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1 COMMUNITY GOALS & OBJECTIVES

1.1 Comprehensive Planning

A comprehensive plan is a document that articulates a future vision for a community and the goals, objectives, and actions to help achieve it. It provides guidance to City staff, leaders, decision-makers, property owners, businesses, developers, and residents in the choices and decisions they make.

A comprehensive plan:

- Provides detailed information about what a city looks like and how it functions;
- Articulates a vision of how residents and other community members want the city to grow as it looks to the future;
- Identifies specific goals and actions to help achieve the vision;
- Provides a framework for policy decisions and physical development;
- Covers a long-term time frame of 10- to 20-years; and
- Is integrated with other planning documents, studies, and initiatives carried out by the City and region.

While not statutorily required for Texas cities, comprehensive plans provide important legal and political support for zoning, subdivision, and other city development processes. A comprehensive plan defines a city's reasons for adopting and implementing land use regulations and provides information for budgeting, capital improvements programs, and other regulatory documents of the City.

Once complete, a comprehensive plan represents not only a sophisticated set of data about a city but also a set of priorities and specific projects established by the community that the city's leadership can use to move the city into the future.

1.2 Developing a Vision

Community goals and objectives guide the actions recommended throughout this comprehensive plan. Pecos residents' goals and objectives were developed through public hearings, presentations, and a survey. The City of Pecos hosted a planning workshop at the Reeves County Civic Center on March 16, 2020. The purpose of the workshop was to identify, organize, and analyze goals and objectives for the community. The conclusions from the workshop can be expressed as a community vision statement that describes residents' hopes for what Pecos might be like in 2030:

City of Pecos Community Vision Statement

In 2030, Pecos will be an affordable, residential community that provides excellent services and attractive amenities. The city will be characterized by:

- *A dynamic economic hub in with a small-town feel;*
- *A historically rooted and inclusive community;*
- *Diverse housing opportunities affordable to and serving the needs of all segments of the population;*
- *A resilient, diversified local economy that supports a variety of businesses;*
- *A Multimodal transportation system that will prioritize safety while accommodating heavy industrial traffic,*
- *Updated and efficient water and sewer systems that meets the needs of Pecos's growing population and economy; and*
- *Well-maintained parks, recreational facilities and amenities for residents of all ages.*

1.3 Community Input

The planning workshop gathered information from Pecos residents using an effective, established process known as the Goals Grid Method.¹ The following questions were presented to those in attendance:

1. What are you trying to achieve?
2. What are you trying to preserve?
3. What are you trying to avoid?
4. What are you trying to eliminate?

Residents responded as follows:

Preserve/Achieve

- Community
 - Flush out and guide implementation of existing plans
 - Manage rapid growth while maintaining West Texas roots
 - Incorporate large temporary energy workforce as permanent residents
 - Provide amenities and education to encourage families to settle in Pecos
 - Integrate large new developments into the existing fabric of Pecos
- City
 - Complete renovations to City Hall to ensure accessibility to all residents
 - Expand City staff to meet the needs of the growing population and increased development
- Housing
 - Incorporate Mixed-Use building typologies
 - Encourage use of new zoning categories
 - Plan for integration of West Pecos Development
 - Compare population projections to other plans
 - compare stable oil market vs. boom-bust oil market scenarios
 - Formalize/make permanent energy workers living in temporary housing
- Land Use
 - Incorporate Mixed Use typologies
 - Encourage use of new zoning categories
 - Plan for West Pecos Development
 - Increase connectivity between old Pecos and “West Pecos”

¹ Nichols, Fred (2000) The Goals Grid: A Tool for Clarifying Goals and Objectives

- Use West Pecos as model for new development across Pecos
 - Expand landfill/solid waste capacity
 - Plan for new recreational facility east of Airport
 - Plan for development along future truck loop
 - High water table will prevent some development
 - New recreational facilities needed in Central Pecos
 - Consider stormwater ditches for Hike/bike trails
 - Consider ISD facilities as shared park facilities
 - Consider diversifying use of Reeves County Civic Center and Rodeo Area during off-season
 - Consider annexation of Lindsey addition
- Water and Wastewater Infrastructure
- Meet growth projections by increasing capacity
 - Wastewater expansion project implementation
 - Ensure all residents are supplied with safe and affordable services
 - Leverage water and wastewater infrastructure to attract permanent residents to Pecos, rather than temporary accommodations outside the city limits
- Economic Development
- Diversify commercial activities
 - Leverage infrastructure assets to grow as trade hub
 - Diversify job base, future proof
 - Increase ISD staffing to meet demand
 - Diversify recreational and entertainment options
 - Attract a theater, nightlife options
 - Create regional recreational attractions
 - Consider stormwater ditches for Hike/bike trails
 - Consider ISD facilities as shared park facilities
 - Consider diversifying use of Reeves County Civic Center and Rodeo Area during off-season
 - Increase tax base by incorporating development in county
 - Bring energy workforce into city limits
 - Consider preserving some land for agriculture for future cultivation
 - Increase funding from TxDOT for transportation improvements
 - Attract energy industry supply businesses to Pecos from Odessa/Midland
 - Find ways to compete with NM Cities
- Transportation and Thoroughfares
- Plan for long-term growth projections
 - Improve connectivity across I-20
 - Corridor study plans to raise I-20 through Pecos
 - Connectivity to Pecos Park

- Increase funding from TxDOT for transportation improvements to address Oil/Gas development
- Plan for West Pecos development
 - Increase connectivity to west Pecos development
- Plan for “Truck Loop” coming on East Side of Pecos
 - High water table will prevent some development

Eliminate/Avoid

- Substandard Structures & Lot Conditions
 - Help for residents to clarify titles and deeds
 - Consider community outreach effort to promote dilapidated structure removal
 - Junked yards
 - Vacant commercial buildings downtown
 - Replace low quality manufactured homes and RV’s with permanent structures
- Community
 - Loose animals
- Infrastructure
 - Thoroughfares
 - Create and enforce truck route to limit wear on local roads and promote safe environments within neighborhoods
 - Fix potholes/poor road conditions
 - Secure funding for road improvements
 - Secure funding for multimodal infrastructure

1.4 Implementation: Goals & Objectives Framework

The results of the Goals Grid Method were used in conjunction with fieldwork and background research to define specific implementation plans for each area of this comprehensive plan. Each implementation plan contains long-term goals and specifically defined objectives, timelines, involved parties, and estimated costs.

1.5 Commitment to Fair Housing

In recognition of fair housing as important to all aspects of community planning, the studies in this plan include analyses of protected classes in Pecos and of how Pecos policies, procedures, and investments impact protected classes in the city.

2 POPULATION ANALYSIS

Comprehensive plans include estimates of the current and future population because the size and rate of a community's growth affect planning for community facilities and services. Information for the population analysis comes from the United States Census Bureau, the Texas Demographic Center, the Texas Water Development Board, and a survey of the community's occupied houses.

2.1 Highlights

Like many small cities in Texas, Pecos's population fluctuated over the past 50 years. Historical population changes were impacted by the activities and investments agricultural and oil and gas industry. In 2020, Pecos is a commercial and residential hub for surrounding energy industry facilities in the region. Pecos's location is at the intersection of US Highway 20 and Highway 285, which provide direct links to nearby cities including Ft. Stockton and Odessa.

Pecos's population decreased over the last census decade (2000-2010) and became somewhat older. However, according to the housing survey of this plan, the city saw rapid population growth between 2010 and 2020. Additionally, there are dozens of "man camps", or temporary oil worker housing developments, which inflate Pecos's effective population even further. Pecos's population is very likely to increase over the planning period considering the anticipated long-term fracking operations expected in the area. With this rapid growth in mind, the City is preparing to attract oil-workers to permanently settle in the city limits with new, high quality residential development and amenities in the town. However, the recent slowdown in fracking, and the economic downturn due to the Covid-19 pandemic have thrown these rapid growth projections into question. Based on the 2020 population estimate derived for this plan, the town of Pecos's population increased by 43% over the last 10 years.

This study projects that Pecos's population will experience high growth over the next 10 years, reaching approximately 14,320 residents in 2030.

2.2 Conditions

The Town of Pecos City is the County seat of Reeves County, located at the intersection of Interstate 20 and Highway 285 in West Texas. Incorporated in 1885, Pecos is a Home Rule City with a council-mayor-city manager form of government and is within the Permian Basin Regional Planning Commission (PBRPC).

Historical Development & Growth

Pecos’s history is closely tied to the activities and investments of the agricultural and Oil industries. The area around Pecos were first occupied by indigenous people including the Jumanos and Mescalero tribes. Later, Mexican settlers established farms along the Pecos River and Toyah River. Anglos began arriving in the area in the 1850’s, but the settlement became a more permanent one in the 1880’s, when Pacific Railroad arrived. The railroad station and townsite were built on land owned by George A. Knight, and became a trading depot for ranching and agricultural activity in the area. On July 4th, 1883, the town claims to have hosted the world’s first rodeo, which has cemented the town’s association with the Old West and Cowboy culture.

At the time of the establishment of the First National Bank of Pecos in 1904, the town’s population was 630. The town’s population fluctuated through the early 20th century with the establishment of various commercial and military activities. The first oil boom in the Delaware Basin occurred in the 1920’s, bringing with it the first wave of energy workers to the town. By 1940, the town had grown to a population 4,855. This number almost doubled during WWII, when the construction of the Pecos Army Airfield brought thousands of servicemen and their families to the area. After the war, the airfield was decommissioned, but Pecos’s population still trended upward through boom-bust cycles until it peaked in the early 1970’s at 14,200.

Pecos’s population saw a major dip after the Texas oil industry collapsed in the 1980’s, while further economic retraction in the area contributed to population decline through the 90’s and 00’s. The population bottomed out at 8,780 in 2010 census, and may have been as low as 7,600. However, due to rapid advancements in fracking and horizontal drilling techniques, Pecos once again became a boom town in the 10’s. In 2012, it was named the 2nd fastest growing city in the country by Forbes magazine, and has continued its rapid growth through the decade. Despite a slowdown in the fracking industry in 2019, economic and population growth projections were still bullish through the start of 2020. This is

Table 2A: Population (1960 – 2020)

Year	Pecos	Reeves County	State of Texas
1960	12,728	17,644	9,579,677
1970	12,682	16,526	11,196,730
1980	12,855	15,801	14,229,191
1990	12,069	15,852	16,986,540
2000	9,501	13,137	20,851,820
2010	8,780	13,783	25,145,561
	2020 (estimate)	12,570	

Source: US Census Bureau, Profile of Demographic Characteristics, 1960 – 2010; GrantWorks 2020 estimate

projected growth has been based largely on stabilization of the fracking industry, due to improvements in efficiency and high productivity of the Permian Basin. With this in mind, one forecast by the Perryman Group have predicted population rising up to approximately 44,000 by 2038 in the Pecos area (Reeves and surrounding counties), if the transitory energy workers are incorporated into the town's permanent population. However, this over 300% increase in population is contingent on continued growth of the fracking industry capacity as well as unprecedented stability in oil production and demand. The most recent comprehensive plan, Positioning Pecos, was reluctant to rely on such optimistic and far reaching predictions. Their projection predicts a 16,708 population on the low end, and 22,904 by 2024. The plan, which was published in 2015, did not predict further than 10 years due to the historic volatility of the oil industry and in turn, Pecos's population.

Both the Perryman Report and Positioning Pecos were written before the fracking slowdown in late 2019, and the Covid-19 pandemic of 2020. At the time of the writing of this plan, the future of the U.S. fracking industry is in the balance due to extremely low oil prices and demand. Additionally, the 2020 presidential elections could bring a new Democratic administration that may put into place significant regulations or other restrictions on the industry. Therefore, it will be necessary to reevaluate the bullish population forecast with these factors in mind. It would be prudent for Pecos to plan for at least two scenarios - one of bullish growth, and one of bearish recession.

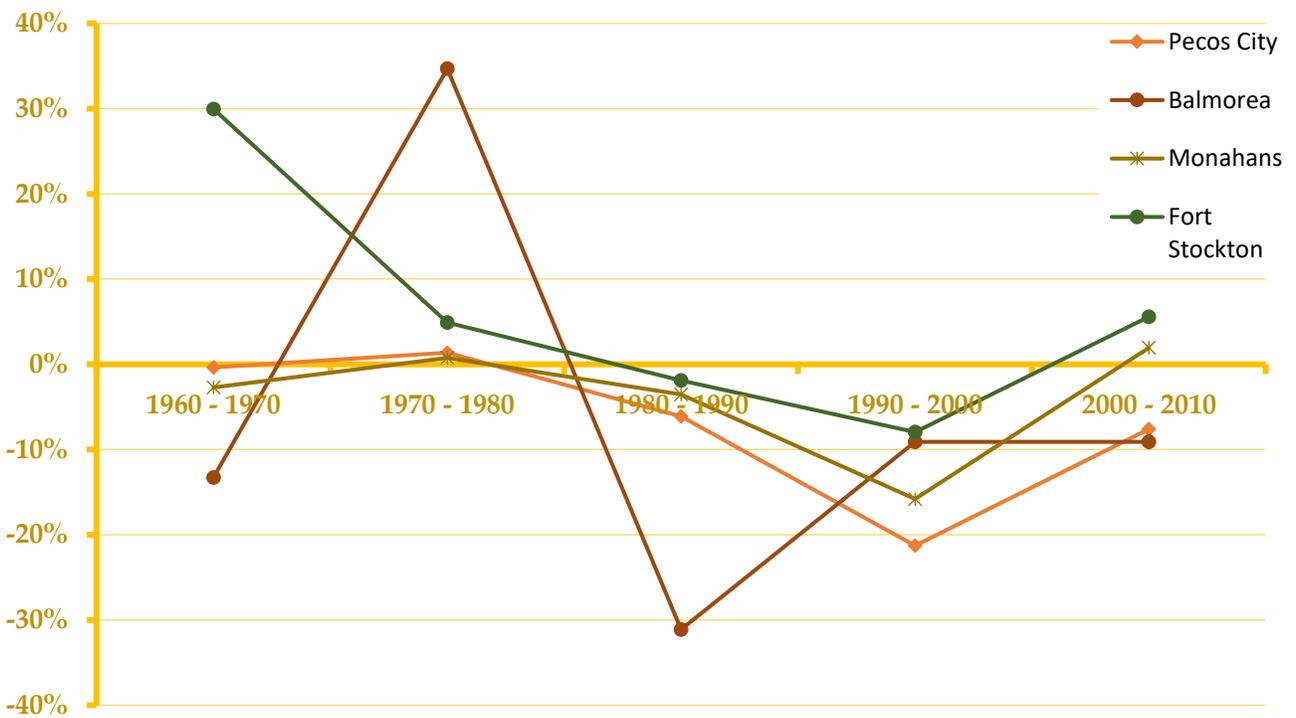
Chart 2A and Chart 2B (next page) compare population changes in Pecos, nearby cities, Reeves County, and the State of Texas over the last 50 years. As the charts show, population changes were more pronounced in Pecos than population changes at the State level. However, nearby cities like Ft. Stockton and Monahans experienced similar population change fluctuations.

Chart 2A: Historical Population Change (1960 – 2010) [City, County, Texas]



Source: US Census of Population and Housing

Chart 2B: Historical Population Change (1960 – 2010) [City, Nearby Cities]



Source: US Census of Population and Housing

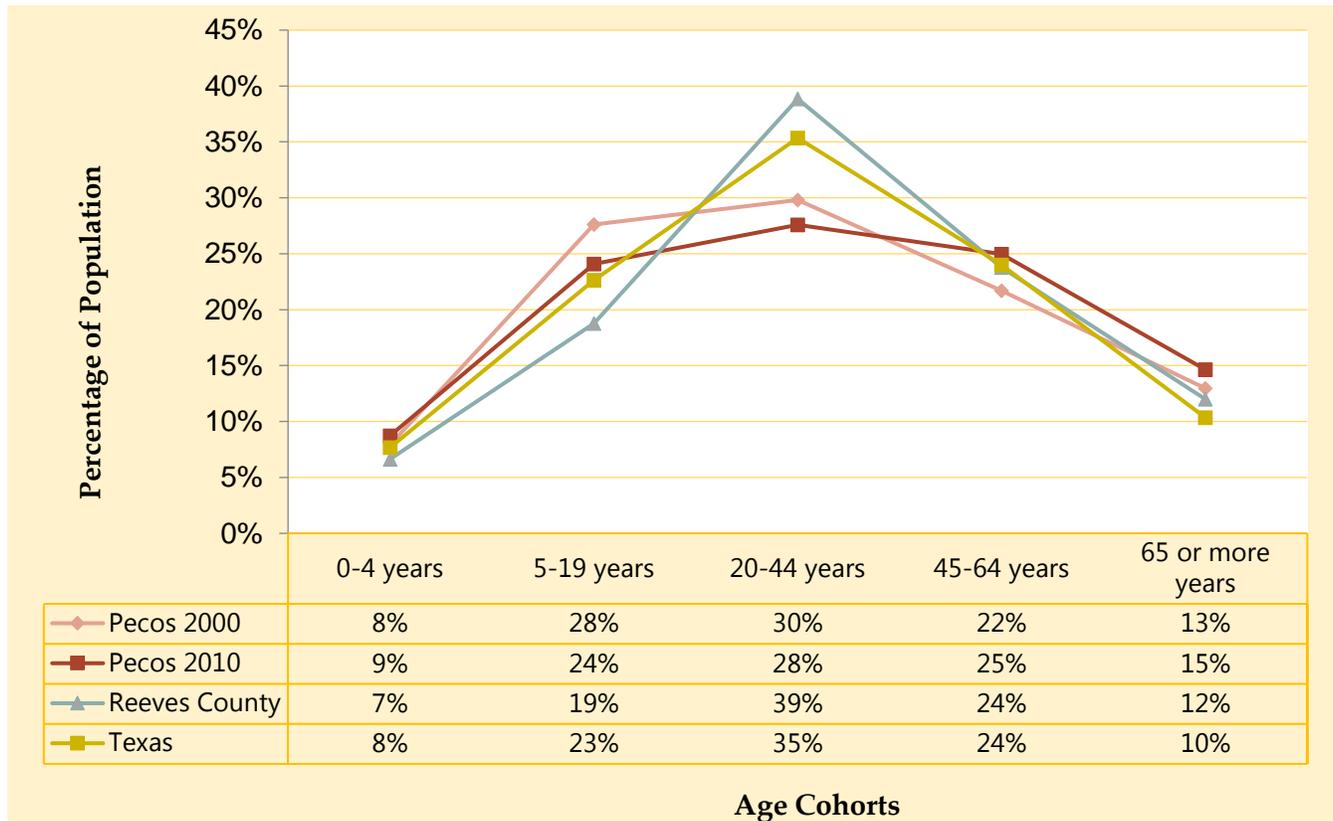
Recent Population Changes (2000-2010)

Pecos's population decreased by 7.6% (-721 residents) over the last census decennium (2000-2010). The following sections analyze changes in age distribution and representation of racial and ethnic minorities in the town during this period.

Age Distribution

Chart 2C illustrates age cohort distributions for Pecos (2000 and 2010), Reeves County (2010), and the State of Texas (2010). An age distribution peaked by the 20-to-44-year-old age cohort generally indicates a stable-to-expanding or "healthy" population distribution. The 2010 Texas distribution is an example of a "healthy" population change. In contrast, a flatter distribution can indicate relatively stationary or declining population change. As Chart 2C demonstrates, the age distribution of Pecos's residents in both 2000 and 2010 are peaked by the 20-to-44-year-old age cohort. However, this age group represented a lesser percentage of the town's population in 2010, leading to a less pronounced peak. It should be kept in mind that, due to the relatively small size of Pecos's population, the age distribution can fluctuate from minor changes. However, this comparison suggests that Pecos's population became somewhat older between 2000 and 2010.

Chart 2C: Recent Population Change, by Age Group (2000 – 2010)



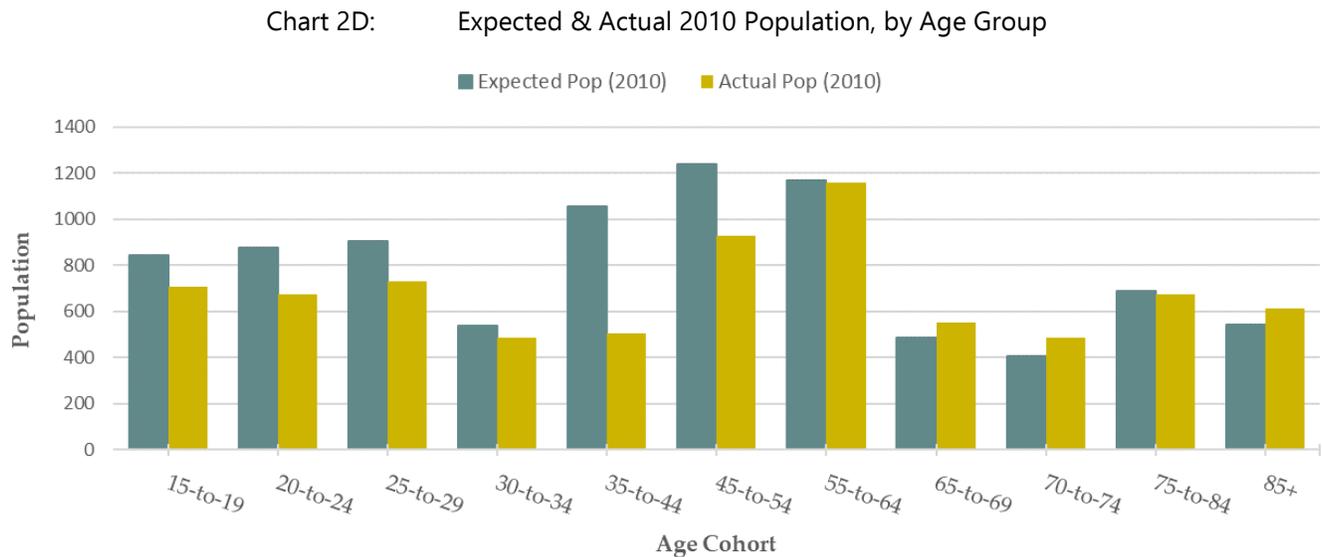
Source: 2000 and 2010 Census of Population and Housing, Summary Population and Housing

Actual Versus Expected Population

Population changes are usually the result of both migration - residents moving to or leaving a city - and natural changes – new births or current residents passing away. Examining the relative impact of these factors provides a more nuanced understanding of recent population change.

Chart 2D compares Pecos’s expected 2010 population (organized by age group) with the actual population figures from the 2010 Census (also organized by age group). The expected population in each group is based on the aging of individuals living in Pecos in 2000. For example, the expected population of 20-to-24-year-olds in 2010 is the population that was 10-to-14 years-old in 2000. A higher than expected 2010 population suggests that new residents in the age group moved to Pecos between 2000 and 2010. In the case of residents under the age of 15, this could also indicate natural population growth (new births to parents already living in the city). A lower than expected 2010 population could be the result of several factors, namely mortality or previous residents moving away.

Comparison of Pecos’s actual and expected 2010 population by age group suggests that a significant amount of residents of prime working age living in Pecos in 2000 likely left over the previous decade. The actual 2010 population was lower than expected in all age groups – below age 65. In particular, the actual population of residents in their thirties and forties was notably lower than expected.



Source: 2000 and 2010 Census of Population and Housing, Summary Population and Housing

It is important to note that these are only general reference figures to identify general changes. The comparison captures only overall changes.

Race & Ethnicity

The U.S. Census distinguishes between two minority population groups: “racial minorities” - all non-“White” residents - and “ethnic minorities” - all “Hispanic or Latino” residents. *Table 2B* provides a population profile of residents in Pecos and Reeves County in terms of race and ethnicity.

As *Table 2B (next page)* demonstrates, approximately 22% of Pecos’s 2010 population identify as a racial minority (non-White), and 83% identify as an ethnic minority (Hispanic or Latino). Racial minorities comprised a very similar percentage of Pecos residents in 2010 than in 2000, as did representation with ethnic minority groups. Pecos’s ethnic minority population increased slightly during this period (3%). *Table 2B* also shows that Pecos is more racially and ethnically diverse than the populations in Reeves County and roughly the same as the State of Texas.

As shown on *Map 2A: Population Distribution 2020 & 2030* and discussed further in *Chapter 3: Housing Study*, the town of Pecos has several areas of high minority concentration. The State of Texas defines an “Area of High Minority Concentration” as “a census block group that consists of 65% or more of minorities”.² Minorities include all racial and ethnic population groups other than “White, non-Hispanic (Anglo)”. Census data is not available to map the locations of other protected classes for towns or cities with fewer than 20,000 residents.

Additional data regarding minorities in Pecos included in *Appendix 2A: Project Beneficiaries*.

² The “65 percent threshold” is based on the definition of “an area of minority concentration” used by the Texas General Land Office in its 10/1/2012 publication, “Homeowner Opportunity Program Guidelines - CDBG Disaster Recovery Program - Hurricanes Ike & Dolly, Round 2.”

Table 2B: Population Change by Race & Ethnicity (2000, 2010) [City, County, State]

Characteristic	Pecos				Reeves County		STATE	
	2000		2010		2010		2010	
	#	%	#	%	#	%	#	%
Total Population	9,501	100%	8,780	100%	13,783	100%	9,501	100%
Race								
White	7,251	76%	6,806	78%	10,645	77%	7,251	76%
Black or African American	233	2%	163	2%	690	5%	233	2%
American Indian, Alaskan Native	44	0%	39	0.4%	64	0.5%	44	0%
Asian	45	0.5%	88	1.0%	119	0.9%	45	0.5%
Native Hawaiian / Hawaiian / Another Pacific Islander	1	0.0%	5	0%	6	0.04%	1	0.0%
Other	1716	18%	1,510	17%	2,047	15%	1716	18%
Two or More Races	211	2%	169	2%	212	2%	211	2%
Ethnicity								
Hispanic or Latino	7560	80%	7,302	83%	10,233	74%	7560	80%
Not Hispanic or Latino	1,941	20%	1,478	17%	3,550	26%	1,941	20%

Source: U.S. Census Bureau.

Note: Figures may be rounded to next whole number

2.3 Population Projections & Forecast

Population Projections

Population projections inform federal, state, and local funding decisions about facilities such as highways, sewage treatment plants, and schools. Population projections are based on historical trends ranging from the population changes in the most recent decade to changes over the past century or more. Planners considered several population projections, based on differing methods, to help guide the planning recommendations for the town of Pecos in this comprehensive plan.

- Extrapolation of Texas Demographic Center (TDC) cohort population projection for Reeves County (adjusted by the town of Pecos's relative population)
- Geometric extrapolation of recent Census data (2000, 2010)
- Linear regression analysis of Census data (1930-2010)
- Texas Water Development Board (2020 estimate)

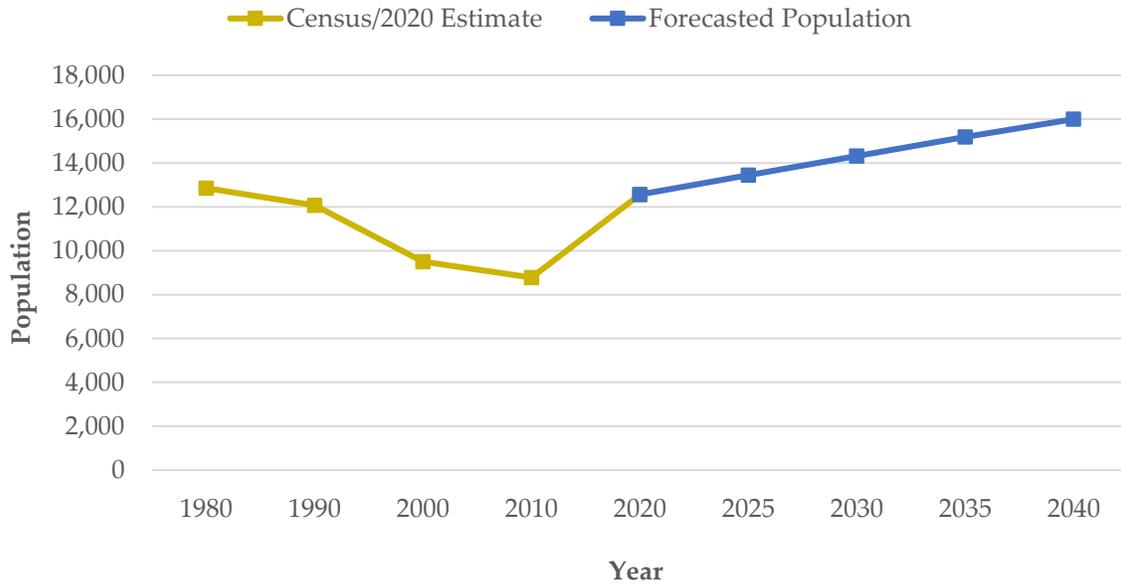
Appendix 2B provides a more detailed discussion of the population projection methods.

Population Forecast

Pecos's population is difficult to forecast due to the unpredictable nature of the oil and gas industry, and recent events, including the aforementioned fracking slowdown and oil market crash due to Covid-19. Recent forecasts have ranged from very strong growth to exponential growth, all of which are in question in light of recent events. However, the region has already seen major population growth and significant investments in permanent oil and gas infrastructure, which is unlikely to be abandoned in the medium term. Meanwhile, the Town of Pecos City and developers have made plans for significant improvements to the amenities and services in Pecos that should attract new permanent residents.

Therefore, this plan uses county-level projection data from the Texas Demographic Center (TDC) and the number of total occupied housing units (collected during fieldwork, Winter 2020) to provide a more moderate population forecast that takes into account the above-mentioned factors. Pecos's forecasted population is the town's historical share of Reeves County total population applied to the TDC projected growth for Reeves County for 2010-2050. **This study forecasts that Pecos's population will experience steady growth over the next 10 years, reaching approximately 14,320 residents by 2030** (*see Chart 2E*). It is important to note that while this forecast is lower than other forecasts for Pecos, it is the highest of any projection method Grantworks typically uses for towns of similar size as Pecos (*see chart 2B.1 below*). *Map 2A* shows the expected locations of Pecos's population in 2030.

Chart 2E: Population Forecast



2.4 Appendix 2A: Project Beneficiaries

Table 2A.1 contains information required by the U.S. Department of Housing and Urban Development (HUD) in the fulfillment of this planning grant. The numbers detailed for project beneficiaries below may not correspond exactly to the numbers presented in *Table 2B* (above) because HUD grant programs generally require at least a 51% low-to-moderate community income level to qualify for funding. However, income levels are not collected from all Census respondents. Census income levels are derived from a sample and weighted to represent the total population. Race beneficiary numbers are then mathematically derived to correspond to income beneficiary numbers. When Census income level estimates seem too high, additional door-to-door surveys are conducted to verify a 51% low-to-moderate income level. Because the income tabulation is slightly different for the grant application, the resulting numbers generally do not correspond to the 100% population samples that represented in *Table 2A.1*.

Table 2A.1: Beneficiary Report

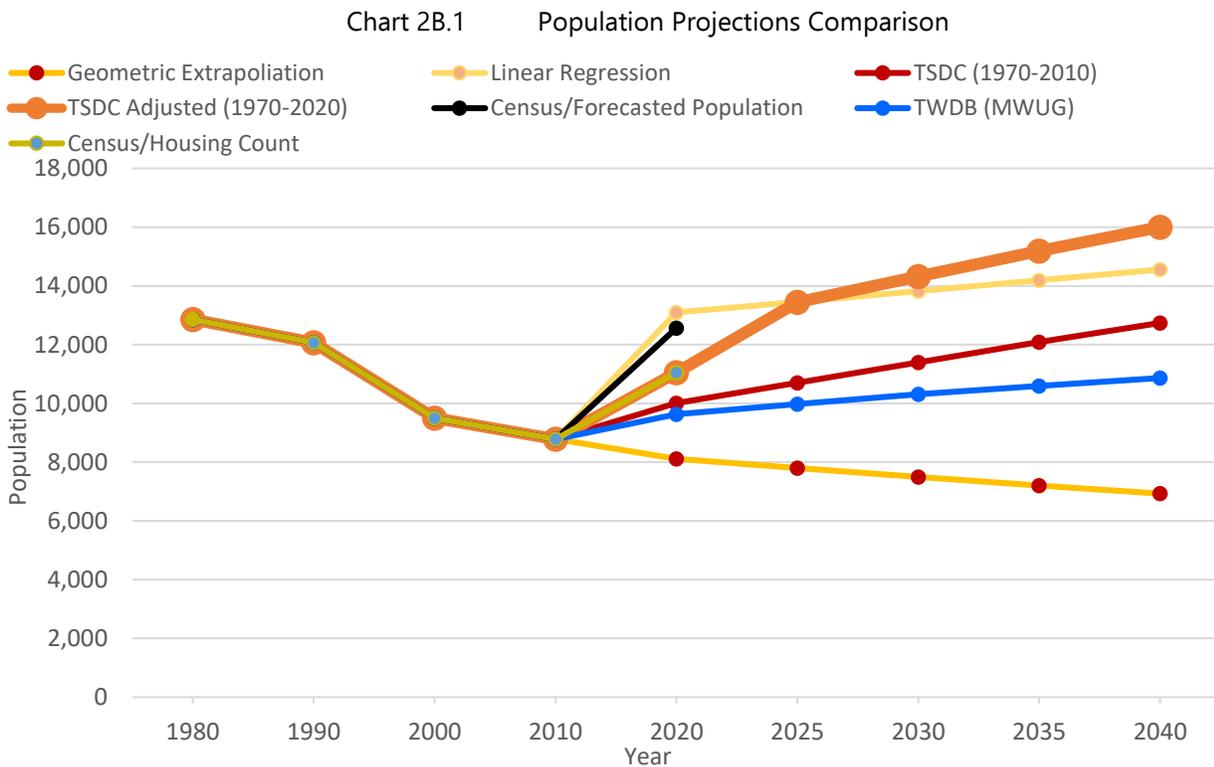
Total Project Beneficiaries	8,405	Male	4,252	Female	4,153
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Race	Non-Hispanic	Hispanic Ethnicity Also	Total
White	1626	4574	6,200
Black/African American	356	33	389
Asian	104	0	104
American Indian/Alaskan Native	62	41	103
Native Hawaiian/Other Pacific Islander	0	0	0
American Indian/Alaskan Native & White	13	45	58
Asian & White	5	15	20
Black/African American & White	0	0	0
American Indian/Alaskan Native & Black/African American	7	25	32
Other Multi-Racial	49	1450	1,499
		<i>Grand Total</i>	<i>8405</i>

Income Level	No. of Persons
Very Low (at or below 30% of the AMFI)	n/a
Low (31-50% of the AMFI)	n/a
Moderate (51-80% of the AMFI)	n/a
Non-Low/Moderate (above 80% of AMFI)	n/a
Total	8,990
Subtotal – All Low/Mod	3,315 (36.9%)

2.5 Appendix 2B: Population Projection Methods

Chart 2B.1 illustrates each projection considered for this plan. The following sections describe projection methods.



Cohort Extrapolation

Population estimates identify changes to the town's population and provide a benchmark to guide population projections and forecasts. The Texas Demographic Center (TDC) periodically issues population estimates for all incorporated places in the state; the TDC's system provides a baseline for the cohort extrapolation estimate produced as part of this study. The TDC uses the **Cohort-Component Method** to calculate estimates and projections. The basic characteristics of this technique are the use of separate cohorts – persons with one more characteristic – and the separate projection of each of the major components of population change –fertility, mortality, and migration for each of the cohorts. The latest projections employ a migration scenario that assumes a continuation of 2010-2015 rates of age-, sex-, and race/ethnicity-specific rates of migration.

Geometric Extrapolation

The geometric extrapolation model operates on the assumption that the population will change by the same percentage in each future year as the average annual change over the base period (2000-2010).

Linear Regression

Linear regressions attempt to model the relationships between two variables by fitting a linear equation to the observed data. One variable is considered to be an explanatory variable (time) and the other is considered to be a dependent variable (population change). Linear regressions help to adjust for short term fluctuations over time to identify longer-term trends.

Texas Water Development Board

The Texas Water Development Board (TWDB) provides population projections for “Municipal Water User Groups,” which include:

- Cities with a 2010 population greater than 500;
- Select Census Designated Places, such as military bases and in counties with no incorporated cities;
- Utilities (areas outside the places listed above) providing more than 280 acre-feet of municipal water per year);
- Collections of utilities with a common water supplier or water supplies (Collective Reporting Units); and
- Remaining rural, unincorporated population summarized as “County-Other”.

Municipal water user group (“MWUG”) projections are taken from county-level projections based on projections from the Texas State Data Center (TSDC) / Office of State Demography (*see Cohort Extrapolation above*). County-level projections are based on the TSDC half-migration scenario, but alternative scenarios are selected where more reflective of anticipated growth patterns. Projections for individual MWUGs are developed by allocating growth from the county-level projections according to the following methods:

- Share of Growth – applying the MWUG’s historical (2000-2010) share of the county’s growth to future growth;
- Share of the Population – applying the MWUG’s historical share (2000-2010) of the county population to the projected county population; and
- Constant Population – applied to military bases and other water user groups that had a population decline between 2000 and 2010 in a county with overall population growth.

The sum of all MWUG populations within a county is reconciled to the total county projection. More information about the MWUG population projection methods and methodology can be found at <https://www.twdb.texas.gov/waterplanning/data/projections/>.

3 HOUSING STUDY

The Housing Study analyzes the location and condition of Pecos's housing stock. It identifies the various types of housing, including multifamily (apartments, duplexes, etc. and government-funded units), single-family (the typical house), and mobile/manufactured houses, as well as fair housing-related characteristics of the city's housing stock. The study lists particular issues that need to be addressed, actions municipal authorities should take, and resources available for improving local housing.

Due to the difficulty of quantifying the number of units in the often informal and largely temporary oil worker housing complexes (known as "man camps,") this study was limited to quantifying the *permanent* housing stock of Pecos. The gross acreage of oil worker housing was collected, however, which, with further study, could be used to provide a rough estimate of oil worker housing units available at the time of this study's fieldwork period (March 2020) by using an estimated units per acre metric. More information regarding oil worker housing is provided in the Land Use Chapter (*Chapter 4*) of this plan.

In 2015, WTC Incorporated and Gap Strategies completed a comprehensive plan for the town of Pecos that included a housing section (section recommendations summarized below).

3.1 Highlights

The town of Pecos's housing stock is characterized by single-family, stick-frame housing (73% of all units). Approximately 58% of housing units are in standard condition, and residential vacancy rates are very low (estimated 2%).³ The Town has numerous multi-family units (566), including duplexes, triplexes, and apartments. Almost 100% of multifamily units (96%) are in standard condition. Only 5 units require repair beyond routine maintenance. 41% of multifamily units in Pecos are income-limited (234 units) and renter-occupied. Landlords report very high occupancy in, and demand for, affordable rental units.

Pecos faces several significant challenges for maintaining and further developing a healthy housing stock. Approximately 42% of Pecos's housing (1674 units) is in substandard condition (i.e. deteriorated or dilapidated condition), and nearly all substandard units are occupied (96% or 1611 units). In addition, there are 63 vacant, dilapidated/deteriorating units located within the city limits. Vacant, dilapidated houses are a key community concern, increase risks to public health and welfare, and should be

³ Estimated vacancy rate derived from the average of the 2010 US Census vacancy rate and the 2020 vacancy rate based on windshield observations (further discussed in *Section 3.3.2*).

removed.

Map 3A: Housing Conditions 2020 shows the location of housing by type and condition.

Improving the existing housing stock will require financial and technical support for repair and maintenance, as well as financial and technical support for housing removal and replacement. The Town should focus on assisting residents with home repair (e.g., through grant applications and dissemination of information on organizations able to help individuals) and with dilapidated structure removal. The Town should also update and enforce relevant ordinances to ensure that housing and lots meet high standards.

The town of Pecos will require new housing to accommodate anticipated population growth. Based on a projected 2030 population of 14,320, Pecos will need approximately 623 new housing units over the next 10 years.⁴ Town representatives and residents expressed a desire for additional affordable and multifamily housing in Pecos. The Town should continue to work with area foundations, large landowners, and regional developers to identify areas and to finance and build new housing.

3.2 Context: History & Community Input

Previous Studies

WTC Incorporated and GAP Strategies conducted a housing study for the Town of Pecos in 2015 as part of a comprehensive planning process. *Table 3A* compares the 2015 housing study data to the housing data collected for this plan (2020). The data in the 2015 plan is limited to the general condition of the housing stock as a whole, so comparisons across the two plans does not include change in housing type or quantity.

Table 3A: Housing Changes (2015, 2020)

	2015	2020
Percent in standard condition	40%	58%
Percent in deteriorated condition	39%	33%
Percent in dilapidated condition	22%	9%

The goals expressed at the end of the 2015 housing study are listed below with the status of each goal in 2020:

1. Address community desire expressed in survey for more high-quality housing.

⁴ This figure includes the currently vacant, dilapidated units that need to be removed and replaced.

- Significant amounts of residential development, particularly multifamily development, has been completed or is underway since 2015.
2. Improve housing integration into the city fabric.
 - New mixed-use developments are being planned with fully integrated commercial, educational and public facilities that are within a walkable community.
 - Mixed-use zoning category and downtown redevelopment efforts are attracting denser development typologies.
 3. Reduce institutional barriers to the redevelopment of underused or abandoned lots in town.
 - The mixed-use zoning category and zero-lot line option in the zoning ordinance allow for higher flexibility in redevelopment.
 4. Allow RV's to fill immediate housing needs and provide a flexible housing market while reinstating the RV Ordinance to enforce the standards of RV parks in regards to health, safety and aesthetic appearance.
 - The Town of Pecos adopted an RV Ordinance in late 2014 that regulates the site design and ensures basic services and infrastructure are installed.
 5. In conjunction with local banks, pursue additional HOME first-time homebuyer and down payment assistance to encourage home purchases in the community.
 - Since the completion of the 2015 comprehensive plan, the Town of Pecos has not participated in any HOME grant programs.

Community Input

Housing goals expressed by residents in *Chapter 1: Community Goals & Objectives* are:

Achieve/Preserve	Avoid/Eliminate
------------------	-----------------

- Incorporate Mixed-Use building typologies
- Encourage use of new zoning categories
- Plan for integration of West Pecos Development
- Compare population projections to other plans
- compare stable oil market vs. boom-bust oil market scenarios
- Formalize/make permanent energy workers living in temporary housing
- Help for residents to clarify titles and deeds
- Consider community outreach effort to promote dilapidated structure removal
- Junked yards
- Vacant commercial buildings downtown
- Replace low quality manufactured homes and RV's with permanent structures

3.3 Inventory & Forecast

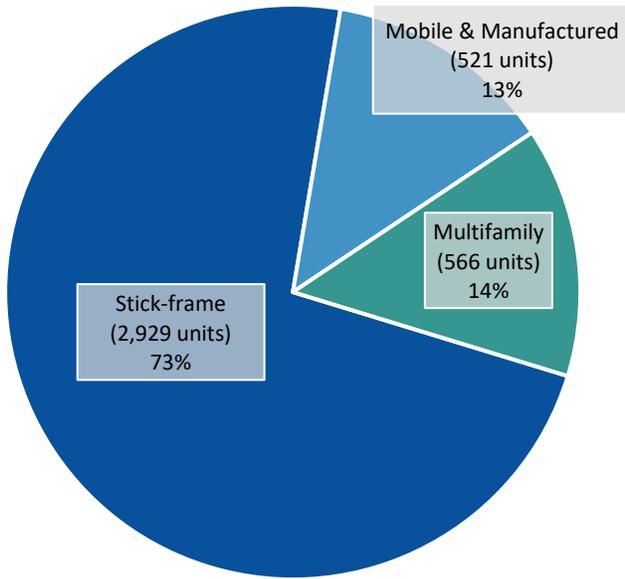
Housing Types & Condition

The town of Pecos's housing stock includes stick-frame, mobile manufactured, and multifamily units. There are also significant amounts of occupied RVs in the City Limits and ETJ, however due to the difficulty discerning between temporary oil worker housing and RV's as a primary residence, RV's were counted as oil worker housing. However, the housing stock in Pecos is characterized by single-family, stick-frame units – 73% of all housing in the town (see *Chart 3A, next page*).

Approximately 58% of Pecos's housing stock is in standard condition (see *Chart 3B, next page*). Relative housing conditions differ across housing types. A higher percentage of mobile/manufactured units are in substandard condition; 53% of mobile/manufactured units are in deteriorated or dilapidated condition (see *Table 3B, page 3-5*).

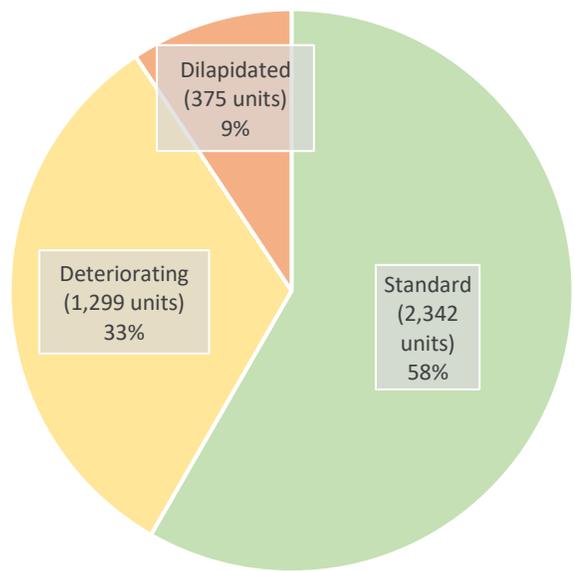
There are 1,674 substandard housing units in Pecos. Substandard units include all housing types, but 82% of substandard units are stick-frame structures. Nearly all substandard units are occupied (96%). Approximately one-fifth (22%) of substandard housing units have significant problems indicating dilapidation, such as holes in the exterior walls, missing windowpanes, cracked foundation, etc.; 85% of these dilapidated units are occupied (see *Table 3D, page 3-7*). These findings support one of the key housing goals identified by Pecos residents: the need for support for home repair and maintenance. *Appendix 3A* provides a detailed tabulation of all housing units by type, condition, occupancy, and location (city and ETJ).

Chart 3A: Houses, by Type



Source: GrantWorks, Inc. Fieldwork 2020

Chart 3B: Houses by Condition, All Types



Source: GrantWorks, Inc. Fieldwork 2020

Table 3B: Housing Conditions, by Type

<u>Unit Type & Condition</u>	<u>All Units</u>	
	#	%
Stick-frame	2929	73%
Standard	1553	53%
Deteriorated	1126	38%
Dilapidated	250	9%
Mobile & Manufactured	521	13%
Standard	247	47%
Deteriorated	154	30%
Dilapidated	120	23%
RV	0	0.0%
Standard	0	-
Deteriorated	0	-
Dilapidated	0	-
Multifamily	566	14%
Standard	542	96%
Deteriorated	19	3%
Dilapidated	5	1%
Total Substandard Units	1674	42%
Total Dilapidated Units	375	9%
Total Units	4016	-

Source: GrantWorks, Inc., Fieldwork 2020

Table 3C: Occupied Housing Conditions, by Type

<u>Unit Type & Condition</u>	<u>Occupied Units</u>		
	#	%	
Stick-frame	2868	73%	73%
Standard	1544	54%	
Deteriorated	1120	39%	
Dilapidated	204	7%	
Mobile & Manufactured	507	13%	13%
Standard	244	48%	
Deteriorated	154	30%	
Dilapidated	109	21%	
RV	0	0.0%	0.0%
Standard	0	-	
Deteriorated	0	-	
Dilapidated	0	-	
Multifamily	557	14%	14%
Standard	533	96%	
Deteriorated	19	3%	
Dilapidated	5	1%	
Total Substandard Units	1611	41%	
Total Dilapidated Units	318	8%	
Total Units	3932	-	

Source: GrantWorks, Inc., Fieldwork 2020

Table 3D:

Substandard Housing Conditions & Occupancy, by Type

Unit Type & Condition	All Units		Occupied Units		Occupancy Rate	
	#	%	#	%	%	
Stick-frame	1376	82%	1324	82%		
Deteriorated	1126	82%	1120	85%	99%	96%
Dilapidated	250	18%	204	15%	82%	
Mobile & Manufactured	274	16%	263	16%		
Deteriorated	154	56%	154	59%	100%	96%
Dilapidated	120	44%	109	41%	91%	
RV	0	0%	0	0%		
Deteriorated	0	-	0	-	-	-
Dilapidated	0	-	0	-	-	-
Multifamily	24	1%	24	1%		
Deteriorated	19	79%	19	79%	100%	100%
Dilapidated	5	21%	5	21%	100%	
Total Dilapidated Units	375	22%	318		20%	
Total Units	1674		1611			

Source: GrantWorks, Inc., Fieldwork 2020

Vacancy Rate

Pecos's estimated residential vacancy rate is 2.1%, or approximately 1 in 400 houses.⁵

Vacant Structures

Fieldwork windshield observation identified 84 vacant units in Pecos. Most vacant units have significant problems like holes in exterior walls, missing windowpanes, cracked foundation, etc. (coded as dilapidated). An additional six vacant units require repair beyond routine maintenance (coded as deteriorated) (see Table 3E).

Table 3E: Vacant Housing, by Condition

<u>Unit Condition & Type</u>	<u>Vacant Units</u>		
	#	%	
Standard	21		
Stick-frame	9	43%	5%
Mobile/Manufactured	3	14%	
RV	0	0%	
Multifamily (Excluding Institutional)	9	43%	
Deteriorated	6		
Stick-Frame	6	100%	11%
Mobile/Manufactured	0	0%	
RV	0	0%	
Multifamily (Excluding Institutional)	0	0%	
Dilapidated	57		
Stick-Frame	46	81%	84%
Mobile/Manufactured	11	19%	
RV	0	0%	
Multifamily (Excluding Institutional)	0	0%	
Total Substandard Units	63	75%	
Total Units	84	100%	

Source: GrantWorks, Inc. Fieldwork 2020

⁵ The estimated vacancy rate for this study is the 2020 vacancy rate based on windshield observations. According to U.S. Census Data, 23 of houses in Pecos were vacant in 2010. However due to the age of this estimate and the significant growth in demand and population since 2010, the actual vacancy rate is likely much closer to the observed rate based on the windshield survey. Windshield observations are necessarily limited to observation of external and readily apparent housing characteristics and therefore may miss some units. In addition, windshield observations may undercount vacant structures in better condition because it is easier to identify vacant housing that is deteriorated/dilapidated than vacant housing that is in standard condition. For example, some houses in Pecos had "For Sale" signs posted. Unless otherwise apparent, it was assumed that these structures were occupied. However, the possibility exists that these structures, and other structures in an externally standard condition, were in fact vacant. As a result, the vacancy rate based on windshield observations may be somewhat understated.

Vacant, dilapidated housing increases the risks to public health and welfare and should be removed. These findings support one of the key housing goals identified by Pecos residents: to eliminate substandard and dangerous houses from the community.

Multifamily Housing

Pecos has many multifamily housing options. The Pecos Housing Authority offers four housing complexes, one in the northern area of the city, two in the southern area and one in the east area. All units are income-limited. Together the complexes include 186 units, seven of which are ADA accessible. Most units (118) have two or more bedrooms, indicating opportunities for tenants with families. There are also 44 affordable units at the Country Club Apartments, a privately owned complex located in the south-east part of town.

Pecos's largest multifamily complex is the newly built Mission Village of Pecos located off Texas St, south west of the city center. The complex includes 60 units. Four units are income-limited, and one is ADA accessible.

Other large complexes include the Lone Star Villas, Casa Manana Apartments, and the Texas St. Apartments. Additionally, there are numerous clusters of duplexes and triplexes throughout the city, the largest of which is located on Cherry Street. (*see Map 4A: Existing Land Use*). Detailed information about the number of bedrooms/bathrooms, ADA accessibility, and income limitations for these units was not available at the time of plan production.

Several of the large, privately owned complexes and duplex clusters are recently constructed, while the PHA properties were all built in the 70's and 80's. Architectural design and condition of the other privately owned complexes and duplexes indicate they were constructed in the mid to late 20th century. Nearly all of the units are in externally standard condition.

According to local landlords, existing multifamily rental units are in high demand; there were only nine confirmed vacant multifamily units at the time of fieldwork. Notably, there were numerous large and moderate scale multifamily complexes under construction at the time of the writing of this plan (March 2020), however their unit count, composition and affordability were not available. Almost all of the new construction was taking place off of Stafford Blvd in the southern area of town. Additionally, significant plans are underway for the "West Pecos" development, set to be constructed on previously agricultural land in the far southwest part of town. These new developments are all in response to the overwhelming demand for housing created by the Permian basin fracking boom, and the city's desire to attract temporary oil workers to settle permanently in the city limits.

Table 3F: Multifamily Housing Condition, Occupancy, & Income-Limitations

<u>Name</u>	<u>Condition</u>	<u># of Units</u>	<u># Occupied</u>	<u># Vacant</u>	<u># Income-limited</u>
2nd St Apartments	Standard	5	5	0	0
7th St Duplex 1	Dilapidated	2	2	0	0
7th St Duplex 2	Deteriorated	2	2	0	0
7th St Quadplex	Deteriorated	4	4	0	0
7th St Duplexes 3	Standard	4	4	0	0
Casa Manana Apartments	Standard	32	32	0	0
Cedar St Duplex	Deteriorated	2	2	0	0
Country Club Apartments	Standard	44	40	4	44
Daggett St Apartments	Standard	9	9	0	0
Lone Star Villas	Standard	44	44	0	0
Mission Village of Pecos	Standard	60	55	5	4
Pecan St Quadplex	Standard	4	4	0	0
PHA #1 (Teague Ln)	Standard	44	44	0	44
PHA #2 (300 West Country Rd)	Standard	56	56	0	56
PHA #3 (2nd St)	Standard	30	30	0	30
PHA #4 (Orange St)	Standard	56	56	0	56
S Alamo St Duplexes 1	Standard	4	4	0	0
S Alamo St Duplexes 2	Standard	8	8	0	0
S Alberta Duplex	Deteriorated	2	2	0	0
S Cherry Duplex 2	Deteriorated	2	2	0	0
S Cherry Duplex 1	Standard	2	2	0	0
S Cherry Duplexes 3	Standard	36	36	0	0
S Cherry St Triplexes	Standard	12	12	0	0
S Cherry Triplex 2	Standard	3	3	0	0
S Country Club Dr Apartments	Standard	8	8	0	0
S Cypress St Triplex	Deteriorated	3	3	0	0
S Hickory Duplex	Standard	2	2	0	0

S Hickory Triplex	Standard	3	3	0	0
S Iowa St Apt 1	Standard	12	12	0	0
S Iowa St Apt 2	Standard	6	6	0	0
S Iowa St Apt 3	Standard	4	4	0	0
S Iowa St Duplex	Standard	2	2	0	0
S Mesquite Triplex	Dilapidated	3	3	0	0
S Missouri St Quadplexes	Standard	4	4	0	0
S Oleander Duplexes	Deteriorated	4	4	0	0
S Walnut Triplex	Standard	3	3	0	0
Texas St Apts	Standard	24	24	0	0
W 6th Duplexes	Standard	6	6	0	0
W 7th St Apartments	Standard	15	15	0	0
Total Standard		542	533	9	
Total Deteriorated		19	19	0	
Total Dilapidated		5	5	0	
Total Multifamily Units		566			

Source: GrantWorks, Inc. Fieldwork 2020

Residents would like to see a significant increase in housing development that will be attractive and affordable for current and future residents. Additional multifamily housing developments are vital to support this goal (see *Section 3.4.2 - Key Considerations*).

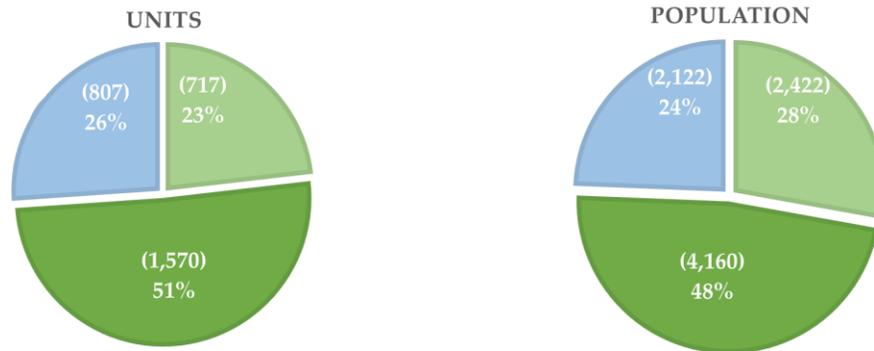
Homeownership & Renting

Tenure refers to the conditions under which land or buildings are held or occupied, for example, through ownership or through renting. Examining tenure types and comparing the characteristics of residents with different types of tenure can provide helpful information about shared or differing needs between these groups.

Chart 3C compares the percentage of units, and of Pecos's total population, held through the following tenure types: outright ownership, ownership through a mortgage, and renting. As the chart shows, most Pecos residents own or are in the process of purchasing their house, while only 26% of residents live in a rental unit.

Chart 3C: Housing Unit & Population, by Tenure Type

■ Owned with a mortgage or loan ■ Owned free and clear ■ Renter occupied



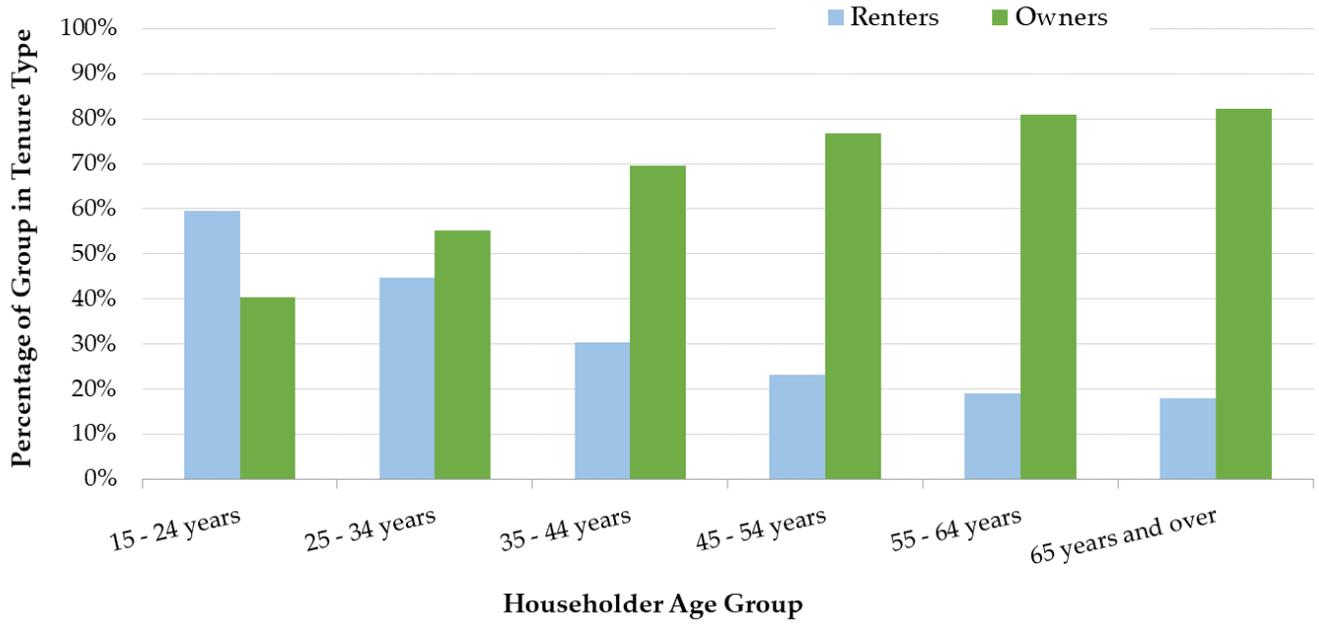
Source: Census 2010, SF1, Tenure (H4) and Population in Occupied Units By Tenure (H11)

Renter-householders and owner-households⁶ in Pecos differ in terms of age. As in many US cities, renting is more common among younger residents, and homeownership is more common among older residents. *Chart 3D (next page)* demonstrates this difference by illustrating the percentage of householders in each age group that rent or own their house. As the chart shows, most householders in Pecos between 15 and 24 rent their house, but starting in the 25-to-34-year-old age group most householders own their house. This is younger than most cities, indicating higher than typical ownership ability for younger residents.

