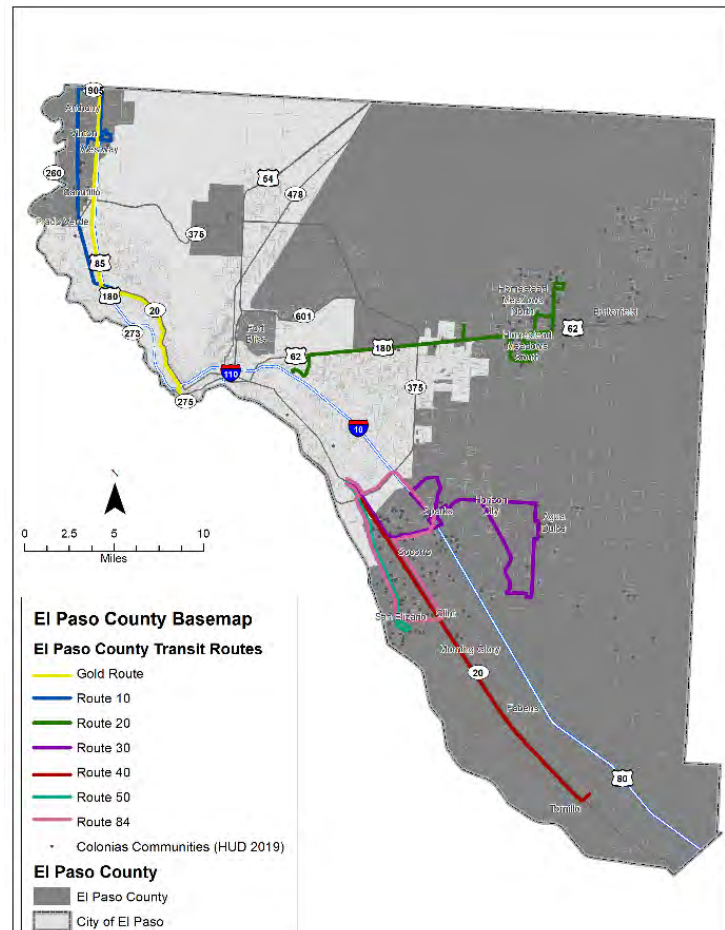


El Paso County Transit Facility Assessment



Prepared for: TxDOT and El Paso County Transit

Final Report

October 2022



Austin, TX | Bethesda, MD

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Appendix A: Site Fit Diagrams

Chapter 1:

Study Goals and Objectives

El Paso County Transit (EPCT) has requested consultant assistance to develop a square foot requirement for a maintenance building, identify potential locations for the facility, as well as reviewing potential costs for a CNG facility. It is our understanding that the purpose of this effort is to develop a square foot requirement for a maintenance building for 30 CNG buses. The study also reviewed and assessed potential sites for this facility. Site selection was based on:

- Reducing deadhead
- Minimizing environmental issues
- Ensuring there is a facility that meets the long term needs of the transit system.

Project Initiation

This project was kicked off through a series of meetings with management of El Paso County Transit. Based on these meetings and the review of the data supplied to date, the following project goals and objectives were formed.

Overarching Goal

First, the consultant team would like to point out the overarching goal for this study. Constructing a facility for EPCT will improve the overall performance of the service.

The Overarching Goal for Transit

For each of our projects we have one overarching goal which we believe is shared by all of our clients:

Help provide for more trips for more people while providing cost effective, high quality, and safe transportation for our community.

This study seeks to improve transit's ability to serve the public and increase ridership. This goal attempts to maximize ridership, while at the same time ensuring the service is one that El Paso County Transit can be proud to have.

Following are specific the goals and objectives identified at the start of the project. These draft goals were developed based on multiple discussions with El Paso County Transit management as well as an analysis of the data. The final section offers further refinement of objectives in the final section – Key Themes.

Study Goals and Objectives

1. **Fully define needs** – Crucial to ensuring the facility is the right size and meets needs.
 - a. Determine facility needs – building space and parking
 - b. Define the most appropriate locations for the facility to minimize deadhead – located near the major origins and close as well to major destinations.
2. **Conduct an analysis of each potential facility**
 - a. Assess:
 - location,
 - size
 - parking
 - b. Availability
 - c. Is it suitable for a maintenance center?
 - d. Other issues
3. **Select the most appropriate site**
 - a. Rank locations based on criteria set by El Paso County Transit management.
 - b. El Paso County Transit management will select the site.

Key Themes

- **Location will be critical** – The study team through a review origins and destinations as well as demographics and land uses will identify the general areas most appropriate for this facility.
- **Facility access** – The facility should have excellent access to major roads to minimize deadhead time as well as mileage.
- **Room for expansion** – Since facility is planned for 30 years or more, expansion should be considered. The facility must be big enough to meet long term needs. Some systems lease their excess office space to local non-profit organizations, creating a win for all.
- **Sustainability** - The study team did not do an analysis of EPCT's ability to sustain this facility.

Chapter 2:

Population Profile and Potential Service Levels

Introduction

This chapter prepared for the El Paso County Transit's Facility Assessment provides a review and analysis of the study area's overall population, transportation dependent populations, colonia communities, and major transit origins and destinations to support the planning process for a new transit facility. At the end of this document, several specific locations in El Paso County will be selected for more detailed study.

Demographic analysis data ranging from underserved and unserved population subgroups are documented and assessed. The analysis includes a general population profile, identification and evaluation of population groups more likely to depend on transit services, and a review of the demographic characteristics pertinent to a Title VI analysis. For the demographic analysis, the City of El Paso is outside the County's service area and was therefore excluded from the data analysis. Data sources include the 2010 Census and American Community Survey (ACS) 2019 5-year estimates.

This document is presented in the following manner:

- A **population profile** that discusses recent changes and trends in the region as well as future population projections.
- An analysis of **transit dependent populations** that are more likely to rely on public transit or human services transportation services for their daily mobility.
- An analysis of **colonias communities** in the county that may need higher levels of service and outreach to utilize transit surveys.
- An **origin and destination analysis** that identifies locations with the highest transit activity.

This chapter should be treated as a draft document, and revisions will be incorporated into a version that will ultimately be included as a chapter in the draft final updated coordinated plan.

Population Profile

El Paso County spans 1,015 square miles and sits at the western edge of Texas, bordering New Mexico and the Mexican state of Chihuahua. Most El Paso County residents live in the city of El Paso, while a smaller but still significant portion of residents live outside of the city in the western or eastern portions of the county. Between the 2000 and 2010 Census, El Paso County grew by 17.8 percent while the city of El Paso grew by 15.16 percent. The areas outside of the city grew by over 30 percent between 2000 and 2010, demonstrating the need for increased services to these areas of the county. Table 2-1 shows historical population trends in the region.

Between 2015 and 2019, El Paso County has grown at a slower rate than between the 2000 and 2010 Census. The city of El Paso only grew by 0.5 percent while the areas outside the city grew by 0.96 percent. While growth has slowed down in the past decade, the areas outside of the city are still growing at a faster rate than the city proper. Table 2-2 displays more recent population trends in El Paso County.

Table 2-1: Historical Population Trends, El Paso County

County	2000	2010	Percent Change
El Paso County	679,622	800,647	17.81%
El Paso City	563,662	649,121	15.16%
El Paso County (excl. City)	115,960	151,526	30.67%
State of Texas	20,851,820	25,145,561	20.59%

Table 2-2 : Recent Population Trends, El Paso County

County	2015	2016	2017	2018	2019	Percent Change 2015-2019
El Paso County	831,095	833,592	834,825	837,654	836,062	0.60%
El Paso City	676,325	678,058	678,266	680,354	679,813	0.52%
El Paso County (excl. City)	154,770	155,534	156,559	157,300	156,249	0.96%
State of Texas	26,538,614	26,956,435	27,419,612	27,885,195	28,260,856	6.49%

Figure 2-1 shows the population density in areas outside of the city. Higher Density areas are found closer to the city border. On the west side of the county, higher density areas are found in Canutillo, while the east side of the county has the highest population density in Fabens, Horizon City, Socorro, and Sparks. Fort Bliss also has high population density. Included in this map is the most recent U.S. Department of Housing and Urban Development (HUD) colonias dataset. Colonias communities are clustered in Homestead Meadows North and Homestead Meadows South in the Northeast, as well as in San Elizario and Socorro in the southeast. The west side has clusters of Colonias in Canutillo and Vinton.

Future Population Trends

The Texas Demographic Center's 2010-2050 population projections predict future demographic patterns for all of Texas and each of its counties. Data was not available for the city of El Paso, so the areas outside of the city could not be broken out separately. As the baby boomer generation and millennials continue to age, there will be increasing demand for services that are accessible to older adults, who are less likely to drive and more likely to have limited mobility. While El Paso County is expected to grow by over 16 percent between 2020 and 2050 (Table 2-3), the population ages 65 and older is expected to increase by over 37 percent over the same time period. This population projection demonstrates a need for increase mobility services to satisfy this growing population.

Table 2-3: Future Population Trends, El Paso County

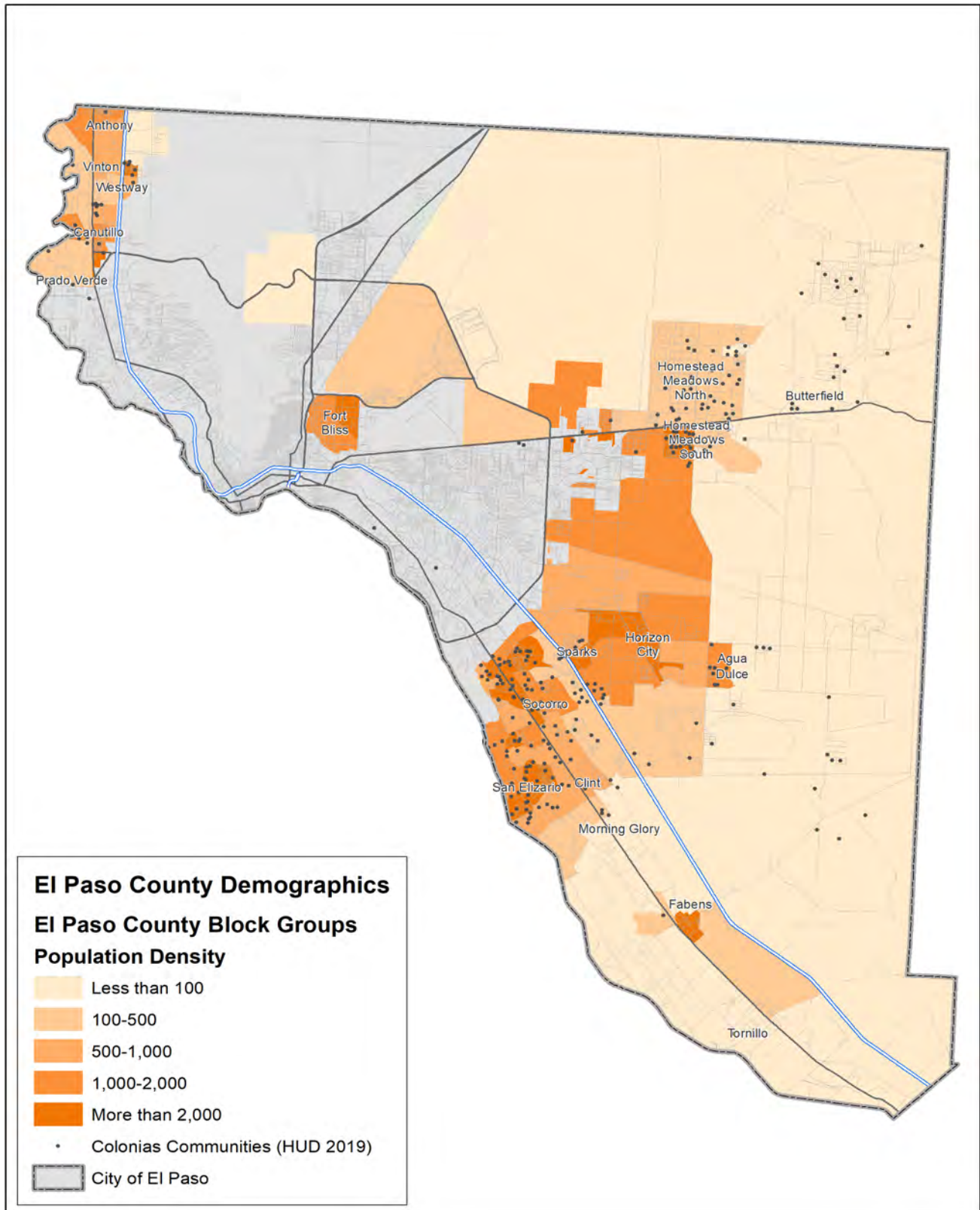
	2020	2030	2040	2050	Percent Change 2020-2030	Percent Change 2030-2040	Percent Change 2040-2050	Percent Change 2020-2050
El Paso County Total Pop	876,120	936,697	984,173	1,046,847	6.91%	5.07%	6.37%	16.31%
El Paso County 0-64	759,705	780,693	809,170	861,657	2.76%	3.65%	6.49%	11.83%
El Paso County 65+	116,415	156,004	175,003	185,190	34.01%	12.18%	5.82%	37.14%

Transit Dependent Populations

Transit Dependency Index

Transit dependent populations are demographic groups that are more likely to rely on public transit for their daily mobility. For this analysis, transit dependent populations are defined as:

- Individuals living below the federal poverty line
- Households without access to a private vehicle
- Individuals with disabilities
- Older adults (ages 65 and older)
- Younger individuals (between ages 10 and 17)

Figure 2-1: Population Density

Using the U.S Census Bureau American Community Survey 2015-2019 5-year Estimates (ACS) for each of El Paso County's Census Block Groups, the percentage of each transit dependent population was calculated and assigned a score relative to the average percent in the study area's block groups. The amount of transit dependent populations in each group were combined and synthesized into two measures of transit dependence, the transit dependence index (TDI) and the transit dependence index percentage (TDIP). The Transit Dependent Index combines scores for each of the transit dependent populations and multiplies them by a population density factor. This measure shows the amount of transit dependent individuals in an area. As illustrated in Figure 2-2, the relative classification system utilizes averages in ranking populations. For example, areas with a below average percentage of transit dependent population fall into the "very low" classification, while areas that are more than twice the average will be classified as "very high."

The TDIP is similar to the TDI but does not use the population density multiplier. Instead, the TDIP evaluates the total amount of transit dependent individuals in each block group, calculates the percentage of dependent individuals, and gives a score based on how that percentage relates to the study area average. The TDIP is useful in showing the block groups with a high degree of transit dependence, rather than a high number of transit dependent populations. In the parts of the county outside of the City of El Paso, the TDIP is especially important, since it better demonstrates where high percentages of dependent individuals are living even if there is not high population density.

Accounting for population density, the highest amount of transit dependent populations are Fabens, Homestead Meadows South, Horizon City, San Elizario, Socorro, and Vinton. The TDIP shows that the block groups with the highest percentage of transit dependent persons are located in the county's less urban areas in the northeast and southeast corners of the county, as well as Fabens, San Elizario, and Socorro. The TDI is mapped in Figure 2-3 and the TDIP is mapped in Figure 2-4.

