City of Copperas Cove

TEXAS

City Built for Family Living

2020

Comprehensive Plan Update

Prepared by K FRIESE + ASSOCIATES, INC.

Edited by BG SERVICES

Ordinance No. 2020-19

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ACKNOWLEDGEMENTS

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City of Copperas Cove

T E X A S

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CHAPTER 1: BASELINE ANALYSIS

Chapter 1: Baseline Analysis

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INTRODUCTION TO BASELINE ANALYSIS

The 2020 Comprehensive Plan is an update of the existing 2007 Comprehensive Plan of the City of Copperas Cove. The purpose is for making coordinated future land use planning decisions that incorporates the City's Extraterritorial Jurisdiction (ETJ) consisting of 47,127.52 acres or 73.64 square miles of land. This Plan establishes and prescribes new goals and policies for regulating development projects and balancing population growth with infrastructure availability, viable business environment, current and potential neighborhoods, environmental preservation, and natural resource protection. Other goals and policies are directed towards timely availability of public infrastructure and services, and encouraging a well-balanced economy. The Plan will also integrate new planning concepts endorsed by the City Council and Planning and Zoning Commission, and translate the updated goals and policies into implementation programs (such as amendments to the City's Code of Ordinances), to assure that the City's vision is implemented.

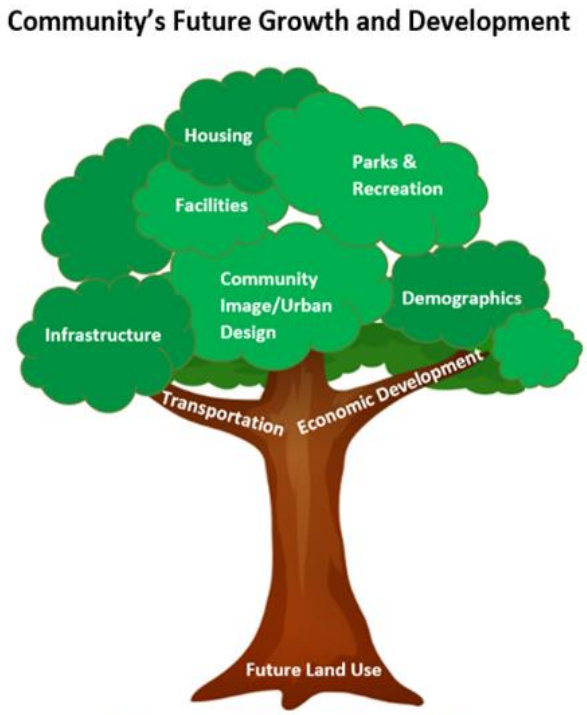


Illustration 1-1: Comprehensive Plan

The 2020 Comprehensive Plan reflects the best interests for the City of Copperas Cove as recognized by its citizens, business leaders, community stakeholders, developers and property owners. It serves as a long-range planning guide for the City to consider growth opportunities to shape its own future.

The Comprehensive Plan is a vision for the community's future growth and development in relation to public policy, economic viability, and environmental sustainability. The plan is comprised of interrelated elements incorporating demographics, economic development, infrastructure, parks and recreation, housing, transportation, community image/urban design, and facilities. This interrelated idea is pictured in **Illustration 1-1.** Existing and future demographics, housing conditions, parks and recreational facilities, infrastructure and many more features are analyzed together to create a complete Comprehensive Plan. The Plan sets forth a generalized pattern of land use and transportation corridors while providing steps and processes towards its implementation. There is a Transportation Master Plan incorporated that will coincide with the Comprehensive Plan. The recommendations made in the Plan are formed by a set of goals and objectives drawn from existing conditions, economic opportunities and public input from the community. The Comprehensive Plan becomes the official policy of the City once adopted. It is intended to be flexible and provide areas for development with more detailed analysis, which are common aspects of zoning decisions. Yet, all decisions should be made consistent with the Plan. The City will be challenged with proposals that could be beneficial to the City that may differ from the Comprehensive Plan. If needed, these proposals may be granted.

This baseline chapter intends to provide a foundational understanding of the physical and social characteristics of the City and its environment. The following sections are designed to facilitate a compilation of goals and objectives to guide the Comprehensive Plan. Along with the historical background, there are five major sections of the Baseline Analysis:

1. Historical background
2. Physical Features
3. Population and Socioeconomic Characteristics
4. Housing
5. Existing Land Use

HISTORICAL BACKGROUND[1]

The City of Copperas Cove originally began as a small community that centered on a single store. In 1879, the Coperas Cove (original spelling) Post Office was established with Marsden Ogletree as postmaster. The large stone building, which still stands today, also served as a relay station for the stage coach, which ran between Belton and Lampasas. The cattle industry became an important economic drive for the City during the 19th century due to a feeder route of the Chisholm Trial. The Town also saw a shift from livestock to farming. In 1901, the community changed the spelling of their name from "Coperas Cove" to "Copperas Cove." Businesses opened to provide services for these area residents, including a steam gristmill-cotton gin, three hotels, a barber shop, and an opera house. Many of the town's early buildings remain to this day, focusing around the block of Avenue D between Main Street and 1st Street. By 1900, the population had reached 475, and residents voted to form their own school district. A private bank opened in 1906, and residents elected Jouett Allin their first mayor in 1913. He and his wife, Emma, built their first home that same year on land she inherited from her mother.

Original post office and stage stop
Source: Wikipedia

Photo of Allin House - Designed by architect H. D. Pampel of Temple, this structure is an excellent example of the craftsman style, with features such as a frame construction bungalow plan with a three-bay front porch with box columns, a gable roof and a Palladian window. The house was among the most prominent homes in Copperas Cove. It is located at 401 N Main Street.
Source: http://www.waymarking.com/waymarks/WM2ADJ

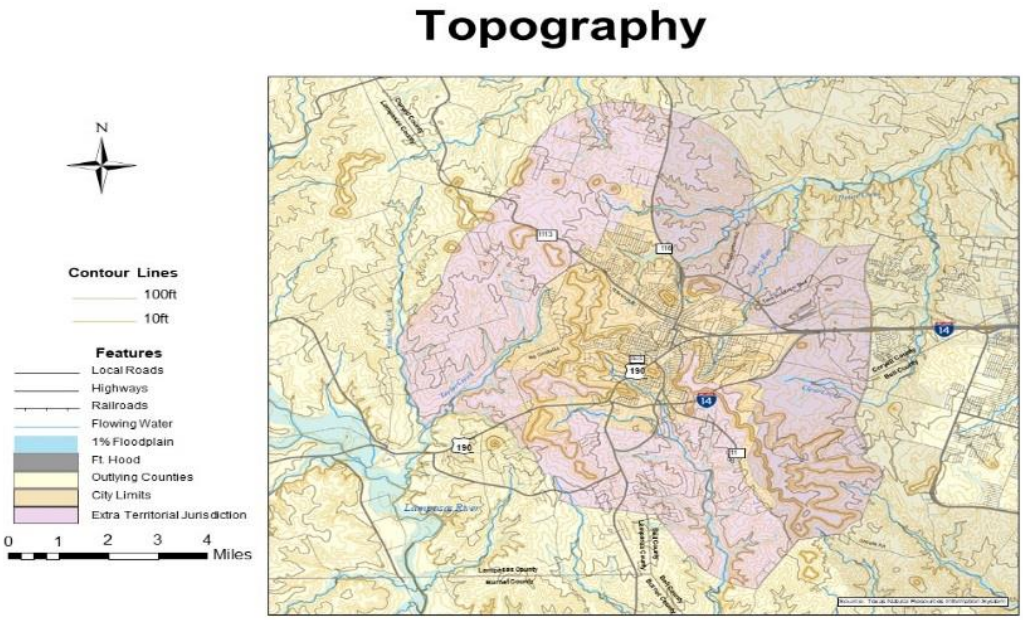
[1] Portions of this historical background were excerpted from: Handbook of Texas Online, Vivian Elizabeth Smyrl, "Copperas Cove, TX," accessed October 11, 2016, http://www.tshaonline.org/handbook/online/articles/hec04

The town continued to prosper over the coming years, depending largely on local agriculture, of which cotton played a dominant role. Copperas Cove reached a peak population of 600 in 1929, but entered a state of decline with the onset of the Great Depression. During the 1930s, the local bank failed, several businesses closed, and many people left to look for work in other areas. By 1940, only 356 people remained. In 1942 Copperas Cove received a population growth due to the development of Fort Hood. By the 1950 census, the population nearly tripled to over 1,000 residents. Fast forward to 1990 and Copperas Cove had several manufacturing establishments, a wide variety of businesses, a hospital, and a population of 24,079. On June 13, 1990, United Press International (UPI) reported that the Army proceeded with plans to deactivate the 12,083 member 2nd Armored Division at Fort Hood eliminating military jobs and several civilian positions. At the time, under the Bush 41 Administration, Defense Secretary Dick Cheney's fiscal 1991 budget called for deactivating two Army divisions -- the 9th Infantry at Fort Lewis, Wash., and the 2nd Armored Division at Fort Hood -- for a savings of $1.2 billion. The Army's decision to go ahead with the Fort Hood plan was after an environmental assessment determined there would be 'no significant impact,' and after considering 'comments from the public.'

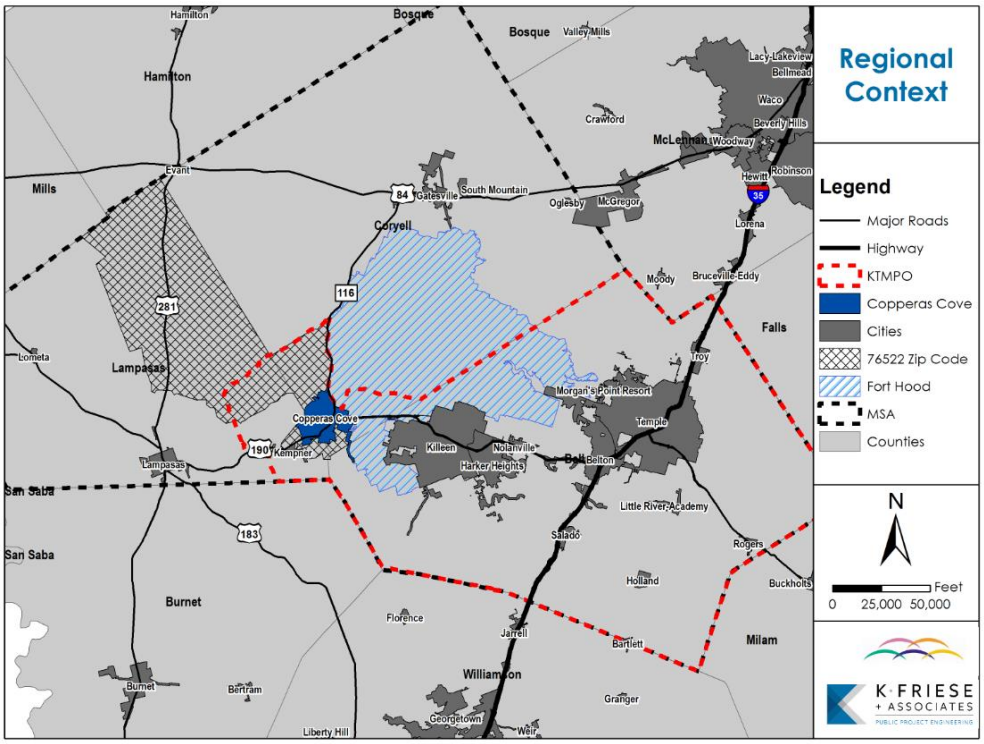
The last Comprehensive Plan for the City of Copperas Cove was prepared by Dunkin Sefko & Associates, Inc., Urban Planning Consultants, and was adopted on May 15, 2007 (Ordinance Number: 2007-10). The City's earliest Comprehensive Plan was prepared in 1965 by Gregory, Knowlton & Ratliff, Consultant Engineers. The 1995 Plan was prepared by J.T. Dunkin and Associates and was adopted on July 16, 1996 (Ordinance Number: 1996-30).

PHYSICAL FEATURES

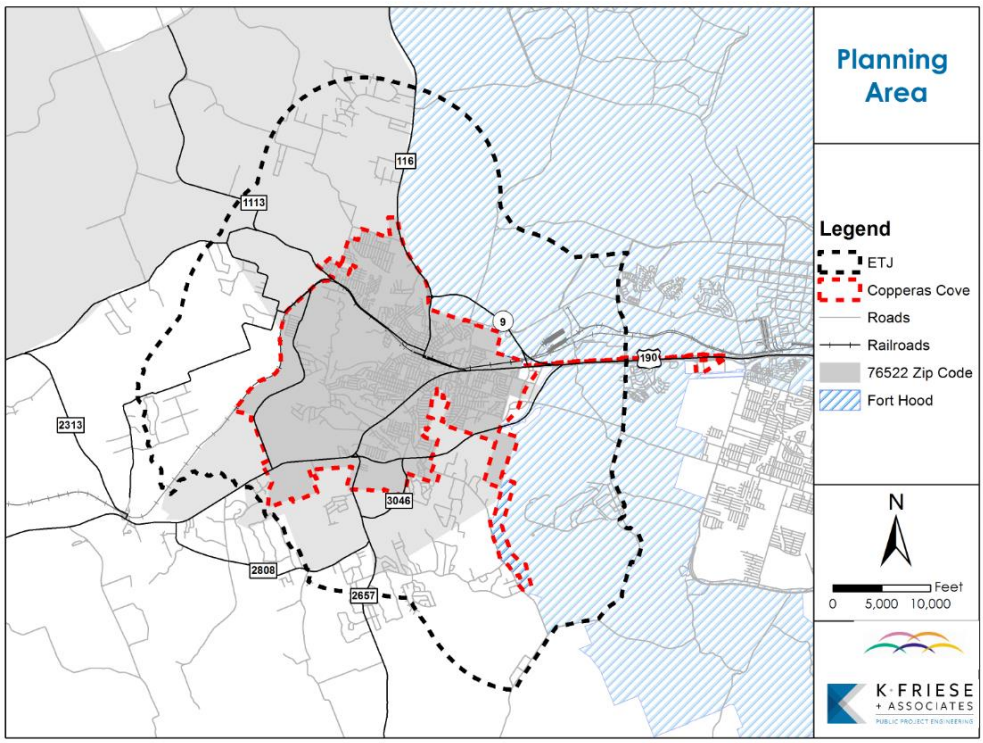
Copperas Cove is located in southern Coryell County along US Highway 190. It is immediately adjacent to Fort Hood and is approximately 33 miles west of Interstate 35. **Map 1-1** shows the Topography whereas **Map 1-2** shows the regional relationship Copperas Cove has to the surrounding area. Gatesville is the County seat and is approximately 30 miles north, along FM 116 and US Highway 84. Lampasas is located 15 miles west of Copperas Cove and Austin is approximately 60 miles south. **Map 1-3** visualizes the planning area, including the Extraterritorial Jurisdiction (ETJ).



Map 1-1: Topography - (ETJ) containing 47,127.52 acres or 73.64 square miles of land.



Map 1-2: Regional Context



Map 1-3: Planning Area

Built Features

Fort Hood

Fort Hood has a major impact on the region surrounding Copperas Cove. As of January 7, 2020, Fort Hood had 36,898 assigned soldiers and airmen and 5,368 civilian employees.[2] In 1987, there were approximately 39,000 total authorized military personnel, and in 1991 this decreased to approximately 30,000 (probably due to Desert Storm activity in the Persian Gulf). The base has played an important role in military campaigns throughout history, including campaigns in Afghanistan and Iraq. Notably, troops from Fort Hood's 4th Infantry Division captured Saddam Hussein in December 2003. It is the only post in the United States capable of stationing and training two Armored Divisions. It is also the home of the 1st Calvary Division.

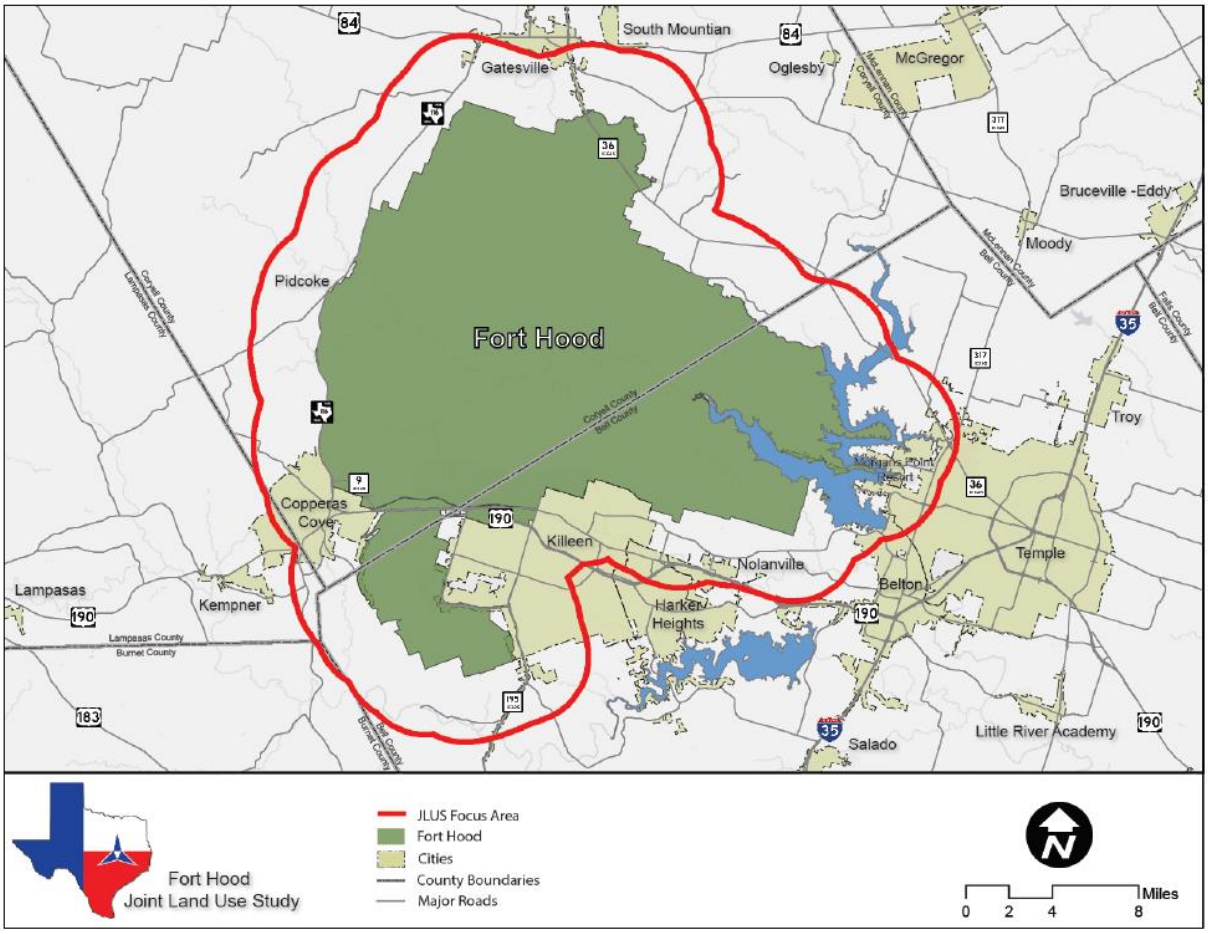
Fort Hood 1st Calvary and Apache Helicopter
Photograph by Lee Letzer, Camera Artistry Photography

Fort Hood has a huge social, economic, and physical impact on Copperas Cove. According to the Heart of Texas Defense Alliance (HOTDA), 2,482 Fort Hood soldiers exited the military in 2017. These individuals provide a highly skilled and high-tech trained labor force for Copperas Cove. The City's ability to capture this labor force will have a significant impact on the future growth and development of Copperas Cove. According to the 2017 Texas Comptroller of Public Accounts, Fort Hood has a $24.56 billion annual economic impact on Texas economy[3].

Fort Hood occupies 342 square miles of Bell and Coryell Counties. The majority of development on Fort Hood is located in the vicinity of Killeen, along US Highway 190. The installation contains 218,823 acres

[2] Fort Hood January 7, 2020 Fast Facts
[3] Fort Hood Estimated contribution to Texas Economy, 2017. Texas comptroller of Public Accounts, Data Analysis and Transparency Division

with 132,626 used for maneuver, 64,272 used as a Live Fire and Range area, and 22,026 acres for the installation's Cantonment Areas.[4] Fort Hood is the largest single site employer in Texas, with the total employment estimated at 150,155 persons.[5] Fort Hood has also continued its regional planning efforts with the Joint Land Use Study (JLUS), which seeks to promote compatible growth strategies to protect Fort Hood's operational testing and training missions from encroachment and general incompatibilities among jurisdictions.[6] The JLUS focus area is shown in **Map 1-4**, covering most of the City of Copperas Cove. Policy recommendations from the JLUS are discussed in Chapter 3: Future Land Use of this Comprehensive Plan Update.



Map 1-4. Source: http://www.forthood-jlus.org/

Area Jurisdictions

Fort Hood is the primary eastern physical boundary for the City of Copperas Cove. There are three small communities just outside of Copperas Cove: Topsey to the north, Kempner to the west, and Oakalla to the south. Topsey is an incorporated community in Coryell County with a population of 114 persons and is approximately ten miles to the north of Copperas Cove. Kempner is another incorporated community

[4] USAG Fort Hood Fact Sheet (3 March 2017)
[5] Texas Comptroller of Public Accounts. https://comptroller.texas.gov/economy/economic-data/military/fort-hood.php
[6] http://www.forthood-jlus.org/

in Lampasas County with a population of 1,117 persons and lies approximately six miles to the west. Oakalla is an unincorporated community in Burnet County with a population of 204 persons. It is located approximately ten miles to the south. The City of Killeen does share a common boundary with Copperas Cove to the east along Highway 190 with the shared annexation boundary for the Central Texas College - Killeen Campus.

Regional Employment Generators

Coryell and Bell Counties contain various regional employment sectors. These include medical, transportation and distribution, correctional facilities, and higher education. The Scott and White Hospital and Olin Teague Veterans Center are two of many nationally recognized medical centers located in Temple. Temple is also a major rail destination for the Burlington Northern Santa Fe (BNSF) Railroad, a major source of employment for the region. There are six Texas Department of Criminal Justice correctional facilities (and one state jail), located in the City of Gatesville (the County seat for Coryell County). These facilities combined employ approximately 2,631 people.[7] The University of Mary Hardin-Baylor is located in Belton, which is also the County seat for Bell County. There is also Central Texas College (CTC) located within the eastern City limits of Copperas Cove. CTC is the fifth largest employer in the region. They employ 1,487 people according to the Killeen Chamber of Commerce, January 2015.

Access

Access to the City from US Highway 190 and Interstate 14 to Interstate 35 are two important factors involved in Copperas Cove's future development. Interstate 35 is one of Texas' most important corridors, connecting Dallas to Austin to San Antonio. Fort Worth, Waco, Temple, and San Marcos are all scattered along this corridor. The concentration of water resources, educational facilities, industries, military outposts, and people make this a significant corridor to consider on Copperas Cove's growth. US Highway 190 and Interstate 14 are thoroughfares that connect Copperas Cove to Interstate 35, as many commercial services are found along these primary access corridors.

Utility Expansion

Utility services are a major feature influencing future development. The Kempner Water Supply Corporation (KWSC) serves the area beyond Copperas Cove's Certificate of Convenience and Necessity. Many subdivisions and newer developments have been built in Copperas Cove's Extraterritorial Jurisdiction (ETJ). A community's ETJ is based upon its population (Local Government Code, Section § 42.021). The City has no power to zone land within the ETJ, but it can enforce subdivision regulations. Rural water systems encourage semi-urban developments; this can cause rural water systems to become overloaded. These areas tend to use private sewer systems due to wastewater supply and infrastructure having limited distribution. Private sewer systems and septic tanks are not considered ideal for preserving and protecting ground water quality.

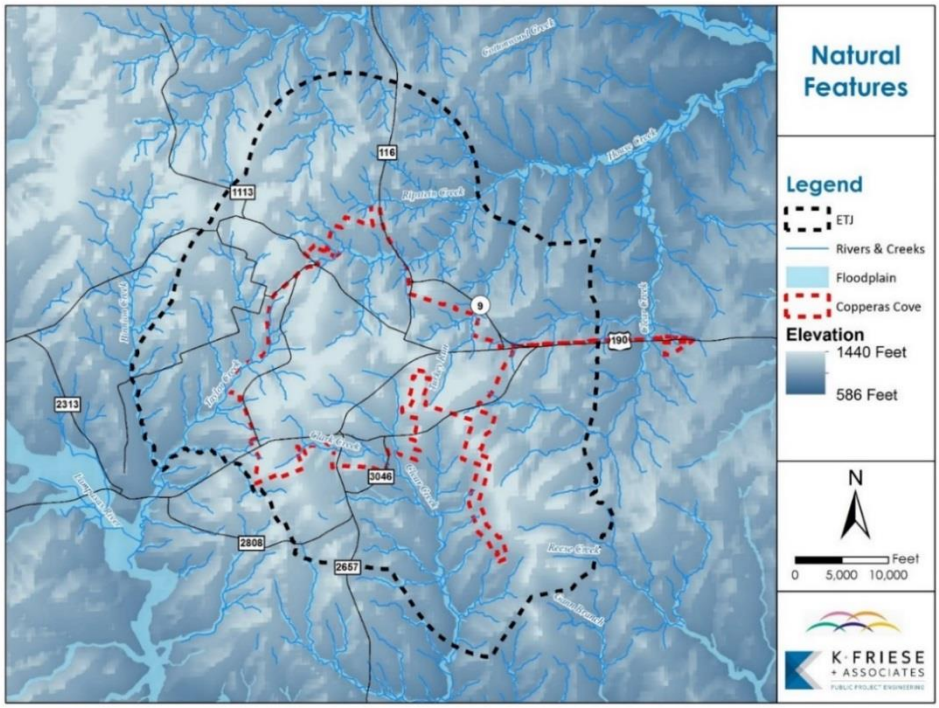
[7] Texas Department of Criminal Justice. https://www.tdcj.texas.gov/unit_directory/

Environmental Features

Terrain

Copperas Cove is on the edge of Texas Hill Country or what is considered the Edwards Plateau. Elevations range from 1,000 to 1,300 feet above sea level. There are numerous mesas that exist throughout Copperas Cove. The slopes from the mesas create urban development and expansion opportunities. However physical characteristics of the topography have natural constraints for development.

Photo looking northwest from Skyline Drive



Map 1-5: Natural Features

All the drainage in Copperas Cove drains either north to Cowhouse Creek or House Creek, or south to the Lampasas River. Taylor Creek and Clear Creek eventually drain south into the Lampasas River but neither has significant flood plains. Urban area expansion is relatively unaffected by flood plain areas. **Map 1-5** visualizes the slopes and floodplains for the region.

Coryell County is on the edge of the Edwards Plateau while lying within the Cross-Timber Ecoregion of Texas. This results in a variety of vegetation. Much of the vegetation within the Cross-Timber Ecoregion resembles what is found in the Edwards Plateau/Hill Country. The average annual rainfall in Coryell County is 33.09 inches, which is higher than most Hill Country counties. There are around 33 native tree species in the Cross-Timber Ecoregion, and there are 58 species of trees in the Edwards Plateau. Copperas Cove's predominant tree species are Pecan, Red Cedar, Bur Oak, Live Oak, Red Oak, and Cedar Elm. Native grasses include Blue Gramma, Red Gramma, Buffalo Grass, Curly Mesquite Grass, and some inland Salt Grass.

Surface Geology

The geological strata existing through Coryell County is the cretaceous series, which extends throughout Texas from the Rio Grande to the Red River. The Edwards, Comanche Peak, Walnut, and Biloxi geological formations are contained within this system.

The Trinity Aquifer is a major water source that underlies Coryell County. It extends from Dallas/Fort Worth through Waco and continues south to Comal, Kendall, and Medina Counties. This aquifer has been overused in many areas causing declining water levels in recent years.

The principal stratum within Copperas Cove is limestone, which contains shallow soils. Even though shallow soil causes complications for underground utility line installation, future development in Copperas Cove is feasible due to limestone providing good footing and stable building foundations.

Soils

The Grand Prairie Group is the basic soil characteristic of Coryell County and Copperas Cove. This soil group is in the transitional sub-area of the Edwards Plateau. The predominant soil types for the Grand Prairie Region are Tarrant, San Saba, and Denton with small areas of Crockett, Crawford, Brackett, Krum, Lewisville, and Catalpa. These soils are derived from limestone and other limey materials. The northern portion of the region produces cash crops like cotton and grain. The southern portion of Copperas Cove within Coryell County has an economy based on livestock and feed crops from native vegetation and rangelands. Frequent droughts and prevalent hot, dry growing seasons greatly affect native vegetation in the rangeland. Livestock numbers are frequently adjusted due to variable rangeland forage production.

The southern end near Copperas Cove in the Grand Prairie Region becomes steeper, rougher, and rockier. The Edwards Plateau transitional area just south of Copperas Cove is mostly rough and broken or it is composed of shallow, rocky soils. There are some constraints to the expansion of Copperas Cove resulting from geologic formations (steep slopes) or shallow soils.

As shown, there are several physical and environmental factors influencing future development in Copperas Cove. The most obvious and largest limiting physical factor is Fort Hood. Expansion within the eastern and northern portions of Copperas Cove are highly limited due to the military installation, and these boundaries are unlikely to change in the future. Land trades between the military and City can be accomplished, but these trades take time and are only considered in very specific circumstances. Copperas Cove should encourage industrial, freight distribution, high-tech manufacturing and service industry development that goes beyond retail to decrease the dependence on those dollars to stimulate the local economy. This will create a wider diversity of jobs that military personnel can seamlessly transition to, so they can stay and work in Copperas Cove.

Some limiting environmental and physical factors in Copperas Cove are the steep slopes and its natural floodplain. However, higher elevation points can provide opportunities for water reservoirs, radio,

cellular and television broadcast towers, and recreational bike and trail opportunities. Most of the housing in Copperas Cove has avoided developing in the floodplain, which should continue to be utilized as recreational open space. These are both positive development trends that Copperas Cove should continue when developing its Future Land Use Plan.

Water and cell towers in the Reserve at Skyline Mountain

Cell and radio towers on Hog Mountain

POPULATION AND SOCIOECONOMIC CHARACTERISTICS

Copperas Cove's growth is linked closely to economic opportunities available. Copperas Cove's ability to provide quality municipal services and facilities will allow it to capture new families moving to the region. Copperas Cove's population is reflected in **Table 1-1**.

Year	Population	Numerical Change	Percent Change (%)
1920	509		
1930	406	-103	-20.2
1940	356	-50	-12.3
1950	1,052	696	195.5
1960	4,567	3,515	334.1
1970	10,818	6,251	136.9
1980	19,469	8,651	80.0
1990	24,079	4,610	23.7
2000	29,592	5,513	22.9
2010	32,032	2,440	8.24
2019	34,787*	2,755	8.6

*Table 1-1, Source: US Census, *Estimated Projection*
City of Copperas Cove Population Change

Copperas Cove's population is greater than that of surrounding cities of Harker Heights, Belton, and Lampasas. However, Copperas Cove has a much lower annual growth rate than Harker Heights, Belton, Temple, and Killeen. With the surrounding areas experiencing a surge in growth, Copperas Cove has the opportunity to monetize on the increased attraction in the region for new residents.

Copperas Cove's proximity to Fort Hood and the Temple/Belton/Killeen metropolitan areas can be assumed to be responsible for much of the growth within the region. Copperas Cove's ability to provide adequate public facilities, a close-knit family environment,

and a higher quality of life will affect its ability to continue to capture new residents and attract vibrant business opportunities. Copperas Cove's most recent average household size (2013 – 2017) is only slightly lower at 2.63 persons per household, than the state of Texas average at 2.84 persons per household.

Race[8]

In 2016, there were 3.49 times more White residents (19,447 people) in Copperas Cove, TX than any other race or ethnicity. There were 5,572 Hispanic and 4,586 Black residents, the second and third most common racial or ethnic groups. Copperas Cove displays a gradually increasing Hispanic population.

The following **Chart 1-1** shows the 8 races and ethnicities represented in Copperas Cove, TX as a share of the total population.

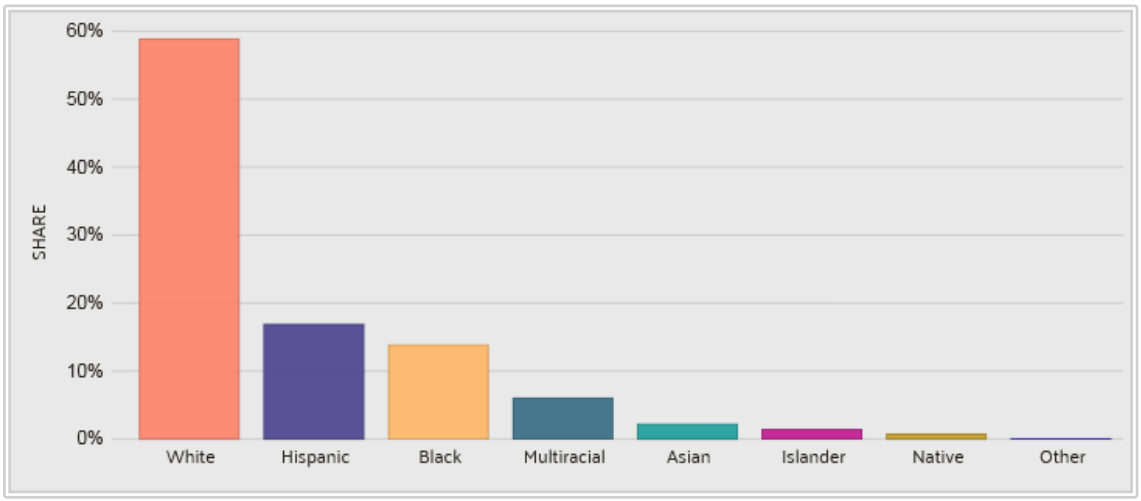


Chart 1-1

Income

Retail trade and personal services are largely affected by the household income of consumers and customers. According to the US Census 2013-2017 American Community Survey 5 Year Estimate, the median household income in Copperas Cove, TX is $52,017, which is slightly above the Killeen-Temple, TX Metro Area but less than that for the State of Texas.

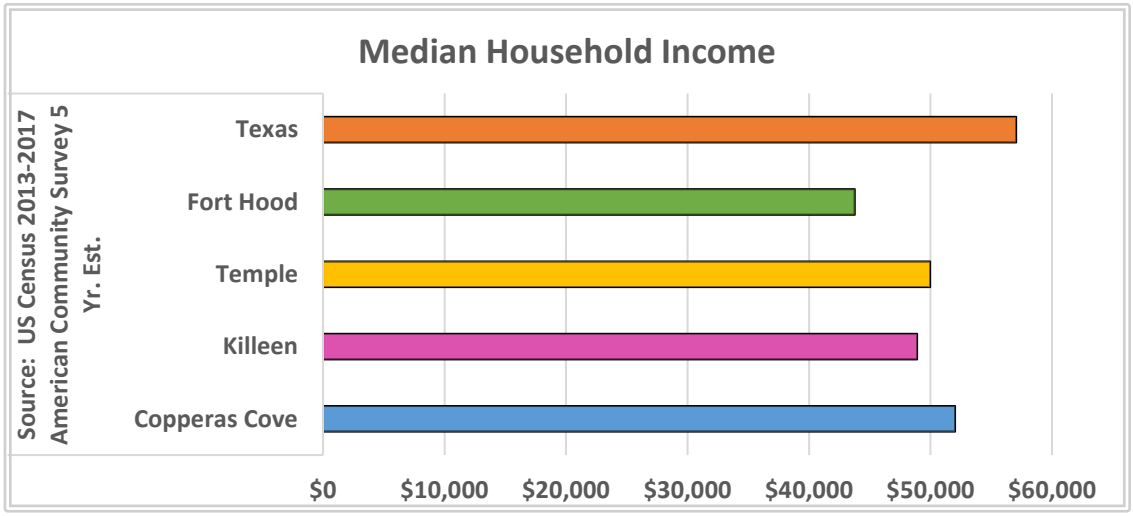


Chart 1-2

[8] Data USA

Employment

Employment opportunities from Fort Hood and the surrounding metropolitan areas have contributed to the growth of Copperas Cove. The American Community Survey for 2014 – 2016 estimated that from 2015 to 2016, employment in Copperas Cove, TX grew at a rate of 2.73%, from 12,176 employees to 12,509 employees. **Chart 1 – 3** displays the occupations for residents of the City.

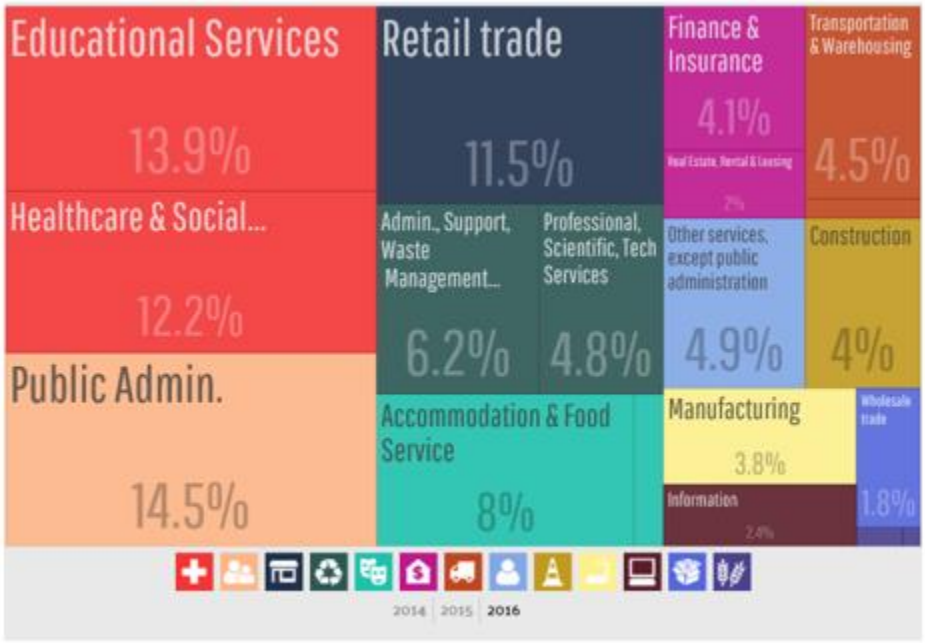


Chart 1-3: Occupation of Copperas Cove Residents

The most common employment sectors for those who live in Copperas Cove, TX, are Educational Services, Healthecare & Social Assistance, and Public Admin. This chart shows the share breakdown of the primary industries for residents of Copperas Cove, TX, though some of these residents may live in Copperas Cove, TX and work somewhere else. Census data is tagged to a residential address, not a work address.

This table is consistent with previous Comprehensive Plans. The largest employer was the Copperas Cove Independent School District as noted in the 2007 Comprehensive Plan. This is consistent with the American Community Survey estimate that educational services, health care and social assistance are the largest occupations, besides Armed Forces.

Increased demand for infrastructure and specific land uses are taken into account when establishing a Future Land Use Plan. Population estimates and projected populations are foundations towards developing the Future Land Use Plan. Analyzing growth trends for both the City and surrounding communities can help predict the expected growth. It can also help Copperas Cove to change land uses to help attract more people to live in the area, rather than in surrounding communities.

Population Estimates (Past Population Numbers)

Copperas Cove has experienced growth every decade since 1950. Copperas Cove had a median Annual Growth Rate for the region between 1990 – 2010, shown in **Chart 1-4**. This signifies that Copperas Cove has ample opportunities through its Comprehensive and Future Land Use Plan to create a region more attractive to new residents. Harker Heights and Killeen both grew exponentially larger than Copperas Cove.

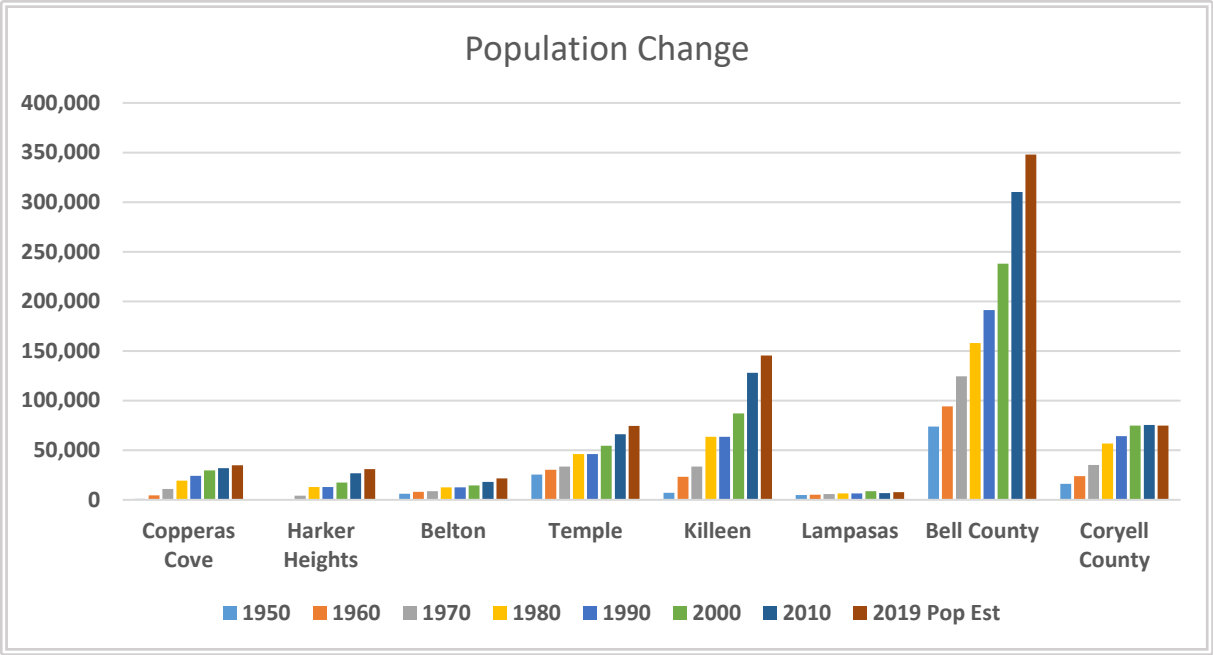
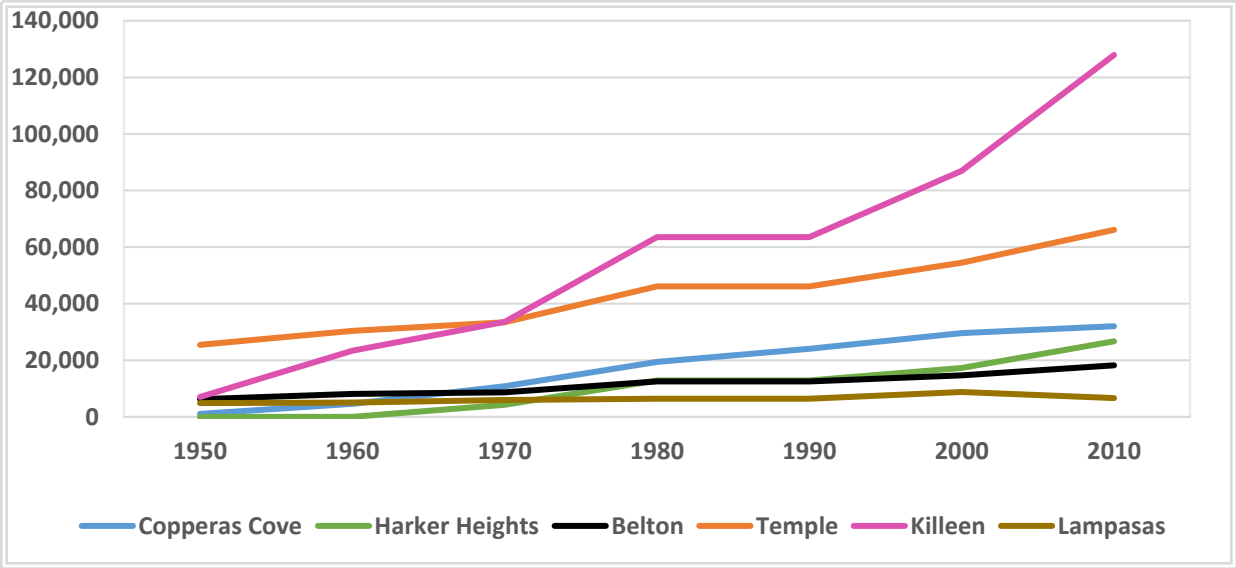


Chart 1-4 Population Change
Source: US Census

Coryell and Bell Counties have significantly different growth rates. As seen in **Chart 1-4**, Bell County has a growth rate by nearly 2% greater than Coryell County. These two growth rates can be good indicators for regional interest in the area due to County populations incorporating only the areas outside of the City and within the County boundary. The overall percent change in population reveals that Copperas Cove increased a modest 33% between the years of 1990 and 2010. Besides Lampasas, this is the lowest percent change for the regional communities. **Graph 1-1** displays the population growth for the cities, excluding the counties. **Graph 1-1** shows that Killeen has seen a significant population growth when compared to other cities in the same region. It can be important to acknowledge Killeen's growth in the Comprehensive Plan to understand why new residents are increasing exponentially in the Killeen area, when compared to other cities in the region. Temple is also increasing in population, and it has a much larger population (nearly double that of Copperas Cove). As previously mentioned, residents may work in other cities but live in Copperas Cove. This Land Use Plan can create opportunities for infrastructure and economic development to encourage people to live and work in Copperas Cove.