Renter- and owner-householders in Pecos also differ in terms of race and ethnicity. *Chart 3E (next page)* compares the percentage of Pecos householders that rent or own their house across several racial/ethnic groups. As the chart shows, most householders in each group own their homes, but the prevalence of homeownership varies between groups.

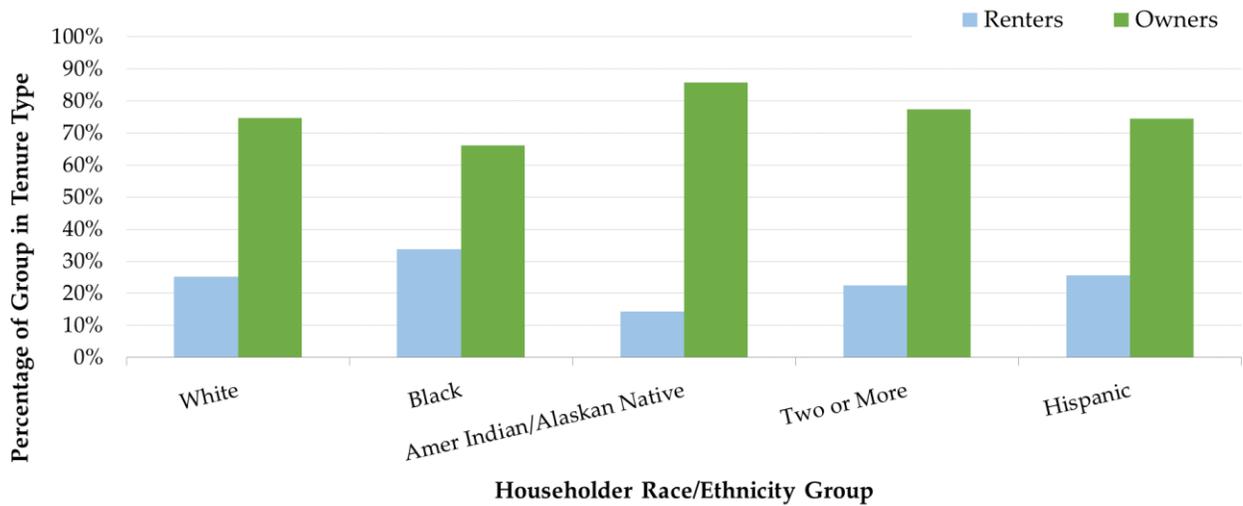
⁶ Refers to the person who is the head of the household.

Chart 3D: Householders, by Age, Tenure



Source: Census 2010, SF1, Tenure by Age of Householder (H17)

Chart 3E: Householders, by Race/Ethnicity⁷

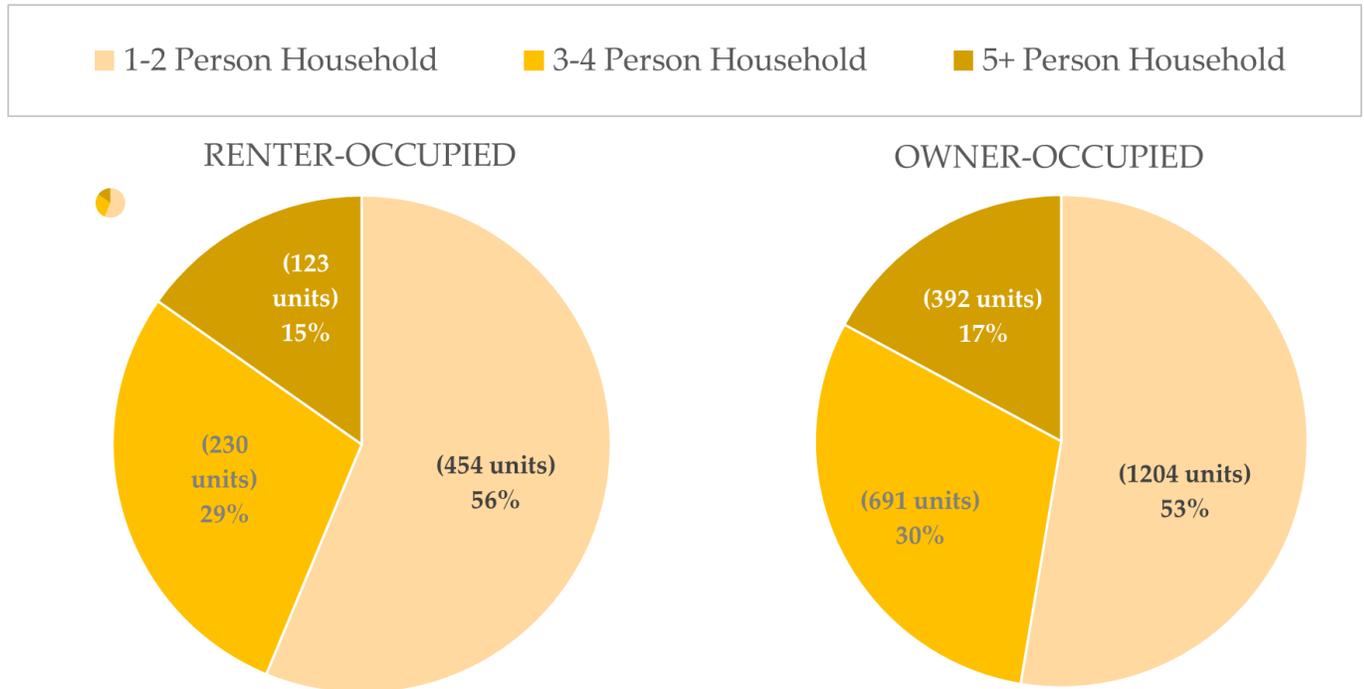


Source: Census 2010, SF1, Tenure by Hispanic or Latino Origin of Householder By race of Householder (HCT1)

⁷ For ease of reference this chart only shows population groups with a universe greater than 10.

While renter- and owner-householders in Pecos differ somewhat in terms of age, race, and ethnicity, household sizes are similar in these two groups. *Chart 3F* compares household sizes in Pecos by tenure type. As the chart shows, household sizes are very similar in both tenure categories.

Chart 3F: Household Size Comparison, by Tenure



Source: Census 2010, SF1, Tenure by Household Size (H16)

Rental housing has often been characterized as a necessary option for only certain groups, such as low-income households or individuals and young couples in transition to homeownership. As a result, rental housing may be treated as an option of secondary importance (to homeownership). However, studies in cities throughout the U.S. have found that renting is increasingly prevalent and that renter households represent a more diverse array of individuals and life situations than previously thought. These findings have led many researchers and policy-makers to reconsider the contribution that renting can make to a healthy housing market (further discussed in *Section 3.4.2 - Key Housing Considerations*).

Residents in Pecos recognize the prevalence of renting in their community and would like to see additional rental housing development that is affordable for residents from all segments of the population. Residents would also like to achieve more support for local landlords interested in providing affordable rental housing.

Housing Affordability

According to American Community Survey (ACS) data, houses in Pecos are, on average, more

expensive than those in Reeves County but significantly more affordable than the state of Texas. The median home value in Pecos – estimated at \$65,200 - is higher than the county-area but lower than state-wide estimates. The town's median home value is approximately 104% of the median home value for Reeves County (\$62,200) but only approximately 35% of the median home value for Texas (\$186,000).

However, the median household income in Pecos – estimated at \$63,478 annually - is also higher than county-area and state-wide estimates; the median annual household income in Pecos is approximately \$5,094 more than the county-area estimates and \$2,849 more than the state-wide estimates, or a difference in monthly income of roughly \$230-to-\$425. Therefore, a more appropriate measure of housing affordability in Pecos would be the percentage of the median income consumed by housing costs.

Housing expenses are conventionally considered to be affordable when they consume less than 30% of a household's monthly income. The level of affordability for owner-occupied units differs depending on whether the owner has a mortgage or owns the home outright. Owner-occupied housing costs for Pecos residents *without a mortgage* consume an estimated 6% of the average income. However, owner-occupied housing costs for Pecos residents *with a mortgage* consume an estimated 16% of the average income (see *Appendix 3B*). Owner-occupied housing costs for residents with a mortgage in Reeves County consume an estimated 18% of the average income in the county.

Housing affordability in Pecos also varies by tenure.⁸ Monthly housing costs for renters in Pecos are affordable and consume a lower higher percentage of the average income than rental costs in Reeves County; median monthly rent consumes approximately 12% of the average income in Pecos and 13% of the average income in Reeves County (see *Appendix 3B*).

Appendix 3B includes detailed tables and methodology regarding housing affordability calculations.

Fair Housing

In conjunction with the acceptance of grant funds from the Texas Community Development Block Grant Program (TxCDBG) program of the U.S. Department of Housing and Urban Development (HUD), the Town of Pecos stated that it would affirmatively further fair housing (AFFH) and uphold the 1968 Fair Housing Act. The Fair Housing Act prohibits discrimination based on disability, familial status, race, color, religion, sex, or national origin. *Table 3G, page 3-16*) provides basic data on the availability of housing types to those protected classes. The following paragraphs discuss each protected group.

- **Disability:** According to the 2014-2018 American Community Survey (ACS), approximately 13% of residents in Pecos (estimated 1,228 residents) have a disability;⁹ this figure is higher than the State-wide average – 11.6% of all Texans. An estimated 7% of Pecos residents with a disability

⁸ "Tenure" refers to the conditions under which land or buildings are held or occupied, for example through ownership or through renting

⁹ In the 2014-2018 American Community Survey, individuals were classified as having a disability if they had hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and/or independent living difficulty.

are over 65 years old. It is not known how many single-family homes in Pecos fully meet ADA accessibility standards. *Appendix 3C* includes information about organizations providing grants and loan assistance to disabled individuals.

- **Familial Status:** As measured by the number of bedrooms available, a variety of rental properties and homes for ownership are available to accommodate families, as well as single occupants.
- **Race & Ethnicity:** As shown in *Figure 3A (page 3-17)*, the minority population in most Census areas of Pecos is 65% or higher, which is the threshold¹⁰ used by the State of Texas for defining an area of “minority concentration.” Houses in both good and poor conditions are located throughout the community. There are thirty-nine multifamily developments within the city limits.

¹⁰ The “65% threshold” is based on the definition of “an area of minority concentration” used by the Texas General Land Office in its 10/1/2012 publication, “Homeowner Opportunity Program Guidelines - CDBG Disaster Recovery Program - Hurricanes Ike & Dolly, Round 2.”

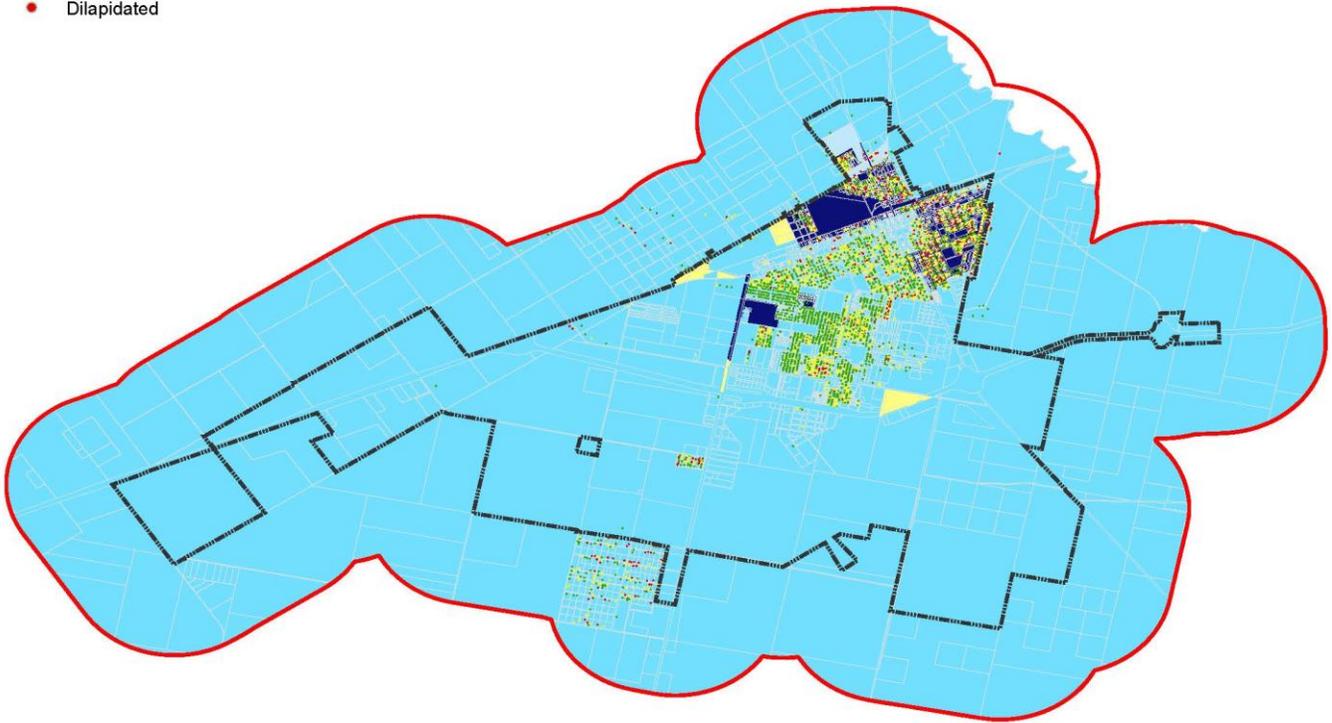
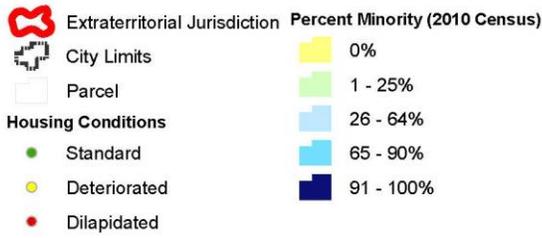
Housing by Type/Location (Field Survey 2020)

	Units	% of all Units in Town [1]	ADA Accessible	2+ Bedroom	Location
<i>Multifamily Units (Occupied and Vacant)</i>					
2nd St Apartments	5	0.12%	0		City
7th St Duplex 1	2	0.05%	0		City
7th St Duplex 2	2	0.05%	0		City
7th St Quadplex	4	0.10%	0		City
7th ST Duplexes 3	4	0.10%	0		City
Casa Manana Apartments	32	0.80%	0		City
Cedar St Duplex	2	0.05%	0		City
Country Club Apartments	44	1.10%	0	28	City
Daggett St Apartments	9	0.22%	0		City
Lone Star Villas	44	1.10%	0		City
Mission Village of Pecos	60	1.49%	1		City
Pecan St Quadplex	4	0.10%	0		City
PHA #1 (Teague Ln)	44	1.10%	0	4	City
PHA #2 (300 West Country	56	1.39%	0	28	City
PHA #3 (2nd St)	30	0.75%	0	30	City
PHA #4 (Orange St)	56	1.39%	0	56	City
S Alamo St Duplexes	4	0.10%	0		City
S Alamo St Duplexes 2	8	0.20%	0		City
S Alberta Duplex	2	0.05%	0		City
S Cherry Duplex 2	2	0.05%	0		City
S Cherry Duplex 1	2	0.05%	0		City
S Cherry Duplexes 3	36	0.90%	0		City
S Cherry St Triplexes	12	0.30%	0		City
S Cherry Triplex 2	3	0.07%	0		City
S Country Club Dr	8	0.20%	0		City
S Cypress St Triplex	3	0.07%	0		City
S Hickory Duplex 1	2	0.05%	0		City
S Hickory Triplex	3	0.07%	0		City
S Iowa St Apt 1	12	0.30%	0		City
S Iowa St Apt 2	6	0.15%	0		City

S Iowa St Apt 3	4	0.10%	0		City
S Iowa St Duplex	2	0.05%	0		City
S Mesquite Triplex	3	0.07%	0		City
S Missouri St Quadplexes	4	0.10%	0		City
S Oleander Duplexes	4	0.10%	0		City
S Walnut Triplex	3	0.07%	0		City
Texas St Apts 1	24	0.60%	0		City
W 6th Duplexes	6	0.15%	0		City
W 7th St Apartments	15	0.37%	0		City
Total MF Units	566	14%	8	146	
<i>Houses (Occupied and Vacant)</i>					
Single Family Rentals [3]	1556	52%	0	706	Throughout City
Single Family Owned	1373	46%	0	1142	Throughout City
Single Family Vacant	75	2%	0	34	Throughout City
Total Units	566				Throughout City

<i>Housing by Race/Ethnicity (Census 2010)</i>					
<i>Ownership by Race</i>					
% White Owned	1,801	75%	% White Rented	609	25%
% Black Owned	45	66%	% Black Rented	23	34%
% Amer Indian or Alaskan Native Owned	12	86%	% Amer Indian or Alaskan Native Rented	2	14%
% Asian Owned	16	62%	% Asian Rented	10	38%
% Native Hawaiian and Other Pacific Islander Owned	2	100%	% Native Hawaiian and Other Pacific Islander Rented	0	0%
% Other Owned	363	71%	% Other Rented	149	29%
% Two or more Owned	48	77%	% Two or more Rented	14	23%
All Racial Minorities Owned	486	71%	All Racial Minorities Rented	198	29%
<i>Ownership by Ethnicity</i>					
% Hispanic Owned	1,801	74%	% Hispanic Rented	619	26%

Source: Census 2010, Sf-1 Data, Quick Table H1 (QTH1)



Pecos City

Figure 3A: Distribution of Minority Residents

Future Housing Needs

To improve the condition of the existing housing stock and ensure that current residents have access to safe and suitable housing, the Town of Pecos will need to remove and replace the following occupied, substandard units:

- 263 occupied deteriorated/dilapidated manufacturing units,
- 204 occupied, dilapidated stick-frame units,

The Town will also need to take action to support repair and prevent further deterioration of 1,293 currently deteriorating, stick-frame- and multifamily-units (see *Table 3H*). Additional construction beyond the 1,120 replacements for occupied, substandard units may take place instead of deteriorated unit

rehabilitation. However, rehabilitation is often cheaper.

In addition, based on a projected 2030 population of 14,320 residents, Pecos will need an additional 623 units to accommodate the anticipated population growth. To increase housing diversity in Pecos, at least 156 of the new units should be multifamily units. New housing units should ideally support the goal of removing and replacing the 63 currently vacant, substandard, single-family units in Pecos (see *Table 3H*).

Table 3G: Future Housing Needs

	Single-family	Multifamily	Total
Housing 2020, 2030			
Occupied Housing in 2020	3,375	557	3,932
Total Housing in 2020	3,450	566	4,016
<i>Total needed in 2030</i>	3,842	713	4,555
Future Housing Strategy 2020-2030			
Need to repair <i>(Deteriorated SF)</i>	1,126	19	1,145
Need to remove/replace <i>(Occupied: dilapidated MH & SF, deteriorated MH)</i>	467	5	472
New construction needed	467	156	623
Need to remove <i>(Vacant: dilapidated MH & SF, deteriorated MH)</i>	63	-	63

Note: SF – Strick Frame; MH – Manufactured House

3.4 Key Housing Considerations

Based on the community input and local housing data described above, the Town of Pecos and its residents should focus on the following key areas related to housing: structural condition, stock diversity and affordability, and Fair Housing Act compliance.

3.4.1 Improving Structural Conditions

Pecos residents expressed a desire for improved housing conditions. The Town has two ongoing methods for assisting residents with single-family housing conditions: HOME program grants and enforcement of City ordinances (further described below). The Town should pursue the following strategies to support improved residential structural conditions.

Reduce Dilapidated Housing

Within the city limits, Pecos has 467 occupied, dilapidated/deteriorating houses that need to be replaced, and 63 vacant, dilapidated/deteriorating houses. Dilapidated houses comprise approximately 9% of Pecos's housing stock.

Common causes of house deterioration include:

- A change in financial circumstances that makes an owner unable to pay for home repairs;
- Elderly residents no longer attentive to or able to maintain their homes;
- Lack of motivation by rental property owners to maintain their properties (because of low renter expectations, desire to maximize profit, living out-of-town, lack of enforcement, etc.); and
- Lack of pride in the property.



Figure 3B: Overgrown Yard/Dilapidated Housing Example

The effects of deteriorated and dilapidated houses impact the entire community, and it is worth community

investment to address the problem. Effects include:

- Health risks to residents of deteriorated and dilapidated structures;
- Downward pressure on property values; and
- Reluctance of future homeowners to move to an area with large numbers of deteriorated or dilapidated houses.

Pecos should pursue the following strategies to support the renovation or removal of substandard houses in the community, and to prevent future deterioration.

To improve the condition of Pecos's housing stock, the Town should:

- a) Track the number and location of vacant, dilapidated structures in the community;
- b) Update the Substandard Buildings and Structures Ordinance;
- c) Support voluntary and alternative dilapidated building removal; and
- d) Apply for, and educate homeowners about, available grants

The following sections describe these recommendations in further detail.

Many of these strategies require clear property titles to be successful. Complicated titles are a key concern raised by residents and public representatives (see *Chapter 4: Land Use* for more information about legal clinics to assist residents).

Track Vacant, Dilapidated Structures

Tracking vacant, dilapidated housing enables the Town to have a clear understanding of both the extent of the challenge and of progress in addressing that challenge. Depending on municipal resources and needs, the tracking system could be as sophisticated as a mapped database or something as simple as a single word document or excel spreadsheet noting structure addresses and the date each vacancy was identified. Tracking implies regular or semi-regular updates to the database or document/spreadsheet. Updates can similarly vary based on the resources and needs of the municipality. Municipalities with less available resources for this activity could select a time each year to drive the community, identify newly vacant, dilapidated structures, and update the document/spreadsheet as needed.

An up-to-date record of vacant, dilapidated housing can enable a town to make strategic decisions about its actions, such as focusing efforts on a few proximate structures or integrating demolition activities with other neighborhood improvements. Vacant, dilapidated housing records may also support grant applications. The Town could also share general figures with community members as part of an educational campaign about housing conditions or to encourage support for a voluntary clean up event.

The Town of Pecos does not have an established system for tracking vacant, dilapidated housing. As part of this comprehensive plan, the town will receive fieldwork data collected to support each study,

including housing. The Town could use this data to start a tracking system according to its resources and needs.

Update the Substandard Buildings & Structures Ordinance

Local Government Code, Title 7, Subtitle A, Chapter 214 establishes a municipality's authority to regulate substandard buildings. The statutes enable a municipality to, by ordinance, require the vacation, relocation of occupants, securing, repair, removal, or demolition of certain buildings. Such ordinance must

- ✓ Establish minimum standards for the continued use and occupancy of all building regardless of the date of their construction
- ✓ Provide for giving proper notice
- ✓ Provide for a public hearing to determine whether a building complies with the ordinance standards

In addition, in 2011 and 2012, the Texas Supreme Court released opinions on *City of Dallas v. Stewart* that impact dangerous structures ordinance enforcement. Most importantly, cities must allow 30 days after an administrative nuisance declaration for an owner to appeal the declaration before enforcing the ordinance. The Texas Municipal League (TML) has prepared a detailed report on the case and its implications for municipal enforcement of substandard structures ordinances. That report is included in the *Digital Appendix* to this study and is available on the TML website (www.tml.org).

According to previous records, the Town of Pecos adopted a substandard buildings ordinance in 1987. However, this ordinance is now over 30 years and is limited in scope and enforcement. The Town should update the ordinance to regulate substandard buildings and structures in Pecos. The *Digital Appendix* to this study includes a sample ordinance for reference.

The effectiveness of an ordinance depends on enforcement. Pecos should continue to fund and consider expanding its Code Enforcement staff to ensure all new development is built to meet city code.

Support Voluntary & Alternative Building Removal Strategies

The Town can also support the effectiveness of a Substandard Structures Ordinance by supporting voluntary and alternative building removal strategies. One way that some cities have encouraged landowners to abide by dangerous structures codes without entering litigation is to include a provision in the regulating ordinance that provides Town assistance with demolition to landowners who voluntarily come forward and ask for an inspection. Instead of the \$5,000-to-\$10,000 it can cost to demolish the structure, the property owner pays landfill costs and \$500 to the Town for labor and hauling.

Some cities also provide no-cost demolition to homeowners who show financial inability to pay. Some

small cities negotiate with their solid waste providers to include provisions such as removal of one or more dilapidated structures per year in their solid waste contract.

Home demolition is expensive, and costs may prove prohibitive for municipalities and residents. The Town can also facilitate ordinance compliance by allowing for demolition alternatives. Two increasingly popular alternatives to house demolition are deconstruction and house moving. Rather than bringing in heavy equipment to raze an abandoned structure before sending it to the landfill, home deconstruction specialists and salvagers take apart abandoned houses piece by piece. Their focus is on collecting materials for reuse, so they limit the amount of waste that heads to the landfill. Unlike demolition, pricing for deconstruction is not always straightforward.

In some cases, salvagers will pay to remove certain materials, but they might not take everything. In other cases, deconstruction specialists will demolish the house for the right to collect the materials they want. In still other cases, deconstruction can cost significantly more than demolition. However, deconstructing a home allows the homeowner to take a significant tax deduction, often higher than the cost of deconstruction itself. The *Digital Appendix* includes an explanation of the appraisal process for donated building materials.

Some structural moving companies maintain an inventory of the commercial and residential structures they remove from properties to resell and relocate. Often, structural moving companies sell their inventory at relatively affordable prices. By reselling the homes, house movers keep them out of the landfill and they give new buyers an opportunity to rehabilitate the structures. If structural movers keep the structure, they may or may not charge for house removal. Depending on the house, they might buy it from the property owner before moving the structure. As long as the home is structurally sound enough to be moved, structural moving companies will collect homes and other buildings in all conditions.

Improve Manufactured Housing Regulations

Manufactured houses comprise 13% of Pecos's housing stock. Although less durable than well-constructed, stick-frame houses, when in compliance with HUD and building codes, manufactured units can provide affordable, safe housing. One of the most common complaints about manufactured houses is that their appearance negatively impacts surrounding property values. Manufactured houses are increasingly similar to stick-frame houses in design and, when located on single-family lots with landscaping, masonry skirts, and regular maintenance, can be near-indistinguishable from stick-frame houses.



Figure 3C: New Manufactured Home Example

Manufactured home values may be more likely to depreciate than stick-frame homes values due to factors like location, maintenance, and purchase price. Depreciation negatively impacts local property tax revenues. A 2003 study conducted by the Consumers Union in Texas assesses which aspects of manufactured houses are most likely to lead to depreciation or appreciation in value.¹¹ The Consumers Union concludes that variability in manufactured house appreciation/depreciation is much higher than in stick-frame construction. However, the study finds that homeowners and regulators can pursue several actions to increase the likelihood of appreciation:

- ✓ Own Land. If land ownership is not an option, rent and tenancy should be as stable as possible. Homes should be sold in place
- ✓ Select durable houses
- ✓ Pay fair price – and it may be that shopping for a deal in used homes is worthwhile
- ✓ Improve demand for used homes by creating lending products to finance this market
- ✓ Place housing in good locations and neighborhoods [increase appreciation]
- ✓ Give the home-site built visual appeal and congruence with neighborhood styles
- ✓ Budget money for repairs
- ✓ Consider all the aspects that lead to equity building, not just appreciation

The impact of manufactured houses on municipal tax revenues also depends on state tax law and county appraisal district methods for depreciating manufactured housing.

¹¹ Study available from www.consumersunion.org and is included in the *Digital Appendix* for this plan.

Because of the dual considerations of Pecos's larger oil-worker population (see *Appendix 2A*) and residents' desire to improve the town's housing stock, the Town of Pecos should

- a) Update the manufactured housing ordinance to take into account the proliferation of "man camps" to ensure they are held to a consistent standard,
- b) Over time and in conjunction with other economic development projects, consider adopting stricter ordinance standards to both improve manufactured house value and encourage more stick-frame construction.

Continue Enforcing Manufactured Housing Ordinance

Manufactured housing standards are not likely to reduce the number of manufactured units in the town, but standards are likely to improve the condition of Pecos's manufactured housing stock over time.

The Texas Manufactured Housing Standards Act, passed in June 2003, established manufactured housing regulations at the state level (Texas Occupations Code, Subtitle C, Chapter 1201). The standards create an important distinction between "Mobile Homes" and "HUD-Code Manufactured Homes". This distinction is important because the structure types receive different protections under the law. For example, it is lawful for a city to prohibit the new installation of a Mobile Home within the city limits (with a few caveats). However, a city may NOT prohibit the new installation of HUD-Code Manufactured Home in the city limits. The act defines the term "Manufactured Home" or "Manufactured Housing" as a "HUD-code Manufactured Home or a Mobile Home".

The Town enforces a Mobile Home Ordinance (Ordinance 16-11-02). The ordinance was mostly recently updated in February of 2017). Town should continue to enforce the new manufactured housing ordinance and consider updating it to specifically address the numerous "man camps" around Pecos.

Sample manufactured housing ordinances from other municipalities, as well as a legal Q&A report regarding manufactured housing regulation from the Texas Municipal League, are included in the *Digital Appendix* to this study.

Apply for Grants / Educate Homeowners about Available Grants

Within the city limits, Pecos has 293 occupied, residential structures in deteriorated conditions that need renovation and 36 occupied, dilapidated/deteriorating houses that need to be replaced. The Town can further support improved housing conditions by applying for grants and working to share information about available grant programs with homeowners.

HOME Grants. Since 2003, the Town has facilitated 30 home replacements and over \$575k in housing rehabilitation through the HOME program. The Town should continue applying for grants under the HOME program. The HOME grant is the most common grant program for rehabilitation or replacement of single-family homes. The program is managed by the Texas Department of Housing and Community Affairs (TDHCA) and funded by the U.S. Department of Housing and Urban Development (HUD). Program details change year to year, but, in general, the recipient resident must meet income limits and have a clear title to the property and land. The Town may also have to provide a cash or labor/materials match, depending on population size.

Maintenance Grants. Municipal authorities should also work to share information about available maintenance grant programs with homeowners. Housing maintenance and repairs can be costly. Providing homeowners with information about home maintenance and repair grant and loan programs is a key component not only to preventing structural deterioration but also for maintaining affordability. Several programs are available to homeowners that assist with a variety of home maintenance needs such as weatherization improvements, general home repairs, and low-interest loans.

Appendix 3C: Community Housing Organizations & Grant Programs lists grant programs and resources that public officials should be aware of and should share with residents.

Consider Developing a Disaster Recovery Program

On March 13th, 2020, a tornado tore through an RV park near Pecos, leaving 1 man injured and property destroyed. The town of Pecos did not see damage from the tornado, but the recent event reveals Pecos's vulnerability to tornados and other severe weather phenomena.

With this recent event in mind, the Town should consider developing a disaster recovery program. The Rapid Disaster Recovery Housing Report, developed out of the Rapid Housing Recovery Pilot Program (RAPIDO) in the Lower Rio Grande Valley, is an excellent resource.

The report was created to "...give an overarching view of the lessons learned from the RAPIDO

Demonstration Project¹² as well as findings from a comparison of other reports completed after similar disasters across the Gulf and Atlantic Coasts” (CDC Brownsville, 2015).

The report approaches disaster management as an “ongoing cycle of action that takes place both during and between disasters. In other words, recovery from one disaster is mitigation for the next” (CDC Brownsville, 2015). The disaster management cycle consists of four phases – mitigation, preparedness, response, recovery – each requiring ongoing planning to reduce the impact of disasters. The program emphasizes several “Key Concepts and Innovations”, including: pre-disaster preparedness, pre-procurement, local focus, supportive case navigation, community empowerment, and temporary-to-permanent housing strategy.

The Rapid Disaster Recovery Housing Report consists of three documents: policy recommendations, a step-by-step technical guide for local jurisdictions, and a program comparison report. The report is available online at <http://www.rapidorecovery.org/>.

“Disasters both magnify and accelerate processes already occurring in communities, such as housing turnover, gentrification, or conversions of land use from residential to commercial.... Such acceleration might not permit the extent of community input or interventions that might occur normally.

Consequently, in the days, weeks, and months that follow a disaster, decisions must be made rapidly to deal with pressing immediate issues like emergency sheltering and temporary housing, rebuilding, and the restoration of community infrastructure.

The pace of decision-making defies typical rational planning methods that require the collection of data and consideration of many alternatives, forcing communities to make hasty decisions that may later turn out to be ill-advised, but yet now are long-lasting if not permanent.”

(CDC Brownsville (2015)., pg. 05)

3.4.2 Developing More Diverse & Affordable Housing Options

Pecos residents expressed a desire for additional housing development to meet the high demand for affordable and rental housing. Residents currently living in dilapidated/deteriorating housing that needs to be replaced could also benefit from additional housing development efforts. The Town should pursue the following strategies that promote a variety of housing options, affordable for diverse incomes and stages of life:

- (a) Promote residential infill, especially multifamily
- (b) Collect and share housing and community information
- (c) Network with affordable housing organizations and developers

¹²<http://www.cdcbrownsville.org/rapido.html>

Promote Residential Infill, Especially Multifamily Housing

The Town should promote infill development. One key component in affordability is the costs associated with utility bills and taxes. These costs tend to rise when a city issues municipal bond debt. Bond debt is a common tool used to finance large-scale infrastructure improvements that result from growth and development. One way to limit the need for increased infrastructure costs that result from growth is to encourage residential infill development on vacant, subdivided land within the corporate limits.

Since existing infrastructure systems already serve these lots, new development would not require significant infrastructure expansion and would allow the Town to focus on existing system maintenance and improvements. Development should be encouraged in areas identified as semi-developed and located outside of the 100-year Floodplain. Strategies to promote infill development and a map showing the location of developable properties ideal for infill development are found in *Chapter 4: Land Use Study*.

The Town should also promote multifamily housing development. An Urban Land Institute (ULI) study finds that multifamily housing:

- ✓ Is needed and preferred by many people at a variety of life stages (individuals, new families, empty-nesters, seniors, etc.);
- ✓ Is important to the economic vitality of the broader community;
- ✓ Can help minimize traffic congestion;
- ✓ Enables a community to provide housing that is affordable to a broader range of incomes; and
- ✓ If well designed, can be an attractive and compatible addition to the community.

The ULI study is included in the *Digital Appendix* to this plan.

Multifamily housing does not have to be exclusive to renters. Multifamily housing development could also provide an important alternative housing option for Pecos's potential homeowners as multifamily housing units, such as duplexes, are often (but not always) more affordable than single-family housing.

Collect & Share Housing & Community Information

The Town of Pecos can also support the development of more diverse and affordable housing options by collecting and sharing housing and community information through record-keeping, surveys, and workshops.

The Town should keep records of housing market information such as:

- ✓ Requests made to City Hall for rental housing information;
- ✓ Records of occupancy and vacancy rates in rental housing (including RV parks and single-family houses);
- ✓ Information on land available for lease or purchase; and
- ✓ Information on utility rates and capacities.

Keeping records of inquiries about available single-family and multifamily housing opportunities would make Pecos more appealing to potential residents and housing developers. This type of basic legwork by municipal staff and residents makes a city more appealing. The potential resident/developer does not have to spend as much time on research, and such work builds trust that residents and staff members are able and willing to work with new residents or development groups.

The Town should also consider regularly collecting information from residents about housing conditions. For example, a survey conducted every three-to-five-years could help the Town maintain a better understanding of housing conditions. In addition to potentially supporting grant applications and studies, record keeping and housing survey results could help the Town identify key community challenges and opportunities and to work with residents on these issues. For example, the housing survey could be followed up with a workshop to educate residents about fair housing laws and available grant and loan programs that pertain to housing needs expressed through the survey.

Community and housing information could be shared on the Town website. *Chapter 7: Economic Development* discusses opportunities for further enhancing the Town of Pecos website.

Network with Affordable Housing Organizations & Developers

The Town should network with affordable housing organizations. Several regional and State organizations promote affordable housing. Coordinating and communicating with these organizations will keep Pecos updated about affordable housing programs and opportunities. State organizations working on affordable housing initiatives include the Texas Department of Housing and Community Affairs, Texas Affiliation of Affordable Housing Providers, Texas State Affordable Housing Corporation. *Appendix 3C* includes more information about those and other housing organizations.

The Town should also network with affordable housing developers. Currently, Pecos may be most appealing to niche developers in the lower-income, energy industry worker, and young family markets. Recruiting those developers would require networking, consulting with potential developers about their needs, and providing information about the town to as many people as possible. *Appendix 3C* describes several organizations that provide general information, grants, and loans for housing development and access to networks of housing developers, including:

- ✓ Texas Affiliation of Affordable Housing Providers (TAAHP)
- ✓ Texas State Affordable Housing Corporation (TSAHC)
- ✓ Texas Department of Housing and Community Affairs (TDHCA)
- ✓ U.S. Department of Agriculture Rural Development (USDA-RD)

In terms of bringing affordable, multifamily, rental housing development to Pecos, the Town should focus on working with developers who are eligible to apply for the Housing Tax Credit (HTC) program. The HTC program is a dollar-for-dollar reduction of federal income tax liability through the Texas Department of Housing and Community Affairs (TDHCA). The program reduces the cost to developers, allowing them to provide more affordable units at lower rates to tenants. This would increase the number of quality, affordable units in Pecos. The program is competitive, so municipal participation is encouraged in the form of development support and funding contributions. Visit the TDHCA website for more information (<http://www.tdhca.state.tx.us/multifamily>).

3.4.3 Continuing to Support Fair Housing

The Town of Pecos has adopted or agreed to adopt several policies and to undertake actions to increase local awareness of fair housing issues and increase the availability of housing choices to protected classes. The Town must consider whether its policy and budget decisions intentionally or unintentionally sanction segregation or limit free housing choice, if it has sufficiently educated the public about the Fair Housing Act, and if it has taken proper steps to uphold the Act.

The fair housing analysis in this plan is guided by the State of Texas Analysis of Impediments and the Fair Housing Activities Statement of Texas (FHAST), both of which provide standards for analyzing fair housing in a community. The FHAST often combines references to protected classes with references to low-income because there is a high correlation between the two groups; therefore, the following analysis also references income-related assistance.

The Town has at least three tools by which it can affect fair housing:

Grant Applications. With the exception of HOME (described above), many grant applications that would help residents with home repair and rehabilitation must be initiated by individuals or non-municipal organizations. Pecos's public officials and municipal staff can publicize and provide contact information for such grants. *Appendix 3C* provides a list of grant programs and area organizations that work on housing assistance.

Ordinance Adoption & Enforcement. The Town's ordinances do not appear to contain fair housing impediments. The following review assesses how fair housing is affected by the Town's standards for flood damage prevention and minimum standards for continued use and occupancy of a building.

- *Flood Damage Prevention Ordinance:* Pecos's Flood Damage Prevention Ordinance permits the construction of structures in flood-prone areas provided that the construction meets damage-prevention and safety standards. The ordinance applies equally to all residential structures in the 100-year Floodplain; there are currently 7 single-family structures located in the 100-year Floodplain.
- *Minimum Standards for Building Use/Occupancy.* Houses of varying conditions are located throughout the Town, and the standards apply equally to all such housing. The standards would be improved if combined with assistance to owners who are unable to repair or replace their homes (primarily through HOME grants and other grant resources listed in *Appendix 3C*).

Policy Adoption & Community Education. The Town has regularly published the following ad in its newspaper of record in conjunction with TxCDBG grants.

To promote fair housing practices, the Town of Pecos encourages potential homeowners and renters to be aware of their rights under the National Fair Housing Law. Title VIII of the Civil Rights Act of 1968, as amended, prohibits discrimination against any person on the basis of race, color, religion, sex, handicap, familial status, or national origin in the sale or rental of units in the housing market. For more information on fair housing or to report possible fair housing discrimination, call the U.S. Department of Housing and Urban Development's toll-free hotline at 1-800-669-9777.

The Town posts provisions of the National Fair Housing Laws and the process for filing a complaint regarding housing discrimination at City Hall.

The Town should take the following actions to further support fair housing in Pecos.

- a) Provide at City Hall:
 - Local, State, and Federal contacts for reporting a fair housing complaint.
 - A copy of the Town's Fair Housing policy and complaint procedures.
 - A copy of the Federal Fair Housing Act.¹³
 - A copy of the Texas Accessibility Standards¹⁴ and Construction Requirements for Single-Family Affordable Housing (Texas Government Code, Section 2306.514).¹⁵
- b) Adopt and annually update fair housing ordinances, resolutions, and policies, including:
 - A Fair Housing Ordinance based on HUD model ordinances.
 - A policy explicitly requiring that all non-federally funded projects in the town follow State and Federal laws regarding special-needs construction standards.
 - A policy preventing the concentration of undesirable infrastructure (e.g. sewer plant, solid waste dump, etc.) in locations that would unfairly impact protected classes.
 - A resolution designating April as Fair Housing Month.
- c) Provide annual fair housing training to all senior municipal staff.¹⁶
- d) Establish a procedure for municipal staff to keep logs and records of fair housing complaints and referrals.
- e) Coordinate housing grant applications with other grant applications so that housing quality in an area is improved at the same time as water, sewer, streets, and drainage.
- f) Develop an anti-NIMBYism¹⁷ action plan to disseminate timely and accurate information to residents and other concerned parties during the planning and execution of fair housing projects and developments.

¹³ Available at the Department of Justice Civil Rights Division website: www.justice.gov/crt/about/hce/title8.php

¹⁴ Available at www.tdlr.state.tx.us/ab/abtas.htm

¹⁵ Available at www.statutes.legis.state.tx.us/Docs/GV/htm/GV.2306.htm#2306.514

¹⁶ The Texas Workforce Commission offers a variety of training programs. Visit <http://www.twc.state.tx.us/partners/fair-housing-presentations-training> for further information.

¹⁷ "NIMBY" is an acronym for "Not In My Backyard". An AntiNIMBYism action plan is intended to prevent/address misinformation that may lead to NIMBY-type sentiments about proposed new developments and fair housing opportunities.

3.5 Implementation Plan

The Implementation Plan organizes the recommended action items recommended to address each issue identified in the above sections into a timeline for completion. The actions are prioritized and organized by date.

Table 3H: Implementation Plan: 2020-2030

Goals & Objectives	Activity Year(s)			Lead Organization	Cost Estimate	Funding Sources
	2020-2023	2024-2026	2027-2030			
Goal 3.1 Renovate or replace occupied, substandard housing and support housing stock resiliency						
Reconstruct or replace at least one (1) house per year with HOME grants	X	X	X	Town	Match is variable ¹⁸	GEN; TDHCA;
Keep up-to-date information on housing assistance organizations at City Hall, on a City website, and at local institutions (service organizations, churches, etc.) (see Appendix 3C for a list of organizations)	X	X	X	Town	Staff	GEN
Keep up-to-date information on grant programs at City Hall, on a Town website, and at local institutions (service organizations, churches, etc.) (see Appendix 3C for a list of programs)	X	X	X	Town	Staff	GEN
Consider updating Manufactured Housing Ordinance to address "man camps"	X			Town	\$1,000 (legal)	GEN
Consider developing a Disaster Recovery Housing Program		X	X	Town	Staff; Variable	GEN
Goal 3.2 Remove vacant, dilapidated structures						
Create and maintain a log of vacant, dilapidated structures	X	X	X	Town	Staff/Varies	GEN; Local

¹⁸ HOME program details, including match requirements, change year-to-year.

Pursue one or more strategies to support voluntary and alternative dilapidated building removal	X	X	X	Town	Staff	GEN; Local
Consider hiring additional staff in code enforcement commiserate with rapid housing development	X			Town	\$1,000 (legal)	GEN; TDLR
Consider updating the Dangerous Buildings Ordinance	X			Town	\$1,000 (legal)	GEN
Remove at least one (5) vacant, dilapidated house per year		X	X	Town	Varies (US avg. = \$18,000)	GEN; Local

Goal 3.3 Pursue diverse and affordable housing development

Network with affordable housing organizations and developers	X	X	X	Town	Variable	EDC; GEN; Local
Collect information on Pecos's population and housing needs (e.g. rental housing requests, occupancy rates, demographics)		X	X	Town	Varies by form	GEN; Local
Update website to make information about Pecos easily accessible to residents and developers (<i>see also Chapter 7: Economic Development</i>)		X	X	Town	Variable by form; (estimated \$100 - \$1,500/year) + Staff	EDC; GEN; Local

Goal 3.4 Continue to support Fair Housing initiatives

Adopt and conduct annual reviews of ordinances, resolutions, and policies that support fair housing	X	X	X	Town	Staff	GEN
Keep up-to-date information on Fair Housing laws, policies, complaint procedures, and ADA construction standards at City Hall and on a Town website	X	X	X	Town	Staff	GEN

Provide annual fair housing training to all senior staff	X	X	X	TWC, Staff	Staff	GEN
Establish a procedure for Town staff to keep logs and records of fair housing complaints and referrals	X			Staff	Staff	GEN
Develop an anti-NIMBYism action plan to disseminate timely and accurate information to residents during the planning of fair housing developments			X	Town	Staff	GEN

Goal 3.5 Attract economically stable residential development that complements existing development

Develop annexation protocol and conduct cost-benefit analyses of new residential developments (see <i>Chapter 4: Land Use Study</i>)	X	X	X	Town	Staff	N/A
Prioritize and market lots suitable for residential infill	X	X	X	Town	Staff	GEN
Adopt a Future Land Use Map that represents the Town's development goals and limitations	X			Town	Staff	N/A
Establish a schedule for regular review of Future Land Use Map, Zoning Ordinance, and Subdivision Ordinance		X		Town	N/A	GEN

Sources: **EDC** = Pecos Economic Development Organization; **GEN** = Municipal funds; **Staff** = Staff time (Town); **Local** = donations of time/money/goods from private citizens, charitable organizations, and local businesses; **TDHCA** = Texas Department of Housing and Community Affairs; **TDLR** = Texas Department of Licensing and Regulation; **TWC** = Texas Workforce Commission

3.6 Appendix 3A: Detailed Housing Data

In March 2020, GrantWorks, Inc. conducted an exterior/windshield survey of all residential buildings in Pecos to determine the physical condition of each housing unit in the town and extraterritorial jurisdiction (ETJ). A housing unit can be a single-family detached house, a mobile/manufactured house, or a multifamily unit such as an apartment, condominium, or townhome). The survey rated the condition of each housing unit on a scale from “standard” to “dilapidated,” as defined in *Table 3A.1*.

Table 3A.1: Housing Condition Survey Classifications & Criteria

	Criteria
Standard	<p>Few or no minor visible exterior defects such as:</p> <ul style="list-style-type: none"> • cracked, peeling, or missing paint • cracked, sagging, rotting, or missing siding, steps, porch planks, or other wooden surfaces • cracked or broken window panes • cracked masonry, brick, or mortar surfaces • missing or damaged roof shingles • small rust spots on mobile homes <p>Generally meets local building codes No detriment to health and safety present</p>
Deteriorating	<p>Few visible exterior defects requiring repair beyond routine maintenance such as:</p> <ul style="list-style-type: none"> • missing or damaged wooden surfaces that could cause injury if walked upon or leaned against • missing windowpanes • badly deteriorated window frames • major holes in exterior walls, up to one (1) foot across and/or penetrate through the interior walls • roof missing many shingles or has holes up to six (6) inches across • chimney bricks missing • extensive rusting, joint separation on mobile home exterior <p>Rehabilitation is economically feasible</p>
Dilapidated	<p>Fails to provide safe shelter Several of the major defects listed under Deteriorating Any major structural damage such as:</p> <ul style="list-style-type: none"> • sagging foundation • sagging roof • slanted or tilted exterior walls • missing doors • collapsed chimney or porch • fire or severe water damage <p>Rehabilitation is not economically feasible All non-HUD Code (pre-June 15, 1976) mobile homes are considered dilapidated</p>

Housing occupancy was determined by visual inspection of each house. Each house was checked for: wired electric meter, yard maintenance, intact blinds and/or visible furniture, undamaged or secured windows, and the condition of yard furniture. *Table 3A.2* tabulates the complete survey results.

Table 3A.2: Housing Data from Windshield Survey

Type / Condition		Occupancy	City	ETJ	Total Region
Stick-Frame	Standard	Occupied	1544	52	1596
		Vacant	9	1	10
	Deteriorated	Occupied	1120	51	1171
		Vacant	6	0	6
	Dilapidated	Occupied	204	26	230
		Vacant	46	2	48
	Total (Occupied)		2868	129	2997
	Total (Vacant)		61	3	64
<i>Subtotal - Stick-Frame Homes</i>			<i>2929</i>	<i>132</i>	<i>3061</i>

Type / Condition		Occupancy	City	ETJ	Total Region
Manufactured Home	Standard	Occupied	244	54	298
		Vacant	3	0	3
	Deteriorated	Occupied	154	25	179
		Vacant	0	0	0
	Dilapidated	Occupied	109	35	144
		Vacant	11	5	16
	Total (Occupied)		507	114	621
	Total (Vacant)		14	5	19
<i>Subtotal - Manufactured Homes</i>			<i>521</i>	<i>119</i>	<i>640</i>
<i>Subtotal - Single-Family Homes</i>			<i>3450</i>	<i>251</i>	<i>3701</i>

	Type / Condition	Occupancy	City	ETJ	Total Region	
Multifamily	Standard	Occupied	533	0	533	
		Vacant	9	0	9	
	Deteriorated	Occupied	19	0	19	
		Vacant	0	0	0	
	Dilapidated	Occupied	5	0	5	
		Vacant	0	0	0	
	Total (Occupied)			557	0	557
	Total (Vacant)			9	0	9
<i>Subtotal - Multifamily Homes</i>			<i>566</i>	<i>0</i>	<i>566</i>	

	Type / Condition	Occupancy	City	ETJ	Total Region	
Total Housing Conditions	Standard	Occupied	2,321	106	2,427	
		Vacant	21	1	22	
		Total Standard	2,342	107	2,449	
	Deteriorated	Occupied	1,293	76	1,369	
		Vacant	6	0	6	
		Total Deteriorated	1,299	76	1,375	
	Dilapidated	Occupied	318	61	379	
		Vacant	57	7	64	
		Total Dilapidated	375	68	443	
	Total (Occupied)			3,932	243	4,175
	Total (Vacant)			84	8	92
<i>Total Housing Units</i>			<i>4,016</i>	<i>251</i>	<i>4,267</i>	

Source: GrantWorks, Inc., 2020 Fieldwork Study

3.7 Appendix 3B: Housing Affordability Calculations

Housing units are conventionally considered to be affordable when monthly costs are less than 30% of monthly income. *Table 3B.1: Housing Tenure Data* tabulates the median monthly income, the total number of owner- and renter-occupied housing units, and housing costs as a percentage of income for both renters and homeowners. Average housing costs for owner-occupied units with a mortgage consume 16% of the median monthly income in Pecos.

Table 3B.1: Housing Tenure Data (2015)

		Pecos	Reeves County
Owner-occupied Units	<i>Total Occupied Housing Units</i>	2,818	3,713
	# of Units	1,965	2,625
	% of Total	70%	71%
	Monthly \$ w/Mortgage (median)	\$865	\$861
	% of monthly income	16%	18%
	Monthly \$ w/o Mortgage (median)	\$328	\$357
	% of Income	6%	7%
Rental Units	Number of Units	853	1,088
	% of total units	30%	29%
	Median monthly rent	\$653	\$614
	% of monthly income	12%	13%

* The Town housing unit count is from the ACS and does not include additional houses counted in the field survey.
Source: U.S. Census Bureau; American Community Survey 2014-2018, Tables S2502, B25077, B19013, B25088, B25064;
<data.census.gov>

Another affordability measure for housing and a key component of mortgage lending decisions is the price-to-income ratio. The price-to-income ratio is the disparity between median income and median housing value. It provides a measure to answer the question “Is a median-priced home affordable for a median income earner?” Houses are generally considered to be affordable for the purchaser when the cost of the house equals roughly 2.6 times the purchaser’s annual income.¹⁹ *Table 3B.2* shows that Pecos’s price-to-income ratio is less than the ratios for the state and Reeves County. The ratio for all three geographies is considered affordable.

Table 3B.2: Median Household Income & Housing Values

	Pecos	Reeves County	State
Median Household Income	\$63,478	\$58,384	\$60,629
Median Household Monthly Income	\$5,290	\$4,865	\$5,052
Median Home Value	\$65,200	\$62,200	\$186,000
Median Home Value / Median Household Income	1.0	1.1	3.1

Source: U.S. Census Bureau; American Community Survey 2014-2018, Tables B19013 and B25077; <data.census.gov>

3.8 Appendix 3C: Community Housing Organizations & Grant Programs

Detailed information regarding programs that serve housing needs in Reeves County and Pecos are listed below. Additional information on state and federal programs that may be useful to Pecos’s residents may be found by contacting local offices and reviewing individual organizations’ websites.

3.8.1 Services Currently Available/Active in Pecos

Permian Basin Regional Housing Finance Corporation

PBRHFC primary business activity is to issue tax-exempt single-family mortgage revenue bonds. The corporation also issues bonds for affordable multifamily housing projects, provides homebuyer training, and offers administration of federal housing programs/awards.

<i>Organization / Office:</i>	Permian Basin Regional Housing Finance Corporation
<i>Address:</i>	P.O. Box 60660 Midland, TX 79711
<i>Phone / Email:</i>	(432) 563-1061

¹⁹ “Where the House-Price-to-Income Ratio is Most out of Whack” retrieved from: <https://www.citylab.com/equity/2018/05/where-the-house-price-to-income-ratio-is-most-out-of-whack/561404/>; “High Home Price-to-Income Ratios Hiding Behind Low Mortgage Rates” retrieved from: <http://www.forbes.com/sites/zillow/2013/04/16/high-home-price-to-income-ratios-hiding-behind-low-mortgage-rates/>

Pecos Housing Authority

In operation since at least 1973, the Pecos Housing Authority provides housing assistance to low-income families. The Pecos Housing Authority administers the Public Housing and Housing Choice Voucher Program (Section 8) through federal funding from the U.S. Department of Housing and Urban Development (HUD). The Housing Authority manages four, income-limited, multifamily complexes in Pecos (186 total units).

<i>Organization / Office:</i>	Pecos Housing Authority
<i>Address:</i>	2320 Teague Dr Pecos, Texas 79772
<i>Phone / Email:</i>	(432) 447-2807

Permian Basin Regional Planning Commission (PBRPC)

RPC (RPCs), also known as Council of Governments, are voluntary associations of local governments formed under Texas law. These associations address problems and planning needs that require regional attention or that cross the boundaries of individual local governments. RPCs coordinate planning and provide a regional approach to problem-solving through cooperative action and may provide direct services at the local level. The Permian Basin Regional Planning Commission conducts planning activities, applies for grants for local communities, administers programs such as the Area Agency on Aging program and the Housing Choice and Voucher program, and is an Economic Development District.

<i>Organization / Office:</i>	Permian Basin Regional Planning Commission
<i>Address:</i>	2910 La Force Blvd. Midland, Texas 79706
<i>Phone:</i>	(432) 563-1061
<i>Website:</i>	http://www.pbrpc.org/
<i>Counties Served:</i>	<i>Gaines, Dawson, Borden, Andrews, Martin, Howard, Loving, Winkler, Ector, Midland, Glasscock, Reeves, Ward, Crane, Upton, Pecos, and Terrell Counties</i>

Area Agency on Aging

Local area agencies on aging (AAAs) are affiliated with the Texas Department on Aging and receive State and federal funds to help coordinate local elderly care for those over age 60. Services the agency provides include: Nursing Home Ombudsman, Benefits Counseling (legal information), Care Coordination (in-home assistance with meals, minor repair, health care, etc.), Caregiver Support Program (counseling/assistance to caregivers) and some additional services (health and wellness). PBRPC administers the program in Reeves County. The Department of Health and Human Services provides an online eldercare locator that includes the option for an online chat at <http://www.eldercare.gov/eldercare.NET/Public/index.aspx>.

<i>Organization / Office:</i>	Permian Basin Regional Planning Commission
<i>Address:</i>	2910 La Force Blvd. Midland, Texas 79706

<i>Phone</i>	(432) 563-1061
<i>Website:</i>	http://www.pbrpc.org/
<i>Counties Served:</i>	Gaines, Dawson, Borden, Andrews, Martin, Howard, Loving, Winkler, Ector, Midland, Glasscock, Reeves, Ward, Crane, Upton, Pecos, and Terrell Counties

3.8.2 Grants/Loans & Organizational Resources Available to the Town

Texas Department of Housing and Community Affairs (TDHCA)

TDHCA is the state agency responsible for promoting and preserving homeownership, and financing the development of affordable rental housing. The agency has programs to build and to rehabilitate single-family and multifamily housing. The Town can apply for funding to:

- Assist with multifamily unit rehabilitation projects; (Rental Housing Development Program);
- Assist renters, including veterans and persons with disabilities, with utility and security deposits (Tenant-Based Rental Assistance Program, Tenant-Based Rental Assistance Program for Persons with Disabilities, and the Veterans Housing Support Program);
- Provide down payment assistance to individuals who have not owned a home in three years or who are first-time home buyers (Texas HOMEbuyer Assistance Programs);
- Repair or replace substandard homes for low-to-moderate-income residents (HOME Rehabilitation Program and Homeownership Assistance Program); and
- Construct home accessibility projects for disabled residents (Amy Young Barrier Removal Program)

<i>Organization / Office:</i>	Texas Department of Housing & Community Affairs
<i>Address:</i>	221 East 11 th Street Austin, Texas 78701
<i>Phone / Email:</i>	(512) 475-3800 or (800) 525-0657 / info@tdhca.state.tx.us
<i>Website:</i>	www.tdhca.state.tx.us

U.S. Department of Agriculture Rural Development (USDA-RD)

The mission of USDA-RD is to improve the economy and quality of life in rural America. USDA programs include homeownership opportunities, owner-occupied housing assistance, rental assistance, rental housing development, community development activities, business development, and technical assistance in rural areas of the State (generally considered areas with a population of fewer than 20,000 people). Programs include:

- **Loan Program:** USDA-RD Guaranteed Rural Housing Loans for Single-family Dwellings offers help for people who want to own a home but cannot pay a down payment. Low and moderate-income applicants can have closing costs associated with purchasing a house financed into the loan up to the appraised value of the property. Loans can be for new or existing homes.