Figure 2-2 Transit Dependent Classification System

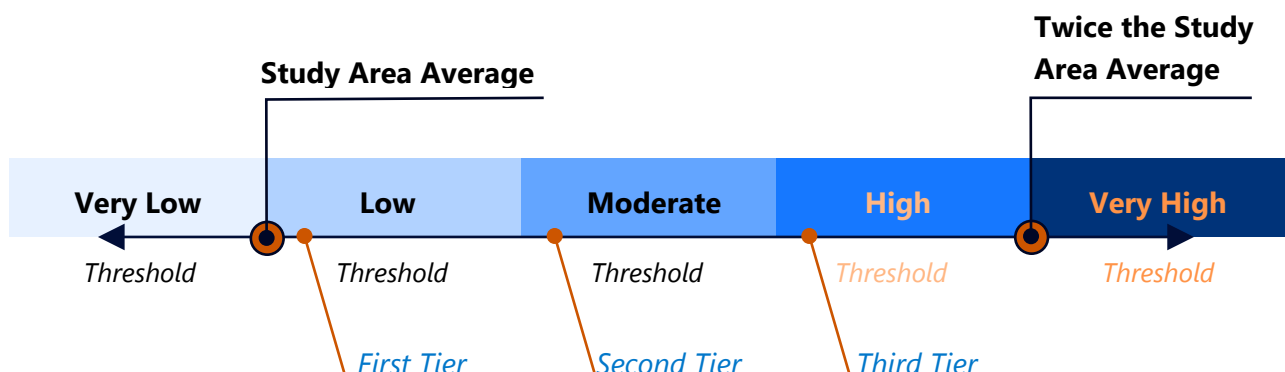


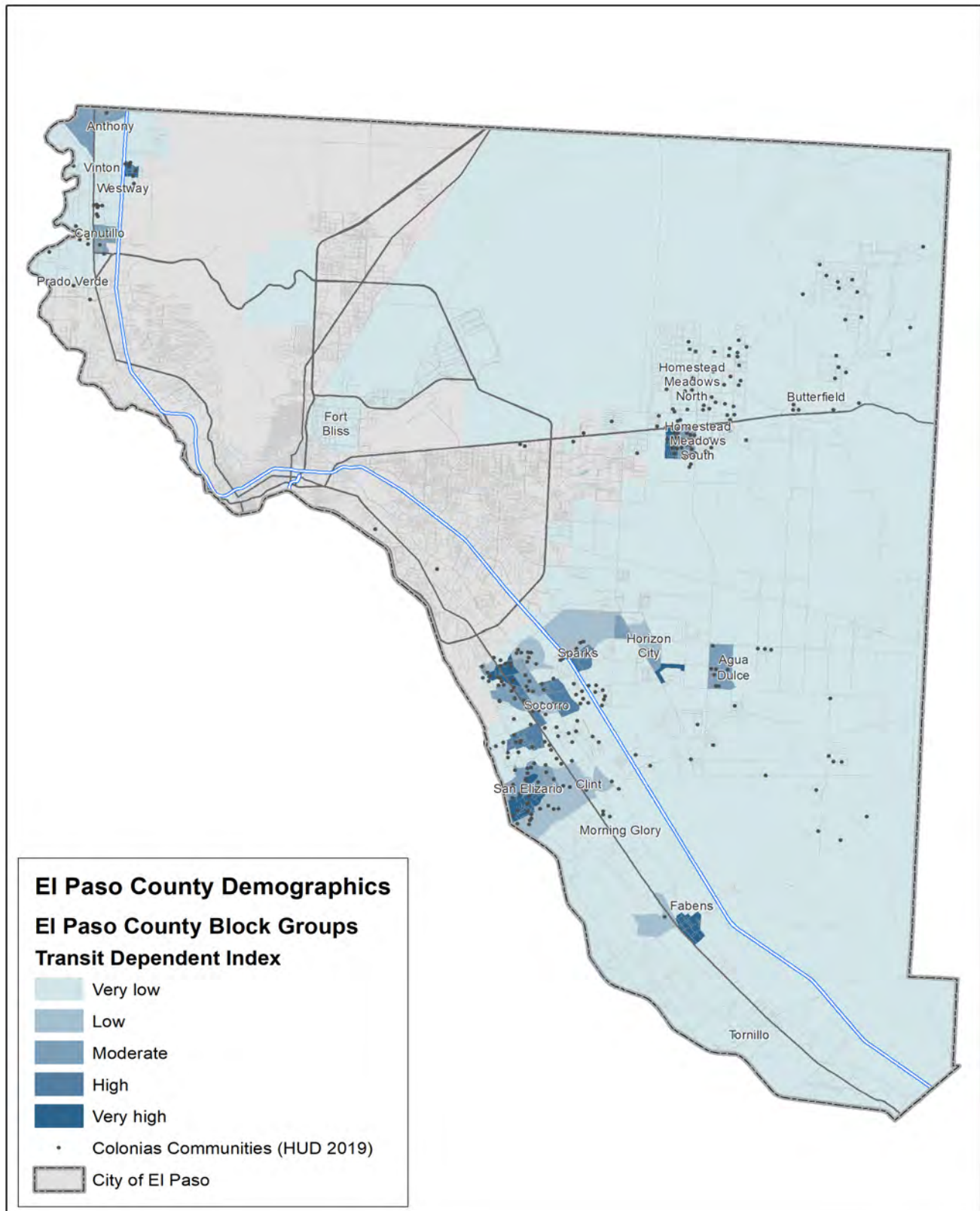
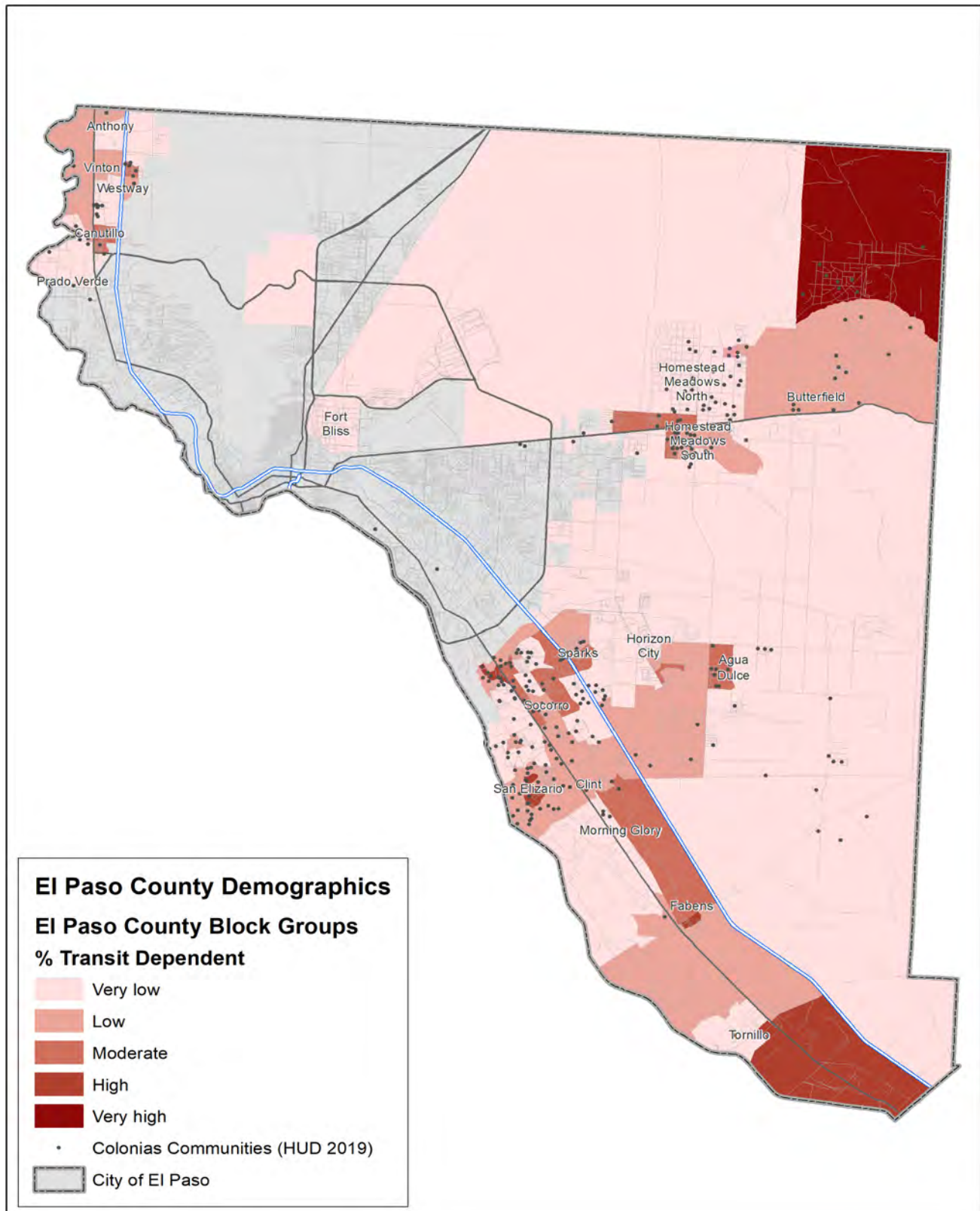
Figure 2-3: Transit Dependent Index

Figure 2-4: Percent Transit Dependent Percentage (TDIP)

Below Poverty Populations

Individuals living below the federal poverty level are most often in need of public transit. Any service change or improvement should be made so that there is no disproportionate burden on this population group. In the study area, above average percentages of below poverty individuals can be found on both the east and west sides of the county, including in the less populous northeast and southeast corners of the county. Figure 2-5 maps below poverty individuals by block group.

Autoless Households

People living in households without vehicle access are very likely to use transit to provide them an adequate level of mobility to satisfy their needs. High and very high percentages of autoless households were found throughout the study area, in Agua Dulce, Anthony, Fabens, Homestead Meadows South, Socorro, and Tornillo, as well as along the eastern edge of the county. Figure 2-6 displays El Paso County's Census Block Groups by the percentage of autoless households.

Older Adults

Older adults are more likely to rely on public transportation to satisfy their mobility needs. Block groups with high percentages of older adults are found throughout the study area in the northeastern and southeastern corners of the county as well as Canutillo, Clint, Fabens, Morning Glory, San Elizario, Socorro, Sparks, and Tornillo. Figure 2-7 displays the percentage of older adults by block group.

Individuals with Disabilities

Individuals with disabilities often rely on public transportation as their primary mobility option. Large percentages of individuals with disabilities are found throughout the study area, specifically in the less populated areas in the northeast and southeast corners, as well as Canutillo, Fabens, Homestead Meadows South, and Sparks. Figure 2-8 maps the percentage of individuals with disabilities.

Younger Individuals

Individuals between the ages of 10 to 17 are either unable to drive or have limited access to a personal automobile and therefore may be more reliant on public transportation for their mobility needs. In the service area, very high percentages of young individuals live in urban areas, as well as some more rural areas. Areas with very high percentages of younger individuals include Clint, Horizon City, San Elizario, Sparks, and Tornillo. Figure 2-9 displays the percentage of younger individuals by block group.

