels in Austin's zoning jurisdiction that had an industrial base zone (IP, LI, MI, R&D, or W/LO). These parcels account for 6.6% of the zoned area. There majority of industrial-zoned parcels are zoned LI.

Base Zoning Districts in the appendix highlights (page 30) where the industrial-zoned properties are. For comparison, there were 11,579 acres of industrial-zoned property in 2001, accounting for 8.0% of zoned land. In the years since 2001, Austin has annexed 1,923 acres of industrial land but rezoned 1,846 acres from industrial to different zoning categories.

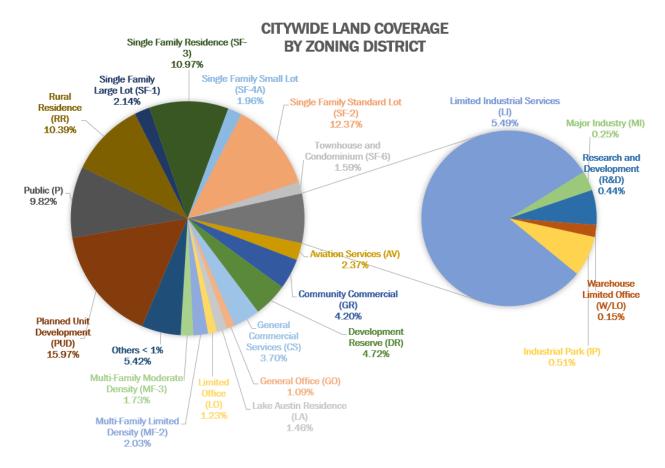


Figure 2 Citywide Land Coverage by Zoning District, *2018 Land Use & Zoning Data

Industrial Zones Districts Breakdown		
Zone	Parcels	Acres
IP - Industrial Park	132	744
LI - Limited Industrial Services	2176	9448
MI - Major Industry	50	435
R&D - Research and Development	12	767
W/LO - Warehouse Limited Office	84	263
Totals	2454	11657

*2018 Austin Land Use & Zoning Data

Reported land uses on industrial-zoned parcels varies greatly. By area, industrial uses account for 38% of the land in industrial-zoned parcels followed by undeveloped parcels (27%) and office uses (12%). Of the 2,454 industrial-zoned parcels, 750 are used as single-family residences, 692 for industrial uses, and 354 are undeveloped.

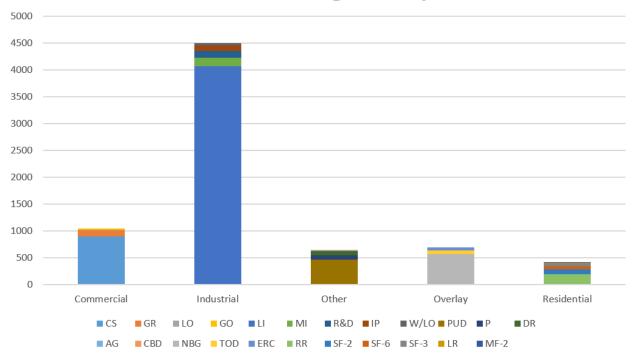
Industrial Zones Use Breakdown				
Land Use	Acres			
Industrial	4455			
Undeveloped	3027			
Office	1550			
Civic	666			
Commercial	648			
Parks/Open Space	567			
Resource Extraction	296			
Apartment/Condo	155			
Single Family	131			
Large-lot Single Family	129			
Transportation	72			
Utilities	34			
Mixed Use	22			
Mobile Homes	7			
Total	11,759			
*2018 Austin Land Use & Zoning Data				

Industrial Land Uses

This study also looked at parcels listed as being developed and used for an industrial use, regardless of zoning. There were 1,715 parcels in 2018, or 4.4% of the Austin's land area. Of these, 692 parcels are industrial-zoned. 475 are zoned CS (Commercial Services), 144 are NBG (North Burnet-Gateway), and 114 are TOD (Transit Oriented Development).

Industrial Clusters – Land Use of the appendix shows (page 31) the land use of industrial clusters throughout the City.

The following Figure 3 shows the total land area, sorted by zoning district, of parcels with an industrial use. Zoning districts are grouped into major categories.



Industrial Use - Zoning Districts by Area

Figure 3: Industrial Use-Zoning Districts by Area, *2018 Austin Land Use & Zoning Data

Property Values

Assessed land and improvement (buildings) values— excluding condominiums—are available for parcels within Austin's municipal boundaries. Industrial-zoned parcels account for 6% of the assessed value of land within the city, almost \$9.5 billion. Industrial-zoned properties had an average improvement-to-land assessment ratio of 3.28, much higher than the city-wide average of 1.48. The larger the number indicates that the buildings are worth considerably more than the value of the land upon which they are located. This could be accounted for by the value of the specialized structures built on industrial-zoned parcels, or it could be that land values are assessed lower for industrial properties in general.

Like the rest of Austin's real estate, property valuations have been increasing for industrial properties. There was a sharp increase in total assessed value of industrially-used properties from 2014 to 2018. On average, total industrial property value assessments (land and improvements) increased 52% from \$516,633 per acre to \$787,453 per acre. Over the same period, commercially used parcels increased 62% per acre. The marked increase in the valuation of industrial properties cold have long-term implications related to their viability as industrial uses. This is discussed in greater detail in the St Elmo Industrial Case Study on page 50.

Zoning Cases

To determine the citywide changes in industrial land use, this study examined zoning cases going to or from an industrial zoning classification. The source database for these cases is incomplete, so this analysis may not capture all of the zoning cases. For example, rezonings associated with neighborhood plans were shown covering the entire plan area and not usable for this study. However, it is important to note that as part of the *East Cesar Chavez Neighborhood Plan, Holly Neighborhood Plan*, and *Govalle/Johnston Terrace Combined Neighborhood Plan* a significant number of industrially-zoned properties in East Austin were downzoned—mostly to the CS base zoning district.

Data prior to the year 2000 was incomplete and not used. In all, 230 cases were identified and included in this study. Figure 4 shows a timeline of industrial zoning cases, with parcels becoming industrial in purple, parcels converting to another zoning district in red, and industrial parcels moving between zoning districts in gray. The bar chart shows the number of cases per year. The bubble chart shows the total area of land rezoned to or from industrial since the year 2000.

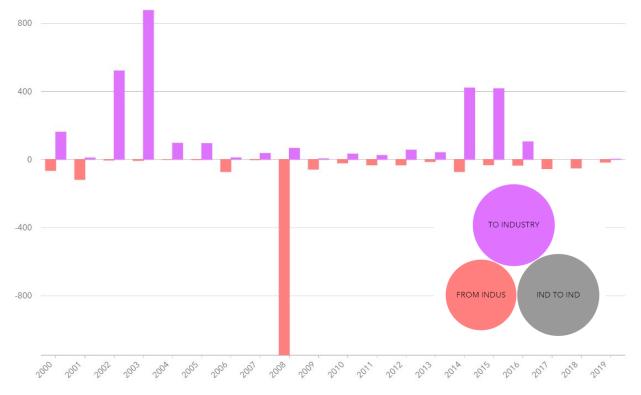


Figure 4: Total Area of Land Rezoned to or from Industrial since 2000, *2019 Austin Zoning Case Data

Industrially zoned land has been added to Austin; however, much of this is attributable to annexations and new development and redevelopment near the airport. Despite these additions, a significant amount of industrial land was lost in North Austin. In 2008, over 1,000 acres of industrial-zoned land was rezoned to North Burnet/Gateway (NBG). This appears to have signaled a trend. Between 2008 and 2018, about 37 acres of industrial-zoned property per year have been rezoned to nonindustrial zones. Industrial Zoning District Cases of the appendix (page 32) shows a city-wide view of industrial rezoning cases, and Industrial Clusters - Loss of Industrial Zoning (page 33) shows the current zoning districts of selected industrial clusters throughout the City and the loss of industrial zoning.

The following chart shows the land area of parcels that were rezoned from industrial districts (on the left) to nonindustrial districts (on the right). In addition to the 1,000+ acres that went to NBG, 321 acres of industrial-zoned properties have been rezoned to a use that allows multifamily residential, including MF zones and -MU overlays. Some of the rezonings did not change the base zone, but only changed overlays or restrictive covenants (such as GR to GR or IP to IP).

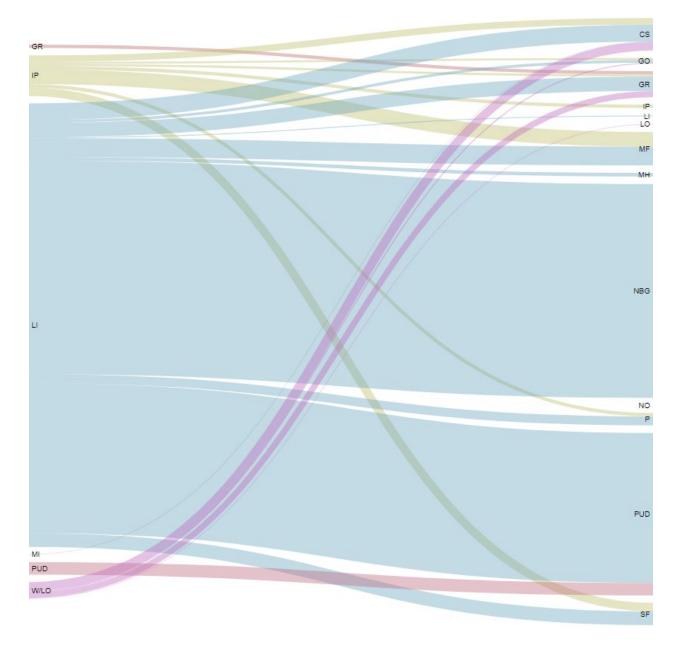


Figure 5: Land area rezoned from industrial districts to nonindustrial districts, *2019 Austin Zoning Case Data

The Imagine Austin Comprehensive Plan

Imagine Austin's Growth Concept Map designates certain centers as Jobs Centers. These centers are meant to include industrial jobs as the City grows. The largest share of Jobs Centers are zoned for Limited Industry, as shown on Imagine Austin Jobs Centers of the appendix (page 34).

Geographic Distribution & Transport

Areas of industrial zoning—and industrial jobs—are found throughout the city, but are largely clustered along or near highways and near the airport. These areas include Southeast Austin (along Highway 71 and near the airport), East and Northeast Austin (along US 183), Tech Ridge, and Research Boulevard. Industrial uses are also often clustered along railroad rights of way. However, rail is less important to industry as it was in the past, and some of the rail lines adjacent to industrial properties are inactive or are in passenger service. Today, most industry in Austin relies on trucks to bring in parts and materials and to send out finished goods. The amounts of freight shipped to and through Austin vary greatly by mode:

- Austin-Bergstrom International Airport ranks 51st in the country for amount of freight shipped by air (about 268,000 tons in 2015 per the FAA).
- The Union Pacific rail line transports 10 to 50 million tons of freight per year through the City (FRA 2014).
- Highway truck freight totals reach as high as 156 million tons per year along some stretches of I-35 within the City (FHA 2012).