The Guaranteed Rural Housing Program charges a 1.5% guarantee fee that is due at closing. Generally, the program targets communities with populations of 10,000 or less in locations not

closely associated with urban areas.

- Direct Loan Program: Individuals can apply for direct loans through the area offices.
- Rural Repair and Rehabilitation Loans: Used to modernize existing homes by adding bathrooms, central heating, modern kitchens, and other improvements such as driveways and foundation plantings. Individuals who meet the requirements should contact USDA directly for these loans. The USDA Rural Development Ft. Stockton office accepts applications for Pecos. Some seniors may be eligible for grants of up to \$7,500 for home repairs.

Programs are explained at www.rurdev.usda.gov/ProgramsAndOpportunities.html or the following offices can be contacted.

<i>Organization / Office:</i>	US Department of Agriculture Rural Development / Ft. Stockton Service Center
<i>Address:</i>	2306 West Dickinson Blvd, Suite 2 Fort Stockton, TX 79735
<i>Phone / Email:</i>	(432) 336-7585 / John.Perkins@usda.gov

<i>Organization / Office:</i>	US Department of Agriculture Rural Development / State Office
<i>Contact:</i>	Housing Program Staff
<i>Address:</i>	101 South Main Street, Suite 102 Temple, Texas 76501
<i>Phone / Email:</i>	(254) 742-9770, TTD (254) 742-9712
<i>Website:</i>	http://www.rd.usda.gov/tx or http://www.rd.usda.gov/contact-us/state-offices/tx

Texas Affiliation of Affordable Housing Providers (TAAHP)

TAAHP is a non-profit association of affordable housing developers, financiers, and designers throughout Texas. The goal of TAAHP is to “increase the supply and quality of affordable housing for Texans with limited incomes and special needs,” and the organization’s primary focus is on education and lobbying. The group is a good starting place for communities interested in affordable housing projects. It provides communities with networking opportunities (through conferences and newsletters) to market available land, seek financing information, and/or discuss changes to state laws that could bring more affordable housing to their cities.

<i>Organization / Office:</i>	Texas Affiliation of Affordable Housing Providers
<i>Address:</i>	221 East 9th Street, Suite 408 Austin, Texas 78701
<i>Phone / Email:</i>	(512) 476-9901
<i>Website:</i>	http://www.taahp.org/

Rural Rental Housing Association of Texas (RRHA)

RRHA is a non-profit association of professionals involved in the development and management of rental housing in rural Texas. Like TAAHP, the organization provides communities with networking opportunities and lobbying for the industry as well as technical assistance and training for housing providers.

<i>Organization / Office:</i>	Rural Rental Housing Association of Texas
<i>Address:</i>	417-C West Central Avenue Temple, Texas 76501
<i>Phone / Email:</i>	(254) 778-6111
<i>Website:</i>	http://www.rrhatx.com/index.php

3.8.3 Grants/Loans & Organizational Resources Available to Residents

Combined Community Action, Inc.

Combined Community Action, Inc. is a non-profit organization that provides assistance through programs focusing on tenant-based rental assistance, weatherization, and comprehensive energy assistance, among others. CCA's mission is to assist people to become independent and self-sufficient by transitioning people out of poverty and providing comprehensive programs that support families and individuals.

<i>Organization / Office:</i>	Combined Community Action, Inc.
<i>Address:</i>	165 West Austin Giddings, Texas 78942
<i>Phone / Email:</i>	(979) 540-2980/ info@bvcaa.org
<i>Website:</i>	http://www.ccaction.com/about/about-cca
<i>Counties Served:</i>	<i>Not specified</i>

Texas State Affordable Housing Corporation (TSAHC)

TSAHC is a self-supporting, not-for-profit organization created by state statute in 1994 to provide safe, decent and affordable housing for low-income Texans and other underserved populations. TSAHC provides a variety of affordable housing programs that range from First-time Homebuyer Programs for individuals and families. Programs provide low-interest financing to individuals, particularly first-time homebuyers, teachers, paid firefighters, EMS personnel, peace officers, correction of juvenile corrections officers, county jailers, and public security officers. It also provides various financing options for developers of both single-family and multifamily housing, portions of which would serve low-to-moderate income tenants. Programs are listed on the agency website at www.tsahc.org. The agency can be reached at 512-477-3555 or 888-638-3555.

Aging in Place

Aging in Place is a joint program of Partners for Livable Communities and the National Association of Area Agencies on Aging. It provides regional workshops and Jumpstart grants to facilitate conversations and form action plans that address issues of aging in place within a community. Past JumpStart grants have been used to create programs that assist seniors with home maintenance and lawn care, provide paratransit services to help senior residents remain an active part of their community, and create “return visit” programs where nurses/social workers visit regularly to identify possible issues that may impair the individual’s ability to remain in their home. For information, contact Penny Cuff, Vice President of Programs for Partners for Livable Communities by emailing pcuff@livable.org or calling (202) 887-5990. Website: www.aginginplaceinitiative.org

Additional resources on aging in place can be found through national networks:

National Aging in Place Council (www.ageinplace.org)
Senior Resource (www.seniorresource.com/ageinpl.htm)

Texas Ramp Project

Texas Ramp Project is a non-profit agency that relies on volunteers, foundations, civic organizations, and corporate partners to build ramps for low-income elderly and disabled residents. Since it was established in 2006, the organization has built over 3,428 ramps throughout the state. The organization accepts client referrals from social service agencies through its 33 service areas. Social service agencies can refer clients by submitting an online form to their respective service area.

<i>Organization / Office:</i> Texas Ramp Project / Central Administration Office
<i>Address:</i> PO Box 832065 Richardson, Texas 75083
<i>Phone / Email:</i> (214) 675-1230 / info@texasramps.org
<i>Website:</i> http://www.texasramps.org/

Texas Association of Structural Movers (TASM)

TASM is a statewide trade organization for structural movers. Their website provides an easy to use Member Directory that is organized by region. It also provides an Online Quote Engine to send a request for services to all TASM members. The organization is a good source for helpful information about the house moving process and permitting requirements.

Organization / Office: Texas Association of Structural Movers
Contact Name: Joe McCullough, Executive Director
Address: 1306-A West Anderson Lane
Austin, Texas 78757
Phone / Email: (512) 454-8626 / jmccullough@assnmgmt.com
Website: www.texashousemovers.com

The ReUse People of America

The Reuse People of America provide deconstruction services across the country. With over 20 years of experience in the deconstruction industry, they are experts in making sure that homeowners get as much salvageable material as possible. Their expertise is important because the value of the salvageable material will determine the tax deduction that a homeowner can take on the donated deconstructed materials. In addition to deconstruction services, The Reuse People of America conduct job training seminars. In the past, they have worked with cities to provide job training for unemployed and underemployed residents.

Organization / Office: The Reuse People of America
Contact Name: Mike Thrutchley, Deconstruction Manager, Texas Regional Office
Phone / Email: (214) 251-2306 / mikethrutchley@thereusepeople.org
Website: <http://www.deconstructiontexas.com/>
Corporate Office 9235 San Leandro Street
Oakland, California 94603
(510) 383-1983 / info@thereusepeople.org

Pure Salvage Living

Pure Salvage Living is Tiny Texas Houses' salvage operation. They salvage materials from dilapidated and decaying structures before completing demolition. They can deconstruct a structure and leave the salvaged materials for the property owner, or they can keep the salvaged materials. The Pure Salvage Living website is a good source for homeowners trying to locate deconstruction professionals in their area. The website is also the best way for homeowners to have their projects evaluated. It includes an online form where homeowners can input information about the size, condition, and location of the structure that needs to come down, along with the desired project timeframe. Pure Salvage Living reviews deconstruction projects on a case by case basis. All fees for deconstruction must be worked out directly with Pure Salvage Living or their representatives.

Organization / Office: Pure Salvage Living
Address 20501 East I-10
Luling, Texas 78648
Phone / Email: (830) 875-2500
Website: www.puresalvageliving.com

Legal Aid Services

Local legal aid organizations provide civil legal representation and advice at little or no cost to low-income individuals who cannot afford a lawyer. Legal aid focuses on legal issues relating to basic needs, self-sufficiency, children and families, elderly and disability, and housing and homelessness prevention.

Texas Rio Grande Legal Aid (www.trla.org/) serves communities around Texas with legal aid in housing, family, health, public benefits, education, employment, individual rights, fair housing, and many other areas.

<i>Organization / Office:</i>	Texas Rio Grande Legal Aid / Austin TAJ
<i>Address</i>	4920 North I-35 (Austin Office) Austin, Texas 78751
<i>Phone / Email:</i>	(888) 988-9996 Austin Office: (512) 347-2700
<i>Website:</i>	http://www.trla.org/office

Leader Dog for the Blind

Leader Dog works to improve the mobility and independence of blind or visually impaired individuals by partnering them with a guide dog. Applicants complete a 26-day residential training program and must be 16 years or older and in good mental and physical health. The training program is located in Rochester Hills, Michigan and is offered at no cost. Room and board and transportation costs to and from the training program for clients traveling within the United States are also provided free of charge. The organization also offers orientation and mobility and GPS programs to professionals and clients. Applicants can apply online at or can download an application to print and mail.

<i>Organization / Office:</i>	Leader Dogs for the Blind
<i>Address</i>	1039 South Rochester Rd. Rochester Hills, Michigan 48307
<i>Phone / Email:</i>	(248) 651-9011, Toll Free (888) 777-5332, TTY (248) 651-3713 / leaderdog@leaderdog.org
<i>Website:</i>	http://www.leaderdog.org

4 LAND USE STUDY

The location and extent of land uses in a community impact property values, City service expenditures, traffic flow, aesthetics, and economic development potential. The Existing Land Use Map (*Map 4A*) shows land development patterns within the city limits and extraterritorial jurisdiction (ETJ).²⁰ The Future Land Use Map (*Map 4B*) and Land Use Study help the community plan for infrastructure to guide the desired direction of future growth.

4.1 Highlights

Undeveloped/Agricultural land is the most common land use in the Town of Pecos, based on total acreage (3,397 acres). Much of this land was previously under agricultural cultivation, but is now either fallow or slated for housing, commercial or industrial development. The next largest land uses are oil fields (land with facilities related to the extraction of oil and gas, but not refineries) and right of way. These land uses reflect Pecos's status as a working town where oil and gas extraction, and the infrastructure that support the industry, are dominate.

Development in Pecos is characterized primarily by commercial uses (1,753 acres), single family homes (1,049 acres), and the airport (897 acres). There is also a higher than typical share of industrial land uses (302 acres) which, for the purposes of this plan, is separate from oil fields (as mentioned above).

The city of Pecos also has a large amount of semi-developed land (1,295 acres). Most of the undeveloped land consists of larger lots in the city's periphery and smaller lots scattered throughout existing neighborhoods. Vacant lots can have 'spillover' effects that negatively impact neighboring properties. Research has found that vacant and abandoned properties can be linked to reduced property values, increased crime, as well as increased risk to public health and welfare. In commercial areas, vacant lots can also reduce the feeling of business activity.

²⁰ The ETJ is the area within a certain distance beyond the city or town limits in which the local government can control land development patterns through its subdivision ordinance.

The primary natural barriers to construction are floodplain, a high-water table in some areas and shrink-swell from changing water content in the soil.

Residents are interested in these primary areas of land use improvement:

- Enhanced community appearance, including dilapidated building removal and yard maintenance;
- Additional housing options to serve the needs of all segments of the growing population;
- Additional businesses to support an active downtown and a diverse local economy; and
- Improved connectivity between neighborhoods.

These land-use improvements are represented in *Map 4B: Future Land Use 2030* as increased residential and multifamily development in existing residential areas; new mixed residential development in southern Pecos; concentrated local commercial land use in the city center; and increased commercial development along US-285 and TX-17 and I-20.

4.2 Context: History & Community Input

Previous Land Use

WTC Incorporated and GAP Strategies conducted a land-use study for the Town of Pecos in 2015 as part of a comprehensive planning process. Major changes since the completion of the 2015 Comprehensive Plan include:

- Annexation of approximately 7000 acres of land, including the formally agricultural land south of I-20, between I-20 and I-20B, various parcels along I-20 south of the city, and various parcels previously landlocked within the city limits.
- Conversion of most if not all previously agricultural land uses within the city limits to oil fields or other commercial development

The previous plan does not include a detailed analysis of land uses by parcel, therefore a direct comparison to current land use is not possible.

Community Input

A detailed discussion of community input collection is located in *Chapter 1: Community Goals & Objectives*. The particular concerns expressed by residents that relate to land use are:

Achieve/Preserve

Avoid/Eliminate

- Incorporate Mixed Use typologies
- Encourage use of new zoning categories
- Plan for West Pecos Development
 - Increase connectivity between old Pecos and “West Pecos”
 - Use West Pecos as model for new development across Pecos
- Expand landfill/solid waste capacity
- Plan for new recreational facility east of Airport
- Plan for development along future truck loop
- New recreational facilities needed in Central Pecos
 - Consider stormwater ditches for Hike/bike trails
 - Consider ISD facilities as shared park facilities
 - Consider diversifying use of Reeves County Civic Center and Rodeo Area during off-season
- Consider annexation of Lindsey addition
- Vacant, dilapidated commercial structures
- Abandoned housing
- Avoid development in high water table
- Negative impact of truck route bypass
- Disconnected neighborhoods due to major roads and rail
- Improper/ insufficient drainage resulting in flooding

4.3 Inventory & Forecast

4.3.1 Existing Land Use

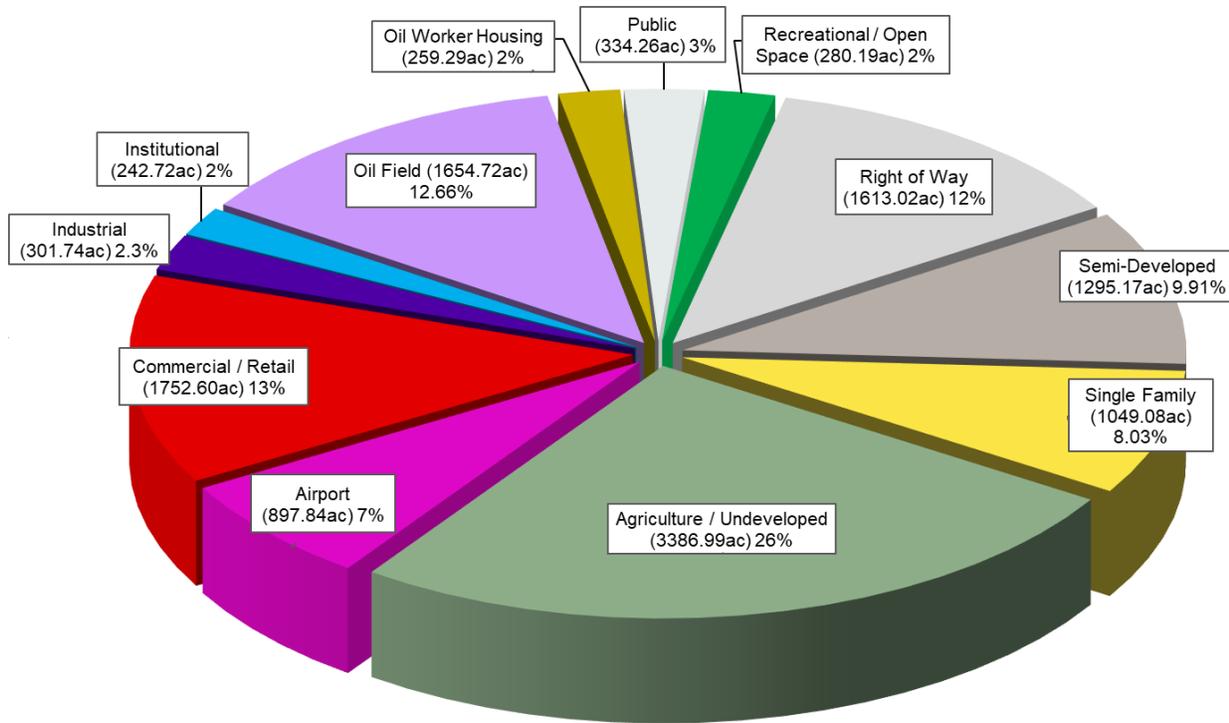
Pecos’s land use in 2020 is characterized by:

- Approximately 13,206 acres in the city limits; approximately 4,682 semi-developed,²¹ undeveloped, or used for agriculture.
- Approximately 1,049 acres of single-family residential land (an average 0.3 acres per house).
- Approximately 1,613 acres of right-of-way which is primarily attributable to Interstate 20, State Highway 285, and the railroad.

²¹ Subdivided and provided with city services, but no building on the property.

- General separation of commercial, residential, and industrial land uses (see *Map 4A*).

Chart 4A: Land use, Total Acres/Percent



Appendix 4A provides definitions, detailed tables, and an explanation of the methodology used to calculate land use.

4.3.2 Land Development Considerations

Environmental Factors

Environmental factors impacting construction include lakes and streams, floodplain, and soil type. These factors do not prevent construction, but they can make initial costs and/or long-term maintenance more expensive.

Lakes & Streams

The namesake of Pecos City, the Pecos River, runs through the northeastern portion of the E.T.J. and forms the county line between Reeves and Ward County. The river once flowed year-round, but due to upstream dams, now runs intermittently during wet times. There are a number of small streams and drainages throughout the city, mostly running west to east towards the Pecos River. There is an area of

high-water table in the eastern portion of the town, and a small detention pond just northwest of the airport.

Floodplain

Approximately 92 acres of land within Pecos’s city limits are within the FEMA-identified 100-year Floodplain. Most of the land in the floodplain has an active use. Active residential uses are most common. There are 7 single-family houses in the floodplain, 100% of which are occupied. These houses comprise less than 1% of all single-family housing and less than 1% of all occupied, single-family housing in Pecos. The floodplain also crosses an active commercial and institutional use and portions of several major thoroughfares (see *Figure 4A*).

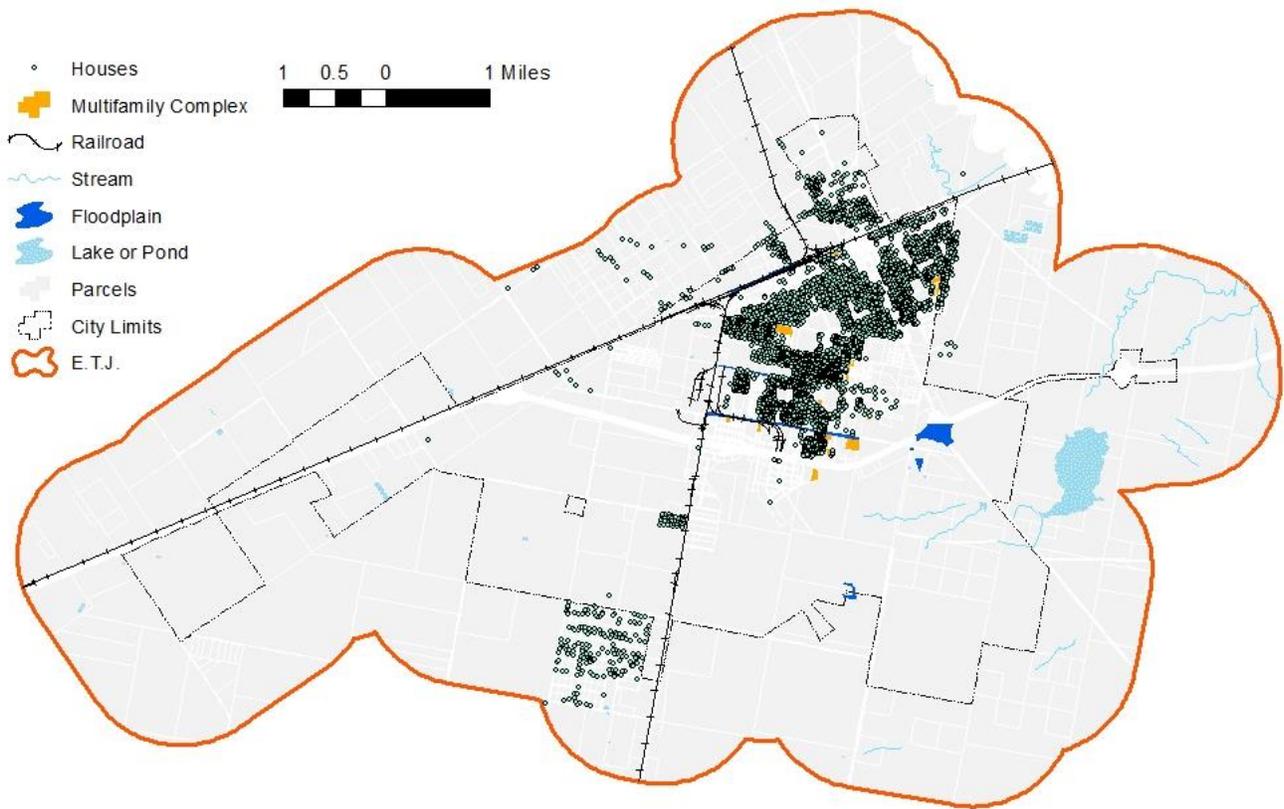
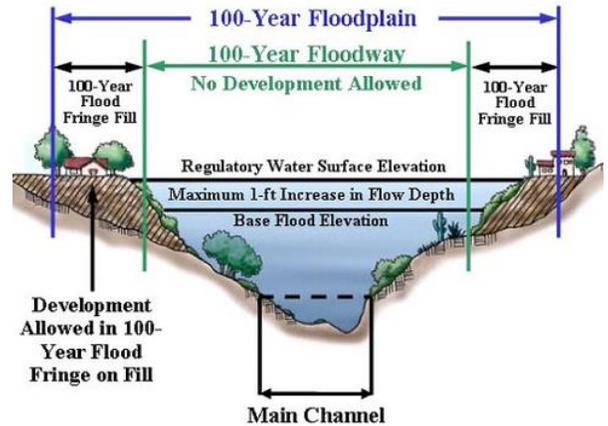


Figure 4A: Floodplain & Floodway Location

FEMA defines a floodway as “the channel of a river or other watercourse and the adjacent areas that must be reserved to discharge a base flood. Communities must regulate development in these floodways to ensure that there are no increases in upstream flood elevation”. Often, to ensure no increase in upstream elevation, development is prohibited in the floodway. *Figure 4B* illustrates the distinction between the floodway and the floodplain for reference. Part 55 of the Code of Federal Regulations prohibits the use of Housing of Urban Development assistance, such as Community Development Block Grants, for any action “located in a floodway”.



Source: <https://www.floodpartners.com/floodway1/>

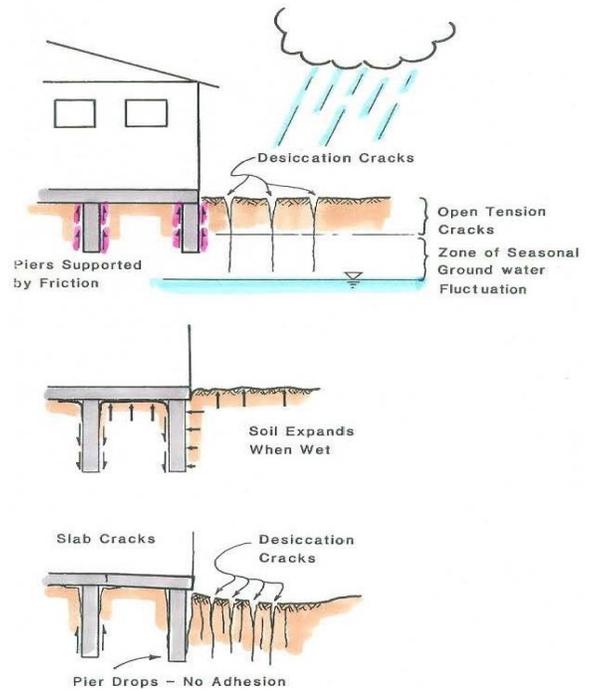
Figure 4B: Floodplain Diagram

Soil

The primary limiting soil factors in Pecos are shrink-swell and depth to saturated zone. Shrink-swell refers to the contracting and swelling of soils as moisture content changes.

As *Figure 4C* demonstrates, soil with a high capacity to shrink or swell in response to moisture changes (expansive soil) can cause infrastructure damage such as foundation, road, or pipeline cracks, as well as root damage to crops. Expansive soil presents the greatest challenges in regions with very defined wet and dry periods (as opposed to areas with a consistent moisture level year-round).

Depth to saturated zone refers to distance from the surface to the area below ground in which water fills all openings (pores) in the soil or rock. The probability of soil instability increases in areas with shallower depth to saturation because saturated soil has a higher tendency to shift underweight and pressure, especially in areas with steeper slopes. Areas with shallower depth to saturation zones are also subject to increased risk of groundwater contamination.



Source: Rogers, Olsahnsky, and Rogers (www.mst.edu)

Figure 4C: Shrink-Swell Foundation Damage

Figure 4D illustrates soil types and buildability within and around Pecos. Soil areas are organized in two groups: soil types and/or slopes that create more construction restrictions (darker red indicating more restrictions) and soil types and/or slopes that create fewer construction restrictions (green indicating fewer restrictions). Few houses in Pecos have been constructed in areas with some soil limitations on construction of streets, small commercial buildings, or one-to-three-story, single-family homes (shades of orange in Figure 4D). The presence of limiting factors does not prevent construction, but it can make initial development and long-term maintenance more expensive. Detailed soil data is available through the U.S. Department of Agriculture – Natural Resources Conservation Service.²²

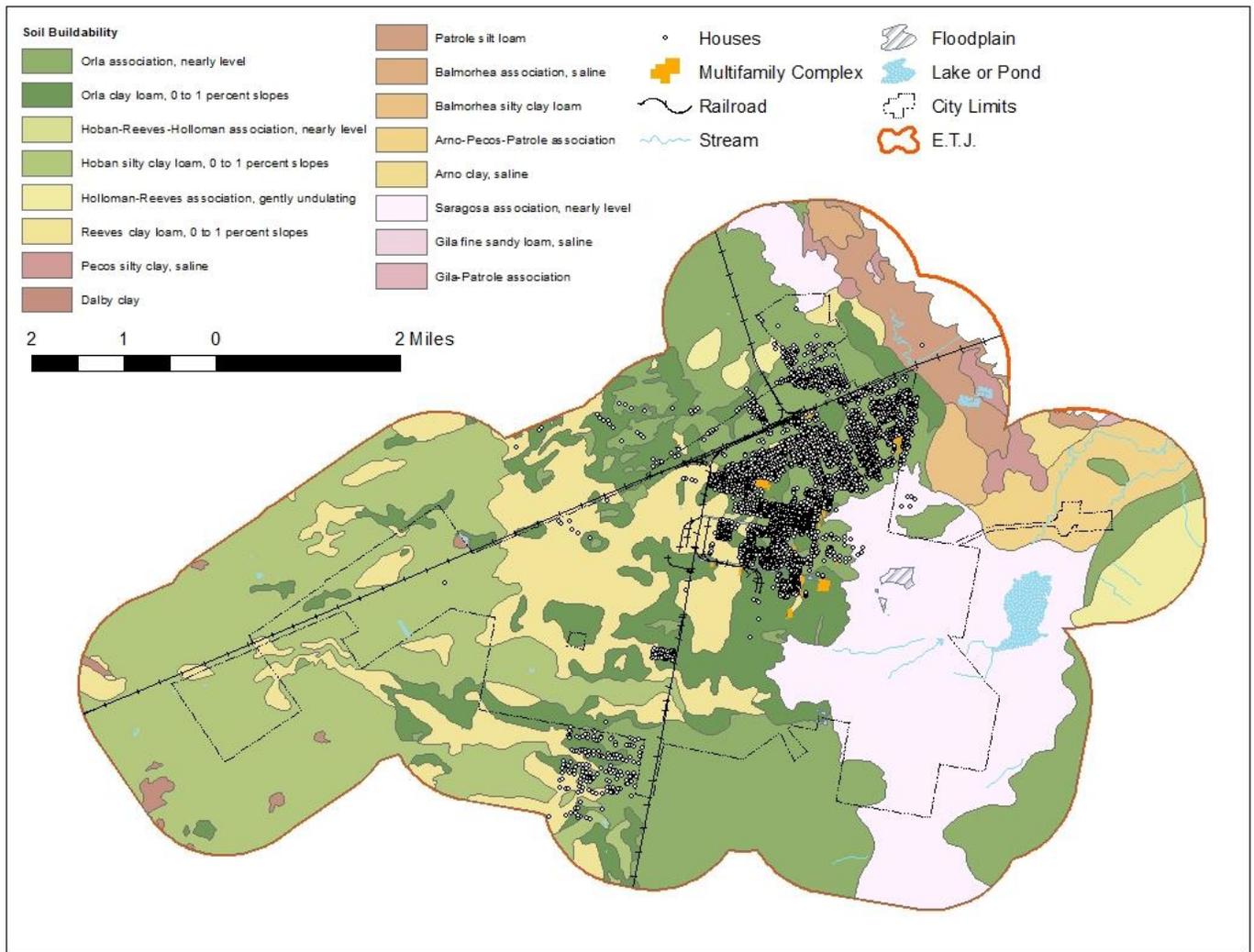


Figure 4D: Soil Types & Buildability

²² <http://datagateway.nrcs.usda.gov/GDGOrder.aspx>

Future Land Use

Pecos is expected to experience major land use changes in land use patterns over the next 10 years based on a forecasted population increase from 12,570 to 14,320 residents (+13.9%). New annexation restrictions may place significant limits on the ultimate extent of the town's expansion, but there is ample room within the existing city limits and the ETJ for new land development, including both infill and larger-scale development. Soil conditions in the eastern areas and the small floodplain may limit some new construction but the feasibility of additional development will depend primarily on continuing improvements to Pecos's transportation, water and sewer systems to ensure that they remain below capacity.

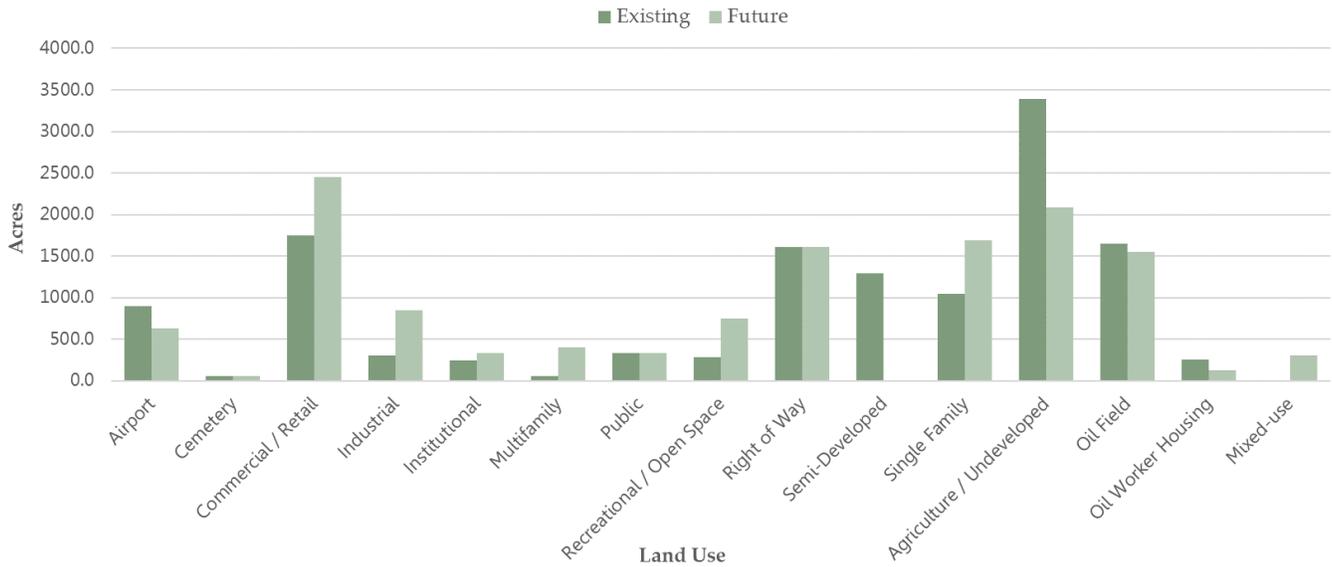
Chart 4B and Map 4B: Future Land Use Plan illustrate anticipated land use changes in Pecos. Because the City is experiencing rapid and increasing development interest, the illustrated changes extend beyond the current planning period (2020-2030). At minimum, the following land use changes are anticipated over the planning period:

- The West Pecos Development will bring housing, commercial, mixed-use and institutional land uses to southwest Pecos
- Dense multifamily housing is currently under construction along Stafford Avenue and nearby streets

In addition, the Town should prepare for the possibility that the following changes may occur:

- The proposed truck bypass loop would likely bring significant commercial development to the north of the city
- Temporary oil-worker housing should transition to permanent single family and multifamily land uses
- New parks in the northern areas of Pecos and along the Pecos River may be developed
- Oil fields and industrial facilities in the city limits, particularly those close to residential areas, should be phased out and converted to commercial or mixed-use land uses
- The Town should apply mixed-use zoning to downtown and other dense areas of town to encourage infill and improve livability

Chart 4B: Land Use Change (2020 – 2030)



It is important to note that a **future land use map is a visual statement of where and how a community wants to grow, not a prediction of future growth**. However, adopting a future land use map can encourage additional growth because it communicates a city’s long-range development goals not only to residents and future local government, but also to potential developers with an interest in creating thriving developments.

4.4 Key Land Use Considerations

Based on the community input and local land use data described in this chapter, Pecos should focus on the following key areas related to land use: flood damage prevention, community physical appearance, historical assets, and future growth.

4.4.1 Flood Damage Prevention

Approximately 92 acres of land within Pecos’s city limits are within the FEMA-identified 100-year Floodplain. Most of the land in the floodplain has an active use. Active residential uses are particularly prominent. There are 7 single-family houses in the floodplain, 100% of which are occupied. These houses account for less than 1% of all single-family housing and less than 1% of all occupied, single-family housing in Pecos. The floodplain also crosses an active commercial and institutional use and portions of several major thoroughfares (see *Figure 4A, page 4-7*).

The City can work to prevent future damage due to flooding by pursuing the following strategies:

- a) Continue to Enforce the Flood Damage Prevention Ordinance

- b) Pursue grants to elevate or remove existing development in the floodplain/floodway
- c) Assist residents with clarifying clouded property titles
- d) Promote and support NFIP Participation/Compliance
- e) Consider participation in the Community Rating System
- f) Consider measures to limit future development in the floodplain

Continue to Enforce Flood Damage Prevention Ordinance

The City should continue to enforce Pecos’s Flood Damage Prevention Ordinance (adopted 3/26/1987). Based on the model ordinance developed by the Texas Water Development Boards (TWDB), the ordinance establishes requirements and limitations for construction in areas of special flood hazard. Special flood hazard areas, or floodplain boundaries, are set by FEMA’s November 4, 2016 “Flood Insurance Study (FIS) for Reeves County, Texas and Incorporated Areas” and accompanying maps, including any revisions to the study/maps. The ordinance does not prohibit development in the floodplain, but it establishes construction requirements such as the requirements that the lowest floor of all residential construction is elevated at or above the (BFE).²³ Nonresidential construction may be constructed below the BFE provided that the lowest floor meets certain design requirements (watertight, substantially impermeable, resistant to the effects of buoyancy, etc.). The ordinance also establishes permit procedures, variance process/requirements, and penalties for non-compliance.

The ordinance defines the term “Regulatory Floodway” as “the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevations more than a designated height”. The National Floodplain Insurance Program (NFIP) Guidebook encourages communities to secure the services of an independent, third party, engineer to review the no-rise analysis. The City of Pecos should consider amending this definition to specify that a licensed engineer must make the determination that a proposed development will cause no rise to the base flood.

Pursue Grants to Elevate or Remove Existing Development from the Floodplain

The City should pursue grant support for elevating or removing existing development located within floodplain (see *Figure 4A, page 4-7*). For example, the FEMA Hazard Mitigation Grant Program (HMGP) provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. HMGP funds may be used to fund projects that will reduce or eliminate the losses from future disasters. Projects must provide a long-term solution to a problem, for example, elevation of a house to reduce the risk of flood damages as opposed to buying sandbags and pumps to

²³ Fema.gov defines the BFE as “the computed elevation to which floodwater is anticipated to rise during the base flood” or the flood having a one percent chance of being equaled or exceeded in any given year, i.e. the 100-year floodplain.

fight the flood. In addition, a project's potential savings must be more than the cost of implementing the project. Funds may be used to protect either public or private property or to purchase property that has been subjected to, or is in danger of, repetitive damage. Examples of projects include, but are not limited to:

- Acquisition of real property for willing sellers and demolition or relocation of buildings to convert the property to open space use
- Retrofitting structures and facilities to minimize damages from high winds, earthquake, flood, wildfire, or other natural hazards
- Elevation of flood-prone structures
- Development and initial implementation of vegetative management programs
- Minor flood control projects that do not duplicate the flood prevention activities of other federal agencies.

More information about FEMA hazard mitigation grants is available at <https://www.fema.gov/hazard-mitigation-assistance>.

Assist Residents with Clarifying Clouded Property Titles

“Clouded title” refers to issues in a property’s past that make legal ownership of that property unclear. Several situations may result in a clouded title such as unreleased liens or improperly described foreclosures. Very often, however, clouded may result from lack of clear inheritance, sometimes over multiple generations, and/or disagreement between multiple heirs. Lack of clear title presents a major impediment to connecting residents with State and federal housing funding.

The City should reach out to area law schools and relief assistance resource providers, such as the Rebuild Texas Fund, to obtain legal counseling for residents with a clouded title. Legal assistance may also become available through the State. After Hurricanes Dolly and Ike, the Texas General Land Office (GLO) funded the Texas Title Project to help low-income homeowners acquire clear title to their land. As part of the project UT law students hosted a series of pro bono legal clinics.

Promote & Support NFIP Participation/Compliance

The City should encourage more residents to participate in the National Flood Insurance Program (NFIP). Created by the US Congress in 1968, NFIP enables property owners in participating communities to purchase federal insurance protection against flood losses.

The City of Pecos has participated in National Flood Insurance Program (NFIP) since 1985. However, relatively few residents have NFIP insurance; as of February 28, 2019, there are 11 NFIP policies in force

in the Town of Pecos, over 100% of the occupied housing in the floodplain.²⁴ Many residents may not be aware that flood insurance is available, may not see the need to insure their property, or may not be aware that insurance must be purchased at least 30 days before any claim to be covered. Flood insurance is very important, even for a community with limited floodplains such as Pecos. As noted in the NFIP manual:

“Flood insurance is a wise investment. Floods are the number-one natural disaster in the United States... Just a few inches of water can cause tens of thousands of dollars in damage. Flood damage is not covered by most standard homeowners or business insurance policies. Disaster assistance, if it is available, is typically a loan that must be repaid with interest”.²⁵

To promote and support NFIP participation, the City should conduct public outreach to educate residents about the need for flood insurance and information about the NFIP. Public outreach activities could include a public workshop, targeted letters to owners of property within the floodplain, or even a few sentences included in each water bill indicating where residents can obtain more information about the NFIP. Public outreach activities could also result in credit - and therefore reduced insurance premiums for residents - through the NFIP's Community Rating System (discussed below).

In addition, the City should:

- a) post the FEMA Flood Insurance Rate Map (FIRM) in a visible location at City Hall; and
- b) maintain records of the number of flood insurance policies in the community and identify areas that require further coverage; and
- c) post information about flood damage and flood insurance on the City website (see also *Chapter 7: Economic Development*).

Consider Participation in the Community Rating System (CRS)

The City should consider participation in the National Flood Insurance Program's (NFIP) Community Rating System (CRS). The purpose of CRS is to encourage and recognize community and state activities that exceed the minimum NFIP requirements. Based on credited activities, residents in participating communities can obtain discounts of up to 45% off flood insurance premiums. There are 19 creditable activities organized under four categories: public information activities; mapping and regulations; flood damage reduction activities; and warning and response.

Under mapping and regulation activities, the CRS defines several “higher regulatory standards” that a community may adopt to receive credit, such as a freeboard requirement. A freeboard requirement

²⁴ More information available at <https://www.fema.gov/national-flood-insurance-program-community-status-book> and <https://www.fema.gov/policy-claim-statistics-flood-insurance>.

²⁵ Federal Emergency Management Agency. (2017). “National Flood Insurance Program Community Rating System Coordinator's Manual FIA-15/2017”. <https://www.fema.gov/media-library/assets/documents/8768>

establishes that the lowest floor of new buildings (or a substantial improvement) is a certain number of feet above the base flood elevation, rather than “at or above” base flood elevation level (as established in Pecos’s current Flood Damage Prevention Ordinance). A freeboard requirement could help prevent future damage resulting from unanticipated flooding that may exceed the base flood elevation level.

The CRS also provides credit for revised standards of “substantial improvement” to property in the floodplain. Under Pecos’s current Flood Damage Prevention Ordinance, “substantial improvement” refers to “any reconstruction, addition, rehabilitation, addition, or other improvement of a structure, the cost of which exceeds 50% of the market value before start of construction of the improvement.” Pecos could obtain points by (a) reducing the cost amount that triggers a “substantial improvement” from 50% to a lower figure like 30% or 25%; and/or (b) adopt rules that would cumulatively count all improvements over a given period (such as 5 or 10 years).

The above-listed options are only a sample of credited actions. Other creditable actions include staff training and certification in floodplain management and public information activities such as outreach to increase NFIP insurance participation (discussed above). The City should work with its Floodplain Administrator to increase familiarity with opportunities to obtain CRS credit and the specific criteria required to obtain credit. The City should also consider updating Pecos’s Floodplain Damage Prevention Ordinance to incorporate one or more of the recommended higher regulatory standards. The City should pursue one or more of the public information activities which, in addition to potentially providing CRS credit, will be vital to encouraging public awareness about the risks of floodplain development and about resources that may mitigate damage and/or speed recovery (such as better building practices and NFIP insurance policies).

The 2017 Community Rating System Coordinator’s Manual provides extensive detail about the options and requirements for obtaining CRS credit. The manual is available online at <https://www.fema.gov/media-library/assets/documents/8768> and included in the *Digital Appendix* for this plan.

Consider Measures to Limit Future Development in the Floodplain

The floodplain crosses several vacant and occupied parcels within the Town of Pecos. The City should consider measures to limit future development in the floodplain on undeveloped or agricultural parcels within both the city and the ETJ.

The City should adopt standards to regulate development in the extraterritorial jurisdiction (ETJ) to prevent future construction in the floodplain. Pecos’s ETJ extends approximately 1 mile from the city limits in all directions. Regulation of development in the ETJ is important for preventing flood damage because development in the floodplain upstream will impact the ability of the floodplain within Pecos’s city limits to accommodate floodwaters.

There are many options to limit construction in floodplain located in the ETJ through subdivision

standards.²⁶ For example, Pecos could require that each lot in a new subdivision provide a building site that is on natural, high ground, out of the 100-year regulatory floodplain. Similarly, Pecos could require open space/recreation areas and allow floodplain land to be used to meet a portion of this requirement. *Figure 4E* illustrates a few alternatives to the traditional approach to developing a property that is partially in the floodplain (further discussed in *4.4.4 Guiding Future Development*).

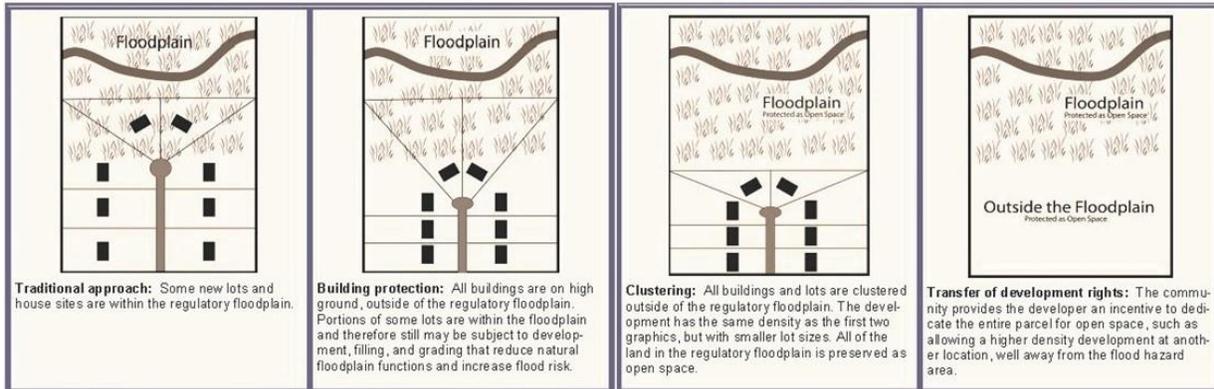


Figure 4E: Alternative Development Approaches to Limit Development in the Floodplain²⁷

The City of Pecos has a subdivision ordinance adopted August 13th, 2015. The subdivision ordinance has not been updated since this adoption.

The City of Pecos can also discourage development in the floodway/floodplain by educating residents and potential land developers about the associated risks. For example, the City could maintain a small library of materials that explain the natural purpose of a floodway/floodplain and the impact of construction on that purpose, as well as the risks to life and property associated with floodway/floodplain development.

The City should also post the FEMA Flood Insurance Rate Map (FIRM) in a visible location at City Hall so that residents and potential developers are able to consider the additional insurance costs associated with occupying the floodway. The FIRM and educational information could also be provided on a City website to enable easier access to the information (see also *Chapter 9: Economic Development*).

Pecos can also make clear that the community prefers not to see new development in the floodplain by adopting a future land use plan that reflects this preference and posting the map at City Hall.

4.4.2 Enhancing Pecos’s Physical Appearance

Community members would like to see the local government and current residents expand their

²⁶ The Texas Statutes enable a city to extend subdivision ordinance standards to regulate the following aspects of development in the ETJ: (1) the use of any building or property for business, industrial, residential or other purposes; (2) the bulk, height, or number of buildings constructed on a particular tract of land; (3) the size of a building that can be constructed on a particular tract of land, including without limitation any restriction on the ratio of building floor space to the land square footage; or (4) the number of residential units that can be built per acre of land.

²⁷ Source: *NFIP Community Rating System’s Coordinator’s Manual FIA 15/2013 (2013)*

involvement in shaping and maintaining the city's physical appearance. Pecos can support an enhanced physical appearance by pursuing the following strategies:

- a) Continue to Enforce nuisance ordinances
- b) Consider voluntary measure to promote building/yard clean up
- c) Promote visually appealing development in commercial centers and along thoroughfares
- d) Activate vacant lots through temporary use

Continue to Enforce Nuisance Ordinances

One of the key community goals identified by Pecos residents was to eliminate damaged structures and abandoned housing from the city. Observations from the field survey conducted in March 2020 support the need to address this challenge; the survey found 64 vacant, dilapidated/deteriorating houses. Community members also expressed a desire to eliminate junked vehicles and the survey identified some lots with piles of debris in the yard.

Many cities use nuisance standards/ordinances to address structure and yard conditions such as vacant/dangerous structures and junked vehicles. Generally, nuisance refers to the use of land/property in a way that injures the rights of others or that may negatively impact the health, morals, safety, welfare, comfort, or convenience of the general public. For example, allowing weeds and trash to accumulate may negatively impact the health and safety of the general public by resulting in an unsanitary environment which may attract vermin and/or disease-carrying pests.

The City of Pecos has adopted numerous Nuisance Ordinances, including the Unsanitary Nuisance Ordinance, and ordinances that abate noise nuisances and nuisances in historic districts and establish procedures for abatement of neighborhood nuisances and for the abatement and removal of junked vehicles as a public nuisance on a private property. Public (neighborhood) nuisances include "Uncut grass, weeds, or other objectionable or unsightly matter shall not be allowed to accumulate on any public right-of-way, nor shall such grass, weeds, or other objectionable or unsightly matter be deposited or allowed to be deposited into the storm sewer or sanitary sewer system" or "It shall be unlawful for the owner of any lot, alley, building, house, establishment or premises in the city to allow or permit any carrion, filth or any other impure or unwholesome matter of any kind to accumulate or remain thereon.". Generally, the nuisance regulations:

- ✓ Establish procedures and requirements for:
 - Filing a nuisance complaint
 - Investigation of a potential nuisance
 - Notice of violation

- Public Hearing
- Appeal

✓ Provide for the City Council to accept bids for abatement/removal

The City of Pecos should continue to enforce its nuisance standards. However, the City should consider adopting separate, expanded ordinances for relevant nuisances. Nuisance law can be very specific. For example, unlike a junked vehicle, an abandoned vehicle does not have to be inoperable or unregistered, only unattended without permission. Procedural requirements also differ somewhat for abandoned vehicles. Separate ordinances permit specificity in the ordinance language that may be important to preventing legal challenges to City nuisance abatement efforts.

Many cities also declare dangerous or substandard buildings to be a nuisance and adopt substandard building ordinances to establish procedures for removing, repairing, rehabilitation, or demolishing such structures. The City of Pecos adopted a dangerous buildings ordinance but this ordinance should be reviewed and considered for update with regards to the high amount of temporary housing in the town. *Chapter 3: Housing Study* provides additional suggestions for improving structural conditions in Pecos.

Sample nuisance ordinances from other municipalities, as well as a legal Q&A reports Texas Municipal League, are included in the *Digital Appendix* to this study and available on the TML website (www.tml.org).

Consider Voluntary Measures to Promote Building/Yard Cleanup

Adopting voluntary measures is another key method for addressing structure and yard conditions. Motivating property owners to voluntarily clean up their buildings and yards is usually the most politically popular and effective mechanism for eliminating junked yards and dilapidated buildings and improving property maintenance.

Pecos should support additional voluntary activities related to housing and yard conditions that have been successful in other similarly sized communities such as:

1. Competitions for “yard of the month,” “best garden,” and/or “best maintained property”. For example, each month from June through October members of a local landscape committee in Mesquite, Texas select up to five residents living in the city to receive a “Yard of the Month” award signed by the mayor. Award winners demonstrate property that has no visible code violations and is considered one of the most visually pleasing in the area. For more information, visit <https://www.cityofmesquite.com/385/Yard-of-the-Month>.
2. Self-assessments. It is easy for anyone to get used to how the things and places around them look. One effective way to help property owners refocus on their property is to ask them to conduct

a self-assessment of their property's appearance. A "Self-Assessment Questionnaire" used in another small city is included in the *Digital Appendix* to this study. The questionnaire was sent by a volunteer group working on image improvement to owners of properties on that city's main thoroughfares. The volunteers included a letter explaining the project and requesting that owners evaluate their properties. The letter resulted in approximately 50% of property owners conducting repair and maintenance work.

3. **Mowing Clubs.** Mowing clubs can help support regular private yard maintenance. Often mowing clubs are designed to assist low-income seniors in the community who may be unable to maintain their properties. Clubs can be started as Eagle-Scout projects or by other neighborhood and community groups. The Aging in Place Initiative is one organization that has successfully implemented such a program. (See www.aginginplaceinitiative.org and information in *Appendix 3C* in *Chapter 3: Housing Study*.)

In addition to promoting voluntary activities like the ones listed above, the City can help connect residents with support opportunities from governmental and/or non-profit organizations. For example, the Texas Department of Transportation and Keep Texas Beautiful sponsor a scholarship competition for high-school students involved in a trash-off organization. Information is available on their websites (<http://www.ktb.org/programs/litter-prevention/dont-mess-with-texas-trash-off.aspx> and <http://dontmesswithtexas.org/>).

Promote Visually Appealing Development in Commercial Centers & Along Major Thoroughfares

Commercial centers and major thoroughfares can provide a community's visual introduction. Seemingly minor changes in the type and form of permitted development can have a notable impact on the appeal of that introduction. A comparison of streets in Dallas (*Figure 4F, next page*) and Lubbock (*Figure 4G, next page*) provides an illustrative example. The Dallas and Lubbock street sections have a number of similarities: the buildings in both locations have masonry/hardwood/cement facades, plenty of windows, and neither street boasts amenities such as benches, decorative lighting, or underground telephone wires. Nevertheless, basic differences in layout and maintenance give the Dallas street a much more appealing aesthetic than the Lubbock street.

Reasons for the difference include:

Oak Lawn (Dallas)	34 th St (Lubbock)
<ul style="list-style-type: none">• 4 traffic lanes• Few, minimally sized parking lot entrances• Wide, well-maintained sidewalk• Deep awning and walkway in strip-mall• Vegetation along street• Well-maintained streets and buildings• Building placement is fairly consistent and closer to the sidewalk/street	<ul style="list-style-type: none">• 5 traffic lanes• Frequent, wide parking lot entrances• Narrow, poorly maintained sidewalk• Shallow awnings and walkway in strip-mall• No vegetation along street• Poorly maintained streets and buildings• Building placement is irregular and farther from the sidewalk/street



Figure 4F: Oak Lawn, Dallas

Auto-oriented, pedestrian accessible development²⁸



Figure 4G: 34th St, Lubbock

Auto-oriented development with limited pedestrian features (narrow sidewalk on right, wide driveways, no trees in right of way)²⁹

²⁸ Images downloaded from Google Streetview.

²⁹ Images downloaded from Google Streetview.

Pecos has two commercial nodes. The city's largest commercial concentration extends between E 1st Street and E 6th Street along Oak St and US Highway 285. This is traditional main street district and features a well preserved, walkable urban fabric, wide lanes, ample parking and terminates at the historic train depot, now a tourist destination. It features several historic buildings, including a replica of the Judge Roy Bean Courtroom and the West of the Pecos Museum, formally the Orient Hotel. It also features numerous civic buildings including the Reeves County Courthouse and Pecos City Hall. Pedestrian conditions along Oak Street are very favorable, however U.S. 285 is much less appealing with heavy truck traffic, few crossing points, and narrow sidewalks.



Figure 4H: SH 35 Commercial Area

Pecos's 2nd commercial center is located along S. Eddy Street, between 8th street and W. Jackson Street. This center was constructed in the mid-20th century, and reflects an auto-oriented city. There are several big box stores in the northern section of the district, and some smaller, more walkable retail areas along a short stub road parallel to S. Eddy Street just south of Washington St. While some areas in this district have a consistent urban fabric, most of the area features large surface parking lots, numerous curb cuts and disjointed or non-existent sidewalks. Additionally, there are few crossing points and fast, heavy traffic that prevent shoppers from perusing the district outside a vehicle.



Figure 4I: Traditional Commercial Center

The nearest competing commercial districts are located roughly 45 minutes away in Monahans and Ft. Stockton. These districts are not as historic or walkable as Pecos's, however the commercial services and industrial supply sectors are perhaps more competitive. With further enhancement of these areas to create inviting and accessible destinations, the anticipated population growth may provide a helpful base for developing successful local commercial centers.

Pecos should consider adopting a revised zoning ordinance that establishes what the City requires and encourages development in these key areas. In addition to supporting the appropriate separation of uses (e.g. preventing an industrial factory from locating in an existing neighborhood), zoning ordinances often include standards that, over time, contribute to the creation of visually appealing areas that may encourage not only resident pride in the community but also new business and population growth. Adopting standards such as building orientation requirements and minimum/maximum setbacks, as well as parking and sidewalk requirements would ensure that future development follows many of the positive trends already found in some parts of these commercial centers. Standards such as screening and landscaping requirements could also, over time, provide visual consistency and improve physical appeal, especially along S. Eddy Street, US 285, and other commercial corridors in the city. In the longer term, standards such as lot coverage requirements could ensure that future development is complementary in size.

Activate Vacant Lots Through Temporary Use

Pecos's appearance can also be enhanced by activating some of the 1,295 acres of semi-developed land within the city limits, particularly vacant lots in existing residential and commercial areas. Vacant lots can have 'spillover' effects that negatively impact neighboring properties. Research has found that vacant and abandoned properties can be linked to reduced property values, increased crime, as well as increased risk to public health and welfare. In commercial areas, vacant lots can also reduce the feeling of business activity. Until such time as more-permanent development occurs, Pecos should consider

activating vacant lots in the community through temporary uses. The Office of Policy Development and Research for the United States Department of Housing and Development (HUD) notes in its Winter 2014 issue of Evidence Matters that:

“Temporary use, when successful, can rapidly and efficiently bring underutilized land into productive use, thereby reducing or removing many undesirable externalities. As low-cost and low-risk strategies, temporary projects can also respond quickly to changing conditions and demands — a particular advantage in many cities, where political and economic conditions are uncertain, and cause a reluctance to enter potential long-term commitments, responsibilities, and liabilities... For city administrators facing tight budgets, temporary use projects can be a cost-effective strategy for dealing with vacant land that yields rapid results.”

A copy of this issue is included in the *Digital Appendix*.³⁰

Vacant lots can be activated by introducing general activity spaces, as well as through more specific community events. The below lists provide just a few examples of temporary uses:

Activity Spaces

- Public park
- Free library, outdoor reading space
- Public art
- Community garden/children’s learning or school garden

Events

- Farmer’s market / bake sale
- Community chess, board, or card game tournaments
- Outdoor concert or dance
- Local vendor and artisan stalls

Communities throughout the United States, as well as in many other countries around the world, have been turning to temporary use as a way to address some of the negative community impacts created by vacant lots in developed areas. As a result, there are a number of resources available to help both residents and local governments pursue these options. In addition, state and national government departments provide resources for a number of activities that could be used to activate vacant land.

For example, the Texas Departments of Agriculture (TDA) provides resources supporting initiatives like garden-based learning³¹ and setting up and maintaining a local farmer’s market.³² Similarly, the National Parks and Recreation Association (NPRA) has created a general guide for creating mini-parks.³³ The TDA and NPRA reports are included in the *Digital Appendix* for this plan.

³⁰ The *Evidence Matters (Winter 2014)* issue also available at and can be found at <https://www.huduser.gov/portal/periodicals/em/winter14/index.html>.

³¹ For more information about garden-based learning visit <http://www.squaremeals.org/FandNResources/TexasFarmFresh/GardenBasedLearning.aspx>

³² The TDA report on starting a farmer’s market is also available at Reports are also available online at http://www.gotexan.org/Portals/1/PDF/FarmersMarketGuide-online_version_lo-res.pdf

³³ The NPRA report on mini-parks is also available online at

https://www.nprpa.org/uploadedFiles/nrpaorg/Grants_and_Partners/Recreation_and_Health/Resources/Issue_Briefs/Pocket-Parks.pdf.

³³ Ibid.