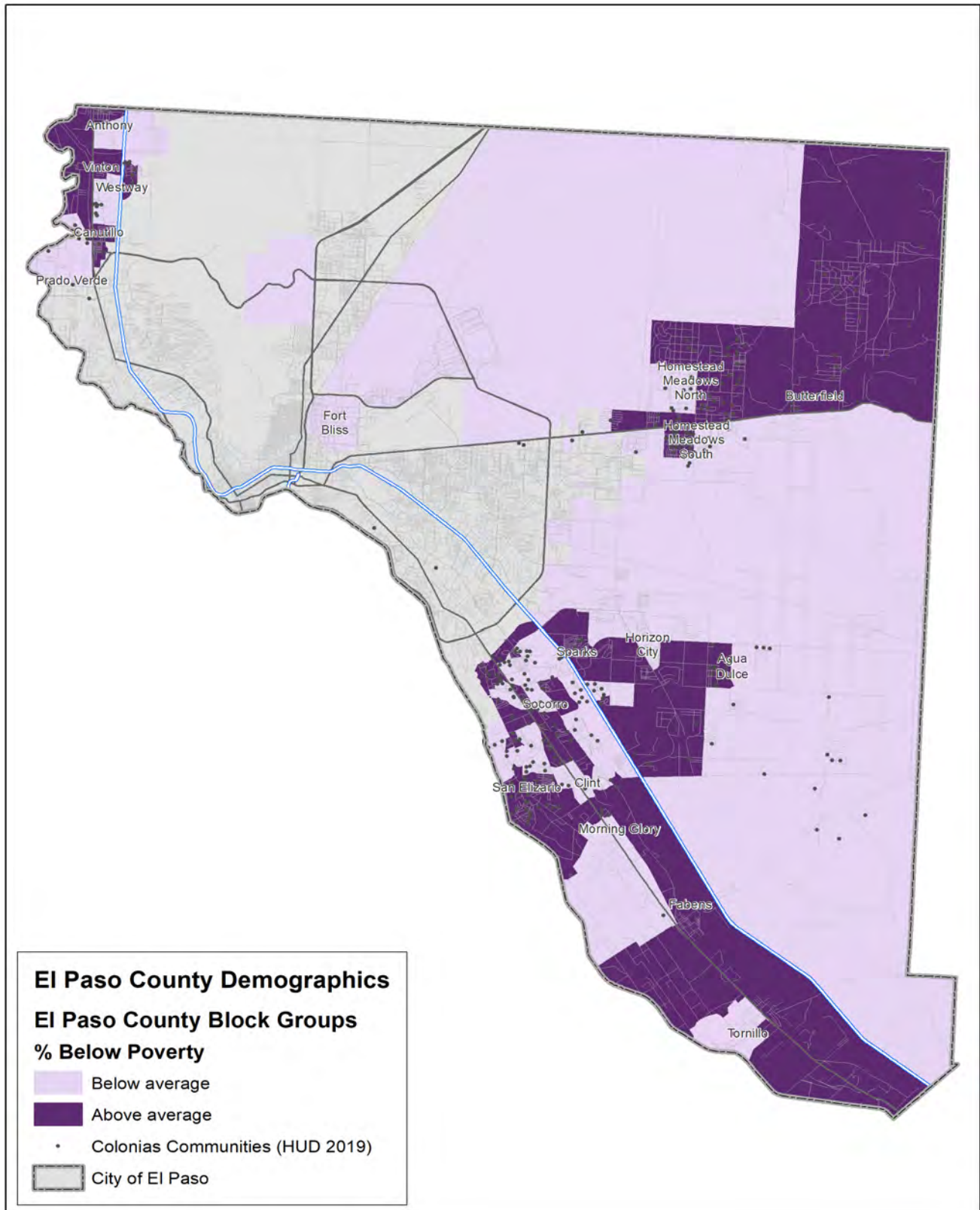
Figure 2-5: Percent Below Poverty

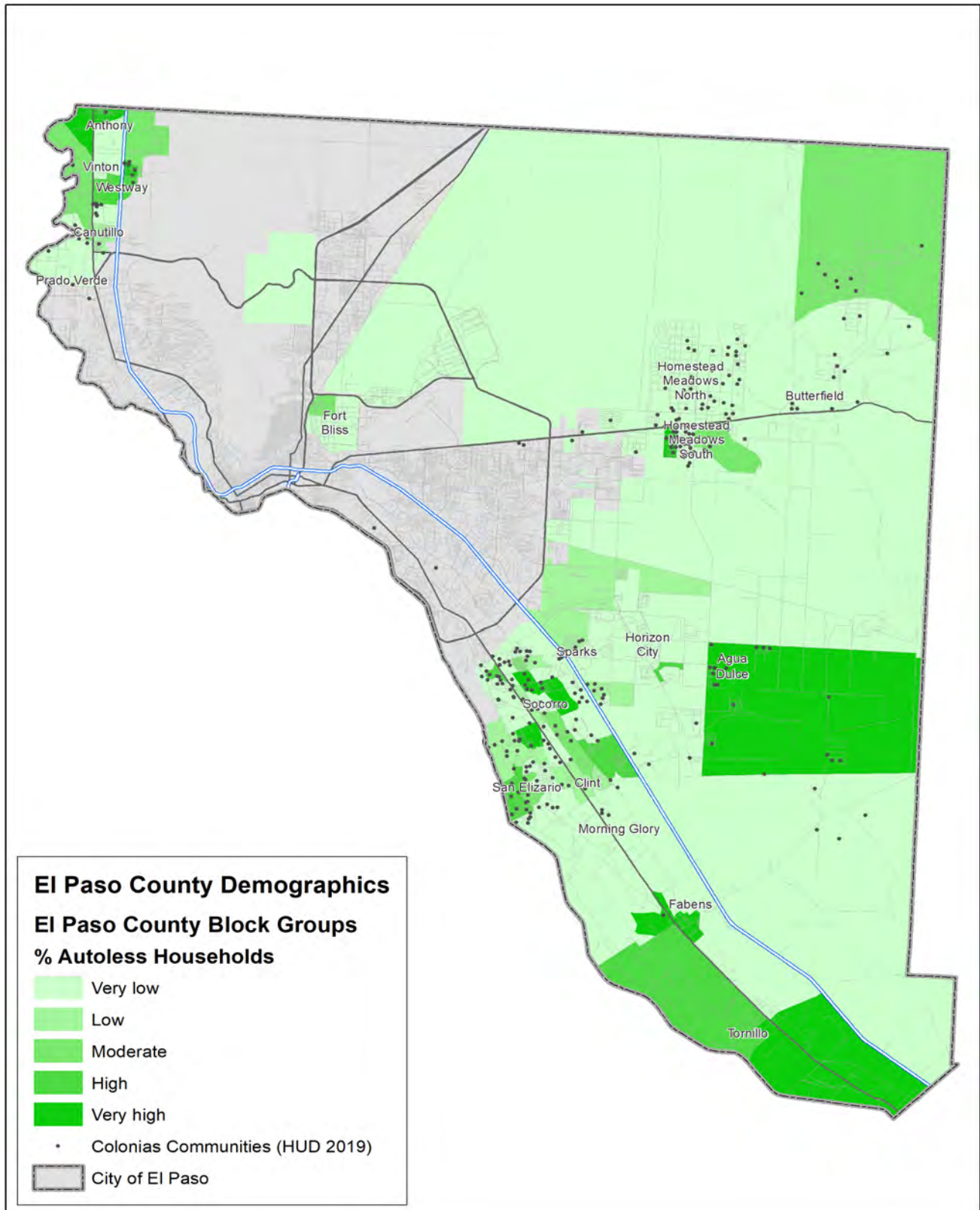
Figure 2-6: Percent Autoless Households

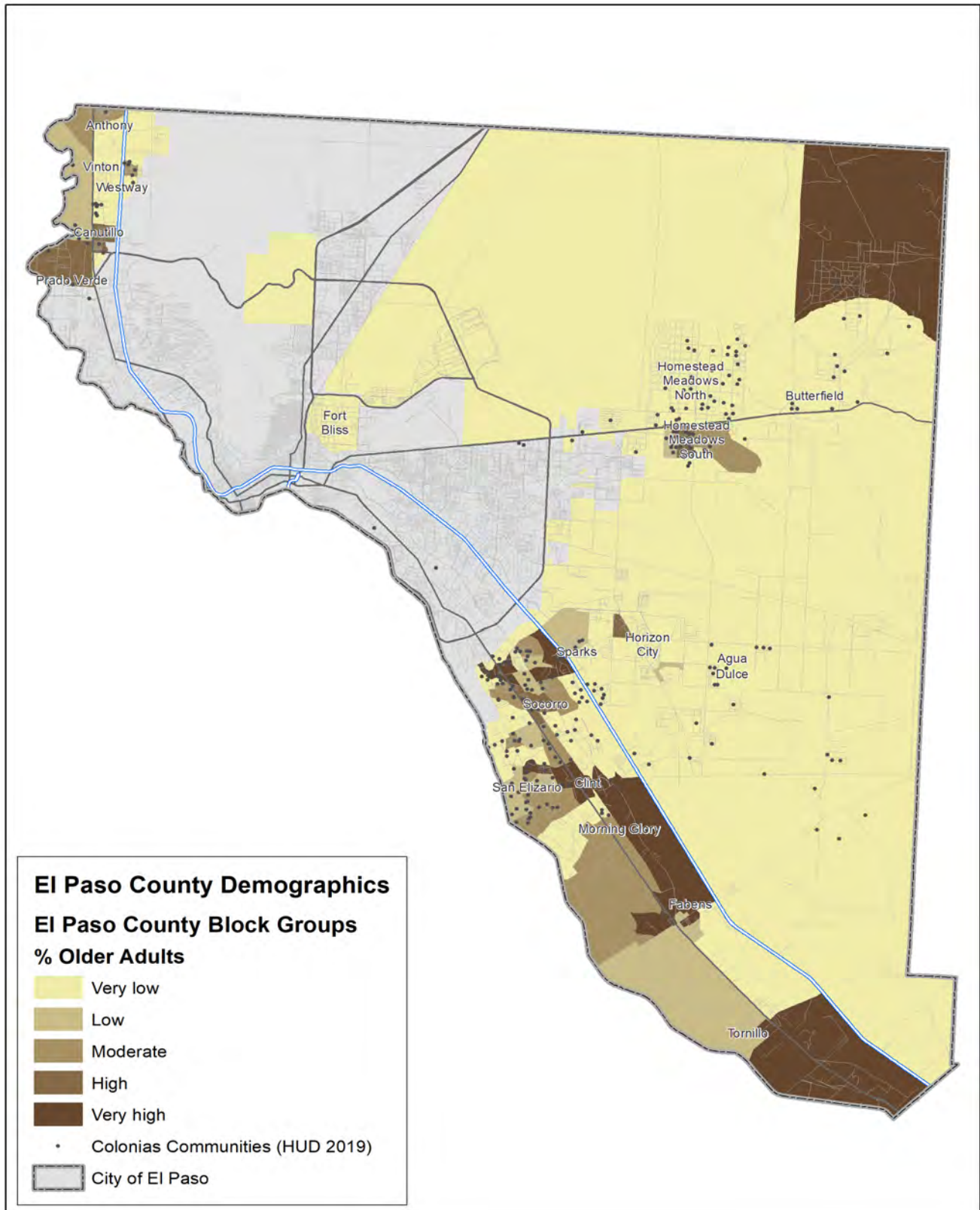
Figure 2-7: Percent Older Adults

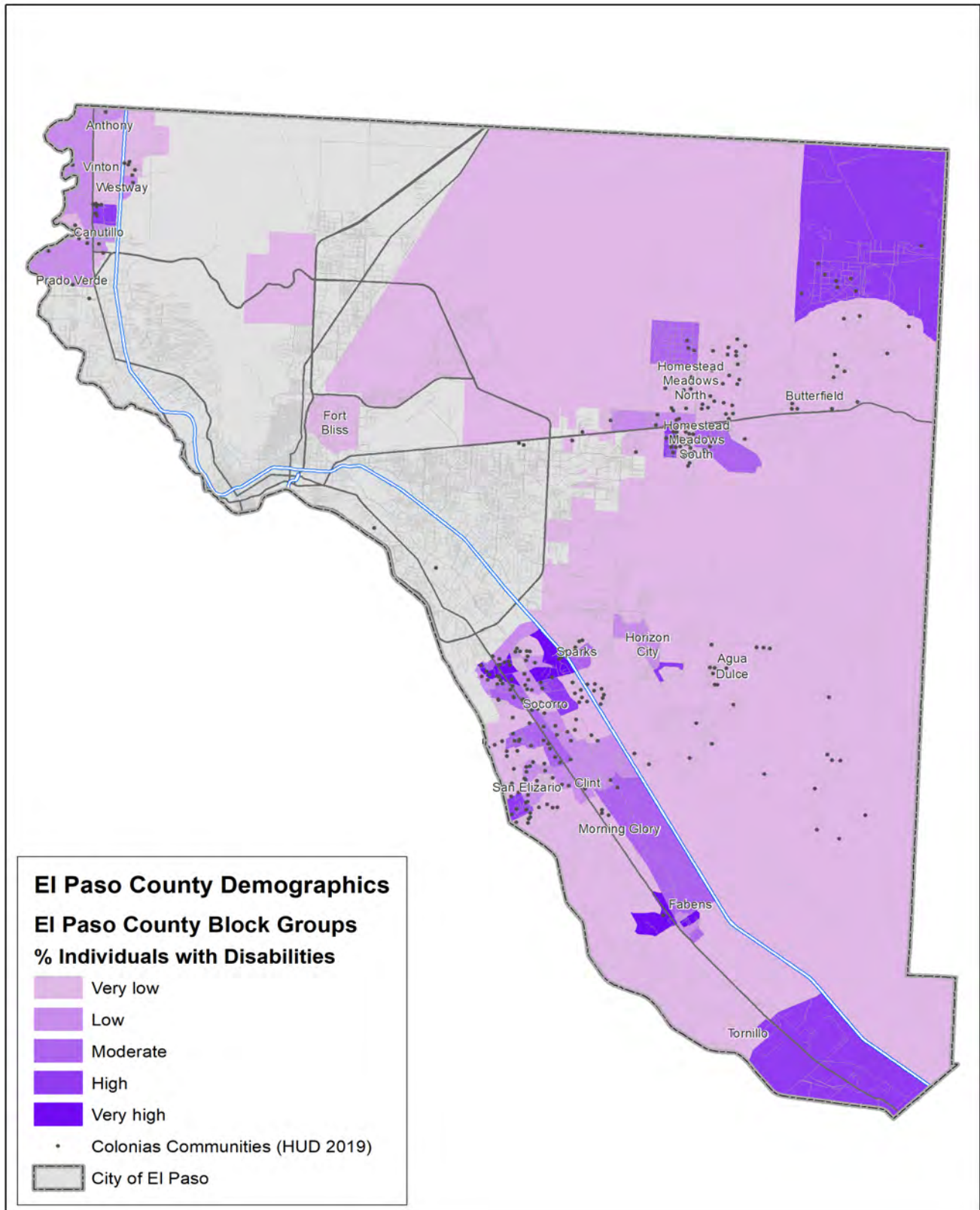
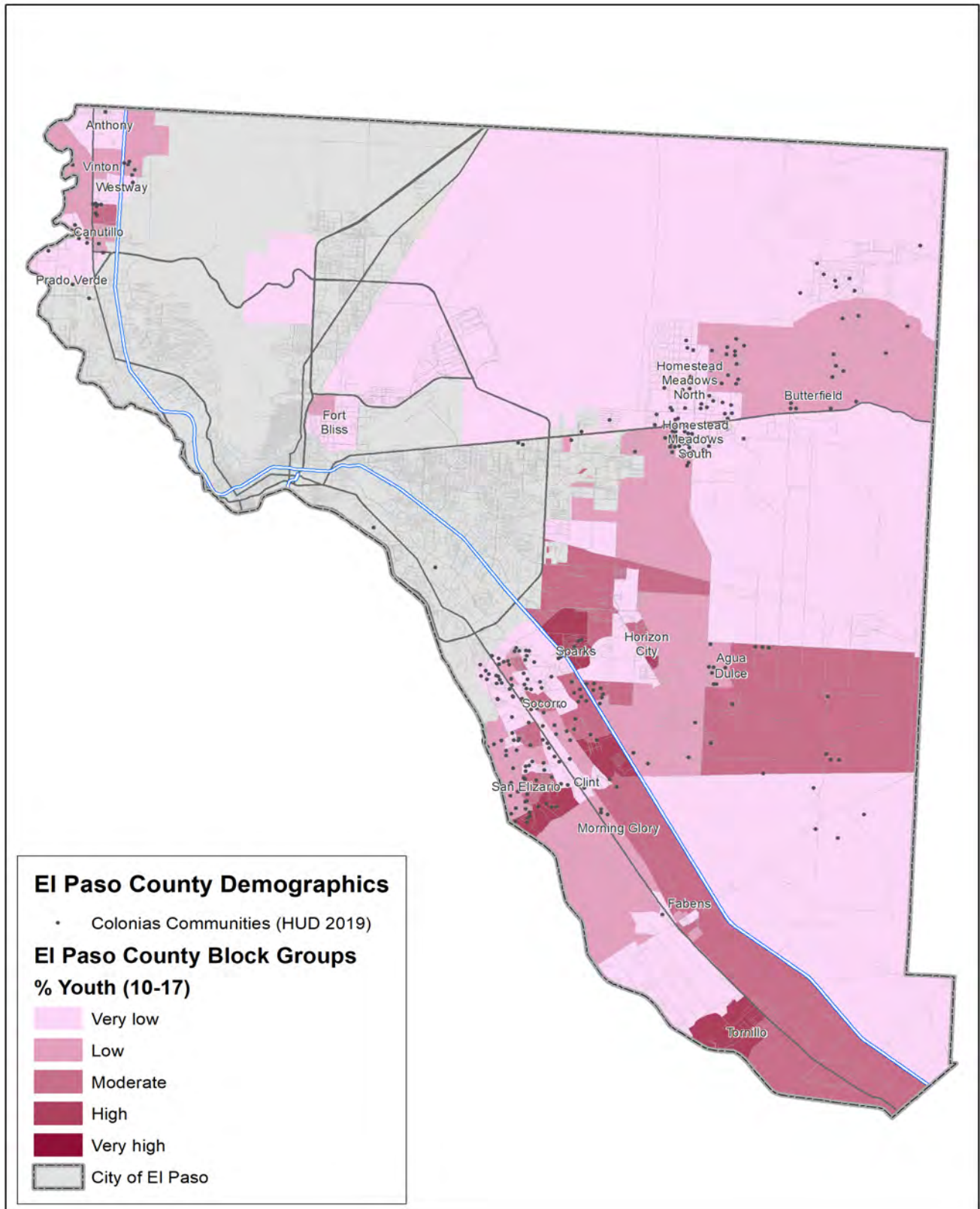
Figure 2-8: Percent Individuals with a Disability

Figure 2-9: Percent Youth (ages 10-17)

Title VI – Demographic Analysis

Through the Civil Rights Act of 1964, Title VI prohibits discrimination on the basis of race, color or national origin in programs and activities receiving federal subsidies. This includes agencies providing federally funded public transportation. The following section examines the minority below poverty level, and limited English proficiency (LEP) populations in the rural areas outside of El Paso.

Minority Populations

Minority populations are protected from discrimination under the Civil Rights Act, and therefore service changes should be analyzed for their impact on these communities. In the study area, the block groups with above average percentages of minority populations (in the County) are found throughout, specifically in the eastern and southeastern portions of the county. In the west, Anthony, Canutillo, Vinton, and Westway have above average minority populations. Figure 2-10 maps minority populations by Census block group in the service area.

Limited English Proficiency Population

Limited English proficiency (LEP) populations are defined by the FTA as any person who identifies how they speak English as less than “very well”. The FTA Safe Harbor Provision of Title VI stipulates that materials must be translated for any language that has a limited English population that represents over 1,000 individuals or over one percent of the service area population, whichever number is lower. The most recent dataset for El Paso County was the ACS 2011-2015 five-year estimates. Over thirty percent of the population speaks English less than “very well”. Over 97 percent of the LEP population speak Spanish at home. El Paso’s location along the Mexican border, as well as the high number of Mexican nationals who use the service make Spanish the most important language for translations and interpretation services. Spanish is the only language in the service area that clears the Safe Harbor Provision, so measures should be made to ensure that Spanish speakers receive translation and interpretation services to access federally funded transportation in the region. Table 2-4 provides a full breakdown of the LEP population in the service area.

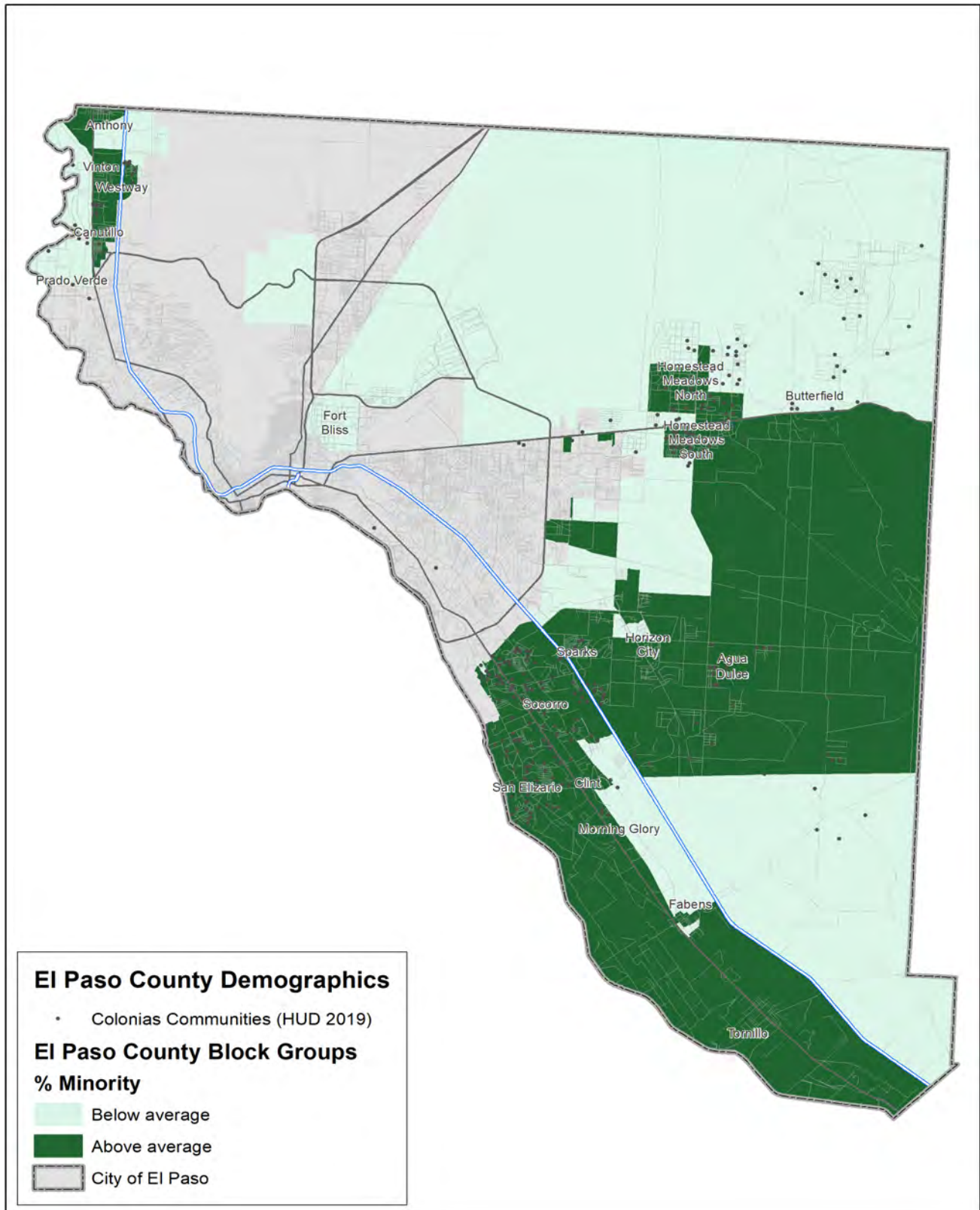
Figure 2-10: Percent Minorities

Table 2-4: LEP by Language Spoken at Home in El Paso County

	El Paso County	Percent of Total	Percent of LEP
Total	763,568	-	-
Speak only English	212,685	27.85%	-
Total LEP	235,136	30.79%	-
Spanish or Spanish Creole LEP	229,152	30.01%	97.46%
French (incl. Patois, Cajun) LEP	276	0.04%	0.12%
French Creole LEP	29	0.00%	0.01%
Italian LEP	82	0.01%	0.03%
Portuguese or Portuguese Creole LEP	39	0.01%	0.02%
German LEP	828	0.11%	0.35%
Russian LEP	100	0.01%	0.04%
Polish LEP	5	0.00%	0.00%
Serbo-Croatian LEP	128	0.02%	0.05%
Other Slavic Languages LEP	11	0.00%	0.00%
Persian LEP	247	0.03%	0.11%
Gujarati LEP	65	0.01%	0.03%
Hindi LEP	7	0.00%	0.00%
Urdu LEP	102	0.01%	0.04%
Other Indic Languages LEP	272	0.04%	0.12%
Other Indo-European languages LEP	15	0.00%	0.01%
Chinese LEP	775	0.10%	0.33%
Japanese LEP	176	0.02%	0.07%
Korean LEP	867	0.11%	0.37%
Mon Khmer, Cambodian LEP	38	0.00%	0.02%
Thai LEP	29	0.00%	0.01%
Greek LEP	9	0.00%	0.00%
Vietnamese LEP	351	0.05%	0.15%
Other Asian languages LEP	213	0.03%	0.09%
Tagalog LEP	531	0.07%	0.23%
Other Pacific Island languages LEP	158	0.02%	0.07%
Arabic LEP	450	0.06%	0.19%
Hebrew LEP	21	0.00%	0.01%
African languages LEP	90	0.01%	0.04%
Navajo LEP	15	0.00%	0.01%
Other Native North American languages	23	0.00%	0.01%
Hungarian	22	0.00%	0.01%
Other and unspecified languages	10	0.00%	0.00%

Origins and Destinations

Identifying important origins and destinations in El Paso County will help county officials and the consultant team to locate where a transit facility would be most well-utilized. Having a facility in proximity to routes and locations that generate high ridership may help provide more efficient service by cutting deadhead times on its most productive services. The origins and destinations analysis utilized ridership data, both pre-COVID (FY2017-FY2019) and pandemic (FY2020-FY2021) ridership by route. Because the county service area is bifurcated by the city of El Paso, this data can inform officials whether the geographically smaller, but more dense, west side should be the site of the transit center rather than the east side.