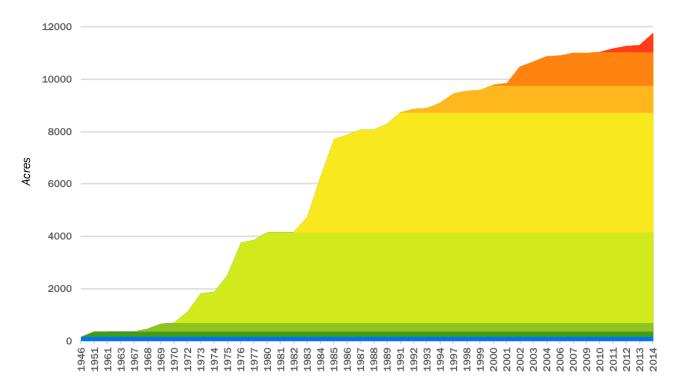
Freight Transport Network of the appendix (page 35) shows industrial-zoned properties in relation to freight transportation infrastructure.

Vacancies and Undeveloped Land

Not all of Austin's industrial-zoned land is developed—27% (3,168 of the City's 11,657 acres) of industrial-zoned properties were undeveloped in 2018. 1,097 of those undeveloped acres are located east of Austin-Bergstrom International Airport, as shown in Developed & Vacant Industrial Zoning of the appendix (page 36).

Building and Annexation Over Time

Throughout the latter half of the past century, Austin's inventory of industrial-zoned properties grew, largely driven by annexations. Prior to 1950, only 110 acres of land *currently* zoned industrial was within the municipal boundaries (although a larger area was occupied by industrial uses). The industrial base grew slowly through the 1960s, and then rapidly in the 1970s through the mid-1980s. After 1985, industrial annexations continued at a steady pace of roughly 140 acres per year.



Industrial-Zoned Properties Decade Annexed of the appendix (page 37) shows industrial annexations over time.

Figure 6: Industrial Annexation Growth by Year, *2019 Austin Annexation History Data

Industrial-zoned properties have a wide range of building ages. Structures going back to the year 1900 are still standing in industrial zones. However, most of the buildings on industrial-zoned parcels are modern, and half of these parcels have buildings constructed after 2003. Industrial-Zoned Properties Year Structure Built (page 38) shows structure age for industrial-zoned properties.

Workforce Considerations

Workforce Master Plan

The Austin Metropolitan Area continues to grow and prosper economically. But not all residents share the fortune of this prosperity. Between 2010 and 2015 employment in the region grew more than 20% and median household income increased by almost the same amount. At the same time, median home prices and average rental rates increased by about 35%, outpacing the rise in

household income. A recent study by the Joint Center for Housing of Harvard University indicates that 49% of rental households are cost burdened in the Austin-Round Rock MSA.¹⁷

In 2017, the non-profit organization Workforce Solutions Capital Area, in partnership with the City of Austin, completed the *Austin Metro Area Master Community Workforce Plan*. The plan lays out a set of strategies and measures to assist in make living in Austin more affordable for economically disadvantaged residents by improving access to higher wage jobs.

The plan used American Community Survey data and found that more than 99,000 families, representing about 23% of families in the MSA, live at or below 200% of the federal poverty level. That same data shows that more than 76,000 individuals living below the poverty level were employed in the Austin MSA. The plan's objective is to aid 10,000 area residents living at or below 200% of the federal poverty level in securing middle-skill jobs by 2021.

Middle-skill jobs are those requiring more than a high school diploma but less than a four-year degree. For the region's economically disadvantaged residents these types of jobs can offer a path out of poverty.

The Austin Metro Area Master Community Workforce Plan lays out a framework for coordination of the region's workforce development organizations and educational institutions. A collaborative vision is presented to engage, empower, and prepare a regional workforce to fill higher earning middle-skill jobs. A pool of highly qualified economically disadvantaged residents offers employers a more diverse set of candidates for these jobs.

The Austin Metro Area Master Community Workforce Plan has projected that the Austin Metropolitan Area will have more than 60,000 middle-skill jobs to fill over the next five years. The plan will focus on four primary strategies to help address the region's key workforce challenges:

- Awareness and enrollment cultivate interest in high-demand, middle-skill careers
- Training equip workers with the skills they need to succeed
- Placement connect employers with local talent to fill middle-skill jobs
- Upskilling assist frontline workers in acquiring skills to advance into middle-skill jobs.

According to the Austin Metro Area Master Community Workforce Plan there are currently close to 29,000 job openings in 47 different middle-skill occupations that provide an annual wage greater

¹⁷ Joint Center for Housing Studies of Harvard University, America's Rental Housing 2020: Interactive Data & Resources, (<u>https://www.jchs.harvard.edu/americas-rental-housing-2020</u>), Accessed on February 5, 2020.

than \$40,840. Over 50% of these jobs are found in three key opportunity sectors: healthcare, information technology, and skilled trades. The workforce plan focusses its outreach and engagement strategies in these areas and with employers and organizations that actively align their workforce efforts with the *Austin Metro Area Master Community Workforce Plan* and will be utilized as Talent Champions, helping to grow and sustain the plan's efforts.

Job Totals for Austin's Industrial-Zoned Land

Of the three opportunity sectors recommended by the *Austin Metro Area Master Community Workforce Plan,* skilled trades will have 13,840 projected job openings in the next five years. Skilled trades include carpenters, electricians, mechanics, plumbers, truck drivers, and welders. Many skilled trade jobs are located on industrial-zoned land. In order to understand the change in jobs on



Austin's industrial zoned land, 2001 Zoning Layer with 2002 US Census Data (page 39) and

2018 Zoning Layer with 2017 US Census Data (page 40) compare the industrial jobs on industrial zoned land in 2001, to the industrial jobs on industrial zoned land in 2017.

The table below compares the job totals from 2002 and 2017 within industrial-zoned land from the City of Austin's official GIS zoning layer and a historic zoning layer from 2001.

NAICS codes	2001 Zoning Layer with 2002 US Census Jobs Data	City of Austin's official GIS zoning layer with 2017 US Census Jobs Data		
Construction	4,102	3,719		
Manufacturing	17,819	9,906		
Wholesale Trade	13,186	10,027		
Transportation and Warehousing	2,271	1,580		
Total Jobs in Industrial-Zoned property	76,210	75,244		

*2017 Census On the Map

Despite the total acreage of industrial-zoned increasing by 440 acres between the 2001 and today, the number of jobs on industrial-zoned land decreased – particularly in skilled trade industries like construction, manufacturing, wholesale trade, and transportation and warehousing. This discrepancy is due in large part to annexing undeveloped industrial land, annexing large campus development, and rezoning developed industrial land to a nonindustrial zone.

The decline in skilled trade jobs can be attributed to many large economic forces beyond zoning such as automation and offshore production, however, the *APA PAS 577 Report* suggests that despite the sectors overall decline, cities can leverage their land use control to support – rather than hinder – the growth of skilled labor. Despite the national decline in manufacturing, the *Austin Metro Area Master Community Workforce Plan* still projects skilled trades as the opportunity sector with the most openings in the next five years.

An Industrial Cluster Typology for Austin

Using data gathered for the previous sections, staff identified industrial clusters and analyzed them to determine if they are currently providing industrial jobs, appropriate for more industrial development, or transitioning to mixed-use commercial and residential redevelopment. The clusters areas are mostly, but not entirely, contained in a broad arc beginning at the southwest corner of IH-35 corner of US Highway 290/Ben White Boulevard, extending east toward ABIA, and extending north along US 183/Ed Bluestein Boulevard and IH-35, and then north and northwest through North and Northwest Austin. The map on the following page highlights eight areas in Austin with high concentrations of industrial uses, jobs, and industrial-zoned land.

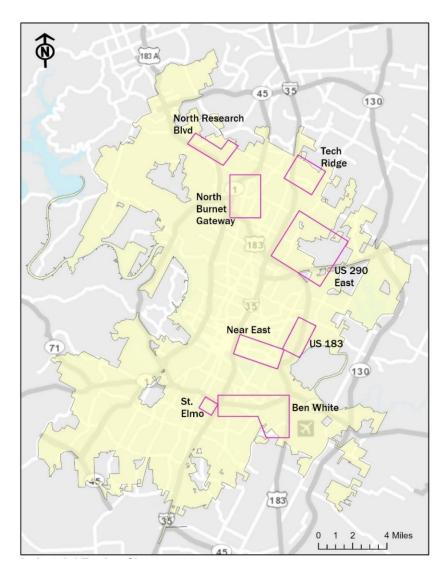


Figure 7: Industrial Zoning Clusters

Building on the best practices from Philadelphia and Los Angeles, staff considered the following future land use typologies for Austin's industrial areas:

- **Protection:** intended for employment-rich areas where industrial zoning should be maintained and residential uses discouraged.
- Intensification: intended for areas that have potential to accommodate more productive industrial uses through zoning certainty, planned infrastructure improvements, and master planning to coordinate public and private sector investment.
- **Transition:** intended for areas that have experienced significant land conversion to nonindustrial uses and are no longer viable for industrial development due to lack of adequate infrastructure or adjacent incompatible land uses.

Key Considerations

Staff specifically reviewed four metrics: all job trends, manufacturing job trends, percentage of undeveloped industrial zoned land, and the percentage of land rezoned to another use. While the metrics might begin to suggest an appropriate typology for future land use considerations, further community discussions are needed with stakeholders to balance the competing interests and community goals.

Job Growth on Industrially Zoned Land

This metric represents all job trends between 2002 and 2017 on land currently zoned industrial from the current City of Austin zoning layer. Staff assumed the following scores for the purpose of categorization:

- **Over 50% job growth:** Indication of substantial job growth that, paired with other measures, may suggest a future protection or intensification category.
- Between 50% 0% job growth: Indication of a steady job growth that, paired with other measures, may be appropriate for the protection category.
- Less than 0% job growth: Indication of job loss could suggest a transition to other uses besides employment.

Manufacturing Job Growth on Industrially Zoned Land

This metric represents the industrial job trends between 2002 and 2017 on land currently zoned industrial from the current City of Austin zoning layer. While industrial zoning encompasses many job types, staff selected manufacturing jobs as an indicator of industrial employment and assumed the following scores for the purpose of categorization:

- **Over 50% manufacturing job growth:** Indication of an increase that, paired with other measures, may be appropriate for the protection or intensification categories.
- **Between 50% 0% manufacturing job growth:** Indication of a steady job growth that, paired with other measures, may be appropriate for the protection category.
- Less than 0% job growth: Indication of manufacturing job loss could suggest a transition to other uses.

Percentage of Undeveloped Land

This metric represents the percent of undeveloped industrial-zoned land within the cluster to determine the potential ease of industrial growth and expansion. Staff assumed the following scores for the purpose of categorization:

- **Over 20% undeveloped land:** Indication of intensification if paired with other measures that indicate industrial job growth.
- Less than 20% undeveloped land: Indication of employment protection area if paired with other measures that indicate industrial employment is steady or growing.

Percentage of Rezoned Industrial Land

This metric represents the percentage of land rezoned to another use within the industrial cluster. The total percentage of industrial-zoned land city-wide rezoned to another use is roughly 20%, Staff assumed the following scores for the purpose of categorization:

- Under 20% rezoned: Indication of protection area if paired with other measures that indicate stable or growing industrial job growth.
- Over 20% rezoned: Indication of transition area.

The following chart summarize the key considerations using the guidelines outlined above. Rather than assigning an overall category for each district, the "Industrial Cluster Case Studies" section in the appendix (beginning on page 44) provides additional background and qualitative analysis to provide a well-rounded assessment of whether the clusters are currently providing industrial jobs, appropriate for more industrial development, or transitioning to mixed-use commercial and residential redevelopment.