Graph 1-1 Population Change for Copperas Cove and Surrounding Communities
Source: US Census

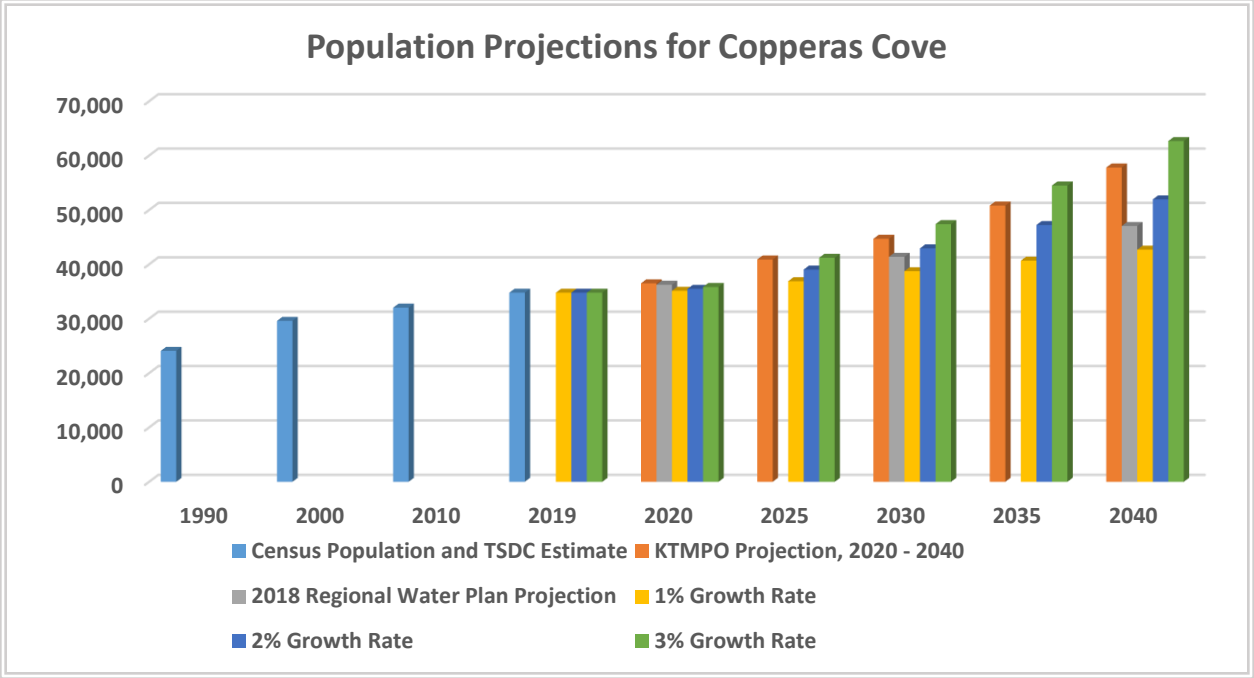
Population Projections for 2040

The following scenarios depict the types of growth that Copperas Cove may expect to experience in the near future, **Table 1-2** displays the different projection methods.

	Census Population and TSDC Estimate	KTMPO Projection, 2020 - 2040	2018 Regional Water Plan Projection	1% Annual Growth Rate	2% Annual Growth Rate	3% Annual Growth Rate
1990	24,079					
2000	29,592					
2010	32,032					
2019*	34,787			34,787	34,787	34,787
2020		36,498	36,253	35,135	35,483	35,831
2025		40,887		36,892	39,031	41,205
2030		44,696	41,385	38,736	42,934	47,386
2035		50,815		40,673	47,228	54,494
2040		57,800	47,053	42,707	51,950	62,668

Table 1-2: Population Projections for Copperas Cove 2015 -2040
*Source: US Census, *Per City Council Action on January 15, 2019*

These different estimates incorporate data from the Census, water meter surveys, and the Killeen-Temple Metropolitan Planning Organization (KTMPO). KTMPO and the 3% projection are the two highest, both indicating a growth between approximately 57,000 and 62,000 people. This seems relatively high, considering the lower growth rate indicated by the US Census. A graph displaying this data can be seen in **Graph 1-2.**



Graph 1-2: Population Projections for Copperas Cove
Source: US Census, KTMPO, Regional Water Plan

For the purposes of this Future Land Use, a growth rate of 2% and the Regional Water Plan projection seems more reasonable, with a prediction of approximately 47,000 to 51,000 people. The City representatives and consultants both agreed that this number best represents the future for Copperas Cove and what should be planned for.

Copperas Cove's population has been consistently and steadily growing since its establishment in the early 20th century. Its annual growth rate between the years of 2000 and 2010 is one of the lowest when compared to the surrounding regional cities. This means that the City needs to take extra efforts in this Comprehensive Plan to attract new residents. Copperas Cove's aging population signifies a need to entice younger families looking to grow roots in the region. The best way to accomplish this is to attract new jobs to the area that are independent of retail and food services. Copperas Cove's highly skilled, high-school educated force means that the City needs to focus on technical and blue-collar labor jobs that these current residents can fulfill. The City is largely a blank slate, meaning that it is not currently specialized enough that one industry will cause mass economic devastation. This provides ample opportunities to entice a number of new businesses to set up shop in Copperas Cove. Copperas Cove is expected to grow by at least 50,000 by the year 2040. This Comprehensive Plan has the opportunity to lay the perfect foundation towards a thriving and sustainable City.

HOUSING

Housing conditions and availability will have a significant impact on the future growth of Copperas Cove. The community has expressed an interest in attracting new businesses and residents, while providing adequate, affordable housing. Analyzing the existing housing distribution and conditions are important factors in estimating future housing requirements. Areas with a variety of housing options, convenient locations for parks and open spaces, adequate streets, and good sanitation and drainage are consistent with healthy neighborhoods. Blighted or partially blighted neighborhoods will consist of poorly

provided features and low accessibility to public facilities; these can lead to a number of problems for residents and surrounding communities. Chapter 3 will examine the trends in housing supply, housing values and rental rates, and then analyze the housing survey update completed for this Comprehensive Plan.

EXISTING LAND USE

The majority of the existing land uses show that Copperas Cove is largely residential (high density, medium density and low density), with the largest of housing types being low density residential. Within the ETJ, Fort Hood is the second largest designated land use. Some areas are available for land development while other areas are limited by physical barriers along slopes near existing mesas. Yet, this provides a unique opportunity for the City to guide future land uses and denser development patterns through the Comprehensive Plan to provide an abundance of new housing and economic opportunities towards a strong, sustainable city.

SUMMARY

As stated at the beginning of this Baseline Chapter, the Comprehensive Plan is a vision for the community's future growth and development in relation to public policy, economic viability, and environmental sustainability. The plan is comprised of interrelated elements incorporating demographics, economic development, infrastructure, parks and recreation, housing, transportation, community image/urban design, and facilities. This chapter provides a foundational understanding of the physical and social characteristics of the City and its environment.

City of Copperas Cove

T E X A S

City Built for Family Living

CHAPTER 2:
FUTURE LAND USE PLAN

Chapter 2: Future Land Use Plan

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INTRODUCTION TO THE FUTURE LAND USE PLAN

The Future Land Use Plan (FLUP) serves as a guide for land development, economic sustainability and managed growth. This Comprehensive Plan update sets the goals, objectives, and policies that will guide the City's future land use decisions. The FLUP is tied closely to the City's vision and mission.

VISION STATEMENT:

"To be the premiere family-oriented community in the Fort Hood/Central Texas region."

MISSION STATEMENT:

"The City of Copperas Cove strives to be a community valuing opportunity and partnerships, promoting family values, a healthy environment, and enhancing the quality of life in a fiscally responsible manner."

The FLUP designates land uses for a mixture of areas based upon the population, projections, and other components discussed in the Baseline Analysis chapter. In addition, the FLUP provides a framework that should be reflected through the City's policy and development decisions.

The FLUP is not a zoning map, which mandates development requirements on parcels. The zoning map and decisions on parcels should be based upon the FLUP.

THE FUTURE LAND USE PLAN MAP

The FLUP map is shown within the Plan as **Plates 1 & 2.** The 2020 FLUP map is posted live on the City's website. Land use categories have been developed through analyzing the existing land use patterns, population projections, and the thoroughfare map created in the Transportation Master Plan. The current land use categories within the existing city limits and the Extraterritorial Jurisdiction (ETJ) are shown in **Chart 2-1** below.

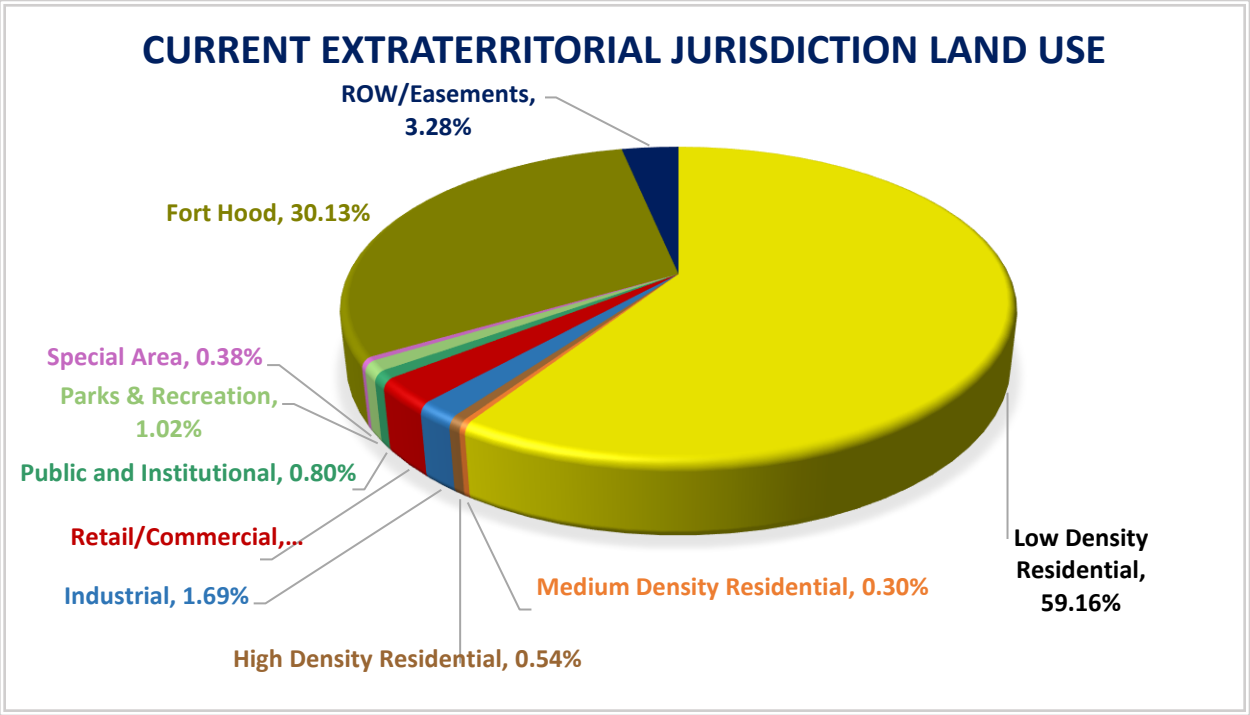


Chart 2-1: Current ETJ Land Use
Source: Development Services Department - City GIS Data Base; Feb. 1, 2019.

As discussed in Chapter 1, the FLUP anticipates a population growth of nearly 52,000 by 2040. The Transportation Plan focuses on routing traffic outside of existing residential neighborhoods while facilitating ease of access and circulation between residential and places of employment. These areas are critical elements in the development of the FLUP. The following five (5) land use areas represent the fundamental building blocks of the FLUP for the City of Copperas Cove:

1. **Residential Areas**:
    a. **LD (Low Density) Residential Land Use** (less than 6 units per acre): Low-density residential represents the majority of housing in traditional suburban neighborhoods consisting of single-family detached subdivisions. This is the largest land use category in Copperas Cove and includes many large estate custom home developments.
    b. **MD (Medium Density) Residential Land Use** (4 – 8 units per acre): Medium density includes attached dwelling units such as row houses, duplexes, townhomes and garden homes. Other types include manufactured homes, mobile home parks and recreational vehicle parks. These home types are ideal for some and offer a life-style choice for those not wanting to maintain a large estate lot or single-family home and is perhaps an affordable alternative for young families or retirees.
    c. **HD (High Density) Residential Land Use** (8 – 16 units per acre): This density includes apartments, condominiums, recreational vehicle parks, extended stay hotels and mixed-use developments. Some high-density areas can be located near mass transit facilities (buses, trains, freeways and major arterials) which are designed to handle large volumes of commuters.
2. **Employment Centers**:
    a. **Retail and Commercial Land Uses**: This land use category is intended for development of commercial, retail and service-oriented uses. Neighborhood shopping centers and services may be located adjacent to neighborhoods, while higher intensity retail and regional shopping centers should be located on major roadways with higher levels of access. These uses are intended for a variety of retail shopping, personal and business services, entertainment and dining establishments. Currently there is a limited amount of land developed as professional employment centers and most residents travel outside the community for work. Focusing future development on additional employment centers will balance the community's land use mix, add value, reduce commuting time and provide more opportunities for residents.
    b. **Industrial and Manufacturing Land Uses:** This land use category is intended to establish major employment centers, provide locations for mining, manufacturing, business parks, light and heavy industrial, transportation centers, distribution, assembly, technology & research development uses. These uses may attract significant employment and commerce. These facilities are generally located near major arterials that provide convenient access for semi-tractor trailers, panel trucks and large special area vehicles.
3. **Public and Institutional Land Uses**: This land use category includes public and private schools, institutional uses such as government buildings, hospitals and religious facilities. These are uses that tend to bind together the community for meetings, gatherings and places of worship.

4. **Parks and Open Space Land Uses**: This land use category includes both public and private parks and open spaces. Parks are located in accordance with the Parks Master Plan to maximize accessibility for residents. Floodplains are preserved to create greenbelts and manage drainage. Park and open space are a vital component for any city to have a high quality of life, especially when competing for new residents in the region. A greenbelt park system of bike and hike trails that connects different subdivisions and employment hubs should be encouraged throughout Copperas Cove.

Copperas Cove City Park

5. **SA (Special Area) and Mixed-Use Land Uses**: Special areas and mixed uses provide opportunities for a broad mix of commercial, entertainment and residential land uses. These types of uses are physically and functionally integrated through building design, site layout and pedestrian connectivity. The combined residential, commercial and entertainment uses are the primary draw to the special area or mixed-use areas. This use reduces the distance between home, work, and entertainment/retail destinations. It also serves as a logical location for transit stops and should be located adjacent to major roadways.

In areas where density is desirable, to create the most value per square foot of real estate, a vertical mixed-use concept can be employed, as seen in **Figure 2-1.** This results in an improved pedestrian environment (more opportunity within a walking-distance radius) and includes more opportunities for housing. Retail uses are focused along the sidewalk or street to encourage attractive storefronts.

Figure 2-1: Vertical Mixed Use
Source: https://www.probuilder.com/5-keys-success-mixed-use-

The vertical special area or mixed use provides for unique places of employment featuring a mix of professional office, retail and residential uses, with some restaurant and service uses that support the office development and the employees working in this location.

The proximity of different land uses - housing, employment, shopping - to each other, impacts

how people can access these destinations. Traditional land use patterns can be mixed horizontally, where they are located close to each other but in separate structures, or integrated vertically in the same building. (See Figure 2-1). This arrangement of uses helps reduce dependence on the automobile by providing alternative transportation options. The integration of uses creates a more compact development pattern, which improves efficiency and reduces public service demands. In addition, a mixed-use development provides alternative life-styles, housing choices and maximizes convenience.

CURRENT LAND USE ASSESSMENT

To project the future land use needs of Copperas Cove, the City's GIS data provides current land use percentages and categories, shown in **Chart 2-2**. The percentage for each is used to determine future land use acres needed for growth opportunities and economic sustainability to maintain the City's quality of life. The results are shown in **Table 2-1**.

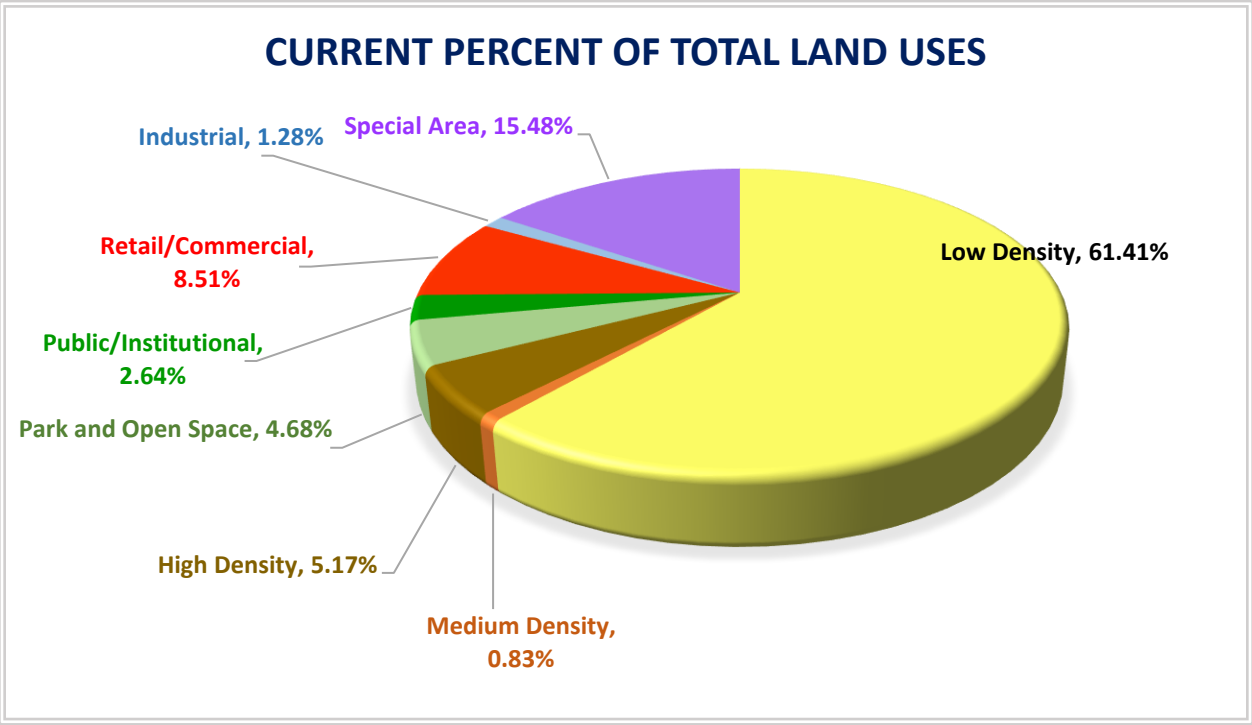


Chart 2-2 Existing Land Use. Source: City of Copperas Cove Development Services GIS Data

The land use **Chart 2-2** shows that low density single-family housing is the primary land use category for Copperas Cove at 61.41 percent. Medium and high-density residential account for 6 percent, raising the total residential land use to 67.41 percent. Retail/commercial and industrial trade account for 9.79 percent of the current land use.

The City does recognize there is a need to capture new economic development opportunities to attract new citizens, businesses and investors. Capturing these opportunities will ensure that Copperas Cove remains competitive with the surrounding Central Texas communities.

Within the last 10 years, the City has experienced modest growth and development in the retail sector. Professional office, industrial uses and major employment centers are underrepresented in the City. The City should encourage development to provide high quality employment opportunities and at the same time encourage desirable, commercial retail development that will positively impact the local

market and long-term values of Copperas Cove. This can be achieved by promoting and adopting appropriate regulations that encourage business growth and community development.

Today's workforce, especially the professional and technology classes, is choosing its employment location based upon the housing choices and quality of life availability. Building a community that is attractive to that workforce will help Copperas Cove remain competitive.

Residents, and potential businesses, are attracted to intangible qualities such as distinctive character, unique developments and uses, and a sense of place and identity. Such qualities make the community more appealing and valuable over time. These types of innovative developments can represent an opportunity to establish Copperas Cove as an attractive and unique community.

Business 190 Retail

The following statements illustrate the City's existing land use patterns and should be evaluated and considered when making future land use decisions:

1. Business 190 continues to be a major corridor for retail shopping, supermarkets, gasoline sales, restaurants, professional offices and many other business service activities.
2. Copperas Cove has parks and open spaces well established throughout the City; however, northwest of Business 190 may need parks and open space as more housing is developed.
3. Eleven Schools are well distributed within the city limits of Copperas Cove.
4. There is significant expansion northwest of Business 190 and south of Avenue B (FM 1113) in single-family housing. There has also been increased development north of Avenue B (FM 1113) and south of 1st Street (FM 116).
5. There are wide tracts of vacant land that can be used towards development or preservation given a willing buyer and seller. Natural features (slopes, floodplains, and arroyos) should be taken into consideration for possible conservation.
6. The floodplain should remain undeveloped and utilized for possible public open space.
7. The east side of Copperas Cove has a significant amount of undeveloped land near Fort Hood. This area may offer opportunities for residential and retail uses in the City.
8. Residential development and existing infrastructure will be an important consideration in the implementation of Copperas Cove's Future Land Use Plan.
9. The City will continue to work with Fort Hood in recognition of the encroachment awareness area as identified in the Fort Hood Joint Land Use Study (JLUS).
10. There are special study areas described in the FLUP which include:

- Downtown Copperas Cove.
- Business 190 Corridor.
- Vacant parcels within the Narrows Business Park.
- Undeveloped areas near the intersection of FM 2657, Business 190, and the US Hwy 190 bypass which is the gateway to Copperas Cove.

FUTURE LAND USE NEEDS

The current acres within the City is nearly 11,500 acres. For good development to occur, some flexibility must be built into the Land Use Plan. T**able 2-1** reflects the projected land use acreages needed to support a 2% Annual Growth rate for the next twenty years.

Land Use Categories	Percent of Land Use	2019 Land Use Acres	Acres Per 100 Persons Population (34,787)	Acres Needed for 2020 Population (35,483)	Acres Needed for 2030 Population (42,934)	Acres Needed for 2040 Population (51,950)
Low Density	61.41%	7078.1	20.35	7,220.79	8,737.07	10,571.83
Medium Density	0.83%	96.11	0.28	99.35	120.22	145.46
High Density	5.17%	595.62	1.71	606.76	734.17	888.35
Park and Open Space	4.68%	539.9	1.55	549.99	665.48	805.23
Public/Institutional	2.64%	304.08	0.87	308.70	373.53	451.97
Retail/Commercial	8.51%	980.66	2.82	1,000.62	1,210.74	1,464.99
Industrial	1.28%	147.03	0.42	149.03	180.32	218.19
Special Area	15.48%	1784.1	5.13	1,820.28	2,202.51	2,665.04
TOTAL	**100.00%**	**11525.6**	**33.13**	**11,755.52**	**14,224.03**	**17,211.04**

Table 2-1: Projected Population and Land Use Acres Needed. Source: Development Services GIS Data.

The total acres needed for all land use categories to support the 2040 population is approximately 17,200 acres. Using the 2% Annual Growth rate, there is future demand for nearly 10,600 acres needed for low density residential development. In addition, there will be a future demand for nearly 1,500 acres projected for retail/commercial development.

ANNEXATIONS

Annexation is a process by which a city expands its boundaries into adjacent areas not already incorporated into the municipality. This has been a common response of cities to urbanization in neighboring areas. In Texas, municipal annexations must follow the procedures outlined in Chapter 43 of the Texas Local Government Code. However, annexation laws and procedures were changed significantly on December 1, 2017. As long as Copperas Cove follows the legal steps laid out in the Local Government Code, especially in reference to the timing of service agreements to annexed areas, the annexation process should be a relatively smooth process. Within an annexation process, cities are only allowed to annex acres that equate to 10% of their current acreage.

Texas State Law

Property rights are a vital component to Texas law. Texas cities have few growth management tools available due to the limitations imposed by Texas State Law. It is important that the City understand its limitations and outline challenges associated with some of these laws when managing growth.

Vested Rights

Vested rights are the rights to develop property under a community's rules and regulations that are in place at the time a development application is submitted. The Local Government Code (§245) includes zoning-related rights. Specifically, Texas cities are prohibited from:

- Enforcing new or updated zoning regulations that affect property classifications against the holder of a vested permit
- Enforcing landscaping, tree preservation, open space or park dedication regulations against the holder of a vested permit
- Setting an expiration date that is less than two years for a permit or five years for a project

These statutes mean that a site plan approved by the City in 1995 would only be required to meet the regulations placed during the time the site plan was approved. Vested rights can make it difficult to implement growth management policies if dormant projects begin to build after new regulations are put into place. It is important for the city to take note of vested rights so the city can adhere to them when zoning requests are made.

Proportionality

A developer is only financially responsible for a "fair share" of infrastructure or facilities being built at that times capacity. A developer does not have to provide, for example, larger water or sewer lines that incorporate future growth. It becomes the cities responsibility to oversize infrastructure if needed to provide for future growth or development. It can be a challenge to define what "fair share" means in the State law.

Annexation Planning

One of the most important aspects to consider in developing a new annexation plan is the public facilities needed when annexing an area for new development. There are important infrastructure requirements to any development which include adequate right-of-way, power, water, sewer, drainage and communication facilities. Two important water service providers are the City of Copperas Cove and Kempner WSC. The City of Copperas Cove provides all the sewer utilities and fire protection services for both the City and extending into its ETJ. In some cases, this makes provision of utilities easier due to the areas already being served and an extension of service is not necessarily required by the annexation. Thus, the areas of priority for annexation should be based largely upon projected growth patterns in proximity to existing services and infrastructure.

Copperas Cove's current acreage is approximately 11,500 acres. This means Copperas Cove's next annexation plan will be able to annex approximately 1,150 acres. **Map 2-1** shows the annexation priority areas. Priority areas are defined below:

- Priority 1 – The land surrounding US Hwy 190 and undeveloped land extending northwards since the development of SH 9. Both of these areas will be important to annex so the City can maximize growth control measures.

- Priority 2 – These are remaining tracts from the 2007 Comprehensive Plan or additional land surrounding US Hwy 190
- Priority 3 – These tracts are remaining land within Copperas Cove's ETJ. Land here is not divided into portions smaller than 1,150 acres. This is due to the priority areas being annexed first. These larger portions will increase the number of acres the City can annex in one year. After the higher priority areas are annexed, these lower priority areas can be broken down into smaller annexation areas that will be more specific to the needs of the City at that time.

Regardless of priority, the City will need to evaluate each tract for the benefits of annexation and use the Texas Local Government Code to comply with all legislation.

The main areas to focus on are located on the southern and northern portions of the ETJ. The southern area is located where Business 190 cuts through, and it would be beneficial to the City to capture that area for any retail tax revenue. The second area of high priority is north on 1st Street (FM 116). This area has been identified in the last two Comprehensive Plans as an area of high priority, and since SH 9 has been developed, the northern portion of Copperas Cove will continue to exponentially grow.

(**Disclaimer:** This chapter section, and **Map 2-1** do not qualify as an annexation plan under State law; however, this chapter should be used as guidance during future annexation studies.)

Land Swaps

Fort Hood provides the most obvious barrier when it comes to annexing land on Copperas Cove's east side. Copperas Cove can participate in land swaps with Fort Hood, especially in relation to areas along the SH 9 Bypass. This corridor now provides quick and convenient access from 1st Street (FM 116) and US Hwy 190. This corridor is a major transportation corridor that will continue to influence development in Copperas Cove. Focusing on land swaps that encompass these areas can provide ideal locations to obtain prime real estate for the City. Land swamps are beneficial, and do not include the 10% of acres in an annexation plan.

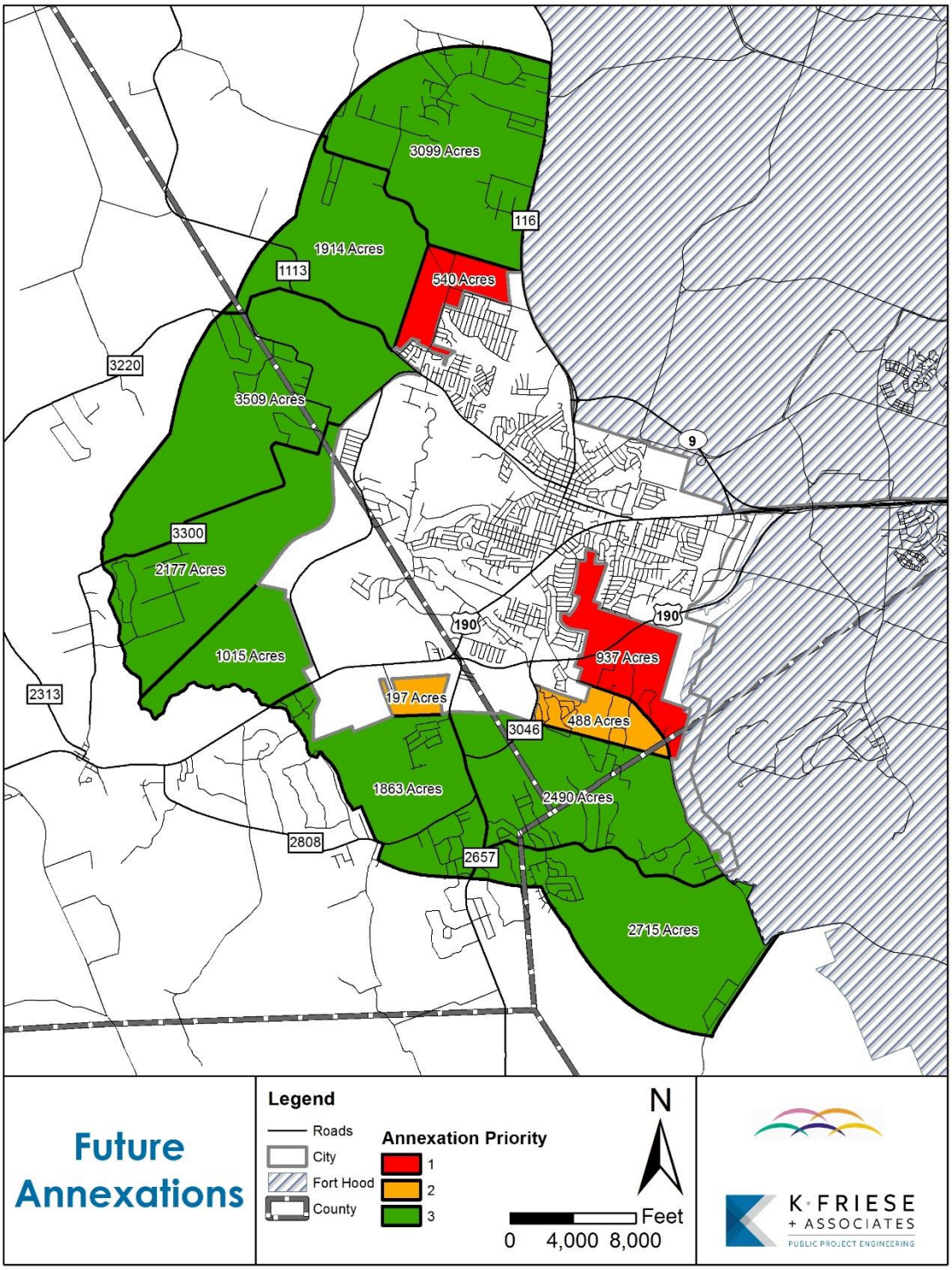
State Law Reviews

It is of the utmost importance that the City stays current and up-to-date on all rules and regulations regarding annexation procedures. This is important, not just for the City, but for both the citizens of Copperas Cove and those that live within the ETJ. The City should use both consultants and the resources such as the Texas Municipal League to help monitor changes to State Law.

City Services

As stated, when developing annexation priority areas, meeting infrastructure and service needs are of vital importance to a growing population and the annexation process. The City should continue to increase water and wastewater service availability. The City should also continue to expand fire and police services to meet the needs of Copperas Cove's current and future population.

Some of these services will include provisions to the ETJ. These services should be provided as consistent with the Comprehensive Plan and the City's ability to annex in the future.



Map 2-1: Future Annexation Planning

DEVELOPMENT PROPOSALS AND FUTURE LAND USE PLAN

The Future Land Use Plan (FLUP) is a guide for future land use and development patterns. It is not the community's official zoning map. The Comprehensive Plan, including the FLUP map, are developed and implemented through development regulations (zoning ordinances and subdivision ordinances), or through programs such as the Capital Improvement Plan. The zoning ordinance determines the specific development requirements and is the primary tool used to implement the FLUP.

A zoning map should reflect the FLUP. Ideally, a landowner or developer will apply for a zoning change or rezoning request and the FLUP map is also requested to be changed, when appropriate. Approval of development proposals that are not consistent with the FLUP will occur. This causes the City to amend the current zoning map through the public hearing rezoning process. In order to expedite amending the FLUP, the amendment recommendations should be made simultaneously with the rezoning requests. When development proposals occur that do not coincide with the FLUP, the City will take careful considerations and keep in mind the best interests of the community as time passes and things change.

Planning for a city's future requires balancing land uses to meet the long-term needs of the population for homes, employment, entertainment, shopping and recreation. This FLUP is focused on how the remaining vacant land should be developed to ensure a balanced mix of housing, commercial and employment opportunities. This FLUP promotes the development of Copperas Cove as a livable community with a balanced mix of high-quality housing, commercial and employment choices. The City will likely encounter proposals and opportunities that may not directly correlate or reflect the land use pattern shown on the FLUP map (**Plate 2**). The following considerations should be taken into account when reviewing these kinds of development proposals:

- Does the proposal enhance the surrounding neighborhood and existing site?
- Is the proposal an improved land use that is recommended by the Future Land Use Plan?
- Is the proposal compatible with the adjacent area, or does it negatively impact adjacent land uses?
- Is the proposal similar in nature in terms of appearance, hours of operation, and impact to the surrounding area?
- Does the proposal provide a benefit to the public health, safety, and welfare of the community?
- Does the proposal contribute to the City's long-term economic and environmental sustainability?
- Does the proposal offer mitigation measures to enhance the City's long-term objectives?

As mentioned in the beginning of this Chapter, the Future Land Use Plan (FLUP) is intended as a guide for land development, economic sustainability and managed growth for the City. For good development to occur, some flexibility must be built into it. There is a relationship between categories on the FLUP and the zoning districts within the zoning code. The relationship is not exact and allows for considerable choices, depending upon the specific type of development and its location. The Comprehensive Plan contains many policies and strategies for development.

Zoning

Zoning is a tool that cities use to implement their adopted Comprehensive Plans to govern "land uses" (e.g. residential, commercial, or industrial), the size of buildings, and how buildings relate to their surroundings, including other buildings, open spaces, and the street. In the U.S., zoning began as a tool to separate land uses from one another, and in particular, was used to separate more impactful uses such as manufacturing from the more sensitive residential uses.

Zoning does restrict a particular use to residential, commercial, industrial, or other uses. Generally, cities consider the attractiveness of a property as well as its fitness and compatibility of the surrounding uses. However, cities must enact the regulations in accordance with a well-considered and comprehensive plan intended to avoid arbitrary exercise of government power. A comprehensive plan is a general design to control the use of properties in the entire municipality. These laws generally limit size, location and dimensions in each zone. Many regulations require certain building features and limit the number and location of parking and loading areas and the use of signs. Other regulations provide space for schools, parks, or other public facilities.

Zoning helps city leaders bring about orderly growth and change. It controls population density and helps create attractive, healthful residential areas. In addition, zoning helps assure property owners and residents that the characteristics of nearby areas will remain stable.

Development Trends and Zoning Decisions

The City should encourage development of tracts that are in proximity to existing water and wastewater lines. This will prevent septic tanks and private wells from being built. This will also encourage a denser development pattern that makes distributing emergency services easier and ensures faster response times.

Zoning decisions within City limits need to be carefully considered. Decision makers should consider the surrounding land uses, the distance from major roads and infrastructure, response times for emergency services, municipal funding impacts, and effects on school districts. The City might not have zoning control over its ETJ, but it can implement subdivision ordinances for the area. Subdivision Ordinances should encourage development ideal to the zoning pattern incorporated within the City limits. All development and zoning decisions need to reflect the Comprehensive Plan. Following this document will allow the City to continue growing and increasing the quality of life for citizens.

FUTURE LAND USE GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

Goal 2-1: Create the premier family-oriented community that accommodates residential, business, and economic growth, while enhancing a small-town atmosphere.

Objectives:

- Provide residential housing that offers a variety of housing types and life-style choices that are affordable to most.
- Locate business uses, both commercial and industrial, appropriately and allocate enough acreage to support economic growth and development efforts.

Policies:

- Designate specific areas and plan to meet projected residential growth demands and promote market flexibility. This includes encouraging growth near adequate public facilities and infrastructure to maximize cost efficiency to the community. Major extensions of utilities may be necessary to support larger residential developments.
- Promote a mixture of land uses that ensures community health, safety and general welfare by encouraging commercial, retail and service-oriented industries that meets the demand of future residents of Copperas Cove.

Implementation Measures:

- Uses should transition from areas of high density, adjacent to a major roadway, to areas of low density, such as detached single-family residential developments.
- Community development regulations should be used to protect residential uses, which should create smooth transitions between competing uses to avoid encroachment. Consider adoption of flexible standards that provide the most effective buffering to adjacent residential uses.
- Facilitate easy access to parks through planning residential uses adjacent to parks and open space. Public access to parks greatly improves the quality of life for citizens. Making sure that residential uses have adequate access to parks and open space is a vital component towards the livability of Copperas Cove, especially when trying to attract new families. Parks also provide a way to easily transition between residential and non-residential uses.
- Establish the general pattern of development in the community through the use of the FLUP map.
- Consider the inclusion of a public parkland dedication and parkland improvement fee as part of the subdivision regulations.
- Encourage a diverse set of commercial, retail, office, vertical special area or mixed use, and open space along the Business 190 corridor.
- Promote more, small to medium, employment centers to balance the City's land uses to add value and reduce commuting time for future residents.
- Create opportunities for a broad mix of commercial, entertainment and residential uses to reduce the distance between home, work, and leisure destinations.
- Commercial uses should be located near major arterials. Retail uses should occupy the most visible areas along arterials, and at intersections. Industrial uses should also be placed near the US Hwy 190 Bypass so large freight trucks can easily move to and from Interstates 14/35 and US Hwy 281. Planning for these areas will help Copperas Cove attract rail, freight and distribution industries.
- Promote land use opportunities to ensure the City remains competitive with surrounding communities and continue to utilize the natural higher elevations of the City's mesas.
- Strive to increase professional office, manufacturing and major employment centers which will make a positive impact to the City's local economy.
- Establish a cooperative redevelopment program with the Copperas Cove Economic Development Corporation and pursue Federal grant funding for infrastructure improvements.

- Establish innovative parking design criteria for retail uses to achieve better onsite circulation vs. strict adherence to minimum parking standards.
- Encourage family values, a healthy environment and enhanced quality of life in a fiscally responsible manner.
- Maintain and update the Future Land Use Plan as changes occur.
- The Comprehensive Plan and FLUP map should be continually updated as zoning, development, and subdivision regulations change over time.

Goal 2-2: Respect, conserve, and enhance important natural resource features and resources of the community.

Objective:

- Preserve areas of steep slopes, conserve natural areas of vegetation and limit development along the flood plains.

Policy:

- Retain scenic vistas; preserve green space and natural landscapes.

Implementation Measures:

- Encourage a greenbelt parks system consisting of bike and hike trails that connect subdivisions and employment centers to promote pedestrian travel.
- Maintain public access to open space and natural areas.
- Conserve ground water aquifers and maintain high water quality standards.
- Promote opportunities for water reservoir infrastructure, communication towers and recreational bike and hike trails.
- Utilize the existing flood plain to designate and create recreational open space opportunities.
- Promote intangible qualities such as distinctive character, mixed-use developments and uses that create a sense of place, livability and identity.
- Ensure water supply, wastewater treatment, and storm drainage public services adequately meet the needs of present and future residents and businesses.
- Implement sustainable storm water techniques to minimize flooding issues.
- Develop participation strategies for public facilities and utilities that will encourage public involvement.
- Develop long-range strategies that ensure adequate water supplies and wastewater capacities.
- Develop volunteer annexation policies that will address challenges associated with managing growth and the effects new development has on existing public services.

Goal 2-3: Enhance economic opportunities with Fort Hood.

Objective:

- Partner with Fort Hood on mutually important issues.

Policy:

- Participate in joint committees involving common issues such as land swaps, encroachments, infrastructure, buffers, and other similar projects and programs.

Implementation Measures:

- Participate in Fort Hood forums and similar community leadership programs
- Nurture economic opportunities and continue cooperation with Fort Hood
- Promote compatible growth strategies through regional planning efforts with Fort Hood.
- Continue to work with Fort Hood's operational and mission training needs.
- Encourage possible land trade for industrial, freight distribution, high-tech manufacturing and service industry development along the Fort Hood railroad spur.
- Support the regional planning recommendations of the Fort Hood Joint Land Use Study
- Avoid higher density uses or those uses incompatible with noise within the Encroachment Awareness Area, the Installation Boundary Zone, and the Low-Level Flight Corridors, as referenced in the JLUS Supplement (**Appendix A**).
- Consider the implementation of "dark sky" provisions to the City's Code of Ordinances to reduce the impact of light pollution to night-time training activities on the base.
- Consider a formal land use coordination protocol for development applications which may affect the JLUS Focus Area.
- Consider an amendment to the subdivision regulations requiring a notation on subdivision plats indicating the likelihood of impacts from training activities within areas of defined and potential encroachment concerns around the installation.

City of Copperas Cove

T E X A S

City Built for Family Living

CHAPTER 3: HOUSING STRATEGIES

Chapter 3 – Housing Strategies

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INTRODUCTION TO HOUSING STRATEGIES

Demographics, income and location all play strategic roles in a community's quality of life. Providing high quality housing and adequate public facilities reflect on the way residents identify with their vision, wants and needs for their community. This section will look at the existing housing in Copperas Cove, along with evaluating and identifying strategies that the City can implement to achieve its needs. As discussed later in this chapter, Copperas Cove is one of the most affordable areas to own or rent a home when compared to other cities in the region. Copperas Cove has predominately single-family housing, with some apartments and duplexes scattered throughout the City. Overall, the housing stock is generally in good condition. The ability of the City to capitalize on affordable housing opportunities and life-style choices will be beneficial to the City's future residential development.

HOUSING AND NEIGHBORHOOD AREAS

A neighborhood is often considered a blend of social communities with considerable face-to-face interaction among its members. Copperas Cove is predominately made up of interwoven residential neighborhoods surrounded by alluring natural features. Desirable neighborhoods are generally close to work, schools, shopping, churches, parks, and public services. Copperas Cove has several charming, desirable neighborhoods offering a variety of housing types which may need some upgrading. Improvements in neighborhood conditions can be achieved through collaborative action of citizens, business leaders and property stakeholders.

There are four key housing strategies outlined below that can serve to aid in the improvement of desirable neighborhoods in Copperas Cove:

1. **Conservation:** This effort to maintain a home can be aided through upholding local regulations such as zoning, building and subdivision ordinances, and related health, safety and general welfare principles. These tools can allow housing to be preserved and protected from deterioration. The City should also focus on the preservation of public facilities such as schools, parks, and roadways.

Older, well-maintained home near Veterans Avenue

2. **Rehabilitation:** As of 2016, approximately 5% or 617 housing structures are considered deteriorated as shown in **Chart 3-1**. Rehabilitation can be considered an area-wide program, and is focused on defining properties in need of restoration. Community grant programs can focus upon making financial assistance available at affordable interest rates and/or educational and outreach programs that assist property owners.

Older home near Veterans Avenue in need of repairs

3. **Redevelopment:** Housing that has reached the point of being dilapidated must use a redevelopment strategy. This strategy is only considered when the cost of restoring the house becomes impractical or economically infeasible. Redevelopment of rundown housing areas can be accomplished by capital investments through tax incentive programs such as enterprise zones or grant funded programs. The 2016 Housing Survey reveals only 72 housing units (less than 1%) are dilapidated.

Example of a Dilapidated Property

4. **Development Guidance:** Copperas Cove has increased its housing activity over the past decade. Between the 2004 and the 2016 housing surveys, approximately 2,700 new homes were added. From 2017 to present, 1,083 lots have been approved for future housing. It is important that new housing follow subdivision regulations, building codes, and housing standards to maintain good housing conditions. Developing vacant land is an investment in the City's economic future.

New Housing Development Along Risen Star Lane

Chart 3-1 shows the results of previous housing surveys, and **Map 3-1** visually displays the housing survey results.