Figure 4J: Little Free Library³⁴



Figure 4K: Community Garden³⁵

Several nonprofits also provide useful guides and resources. For example, Keep Texas Beautiful also offers grants and funding for a number of projects that could be used to activate vacant spaces, such as butterfly gardening³⁶ and the American Community Gardening Association provides informational and resource support for community gardening initiatives.³⁷ In addition, Pecos can draw from the experiences of a number of local governments and communities throughout the United States that have already undertaken initiatives to active vacant land in their cities. For example, the City of St. Louis, Missouri provides residents with a number of resources for “fostering the creative reuse of the City owned land” on its website.³⁸ The City of Milwaukee, Wisconsin has similarly put together a “Vacant Land Handbook” to support resident projects on publicly owned land.³⁹

4.4.3 Highlighting & Protecting Historical Assets

A city’s history can inspire a sense of community pride among residents and, if shared, may draw visitors and businesses. Pecos can highlight and protect historical assets by pursuing the following strategies:

- a) Identify structures potentially eligible for state and/or national landmarks
- b) Preserve historical development character
- c) Identify buildings of local historical importance
- d) Update the Historic Preservation Ordinance to cover the entire town

There are fourteen State historical markers located within the city commemorating places like the Orient Hotel and the Pioneer Cemetery. Pecos should consider working with property owners to identify other structures that are potentially eligible for state and/or national landmark status. Communities often fail to recognize which of their characteristics non-members find important or attractive; therefore, it can be

³⁴ Source: <https://littlefreelibrary.org/pressresources/>

³⁵ Source: <http://inhabitat.com/top-10-cities-in-the-us-for-urban-farming/portland-community-garden/>

³⁶ More information about butterfly gardening is available at <http://www.ktb.org/resource-library/butterfly-gardening.aspx>.

³⁷ More information about the American Community Garden Association is available at <https://communitygarden.org/resources/10-steps-to-starting-a-community-garden/>

³⁸ More information available at

<https://www.stlouis-mo.gov/government/departments/mayor/initiatives/sustainability/toolkit/develop-creative-use-for-vacant-land.cfm>

³⁹ Handbook available at <http://city.milwaukee.gov/ImageLibrary/Groups/cityDCD/planning/pdfs/VacantLotHandbook.pdf>

challenging but useful to receive the kind of recognition represented by historic listings such as the National Register of Historic Places⁴⁰ and the Texas Historic Landmarks Program.⁴¹ Additional information can be found at: <https://www.nps.gov/nr> and <http://www.thc.state.tx.us/preserve/projects-and-programs/state-historical-markers>.

Pecos's historical development character is another important asset. Preservation of amenities commonly found in historic districts and lost in new construction adds value to properties. Streets that accommodate pedestrian and bicycle as well as automobile traffic (and typically include features such as uniform setbacks, trees, benches, etc.) – create the following advantages:⁴²

- Retail sales increase through accommodating non-auto users and creating an appealing space for pedestrians and shoppers
- More residents shop locally due to reduced travel time and added convenience
- New development and businesses are attracted to the area
- Residential property values increase because, in general, homeowners will pay a premium to reside in walkable communities
- Office and retail property values increase⁴³

From a land use perspective, Pecos should strongly consider regulations and public investments that:

- Preserve existing historical structures and lot layouts
- Encourage new construction that matches or enhances existing historical structures and lot layouts
- Provide additional practical and/or aesthetic benefits that will draw people to the city

Pecos should also consider bringing community members together to identify the historic buildings or areas they wish to protect through a historic preservation ordinance. Texas Local Government Code (Sec. 211.003) provides that “In the case of designated places and areas of historical, cultural, or architectural importance and significance, the governing body of a municipality may regulate the construction, reconstruction, alteration, or razing of buildings and other structures.” No limits are placed on the type of city with regards to that type of regulation (i.e. general law or home rule). The Texas Historical Commission has produced a model ordinance, and that ordinance as well as the version of that ordinance adopted by Fredericksburg, are included in the *Digital Appendix* to this plan. Mount Vernon, a General Law Type A City in northeast Texas has also been widely recognized for the success of its historic preservation efforts.⁴⁴ Grapevine, TX has a useful FAQ related to its historic preservation

⁴⁰ The National Register of Historic Places is a nation-wide program aimed at protecting America's historic and archaeological resources.

⁴¹ Awarded by the Texas Historical Commission, Texas Historical Landmarks recognize historically and architecturally significant properties in the State of Texas.

⁴² See www.completestreets.org/complete-streets-fundamentals/factsheets/economic-revitalization/ for examples and studies

⁴³ Pivo, G. & Fisher, J.D. (2010). The Walkability Premium in Commercial Real Estate Investments. Retrieved from

<http://merage.ucl.edu/ResearchAndCenters/CRE/Resources/Documents/01%20-%20Fisher-Pivo%20Walkability%20Paper.pdf>

⁴⁴ Mount Vernon's historic preservation ordinance is available at www.comvtx.com/

ordinance listed on its website.⁴⁵

4.4.4 Guiding Future Development

Pecos residents would like to see new development that complements existing development, both within existing developed areas and outside of the city center. Pecos can support these goals by pursuing the following strategies for guiding future growth:

- a) Prioritize infill development
- b) Ensure orderly and timely expansion through targeted annexation
- c) Consider alternative development types

Prioritize Infill Development

Pecos should prioritize infill development. As discussed in *Chapter 3: Housing Study*, infill development provides several benefits including:

- Maintains housing affordability by minimizing infrastructure costs;
- Supports hunting and agriculture land preservation, as well as downtown revitalization; and
- Discourages development within the 100-year floodplain.

There is enough undeveloped land within the current city limits and outside the floodplain to accommodate the anticipated 100% population increase over the planning period, as well as potential space for desired non-residential development, such as additional commercial establishments.

There are approximately 769 acres within the city limits that are easily developed, meaning that the land is:

- Currently identified as either vacant or used for agricultural purposes;
- Within 100 feet of water and sewer distribution lines; and
- Located adjacent to public right-of-way and paved or dirt streets; and
- Located outside of the 100-year floodplain (FEMA special hazard area).

Approximately 42% (320 acres) of such easily developed land has frontage on an arterial including US Interstate 20 and US Highway 285. An additional 89.5 acres have all the above advantages except for public right-of-way access.

⁴⁵ www.grapevinetexas.gov/IndividualDepartments/HistoricPreservation/HistoricPreservationFrequentlyAskedQuestions.aspx

Approximately .8 additional acres could be easily-developed (all with arterial access) but is located within the floodplain (see *Table 4A*). Floodplain development should ideally be discouraged but, with additional building requirements such as elevated lowest floors, may be safely constructed and used (see *Section 4.4.1 – Protecting, Reducing, & Discouraging Developing in the Floodplain*). Construction in the floodway should be discouraged or follow a much-heightened standard.

Table 4A: Ease of Development

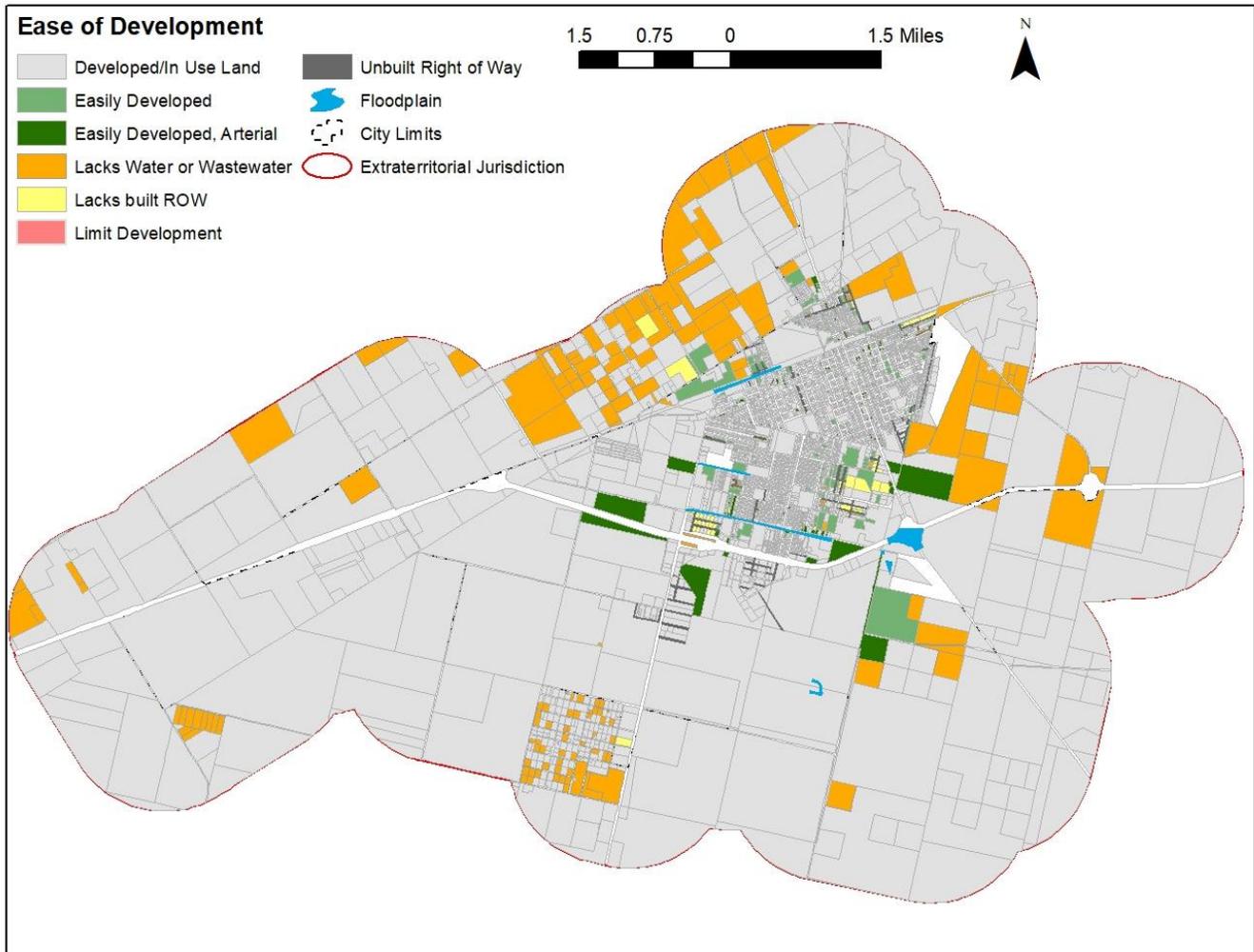
Ease of Development	Acres Outside Floodplain	Additional Acres in Floodplain	Total Acreage
Easily Developed (All)	769	.8	769.8
With Arterial Access	320	.8	320.8
Lacks Built ROW Access	89.5	-	89.5

Figure 4M (next page) shows all of Pecos’s undeveloped land as defined by the above criteria, including land in the floodplain and floodway, and a large-scale version of the map in PDF format is included with the *Digital Appendix* to this study. That map should be posted in a visible location at City Hall (and ideally on a City website) to demonstrate the type and variety of undeveloped land within the city limits.

To facilitate infill development, Pecos should:

- Discourage new subdivisions and developments that are located in the floodplain by posting the FEMA Flood Insurance Rate Map at City Hall and on a City website
- Limit extension of services beyond the town limits
- Update and enforce the subdivision ordinance and adopt public works construction manual to ensure the provision of high-quality infrastructure when new development occurs
- Adopt a future land use map that illustrates where infill development will occur and what type of infill development is prioritized by the community
- Update and enforce the zoning ordinance and zoning map that can be used to achieve future land use goals

Figure 4L: Ease of Development



Ensure Orderly & Timely Expansion through Targeted Annexation

Targeted or directed annexation is another way to shape and manage growth. The purpose of annexing land is to bring urbanizing areas into a system where development can be regulated to ensure public health, safety, and welfare. Only parcels in certain locations and under certain conditions can be annexed. A city may only annex land that is contiguous with its corporate limits. The land must also be located within that city’s extraterritorial jurisdiction; it cannot be located in another municipality’s extraterritorial jurisdiction.

Cities are further limited in terms of how annexation may occur. The Texas Local Government Code establishes two general forms of annexation for municipalities: voluntary and unilateral (or involuntary). The following paragraphs provide information on these two options but should not be considered a

substitute for legal counsel.

Voluntary or Consent Annexation: Voluntary annexation is based on a petition by residents of the area(s) to be annexed. Residents must file an affidavit with the mayor certifying that a vote by the majority of qualified voters in the area to be annexed approved the annexation. Once the affidavit has been certified, the city council can annex the area by ordinance. This type of annexation would likely require a city-initiated education campaign and door-to-door vote/petition of residents. Essential to the process would be demonstrating cost savings for residents associated with living within the corporate limits.

Unilateral or Consent Exempt Annexation: Unilateral annexation occurs when a city has the authority to involuntarily annex a parcel of land. For decades, Home Rule cities in Texas had broad unilateral annexation power that permitted most unilateral annexation through a notice and hearing process. However, in the 2017 and 2019 legislative sessions, a series of laws were passed that greatly limit cities' ability to unilaterally annex neighboring communities. Under the new laws, almost all annexation must be done by consent, with only a few narrow exceptions.

The 2019 Texas Legislative Session introduced several important changes to annexation law:

- Texas House Bill 347 (HB 347) effectively prohibited unilateral annexation in most cities and counties.
- Texas House Bill 4257 (HB 4257) establishes that disapproval of proposed annexation does not affect any existing legal obligation of the city proposing to annex to provide governmental services in the area.
- Texas Senate Bill (SB 1303) requires all cities to maintain a copy of the city boundaries and extraterritorial jurisdiction in a location that is easily accessible to the public, and make copies of said map available without charge, with additional requirements for Home Rule cities.
- Texas Senate Bills SB 1303 and SB 1204 establish additional requirements for cities planning to consent under remaining "consent exempt" provisions.

Appendix 4B further describes the main elements of this bill.

If a city fails or refuses to provide services or to cause services to be provided to an annexed area within the period specified by the service plan for that area or the period specified by written agreement or resolution, a majority of qualified voters of the area may petition the governing body to dis-annex the area. If the area is dis-annexed it may not be annexed again within 10 years after the date of annexation.

Annexation is not recommended without significant legal counselling. However, in July 2019 the Texas Municipal League updated its existing, detailed explanation of annexation procedures and requirements in Texas (included in the Digital Appendix). [1]

Annexation can be financially beneficial for cities when it brings the developed land on to the city's tax rolls. At the same time, annexation can introduce an additional financial burden because a city that annexes land must provide full municipal services, including water and sewer, within a designated period. Thus, at minimum, cities considering annexation should conduct a financial analysis to determine whether the provision and maintenance of water, sewer, street, drainage, and police and fire services would be adequately paid for by fees and taxes on those served over the long-term (i.e. including replacement of lines and pavement at 30-year intervals).

Determining the relative costs and benefits of annexation is often complex and may involve factors that are not easily measurable in financial terms. As a result, many larger cities in Texas have developed policies or criteria to help guide decisions. For example, the City of Tyler, Texas uses the following prioritized criteria to guide annexation decisions:

§ Amount of existing development and potential tax benefits

§ Potential for imminent new development

§ Potential connection to unique transportation locations like interstate highway interchanges and the airport

§ Adverse consequences of not annexing the area

§ Cost of extending infrastructure

§ Potential for significant shaping of the development character

Pecos does not border with any other municipalities, and the only natural barrier is the Pecos River to the Northeast, and a highwater table to the east. Due to the existing development and infrastructure along I-20, the primary growth avenues for the city are along that corridor to the southwest and northeast. Additionally, there will likely be growth in the north, where TxDOT will construct the truck bypass in the coming years and much of the temporary oil-worker housing is located. the City should prioritize annexation of the land to the north, where the roads which will intersect with the truck bypass are located, and the south, where the Lindsay Addition is located, which would include much of the current development in the town's ETJ. *Figure 4M* illustrates priority annexations areas.

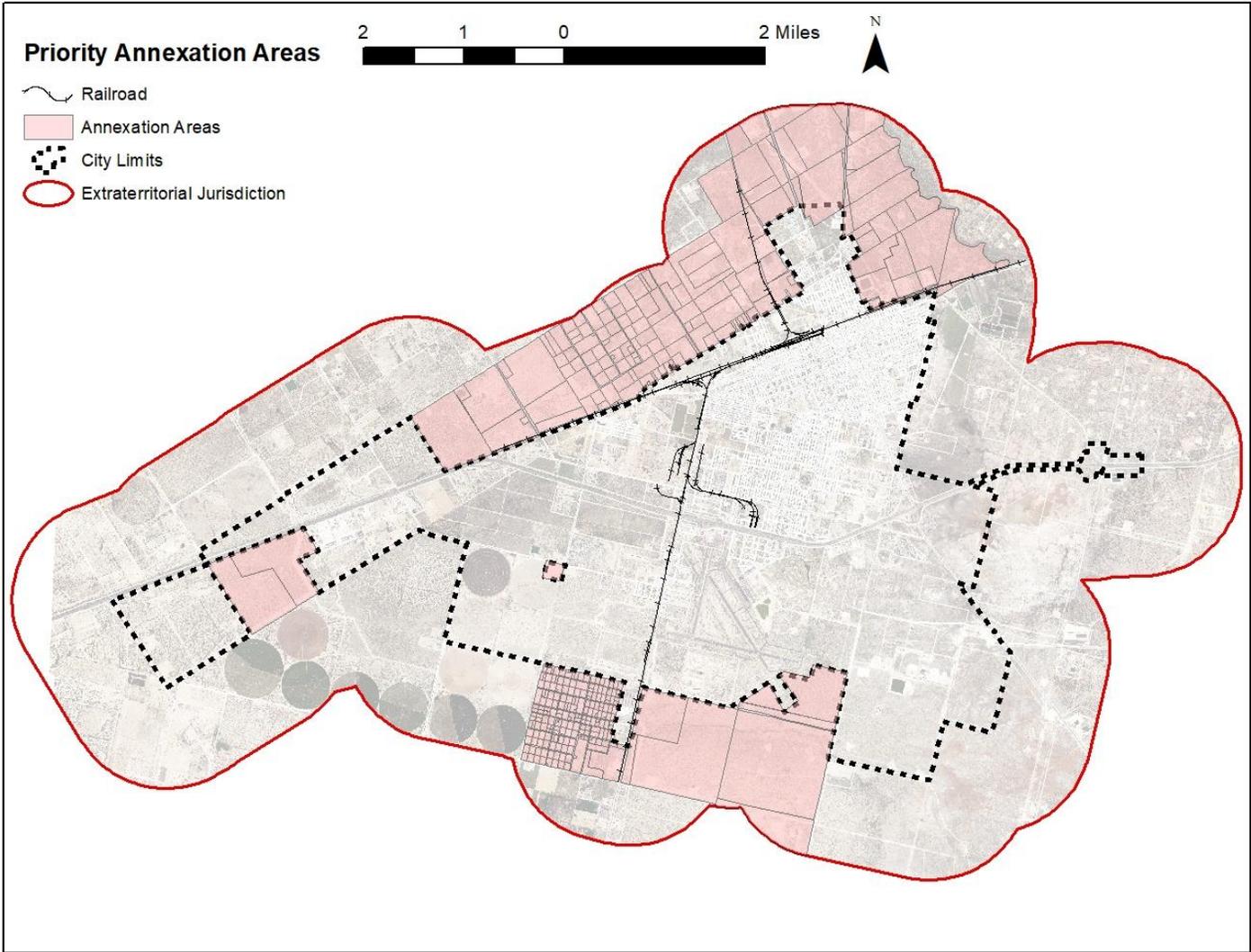


Figure 4M: Priority Annexation Areas

Consider Alternative Development Types

Pecos should also consider permitting alternative development types that support the community growth goals. Planned Unit Developments and Cluster Developments are two types of development that many municipalities are encouraging as alternatives to traditional suburban development.

Planned Unit Development (PUD): A PUD is a designed grouping of varied and compatible land uses, such as housing, recreation, commercial centers, and industrial parks, within one development or subdivision. It is used as part of conventional zoning or form-based code to allow for flexibility in land use planning. It can be an overlay district or a zoning category. Depending on the type of PUD, a project might go through the subdivision and zoning processes at the same time. PUDs are usually implemented to carry out master planning of a tract of land and are intended to:

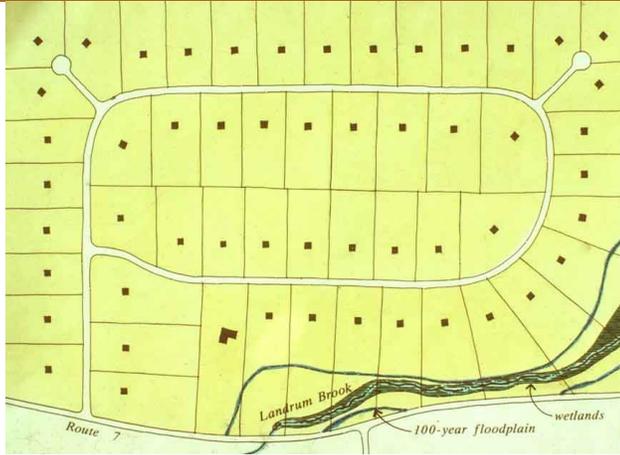
- Foster city or public/private partnered special projects;
- Allow for the development of mixed use, transit-oriented, or traditional neighborhoods with a variety of uses and housing types;
- Carry out specific goals of a comprehensive plan; and/or
- Preserve natural features, open space, and other topographical features of the land.

Standards within a PUD are usually negotiated between city authorities and staff and the developer on a case-by-case basis, and they require approval under adopted zoning and/or subdivision codes, including plan review and public hearings.

Cluster Development. Cluster developments, also known as conservation subdivisions, are residential subdivisions that have been designed to maximize contiguous open space to:

- Provide habitat for wildlife;
- Provide shared open space for recreation;
- Enhance community spirit;
- Reduce infrastructure maintenance costs (fewer miles of pavement and utility lines);
- Reduce flooding and road deterioration (less water enters the drainage system); and
- Preserve the city's rural character (by preserving open space).

As shown in *Figures 4N* and *4O*, a piece of land subdivided as a cluster development allows for the same number of houses as a traditional development. While each individual lot is smaller in the cluster development, the remaining land becomes common open space that can be used for recreation, utilities such as storm water detention ponds, and for public gardens or agriculture.



130-acre site with 55, 2-acre home sites

Figure 4N: Standard Subdivision⁴⁶



Same 130-acre site with 55, ¾ acre home sites; 81 acres preserved as common open space.

Figure 4O: Cluster Subdivision

The City of Pearland has adopted a provision for cluster developments and could be contacted for guidance on adopting an appropriate ordinance amendment and encouraging their construction. See City of Pearland website at www.cityofpearland.com and *Digital Appendix* for this study. The *Digital Appendix* also includes a fact sheet on cluster developments created by Ohio State University.⁴⁷

Several non-profit groups are working with cities, developers, and individuals throughout the country to promote energetic, livable cities through design and would be a good source for technical information on various design features, community education, and funding as relates to both alternative subdivision design (PUDs and cluster developments) and thoroughfare design elements. These include the USDA Office of Sustainable Development (www.usda.gov), the Congress for New Urbanism (<http://www.cnu.org/>), the Urban Land Institute (www.uli.org) and Smart Growth Online (<http://www.smartgrowth.org/>).

⁴⁶ Images retrieved from www.landchoices.org. Extensive information available on that site and from the University of Minnesota Extension office www.extension.umn.edu/

⁴⁷ The fact sheet is also available at <http://ohioline.osu.edu/cd-fact/1270.html>

4.5 Implementation Plan

The Implementation Plan organizes the action items recommended to address each issue identified in the above sections into a timeline for completion. The actions are prioritized and organized by date.

Table 4B: Implementation Plan: 2020-2030

Goals & Objectives	Activity Year(s)			Lead Organization	Cost Estimate	Funding Sources
	2020-2023	2024-2026	2027-2030			
Goal 4.1 Support flood damage prevention						
Pursue legal counseling assistance to help residents clarify property titles	X	X	X	City	N/A	N/A
Pursue grants to elevate or remove existing housing from the floodplain/floodway (CDBG-DR; HMGP)	X	X	X	City	Variable	GEN; CDBG-DR; FEMA
Continue to enforce Flood Damage Prevention Ordinance	X	X	X	City	Staff	GEN
Post the FEMA Flood Insurance Rate Map (FIRM) in a visible location at City Hall and on a City website; update as needed	X			City	N/A	N/A
Start annual public outreach activity to encourage participation in NFIP		X	X	City	Staff	GEN; Local
Consider participation in the NFIP Community Rating System (CRS)		X	X	City	Staff	GEN
Goal 4.2 Enhance Pecos's physical appearance and recognize community beautification efforts						
Continue to enforce the Substandard Buildings Ordinance and Structures Ordinance; remove at least (1 dilapidated, non-residential structure per year	X	X	X	City	\$1,000 (legal) + cost per structure (variable; US avg. = \$18,000/structure)	GEN; EDC
Host annual trash collection day; keep records of tons of trash collected	X	X	X	City	Variable	GEN; Local

Encourage local organizations and groups to start a mowing club to help low-income seniors maintain their yards.	X	X	X	City	Variable	Local
Start a community beautification recognition program (garden club, yard of the month, etc.); create record of winning properties (pictures and text) post at City Hall and include on a City website	X			City	Variable	GEN; Local
Encourage use of new Zoning categories that supports high-quality development in Pecos	X			City	Variable	GEN
Develop a library of reference materials available at City Hall (and on a City website) to support residents interested in developing temporary uses on vacant land in Pecos		X		City	Staff	EDC; GEN
Goal 4.3 Highlight and protect historical assets						
Expand Historic Preservation Ordinance to cover entire town.			X	City	\$2,000 (legal)	GEN
Familiarize residents with National Historic Register and State Historical Landmarks application eligibility and requirements; support interested applicants		X	X	City	Staff	GEN
Expand information about Pecos's history and historical assets at City Hall and on a City/EDC website		X	X	City	N/A	N/A
Goal 4.4 Infill development occurs instead of greenfield development, and as a result, the City spends less on infrastructure costs, the rural character of the area is preserved, housing remains affordable, and the downtown investment increases.						
Post the FEMA Flood Insurance Rate Map (FIRM) in a visible location at City Hall and on a City website; update as needed	X	X	X	City	N/A	N/A
Refuse to extend city services to development within the city limit only.	X	X	X	City	N/A	N/A

Keep the future land use map and information on desired development types on display at City Hall and on a City website.	X	X	X	City	N/A	N/A
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Adopt a public works construction manual.	X			City	\$2,000 (legal)	GEN
---	---	--	--	------	-----------------	-----

Goal 4.5 Attract economically stable development that complements existing development

Conduct cost-benefit analysis of new developments	X	X	X	City	Varies	GEN
---	---	---	---	------	--------	-----

Develop annexation criteria in light of new state laws	X			City	N/A	GEN
--	---	--	--	------	-----	-----

Update Subdivision Ordinance to improve connectivity	X			City	\$1,000 (legal)	GEN
--	---	--	--	------	-----------------	-----

Adopt a more detailed Future Land Use Map	X			City	Staff	N/A
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Establish a schedule for regular review of Future Land Use Map, Subdivision Ordinance, and Zoning Ordinance		X		City	Staff	N/A
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Sources: **GEN** = Municipal funds; **CDBG-DR** = Community Development Block Grant Disaster Recovery program; **EDC** = Economic Development Corporation; **FEMA** = Federal Environmental Management Agency hazard mitigation/disaster recovery grants; **Local** = donations of time/money/goods from private citizens, charitable organizations, and local businesses; **Staff** = Staff time;

4.6 Appendix 4A: Land Use Methodology

GrantWorks Inc. conducted a land use survey in Pecos in March 2020. Land use data was collected by driving by every property in the city and extraterritorial jurisdiction (ETJ), using aerial imagery available from the Texas Natural Resources Information System (www.tnris.org), and consulting with City staff.

Table 4A.1: Land Use Classifications defines the land uses that were chosen to describe property in Pecos.

Table 4A.1: Land Use Classifications

Classification	Examples
Agricultural / Undeveloped	Fields, farms, woodlands, open flood plain
Agricultural Processing	Cotton Gin; Grain/Seed Storage; Mills; Feed Lots; Slaughterhouses; Chick or Pig "Factories"; Livestock showing; Peanut Processing
Single-Family Residential	Single-family houses, mobile homes
Multifamily Residential	Duplexes, triplexes, apartments, condominiums
Oil Worker Housing	RV Parks, manufactured home parks, tiny home villages, and other temporary housing accommodations specifically built or marketed to house oil workers.
Mixed Use	Apartment over office or store, home occupation with store/office front, light commercial uses among residential uses.
Commercial	Stores, mini-storage businesses, offices, including medical offices, and commercial parking lots/facilities
Industrial	Factories, salvage yards, mines, large warehouses, industrial yards and refineries
Oil Field	Active and decommissioned oil and gas extraction infrastructure, including fracking water ponds, but not including refineries
Institutional	Educational and religious institutions, and hospitals, jails, prisons, and nursing homes, including associated parking lots and recreation/park areas for the institutional use only
Recreational	Developed recreational or open space (public or private), not associated with other uses
Public	Government offices and facilities, water and wastewater facilities, public utilities
ROW	Highway and street right-of-way, railroad right of way
Utility	Private utility, including cell phone towers, electrical stations, transformer stations, etc.
Semi-Developed	Vacant subdivided lots of less than 10 acres in areas with or very near water, sewer, and street infrastructure

Table 4A.2: Detailed Land Use Tabulation

City Land Use Classification	Acres	% DEV	% TOTAL	Acres/100
Agricultural Processing	0.0	0.0%	0.0%	0.0
Airport	897.8	9.1%	6.8%	70.1
Cemetery	62.2	0.6%	0.5%	4.9
Commercial / Retail	1,752.6	17.8%	13.3%	136.9
Industrial	301.7	3.1%	2.3%	23.6
Institutional	242.7	2.5%	1.8%	19.0
Multifamily	54.9	0.6%	0.4%	4.3
Public	334.3	3.4%	2.5%	26.1
Recreational / Open Space	280.2	2.9%	2.1%	21.9
Right of Way	1,613.0	16.4%	12.2%	126.0
Semi-Developed	1,295.2	13.2%	9.8%	101.2
Single Family	1,049.1	10.7%	7.9%	82.0
Utility	21.5	0.2%	0.2%	1.7
Oil Field	1,654.7	16.9%	12.5%	129.3
Oil Worker Housing	259.3	2.6%	2.0%	20.3
Total for Developed Areas	9,819	100.0%	74.4%	767.1
Agriculture / Undeveloped	3,387	-	25.6%	264.6
Citywide Total	13,206		100.0%	1031.7

ETJ Land Use Classification	Acres	% DEV	% TOTAL	Acres/100
Agricultural Processing	3	0.1%	0.0%	1.2
Airport	636	10.2%	3.5%	227.2
Cemetery	5	0.1%	0.0%	2.0
Commercial / Retail	922	14.8%	5.0%	329.2
Industrial	258	4.2%	1.4%	92.2
Institutional	0	0.0%	0.0%	0.0
Multifamily	0	0.0%	0.0%	0.0
Public	51	0.8%	0.3%	18.2
Recreational / Open Space	0	0.0%	0.0%	0.0
Right of Way	485	7.8%	2.6%	173.1
Semi-Developed	3,140	50.5%	17.1%	1121.6
Single Family	718	11.5%	3.9%	256.4
Utility	0	0.0%	0.0%	0.1
Oil Field	4,019	64.6%	21.8%	1435.4
Oil Worker Housing	277	4.4%	1.5%	98.8
Total for Developed Areas	6,219	100.0%	33.8%	2221.1
Agriculture / Undeveloped	12,199	-	91.0%	4356.7
ETJ Total	18,418		100.0%	6577.8

Regional Land Use Classification	Acres	% DEV	% TOTAL	Acres/100
Agricultural Processing	3	0.0%	0.0%	0.2
Airport	1,534	10.9%	5.2%	98.3
Cemetery	68	0.5%	2.0%	4.3
Commercial / Retail	2,674	18.9%	9.0%	171.4
Industrial	560	4.0%	1.9%	35.9
Institutional	243	1.7%	0.8%	15.6
Multifamily	55	0.4%	0.2%	3.5
Public	385	2.7%	1.3%	24.7
Recreational / Open Space	280	2.0%	0.9%	18.0
Right of Way	2,098	14.9%	7.1%	134.5
Semi-Developed	4,436	31.4%	14.9%	284.3
Single Family	1,767	12.5%	5.9%	113.3
Utility	22	0.2%	0.1%	1.4
Oil Field	5,674	40.2%	19.1%	363.7
Oil Worker Housing	536	3.8%	1.8%	34.3
Total for Developed Areas	14,124	100.0%	47.5%	905.4
Agriculture / Undeveloped	15,586	-	52.5%	999.1
Regional Total	29,710	-	100.0%	1904.5

Source: GrantWorks, Inc. Field Survey, 2020

Note: Values may be rounded to next whole number.

4.7 Appendix 4B: Unilateral Annexation for General Law Cities

HB 347

Eliminates the distinction between Tier 1 and Tier 2 cities and counties created by S.B. 6;

Eliminates existing annexation authority that applied to Tier 1 cities and makes most annexations subject to the three consent annexation procedures that allow for annexation:

On request of each owner of the land;

Of an area with a population of less than 200 by petition of voters and, if required, owners in the area; and

Of an area with a population of at least 200 by election of voters and, if required, petition of landowners; and

Authorizes certain narrowly-defined types of annexation (e.g., city-owned airports, navigable streams, strategic partnership areas, industrial district areas, etc.) to continue using a service plan, notice, and hearing annexation procedure.

H.B. 4257

Applies only to Subchapter C-4 (election-approved annexations).

The disapproval of the proposed annexation of an area does not affect any existing legal obligation of the city proposing the annexation to continue to provide governmental services in the area, including water or wastewater services, regardless of whether the municipality holds a certificate of convenience and necessity to serve the area; and

A city that makes a wholesale sale of water to a special district may not charge rates for the water that are higher than rates charged in other similarly situated areas solely because the district is wholly or partly located in an area that disapproved of a proposed annexation.

SB 1024

Applies only to “consent exempt” annexations.

A city with a population of 350,000 or less shall provide access to services provided to an annexed area under a service plan that is identical or substantially similar to access to those services in the city;

A person residing in an annexed area subject to a service plan may apply for a writ of mandamus against a city that fails to provide access to services in accordance with (1);

In the action for the writ:

The court may order the parties to participate in mediation;

The city has the burden of proving that it complied with (1);

The person may provide evidence that the costs for the person to access the services are disproportionate to the costs incurred by a municipal resident to access those services; and

If the person prevails, the city shall disannex the property that is the subject of the suit within a reasonable period specified by the court or comply with (1); and (e) the 12 court shall award the person's attorney's fees and costs incurred in bringing the action for the writ; and

A city's governmental immunity to suit and from liability is waived and abolished to the extent of liability created under the bill.

SB 1303

Every city must maintain a copy of the map of city's boundaries and extraterritorial jurisdiction in a location that is easily accessible to the public, including:

The city secretary's office and the city engineer's office, if the city has an engineer; and

If the city maintains a website, on the city's website;

A city shall make a copy of the map under (1), above, available without charge;

Not later than January 1, 2020, a home rule city shall:

Create, or contract for the creation of, and make publicly available a digital map that must be made available without charge and in a format widely used by common geographic information system software;

If it maintains a website, make the digital map available on that website; and

If it does not have common geographic information system software, make the digital map available in any other widely used electronic format; and

If a city plans to annex under the "consent exempt" provisions that remain in the Municipal Annexation Act after the passage of H.B. 347 (discussed below), a home rule city must:

Provide notice to any area that would be newly included in the city's ETJ by the expansion of the city's ETJ resulting from the proposed annexation; and

Include in the notice for each hearing a statement that the completed annexation of the area will expand the ETJ, a description of the area that would be newly included in the ETJ, a statement of the purpose of ETJ designation as provided by state law, and a brief description of each municipal ordinance that would be applicable, as authorized by state law relating to subdivision ordinances, in the area that would be newly included in the ETJ; and

Before the city may institute annexation proceedings, create, or contract for the creation of, and make publicly available, without charge and in a widely used electronic format, a digital map that identifies the area proposed for annexation and any area that would be newly included in the ETJ as a result of the proposed annexation. (Note: Many of the remaining provisions of the bill modified sections in Chapter 43 of the Local Government Code, relating to municipal annexation, which were eliminated by H.B. 347.)⁴⁸

⁴⁸ <https://www.tml.org/DocumentCenter/View/1233/Annexation-Paper-TML-July-2019PDF>

5 WATER SUPPLY & DISTRIBUTION STUDY

The approximate date of the original construction of the City of Pecos's water distribution system is unknown. Original line material consists of Asbestos Cement (AC). City staff indicate that 87% of the system is original. Newer replacement lines consist of Polyvinyl Chloride (PVC). Previous water system maps were generated by the City's engineering firm Frank X. Spencer & Associates Inc.

There have been at least six (6) projects since 1985 using funds from Texas Department of Rural Affairs Grant ORCA, now administered by the Texas Department of Agriculture, TDA).

- 2005 Contractor installed two water wells with pumps, electrical, telemetry system, and installation of 2,560 liner feet (LF) of water line to connect wells to existing water system in the South Worsham Well Field.
- 2000 Contractor replaced 6,680 (LF) of 24" water transmission line to replace an existing line in deteriorating condition including a 24" butterfly valve with concrete vault, a 6" flush valve assemble, a 4" combination air valve assembly, two interconnectors, fittings, and related appurtenances.
- 1998 Contractor replaced of 3,220 (LF) of 24" water transmission line, air and flushing valves, interconnectors and other appurtenances.
- 1997 Contractor replaced of 8,070 (LF) of 24" water transmission line, and related appurtenances.
- 1996 Contractor replaced of 6,240 (LF) of 24" water transmission line, and related appurtenances.
- 1985 Contractor installed 10.5 miles of supply line.

The following sections provide an inventory of the major components of Pecos's water system as of the date of this comprehensive plan. The plan identifies areas of operation in which system improvements should be implemented to improve the safety, efficiency, and economy of the treatment and distribution operations. The plan will conclude by providing a prioritized summary of the needed improvements and their estimated costs.

5.1 Water System Inventory

Tables 5A and 5B show the inventory and locations of the various components associated with the water treatment, storage, and distribution system.

Table 5A: Major Water System Components

Component	Location	Capacity or Size
Pump Station	Warehouse	12,000 GPM
Ground Storage Tank	Warehouse	3,000,000 gallons
Ground Storage Tank	Warehouse	3,000,000 gallons
Elevated Storage Tank	Cotton Street	100,000 gallons
Elevated Storage Tank	6 th /Locust Street	500,000 gallons
Elevated Storage Tank	W. Washington Street	300,000 gallons
Elevated Storage Tank	Easterbrook Drive	600,000 gallons

Table 5B: Water Distribution System Components

Component	Linear Feet (LF)	Component	# Of Units
2" Line	71,422	Elevated Storage Tank	4
3" Line	63,408	Ground Storage Tank	2
4" Line	37,142	Fire Hydrant	246
6" Line	188,045	Gate Valve	1,433
8" Line	97,135	Flush Valve	1
10" Line	23,937		
12" Line	28,245	Service Connections	6293 (TCEQ)
16" Line	34,202	Wholesale Connections	287 (TCEQ)
21" Line	2,730		
24" Line*	9,696*		
UNK Line	5,725		

*Inside City Limits.

Table 5C shows the location and capacity of generators used to support the Pecos water system.

Table 5C: Generator Locations & Capacity

Generator	Location	Capacity or Size
	Warehouse	UNK

5.2 Water System Analysis

Standards & Criteria

The Texas Commission of Environmental Quality (TCEQ), the American Water Works Association (AWWA), and the US Environmental Protection Agency (EPA) have established regulations and standards for the safe treatment, storage, and distribution of potable water to the public. All Public Water Supply (PWS) systems operating within the State of Texas must adhere to these regulations and standards.

Table 5D lists the TCEQ-adopted engineering standards that apply to the minimum production and supply capacities for public water systems and, according to copies of recent routine compliance reports from the TCEQ, capacities for the Pecos Water Supply System.

Table 5D: Minimum Water System Standards

Facility or Measure	TCEQ / Engineering Standard	City of Pecos*
Well Production, Surface Water Production, or Purchase Capacity (GPM/Connection)	0.6	1.17 [3]
Total Storage – TCEQ (gal/connection)	200	1293 [3]
Elevated Storage (gal/connection)	100	182 [4]
Service Pump (GPM/Connection) [4]	0.6	1.04
Normal Operating Pressure (psi)	35	+/-40
“B” Certified Operators [1]	1	1
Minimum Main Size [2]	2”	2”

*** Including Barstow, Man Camp, and Madera Valley.**

[1] Depends on system type and size, according to TCEQ 30 TAC 290, Subchapter D: Rules and Regulations for Public Water Systems, Section 290.46

[2] According to TCEQ 30 TAC 290, Subchapter D: Rules and Regulations for Public Water Systems, no new waterline under two inches in diameter will be allowed to be installed in a public water system distribution system. These minimum line sizes do not apply to individual customer service lines.

[3] Calculated using TCEQ Water Utility Database information indicating a total of 6293 connections to the system and using the daily production rate of 0.6MG per month as reported in the CCI Report # 1556613 – 4/23/2019, including Barstow, Man Camp, and Madera Valley for a grand total of 7562 Connections which these numbers are based on.

[4] If Elevated Storage Capacity is > 200 Gallons/Connection, Service Pump Capacity is 0.6 GPM/Connection. If Elevated Storage Capacity is < 200 Gallons/Connection, Service Pump Capacity is 2.0 GPM/Connection. The minimum Elevated Storage Capacity requirement is always 100 Gallons/Connection. These numbers include Barstow, Man Camp, and Madera Valley for a grand total of 7562 connections.

Table 5D (page 5-3) indicates that the City of Pecos is operating in accordance with the established standards for minimum production and supply capacities in all categories, including wholesale obligations and Madera Valley.

Water Supply

The water supply source for the City of Pecos is groundwater drawn from the Cenozoic Pecos Alluvium strata of the Pecos Valley and Woodbine River Subcrop Aquifers. The City owns and operates twenty-seven (27) wells that are capable of a production capacity of approximately 9661 Gallons Per Minute (GPM), or 13.912 Million Gallons Per Day (MGD). Water is obtained from three (3) groundwater sources known as Ward County Field, Worsham Field, and South Worsham Field.

Ward County Field is located approximately 32 miles east of Pecos and south of Pyote. Ward County wells discharge into a 0.150 MG steel standpipe located at the well field. Water gravity feeds from the standpipe to a 0.300 MG steel ground storage tank at the River Booster Station located 14 miles east of Pecos. It is then pumped by three 2,000 GPM transfer pumps via 24-inch transmission line to elevated ground storage tanks located four (4) miles west of the River Booster Station. These elevated ground storage tanks are referred to as the “Blending Station” by the City since water from all three (3) well fields are blended in the ground storage tanks before gravity flowing to City Yard.

Worsham Field is located 12.6 miles east-southeast of Pecos. Water is pumped into the blending station which consists of a 1.0 MG and a newer 2.0 MG steel elevated ground storage tanks.

South Worsham Field is located six (6) miles south of Worsham Field. Water is discharged to two (2) 0.100 MG standpipes and thence to the Blending Station at Worsham Field. A 24-inch transmission line

delivers water from the Blending Station to Town. An older 20-inch transmission line is available when needed.

In Pecos at the City Yard, also referred to by City personnel as “Warehouse,” there are two (2) 3.0 MG ground storage tanks. Five (5) service pumps take suction from these tanks and discharge to the distribution system. Chlorination is provided ahead of the ground storage tanks at City Yard. Four (4) elevated tanks floats on the system. Operating staff describe the water quality as good.

The City’s water supply is rated as superior by the TCEQ Water System Data Sheet.

Water Storage

Texas Administrative Code, Title 30, Chapter 290, Subchapter D specifies water treatment plant design, operation, and maintenance requirements for public water systems. The code requires water systems with more than 250 connections to have storage capacity for the total number of connections served equal to or greater than:

- a) 200 gallons of total storage per connection; and
- b) 100 gallons of elevated storage per connection or a pressure tank capacity of 20 gallons per connection.

According to the TCEQ Water Utility Database, the Town of Pecos City’s water system has 7562 total connections (including wholesale obligation and Madera Valley). The City’s water system meets the established minimum standards for water storage capacity with 1583 gallons per connection of total storage and 223 gallons per connection of elevated storage.

Water Distribution System

Water system pipes in the City of Pecos range in diameter from 2”-to-24”. The system is comprised of approximately 561,687 (LF) of distribution lines. The materials contained in the original lines are primarily Asbestos Cement (5.89%) and unknown (81.4%) which are assumed original. The newer replacement lines are primarily PVC (12.7%).

Undersized water lines limit both volume and pressure within the distribution system. Texas Administrative Code (TAC), Subchapter D, Section 290.44(c) prohibits the installation of new water lines smaller than 2”. In addition, the standards only permit more than 10 connections on existing water mains when a licensed professional engineer deems it necessary.

There are many segments of 2” and smaller diameter pipe in the distribution system. Two-inch (2”) diameter lines comprise roughly 12.7% (71,422 LF) of the water distribution system in Pecos. Some are located at the periphery of the system where the intensity of development is low, but a significant number are located within established residential neighborhoods and have numerous single-family connections.

Lines of 3" and 4" in diameter comprise an additional 17.9% (100,550 LF) of the system.

The City of Pecos does have an established program for routine line replacement. The City replaces lines periodically when required by events such as line breakage, valve malfunctions, or other related system failures. The City of Pecos does dedicate specific revenues, such as a water utility fund, for annual repair and maintenance.

System Water Pressure

The City's water system operates at a normal working pressure of approximately 68 pounds per square inch (psi). This is sufficient to operate the system effectively.

Future Development Considerations

The city of Pecos is projected to experience approximately 14% growth during this planning period. Growth is influenced by adjacent city centers and industrial developments in the area.

Texas Administrative Code (TAC) Title 30, Chapter 291 states that when a water utility that requires a Certificate of Convenience and Necessity (CCN) reaches 85% utilization of the minimum capacity requirements for the system it must submit to the TCEQ Director a planning report indicating how the utility plans to expand its capacity to meet future demands.

According to the information contained in *Tables 5D (page 5-3) and 5E*, the City's system will support the number of anticipated new connections before reaching the 85% threshold, as shown below:

Table 5E: Capacity for New Connections

Measure	Required	Provided [1]	# New Connections
Production Capacity	0.6	1.43	7757
Total Storage	200	1583	43328
Elevated Storage	100	223	6795
Service Pump Capacity	0.6	1.27	6038

[1] Based on current connection count of 7562 active connections, including wholesale obligations and Madera Valley.

As shown in *Table 5D (page 5-3)*, one restrictive element in the City's water system regarding the capacity for future growth is the maximum purchase capacity. With a 14% growth rate over the next 10 years, the City will add approximately 1,699 new connections.

To stay below the 85% threshold, the City would need the capacity to produce enough water daily to provide the future total connection count of 9299 connections with 0.6 Gallons Per Minute (GPM) per connection or 5580 GPM, plus enough surplus so that the 5580 GPM represented less than 85% of the production capacity. In other words, the City will need to have a maximum production capacity of 6417

GPM to comply with the 0.6 GPM standard and still be below the 85% threshold that would trigger planning requirements for expansion. 6417 GPM equates to approximately 9.24 Million Gallons Per Day (MGD). The City of Pecos exceeds these requirements.

Fire Protection Considerations

The primary consideration for fire protection issues is whether the system is capable of delivering sufficient flow volume at sufficient pressure to respond to emergencies effectively.

The standards for adequate fire protection are established in the International Fire Code (IFC). The code recommends minimum flow volume, flow pressure, hydrant spacing, and construction standards. Examples of the IFC recommendations are as follows:

1. Every building in a community should be located no more than 500' from a fire hydrant;
2. All fire hydrants should be installed on water mains no smaller than 6" in diameter;
3. Each hydrant should provide a minimum flow volume of 1,500 GPM; and
4. The minimum flow volume should be delivered at a minimum residual pressure of 20 psi.

Fire departments perform individual hydrant flow tests to determine if adequate pressure and flow rates are available at specified hydrant locations. Testing every hydrant is usually beyond the capabilities of most small communities but field-testing at selected hydrants can give the City some preliminary information on water system firefighting capabilities. When any major new subdivision construction is proposed, a computer-aided water system model of the existing conditions and the effects of the proposed development should be prepared by the consulting engineer. This model will assist the City and its representatives to evaluate the existing system's capacity to provide adequate flow volume at sufficient pressure to effectively respond to emergencies.

There are many homes within the city of Pecos that are not within 500' of a hydrant connected to a 6" water main. Several homes within the City that are located near to 4" or smaller lines. A 4" line will provide adequate flow volume and pressure for firefighting purposes under ideal conditions, but the configuration is usually not effective. A smaller line cannot provide adequate flow and pressure for firefighting purposes under any conditions. This plan will recommend several line replacement projects that will replace aging, deteriorating, and/or undersized lines. All proposed line replacement projects will include lines of sufficient size to provide adequate flow and pressure for firefighting purposes. Proposed projects will also include fire hydrants at the appropriate locations.

System Operations

TCEQ conducted a Comprehensive Compliance Investigation (CCI) in September 2014. TCEQ records indicate that any minor violations have been resolved. The last CCI indicated that the system was operating at an average pressure of 68 psi with a residual chlorine level of 0.71 milligrams per liter (mg/L).

Water System Revenues

The city of Pecos has adopted a rate schedule as follows:

Table 5F: Minimum Monthly Water Fee: Residential - \$16.00 Commercial - \$25.00*
 Minimum Monthly Sewer Fee: Residential - \$16.00 Commercial - \$30.00*

Per 1,000 Rates	0 – 10,000 Gallons	10,000 – 24,999 Gallons	25,000 – 49,999 Gallons
Residential Water	\$3.51	\$4.20	\$5.15
Residential Sewer	\$3.82	5.07	\$6.32
Commercial Water	\$5.27	\$6.30	\$7.73
Commercial Sewer	\$5.73	\$7.61	\$9.48

* Separate rates exist for Man-camp, Government, and Reeves County Detention Center

According to the information provided by City staff, the City’s revenues and expenses as related to water and sewer services are as follows:

Table 5G: Water/Sewer Revenues & Expenses

Capital Utility Assets	\$7,719,353
Water & Operating Revenues	\$5,763,000
Water & Operating Expenses	\$9,386,160
Estimated Water Pumped	1,203,471,381 gallons

Water Losses

Unmetered water usage and/or unaccounted-for usage affects the cost to provide water services. City staff indicate that there are no unmetered or unbilled customers. Available data on the actual number of gallons purchased compared with actual gallons billed indicates an approximate water loss of 25.8% annually. A typical value of acceptable water loss ranges from 6% - 11%. Major sources of water loss include:

- Line leakage,
- Line breaks,

- Aging or faulty meters,
- Inaccurate or incomplete record-keeping,
- Water theft and unauthorized use.

The City is planning to replace aging lines and meters as funding becomes available.

Water Interconnections

The City of Pecos sells treated water to the City of Barstow with a population of 750 and 236 connections at a maximum purchase rate of 300,000 GPD or 208.3 GPM. Pecos also sells water to FM 1450 Man Camp with a population of 208 and 51 connections. The City of Pecos is currently in the process of acquiring the Madera Valley WSC. Madera Valley WSC has a total of 769 connections, a six (6) well production capacity of 1152 GPM or 1.66 MGD, total storage of .824 MG with .189 elevated, and a pump capacity of 2800 GPM. With the addition of the new connections and production capacity the combined systems will still meet all TCEQ Water Supply System capacities, except the minimum main size for the Madera Valley WSC and Barstow are unknown.

Regional & Drought Planning

In 1999, the 75th Texas Legislature passed Senate Bill 1. This legislation requires that all entities providing public water supplies must develop drought contingency plans. These plans must be implemented during periods of severe water shortages and drought. A drought contingency plan often combines several strategies designed to achieve long-term advancements in the efficient use of water.

The plans require the development of specific response measures aimed at avoiding, minimizing, or mitigating the risks and impacts of drought-related water shortages and other emergencies. The plan adopted by a water provider should ensure the provider's capability of providing adequate water supplies under drought conditions.

The City of Pecos adopted a Drought Contingency Plan in February 2015, Ordinance No. 15-01-01. The plan includes both a Drought Contingency Plan and an Emergency Water Demand Management Plan.

The Emergency Water Demand Management Plan contains five stages of water demand that provides detailed information on the process that should occur in extended periods of low rainfall.

The City of Pecos adopted a Water Conservation Plan in August 2019, Ordinance No. 19-07-01. The plan includes a Water Conservation section only and is on file in the city secretary's office.

The Region F 2016 Regional Water Plan projects that the water supplies for the city of Pecos will remain steady for the duration of this planning period.

As Pecos grows by the estimated amount described previously, the City may attempt to develop some water conservation methods as part of the development standards. These standards may include the following:

1. Require recirculation equipment for all new swimming pool installations and insulation of hot water piping for all new construction;
2. Require builders to utilize low demand fixtures and appliances;
3. Implement a conservation water rate structure in which the rates increase as the water consumption increases;
4. Implement testing of all meters;
5. Require sub-dividers and builders to include low water demand landscaping items in their development plans; and
6. Reduce unaccounted for water by 5% per year for the first two years and 2% per year for the remainder of this planning period (2020-2030).

Texas water law requires that revised and updated Regional and State Water Plans be prepared every five years. The 2016 Plans may be found at the TWDB web site.

5.3 Water Supply & Distribution System Improvement Projects

The Pecos Comprehensive Plan places a high priority on a continuing program of replacing old and undersized system lines and aging, broken valves to help ensure that the City and the surrounding area continue to meet local water supply demands.

Prioritized Problems

City leaders, residents, operating staff, and consulting engineers have identified the following areas of concern with regards to the Pecos water system:

1. A need to rehabilitate aging storage tanks;
2. A need to replace water meters throughout the City and improve the SCADA system;
3. A need to extend the water line on CR118;
4. A need to make the water system more resilient against disruptive events by installing generators at all well fields and pump stations.

Goals & Objectives for the Water System

Goal 1: A local water system that operates efficiently and cost-effectively.

Objective 1.1: By 2030, reduce operating costs.

Policy 1.1.1: Promote and exercise preventative maintenance by inspecting all facilities once per year.

Policy 1.1.2: Maintain a monitoring plan and report on a timely basis.

Objective 1.2: Reduce system water loss by 40% by 2030.

Policy 1.2.1: Implement methods to classify meters and replace meters that are damaged or leaking.

Policy 1.2.2: Replace deteriorated lines throughout system, with priority given to those made of obsolete materials.

Policy 1.2.3: By 2021, enact procedures to document water used but not billed.

Objective 1.3: The City is financially able to maintain and improve the system to improve quality of life for residents and enable growth.

Policy 1.3.1: By 2023, evaluate rate structure and usage characteristics to determine if a rate increase would be feasible and enable the City to complete more line replacement projects.

Policy 1.3.2: Beginning in 2020 and continuing throughout the planning period, regularly apply for available grants through the Texas Department of Agriculture to fund replacement of aging, deteriorated water lines.

Goal 2: City and area residents have clean, safe, potable water.

Objective 2.1: Over the planning period, deteriorated lines and equipment are replaced and/or improved.

Policy 2.1.1: Continue maintaining and inspecting the existing system facilities according to a regular schedule and providing repairs as the need arises.

Policy 2.1.2: In phases throughout the planning period, replace deteriorated and undersized lines with PVC lines 4" or larger in diameter.

Policy 2.1.3: In phases throughout the planning period, replace defective meters.

Goal 3: Customers have access to a sustainable water supply that provides sufficient pressure and fire protection, particularly in times of drought.

Objective 3.1: By 2030, upgrade the system to ensure adequate pressure and coverage for fire safety.

Policy 3.1.1: Provide additional storage capacity.

Policy 3.1.2: Install fire hydrants and upgrade lines in areas with inadequate fire protection coverage.

Goal 4: The City's water system maintains acceptable levels of functionality during and after disruptive events, and efficiently recovers full functionality after a hazard event.

Objective 4.1: Minimize disruption of water system during adverse weather events.

Policy 4.1.1: Install backup generators for all critical water system components, including treatment plants, pump stations, etc.

Policy 4.1.2: Harden storage tanks against flood damage and high winds, etc.; elevate storage tanks out of the floodplain.

Policy 4.1.3: Institute protocol to harden critical water system components prior to adverse weather.

Policy 4.1.4: Incorporate targeted projects to improve system resilience, such as planned retrofits and replacements, in capital improvement priorities.

Objective 4.2: Proactively support recovery of full functionality after a hazard event.

Policy 4.2.1: Incorporate water system resilience into community goals and plans.

Policy 4.2.2: Coordinate with government emergency managers and local utility providers to develop service restoration priorities and procedure(s).

Policy 4.2.3: Develop and evaluate water system's ability to meet performance goals during a hazard event; identify and plan to address performance gaps.

Proposed System Improvements – Planning Period 2020-2030

The following section describes a series of proposed improvements to the existing water treatment, storage, and distribution system. The improvement projects are presented as phased improvements that are suggested for implementation over the 10-year planning period encompassed by this comprehensive plan.

The projects are listed in a sequence that represents just one of several possible approaches, all of which should lead to the achievement of the long-term goals adopted by the City for the operation and maintenance of the water treatment, storage and distribution system.

The sequence shown in this plan is a logical, step-by-step process intended to increase the safety, efficiency, and economy of the water system operations. The sequence is intended only as a suggested program of phased improvements, and alternative sequences are recommended if funding availability requires significant changes.

Table 5H (Section 5.4) contains the estimated projected costs for each phase of the improvements program. These costs are based on current costs of record for similar projects in the same geographical area of the state. Every effort has been made to include appropriate cost factors such as inflation, variations in the market, and advances in water treatment, storage, and distribution technology. These cost estimates are predicated on several assumptions related to the scope of each phase.

These assumptions are as follows:

- The choice of specific lines to be replaced within each area – The cost estimates assume that all lines less than 6” in diameter will be replaced with 6”-to-8” C-900 DR 18 PVC pipe and fire hydrants at the appropriate spacing. The priority is placed on replacing the smaller lines, but each individual project evaluation may identify segments of larger lines that need replacement. In this event, the funding should be applied to replacing the lines with the greatest need for repair, regardless of size;
- Fire hydrants – Fire hydrants are included in the estimates. However, when replacing lines of 6” and larger, the estimates assume that approximately 50% of the existing fire hydrants can be re-used;
- Service re-connects, valves, and appurtenances – Service re-connects, valves, and appurtenances are estimated at 12%-to-15% of the line costs, depending on the housing density and complexity of the proposed improvements;
- Street & pavement repair – Streets, driveways, and pavement repair is estimated at 5%-to-10% of the line costs, depending on the housing density and the presence of curb & gutter in the area of interest;

- Engineering & Surveying – Engineering and surveying services are estimated at 15% of the estimated construction costs of the combined elements described above.

The suggested phases for the system improvements are as follows:

- ✓ **Phase 1 (2020-2023):** Rehabilitate East Side and North Ground elevated storage tanks. Projects will also include pavement repair; and administration and Engineering & Survey services.
- ✓ **Phase 2 (2024-2026):** Replace AMI/AMR meters throughout the city, complete water and wastewater Master Plan, and conduct ground water assessment. Projects will also include pavement repair; and administration and Engineering & Survey services
- ✓ **Phase 3 (2027-2030):** Connect Madera Valley accounts, extend the water line on CR 118, and update the water and wastewater SCADA systems. Projects will also include pavement repair; and administration and Engineering & Survey services.