	North Research Boulevard	North Burnet /Gateway	Tech Ridge	US-290	Near East	US-183	St. Elmo	Ben White
Job Growth	169%	74%	843%	127%	33%	-43%	-39%	72%
Manufacturing Job Growth	1905%	-122%	96%	34%	0%	-60%	-24%	-26%
Undeveloped Land	1.5%	0.30%	26%	19%	14%	13%	7%	20%
Rezoned Land	16%	-82%	7%	3%	-83%	-34%	-33%	9%

Figure 8: Summary of Key Considerations

Conclusion

Recent conversions of Austin's job producing industrial land to nonindustrial uses present important planning and public policy concerns regarding the economic, social, and physical development of Austin. The following trends and recommendations summarize the results of this study and considerations for the future.

Trends

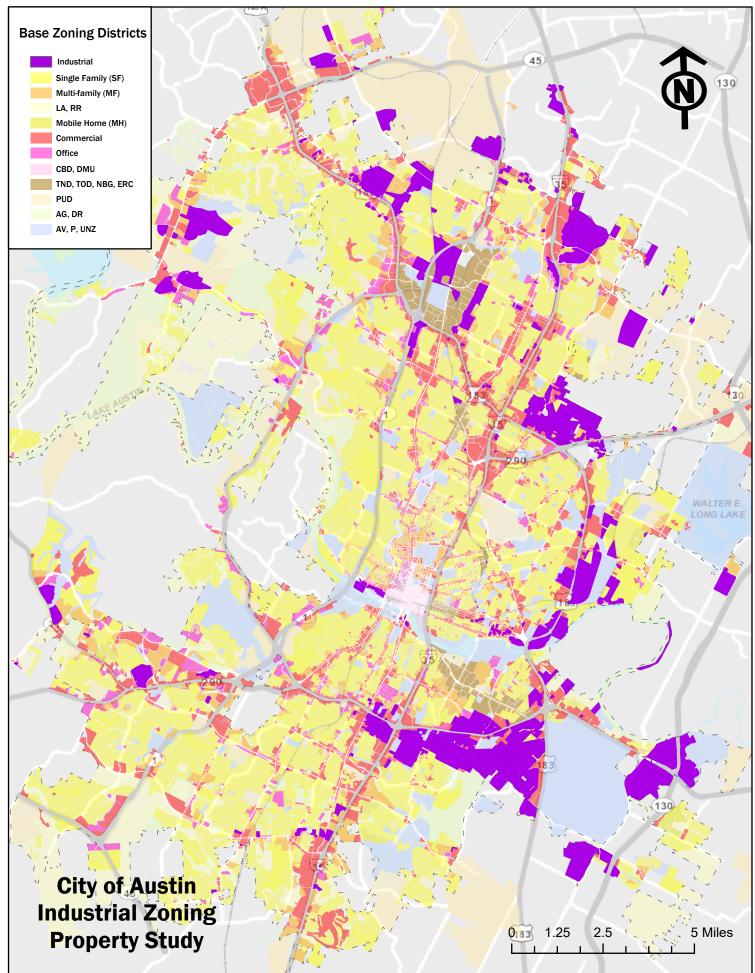
- Annexations have been the largest driver in growing Austin's industrial-zoned land base.
- Neighborhood plans and other small area plans have been the most significant factor in conversion of industrial-zoned land to nonindustrial districts.
- Excluding rezonings associated with small area plans, Austin has lost roughly 37 acres of industrial zoning annually for the last ten years.
- Much of the more recent industrial development has taken the form of large corporate campuses and business or industrial parks.
- Austin's neighborhood plans particularly in East Austin have rezoned industrial parcels to nonindustrial zones. This was done to begin to address the unjust legacy of locating industrial uses into economically disadvantaged and segregated neighborhoods, but likely accelerated mixed use redevelopment that contributes to gentrification.
- Unused land in industrial clusters is relatively inexpensive and has been targeted by the market for new mixed-use, multifamily developments, many times for suburban-styled garden apartments located along freeway frontage roads.
- The number of jobs on industrial-zoned land has decreased, particularly for skilled trades, despite the total acreage of industrial-zoned land increasing slightly. This discrepancy is likely due to annexing undeveloped industrial land, annexing large campus development, and rezoning developed industrial land to a nonindustrial zone.
- Austin's legacy industrial areas, such as the St Elmo Industrial District, generally support smaller businesses; often have open-air yard storage of materials and vehicles; and are housed in relatively inexpensive tilt-wall or metal buildings. As property tax valuations increase, the tax burden on these businesses may reduce their ability to stay in these districts. As these valuation increase, property owners may seek to convert these parcels to more profitable land uses.

Recommendations

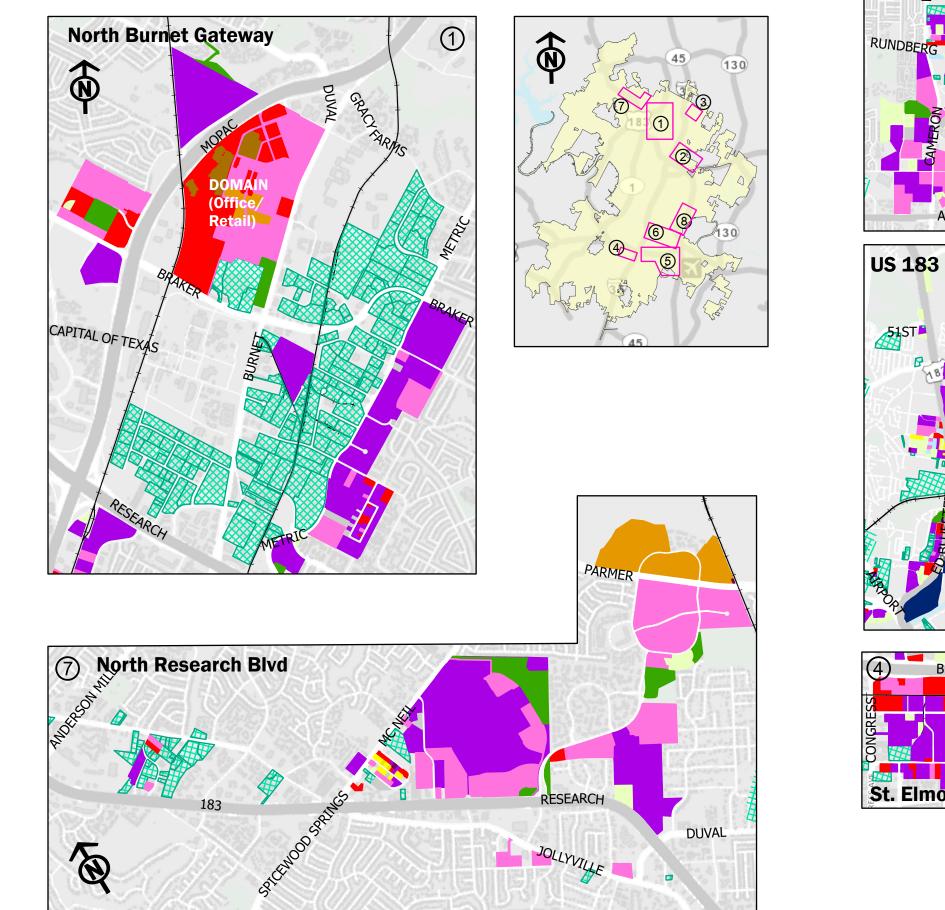
As Austin considers future zoning decisions that impact industrial areas, staff and city leaders should consider the following:

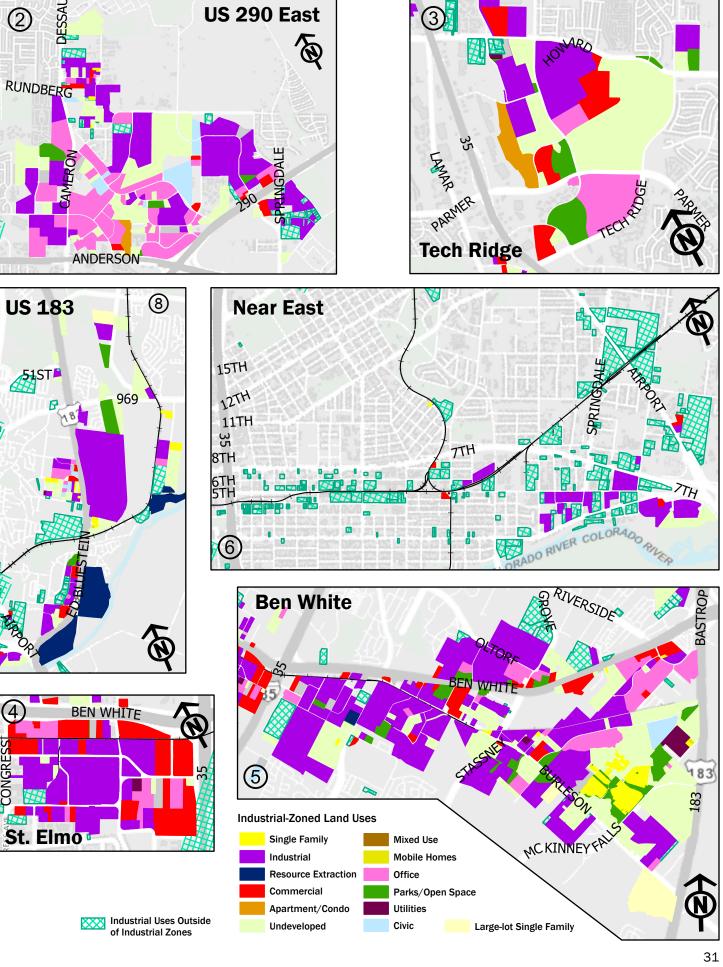
- Industrial uses can contain hazardous or explosive chemical storage and may pose a threat to the health and safety of nearby residents. Before permitting residential in industrial zoned areas, precautions must be taken to ensure that nearby industrial properties do not pose a risk to future residents.
- Industrial subdivisions were not built with residential uses in mind and predate the current code's requirements. There is little sidewalk connectivity and high levels of noise, vibration and truck traffic. Developers should retrofit transitioning clusters to include sidewalks, bicycle and transit accommodations, storm water facilities, parks and open space, and availability of goods and services to meet residents' daily needs.
- Remaining industrial users should not be penalized for new residential users "coming to the nuisance" and objecting to the preexisting businesses.
- If the policy decision is made to allow for large numbers of residential units within an industrial cluster, a transition plan and policies to preserve existing jobs should be explored.
- The allowance of residential uses in industrial zoning districts should take into consideration environmental justice issues in order avoid outcomes similar to those resulting from the 1928, A City Plan for Austin, Texas.
- For transitioning areas experiencing pressure to convert to mixed-use, Austin could consider a density-bonus model similar to San Francisco where bonus entitlements would be granted in exchange for on-site construction of manufacturing space.
- Los Angeles's proposed policy of requiring industrial uses in all new residential development in transitioning industrial areas may be an additional tool to consider. However, such tools must be carefully calibrated with the needs of existing industrial uses and employees in order to achieve the goals of preserving middle-skilled jobs.
- For industrial districts along major corridors, Austin could consider Portland's approach of concentrating mixed-use along the corridors and preserving the industrial district cores. However, Portland's most recent changes demonstrate a need to evaluate the highest and best use for industrial districts in the urban core – which may be suited for higher employment densities due to their strategic location.