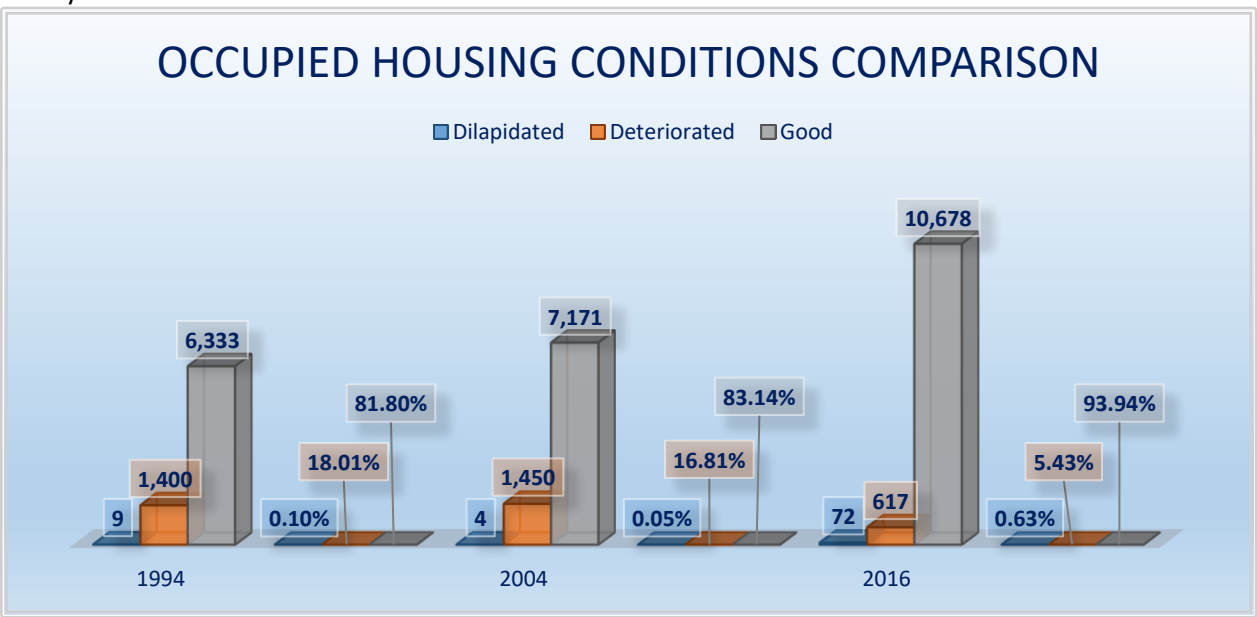
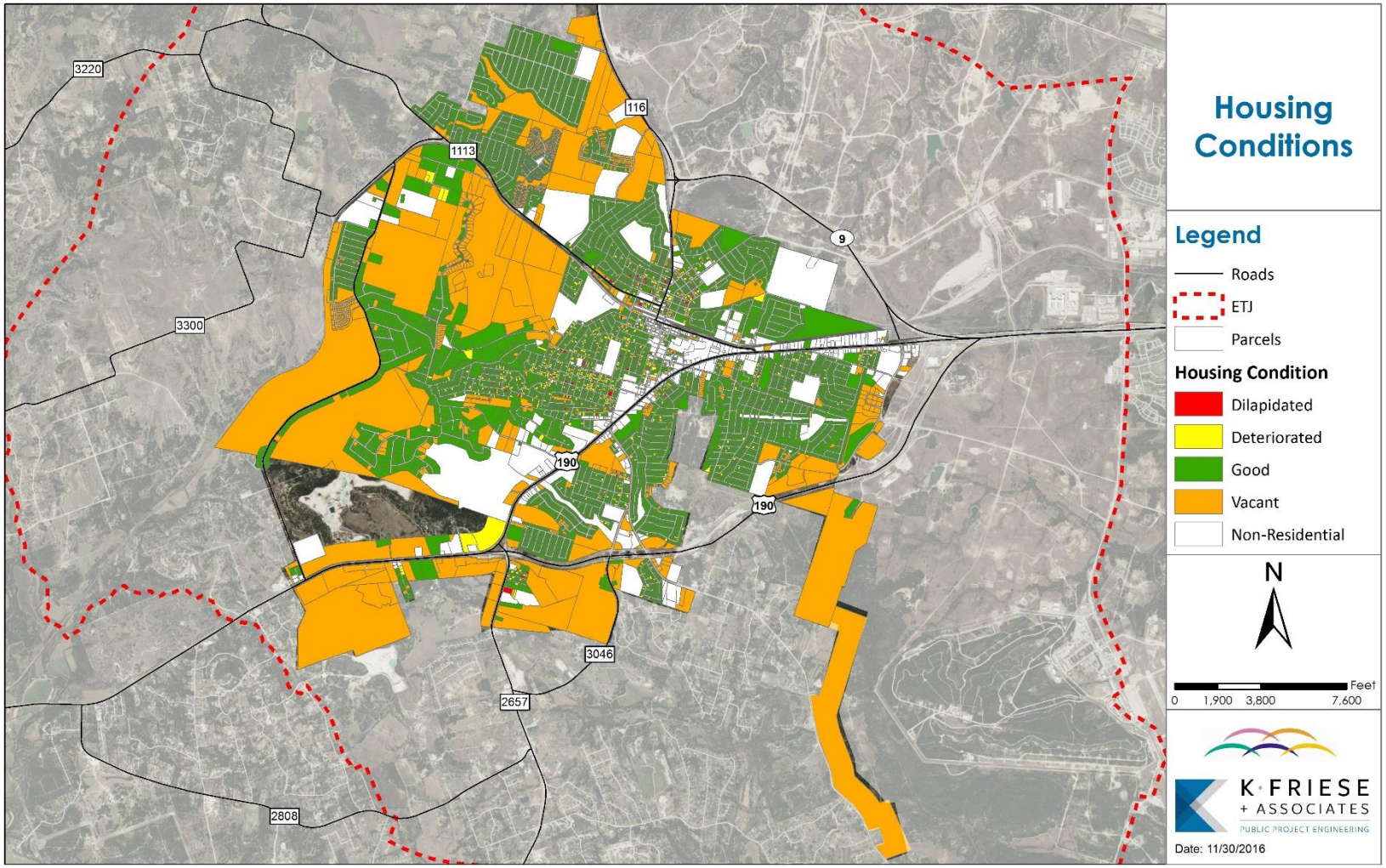
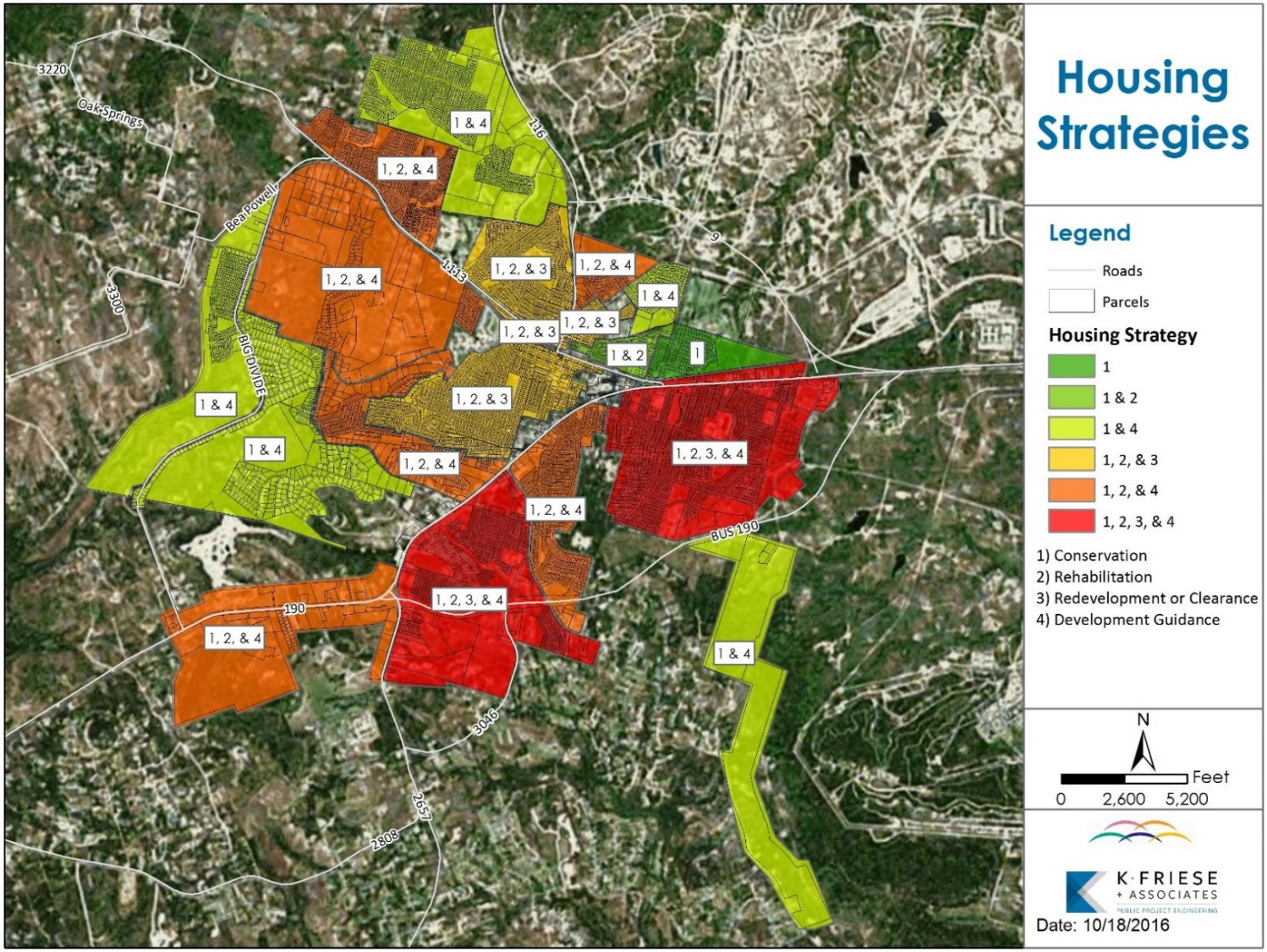


Chart 3-1: Historical Housing Conditions Comparison
Source: K. Friese & Associates



Map 3-1: Housing Conditions

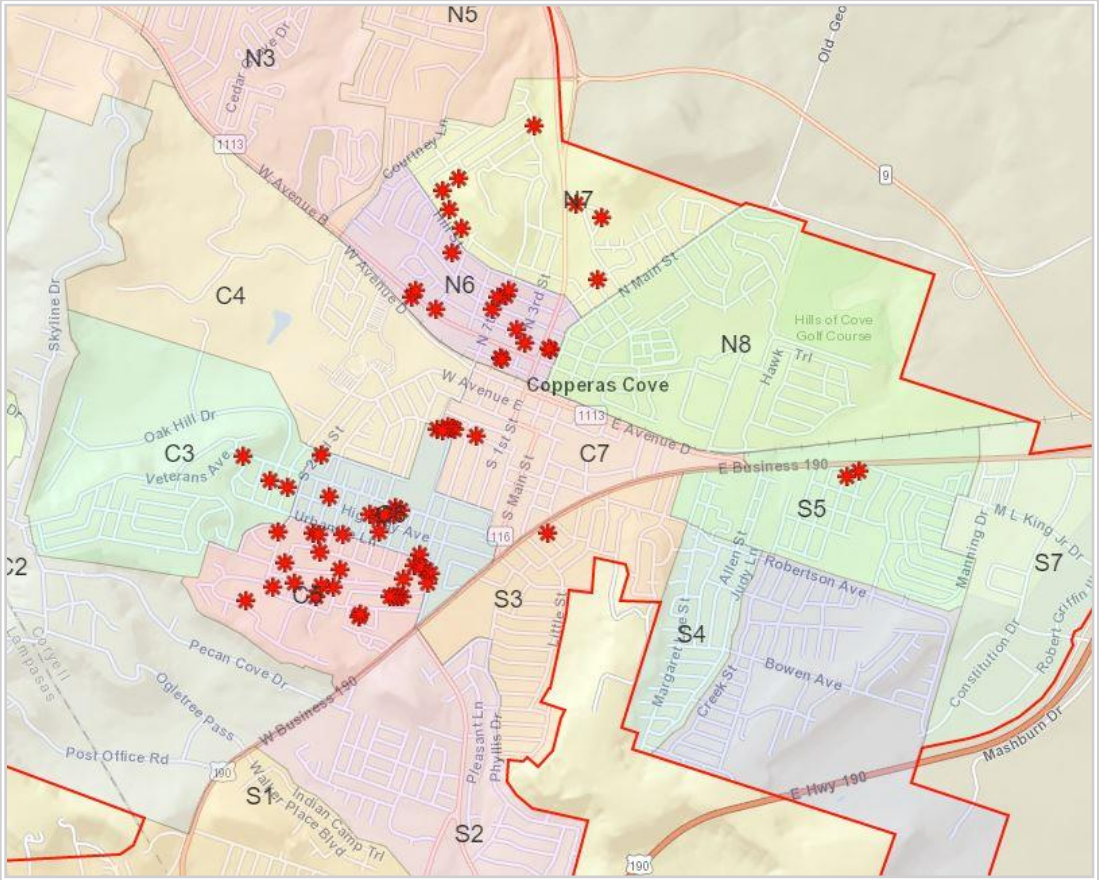


Map 3-2: Housing Strategies by Area

Housing Conditions

Construction of New Homes Near Risen Star Lane

The 2016 Historical Housing Conditions Comparison shown in **Chart 3-1**, indicates nearly 94% of housing in Copperas Cove is relatively in good condition. Most of these homes are built to modern development standards so they should remain in sustainable condition for a number of years. The survey indicates that dilapidated structures did increase from 4 homes in 2004 to 72 homes in 2016. However, the most recent housing survey reveals the number of deteriorated homes has fallen significantly from 1,450 in 2004 to 617 in 2016. This illustrates a reduction of nearly 60% in deteriorated homes. As of March 2019, the Police Department has reported 71 deteriorated homes that are in need of repair or maintenance, shown in **Map 3-3** Housing Conditions. These homes were reported by members of the community which indicates their concern for the general welfare of the City. Most of these homes are located in the northern and central sectors of the City of Copperas Cove. Only 3 were reported in the southern sector.



Map 3-3: Housing Conditions
Source: Copperas Cove Police Dept.

Housing Conditions in **Map 3-1,** reveals that many of the older neighborhoods located near the downtown, north of Business 190 and south of Avenue B (FM 1113), could use assistance in the form of housing grants to help rebuild and repair qualified homes. Overall, Copperas Cove's housing stock is considered to be in good condition.

The recommended housing strategies by area can be seen in **Map 3-2**. Each area has been delineated by the four housing strategies. Most housing strategies in Copperas Cove will either utilize Strategy 1 (Conservation) or Strategy 4 (Development Guidance). Some conditional areas, especially ones located near the downtown will utilize Strategy 2 (Rehabilitation) or Strategy 3 (Redevelopment or Clearance). These two strategies should be the main focus of the City in order to improve the downtown, thereby beginning the process of allocating capital resources to fix many of the structural problems and clearing dilapidated houses. These actions can provide assistance and help improve housing values exponentially over time. This should, in turn, provide more adequate housing stock for new residents. The City is encouraged to implement these strategies sooner than later, as opportunities are currently available to facilitate housing improvements to aid in the prevention of blighted neighborhoods.

Age

According to the American Community Survey (ACS) 2013-2017, 5-Year Estimates, the majority of housing in Copperas Cove was built between 1980 and 2010 as seen in **Table 3-1**. This latest data from ACS shows that nearly 51% of the Total Housing Units from 1980 are less than 37 years old. The age of the housing stock is an important remodeling market indicator. Older houses built before 1980 are less energy-efficient than newer construction and ultimately will require remodeling and renovation in the future. In Copperas Cove, single-family housing has stayed relatively steady with each decade. This means that the City is consistently growing and expanding to meet the demand for new housing.

Year	Total Housing Units	New Housing Added
1970	3,381	
1980	7,142	3,761
1990	9,307	2,165
2000	11,120	1,813
2010	12,642	1,522
2017*	14,038	1,396

Table 3-1 City of Copperas Cove Housing Units
Source: US Census, *Estimated

Construction of New Single Family Homes Near Lutheran Church Road

Housing Types and Densities

Healthy neighborhoods provide diverse housing options in both varying densities and housing types. The Future Land Use Plan provides ideal locations for low, medium, and high-density housing while maintaining flexibility as needed. Medium and high-density housing should remain near major thoroughfares and in locations where public facilities and infrastructure are available to meet the needs of a denser population. Copperas Cove has a healthy variety of housing types, with single-family detached, duplex and multi-family housing. It is noteworthy to mention that the City's multi-family housing options are largely located near Business 190 and Avenue B (FM 1113). Continuing to develop dense housing along these corridors will ensure a variety of housing choices while maintaining the single-family detached homes further away from the City's core.

Multi-Family Housing on Constitution near Business 190

Duplex housing located near Gibson Street and MLK Jr. Drive

New Home Construction Near N. 1st Street (FM116)

Housing Supply

The housing surveys can also be used as a good indicator to the amount of housing available in Copperas Cove. In 1994 and 2004 Dunkin, Sefko & Associates, Inc. conducted housing surveys for the City of Copperas Cove. **Chart 3-2** shows the number of dwellings by type. The 2010 and 2017 surveys were taken from the US Census-American Community Survey. As shown, the majority of housing is single- family homes.

Trends in Supply

Copperas Cove has seen an increase in housing with an increase in established population over the last five decades, this is reflected in **Table 3-2**. However, the number of people in a household has decreased over the past decades. This trend is not unusual as families, in general, are becoming smaller due to life-style choices.

Year	Population	Persons per Household
1970	10,818	3.44
1980	19,469	3.11
1990	24,079	2.97
2000	29,592	2.85
2010	32,032	2.68
2017*	32,706*	2.63

*Table 3-2, Source: US Census, *Estimated*

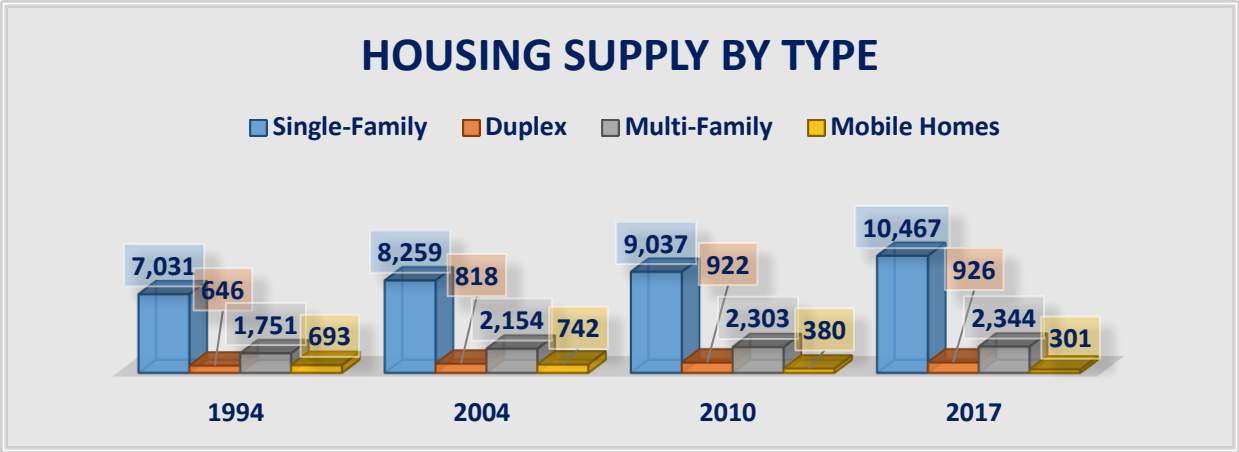


Chart 3-2
Source: 1994 and 2004 Survey by Dunkin, Sefko & Associates, Inc.
Source: 2010 AND 2017 Survey from US Census-American Community Survey

Housing Value and Rental Rates

Housing values and rental rates have a direct effect on a family's ability to become homeowners and obtain adequate shelter. The standard income guide for mortgage and rent requirements are to be 30% or less of a family's total gross income.

The following **Chart 3-3** shows owner-occupied housing values within Copperas Cove and how it compares to other areas in the region and Texas. The majority of Copperas Cove's housing stock is valued between the $50,000 and $149,999 range. The median housing value is approximately $106,400. As shown in Chapter 1, the median household income is $52,017. With a healthy housing stock within their budget, this means that most people can afford to purchase a home in Copperas Cove.

According to the US Census Bureau, American Community Survey (2013-2017), the median gross rent for Copperas Cove was $868.00, which is slightly less than the average of the Killeen-Temple area of $876.00. If 30% of income is utilized to obtain an adequate rental property, then an annual income of approximately $35,000 is necessary to rent a home at median value. With a median income of $52,017, Copperas Cove is very affordable for renting, and allows for the possibility of saving towards eventual homeownership. Copperas Cove's affordability is an important aspect to emphasize to entice future residents to the City.

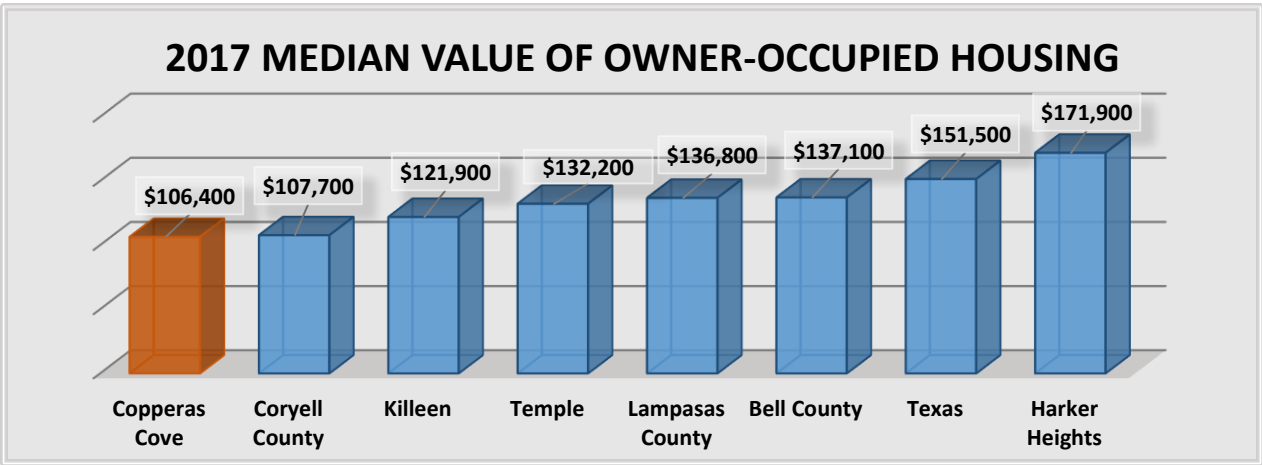


Chart 3-3 Median Property Value. Source: https://www.census.gov/quickfacts/fact/table/US/PST045218

AVAILABLE PROGRAMS

There are a variety of programs available to improve housing in both the neighborhood and individual housing units from the Federal level. Some of these programs require a certain level of matching funds, and others do not have this requirement.

Grant Funded Programs

- **US Department of Housing and Urban Development** provides a variety of housing grants available to State and local governments and non-profit organizations.
    - **The Fair Housing Initiative Program** is a Federal level program administered by the Fair Housing and Equal Opportunity Office. It allocates funds on a competitive/discretionary basis. It has four initiatives providing funds.
        - **The Fair Housing Organizations Initiative** provides funding that builds the capacity and effectiveness of non-profit fair housing organizations. It strengthens the fair housing movement through focusing on the rights and needs of underserved groups, especially those with disabilities.
        - **The Private Enforcement Initiative** assists with the nationwide network of fair housing groups through funding non-profit fair housing organizations focused on testing enforcement activities that prevent or eliminate discriminatory housing practices.
        - **The Education and Outreach Initiative** focuses on support for fair housing activities. It provides funding to State and local government and non-profit agencies that explain to the general public and housing providers what equal opportunity in housing means.
        - **The Administrative Enforcement Initiative** assists State and local governments that administer laws similar to those of the Fair Housing Act.
    - **The Healthy Homes Program** addresses several childhood diseases and injuries in homes across the United States. It focuses on housing-related hazards on a large scale, rather than focusing on each individual hazard. It expands upon HUD's Lead Hazard Control program to include mold, lead, allergens, asthma, carbon monoxide, home safety, pesticides, and radon. There are two grant programs.
        - **The Healthy Homes Demonstration Program** develops, demonstrates, and promotes cost-effective and preventative measures for identifying and correcting residential health and safety hazards.
        - **The Healthy Homes Technical Studies** is a competitive grant program focused on gaining knowledge to improve the efficacy and cost-effectiveness of methods relating to the evaluation and control of housing-related health and safety hazards.
    - **The Community Development Block Grant Program** focuses on ensuring affordable housing and ensuring that vulnerable communities have access to these services. It also looks at creating jobs through the expansion and retention of businesses. It has many program areas and some relevant to Copperas Cove are listed below.
        - **State Administered CDBG** awards grants to smaller units of government to carry out community development activities.

- **Section 108 Loan Guarantee Program** provides assistance through a loan to carry out a Section 108 project.

- **The HOME Investment Partnerships Program** funds a wide range of activities including building, buying, and /or rehabilitating affordable housing for rent or homeownership. It can also provide direct rental assistance to low-income people. It provides grants to States and localities.

Nonprofit & Volunteer Organizations

- **Habitat for Humanity** is a 501(c)(3) nonprofit organization that builds and rehabilitates homes for low-income residents. Houses are sold at no-profit to low-income residents and financed through no-interest mortgages. Mortgage payments are used to fund and finance more construction. Homeowners are required to invest hours directly working on habitat projects once they are pre-qualified. The organization uses volunteer labor and in-kind donations.
- **Operation Homefront** is a charity that provides short-term critical assistance, long-term stability, and recurring family support programs to military families. They offer services in the form of financial assistance with home repairs and rent/mortgage payments, provide mortgage-free homes across the US, and much more to military families.

HOUSING STRATEGIES GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

Goal 3.1: Encourage revitalization and rehabilitation of the identified substandard housing units.

Objective:

- Improve neighborhood conditions through collaborative action of citizens, business leaders and property stakeholders.

Policy:

- Protect, and where possible or needed, upgrade existing housing areas.

Implementation Measures:

- Through the funding programs identified, the City can make efforts to begin to rehabilitate and modernize many of the dilapidated and deteriorated homes identified by the housing survey. The City should also work to maintain a housing survey every five years to track the progress of efforts made.
- Consider special needs citizens when planning housing types.
- Apply for and pursue housing rehabilitation programs and grants.
- Develop and coordinate housing preservation and revitalization programs such as “Rebuilding Together" or “Habitat for Humanity”.

Goal 3-2: Provide high quality housing and adequate public facilities.

Objective:

- Encourage development of a wider selection of housing choices.

Policy:

- Develop design and housing guidelines to assist and promote first-time home ownership, move-up housing and large estate lots.

Implementation Measures:

- The housing market will define housing types, prices and availability; however, the City should promote efforts to encourage affordable housing for low income groups.
- The development process should be made as accessible as possible to encourage continued development, while delivering quality, sustainable form to the City.
- Infill development needs "built-in" rules flexibility to maximize the redevelopment of areas within the existing infrastructure systems.
- Continue to develop dense housing along Business 190 and Avenue B (FM 1113).
- Encourage quality nonresidential development that is aesthetically pleasing.
- Develop design guidelines that establish a common understanding of design principles and standards to create a high quality of life and retain the charm and character that exists in the City.
- Create incentives that encourage landscaped areas, attractive building facades and signage.
- Develop tree-planting programs along major corridors to encourage private property owners to participate.
- Protect existing neighborhoods and ensure neighborhood cohesion. Existing neighborhoods need to be protected and have their densities maintained along with their character. New developments will have to respect the surrounding existing community in terms of housing type and density. Areas that vary in housing compatibility should utilize design techniques that minimize the impact between these areas.

Goal 3.3: Encourage master planned active adult communities and plan for the housing needs of senior citizens and the elderly.

Objective:

- Strive to be a full life-style city.

Policy:

- Ensure that housing, businesses, and recreation meet the needs of multiple generations.

Implementation Measures:

- The City will need to encourage the development of active adult, senior housing and assisted living facilities to accommodate the aging population.

- Encourage a variety of housing types to allow for diversity of life-styles.
- The City should plan for diverse housing types with amenities which includes master planned communities, mixed use developments, recreational RV parks and extended living communities.
- Allow market forces to produce an appropriate density of housing for all levels of independence and care.
- Copperas Cove is one of the most affordable areas in the region. It should continue efforts to maintain its affordability while still providing a high quality of life for residents, regardless of income. Some of the mentioned grant programs are great resources to provide programs for low income families and housing assistance.

Goal 3-4: Capture new families moving to the region.

Objective:

- Attract new residents by providing adequate public facilities, a close-knit family environment, and a higher quality of life.

Policy:

- Continue to improve existing infrastructure and economic development opportunities to encourage people to live and work in Copperas Cove.

Implementation Measures:

- Promote and attract vibrant sustainable business opportunities.
- Continue to analyze growth trends and patterns to meet the needs of future residents.
- Promote high-tech manufacturing, blue-collar and public service jobs that future residents can fill.
- Provide facilities and a high quality of life that will encourage people to live their entire lives in Copperas Cove if they desire to.

City of Copperas Cove

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City Built for Family Living

CHAPTER 4: COMMUNITY IMAGE AND URBAN DESIGN

Chapter 4 – Community Image and Urban Design

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INTRODUCTION TO COMMUNITY IMAGE AND URBAN DESIGN

This section of the Comprehensive Plan Update identifies areas which can enhance and improve the City's community image and increase the quality of development practices.

Several concepts for the City's design were identified and some were implemented from the 2007 Comprehensive Plan. These elements are still relevant to planning in Copperas Cove today.

1. Gateway treatments at key entrances to planned communities.
2. Creating a better residential aesthetic and increasing connectivity.
3. Streetscape treatments along major thoroughfares.
4. Signage, street lighting, and other amenities.
5. Downtown beautification.

Gateway entrance to planned community of The Reserve at Skyline Mountain

Designing the community image with a common theme with specific urban design standards can improve the overall image and aesthetic of the City. It can enhance Copperas Cove's ability to acquire new residents and keep existing ones as they consider their desired life-style choice of housing in the region. A number of planning developments within Copperas Cove have incorporated gateway treatments at key entrances to their communities.

Gateway entrance to new planned community of Creekside Hills

Gateway entrance to planned community of Walker Place

COMMUNITY FOCAL POINTS/LANDMARKS

Copperas Cove has opportunities to consolidate a clear identity and a focal point for activities. The three most common areas that create a city aesthetic are along its major street corridors, retail market places and in its downtown core.

Proposed Downtown Revitalization
Source: 2008 Downtown Improvements Master Plan

Copperas Cove has many prospects to create a community image. Business 190 is the major travel corridor providing visibility to the City's retail market places and access to the downtown. One way in which the City can begin to create a common theme and apply design enhancements is to focus on this corridor and the branding market place activities that surround it. Applying design standards to new buildings that have appealing architectural components and landscaping create an area that a passerby will want to stop and dine, perhaps explore or do a bit of shopping. By expanding upon this, the downtown can add locally owned restaurants and boutiques which will draw interest. In addition, due to the strong linear space along Business 190, there can be interest built-in to the fabric of the City by incorporating appealing wayfaring signage from retail market places, which will lead a passerby towards the downtown core. Copperas Cove has the potential to create a beautifully designed major corridor and downtown that can become the City's focal point.

GATEWAY ENTRY TREATMENTS

A visitor's initial perception of the character and livability of a community occurs along the major access corridors and entrances into a city. These corridors and entrances are gateways to the community and should be designed to create a cohesive identity and reflect the desired image of the community. Gateways can also include architecturally significant buildings, bridges or other infrastructure improvements such as monuments, signs, and streetscapes.

Downtown Monument near Avenue D and S.1st Street

Gateways can be enhanced through either public realm improvements or private development, or a combination of the two. The public realm improvements can be in the form of landscape improvements or enhancements, directional/ informational signs or markers, public artwork, monuments, and public infrastructure/bridge improvements. Private development can be guided to improve gateways through City land use controls, site planning standards, architectural guidelines and viewshed corridors.

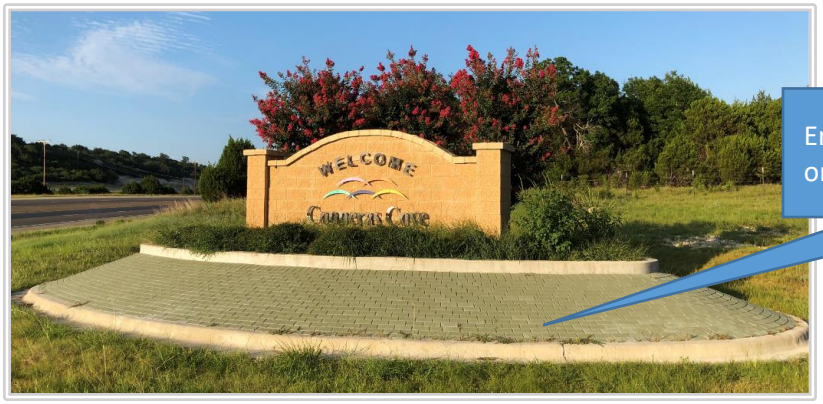
Within the City of Copperas Cove, there exist two main gateway corridors that provide access to the City from adjacent communities. These gateway corridors help to define and celebrate the entrance into the City and reinforce the identity and character throughout the community. These gateways also give visitors their initial perceptions of the City.

Proposed City gateway entry structure to be located near the intersection of Avenue D and 4th Street. Source: 2008 Downtown Improvements Master Plan.

The existing gateway corridors into Copperas Cove along primary arterial roadways include:

- Business 190 (from Killeen I-14 from the east)
- US Hwy 190 (from Kempner from the west)

Entrance to City Gateway Monument on Business 190 heading west.



Entrance to City Gateway Monument on US Hwy 190 heading east.

The 2008 Downtown Improvements Master Plan corridors include:

- Avenue D (north)
- 4th Street (east)
- Avenue F (south)
- 3rd Street (west)

Downtown Revitalization

Proposed revitalization of S. 1st Street and Avenue D.
Source: 2008 Downtown Improvements Master Plan.

Downtowns are among the first places visitors (tourists, potential residents, prospective businesses) see in a community. Communities with vibrant downtowns often have a distinct advantage, making them better able to compete for talent and business investments. Although Copperas Cove does not have the advantage of a "historic" downtown, maintaining and enhancing the existing building stock should be a priority. Recent infrastructure investments (sidewalks) add to the area's appeal. This investment should be met with a concerted strategy for filling available vacancies and driving foot traffic downtown.

Motion, movement and vibrate activities are essential elements to a thriving downtown business district. This can be accomplished by stimulating economic growth, incorporating livable green spaces and appealing aesthetics. The 2008 Downtown Improvements Master Plan shows the proposed revitalization of the City's downtown business district. It is anticipated that the downtown plan will be soon updated to address growth impacts and traffic flow access issues happening due to steady housing expansion occurring in the northern sector of the City along FM 116 (1st Street).

RESIDENTIAL BEAUTIFICATION AND SUBDIVISION CONNECTIVITY

Street designs that follow contours of the terrain.
Photo of Walker Place Blvd.

Close to schools, convenient shopping and affordable housing is what you will find in Copperas Cove, "The City Built for Family Living". The city is fortunate to have an affordable cost of living, a vibrant local economy, natural beauty and safe friendly neighborhoods. City leaders take extra care to encourage home builders to provide long-term aesthetic value and marketability. Some examples of subdivision design practices include designing and creating roads that follow natural contours, protecting existing vegetation when possible, requiring sidewalks, and including attractive facades like those found along Walker Place Boulevard.

The design standards like those found along Bowen Avenue show homes close to the sidewalk filled with native plants and trees while maintaining many of the older, larger trees during the development process. Many of the newer subdivision developments have incorporated these design standards. These areas of the City offer a variety of floor plans that are thoughtfully designed. Most of these homes are predominately single-family, one and two-story homes which offer timeless features and a variety of open concept layouts which are appealing to new buyers.

Sidewalks, front yards and landscaping are key to livable, walkable neighborhoods. Photo of Bowen Avenue.

COMMUNITY IMAGE AND URBAN DESIGN GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

Goal 4-1: Develop a Façade or Gateway Enhancement Program that leverages development in ways that create unique, identifying spaces and buildings.

Objective:

- Enhance specific intersections and gateway nodes with landscaping, lighting, and informational/directional signs that will create a strong sense of arrival that informs visitors that they have entered into the City of Copperas Cove.

Policy:

- Define streetscape/gateway improvements along the corridors and at key locations along the City's main roadway entrances. Identify improvement locations along the entrance roads leading to the core of the City and the downtown area.

Implementation Measures:

- Define a system of regionally unique landscaping, civic monuments, sign treatments and public infrastructure improvements that reinforces the City's vision and creates a sense of community pride.
- A mix of retail, business services, entertainment and housing land use creates a vibrant sense of place at key gateways.

- Gateways to the City of Copperas Cove should be visible from a long distance and contain a mix of uses. The use of towers, cupolas, arches, lighting and public art are encouraged to draw attention to the destination and create a sense of place to gateway locations.

Goal 4-2: Allow and/or encourage new development types and trends as the market dictates (such as New Urbanism, Traditional Neighborhood Development, etc.)

Objective:

- Utilize the Planned Development tool in the Zoning Ordinance to encourage high-quality innovative development

Policy:

- Create a design criteria guide that explains in detail many of the design practices encouraged in this Comprehensive Plan

Implementation Measures:

- Encourage development guidelines that inspire innovation
- The City's development codes should provide enough guidance in their design processes that developers can implement innovative residential and commercial design that encourages land use efficiency, environmental sensitivity, and infrastructure techniques that uses vegetation, soils, and practices to restore some of the natural setting.
- Work with local organizations such as Keep Copperas Cove Beautiful to educate and implement green infrastructure practices. Example programs can include rain barrel donations, youth groups planting rain gardens, etc.

Goal 4-3: Address high traffic volumes in the Downtown.

Objective:

- Identify roadways and circulation patterns based on function and expected traffic volumes including alternate transportation modes, routes and opportunities.

Policy:

- Define standards by working with TXDOT and BNSF railroad for the City's downtown transportation system which can carry traffic generated by future development.

Implementation Measures:

- Create a downtown traffic study as a baseline document for a new downtown master plan.
- Identify downtown infrastructure programs for roadways, sidewalks, landscaping, lighting, benches, signage, public parking and inviting open space amenities.

Goal 4-4: Create a new Downtown Master Plan and focus on refurbishing the surrounding neighborhoods.

Objective:

- Encourage property owners to redevelop properties in the downtown by focusing on mixed use development opportunities in the marketplace.

Policy:

- Develop a tax-increment funding mechanism for necessary public improvements, provide centralized, easy assessible parking which is well maintained and has directional signage and incentivize façade enhancement and create a marketplace downtown theme.

Implementation Measures:

- Create a "Downtown Public Private Partnership Program" to market the downtown for investment opportunities for retail, professional services, mixed-use and professional office.
- Identify anchor tenants to invest in the downtown. An anchor tenant can generate jobs and stimulate future development. As such, the City should offer incentives comparable to those offered to service industry prospects.
- Consider using the following approach to downtown revitalization:
    - Organization: Create a formal organization to establish clear lines of responsibility, create consensus and cooperation, and maximize resources (partnerships, volunteers, investors, lenders, stakeholders, business and community leaders.)
    - Promotion: Create a positive image and drive foot traffic to the downtown by scheduling and promoting events in the downtown on a regular basis (e.g., farmer's markets, trade days, walking tours, art displays, craft shows and open air concerts.)
    - Design: Ensure downtown is safe and visually appealing. Related elements include attractive storefronts, signs, public spaces, parking areas, street furniture, public art, mature landscaping, window displays, and promotional materials.
- Seek and identify funding resources to invest and stimulate the downtown economy by refurbishing surrounding neighborhoods to create a downtown "destination" and unique identity.
- Enable Downtown Copperas Cove to become a retail center for unique businesses which meet missing market components.
- Develop a marketing plan to promote tourism in Copperas Cove, implement projects that strengthen Downtown and promote small-scale retail, window-based shopping and dining.

City of Copperas Cove

T E X A S

City Built for Family Living

CHAPTER 5: PARKS, RECREATION AND OPEN SPACE

Chapter 5 – Parks, Recreation and Open Space

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INTRODUCTION TO PARKS, RECREATION AND OPEN SPACE

Vibrant state-of-the-art recreational facilities and programs serve as a vital component of growing communities. The quantity and quality of parks, recreation, and open space for family activities is reflective of the quality of life for the City. Copperas Cove has long recognized the importance of accessibility to park facilities, which is a key component to increase housing values along with having a direct correlation to its quality of life values. The following chapter examines the existing parks and recreation facilities, along with the recently approved capital improvement projects being completed. This assessment will help to identify any further needs in relation to parks and recreation activities.

The City of Copperas Cove maintains eight parks for the public's enjoyment and 1 golf course:

1. Highland Park, 1203 Craig St. (W)
2. Heritage Park, 1929 Pleasant Lane (SW)
3. Kate St. Park, 603 Kate St. (SE)
4. High Chaparral Park, 1310 High Chaparral (W)
5. Edgar H. Rhode Park, 3514 Rhode Way

6. South Park, 2602 Dennis Street (CR 30 46) (SW). South Park has a paved hike/bike trail that runs along a local creek. The trail measures 0.7 miles one way and is used for many exercise and fitness activities. One of two swimming pools is located at this park and features a Splash Pad for our younger patrons. It also has a children's playground and two youth multi-purpose fields.

7. Ogletree Gap Preserve, 1878 Post Office Rd. (Hwy 190 West). Ogletree Gap has the original stage stop at this historical town site. This is a beautiful area for exploring and walking in a natural setting. Ogletree Gap features a pavilion that can be reserved and rented for special events. This park also has established a new three-mile single track hike and bike trail.

8. City Park Complex, 1206 W. Ave. B. (NW). This is an 88-acre park with picnic areas, grills, playgrounds, soccer fields, baseball and softball fields, outdoor basketball and volleyball courts. City Park features the main public swimming pool in Copperas Cove which features a circular slide and a zero entry in the children's play area with a mushroom fountain. And don't forget your fishing pole and try your luck at the "duck pond".

9. The Hills of Cove Golf Course, 1408 Golf Course Road.

South Park

Ogletree Gap Park

City Park

Highland Park

Heritage Park

Kate Street Park

High Chaparral Park

Edgar H. Rhode Park

PREVIOUS AND CURRENT PLANNING EFFORTS

The following is a summary outline for creating and developing a new Parks Master Plan. In April, 2011, the City of Copperas Cove created a Parks Needs Assessment which included the following elements:

- An executive summary.
- What did the design team learn from residents?
- City leadership, key stakeholders' input, youth engagement through meetings and surveys.
- Goals of the Needs Assessment were established.
- Development of preliminary master plans in five parks.
- Proposed sequence/cost of implementation.

To initiate the Parks Master Plan, current staff utilized this Needs Assessment to establish and prioritize the current five year Parks Improvement Plan to include the "project types" within this improvement plan. Copperas Cove Parks and Recreation Department hired BSP Engineers to initiate and produce the Master Plan, which started in October, 2018 with an anticipated completion of May, 2020.

THE FUTURE PARKS MASTER PLAN

- Update inventory on parks (park facilities and amenities).
- Update existing parks Needs Assessment / conduct one.
  (What does the City have and what is the condition life cycle).
- Public involvement i.e. surveys, Town Hall Meetings (Being developed).
- Meet with City Council to hear their vision for City parks, include City Manager.
- Identify opportunities and deficiencies within the park(s).
  -Inject current five-year plan (2017-2021) into inventory.
- Create schematic layout of each park / combine into the entire park system.
- Cost estimate to create "proposed" layout / Identify different funding opportunities.
- Take before City Council to receive input through workshop(s).
- Final report to City Council requesting adoption of this plan / update every five years.

WHY CREATE A PARKS MASTER PLAN?

- Master plans are tangible and often visible statements of where the park is now, what it should be in the future and what is required to get there.
- Good master plans are flexible, and have involved the community and other stakeholders from the outset, giving the plan a legitimate base, and a better chance to come to fruition.
- Master plans can build visibility and credibility for a nonprofit group, and can help them target projects and raise money.
- Master plans can/will assist the City in not only applying for but in being granted recreational grants (TPWD, one of the funding sources, requires an update to a Master Plan every five years in order for the entity to submit applications for funding).
- Include this active document into the City's Comprehensive Plan.

The current Capital Improvement Program will greatly improve the quality of parks in Copperas Cove. With the update to park infrastructure and much needed facility improvements, residents will have an improved quality of life. Landscaping improvements and installing monument signs will greatly beautify not only the park, but the surrounding neighborhoods as well. These improvements also reflect upon many of the identified outdoor recreational needs mentioned in the previous need's assessment.

It is important to take these priorities into account to examine what has been funded and/or built since the previous Comprehensive Plan. It will also help formulate what priorities are still important, and if there are any new priorities for the current population.

An October 2016 update to the 2017 – 2021 Capital Improvement Plan involves many improvements to parks and recreational facilities throughout Copperas Cove. Over the next five years, approximately 3.7 million dollars of park improvements have been approved. These include projects that involve improvements and creation of parking lots/sidewalks, walking trails, restrooms, pavilions, playgrounds, monument signs, fitness stations, security lights, multi-purpose fields, and a splash pad.