5.4 Implementation Plan

The City strives to provide a safe, efficient, and uninterrupted water supply while meeting all applicable water system standards. These goals can be accomplished by implementing the improvements described above over the planning period of 2020 through 2030. The estimated costs for the proposed improvements to the water system are as follows:

Table 5H: Water System Improvement Plan Projects: 2020-2030

Goals & Objectives	Activity Year(s)			Lead Organization	Cost Estimate*	Funding Sources
	2020-2023	2024-2026	2027-2030			
Goal 5.1 <i>Replace and/or improve deteriorated lines and equipment so city and area residents have access to clean, safe, and potable water.</i>						
Phase 1: Rehabilitate East Side and North Ground elevated storage tanks. Projects will also include pavement repair; and administration and Engineering & Survey services.	X			City	\$1,557,00	City Utility Fund
Phase 2: Replace AMI/AMR meters throughout the city, complete water and wastewater master plan, and conduct ground water assessment. Projects will also include pavement repair; and administration and Engineering & Survey services.	X	X	X	City	\$1,458,000	City Utility Fund
Phase 3: Connect Madera Valley accounts, extend the water line on CR 118, and update the water and wastewater SCADA systems. Projects will also include pavement repair; and administration and Engineering & Survey services	X	X	X	City	\$750,000	City Utility Fund
Goal 5.2 <i>Ensure local water system operates efficiently, cost-effectively, and in compliance with TCEQ requirements</i>						
Exercise preventative maintenance by inspecting all facilities once per year	X	X	X	City	Variable	GEN; Utility

Seek funding to address TCEQ issues	X	X	X	City	N/A	N/A
Evaluate rate structure and usage characteristics to determine if rate increase would be feasible and enable the system operator to complete more line replacement projects	X	X	X	City	N/A	N/A
Regularly apply for TxCDBG grants to fund replacement of aging, deteriorated water lines	X	X	X	City	N/A	N/A

Goal 5.3 *Ensure customers have access to a sustainable water supply that provides sufficient pressure and fire protection, particularly in times of drought and disaster*

Replace as many lines 2" or less in diameter, giving priority to those with more than ten (10) connections	X	X	X	City	Variable	TxCDBG, GEN; USDA; TWDB; Utility
Replace as many lines 4" in diameter that connect to at least one (1) fire hydrant	X	X	X	City	Variable	TxCDBG, GEN; USDA; TWDB; Utility
Install fire hydrants in areas with inadequate fire protection coverage	X	X	X	City	Variable	TxCDBG, GEN; USDA; TWDB; Utility
Continue City's participation and mention in the Region F Regional Water Plan	X	X	X	City	\$1,000 annually	GEN; Utility
Install generators and fuel tanks with adequate capacity to power all water plant and well sites	X	X	X	City	Variable	TxCDBG, GEN; USDA; TWDB; Utility
Harden storage tanks in areas prone to flooding and windstorm damage	X	X	X	City	Variable	TxCDBG, GEN; USDA; TWDB; Utility
Increase system and source reliability through additional system interconnections with adjacent systems and/or new water sources to ensure adequate firm water supply.	X	X	X	City	Variable	TxCDBG, GEN; USDA; TWDB; Utility
Develop and institute pre-adverse event procedures to harden and prepare the system for disaster	X	X	X	City	Variable	TxCDBG, GEN; USDA; TWDB; Utility

Sources: **EDA** = US Economic Development Administration grant program; **GEN** = Municipal funds and General Obligation Bonds; **TCF** = Texas Capital Fund; **TxCDBG** = Texas Community Development Block Grant Program, administered through the Texas Department of Agriculture (TDA); **TWDB** = Texas Water Development Board grants and loans; **USDA** = US Department of Agriculture Rural Development Water and Wastewater Infrastructure loans and grants; **UTILITY** = City utility fund/revenue

Notes on Cost Estimates: GrantWorks Engineering Staff provided cost estimate

6 WASTEWATER COLLECTION & TREATMENT SYSTEM STUDY

Most of the Town of Pecos City's existing sewage collection and treatment system was constructed in 1950's. The current wastewater treatment plant (WWTP) is an aerated lagoon type plant that was expanded in 2013. Frank X. Spencer & Associates and J. Silva updated the system maps in 2019.

There have been at least three (3) system improvement projects implemented since 1995 using funds from Texas Department of Rural Affairs Grant Programs (TDRA – formerly ORCA, now administered by the Texas Department of Agriculture, (TDA):

- 2019: Contractor installed approximately one thousand eight hundred seventy linear feet (1,870 LF) of eighteen-inch (18") gravity sewer line, manholes, and all associated appurtenances. Construction took place on 3rd Street and Orange Street.
- 2012: Contractor installed approximately two thousand six hundred twenty linear feet (2,620 LF) of six-inch (6") to twenty-four-inch (24") PVC sewer line, eight (8) fiberglass manholes and associated appurtenances. Construction took place on 7th Street from Ash to Orange Streets.
- 1991: Contractor installed approximately 6,311 (LF). of 8' sewer line, 110 (LF). of 4' force main, 67 connections, 2,884 (LF). of 4' house lateral line, 1,021 (LF). of 6' lateral line, 1 lift station, 46 service connections, 24 manholes, 6,296' of trench excavation protection.

The most recent Comprehensive Compliance Investigation (CCI) report of May 5, 2015 indicates that the City has received several minor alleged violations. Staff indicate that these allegations are being resolved, or have been resolved, as of the time of this plan.

6.1 Wastewater Collection System Inventory

Table 6A lists the quantity of the collection lines associated with the collection system operated by the City of Pecos by size, total length, and percentage of the system as a whole.

Table 6A: Major Sewer Collection System Components

Sewer Lines			
	Diameter (in.)	Length (ft.)	Percent
Force Mains			
	6"	2,953	0.76%
	12"	5,188	1.34%
Subtotal – Force Main		8,141	2.10%
	Diameter (in.)	Length (ft.)	Percent
Gravity Feed			
	1 ½"	775	0.20%
	3"	902	0.23%
	4"	100	0.03%
	6"	107,819	27.86%
	8"	72,729	18.79%
	10"	12,994	3.36%
	12"	37,222	9.62%
	15"	22,599	5.84%
	16"	988	0.26%
	18"	1,186	0.31%
	24"	15,364	3.97%
	UNK	106,226	27.45%
Subtotal – Gravity Feed		378,905	97.90%
Total Sewer Lines		387,046	100%

Table 6B provides the lift station inventory.

Table 6B: Lift Station Inventory

Lift Stations			
Name	Pump Capacity (GPM)	Year Built	Condition
Oak Street	UNK	1986	Fair
Rancho Street	UNK	2011	Good
Tumbleweed	UNK	1993	Fair
Crow Park	UNK	1960	OOC
West F	UNK	2012	Fair
N. Hickory Street	UNK	2004	OOC
Alamo Street	UNK	2011	Good
Stafford Blvd.	UNK	2014	Good
W. County Road	UNK	2004	Fair
S. Olive Street	UNK	2004	Fair
Quality Inn	UNK	2018	Good
Warehouse	UNK	1960	Poor
WWTP	UNK	2014	Good
Walmart	UNK	2017	Good

Table 6C shows the locations and capacity of generators used to support the Pecos wastewater system.

Table 6C: Generator Locations & Capacity

Generator	Location	Capacity or Size
	Stafford	UNK
	WWTP	UNK

6.2 Wastewater System Analysis

The wastewater system analysis evaluates the system components described in the previous sections with respect to the applicable standards and criteria, as described in the previous sections. This analysis will consider the following elements:

- Standards & Criteria;
- The wastewater treatment facilities;
- Industrial waste and special treatment facilities;
- Collection system conditions;
- Unserved/underserved areas;
- Manhole conditions;
- The characteristics of the soil and terrain affecting the collection facilities;
- Lift station conditions;
- Infiltration/inflow problems; and
- Operational procedures.

Standards & Criteria

The US Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ) outline the standards or criteria applicable to the design and operation of municipal wastewater systems. The standards address influent quality, collection, treatment, and effluent quality. The TCEQ guidelines were originally set forth in Title 30 Part 1 Chapter 317 of the Texas Administrative Code "*Design Criteria for Sewerage Systems*".

The State of Texas has revised the standards and replaced Chapter 317 with Chapter 217, "*Design Criteria for Domestic Wastewater Systems*"; which outlines system design and operations in all respects. EPA requirements mainly relate to discharge limitations and industrial wastewater treatment.

For wastewater treatment facilities, the TCEQ standards provide detailed information concerning design flows and design loadings expected at the treatment facility for the average municipal wastewater effluent stream. The authorized effluent discharge quality limitations are established in the individual municipality or operator's Permit to Discharge Waste and will vary based on local conditions. Typically, effluent strength entering the treatment facility should not exceed approximately 200-350 mg/L BOD-5,⁴⁹ depending on the characteristics of the influent stream and the source of the wastewater stream. BOD5 and TSS values higher than 200 mg/L would likely be the result of wastewater demand from industrial sources that should be pretreated or eliminated.

⁴⁹ Two hundred to three hundred fifty milligrams per liter biochemical oxygen demand

The average quantity of wastewater flow set forth by the standards depends on the source. For example, a residential subdivision would have a design flow of 75-100 gallons per capita per day, while a hospital design flow is approximately 200 gallons per capita per day. For another example, the design flow criteria for a facility with expected flows of less than 1.0 Million Gallons per Day (MGD) establishes the permitted flow as the maximum 30-day average flow. This permitted flow is estimated by multiplying the average annual flow by a factor of at least 1.5 and dividing that value by 12. When site-specific data is unavailable, the two-hour peak flow must be estimated by multiplying the permitted flow described above by a factor of four (4.0).

The criteria for sewer treatment facilities are based on process type and address the individual system components. The design standards account for design flow, peak flow, influent characteristics, and required discharge quality. The criteria are comprehensive and consider most treatment technologies currently in common use.

When a public sewer system experiences average daily flows in excess of 75% of its permitted capacity for three or more consecutive months, TCEQ regulations require that the system owner begin planning for plant expansion or replacement. When average daily flows exceed 90% for three or more consecutive months, TCEQ requires that the owner of the facility begin construction on a new or expanded treatment facility.

Design criteria for collection systems include standards for pipe size, horizontal and vertical spacing, gradient, manhole spacing, lift station connections, and allowable infiltration/inflow. The standards require a minimum diameter of 6" for gravity collection mains. The standards also specify minimum gradients for various pipe sizes that will be required to achieve a flow velocity of at least two feet per second (2' fps).

Table 6D lists the grade requirements and pipe size minimums that should be required within the city of Pecos's system.

Table 6D: Sewer Gradient Standards

Main Size (in.)	Fall in Feet per 100 Feet of Line (ft.)
6"	0.50
8"	0.33
10"	0.25
12"	0.20

The typical manhole spacing for 6"-to-12" main sizes with straight alignment and uniform grades is 500' (maximum). Reduced spacing may be necessary based on a system's ability to clean and maintain its sewer with available equipment.

Lift station design criteria establish general requirements that include, but are not limited to, the following:

1. The raw wastewater pump, with the exception of a grinder pump, must be capable of passing a sphere of 2.5" or greater;
2. The raw wastewater pump must have suction and discharge openings of at least 3.0" in diameter;
3. The lift station pumping capacity must have a firm pumping capacity equal to or greater than the expected peak flow;
4. For a lift station with more than two (2) pumps, a force main in excess of ½-mile, or firm pumping capacity of 100 GPM or greater, system curves must be provided for both the normal and peak operating conditions at C values for proposed and existing pipe;
5. A collection system lift station must be equipped with a tested quick-connect mechanism or a transfer switch properly sized to connect to a portable generator, if not equipped with an onsite generator;
6. Lift stations must include an audiovisual alarm system, and the system must transmit all alarm conditions to a continuously monitored location;
7. A lift station must be fully accessible during a 25-year 24-hour rainfall event;
8. A force main must be a minimum of 4.0" in diameter, unless it is used in conjunction with a grinder pump station;
9. For a duplex pump station, the minimum velocity is three feet per second (3 fps) with one (1) pump in operation;
10. For a pump station with three (3) or more pumps, the minimum velocity is two feet per second (2 fps) with only the smallest pump in operation. The use of pipe or fittings rated at a working pressure of less than 150 pounds per square inch (psi) is prohibited;

Wastewater Treatment Facility

The City of Pecos's wastewater treatment plant is an aerated lagoon treatment plant. It was expanded in 2013. The current Permit to Discharge Wastes (WQ0010245001) authorizes the discharge of treated domestic wastewater effluent at a daily average flow not to exceed 1.60 Million Gallons Per Day (MGD).

According to operations staff, current average daily flows at the facility are an estimated 1.178 MGD. Peak 2-hour flows are not available at this time. Peak flows during and after significant storm events are not available. The City's sewer system is sensitive to rainfall. Collection systems of this age typically experience a significant amount of inflow and infiltration (I/I) into the system. Flows that exceed the systems design capacity can cause the WWTP to experience solids washout and other plant failures that would in turn cause violations of the permitted effluent quality. In addition, when a public sewer system experiences average daily flows in excess of 75% of its permitted capacity for three or more consecutive months, TCEQ regulations require that the system owner begin planning for plant expansion or replacement. When average daily flows exceed 90% for three or more consecutive months, TCEQ requires that the owner of the facility begin construction on a new or expanded treatment facility.

The current estimated average daily flow of 1.1788 MGD represents roughly 73.6% of permitted levels. The City is currently developing a strategy to identify and address I/I.

Industrial Waste & Special Treatment Facilities

There are no significant industrial wastewater contributors as the large industrial facilities and refineries surrounding Pecos own and operate their own industrial wastewater treatment facilities.

Collection System Lines

Pecos's collection system consists of 387,046 Linear Feet (LF) of sewer line. Many of the lines were installed with the original system in the late 1950s. The City's collection system is comprised of three different types of pipe: Vitrified Clay, Asbestos Cement (AC), and Polyvinyl Chloride (PVC). City staff estimate that of the 387,046 LF of pipe in the system, 70% is Clay and Asbestos Cement (AC). The remaining 30% is Polyvinyl Chloride (PVC). The clay pipe is a serious source of inflow and infiltration (I/I) for the system.

Clay pipe has been used extensively throughout the city. The advantages of clay pipe include availability, low cost, and that it sustains ordinary street load when installed properly. However, as clay pipe ages it becomes brittle and cracks easily and is susceptible to root intrusion and to sewer gases which are corrosive and can dissolve the pipes leaving nothing but a tunnel in the soil.

The old, deteriorating vitrified clay pipes in Pecos's collection system are a primary cause for constant leaks and subsequent repairs and inflow and infiltration (I/I). The City is currently developing a strategy to identify and address I/I.

Unserved/Underserved Areas

According to the best information available at this time, there are no areas that do not receive sewer services within the City or ETJ.

Manholes & Cleanouts

There are approximately 944 manholes and an unknown number of cleanouts within the collection system. The manholes and cleanouts are distributed throughout the collection system. For exact locations, please see *Map 6A: Existing Sewer System Map*. Older, deteriorating brick and mortar manholes in the system are probably one of the causes of excessive inflow and infiltration into the collection system, and the City should continue to replace these brick manholes as funding sources are found in the future.

Soil Conditions

The integrity of wastewater systems may be affected by soil and topography with respect to system infiltration and inflow, pipe breakage, and other construction issues. For example, soils with high porosity characteristics may contribute to higher system infiltration rates than soils with low infiltration rates, particularly when collection lines and manholes have deteriorated due to age and breakage. Soils that absorb water and swell, like fat clays, can crack sewer pipes and manholes, particularly when these components have been constructed with improper bedding material or techniques. In areas that include septic systems, certain soils may be unsuitable for septic systems if they do not have suitable porosity and percolation characteristics.

According to current system maps, the City of Pecos provides centralized sewer collection service to all residents within the corporate city limits, so the porosity and percolation characteristics of the local soils are not relevant. In addition, the collection system is relatively young in terms of service life and was installed in the late 1950s. Modern regulations require pipe installation to be constructed with engineered bedding materials that surround the pipe. These bedding techniques essentially remove the effects of swelling and shrinking clay soils and render the nature of the soil irrelevant.

Lift Stations

There are fourteen lift stations operating within the collection system. According to the best information available at this time, the lift stations are full-size lift stations. Operations staff indicates that three lift stations require rehabilitation.

Inflow & Infiltration (I/I)

Inflow and Infiltration (I/I) are terms used to describe the flow of surface water or groundwater into a wastewater collection system. Primary causes include deteriorated manholes that are no longer watertight, cracked or collapsed pipes, disjointed pipe connections, and inadvertent stormwater flows into the sanitary system via storm drains (cross-connections). I/I is a serious, continuous, and cumulative problem that has a significant adverse effect on the operation costs and efficiency of a wastewater treatment facility.

Acceptable levels of I/I are determined by applying the standard of 200 gallons per inch of diameter per mile of pipe per day. Using information collected in the system inventory, the allowable I/I for the City of Pecos would be about 120,918 GPD. This represents approximately 10.25% of the normal average daily flow. The City is exploring options to address the I/I issue.

Operational Procedures

The treatment facility is classified as a Class “C” facility and requires one operator with a Class “C” or higher license. The City currently employs one Class “C” operator. This operator also holds a valid level “D” wastewater operator’s license.

In the area of operational procedures, there are several issues that all sewer systems should address concerning its treatment and collection systems that require a minimum of capital outlay. These issues are continuous and should be addressed by routine, scheduled operational procedures such as the following:

- Establish a routine to locate sources of I/I and a plan to address these problems in a timely fashion;
- Establish a program for routine scheduled maintenance of plant mechanical equipment, possibly incorporating currently available technological systems such as SCADA (Supervisory Control and Data Acquisition) packages designed for this task;
- Monitor influent and effluent quality on a regularly scheduled basis, with appropriate recording and reporting procedures;
- Establish a routine line and manhole inspection schedule and a plan for the required line and manhole replacement and/or rehabilitation.

In many systems, these operational/maintenance practices occur in the form of repair as opposed to preventive maintenance. This situation appears to have occurred frequently in Pecos.

6.3 Wastewater Collection & Treatment System Improvement Projects

Prioritized Problems

In summary, the wastewater system analysis and input from City staff have identified the following problems with the current municipal wastewater collection and treatment system:

1. A need to expand the WWTP;
2. A need to reduce potential system infiltration in large rain events due to;
 - a. Presence of brick and mortar manholes in the system contributes to excessive inflow and infiltration
 - b. Presence of aging and deteriorated collection lines in the system, also a major contributor to excessive inflow/infiltration.
3. A need to make the wastewater system more resilient against natural disasters by adding generators.

Goals & Objectives

The City established the following goals for its wastewater system:

Goal 1: An efficient wastewater system with minimal operational and maintenance costs.

Objective 1.1: Deteriorating lines in the collection system are replaced by 2030.

Policy 1.1.1: Replace deteriorating and undersized lines, manholes, and cleanouts in the system to reduce inflow and infiltration in the system and thereby reduce operational costs.

Policy 1.1.2: Apply for grants and/or loans from the TxCDBG Program, USDA Rural Development, and other sources to keep the costs of system improvements at a minimum.

Goal 2: Safe and sanitary wastewater treatment and disposal.

Objective 2.1: By 2030, Failing equipment that poses a safety hazard will have been replaced as needed and an annual program put in place to ensure the continued safety of the wastewater system.

Policy 2.1.1: After major improvements are made according to the phased projects in this report, begin an annual program to smoke test and pressure test all existing manholes and cleanouts for leakage. Install waterproofing and seals as needed.

Goal 3: The City's wastewater system maintains acceptable levels of functionality during and after disruptive events, and efficiently recovers full functionality after a hazard event

Objective 3.1: Minimize disruption of wastewater system during adverse weather events

Policy 3.1.1: Install backup generators for all critical wastewater system components, including lift stations, treatment plants, etc.

Policy 3.1.2: Harden lift stations against flood damage, etc.; elevate lift stations out of the floodplain

Policy 3.1.3: Institute protocol to harden critical wastewater system components prior to adverse weather

Policy 3.1.4: Incorporate targeted projects to improve system resilience, such as planned retrofits and replacements, in capital improvements priorities

Objective 3.2: Proactively support recovery of full functionality after a hazard event

Policy 3.2.1: Incorporate wastewater system resilience into community goals and plans

Policy 3.2.2: Coordinate with government emergency managers and local utility providers to develop service restoration priorities and procedure(s)

Policy 3.2.3: Develop and evaluate wastewater system's ability to meet performance goals during a hazard event; identify and plan to address performance gaps

Proposed System Improvements – Planning Period 2020-2030

The following section describes a series of proposed improvements to the existing wastewater collection and treatment system. The improvement projects are presented as phased improvements that are suggested for implementation over the 10-year planning period encompassed by this comprehensive plan.

The projects are listed in a sequence that represents just one of several possible avenues, all of which should lead to the achievement of the long-term goals adopted by the City of Pecos for the operation and maintenance of the wastewater collection and treatment system. The sequence shown in this plan is a logical, step-by-step process intended to increase the safety, efficiency, and economy of the wastewater system operations. The sequence is intended only as a suggested program of phased improvements, and alternative sequences are recommended if funding availability requires significant changes to this proposed system improvements program.

Table 6E (Section 6.4) contains the estimated projected costs for each phase of the improvements program. These costs are based on current costs of record for similar projects in the same geographical area of the state. Every effort has been made to include appropriate cost factors such as inflation, variations in the market, and advances in wastewater technology.

The suggested phases for the system improvements are as follows:

- ✓ **Phase 1 (2020-2023):** Obtain funding to increase plant (WWTP) capacity from 1.6 MGD to 2.0-2.5 MGD. Project will consist of pond improvements and the addition of a cloth filtration system. Project will include administrative, engineering, and survey services.
- ✓ **Phase 2 (2024-2026):** Obtain funding for final plant (WWTP) expansion by the addition of a membrane bioreactor (MBR). Project will include administrative, engineering, and survey services.
- ✓ **Phase 3 (2027-2030):** Obtain funding to install generators at all thirteen (13) lift stations and to conduct smoke testing on all clay lines over ten (10) inches, approximately 24,270 (LF). Project will include administrative, engineering, and survey services.
- ✓ **Phase 4 (2027-2030):** Obtain Funding to replace 6,650 (LF) of 10 and 12” clay pipe and replace 21 manholes. Construction will happen from Walthall to Monroe (alongside the Warehouse), FM 761, and along the alley between Lincoln and Meadowbrook. Project will include administrative, engineering, and survey services.

6.4 Implementation Plan

The City strives to provide a safe, efficient, and sanitary wastewater collection and treatment system

while meeting all applicable wastewater system standards. These goals can be accomplished by implementing the actions and improvement projects outlined in *Table 6E* below.

Table 6E: Wastewater System Improvement Plan Projects: 2020-2030

Goals & Objectives	Activity Year(s)			Lead Organization	Cost Estimate*	Funding Sources
	2020-2023	2024-2026	2027-2030			
Goal 6.1 <i>Replace deteriorated lines and equipment to increase the efficiency of the wastewater system and to minimize operational and maintenance costs.</i>						
Phase 1: Obtain funding to increase plant (WWTP) capacity from 1.6 MGD to 2.0-2.5 MGD. Project will consist of pond improvements and the addition of a cloth filtration system. Project will include administrative, engineering, and survey services.	X			City	\$4,000,000	TWDB Clean Water SRF Program
Phase 2: Obtain funding for final plant (WWTP) expansion by the addition of a membrane bioreactor (MBR). Project will include administrative, engineering, and survey services.		X		City	\$45,000,000	TWDB Clean Water SRF Program
Phase 3: Obtain funding to install generators at all thirteen (13) lift stations and to conduct smoke/TV testing on all clay lines over ten (10) inches, approximately 24,270 (LF). Project will include administrative, engineering, and survey services.			X	City	\$350,000	TWDB; CDBG; USDA; HMGP; Private; WW Utility
Phase 4: Obtain Funding to replace 6,650 (LF) of 10 and 12" clay pipe and replace 21 manholes at Walthall to Monroe (alongside the Warehouse), FM 761, and along the alley between Lincoln and Meadowbrook. Project will include administrative, engineering, and survey services			X	City	\$454,000	TWDB; CDBG; USDA; Private; WW Utility

Apply for grants and/or loans from the TxCDBG program, USDA Rural Development, and other sources to keep costs of system improvements at a minimum.	X	X	X	City	N/A	TxCDBG; USDA
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Goal 6.2 *Ensure customers have access to a safe and sanitary disposal system, particularly in times of disaster.*

After major improvements are made according to the phased projects in this report, begin an annual program to smoke test and pressure test all existing manholes and cleanouts for leakage. Install waterproofing and seals as needed.	X	X	X	City	Variable	GEN; WW Utility
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Install generators and fuel tanks with adequate capacity to power all sewer plant and lift station sites.	X	X	X	City	Variable	TxCDBG, GEN; USDA; Utility
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Harden lift stations in areas prone to flooding.	X	X	X	City	Variable	TxCDBG, GEN; USDA; Utility
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Develop and institute pre-adverse-event procedures to harden and prepare system for disaster.	X	X	X	City	Variable	TxCDBG, GEN; USDA; Utility
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**Includes any associated engineering, administration, and/or acquisition costs*

Sources: **Private** = Private funding sources through Development Agreements; **TxCDBG** = Texas Community Development Block Grant Program, administered through the Texas Department of Agriculture (TDA); **TWDB** = Texas Water Development Board; **WW UTILITY** = Municipal Water & Sewer Fund or Certificated of Obligation/Revenue Bonds; **USDA** = US Department of Agriculture – Rural Development; **HMGP** = FEMA Hazard Mitigation Grant Program

7 THOROUGHFARES STUDY

The Thoroughfares Study analyzes the community's ability to safely and efficiently move people and goods. After assessing the Town's traffic volumes and major traffic generators, road widths, traffic control systems, and parking and truck regulations, the study provides suggestions for improvements that can be incorporated into the community's future development plans. A good thoroughfare plan considers not only the ability of the system's infrastructure to move vehicles, but also the relationship between street construction, land development, and quality of life. The result should be a pleasing and efficient transportation system for both residents and visitors.

7.1 Highlights

Interstate 20, I-20B, US Highway 285 and US 17 form much of Pecos's thoroughfare system. While most of these major roads have enough capacity to accommodate vehicle traffic at Pecos's current scale of development, heavy truck traffic as a result of the region's extraction economy continuously deteriorate local and TxDOT roads throughout the town, and US 285 in particular contributes to heavy congestion in the town center.

Despite these challenges, connectivity in the system is very high due to a well-developed grid street layout and few, if any, geographic restrictions.

That there are numerous internal connections within neighborhoods and numerous direct connections with other neighborhoods means that most trips do not necessarily require travel on an arterial road. However, lack of mobility options and serious road safety concerns due to heavy truck traffic means that most residents always travel by car, even for very short trips. Lack of multimodal transportation in an otherwise compact, well connected town exacerbates congestion and will only decrease quality of life for Pecos residents as the population continues to increase at a rapid rate. Improving multimodal transportation options, and diverting heavy truck through traffic will be important for ensuring that the anticipated population growth will not overwhelm the current infrastructure.

Compact, connected residential areas should be connected by safe pedestrian and bike infrastructure to promote active transportation for short, everyday trips. Pecos has a fair quality system of sidewalks for a Texas town of its size, but much of this sidewalk system is in disrepair or is fragmented between lots. In addition, there is no designated bicycle infrastructure or shared-use paths in Pecos, despite having

ample right-of-way to implement such infrastructure. Previous studies and community members expressed a strong interest in enhancing Pecos’s multimodal options/infrastructure.

The planned Truck Bypass Route and eventual loop will significantly impact traffic on Pecos’s thoroughfare system. While not yet funded, the bypass route seems highly likely to eventually direct truck traffic along I-20B to the north of the city, and eventually allowing for a connection to US 285 that completely bypasses the town center. This will likely notably decrease through-traffic in downtown Pecos, and spur development along the highways, particularly in the under-developed north sections of the Town. The Town will need to develop a strategy to maintain and grow its downtown economy after the bypass is built by promoting tourism and local amenities that are not dependent on commercial traffic.

Pecos made clear its need to attract visitors and support permanent residents with amenities and attractions. As part of these efforts the Town should consider adopting design standards for major thoroughfares like those proposed in the “West Pecos” development including creating community gateways and visually attractive and accessible streetscapes. Development along Pecos’s thoroughfares serves as publicity for the Town and determines the first impression of potential residents and investors.

To ensure that traffic can circulate easily throughout the planning period, the Town should do the following:

- Continue the tradition of connectivity between existing neighborhoods by adopting “West Pecos” urban design specifications city wide
- Continue to coordinate transportation and land use goals throughout the town;
- Adopt thoroughfare urban design standards;
- Create designated shared-use paths and install bicycle route markings to support cyclists;
- Establish sidewalk and bicycle network goals and prioritization criteria/scoring; and
- Collaborate with the Reeves County TxDOT office regarding the need for more pedestrian and bicycle infrastructure on US-285, I-20B and US 17

Table 7A: Ranked Problems Relating to Thoroughfares

Thoroughfare System Problems
1. Heavy truck traffic rapidly accelerates wear and tear on roads
2. Heavy truck traffic creates unsafe conditions on major thoroughfares for vulnerable users
3. Subdivision Ordinance allows blocks up to 1,200 feet in length
4. Limited pedestrian infrastructure, no public transit and no bicycle infrastructure limits transportation choices and contributes to congestion

7.2 Context: History & Community Input

Previous Studies

There are three documents which address the thoroughfare system. Starting with the most general, Positioning Pecos, the 2015 comprehensive plan, identifies current transportation conditions and issues, mostly related to heavy truck traffic. It identifies the need for a pedestrian and bicycle network, and recommends the creation a conceptual plan for a trail and bikeway system. It also addresses the proposed Truck Bypass route, which includes cost estimates for each phase, totaling \$10,237,100.

The Long-Range Transportation Plan, completed in 2019, details transportation current conditions, projected needs, planned projects and recommended projects across the town. Finally, the Planning and Engineering Study for a Proposed Truck Bypass/Loop Road Project, completed in 2018, details the need and potential design of the truck bypass. It includes a number of potential alignments, detailed phasing, sections, and a proposed timeline. (see *Regional Transportation Projects*).

Regional Transportation Projects

The Texas Department of Transportation (TxDOT) has several projects active, under development, or planned in the Pecos area.

The largest project under development and in long term planning is the Interstate is US HWY 285, which is currently rebuilt to accommodate the heavy truck traffic through the city. Additionally, Interstate 20 and FM 761 are being seal-coated in various sections. There are also multiple projects planned throughout the city over the next few years, including intersection improvements on SH 17, and improvements on FM 2119.

In addition to the ongoing and planned projects led by TxDOT, Reeves County recently commissioned a study that developed a proposal for a Truck Bypass Loop that would reroute freight traffic around the city, most notably by constructing an additional highway to the north of the city that reconnects to I-20B east of the city. The bypass would comprise a major part of a future highway loop that would circumvent the entire city. The county and TxDOT are now in negotiations to secure funding for the project.

Community Input

Residents have expressed the following desires related to Pecos's thoroughfare system:

- Plan for long-term growth projections
- Improve connectivity across I-20
 - Corridor study plans to raise I-20 through Pecos
 - Connectivity to Pecos Park
- Increase funding from TxDOT for transportation improvements to address Oil/Gas development
- Plan for West Pecos development

- Increase connectivity to west Pecos development
- Plan for “Truck Loop” coming on East Side of Pecos
 - High water table will prevent some development

Current Context of Thoroughfare Planning

Early transportation planning focused on moving the maximum number of vehicles at the maximum speed and reflected the belief that all traffic congestion can be solved by newer, wider roads. Beginning in the 1990’s, transportation engineers realized that new construction could not stay ahead of car use and that the financial cost of road and highway expansion was unsustainable. They also began to recognize the social costs of land use patterns that require car use such as isolation of the youth and elderly unable to drive or walk from their neighborhoods and dispersal of residents from the central city.

As travel became restricted to those who could drive, and as families moved out of central cities, local businesses and community activities suffered. As a result of these findings, the Institute of Transportation Engineers in cooperation with the Federal Highway Administration, the Environmental Protection Agency, and the Congress for New Urbanism worked together to incorporate alternative transportation solutions into national design standards.

In 2006, the ITE’s Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities (the CSS manual) was released.⁵⁰ Texas was the first state to formally adopt the CSS manual in department of transportation project design and review processes. The new guidelines are considered throughout this study to ensure that the Town of Pecos plans for accessibility by all methods and all populations.

7.3 Inventory & Existing Conditions

In March 2020, an inventory was conducted of Pecos’s thoroughfare system to identify and classify Pecos’s major thoroughfares. The inventory included TxDOT traffic counts (2018); local traffic generators;⁵¹ traffic control data; parking restrictions, pavement types and width; traffic speeds; infrastructure for pedestrian use and safety; and truck routes.

Designation & Classification of Thoroughfares

Pecos’s thoroughfares are identified and located on *Map 7A: Existing Thoroughfare System* and shown in *Figure 7A (next page)*.

⁵⁰ A free copy of the CSS manual can be found at <https://www.epa.gov/sites/production/files/2015-11/documents/rp036.pdf>

⁵¹ A “traffic generator” or “trip generator” is any piece of land that creates traffic by causing people to travel to the location. Trip generators that cause the most trips (generate the most traffic) typically include businesses, apartments, and schools.

The thoroughfares are classified based on TxDOT's adopted standards (described in *Appendix 7A*) and on factors such as traffic generators, 2017 TxDOT traffic counts (the most recent available for Pecos), and a field survey of roadway width and right-of-way. The Town's thoroughfare system provides residents and employers with routes from home to employment and businesses. For the most part, traffic generators which create the highest number of trips at various peak periods during the day are located on or near thoroughfares that can move heavier traffic volumes to local destinations.

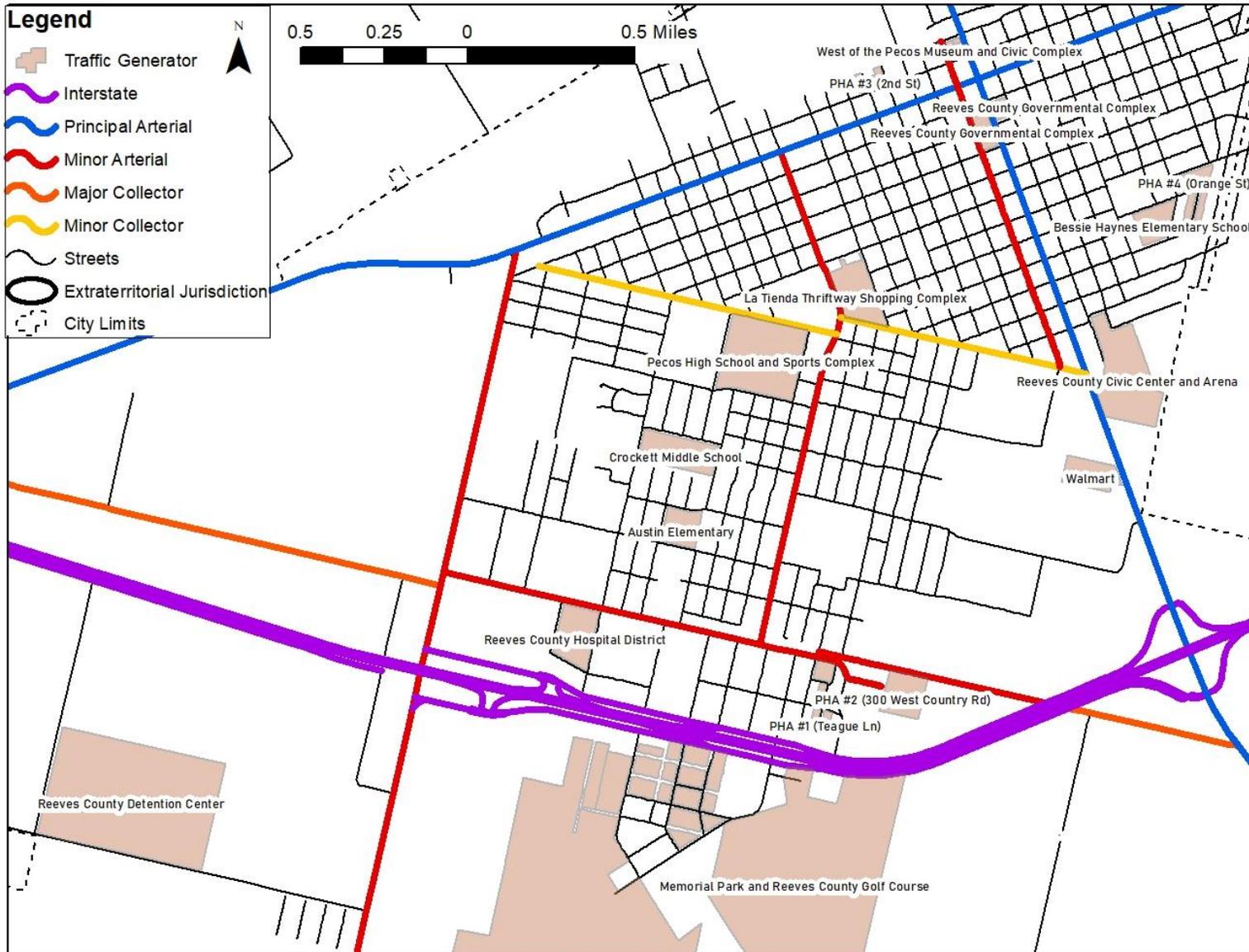


Figure 7A: Thoroughfares in Pecos

Table 7B: Functional Classifications

Road	Peak Traffic Counts	Number of Lanes	Width [1]	ROW [2]	Town Speed Limit	Traffic Generator	Sidewalks
Interstate							
Interstate 20	24,250	4	72	288	55 to 75	Reeves County Hospital, Memorial Park, PHA #1 and #2, Pecos Municipal Airport	No
Principal Arterial							
US 285	12,258	4	62	80	30 to 65	West of the Pecos Museum, Reeves County Governmental Complex, Walmart, Reeves County Civic Center	Some
W. 3 rd St (I-20B)	11,166	2	52	52	30 to 55	PHA #3, West of the Pecos Museum	Some
Minor Arterial							
S. Oak Street	N/A	2	40	76	30	West of the Pecos Museum, Reeves County Governmental Complex	Some
S. Bickley Ave (SH 17)	15,267	4	48	64	45 to 55	Reeves County Detention Center, Reeves County Hospital	No
Eddy St.	9,684	4	60	60	30 to 35	Pecos High School and Sports Complex, La Tienda Thriftway Shopping Complex	Most
Stafford Blvd.	6,528	2	28	60	35	Reeves County Hospital, PHA #1 and #2	Some
Major Collectors							
County Road 201	7,745	2	26	42	25	-	No
FM 1216	3,230	2	24	38	35 to 50	-	No
Minor Collector							
Washington St.	N/A	2	36	36	30	Pecos High School and Sports Complex, La Tienda Thriftway Shopping Complex	Some
Walthall St.	N/A	2	38	38	30	La Tienda Thriftway Shopping Complex, Reeves County Civic Center	Some

NM = Not marked

* = School Zone

[1] Width is for drive lanes; shoulders are not included

[2] Estimate *Source: GrantWorks Field Survey (2020); TxDOT (Peak Traffic Counts) at www.dot.state.tx.us/apps*

Origin & Destination / Trip Generators

Pecos has several major traffic generators, which cause traffic congestion on some of Pecos's streets at both predictable and irregular times of the day and week. Pecos's major trip generators and destinations are identified in *Table 7C: Major Traffic Generators* and are illustrated on *Map 7A: Existing Thoroughfare System*. The methodology of trip generation calculations is explained in *Appendix 7A*.

Table 7C: Major Traffic Generators

Site	Units	Unit Type	Trip Rate Basis	Streets Effected	Avg. Daily Traffic
PHA #1 (Teague Ln)	44	DU	6.65	Meadowbrook Dr, Sage St, S Cactus St, Stafford Blvd	293
PHA #2 (300 West Country Rd)	56	DU	6.65	West Country Rd	372
PHA #3 (2nd St)	30	DU	6.65	W. 2nd St.	200
PHA #4 (Orange St)	56	DU	6.65	E. 10th St, Orange St, E 11th St.	372
Reeves County Civic Complex	99	1,000 SF	27.92	Hwy 285, S. Oak St.	2,764
West of the Pecos Museum and Civic Complex	38	1,000 SF	5.1	Hwy 285, S. Oak St.	194
Pecos Municipal Airport	65	Flights/Day	1.97	Moore St	65
Pecos Veterans Memorial Park and Reeves County Golf Course	205	Acres	4.57	Interstate 20, Country Club Dr.	937
Reeves County Hospital District	504	1,000 SF	5	Stafford Blvd, Interstate 20 Service Rd.	2,515
Reeves County Detention Center	600	Employees	1.8	CR 204	1,080
Reeves County Civic Center and Buck-Jackson Rodeo - Arena	28	Acres	33.33	US 285	933
Walmart	57	1,000 SF	102.24	US 285	5,828
La Tienda Thriftway and Adjacent Shopping Complex	116	1,000 SF	102.24	S. Eddy St.	11,860
Pecos High School and Sports Complex	696	Students	1.71	W. Jackson St, W. Washington St., S. Iowa St., S. Park St.	1,190
Austin Elementary	671	Students	1.29	Normandy St., W. Veterans Blvd, Nebraska St.	866
Crockett Middle School	594	Students	1.62	S. Missouri St, W. Monroe St.	962
Bessie Haynes Elementary School	513	Students	1.29	E. 11 th St, Mesquite St., E 12 th St, S. Locust St.	664

DU = Dwelling Unit
SF = Square feet

Source: GrantWorks Field Survey, 2020, including facility size (approximate from building footprint); Institute of Transportation Engineers, 9th edition Trip Generation Report; School size from 2016-2017 TEA AEIS School Campus Reports

Storm Drainage

Curb and gutter can be the most effective way to capture and direct run off during heavy rainfall and prevent deterioration at the edges of street pavement; however, it is very expensive to construct. Storm drainage around Pecos's thoroughfares consists of both curb and gutter and culvert/drainage channels.

The drainage system elements that serve the Town of Pecos are controlled by three (3) separate entities: the Texas Department of Transportation (TxDOT), Reeves County, and the Town of Pecos. The Town is responsible for minor roadside ditch and culvert maintenance and major structures that are located within the city limits on roads and properties maintained by the Town. Reeves County is responsible for maintaining the drainage channels in the extraterritorial jurisdiction (ETJ) that are not located on the US highways or on farm-to-market roads, which are maintained by TxDOT.

Traffic Control System

Traffic is controlled by traffic lights, STOP signs, YIELD signs, and restrictions on parking. Pecos's traffic control infrastructure functions adequately and is generally in scale with the city size.

- Traffic Lights. Pecos has seven four-way traffic lights located on 4th street (I-20B), US 285, and S Eddy St.
- STOP/YIELD Signs. Traffic flow in Pecos is regulated primarily through STOP and YIELD signs. The study found 830 STOP signs and 119 YIELD signs in the city limits. There are 12 additional STOP and 3 YIELD signs in the ETJ.
- Parking Restrictions. The study did not find any parking restriction signs.
- Traffic Speeds. TxDOT establishes traffic speeds along state highways and farm-to-market roads including I-20, I-20B, SH 17 and FM 761. Within the city limits, the speed limit on I-20 is 55 to 75 mph, US 285 ranges from 30 to 65 mph, the speed limit on SH 17 is 45 to 65 mph, the speed limit on FM 761 (S Eddy St) ranges from 35-45 mph. The speed limit on most local streets is 30 mph and 20 mph around schools during school hours.

Truck Routes & Traffic

“Truck Routes” and “No Trucks” signs are posted in several areas of Pecos. *Figure 7B* illustrates the local truck route in Pecos based on the location of these signs. Trucks are generally prohibited from entering neighborhoods. The roads where trucks are permitted are farm-to-market roads, state highways and the I20 Interstate.

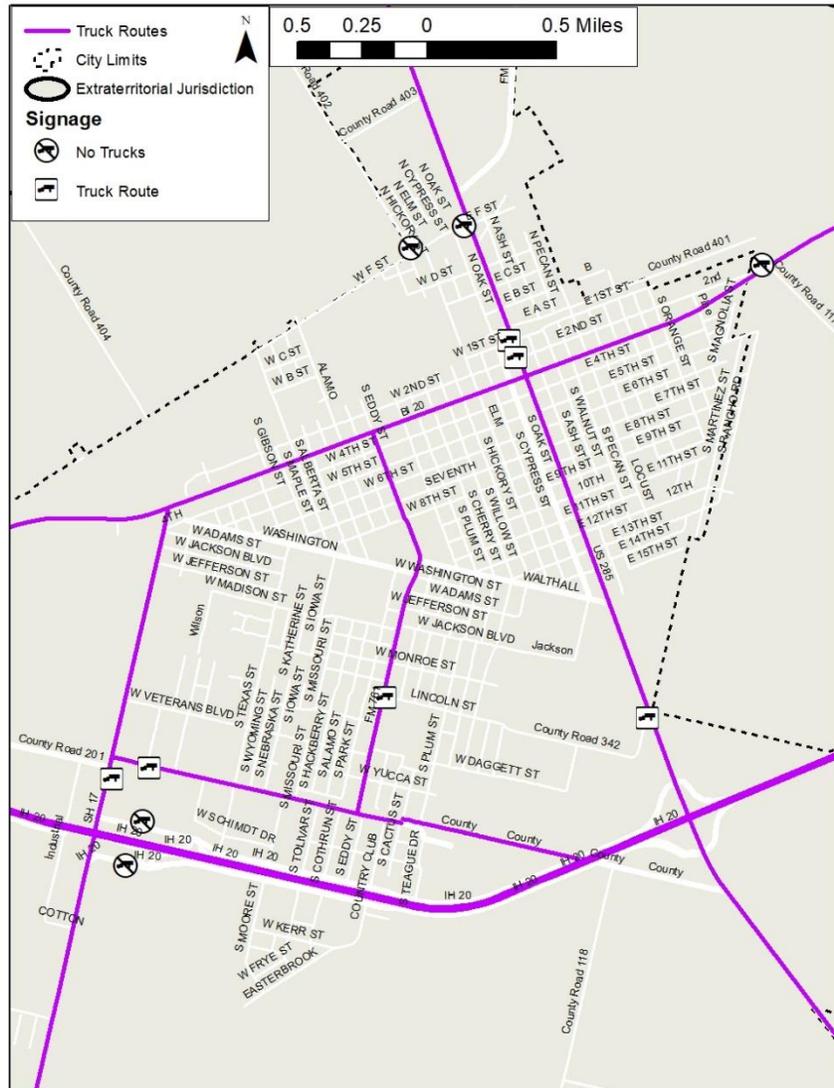


Figure 7B: Local Truck Route

Public Transit

There is currently no public transit within Pecos, or regional transit between other major cities in the area. There is one Greyhound Bus Station, a private bus company, located on Stafford Blvd. in South Pecos.

Greyhound offers transportation along Interstate 20 and 10 between El Paso and Dallas, with stops in major towns and cities along the route.

System Connectivity

System connectivity refers to how transportation systems link users with the places they need to go. Areas with low connectivity are characterized by long blocks, many dead-ends, and few connections between neighborhoods. Residents of such areas frequently depend on arterials to enter or exit their neighborhoods. In contrast, areas with high connectivity are characterized by short blocks and many connections between local neighborhood streets and interlocal arterial/collector streets. Such areas provide residents with multiple routes between locations, so residents are not dependent on arterials.

Figure 7C illustrates how differing street network types impact a system's ability to circulate vehicles. For example, a high number of dead-end streets - as shown in the cul-de-sac networks in *Figure 7C* - are known to increase congestion and speed road deterioration. Grid-based networks facilitate ease of access and movement, but also require a larger amount of land use for streets and, as a result, higher maintenance costs. Curvilinear loop networks offer an option for maintaining connectivity while reducing the land area required for streets (*see Figure 7C*).

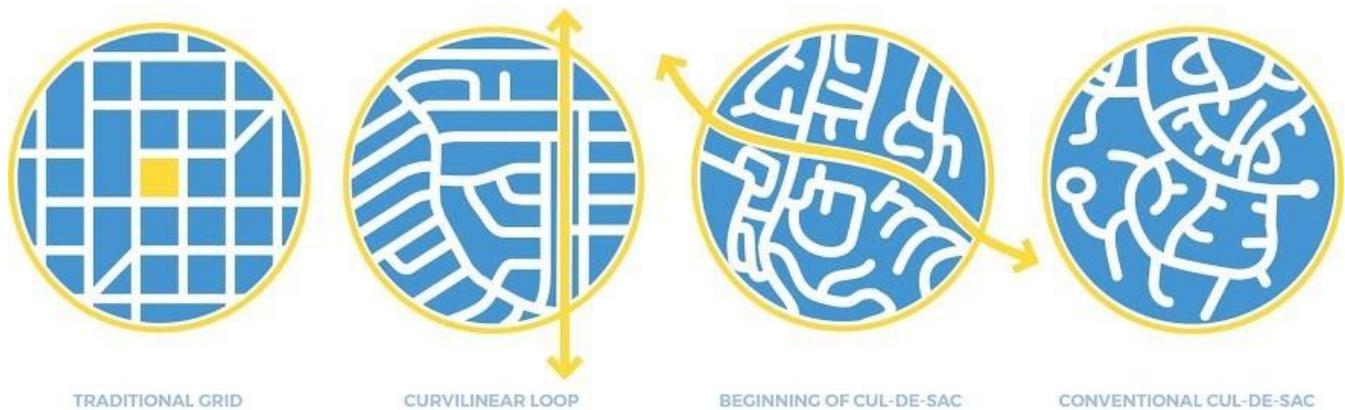


Figure 7C: Street Network Examples⁵²

⁵² Source: <https://www.cnu.org/our-projects/street-networks/street-networks-101>

Table 7D outlines the advantages and disadvantages of high and low connectivity in a transportation system.

Table 7D: Advantages of High vs. Low Connectivity

High Connectivity (Grid System)	Low Connectivity (Conventional System)
<ul style="list-style-type: none"> ■ Dispersion of traffic lowers congestion on major roads ■ Reduced drive time (including for emergency and utility vehicles) ■ Enables walking and bicycling ■ Block structure enables land use to evolve and adapt over time (development flexibility) 	<ul style="list-style-type: none"> ■ Lower traffic volumes on local streets ■ More very low volume local streets and cul-de-sacs, which are desirable to some residents ■ Depending on street widths/lot sizes, can use less pavement/land

As Figure 7D (next page) illustrates, most areas of Pecos’s street network align with principles of high connectivity. Thanks to Pecos’s adherence to a strong grid system, and the lack of geographic limitations, the land development pattern has created a connected transportation system throughout the town that lessens the city’s reliance on major roads for local traffic. Local streets constructed in a grid of 300 - to 600-foot blocks disperse traffic and allow for multiple paths to destinations.

However, development outside these limited areas is far less connected. Challenges for connectivity include very long block lengths (up to 1,200 feet) and numerous dead-end streets. Some new residential areas in Pecos have few internal connections and very few direct connections with other neighborhoods. As a result, in some areas, driver trips in Pecos require travel on an arterial road, increasing congestion. Poor connectivity contributes to the congestion at various thoroughfares such as Stafford Ave, SH 17, and US 285. (see Section 8.4.1 – Updating Traffic Control Infrastructure).

As Figure 7D (next page) also shows, in some locations, reduced connectivity within and between areas of Pecos results from incomplete build-out of the road network (see unbuilt right-of-way). However, limited connectivity most often results from current land use, particularly large-scale uses like industrial development, schools, and other institutional uses, as well as railroad right-of-way and large developments such as the Pecos Municipal Airport. Strategic thinking about placement of large-scale uses and requiring shorter block lengths would help reduce the impact of similar, future uses on connectivity.

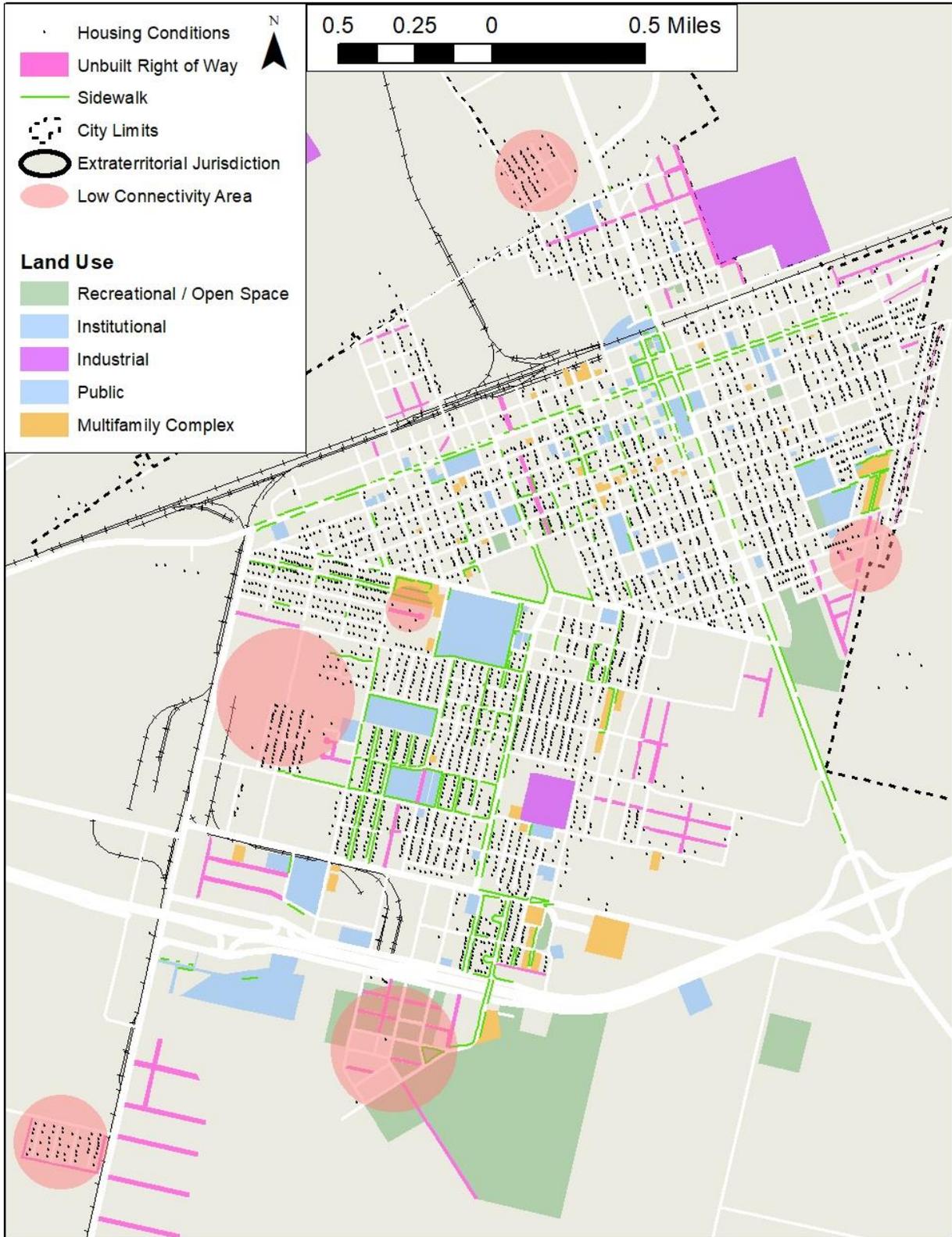


Figure 7D: Low-connectivity Areas

Pedestrian Facilities

There are approximately 21.3 miles of sidewalks in the city of Pecos (see green in *Figure 7E*). Additionally, Pecos’s pedestrian system includes approximately 46 crosswalks, most of which are concentrated around the historic downtown and schools. There are a number of places where crosswalks once were in service but are now too deteriorated to be considered active. (see purple in *Figure 7E*).

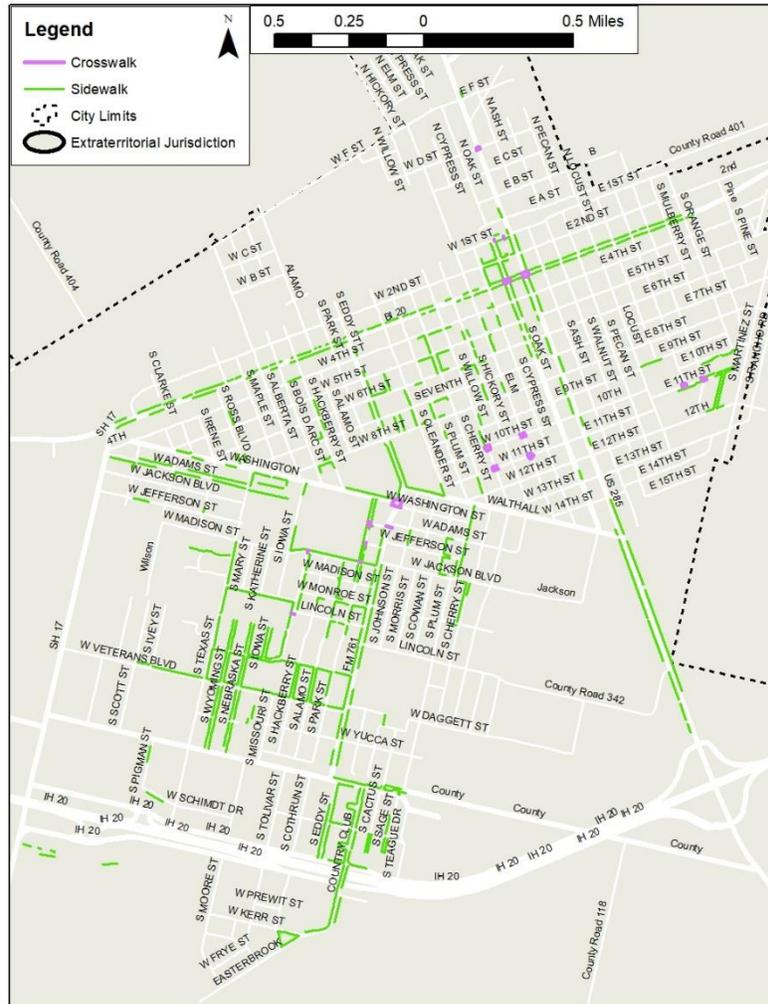


Figure 7E: Pecos Sidewalk Network

Most sidewalks are in good to fair condition. Sidewalks downtown are in good condition, but need to be connected to other sections of the network to be more useful. Sidewalks along US 285 are very high quality and in good condition. Much of the new development in South Pecos includes new sidewalks in good condition. The sidewalks in the older residential areas are deteriorated and inconsistent. Notably, there are very few sidewalks in East or North Pecos.

There are some high-quality crosswalks in Pecos, particularly near schools or retail areas. One particularly dangerous crosswalk located at D Street will require a Pedestrian Activated Beacon or a

traffic light to be effective and safe. As *Figure 7F* shows, pedestrians at this intersection have little to no chance of safely crossing US 285 during peak hours.



Figure 7F: Dangerous Crosswalk and No Sidewalk

Gaps in the sidewalk network further limit mobility; the sidewalk may “disappear” for one or more blocks (see *Figure 7E, previous page*). This may result from the commonly piecemeal approach to sidewalk development in established neighborhoods, wide and/or frequent curb cuts (such as for driveways), as well as deterioration of a previous sidewalk. At the block level, gaps in the sidewalk negatively impact accessibility and use. At the network level, large gaps between sidewalks limit the system’s ability to accommodate users for longer trips and thereby to provide a viable alternative to driving.