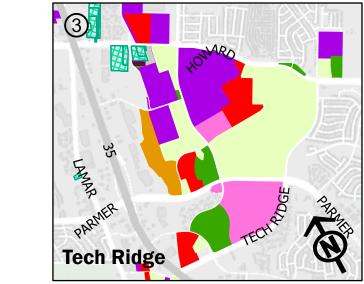
Appendix I: Maps Base Zoning Districts



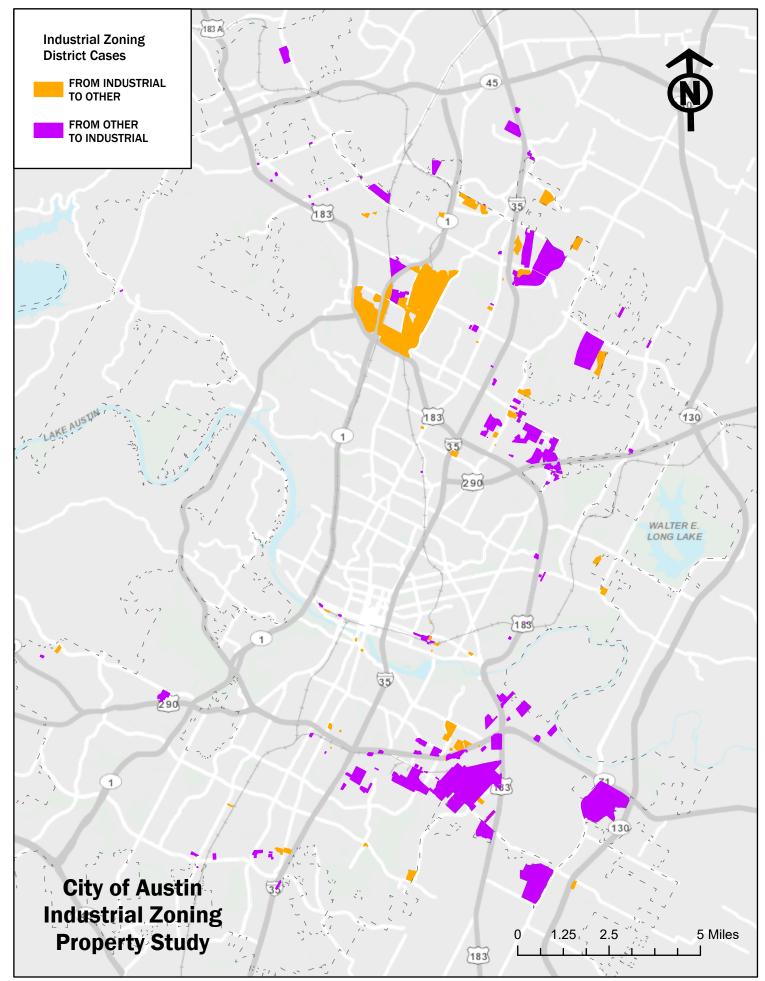
Industrial Clusters - Land Use



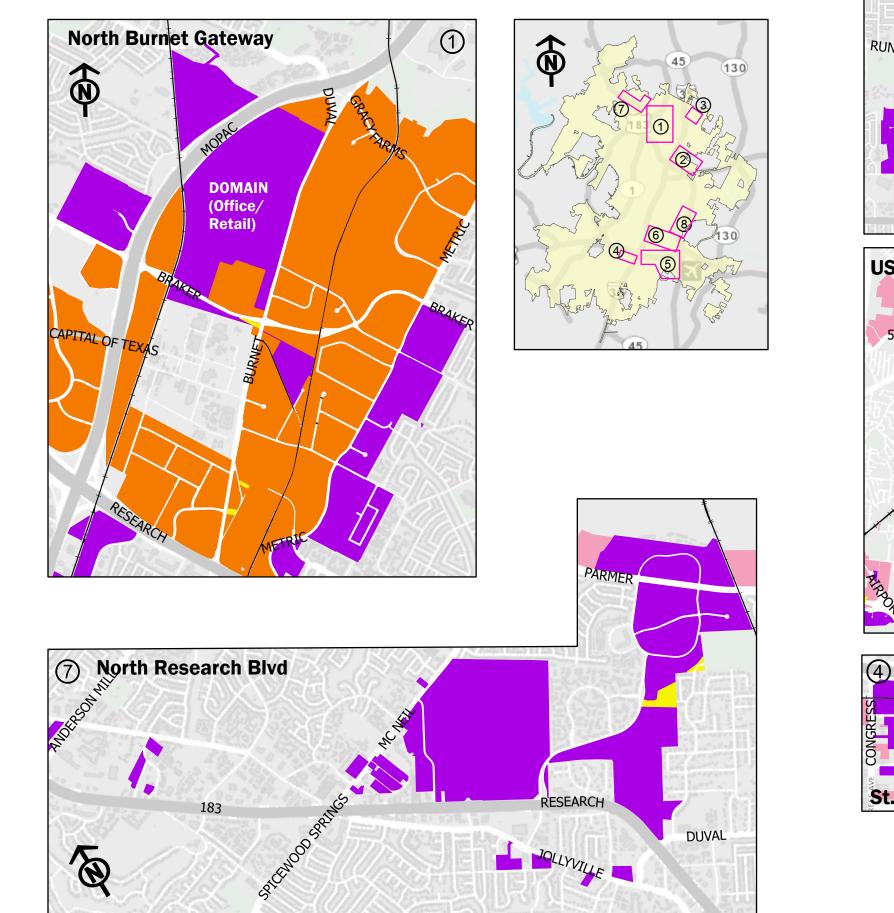


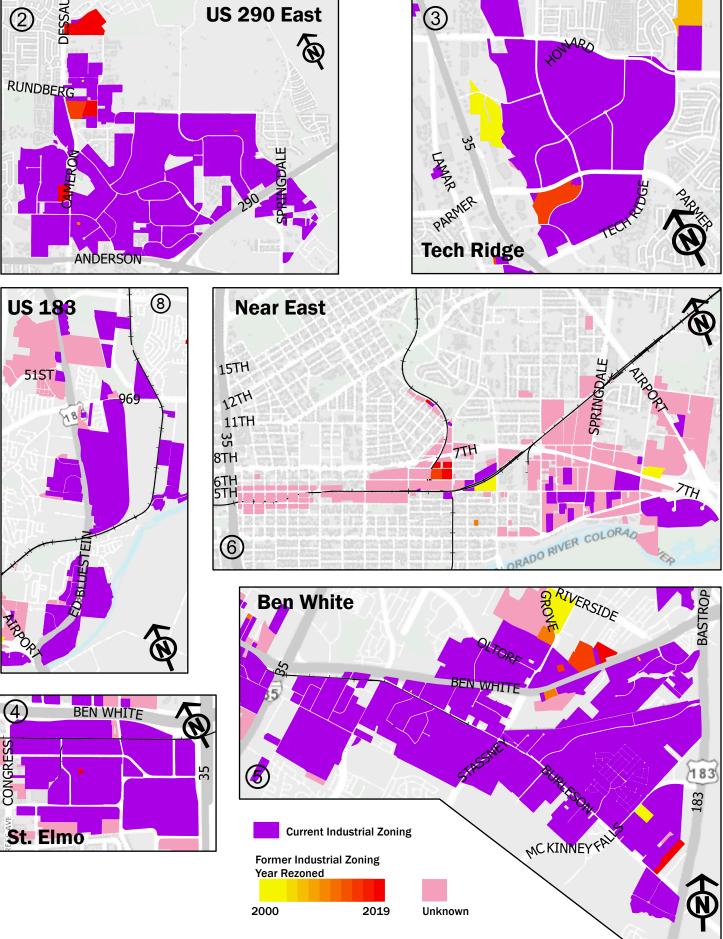


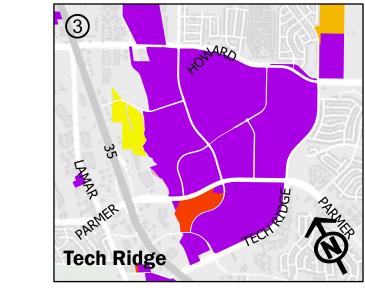
Industrial Zoning District Cases



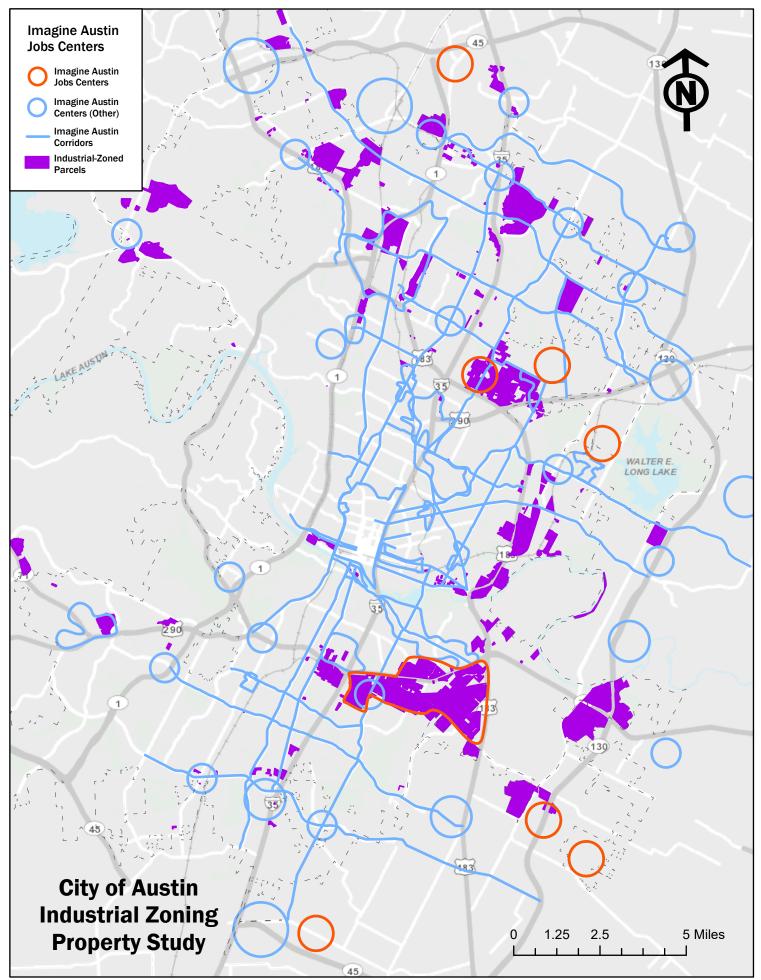
Industrial Clusters - Loss of Industrial Zoning