Table 5-1 shows the park improvements to be implemented.[1]

PARK IMPROVEMENTS BY YEARS

ITEM/PROJECT TYPE	FY
PARKING LOTS/SIDEWALKS	2017-2018
**WALKING TRAILS	2017-2018 (On-going)
RESTROOMS/CONCESSION	2018-19
PAVILIONS	2020
PLAYGROUNDS	2021
MONUMENT SIGNS	2017
FITNESS STATIONS	2021
SECURITY LIGHTS	2021
MULTI-PURPOSE FIELDS	2021
TRAILS AND PARKING	2022-23

FUNDING	YEARS	PHASE
$1,556,367	2017	1
378,029	2018	2
834,425	2019	3
431,250	2020	4
500,000	2021	5
$3,700,071	**TOTAL**	

[1] 2017 – 2021 Capital Improvement Plan, City of Copperas Cove, 2016
http://www.copperascovetx.gov/files/parks/town_hall/town_hall.pdf

ITEM/PROJECT TYPE	
PARKING LOTS/SIDEWALKS WALKING TRAILS RESTROOMS PAVILIONS PLAYGROUNDS MONUMENT SIGNS FITNESS STATIONS SECURITY LIGHTS MULTI-PURPOSE FIELDS SPLASH PAD	Identified the 1st phase: 1. Parking lots in 7 out 8 parks 2. Sidewalks/Walking trails 3. Monument Signs in all 8 parks 4. Developing construction signs at each park outlining phases Phase 2: 1. Continuing Phase 1 focus (Trails and Parking Lots) 2. Move into restroom renovation at City Park, South Park, and High Chaparral Phase 3: 1. Renovation to restroom, concession and storage areas at the following parks: CP, SP, and High Chaparral Phase 4: 1. Continue renovation to restroom, concession and storage areas at the following parks: -City Park -South Park -High Chaparral 2. Begin construction of park pavilions Phase 5: 1. Continue pavilion construction 2. New play structures 3. Play structure canopies 4. Fitness stations along identified walking trails 5. Security lights 6. Multi-purpose fields

Table 5-1: 2017 – 2021 Capital Improvement Plan Inventory

CITY PARK AREAS AND FACILITIES

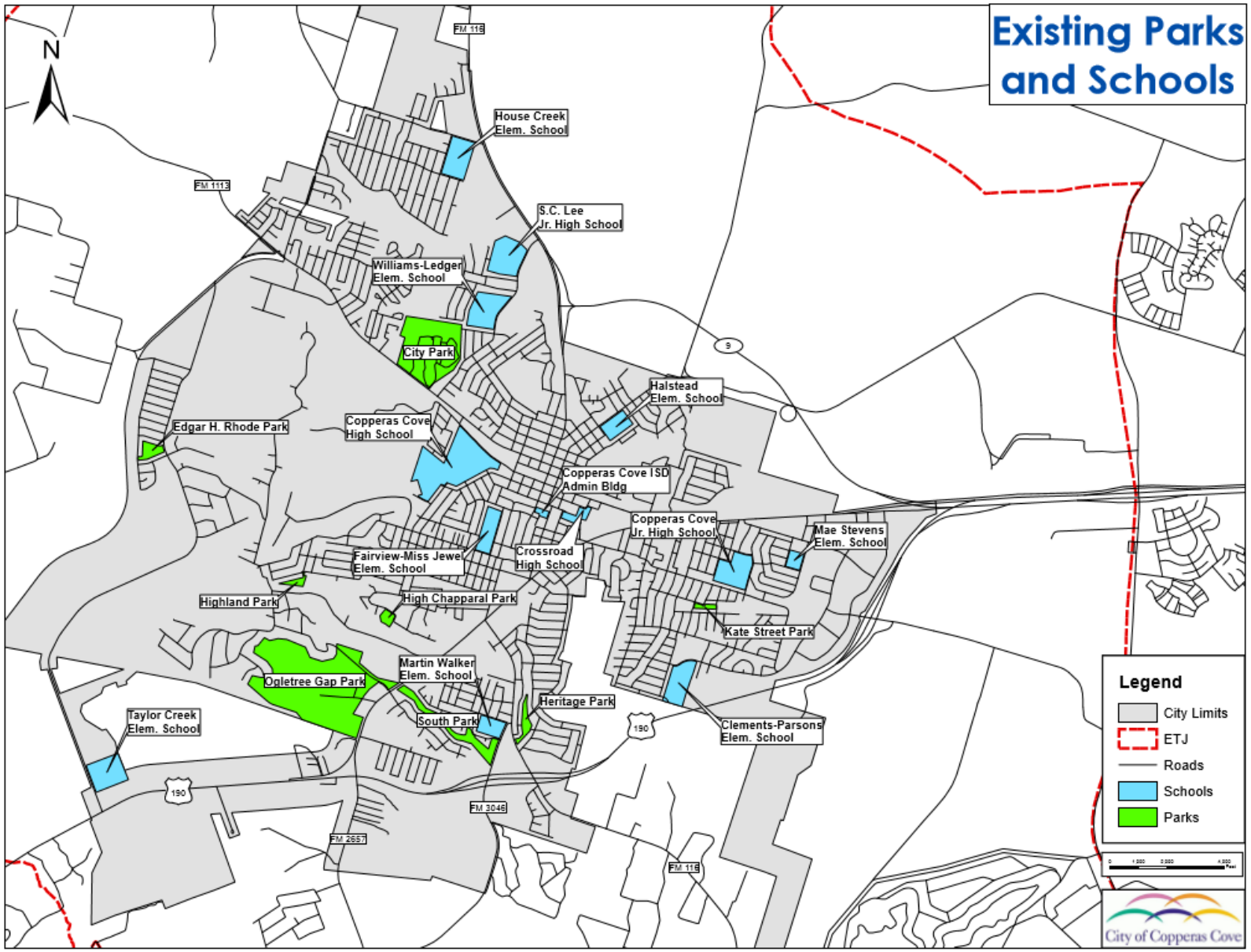
CCPARD
Core Value #5
Diverse Opportunities
Something for everyone!

	Acreage	Restrooms	Pavilions	Picnic Units	Play Units	Pool	Open Play Area	Pond	Grills	Walking	Basketball	Soccer	Baseball
City Park 1206 W. Avenue B.	88	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
South Park 2602 Dennis Dr.	22	✓	✓	✓	✓	✓	✓		✓	✓		✓	
Ogletree Gap Preserve 1808 Post Office Rd.	218	✓	✓				✓			✓			
Highland Park 1203 Graig St.	4				✓		✓						
Heritage Park 1929 Pleasant Lane	7			✓	✓		✓		✓	✓			
Kate Street Park 603 Kate St.	23			✓	✓		✓		✓				
High Chaparral Park 1310 High Chaparral	5		✓	✓	✓		✓		✓			✓	✓
Edgar H. Rhode Park 3514 Rhode Way	4						✓						

Table 5-2: Inventory of City Parks in Copperas Cove
Source: Copperas Cove Tourism Guide

Recreational parks and open spaces are provided through the City's Public Park Areas and Facilities. The City currently operates and maintains eight City parks and facilities that can be seen on **Table 5-2**. Copperas Cove has approximately 371 acres of park land and 100 acres of golf course currently maintained and operated by the City. Ogletree Gap Park is the largest park and Highland and Rhode are the smallest parks.

Map 5-1 displays both City parks and schools.



Map 5-1: Existing Parks and Schools

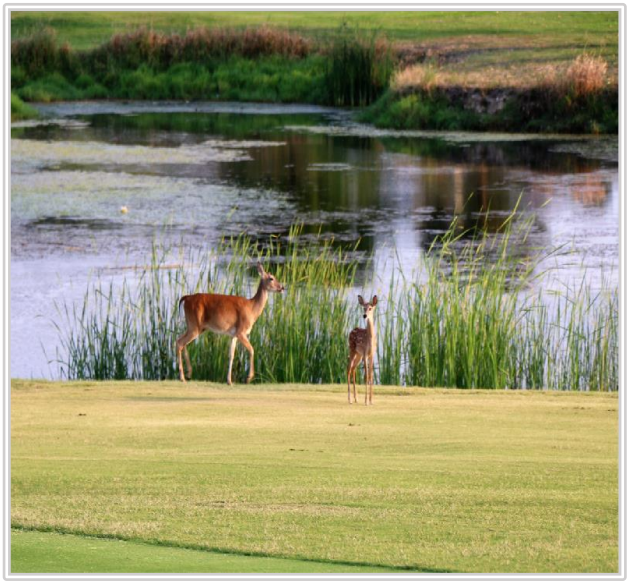
The Hills of Cove Golf Course

Hills of Cove Golf Course

Hills of Cove Golf Course is an 18-hole facility owned and operated by the City of Copperas Cove. The original nine holes golf course was built in 1972, but was expanded to 18 holes in 1999. The course, a par 71, winds its way through the rolling terrain of Northeast Copperas Cove and is made up of five challenging par 3's, nine magnificent Par 4's, and four exuberant Par 5's. The Hills of Cove offers a golf professional, golf lessons, a full-service pro-shop, beer sales, driving range, grill, and a fleet of 40 Yamaha golf carts.

The City has taken some aggressive steps towards creating and developing this course to serve as one of the top municipal courses in our region. The City is currently navigating a 3 Phase, Cart Path Renovation project that will see nearly 4 miles of new concrete cart path. Phase 1 started in December of 2018 and will look to wrap up Phase 3 in 2020.

STANDARDS-BASED NEEDS ASSESSMENT



The National Recreation and Parks Association (NRPA) releases an annual Research Report that analyzes the standards for parks across the United States.[2] The NRPA recognizes that every city varies in population and individual needs. The 2019 NRPA Agency Performance Review shows that typically there are 10.1 acres of park land per 1,000 residents in the United States. Copperas Cove's current park acreage is 471 acres, which includes 100 acres for the Hills of Cove Golf Course. At a population of 34,787, Copperas Cove is currently exceeding the NRPA recommended acreage which is 351.3 acres for the current population. At its projected 2040 population of 51,950, Copperas Cove would need 524.7 acres of park land. This means Copperas Cove would need to add 53.7 acres to accommodate the projected population. The City also needs to focus on the facilities and recreational features available at each park.

[2]https://www.nrpa.org/publications-research/research-papers/agency-performance-review/park-facilities/

Golf Course Cart Path Restoration

Cold Hard Facts:

Phase 1 will accomplish the base bid and additive alternates 2-6

- 4k square yard of cart path
- 3,200 square yard of sod
- 6 culvert crossings
- 12 bridge approaches amended
- 8k linear feet of post and cable established

Phase 2 will accomplish additive alternates 7-10

- 2k square yard of cart path
- 1,600 square yard of sod
- 6 bridge approaches
- 4k linear feet of post and cable established

Phase 3 will accomplish additive alternate 11, 12 and 1 (Maintenance road)

- 1k square yard of cart path
- 800 square yard of sod
- 2k linear feet of post and cable established

Facility-Activity Standards

Table 5-3 shows the Outdoor Park and Recreation Facilities medians for the United States for populations of 20,000 to 49,999. These facilities do not include school facilities due to the ISD being responsible for the school facilities, and not the Parks and Recreation Department.

	NRPA Median for Population of 20,000 to 49,999	Current	Needed to meet current population (34,787)
Basketball Courts	1 per 7,056	2	5
Community Gardens	1 per 24,775	0	1
Baseball Fields (Youth)	1 per 5,000	3	7
Dog Park	1 per 27,552	0	1
Playgrounds	1 per 3,019	6	12
Football Field	1 per 17,173	0	2
Soccer Field (Youth)	1 per 4,839	6	7
Swimming Pools	1 per 26,474	2	1

Table 5-3: Comparative Development Standards
Source: National Recreation and Parks Association Annual Research Report

As the table shows, Copperas Cove does have a variety of outdoor recreational facilities. However, Copperas Cove is lacking in community gardens and dog parks; but these are facilities/activities that the City is looking to plausibly identify through the on-going development of the Parks Master Plan. Copperas

Cove and Copperas Cove Independent School District (CCISD) currently share facilities through a long-standing Memorandum of Understanding (MOU). This MOU allows City use of various athletic facilities, while also allowing CCISD access to various City facilities. These types of agreements bolstered with long range planning will solely assist the City in creating and developing a strong quality of life while looking at a projected growth of approximately 17,000 people by 2040.

Dog Friendly Purser Family Park, Harker Heights. Source: https://www.bringfido.com/attraction/11799.

PARKS, RECREATION & OPEN SPACE GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

Goal 5-1: Provide a high-quality park and recreation system, meeting the needs of the citizens of Copperas Cove.

Objectives:

- Add parks as necessary in newly annexed residential areas.
- Develop and establish more youth activities and facilities.

Policies:

- Expand park facilities as Copperas Cove continues to grow.
- Coordinate with CCISD school groups, local churches, and other youth engagement groups to provide regularly scheduled activities for the entirety of the City's youth.

Implementation Measures:

- Copperas Cove will continue to grow and annex. It is important to add parks to these new areas, regardless of exceeding the median acreage for parks by the NRPA. The City must also be careful here as it relates to the types of park classifications. The City should ensure that it maintains a balanced allotment of park classifications.
- Park Classifications:
    - Mini-Park
    - Neighborhood Parks
    - Community Park
    - Regional Park
    - Special Use Areas
    - Greenways/ Linear Park
    - Natural Resource Areas
- Something lacking in the current park system within Copperas Cove are dog park(s) and community garden(s). These provide important recreational facilities for citizens of Copperas Cove. It allows people to meet their neighbors and interact with a diverse group of people. Community gardens also provide great opportunities for families to grow and share their own food.
- Develop a parkland dedication ordinance. A parkland dedication ordinance would allow the City to acquire future sites for parks and open space. As the City continues to annex and expand within its ETJ, it will be important to set aside and identify land specifically for use of parks and recreation.
- Enhance green space by encouraging the establishment of landscaped areas.
- Commit to the upkeep of existing parks and recreation spaces.
- Implementation of the Parks Master Plan. Initiating the Parks Master Plan began when the Copperas Cove Parks and Recreation Department hired BSP Engineers to initiate and produce the Parks Master Plan, which started in October, 2018. The 2020 Parks Master Plan has been incorporated into this Comprehensive Plan Update.
- Encourage the Parks and Recreation Department to create year-round activities, lessons, and events that appeal to all age groups.

City of Copperas Cove

T E X A S

City Built for Family Living

CHAPTER 6: GOVERNMENT FACILITIES AND SERVICES

Chapter 6 – Government Facilities and Services

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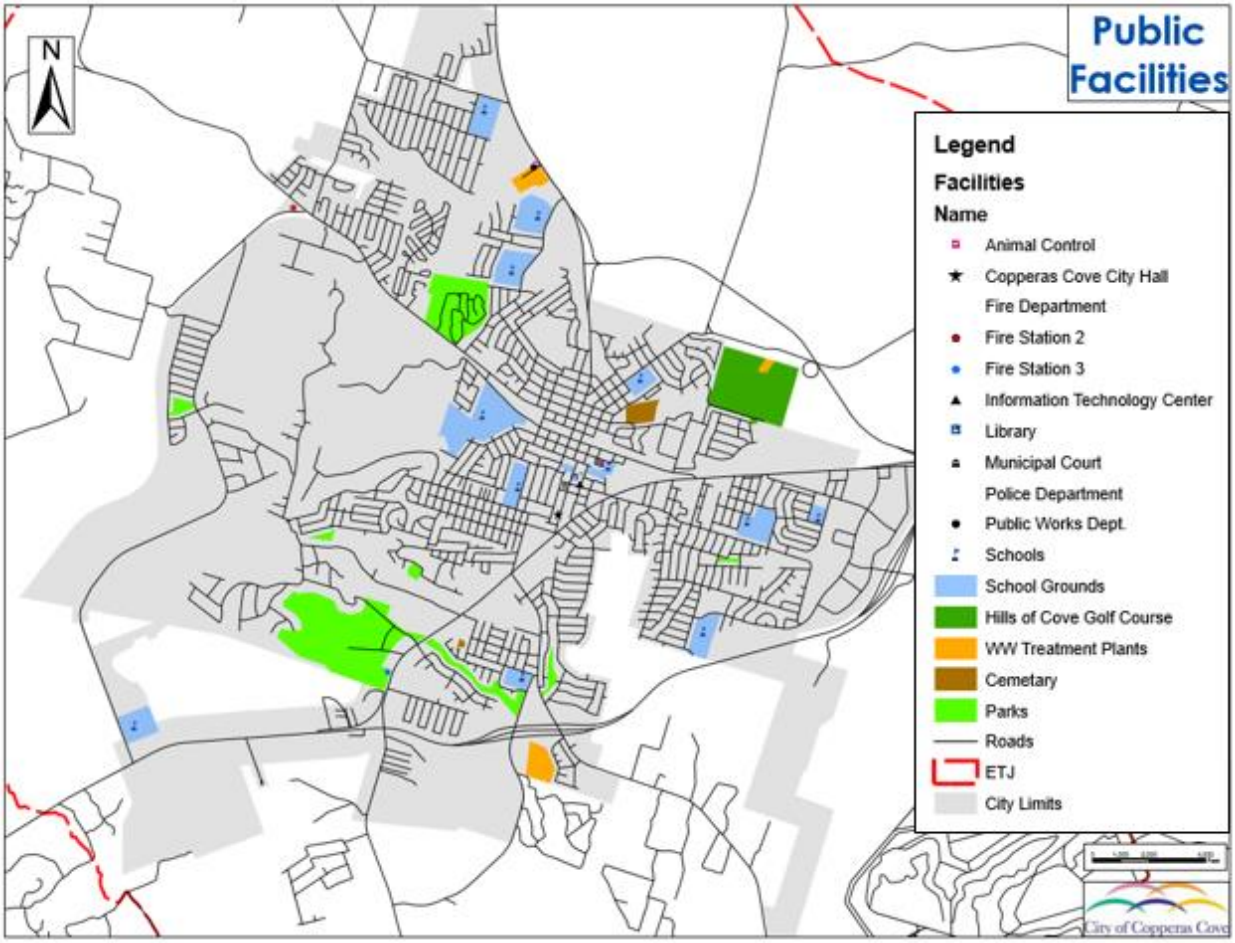
INTRODUCTION TO GOVERNMENT FACILITIES AND SERVICES

Public buildings and facilities are a vital component to a thriving community. As a home-rule city, Copperas Cove is empowered by the State of Texas to provide up-to-date emergency services and facilities for the Police and Fire Departments, an appropriate number of schools to meet population growth demands, adequate public works infrastructure and roadways and additional public services including libraries, parks and recreational facilities. **Map 6-1** displays Copperas Cove's public facilities.



Map 6-1: Public Facilities

The Copperas Cove Independent School District (CCISD) currently manages one Pre-K center, six elementary schools, two junior high schools, and two high schools (one being an alternative school choice). **Map 6-1** shows that the schools are relatively well distributed throughout the City. It is important to continue good communication and coordination with the CCISD to be sure that the community's educational needs are being met.

Growth in Copperas Cove will predictably mean an increase in the number of schools CCISD will need in the future.

Existing and Future Facilities

City Administration

Copperas Cove has five main buildings throughout the City that house City administrative departments and staff: City Hall, Municipal Court, Public Works, Technology Center, and Parks & Recreation. Copperas Cove's City Hall was recently built, and is located at 914 S Main Street and houses many of the City's administrative staff and departments. Currently, City Hall is where citizens can find the: City Manager, City Secretary, Code Compliance, Development Services (Building and Planning), Human Resources, Finance, and Utilities.

City Hall

The Municipal Court is located at 602 S. Main Street. Court information and services can be found on-line at the City's website.

Municipal Court

Public Works also has its own building located at 1601 N. First Street. Public Works maintains operational control of and provides administrative services to the following departments: Compost Services, Drainage, Fleet Services, Sewer Collection, Solid Waste, Streets, Water Distribution and Wastewater Treatment. It also shares the space with Animal Control.

Public Works

Animal Control

The Solid Waste Department is located at 2605 S. FM 116 and is responsible for the management and operation of the Solid Waste Operational Center, which consists of residential, recycling, brush and commercial collections, proper disposal at the transfer station, and the collection of recyclables through its recycling center. This department also oversees the curbside pick-up of solid waste generated by residential households.

Solid Waste

The Technology Center has its own building located at 508 S. 2nd Street and contains the following departments: Budget, Information Systems, and Public Information Officer. It also contains the City Council Chambers.

The Technology Center

The Budget Department is responsible for developing the annual operating budget, Capital Improvement Plan, Personnel Improvement Plan, and Capital Outlay Plan. Staff also reviews and prepares

monthly and quarterly financial reports as needed, tracking of budget and project progress, and providing budgetary action recommendations to the City Manager and City Council.

The Public Information Office plans and implements the public relations efforts for the City of Copperas Cove. The office provides relevant, concise, and timely information to the public, media, and City staff, through the use of various communications tools. This information includes services, disruptions in services, activities, City accomplishments, employee recognition and goals.

The primary goal of the Information Systems Department is planning, developing and maintaining the information systems program for the City. The department also provides hardware and software technical support, installation, upgrading and repair services.

The City Council holds two meetings each month, meeting on the first and third Tuesday of the month. The council is composed of a mayor and seven other council members. The mayor and all other council members are elected from the City at large. A council member, can serve for a term of three years, and can serve not more than two terms in succession in the office to which they are elected. The mayor, can also serve for a term of three years, and can serve not more than two terms in succession in the office to which they are elected. The council elects one of its members as mayor pro tem, for a period of one year. The mayor pro tem acts as mayor during the absence or disability of the mayor and, when so acting, shall have the same powers, duties, and restrictions as set forth for the office of mayor.

The Parks and Recreation Administration office is located at the Municipal Civic Center at 1206 W. Avenue B. The Civic Center can accommodate up to 450 people. It hosts various art shows, dances and commercial expositions. It is available to rent for private group gatherings. The center is operated by the City of Copperas Cove, Parks and Recreation Department. The department offers a variety of athletic activities, including soccer, tennis, baseball, softball and basketball. It also offers the Start Smart program. The department conducts a range of exercise programs, including wake-up and walk, stretch and flex, walk and talk, and low-impact and water aerobics. It also provides swimming instructions and organizes cardiopulmonary resuscitation and first aid training classes.

Municipal Civic Center

The Parks and Recreation Department is also responsible for the Hills of Cove Golf Course. The Pro Shop and Grill Bar is located at 1408 Golf Course Road. The course is an 18-hole facility owned and operated by the City of Copperas Cove. The original nine holes golf course was built in 1972, but was expanded to 18 holes in 1999. The course, a par 71, meanders its way through the rolling terrain of northeast Copperas Cove and is made up of five challenging par 3's, nine magnificent Par 4's, and four exuberant Par 5's.

Hills of Cove Golf Course Pro Shop and Grill Bar

The Parks and Recreation Department also maintains the Municipal Cemetery located at 415 Avenue A. The cemetery was established in 1987. Information regarding burial permits and a copy of the cemetery ordinance may be obtained at the Copperas Cove Senior Activity Center located at 1012 North Drive, Suite 5.

Municipal Cemetery

The City of Copperas Cove maintains one of the oldest burial sites in Coryell County. It is located at 2203 Jay Drive. The small graveyard, with more than 100 years of age engraved in stone, is nestled in the Pioneer addition of the Walker Subdivision at the end of the Jay Drive cul-de-sac. According to City documents, the addition that included the development of the cul-de-sac was platted in 1998. According to Coryell Central Tax Appraisal District, the acreage containing the cemetery was given to Copperas Cove in 2002 and is maintained by the City. Before the land became a housing area, it was called Walker Ranch, according to the land development official.

Historical Pioneer Walker Cemetery on Jay Drive

Police Services and Facilities

Police services are a vital component towards the safety, livability, and economic growth of a city. Without a proactive and vigilant police department, a city can give way to higher crime rates, which makes it less attractive for residents. Low crime rates are a priority for future inhabitants.

City of Copperas Cove Police Station

The Copperas Cove Police Department is located at 302 East Avenue E. It is organized into two major divisions lead by the Chief of Police. The two divisions are the Uniform Services Division and the Support Services Division. Professional Standards are coordinated through the Office of the Chief of Police.

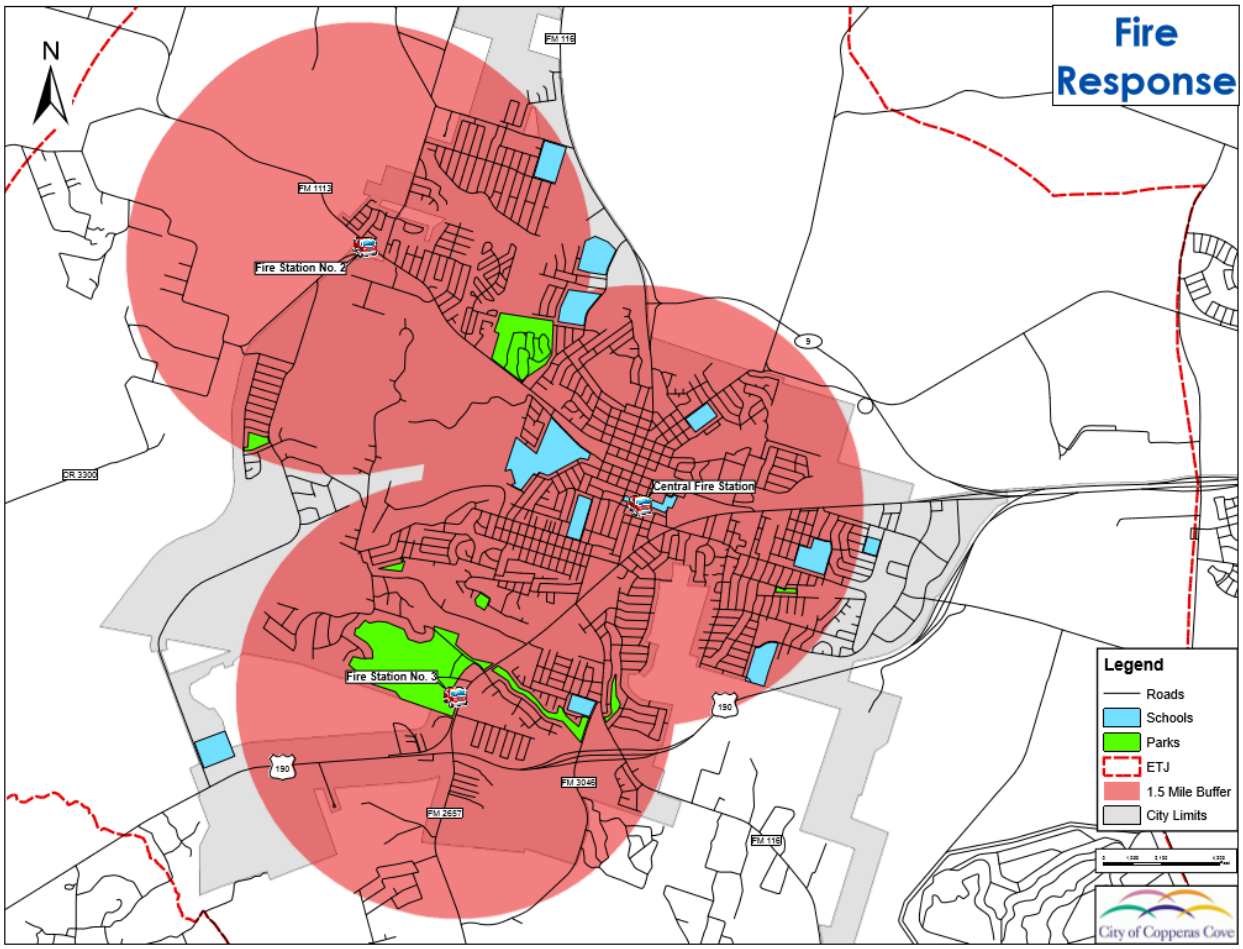
Uniform Services Division is led by a Deputy Chief and consists of Patrol Services, which includes three patrol shifts that provide 24-hour coverage; Special Operations Services, which includes the Traffic Section and the School Enforcement Section; and the Communications/Jail Section. Other responsibilities under this division include the Code Compliance Department, Special Weapons and Tactics (SWAT), the Honor Guard, and the Law Enforcement Explorer Program.

Support Services Division is also led by a Deputy Chief and provides a multitude of services to the department. Included within this division are the Criminal Investigation Section; the Organized Crime Unit; Community Relations and Public Information; an Evidence Technician; the Records Section; and the Training and Personnel Section, which includes the supervision of Police Cadets and the Field Training Program. The Animal Control Department is also included under Support Services.

Needs expressed for the Police Department include a training facility and shooting range to be added into a future Capital Improvement Plan along with a fitness center to maintain the physical readiness standards for all officers. In addition, the Animal Control Department currently has a new facility included in the Capital Improvement Plan.

Fire Services and Facilities

In 2017, the Copperas Cove Fire Department replaced three aging ambulances with new Dodge 4500 chassis with Frazer ambulance modules. The ambulances were also changed to a red color scheme with new graphics to renew the organization's professional commitment to the community and to signify the City's Emergency Medical Services are delivered by the Fire Department. In addition to the new ambulances, the department replaced twenty of its structural firefighting ensembles to include coats, pants, helmets, gloves, boots, and hoods.



Map 6-2: Fire Response Educational Facilities

The National Fire Protection Agency (NFPA) standard for fire facilities is 1.5 miles in urban areas and 2.5 miles in rural ones, these correspond to a 4-minute maximum travel time to the emergency. **Map 6-2** displays Copperas Cove's fire services 1.5-mile buffer. It shows that currently, Copperas Cove is managing the majority of its population within the ideal response time. But, as Copperas Cove begins to look to expand farther north, west, and south more emergency facilities will need to be built. Kempner has a Volunteer Fire Department built near Copperas Cove's southwest area of the City.

Fire Stations

Station 1
415 S. Main Street

Battalion 1	Command Vehicle
Engine 1	Pumper Truck
Engine 11	Pumper Truck (Reserve)
Brush 1	Brush Truck
Ladder 1	Ladder Truck
Medic 1	Ambulance
Medic 11	Ambulance (Reserve)

Station 2
2401 FM 1113

Engine 2	Pumper
Truck Brush 2	Brush Truck
Medic 2	Ambulance
Medic 22	Ambulance (Reserve)

Station 3
1050 W. Hwy 190

Engine 3	Pumper
Truck Brush 3	Brush Truck
Medic 3	Ambulance

Library Services and Facilities

The Copperas Cove Public Library is centrally located at 501 South Main Street, just north of City Hall. The American Library Association does not provide a set standard for library services in America anymore. They realize that libraries are individual, and a square foot amount does not adequately represent a standard for a library. This means it is of vital importance for the library to regularly gain feedback from patrons on their needs and wants for the public space.

Library services include borrowing books, CDs and DVDs, library card holders can download and borrow children's books or current, popular e-books for teens and adults from the library's collection. Card holders can also search licensed online databases of journal articles and other current information. The library also has computers with internet access and Wi-Fi.

The library's collection includes popular fiction and non-fiction books, graphic novels and large print works as well as videos and audio CDs of favorite books. Books not in the inventory can be requested through Inter-Library Loan for a modest fee. There are many special programs offered throughout the year, or take part in the Book Club. Citizens are also always welcome to participate in the Friends of the Library activities or volunteer in the library.

The children's room in the library has a wide selection of books, CD books and videos (both VHS and DVD) and stuffed toys. The library even has a puppet theater! Other programs offered are Toddler Time for 1-3 year old children on Tuesdays at 10:00 a.m. and Story Time for 3-5 year old children on Thursdays at 10:00 a.m. The annual Summer Reading program runs from mid-June into early July with special activities and performers in the library each week.

The library is one of Copperas Cove's best public facilities and provides many programs and services for its residents. As Copperas Cove continues to grow and expand, locating smaller public libraries or flagship libraries in the northern and southern areas of the City could be worth investing in.

Copperas Cove Public Library

The Senior Center is located at 1012 North Drive, Suite 5. It offers a variety of recreational activates as well as nourishment, fitness and health programs. This encourages seniors to get out of their house and come to the center, not only for nourishment, but also for programs that will enrich their quality of life and personal health and allow them to socialize with others in their age group.

Senior Center

GOVERNMENT FACILITIES AND SERVICES GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION

Goal 6-1: Provide adequate Police and Fire protection and expand service/facilities as growth continues.

Objective:

- Provide for Capital Improvement funding of Police and Fire facilities that will enhance and streamline budgetary processes of short- and long-range public safety projects.

Policy:

- New police, fire, and public infrastructure will need to be planned and built as new residents move to the City. Specifically, identifying land to purchase on the west, north, and south side of the City should be examined and budgeted for. Police services should also be expanded through recruiting and training more police officers. The current police building provides plenty of room for future personnel expansions.

Implementation Measures:

- Plan for Public Safety facilities and staffing needs to ensure efficiency in responding to emergencies, encourage safe neighborhood designs and coordinate and integrate Homeland Security initiatives.
- Maintain and continually update the Emergency Management Plan, exercise a regular program of coordinated drills and training, and develop a program to involve citizen volunteers in crime prevention and other safety programs.
- Provide adequate training facilities, shooting range and fitness center for Police officers and provide suitable emergency services and facilities as the City continues to grow and expands.
- Cooperate with surrounding communities along with Coryell County, Lampasas County, Bell County, and Fort Hood through interlocal cost sharing of public facilities and services.
- Coordinate with Kempner to increase their volunteer Fire Department program in order to meet the demands for services in the ETJ.

Goal 6-2: Plan for the expansion of public services in reference to both projects and future annexations.

Objectives:

- Ensure educational and senior facilities meet local needs and future population growth.
- Locate smaller public libraries or flagship libraries in the northern and southern areas of the City.

Policies:

- Coordinate with CCISD on any new locations to serve areas of growth.

- As Copperas Cove continues to expand, access to the library will be important for people who live farther from the City center. Though a new facility is not necessarily required currently, the City can encourage pop up programs (i.e. library on wheels) to access areas farther north and west of the City. This can ensure populations that are not as mobile still have access to library services. This will be especially useful to the aging and retiring populations looking to make Copperas Cove their home.

Implementation Measures:

- Work with the CCISD to provide information to the entire community concerning major endeavors of the schools.
- Coordinate with CCISD and post-secondary providers to maintain a sound educational system available to all citizens.
- Encourage the CCISD to represent on Citywide boards and commissions that will support unified efforts and prevent redundancy of actions.
- Encourage community-wide support for educational programs that promote successful outcomes for the students, pre-school through higher education.
- The City should coordinate with the Copperas Cove Independent School District to ensure that future sites of schools are located away from major arterial streets. Close communications with CCISD will enhance growth projections and improve planning processes for new facilities. This can be accomplished by:
    - Including CCISD verification in developer packets. This assures the CCISD has been contacted about future projects.
    - Coordinating with CCISD to identify new educational sites including maximum enrollment numbers, acres for campuses, adequate parking, sports facilities and best practices for identifying future school locations (i.e. elementary schools near City parks.).
    - Partnering with CCISD, non-profit organizations, private endowments and the Copperas Cove Economic Development Corporation for funding opportunities.
- Encourage new opportunities through Public Library service grant programs.
- Encourage additional activities for senior citizens and improve the use of City's senior facilities.

City of Copperas Cove

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CHAPTER 7: IMPLEMENTATION

Chapter 7 – Implementation

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INTRODUCTION TO IMPLEMENTATION

Comprehensive planning influences the City's policy decisions for years to come. The Plan provides a tool for the City to make planning and policy decisions regarding the long-term growth and development of Copperas Cove. The quality of life for Copperas Cove's current and future citizens is dependent on the way the Comprehensive Plan is implemented. The Comprehensive Plan can help influence policies through adopted development regulations such as zoning and subdivision ordinances, and through capital improvement programs.

Proactive and Reactive Implementation

"Good planning" is implemented in both proactive and reactive ways. Proactively, a community establishes its priorities and a timeline for implementation alongside statements of policy. The community also proactively establishes rules and processes which guide development. Reactively, planners respond to development requests which may represent opportunities or threats to the community's vision – even the perfect plan could not anticipate all possible requests and situations a community might face. A well-developed set of tools help reactive planning work smoothly and efficiently.

THE ROLES OF THE COMPREHENSIVE PLAN

A Guide to Decision-Making

The Comprehensive Plan is to be used as a guide to make decisions concerning the future of the City. This includes decisions regarding amendments to zoning, platting of subdivisions, investing in capital improvements, and overall City development. The Plan provides a comprehensive look at the City's needs and opportunities as expressed by citizens, policy leaders and local representatives. The Plan provides the best guide to balancing the needs of the community and strengthening the City's economic viability.

A Flexible and Alterable Guide

The Plan is a fluid document, one that must remain flexible to allow the City to make adjustments to accommodate shifts in local and national social, economic, physical, and political changes. However, the Plan should not be changed too quickly or easily. Alterations should be made through systematic analysis and long-term considerations. The City leaders will need to consider each proposed Plan change carefully. To help aid this process, a comprehensive review should be made of the Plan every three to five years to ensure that all capital expenditures and priorities are being met in relation to the current measurable objectives. The Planning and Zoning Commission and the City Council should be the primary reviewers of this policy document and changes should be made according to their recommendations. These reviews will not only look at plan priorities, but also determine if the City is meeting its goals. It should also allow for changes in state and local laws to be incorporated into the Plan.

Complete Review with Public Participation

The most important aspect of the Comprehensive Plan is active public participation. The public needs to be involved in the creation and implementation of the Plan. Reviewing the Plan with the public every five to ten years will allow for adequate public participation and feedback.

REGULATORY MECHANISMS

General

Zoning ordinances, subdivision ordinances, and development plans provide opportunities to implement the various policies identified in this Comprehensive Plan.

The Zoning Ordinance

Zoning is the tool to implement the Comprehensive Plan. At certain periods, the City's Zoning Ordinance should be updated to implement the policies adopted by the Plan in the following ways:

- By adding new zoning districts to achieve land use policy goals and objectives.
- By updating definitions to account for a changing economy and culture.
- By adding buffering standards, design guidelines and landscape requirements.
- By adding form-based codes to promote flexibility and aesthetic consistency.
- By utilizing the conditional use process to enable conformity of land uses.

Zoning Map Amendments

Changes to the Zoning Map should be consistent with the Comprehensive Plan and Future Land Use Plan (FLUP) map. Any proposed development application which is not consistent with the Plan, will need to seek a parallel rezoning application to amend the City's Zoning Map to align with the Comprehensive Plan. Any rezoning should consider, at a minimum, the following factors:

Comprehensive Plan Consistency
Is the use consistent with the Future Land Use Plan (FLUP)? Does the requested zoning district fit within the broader Future Land Use category? If not, the Future Land Use Plan (FLUP) should be amended.

Land Use Compatibility
In order to determine land use compatibility, a review of the FLUP, the current zoning and consideration of potential uses allowed within the district, is necessary for any proposed development. How will the proposal work together with existing land uses? Where will conflicts emerge? Is there sufficient separation? Is there consistent traffic flows and patterns? Most importantly, will the proposal meet the adopted policy goals and objectives of the Plan?

Access
Does the property have sufficient access to a roadway network which is capable of moving anticipated traffic to and from the site? Would traffic be directed into areas of less intense use?

The Subdivision Ordinance

The subdivision regulations govern the process of dividing land and creating the improvements necessary to serve new development (or redevelopment). These rules apply to the extraterritorial jurisdiction (ETJ) in addition to the City limits. The subdivision regulations contain the minimum standards for public improvements. These are mostly technical standards, related to the construction of streets, water, sewer and drainage infrastructure. However, the subdivision regulations also contain critical policies concerning the extension of streets and utilities and the policy basis for requiring the dedication of land for public improvements and public use, as these are set forth within the Comprehensive Plan and technical master plan elements. The City recently completed a thorough review of the subdivision regulations by a specially-appointed committee.

Future Considerations

During the draft review process for this Plan, two topics came up related to housing revitalization and the preservation/maintenance of property value. The topic of building materials requirement for new residential construction was addressed on August 20, 2019. On June 14, 2019, Governor Abbott signed HB 2439 which became effective on September 1, 2019. The bill prohibits municipalities from adopting or enforcing an ordinance that limits the installation of building materials approved by a national model code. The City of Copperas Cove has adopted the 2015 model codes as produced by the International Code Council. The 2015 International Building Code (2015 IBC), International Residential Code (2015 IRC), and International Plumbing Code (2015 IPC), as adopted by the City, are affected by this bill.

Secondly, the topic of value enhancement is not simply a function of applying design standards, but is largely market driven and reflects a broad array of needs which play an important part in creating long-term value. For example, the quality of schools, the quality and availability of jobs within close proximity to a given neighborhood, and the availability of amenities also play a key role in the longer-term value of a neighborhood. Typically, the role of a city is limited in revitalization to supportive land use policy and the availability of utilities, and in the enforcement of some nuisance-related ordinances. The non-profit sector, including housing redevelopment/revitalization corporations play a big role in leveraging federal funding opportunities. And finally, the private sector is always operating to try to bring a market need to viability through private investment in the maintenance or redevelopment of property.

All of these topics will continue to affect the availability and quality of housing supply in Copperas Cove and should be explored in greater detail within the short-term following this Comprehensive Plan Update.

Implementation Funding

A variety of funding sources may be used to implement the Comprehensive Plan. These may include local resources such as the general fund; private donations; voter approved bonds; public/private partnerships; federal, state, and other grants. In addition to these common and typical sources of funding, some cities also pursue the creation of special improvement districts to promote and incentivize new development or redevelopment both within the City limits and the ETJ. While each of these special districts have their

own unique statutory framework, they all have the same general objective to improve the overall quality and performance of the City's infrastructure and facilities. Thus, ensuring high quality development and protecting local citizens from a heavier tax burden in the future.

Capital Improvements Plan

When implementing the Comprehensive Plan, it will be essential that the City Identify and budget for major capital improvements. To identify budgeted capital projects, a Capital Improvements Plan, or "CIP," is used. The policy and management directives of this Plan and other policy documents adopted by the City should be taken into account when making decisions regarding the prioritization of proposed capital improvements. These projects include public safety, transportation, street and sidewalk, parks and recreation, water and sewer, wastewater, solid waste, drainage and golf course.

SUMMARY

The Comprehensive Plan creates goals, objectives, and policies that will shape how the City grows and develops for the next 10 to 30 years. The plan is based upon input from the citizens of Copperas Cove. Goals and objectives establish a framework for specific actions that will help the citizens of Copperas Cove achieve their vision for the City's future.

The Comprehensive Plan, once adopted, becomes the official policy of the City. To be fully effective, the Plan should be used on a daily basis to determine policy, thereby guiding Copperas Cove to realize its ultimate vision.