Of El Paso County Transit's seven routes (including NMDOT's Gold Route), five serve the east side of the county. These routes are the 20, 30, 40, 50, and 84. Route 10 and the Gold Route serve the west side. The vanpool program serves both sides of the county.

Ridership Analysis

Pre-pandemic ridership showed that the Route 84 and Gold Route were the most individually productive routes. Routes 10, 20, 30, and 40 had their ridership data combined between 2017 and 2019. The vanpool program generated the highest ridership of any program during this time period. 2020 ridership data, which was heavily impacted by the COVID-19 pandemic, broke out Routes 10, 20, 30, and 40 individually. Figure 2-11 maps the El Paso County Transit routes.

In 2020, Route 84 and the Gold Route had the highest ridership, while Route 10 had the next highest ridership. The Gold Route and Route 10 both serve the west side and have higher ridership than the routes serving the east side, but in total the east side routes have generated more ridership overall since 2019. The Gold Route connects Las Cruces to El Paso and stops in Anthony, so while it generates a lot of ridership overall, there may not be as high demand in Anthony itself. Route 10, which serves Anthony and Canutillo, is more locally oriented, with major stops along Doniphan and Westway.

Route 84 is the most productive route operating on the east side of the county, connecting the communities of Clint and Socorro to the El Paso Community College as well as the broader Sun Metro network. Route 20, which serves the Homestead Meadows and Butterfield, is the east side route with the second highest ridership in the county. Route 50, which serves Horizon City and Agua Dulce, is the least productive route on the east side.

Ridership in FY2021 (through May 2021), shows similar ridership pattern with Route 10, Route 84, and the Gold Route having the highest ridership throughout the year. Route 50 is still the least productive route in the County. An analysis of El Paso County's route ridership numbers show that in the west side, Canutillo is likely the best location for a transit facility, while on the east side, both Homestead Meadows and the Socorro/Clint/San Elizario region are the most viable locations on the east side.

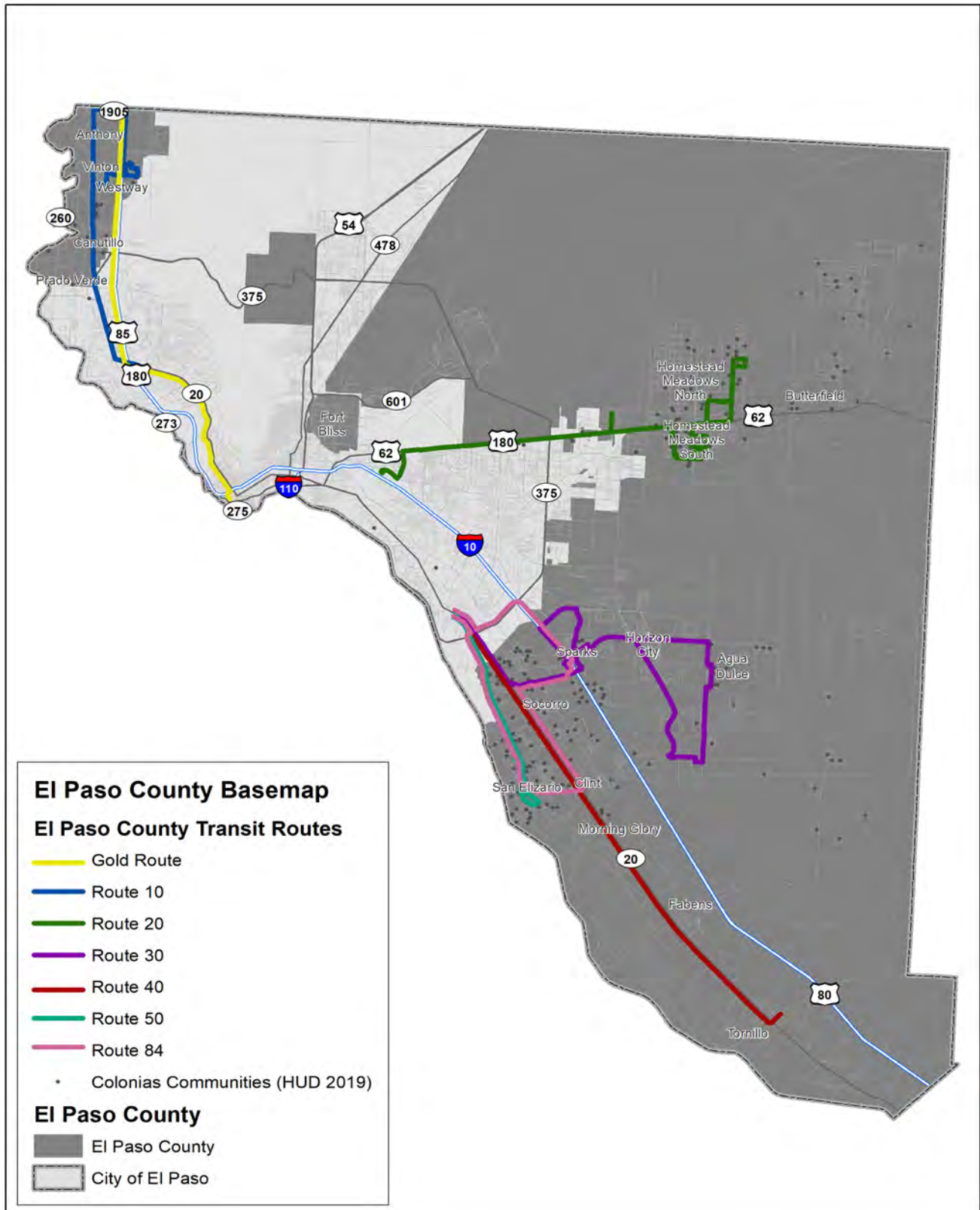
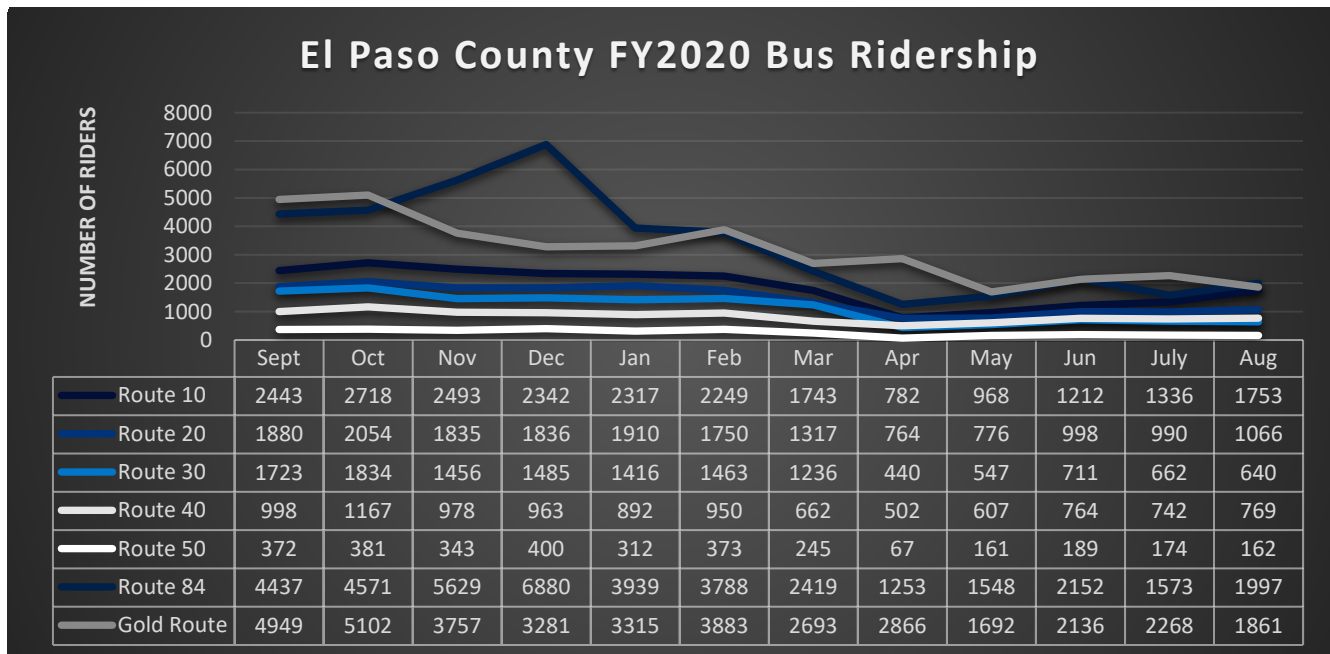
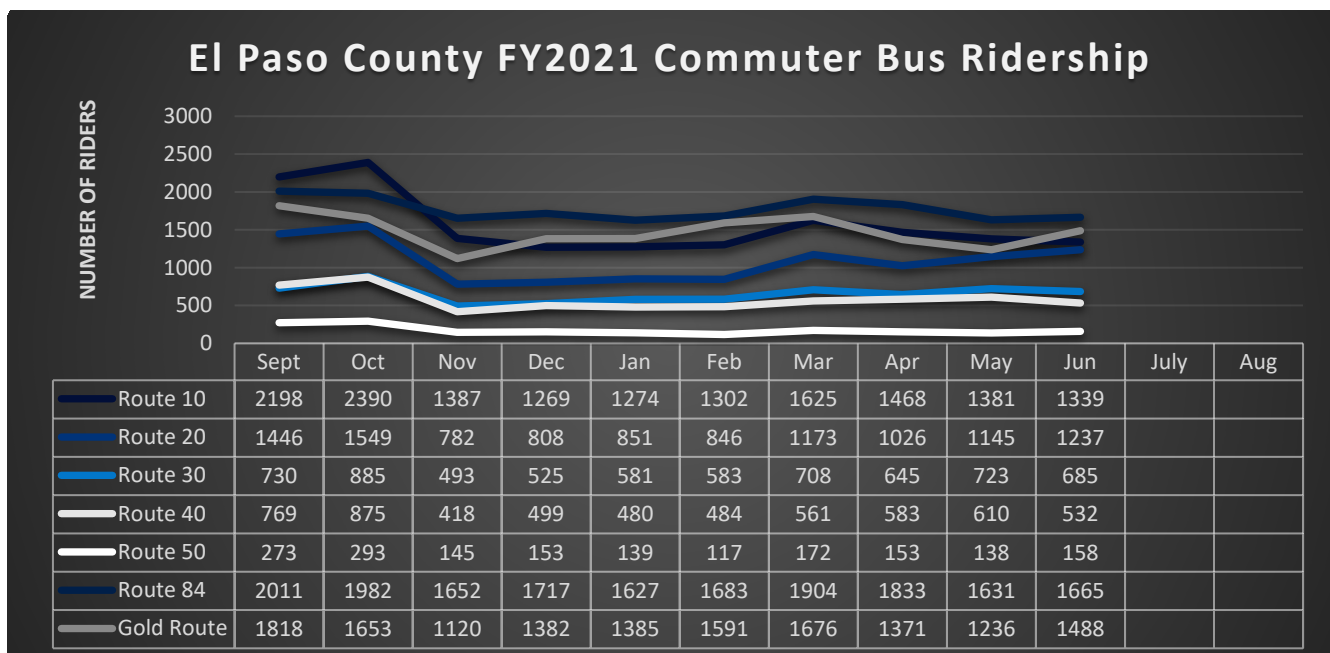
Figure 2-11: El Paso County Transit Route Map

Figure 2-12: El Paso County FY2020 Ridership**Figure 2-13: El Paso County FY2021 Ridership**

Conclusion and Recommendation

As El Paso County continues to grow and the population ages, increased transportation services are needed to supply demand. A well-located transit facility can help provide more efficient service to the populations who most need it. The analysis of transit dependent groups showed the highest degree of transit dependent people located in the east side communities of Homestead Meadows South and on the west side in Vinton.

Ridership shows that the Gold Route and Route 10 are the most productive routes on the Westside, while the Route 84 and Route 20 are the most productive routes on the eastside. The eastside also has the most services (five routes on the east side and one on the west side).

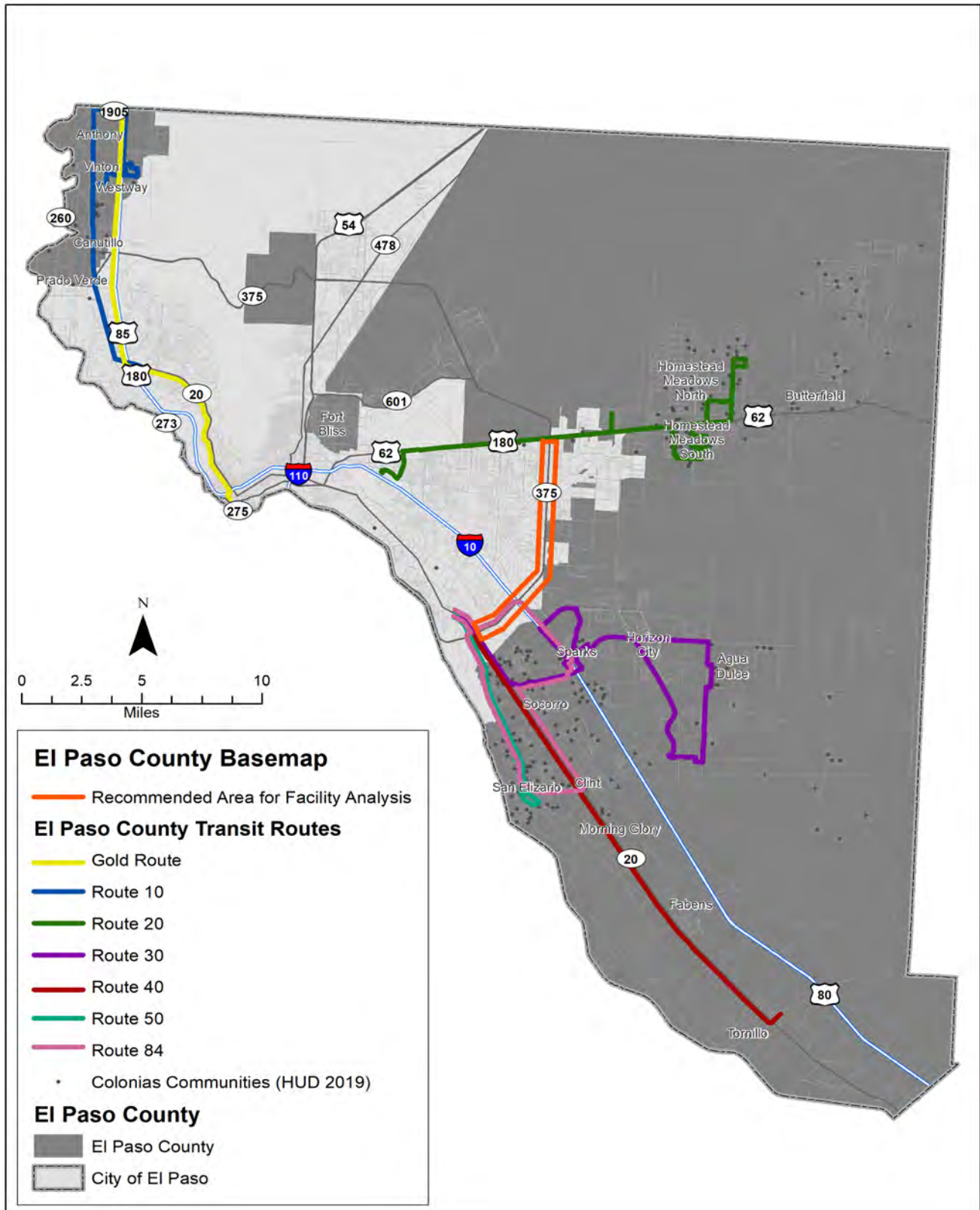
Through the demographic and ridership analysis, the consultants recommend properties for a transit facility along Loop 375 between U.S. 180/62 and Alameda Avenue - State Route 20 (Figure 2-14).