Bicycle Facilities

There are no bike lanes or marked bicycle share right-of-way markings, etc. in the town of Pecos. Some roads with wide shoulders and/or low traffic volume are suitable for cycling, and could easily be designated as bicycle routes with signage and paint. The planned West Pecos development includes bicycling facilities in its preliminary designs and could serve as a model for facilities elsewhere in the city. Additionally, future hike and bike trails would serve a double purpose as both recreational and transportation infrastructure.

Emergency Routes

TxDOT designates specific routes for safe and timely evacuation of coastal areas in the event of a hurricane. TxDOT may use *contraflow* (reversal of inbound lanes to outbound lanes) or *evaculanes* (use

of the road's shoulder) to facilitate evacuation along these regional routes. As Pecos is sufficiently far away from the Gulf Coast, there are no officially designated evacuation routes in Pecos. However, the Town should still consider developing emergency contingency plans, including designated evacuation routes. These routes typically follow interstate and state highways.

Additionally, a well-connected street system can greatly facilitate the safe and rapid movements of people away from a threat, as well as the swift delivery of assistance and supplies. *Section 8.4.3 – System Connectivity (above)* further discusses system connectivity and identifies low-connectivity areas in Pecos.

7.4 Key Thoroughfare Considerations

Pecos's thoroughfare system should meet the local and regional needs of employers and schools, as well as ensure that local trips are easy and safe. Residents and employees should also have opportunities to make some trips via walking or biking. The Town of Pecos should consider the following areas when meeting the Town's circulation goals: traffic control infrastructure, connectivity, accessibility, and appeal.

7.4.1 Updating Traffic Control Infrastructure

An intersection where traffic flow is not properly regulated increases the potential hazards to pedestrians and motorists but unwarranted traffic control devices can lead to unintended consequences. In the case of STOP signs, unwarranted signs can lead to increased speed between signs and/or ignored signs.

The Federal Highway Administration's standards for traffic control devices are outlined in the Manual on Uniform Traffic Control Devices (MUTCD). After appropriate consideration by an engineer, the Town of Pecos should consider the following improvements to the existing traffic control system.

Additional Traffic Lights. Based on traffic volumes, accident reports, development patterns and fieldwork observations, the following intersections would benefit from traffic lights to improve safety:

- E. F St. and US 285
- E. 8th St. and US 285
- Walthall and US 285
- I-20B and SH 17
- Stafford Ave. and SH 17
- Stafford Ave. and S Eddy St.

Most of these intersections include roads that are managed by TxDOT. If the Town decides that a traffic light could alleviate vehicle conflicts at these and/or other intersections on TxDOT roads, TxDOT's policy allows for a *traffic signal warrant analysis* requested by the community. A traffic signal warrant analysis consists of documenting and quantifying conditions such as vehicular volume, pedestrian volume, accidents, progression, and delay at a proposed site. The data gathered at the site is then compared to criteria established by the agency to determine if a traffic light will be installed. A traffic signal warrant analysis is free to the community.

Truck Routes. Truck traffic is generally limited to major thoroughfares in Pecos, but there are few official limitations on truck traffic through neighborhoods. (see *Section 8.3-Truck Routes & Traffic*). Truck traffic can bring a significant amount of money to the local economy through gas and food purchases and through wages to area residents. To avoid paying the high maintenance costs of truck traffic on local streets, the Town should consider the availability of truck routes when siting industrial and commercial areas through future land use and zoning. The Texas Transportation Code §621.303 gives municipalities the authority to regulate truck traffic on city streets, and §623.072 covers the designation of specific routes. The Town should also consider potential economic effects of the planned Truck Bypass route, which may drive development along the highway and decrease economic activity in the traditional Central Business District.

Traffic Speeds. The Town of Pecos should consider lowering speed limits on thoroughfares and local streets. Traffic speeds on thoroughfares in Pecos range from 75 mph to 25 mph and the speed limit on most local roads is 30 mph. Due to the high volume of truck traffic in Pecos, this plan recommends a top speed of 35 on boulevard arterials and a speed limit of 25 mph on local streets. Higher speed limits decrease a driver's peripheral vision and require longer stop times. As a result, accidents are more common and the consequences of accidents, particularly for pedestrians and cyclists, more severe. In addition to increasing safety for all road users, lower speeds can support economic development as slower drivers with increased peripheral vision are more likely to notice businesses and other local stops. Most of Pecos's thoroughfares are county- or state-owned, so the Town would have to appeal to the appropriate agency for speed limit changes on those roads. In the case of US 285, the reduced traffic following completion of the truck-bypass may make a speed reduction more feasible.

Pedestrian & Bicycle Infrastructure: Pecos residents would like their city to be more walkable. In addition to constructing additional sidewalks/trails (discussed in next section), the Town of Pecos should consider installing additional crosswalks at the following locations to support pedestrian safety in the existing sidewalk network:

- 1st and US 285
- 8th St and US 285
- Walthall and US 285
- S Eddy and Walthall
- Washington and Hackberry

Pecos residents would also like to see more bike-friendly areas in their city. To do this, the Town should adopt an Active Transportation Masterplan. In the short term, the Town of Pecos should add safety features to roads with sufficient shoulders to accommodate cyclists. Several of these roads are owned and operated by TxDOT or Reeves County, so the Town would need to reach out the Reeves District TxDOT office about desired/proposed improvements. However, the Town can start improving bike safety

on Town-maintained roads, like Stafford Ave and Washington Street, by adding buffered bicycle lanes or separated bicycle paths, as seen below.

This plan includes a conceptual shared-use path plan that proposes a network of protected pedestrian and bicycle paths throughout the town, connecting major destinations such as schools, downtown, and parks. This plan could be adopted as part of a future Active Transportation Masterplan.



Figure 7H: Examples of a protected crosswalk and a protected two-way bicycle path

7.4.2 Improving Connectivity

Limited road network connectivity presents a major challenge for fostering safe and active neighborhoods in Pecos. Block lengths in excess of 550 feet encourage speeding and, related, disincentivize pedestrian travel. Community members would like improved connections between neighborhoods and would also like more options for travel such as walking, cycling, and golf carts. The Town of Pecos can support enhanced connectivity and travel choices by pursuing the following strategies:

- (a) Coordinate transportation and land use goals
- (b) Update subdivision policies to support high connectivity in new development
- (c) Pursue opportunities to increase road network connectivity in existing neighborhoods
- (d) Prioritize pedestrian and bicycle infrastructure to address network gaps

Coordinate Transportation & Land Use Goals

Transportation and land use are closely linked. Land use impacts the ability to circulate traffic, and the type of facilities needed to accommodate traffic. For example, as *Figure 7I* depicts, the typical suburban housing development design is often less efficient in terms of mobility, especially for residents on foot. Because of the 'lollipop' street network layout, a one-minute walk becomes a 10-minute walk or, without infrastructure to support non-motorized travel such as sidewalks or bike lanes, travelers may only feel safe driving, leading to congestion.

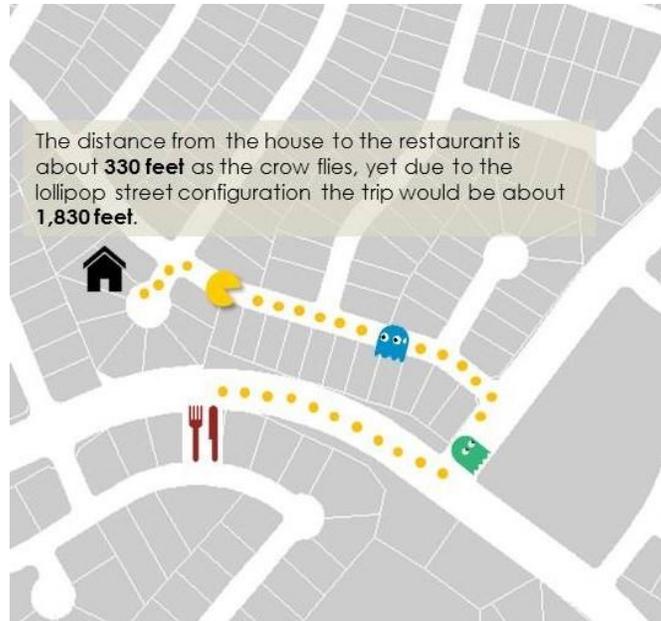


Figure 7I: Land Use Impacts Transportation

Because land use patterns and design have such a significant impact on traffic flow and mobility, coordination between transportation goals and land use goals is essential.

Update Subdivision Policies to Support High Connectivity in New Development

Improving street network connectivity is frequently a piecemeal or incremental process. Often the most effective strategies to improve connectivity occur through the subdivision process.

At a minimum Pecos's subdivision ordinance should:

- Require shorter maximum block lengths (not to exceed 600 feet);
- Require connections to existing streets;
- Require multiple exits from new residential development, ideally in all directions; and
- Limit cul-de-sacs and dead-end streets to places where topography restricts through streets

The Town of Pecos should also consider adopting the following, more extensive connectivity policies:

Road Spacing Recommendations. Road spacing recommendations establish the preferred maximum distance between various street types, such as the distance between two arterials or the distance between arterial and collector roads (see *Figure 7J*). Establishing recommended road spacing requirements for new subdivisions would support enhanced external connectivity:

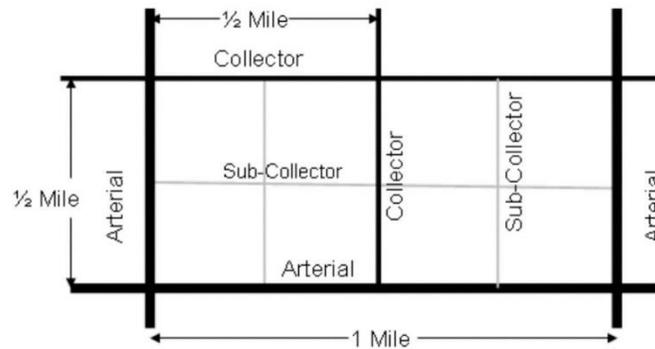


Figure 7J: Example Road Spacing Recommendations⁵³

Connectivity Index Requirements. The Connectivity Index measures the number of segments between intersections relative to the number of intersections (Ewing, 1996). A higher index score indicates greater connectivity and, therefore, more route choices for travelers. A lower index score indicates less connectivity and route choice, often as a result of dead-end streets (see *Figure 7K*). Intersection points can also include pedestrian and bicycle connections. Establishing minimum Connectivity Index scores for new subdivisions would support enhanced internal connectivity.

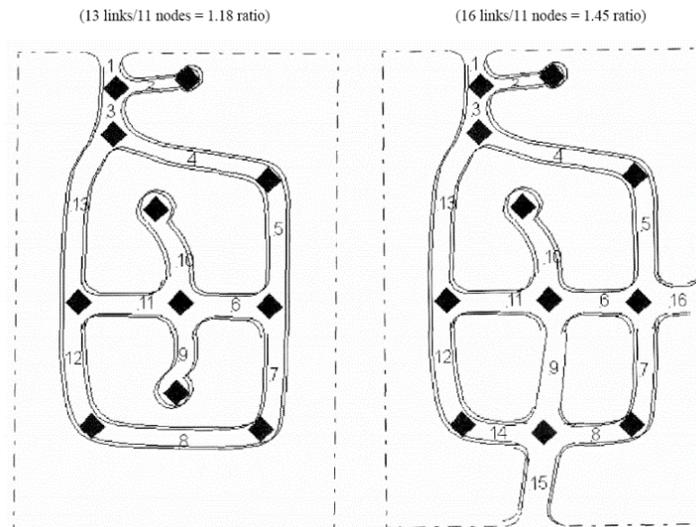


Figure 7K: Connectivity Index Score Explanation⁵⁴

⁵³ Kentucky Transportation Cabinet, Division of Planning (March 2009). Street Connectivity Zoning and Subdivision Model Ordinance
⁵⁴ Kentucky Transportation Cabinet, Division of Planning (March 2009). Street Connectivity Zoning and Subdivision Model Ordinance

The State of Kentucky's Connectivity Zoning & Model Subdivision Ordinance, included in the *Digital Appendix*, further explains and elaborates these and other policies to ensure external and internal connectivity.

Pursue Opportunities to Increase Road Network Connectivity in Existing Neighborhoods

While regulating new developments may be the most effective strategy for improving connectivity, the Town of Pecos should also pursue potential opportunities to improve connectivity in existing neighborhoods.

Some of Pecos's newer neighborhoods face challenges with very long blocks (up to 1,200 feet). These blocks are few and far between, however the Town should not let the new developments start a precedent. The Town should amend the Subdivision Ordinance to require shorter blocks, and continue the strong precedent set by the town's older developments and the West Pecos Development.

The Town of Pecos should use strategic land acquisition and Eminent Domain – the right of the government to use just compensation to acquire private property for public use – to acquire additional land and build out a grid road network. In addition to the typical acquisition process for public right-of-way, the Town should consider opportunities to incentivize voluntary conveyance of property to the Town for demolition (in the case of vacant, substandard housing) and or quitclaim deeds for absentee land owners.

Invest in Pedestrian & Bicycle Infrastructure to Increase Mobility

Residents expressed a strong interest in making Pecos safer for pedestrians and cyclists. Residents want more sidewalks and improved connections between public facilities for a variety of modes of transportation, and away from the heavy truck traffic of major thoroughfares. The West Pecos development proposal includes high quality urban design standards that could be adopted throughout the Town.

Sidewalk installation can be prohibitively expensive for smaller communities like Pecos; the average cost for one mile of concrete sidewalk is approximately \$16,900.⁵⁵ Determining where and when to install a sidewalk can present a major challenge as a result. To help guide these decisions, the Town of Pecos should develop sidewalk network goals and prioritization criteria/scoring. Examples of sidewalk improvement policies are included in the *Digital Appendix* for this plan.

Sidewalk network goals and policies are best developed through a master plan which should include:

- Assessment of existing sidewalk network and conditions

⁵⁵ http://www.pedbikeinfo.org/cms/downloads/Countermeasure_Costs_Summary_Oct2013.pdf

- Goals and policies for maintenance/improvement of the existing network
- Goals and priorities for additional network development
- Phased improvements according the established goals and priorities
- Potential funding sources

Given Pecos’s flat topography, adding comfortable bike lanes, separated shared-use paths and convenient bike parking could encourage both novice and more experienced bicyclists to ride for both transportation and recreation. Residents would like to see safe pedestrian and bicycle facilities away from the heavy truck traffic on US 285 and I-20B. Potential additional shared pedestrian/bike routes should be incorporated in the active transportation master plan (mentioned above).

7.4.3 Enhancing Thoroughfare Accessibility & Appeal

The Town of Pecos should consider the following strategies to support accessible and appealing thoroughfare design:

- (a) Adopt thoroughfare design standards that support safe bicycle and pedestrian use
- (b) Pair system capacity increases with transportation alternatives & safety improvements
- (c) Adopt design standards for development along major thoroughfares

Conduct Transit Demand and Feasibility Study in Partnership with Reeves County

The Pecos Long Range Transportation Plan recommends that the Town partner with Reeves County to identify potential transit stops, routes and demand. Based on the rapid population growth of Pecos and relatively dense development, planning for a future transit system is recommended to improve affordability and reduce congestion. Additionally, a regional transit system between major cities in the area would support tourism and recreational goals of the Town.

When planning a transit system, it is important to take into account future land use patterns, commute routes, housing density, and social equity. Studies have shown that frequency and reliability are typically the most important characteristics to attract a stable ridership. Additionally, when budgeting for a transit system, it is important to account for the secondary benefits of public transit, such as economic development, social welfare, improved air-quality, etc., rather than focusing on direct profitability of the service itself.

Adopt Thoroughfare Design Standards that Support Bicycle & Pedestrian Use

Thoroughfare design standards describe the dimensions, layout, speed limit, amenities, and use of major roads. They are not construction standards, which regulate building material, pavement depth, testing procedures, and similar engineering requirements.

Based on residents' desires to increase the attractiveness of Pecos's thoroughfares and to improve walking and bicycling infrastructure, the Town should adopt the Context Sensitive Solutions (CSS) manual standards for the construction of new thoroughfares and the redevelopment of existing thoroughfares. The CSS manual preserves long-standing U.S. Department of Transportation functional street classifications, which include street standards based on vehicle speed and sight distance. To those standards, it adds a new 'thoroughfare type' definition that incorporates multi-modal design standards such as bicycle lanes, medians, and sidewalks which were previously not included.

The CSS manual describes needed facility standards in detail and includes information on construction standards (e.g. sidewalk and lane width). The following facility standards are included in *Table 7F (page 8-26)*:

- Number of through lanes. The number of lanes effect vehicle speed, traffic volume, traffic noise, and the safety of crossing pedestrians.
- Operating speed. Speed limits effect vehicle speed, traffic volume, traffic noise, and the safety of crossing pedestrians.
- Sidewalks. Sidewalks provide safe pedestrian routes. Detailed information on sidewalk standards are available from Safe Routes to School (<http://guide.saferoutesinfo.org>) and WalkingInfo.org (www.walkinginfo.org)
- Median. Medians slow traffic and provide safe stopping points for pedestrians crossing the street. They can also be used to plant trees, which improve aesthetics, slow traffic, reduce the heat-island effect, and reduce wear on the streets from sun and rain. Detailed information on median standards is available through the sidewalk resource sites listed above.
- Bicycle Lanes/Shoulders. Bicycle lanes provide safer routes for bicycle traffic. Detailed information on bicycle lane standards is available from www.bicyclinginfo.org
- On-street parking. On-street parking slows traffic, provides a buffer between moving traffic and pedestrians, and provides extra parking capacity.
- Landscaping. Landscaping (e.g. flowers, trees, screening walls) provides aesthetic improvements, buffers pedestrians from moving traffic, and can help slow traffic. Landscaping is not required for single-family, residential properties.
- Block length. Shorter block lengths (200-400 feet) are most conducive to pedestrian traffic and provide shorter routes for automobiles. Blocks over 660 feet in length discourage people from walking.
- Freight movement. Truck traffic discourages pedestrians.

Table 7E (next page) lists specific thoroughfare characteristics and design standards, modified slightly from the CSS manual, to serve Pecos's character and local conditions. *Table 7F (page 8-26)* suggests improvements that would be needed to bring Pecos's thoroughfares up to the standards listed.

The original CSS standards and definitions are in *Appendix 7B*. On State roads, the Town will need to work with TxDOT to meet these standards. On local roads, the Town will need to amend its subdivision ordinance to require developers to meet these standards in new construction.

Table 7E: CSS Thoroughfare Type Design Standards

Type* (Classification)	Number of Through Lanes	Operating Speed (mph)	Sidewalks	Median	Bicycle Lanes/ Shoulders	On-street parking	Landscaping	Freight Movement
Expressway	4 to 6	45-65	No	Yes	No	No	Optional	Regional Truck Route
Rural Highway (Arterial)	4 to 6	45+	Optional	Optional	Yes	No	Optional	Regional Truck Route
Boulevard (Arterial)	4 to 6	25-35	Yes	Yes	Yes	Optional	Yes	Regional Truck Route
Avenue (Arterial/ Collector)	2 to 4	25-35	Yes	Optional	Yes	Optional	Yes	Local Truck Route
Rural Road	2	25-35	No	No	Shared or Shoulder	No	Optional	Local Deliveries Only
Street (Local)	2	25	Optional	No	Optional	Optional	Optional	Local Deliveries Only

*If type is located in the CBD or other area where walking or biking is desired, speed limits may be lowered, sidewalks and on-street parking may be required, and maximum block length lowered

Source: Adapted from field survey, *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*. Institute of Transportation Engineers, 2010, pg. 54 and *Complete Streets Best Practices*, Sacramento Transportation and Air Quality Collaborative, p. 10 as accessed on the web in 2012 at <http://www.completestreets.org/webdocs/resources/cs-bestpractices-sacramento.pdf>

Table 7F: Recommended Thoroughfare Improvements

Road	Current Functional Classification	Future Thoroughfare Type	Needed Additional to Achieve Thoroughfare Type Standards
Interstate 20	Interstate	Interstate	-
US 285	Principal Arterial	Boulevard	Sidewalks; Bike lane, Median, landscaping
W. 3 rd St (I-20B)	Principal Arterial	Avenue	Additional sidewalks, Bike lane, landscaping
S. Oak Street	Minor Arterial	Street	Sidewalks; Bike lane
S. Bickley Ave (SH 17)	Minor Arterial	Avenue	Sidewalks; Bike lane, landscaping, Median
Eddy St.	Minor Arterial	Avenue	Sidewalks, Bike lane; Median, landscaping
Stafford Blvd.	Minor Arterial	Avenue	Sidewalks, Bike path; landscaping
County Road 201	Major Collector	Street	Sidewalks
FM 1216	Major Collector	Avenue	Shoulders
Washington St.	Minor Collector	Street	Sidewalks; Bike lane; landscaping
Walthall St.	Minor Collector	Street	Sidewalks; Bike lane; landscaping

Pair System Capacity Increases with Transportation Alternatives & Safety Improvements

Road widening is a common strategy to ease congestion/increase road capacity. However, it is important to keep in mind potential unintended consequences. Road widening without additional transportation system improvements is notorious for failing to create substantive improvements in levels of service (LOS) over the long-term. The amount of driving in an area invariably increases to fill available capacity, because the better the LOS, the worse our driving habits (e.g. driving at rush hour, making many separate trips instead of one coordinated trip, driving instead of walking even for short trips, etc.). While road widening is necessary in some cases, road widening will not solve congestion problems once an area's population has grown past a certain point. Capacity increase meets a point of diminishing returns against infrastructure and maintenance costs, less efficient use of land (sprawl), and reduced travel choice options (walking, bicycling).

Table 7G lists some of the pros and cons of road widening.

Table 7G: Pros & Cons of Road Widening

Pros	Cons
<ul style="list-style-type: none"> ▪ Higher maximum road capacity ▪ Short-term decrease in pollution ▪ Short-term decongestion 	<ul style="list-style-type: none"> ▪ Little change in long-term congestion ▪ Negative impact on non-automobile users ▪ Negative impact on area's appearance ▪ More expensive construction and maintenance; associated pollution ▪ Higher ambient temperature (heat island effect) and associated pollution ▪ More impermeable surface, which increases drainage problems/ infrastructure costs

While some engineers and planners advocate road widening for safety reasons, several parameters can make a road more or less safe. Features that can increase safety include: slower speeds, narrower lanes, medians, turn lanes, shoulders, lighting, and signals. The various features impact each other (e.g. wider lanes lead to speeding), so no single feature should be considered in isolation.

Improvements to transportation infrastructure other than or in addition to road widening include:

- Pedestrian improvements (sidewalks, street trees, benches, raised road median, crosswalks at highway intersection)
- Bicycle improvements (wide shoulder/signage or facility building)
- Safety features (speed bumps, designated truck routes, speed limit signs, flashing lights)

- Subdivisions and commercial/residential developments designed for increased connectivity (discussed above)

Pedestrian improvements such as medians can also be used to slow traffic in locations where speeding is a problem. While a larger population and increased economic activity will increase road congestion, incorporating alternative transportation infrastructure and land development patterns into the Town’s development regulations will offset traffic problems.

Adopt Design Standards for Development Along Major Thoroughfares

Development along Pecos’s thoroughfares serves as publicity for the city and determines the first impression of potential residents and investors. For that reason, thoroughfare fronting development should project economic success, cooperation between landowners, and local investment. The addition of bicycle and pedestrian facilities, including street trees, sidewalks, bicycle lanes, medians, and similar infrastructure will contribute to the aesthetic appeal of Pecos’s thoroughfares.

Figure 7L shows building setbacks and orientation along the central portion of one of Pecos’s arterials – Eddy Street. This section of Eddy Street is densely developed and there are few vacant lots. These features project an image of success. However, the variation in building setbacks (from 10-to-300 feet), the poor condition of some of the buildings, the lack of façade or screening standards, and the large distance between some buildings undermine that image.



Figure 7L: Building Setbacks & Orientation Along Temple Street

Two streets in Dallas and Lubbock illustrate important features of thoroughfare design (see *Figures 8M and 8N, next page*). The Dallas and Lubbock street sections have several similarities: the buildings in both locations have masonry/hardwood/cement facades, plenty of windows, and neither street boasts amenities such as benches, decorative lighting, or underground telephone wires. Nevertheless, the basic differences in layout and maintenance give the Dallas street a much more appealing aesthetic than the Lubbock street. Reasons for the difference include:

Oak Lawn (Dallas)	34 th St (Lubbock)
<ul style="list-style-type: none"> ■ 4 traffic lanes ■ Few, minimally sized parking lot entrances ■ Wide, well-maintained sidewalk ■ Deep awning and walkway in strip-mall ■ Vegetation along street ■ Well maintained streets and buildings 	<ul style="list-style-type: none"> ■ 5 traffic lanes ■ Frequent, wide parking lot entrances ■ Narrow, poorly maintained sidewalk ■ Shallow awnings and walkway in strip-mall ■ No vegetation along street ■ Poorly maintained streets and buildings



Figure 7M: Oak Lawn, Dallas

Auto-oriented, pedestrian accessible development (Source: Google Earth Street View)



Figure 7N: 34th St, Lubbock

Auto-oriented development with limited pedestrian features (narrow sidewalk on right, wide driveways, no trees in right of way) (Source: Google Earth Street View)

As illustrated, the design elements that create appealing streetscapes include decisions about cross-property layout such as building widths, parking location and driveway widths, and building setbacks. These elements do not impact developer expense but instead depend on the city taking a role in establishing standards and enforcing those standards as new buildings are built. Other design elements, such as awnings and vegetation, are fairly low-cost methods for improving aesthetics and the experience of visitors. Additional design elements, such as sidewalks, do increase costs and may not be suitable along all thoroughfare sections. Municipal representatives, landowners, and local organizations working on economic development would need to decide which requirements return the greatest cost benefit in which locations.

The Town of Pecos should also consider strengthening standards for lot layout and landscaping as well as building orientation and design, most often regulated through a zoning ordinance. Amending what the Town requires and encourages of development on its thoroughfares would, over time, contribute to local efforts to increase residents' pride and encourage new business and population growth.

7.5 Implementation Plan

The Implementation Plan organizes the action items recommended to address each issue identified in the above sections into a timeline for completion. The actions are prioritized by date.

Table 7H: Implementation Plan: 2020-2030

Goals & Objectives	Activity Year(s)			Lead Organization	Cost Estimate	Funding Sources
	2020-2023	2024-2026	2027-2030			
Goal 8.1 Develop a thoroughfare system that accommodates pedestrians and bicyclists						
Repave existing sidewalks in deteriorated condition and begin ADA Transition Plan improvements	X	X	X	Town	Variable	GEN, SRTS, THC, TxDOT
Ensure that all future upgrades to thoroughfares within the city limits are designed to ITE CSS standards with provisions for sidewalks and bike lanes or shoulders	X	X	X	Town, TxDOT	Variable	GEN, TxDOT
Update the Zoning Ordinance with stronger standards for thoroughfare-fronting development	X			Town	<\$2,000 (legal)	GEN
Install crosswalks at E 8 th St. and US 285, Walthall and US 285, S Eddy St and Walthall, S Hackberry St and Washington, I-20B and SH 17, Safford and SH 17, and Stafford and S Eddy St.	X			Town	\$310/per	GEN, SRTS, TxDOT
Add "share the road" and "bicycle route" signs to roads with shoulders and between schools.	X			Town	\$160/ per crosswalk \$330/ per sign	GEN, SRTS
Apply for funding and begin construction of first phase of urban trails parallel to drainage between SH 17 and S. Eddy St and along Stafford St between SH 17 and S Eddy St		X		Town	Up to \$50,000 (or 20% match of TPWD grant funds)	GEN; TPWD (total grant and match not to exceed \$200,000)
Apply for funding and extend and improve sidewalks along entire length of US 285 between E. 1 st Street and I-20 service road		X		Town	Staff, Variable	GEN; TxDOT

Adopt an Active Transportation Masterplan, including an ADA Transition Plan, Sidewalk Plan, and a bikeways and urban trails plan	X			Town	Variable	GEN
Adopt West Pecos urban design guidelines city wide, including trail and sidewalk specifications		X		Town	Variable	GEN;
Establish sidewalk network goals and prioritization criteria/scoring		X		Town	Variable	GEN;
<i>Goal 8.2 Ensure that the thoroughfare system maintains its capacity as new development is built and supports safe and rapid movement of people in emergency situations</i>						
Install STOP or YIELD signs at identified intersections, as appropriate (see <i>Section 8.3-Pedestrian Facilities</i>)	X	X	X	Town	\$300/per	GEN
Adopt a Future Land Use Map/Plan that encourages infill development and limits industrial uses near residential and public developments	X			Town	Staff	GEN
Develop local emergency routes/procedures		X		Town	Variable	GEN; Staff
Update Subdivision Ordinance to require subdivision streets to connect to existing streets and limit block length to a minimum of 200' and a maximum of 600'		X		Town	< 2,000 (legal)	GEN
Request Traffic Warrant Analysis for intersection of W. F St. and US 285	X			Town	\$0	TxDOT
Request Traffic Warrant Analysis for intersection of W 8 th St and US 285		X		Town	\$0	TxDOT
Request Traffic Warrant Analysis for intersection of SH 17 and I-20B		X		Town	\$0	TxDOT

Request Traffic Warrant Analysis for intersection of Walthall and US 285			X	Town	\$0	TxDOT
Request Traffic Warrant Analysis for intersection of Stafford Ave. and SH 17			X	Town	\$0	TxDOT
Disseminate and inform residents of emergency routes/procedures	X	X	X	Town	Variable; Staff	GEN
Incorporate targeted projects to improve road network connectivity in capital improvement projects so residents have more options to access emergency routes	X	X	X	Town	Variable	Variable

GEN = Municipal funds, including bonds; **LOCAL** = donations of time/money/goods from private citizens, developers (as required by subdivision ordinance), charitable organizations, and local businesses; **SRTS** = Safe Routes to School; **THC** = Texas Historical Commission (Downtown Revitalization Program); **TxDOT** = Texas Department of Transportation funding;

FOR A FULL LIST OF FUNDING SOURCES, SEE CHAPTER 9

7.6 Appendix 7A: Trip Generation

Major traffic generators are defined as sites that are the starting point or destination of more than 100 vehicle trips per day on average. A visit to the grocery store in one automobile generates two “trips:” the trip from the point of origin and the return trip. Trip generation rates are calculated in such a way as to account for what are known as “multi-event” trips, or those in which the driver leaves home and visits multiple destinations before returning home.

Predicting trip generation and traffic patterns on a roadway network requires the ability to determine trip rates and characteristics for various types of land use. The Institute of Transportation Engineers (ITE) compiles comprehensive listings of trip rates by land use in an informational report call Trip Generation. That document is updated periodically and is widely used in thoroughfare analysis. *Table 7A.1: Daily Trip Generation Rates* lists typical trip generation rates for land uses found in Wharton.

Table 7A.1: Daily Trip Generation Rates

Land Use	Trip Rate Basis (Unit)	Daily Trips/ Unit
Single-family	Dwelling unit (DU)	9.52
Apartment	DU	6.65
Mobile Home Park	Occupied DU	4.99
Motel	Rooms	5.63
Town Park	Acres	1.89
Golf Course	Acres	5.04
Elementary School	Student	1.29
Middle/Junior High School	Student	1.62
High School	Student	1.71
Church	1,000 Square Feet (SF)	9.11
Assisted Living	Beds	2.66
General Office	1,000 SF	11.03
Government Office Building	1,000 SF	68.93
Library	1,000 SF	56.24
Prison	Employees	136
Shopping Center	1,000 SF	42.70
Supermarket	1,000 SF	10.24
Heavy Industrial	1,000 SF	1.5
Manufacturing	1,000 SF	3.82
Light Industrial	1,000 SF	6.97

Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition

7.7 Appendix 7B: CSS Manual Thoroughfare Standards

The CSS manual preserves long-standing U.S. Department of Transportation functional street classifications, which include street standards based on vehicle speed and sight distance. To those standards, it adds a new ‘thoroughfare type’ definition that incorporates multi-modal design standards such as bicycle lanes and sidewalks which were previously not included. *Table 7B.1* shows the relationship between functional classification and thoroughfare type. *Table 7B.2* describes the functional and design aspects of each street type in general terms. *Table 7B.3* lists specific thoroughfare characteristics and design standards.

Table 7B.1: Relationship between Functional Classification & Type

Functional Classification	Thoroughfare Types						
	FREEWAY/ EXPRESS- WAY/PARK- WAY	RURAL HIGHWAY	BOULEVARD	AVENUE	STREET	RURAL ROAD	ALLEY/REAR LANE
Principal Arterial							
Minor Arterial							
Collector							
Local							

Shaded cells represent thoroughfare types that are not addressed in this report.

Source: Designing Walkable Urban Thoroughfares: A Context Sensitive Approach. Institute of Transportation Engineers. 2010. (pg. 53)

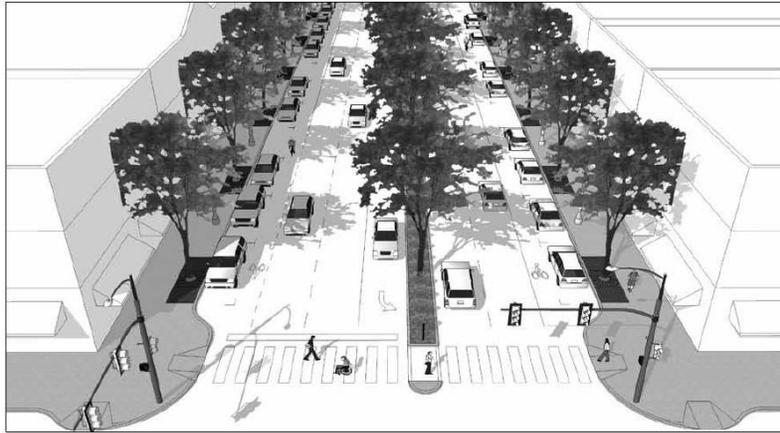


Figure 4.5 Illustration of a boulevard. Source: Claire Vlach, Bottomley Design & Planning.

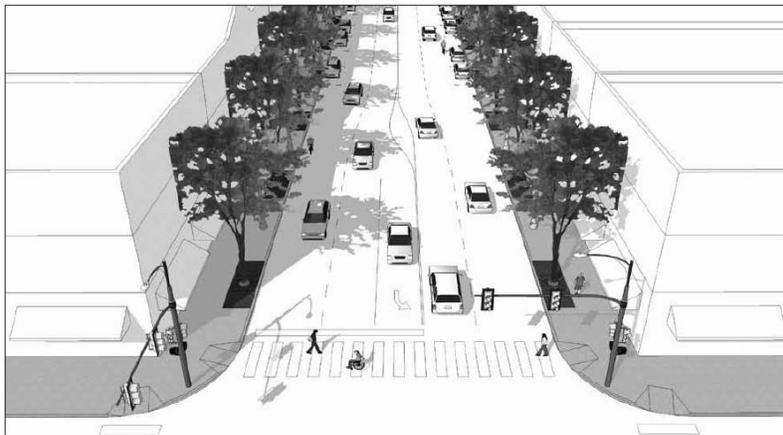


Figure 4.6 Illustration of an avenue. In this example on-street parking is dropped to gain width for a left turn lane at the intersection. Source: Claire Vlach, Bottomley Design & Planning.

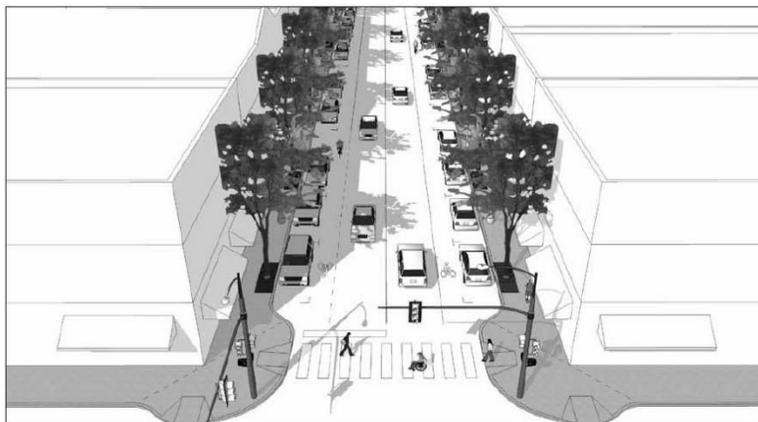


Figure 4.7 Illustration of a street. Source: Claire Vlach, Bottomley Design & Planning.

Figure 7B.1: Top to Bottom: Boulevard, Avenue, & Street

Source: *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*. Institute of Transportation Engineers. 2010. (pg. 50-51)

Table 7B.2: Street Functional Hierarchy

Street Type	Function & Design
Freeway/Expressway/ Parkway (Principal Arterial)	Provides efficient movement at higher speeds (50 mph or more), often with controlled access to prevent slowing of movement and grade separated intersections. No pedestrian access. <i>Examples: Interstates/other divided highways.</i>
Rural Highway (Principal/ Minor Arterial)	High speed traffic (45 mph +) for efficient movement and access to rural properties. At-grade intersections. <i>Examples: Long-distance county and farm-to-market roads</i>
Boulevard (Principal/ Minor Arterial)	Moderate speed (35 mph), urban, divided arterial with multimodal transportation facilities. Typically 4-8 lanes providing traffic movement and some degree of access management. Pedestrian and bike access are present, sometimes through a parallel facility. Function as the primary goods movement and emergency response routes. Sometimes include curb parking and parallel access lanes (multiway boulevard). <i>Example: Multilane streets with turn lanes.</i>
Avenue (Principal/ Minor Arterial, Collector)	Walkable, low to medium speed (25-35 mph), generally carries local traffic for shorter trips than boulevards. Should not exceed 4 lanes. May feature a raised, landscaped median and curb parking. Are primary pedestrian and bike routes. <i>Example: City streets with stoplights but few stop signs.</i>
Street (Principal/ Minor Arterial, Collector, Local)	Low speed (~25 mph) access roads to adjacent properties and connectors between residential, commercial, and larger thoroughfares. Streets may serve as the main road of commercial or mixed-use areas and emphasize curb parking. <i>Example: Neighborhood streets</i>
Rural Road (Collector/ Local)	Low speed (25-35 mph), rural roads <i>Example: Neighborhood county roads</i>
Alley/Rear Lane (Local)	Very low-speed (5 to 10 mph) at the rear of properties, providing access to parking, service areas, secondary residential units, and utility easements <i>Example: Alleys</i>

Shaded cells represent thoroughfare types that are not addressed in ITE report.

Source: *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*. Institute of Transportation Engineers. 2010

Table 7B.3: Street Characteristics & Design Standards

Table 4.4 Urban Thoroughfare Characteristics

Urban Thoroughfare Type	Number of Through Lanes	Desired Operating Speed (mph)	Transit Service Emphasis	Median	Driveway Access	Curb Parking	Pedestrian Facilities [1]	Bicycle Facilities	Freight Mvmt. [2]
Freeway	4 to 6+	45–65	Express	Required	No	No	No	Optional separated pathway or shoulder	Regional truck route
Expressway/Parkway	4 to 6	45–55	Express	Required	No	No	Optional separated pathway	Optional separated pathway or shoulder	Regional truck route
Boulevard	4 to 6	30–35	Express and Local	Required	Limited	Optional	Sidewalk	Bike lanes or parallel route	Regional truck route
Multiway Boulevard	4 to 6	25–35	Express and Local	Required on access lanes	Yes from access lane	Yes on access roadway	Sidewalk		Regional route/local deliveries only on access roadway
Avenue	2 to 4	25–30	Local	Optional	Yes	Yes	Sidewalk	Bike lanes or shared	Local truck route
Street	2	25	Local or none	No	Yes	Yes	Sidewalk	Shared	Local deliveries only
Rural Road	2	25–35	Local or none	No	Yes	No	No	Shared or shoulder	Local deliveries only
Local Street	2	25	Local or none	No	Yes	Yes	Sidewalk	Shared	Local deliveries only
Alley/Rear Lane	1	5–10	None	No	Yes	No	Shared	Shared	Local deliveries only

Shaded cells represent thoroughfare types that are not addressed in this report.

Notes:

[1] Boulevard, Multiway Boulevard, Avenue, and Street thoroughfare types have sidewalks on both sides. Sidewalk width varies as a function of context zone, fronting land use and other factors.

[2] Freight movement is divided into three categories: 1) Regional truck route, 2) Local truck route and 3) Local deliveries only. Cells show highest order of truck movement allowed.

Source: *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*. Institute of Transportation Engineers. 2010. (pg. 54)

8 ECONOMIC DEVELOPMENT

Economic development in rural America is any activity that makes the choice to remain in a community easier and more satisfying. Job opportunities are an obvious example but this list also includes the availability of decent affordable housing, quality education, an attractive, safe, and clean environment (natural and manmade), a comfortable social atmosphere, recreation and entertainment options, convenient shopping, adequate health care, a competitive and fair tax structure, responsive local government, transparent government regulations, and high-quality infrastructure (water, sewer, streets, drainage, telecommunications, etc.).

8.1 Highlights

Pecos's unique position as a main hub in the West Texas fracking boom presents both significant opportunities and difficult challenges for the area's economic development. While the area's astounding economic growth has led to high wages, low unemployment, and opportunities for significant investment in social and physical infrastructure, a subsequent bust could collapse the regional economy and leave Pecos over committed and underfunded.

Traditional economic development strategies for small cities in Texas will need to be adapted to promote the diversification of the Pecos area's economy, to ensure resiliency to potential future busts in the oil and gas market, exhaustion of the oil and gas deposits and the eventual devaluation of oil and gas resources as renewable energy becomes cheaper and more widespread. One of the main potentially limiting factors is the inaccessibility of higher educational opportunities in the Pecos area compared to the State. Additional attractions/amenities are needed to draw visitors and long-term residents to the city. Finally, housing availability severely limits Pecos's ability to absorb permanent residents and collect taxes, and housing quality is often substandard.

However, Pecos also has several potential opportunities for further economic growth and resiliency. Almost all residents can find work in Reeves County, and average wages in Reeves County are higher than average wages in the WDA and the state. Establishments in Pecos represent a variety of industry areas and in most cases comprise over 75% of county establishments in that industry. In addition, the city's location off I-20, US 285, and a Union Pacific Railroad provides direct links to larger cities like El Paso and Midland-Odessa. Pecos also has

professional, dedicated staff and volunteer organizations in place to capitalize on Pecos's strengths and work on the local challenges described in this study. The Town has already invested significant time and money in addressing the challenges described in this study, and has adopted forward-thinking policies and development strategies to meet their future needs.

Over the planning period the City should focus on the following activities related to economic development: increasing regional presence and collaboration; Improved education and workforce training, developing, and strengthening the City "brand", and quality of life improvements. Continued volunteer and financial support will be needed to preserve and enhance key community resources such as Pecos Memorial Park, underused public facilities, and the traditional downtown area.

8.2 Context: History, Location, & Community Input

Historic Development & Community Character

The Town of Pecos City is the County seat of Reeves County Located at the intersection of Interstate 20 and Highway 285 in West Texas. Incorporated in 1885, Pecos is a Home Rule City with a council-mayor-city manager form of government and is within the Permian Basin Regional Planning Commission (PBRPC).

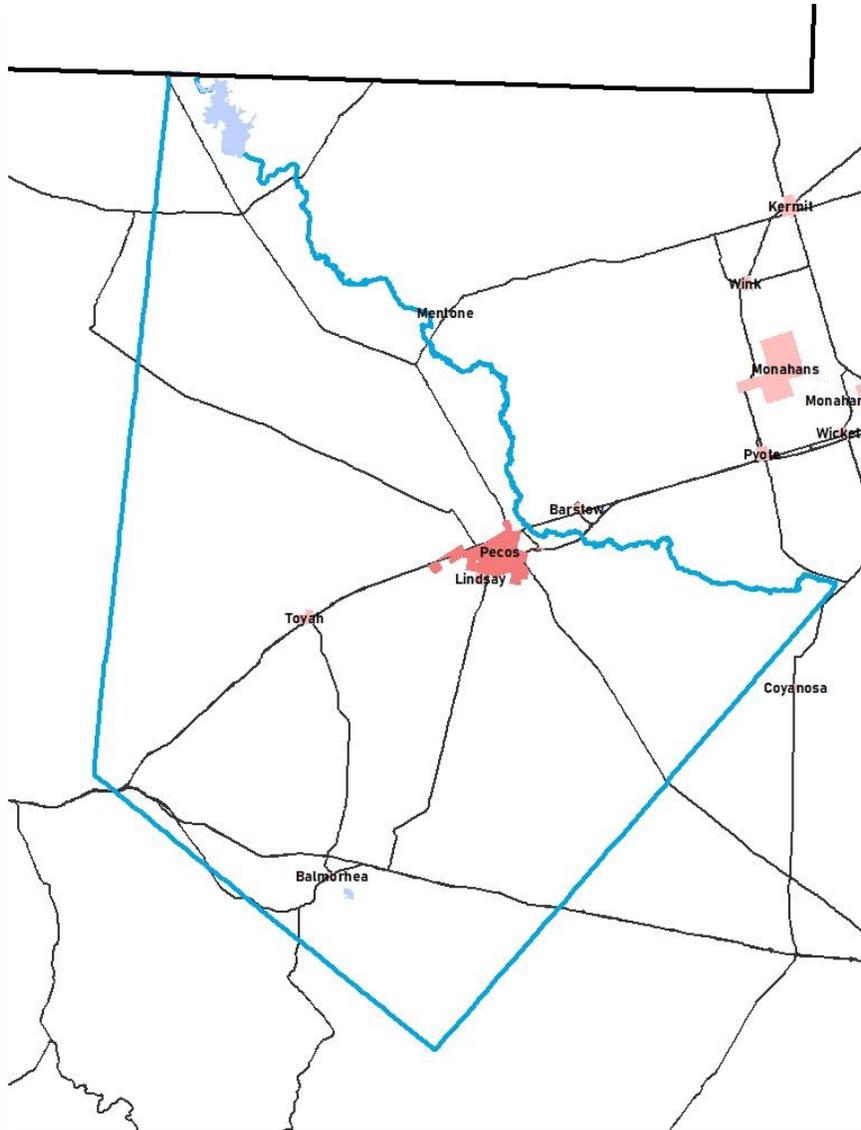


Figure 8A: City Location Map

Pecos's history is closely tied to the activities and investments of the agricultural and Oil industries. The area around Pecos were first occupied by indigenous people including the

Jumanos and Mescalero tribes. Later, Mexican settlers established farms along the Pecos River and Toyah River. Anglos began arriving in the area in the 1850s, but the settlement became a more permanent one in the 1880s, when Pacific Railroad arrived. The railroad station and townsite were built on land owned by George A. Knight, and became a trading depot for ranching and agricultural activity in the area. On July 4th, 1883, the town claims to have hosted the world's first rodeo, which has cemented the town's association with the Old West and Cowboy culture.

At the time of the establishment of the First National Bank of Pecos in 1904, the town's population was 630. The town's population fluctuated through the early 20th century with the establishment of various commercial and military activities. The first oil boom in the Delaware Basin occurred in the 1920's, bringing with it the first wave of energy workers to the town. By 1940, the town had grown to a population of 4,855. This number almost doubled during WWII, when the construction of the Pecos Army Airfield brought thousands of servicemen and their families to the area. After the war, the airfield was decommissioned, but Pecos's population still trended upward through boom-bust cycles until it peaked in the early 1970s at 14,200.

Pecos's population saw a major dip after the Texas oil industry collapsed in the 1980s, while further economic retraction in the area contributed to population decline through the 90s and 00s. During the last census decade (2000-2010) Pecos's population decreased 7.6% (or -721 residents), bottoming out at 8,780 in 2010 census. However, due to rapid advancements in fracking and horizontal drilling techniques, Pecos once again became a boom town in the 10s. In 2012, it was named the 2nd fastest growing city in the country by Forbes magazine, and has continued its rapid growth through the decade. Despite a slowdown in the fracking industry in 2019, economic and population growth projections were still bullish through the start of 2020. This projected growth has been based largely on stabilization of the fracking industry, due to improvements in efficiency and high productivity of the Permian Basin.

With this in mind, the Perryman Group produced a study that predicted population rising to approximately 44,000 by 2038 in the Pecos area, if the transitory energy workers are incorporated into the town's permanent population. However, this over 300% increase in population is contingent on continued growth of the fracking industry capacity as well as unprecedented stability in oil production and demand. The most recent comprehensive plan, Positioning Pecos, was reluctant to rely on such optimistic and far reaching predictions. Their projection predicts a 16,708 population on the low end, and 22,904 by 2024. The plan, which was published in 2015, did not predict further than 10 years due to the historic volatility of the oil industry and in turn, Pecos's population.

Both the Perryman Group Report and Positioning Pecos were written before the fracking slowdown in late 2019, and the Covid-19 pandemic of 2020. At the time of the writing of this plan, the future of the U.S. fracking industry is in the balance due to extremely low oil prices and demand. Additionally, the 2020 presidential elections could bring a new Democratic administration

that may put into place significant regulations or other restrictions on the industry. Therefore, it will be necessary to reevaluate the bullish population forecast with these factors in mind. It would be prudent for Pecos to plan for at least two scenarios - one of bullish growth, and one of bearish recession.

Previous Studies

Permian Basin Economic Development District: Comprehensive Economic Development Strategy (2015-2020)

Pecos is part of the Permian Basin Regional Planning Commission (PBRPC) a voluntary association of cities and special districts in the Texas Permian Basin. Since 1971, the PBRPC has assisted local governments of the 17-county area⁵⁶ with planning, development, and implementing programs intended to improve general health, safety, and welfare of residents in the region. The affiliated Permian Basin Economic Development District (PBEDD) is funded through planning assistance from the Economic Development Administration. The PBEDD is responsible for producing a Comprehensive Economic Development Strategy (CEDS) every five years. The CEDS is a locally initiated planning process designed to provide a mechanism for guiding and coordinating the efforts of local individuals and organizations concerned with economic development.

The most recent full five-year update to the CEDS was completed in 2015. *Table 8A* summarizes key information from the document about traditional and developing industries in the Permian Basin region:

Table 8A: State of Permian Basin Traditional & Developing Industries

TRADITIONAL	DEVELOPING
<ul style="list-style-type: none"> ▪ Oil and Gas <ul style="list-style-type: none"> ○ <i>Improvements in horizontal drilling techniques promise more stable jobs</i> ▪ Agribusiness <ul style="list-style-type: none"> ○ <i>New technology is driving some growth while traditional agriculture recedes</i> ▪ Manufacturing <ul style="list-style-type: none"> ○ Driven by oil and gas, but has capacity for other production ▪ Transportation and Logistics <ul style="list-style-type: none"> ○ Strong infrastructure including rail, highways, and airports 	<ul style="list-style-type: none"> ▪ Renewable Energy <ul style="list-style-type: none"> ○ West Texas is home to the largest solar farm in Texas and 6 largest wind farms in the country ▪ Biomedical and Life Sciences <ul style="list-style-type: none"> ○ Growing to match pace with regional population growth ▪ Aerospace, Aviation and Space <ul style="list-style-type: none"> ○ Midland International Airport recently designated as a Spaceport

⁵⁶ *Gaines, Dawson, Borden, Andrews, Martin Howard, Loving, Winkler, Ector, Midland, Glasscock, Reeves, Ward, Crane, Upton, Pecos, Terrell*

Table 8B summarizes the SWOT analysis - the strengths, weaknesses, opportunities, and threats - for the Permian Basin region identified in the 2020 document:

Table 8B: SWOT Analysis for the Permian Basin Region

<p>STRENGTHS</p> <ul style="list-style-type: none"> ▪ Logistics: Location on IH-20 and IH-10 / Mature State Hwy System ▪ Oil and Gas Production Potential ▪ Regional Oil and Gas Competency ▪ Potential Production - Horizontal Drilling Techniques ▪ Availability of Land ▪ Accessibility of Rail Service ▪ Private Sector Investments in Rail Service ▪ Numerous Intermodal Business Parks ▪ CREZ Transmission Capacity ▪ Abundance of Alternative Energy Resources ▪ Midland International Air and Space Port / Differentiation ▪ Regional Marketing Plan - Higher Ground of Texas ▪ Regional Transportation Advocates / MOTRAN, Ports to Plains, etc. • Industrial Water Supply ▪ Strong Collaboration / Communities, EDCs, Workforce Solutions, Education, etc. ▪ Post-Secondary Education Infrastructure ▪ Innovation and Commercialization Potential / Private and Public Sector Expertise ▪ Emerging Biomedical and Life Sciences Competency / Health Science Center ▪ Stable Weather • Small Business Administration and Entrepreneurship Assets 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> ▪ Deterioration of State, County, and Local Roads - Heavy Truck Traffic ▪ Low Unemployment / Little Slack in Labor Force ▪ Strong Competition for Oil and Gas Production Skill Set (competitive with other target industry clusters, i.e. manufacturing, transportation/logistics, and agribusiness) ▪ Available Skilled Workforce ▪ Attractiveness of "Quality of Life" to Younger Generation ▪ Availability of Affordable Housing ▪ Availability of Multi-Family Housing ▪ Lower Relative Educational Attainment ▪ Capacity to Monitor/Enforce Environmental Regulations (primarily rural communities) ▪ Utility Infrastructure for Expansion ▪ Skilled Trade Labor in Rural Areas (i.e. electricians, plumbers, etc.) ▪ Rural Areas Lose Industry and Workforce to Midland/Odessa ▪ Competitiveness between Communities for Economic Developments ▪ Lack of Funds to Support Dedicated Economic/Community Development (rural) ▪ Transportation Infrastructure between Communities not Adequate (support workforce mobility)
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> ▪ Diversification of Economic Base ▪ Enhance Business Retention and Expansion Initiatives ▪ Strengthen Business Recruitment Strategies ▪ Leveraging Strong Transportation/Logistics Capacity for Diversification ▪ Secondary/Post-Secondary Education Collaboration to Promote Early Skill Attainment and Credentialing (i.e. dual credit, articulation, stackable credentials, etc.) ▪ Enhanced Alternative Energy Production ▪ Organized Effort to Promote R&D Competency ▪ Development of Commercial Space Cluster (unique asset in space port designation) ▪ Educate Federal and State Government Agencies about the Impact of Permian Basin 	<p>THREATS</p> <ul style="list-style-type: none"> ▪ Volatility in Oil and Gas Prices (supply and demand changes) ▪ Regulatory Changes / Energy Production ▪ Increase in Active Oil and Gas Plays (i.e., emergence of Eagle Ford Shale and others) ▪ Competition with Other Regions for Skilled Workforce ▪ Funding Allocations to Permian Basin Region from State/Federal Agencies ▪ Growth Outpacing Infrastructure Development ▪ Economic Contraction Resulting in Infrastructure Abundance (i.e., vacancy rates at hotels and rental properties) ▪ Deterioration of City/County Buildings

<p>Economic Activity (tax revenue) and the Region's Needs</p> <ul style="list-style-type: none"> ▪ Promote and Develop Tourism to the Region ▪ Strengthening of Entrepreneurship Assets (low barriers to global competition) ▪ Addition of "Quality of Life" Assets ▪ Enhanced Coordination of Region Economic Development Planning ▪ Strengthen Out of Region Recruitment ▪ Enhanced Public Transportation Alternatives 	<ul style="list-style-type: none"> ▪ Lack of Housing Threatens Economic Development (lack of large national housing builders in Permian Basin) ▪ Changes to Immigration Policy / National ▪ Availability of Water Resources
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The 2020 document lists the following top five issues, problems, concerns, and needs for Reeves County:

1. Education and Workforce Development
2. Transportation and Infrastructure
3. Housing
4. Industry Diversification
5. Regional Marketing and Outreach

Permian Basin Workforce Development Area 2017-2020 Integrated Plan

Texas Workforce Solutions is a local and statewide network for regional planning and service delivery comprised of the Texas Workforce Commission and 28 Workforce Development Boards covering Workforce Development Areas. Under the Workforce Innovation and Opportunity Act, Section 108, each local Workforce Development Board must develop and submit a four-year plan to the governor that identifies and describes policies and procedures, as well as local activities that support the Texas Workforce Investment Council's State Plan.

Pecos is located in the Permian Basin Regional Planning Commission (PBRPC). The most recent plan for the PBRPC is the 2017-2020 Integrated Plan. The plan includes a regional analysis of economic conditions, including existing and emerging in-demand industry sectors and occupations, as well as target occupations. In-demand industries are high-growth and other high-priority industries. The Permian Basin Regional Planning Commission uses the following information from industry representatives and economic development professionals to identify in-demand industries/occupations:

- Industrial and occupations trends;
- Education and training preferences;
- Employee recruiting methods; and

- Specific gaps in employee's skills.

Table 8C (next page) is taken from the integral plan. In-demand industries and occupations are highlighted in grey.

Table 8C: List of PBRPC In-Demand Industries & Associated Target Occupations

NAICS Code*	In Demand Industry	Associated Target Occupations**
2011	Oil & Gas Extraction	Mobile Heavy Equipment Mechanics Operating Engineers & Other Construction Equipment Operators
2382	Building Equipment Contractors	Heating, Air Conditioning, & Refrigeration Mechanics Plumbers, Pipefitters, and Steamfitters
2131	Support Activities for Mining	Petroleum Pump System/Refinery Operator Plumbers/Pipefitters/Steamfitter
7211	Traveler Accommodation	Business Operations Specialist
2371	Utility System Construction	Electrical Power-Line, Install/Repair
4841	General Freight Trucking	Bus & Truck Mechanic & Diesel Engine Specialists Truck Drivers, Heavy/Tractor-Trailer
447190	Gasoline Stations	Business Operations Specialist Bus/Truck Mechanic/Diesel Specialist
423800	Machinery, Equipment, and Supplies Merchant Wholesalers	Computer User Support Specialist
621610	Home Health Care Services	Licensed Vocational Nurses Medical Assistants Nursing Assistants
6111	Elementary & Secondary Schools, Public & Private	Elementary School Teachers Secondary School Teachers
6211	Offices of Physicians	Licensed Vocational Nurses Medical Assistants Nursing Assistants Occupational Therapy Assistants Physical Therapist Assistants
6221	General Medical & Surgical Hospitals, Public & Private	Medical & Clinical Laboratory Technicians Medical Records & Health Information Technicians Pharmacy Technicians Radiologic Technologists and Technicians Registered Nurses Respiratory Therapists
7225	Restaurants & Other Eating Places	Food Service Managers
8111	Automotive Repair & Maintenance	Automotive Service Technicians & Mechanics
9000	Government, State & Local	Correctional Officers & Jailers Fire Fighters Police & Sheriff's Patrol Officers
4842	Specialized Freight Trucking	Bus/Truck Mechanic/Diesel

424690	Chemical and Allied Products Merchant Wholesalers	Computer User Support Specialist
441110	Automobile Dealers	Auto Service Technicians & Mechanics
452319	Other General Merchandise Stores	Business Operations Specialist
541990	Management, Scientific, and Technical	Business Operations Specialist
6112	Junior Colleges	Business Operations Specialist
444190	Building Material and Supplies Dealers	Computer User Support Business Operations Specialist
713990	Other Amusement and Recreation Industries	Business Operations Specialist
621399	Offices of Other Health Practitioners	Licensed Practical/Vocational Nurses Radiologic Technologists and Technicians
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	Electricians Heating/Air Conditioning Refrigeration

Notes: [*] North American Classification System; [**] While only listed once above, several PBRPC Target Occupations are Associated with multiple PBRPC In-Demand industries. The associated list above is abbreviated to show examples for references

Source: Permian Basin Regional Planning Commission 2017-2020 Integrated Plan

More information about WDA initiatives and programs is available at <https://http://workforcepb.org/>.