City of Copperas Cove

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PLATES

Plates

Plate 1 - Future Land Use Plan (FLUP) – Extraterritorial Jurisdiction (ETJ)

Plate 2 - Future Land Use Plan (FLUP) – City Limits

City of Copperas Cove

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PLATE 1: FUTURE LAND USE PLAN (FLUP) – EXTRATERRITORIAL JURISDICTION (ETJ)

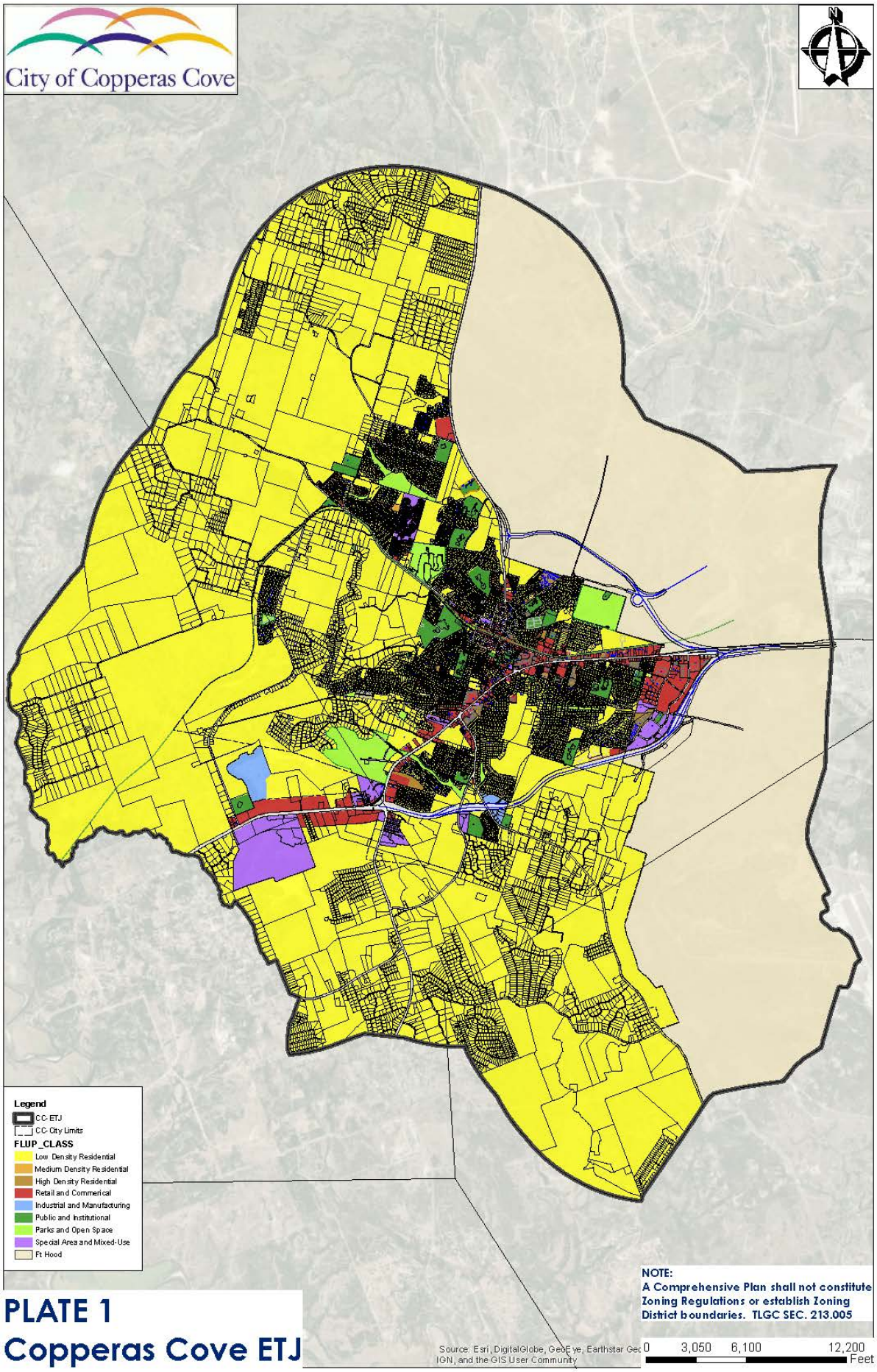

PLATE 1
Copperas Cove ETJ

City of Copperas Cove

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PLATE 2: FUTURE LAND USE PLAN (FLUP) – CITY LIMITS

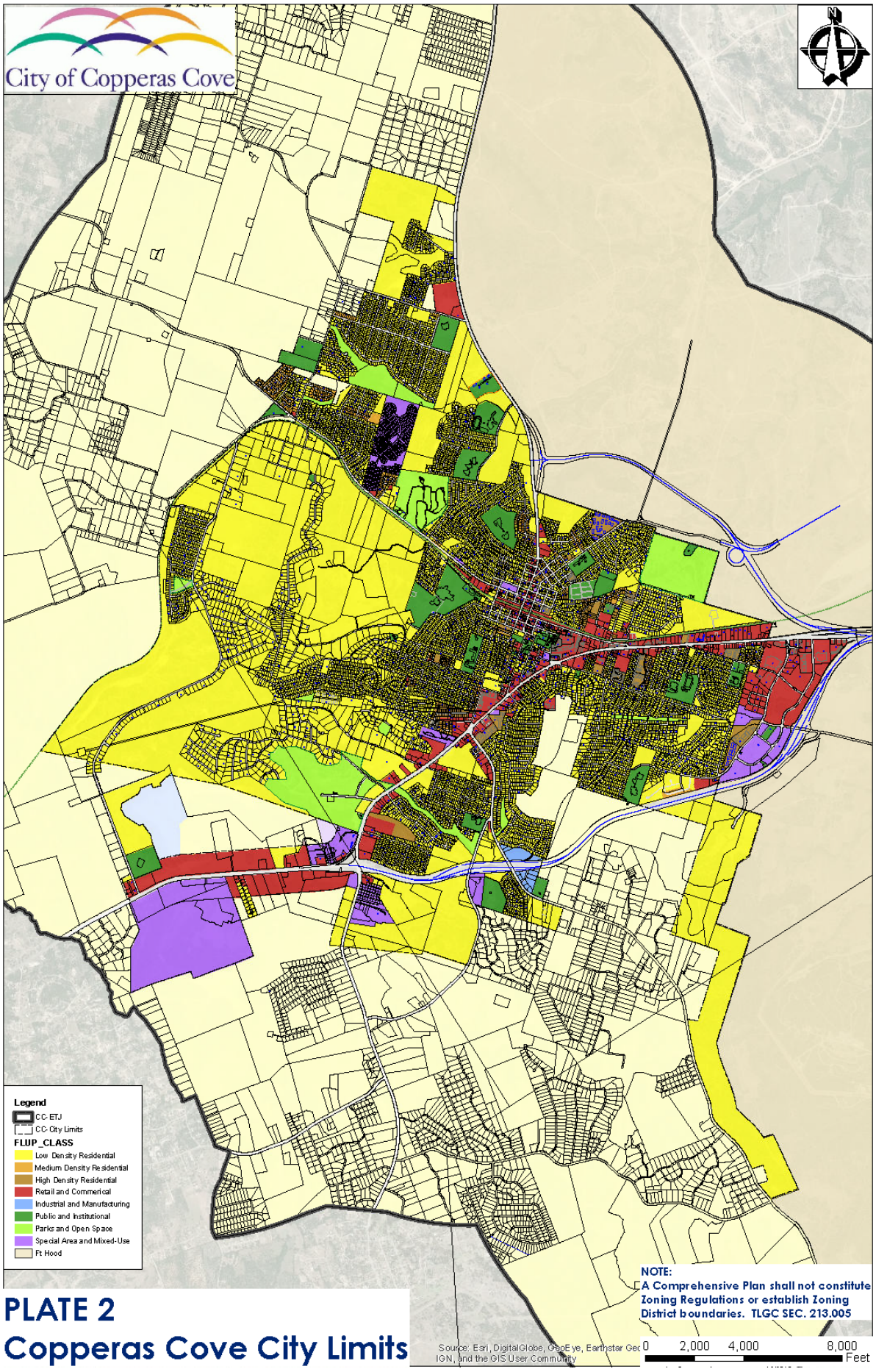

PLATE 2
Copperas Cove City Limits

City of Copperas Cove

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APPENDICES

APPENDICES

Appendix A – 2018 Fort Hood Joint Land Use Study (JLUS)

Appendix B – 2020 Transportation Master Plan

Appendix C – 2020 Parks Master Plan

City of Copperas Cove

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APPENDIX A:
2018 FORT HOOD JOINT LAND USE STUDY (JLUS)

AUGUST 2018

City of Copperas Cove

Comprehensive Plan Supplement:

Fort Hood and Military Land Use Compatibility

FORT HOOD
JOINT LAND USE STUDY

CTCOG
central texas council of governments

BENCHMARK

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I. Introduction

Fort Hood is the largest active-duty installation in the United States; one of three enduring US Army installations (the others being Fort Bragg and Joint Base Lewis McChord (Fort Lewis)); and a force structure and infrastructure priority for the Department of Defense and Headquarters, Department of the Army. Fort Hood is the largest employer in the State of Texas, with over 55,000 direct jobs and an additional 150,000 indirect jobs associated with the installation (Texas Comptroller 2018). The installation also contributed $24.6 billion in GDP to the Texas economy in 2017, per the most recent economic impact study prepared by the Texas Comptroller of Public Accounts.

Fort Hood's growth over the past 60-years resulted in a corresponding population surge in the region (the Killeen-Temple-Fort Hood Metropolitan Statistical Area (MSA)). The 1960 US Census reflected an MSA population of 118,058. This increased to over 405,000 residents in the 2010 Census – a 243% increase over a 50-year period, with growth occurring in every direction around Fort Hood. Geographically situated in central Texas along the I-35 and I-14 corridors, Fort Hood is situated in two counties (Bell and Coryell), and has seven cities within close proximity to the installation boundary (Killeen, Temple, Copperas Cove, Harker Heights, Belton, Gatesville, Nolanville and Morgan's Point Resort).

The population growth that has accompanied the expansion of the military footprint at Fort Hood has led to a significant expansion of the urbanized area around the installation, with a nearly continuous stretch of cities and their extraterritorial jurisdictions (ETJs) now occupying the southern and eastern boundaries of Fort Hood from Copperas Cove in the west to Temple in the east. This urban growth, in turn, has added pressure to the installation as it seeks to sustain its training, testing and power projection missions in the face of future challenges related to encroachment from urban development that is potentially incompatible with the external impacts of its missions. Figure 1 on the following page, taken from the 2016 Fort Hood Joint Land Use Study, demonstrates the degree of urbanization around the installation as represented by census tract level population density at the time of the 2010 Census.

Recognizing the emerging challenge to the long term sustainability of its missions, US Army Garrison Fort Hood nominated itself for participation in the Joint Land Use Study (JLUS) program sponsored by the DOD's Office of Economic Adjustment (OEA). With the City of Killeen as the local grant sponsor, the communities around Fort Hood joined with the installation in a year-long process, beginning in December 2015, to evaluate growth patterns, areas of encroachment concern, and community plans and ordinances with the goal of developing strategic guidance for the civilian communities and Fort Hood to utilize as they continue to work together to foster compatible growth.

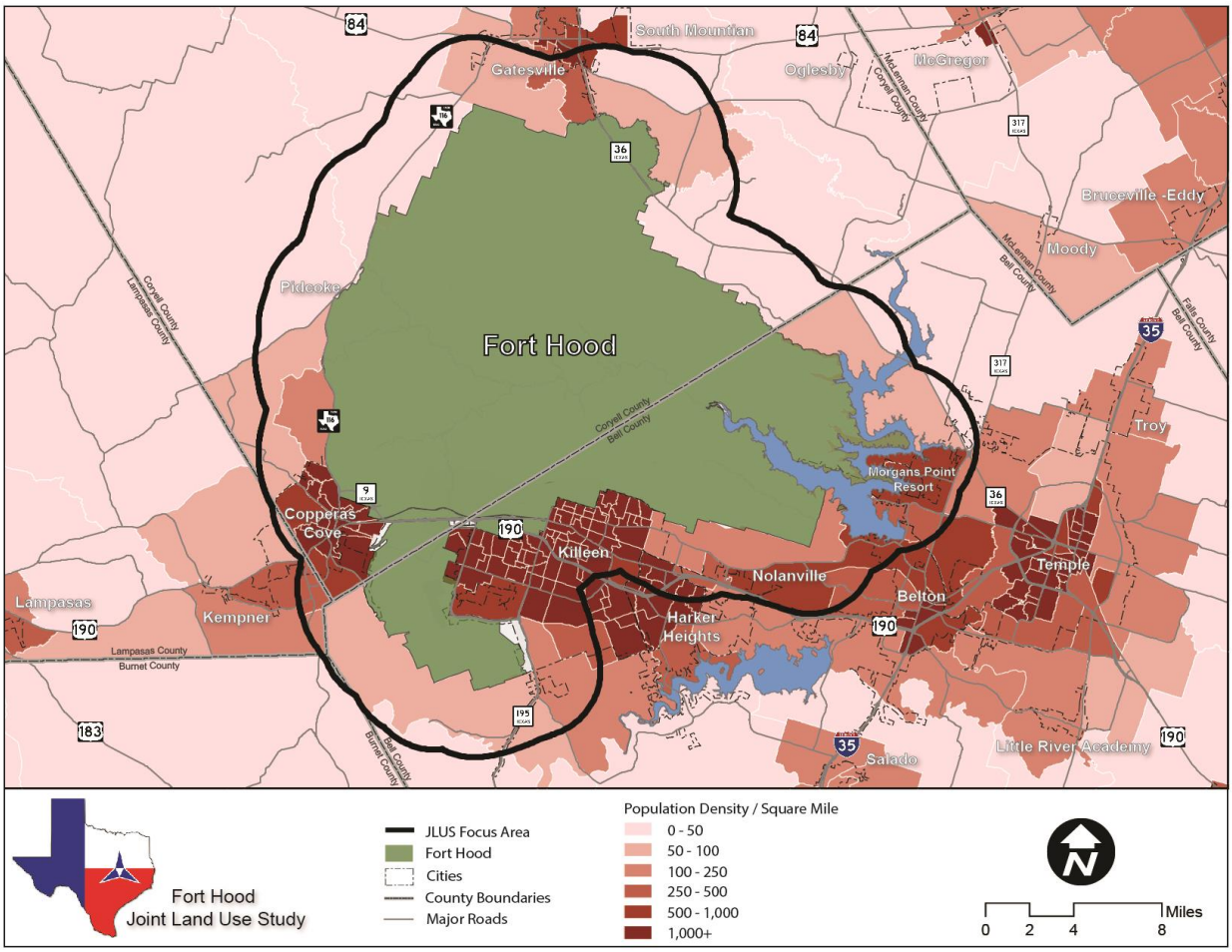


Figure 1: Population Density in the Fort Hood Region – 2010

When the JLUS process concluded in December 2016, the study partners had identified a total of 34 recommendations for the participating communities and Fort Hood to consider for further implementation. The recommendations focused on three primary areas: Regional Coordination, Planning for Compatible Growth, and Regulations to Support Compatible Growth. Several additional recommendations which did not fit in the three primary categories were included as well in a set of supplemental recommendations.

Following the conclusion of the study, the Central Texas Council of Governments (CTCOG) took the lead role in moving the recommendations forward into an implementation phase (JLUS-I), with the regional partners continuing their roles in the process through the previously established JLUS Policy and Technical Committees. CTCOG sought and received supplemental grant funding from OEA to work towards the JLUS recommendations that were viewed by the Department of Defense as the most critical to be implemented over the short-term. Among these high priority implementation strategies was the recommendation that local

governments should prepare updates to their comprehensive plans to incorporate information regarding areas of encroachment concern and amend their land use ordinances to include compatible growth policies identified in the JLUS.

As the implementation phase moved forward, it was determined that the most appropriate method of achieving the comprehensive plan updates was to provide standalone documents to each of the jurisdictions; focusing on encroachment concerns and compatible growth strategies that are locally applicable. To that end, this document is intended to provide the City of Copperas Cove with locally relevant information regarding these matters, along with a set of recommendations for the City to consider as it moves forward with its regional partners in implementing the JLUS and supporting the sustainability and viability of Fort Hood and its missions. This document and its companions that were prepared for the other jurisdictions in the region are intended as an intermediate source of information to supplement existing planning documents. Over the longer term, it is intended that the information and recommendations contained in the supplement be fully incorporated into future updates to local plans and help to inform each community's (and ultimately the region's) compatible growth strategy.

II. Fort Hood

A. Historical Context

In the earliest days of World War II, the United States Army needed wide-open space to organize a Tank Destroyer Testing and Training Center, and in 1942 chose 108,000 acres near Killeen, Texas to establish Camp Hood. Almost immediately, the Army expanded Camp Hood's mission to include a replacement and basic training center at North Camp Hood near Gatesville. As many as 100,000 Soldiers trained simultaneously at Camp Hood during the war.

In 1950, Camp Hood became a permanent installation and was renamed Fort Hood. In 1953, the post expanded to 207,557 acres, nearly doubling in size, and in the same year the Air Force turned over control of Killeen Base/Robert Gray Air Force Base to the Army. Fort Hood's current boundaries have remained essentially the same since this 1953 expansion.

B. Fort Hood Today

Today, Fort Hood is home to the III US Armored Corps Headquarters; the 1st Cavalry Division (consisting of a Headquarters, three Armored Brigade Combat Teams (ABCTs), Division Artillery, Combat Aviation Brigade, and Sustainment Brigade); the 3rd Cavalry Regiment; 1st Army-Division West (consisting of a Headquarters and the 120th Infantry Brigade which train mobilized Reserve Component forces at North Ft Hood); seven III Corps Separate Brigades (Medical, Signal, Engineer, Civil Affairs, Air Defense, Military Police, Chemical); the 13th

Sustainment Command (Expeditionary); the Army's Operational Test Command, and the United States Air Force (USAF) 3rd Air Support Operations Group – which is the largest contingent of Airmen assigned to an installation other than an Air Force base.

C. Training, Testing and Power Projection Assets

Fort Hood encompasses 218,823 acres (342 square miles), with 87 live-fire ranges and maneuver training areas comprising 196,791 total acres – a land area capable of supporting brigade-sized maneuvers (see Figure 2, below. The installation also hosts the largest concentration of armored and mechanized combat capabilities in the United States Army, with three Armored Brigade Combat Teams (ABCTs) and one Stryker Brigade Combat Team (SBCT) assigned – currently the only Army installation with four assigned BCTs. During simultaneous operations in Iraq and Afghanistan, Fort Hood's assigned strength surged to nearly 54,000 Soldiers and demonstrated its significant training and power projection capabilities.

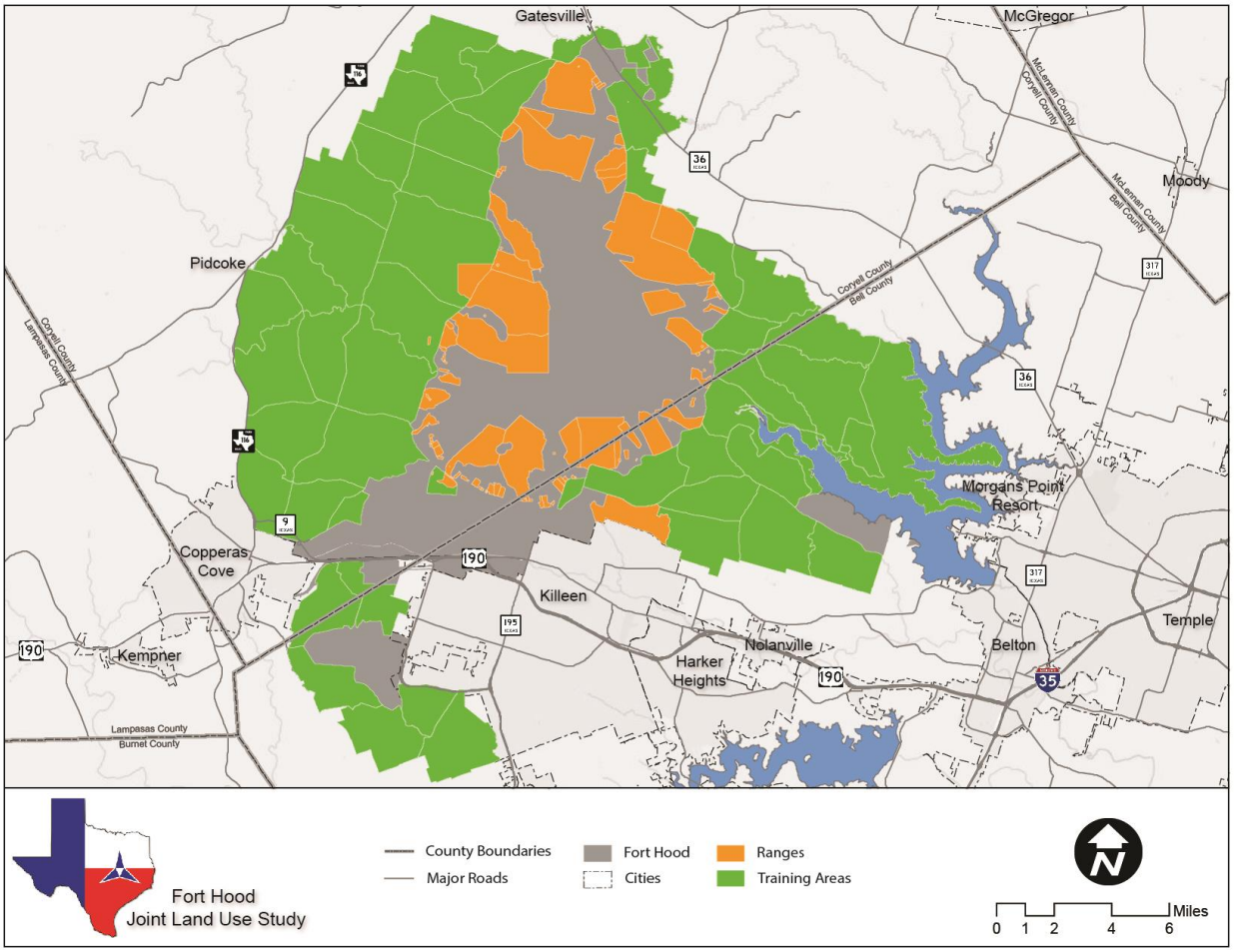


Figure 2: Fort Hood Ranges and Maneuver Training Area

Through cooperative agreements with ranchers and landowners, Fort Hood has training access to over 15,000 square miles of airspace in the Western Training Area (WTA) which extends over 150 miles to the west of the installation (see Figure 3, from the JLUS, below). American and NATO forces routinely deploy rotary and fixed wing aircraft, as well as unmanned aerial systems (UAS), to the WTA and are able to train at doctrinal depths and distances.

Until 2015, the 21st Cavalry Aviation Brigade conducted AH-64 Apache transition unit training at Fort Hood and in the WTA for all aviation units in the Army, as well as numerous allied nations who have purchased the Apache helicopter. Units leveraged this critical training space extensively and today it continues to provide critical capability for realistic training for both AH64 transition units and combined arms live fire exercises employing a myriad of UAS platforms. Other aviation training assets at Fort Hood include Hood Army Airfield, which is home to the 1st Cavalry Division's Combat Aviation Brigade, and the Longhorn and Shorthorn airstrips, which accommodate rotary wing and UAS training activities at North Fort Hood.

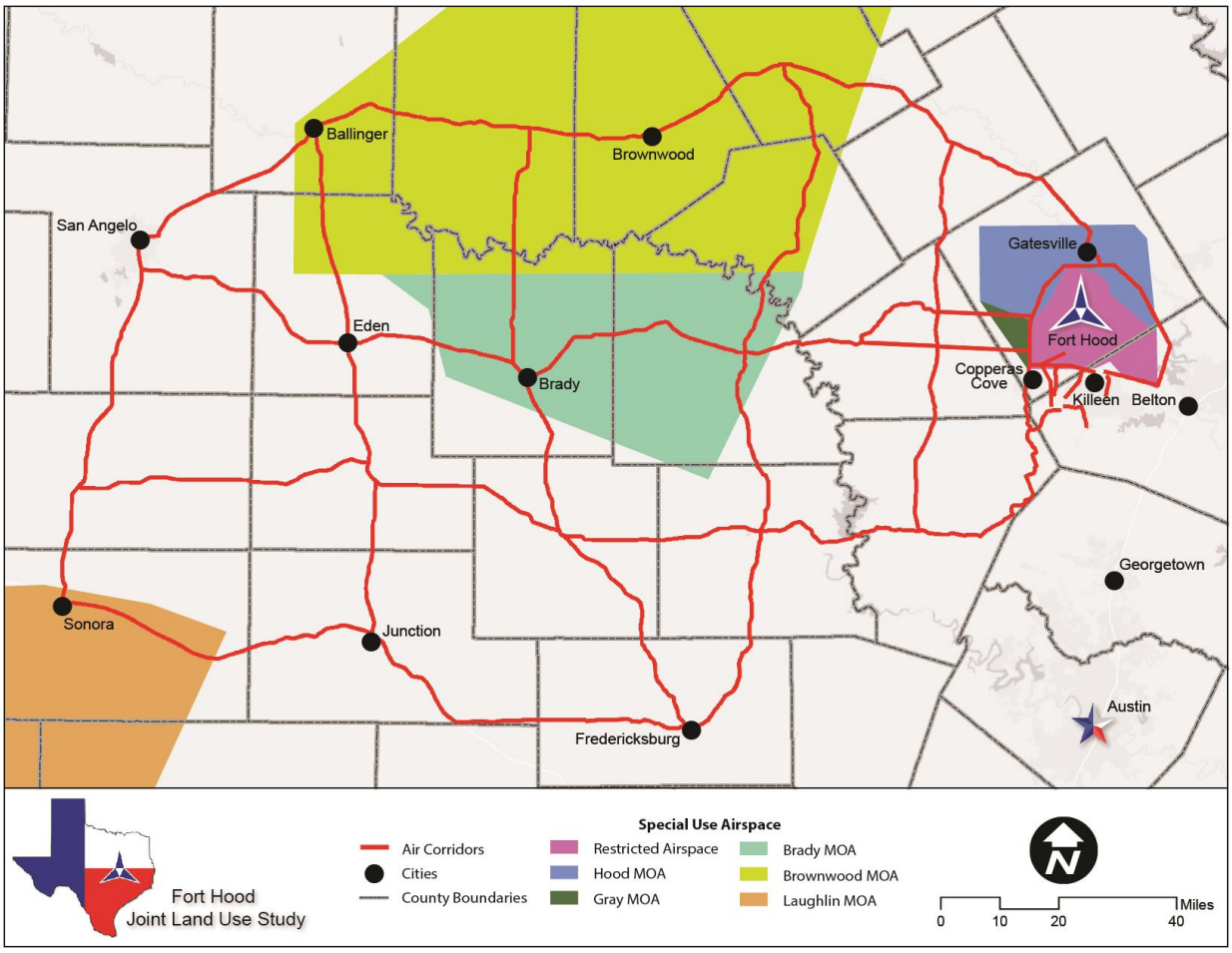


Figure 3: Western Training Area (Aviation)

Fort Hood's railroad operations complex is equipped with 12 loading spurs (capable of staging 600 cars and loading 240 cars per day) and is only a one-day transit time to the Gulf Coast ports of Beaumont and Corpus Christi. The Aerial Port of Embarkation (APoE) at Robert Gray Army Airfield (RGAAF) shares a 10,000-foot instrumented runway with the K-FHRA and consists of parking space for 11 wide-body aircraft, a 900-Soldier passenger terminal and modern crash-fire-rescue facilities.

Fort Hood is one of two Army installations that support pre and post-mobilization of Reserve Component units from across the United States. Since September 2001, nearly 125,000 Army National Guard and Reserve Soldiers have trained at North Fort Hood prior to deploying for operational missions. An enduring mission, plans are in place for continued modernization and growth at North Fort Hood to accommodate future mobilization requirements to meet the needs of the demands of the Army.

One of the Army's largest Mission Command Training Complexes (MCTC) is located at Fort Hood, with an additional $52 million military construction project for a new Mission Training Command (MTC) facility approved, with construction beginning in FY17.

Carl R. Darnall Army Medical Center (CRDAMC) was completed and opened in April 2016 and provides over 1 million square feet of space to provide full medical support and care for active duty and retired Soldiers and families across the central Texas region.

D. Future Missions

Prior to 2009, Fort Hood was the only Army installation with two assigned Heavy Divisions – the 1st Cavalry Division and the 4th Infantry Division. As a result of Base Realignment and Closure Commission (BRAC) recommendations in 2005, the 4th Infantry Division relocated to Fort Carson, Colorado and the 3rd Armored Cavalry Regiment (now the 3rd Cavalry Regiment) relocated from Fort Carson to Ft Hood. These moves provided Fort Hood the facilities to accommodate a surge of up to an additional 15,000 Soldiers, including another heavy or light infantry brigade, an additional combat aviation brigade, combat support and combat service support enablers, and a division headquarters.

In addition to the capacity of the installation to meet basing requirements for potential future changes in the size or location of the force, Fort Hood is continually evaluating its capacity to meet additional training, testing and power projection missions. Recent examples include the relocation of an Air Defense Artillery brigade from Fort Bliss to Fort Hood and the ongoing growth of the installation's UAS mission. Looking further into the future, Fort Hood has developed plans for the addition of a second runway at Robert Gray Army Airfield, which could theoretically lead to the basing of an Air Force wing at the expanded airfield. Fort Hood is also currently exploring opportunities to expand its intermodal (truck/rail) capabilities in support of its power projection mission through a potential partnership with local governments and economic development entities in the region.

Regardless of the specific missions that Fort Hood will be tasked to fulfill in the future, change is inevitable, as the region has experienced first-hand through nearly 80 years of transformation of Fort Hood from an isolated training base into the premier military asset that it is today. With changes in missions, weapons systems, training doctrine, force strength, and the types of units assigned to the installation there will be changes in the nature and extent of land use compatibility concerns. While this document, and the recently completed JLUS, provide insight into current conditions, it will be important for Fort Hood and its host communities to work together to address emerging compatible growth and encroachment issues as these inevitable changes occur.

III. Current Encroachment Concerns

This section of the report details the locally relevant types and spatial extent of encroachment concerns that the City of Copperas Cove is encouraged to consider as it develops and implements plans and policies related to land use, infrastructure, annexation, and other matters that influence land use compatibility around Fort Hood. At the present time, aviation training and operations in the airspace above the city and its ETJ, as well as the general proximity of urban growth in the city and its environs to Fort Hood's maneuver training areas are the primary encroachment concerns present in the city. These are not unique to Copperas Cove, as most of the other jurisdictions around the installation face similar land use compatibility issues. In each case, the local government has the final decision-making authority as to whether and to what extent it will address these encroachment concerns, and the timeframe in which it chooses to do so, if determined necessary.

The Joint Land Use Study, and follow-on research conducted during the JLUS implementation process relied on data and reports provided by Fort Hood to define areas of encroachment concern in the civilian communities around the installation. Due to the ongoing evolution of Fort Hood's mission, training requirements and operational tempo, there are differences in the data presented in the JLUS and the information later used in the implementation process, particularly with regard to noise contours, which Fort Hood recently updated (2017 Fort Hood Installation Compatible Use Zone Study). Noting this reinforces the necessity of maintaining constant vigilance to ensure that future updates to areas of encroachment concern are identified and noted in each community.

Following this section, additional information regarding potential future encroachment concerns is provided in Section IV. This is followed by a discussion of the tools that can be used to address encroachment concerns in Section V. The final section of the report contains recommendations that the city can consider implementing in support of the JLUS.

A. Installation Boundary Zone

Urban development of any kind, while not inherently incompatible, can pose encroachment challenges when located in close proximity to the external boundary of Fort Hood, particularly in areas that are adjacent to maneuver training areas, firing ranges, aviation facilities, and similar training and operational infrastructure. Specifically, proximity to military training activities can bring exposure to noise, dust, smoke, and other types of military training impacts which can be incompatible with urban development, particularly residential development. The proximity of urbanized areas to training infrastructure brings concentrations of population, night lighting, traffic congestion, tall structures, such as cellular towers, and similar features of urban growth into areas that were formerly used for farming, ranching and similar uses that are generally compatible with military training. When encroachment by urban development into these areas occurs, it can constrain the ability of the installation to conduct training in the manner and to the extent necessary to meet military needs.

In order to guard against incompatible urban encroachment into sensitive areas adjacent to the installation boundary where well defined areas of encroachment concern, such as noise contours, low level flight corridors, aircraft accident

potential zones, and similar features are not present, the JLUS implementation process established an area (1 mile from the installation boundary – see Figure 4) where enhanced coordination is recommended between the civilian communities and Fort Hood. Many of these areas that are adjacent to the installation boundary are already urbanized, particularly along the southern boundary of Fort Hood, but a significant amount of Fort Hood's western, northern and eastern boundary areas remain rural and undeveloped. Maintaining compatibility by limiting urban encroachment into these remaining rural and undeveloped portions of the installation boundary area will be critical to ensuring the long-term viability of Fort Hood's training mission.

While heightened awareness about the consequences of incompatible urban encroachment in these areas is necessary, and close coordination with Fort Hood is encouraged to ensure that local government decisions related to zoning, subdivision activity, infrastructure improvements, annexation and similar actions that can lead to incompatible growth, it does not mean that these areas should be excluded entirely from community growth plans. The existing urbanized portions of Fort Hood's external boundary area, for example, are for the most part compatible with the activities taking place on the installation since they tend to be adjacent to the main post / cantonment area, where few heavy training activities take place. Notable exceptions to this include the area around Robert Gray Army Airfield and Hood Army Airfield, which each have significant areas of encroachment concern which are addressed separately in this report.

Even in these generally compatible urbanized areas, however, it is recommended that ongoing coordination and consultation with Fort Hood take place to ensure that local government plans and policies align with the installation's emerging training needs, and other issues, such as transportation, force protection (security) concerns, and similar matters are taken into consideration during the development and implementation of local plans. The expansion of urban development into currently undeveloped portions of the installation boundary area can also be compatible if the uses are of such a nature as to not pose an encroachment challenge, such as light industry, commercial development, and similar uses, when they are sited and developed in a manner that is compatible with military training activities. Limiting further urban development into areas that pose encroachment challenges, however, will always be the safest course of action.

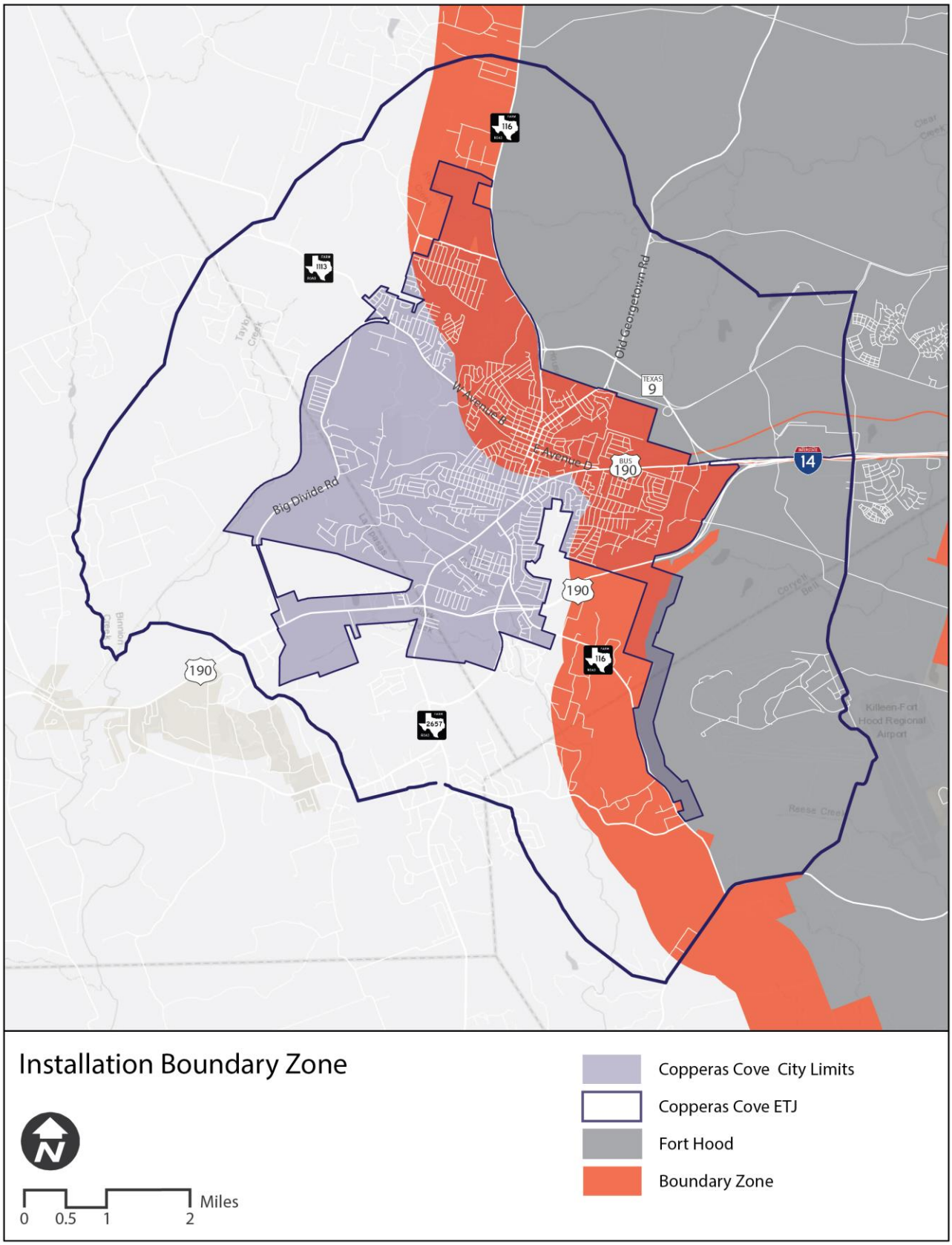


Figure 4: Fort Hood Installation Boundary Zone

With specific regard to the City of Copperas Cove, the greatest challenge presented within the installation boundary zone area is the ongoing growth northward of the current city limits along FM 116. These areas are adjacent to Fort Hood's primary heavy maneuver training area, which, as mentioned previously, can host brigade-sized training exercises for armored and mechanized units, including combined arms training which adds aviation, artillery, and other supporting forces to the exercise. For a period of almost 15 years beginning in 2002, these areas were used less frequently for large scale training exercises due to the Army's pivot toward counterinsurgency warfare and training for low intensity conflicts, such as the wars in Afghanistan and Iraq. With the drawing down of these conflicts, however, Fort Hood's units have transitioned back toward their traditional training activities, focusing on preparing for large scale conflicts employing the full spectrum of combat capabilities.

The reemergence of intensive training activity has occurred following a period of significant growth for the city, including growth northward along the FM 116 corridor. While the degree of urbanization in close proximity to these critical maneuver training areas does not yet pose a significant encroachment threat, ongoing growth north of the city could begin to constrain certain types of training in the future. While it is also understood that the city has a limited degree of control over land use in its ETJ, other factors within its control, such as utility extensions and annexation, can be used to direct and shape growth in these areas, if necessary, to maintain a more compatible environment in the future. To that end, close coordination with Fort Hood when developing land use and infrastructure plans for the FM 116 corridor, in particular, is encouraged.

B. Low Level Flight Corridors

Fort Hood is the home to a significant amount of rotary wing (helicopter) aviation training activity, including by the 1st Cavalry Division's Combat Aviation Brigade, as well as Reserve Component, and allied aviation units which regularly train on and around the installation. To facilitate low level aviation traffic to, from, and around the installation, Fort Hood has established low level flight corridors (known as the Corridor Air Route Structure), with flight altitudes ranging from 500 – 1,000 feet above ground level. Within these aviation corridors, frequent aircraft overflights can be expected during both day and nighttime hours. While these routes were established to generally avoid urbanized areas, growth in the region over the years has led to portions of these routes now being located over areas that are now developed at urban densities.

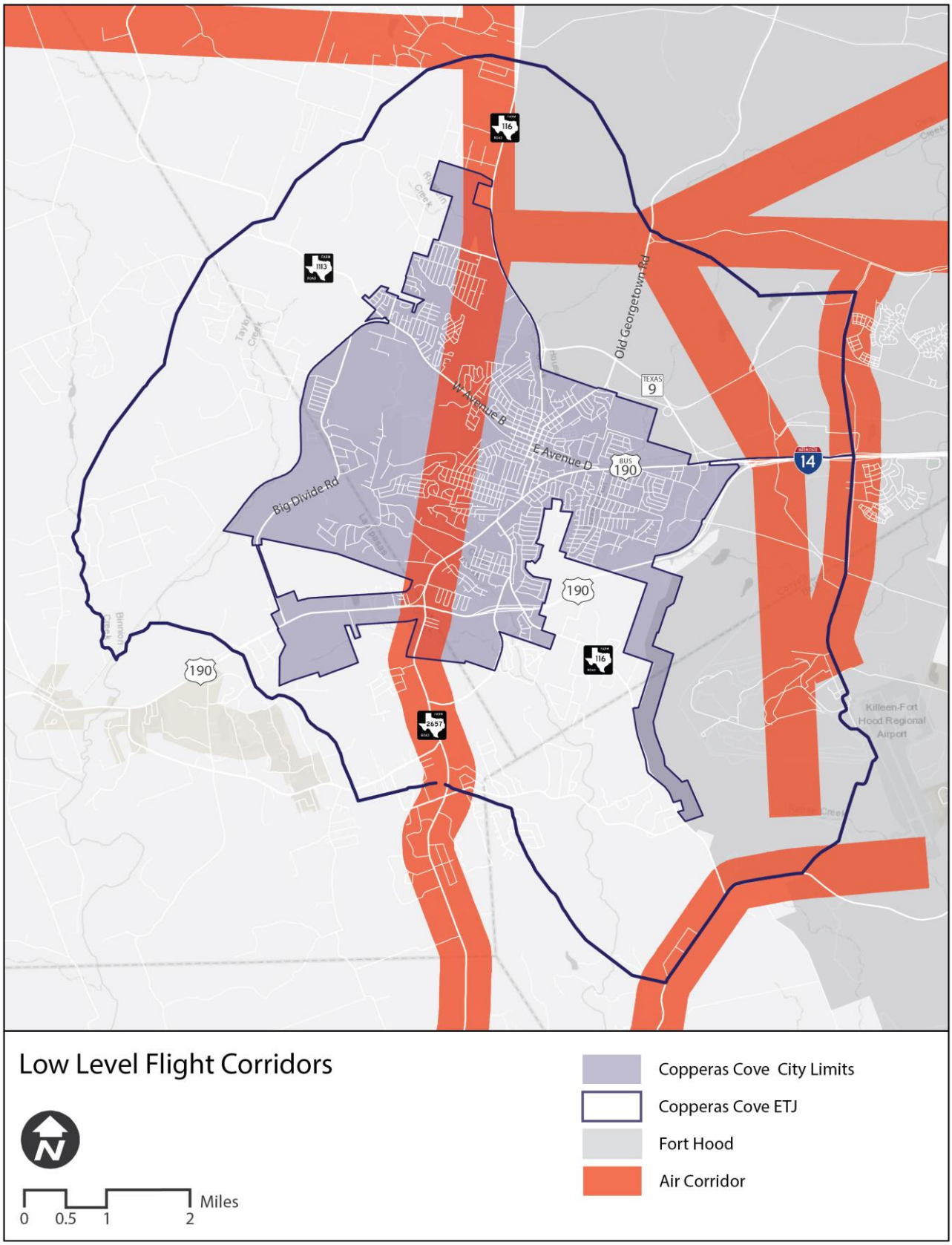


Figure 5: Low Level Flight Corridors

The primary encroachment concerns related to these low level flight corridors are tall structures and certain land uses that may pose a hazard to aerial navigation when located within, or in close proximity to, the corridor. Examples of potentially incompatible tall structures include wireless telecommunications towers, elevated water storage towers, broadcast antennas, high voltage electric transmission lines, and similar features. Even when these structures do not penetrate the floor, or lower altitude limit, of a flight corridor, their location in the route can require modifications to the flight altitude, or the route itself, to ensure a safe separation distance between the aircraft and a potential hazard. Examples of potentially incompatible land uses within, or in close proximity to, these areas include any use which generates significant emissions of smoke, steam, dust, or other obscurants, uses which produce glare or significant night lighting, heavy emissions of electromagnetic radiation, and uses which attract large concentrations of birds, such as landfills and open pit mines that collect water.

A secondary concern within these low level flight corridors is aviation noise exposure, particularly related to residential areas and other noise sensitive uses. While the frequency of traffic within these routes is not sufficient to generate noise contours using the Army's standard noise modeling software, the latest Fort Hood Installation Compatible Use Zone Study (2017) did include supplemental information regarding the potential for annoyance (and hence the potential for noise complaints) due to low level aircraft flight activity. Within these corridors, certain rotary wing aircraft (particularly CH-47s) can generate peak noise levels of over 90 decibels (approximately the level of exposure from operating a lawn mower or food blender) directly underneath its flight path when flying at 500 feet. Although this does not rise to the level of a significant encroachment concern, given the relative frequency of operations and variations in the absolute flight paths of each aircraft, the city should nonetheless be aware of the potential for noise sensitive land uses to generate noise complaints to Fort Hood when new / additional development occurs within these corridors.

With specific regard to Coppers Cove, one of Fort Hood's primary north/south air corridors that follows the western boundary of the installation and connects the local corridors to the southern portions of the WTA traverses the city and its ETJ along a path that connects (and roughly follows) FM 116 in the north to FM 2657 in the south (see Figure 5).

Protecting the integrity and viability of these flight corridors by coordinating closely with Fort Hood to ensure that development activity does not pose a hazard to aerial navigation is critical to the sustainment of Fort Hood's significant aviation training mission. To that end, all tall structures within, or close proximity to these corridors should be evaluated in coordination with Fort Hood, in addition to the standard FAA obstruction evaluation process for tall structures

since not all tall structures that may impact aviation operations at Fort Hood would necessarily fall within an area / altitude that would trigger FAA to declare the structure to be a hazard.

C. Airfield Imaginary Surfaces

Airports, including military airfields, such as Robert Gray Army Airfield, Hood Army Airfield, and Longhorn and Shorthorn landing strips on Fort Hood, are surrounded by "Imaginary Surfaces" established under Part 77 of the Code of Federal Regulations to limit encroachments into airspace where tall structures could pose obstructions, and thus hazards, to aerial navigation. The surfaces, as defined by Part 77 CFR, establish minimum clear heights that coincide with flight patterns around the airfields with which they are associated (see example in Figure 6, below). Although the FAA is tasked with reviewing tall structures within these areas to evaluate whether they penetrate the established imaginary surfaces and would create a hazard to aerial navigation, the FAA does not have any land use regulatory authority, which is vested in state and local governments. Therefore, the protection of these critical airspace areas is the responsibility, if accepted, of the local governments over which the imaginary surfaces are located.