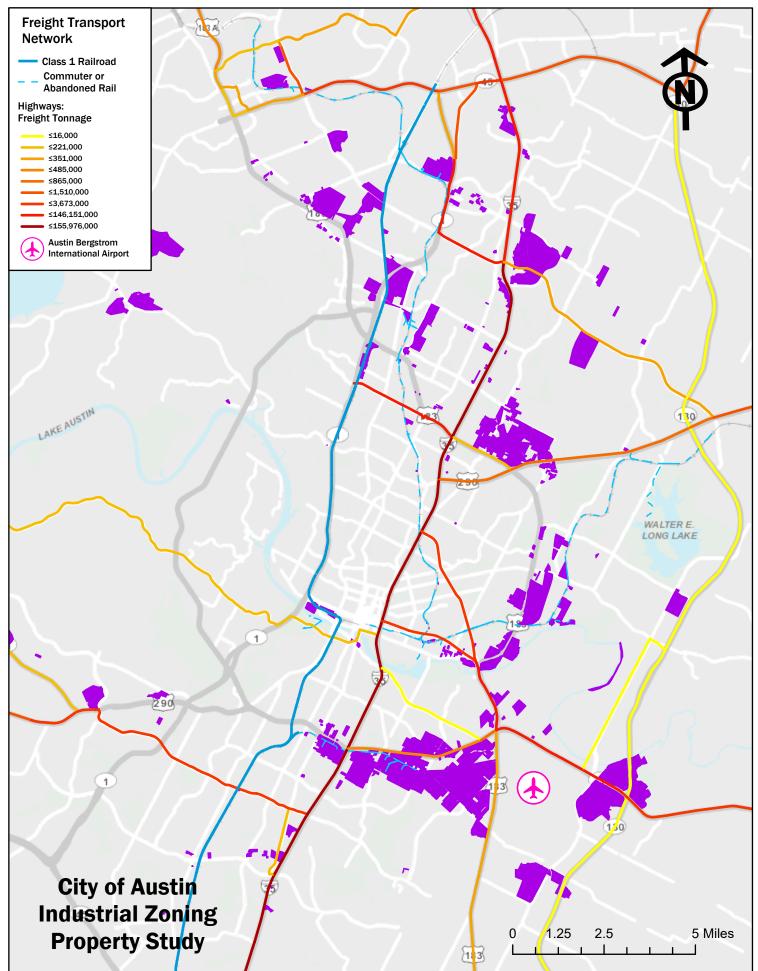




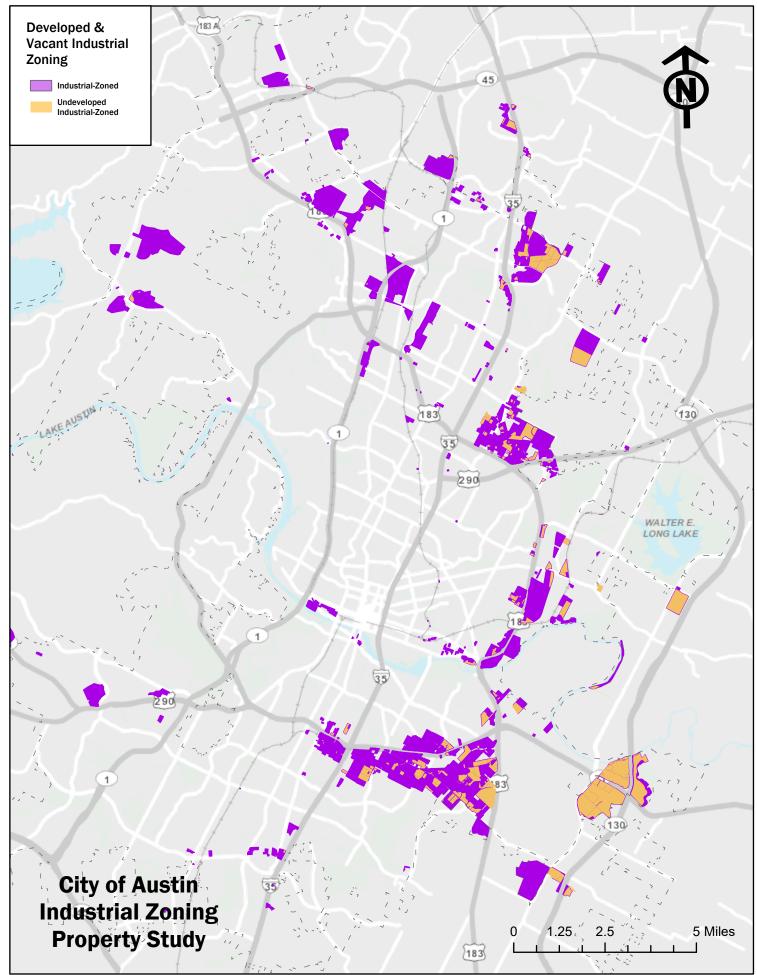
Imagine Austin Jobs Centers



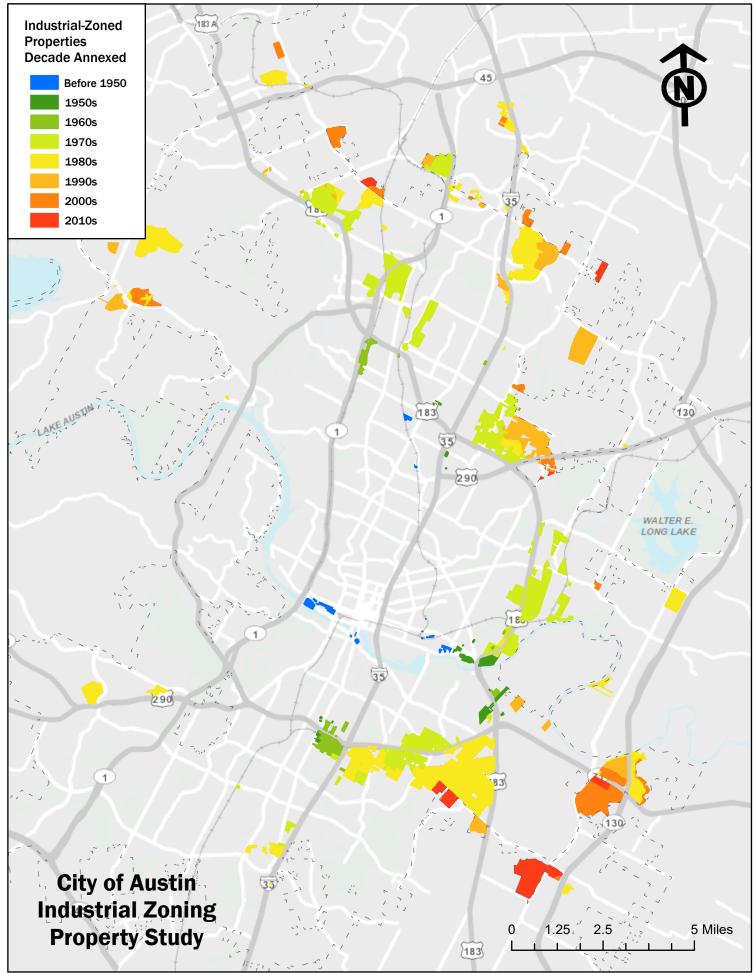
Freight Transport Network



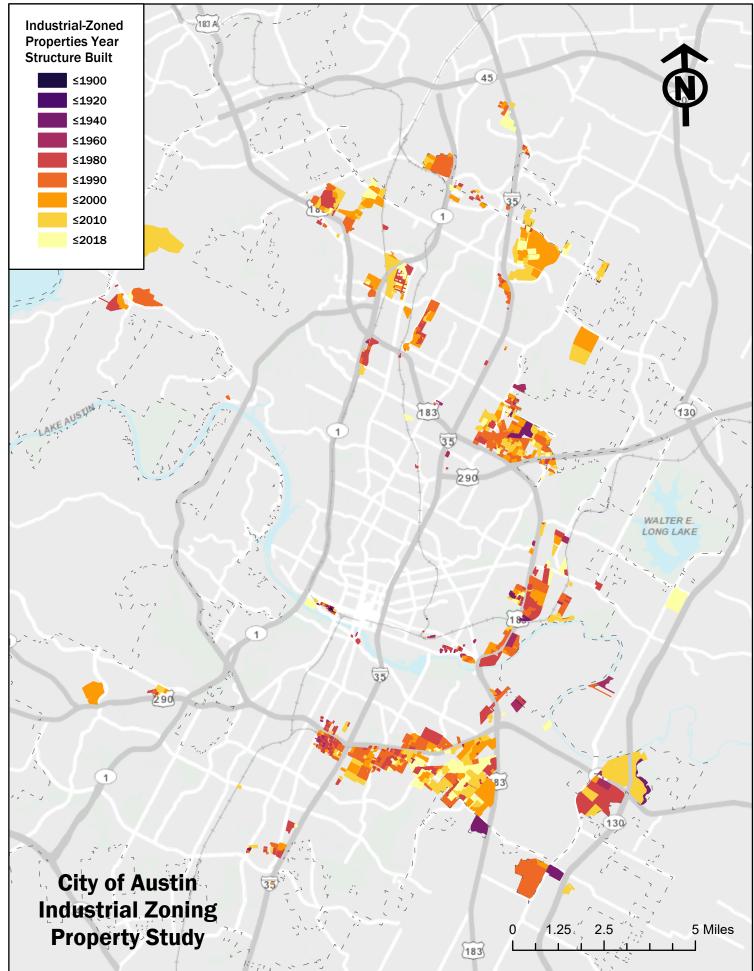
Developed & Vacant Industrial Zoning



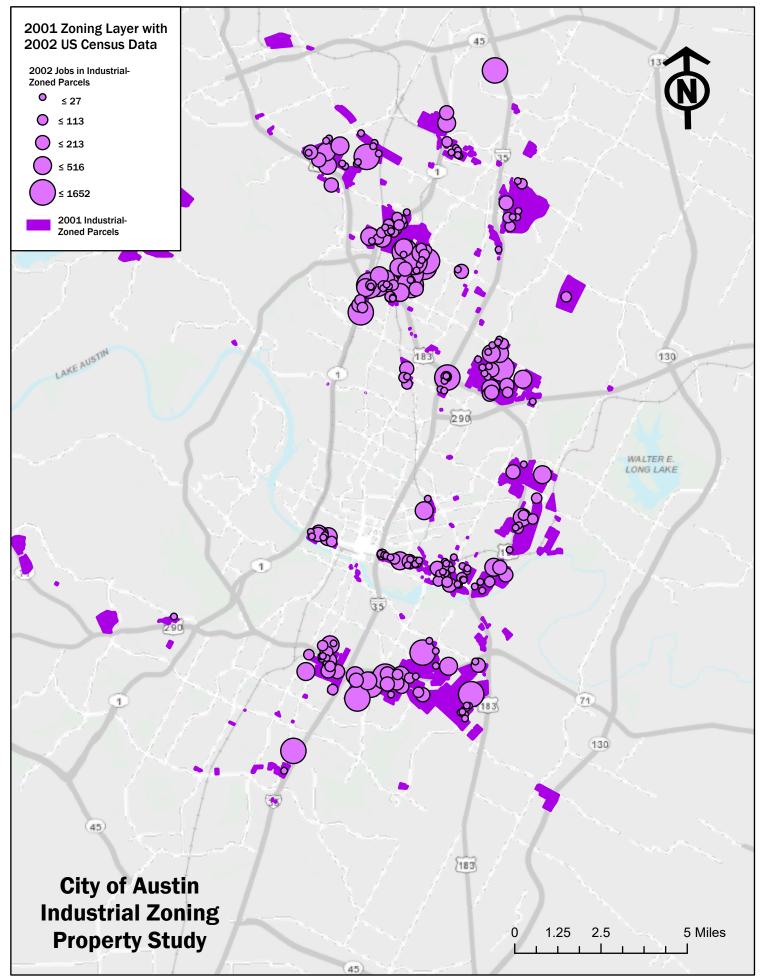
Industrial-Zoned Properties Decade Annexed