The Economic Benefits and Housing Needs Associated with Establishing a Permanent Energy Workforce in the Pecos Area - November 2018

In November of 2018, the Perryman Group completed an economic development study of the potential effects of the establishment of a permanent energy workforce in the Pecos area (Reeves, Culberson and Loving Counties), which would be facilitated through the development of major new housing developments and advancements in energy technology. For the report, the authors produced a baseline economic forecast for the area.

The report anticipates that much of the heretofore temporary energy workforce will be able to permanently settle in the area as the boom-bust oil and gas extraction cycles are replaced with more stable productivity. This is due to advancements in extraction technology as well as developments in the renewable energy sectors. In order to accommodate this new permanent population, the Town has partnered with developers to create a 4,500-acre master planned community in the southwest area of Pecos City.

The report analyzes major energy producer's investment in the area, which indicate confidence in the area's stable productivity for the coming decades. The report projects an annual 3.42% increase in output (Real Gross Product) for the area for the 2017 - 2038 period. The report projects housing needs to increase by an additional 14,030 units by 2023. The report estimates that

without a permanent energy workforce, baseline trends would lead to 8,600 jobs by 2038, and 35,430 with a permanent energy workforce.

Community Input

A detailed discussion of community input during the planning process is located in *Chapter 1: Community Goals & Objectives*. The concerns expressed by residents that related to economic development and guide the discussion below are:

Achieve/Preserve	Avoid/Eliminate
<ul style="list-style-type: none"> ■ Diversify commercial activities <ul style="list-style-type: none"> ○ Leverage infrastructure assets to grow as trade hub ■ Diversify job base, future proof <ul style="list-style-type: none"> ○ Increase ISD staffing to meet demand ■ Diversify recreational and entertainment options <ul style="list-style-type: none"> ○ Attract a theater, nightlife options ○ Create regional recreational attractions ○ Consider stormwater ditches for Hike/bike trails ○ Consider ISD facilities as shared park facilities ○ Consider diversifying use of Reeves County Civic Center and Rodeo Area during off-season ■ Increase tax base by incorporating development in county <ul style="list-style-type: none"> ○ Bring energy workforce into city limits ■ Consider preserving some land for agriculture for future cultivation ■ Increase funding from TxDOT for transportation improvements ■ Attract energy industry supply businesses to Pecos from Odessa/Midland ■ Find ways to compete with NM Cities 	<ul style="list-style-type: none"> ■ Housing Shortages ■ Lack of Economic Diversity ■ Conflicting Land uses ■ Too much development outside of the city limits ■ outgrowing current water, wastewater, and solid waste systems

8.3 Conditions & Forecast

Because Pecos's local workforce and economy are closely connected to the larger region, the following sections include both local and regional economic information. Some data is not available at the local level and in those cases Reeves County data are used for comparison.

8.3.1 Pecos General Economic Profile

The following sections examine Pecos's economy in terms of establishments, taxable sales, and resident employment.

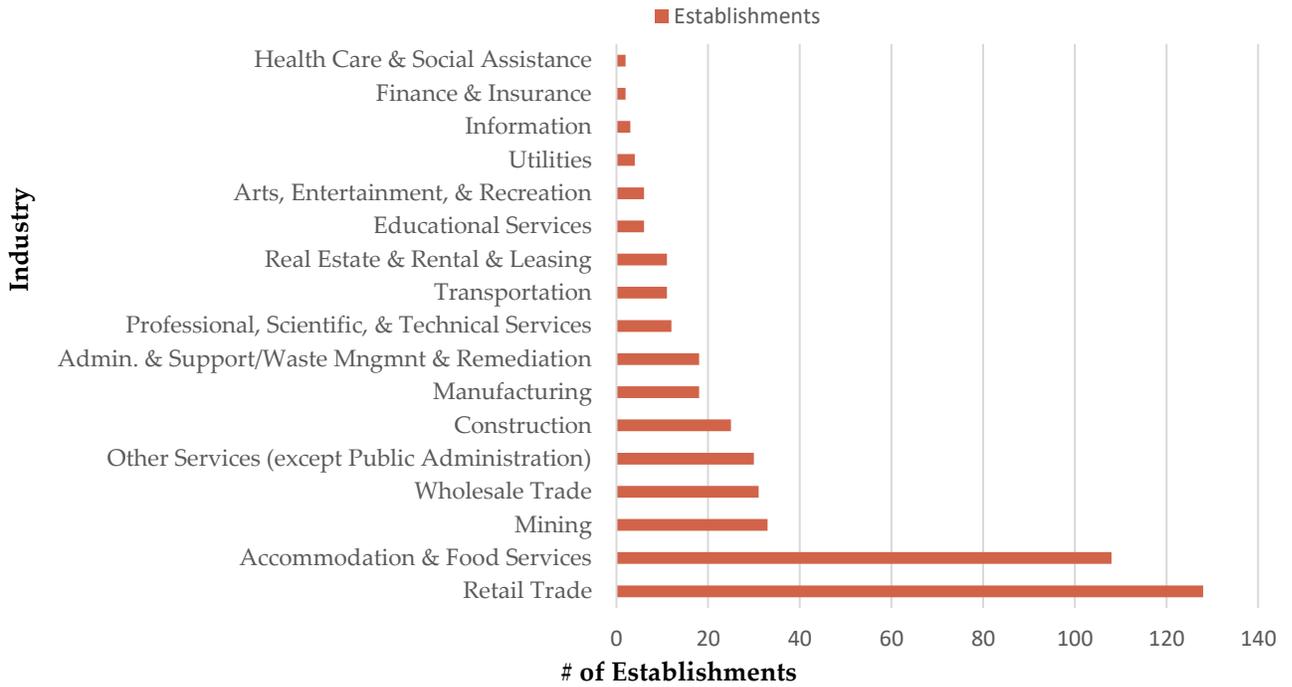
Establishments & Taxable Sales

Charts 8A and Chart 8B (next page) provide an initial snapshot of the local economy in Pecos. *Chart 8A* lists the number of establishments in Pecos by industry. *Chart 8B* illustrates absolute taxable sales revenues overall and by industry for the period between 2008 and 2018.

As the charts demonstrate, Pecos's establishments represent several industries. Retail Trade and Accommodations and Food Trade play a key role in Pecos's local economy. Local establishments in the retail trade industry comprise over $\frac{1}{4}$ of the city's establishments (see *Chart 8A*). Taxable sales revenues from establishments in the Retail Trade industry ranged from approximately \$39,000,000 to \$218,000,000 between 2008 and 2018 (see orange in *Chart 8B*).

Complete information about taxable sales revenues from the Retail Trade industry and other industries with establishments in Pecos is unavailable because the Texas Comptroller's Office does not report sales tax revenue for industries with three or fewer establishments. The "Suppressed Data" category represents the difference between the disclosed industry sales tax revenues and the total sales tax revenues each year. However, only a minor portion of taxable sales revenues in Pecos are in the Suppressed Data category.

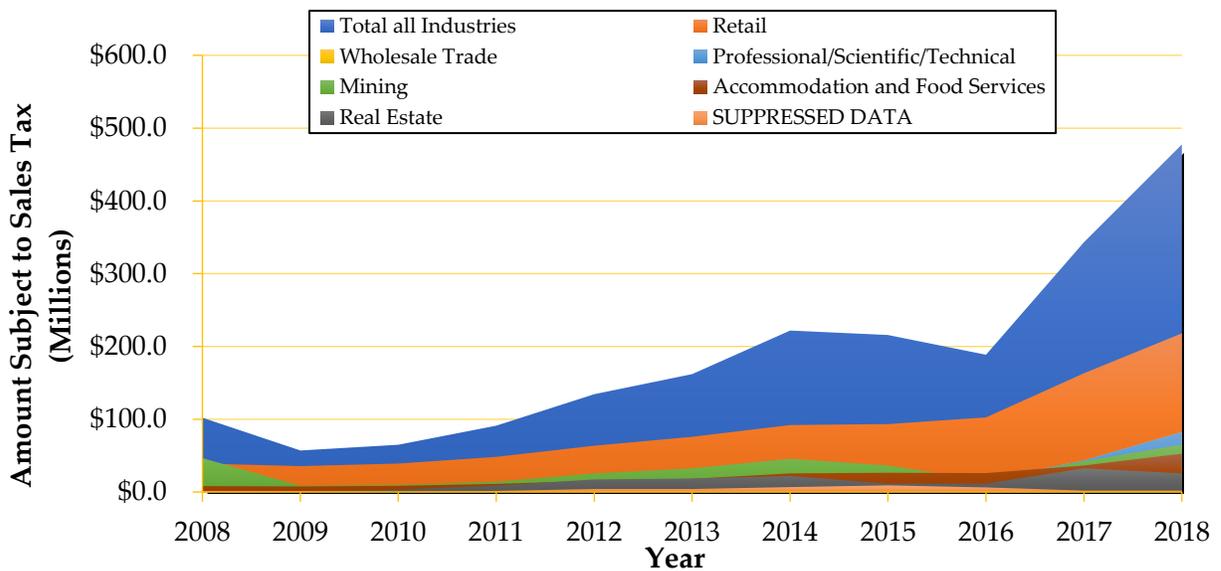
Chart 8A: Establishments, by Industry



Source: Texas State Comptroller (data request February 2020).

Note: The Comptroller does not collect information for establishments not subject to sales tax; therefore, some financial institutions, franchise establishments, and similar organizations are not included. [*] Agricultural Operations establishments based on estimate.

Chart 8B: Sales Tax Revenues Total & by Industry (2008-2018)



Source: Texas Comptroller Quarterly Sales Tax Historical Data.

The Comptroller’s Office also does not report sales for agricultural establishments within the city of Pecos. However, zip code level employment data from the 2017 USDA Census of Agriculture⁵⁷ provides an indication of the extent and size of agricultural operations in the Pecos Area. *Table 8D* displays agricultural establishments and sales data for the zip code that includes Pecos (79772). As the table shows, numerous farms operate in the Pecos Area. Based on the value of sold products, most of these farms are likely smaller operations (less than \$50,000 in sales). According to the Texas Almanac, Reeves County’s main agriculture products include ranching, dairies, hay, cotton, cantaloupes, pecans, pistachios.

Table 8D: Farm Production in Pecos Zip Code (2017)

<u>Location</u>		<u>Value of all Agricultural Products Sold</u>			
<i>Zip Code</i>	<i>Place Name</i>	<i>Total farms</i>	<i>Less than \$50,000 (farms)</i>	<i>\$50,000 to \$249,999 (farms)</i>	<i>\$250,000 or more (farms)</i>
79772	PECOS	107	92	7	8

Source: USDA – National Agricultural Statistics Service; 2007 Census of Agriculture, Zip Code Tabulations of Selected Items (www.agcensus.usda.gov/); Note: 2012 Census of Agricultural data not available at the zip code level.

Employment

Table 8E (next page) lists estimates of the number of Pecos residents employed in each industry area. As the table shows, approximately 1/4th of Pecos residents work in educational services, and health care and social assistance. Other common industry employment areas include Agriculture, forestry, fishing and hunting, and mining and the Retail Trade.

It is important to note that these figures refer to the industries that employ residents of Pecos and do not necessarily mean that those residents are employed in Pecos.

Chart 8C (next page) and *Table 8F (page 8-11)* illustrate estimated data for employment inflow to and outflow from the city of Pecos. As *Chart 8C* shows, roughly half of the individuals surveyed who work in Pecos do not live in the city. It is worth noting that 1,142 individuals reported commuting more than 50 miles to Pecos for work. Conversely, most of the individuals surveyed who live in Pecos do not work in the city. More common outflow destinations include Odessa and Midland. Most outflow commutes likely require 30 minutes to an hour; an estimated 52% of Pecos residents travel more than 50 miles (see *Table 8F, page 8-11*).

⁵⁷ The 2012 Census does not provide employment data by zip code.

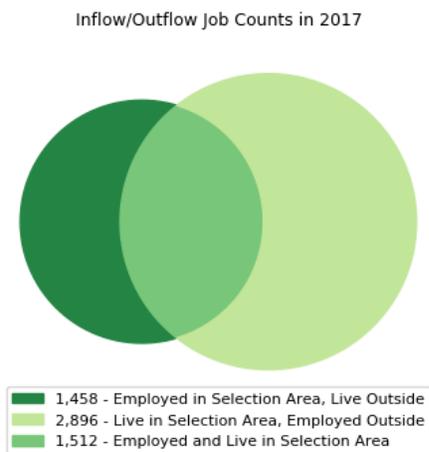
Table 8E: Residents Who Work, by Industry

Industry	Estimate	Margin of Error	Percent
Civilian employed population 16 years and over	4,311	+/-420	4,311
Agriculture, forestry, fishing and hunting, and mining	704	+/-285	16.3%
Construction	309	+/-144	7.2%
Manufacturing	204	+/-113	4.7%
Wholesale trade	75	+/-58	1.7%
Retail trade	425	+/-142	9.9%
Transportation and warehousing, and utilities	423	+/-204	9.8%
Information	6	+/-10	0.1%
Finance and insurance, and real estate and rental and leasing	169	+/-109	3.9%
Professional, scientific, and management, and administrative and waste management services	40	+/-33	0.9%
Educational services, and health care and social assistance	1,018	+/-269	23.6%
Arts, entertainment, and recreation, and accommodation and food services	367	+/-127	8.5%
Other services, except public administration	159	+/-100	3.7%
Public administration	412	+/-166	9.6%

Source: US Census, 2014-2018 American Community Survey, 5-Year Estimates, DP03: Selected Economic Characteristics for Pecos

Note: Margins of error are large, data cited for trends only.

Chart 8C: Employment Inflow/Outflow (2017)



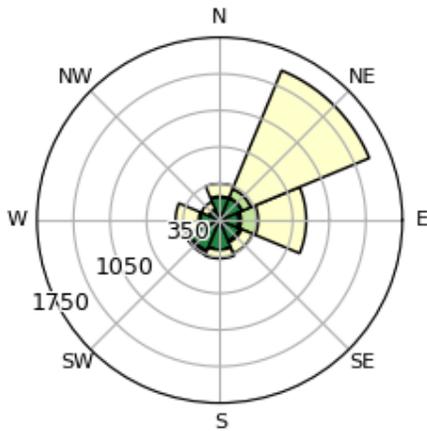
Employed in Pecos	% (#)
Total	100% (2,970)
Living Outside	49% (1,458)
Living In	50.9% (1,519)
Living in Pecos	% (#)
Total	100% (4,408)
Employed Outside	65.7% (2,896)
Employed In	34.3% (1,512)

Source: <https://onthemap.ces.census.gov/> Note: Margins of error are large, data cited for trends only.

Table 8F: Employment Travel Profiles

Travel from Pecos for Work

Direction



Distance

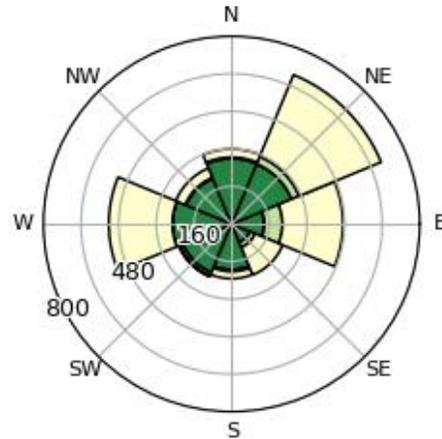
Distance (Miles)	%	#
Less than 10	39.4%	1,738
10 to 24	1.5%	66
25 to 50	6.6%	290
Greater than 50	52.5%	2,314
<i>Total Primary Jobs</i>	<i>100%</i>	<i>4,408</i>

Common Destinations

Place	%	#
Pecos City, TX	34.3	1,512
Odessa, TX	10.6	468
Midland, TX	7.1	314
El Paso, TX	3.7	165
Monahans, TX	2.5	111
<i>All Other Locations</i>	<i>34.9%</i>	<i>1,540</i>

Travel to Pecos for Work

Direction



Distance

Distance (Miles)	%	#
Less than 10	55.8%	1,657
10 to 24	0.4%	13
25 to 50	5.3%	158
Greater than 50	38.5%	1,142
<i>Total Primary Jobs</i>	<i>100%</i>	<i>2,970</i>

Common Destinations

Place	%	#
Pecos City, TX	50.9	1,512
El Paso, TX	5.9	174
Odessa, TX	3%	90
Midland, TX	2.9	86
Monahans, TX	1.6	48
<i>All Other Locations</i>	<i>31.5%</i>	<i>935</i>

Source: <https://onthemap.ces.census.gov/> Note: Margins of error are large, data cited for trends only.

8.3.2 Regional Economic Context

Considering that most Pecos residents likely work outside of the city, it is important to consider Pecos's economy in regional context. The following sections examine Reeves County in terms of industry concentration or specialization, share of total regional employment, industry employment growth, average wages, and unemployment.

Industry Concentration

Industry concentration refers to the degree to which activities associated with a given industry are present in a given region. Generally, concentrated industries make a regional economy “unique” or “specialized”. Location quotient (LQ) analysis identifies industry concentrations by comparing an industry's share of employment in a specific area (such as a county) with that same industry's share of employment in a larger geographic area (such as the state or nation). For example, the LQ for the Mining Quarrying, Oil & Gas Extraction industry in Texas was 4.31 in 2015. This indicates that the Mining Quarrying, Oil & Gas Extraction industry accounts for approximately three times more employment in the Texas economy than in the U.S. economy; employment within the Mining Quarrying, Oil & Gas Extraction industry is thus, in relative terms, more concentrated in the Texas economy than in the U.S. economy.

LQ figures are often used to identify export industries (industries that produce enough to meet local need and to sell products outside the region). Generally, an LQ score over 1.25 indicates an export industry. The direction of an industry's LQ score over time indicates whether that industry is growing or declining in the location.

Table 8G (next page) lists the LQ calculations for Reeves County relative to Texas. Based on the LQ scores, Reeves County's highest employment concentrations is unsurprisingly in the Mining, Quarrying, Oil and Gas Extraction industry. In 2018, the employment concentration of the extraction industries was over five times higher than the State of Texas, which itself has a very high Extraction industry concentration compared to the country at large.

Additionally, Reeves County saw major increases in Construction employment, as well as moderate increases in transportation, warehousing, and real estate industries. Meanwhile, the Agricultural industry concentration dropped substantially (from a 6.42 LQ to 2.03 LQ) but remains a major economic base. Finally, the County saw minor decreases in Retail trade and Financial Services since 2008.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Agriculture, Forestry, Fishing & Hunting	6.42	6.57	7.60	6.86	6.20	4.64	4.94	4.30	4.33	2.96	2.03
Mining, Quarrying, Oil & Gas Extraction	5.87	5.30	5.39	5.40	5.00	5.29	4.53	3.98	5.03	5.74	5.46
Utilities	2.45	2.54	9.47	9.62	2.84	3.25	3.86	3.13	2.36	1.59	1.22
Construction	0.34	0.32	0.00	0.35	0.35	0.46	0.70	1.52	1.89	2.64	4.31
Manufacturing	0.77	0.59	0.00	0.45	0.07	0.06	0.06	0.09	0.10	0.62	0.50
Wholesale Trade	0.57	0.57	0.44	0.42	0.43	0.42	0.64	0.66	0.66	0.66	0.54
Retail Trade	1.76	1.84	1.72	1.71	1.92	1.83	1.69	1.62	1.56	1.35	1.00
Transportation & Warehousing	0.29	0.37	0.39	0.48	1.12	1.49	2.09	2.00	1.09	1.55	2.16
Information	0.62	0.60	0.44	0.45	0.50	0.50	0.45	0.40	0.40	0.29	0.16
Finance & Insurance	1.17	1.21	1.01	0.88	0.91	0.77	0.70	0.63	0.57	0.32	0.19
Real Estate & Rental & Leasing	0.46	0.39	0.33	0.43	0.54	0.65	0.85	1.85	1.79	1.80	1.32
Professional & Technical Services	0.00	0.21	0.20	0.22	0.18	0.25	0.21	0.24	0.00	0.00	0.00
Management of Companies & Enterprises	-	-	-	-	-	-	-	-	0.00	0.00	0.00
Administrative & Waste Services	0.00	0.15	0.14	0.14	0.16	0.08	0.07	0.09	0.31	0.31	0.35
Educational Services	-	-	-	-	-	-	-	-	-	-	-
Health Care & Social Assistance	0.80	0.89	0.89	0.85	0.76	0.74	0.63	0.49	0.47	0.34	0.21
Arts, Entertainment, & Recreation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Accommodation & Food Services</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Services, except public administration	0.91	0.96	0.83	0.94	0.93	0.77	0.60	0.48	0.48	0.45	0.31

C: Not Calculable – the data does not exist; ND: Not Disclosed *Source: <https://www.bls.gov/cew/datatoc.htm>*

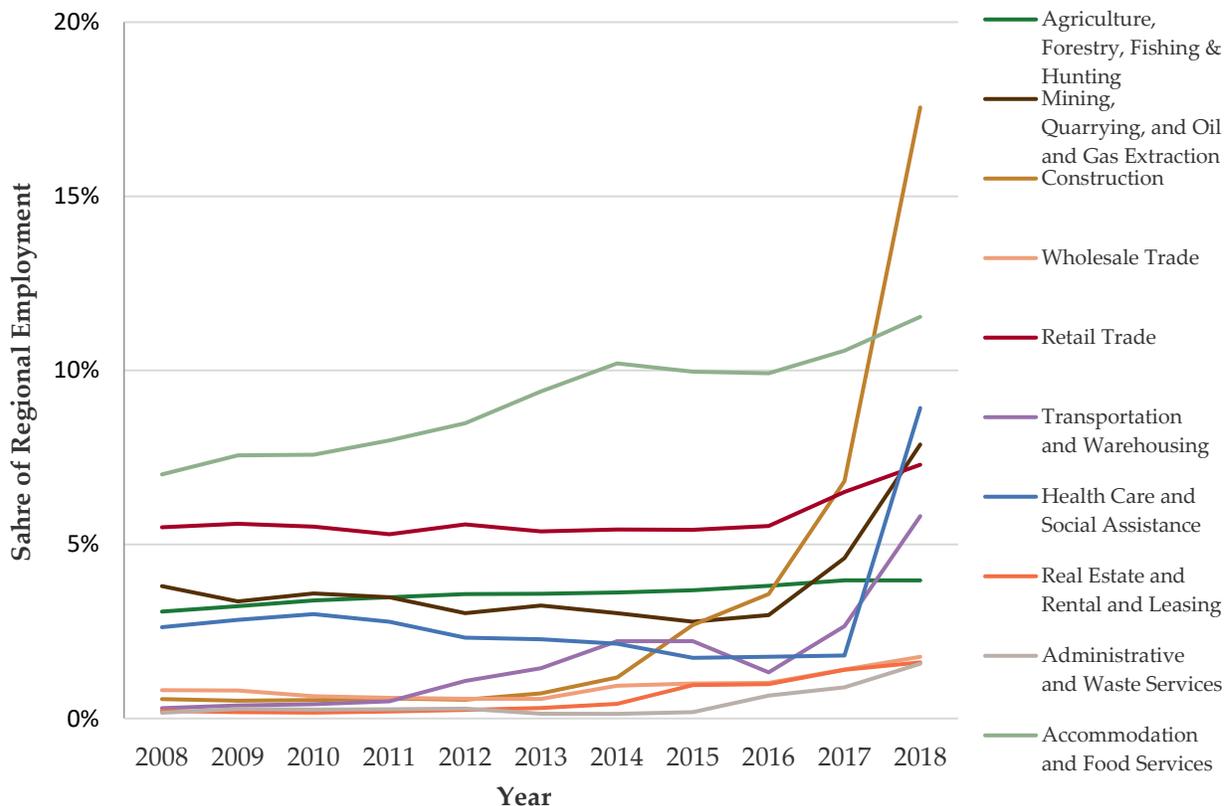
Table 8G: Location Quotients for Reeves County Compared to Texas (2008 - 2018)

Share of Total Employment

In this analysis, share of total employment refers to the percentage of total jobs in Reeves County that come from a specific industry. It is important to consider share of total employment in addition to industry concentration (LQ) because a high relative concentration of jobs does not necessarily indicate a high number of jobs in the industry. Industries that have both a high relative concentration of jobs and a large share of jobs in regional economy typically form the region's economic base. An industry with a larger share of regional jobs and a declining relative concentration may indicate economic problems.

Chart 8D illustrates changes in industry shares of total employment in Reeves County between 2008 and 2018. An analysis of top employing industries and whether the industry may be an economic base for the county follows.

Chart 8D: Share of Regional Employment, by Industry (2008 - 2018) [Reeves County]



Note: * Annual Agriculture industry employment figures based on average annual changes between 2007 and 2012 Census of Agriculture data

- *Construction (1,867 jobs in 2018).* Construction employment, associated with the fracking boom and subsequent development, has skyrocketed in recent years and is a major economic base for Reeves County. Construction was a minor employer in 2008, likely due to the economic recession. Since then, construction jobs have grown over 3000%, and represented 18% of the reported employment in 2018.
- *Accommodations and Food Services (1,227 jobs in 2018).* The Accommodations and Food Services industry is not likely an economic base for Reeves County. The industry provided the second largest reported share of regional employment (12%) but does not have a job concentration in the county (relative to the state). Also, Accommodation and Food Services jobs typically have very low wages compared to over major industries in Reeves County.
- *Health Care and Social Assistance (949 jobs in 2018).* The Retail Trade industry is not likely an economic base for Reeves County. Although the industry provided the third largest reported share of regional employment (9%), the industry does not have a job concentration in the county (relative to the state). Similar to the Financial Services industry, the LQ for the Health Care and Social Assistance industry decreased annually over the last 10 years.
- *Mining, Quarrying, and Oil and Gas Extraction (837 jobs in 2018).* Mining, Quarrying, and Oil and Gas Extraction employment, associated with the fracking boom, has rebounded strongly in recent years and is a major economic base for Reeves County. Extraction has long been a major economic base for Reeves County, but employment numbers follow the boom and bust cycle of the industry. The employment share of the Extractive industry was likely even higher in 2019, and the reported numbers may be artificially lower than actual employment due to the temporary nature of the job assignments in the industry.

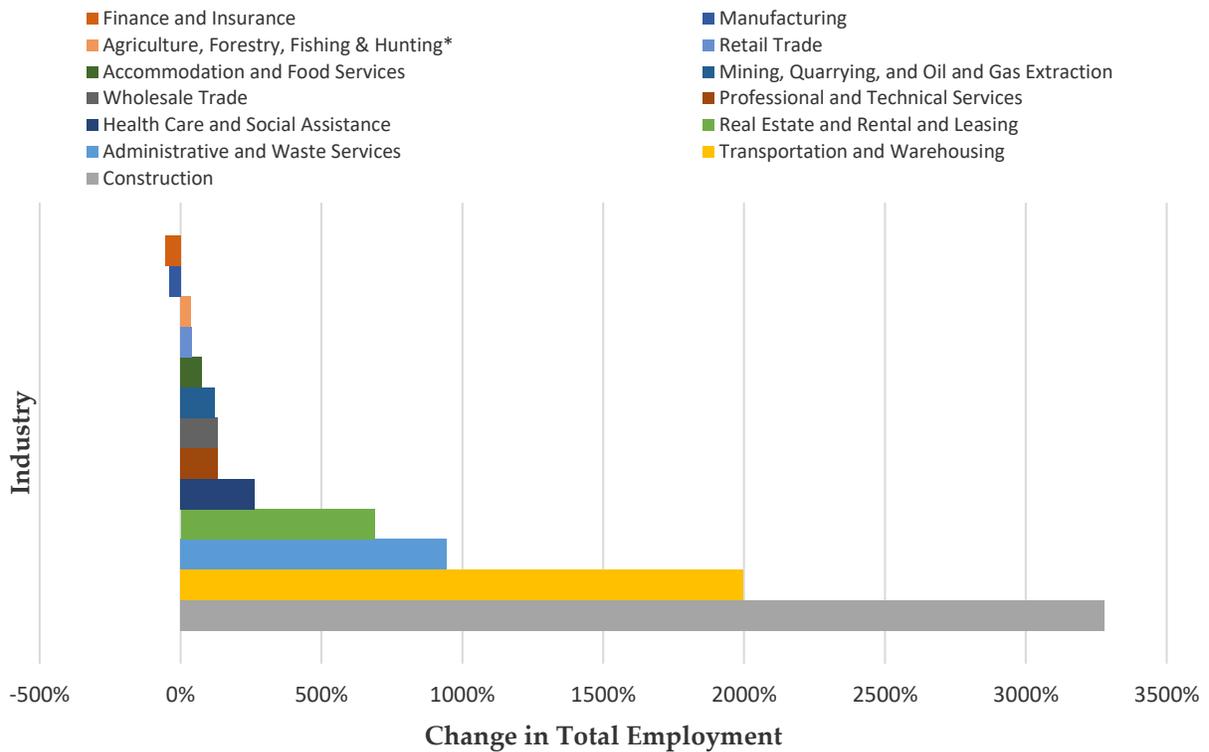
Overall Change in Industry Employment

Examining absolute industry employment changes over a longer period can provide an initial indication of industry stability and future outlook. Industry job growth, particularly in economic base industries (regionally concentrated industries with a large share of regional economic employment) suggests industry stability and growth. Conversely, job decreases may indicate economic trouble.

Chart 8E (next page) illustrates overall changes in employment between 2008 and 2018 for each reported industry in Reeves County. As the chart demonstrates, overall employment decreased

moderately in the Finance and Insurance industry (-56% or -79 employees) and the Manufacturing industry (-42% or -58 employees) during this period. However, employment in nearly all key industries related to the Pecos economy increased, some exponentially. Employment increased 3280% (+1,812 employees) in the Construction industry and 2000% (589 employees) in the Transportation and Warehousing industry, representing the two largest overall employment increases between 2008 and 2018. Other industries had very strong growth, including the Administrative and Waste Services industry (945%), and the Healthcare Industry (263%).

Chart 8E: Change in Total Employment, by Industry (2008 - 2018) [Reeves County]



Source: Texas Workforce Commission, Tracer quarterly employment and wages

Wages & Unemployment

Table 8H compares average weekly wages for Reeves County, the Permian Basin Workforce Development Area (which includes Reeves County), and the state of Texas. Average weekly wages in Reeves County higher than in both the WDA and the state. The high average weekly wages are linked to higher wages in the Mining, Quarrying, and Oil and Gas, Transportation and Warehousing, and Construction industries. Combined these industries comprise 32% of employment in the county. When these industries are excluded average weekly wages in Reeves County are \$1,103.00.

Table 8H: Average Weekly Wages Comparison (3rd Quarter 2019)

	Reeves County	WDA	Texas
Average Weekly Wage (all industries)	\$1,401	\$1,341	\$1,116

Source: Texas Workforce Commission, Tracer quarterly employment and wages

Table 8I lists the industries with the top three highest average weekly wages as well as average weekly wages for the top three employment industries in the county. As the table demonstrates, at least two of the top employment industries is also a top industry in terms of average weekly wages. All top employers have weekly wages that are higher than the average wage in both the WDA and the State. Table 8H (previous page).

Table 8I: Top Industry Average Weekly Wages Comparisons (3rd Quarter 2019)

	Top 3 Industry Average Weekly Wages		Top 3 Employment Industries Average Weekly Wages	
Reeves County	Construction	(\$ 2,052)	Mining, Quarrying, and Oil and Gas	(\$1,659)
	Utilities	(\$1,838)	Construction	(\$2,052)
	Mining, Quarrying, and Oil and Gas	(\$1,659)	Transportation and Warehousing	(\$1,354)

Source: Texas Workforce Commission, Tracer Quarterly Employment and Wages Q3 2019

* Refers to average weekly wages for Animal Production

As Table 8J lists unemployment rates for Reeves County, the WDA, and the state of Texas in 2018 and 2019. As the chart shows, average rates in all three areas decreased between 2018

and 2019. The 2019 unemployment rate in Reeves County is lower than the average rates for both the WDA the state. The current unemployment rate in Reeves County is 2.4% or approximately 1-in-400 residents.

Table 8J: Unemployment Rate Comparisons (2017, 2018)

Year	Area	Labor Force	Employment	Unemployment	
				#	%
2019	Texas	13,245,729	13,798,717	552,988	4.0
2019	Reeves County	8,795	8,582	213	2.4
2019	Permian Basin WDA	247,016	253,943	6,927	2.7
2018	Texas	13,447,760	13,939,677	491,917	3.5
2018	Reeves County	10,866	11,048	182	1.6
2018	Permian Basin WDA	264,286	270,541	6,255	2.3

Source: Texas Workforce Commission, Civil Labor Force Employment (LAUS), May 2018 vs. May 2019

The 2020 CEDS update (see *Section 8.2-Previous Studies*) notes that low unemployment and general economic development in the Permian Basin region compared to the State of Texas and the nation is “subject to a range of external pressures including foreign production and demand, economic cycles, regulatory policy, tariffs, weather, etc. [and] the resultant volatility has led to a boom-bust cycle of economic activity for the region...”⁵⁸ This boom-bust cycle means unemployment could go up sharply during a bust cycle, and local governments should be prudent to prepare for this occurrence.

8.3.3 Regional Competitiveness

The following sections analyze Pecos’s regional competitiveness by examining the city’s share of regional establishments, relative workforce education and skill levels, relative business costs and operating factors, and, finally, by comparing changes in Pecos’s gross annual sales growth with nearby cities.

Share of Regional Establishments

Table 8K (next page) lists the number of establishments in each industry sector for Pecos and Reeves County. In addition, the tables indicate the extent to which establishments in Pecos may account for the total number of county establishments in each industry sector (as a percentage). As *Table 8K* shows, Pecos establishments comprise over 3/4 of county establishments in most industry areas, including county industry areas with significant amounts of establishments, like

⁵⁸ <http://www.pbrpc.org/pdfs/EDD/2015/2015-2020%20PB-CEDS.pdf>

the Accommodation & Food Services industry. This is positive but not necessarily surprising, considering Pecos is easily the largest city in the County.

Table 8K: Establishments Comparison [City, County]

<u>Industry</u>	<u># of Establishments</u>		<u>% of County</u>
	<i>City</i>	<i>Reeves County</i>	<i>City</i>
Agriculture Operations*	74	104	71%
Mining	33	42	79%
Utilities	4	4	100%
Construction	25	28	89%
Manufacturing	18	22	82%
Wholesale Trade	31	35	89%
Retail Trade	128	152	84%
Transportation	11	16	69%
Information	3	5	60%
Finance & Insurance	2	2	100%
Real Estate & Rental & Leasing	11	12	92%
Professional, Scientific, & Technical Services	12	13	92%
Management of Companies & Enterprises	0	0	N/A
Administrative and Support & Waste Management & Remediation Services	18	25	72%
Educational Services	6	7	86%
Health Care & Social Assistance	2	3	67%
Arts, Entertainment, & Recreation	6	6	100%
Accommodation & Food Services	108	130	83%
Other Services (except Public Administration)	30	31	97%
Public Administration	2	4	50%
TOTAL	524	641	81.7%

* Comptroller data undercounts agriculture operations. Agriculture operations data sourced from most recent USDA data (<http://quickstats.nass.usda.gov>). County figures based on 2017 USDA census. Pecos 2017 figures based on percentage of county operations attributable to Pecos zip code (79772) in 2007; 2017 USDA census does not provide data at the zip code level.

Source: Texas State Comptroller (open records request August 2018). Note: Comptroller does not collect information for establishments not subject to sales taxes; therefore, some financial institutions, franchise establishments, and similar organizations are not included.

Workforce Education & Skills

Table 8L is based on the occupation estimates for the civilian employed workforce (16 years and older) from the 2014-2018 American Community Survey (ACS). ACS occupation data is grouped to reflect the anticipated required educational level for entry. “High Education” occupations usually require at least a college degree. “Moderate Education” occupations generally require a high school diploma, an associate degree from a two-year/technical college, or specialized coursework/certification. Occupations with low educational barriers do not require completion of high school. The table lists occupation group data for Pecos, Reeves County, and the state of Texas.

As Table 8L shows, Pecos’s civilian workforce is most concentrated in occupations requiring Moderate Education (36%), followed by High Education (25%). Pecos’s workforce concentration in Moderate and High Education occupation may be seen as an asset for businesses and industries seeking specialized and/or certified employees. However, both the county and the state have larger percentages of the civilian workforce employed in high education occupations.

Table 8L: Workforce Education Comparison

	<u>Pecos</u>		<u>Reeves County</u>		<u>Texas</u>	
	#	%	#	%	#	%
High Education	1,173	25%	2,013	28%	4,931,037	39%
Moderate Education	1,715	36%	2,542	36%	3,982,818	31%
Moderate-Low Education	792	17%	1,256	18%	1,590,910	12%
Low Education	1,078	23%	1,266	18%	2,297,235	18%
<i>Total</i>	4,758	100%	7,077	100%	12,802,00	100%

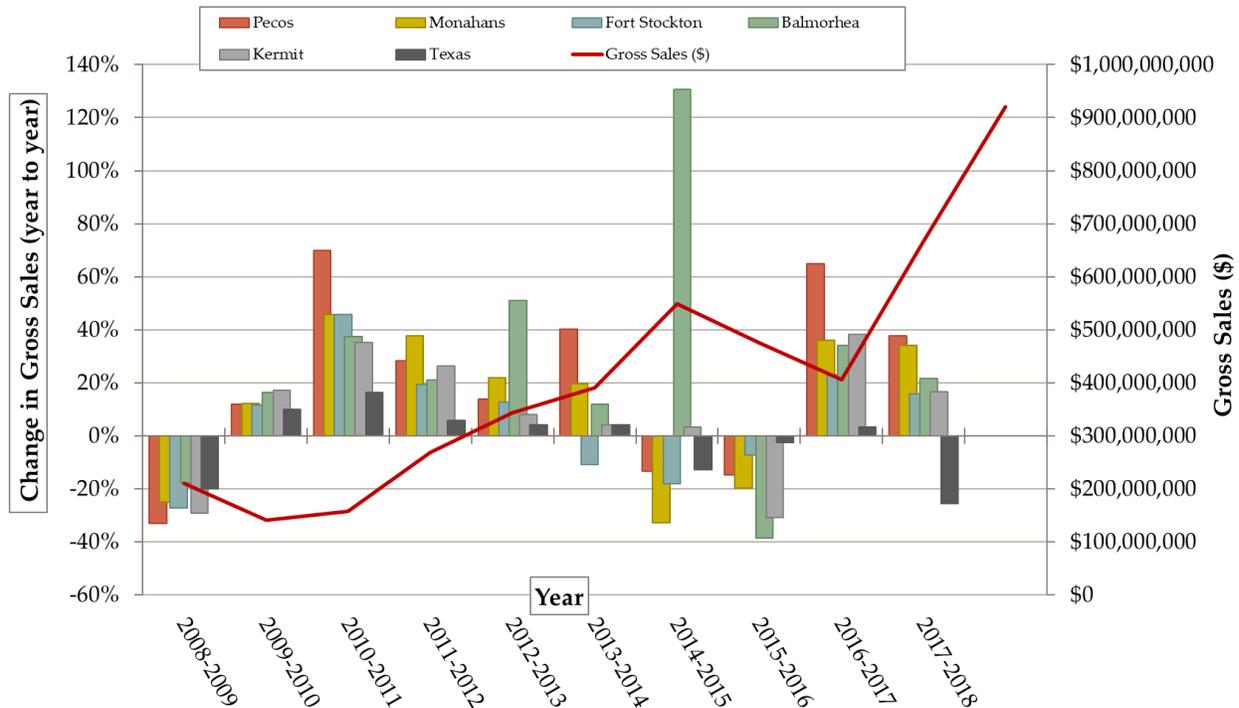
**Note: More detailed Occupation by Education and Occupation by Education and Gender tables are located in Appendix 8B: Occupation by Education Tables*

Source: Summarized from 2014-2018 American Community Survey, Table C24010, Margins of error are large, data cited for trends only.

Sales Growth

Chart 8F illustrates annual changes in gross sales in Pecos, Reeves County, and the state between 2008 and 2018. As the chart shows, overall gross sales in Pecos increased by approximately 224% during this period (from \$210,318,898 in 2008 to approximately \$921,220,588 in 2018, adjusted for inflation). Relative changes in Pecos’s gross sales in recent years correspond with trends experienced nearby cities.

Chart 8F: Annual Change in Gross Sales Comparison, Adjusted for Inflation (2008 - 2018) [Multiple]



Source: Quarterly Sales Tax, Texas State Comptroller; <https://ourcpa.cpa.state.tx.us/allocation/HistSales.jsp>

Cost Factors

Table 8M lists basic costs that most companies consider when choosing where to open a facility. Companies will view each cost differently depending on their specific needs. However, the “ratings” column provides an approximate indication of Pecos’s relative advantage for each factor in comparison with costs in Reeves County and the state. As the table shows, Pecos is at a relative disadvantage to Reeves County for several cost factors including local property tax rates and access to financing. However, Pecos’s electricity and wages rates may be a potential asset or attraction for businesses.

Table 8M: Comparative Cost Factors

Factor	Pecos	Rating for a Business	Reeves County	Texas
Wage Levels (Avg. weekly)	\$830	Liability	\$1,401	\$1,116
Electricity Costs (Commercial)	\$0.0760kWh	Asset	\$0.0760kWh	\$0.1197/kWh
Fuel Costs	\$1.99	Liability	\$1.99	\$1.66
Water Rate (Commercial, \$/50,000 gallons)	\$473	Liability	N/A	\$ 338.26 [2]
Sewer Rate (Commercial, \$/50,000 gallons)	\$262	Liability	N/A	\$ 233.13 [2]
Building Costs [3]	\$148,965	Similar	\$148,965	\$150,951
Land costs (median price per acre)	\$1,450	Asset	\$700	\$2,972
Local Property Taxes [4]	\$0.50	Liability	\$0.35	\$0.44 - \$0.81
Financing Costs [5]	N/A	Liability	7.21	5.99

[1] 2014-2018 American Community Survey estimated mean income divided by 52.1429

[2] Average for Texas cities between 10,001 - 15,000 population (TML Survey, 2020)

[3] Derived from national price per square foot data from RSMeans-cost plus air-conditioning-cost multiplied by the location factor. Priced based on a 2,000-square-foot home. County and city price used Odessa location factor. Texas price is average of Texas cities listed.

[4] Rates from Texas Comptroller 2018 Tax Rates and Levies data. State rate is range for the 10 largest cities

[5] Percentages are not interest rates charged; they are the amount of profit banks report on loans as an indicator of interest rate charges.

Sources include Texas Workforce Commission TRACER data (2018 Q3); RSMeans Building Construction Cost Data (2013); U.S. Bureau of the Census, Construction Reports, Series C-25, New One Family Homes Sold and For Sale; Texas Municipal League Annual Water and Wastewater Surveys (2017); Texas Comptroller's Office Tax Rates and Levies Data (2017); Real Estate Center at Texas A&M University Rural Land Prices for Permian Basin -Central (LMA 2) (2017); Uniform Performance Reports, Federal Financial Institutions Examinations Council (FFIEC)(03.2018)

Operating Factors

Table 8N table lists data that can impact the ability of businesses to operate. The “Rating” column indicates Pecos’s relative advantage/disadvantage under each factor compared with Reeves County and the state. Many local operating condition factors in Pecos are similar to figures for the county and/or state. Potential liabilities may include a larger percentage of unskilled labor, and few post-HS educational opportunities.

Table 8N: Local Operating Condition Factors

Factor	Pecos	Business Rating	Reeves County	Texas
<i>Workforce</i>				
Unskilled Labor [1]	39%	Liability	36%	30%
Skilled Labor [2]	61%	Liability	64%	70%
Productivity (avg. annual sales growth (2007-2017) [3])	21%	Asset	8.91%	11%
HS Graduation rate [4]	93%	Asset	86%	90%
Unionization [5]	4%	Similar	5%	5%
<i>Transportation</i>				
Motor carrier operators [6]	69	Asset	76	Variable
Rail/Freight service (closest shipping yard)	Amarillo	Similar Asset	Amarillo	Variable
Air Service	Pecos Municipal Airport	Asset	Pecos Municipal Airport	Numerous
<i>Existing Facilities</i>				
Site Availability	9.9% of land semi-developed	Potential Asset	Variable	Variable
Medical Services [7]	Reeves County Hospital District	Similar Liability	Reeves County Hospital District	75% of counties have at least 1 hospital
School District per pupil expenditure [8]	\$13,951	Asset	\$13,951	\$11,681

Post-HS Education	Odessa College in Pecos	Asset	Odessa College in Pecos	Variable
<i>Natural Resources</i>				
	Oil/gas production, ranching, dairies, hay, cotton, cantaloupes, pecans,	Similar	Ranching, dairies, hay, cotton, cantaloupes, pecans, pistachios	Variable
<i>Non-Competitive Factors</i>				
Electric Power	Readily Available	Similar	Readily Available	Readily Available
Water/Sewer Capacity	Readily Available	Similar	Readily Available	Variable
Gas availability	Readily Available	Similar	Readily Available	Readily Available

[1] From (2014-2018) American Community Survey, Table C24010. Includes food prep, maintenance, and similar occupations.

[2] From (2014-2018) American Community Survey, Table C24010. Includes professional occupations.

[3] Gross sales; www.texasahead.org

[4] From (2016-2017) TEA report: <http://www.tea.state.tx.us/>

[5] From www.bls.gov and (2014-2018) American Community Survey, Table C24030

[6] See www.txdmv.gov/motor_carrier/records_tracking.htm

[7] Texas Department of State Health Services, Texas Hospital List, (2016)

[8] <http://txsmartschools.org/results/downloads.php>

8.4 Key Economic Development Strategies

Based on the community input and local economic development data described above, Pecos and its residents should focus on the following key issues related to economic development: enhancing marketing efforts, focusing on business growth and recruitment, prioritizing quality of life improvements.

Chapter 9: Funding Sources has detailed information on grant and loan agencies and programs available to assist with economic development projects. *Appendix 8D* provides information about local and regional resources that provide economic development support services related to the recommendations in this section.

8.4.1 Enhancing Marketing Efforts

City officials involved in economic development can do at least three things to market themselves to prospective businesses and tourists. These include: participate in regional economic development and tourism initiatives to ensure Pecos continues to be in future plans and to keep City officials abreast of programs and financing opportunities related to economic development; develop a clear “brand”; and continue to update the city website to provide easy access to information about Pecos to prospective visitors and investors.

Increase Regional Presence & Collaboration

Several local, neighboring, and regional organizations focus on economic development. Building relationships with those organizations would simplify basic marketing activities such as:

- Ensuring that a City website is linked to the websites of related organizations such as Reeves County, Permian Basin Regional Planning Commission, and Workforce Solutions Permian Basin, as well as the Reeves County Appraisal District.
- Publicizing information about Pecos events in neighboring cities such as Balmorhea, Monahans, and Fort Stockton.
- Considering membership in the GO TEXAN Rural Community Program for increased internet marketing opportunities and other economic development resources (www.gotexan.org).
- Continuing participation by Pecos officials at Permian Basin Regional Planning Commission meetings to provide access to recent research and information about best practices as well as the potential opportunity to participate in regional planning efforts and programs.
- Coordination of training for “first responders,” retail employees on primary thoroughfares who provide information to visitors.

The City should focus collaborative efforts with Permian Basin Regional Planning Commission and the GO TEXAN Rural Community Program. Contact information for these organizations is located in *Appendix 8D*.

Strengthen the City's Brand

One of the most basic marketing tools a city has at its disposal is its identity. Pecos already maintains a strong identity based on its history as the birthplace of the Rodeo and should continue to expand on this branding as much as possible. The town's strongest identifying characteristics can become the centerpiece of an economic development plan, attract businesses and residents, and inspire community pride. Cities will often install murals and emblems that help to define the city's identity throughout the community, though generally concentrated in the downtown area. The examples below from Rising Star, Texas include the use of stars symbolic of the city's name, murals highlighting famous residents, depictions of the city's agricultural roots, and paw prints painted on streets near the school campus representing the wildcat mascot.



Figure 8B: Light Pole Adornments



Figure 8C: City Hall Sign



Figure 8D: ISD Wildcat Paws



Figure 8E: Agriculture Mural

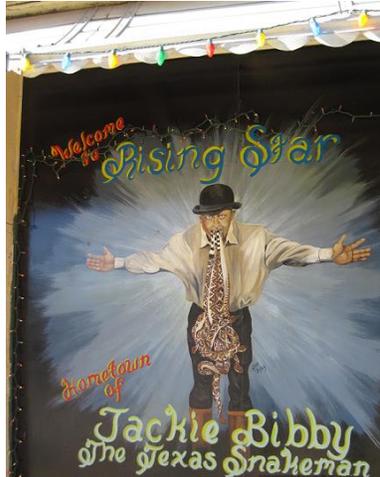


Figure 8F: Jackie Bibby Mural



Figure 8G: Welcome Mural

Pecos's EDC already has developed a well-defined brand that permeates its website and promotional literature. The town could also consider adopting a motto that helps define and sell the town and its activities to potential investors. For example, the Economic Development Corporation for Emory, Texas uses the motto "Land Between the Lakes" on its website. This motto associates Emory as a destination for water-based sports and tourism, but has the potential to create a broader brand based around recreational opportunities that go beyond the lakes. When developing a brand and a city motto it is important to focus on the aspects of the city that are actually part of the city – things that exist within the city that visitors and residents can see or interact with. For example, cities that label themselves as "Gateways" to other places are not inviting people to visit their city.

To develop an effective motto that reflects something unique and attractive about the city, residents of Pecos need to reflect on its history, current assets, and its desired future. Pecos can build its brand by continuing to include the motto and logo, on all websites, signs, at annual events, in partner organizations' materials when demonstrating City support, and in marketing materials. City ordinances can be also used to support marketing/branding goals. For example, Plano requires that the official logo be included "on all its equipment, materials, supplies, and flags" and that the motto "be used alone or in conjunction with the official logo by the City of Plano on all its marketing, branding, advertising, and promotional materials, equipment, material supplies, and flags...". In addition, city events can be tweaked to support the image the community wants to project and increase brand recognition. For extreme examples, think of Christmas City USA (www.mcadenville-christmastown.com) and the Bavarian Village of Leavenworth, WA (www.leavenworth.org).

The Kansas Sampler Foundation, a rural community development organization in Kansas (<http://kansassampler.org/rce/>), and rural economic development specialist Jack Shultz, author of *Boomtown USA: The 7½ Keys to Big Success in Small Cities* (<http://www.boomtowninstitute.com/index.html>), provide further strategies for building and strengthening a city's brand.

Update the City Website

The internet is typically the first resource visitors and potential residents, investors, and businesses utilize when looking for information about a city. A good website conveys not only necessary information but also the presence of municipal staff and residents who cooperate and are willing and able to work with prospective companies. Therefore, it is essential that cities, economic development boards, and other organizations interested in promoting a location use the internet to demonstrate everything that location has to offer.

Information that could be included on a City website includes:

- A statement by the mayor and/or an economic development board expressing a vision for economic development in the community.
- Utility rates and local ordinances.
- Real estate data: contact information for local realtors, photos, and information on available commercial land and buildings.
- Updated information on local events open to the public such as open-air markets, annual festivals, sports club activities, and school activities.
- Information on volunteer and community organizations.
- Picture gallery highlighting local events and activities; as one economic development blogger comments, “Mothers love pictures, so when someone is looking at a new city they might move to hundreds of pictures from dozens of people might be what it takes to seal the deal.”⁵⁹
- Links to related organization websites including the ISD, Reeves County, and the Permian Basin Regional Planning Commission.
- Information targeted towards businesses that might consider locating or expanding to Pecos. The Texas State Comptroller provides guidelines for a ‘prospect kit’⁶⁰ - a package of information used for communication with prospective businesses. Much of the information suggested in the prospect kit is included in this economic development study.

8.4.2 Focusing on Diverse Business Growth & Workforce Training

Three common business and job growth strategies form the basis of an economic development plan: existing company growth, start-up companies, and company recruitment. In general, enabling local entrepreneurship and helping existing companies expand is considered more productive for local economic development in rural America than “smokestack chasing”.⁶¹ Particularly in Pecos’s case, it will be crucial to diversify the types of businesses based in the town, to avoid over-reliance on extractive industries.

⁵⁹ Crawford, M. Small But Strong: Strategies for Business Success in Rural America. *Rural Telecom*, www.ntca.org

⁶⁰ Prospect kit information located at <http://www.texasahead.org/lga/kit.php> and in the *Digital Appendix* to this study.

⁶¹ Kotval, Z., J. Mullin, and K. Payne. 1996. *Business Attraction and Retention: Local Economic Development Efforts*. International City/County Management Association, Washington, D.C.

Statistically speaking, “there are literally thousands of communities involved in industry attraction, yet fewer than 200 major plant relocations occur annually”.⁶² When compared to building a business park, creating tax incentives, and competing with other towns in marketing campaigns, it is more cost-effective for a community to foster opportunities for existing and home-grown businesses than it is for a community to devote resources to attracting new businesses. Nevertheless, many of the activities that support existing and start-up businesses will also encourage out-of-town companies to consider relocating, and there are specific actions that cities can take to lower barriers to relocation.

Support Existing Businesses

In addition to current activities, the City could pursue the following activities to support existing businesses:

- Purchase advertising space in local newspapers to promote a business in Pecos or the immediate area twice monthly.
- Provide financial support to help local businesses with sign improvements.
- Host monthly open-air markets that provide retail and other businesses an additional space to sell goods or market services.
- Ask businesses what they need. Schedule an annual informal meeting with each local employer to express appreciation for their presence; determine whether infrastructure facilities adequately support existing business operations; and learn of any planned expansions that will require public infrastructure improvements. Alternatively, hold a business appreciation summit or other event to create an ongoing dialogue on future improvements and business strategies.
- Invest in infrastructure that contributes to residents’ quality of life. Beyond basic infrastructure maintenance, gaining businesses’ input on investments they believe would make their employee’s lives better can increase community buy-in to public expenditures, make it easier for companies to retain a skilled workforce, and create opportunities for public-private partnerships.

⁶² Cothran, H.M. “Business Retention and Expansion (BRE) Programs: Why Existing Businesses Are Important”. (included in *Digital Appendix* and online at <http://edis.ifas.ufl.edu/pdf/files/FE/FE65100.pdf>)

- Prioritize marketing and tourism efforts. Happy visitors lead to more customers and more residents.
- Create a City⁶³ and partner with organizations that promote area businesses and events on their websites to raise Pecos's profile (see *Section 8.4.1*).
- Consider a "Buy Local" campaign.⁶⁴ Often started by or with the support of City government, such campaigns can help residents understand the importance of shopping at home. Dollars spent at local businesses provide a larger return through taxes, payroll, and other expenditures than do dollars spent at national chains or online at businesses outside the city or region.



Figure 8H: Buy Local Logo⁶⁵

The City can also support existing businesses by building stronger generational connections. Many small communities lose businesses through owner retirement. Building stronger connections between generations through high school entrepreneurship clubs, mentoring programs, and organized systems for connecting business owners with younger generations can: provide employers with more focused employees, give students specific education goals, provide businesses with the employees they need to expand, give Pecos residents reasons to remain in or return to the community, and create a new generation of entrepreneurs able to take over from retirees.

⁶³ For examples, see Rogers, TX website: <http://Cityofrogers.us/index.html> and Lexington, TX website: <http://www.lexingtontexas.com/cms/index.php/government/City>

⁶⁴ For more information on starting buy local campaigns, see www.the350project.net/home.html

⁶⁵ Source: www.lowcountrylocalfirst.org

The HomeTown Competitiveness Approach is an example of a model for existing business growth and youth engagement that has been successful for many small towns. The HomeTown Competitiveness Approach highlights youth engagement and existing business growth through a series of collaborative task forces. One of the key components to the approach is its “come-back/give-back mentality” that focuses on cultivating opportunities to encourage and enable younger generations to return to their hometown. *Appendix 8C* provides additional information on the Hometown Competitiveness Approach.

Support Farming in Pecos

Much of Pecos’s historic farmland has been converted to extractive land uses. The town should support the preservation of the productive capabilities of the most fertile local farmland, so that when demand for oil and gas decreases, those lands can be converted back to productive uses. There are innovative ways to keep farming practices profitable and desirable for the whole community. These include Co-ops and food hubs and Community Supported Agriculture or CSA’s.

As demand for locally grown produce continues to rise, farmers everywhere face three key challenges: crop variety, crop volume, and distribution. Planting new or unfamiliar crop varieties increases a farmer’s financial risk. In their attempt to anticipate necessary crop volumes to meet shifting demands, farmers may overplant one crop while shorting another. Even if farmers plant the right crops in the right volumes, they still must figure out how to get their crops to market in the most efficient way possible.

Most farmers are familiar with co-ops. Typically, co-ops have provided farmers with the opportunity to spread the cost of materials and equipment across the community by putting together bulk orders, creating shared facilities, and purchasing shared machinery. Co-ops have also served to ensure that farmers are paid a fair price for their goods by helping to match supply to demand. More often than not, co-ops have served as an interface between farmers and wholesalers.

Now, in addition to buying local, consumers want more direct contact with the farmers who produce their food. Co-ops may not be the most useful tool to help farmers directly access their consumers. Instead, farmers will need to collaborate more innovatively. Food hubs aren’t a perfect solution, but they’re a good step in the right direction.

Unlike traditional co-ops, food hubs, which may be co-operatively run, are often designed as teaching aids. They work to educate farmers and community members about agricultural diversity and land stewardship. They also operate retail and wholesale markets. Unfortunately, they don’t tend to operate profitably.⁶⁶ However, they do provide the direct contact with consumers that co-

⁶⁶ “Food Hub Development in Iowa: Lessons Learned From a Study of Food Hub Managers and Regional Food Coordinators” Leopold Center for Sustainable Agriculture, February 2015. Full text included in digital appendix.

ops don't typically offer, and that's important because it can be used to better anticipate consumer demand for new and existing crops.

Community Supported Agriculture programs (CSAs) offer farmers another means to engage their customers. There are various styles of operation, but CSAs give customers an opportunity to buy into a local farm by directly supporting the farmer. Often, customers are referred to as members. They're generally required to buy into the entire season, which can vary in length, and there is an upfront membership fee that is used to help the farmer afford seeds and materials to get future plantings started on time. Members pay a weekly fee for their share of produce, but CSAs are responsible for delivering produce to members or to a central location where members can pick up their food.

Tecolote Farm near Manor, TX is a great example of a successful small farm in Texas. In business for over 20 years, the farm is a pioneer of organic farming in Central Texas and began delivering CSA shares in 1994. Tecolote delivers to more than 300 CSA subscribers, sells to area restaurants and has a presence at several farmers markets. The CSA is the main source of revenue for Tecolote and they grow 100% of the produce that goes into the CSA baskets.