Figure 6: Part 77 CFR Imaginary Surfaces for Military Airfields (Fixed Wing)

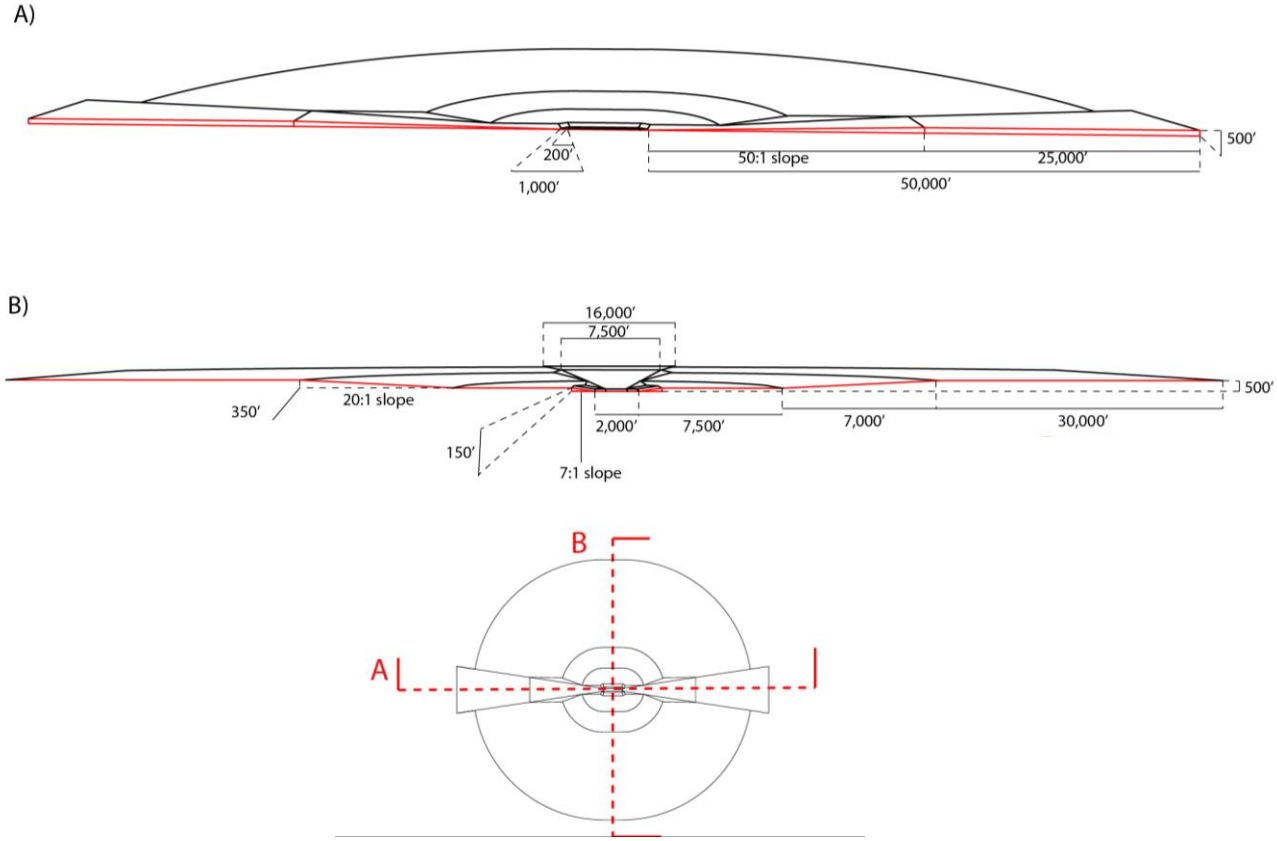
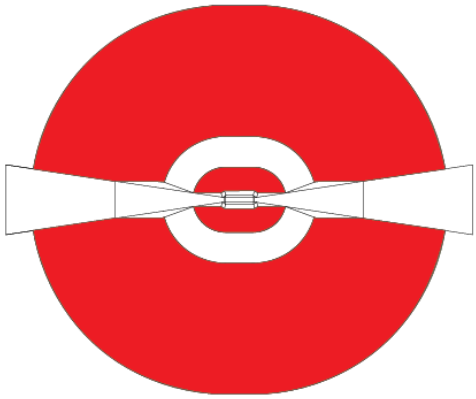


Figure 6A: Part 77 CFR Imaginary Surfaces for Military Airfields (Fixed Wing)

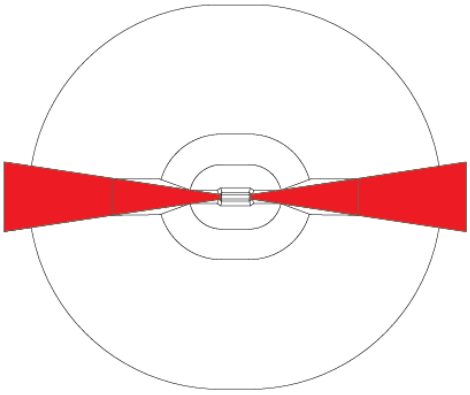
HORIZONTAL SURFACES



Inner Horizontal Surface: a horizontal plane, the perimeter of which is constructed by swinging arcs of a specified radii (defined in each section) from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by tangent lines

Outer Horizontal Surface: a plane located above the established airfield extending outward from the outer periphery of the conical surface

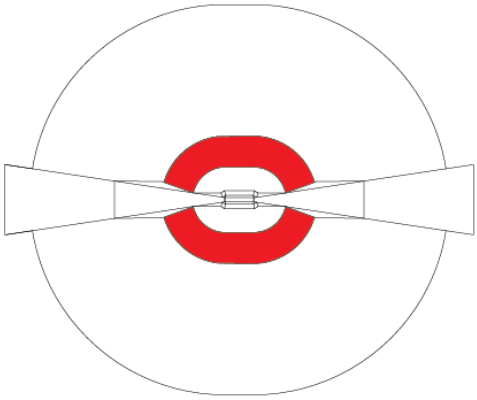
APPROACH SURFACES



Approach Surface: a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of a primary surface. Applied to each end based upon the type of approach available or planned for that runway end

**The inner edge is the same width as the primary surface and expands uniformly to a specified width*

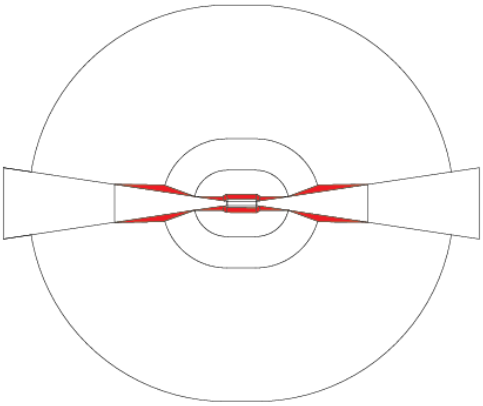
CONICAL SURFACES



Conical Surface: a surface extending up and out from the periphery of the horizontal surface

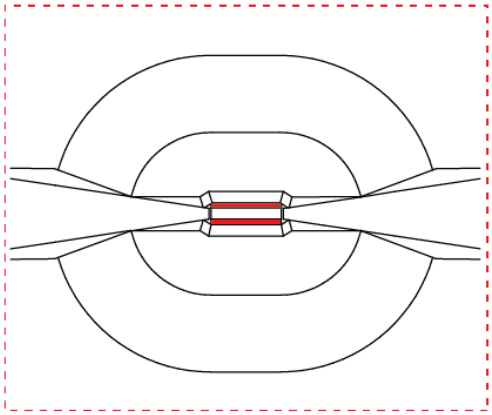
Figure 6B: Part 77 CFR Imaginary Surfaces for Military Airfields (Fixed Wing)

TRANSITIONAL SURFACES



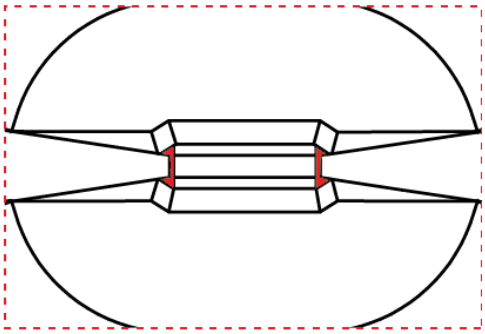
Transitional Surface: These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended from the sides of the primary surface and the approach surfaces. Transitional surfaces on the precision approach surface which project through and beyond the limits of the conical surface extend a distance of 5,000' horizontally from the edge of the approach surface and at right angles of the runway centerline

PRIMARY SURFACES



Primary Surface: a surface longitudinally centered on a runway;. The elevation at any point is the same as the elevation on the nearest point of the runway centerline

CLEAR ZONE SURFACES



Clear Zone Surface: a surface located on the ground or water at each end of the primary surface

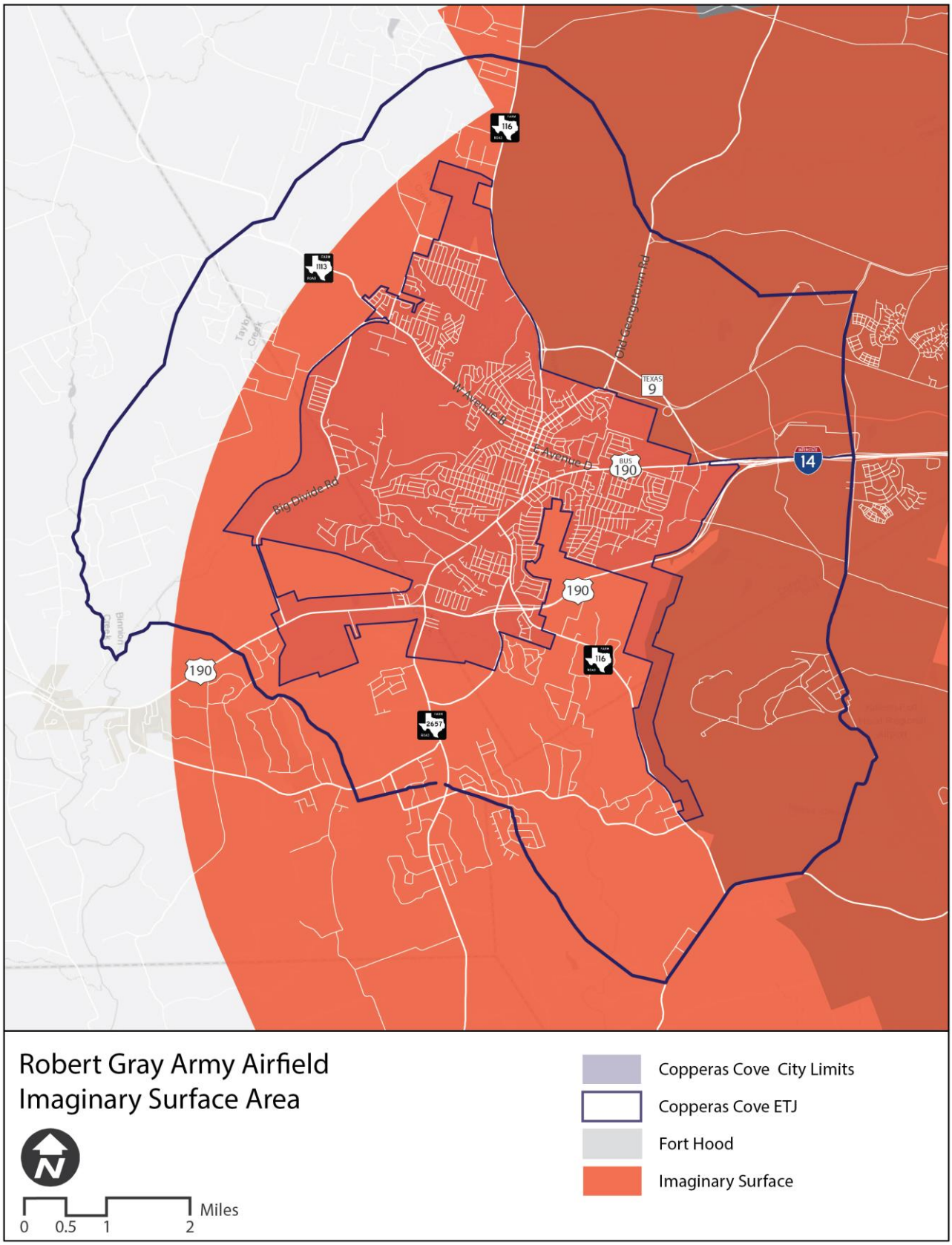


Figure 7: Robert Gray Army Airfield Imaginary Surfaces

As the map shown in Figure 7 on the previous page demonstrates, the entirety of the City of Copperas Cove and the majority of its ETJ fall within the imaginary surface areas associated with the existing runway at Robert Gray Army Airfield. The "floor" – or lower altitude – of these imaginary surfaces within the city's jurisdiction are typically 500 feet, as measured from the elevation of the primary surface (in this case the threshold at the end of the runway at RGAAF), although there is a portion of the conical surface in the ETJ that would have a slightly lower elevation. In order to protect this airspace the city will need to closely coordinate the review of tall structures with Fort Hood to ensure that aircraft arriving to and departing from RGAAF can utilize the full amount of airspace that is necessary to safely navigate around the airfield.

Like the low level flight corridors, imaginary surface areas are also subject to encroachment from land uses that can interfere with aerial navigation due to the emission of obscurants (smoke, steam, etc.), creation of glare and night lighting, electromagnetic radiation, and the attraction of birds (such as landfills). Given the geographic coincidence of these two areas of encroachment concern, any regulatory or coordination actions taken by the City of Copperas Cove to protect imaginary surfaces from incompatible land uses, should also help to protect the low level flight corridors.

IV. Emerging / Future Encroachment Concerns

In addition to the current areas of encroachment concern that were identified dur4ing the JLUS and further refined during the JLUS implementation process, there are a number of additional encroachment concerns that should be taken into consideration by the city as it prepares and executes plans and policies related to growth and development. Among these emerging and future compatibility concerns that could cause compatibility concerns in and around Copperas Cove:

- The potential for the construction of a second runway at RGAAF:
  - New imaginary surface areas associated with a new runway.
  - High noise potential from aviation operations with a new runway.

- Changes in weapons systems or doctrine that increase the level of noise exposure in the city and its ETJ.

- Increased training tempo that leads to more large scale combined arms maneuver training exercises in close proximity to the FM 116 corridor.

- An increase in the number, type and autonomous operational capabilities of Unmanned Aerial Systems at Fort Hood.

- Potential growth in the size and/or composition of the force structure stationed at Fort Hood.

While none of the previously mentioned scenarios is guaranteed to occur, the city should take these matters into account and be prepared to respond to changes as they occur.

A. RGAAF Second Runway

The potential for a second runway has been under consideration for some time, and the installation has developed plans detailing the most likely location and layout of a new runway. If constructed, this would lead to the establishment of a duplicate set of imaginary surfaces for the new runway, which would overlap with the current surfaces and extend to the south and west based on the proposed location of the second runway. As currently designed, the new runway would not create any areas of high aircraft accident potential (Accident Potential Zones) within the city, but it would likely lead to more frequent fixed wing (and potentially rotary wing) aircraft operations over the city given the alignment of the runway, as currently envisioned. This, in turn, could lead to encroachment concerns from aviation related noise if the runway's noise contours extend off of the installation.

If a second runway is constructed, it also raises the possibility of the stationing of an Air Force wing at RGAAF. While this is speculative, it could lead to significant changes in the number of fixed wing aircraft operations at RGAAF, and lead to an even higher potential for noise compatibility issues in areas where urban development encroaches toward the airfield. If this project comes to fruition, it will be important for Copperas Cove to coordinate with Fort Hood and its regional partners to access the most accurate information about potential encroachment concerns and incorporate these into its land use plans.

B. Weapons Training Noise

At the time of the JLUS implantation process, there are no defined noise contours that fall within the City of Copperas Cove or its ETJ, based on the most recent (2017) Fort Hood Installation Compatible Use Zone Study. While it is likely that noise from weapons training activity (particularly artillery and demolitions training) can be heard in Copperas Cove on a regular basis, the ICUZ indicated that the lowest measure of potential compatibility concern, the 115+ dB PK15 noise contour (single event peak noise levels expected to be exceeded 15% of the time) extend toward, but did not go past the installation boundary (see Figure 8 on the following page).

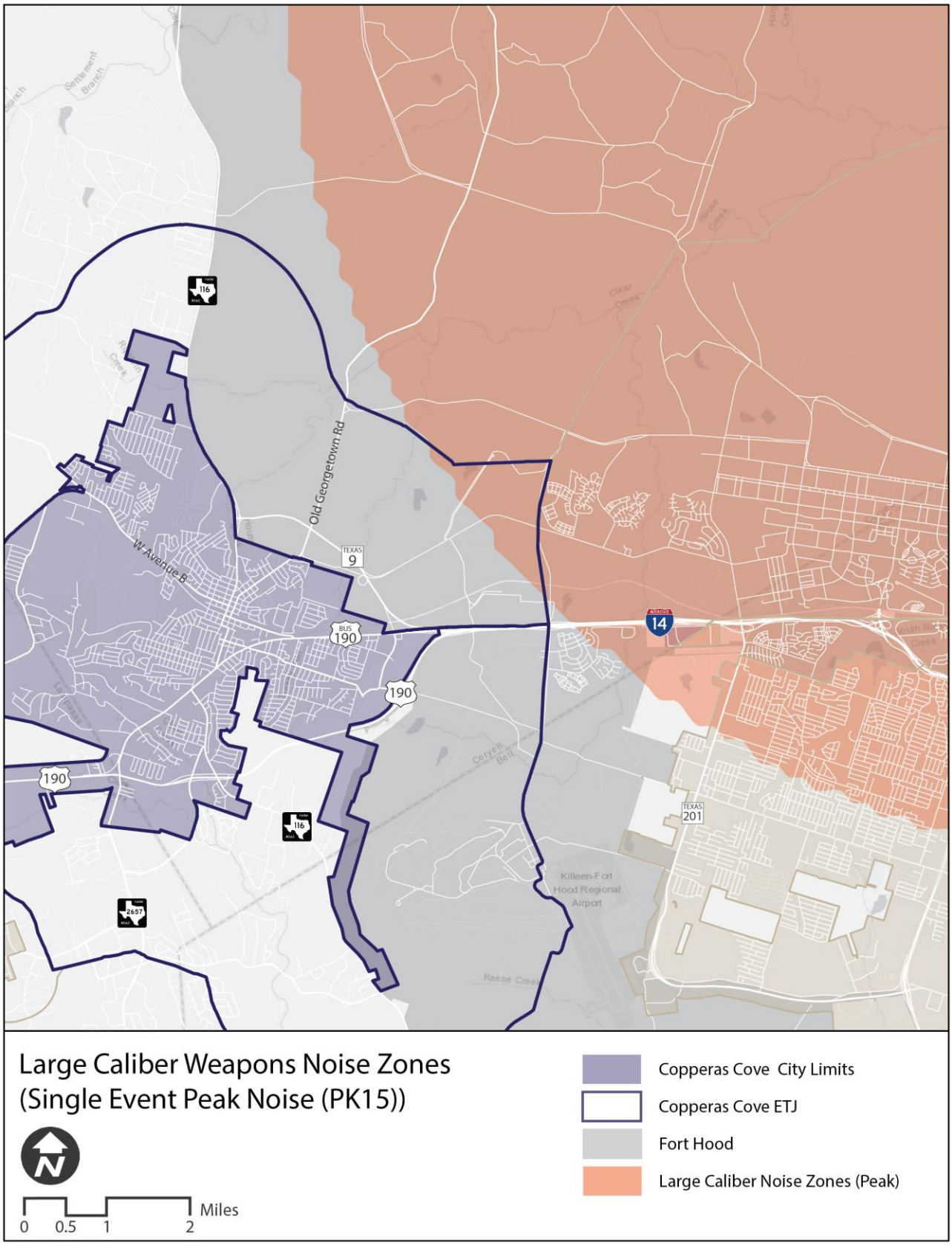


Figure 8: 115+ dB PK15 Single Even Large Caliber Noise Zone

If weapons systems or the location of artillery firing points / demolition ranges change in the future, it is possible that these peak single event noise contours could shift in a manner that could create encroachment issues in and around Copperas Cove. Therefore, it is important to maintain vigilance and work closely with Fort Hood and the regional partners to ensure that the city is fully apprised of planned changes and new data related to this type of encroachment concern, should changes occur to the current noise environment.

C. Increased Training Tempo / Force Structure Changes

As the region has already noticed, there has been an increase in the amount of large scale combined arms training occurring in the installation's maneuver training areas as the Army moves back toward a more conventional / decisive action training doctrine following over a decade of training primarily for low intensity conflicts and counterinsurgency warfare. If these trends continue to increase, additional encroachment concerns could emerge in the installation boundary area in addition to those noted in the previous section of the report.

Even if the units currently stationed at Fort Hood do not increase their training tempo, future changes to the force structure at the installation, whether through a future BRAC process or other changes dictated by the Army, could lead to similar increases in the utilization of training space in areas where encroachment concerns exist. This would especially be true if additional armored or other mechanized / heavy forces are stationed at Fort Hood, as they once were when the installation hosted two combat divisions.

Again, closely working with Fort Hood and the regional partners to maintain situational awareness about potential training and force structure changes will help the city be prepared to respond and shape its plans and policies to meet any emerging challenges.

D. Unmanned Aerial Systems

In recent years, Fort Hood has seen a significant increase in the use of Unmanned Aerial Systems (commonly referred to as "drones"). It is expected that as the technology matures, that the Army will become even more reliant on these systems and they will be deployed to operational units on a greater basis. Even at the point of significant maturity of the systems, there will likely still be operational restrictions on where UAS overflight are permitted to occur outside of restricted airspace, given the military's sensitivity to the potential for accidents involving these remotely piloted (and likely soon to be autonomous) systems in civilian areas.

The ability of these systems to be used in training in the same manner that they will be used on the battlefield is critical, though, to their viability as a tool in the Army's arsenal and to ensure readiness on the units that will be tasked with taking them to war. Therefore, it is critical that the conditions exist for them to be able to access as much of the aviation training airspace as possible, particularly the low level flight corridors and other special use airspace off of the post. It is also critical that they have sufficient maneuver area around the airfields where they are based.

The primary limiting factor with respect to off-post areas where these systems might be permitted to operate in the future is the degree and density of urban growth around the installation and its airfields. If urban growth exceeds certain limits, UAS overflights could be restricted or prohibited, potentially leading to greater competition for increasingly crowded training airspace. As new systems are fielded, or new UAS operating units are gained by Fort Hood, it will be critical for Copperas Cove to closely monitor and work with Fort Hood to ensure that it retains viable access to airspace that is free from encroachment from dense urban development so that UAS operations are not unreasonably constrained.

V. Land Use Compatibility Tools

The following is a summary of the tools that are available for the City of Copperas Cove to consider utilizing as it moves forward with its regional partners to plan for and address compatible growth and encroachment issues around Fort Hood.

A. Regional Land Use Compatibility Efforts

As a region, the communities that partnered together to prepare the 2016 JLUS have begun to implement many of the recommended strategies contained in the study report. Chief among these early actions was the establishment of an agreement between Fort Hood and the Central Texas Council of Governments to cooperate on regional land use compatibility matters, with CTCOG taking the lead role in coordination between the civilian communities and Fort Hood. The Joint Use Agreement (JUA), as it is termed, provides for a coordination mechanism that will allow local governments to submit land use related matters to Fort Hood for review and comment when proposed action could affect land use compatibility or otherwise pose and encroachment challenge. Examples of issues that local governments may request comments from Fort Hood on include zoning map amendments in areas of encroachment concern, proposals for tall structures, and similar matters.

The JUA is an outgrowth of the JLUS implementation process, which identified the establishment of this type of formal land use coordination protocol as a critical component of ensuring ongoing cooperation between Fort Hood and its civilian partners. As the process matures, CTCOG will be working with each local government in the region to establish formal coordination mechanisms in support of the regional coordination protocol. The JUA also establishes a number of other regional coordination responsibilities for CTCOG, with which it will need assistance from its local government partners to fulfill. Among these are:

- The establishment, administration and ongoing maintenance of a regional GIS database focused on compatible growth and encroachment awareness related data

- Promoting the awareness of compatible growth issues in the communities in the region through public outreach programs and materials.

- Assisting local governments with updating plans and policies to promote compatible growth and mitigate encroachment around Fort Hood.

- Serving as a conduit for disseminating information between Fort Hood and local governments (and the reverse).

- Seeking the involvement of technical experts from Fort Hood, as needed, to assist and provide advice to local governments on the development of plans and policies related to compatible growth.

As a party to the JUA, Fort Hood has also agreed to undertake a number of measures to assist local governments in the region with planning for compatible growth, with CTCOG serving as the primary conduit for coordinating these actions. Among Fort Hood's ongoing responsibilities are:

- Providing analysis and input on land use matters that are submitted to it through the CTCOG.

- Providing data, reports, and studies to CTCOG to share with local governments related to Fort Hood's mission and training activities, including areas of encroachment concern and associated military training impacts.

- Inviting potentially affected local governments to participate in and comment on internal planning projects, as appropriate.

- Participate in local government planning processes, when invited.

- Provide command briefings to the CTCOG Executive Committee on a regular basis to ensure that elected officials are informed about what is occurring at Fort Hood.

- Assisting CTCOG with the development and distribution of promotional materials related to compatible growth issues.

While these are not exhaustive lists of the actions that are being taken by CTCOG and Fort Hood to support local governments in the region with compatible growth efforts, it shows the depth of the commitment that has been formally agreed to by these entities to move forward with the implementation of the JLUS. With these significant support tools at hand, it will still be the responsibility, and option, of each local government to take advantage of the support being offered and move forward with their own implementation efforts at the local level.

In addition to the JUA, it should be noted that the JLUS implementation process is carrying forward with standing Policy and Technical committees, and a JLUS project manager embedded with CTCOG. Each local government in the region has been invited and is encouraged to continue their participation in these committees that are guiding the regional implementation efforts. In the future, it is likely that an update to the JLUS will be prepared, although no nomination is currently pending. It will be critical for all local governments in the region to continue their participation through future regional planning efforts.

Other organizations at the regional and state level are also working to support military land use compatibility as part of their missions. Among the organizations that local governments may seek to support, join or participate with include:

- Heart of Texas Defense Alliance (HOTDA)

- Cen-Tex Sustainable Communities Partnership

- Texas Military Preparedness Commission (TMPC)

- Texas Mayors of Military Communities (TMMC)

B. Local Government Planning

Perhaps the most effective tool for local governments to use to support the ongoing compatible growth of the region around Fort Hood is the authority granted to local governments to adopt comprehensive plans (Texas LGC Chapter 213), and other related plans to guide the growth and development of their communities (note that no similar authority to adopt such plans exists for counties, but they may still maintain studies and reports related to related matters, such as the JLUS). By incorporating data related to compatible growth and areas of encroachment concern into their local comprehensive plans, infrastructure plans, annexation plans and similar documents, municipal governments can set conditions in which incompatible urban development is less likely to occur around Fort Hood.

Municipalities also have the authority to set standards for the consistency of their land use ordinances with the adopted comprehensive plan, which, if compatible growth strategies are included, can serve as an additional backstop to the likelihood of incompatible urban development occurring. In order to ensure that the most relevant information is included in local planning documents, coordination with the regional partners and Fort Hood should be an ongoing task for each local government in the region. As new information becomes available, plans should be updated to reflect changing circumstances. Ultimately, each governing board will then need to take action to ensure that, where necessary and desired, that the local compatible growth strategy is incorporated further into land use regulations, capital improvement plans, and other implementation mechanisms.

C. Municipal Zoning

Municipal governments in Texas are authorized by statute (Texas LGC Chapter 211) to adopt and implement zoning ordinances to regulate growth in their communities. The zoning statutes provide significant authority for municipalities to regulate the location, type and character of development within their communities (note that zoning authority, with certain exceptions, does not extend to a city's ETJ). This authority is generally sufficient for the regulation of land uses in a manner that is consistent with compatible growth issues present in a community.

Zoning regulations adopted to address military land use compatibility issues are most often implemented as "overlay districts" which are supplementary districts that impose additional restrictions than those associated with the underlying general use district (such as a commercial or industrial district). Specific examples of military land use compatibility issues that are frequently addressed through the use of overlay zones are:

- Aircraft accident potential zones (APZs), in which zoning restricts the types of uses and density of development in these areas.

- Airport imaginary surface areas, in which zoning restricts the height of structures and prohibits certain land uses that can interfere with aerial navigation.

- Noise attenuation districts, which restrict certain noise sensitive land uses and/or impose construction standards to achieve certain levels of interior noise level reduction.

- Coordination districts, which are often used to define an area in which statutes require the notification and coordination with a military installation on plans, ordinances, and development proposals. In the case of Texas, such a district could be used to establish the (not well defined) mandatory coordination area established by Section 397.005 of the Texas LGC.

- Military lighting districts, in which there are additional regulations governing the installation and operation of outdoor lighting fixtures that interfere with military training activities.

This is only a representative sample of some of the ways in which overlay districts can be utilized to implement policy recommendations regarding land use compatibility in a city's comprehensive plan. This versatile tool can be modified to fit most circumstances, provided that they meet other statutory and constitutional requirements.

Another way that cities can implement compatible growth recommendations through its zoning power is through the application of general use districts that are more compatible with the nature of the external training impacts. Examples

of this can include applying industrial zoning districts in areas that are subject to high noise levels, where single family residences would not be compatible. Another example would be the application of a very low density residential zoning district to an area where there are general encroachment concerns, such as in an area adjacent to a maneuver training area, and thereby limiting the number of potential residential dwellings that can be constructed in such areas, if no other alternative exists to preserve some economically viable use of the land.

In addition to the general statutory zoning authority that municipalities have, the Airport Zoning Act (Texas LGC Section 241) also authorizes additional zoning authority for cities *and counties* to regulate land use around airports. The statute further authorizes the creation of joint airport zoning boards (JAZBs) to administer adopted regulations when two or more units of local government desire to act jointly. An additional provision of the statute permits cities with populations of greater than 45,000 residents to extend their airport compatible use regulatory area outside of their municipal jurisdiction to include any land within 5 miles of the end of each runway of an airport operated for the benefit of the public.

D. Regulation of Subdivisions

Both counties and municipalities are authorized by statute (Texas LGC Sections 232 and 212, respectively) to regulate the subdivision of land within their jurisdictions (including the authority of cities to regulate subdivisions in their ETJs). While subdivision regulatory authority is generally not as strong of a tool to promote compatible growth as zoning is, there are certain regulatory and coordination mechanisms that can be built into a subdivision ordinance that can help to ensure public awareness about the presence of military training and preserve the ability of military aviation operations to continue.

Among these tools are requirements for the local government to provide notice to a military installation of a proposed subdivision in an area of encroachment concern, and the transmission of comments or concerns regarding the proposed development to the subdivider, if the installation chooses to provide such. Subdivision ordinances often require a number of notices to be provided on the final plat before it is approved and recorded. In keeping with this practice, military communities can choose to require a plat notification regarding the presence of military training impacts to help ensure that buyers within the

subdivision are made aware of potential compatibility issues. With regard to military aviation training and facilities, subdividers can also be required to grant "avigation" easements that release the operators of aircraft from any nuisance or potential hazard that the continuation of operations above or in the vicinity of the subdivision might create after it is developed.

While there is no general statutory authority to deny the approval of a subdivision that meets all of the standards set out by an adopted ordinance, measures such as those described above can help to dissuade landowners from developing in areas where encroachment concerns exist, and ensure that buyers within the subdivision are made aware, to the extent possible about the presence of compatible use issues prior to investing in a property.

E. Municipal Building Codes

Municipalities are authorized by Section 214 of the Texas Local Government Code to adopt and enforce regulations for the construction of buildings within their jurisdictions. There are also statutory provisions for local governments to adopt modifications to the building codes for application in their jurisdiction. The most applicable potential modification that a city near a military installation might consider is the adoption of building standards that require interior noise level reduction in certain areas of high noise potential, such as in low level flight routes, or within airfield noise contours. The use of such construction standards can only be applied to new buildings, and so existing noise sensitive uses in inadequately soundproofed structures would still be subject to compatibility issues.

VI. Recommendations

The following is a detailed list of recommendations for the City of Copperas Cove to consider implementing both on the local level, and in concert with its regional partners to promote compatible growth in the city and throughout the wider region. While not all of the recommended strategies may be immediately implementable, and not all may be "ripe" for implementation given the realities of governing at the local level, their inclusion in the Copperas Cove's overall long-term strategic land use guidance will ensure that they are ready for implementation if the need or desire emerges for their use.

The majority of the recommended strategies contained in this section have similar counterparts in the comprehensive plan supplements provided to the other

communities in the region, with some variation due to local needs or conditions, including the recognition of the significant difference in the amount of influence that counties currently have over land use matters. Like the JLUS recommendations, which helped to inspire the development of the recommendations for local governments, these are divided into the categories of: Coordination, Planning for Compatible Growth, and Regulations to Support Compatible Growth, along with supplemental recommendations that do not fit well within the first three categories.

A. Coordination

1. Continue to engage in regional efforts to enhance the compatibility of future growth and development around Fort Hood, including the participation of local government staff and elected officials on the JLUS Policy and Technical Committees.

2. Actively participate in future updates to the Joint Land Use Study and other regional plans related to compatible growth around Fort Hood.

3. Adopt standard operating procedures for the transmission of land use and development proposals within areas of encroachment concern for review and comment by Fort Hood, per the Joint Use Agreement.

4. Where discretionary decisions are permitted with regard to land use and development proposals within areas of encroachment concern, incorporate input received from Fort Hood regarding land use compatibility into the decision-making process.

5. Participate in planning processes initiated by Fort Hood, as requested by the garrison.

6. Share plans, data, and other relevant information with Fort Hood and regional partners.

7. Assist in regional efforts to enhance public awareness about compatible growth issues, including providing access to the current (and future) Joint Land Use Study document on the local government website.

8. Assist in the promotion of public notifications by Fort Hood regarding training activities that exceed the level or type of typical training activities on the installation.

9. Establish formal protocols for the transmission of community complaints related to noise, aircraft overflight and similar training activity to Fort Hood.

10. Work with the Central Texas Council of Governments to establish protocols that ensure timely updates of data are transferred for use in the regional GIS database.

11. Support regional efforts to secure legislative authorization to provide local governments in the region, and throughout the state, with the tools to support compatible growth in areas of encroachment concern.

12. Continue to work with Fort Hood to identify opportunities to establish partnerships that provide mutual benefit to the community and installation.

13. Support ongoing regional efforts to secure funding for infrastructure projects that enhance the military value of Fort Hood through the Defense Economic Adjustment Assistance Grant program.

14. Coordinate infrastructure improvement projects with Fort Hood (such as road improvements, utility upgrades, and stormwater improvements) to ensure that potential external impacts and future plans are taken into account in the design and implementation of the projects.

B. Planning for Compatible Growth

1. Incorporate military land use compatibility information into future updates to the Comprehensive Plan.

2. Incorporate compatible growth factors into the development of infrastructure plans to ensure that utilities and transportation infrastructure do not increase the likelihood of encroachment by incompatible land uses into areas of encroachment concern.

3. Invite relevant Fort Hood garrison staff to participate and provide input on technical matters related to compatible growth in the process of the development of land use and infrastructure plans.

4. Work with Fort Hood and regional partners to incorporate updates related to areas of encroachment concern into local plans and ordinances as new/updated information becomes available.

5. Work with Fort Hood to identify and mitigate potential encroachment issues related to ongoing growth along FM 116 north of the city limits in the current ETJ area and beyond.

6. Extend assistance to other local government agencies, such as school systems, to assist them with siting facilities and developing long range plans that take compatible growth and encroachment concerns into consideration.

C. Regulations to Support Compatible Growth

1. Adopt and implement land use and development regulations to address potentially incompatible development in areas of encroachment concern and update the extent of these regulations as areas of encroachment concern change.

2. Adopt and enforce regulations associated with the siting of small cell wireless facilities within rights-of-way under local government control that includes a discretionary review criteria that the facility may be denied a permit if it poses a hazard to aerial navigation.

3. Adopt and enforce regulations that prohibit the siting of wind energy facilities in such numbers or locations that would impact the functionality of the Airport Surveillance Radar located at Robert Gray Army Airfield.

4. Adopt and implement land use compatibility regulations that prohibit the establishment of tall structures or other land uses that pose a hazard to aerial navigation within low level flight corridors.

5. Adopt and implement land use compatibility regulations that prohibit the establishment of tall structures or other land uses that pose a hazard to aerial navigation within the imaginary surface areas associated with Robert Gray Army Airfield.

6. Amend the subdivision ordinance to require the inclusion of a statement on final subdivision plats that references the potential for land within the

subdivision to be subject to impacts from military training and operational activity.

7. Amend the subdivision ordinance to require the dedication of avigation easements in the vicinity of low level flight corridors and within imaginary surface areas.

8. Adopt and implement regulations for formal coordination and notification of land use and development proposals that may have an impact on military training and operations within defined areas of encroachment concern, including any area within one mile of the installation boundary, regardless of the presence of a defined encroachment concern.

9. Review current outdoor lighting regulations, and amend as necessary to incorporate standards that are designed to reduce the amount of background lighting to enhance night training on Fort Hood and eliminate potential glare hazards for nighttime aviation operations.

City of Copperas Cove

T E X A S

City Built for Family Living

APPENDIX B:

2020 TRANSPORTATION MASTER PLAN

ACKNOWLEDGEMENTS

The 2020 Transportation Master Plan (TMP) being an update to the 2007 Thoroughfare Plan was developed by the City of Copperas Cove with the technical assistance of Lockwood, Andrews & Newman, Inc. (LAN) and edited by BG Services. A special thanks to the many residents, landowners, business owners, community leaders and stakeholders for their input and support throughout this update process. The following individuals are recognized for their significant contributions in the preparation of the 2020 Transportation Master Plan update for the City of Copperas Cove.

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Fred Chavez – Place 2

Dan Yancey – Place 3

Jay Manning – Place 4

Dianne Campbell – Place 5

Marc Payne – Place 6

Jack Smith – Place 7

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Special recognition to former Chairman, Bob Martin

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EXECUTIVE SUMMARY

Plan Purpose

The City of Copperas Cove Transportation Master Plan update is intended to provide a guide for the implementation of the Comprehensive Plan goals and the citizen's priorities and visions for the City's transportation system.

The City of Copperas Cove has a complex natural environment. The geography, history, and planning choices have led to a city with unique needs in preparing for the future development. The existing arterial network and local street patterns are significantly influenced by the natural terrain, US Hwy 190, Burlington Northern Santa Fe (BNSF) railway and neighboring Ft. Hood which impact trends in future development and will most likely continue to do so. All of the municipalities surrounding Ft. Hood have steadily grown over the past 20 years, including the City of Copperas Cove. With this growth comes increased transportation demands and resulting traffic improvement needs.

US Hwy 190 Bypass looking North

Goals and Objectives

The goals of this Transportation Master Plan (TMP) update include the following:

- The TMP will serve as the basis for the transportation element of the Comprehensive Plan.
- Suggest short-term and long-term strategies for motor vehicle, bicycle and pedestrian mobility.
- Serve as tool for the implementation of the Comprehensive Plan.
- Function as a guide for transportation decisions in the City.
- Include strategies and recommendations focused on achieving a safe, efficient and effective multimodal transportation system.

In order to achieve these goals, the TMP update study effort required completing the following:

- Collect, assess, and analyze pertinent data and information relevant to the TMP.
- Evaluate the existing transportation network.
- Evaluate the goals and priorities of the public in regard to the existing transportation system and future needs.

- Develop a prioritization system to aid in identifying the necessary transportation system improvements.
- Recommend design standards for roadway classifications.
- Recommend potential future projects and prioritize based on the developed system.

Data Assessment

A significant amount of data was reviewed and compiled to determine the current state of the City's transportation system. Features and attributes related to the City's transportation network included:

- Geographic features – constraints such as topographical, floodplains, and waterways.
- Existing transportation infrastructure – city streets, TxDOT highways, sidewalks, and railways.
- Recent transportation project completions.
- Places and uses – places of interest within the City and current zoning.
- People and travel distribution – included analysis of historic roadway intersection traffic counts provided by the City.
- Growth – anticipated development location and impact.
- Planned transportation improvements – The Killeen-Temple Metropolitan Planning Organization (KTMPO) Transportation Master Plan and current City of Copperas Cove CIP.

The results of this data analysis are presented herein and were used, along with significant public feedback, to develop the results of the plan.

Public Involvement

Since 2007 the City's population has grown to a total population of 34,787 (per Resolution 2019-4), with a median age of 31.9 years (2018 Census). New priorities for quality of life have emerged and have been considered in this TMP update. These priorities were identified through public input, which consisted of three independent public meetings held over the course of a year. Additionally, an online survey engaged a larger portion of the community and allowed citizens to be explicit in their comments and responses.

The public's priorities are summarized in the graph below. Road safety and traffic congestion were the two highest ranking concerns. The public response made clear that a safe roadway design should consider all users (pedestrian, bicycle, transit, etc.). This goal was subsequently included as one of the primary recommendations of this TMP update.

Graphic 1 - Road Safety ranked number one priority

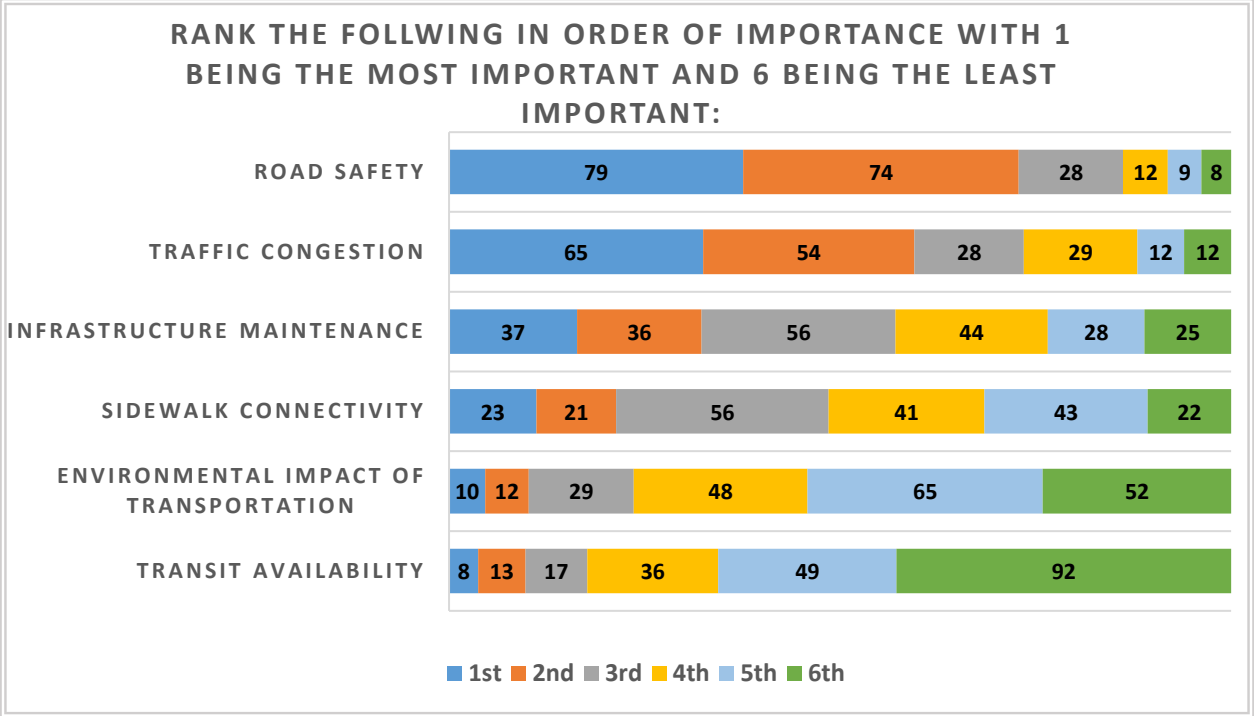


Chart 1 - Ranking in Order of Importance

Implementation

The updated TMP also developed a means to prioritize future transportation improvement projects based on the results of the citizens' survey and public outreach conducted in 2016. This project scoping system shown in **Chart 2** is a tool that can be used by staff to develop future capital improvement projects. A detailed discussion of the ranking system is provided within this update and the resulting ranking of potential projects based on this prioritization strategy is available in **EXHIBIT E.**

Category	Priority	Weigh
Safety	Reducing Car Accidents	10 pts
	Improving Non-Auto Safety	10 pts
Mobility	Vehicular Connectivity	7 pts
	Vehicular Delay Mitigation	5 pts
	Active Connectivity	7 pts
	Modal Choice	3 pts
Development	Activity Center	6 pts
	Promote Future Land Use	5 pts
	Jobs Access	4 pts
Implementation	ROW Acquisition	8 pts
	Plan Coordination	4 pts
	Current Need	8 pts

Chart 2 - Potential Project Listings and Prioritization

This TMP update recommends three basic roadway classifications – arterials, collectors, and locals. The Plan makes a distinction between active transportation network and non-active transportation network

as shown on the map in **EXHIBIT A**. By Active Transportation, the Plan is referring to opportunities for walking, running and cycling – human powered mobility. Transit is also included as a part of the active transportation network, in that walking or cycling may be required to make the transit connection.

Although the Plan does not specify exact roadway design elements, it does provide a guideline and proposed cross- sections to allow the roadway to fit the land use context of the development and to serve all the potential users of that roadway.