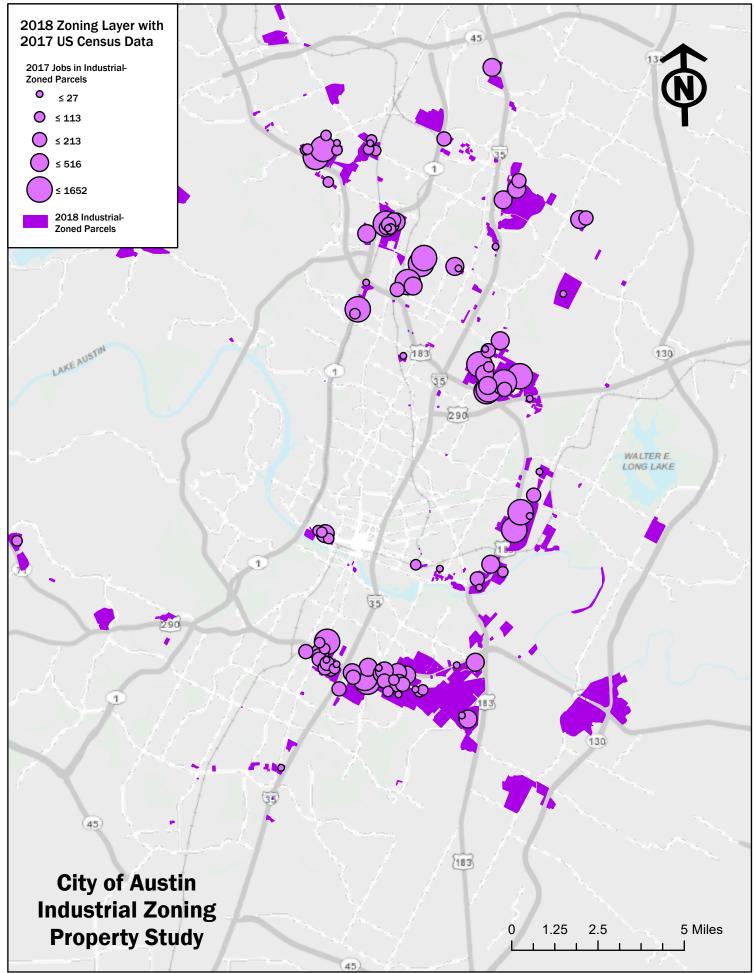
Industrial-Zoned Properties Year Structure Built



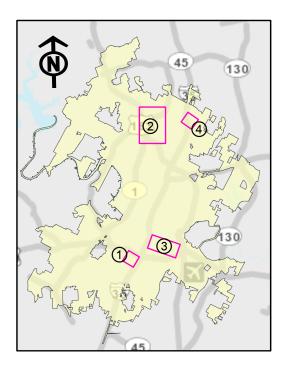
2001 Zoning Layer with 2002 US Census Data

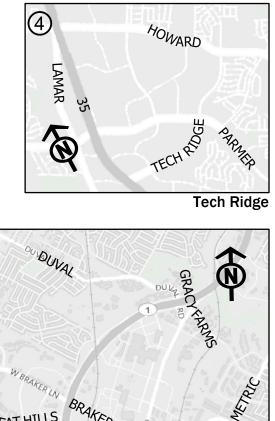


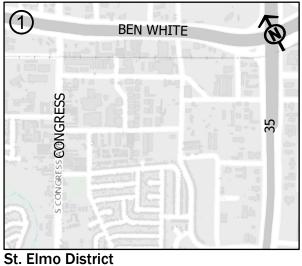
2018 Zoning Layer with 2017 US Census Data

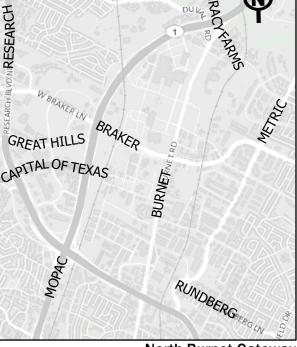


Industrial Zoning Study: Case Study Areas









North Burnet Gateway



2

Near East Austin

Appendix II: Industrial Cluster Case Studies

The following case studies provide historical background and qualitative analysis for the eight industrial clusters identified in the previous section.

North Research Boulevard

The North Research Boulevard cluster may be an opportunity for intensification or protection. The cluster is generally around the area of Research Boulevard, McNeil Drive, Parmer Lane, and Riata Trace Parkway, is home to offices and tech firms with some light manufacturing facilities. Major employers in the cluster include Apple, Flex (formerly Flextronics), 3M, Cisco, Accenture, and others. There are dozens of smaller firms throughout the area. The character of the cluster is defined by three sprawling corporate parks (Apple, Flex and Riata Corporate Park), with several office buildings surrounded by parking lots and garages, with some natural spaces here and there. In addition to the office uses, there are some light manufacturing uses at Apple and Flex. Jekel Circle, off McNeil Drive, is home to several properties used for auto storage.

Properties in this cluster were annexed into the city in the 1970s and 1980s. While the Apple campus is fairly new (and undergoing a major expansion north of Parmer Lane), other areas of this cluster are starting to become dated. The Flex campus has built up around a factory from the mid-1970s. Riata Corporate Park dates to the turn of the millennium and continues to be a viable industrial area. There is a high density of residential units surrounding and in between the parcels that form the North Research Boulevard Cluster, potentially providing nearby housing for employees. The cluster has excellent street connectivity for personal vehicles and delivery trucks, but there is only one nearby bus line, along Research Boulevard.

Looking forward, the North Research Boulevard cluster is likely to continue intensifying. The Apple campus has consistently developed over time, and Apple's second campus will allow for thousands of more employees. The Flex campus has also developed over time and has room for expansion. It should also be noted that Robinson Ranch, a 7,000 acre Planned Unit Development, is directly north of the cluster, and could bring major changes to this part of Austin.

North Burnet/Gateway

As planned, the North Burnet/Gateway cluster is transitioning from an industrial cluster to a mixed use cluster with significant non-industrial employment growth. This transition from industry to mixed use is largely due to policy direction for a planning process that resulted in the *North Burnet/Gateway Master Plan* (2007) and associated regulating plan (2007). The primary goal of these was to transform the District's aging, low-density, automobile-oriented development into a

dense, walkable, and mixed-use district to accommodate a significant number of new residents. The planning process was precipitated by the announced development of the dense, mixed-use Domain development. The successful vote to authorize Cap Metro's Red Line commuter train also factored into the decision.

The District historically served as an employment hub in northwest Austin. Early aerial photos indicate that the area began to develop with industrial warehouse facilities between 1958 and 1965. Major expansions to transportation infrastructure like Highway 183 and the MoPac Expressway, as well as convenient access to two railroad lines, likely made this an attractive location for distribution facilities. In addition to warehousing, several technology employers

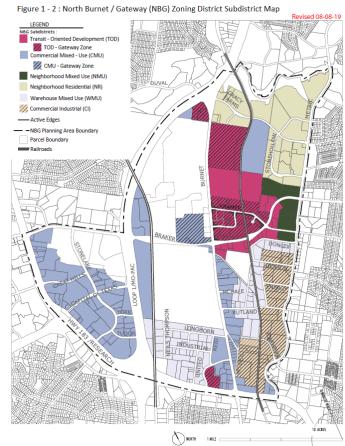


Figure 9: NBG Regulating Plan

such as IBM, National Instruments, and Tivoli Software located near the Pickle Research Campus and contributed to the district becoming a major center for research and development. At the time of the planning effort, there were roughly 13,000 jobs with major employers within or near the planning area.¹⁸

A key goal of the *North Burnet/Gateway Master Plan* was to achieve a jobs-housing balance to provide more housing opportunities for Austin's growing population while also creating more density to support transit oriented development. The goal was not to displace the commercial and industrial uses, but to maximize the use of the area by encouraging densification and reformatting existing uses into a new, more urban form. ¹⁹

In alignment with the North Burnet/Gateway Master Plan, the North Burnet/Gateway Regulating Plan does not completely remove industrial zoning but consolidates it to 43 properties (163 acres)

18 Ibid. 2:5

¹⁹ City of Austin, Texas. (2007). North Burnet/Gateway Master Plan. Austin, TX: Department of Planning.

within the Commercial Industrial (CI) subdistrict, located in the southeastern portion of the plan area along Highway 183 and Metric Boulevard. The regulating plan also designates 85 properties (221 acres) as Warehouse Mixed-use (WMU), which is a transitional district that accommodates existing and new industrial warehouse uses and enables development of residential and local retail uses. These two subdistricts encompass most industrial uses that are currently operating within the district today.²⁰

Within the North Burnet/Gateway Master Plan boundary, but not included in the North Burnet/ Gateway Regulating Plan, is the Domain, an approximately 300-acre lifestyle center located on former industrial property. The redevelopment of the Domain is consistent with the vision of the master plan; however, the property maintains its industrial base zoning of Major Industry (MI) through a Plan Development Agreement PDA) that permits commercial mixed-use.

Although *North Burnet/Gateway Regulating Plan* has provisions for industrial uses, its adoption and the application of the North Burnet/Gateway (NBG) District zone resulted in a loss of 922 acres of industrial-zoned land. US Census data for the area shows a 23% decrease in manufacturing jobs and a 7% increase in professional, scientific, and technical services jobs between 2001 and 2017. The *North Burnet/Gateway Master Plan* provided policy guidance to rezone most of the industrial land to higher density, walkable mixed-use development but may have contributed to a decline in manufacturing jobs. As indicated in sections above, this could be a result of overlooking the value of industrial land uses. As Austin continues to evaluate the transit-oriented districts like the North Burnet/Gateway planning area, it might consider preservation measures to maintain industrial land which often offers higher earning middle-skill jobs.

Tech Ridge

The Tech Ridge cluster is an emerging industrial district in North Austin appropriate for industrial intensification. The boundaries are IH-35 on the west, Howard Lane to the north, Harris Ridge Boulevard on the east, and Tech Ridge Boulevard to the south. Unlike other industrial districts in Austin, this one is distinctly different and reflects the changing nature of industrial and office spaces. Within this diverse district are apartments, offices, industrial uses, the future location of the Austin FC soccer team's St. David's Performance Center training facility, and approximately 1.5 miles of freeway-oriented shopping centers located along the IH-35 northbound frontage road.

²⁰ U.S. Census Bureau. (2019). LEHD Origin-Destination Employment Statistics (2002-2017). Washington, DC: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program. Retrieved on November 29, 2019 at https://onthemap.ces.census.gov

The District has an industrial legacy, albeit, much smaller than today. Some of Dell Computer's earliest facilities were in the District as well as the original Austin Airpark which closed in 1999.

The district has some older manufacturing/industrial and office building, but its defining element is the 386-acre Parmer, an emerging technology and research park. The corporate tenants include 3M's Electrical Markets Division, General Motors IT Center North, Permalite (a coatings and substrate manufacturer), Allergan (a pharmaceutical company), Casa Marco (an industrial printing, fabricating, and framing company), and Blue Apron Austin Office (a home delivery food service). It was announced in November 2019 that the newly formed Austin FC soccer club would locate their 23-acre, \$45M St. David's Performance Center training facility in the Parmer development. This will include training fields as well as the Austin FC Academy that will serve as an incubator to develop youth soccer talent. The Parmer Center also includes an 11-acre pond and plans for open space, walking trails, and sites for food trucks.