- This area is closest to the majority of the service and ridership.
- Other considerations include the proximity to transit dependent populations, and colonias communities as well as having the lowest level of deadhead to and from the facility.
- Excellent access to major roadways such as Interstate 10 and U.S. 180/62 allowing for greater ease in going east/west and north/south.
- Much of this area is appropriately zoned

Next Steps

The next steps are to be taken by WRA and El Paso County Transit:

- The county should be looking for potential sites in the Loop 375 corridor.
- In the next task WRA will develop a Site Matrix that TxDOT and El Paso Transit can use in evaluating potential sites selected by El Paso County.
- Task 5 calls for El Paso County to select three potential sites for WRA to evaluate and prepare high level site diagrams.
- The final task is the presentation and final report by WRA.

Figure 2-14: Recommended Areas for Additional Facility Analysis

Chapter 3:

Program of Needs Analysis

Background

El Paso County operates their current facility under a lease agreement with Sun Metro, the transit system that owns the facility. That lease is expiring with no options to renew. It was determined that the best course of action is to relocate the current operation to a new County-owned facility. To that end, El Paso County contacted the TxDOT Public Transportation Division for support in developing a program of requirements for current and future needs. The KFH Group with WRA has been tasked with analyzing the needs of the County and developing a program of needs for three planning windows: current operations, year 2031 operations and year 2041 operations. This chapter defines the analysis findings and details the resulting program of needs.

El Paso County currently operates rural transit services in El Paso County. Transportation and Maintenance programs are contracted to a private provider. The contract is managed by El Paso County staff. The current fleet consists of 24 cutaway vehicles. The future fleet is projected to grow to 104 vehicles configured with both cutaways and full size transit buses. The fleet will continue to be fueled with Compressed Natural Gas for the foreseeable future.

Analysis

The following parameters were established prior to beginning analysis of program needs.

- The Consultant team recommended that the facility program be established as if the County will someday potentially operate all facets of the program themselves. This is not recommended as a means to disrupt the current contractual arrangements but instead to provide the County future flexibility in how it delivers transit services in the county.
- The new facility and site will be independent of other county functions. For example: the site will require fueling capability.
- The program will reflect office areas for Contract Provider staff but common areas such as lunchrooms, rest rooms, etc. will be shared between County staff and Contract Provider staff.

The operational characteristics of the transit program are defined below as a basis for the analysis to be completed.

- **Administration:** There are two groups of administrative staff co-located at the facility. The County

staff oversees the transit operation including develop of long term plans and contract oversight. Current County staff located at the facility is small. The Contract Provider staff oversees the day to day transportation and maintenance operations for the County. This staff includes executive, managerial and support staff for all aspects of the transit operation.

- **Transportation:** The transportation component of the operation includes all dispatch, scheduling, and driver functions. Transportation staff is also responsible for collection and auditing of fares.
- **Maintenance:** The current maintenance program includes all PM/Inspection and unscheduled repair activities for the transit fleet. Unscheduled repairs can include everything up to an in-chassis overhaul but does not include engine and transmission rebuilds. The maintenance does not perform paint or body work.
- **Fueling:** Fueling currently occurs at Sun Metro CNG Fueling Stations but will be relocated as part of this new project.

Program Development

The Consultant team met with El Paso County staff in a series of teleconference interviews to gain an understanding of the current and projected needs. A program of needs was developed with three planning windows: current, 2031 and 2041. Program needs are primarily driven by four major factors: the projected level of service, the functions/activities to be housed at the facility, the size of the fleet and the size of the staff. Table 3-1 provides the current and projected staffing for the operation. Table 3-2 provides a breakdown of the projected fleet and its configuration.

Table 3-1: Current and Projected Staffing

	<i>Current</i>	<i>2031</i>	<i>2041</i>
County Administration			
Transportation Manager	1	1	1
Transit Planner	1	1	1
Transportation Coordinator	1	2	2
Transportation Engineer	1	2	2
County Administration Total	4	6	6
Provider Staff			
General Manager	1	1	1
Maintenance Manager	1	2	4

	Current	2031	2041
Tech II	1	2	4
Tech I	1	2	4
Safety Manager/Trainer	1	2	4
Lead Dispatcher	1	2	4
PM Dispatcher	1	2	4
Road supervisor	1	2	4
Admin Assistant	1	2	4
Call Taker	0	1	2
Scheduler	0	1	2
Driver Counts (Derived from Bus Count - 1.43 drivers per bus)	35	78	149
Provider Staff Total	44	97	186
TOTALS	48	103	192

Table 3-2: Current and Projected Fleet

	Current	2031	2041
Cut-away (less than 25 feet)	24	39	74
Transit Bus (40 foot)	0	15	30
TOTALS	24	54	104

Each of the above data points and the interviews were used to develop the program requirements for the three planning windows. A summary of the developed programs is provided in Table 3-3. The table also includes the totals for the 2007 study and the space requirements for current conditions for comparison purposes. A detail discussion of each of the spaces is provided following the table. The detail programs are provided in an Attachment to this chapter.

Table 3-3: Total Complex Requirements Summary

TOTAL COMPLEX REQUIREMENTS									
Summary by Space Grouping	current needs			2031			2041		
	building	covered	exterior	building	covered	exterior	building	covered	exterior
ADMINISTRATION	4811	0	0	5284	0	0	5786	0	0
TRANSPORTATION OPERATIONS	2503	0	270	3800	0	270	5628	0	270
MAINTENANCE	5588	0	0	8454	0	0	12936	0	0
OTHER FACILITY SUPPORT SPACES	960	0	0	960	0	0	960	0	0
SHARED SITE FUNCTIONS	1725	1530	44200	1725	1530	91960	1725	1530	159640
Complex subtotal	61587			113983			188475		
Site circulation and setbacks	46190			85487			141356		
Stormwater management*	21555			39894			65966		
Complex Total	129333			239364			395798		
acreage	2.97			5.50			9.09		
Summary by Construction Type									
Structures	17117			21753			28565		
Site Areas	44470			92230			159910		
Complex subtotal	61587			113983			188475		
Site circulation and setbacks	46190			85487			141356		
Stormwater Management*	21555			39894			65966		
Complex Total	129333			239364			395798		
acreage	2.97			5.50			9.09		
*stormwater management requirements are directed by local codes and how detainment/retainment is engineered. The amount of site required could range up to 20 percent of disturbed acreage									

The developed program of requirements indicates that the projected site requirements for the 2031 operation will be just over 5.50 acres while the 2041 operation will require just over 9.09 acres. The majority of the growth between the 2031 and 2041 operations is directly related to fleet growth and related staffing growth. These planning window requirements can be compared to the current program need of 2.97 acres. Detailed programs are provided as an attachment to this chapter.

The Consultant team further delineated the program requirements to provide a calculation of the program elements that are potentially grant eligible. Table 3-4 provides a summary of the program requirements that are grant eligible. In the case of this analysis all project elements fall within the boundaries of fundable spaces.

Table 3-4: Program of Requirements – Grant Eligible Elements

GRANT ELIGIBLE COMPLEX REQUIREMENTS									
Summary by Space Grouping	current needs			2031			2041		
	building	covered	exterior	building	covered	exterior	building	covered	exterior
ADMINISTRATION	4811	0	0	5284	0	0	5786	0	0
TRANSPORTATION OPERATIONS	2503	0	270	3800	0	270	5628	0	270
MAINTENANCE	5588	0	0	8454	0	0	12936	0	0
OTHER FACILITY SUPPORT SPACES	960	0	0	960	0	0	960	0	0
SHARED SITE FUNCTIONS	1725	1530	44200	1725	1530	91960	1725	1530	159640
Complex subtotal	61587			113983			188475		
Site circulation and setbacks	46190			85487			141356		
Stormwater management*	21555			39894			65966		
Complex Total	129333			239364			395798		
acreage	2.97			5.50			9.09		
Summary by Construction Type									
Structures	17117			21753			28565		
Site Areas	44470			92230			159910		
Complex subtotal	61587			113983			188475		
Site circulation and setbacks	46190			85487			141356		
Stormwater Management*	21555			39894			65966		
Complex Total	129333			239364			395798		
acreage	2.97			5.50			9.09		
*stormwater management requirements are directed by local codes and how detainment/retainment is engineered. The amount of site required could range up to 20 percent of disturbed acreage									

Program Elements

The needs of El Paso County are categorized to help define operating elements within the complex. The program has been divided into the following major categories.

- Administration
- Transportation Operations
- Maintenance
- Other Facility Support Areas
- Shared Site Functions

Administration

The administration areas within the program include the following:

- **Public Access** – This group of areas includes the spaces within the building that are accessible by the public. They include a lobby area with transportation pass sales, intake/interview rooms and restrooms. This area also includes a multi-purpose room that can serve as a Board Room or a large

training room. The multipurpose room is sized for the larger of a Board Meeting with a total of 30 people or training for 25 percent of the driver fleet. The Multi-purpose room is supported by a series of small spaces including a media/IT center, chair and table storage, training material storage and a small sink/serving area.

- **County Administration** – This area includes offices and workstations for the County staff assigned to oversee Transit operations.
- **Contract Provider Administration** – This area includes offices and workstations for the County's transit contractor staff.
- **Shared Administrative Spaces** – These spaces support the entire administrative function of the building. These include conference rooms, break rooms, restrooms, a central copy/file work area, and central file storage. This area grows related to the size of the projected staff.

Transportation Operations

The Transportation Operations area consists of all of the spaces related to running bus service. It includes offices and workstations for managers and supervisors. It also includes dispatch centers and money handling areas. The largest portion of the area supports drivers and includes an assembly area, a break area, lockers, computer workstations, restrooms and material storage areas. These areas all grow in direct relationship to the growth of the service delivery fleet.

Maintenance

The maintenance areas defined in the program include all administration and personnel areas, vehicle repair bays, shops, parts storage and maintenance support areas. The maintenance areas are sized to support the entire fleet including all buses stored elsewhere. Major growth in this area is related to the number of repair bays and is directly proportional to the growth in the fleet.

Other Facility Support Areas

This group of spaces includes rooms within the building that support the operation of the building itself. They include mechanical and electrical equipment rooms and janitorial closets. They also include spaces like a facility maintenance shop for the building maintenance staff. These spaces remain constant between planning windows. The space is a minimum, partially grant eligible.

Shared Site Functions

The last major group of required spaces are site elements.

- **Fuel and Wash** – These areas include a fuel island, supporting fuel generation and/or storage areas and a drive through wash facility.
- **Scrap** – Complexes of this type generate substantial amounts of scrap and waste. An area is required for temporary storage of these items along with recycling programs.
- **Parking** – The site includes a variety of parking requirements. There is covered parking for the bus fleet, exterior parking for the non-revenue fleet, employee parking, visitor parking and accessible parking. All these areas will grow between the 2031 and 2041 planning windows due to growth in the fleet as well as growth in staff.

The program documents are included in Attachment 3-1. These include a detailed listing of all major rooms and spaces. Each space is assigned a space standard or dimensions where appropriate, as well as the required quantity of each space. Details as appropriate are included in the Remarks column. The location of each space is further defined. These include spaces within a building, spaces that are covered but open to the exterior environment and spaces that are fully exterior without cover.

Attachment 3-1: Detailed Space Needs

CURRENT NEEDS - Space Description	space std	dimension if specific required	qty	total s.f.	remarks	building	covered	exterior
ADMINISTRATION								
PUBLIC AREAS								
Public Access								
Vestibule	80		1	80		80	0	0
Reception/waiting	120		1	120	reception counter, 4 chairs	120	0	0
Intake/Interview Area	80		2	160	three people at table	160	0	0
Board/Training/Multipurpose Room	850		1	850	8-10 staff - 20 participants in chairs or 25% of driver staff whichever is greater (driver staff at small tables)	850	0	0
Table/Chair/Material Storage	120		1	120	tables/chairs/training materials	120	0	0
Restroom	96		2	192	joint use with Boardroom/training	192	0	0
COUNTY ADMINISTRATIVE AREAS								
Transportation Manager	150		1	150	office	150	0	0
Transit Planner	150		1	150	office	150	0	0
Transportation Coordinator	80		1	80	cubicle	80	0	0
Transportation Engineer	150		1	150	office with u shaped desk	150	0	0
CONTRACT PROVIDER ADMINISTRATIVE AREAS								
General Manager	150		1		office			
Safety Manager/Trainer	150		1		office			
Admin Assistant	80		1		cubicle			
SHARED ADMINISTRATIVE AREA								
Conference Rooms	110		2	220	4-6 people	220	0	0
Lunchroom	20		7	290	administrative and transportation staff (1/2 staff at any time)	290	0	0
Copy/Work/File Room	150		1	150	includes office supply storage and central printer area	150	0	0
Central File Room	100		1	100	controlled access files	100	0	0
Cold File Storage	400		1	400	could be in any portion of building	400	0	0
Marketing Supply Storage	80		1	80		80	0	0
Restroom	96		2	192		192	0	0
Nursing/First Aid Room	80		1	80		80	0	0
Training Room	0		1	0	see Public Areas	0	0	0
Training Room Storage	0		1	0	see Public Areas	0	0	0
subtotal Administration				3564		3564	0	0
circulation and MEP	35%			1247		1247	0	0
TOTAL ADMINISTRATION				4811		4811	0	0

CURRENT NEEDS - Space Description	space std	dimension if specific required	qty	total s.f.	remarks	building	covered	exterior
TRANSPORTATION OPERATIONS								
Administration								
Road Supervisors	100		1	100	workstations in a single office	100	0	0
Lead Dispatcher	100		1	100	workstations in a single office	100	0	0
Dispatch/Call Center	80		1	130	workstations in a single space plus copy/work area - work station includes desk with three monitors and file cabinet	130	0	0
Money Room	150		1	150	locked counting/storage area; sized for future storage of fare boxes and passes	150	0	0
Driver Areas								
Assembly Room	15		18	270	1/2 driver count	270	0	0
Kitchenette/Vending	100		1	100		100	0	0
Exterior break/rest area	200		1	200		0	0	200
Lockers	2		35	70	third lockers, one per driver	70	0	0
Computer Workstation	24		2	48	counter on wall	48	0	0
Quiet Room	100		1	100		100	0	0
Restrooms	96		1	96		96	0	0
Restrooms w/shower	110		4	440		440	0	0
Charging Stations - Tablets and Radios	20		1	20	on shelves	20	0	0
Shared Operations Areas								
Conference Room	110		1	110	4-6 people	110	0	0
Training Room	0		1	0	See Public Areas	0	0	0
Supply Room	120		1	120	printed materials, uniforms, etc.	120	0	0
subtotal Transportation Operations				2054		1854	0	200
circulation and MEP	35%			719		649	0	70
TOTAL TRANSPORTATION OPERATIONS				2773		2503	0	270

CURRENT NEEDS - Space Description	space std	dimension if specific required			qty	total s.f.	remarks	building	covered	exterior
MAINTENANCE										
Administration/Personnel										
Maintenance Manager	120				1	120	office	120	0	0
Mechanic Area	42				2	84	workspace in single area plus manuals	84	0	0
Training/Library/Technician Area/Break Room	200				1	200	seating for eight, workstation for mechanics, kitchen/vending area	200	0	0
Locker Alcove	4				3	12	full height 24" wide, one per staff	12	0	0
Shower/Restroom	100				1	100		100	0	0
Unifrom Storage/Handling	80				1	80	clothes bar for clean,hopper for dirty: could be in parts storeroom	80	0	0
Restroom	96				2	192		192	0	0
Repair Areas										
Repair Bays/Shops										
Vehicle Repair Bays		20	x	55	2	2200	sized for forty foot buses	2200	0	0
Chassis Wash		20	x	55	1	1100		1100	0	0
Common Work Area	200				1	200	includes tire shop	200	0	0
Toolbox and Portable Equipment Storage	160				1	160	paint stripe on floor	160	0	0
Support Areas										
Parts Storeroom	360				1	360		360	0	0
Issue Window/workstation	100				1	100		100	0	0
Tool Crib	80				1	80		80	0	0
Tire Storage	100				1	100	20 tires - mounted	100	0	0
Lubrication/Compressor Room	500				1	500		500	0	0
subtotal Maintenance						5588		5588	0	0
circulation and MEP	35%					0		0	0	0
TOTAL MAINTENANCE						5588		5588	0	0
OTHER FACILITY SUPPORT SPACES										
Mechanical/Electrical/Fire Riser Rooms	600				1	600		600	0	0
Janitors Closet/Storage	100				1	100		100	0	0
Facilities Maintenance Work Area	100				1	100		100	0	0
subtotal Other Facility Support Spaces						800		800	0	0
circulation and MEP	20%					160		160	0	0
TOTAL OTHER FACILITY SUPPORT SPACES						960		960	0	0