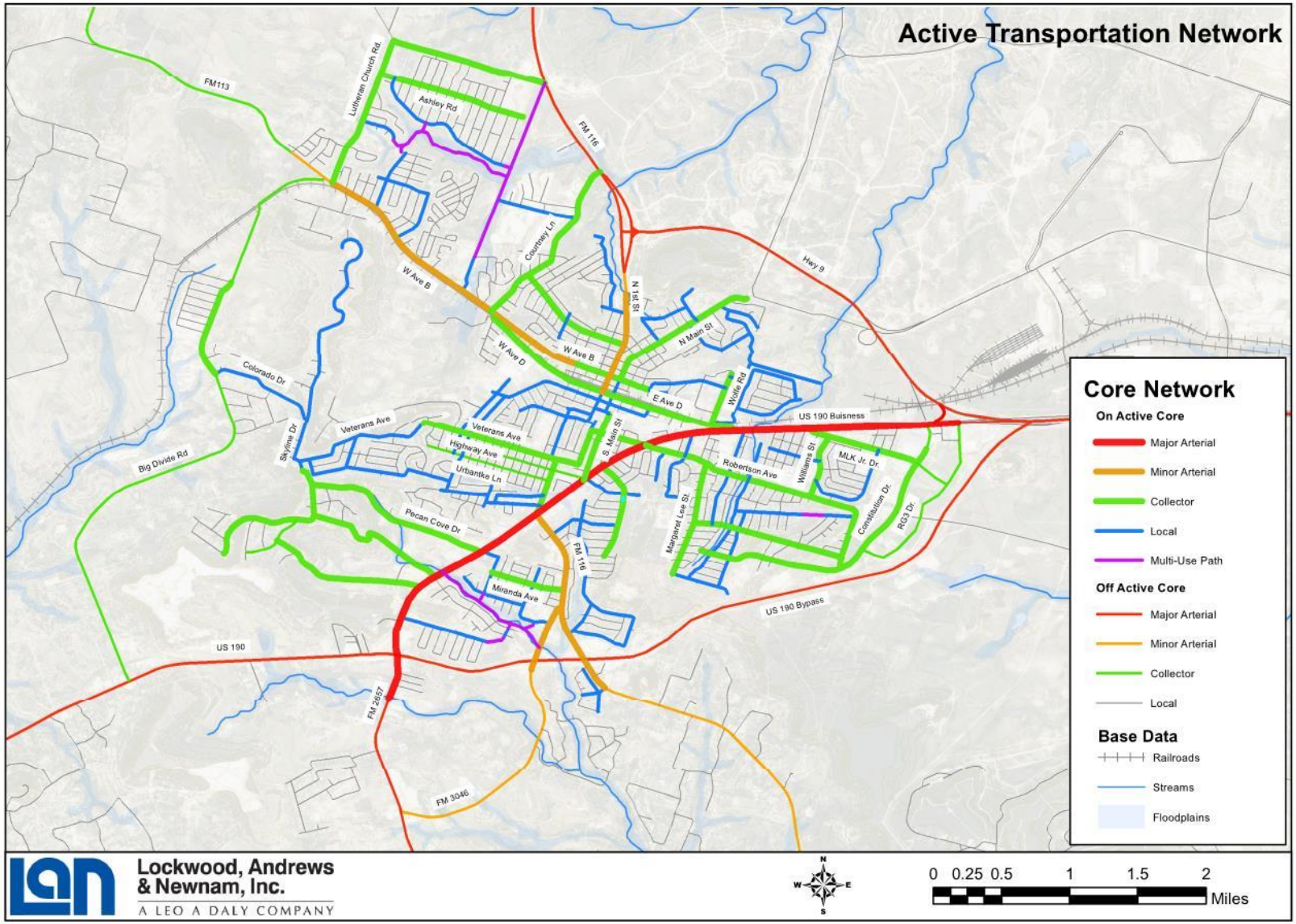
<table>
<tr><td rowspan="4">Arterials</td><td rowspan="2">Major</td><td>Active</td></tr>
<tr><td>Non-Active</td></tr>
<tr><td rowspan="2">Minor</td><td>Active</td></tr>
<tr><td>Non-Active</td></tr>
<tr><td rowspan="2">Collectors</td><td colspan="2">Active</td></tr>
<tr><td colspan="2">Non-Active</td></tr>
<tr><td rowspan="2">Locals</td><td colspan="2">Active</td></tr>
<tr><td colspan="2">Non-Active</td></tr>
<tr><td colspan="3">Multi-Use Pathway</td></tr>
</table>

Chart 3 - Roadway Classifications

The 2020 TMP update classifies existing roadways based on these factors and connectivity in the network. The Active Transportation Network is provided on Page 9, **Map 1** and in **EXHIBIT A** of this document.

The roadway classifications updates are minor with the Colorado Drive, Skyline Drive and Veterans Avenue east-west connection reclassified from a collector to a local street, and Grimes Crossing Road from Big Divide Road to W. Avenue B (FM 1113) reclassified from a local street to a collector roadway. A multi-use path is also recommended in the northwest part of the City.

Multi-use Pathway along Avenue B



MAP 1 - ACTIVE TRANSPORTATION NETWORK

INTRODUCTION

A Transportation Master Plan (TMP) establishes goals and policies for defining transportation needs to efficiently and cost- effectively meet future growth. Further, the TMP identifies deficiencies based on existing conditions and anticipated future transportation requirements to prepare for mobility investments and address specific needs of the community in response to identified priorities.

The Copperas Cove TMP examined the City's existing transportation network, solicited the citizens' perspectives on transportation priorities for the future, evaluated existing traffic patterns, and identified network improvements that prioritized a sustainable transportation system for the future. Key to these efforts was the input from the prior *2007 Thoroughfare Plan*; helping to guide the effort was the need to integrate the TMP update findings and recommendations into the City's Comprehensive Plan. The specific guidance of the Copperas Cove staff was critical. The significance of this input is shown in the evaluation of potential transportation-related projects found in **EXHIBIT E – POTENTIAL PROJECT LISTING AND PRIORITIZATION**.

The staff provided invaluable assistance in identifying the potential projects discussed in this update, providing direction on how to weight the key benefits of each project relative to the identified transportation priorities.

This TMP update examines the current transportation system and pinpoints the impacts of Copperas Cove's growth on the existing system. For the existing transportation system, both the deficiencies in meeting the current or future system demands and priorities as well as those attributes that should be preserved are identified. This plan provides recommendations for future improvements to the City's transportation system. With the objective of striving towards sustainable development as a benchmark, this TMP provides an extensive list of potential projects and corridors for expansion that would provide for a more complete and sustainable transportation system in the future. Below are two examples in the form of dead-end streets which illustrate the need for connectively to the existing transportation network.

Deadend at Clovis and Walker Place

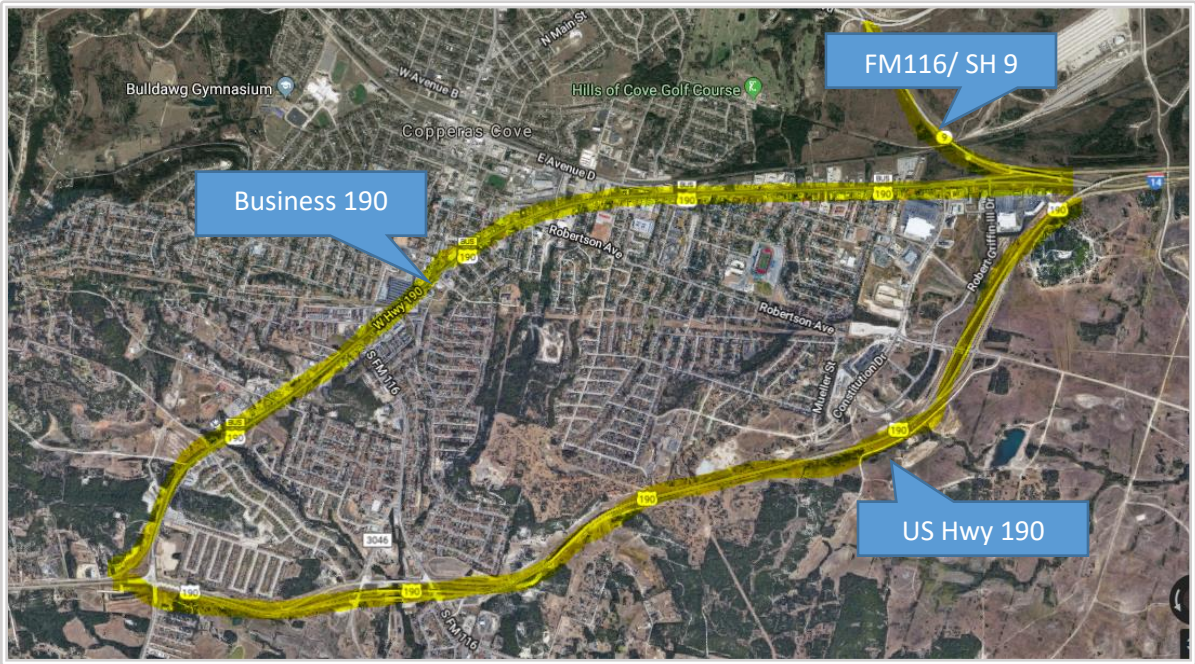
Deadend at Ashley and Jesse

History of the TMP

As found in the 2007 Thoroughfare Plan, this plan provides a framework for roadway classifications and the basic parameters from which detailed engineering construction planning can be developed.

The 2007 Copperas Cove Comprehensive plan provided the last update to the City's transportation system plan. The plan set out to provide an efficient, structured framework for future growth and development while enabling individual developments to be coordinated or integrated into a unified system. That plan also encouraged the creation of neighborhoods with minimal amount of through traffic while providing high capacity routes for moving regional and local traffic through the community.

The *2007 Thoroughfare Plan* identified the US Hwy 190 bypass through the southern part of the City to allow regional traffic to efficiently move through the City without impacting the quality of life of most neighborhoods. The plan also envisioned the construction of northern (SH 9) bypass connection through the outer edges of Ft. Hood connecting FM 116 from the north to US Hwy 190 to the east of the City. These two bypasses have been completed as the plan envisioned.



Map 2 - US Hwy 190 and SH 9 Bypasses

Since 2007 the City's population has grown to a total population of 34,787 (per Resolution 2019-4), with the median age 31.9 years old (2018 Census). As evidenced by the public outreach conducted as part of this TMP update, new priorities for the transportation system to provide additional quality of life benefits have emerged. This update looks to broaden the consideration of future transportation system needs by examining not only the City's network of roadways, but also the cost-effective, alternative pathways and sidewalks that can, to an appropriate extent, provide for these "quality of life" benefits.

The 2007 Plan also established a system of roadway classifications with recommended roadway, lane and right-of- way widths. In this prior plan, the overriding concern was traffic congestion. Therefore, projects were selected that focused on relieving traffic delays and local congestion. Unfortunately, some quality of life aspects were not emphasized. Neighborhood streets were urbanized based on vehicular access and traffic flow; consideration of sidewalks and pathways to accommodate pedestrian needs and related quality of life benefits were often an afterthought.

Purpose and Need

Due to growth and the resulting increase of traffic congestion, the likelihood of change in citizens' attitudes toward the Copperas Cove transportation network and the benefits it should provide, an update to the 2007 Plan was needed. The purpose of the TMP update is to recognize and account for the changing conditions and needs. This creates the necessity to identify projects and develop recommendations for a sustainable transportation system that will reflect a balanced set of network improvements.

Goals

The goal of the Copperas Cove TMP update is reflected in this statement from the City Council:

> *"As the region's population continues to grow, transportation issues will become increasingly important and complex. The effort is meant to lay out framework for how the City will spend money and make decisions on roads, sidewalks, trails, and transit over the next decade. Developing a comprehensive plan will promote efficient use of future funding and resources with the goal of achieving an improved and sustainable transportation future."*

The goal of providing the citizens of Copperas Cove with an adequate, sustainable transportation system is fundamental to the update. Ensuring that future transportation projects meet the criteria of affordability coupled with addressing the priority of benefits expected by the public is another. A key goal of this update is to identify, address and recommend properly balanced benefits that will address quality of life needs as well as traffic safety and congestion.

Overall, the goal is to provide a transportation network to serve the needs of the City of Copperas Cove.

Tasks and Methodology

The tasks performed to achieve the goals and objectives of the update can be summarized as follows:

- Evaluate the existing transportation network.
- Collect, assess, and analyze pertinent data and information relevant to the TMP.
- Evaluate the goals and priorities of the public in regard to the existing transportation system and future needs.
- Develop a prioritization system to aid in identifying the necessary transportation system improvements.
- Recommend design standards for roadway classifications.
- Recommend potential future projects and prioritize based on the developed system.

The specific methods used, the data and information collected for performing these tasks, and the findings are provided in detail in each of the update Sections below.

DATA ASSESSMENT

Planning is comparable to programming or modeling – the results are only as good as the information used to develop the plan. Developing a transportation plan requires understanding of topographic and waterway constraints, as well as understanding of the citizen's travel desires and habits. **Map 3** is the City map that shows the City limits and the extraterritorial jurisdiction boundaries including roadways, railroads, streams, floodplains, floodways, etc.

Geographic Features

Situated in the Lampasas Cut Plains, the area of the Five Hills has a varied topography between the flat prairies to the north and Texas Hill Country to the south as shown in **Map 4**. These geographic constraints have affected development. The northern plains and southern valleys contain single-family neighborhoods of similar size and shape. The hillier neighborhoods are less uniform. The transition between the high and low elevations limits transportation connectivity and affects intersection layouts, e.g. Colorado Drive and Skyline Drive.

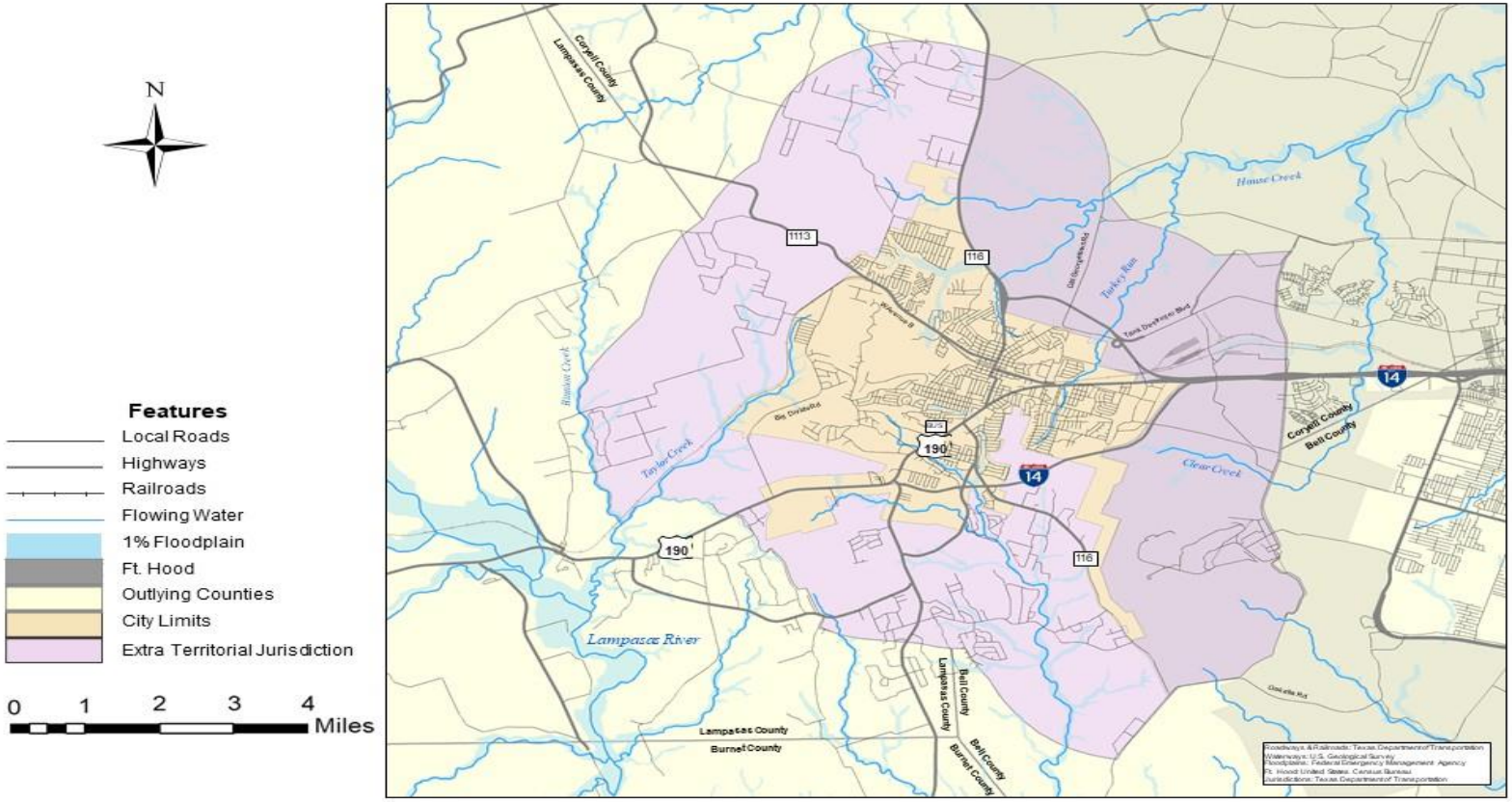
Intersection at Colorado Drive and Skyline Drive

The terrain also affects the design and development around the new US Hwy 190 bypass south of town. The bridge and cut nature of the segment limits the access points to certain areas.

The natural streams in the area feed into either the Lampasas River to southwest or Cowhouse Creek to the north. Natural streams with notable impact to development are Turkey Run flowing from south to north on the east side of the City, and Clear Creek flowing from north to south on the southern side of the City. Other natural streams within the City create additional floodplains. These floodplains areas impact new building and roadway construction. There are examples of floodplain management efforts that have been redirected or mitigated natural streams over time to limit negative impacts to new development, e.g. the floodway between Pleasant Lane and Phyllis Drive shown below.

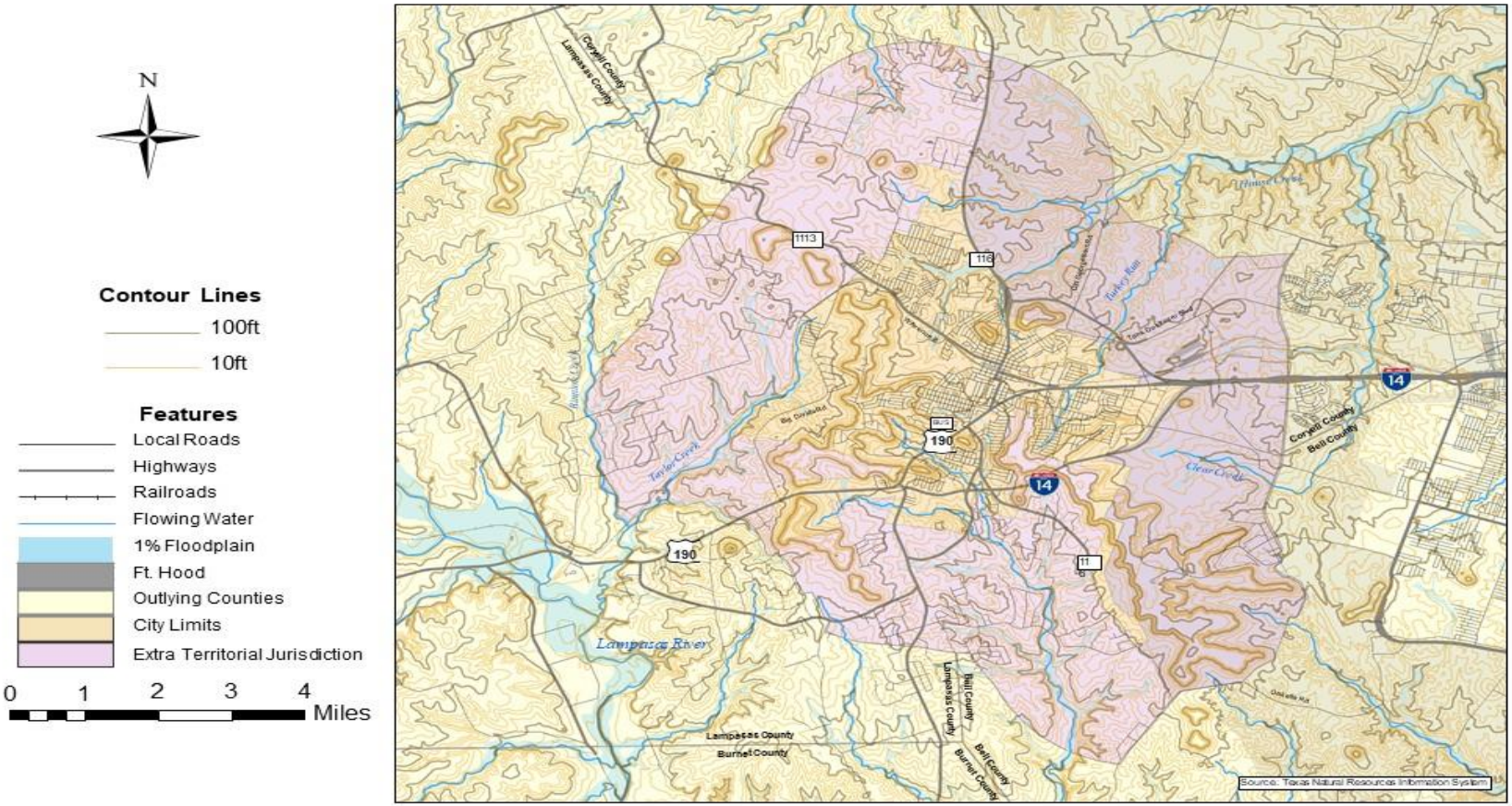
Floodway between Pleasant Lane and Phyllis Drive

Base Map



Map 3 -- City Base Map

Topography



Map 4 -- Topography

Places and Uses

The City is home to two high schools, two junior highs, six elementary schools and a junior learning academy. There are also three large parks: Ogletree Gap Park, City Park, and the Municipal Golf Course, as well as multiple mini parks. The Ogletree Gap Stage Coach Stop and Post Office is one of many historic places in the area. Others include cemeteries, churches, and a masonic lodge. **Map 5** is a mapping of these points of interest.

As discussed in early chapters of the Comprehensive Plan Update, the Business 190 corridor is primarily zoned for general retail uses. There are two areas zoned for commercial retail or business services. The first area is between Constitution Drive and Robert Griffin III Drive, specifically the 5 Hills Retail Center, The Narrows, and the Business and Professional Park developments. The second area dedicated to commercial services is along US Hwy 190 west of FM 2657 on the south side of the City. Although both areas are currently sparsely occupied and provide a large opportunity for future growth, each is still a travel destination for many citizens.

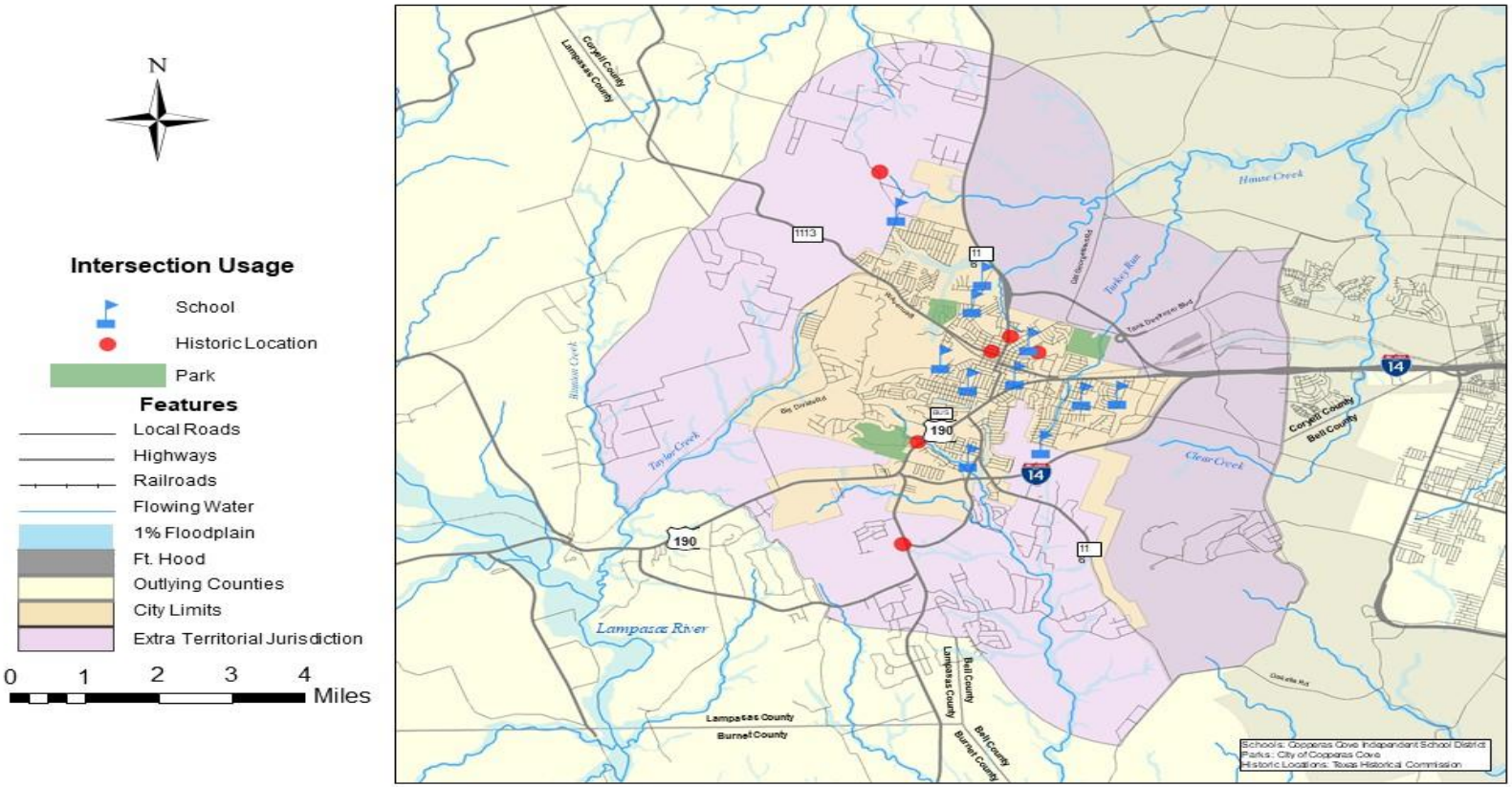
On the north side of the City, north of Lutheran Church Road, commercial and residential developments are under design or construction. On the western side of the City, the railroad tracks serve as a northern border to a large stretch of agricultural uses which proceeds south and transitions to established housing.

The residential areas in the City are split into five zoning types. The northern portion of downtown and some other select areas are dedicated to high density multi-family housing. The Cedar Grove Community and the Five Hills RV Park are two prominent manufactured home developments. Scattered around the City are developments of two-family residences. The remainder of the City is single family housing, with one neighborhood specifically designated as country estates.

Five Hills RV Park

Cedar Grove Community Manufactured Home Development

Places of Interest



Map 5 -- Places of Interest

Growth

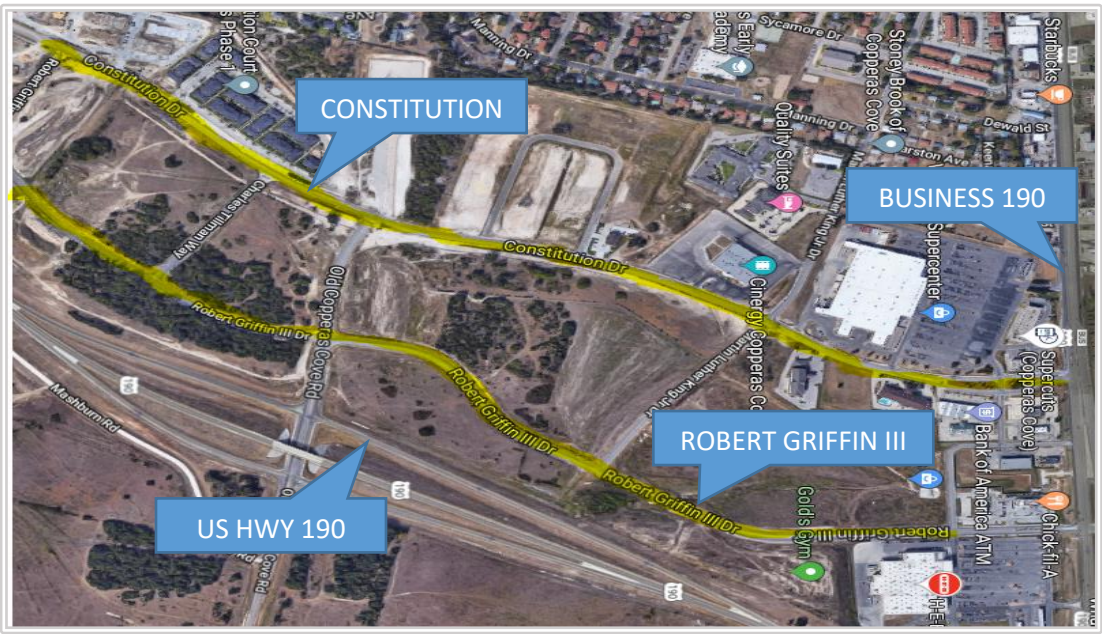
The existing land uses within the City's core will likely remain as they are currently. Likewise in the near future, it is expected that the area within the extraterritorial jurisdiction will also remain the low-density residential area it is today. The retail area along north FM 116 near Lutheran Church Road is expected to continue to grow. The greatest departure from the current land use is anticipated to occur west of the City along US Hwy 190 near the neighboring City of Kempner. Here, the open space and proximity to the railroad line provides an opportunity for industrial and warehouse - distribution land use.

US Hwy 190 Bypass looking South

There are many possible land use patterns that can occur from population growth. The KTMPO developed several growth scenarios based on trends and coordinated efforts of the City. Their study established a balanced scenario based on these patterns.

The KTMPO study indicated that population will continue to grow in the northern portion of the City due to the open, flat area and completion of SH 9, which reduces commuting time to Ft. Hood. Some of this development is already zoned and under construction. The recent completion of the US Hwy 190 section that bypasses the City will also promote population growth in the surrounding undeveloped area in the southeast section of the City. The reduced travel time will also potentially attract new development along existing roads that connect to the new US Hwy 190 bypass.

Within the City, the existing employment centers will continue to grow as businesses seek to serve more people. Directed growth can be expected in four areas. The dedicated development areas between Constitution Drive and Robert Griffin III Drive will become utilized and have the possibility of substantial employment. The zoned commercial area west of the southern intersection of US Hwy 190 and Business 190 also has the potential for in-fill development. Lastly, there exists a large possibility of employment in the southwest part of the City if desired industrial development occurs.



Map 6 - Dedicated Development Area between Constitution Drive and Robert Griffin III

Outside of the City, the KTMPO study indicated that employment at Ft. Hood is projected to increase. A portion of this will be due to natural growth of base activities. However, the projected employment can grow or shrink in an unpredictable way due to the nature of the military arm of the federal government and congressional funding. A future Base Realignment and Closure (BRAC) can significantly alter the employment of the base.

KTMPO used these future population and employment projections to create a Travel Demand Model. This model is what is used to determine the traffic that will occur on major roads as shown in **Map 8**. The SH 9 and US Hwy 190 bypasses will become the most heavily used corridors due to their ability to quickly connect portions of the City with Ft. Hood. Traffic demand on Avenue B will remain heavy due to the residential areas west of the City center. These trips will continue to feed into the City core either as their final destination or continue on towards points east of the City. Of note, Courtney Lane is expected to see a large demand due to the presence of two schools and the connection it creates between Avenue B and SH 9.

Map 7 - Bypasses connecting the City with Ft. Hood

Planned Transportation Improvements

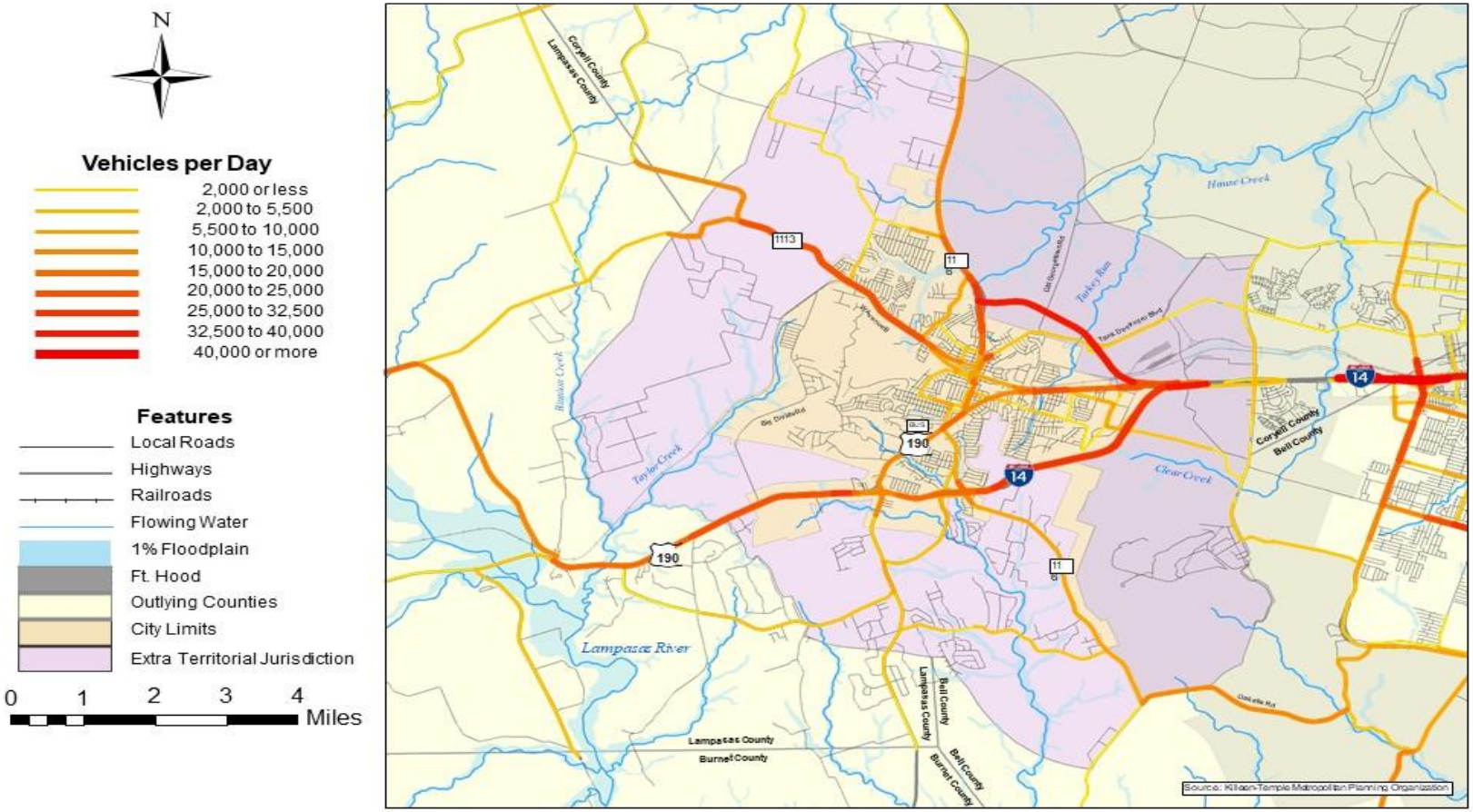
Improving the transportation infrastructure will alleviate the negative impacts of continued traffic growth. There are multiple overlapping plans and funding sources that aim to accomplish this.

KTMPO Mobility 2045 Plan

The **Metropolitan Transportation Plan (MTP)** is the 25-year document that outlines the state of current transportation, projects future needs, and offers projects and other methods for keeping the people and freight in the KTMPO region moving efficiently. The MTP encompasses all aspects of transportation planning as well as transportation projects within the KTMPO region. Each local entity submits projects within their jurisdiction for possible inclusion into the MTP, and the Transportation Planning Policy Board (TPPB) prioritizes these projects based on the needs of the region. This plan is required to be updated every five years. The Mobility 2045 Metropolitan Transportation Plan can be viewed or downloaded here:

https://ktmpo.org/planning/plans/

Projected Traffic



Map 8 -- Projected Traffic Volumes (KTMPO)

The *Mobility 2045 Plan* identifies 91 roadway projects, 45 bike/pedestrian projects, and 2 transit projects for the KTMPO region for the 25-year planning horizon. Within this plan, projects are in various stages based on funding, planning, and design. This funding is allocated between 12 project categories; however, the primary sources are:

- Category 2: Metropolitan and Urban Area Corridor Projects
- Category 4: Statewide Connectivity Corridor Projects
- Category 7: Metropolitan Mobility and Rehabilitation
- Category 9: Transportation Alternatives

Based upon financial modeling, approximately $455 million in funding is available for KTMPO to disperse to the region through 2045. Projects are scored, ranked by the KTMPO Policy Board and funded based upon project prioritization, readiness and available funding in the State's 10-year Unified Transportation Plan.

The **Transportation Improvement Program (TIP)** is the four- year transportation planning document as required by the Moving Ahead for Progress in the 21st Century Act (MAP 21) Federal Highway Administration. The *Mobility Plan 2045* is meant to clarify long term objectives while the TIP is meant to guide impending projects. TIPs are developed in cooperation with state and public transit providers and include surface transportation projects, bicycle and pedestrian facilities, safety projects, and other transportation enhancements. All regionally-significant projects receiving or requiring Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding must be listed in the TIP.

The TIP is updated every two years. Projects included in the TIP must also be included in the Metropolitan Transportation Plan (MTP) and are chosen based on regional priority and available funding. The current TIP covers FY19-FY22 and was approved on May 9, 2018.

One of the goals of this Transportation Master Plan update is to assist with identifying possible projects for submission to be included in the TIP and comply with project planning guidelines to qualify for possible state and federal funding. The current amended TIP can be found at this link:

https://ktmpo.org/planning/plans/

The City of Copperas Cove Capital Improvement Plan

City Council adopted the 2020-2024 Capital Improvement Plan (CIP) on September 3, 2019. CIPs are local, mid-range plans that list financial and planning schedules for tax-supported projects. These plans include safety improvements, street and sidewalk upgrades, parks and recreation, and drainage improvements. Projects are typically ranked in order of preference with a completion timetable for each project. The City's 2020-2024 CIP contains $83.2 million in planned projects, with $7.7 million in local tax funded street and sidewalk projects and $14.9 million in federal and state funded projects.

City Council may amend the CIP from time to time to add projects, or change the limits or budget for a project. The current amended CIP can be viewed here:

http://www.copperascovetx.gov/budget/budget_plans/

EXISTING TRANSPORTATION NETWORK

Transportation Infrastructure

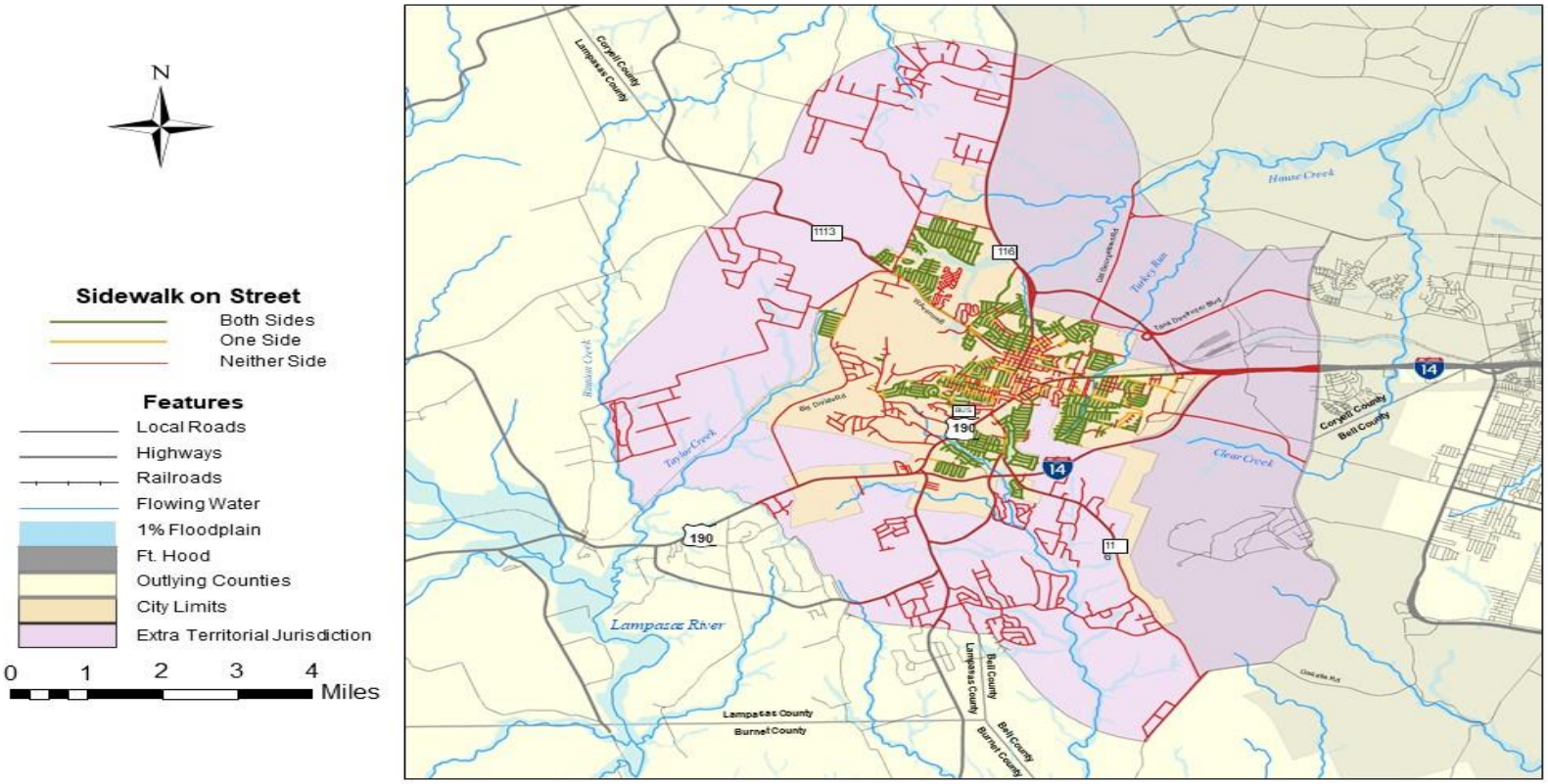
Roadways in the area vary from federal highways to local roads. Within the extraterritorial jurisdiction, there are seven roadways on the state's highway system. These are maintained by the Texas Department of Transportation (TxDOT). The largest of these is US Hwy 190/I-14. It historically ran from Lampasas to the west, through the City's core, and on to Ft. Hood in the east. Opening in early 2015, a bypass was created around Copperas Cove to the south. It is designated as US Hwy 190 and the previous downtown corridor renamed Business 190. Two other roadways are also primary thoroughfares into the City center. FM 1113 (Avenue B) and Avenue D, runs east and west. Both of these roadways connect the City's northern neighborhoods to the Business 190 commerce activities. FM 116 (1st Street) runs north and south but is discontinuous through the City's downtown core. North FM 116 connects northern neighborhoods to the City center and terminates at W. Avenue F. South FM 116 begins at west Business 190 and continues to the City limits along the edge of Ft. Hood. South FM 116 provides an important north-south connection between US Hwy 190 and Business 190. SH 9 connects North FM 116, Ft. Hood and US Hwy 190 bypassing the City center. The remaining two on-system highways (FM 3046 and FM 2657) connect rural portions of the southern neighborhood areas of the City and ETJ.

A single railroad track runs east and west through the City and then bends south towards Kempner. This railroad line is owned and operated by BNSF Railway and is part of the Lampasas subdivision which serves to connect north Texas and New Mexico with the port City of Galveston. Locally, the route comes from Kempner, follows Taylor Creek, then parallels Avenue B through the City, and moves onward to Ft. Hood. Inside the City, the railroad runs between Avenue B and Avenue D. This creates railroad crossings on 7th Street, 1st Street, and Main Street. BNSF railroad line divides the City into a northern section and southern section with limited railroad crossings.

Sidewalk coverage across the City varies heavily based on age of development and the land use patterns, as shown in **Map 9** and in **EXHIBIT B.** In the newer planned housing areas, sidewalk coverage inside a neighborhood is complete. However, connectivity between different neighborhoods is missing. In older neighborhoods, the coverage is more sporadic. This is most likely caused by the historic lack of a sidewalk implementation policy as these neighborhoods developed. Notably outlying from this trend, the Cedar Grove Manufactured Community is without any dedicated sidewalks. The highways around or outside of the City do not have pedestrian facilities. Business 190 and FM 1113 (Avenue B) are either absent of sidewalks or only have one side provided despite the higher density of homes and businesses.