Other industrial companies located in the Tech Ridge Industrial District outside of the Parmer development Include The Home Depot Technology Center, HID Global (an online and computer security company), Ultra Clean Technology (a high-tech manufacturing firm), Parson's Scoring Center (processor of student tests), Kompan (manufacturer of outdoor playscapes, furniture, and sports and fitness equipment), and Flooring Solutions Inc. (a commercial flooring manufacturer).

Unlike some of Austin's more suburban industrial districts that were annexed into the city, the Tech Ridge Industrial District was entirely within Austin's city limits and was rezoned to allow the development that is planned or under construction. This part of Austin has the potential to become a major employment hub. It is the ultimate proposed northern terminus of Project Connect's Orange high-capacity transit line currently under study. Presently it is the northern terminus of Cap Metro's 801 MetroRapid bus line. If there is a successful referendum and a high-capacity transit line is eventually extended to the District, it could spur redevelopment of older commercial/ industrial buildings and increase its value one of far North Austin's most significant job centers.

US 290 East

Located north of US 183 with Cameron Road serving as its central arterial, the approximately 2.5 square mile US 290 East industrial cluster is a sprawling commercial/industrial area in northeast Austin. It is stable commercial-industrial area with a variety of businesses and institutions serving a large segment of Central Texas. It roughly extends from US 183 on the south to the Pioneer Hill neighborhood on the north and from Norwood Park Boulevard and Conner Lane on the west to Sprinkle Road and Tuscany Way on the east. Except for a handful of businesses located on the north side of Ferguson Lane and a segment of Brown Lane it is located within Austin's corporate limits.

The Walnut Business Park comprises almost half of the US 290 East industrial cluster. This business park contains a variety of uses ranging from apartments, multiple houses of worship, offices, wholesalers, retailers, the US Postal services primary service facility in Austin, as well as a USPS Customer Service and Facility. The rest of the US 290 East industrial cluster is equally diverse with businesses ranging from manufacturing, tradesperson's offices, automobile repairs, large and small-scale manufacturing, City of Austin offices, a charter school, retail offices, and even a makers space coop.

The Walnut Creek Business Park's original commercial and industrial subdivisions were from the mid-1980s with additional ones dating to the late 1990s. Many of the other subdivisions for industrial uses are from the same timeframe.

The US 290 East industrial cluster is mostly commercial and industrial area; however, there are a handful of apartment complexes: Clear Creek Estates, Bridges at Cameron, Salado at Walnut Creek Apartments, Promontory Point Apartments, Creekstone Apartments, and The Reserve at Walnut Creek Apartments. The cluster also abuts a mobile home community and single-family neighborhoods in the Heritage Hills Neighborhood Plan Area (NPA). Additionally, there is a small residential community located in the middle, Cameron Acres. This collection of single-family houses and duplexes date from the 1960s to the 1980s. The narrow pavement and lack of curbs and gutters indicate that these were likely built prior to the area's annexation in the mid-1970s.

Although the US 290 East industrial cluster is nearly built out, there are multiple site plans currently in review. Near Ferguson Lane and Tuscany Way, site plans for Tuscany Park Tracts 2 and 3 are in review on sites with LI base zoning. On Cameron Road, between Ferguson Lane and Dungan Lane there are three commercial site plans. Immediately east of these, there is a site plan for an apartment complex: Belmont Apartments. The remaining sizable, undeveloped parcels are industrially-zoned along Conner Drive, west of Cameron Road, off Rutherford Lane.

Near East

The near east side of Austin (generally north of Lady Bird Lake and east of Interstate 35) is an area that, through multiple policy directions, has lost much of its industrial zoning and is transitioning to other uses. As discussed earlier, many of the city's undesirable industrial uses were limited to areas east of I-35 as a result of Austin's 1928 comprehensive plan. After adoption of the plan, industrial uses clustered along the railroad, on East Cesar Chavez Street (east of Pleasant Valley Road), and East 7th Street (from Chicon Street to Airport Boulevard). This included not only manufacturing, warehousing, as well as potentially toxic fossil fuel uses such as a 61-acre petrochemical tank farm. These noxious uses were interspersed among homes, churches, and schools of communities of

color. Over time, zoning districts were painted with broad strokes, and many of the original homes and institutions were located on industrially-zoned property. Planning efforts in the early 2000s aimed to transition these areas of the urban core to zoning and uses compatible with nearby residents.

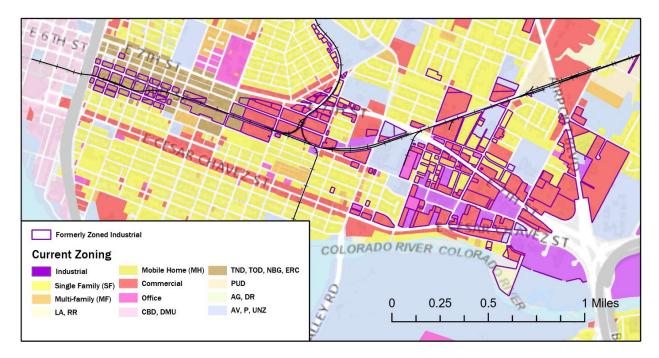


Figure 10: Near East Cluster- Formerly Industrial Zoning and Current Zoning

In the year 2000, there were 313 acres of industrial-zoned property in the area east of I-35, north of the river, south of Rosewood Avenue, and west of Airport Boulevard. By 2019, only 70.1 acres of industrial zoning remained. This was the result of three neighborhood plans and a Transit Oriented Development plan for the area surrounding Plaza Saltillo. The *East Cesar Chavez, Govalle-Johnson Terrace Combined*, and *Holly Neighborhood Plans* all included rezoning of much of their industrial land to mixed-use, commercial, and residential zones.

Several years following the adoption of the *East Cesar Chavez Neighborhood Plan* (1999) the City of Austin initiated an area-wide rezoning to implement the plan's land use element. As part of this action multiple industrial-zoned properties along 4th and 5th Streets were rezoned from industrial to mixed use, partially in anticipation of future passenger rail service and a station being located at Plaza Saltillo. Previously, the area between 4th and 5th Streets, from I-35 to Navasota Street, had been a freight rail yard. The plan referenced the concept of Smart Growth in anticipation of future population growth and aimed to take advantage of its proximity to downtown as a location for new mixed-use development. Properties zoned LI were changed to CS-MU (Commercial Services/Mixed-use) to allow "retail, office, restaurants, civic, residential and clean light industry". However, many of

the owners of these industrial properties objected to the zoning change, which was adopted over their protest.

The *Holly Neighborhood Plan* (2001) had specific objectives to retain industrial uses within its Commercial Mixed-use District, but only for low-impact uses. It also called for restricting industrial zones from residential area and rezoned much of the LI properties to CS-MU.

The Govalle/Johnson Terrace Combined Neighborhood Plan (2003) gave historic context for industrial uses being located adjacent to homes and schools and aimed to remedy those incompatibilities.

The *Plaza Saltillo TOD Station Area Plan* and associated regulating plan (2008) rezoned land near that rail station (originally rezoned during the neighborhood planning process LI to CS-MU) to TOD. The regulating plan guide building form, uses, and public realm improvements.

The legacy of these plans has been twofold. Industry has been unable to expand or continue and has largely moved out of this part of East Austin. This has led to less noxious uses and truck traffic near residences and small commercial corridors. The flipside of this loss of industrial uses has provided fuel for redevelopment that has accelerated gentrification. The addition of a commuter rail station has incentivized higher density mixed-use developments that are unaffordable to the neighborhood's long-time residents and businesses. As the area continues to redevelop and tax assessments increase, further displacement of residents, institutions, and remaining industrial businesses are a distinct possibility.

US 183

This cluster runs along US Highway 183/Ed Bluestein stretching north from the Colorado River up to Loyola Lane. It is centered around the former Motorola campus. Similar to other cluster study areas, significant zoning changes associated, particularly those associated with Austin Viie project to reimagine the campus, indicate that this cluster is transitioning to other uses.

The East MLK Combined Neighborhood Plan and The University Hills Neighborhood Plan both relied on zoning changes to decrease the amount of industrial zoned land in select areas. The US Highway 183 cluster had 386 acres rezoned from industrial to other categories since 2000.

As part of the East MLK Combined Neighborhood Plan the overall amount of Industry as a land use category in the Future Land Use Map was reduced from 16% to 14%. The most significant changes within the plan area were made in two of the three neighborhoods that make up the combined neighborhood plan. Those two neighborhood plan areas, MLK and Pecan Springs-Springdale,

eliminated the application of the Industry land use category in their areas entirely. Industry land use in these two plan areas went from 2% and 8% respectively, to zero. The third part of the combined neighborhood plan, MLK-183, increased the amount of land categorized as industry by 1%.

As noted in prior case studies in this report, an Industry land use categorization does not necessarily mean that there is a current or existing industrial use on the property. Much of the total area in the East MLK Combined Neighborhood Plan was actually vacant or undeveloped at the time of adoption. There were residential subdivisions surrounded by undeveloped land that was zoned industrial and those properties were then changed to Neighborhood Urban Centers, Mixed Residential, Open Space, and Mixed Use land uses on the FLUM. Goal Two of the plan is to "promote a mix of land uses that respect and enhance the existing neighborhood and addresses compatibility between residential, commercial, and industrial uses" with the objective to "reduce the impact of commercial and industrial uses on residential areas."

Close to a quarter of the tracts that were rezoned via the neighborhood plan process actually remain undeveloped. The majority of rezoned tracts have commercial, parks and greenbelts, meeting and assembly (houses of worship), and single family uses.

The City of Austin acquired 200 acres of land, some of which was zoned Limited Industrial Services, in order to create Little Walnut Creek Greenbelt. Near the greenbelt there have been several large multifamily developments signaling a change to the area from undeveloped and rural tracts to condos and lifestyle centers.

The majority of actual land uses on properties that are currently zone industrial (1,046 acres) consist of a mix of warehousing, miscellaneous industrial, office, meeting and houses of worship, a few large-lot single family, and vacant land.

The largest industrial employers are located at the former Motorola campus. A 109-acre section of the campus recently received a zone change from LI-NP to LI-PDA-NP. The Planned Development Agreement (PDA) modifies the LI base district to reduce parking and allow buildings up to 400 feet. The proposed Austin Viie development will include, at full build out, more than 4.6 million sf of office space, a trail system, a 62,336 square foot amenity center, and 327,278 square feet of office. Other planned amenities include a theatre, conference center, game room, food court, Amazon lockers, electrical charging stations, and exercise facilities.

St Elmo

As the industrial district analysis above indicated, the St Elmo Industrial District is beginning to transition to other uses. The wave of zoning cases, site plans, and new construction on South Congress Avenue along the western edge of the District since the mid-point of the decade indicates that this segment of South Congress is on the radar of the development community. A 2019 report issued by Aquilla, an Austin real estate firm, identified the District and its micromarket to the south as an up-and-coming real estate market.²¹

Similarly for developers, St. Elmo is essentially a blank slate ripe with possibilities. It has enough space to pursue a large mixed-use development, yet could also be suitable for a oneoff office or multi-family project. While it's important to remember that most of the sites will require a zoning change, a developer willing to take the time and energy to navigate the rezoning process will likely be rewarded with a higher FAR and unlock more potential for their investment.²²

Developer interest tied with an unmet housing demand and year-to-year tax increases on industrial and commercial property due to increased appraisal values may exert development pressure to convert industrial land to mixed-use or multi-family uses. An early indicator of this is a recent zoning case at 600 Industrial Boulevard, deep inside the District, for mixed-use entitlements on industriallyzoned land.