CURRENT NEEDS - Space Description		space std	dimension if specific required			qty	total s.f.		remarks	building	covered	exterior
SHARED SITE FUNCTIONS												
WASHING												
Wash Building			25	x	65	1	1625		drive through washer	1625	0	0
Wash Equipment Room		100				1	100			100	0	0
subtotal Washing							1725			1725	0	0
circulation		10%					0			0	0	0
TOTAL WASHING							1725			1725	0	0
FUELING												
Fuel Lanes			12	x	45	2	1080			0	1080	0
Fuel Island			5	x	45	2	450			0	450	0
Tank Farm (diesel)			16	x	35	2	1120		based on number of tanks	0	0	1120
Fast Fill Compressor Station		500				1	500			0	0	500
subtotal Fueling							3150			0	1530	1620
circulation		10%					0			0	0	0
TOTAL FUELING							3150			0	1530	1620
SCRAP												
Scrap Bins			6	x	10	3	180		used tires, metal, scrap	0	0	180
subtotal Scrap							180			0	0	180
circulation and MEP		10%					0			0	0	0
TOTAL SCRAP							180			0	0	180

CURRENT NEEDS - Space Description	space std	dimension if specific required			qty	total s.f.	remarks	building	covered	exterior
PARKING										
Agency Parking										
Bus Parking										
Cutaways		12	x	25	24	7200		0	0	7200
Transit Bus		12	x	45	0	0		0	0	0
Non-Revenue		10	x	20	0	0		0	0	0
Down/Ready Line										
Cutaways		12	x	25	2	600		0	0	600
Transit Bus		12	x	45	0	0		0	0	0
Employee Parking										
Employee Parking		10	x	20	31	6200		0	0	6200
Visitor Parking		10	x	20	30	6000	sized for Board meetings	0	0	6000
Accessible Parking		15	x	20	4	1200	final count by code	0	0	1200
subtotal Parking						21200		0	0	21200
circulation exterior	100%					21200		0	0	21200
circulation covered	20%									
circulation interior	50%									
TOTAL PARKING						42400		0	0	42400
TOTAL SHARED SITE FUNCTIONS						42400		1725	1530	44200
COMPLEX TOTALS								15587	1530	44470
Subtotal Structures						17117				
Subtotal Yards						44470				
complex subtotal						61587				
site circulation	75%					46190				
stormwater management						21555				
COMPLEX TOTAL						129333				
acreage						2.97				

Year 2031 - Space Description	space std	dimension if specific required	qty	total s.f.	remarks	building	covered	exterior
ADMINISTRATION								
PUBLIC AREAS								
Public Access								
Vestibule	80		1	80		80	0	0
Reception/waiting	120		1	120	reception counter, 4 chairs	120	0	0
Intake/Interview Area	80		2	160	three people at table	160	0	0
Board/Training/Multipurpose Room	850		1	850	8-10 staff - 20 participants in chairs or 25% of driver staff whichever is greater (driver staff at small tables)	850	0	0
Table/Chair/Material Storage	120		1	120	tables/chairs/training materials	120	0	0
Restroom	96		2	192	joint use with Boardroom/training	192	0	0
COUNTY ADMINISTRATIVE AREAS								
Transportation Manager	150		1	150	office	150	0	0
Transit Planner	150		1	150	office	150	0	0
Transportation Coordinator	80		2	160	cubicle	160	0	0
Transportation Engineer	150		2	300	office with u shaped desk	300	0	0
CONTRACT PROVIDER ADMINISTRATIVE AREAS								
General Manager	150		1		office			
Safety Manager/Trainer	150		2		office			
Admin Assistant	80		2		cubicle			
SHARED ADMINISTRATIVE AREA								
Conference Rooms	110		2	220	4-6 people	220	0	0
Lunchroom	20		13	410	administrative and transportation staff (1/2 staff at any time)	410	0	0
Copy/Work/File Room	150		1	150	includes office supply storage and central printer area	150	0	0
Central File Room	100		1	100	controlled access files	100	0	0
Cold File Storage	400		1	400	could be in any portion of building	400	0	0
Marketing Supply Storage	80		1	80		80	0	0
Restroom	96		2	192		192	0	0
Nursing/First Aid Room	80		1	80		80	0	0
Training Room	0		1	0	see Public Areas	0	0	0
Training Room Storage	0		1	0	see Public Areas	0	0	0
subtotal Administration				3914		3914	0	0
circulation and MEP	35%			1370		1370	0	0
TOTAL ADMINISTRATION				5284		5284	0	0

Year 2031 - Space Description	space std	dimension if specific required	qty	total s.f.	remarks	building	covered	exterior
TRANSPORTATION OPERATIONS								
Administration								
Road Supervisors	100		1	100	workstations in a single office	100	0	0
Lead Dispatcher	80		2	160	workstations in a single office	160	0	0
Dispatch/Call Center	80		4	370	workstations in a single space plus copy/work area - work station includes desk with three monitors and file cabinet	370	0	0
Money Room	150		1	150	locked counting/storage area; sized for future storage of fare boxes and passes	150	0	0
Driver Areas								
Assembly Room	15		39	585	1/2 driver count	585	0	0
Kitchenette/Vending	100		1	100		100	0	0
Exterior break/rest area	200		1	200		0	0	200
Lockers	2		78	156	third lockers, one per driver	156	0	0
Computer Workstation	24		2	48	counter on wall	48	0	0
Quiet Room	100		1	100		100	0	0
Restrooms	96		6	576		576	0	0
Restrooms w/shower	110		2	220		220	0	0
Charging Stations - Tablets and Radios	20		1	20	on shelves	20	0	0
Shared Operations Areas								
Conference Room	110		1	110	4-6 people	110	0	0
Training Room	0		1	0	See Public Areas	0	0	0
Supply Room	120		1	120	printed materials, uniforms, etc.	120	0	0
subtotal Transportation Operations				3015		2815	0	200
circulation and MEP	35%			1055		985	0	70
TOTAL TRANSPORTATION OPERATIONS				4070		3800	0	270

Year 2031 - Space Description	space std	dimension if specific required			qty	total s.f.	remarks	building	covered	exterior
MAINTENANCE										
Administration/Personnel										
Maintenance Manager	120				2	240	office	240	0	0
Mechanic Area	42				4	168	workspace in single area plus manuals	168	0	0
Training/Library/Technician Area/Break Room	200				1	200	seating for eight, workstation for mechanics, kitchen/vending area	200	0	0
Locker Alcove	4				6	24	full height 24" wide, one per staff	24	0	0
Shower/Restroom	100				1	100		100	0	0
Uniform Storage/Handling	80				1	80	clothes bar for clean, hopper for dirty: could be in parts storeroom	80	0	0
Restroom	96				2	192		192	0	0
Repair Areas										
Repair Bays/Shops										
Vehicle Repair Bays		20	x	55	4	4400	sized for forty foot buses	4400	0	0
Chassis Wash		20	x	55	1	1100		1100	0	0
Common Work Area	200				1	200	includes tire shop	200	0	0
Toolbox and Portable Equipment Storage	160				1	160	paint stripe on floor	160	0	0
Support Areas										
Parts Storeroom	810				1	810		810	0	0
Issue Window/workstation	100				1	100		100	0	0
Tool Crib	80				1	80		80	0	0
Tire Storage	100				1	100	20 tires - mounted	100	0	0
Lubrication/Compressor Room	500				1	500		500	0	0
<i>subtotal Maintenance</i>						8454		8454	0	0
<i>circulation and MEP</i>	35%					0		0	0	0
TOTAL MAINTENANCE						8454		8454	0	0
OTHER FACILITY SUPPORT SPACES										
Mechanical/Electrical/Fire Riser Rooms	600				1	600		600	0	0
Janitors Closet/Storage	100				1	100		100	0	0
Facilities Maintenance Work Area	100				1	100		100	0	0
<i>subtotal Other Facility Support Spaces</i>						800		800	0	0
<i>circulation and MEP</i>	20%					160		160	0	0
TOTAL OTHER FACILITY SUPPORT SPACES						960		960	0	0

Year 2031 - Space Description	space std	dimension if specific required			qty	total s.f.	remarks	building	covered	exterior
SHARED SITE FUNCTIONS										
WASHING										
Wash Building		25	x	65	1	1625	drive through washer	1625	0	0
Wash Equipment Room	100				1	100		100	0	0
subtotal Washing						1725		1725	0	0
circulation	10%					0		0	0	0
TOTAL WASHING						1725		1725	0	0
FUELING										
Fuel Lanes		12	x	45	2	1080		0	1080	0
Fuel Island		5	x	45	2	450		0	450	0
Tank Farm (diesel)		16	x	35	2	1120	based on number of tanks	0	0	1120
Fast Fill Compressor Station	500				1	500		0	0	500
subtotal Fueling						3150		0	1530	1620
circulation	10%					0		0	0	0
TOTAL FUELING						3150		0	1530	1620
SCRAP										
Scrap Bins		6	x	10	3	180	used tires, metal, scrap	0	0	180
subtotal Scrap						180		0	0	180
circulation and MEP	10%					0		0	0	0
TOTAL SCRAP						180		0	0	180

Year 2031 - Space Description	space std	dimension if specific required			qty	total s.f.	remarks	building	covered	exterior
PARKING										
Agency Parking										
Bus Parking										
Cutaways		12	x	25	39	11700		0	0	11700
Transit Bus		12	x	45	15	8100		0	0	8100
Non-Revenue		10	x	20	15	3000		0	0	3000
Down/Ready Line										
Cutaways		12	x	25	4	1200		0	0	1200
Transit Bus		12	x	45	2	1080		0	0	1080
Employee Parking										
Employee Parking		10	x	20	64	12800		0	0	12800
Visitor Parking		10	x	20	30	6000	sized for Board meetings	0	0	6000
Accessible Parking		15	x	20	4	1200	final count by code	0	0	1200
<i>subtotal Parking</i>						45080		0	0	45080
<i>circulation exterior</i>	100%					45080		0	0	45080
<i>circulation covered</i>	20%									
<i>circulation interior</i>	50%									
TOTAL PARKING						90160		0	0	90160
TOTAL SHARED SITE FUNCTIONS						90160		1725	1530	91960
COMPLEX TOTALS								20223	1530	92230
Subtotal Structures						21753				
Subtotal Yards						92230				
complex subtotal						113983				
site circulation	75%					85487				
stormwater management						39894				
COMPLEX TOTAL						239364				
acreage						5.50				

Year 2041 - Space Description	space std	dimension if specific required	qty	total s.f.	remarks	building	covered	exterior
ADMINISTRATION								
PUBLIC AREAS								
Public Access								
Vestibule	80		1	80		80	0	0
Reception/waiting	120		1	120	reception counter, 4 chairs	120	0	0
Intake/Interview Area	80		2	160	three people at table	160	0	0
Board/Training/Multipurpose Room	850		1	850	8-10 staff - 20 participants in chairs or 25% of driver staff whichever is greater (driver staff at small tables)	850	0	0
Table/Chair/Material Storage	120		1	120	tables/chairs/training materials	120	0	0
Restroom	96		2	192	joint use with Boardroom/training	192	0	0
COUNTY ADMINISTRATIVE AREAS								
Transportation Manager	150		1	150	office	150	0	0
Transit Planner	150		1	150	office	150	0	0
Transportation Coordinator	80		2	160	cubicle	160	0	0
Transportation Engineer	150		2	300	office with u shaped desk	300	0	0
CONTRACT PROVIDER ADMINISTRATIVE AREAS								
General Manager	150		1		office			
Safety Manager/Trainer	150		4		office			
Admin Assistant	80		4		cubicle			
SHARED ADMINISTRATIVE AREA								
Conference Rooms	110		2	220	4-6 people	220	0	0
Lunchroom	20		22	590	administrative and transportation staff (1/2 staff at any time)	590	0	0
Copy/Work/File Room	150		1	150	includes office supply storage and central printer area	150	0	0
Central File Room	100		1	100	controlled access files	100	0	0
Cold File Storage	400		1	400	could be in any portion of building	400	0	0
Marketing Supply Storage	80		1	80		80	0	0
Restroom	96		4	384		384	0	0
Nursing/First Aid Room	80		1	80		80	0	0
Training Room	0		1	0	see Public Areas	0	0	0
Training Room Storage	0		1	0	see Public Areas	0	0	0
subtotal Administration				4286		4286	0	0
circulation and MEP	35%			1500		1500	0	0
TOTAL ADMINISTRATION				5786		5786	0	0

Year 2041 - Space Description	space std	dimension if specific required	qty	total s.f.	remarks	building	covered	exterior
TRANSPORTATION OPERATIONS								
Administration								
Road Supervisors	100		1	100	workstations in a single office	100	0	0
Lead Dispatcher	80		4	320	workstations in a single office	320	0	0
Dispatch/Call Center	80		8	690	workstations in a single space plus copy/work area - work station includes desk with three monitors and file cabinet	690	0	0
Money Room	150		1	150	locked counting/storage area; sized for future storage of fare boxes and passes	150	0	0
Driver Areas								
Assembly Room	15		75	1125	1/2 driver count	1125	0	0
Kitchenette/Vending	100		1	100		100	0	0
Exterior break/rest area	200		1	200		0	0	200
Lockers	2		149	298	third lockers, one per driver	298	0	0
Computer Workstation	24		2	48	counter on wall	48	0	0
Quiet Room	100		1	100		100	0	0
Restrooms	96		8	768		768	0	0
Restrooms w/shower	110		2	220		220	0	0
Charging Stations - Tablets and Radios	20		1	20	on shelves	20	0	0
Shared Operations Areas								
Conference Room	110		1	110	4-6 people	110	0	0
Training Room	0		1	0	See Public Areas	0	0	0
Supply Room	120		1	120	printed materials, uniforms, etc.	120	0	0
subtotal Transportation Operations				4369		4169	0	200
circulation and MEP	35%			1529		1459	0	70
TOTAL TRANSPORTATION OPERATIONS				5898		5628	0	270

Year 2041 - Space Description	space std	dimension if specific required			qty	total s.f.	remarks	building	covered	exterior
MAINTENANCE										
Administration/Personnel										
Maintenance Manager	120				4	480	office	480	0	0
Mechanic Area	42				8	336	workspace in single area plus manuals	336	0	0
Training/Library/Technician Area/Break Room	200				1	200	seating for eight, workstation for mechanics, kitchen/vending area	200	0	0
Locker Alcove	4				12	48	full height 24" wide, one per staff	48	0	0
Shower/Restroom	100				1	100		100	0	0
Unifrom Storage/Handling	80				1	80	clothes bar for clean,hopper for dirty: could be in parts storeroom	80	0	0
Restroom	96				2	192		192	0	0
Repair Areas										
Repair Bays/Shops										
Vehicle Repair Bays		20	x	55	7	7700	sized for forty foot buses	7700	0	0
Chassis Wash		20	x	55	1	1100		1100	0	0
Common Work Area	200				1	200	includes tire shop	200	0	0
Toolbox and Portable Equipment Storage	160				1	160	paint stripe on floor	160	0	0
Support Areas										
Parts Storeroom	1560				1	1560		1560	0	0
Issue Window/workstation	100				1	100		100	0	0
Tool Crib	80				1	80		80	0	0
Tire Storage	100				1	100	20 tires - mounted	100	0	0
Lubrication/Compressor Room	500				1	500		500	0	0
subtotal Maintenance						12936		12936	0	0
circulation and MEP	35%					0		0	0	0
TOTAL MAINTENANCE						12936		12936	0	0
OTHER FACILITY SUPPORT SPACES										
Mechanical/Electrical/Fire Riser Rooms	600				1	600		600	0	0
Janitors Closet/Storage	100				1	100		100	0	0
Facilities Maintenance Work Area	100				1	100		100	0	0
subtotal Other Facility Support Spaces						800		800	0	0
circulation and MEP	20%					160		160	0	0
TOTAL OTHER FACILITY SUPPORT SPACES						960		960	0	0

Year 2041 - Space Description	space std	dimension if specific required			qty	total s.f.	remarks	building	covered	exterior
SHARED SITE FUNCTIONS										
WASHING										
Wash Building		25	x	65	1	1625	drive through washer	1625	0	0
Wash Equipment Room	100				1	100		100	0	0
subtotal Washing						1725		1725	0	0
circulation	10%					0		0	0	0
TOTAL WASHING						1725		1725	0	0
FUELING										
Fuel Lanes		12	x	45	2	1080		0	1080	0
Fuel Island		5	x	45	2	450		0	450	0
Tank Farm (diesel)		16	x	35	2	1120	based on number of tanks	0	0	1120
Fast Fill Compressor Station	500				1	500		0	0	500
subtotal Fueling						3150		0	1530	1620
circulation	10%					0		0	0	0
TOTAL FUELING						3150		0	1530	1620
SCRAP										
Scrap Bins		6	x	10	3	180	used tires, metal, scrap	0	0	180
subtotal Scrap						180		0	0	180
circulation and MEP	10%					0		0	0	0
TOTAL SCRAP						180		0	0	180

Year 2041 - Space Description	space std	dimension if specific required		qty	total s.f.	remarks	building	covered	exterior
PARKING									
Agency Parking									
Bus Parking									
Cutaways		12	x	25	74	22200	0	0	22200
Transit Bus		12	x	45	30	16200	0	0	16200
Non-Revenue		10	x	20	30	6000	0	0	6000
Down/Ready Line									
Cutaways		12	x	25	7	2100	0	0	2100
Transit Bus		12	x	45	3	1620	0	0	1620
Employee Parking									
Employee Parking		10	x	20	118	23600	0	0	23600
Visitor Parking		10	x	20	30	6000	0	0	6000
Accessible Parking		15	x	20	4	1200	0	0	1200
subtotal Parking						78920	0	0	78920
circulation exterior	100%					78920	0	0	78920
circulation covered	20%								
circulation interior	50%								
TOTAL PARKING						157840	0	0	157840
TOTAL SHARED SITE FUNCTIONS						157840	1725	1530	159640
COMPLEX TOTALS							27035	1530	159910
Subtotal Structures						28565			
Subtotal Yards						159910			
complex subtotal						188475			
site circulation	75%					141356			
stormwater management						65966			
COMPLEX TOTAL						395798			
acreage						9.09			

Chapter 4:

Site Selection Matrix

Introduction

This chapter prepared for the El Paso County Transit's Facility Assessment identifies potential properties that generally meet the program requirements and develops a site selection matrix in concert with El Paso County Transit (EPCT). EPCT selected several representative project sites along the 375 Corridor as recommended in Chapter 2 that meet the minimum acreage recommended during the planning exercise. Those sites were evaluated in a site selection matrix with weighted selection criteria.