Recruit New Companies

Existing businesses often determine what businesses might be interested in moving to an area. Companies to target should include those that:

- Supply raw materials/input products to existing businesses;
- Use existing businesses' waste and by-products; and
- Package and transport locally produced goods.

This strategy is often referred to as clustering, building business around existing business. Educational institutions, including college systems and small business development centers, often work with industry to supply workforce training and to assist with the attraction and creation of companies that expand existing industry clusters. *Table 80* lists the top clusters in Reeves County. The data suggests that Pecos could capitalize on county strengths by supporting the growth of businesses active in the following industries:

Table 80: Top County Clusters (2018)

Industry	Reeves County
NAICS 21 Mining, Quarrying, Oil & Gas Extraction	5.46
NAICS 23 Construction	4.31
NAICS 48 Transportation and Warehousing	2.16

Pecos should also consider how it might capitalize on the emerging industry areas identified in the Permian Basin Economic Development District's Comprehensive Economic Development Strategy (such as the renewable energy industry), as well as the in-demand industries and occupations identified in the Permian Basin Regional Planning Commission's Integrated Plan (see *Section 8.2 – Previous Studies*).

Local economic development efforts should also consider the analysis and goals of regional organizations for the area such as Workforce Solutions Permian Basin and the Permian Basin Regional Planning Commission. Engaging with the organizations may enable Pecos to capitalize on regional economic development initiatives and support growth in the area (see *Previous Studies*).

Surveying existing businesses would also provide additional information for targeted economic development plans. A survey should ask Pecos area businesses the following questions:

- a) What supplies must be purchased in order run the business?
- b) Are there any goods customers ask for that your business doesn't sell?
- c) What goods would you like for your businesses but can't easily access?
- d) How and where does your business transport products?
- e) What types of skills do your workers need?

Data from a survey with at least the above-listed questions would: provide area schools the information to plan classes that would place students into jobs; provide residents considering starting up a business with an idea of what may be needed; and provide companies interested in the area with information about existing market opportunities.

Rural Outsourcing

The U.S. business community is beginning to recognize rural America as a valuable resource for affordable labor. "Rural outsourcing" is the term for outsourcing work to rural communities in the U.S. as opposed to overseas developing countries.

From the perspective of a community like Pecos, this trend is valuable because adding nation-wide employers to the local economy provides a buffer against the risks of relatively undiversified local industry; enables residents to remain in the community; and provides higher-paying jobs. To capitalize on the trend, the City should support enhanced local telecommunications infrastructure and publicize information like commercial real estate availability to companies that manage rural

outsourcing.

Most of those companies focus on information technology, but some also provide services such as marketing, design, and business analysis. Examples of rural outsourcing companies include: www.ruralsourcing.com, www.cross-usa.com, and www.onshoretechnology.com.

Agritourism

One of the most rapidly developing sectors of the tourism industry is agritourism, which gives tourists the opportunity to see, participate in, and/or stay at working farms. Agritourism operations can range from “harvest your own fruit” afternoons to horseback riding – bed and breakfast weekends. Texas A&M provides information about agritourism on its website at <http://naturetourism.tamu.edu/>, and Fredericksburg provides a good example of a community whose farmers have capitalized on the trend www.fredericksburgtexas-online.com/Agritourism.

Entrepreneurial Support

Often rural and/or smaller cities are dependent on one or two companies. That can be detrimental to Pecos if those companies close or shift operations. Supporting local entrepreneurship (start-ups) gives local economies greater flexibility and residents more choice about how to live. Entrepreneurial support generally involves:

- Public infrastructure investment, especially in telecommunications;
- The creation of temporary office space (incubator facilities);
- Programs that defray rents, taxes, or other start-up expenses; and
- Start-up capital such as access to micro loan sources.

New business owners are also much more likely to succeed if they have access to supportive business groups, mentors, and other entrepreneurs. While cities can provide infrastructure and financial assistance to start-ups, the long-term success of entrepreneurs will depend on local business leadership.⁶⁷

Resources for Business Growth & Recruitment

⁶⁷ See Startup America Partnership, a company focused on aggregating information on and providing support for entrepreneurship in the U.S.: www.startupamericapartnership.org/entrepreneurial-communities-must-be-led-entrepreneurs

Several local, regional, and state organizations work on business growth and recruitment efforts. An overview of organizations and programs that can assist the City with sharpening their recruitment skills is located in *Appendix 8.D*.

Expand Educational and Workforce Training Opportunities

In order to maintain a stable population that is resilient to the boom-and-bust cycle of the extractive industries, Pecos should focus on expanding higher educational opportunities and training opportunities for its residents. These opportunities will encourage families to settle in Pecos, and attract new types of industries that rely on well educated workers to produce high value goods and services. Meanwhile, without opportunities to train for different occupations, workers who are laid off during a bust will be forced to migrate to find work elsewhere, depleting the town's workforce and tax base.

Expanding Higher Education

Without significant higher educational opportunities, Pecos will inevitably experience a “brain-drain” of its brightest students leaving town to pursue an education elsewhere. Currently, the only higher education opportunity is the small Odessa College extension in Pecos. This College offers high quality educational opportunities, but its curriculum and capacity is limited.

The Town of Pecos should consider working with Odessa College to expand its offerings in Pecos, through financial support or by providing additional educational space in under-used public facilities. The Town can work with local organizations to increase attendance of the college with scholarships and grants. The Town should work with the Pecos ISD to improve awareness of higher educational opportunities through their college counselor.

The West Pecos masterplan currently includes plans for a future Higher Education Campus that will directly link to its Healthcare Village, providing workforce training for the next generation of Pecos residents. This plan would be highly beneficial for the town of Pecos City and contribute significantly to the diversification of the town's educational and occupational opportunities. The Town should focus on securing federal and state funding to support these developments, with the possibility of one day establishing a Pecos Community College and/or trade school.

Finally, the town should work with the Pecos ISD to expand virtual higher education opportunities to allow students to pursue higher education while remaining in Pecos. Online Education is expanding rapidly due to improvements in accessibility, and the necessity of doing so during the COVID-19 Pandemic. There are numerous online schools which offer the ability to receive a degree completely remotely, or take specific coursework that can be transferred to a brick-and-mortar institution. The University of Texas Online Extension is one such school that offers

transferable coursework which allows for students to maintain a job or support their family in Pecos while attending classes online.

Workforce Training

In addition to higher education, Pecos should improve access workforce training including trade schools, continuing education and apprenticeships. These programs can prepare residents for in-demand jobs that don't necessarily require a college degree but do require a high level of skill and experience. These types of trades include but are not limited to: welding, plumbing, woodworking, HVAC technicians, IT Support, and electricians. Trade schools can often lead to employment in a well-paying position with less time and money spent than a traditional higher education.

The Town of Pecos should work with the Pecos ISD to pursue the establishment of trade schools and apprenticeships for Pecos students to prepare them for high-demand trades in the region. The Texas Workforce Commission provides grants to support the costs of apprenticeship programs. To qualify for funding, the programs and apprenticeships must be registered with the U.S. Department of Labor Office of Apprenticeship. More information can be located on the Texas Workforce Commission's Website: <https://www.twc.texas.gov/programs/apprenticeship-program-overview>

8.4.3 Prioritizing Quality of Life Improvements that Promote Economic Growth

Creating and maintaining quality of life aspects of the community can play a tremendous role in retaining businesses, attracting companies to an area, increasing property values, and enabling a city to market itself. For these reasons, Pecos should continue to invest in activities that improve City infrastructure systems, housing, local parks, and downtown features such as walkable streets and small businesses. The following subsections summarize key activities related to quality of life improvements found throughout the plan that most heavily impact economic development.

Infrastructure Systems

Maintaining reliable infrastructure systems is a key component to economic development. Businesses and residents look for communities with dependable water and sewer systems and well-maintained streets and drainage features. *Chapter 5: Water Supply & Distribution Study* through *Chapter 6: Wastewater System Study* outline improvement projects and estimated costs for some of those infrastructure systems.

Housing

Business owners seeking a place to locate often look for communities that have adequate housing

options for employees. There are 63 vacant, dilapidated/deteriorating homes within the city limits. The prevalence of substandard houses is a primary concern of residents and is also a potential deterrent to attracting new retail/commercial business. The City should: apply for HOME grant funding; update its ordinances to ensure statutory compliance; and provide homeowner education of local and regional housing assistance grant/loan programs. The City should also consider taking a proactive stance in addressing dilapidated housing by establishing a community group that focuses on facilitating voluntary dilapidated house removal. *Chapter 3: Housing Study* includes in-depth discussion of strategies for substandard housing and structure removal or rehabilitation.

Park Improvements

The City's main recreational facility, Pecos Veterans Memorial Park/Maxley Park, offers many amenities to residents and visitors. Further improving connectivity to this park will increase resident use and enhance this space as an attractive amenity for visitors, travelers, and potential new residents. New park facilities and other recreational attractions in the northern parts of the town would also be economically beneficial. *Chapter 7: Thoroughfares Study* offers an urban trails plan to improve connectivity between parks and other public places.

Downtown Improvements

Pecos's traditional commercial center is oriented along either side of Oak Street and US 285 between W. 1st Street and W. 6th Street. The downtown's physical appearance and amenities have a direct fiscal impact on property values and retail sales as well as indirect impacts on residents' sense of pride and community belonging. Working with residents and property owners to identify a set of voluntary or mandatory design guidelines that convey a sense of community investment and cooperation will contribute to economic development. Specific strategies for improving the appearance and functionality of the downtown area can be found in *Chapter 4: Land Use Study*.

In addition to downtown appearance and functionality, creating a "lively" downtown area attracts visitors and new businesses to this part of city. Like many small communities, Pecos has some commercial storefronts that are either vacant or closed in the downtown area. Many communities have been successful in energizing vacant storefronts with community or school art exhibits or other installations. Pecos officials and other community groups should work with property owners of vacant commercial buildings to use these spaces for community engagement and promotion. See also specific strategies for activating vacant lots through temporary use in *Chapter 4: Land Use Study*.

The City may also wish to consider applying to become a Main Street Community through the Texas Historical Commission. The Main Street program accepts annual applications for the Main

Street designation which enables communities to join a statewide and national network and receive a range of services, such as “individualized, on-site training for Main Street managers, boards, and other Main Street participants” and a “full range of design services from a professionally trained TMSP staff that includes a licensed architect to help downtown property owners undertake effective rehabilitation, restoration, and adaptive re-use projects”. In addition, non-entitlement member communities, such as Pecos, receive “access to a Main Street-specific pool of improvement funds through the Texas Capital Fund of the Texas Department of Agriculture”. More information is available at <http://www.thc.texas.gov/preserve/projects-and-programs/texas-main-street>.

Resources for Quality of Life Improvements

Several local, regional, and state organizations work toward improving quality of life amenities that impact economic development. *Appendix 8D* provides an overview of local and regional organizations and programs and *Chapter 9: Funding Sources* provides a comprehensive summary of grant opportunities.

8.5 Implementation Plan

The Implementation Plan organizes the action items recommended to address each issue identified in the above sections into a timeline for completion. The actions are prioritized and organized by date.

Table 8P: Implementation Plan: 2020-2030

Goals & Objectives	Activity Year(s)			Lead Organization	Cost Estimate	Funding Sources *
	2020-2023	2024-2026	2027-2030			
<i>Goal 7.1 Market Pecos as an attractive place to visit, live, and work.</i>						
Coordinate with regional organizations to advertise local events and festivals and consider membership in the GO TEXAN Rural Community Program	X	X	X	City	Staff/ Volunteers \$150 biennially (GO TEXAN program)	GEN; Local
Identify and train "First Responders" in downtown area to serve as an information point for visitors	X	X	X	City	Staff/ Volunteers	GEN; Local
Market available downtown buildings/lots on City website and regional websites as permitted (Permian Basin Regional Planning Commission)	X	X	X	City	Staff/ Volunteers	GEN; Local
Continuously update City website and social media channels; include current figures, pictures, utility rates and other information related to economic development	X			City	Variable by form; (estimated \$100 - \$1,500/year) + Staff	GEN
Create a marketing package to make information about Pecos easily accessible to potential developers and residents		X		City	Variable	GEN; Local
<i>Goal 7.2 Develop a support system for existing businesses, focus on diverse business growth & workforce training, and information readily available on the local economy</i>						
Prioritize capital improvements for infrastructure throughout the planning period	X	X	X	City	See CIP Chapter	GEN; Utility; County; TDA; TXDOT
Create a "resource center" in City Hall that supplies information about Workforce	X			City	Staff	N/A

Solutions of the Permian Basin, the Small Business Development Center, and the Prospect Kit (can also include housing resource information)

Launch a "Buy Local" campaign to raise the profile of local businesses (<i>see Digital Appendix</i>)		X			City	Staff	GEN
Pursue funding to expand Higher Education offerings at Odessa College in Midland extension campus and/or establish a new college campus within the West Pecos Development	X	X	X		ISD; City; Odessa College	Staffs	GEN; ISD Local; TEA
Connect youth to in-demand career paths through local business owners/managers through apprenticeship, internships, and trade programs		X	X		ISD; City	Staffs	GEN; ISD
Survey local businesses annually about City services and general business needs.		X	X		City	Staff	GEN
Host annual "business appreciation" breakfast or lunch for area companies		X	X		City	\$250, Staff	GEN
Provide advertising support for local businesses in local newspaper and/or on local website(s)		X	X		City	\$160/month	GEN
Survey residents about consumer needs, desired businesses etc.; share results with local business owners		X	X		City	Staff	GEN
Goal 7.3 Ensure that Pecos's downtown and thoroughfares are attractive and functional and improve the quality of life for residents and businesses							
Prioritize capital improvements for infrastructure throughout the planning period	X	X	X		City	See CIP Chapter	GEN; County; TDA; TXDOT
Implement strategies in <i>Chapter 3: Housing Study</i> that address dilapidated housing	X	X	X		City, Local	See Housing Chapter	GEN; Local; TDHCA; TWC
Implement strategies in <i>Chapter 4: Land Use Study</i>	X	X	X		City	See Land Use Chapter	GEN; Local;
Implement strategies in <i>Chapter 7: Thoroughfares Study</i> to improve	X	X	X		City	Variable	GEN; Local; TPWD

transportation and recreation facilities

Coordinate with residents, ISD, and property owners of vacant commercial storefronts to implement an "Art in Storefronts" project to revitalize vacant buildings

X

X

X

City, ISD,

Staff/
Volunteers

GEN;
ISD;
Local

GEN = City of Pecos Municipal Funds; **COG** = Council of Governments; County = Reeves County; **EDC** = Economic Development Corporation; **Staff** = Staff Time; **ISD** = Independent School District; **Local** = Donations from private citizens, organization, and local businesses; **TWC** = Texas Workforce Commission; **TDA** = Texas Department of Agriculture Funds including TxCDBG; **TDHCA** = Texas Department of Housing and Community Affairs; **TPWD** = Texas Parks & Wildlife Department; **TXDOT** = Texas Department of Transportation; **Utility** = City of Pecos water and wastewater funds **TEA** = Texas Department of Education

FOR A FULL LIST OF STATE FUNDING SOURCES, SEE CHAPTER 9

8.6 Appendix 8A: Establishments by Industry (Detailed)

Table 8A.1: Detailed Establishments by Industry (2020)

	Number	% Total
Accommodation & Food Services	108	23.9%
Drinking Places (Alcoholic Beverages)	10	
Full-Service Restaurants	28	
Hotels (except Casino Hotels) and Motels	11	
Limited-Service Restaurants	18	
Snack and Nonalcoholic Beverage Bars	6	
RV (Recreational Vehicle) Parks and Campgrounds	3	
Mobile Food Services	22	
Cafeterias, Grill Buffets, and Buffets	3	
Rooming and Boarding Houses	3	
All Other Traveler Accommodation	3	
Caterers	1	
Administrative & Support; Waste Management & Remediation Services	18	4.0%
Security Systems Services (except Locksmiths)	1	
Solid Waste Collection	1	
Hazardous Waste Treatment and Disposal	1	
Other Waste Collection	2	
Other Nonhazardous Waste Treatment and Disposal	1	
Other Services to Buildings and Dwellings	3	
All Other Miscellaneous Waste Management Services	1	
Private Mail Centers	1	
Janitorial Services	3	
Convention and Visitors Bureaus	1	
Exterminating and Pest Control Services	1	
Septic Tank and Related Services	1	
Landscaping Services	1	
Agriculture, Forestry, Fishing and Hunting	1	.2%
Forest Nurseries and Gathering of Forest Products	1	
Arts, Entertainment, and Recreation	6	1.3%
Independent Artists, Writers, and Performers	1	
Fitness and Recreational Sports Centers	2	
All Other Amusement and Recreation Industries	1	
Musical Groups and Artists	1	
Museums	1	
Construction	25	5.5%
Electrical Contractors and Other Wiring Installation Contractors	6	
Highway, Street, and Bridge Construction	2	
Site Preparation Contractors	3	
Oil and Gas Pipeline and Related Structures Construction	2	
Commercial and Institutional Building Construction	2	
Other Foundation, Structure, and Building Exterior Contractors	1	
Structural Steel and Precast Concrete Contractors	1	
Plumbing, Heating, and Air-Conditioning Contractors	3	
Residential Remodelers	1	

Glass and Glazing Contractors	1	
Other Building Finishing Contractors	2	
All Other Specialty Trade Contractors	1	
Educational Services	6	1.3%
Elementary and Secondary Schools	6	
Information	3	0.7%
Motion Picture Theaters (except Drive-Ins)	1	
Telecommunications Resellers	2	
Manufacturing	18	4.0%
Commercial Screen Printing	1	
Ready-Mix Concrete Manufacturing	4	
Cement Manufacturing	1	
Current-Carrying Wiring Device Manufacturing	2	
Machine Shops	1	
Oil and Gas Field Machinery and Equipment Manufacturing	3	
Ice Manufacturing	1	
Sign Manufacturing	1	
Tire Retreading	1	
Plastics Pipe and Pipe Fitting Manufacturing	1	
Prefabricated Metal Building and Component Manufacturing	1	
Retail Bakeries	1	
Mining, Quarrying, and Oil and Gas Extraction	33	7.3%
Construction Sand and Gravel Mining	1	
Support Activities for Oil and Gas Operations	28	
Natural Gas Liquid Extraction	2	
Industrial Sand Mining	1	
Drilling Oil and Gas Wells	1	
Other Services (except Public Administration)	30	6.7%
Beauty Salons	1	
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	2	
General Automotive Repair	4	
Other Automotive Mechanical and Electrical Repair and Maintenance	1	
Snack and Nonalcoholic Beverage Bars	1	
All Other Automotive Repair and Maintenance	3	
Parking Lots and Garages	1	
Automotive Body, Paint, and Interior Repair and Maintenance	2	
Drycleaning and Laundry Services (except Coin-Operated)	1	
Computer and Office Machine Repair and Maintenance	1	
Automotive Glass Replacement Shops	1	
All Other Personal Services	2	
Funeral Homes and Funeral Services	2	
Other Personal and Household Goods Repair and Maintenance	1	
Car Washes	1	
Automotive Exhaust System Repair	1	
Appliance Repair and Maintenance	1	
Private Households	2	
Automotive Oil Change and Lubrication Shops	1	
Barber Shops	1	
Professional, Scientific, and Technical Services	12	2.7%

Computer Systems Design Services	1	
Other Accounting Services	1	
Veterinary Services	1	
Other Scientific and Technical Consulting Services	2	
Administrative Management and General Management Consulting Services	1	
Other Specialized Design Services	1	
Engineering Services	2	
Offices of Certified Public Accountants	1	
Geophysical Surveying and Mapping Services	1	
Photography Studios, Portrait	1	
Retail Trade	128	28.4%
All Other Miscellaneous Store Retailers (except Tobacco Stores)	9	
Beer, Wine, and Liquor Stores	10	
Children's and Infants' Clothing Stores	2	
Discount Department Stores	8	
Gasoline Stations with Convenience Stores	20	
Gift, Novelty, and Souvenir Stores	3	
Jewelry Stores	1	
Other Clothing Stores	1	
Other Direct Selling Establishments	9	
Sporting Goods Stores	3	
Supermarkets and Other Grocery (except Convenience) Stores	2	
Used Merchandise Stores	3	
Women's Clothing Stores	8	
Electronics Stores	7	
Hardware Stores	2	
Other Gasoline Stations	3	
Convenience Stores	3	
Fuel Dealers	1	
Tire Dealers	1	
Furniture Stores	4	
Family Clothing Stores	4	
Tobacco Stores	1	
New Car Dealers	1	
All Other Health and Personal Care Stores	1	
All Other Specialty Food Stores	1	
Other Building Material Dealers	1	
Vending Machine Operators	2	
Hobby, Toy, and Game Stores	2	
Nursery, Garden Center, and Farm Supply Stores	3	
Clothing Accessories Stores	3	
Sewing, Needlework, and Piece Goods Stores	1	
Cosmetics, Beauty Supplies, and Perfume Stores	1	
Floor Covering Stores	1	
Automotive Parts and Accessories Stores	3	
Florists	1	
Home Centers	1	
Pharmacies and Drug Stores	1	
Transportation & Warehousing	11	2.4%

Freight Transportation Arrangement	1	
Pipeline Transportation of Crude Oil	1	
Pipeline Transportation of Refined Petroleum Products	1	
Pipeline Transportation of Natural Gas	1	
Motor Vehicle Towing	1	
Other Warehousing and Storage	1	
Other Support Activities for Air Transportation	1	
Other Nonscheduled Air Transportation	1	
Short Line Railroads	1	
General Freight Trucking, Long-Distance, Truckload	1	
Other Support Activities for Road Transportation	1	
Wholesale Trade	31	6.9%
Tire and Tube Merchant Wholesalers	2	
Other Chemical and Allied Products Merchant Wholesalers	1	
Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	3	
Industrial Machinery and Equipment Merchant Wholesalers	11	
Farm and Garden Machinery and Equipment Merchant Wholesalers	1	
Other Miscellaneous Durable Goods Merchant Wholesalers	1	
Petroleum Bulk Stations and Terminals	3	
Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	1	
Industrial Supplies Merchant Wholesalers	2	
Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	1	
Automobile and Other Motor Vehicle Merchant Wholesalers	1	
Service Establishment Equipment and Supplies Merchant Wholesalers	1	
Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	2	
Other Miscellaneous Nondurable Goods Merchant Wholesalers	1	
Public Administration	2	0.4%
Other General Government Support	2	
Health Care and Social Assistance	2	0.4%
Offices of All Other Miscellaneous Health Practitioners	1	
General Medical and Surgical Hospitals	1	
Real Estate and Rental and Leasing	11	2.4%
Other Commercial and Industrial Machinery and Equipment Rental and Leasing	4	
Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	4	
Office Machinery and Equipment Rental and Leasing	1	
Video Tape and Disc Rental	1	
Consumer Electronics and Appliances Rental	1	
Finance and Insurance	4	0.4%
Direct Title Insurance Carriers	2	
Consumer Lending	1	
Utilities	4	0.9%
Water Supply and Irrigation Systems	2	
Sewage Treatment Facilities	1	
Electric Bulk Power Transmission and Control	1	
Total	451	100%

Source: Texas State Comptroller's office, open records request (2020)

8.7 Appendix 8B: Occupation by Education Tables

Table 8B.1: Detailed Occupation by Education (2018) [City, County, Texas]

Occupation	Pecos		Reeves County		Texas		
	#	%	#	%	#	%	
High Education	Management occupations	301	6.3%	278	3.9%	1,348,564	10.0%
	Business and financial operations occupations	202	4.2%	55	0.8%	710,076	5.3%
	Computer and mathematical occupations	14	0.3%	0	0.0%	401,110	3.0%
	Architecture and engineering occupations	24	0.5%	32	0.5%	255,119	1.9%
	Life, physical, and social science occupations	16	0.3%	328	4.6%	101,127	0.7%
	Community and social service occupations	38	0.8%	28	0.4%	191,012	1.4%
	Legal occupations	34	0.7%	303	4.3%	131,261	1.0%
	Education, training, and library occupations	358	7.5%	85	1.2%	832,075	6.2%
	Arts, design, entertainment, sports, and media occupations	15	0.3%	186	2.6%	219,897	1.6%
	Health diagnosing and treating practitioners and other technical occupations	73	1.5%	155	2.2%	482,006	3.6%
	Health technologists and technicians	98	2.1%	563	8.0%	258,790	1.9%
Moderate Education	Healthcare support occupations	96	2.0%	42	0.6%	395,211	2.9%
	Firefighting and prevention, and other protective service workers including supervisors	112	2.4%	126	1.8%	154,085	1.1%
	Law enforcement workers including supervisors	235	4.9%	355	5.0%	140,169	1.0%
	Personal care and service occupations	98	2.1%	838	11.8%	345,940	2.6%
	Sales and related occupations	450	9.5%	620	8.8%	1,458,075	10.8%
	Office and administrative support occupations	508	10.7%	167	2.4%	1,489,338	11.0%
	Production occupations	216	4.5%	394	5.6%	689,168	5.1%
Moderate - Low	Farming, fishing, and forestry occupations	0	0.0%	16	0.2%	57,020	0.4%
	Construction and extraction occupations	402	8.4%	594	8.4%	967,066	7.2%
	Transportation occupations	390	8.2%	646	9.1%	566,824	4.2%
Low Education	Food preparation and serving related occupations	361	7.6%	164	2.3%	786,897	5.8%
	Building and grounds cleaning and maintenance occupations	238	5.0%	115	1.6%	529,106	3.9%
	Installation, maintenance, and repair occupations	280	5.9%	776	11.0%	463,719	3.4%
	Material moving occupations	199	4.2%	211	3.0%	517,513	3.8%

Source: Summarized from 2014-2018 American Community Survey, Table C24010

Table 8B.2: Detailed Occupation by Gender (2018)

	Occupation	Male	Female	Total	% Total
High Education	Management occupations	155	146	301	6.3%
	Business and financial operations occupations	50	152	202	4.2%
	Computer and mathematical occupations	0	14	14	0.3%
	Architecture and engineering occupations	24	0	24	0.5%
	Life, physical, and social science occupations	5	11	16	0.3%
	Community and social service occupations	28	10	38	0.8%
	Legal occupations	17	17	34	0.7%
	Education, training, and library occupations	50	308	358	7.5%
	Arts, design, entertainment, sports, and media occupations	6	9	15	0.3%
	Health diagnosing and treating practitioners and other technical occupations	58	15	73	1.5%
	Health technologists and technicians	26	72	98	2.1%
Moderate Education	Healthcare support occupations	3	93	96	2.0%
	Firefighting and prevention, and other protective service workers including supervisors	77	35	112	2.4%
	Law enforcement workers including supervisors	160	75	235	4.9%
	Personal care and service occupations	0	98	98	2.1%
	Sales and related occupations	93	357	450	9.5%
	Office and administrative support occupations	109	399	508	10.7%
	Production occupations	184	32	216	4.5%
Moderate - Low Education	Farming, fishing, and forestry occupations	0	0	0	0.0%
	Construction and extraction occupations	402	0	402	8.4%
	Transportation occupations	385	5	390	8.2%
Low Education	Food preparation and serving related occupations	73	288	361	7.6%
	Building and grounds cleaning and maintenance occupations	31	207	238	5.0%
	Installation, maintenance, and repair occupations	258	22	280	5.9%
	Material moving occupations	157	42	199	4.2%

Source: Summarized from 2014-2018 American Community Survey, Table C24010

8.8 Appendix 8C: HomeTown Competitiveness Approach

The HomeTown Competitiveness approach to rural community development emphasizes strong community involvement by creating interconnected committees and task forces centered around four pillars: Entrepreneurship, Charity (Transfer of Wealth), Youth Engagement, and Leadership. The pillars were specifically designed to deal with the four critical issues that are inhibiting rural America—the generational wealth transfer problem, the historical youth out-migration trend, the loss of farms and small businesses, and the erosion of leadership capacity. The approach is one of intense community involvement and so the types of people who lead the task forces need to be passionate, invested in community progress, and willing to work.

The primary objectives of each task force are summarized below:

- *Entrepreneurial Task Force:* Focuses on growing businesses within the community and expanding existing businesses. Develops strategies for producing increased entrepreneurial activity, fostering an entrepreneurial culture, and helping the community realize economic goals.
- *Charitable Assets Task Force:* Establishes a Community Affiliated Fund governed by a Fund Advisory Committee to capture the transfer of wealth from rural America to larger cities over generations. It accomplishes this by encouraging resident and business donations to the Fund.
- *Youth Task Force:* Mobilizes youth engagement and cross generational collaboration on community projects and assists youth in putting their ideas into action. The primary goal here is to encourage youth to return to their communities after college. The innovation center is a good resource for youth engagement (www.theinnovationcenter.org).
- *Leadership Task Force:* Cultivates leadership within the community through training and awareness to share leadership roles and smoothly transition leadership to new generations. There are two main leadership programs: “skill-based” emphasizes conflict management, and “civic-based” emphasizes learning detailed knowledge about the community to more effectively live/work in it.

These task forces work best when in collaboration with one another and in conjunction with an oversight committee. More information on the HomeTown Competitiveness Approach and success stories can be found at <http://htccommunity.org/>.

8.9 Appendix 8D: Local & Regional Economic Development Resources

The following is a summary of local and regional technical and support resources available to the City of Pecos or residents of Pecos. In addition, *Chapter 9: Funding Sources* Provides a comprehensive list of specific grant information related to economic development.

Resources Currently Available/Active in Pecos

Pecos Economic Development Corporation

The Pecos Economic Development Corporation (EDC) is a Type B EDC. “A Type A sales tax is primarily intended for manufacturing and industrial development. EDCs may use Type A revenue to fund land, buildings, equipment, facilities expenditures, [and] targeted infrastructure and improvements for projects.”⁶⁸ In addition to the projects allowed by a Type A tax, the “Type B tax can also fund projects that are typically considered to be community development initiatives. For example, authorized categories under Type B include, among other items, land, buildings, equipment, facilities, expenditures, and improvements for professional and amateur sports facilities, park facilities and events, entertainment and tourist facilities, and affordable housing.”⁶⁹ The Kountze EDC’s primary focus is housing, retail and tourism.

<i>Organization / Office:</i>	Pecos Economic Development Corporation
<i>Address:</i>	119 South Cedar Pecos, Texas 79772
<i>Phone / Email:</i>	(432) 445-9960
<i>Website:</i>	https://pecosedc.com/

Permian Basin Regional Planning Commission (PRPC)

Regional planning commissions, like the Permian Basin Regional Planning Commission, are voluntary associations of local governments formed under Texas law. These associations address problems and planning needs that require regional attention or that cross the boundaries of individual local governments. They coordinate planning and provide a regional approach to problem-solving through cooperative action and may provide direct services at the local level. The Permian Basin Regional Planning Commission produces a Comprehensive Economic Development Strategy for the region every five years and provides technical and support services to local economic development efforts, including regional economic development corporations.

⁶⁸ <https://comptroller.texas.gov/economy/local/type-ab/type-a.php/>

⁶⁹ <https://www.tml.org/DocumentCenter/View/628/Texas-Municipal-League-Economic-Development-Handbook-PDF>

<i>Organization / Office:</i>	Permian Basin Regional Planning Commission
<i>Address:</i>	Midland International Air and Space Port P.O. Box 60660 2910 LaForce Blvd. Midland, TX 79711
<i>Phone / Email:</i>	(432) 563-1061
<i>Website:</i>	http://www.pbrpc.org/
<i>Counties Served:</i>	<i>Gaines, Dawson, Borden, Andrews, Martin Howard, Loving, Winkler, Ector, Midland, Glasscock, Reeves, Ward, Crane, Upton, Pecos, Terrell</i>

Texas A&M County AgriLife Extension:

The County AgriLife Extension Service of Texas A&M University provides free and low-cost educational programs and manages the 4-H programs in Reeves County.

<i>Organization / Office:</i>	Texas A&M Agrilife Extension – Reeves County
<i>Address:</i>	700 W Daggett St Pecos, TX 79772
<i>Phone / Email:</i>	(432) 447-9041 / reeves-tx@tamu.edu
<i>Website:</i>	https://reeves.agrilife.org/

Organizational Resources Available to the City

Texas Pecos Region Heritage Trails Program:

The Texas Pecos Trail Region heritage trails program is a non-profit organization developed in conjunction with the Texas Historical Commission. The organization’s mission is to develop the unique culture, heritage, and natural resources of the area to stimulate economic development. The Texas Pecos Trail Region website provides several advertising opportunities for city events and amenities. Gregory does not have a profile on the website.

<i>Organization / Office:</i>	Pecos Trail Region
<i>Address:</i>	P.O. Box 7045 Midland 79708
<i>Phone / Email:</i>	(432) 262-1927
<i>Website:</i>	https://texaspecostrail.com/

GO TEXAN Rural Community Program:

The GO TEXAN Rural Community Program (RCP) is administered through the Texas Department of Agriculture and provides technical and financial assistance related to tourism and economic development to member cities and associate members (chambers of commerce, EDCs). Memberships are for two years and cost \$150. Members receive emails and an info-letter discussing workshops and available resources for rural development. Members are also linked to the GO TEXAN website and its social media contacts, including a GO TEXAN App for

iPhone which promotes restaurants, agricultural products and other retailers and services in member communities.

Organization / Office: Texas Department of Agriculture, GO TEXAS Certified Retirement Community Program
Phone / Email: (877) 99-GOTEX
Website: <http://www.gotexan.org>

Organizational Resources Available to Residents/Business Owners

Texas Center for Rural Entrepreneurship (TCRE):

TCRE is a non-profit corporation that seeks to provide educational and technical support to meet the needs of rural entrepreneurs and organizations supporting entrepreneurship in their communities. TCRE is a resource for residents seeks to start or grow small businesses in rural communities. The organization provides a number of educational resources including various “how-to” online courses and information about funding options, small business incubators, and Higher Education resources.

Organization / Office: Texas Center for Rural Entrepreneurship
Contact: Greg Clary, Chairman
Address: 3115 Fall Crest Drive
San Antonio, Texas 78247
Phone / Email: (903) 714-0232
Website: <http://www.tcre.org>

Small Business Development Centers:

The SBDC offers general business advice, technical assistance, training, workshops, and reference resources free of charge to those wanting to start or expand a small business. Pecos should reach out to the below office.

Organization / Office: Sul Ross State University, Small Business Development Center
Address: 500 West Avenue H
Alpine, TX 79832
Phone / Email: (432) 837-8694
Website: <https://sbdc.sulross.edu/alpine/>

Workforce Solutions Permian Basin

This organization serves residents of the 17-county Permian Basin Regional Planning Commission area and is a part of the larger Texas Workforce System providing one-stop assistance to job seekers and employers in the region. Services include: labor market information, job training skills, youth services, career planning, childcare, and information or referral.

Organization / Office: Workforce Solutions Permian Basin
Address: 1000 South Eddy Street
Pecos, Texas 79772
Phone / Email: (432) 445-9664
Website: <http://workforcepb.org/>

9 FUNDING SOURCES

Funding for projects in small, low-income, rural cities is one of the biggest challenges city staff, residents, and volunteers face when trying to improve their communities. Not only are grants scarce and competitive, but they require time, sophistication, and patience to write and administer. Nevertheless, they are often the only resource available to reach desired goals.

Funding sources have been identified throughout this comprehensive plan that can help accomplish specific activities. This section of the plan lists detailed information on many of the most common, effective, and implementable grants available. While every attempt has been made to keep the information up to date, funding availability and rules change frequently. After identifying desired grants or loans, it is always essential to call the organization directly to confirm details such as: deadlines, whether the proposed project will be eligible, and probability of funding (i.e. how competitive the grant is).

If a specific project is desired that does not fit one of the funding options below, it is worth checking the home page of each agency for additional programs, contacting the agencies for information, and using the internet to search for additional programs. Although most grants come with specific requirements, most funding agencies are also able to offer technical assistance to help communities find the resources they need to fulfill those requirements. The Foundation Center (<http://foundationcenter.org/>) is a good starting point for online grant searches.

Because of the complexity of identifying, writing, and managing grants, community partners are often the key to successful grant programs. Those frequently include:

- Co-applicants (most typically with other counties or municipalities) where projects or services meet the needs of several jurisdictions
- Sponsored providers of services that benefit residents, which are often provided by nonprofit organizations (VFDs, EMS, youth programs like Boys & Girls Club) or hospital districts, water (MUD/SUDIWCID), drainage, groundwater districts.
- Sources of matching funds (EDC, municipalities, local park foundation or youth sports league, Optimists, Kiwanis or Rotary)
- Sources of information or expertise (local community college or state university, local NRCS office, regionally COG, or internally from the public works director, police chief, etc.)

The following State agencies provide a wide range of grants and technical assistance.

Agency Name	Website
Texas Department of Agriculture	www.texasagriculture.gov
Texas Water Development Board	www.twdb.state.gov
Texas Commission on Environmental Quality	www.tceq.state.gov
Texas Department of Transportation	www.txdot.gov
Texas Historical Commission	www.thc.state.gov
Texas Department of Public Safety Division of Emergency Management	www.dps.texas.gov/dem/
Texas Forest Service (Rural VFD assistance)	www.tfsweb.tamu.edu/
Texas Task Force on Indigent Defense	www.tidc.texas.gov/
Texas Parks and Wildlife Department	www.tpwd.state.tx.us/
Texas Department of Housing & Community Affairs	www.tdhca.state.tx.us/
Texas General Land Office (Coastal Programs)	www.glo.texas.gov/coast/grant-projects/cmp/index.html
Texas Governor's Office Criminal Justice Division	www.gov.texas.gov/organization/cjd/criminal-justice-division
Texas Governor's Office Economic Development	www.gov.texas.gov/business
Texas Office of the Attorney General (Crime victim services)	www.texasattorneygeneral.gov/crime-victims
Texas Department of State Health Services (Indigent Health Care)	www.dshs.texas.gov/transition/chi/
Texas State Library	www.tsl.state.gov
Texas Comptroller of Public Accounts (SECO)	www.comptroller.texas.gov/programs/seco

Detailed Grant Tables by Project Type

Economic Development						
Project Type	Deadline	Organization	Program Name	Program Description	Grant/Loan Amount	Local Contribution
Industry - Infrastructure	Quarterly: February 20, May 20, August 20, November 20	Texas Department of Agriculture (TDA) www.texasagriculture.gov	Texas Capital Fund (TCF) – Infrastructure / Real Estate Programs	<p>For economic development projects that create new jobs for low-to-moderate income persons (new or expanding businesses). Public infrastructure improvements can include: water & sewer facilities/lines, road/street construction/improvements, natural gas line construction/improvements, electric, telephone, & fiber optic line construction/improvements, harbor/channel dredging, purchase of real estate related to public infrastructure improvements, traffic signals and signs, drainage improvements, and railroad spurs.</p> <p>OR</p> <p>Funds must be used for real estate development to assist a business that commits to create and/or retain permanent jobs, primarily for low and moderate-income persons. The real estate and/or improvements must be owned by the community and leased to the business.</p>	\$100,000 to \$1,000,000, based on the number of jobs the business will create or retain. Locality can request up to \$25,000 per job business will create and \$10,000 per job business will retain.	Requirements for minimum amount of leveraged funds (match and fixed assets) varies by project.
CBD - Infrastructure	Annually in early October	TDA	TCF – Downtown Revitalization Program	Funds can be used for public infrastructure improvements such as parking, sidewalks, lighting, utility upgrades in designated “historic commercial district.” Engineering costs are not eligible.	\$50,000 to \$350,000	Cash or in-kind. 10% minimum required, but points awarded for 20% or 30%. Example: on a \$150,000 grant, \$15,000 is required, but points awarded for \$30,000 or \$45,000
CBD - Infrastructure	Annually in early October	TDA	TCF – Grants for Main Street Communities	Funds can be used for public infrastructure improvements such as parking, sidewalks, lighting, utility upgrades in the designated “historic commercial district” of participating Main Street communities. Engineering costs are not eligible to be paid with TCF-DRP funds so those costs must be paid for with local funds.	\$50,000 to \$350,000	Cash or in-kind. 10% minimum required, but points awarded for 20% or 30%. Example: on a \$150,000 grant, \$15,000 is required, but points awarded for \$30,000 or \$45,000

Planning	Annually in Spring for funding the following year	TDA	CDBG - Planning and Capacity Building Fund	Funds can be used to map housing, land use, streets, drainage, public utilities; determine needs to ensure adequate utilities; determine future growth patterns (10-year growth period); & establishes a capital improvement plan.	Varies by size, but maximum grant is \$55,000.	Match varies by population
Retail - Infrastructure	Project dependent	Texas Historical Commission (THC) www.thc.state.tx.us	Federal Historic Preservation Tax Incentives	Available for rehabilitation of income-producing buildings. Building must be listed in the National Register of Historic Places before project completion. Tax credit application must be made before project completion. Project examples include substantial: structural work, building repairs, electrical, plumbing, heating and air conditioning, roof work and painting	Up to 20% of eligible rehabilitation costs	Private funding of at least 80% of project costs
Retail - Marketing, Preservation	Annually in Summer	THC	Certified Local Government Grants	Available to Certified Local Governments (certified cities or counties, or certified counties on behalf of non-certified cities). Project examples include: surveys, oral histories, preservation planning, educational activities, ordinance review, and rehabilitation projects.	\$2,000 to \$30,000	1-to-1 match required. Match can be cash or in-kind and excludes federal grants except for CDBG.
Retail - Marketing, Preservation	Annually in late July	THC	Main Street	Technical assistance program for revitalization of historic downtown areas. Focus is on: organization, marketing, design, and economic development. Successful implementation requires local human resource capacity and community participation. Assistance includes training in economic development and marketing for local managers and retailers, on-site evaluation and recommendations, design assistance, and participation in the First Lady's Tour	No cash. Participation qualifies community to apply for TCF Main Street grants	City must hire a full-time coordinator and fund the program for 3years
Industry - Infrastructure	First business day of March, June, Sept, & Dec	Office of the Governor http://governor.state.tx.us / http://texaswideopenforbusiness.com	Texas Enterprise Zone	State sales and use tax refunds capital costs to businesses that invest in and employ residents of qualified economically disadvantaged areas. Each business must be nominated by a local community. Maps of designated Enterprise Zones, based on Census data, are located at the state's mapping website of http://www.texassitesearch.com/	\$25,000 to \$3.75M refund for capital improvement investment from \$40,000 to \$250M	The local community must offer tax or permitting incentives to the nominated business.
Industry - Infrastructure	Ongoing	U.S. Department of Agriculture (USDA) www.usda.gov	Rural Economic Development Loan and Grant (REDLG)	REDLG program finances utility-managed loans and revolving loan funds. Under the loan program, the managing utility makes zero interest loans to local businesses. Under the grant program, the utility creates a revolving loan fund that makes loans to local businesses. Qualifying projects include: business incubators, telecom. facilities for distance learning, etc.	N/A	Up to 80 % of project costs; 20 % must be provided by the ultimate recipient or the local utility. The interest rate is 0%.

Industry - Infrastructure , Education	Varies	USDA	Rural Business Enterprise Grant (RBEG)	Grants available to small cities and non-profits for activities that will benefit small and emerging private businesses. Examples include: land acquisition, plant renovations/ modernizations; construction of access roads to businesses; parking areas, utilities; distance learning/adult education; and revolving loan fund capitalization	No maximum, but typical award is \$10,000 to \$500,000	N/A
Industry & Retail - Education, Planning	Varies	USDA	Rural Business Opportunity Grants (RBOG)	Technical assistance grants available to rural towns, non-profits, and cooperatives. Typical projects include development of: trade strategies, economic plans, business training, business incubators, and leadership training programs	\$100,000 maximum for projects within one state	N/A
Industry - Infrastructure , Education	Varies	USDA	Rural Business Development Grant (RBDG)	RBDG is a competitive grant designed to support targeted technical assistance, training and other activities leading to the development or expansion of small and emerging private businesses in rural areas that have fewer than 50 employees and less than \$1 million in gross revenues. Programmatic activities are separated into enterprise or opportunity type grant activities.	No maximum, but typical award is \$10,000 to \$500,000	N/A
Industry - Infrastructure	Varies	USDA	Business and Industry Guaranteed Loans	Loans to an organization or an individual for: office/plant modernization or enlargement; employee retention/expansion; land or equipment lease/acquisition. Emphasis on employee expansion, renewable energy, and water conservation/aquaculture	60%-80% loan guarantee, terms negotiated with the agency	Collateral required to secure loan
Industry & Retail - Infrastructure	Varies	Texas State Comptroller www.comptroller.texas.gov	4A/4B Sales Tax	Locally implemented program that allows municipalities to create economic development corporations that manage projects funded by local sales tax. The program is established by vote at the local level. Type A corporations fund industry projects that have specific job creation requirements, while Type B corporations can also fund a broader range of community improvement projects.	Varies	Local management by volunteer board
Retail - Marketing, Preservation	Varies	Comptroller	Hotel/Motel Tax	Available to cities and counties. Maximum tax is 7% of room bill within the city or 15% combined across taxing entities if located in the ETJ. Tax funds must be used on projects that will increase hotel occupancy and can be used for: historic restoration/preservation, visitor centers, arts promotion, city advertising, and similar.	Varies	City staff manages accounting.

Industry - Education	Ongoing	Texas Workforce Commission (TWC) www.texasworkforce.org	Skills Development Fund	The Skills Development Fund pays for workforce training programs created as a partnership between businesses and educational institutions.	\$500,000 maximum per business	None
Industry & Retail	Ongoing	Accion Texas http://us.accion.org/your-accion/location/texas	Multiple	Loans to small businesses or individuals for: business expansion and stabilization. In addition to loans, Accion Texas also provides business support services through their business support team as well as a number of online resources for entrepreneurs.	Varies	N/A
Industry & Retail - Infrastructure	Ongoing	Texas Mezzanine Fund, Inc. http://www.tmfund.com/	Multiple	Loans to small businesses or individuals for: business expansion, equipment, acquisition, and real estate in distressed and low/moderate income communities or that provide jobs for low/moderate income persons. Also provides loans for community facilities that serve the community's social and economic needs.	Up to \$300,000 for stand-alone loans; Up to \$500,000 for in tandem loans; Up to \$750,000 when collateralized by real estate	N/A
Industry & Retail	Ongoing	People Fund https://peoplefund.org/	Multiple	Loans to small businesses and nonprofits for: equipment purchases, permanent working capital term loans, revolving lines of credit, and real estate. Also provides business assistance and education programs through workshops and one-to-one mentorship.	Varies	NA
Multiple	None	Meadows Foundation www.mfi.org	Multiple	The Meadows Foundation provides grants and loans statewide for a variety of causes. Ideal projects already have at least 50% of needed funding and the organizational and financial capacity for execution beyond the grant period. The Foundation should be contacted for information about whether a given project fulfills its priorities.	Varies	Local organizational capacity

Library	January 15, June 1	Tocker Foundation http://tocker.org/	Multiple	The Tocker Foundation offers grants that increase library and literacy assistance to underserved populations (rural, handicapped, elderly, youth, non-English speakers, and the illiterate) and provide training for rural librarians.	Varies	Varies
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Public Service Infrastructure
(water, sewer, streets, drainage, energy, telecommunications)

Project Type	Deadline	Organization	Program Name	Program Description	Grant/Loan Amount	Local Contribution
Water/ Sewer	First-come first-serve basis per year	Texas Department of Agriculture (TDA) www.texasagriculture.gov	Small Towns Environment Program (STEP)	Funds for water and sewer projects utilizing at least 51% local volunteer labor and in-kind donations to complete project.	Up to \$350,000	No match required.
Water/ Sewer	Annually in Spring for funding the following year.	TDA	Community Development Block Grant Program (CDBG) - Community Development Fund	Funds can be used for water and/or sewer improvements. Drainage improvements can be constructed if they are incidental to the water or sewer improvements.	Up to \$800,000 (varies by region)	Match based on population: 0 – 1,500 persons = 5%; 1,501 – 3,000 = 10%; 3,001 – 5,000 = 15%; > 5,000 = 20%
Energy	Annually in early July	TDA	CDBG - Renewable Energy Demonstration Pilot Program	Assists rural communities with installing renewable energy projects, including wind turbines or solar panels to power wastewater treatment or water treatment facilities.	Up to \$500,000	Match of 2% to 25% required, depending on population size. Sliding scale earns points on application. Match can be cash, land, or in-kind.

Drainage	Annually	Texas Water Development Board (TWDB) www.twdb.texas.gov/flood/grant	Flood Mitigation Assistance Program	Funds for planning and project grants to develop or update the flood hazard component of a Multi-Hazard Mitigation Plan (prepared by the COG) and for constructing flood mitigation projects.	Planning grant max: \$50,000; Construction: < \$3.3 million over a 5-year period.	25% match of which not more than half (12.5%) can be of in-kind services.
Drainage	Annually	TWDB	Flood Protection Planning	Funds for regional/watershed-wide planning to evaluate structural and nonstructural solutions to flooding problems.	Varies	1-to-1-match
Water/ Sewer	Annually	TWDB	Revolving Loan Funds	Below-market interest rate loans for planning, acquisition and construction of Clean Water (also for wastewater treatment, storm water and nonpoint source pollution control, and reclamation/reuse projects) and Drinking Water (also includes water supply and Source Water protection infrastructure)	Up to 15% of available funds; 70%-100% principal forgiveness for low-income	Varies
Water/ Sewer	Monthly	TWDB	Rural Water Assistants Funds (RWAFF)	Below-market interest rate loans for small, rural cities, counties, water districts, and non-profit utilities. Typical projects: water/sewer lines, storage, purchase/lease of water rights.	Varies	Varies
Water/ Sewer	Ongoing	TWDB	Economically Distressed Areas Program (EDAP)	Grants and loans for water/sewer in economically distressed areas for PAD (planning, acquisition, design) and construction.	50%-100% grant for PAD; Grant-to loan calculation for construction varies	Varies
Streets/ Sidewalks	Fall	Texas Department of Transportation (TxDOT) www.txdot.gov	Safe Routes to School	Non-infrastructure funds can be used to create student safety programs and incentives. Infrastructure funds can be used to construct sidewalks, bike lanes, drop-off lanes, etc., or install signage, signalization, etc. Must have a TxDOT approved SRTS Plan in place to apply for infrastructure construction funds.	Varies	No match required, but local injection can earn additional points. Match contribution can be cash, land value, and/or in-kind.
Streets/ Sidewalks	Varies	TxDOT	Statewide Transportation Alternatives Set-Aside Program	Previously the Statewide Transportation Enhancement Program, 2017 program details not available at this time. Contact Teri Kaplan – Tap Program Manager, TxDot-PTN (512) 374-5235 or teri.kaplan@txdot.gov	Fixed amount of TA Set-Aside funds for each project determined by commission.	At least 20%

Streets	Varies	Texas State Comptroller http://www.comptroller.texas.gov	Street Maintenance Sales Tax	Cities can vote to dedicate a percentage of sales tax to street maintenance and repair.	Varies	City staff manages accounting.
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Parks & Recreation

Project Type	Deadline	Organization	Program Name	Program Description	Grant/Loan Amount	Local Contribution
Infrastructure	December 4	Texas Parks & Wildlife (TP&W) www.tpwd.state.tx.us	Small Community	Funds can be used for development or rehab of any public outdoor recreation facilities. City would be required to self-administer the project.	Up to \$150,000	1-to-1 match. Can be cash, land, or in-kind.
Infrastructure	December 4	TP&W	Non-Urban Outdoor Recreation	Funds can be used for development or rehab of any public outdoor recreation facilities. Must have master park plan completed prior to application.	Up to \$750,000	1-to-1 match. Can be cash, land, or in-kind.
Infrastructure	TDB	TP&W	Non-Urban Indoor Recreation	Funds can be used for development or rehab of any public indoor recreation facilities. Must have master park plan completed prior to application.	Up to \$1 million	1-to-1 match. Can be cash, land, or in-kind.
Programming	December 4	TP&W	Community Outdoor Outreach	Funds can be used to purchase supplies and equipment for outdoor programs. No construction allowed.	Up to \$50,000.	No match required, but match improves chances of funding.
Infrastructure	February 1	TP&W	Recreational Trails	Funds can be used for new trail development or rehab of existing trails, and trail amenities such as parking areas, restrooms, drinking fountains.	Up to \$200,000	20% of total project cost required as local match (can be cash, land, or in-kind).

Infrastructure	October 1	TP&W	State Boating Access	Funds can be used to develop new or renovate public boating access facilities including boat ramps, parking areas, access roads, boater amenities such as restrooms, picnic areas, courtesy docks, etc.	Up to \$500,000	25% of total project cost required as local match contribution (can be cash, land value, and/or in-kind).
Infrastructure	October 1	TP&W		Funds can be used to develop new or renovate public launching facilities such as ramps and boat lifts. Funds can also be used for land acquisition, fish cleaning stations, parking, restroom, or camping facilities associated with the boating facilities, etc.	Up to \$500,000	25% of total project cost required as local match contribution.
Infrastructure	February	TxDOT & Keep Texas Beautiful	Governor's Community Achievement Awards	Funds can be used for landscaping along public right of way. Location and type of project is decided by the community and TxDOT.	By population: <3,000=\$90K; <5,000=\$110K; <9,000=\$130K	N/A
Infrastructure	Jan. 1, April 1, July 1, Oct. 1	Major League Baseball (mlb.com)	Baseball Tomorrow Fund	Funds can be used for field improvements, equipment purchases, umpire training, but not on-going operational costs. Letter of interest submitted first (due 45 days before deadline). If invited to apply, application submitted by deadline.	No maximum, but typical award is \$50,000 to \$100,000	No match required, but match improves chances of funding.
Infrastructure	February; Rolling deadline for Safe Place to Play grants	U.S. Soccer Foundation www.ussoccerfoundation.org	Program Grants; Safe Places to Play	Priority focus changes annually, but funds can be used for construction of new fields or enhancement of existing fields with lighting or irrigation, in areas primarily designed to serve low-income communities.	Varies, current award is \$30,000 to \$90,000	50% of project funding must be in hand
Infrastructure	Biannual	Tony Hawk Foundation www.tonyhawkfoundation.org	Skatepark Grants	Funds can be used for the design, construction or operation of new skateboard parks, primarily to serve low-income communities.	\$1,000 to \$25,000	If funds requested for construction, match must be provided.
Infrastructure/ Programming	Sept. 15, March 15	Captain Planet Foundation http://captainplanetfoundation.org/	ecoSolution Grants	Funds can be used for community gardens, native plant gardens, learning trails, cleaning up local parks, maintaining/restoring environmentally sensitive areas such as forests and prairies, wetlands, rivers, streams. Preferential consideration is given to projects seeking seed funding of \$500 or less or projects that have at least a 50% match or in-	\$500 to \$2,500	No match of in-kind funding required, but match improves chances of funding.

				kind contribution in funding.		
Infrastructure/ Programming	November	National Gardening Association www.kidsgardenin.org/garden-grants/	Budding Botanist	The program helps low income schools build school gardens by providing tools, educational materials, and monetary contributions.	\$1,000 to \$2,250	No match required.
Infrastructure/ Programming	December	National Gardening Association www.kidsgardenin.org/garden-grants/	Youth Garden Grant	Any nonprofit organization, public or private school, or youth program in the United States or US Territories planning a new garden program or expanding an established one that serves at least 15 youth between the ages of 3 and 18 is eligible to apply.	\$775 to \$2,360 in materials and money	No match required.
Infrastructure	Spring	Fiskars http://www2.fiskars.com/Community/Project-Orange-Thumb	Project Orange Thumb	The program awards grant recipients a combination of financial funding and Fiskars tools to build or make over community gardens.	\$2,500 in gift cards or Fiskars tools	No match required. Only available for non-profit organizations.

Housing

Project Type	Deadline	Organization	Program Name	Program Description	Grant/Loan Amount	Local Contribution
Construction	Ongoing	Texas Department of Housing and Community Affairs (TDHCA) www.tdhca.state.tx.us	HOME	Funds can be used for rehabilitation or demolition and reconstruction of up to six substandard homes. Rehabilitation is not permitted for manufactured homes.	\$100,000 per unit	Match required, 0% to 1% per thousand on total project amount, depending on population size. Plus \$40,000 in cash leverage. Match can be in-kind or cash.

Construction	Ongoing	TDHCA	Multifamily (Rental Housing) Development	Available to local governments, public housing authorities, non-profit, and for-profit organizations for funding multifamily rehabilitation and new construction projects	Subsidy varies by county and number of bedrooms.	Long-term rent and renter income restrictions
Financial Assistance	Ongoing	TDHCA	Tenant Based Rental Assistance (TBRA); TBRA for Persons with Disabilities and Veterans	Assists renters, including veterans and persons with disabilities, with utility and security deposits for up to 24 months. Available to local governments, public housing authorities, and non-profits	Varies	Varies
Financial Assistance	Ongoing	TDHCA	Texas HOME buyer Assistance Programs	Available to local governments, public housing authorities, and non-profits to provide down payment and closing cost assistance to individuals who have not owned a home in three years or who are first-time home buyers. Also includes funding for single-family housing accessibility modifications.	Varies	Varies
Construction	Ongoing until fund emptied	TDHCA	Amy Young Barrier Removal Program	Available to local governments, public housing authorities, and non-profits to construct home accessibility projects for disabled residents (tenants and owners)	Up to \$20,000	N/A
Construction	Ongoing	U.S. Department of Agriculture (USDA) www.usda.gov	Rural Housing Repair and Rehabilitation grants and loans	Available to very low-income residents. Grants available to those over 62 years of age to remove health and safety hazards. Loans available for hazard removal, home repair, improvement, and modernization.	Loan maximum: \$20,000; Grant maximum: \$7,500; can be combined	N/A
Financial Assistance	Ongoing	USDA	Guaranteed Housing Loans	Available to any State housing agency or approved lender for loans to those making no more than 115% of the area median income who lack adequate housing.	Varies	Loan recipient must be able to pay mortgage, tax, and insurance

Construction	Ongoing	U.S. Department of Energy through local Council of Government or Action Agency	Weatherization Assistance	Low income families can apply for assistance to make home improvements that will improve energy efficiency and reduce energy bills.	Varies	Varies
Programming	Ongoing	Aging in Place Initiative www.aginginplaceinitiative.org	JumpStart	Grants have been used to create programs that assist seniors with home maintenance and lawn care, provide paratransit services, and create "return visit" programs where nurses/social workers visit regularly to identify possible issues that may impair the individual's ability to remain in their home	Varies	Varies
Construction	Ongoing	Texas Ramp Project www.texasramps.org	Texas Ramp Project	The mission of this organization is to build accessibility ramps. The organization accepts referrals from social service agencies and establishes regional capacity for ramp building.	Ramp building	N/A
Programming	Ongoing	Legal Aid www.lonestarlegal.org	Legal Aid	Legal aid organizations provide civil legal representation and advice at little or no cost to low income individuals who cannot afford a lawyer. Assistance focuses on basic needs, self-sufficiency, children and families, elderly and disability, and housing and homelessness prevention.	Varies	Varies
Programming	Ongoing	Leader Dog for the Blind www.leaderdog.org	Guide Dogs	Applicants must be 16 years or older and in good mental and physical health. They complete a 26-day residential training program in Rochester Hills, Michigan. Room, board, training, and transportation costs for clients traveling within the U.S. are free of charge. The organization also offers mobility and GPS programs to professionals and clients.	N/A	N/A