The City of Austin's earliest aerial photos indicate that sometime between 1940 and 1958 the first industrial uses appeared in the St Elmo Industrial District. By the mid-1960s the District began to expand and was annexed by the City of Austin. By the mid-1970s the District appears much as it does today, save recent mixed-use development (the 68-unit Public Lofts condominiums built in 2016) and several projects currently under construction on or near South Congress Boulevard.

 ²¹ Aquilla Commercial, St. Elmo: Austin's Next Development Boom? 3Q 2019 Special Report, (file:///G:/Projects and Programs/ SpecialProjects/Industrial%20Zoning%20Study/Reference%20Material/S pecial-Report-3Q-2019-St-Elmo.pdf), Accessed on February 6, 2020
 ²² Ibid.

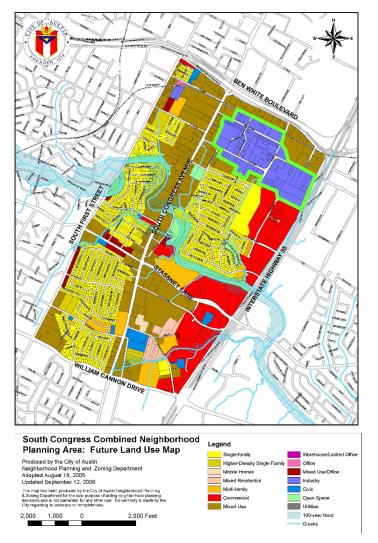


Figure 11: St. Elmo Industrial District (outlined in green)

Presently, the District contains a mix of businesses such as medium to smallscale and general and custom manufacturing, wholesale and general retail outlets, warehouses, tradespersons' offices, and self-storage facilities. Most of the businesses are in metal and tilt-wall buildings, and some have open yard storage with paved and unpaved surfaces. The variety is typical of Austin's more mature, non-technology industrial districts.

On August 18, 2005 the Austin City Council adopted the *South Congress Combined Neighborhood Plan* (Ordinance # 20050818-Z001). In Objective 3.12 on page 71, the plan recommends that the "the St. Elmo Industrial District should be preserved and enhanced where appropriate." To further reinforce this recommendation, the plan's future land use map (FLUM) designated the District as industrial. Along the eastbound Ben

White Boulevard/US 290 frontage road and along South Congress Avenue the FLUM designated the properties as mixed-use. The plan's associated rezonings added the mixed-use combining district (MU) to commercially-zoned properties along South Congress Avenue. Along Ben White Boulevard the rezonings added the Planned Development Area Combining District (PDA) to the industrially-zoned properties to allow residential uses and building heights ranging (west to east) from 85 feet to 125 feet. The plan's objective and associated rezonings were intended to reinforce the District's industrial character.

Following the plan's adoption, very little in the district changed. As the effects of the Great Recession began to recede, the pace of real estate development in Austin began to quickly accelerate. In 2015, the first new significant development along this part of South Congress Avenue, the 352-unit Sur 512 apartment complex was the first residential project developed along the roadway since the 82-

unit Bel Air Condominiums in 2008. In 2014, a zoning case and neighborhood plan amendment were filed and approved for a large mixed-use project, St Elmo Market and Lofts. The plan amendment changed the FLUM from industrial to mixed-use and the zoning change applied a PDA to the existing industrial base zoning in a similar fashion as it was applied along the Ben White Boulevard/US 209 frontage road. The PDA

- Allowed residential uses
- Prohibited industrial uses
- Defined allowable commercial uses
- Established development standards
- Set a density of 42.2968 residential units per acre
- Set a maximum unit count of 400 for the site.

The plans for the project envision a public market, a hotel, office space, and apartments. See below.



Figure 12: St. Elmo Market Leasing Brochure Plan http://stelmomarket.com/assets/uploads/STELMO_Leasing_Brochure.pdf, accessed 12-4-19

It was announced in local media in late January 2020 that the market would open later in the year. These changes, coupled with the following, indicate that the District and the surrounding area along South Congress Avenue are poised to undergo significant change:

- Between 2016 and 2019 there were five zoning cases to add the Vertical Mixed Combining
 District (V) to commercial base districts along South Congress Avenue. Of these zoning cases,
 four have continued to the site plan stage (two are under construction) for mixed-use and
 dense residential projects. If the all of the site plans result in built projects, they will yield
 635 units within 1,300 feet of each other.
- The development of The Yard. This project is a 200,000 square foot complex within the District that has manufacturing and retail spaces whose current tenants include a winery, a distillery, a brewery, small manufactures, and several professional offices. On weekends and evenings, it is a popular gathering place.
- In September 2018, multiple media outlets reported that the site of a former South Austin mainstay, Hill's Café, will be redeveloped into a mixed-use project. Although on the west side of South Congress Avenue, it is indicative that this part of Austin is becoming increasingly attractive for developers.
- There is an recently approved zoning case for a dense, 85-foot mixed project at 600
 Industrial Boulevard located almost a half mile from South Congress Avenue. In
 conversations with the property's representatives, they indicated that increasing property
 taxes made it untenable for their current tenants—one of which had been located at the site
 since the 1970s—to remain at the location. As year-to-year property taxes increases place
 growing burdens on commercial and industrial tenants there will likely be growing tenant
 displacement. As the land becomes more valuable, and consequently taxed at increased
 amounts, property owners or the buyers of their property may seek changes in their land use
 and zoning to allow multi-family or mixed-use development to meet their increased tax
 burdens.

With almost 1,450 residential units recently constructed, under construction, or in review, the segment of South Congress between Ben White Boulevard/US 290 and Williamson Creek is fundamentally changing. As more developers "discover" this South Austin hotspot and the citywide demand for housing remains high and consumer demand for urban places and experiences continues, the redevelopment pressures will increase on the St Elmo Industrial District. This pressure will likely increase at an accelerated rate if there is a successful vote in November 2020 for Project Connect, Cap Metro's plan for and expanded and integrated transit system. One of Project Connect's main high-capacity transit lines, the Orange Line, is proposed to ultimately run along North Lamar

Boulevard from Tech Ridge in far North Austin, through Central Austin, the UT campus area, and Downtown, and down South Congress to ultimately link to South Park Meadows in far South Austin.

Ben White

The Ben White cluster is directly east of I-35 from the St. Elmo Industrial District and is highlighted as a job center on the *Imagine Austin* Growth Concept Map. It has the opportunity to intensify despite some losses in manufacturing jobs. The area is generally located east of I-35, west of US 183, south of East Ben White Boulevard, north of the Dove Springs neighborhood, and also includes the cluster of high-tech facilities north of Ben White and west of Montopolis Boulevard as well as along the west side of US 183 north of the airport.

The history of industrial zoning in Southeast Austin is a story of time and place. Clustered near major transportation routes and the Austin-Bergstrom International Airport, this area has generally been accommodating of industrial and large commercial uses. The typology analysis indicates a loss in manufacturing jobs for this cluster, but overall job growth between 2002 and 2017. The three neighborhood plans that make up the area- *Southeast Combined Neighborhood Plan, Montopolis Neighborhood Plan,* and *East Riverside/Oltorf Combined Neighborhood Plan* all contain various amounts of industrial zoned properties within their boundaries.

The East Riverside/Oltorf Combined Neighborhood Plan (2006) participants considered the presence of industrial companies such as AMD, SEMATECH, and Tokyo Electron as strengths to the community and to the local economy. In 2004 the planning area had 299 acres of industrial land use or 8.91% of total land uses.

The *Montopolis Neighborhood Plan* (2001) called for intense commercial and industrial activities to concentrate along Ben White Blvd and U.S. Highway 183. The 1985 *Montopolis Area Study* recommended a future land use pattern that would accommodate the industrial expansion taking place in the area and recognized the impacts of noise from the then Bergstrom Air Force Base.

The Southeast Combined Neighborhood Plan (2002) acknowledged that its proximity to the airport and large amounts of undeveloped land made the area surrounded by major transportation corridors very attractive for industrial development. The future land use scenario for industrial increased by almost 39% as part of this plan. Much of the undeveloped land in the planning area at the time was zoned industrial.

Until recently, there does not appear to be any one dominant industry type that can be pointed to as a determinant or dominant trend in the areas. Properties that have converted to other zoning districts have done so for various reasons. Several properties have been rezoned to Public (P) zoning. In 2001, two previously undeveloped industrially zoned lots were rezoned for the construction of The Travis County Ray Martinez Office Building on McKinney Falls Parkway. In 2009 a portion of the Tokyo Electron Industrial campus was rezoned to Public in order to convert it to an Austin Energy Control Center.

Along East Ben White Boulevard properties zoned Limited Industrial (LI) were converted to General Commercial in order to accommodate product sales which would not have been allowed under the industrial zoning. In 2004 a hotel on E. Ben White Blvd. was granted CS-1 (Commercial Liquor Sales) zoning in order to convert a portion of its lobby space into a cocktail lounge.

Because of its proximity to the central core of the city, the Montopolis neighborhood has been experiencing significant development pressures for new housing. In 2012 an undeveloped 31.4 acre property along E. Ben White Blvd was rezoned from Limited Industrial and General Commercial to General Commercial Mixed Use in order to allow the development of a mixed-use residential project. In 2015 "Eastwood at Riverside" subdivision expanded to Phase II by rezoning 12 acres from Limited Industrial to Community Commercial Mixed Use and from Community Commercial Mixed Use to Townhouse & Condominium for the construction of 85 new detached, single-family, condominium units.

In 2001 a 49.93 acre tract of land on East Riverside Drive went from Limited Industrial Planned Development Area (LI-PDA) to Community Commercial Mixed Use (GR-MU) and Rural Residential (RR). That same tract of land was subsequently incorporated into the East Riverside Corridor Master Plan. That plan emphasized the importance of a transit-oriented and walkable corridor, one of the few direct connections from the airport to downtown. Tracts on this property were given entitlements in recommended by the 2013 East Riverside Corridor Regulating Plan. The parcels were grouped and divided into three Corridor Subdistricts – Industrial Mixed Use, Neighborhood Mixed Use, and Corridor Mixed Use. The Industrial Mixed-Use subdistrict is a transition district used to accommodate existing industrial uses and enable future development to include residential and commercial uses. Corridor Mixed Use and Neighborhood Mixed Use Subdistricts allow for higher density and mid-rise residential with neighborhood-oriented retail and smaller employers on ground floors.

In October 2019 the Austin City Council approved zoning changes for 4700 E. Riverside, a 97-acre, proposed mixed-use redevelopment at East Riverside Drive and South Pleasant Valley Road. This project would create over 4,000 multifamily units, add over 600 hotel rooms and millions of square feet of office and commercial space. While this is not a case of losing industrial property, it signals that change is occurring in this part of Austin. This major project and the opening of the Oracle

Lakeshore campus in 2018 could be not-so-subtle signifiers that major mixed-use development may continue to move south and east.

As the demand for close-in housing and goods and services continues, the development trends in the St Elmo Industrial District and along the East Riverside Corridor will spur development pressures for mixed-use projects further into Southeast Austin. Large tracts of undeveloped and industrialzoned properties that were intended for those uses might to look more attractive to developers looking to build mixed-use and residential projects.