This document is presented in the following manner:

- Summary of the Programming Planning Tool
- Site Selection Matrix

Programming

Whitman, Requardt and Associates (WRA) worked with EPCT to develop a planning level program of their needs. The program evaluated 3 planning windows – Current Needs, 2031, and 2041. The 2041 program was used as the basis to determine the recommended site acreage. The parking calculation is based on a fleet 74 cutaway buses, 30 transit buses, and 30 non-revenue vehicles. The employee parking lot included 152 parking spaces to accommodate drivers, maintenance and operations staff, and visitors. The building construction includes a combination Administrative, Transportation Operations, and Maintenance facility, as well as a stand alone vehicle wash facility. A two lane fuel island is featured out on the site. The total recommended site acreage is 9.09 acres. A Summary of the program is included in Figure 4-1.

EPCT also expressed a desire to consider an electric vehicle fleet in the future. Infrastructure and programming for an electric vehicle charging operation is not included within this report. It can be noted that the inclusion of electric charging would have a minimal impact on the overall site acreage. Typical infrastructure would include charging rectifiers located away from the vehicle traffic and charging stations for the buses. Charging stations for this fleet would likely be plug in configuration located out at the parking lot.

Figure 4-1 Programming Summary

TOTAL COMPLEX REQUIREMENTS									
Summary by Space Grouping	current needs			2031			2041		
	building	covered	exterior	building	covered	exterior	building	covered	exterior
ADMINISTRATION	4811	0	0	5284	0	0	5786	0	0
TRANSPORTATION OPERATIONS	2503	0	270	3800	0	270	5628	0	270
MAINTENANCE	5588	0	0	8454	0	0	12936	0	0
OTHER FACILITY SUPPORT SPACES	960	0	0	960	0	0	960	0	0
SHARED SITE FUNCTIONS	1725	1530	44200	1725	1530	91960	1725	1530	159640
Complex subtotal	61587			113983			188475		
Site circulation and setbacks	46190			85487			141356		
Stormwater management*	21555			39894			65966		
Complex Total	129333			239364			395798		
acreage	2.97			5.50			9.09		
Summary by Construction Type									
Structures	17117			21753			28565		
Site Areas	44470			92230			159910		
Complex subtotal	61587			113983			188475		
Site circulation and setbacks	46190			85487			141356		
Stormwater Management*	21555			39894			65966		
Complex Total	129333			239364			395798		
acreage	2.97			5.50			9.09		

Site Selection Matrix

Based on the Programming Summary, a site with 9.09 acres was determined to meet the minimal program. EPCT selected fifteen potential properties along the 375 Corridor that generally met the program requirements. A listing of these properties is shown in Figure 4-2 below.

Figure 4-2 Property Information

Properties Information				Transportation Planning and Engineering Division		Location Information		
Areas Along Loop 375 for possible County Transit Bus Station and Office								
								
Matr #	Property ID # (EP Appraisal)	Property Owner	Owner ID (EP Appraisal)	Area (ac)	Property Owner Address	Notes		
1	232206	Coronado Holding II LP	326095	5.27	121 Paragon Ln Bldg C El Paso TX 79912	Possible Location		
2	323466	B75 Properties LLC	1124691	35.03	6330 Montana Ave El Paso TX 79925	Possible Location		
3	36619	El Paso County	30009	76.963	300 E SAN ANTONIO AVE EL PASO TX 79901-2419	Possible Location		
4	192205	People of the State of Texas / TXDOT	10260	11.76	125 E 11TH STREET AUSTIN TX 78701-2409			
5	707317	Alamo Monteverde Holding LLC	1119523			Lot not big enough to accommodate future improvements		
6	297161	Rolling Frisco-Lay Sales	1148948	17.34	7701 LEGACY DR MD 10-207 PLANO TX 75024	Property currently been develop, not for sale		
7	277883	Samaniego Joint Venture	1101318	20+	9812 TRINIDAD DR EL PASO TX 79925-6070	Possible location, only certain area of the property is suitable for construction		
8	167367	People of the State of Texas	10260	5	125 E 11TH STREET AUSTIN TX 78701-2409	Not suitable for construction		
9	379389	People of the State of Texas	10260	5	125 E 11TH STREET AUSTIN TX 78701-2409	Not suitable for construction		
10	236932	Sacorro School	18941	3.86	2309 EASTLAKE BLVD EL PASO TX 79928-5400	School Property - Not for Sale		
11	33554	Sacorro School	18941	72	2300 EASTLAKE BLVD EL PASO TX 79928-5400	School Property some areas already develop, may be able to sell some property but only 1/2 acres at suitable for construction		
12	695430	City of El Paso	1005872	15	1154 HAWKINS BLVD EL PASO TX 79925-6436	Not suitable for construction		
13	582159	People of the State of Texas	10260	8.1155	125 E 11TH STREET AUSTIN TX 78701-2409	Not suitable for construction		
14	333017	RE Orion LLC	980992	5	PO BOX 370296 EL PASO TX 79937-0296	Possible Location		
15	46709	RE Orion LLC	980992	5	PO BOX 370296 EL PASO TX 79937-0296	Possible Location		

WRA provided a site selection matrix to EPCT, populated with site information and weighted site criteria. The evaluation criteria were reviewed by EPCT staff and the design team. Criteria requirements and weightings were refined to reflect the specific needs of the proposed facility and the staff's objectives. Sites less than the recommended acreage were eliminated. The site analysis was originally completed assuming that every site would be purchased. The County informed the programming team that there was a willingness to donate Site 3 for transit operations, however that has not been approved at this time. Assuming the property will be donated, Site 3 ultimately ranked as the highest rated alternative. Figure 4-3 shows the ranked scoring of the three highest rated sites.

Figure 4-3 Site Selection Matrix

Site Evaluation Matrix						
<i>El Paso County Transit</i>						
<i>Transit Facility Assessment</i>						
Weighting Scale: Weighted from 1 to 3 where 3 is the heaviest weight						
Criteria Score: Scored from 1 to 5 where 5 is the best possible score						
Site Information						
		Project Requirements	Site 2	Site 3	Site 7	
Size (in acres)		9.09	15.03	10	20	
Cost (in dollars)		2059000	\$ 3,834,825.00	\$ -	\$ 5,102,895.00	Project requirements from the program
Deadhead (local)			0	0	0	Distance to centroid
Deadhead (Commuter)			118.2	120.6	117.4	Total Distance to all route origins
Weighted Evaluation						
Criteria	Weighting	Project Requirements	Site 2	Site 3	Site 7	Comments
Size	4		4	5	4	
Shape	2		5	5	3	5 - rectangular, with length twice the width
Topography	1		5	5	3	5 - relatively flat - no terrain features (gullies, mesas, etc.)
Major Roads/Traffic Impact	4		5	5	5	
Environmental Concerns	1		5	5	5	
Surrounding Neighborhood	3		4	4	5	Scale of 1 - Residential to 5 - Industrial
Utilities Connections	3		3	3	3	Scale of 1 - Long Dist., 3 - Short Dist., 5 - On Site
CNG Gas Line	5		3	3	1	(Project Specific) High Pressure Line Scale - Same as Utilities
Off Site Improvements	1		1	1	1	Scale of 1 - Signals/Turn Lanes, 3 - Signage, 5 - None
Ingress/Egress	3		2	2	2	
Cost	4		3	5	3	
Deadhead-Local	5		1	1	1	
Deadhead-Commuter	5		5	3	5	
		Weighted Score	141	143	128	
		Rank	2	1	3	

Site 2 is an undeveloped property with generally flat topography located to the east of Route 375. Properties to the north, east, and south are undeveloped. This property requires a real property purchase.

Site 3 is no longer under consideration as the County has decided to keep the land and instead budget \$1.5 million in local funds for procurement of another option. This property has little topography. An elementary school borders to the southeast, with residences to the east and a TXDOT maintenance property to the south. The proposed facility could be located generally anywhere on the site, however zoning will have to be considered when selecting which quadrants of the property to build the new facility. An Industrial use next to residences or schools may not be permitted, whereas a new maintenance facility adjacent to similar Industrial operations may be a more ideal location. The County has also indicated it may develop retail, a hospital, restaurants and tax annex office with the sheriff's

department and other county facilities along this corridor. Negotiations with the County will be necessary to address the myriad of factors that will influence the potential location of the proposed facility and the cost of development. The Utilities Connections and CNG gas line weighting of the matrix assumes development adjacent to 375. The further the transportation facility is moved away from the highway, the cost of improvements such as water, electrical, and gas utilities will increase. There will be a corresponding cost for the length of the roadway if the new facility is located further east than indicated in the Site Fit Diagrams. There may be potential to share part of an access road with the existing TXDOT Maintenance facility.

Site 7 is an undeveloped property with a varying topography that may require significant earth moving and site development. The property is located to the east of Route 375. There is little development to the north, east and south of the property. This property will require a real property purchase.

The presented properties were not evaluated for their suitability to support an electric vehicle fleet as part of this report. An evaluation of that nature typically requires additional information and the participation of the local electrical utility provider to determine if there is adequate capacity for the charging, including capacity, voltage, and redundancy to support charging operations if part of the grid is affected. An analysis of the fleet configuration, scheduling, and service routes would be required to determine what level of charging and what duration would be most suitable for the fleet.

Sites 2, 3 and 7 were identified as the three representative sites to develop site fit diagrams. The Fit Diagram Analysis is included in Chapter 5.

Chapter 5: Fit Diagram Analysis

Introduction

This chapter prepared for the El Paso County Transit's Facility Assessment evaluates the feasibility of the site programming and site selection matrix developed with El Paso County Transit (EPCT) in previous tasks. Those sites were evaluated in a site selection matrix and the top three ranked sites were then developed into site concepts to confirm that they will meet the programmatic requirements.

Fit Diagram Analysis

The final step in this process was the conceptual layouts for the top three ranking sites (Sites 2, 3 and 7). WRA utilized existing GIS maps for the properties based on the information provided by EPCT (Figures 5-1 and 5-2 below).

Figure 5-1 Property Locations

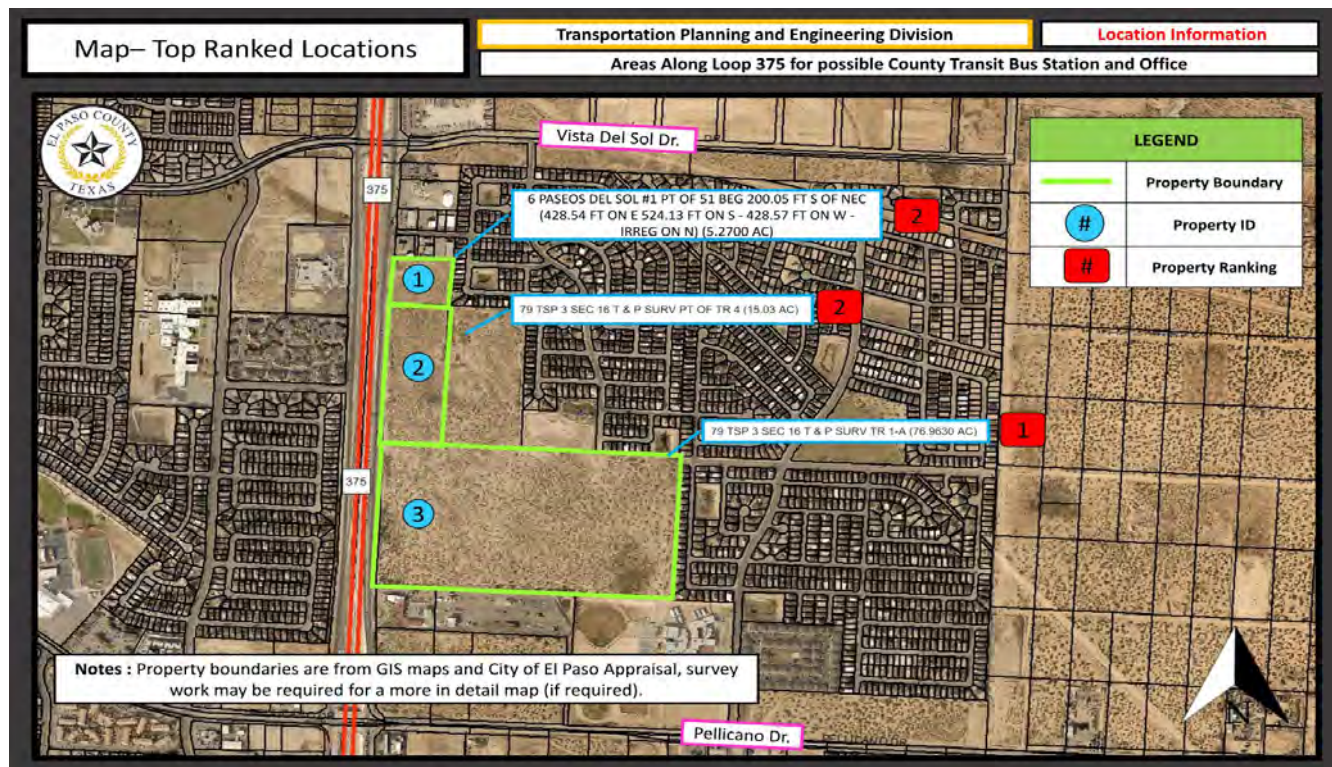
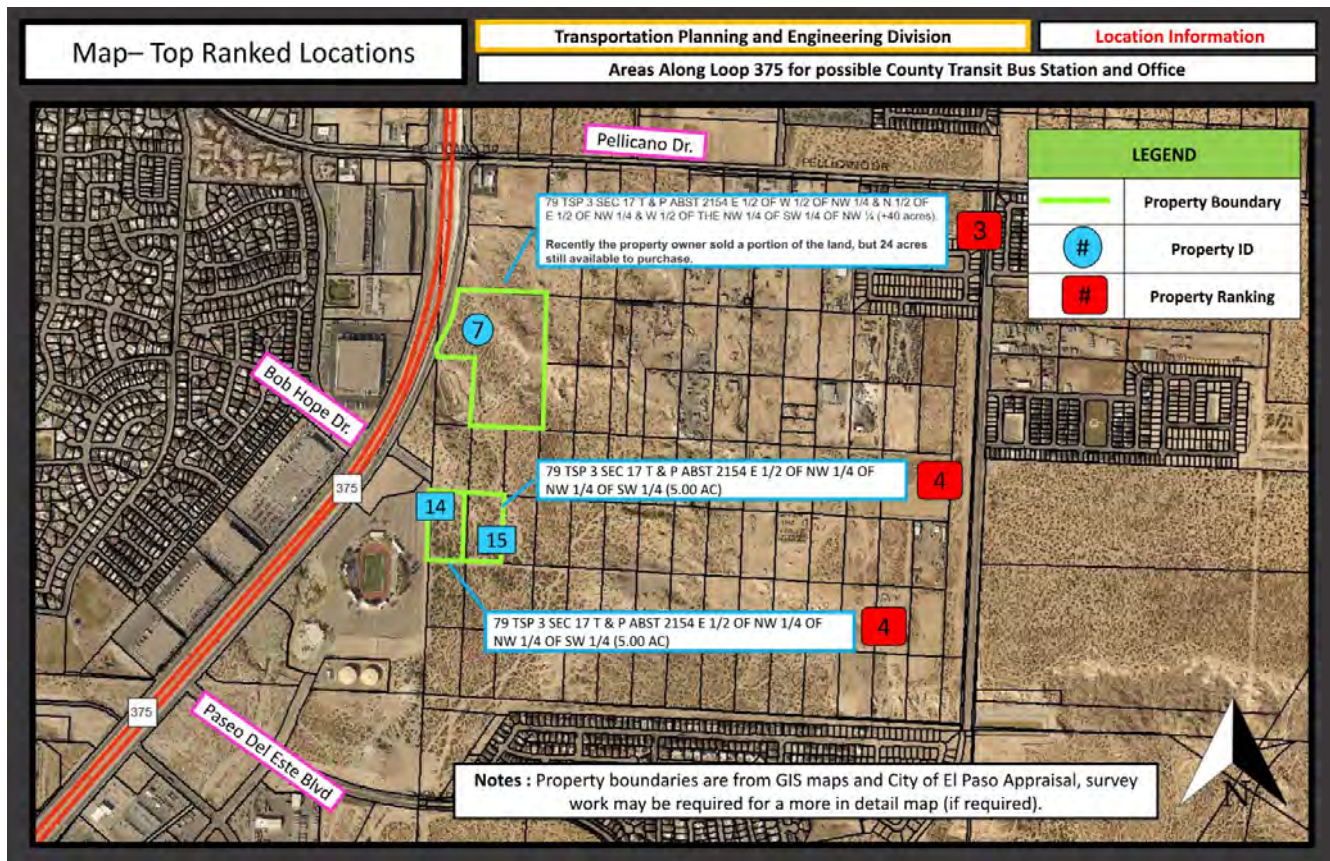


Figure 5-2 Property Locations

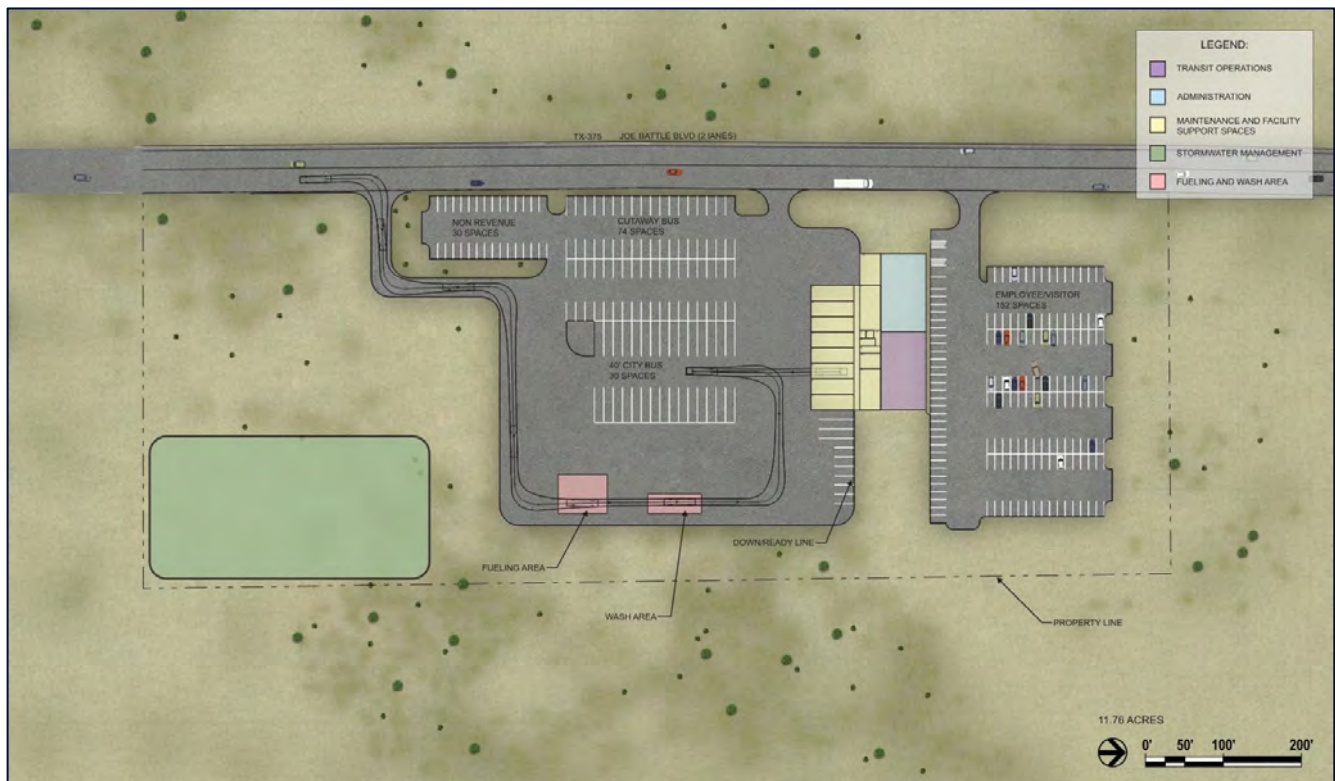


The fit analysis considers the full build out defined in the 2041 program, including bus and employee parking spaces, buildings, fuel and wash facilities and proposed locations for stormwater management. Each property has features that will influence the layout of facilities and parking. Site topography, utilities, or other specifics of each property is not considered at this level of design and should be critically evaluated during the engineering phases of the project. The concepts presented are an exercise to validate that each selected property meets the minimum site requirements to accommodate the 2041 program. Diagrams for each property are included after the descriptions, with larger diagrams included as an appendix following the report.

Site 2

Site 2 is a North-South oriented property running parallel to Loop 375. The property is configured with bus parking, fuel, and wash to the south to facilitate a counterclockwise vehicle circulation. Entrance to the bus lot occurs off of Loop 375 to the south, with buses accessing the highway from the northern access road. The building is located between the bus parking lot and employee parking to serve as a buffer and control point between those functions. Buses awaiting service enter the maintenance bays off of the bus parking lot. Employees have a dedicated entrance to the parking lot to the north of the building. Stormwater management is indicated in the southeast corner of the site. The building blocks can easily be moved to the south if the stormwater pond is more suitably located at the northern end of the site. The proposed layout will allow building expansion to the east or west, and parking expansion to the north or south of the property.

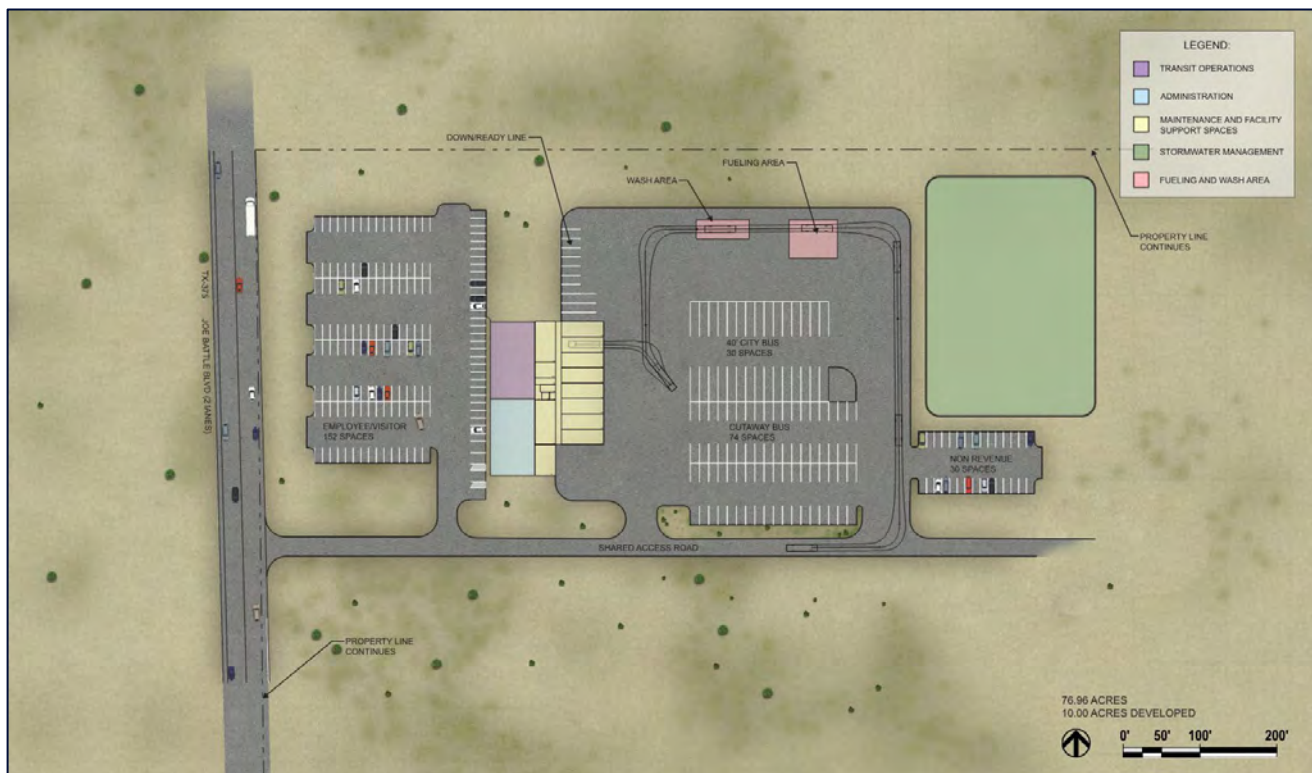
Figure 5-3 Site 2 Fit Diagram



Site 3

After completion of the study, the consultant team was informed that this site is no longer available. Site 3 is an East-West oriented property running perpendicular to Loop 375. The selected property is nearly 77 acres. The proposed configuration would utilize approximately 10 acres on the western portion of the property, with the potential to subdivide the remaining property in the future. An access road is proposed with this layout. The property is configured with bus parking, fuel and wash to the east to facilitate a counterclockwise vehicle circulation. Entrance to the bus lot occurs off of the access road. The building is located between the bus parking lot and employee parking to serve as a buffer and control point between those functions. Buses awaiting service enter the maintenance bays off of the bus parking lot. Employees have a dedicated entrance to the parking lot to the west of the building. Stormwater management is indicated in the east side of the site. The building and parking can shift to the east if the stormwater pond is more suitably located closer to the highway. The proposed layout will allow building expansion to the north or south, and parking expansion to the east or west of the property.

Figure 5-4 Site 3 Fit Diagram



Site 7

Site 7 is an inverted “L” shaped property. Part of the property accesses Loop 375, with the remainder behind an adjacent property. The selected property is 20 acres. The proposed configuration would utilize approximately 10 acres on the northern portion of the property, with the potential to subdivide the southern portion of the property in the future. An access road is proposed with this layout. The property is configured with bus parking, fuel and wash to the south, with a counterclockwise vehicle circulation. Entrance to the bus lot occurs off of the access road. The building is located between the bus parking lot and employee parking to serve as a buffer and control point between those functions. Buses awaiting service enter the maintenance bays off of the bus parking lot. Employees have a dedicated entrance off of the highway to the parking lot to the north of the building. This layout envisions a controlled delivery entrance from just off of the employee lot access road, so that the southern lot is solely dedicated to EPCT vehicles. Stormwater management is indicated in the northeast corner of the site. The site could be reconfigured if the stormwater pond is more suitably located closer to the highway or to the south of the bus lot. The proposed layout will allow building expansion to the east or west, and parking expansion in several directions.

Figure 5-5 Site 7 Fit Diagram



Conclusion and Recommendation

Each of selected properties provides quick access on and off the Loop 375 corridor for both buses and employees. Each property also allows enough acreage for the proposed configuration or any number of alternative solutions, as well as the potential for future expansion. EPCT should evaluate the proposed configurations and highway access to prioritize their needs and goals for the future property in order to determine which property best suits their needs. Two of the selected properties exceed the recommended site acreage which may complicate the FTA funding process. Considerations should be given to the potential for EPCT to independently fund their portion of additional property and the opportunity to subdivide or lease the remainder of the properties not used for EPCT purposes.

Next Steps

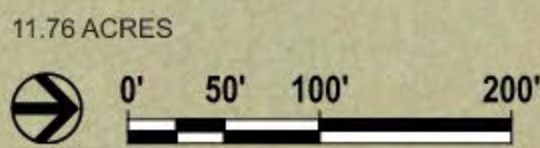
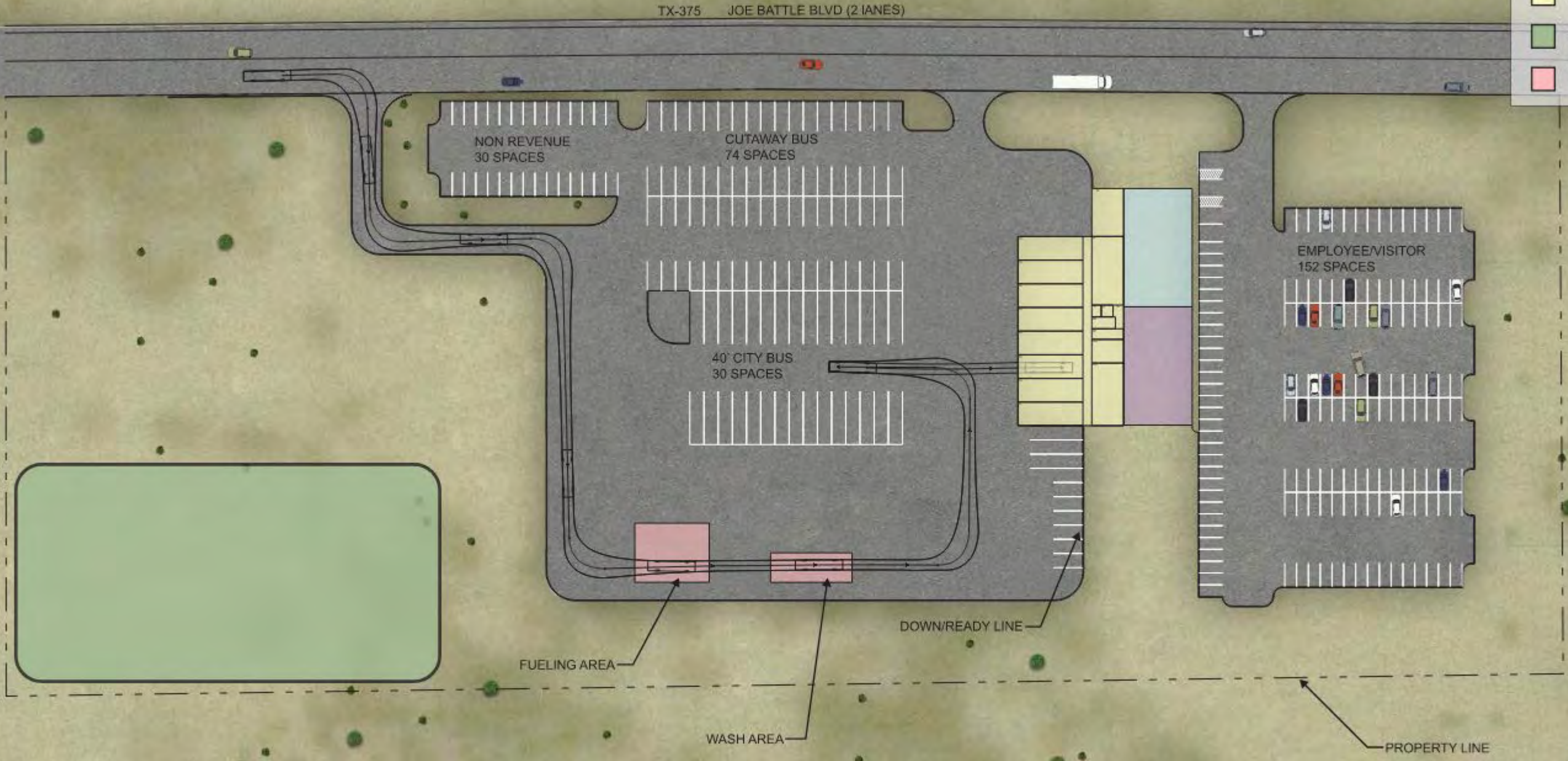
This report concludes the El Paso Site and Facility Programming. The next step will be for EPCT to evaluate the potential to purchase Site 2 or Site 7, and to coordinate next steps with the regional TXDOT facilities program manager as defined in the Transit Facility Pipeline.

Appendix A

Site Fit Diagrams

LEGEND:

- TRANSIT OPERATIONS
- ADMINISTRATION
- MAINTENANCE AND FACILITY SUPPORT SPACES
- STORMWATER MANAGEMENT
- FUELING AND WASH AREA



Prospective Site 2
2022.06.28