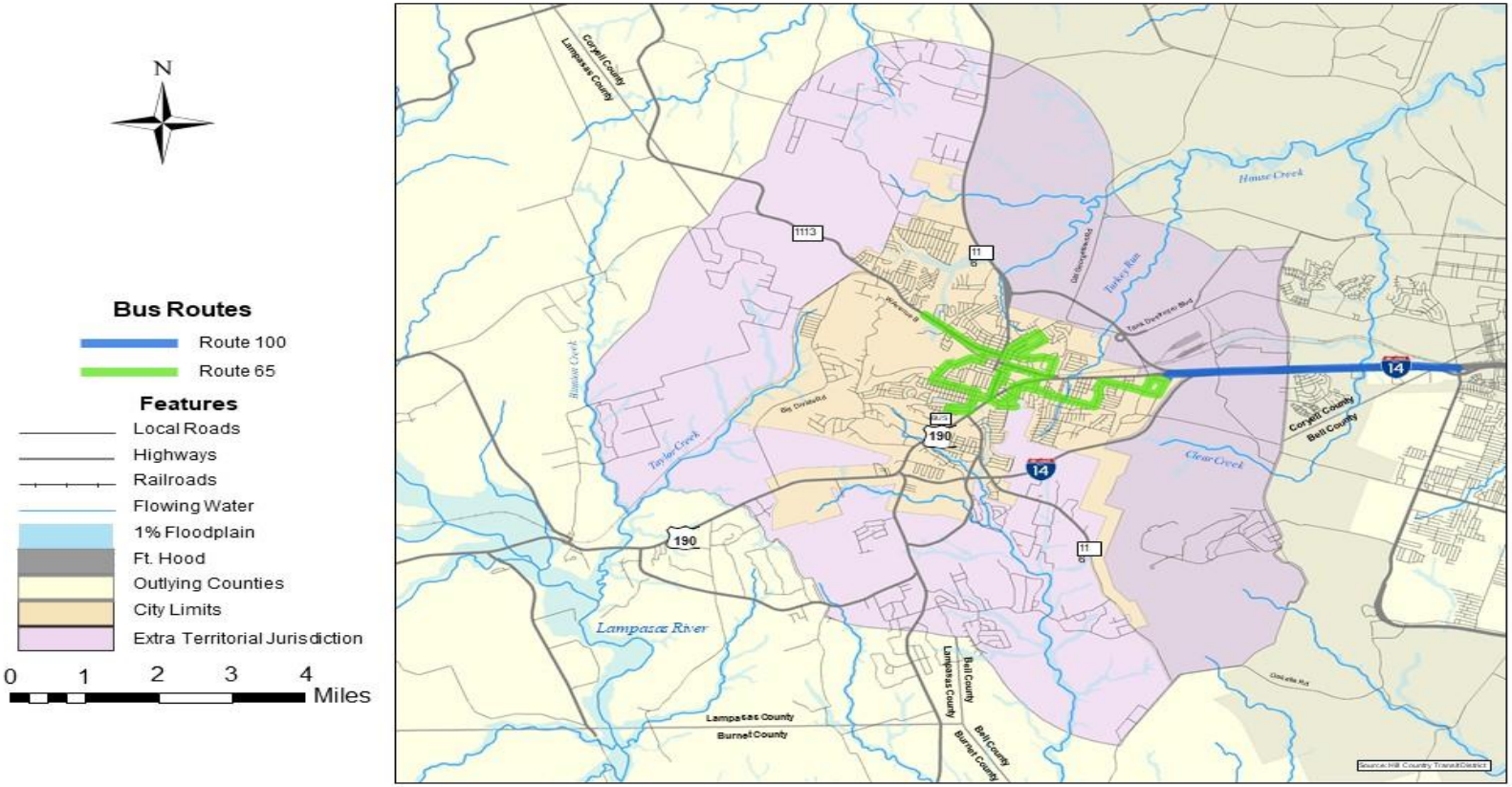
Photo showing sidewalks on both sides of street

Sidewalks



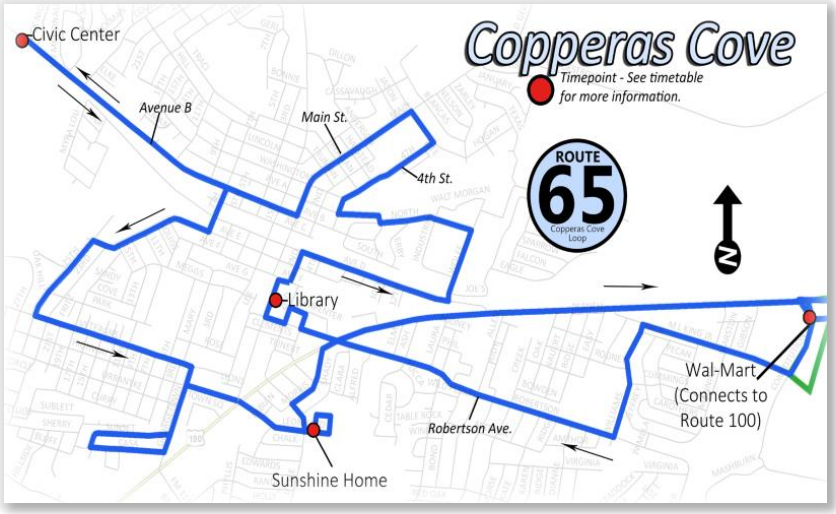
Map 9 -- Sidewalks Inventory

Transit



Map 10 -- Fixed Route Transit Service Map

The City is served by the Hill County Transit District which covers the Killeen-Temple region. **Map 10** shows the two fixed transit routes that service Copperas Cove. **EXHIBIT C & D** provides details on the locations of bus stops within the City. Route 65 circulates the City providing connectivity to the Civic Center in the north, government buildings along South Main Street, and Copperas Cove Business Park. Route 100 is an inter-city connector running from Copperas Cove to neighboring Killeen. The two routes meet at a covered transit station near Walmart.



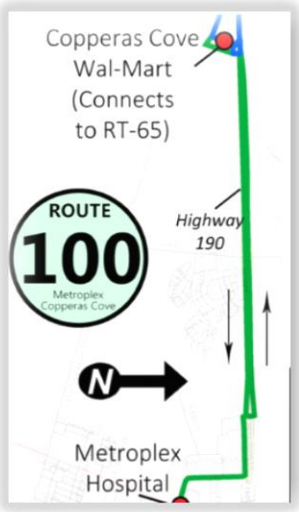


Chart 4 – Transit Routes in Copperas Cove

Recent Transportation Project Completions

Over $80 million in street and sidewalk improvement projects were completed from 2010 to 2014. The two largest projects were US Hwy 190 and SH 9 bypasses. US Hwy 190 extends the full freeway section of I-14 from the east of the Five Hills shopping center to the west ending at the previous intersection of US Hwy 190 and FM 2657. SH 9, which opened in 2014, allows traffic to bypass the City center by going from North 1st Street (FM 116) to US Hwy 190 east of the Five Hills shopping center. Additional reconstruction projects on local roads included West Avenue F and Grimes Crossing Road. A new railroad crossing was constructed at the intersection of Avenue B and where Spur Dr. becomes Bradford Dr. These improvements all completed as of April 2018 are listed in **Table 1.**

New Railroad Crossing at Avenue B and Bradford Drive

Completed	Cost	Project Description	From	To
2010	$1,050,000	Lutheran Church Dr. Improvement	FM 116	Summers Rd
2011	$433,980	Bradford Dr. extension (Phase I)	Olive St.	FM 1113
2012	$147,021	West Ave. F reconstruction (Phase I)	S 1st St	W Ave. E
2012	$266,076	West Ave. F reconstruction (Phase II)		
2013	$20,000	FM 1113 sidewalk (Phase II)		
2013	$110,000	FM 116 sidewalk improvements (TxDOT)	Randa St.	FM 3046
2013	$219,620	Allen Street Mill & Overlay Hardeman Mill & Overlay	Robertson Ave. Rodney Ave.	US HWY 190 MLK,
2013	$66,599	2nd Street Seal Coat Judy Lane Seal Coat	Robertson Ave. Bowen Ave.	US Hwy 190 Margaret Lee St.
2014	$26,225,000	SH 9 (northeast bypass) (TxDOT)	FM 116	US HWY 190
2014	$50,119,264	US Hwy 190 (southeast bypass) (TxDOT)	US Hwy 190 (IH 14)	FM 2657
2018	$5,543,320	FM 116 (TxDOT)	Anderson Ave.	Avenue B

Table 1: Recently Completed Improvements

Existing Traffic Patterns

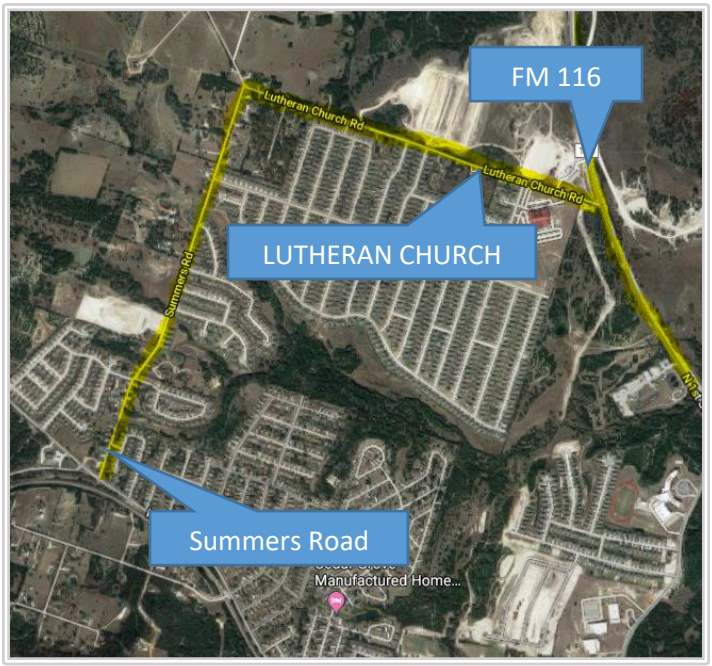
The existing population density closely follows residential zoning patterns. **Map 11** illustrates the existing population density which relates to City travel patterns. Newer housing developments have smaller lot sizes and subsequently slightly higher population densities than older more established neighborhoods, which have a lower but consistent density. In the rural portions of town, there are sporadic clusters of homes that create small pockets of high population density.

One of the primary employment generators for the City is Ft. Hood. Due to the fluctuation in military assignments and lack of collected data, it is difficult to determine the exact number of commuters from Copperas Cove to neighboring Killeen. However, for long-term planning purposes, it is sufficient to assume that these commuters represent the majority of daily work trips.

The primary area of employment inside of Copperas Cove is the Business 190 corridor and the *historic* downtown area around the City's municipal buildings. There are also localized daily traffic peaks around schools and similar facilities. The remainder of employment in the area is agricultural, which have no consistent daily traffic pattern. This travel pattern can be seen in **Map 12.** The two primary areas of employment create the daily peak traffic pattern for the City. People commute to either the center of the City or east to Ft. Hood & Killeen. Intersection traffic counts were provided by the City and shown in **Map 13**. This map gives an indication of the location and intensity of cars. The intersection counts are collected roughly once every four years. As such, some locations do not reflect recent roadway changes. Still, due to the random collection method, the influence of neighboring intersections shows the prevailing trends.

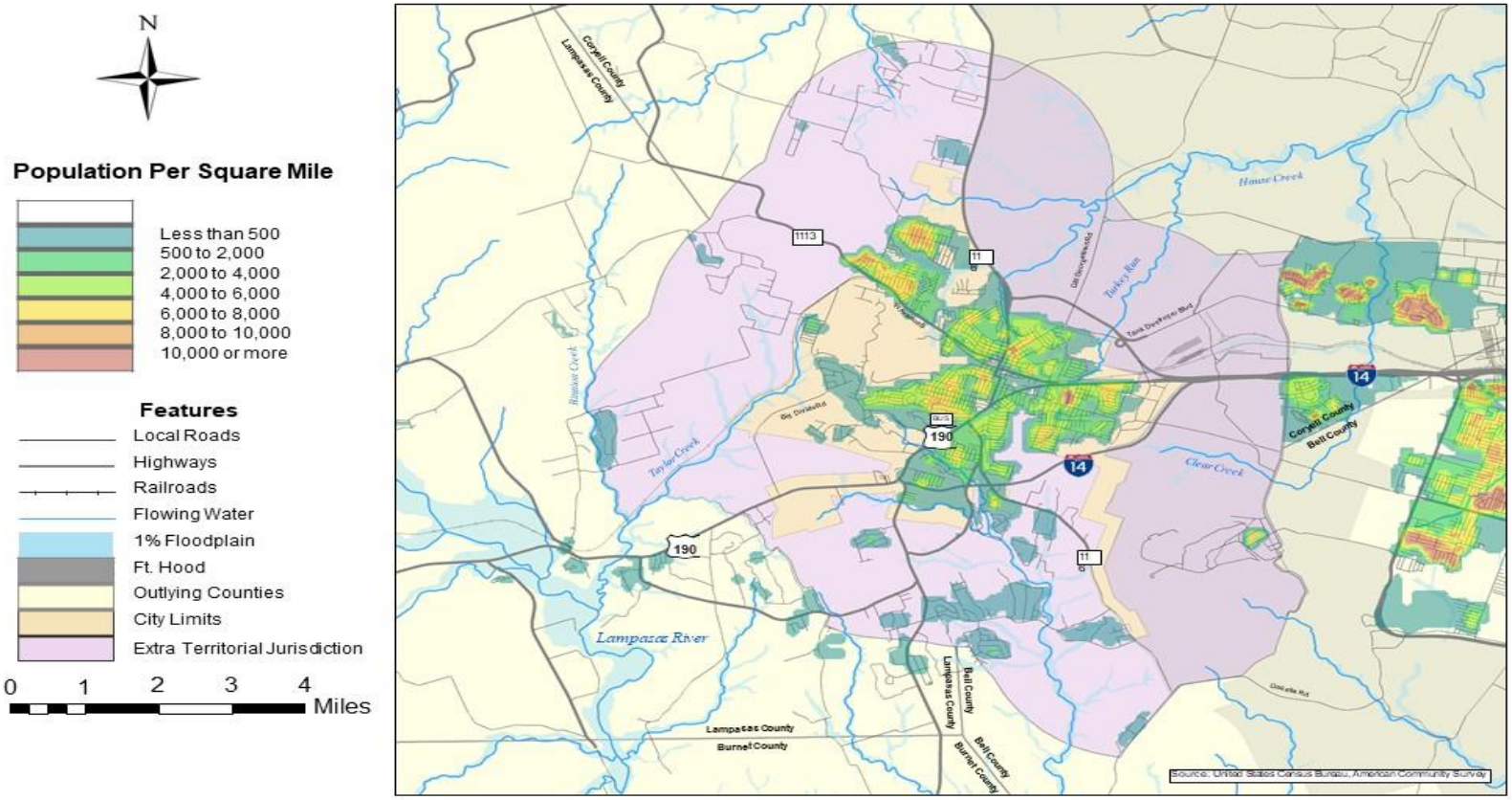
The highest intensity of traffic occurs where Avenue B and Avenue D connect across the railroad tracks via three parallel roads. This is due to the high demand at each intersection and the proximity of the intersections. This demand comes from two groups. The first group lives in the northern section of the City and works in the City core. The second group lives along Avenue B and travel towards US Hwy 190 through the City center. This second group also causes the spike in demand at the intersection of Avenue B and Business 190. Demand along other locations of the Business 190 corridor is due to the high retail usage in the area.

There are several neighborhood intersections with high traffic volumes due to the lack of connectivity between neighborhoods, work, schools, churches and shopping destinations. In the north, there is the intersection of Lutheran Church Road and FM 116 as well as on Summers Road along Sunflower Trail. In the vistas, a peak of traffic occurs on Skyline Drive between Colorado Drive and Veterans Avenue. In the eastern part of town, the intersection of Robertson Avenue and Williams Street near Copperas Cove Junior High lacks efficient connectivity to handle traffic volumes. There are other locations that have increased demand similar to these locations, but to a lesser degree.



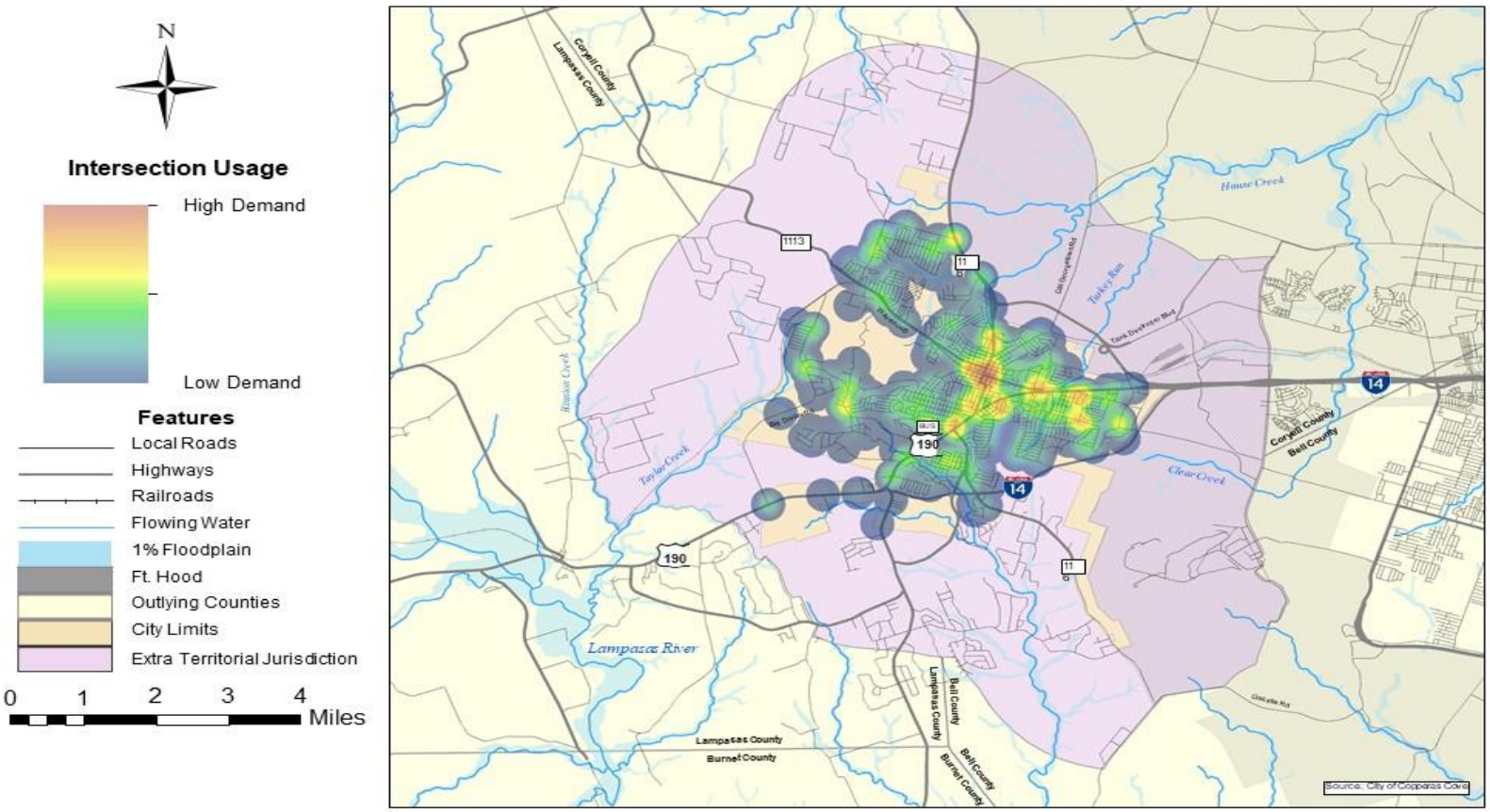
High traffic volumes due to lack of connectivity.

Existing Population



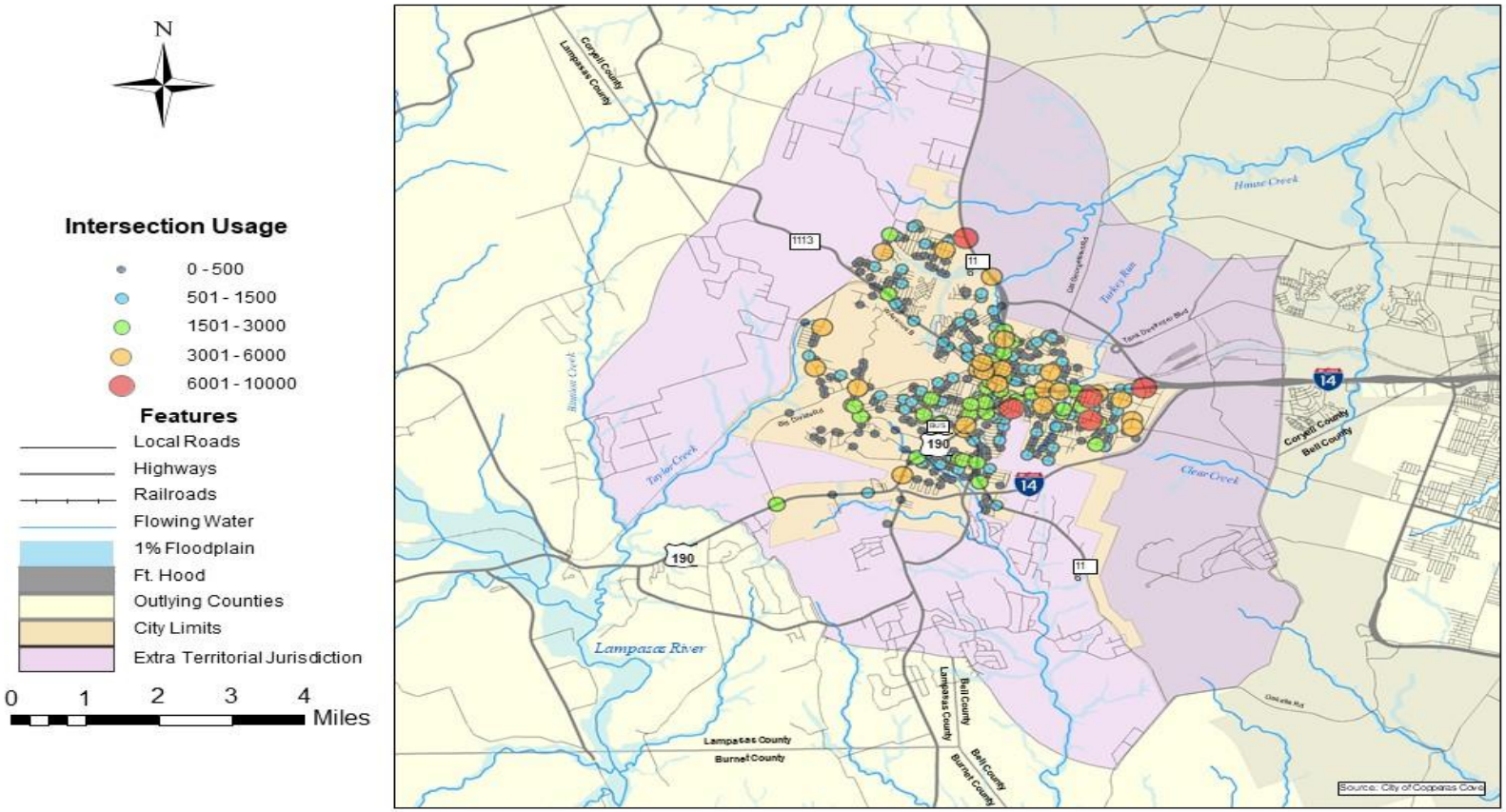
Map 11 -- Exiting Population Density

Existing Traffic Demand



Map 12 -- Existing Traffic Volumes

Existing Traffic Counts



Map 13 -- Intersection Volume Counts

PUBLIC INVOLVEMENT

"What Do We Want?"

The Council set the following goal for the development of this Transportation Master Plan:

> *As the region's population continues to grow, transportation issues will become increasingly important and complex. The effort is meant to lay out framework for how the City will spend money and make decisions on roads, sidewalks, trails, and transit over the next decade. Developing a comprehensive plan will promote efficient use of future funding and resources with the goal of achieving an improved and sustainable transportation future*

To meet this goal, the first step was to understand what the citizens of Copperas Cove wanted—what were the citizens' views and experiences with the City's transportation network? What were the needs and what were the priorities of those needs?

A very active public involvement process was undertaken. Not unlike the priorities for a roadway system, the citizens' *access* to transportation planners was critical. Each citizen should have an opportunity not only to present viewpoints, experiences, comments, etc., but also be able to discuss transportation issues in an informal, one-on-one setting. The understanding of the City's transportation needs from the citizen's perspective, which is the perspective of the users, was critical for identifying and prioritizing potential projects for future improvements.

The citizens' input was also needed to determine how the City's capital funding should be applied and prioritized toward transportation issues.

How Input Was Received

Providing the citizens of Copperas Cove with access for input and comment involved 1) public workshops and 2) an online survey.

The public workshops were advertised extensively and well in advance. The meetings were held at the City's facilities that were accessible and familiar to the community. All were held after work hours to avoid conflicts and improve the opportunity to attend.

Three workshops were held over approximately a one-year period. The first was held on August 24th, 2016, the second on November 30th, 2016, and the third on October 10th, 2017. The public notices are included in **EXHIBIT I.**

At the workshops, the Mayor and/or other City Council members attended and supported the discussion. The City's planning staff provided introductions, discussed the background and need for the TMP update. The transportation planning consultant provided an overview that included a complete description of the planning process—how the TMP update would be accomplished. The input of the citizens was emphasized; how that input would be used to improve the TMP update was also made clear.

Several interactive activities were planned and conducted at the workshops. Participants were asked to rank transportation concerns. Several key transportation issues were presented, and the participants were asked to rank by importance. These issues and results are presented in **Chart 5**. Participants considered six concerns: road safety, traffic congestion, infrastructure maintenance, sidewalk connectivity, environmental impact, and transit availability.

Participants were also asked, "How satisfied are you with the existing system?" in terms of the following: infrastructure maintenance, environmental impact of transportation, sidewalk connectivity, traffic congestion and road safety. Comment cards were also provided for participants to submit either at or after the meeting.

An online survey was also conducted, which allowed citizens to provide input to the TMP update process. The survey contained specific questions which provided understanding of the citizen's priorities. The survey polled the same questions presented at the Public Workshop. The participants could share opinions, concerns, make suggestions, and simply leave comments for consideration. The opinions regarding the City's existing network and priorities for the future were available for comment. The survey remained online for a sufficient period of time during the development of the TMP update.

Public Workshop Findings

From the results of the online survey and the public workshops, transportation issues were prioritized. The highest-ranking priorities were **road safety** and **traffic congestion.** Of the group ranked, the lowest priority was **transit availability**. In between these concerns, and closely grouped, were **infrastructure maintenance**, **sidewalk connectivity**, and **environmental impact.**

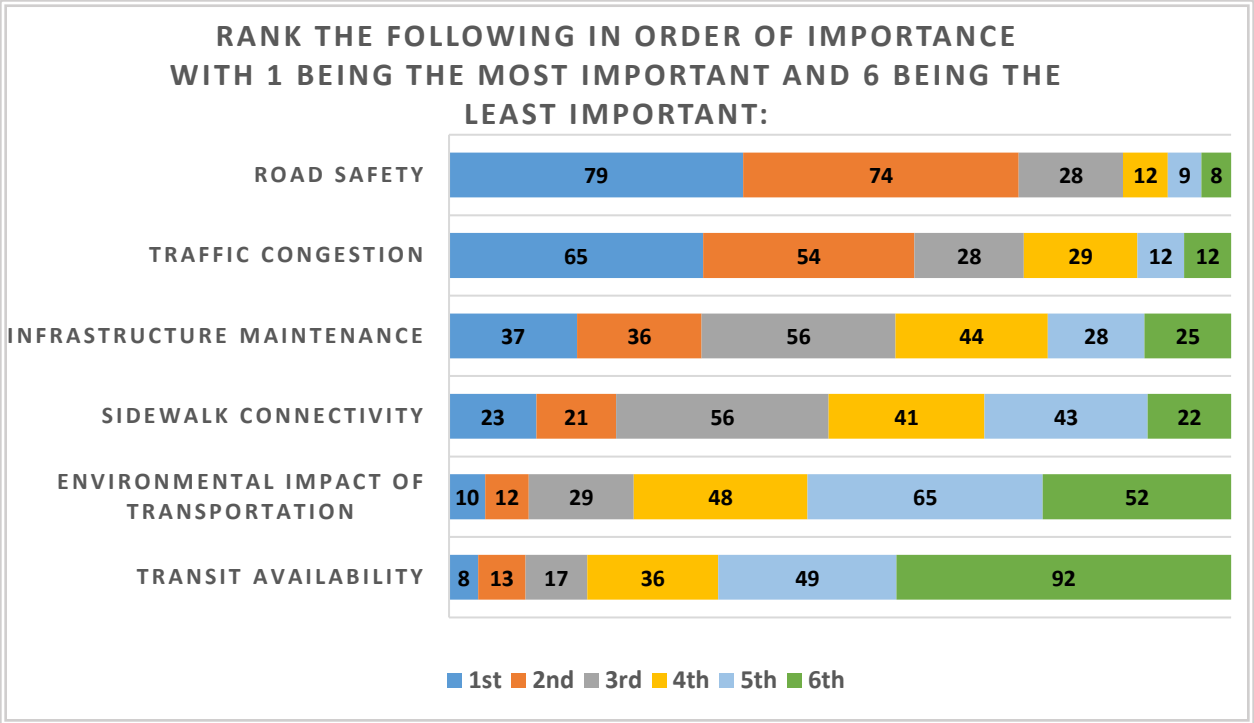


Chart 5 - Ranking of Importance of Transportation Related Issues

"Satisfaction" with the existing system is a means to quantify citizen dissatisfaction with specific attributes of the existing City network. Based on dissatisfaction, the priority for improvement in identifiable areas can be recorded and used in developing recommendations. A graphical representation of the results of a satisfaction survey is shown in **Chart 7**.

It is important to note that the highest dissatisfied rating was sidewalk connectivity even though this concern was in the middle-of-the-pack in the citizens' ranking by priority. A total of 123 responses were either very dissatisfied or dissatisfied with the connectivity of the City's sidewalks. The next highest level of dissatisfaction was with infrastructure maintenance. For Road Safety, the highest priority, only 73 responses were either very dissatisfied (15) or dissatisfied (58).

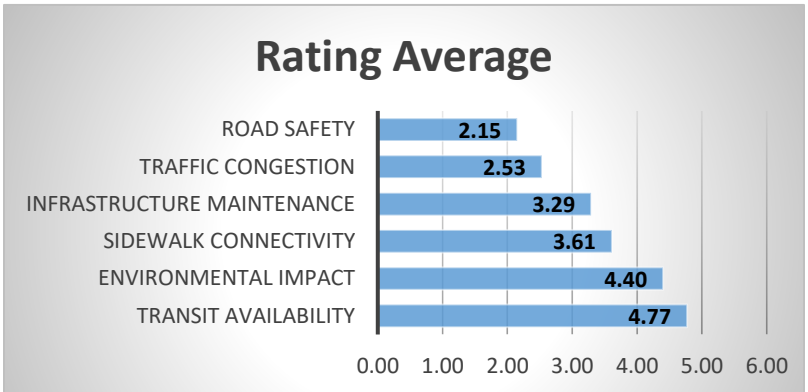


Chart 6 - Citizens Ranking by Priority

Another important finding from the "Satisfaction" survey was the relatively large amount of gray-colored responses that were neither satisfied nor dissatisfied. This is an indication that the City's existing network generally meets with the approval of its users, but it is not considered to meet a higher level of satisfied or very satisfied. **This result would suggest a need and opportunity for the TMP update to define improvements that will be recognized and appreciated by citizenry.** One important recommendation in satisfying this need is implementing the concept of "Complete Streets" where appropriate and affordable.

Complete results of the responses to the online survey can be found in **EXHIBIT H.**

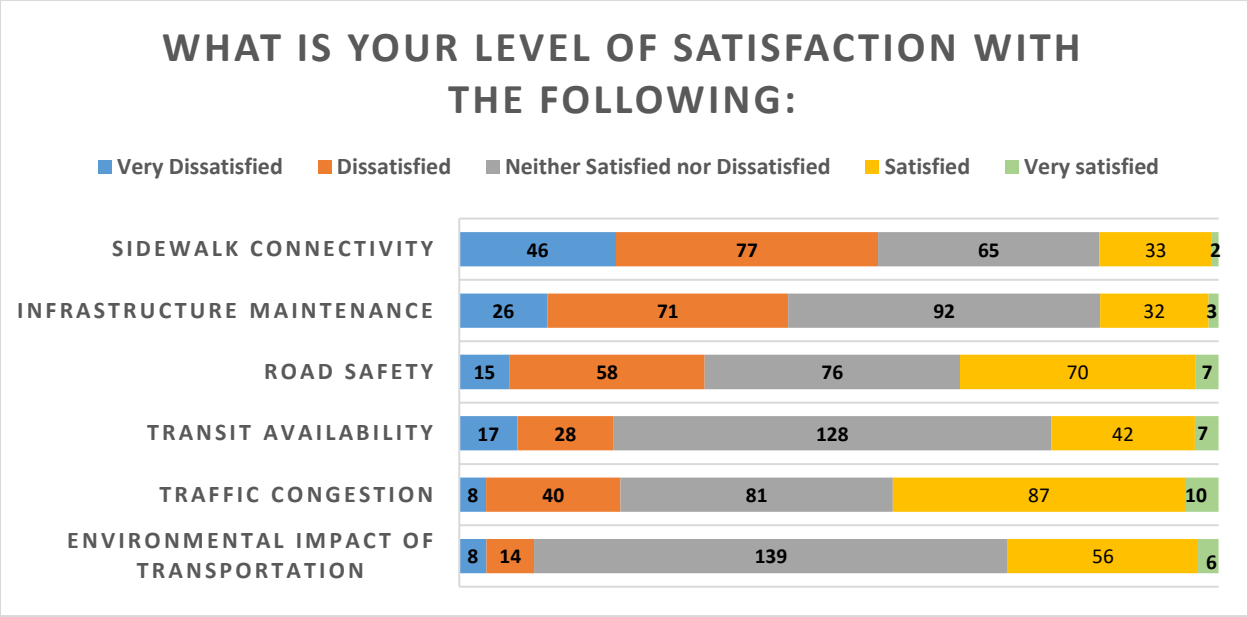


Chart 7 -- Transportation Satisfaction Rating

Complete Streets

Historically, the primary concern in transportation planning has been the control and mitigation of traffic congestion. Projects were selected that focused on traffic delays and local congestion. Unfortunately, this practice overlooked some quality of life aspects. Neighborhood streets were developed around a layout of vehicle centric roadways with little or no consideration given to pedestrian needs. The resulting plans focused on moving traffic around cities, which often resulted in neighborhood businesses losing customers as traffic was diverted to higher mobility streets. It is now recognized that this auto-centric transportation planning approach can lead to less desirable neighborhoods where traffic speeds put pedestrians at risk.

The benefits of active transportation: Active Transportation is defined by the Department of Transportation as any self-propelled, human powered mode of transportation, such as walking or bicycling. The idea of providing Complete Street design where all users of the public right-of-way are considered has grown to accommodate the use of active transportation. Complete Streets, as the name implies, is a holistic approach to viewing a roadway. Although traffic remains a priority, Complete Streets also considers impacts to economic development, pedestrian safety needs, and landscape aesthetics.

In Copperas Cove, citizens have indicated a desire for providing active transportation infrastructure. From the onset of the Transportation Master Plan update, there were comments from the citizens and community leaders for an increase in sidewalks.

As previously indicated, over half of the respondents to the online survey stated that the sidewalk network was unsatisfactory. In the feedback exercise at the second public involvement meeting, the highest chosen project was a downtown revival focused around improving walkways and active transportation elements, such as wider sidewalks and landscaping. And the second highest chosen project was one that only highlighted active transportation elements, an urban trail project.

Further, at the economic development workshop there were discussions about preserving and promoting Copperas Cove, and the need to retain educated, young professionals. Nationally, young professionals with growing families will view the active transportation network as an important consideration in choosing where they will live and raise their families.

In response to this information, City Council adopted Ordinance 2017-35 on July 17, 2017 that amends Chapter 17 of the City of Copperas Cove Ordinances. This new ordinance establishes a Complete Streets policy and requires that all future projects shall consider all potential users and transportation modes on new roadways in compliance with the design guidelines established in this document. These standards will be applied on a project by project basis for the best implementation and within the context of the surrounding land uses. To address the citizen concerns toward sidewalk connectivity, the design standards of the City should focus on addressing the needs of all transportation modes in the public right-of-way, whether that be the student pedestrian walking to school or a cyclist out for a recreational ride. Complete Streets are streets that are designed for everyone. The goal is to balance mobility of various and diverse users. If these concepts are considered in the engineering standards and applied when the opportunity is available, the result will be more livable and safer streets. The dissatisfaction with the City's sidewalk connectivity should also decrease.

A copy of the Ordinance can be found in **EXHIBIT G** of this plan.

PROJECT PRIORITIZATION STRATEGY

Projects for the City's TMP update were prioritized based on public input, technical and engineering design. The four categories considered were: **Safety**, **Mobility**, **Development** and **Implementation.** Each of these categories were further subdivided into priorities and each priority given a maximum point value to establish a hierarchy.

Project Ranking System and Methodology

Projects are ranked based on the categories below. The higher the value the more the project contributes to that priority. The higher the cumulative score, the higher the project ranks.

Category	Priority	Max
Safety	Reducing Car Accidents	10 pts
	Improving Non-Auto	10 pts
Mobility	Vehicular Connectivity	7 pts
	Vehicular Delay	5 pts
	Active Connectivity	7 pts
	Modal Choice	3 pts
Development	Activity Center	6 pts
	Promote Future Land Use	5 pts
	Jobs access	4 pts
Implementation	ROW Acquisition	8 pts
	Plan Coordination	4 pts
	Current Need	8 pts

Chart 8 – Project Prioritization Strategy Breakdown

Scoring is based on a qualitative assessment and may differ from project to project. For example, one project may require buying 10' of additional right-of-way, but that does not mean it will always score higher than another project that requires 20' of additional right-of-way. This would be due to the ease of acquisition and the cost of land around that specific project. Note that most projects will not have a score given to them for every category, as not all projects can or will seek to satisfy all project goals. Further, the scoring for some projects is based upon the impact it will have in the overall future network. These scoring numbers reflect the outcome when projects are completed.

Safety

Safety is always of paramount importance in a City's infrastructure. All projects should improve the safety of the public. However, some projects will have a more prominent impact than others, as each project serves different areas and impacts the public differently. All projects should be awarded points in this category, but certain projects will score higher based on factors such as proximity to an elementary school or a high historic crash rate.

Reducing Car Accidents

Reducing the occurrence and severity of vehicular collisions can be done through several different methods. Identifying locations for new signalized intersections, improving sight distances, and sizing roads appropriately for safe speeds will all accomplish this task. Factors to consider are vehicular volume, road width, curves, and historic crash record.

Improve Active Transportation Safety

Compared to collisions with other motor vehicles, pedestrian and cyclist collisions with automobiles are typically more severe in nature. Ensuring that the transportation network is safe for all modes of transportation is a strategic goal of this update. To accomplish this, certain projects will provide specific protections including new sidewalks, dedicated bicycle lanes, and multi-use paths. Factors to consider are adjacent roadway speed, proximity to schools and other attractors, and vehicular volume.

Mobility

Mobility is the ability for people to travel around the network. An effective quantitative measurement of mobility is the time to travel from any origin to any destination. Mobility projects attempt to reduce the overall travel time for everyone in the network. Of note, there is a difference between the shortest time for any single person and for all persons combined. While overall performance is the focus, projects will seek to not unreasonably impact one person or group over another.

Vehicular Connectivity

Creating or altering the path that vehicles take through the network is a method of long-term traffic congestion control. This means funneling current and future traffic down roadways that can handle larger volumes while deterring traffic down roadways with limited capacity. To accomplish this, new connections are made and the operating speeds of existing connections are raised or lowered appropriately.

Vehicular Delay Mitigation

In roadway systems, the majority of traffic delay occurs at intersections or the short roadways between them. New traffic signals, optimization of existing signals, and modifying turning lanes can all reduce the delay experienced.

Active Delay Mitigation

Pedestrians and cyclists will always use the shortest path that they feel is safe. New connections can be made through new multi-use paths and trails. Existing connections can be made safer by adding sidewalks, adding bicycle lanes, and lowering the speed of adjacent vehicle traffic.

Modal Choice

One of the most efficient and cost-effective ways of reducing traffic congestion in the long-term is to provide a network where modes of transportation other than single occupancy vehicles are commonplace. This is specifically true for commuting trips and during the rush hour. Providing multiple means of travel improves traffic, overall health, and creates an overall more desirable neighborhood.

Development

Strategic implementation of transportation projects can significantly promote the growth of the surrounding area. Certain projects exist primarily to promote businesses or to ease the construction of future development.

Activity Center

Certain areas of the City are hubs for commerce and activities. The historic downtown, City Park, and HEB are all examples of specific places that attract high numbers of trips. Creating appealing streetscapes, ensuring adequate traffic flow, and creating a sense of place will improve the trips and quality of trips to these areas.

Promote Future Land Use

Growth happens organically. While specific areas can be zoned for a certain land use, it requires the correct surrounding infrastructure to actually occur. Some projects highlight elements which are key to promoting this growth.

Job Access

Part of transportation's impact on quality of life is the ease of access to job centers. Currently, Copperas Cove's transportation network does well at getting people to jobs in Ft. Hood or Killeen. However, there are some issues in getting to jobs that may exist on the opposite side of town.

Implementation

The ease at which a project can be done will impact how soon it can get done. The plan's goal is to have every project completed, but the timeframe for that may be over the next few decades. Projects that are easier to implement receive more points here and subsequently, a higher prioritization. By accomplishing easier projects first, impacts can happen sooner and the benefits received over a longer period of time.

ROW Acquisition

Acquiring land for public use is a costly, disruptive, and long process. Projects that do not require land acquisition will score higher here as they will have cheaper costs and a quicker completion time.

Plan Coordination

Other regional and state plans exist to accomplish the same goals as Copperas Cove's Transportation Master Plan. By ensuring projects are specifically referenced in these plans or heavily aligned with plan goals, funding opportunities become available.

Current Need

Not all projects can be completed immediately. Some projects are designed to reflect the current needs of the City while others may focus on the growth of the City over the coming decades. The scoring for this category may be weighted by the location and need of one project in relation to the rest of the network.

Potential Projects

Based on the prioritization system developed as part of this update to the TMP, LAN has reviewed and prioritized just under 60 potential projects in coordination with the Planning staff of Copperas Cove. A full listing of the projects and their ranking is available in **EXHIBIT E**. A listing of the top five potential projects is shown here to demonstrate the prioritization system and the role it can play in future Capital Improvement Project (CIP) rankings.

Future project – Pecan Cove Reconstruction

Table 2 - Top 5 Potential Project Ranking and Breakdown

Project Name:	Railroad Crossings – 1st Street and Main Street	**Rank:**	1	**Priorities**							
From:	Ave B	**To:**	Ave D	**Safety**		**Mobility**		**Development**		**Implementation**	
One of the major traffic bottlenecks in the city, many possible alternatives exist for improving the flow of vehicles through the center of town. Grade separation, conversion of the roads to one-way and road widening are all possibilities. The most likely alternative is grade separation and plans are already in progress towards achieving this.				**Vehicle Safety**	8	**Vehicle Connectivity**	7	**Activity Center**	5	**ROW Acquisition**	2
				AT Safety	6	**Vehicle Delay**	5	**Future Land Use**	0	**Plan Coordination**	4
						AT Connectivity	3	**Jobs Access**	4	**Current Need**	7
						Modal Choice	2				
			Totals		**14**		**17**		**9**		**13**
			Total Score	**53**							

Project Name:	BUS190 - Phase 1	**Rank:**	2	**Priorities**							
From:	Ave D	**To:**	HWY 9	**Safety**		**Mobility**		**Development**		**Implementation**	
Phase 2 of the US HWY 190 Business project covers the northern section extending from the historic downtown area east past the HEB. Its improvements are similar to those in Phase 1 and highlight the need for additional vehicular safety improvements. Similar to Phase 1, this stretch of roadway is also in coordination with regional planning efforts.				**Vehicle Safety**	10	**Vehicle Connectivity**	0	**Activity Center**	6	**ROW Acquisition**	3
				AT Safety	6	**Vehicle Delay**	5	**Future Land Use**	3	**Plan Coordination**	4
						AT Connectivity	4	**Jobs Access**	4	**Current Need**	7
						Modal Choice	0				
			Subtotals		**16**		**9**		**13**		**14**
			Total Score	**52**							

Project Name:	BUS190 - Phase 2	**Rank:**	3	**Priorities**							
From:	FM116	**To:**	Ave D	**Safety**		**Mobility**		**Development**		**Implementation**	
The busiest road in Copperas Cove, US HWY 190 Business is a major arterial with access points for various businesses. It has the highest volume of traffic and the worst historic crash record. It also serves as the primary corridor for a large portion of the population commuting towards Ft. Hood. Improvements to this roadway are already in progress and are continuing with coordination from regional planning authorities. Improvements will include lane reallocation, addition of a center median, improved signals, and an offset pathway for pedestrians and cyclists.				**Vehicle Safety**	10	**Vehicle Connectivity**	0	**Activity Center**	5	**ROW Acquisition**	2
				AT Safety	5	**Vehicle Delay**	4	**Future Land Use**	2	**Plan Coordination**	4
						AT Connectivity	4	**Jobs Access**	4	**Current Need**	8
						Modal Choice	0				
			Subtotals		**15**		**8**		**11**		**14**
			Score	**48**							

Project Name:	W Avenue B - West	Rank:	4	Priorities							
From:	Bermuda St	To:	Courtney Ln	Safety		Mobility		Development		Implementation	
As a prominent minor arterial, West Avenue B serves to funnel a large volume of traffic from the western portion of the city. This volume will likely increase with and westward or northwestward development. In addition, it runs adjacent to the City Park and the Parks and Recreation Department. The roadway is to be widened to two lanes in each direction with the possible removal of the center turning lane except at the entrance of the park. In addition, existing pedestrian facilities will remain with the possibility of widening the path to easily accommodate cyclists.				Vehicle Safety	5	Vehicle Connectivity	5	Activity Center	4	ROW Acquisition	7
				AT Safety	7	Vehicle Delay	5	Future Land Use	2	Plan Coordination	4
						AT Connectivity	4	Jobs Access	0	Current Need	4
						Modal Choice	1				
Subtotals					12		15		6		15
Score				48							

Project Name:	Constitution Drive – BUS190 to Risen Star Lane	Rank:	5	Priorities							
From:	Business 190	To:	Risen Star Lane	Safety		Mobility		Development		Implementation	
Complementing the recent vehicular improvements, active transportation elements will be added along this collector. Connecting the new apartment complex, future multi-family dwellings, the movie theatre, and HEB are prime concerns. This will likely occur as part of a routine maintenance cycle.				Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	5	ROW Acquisition	8
				AT Safety	6	Vehicle Delay	0	Future Land Use	4	Plan Coordination	4
						AT Connectivity	7	Jobs Access	3	Current Need	6
						Modal Choice	3				
Subtotals					6		10		12		18
Score				46							

IMPLEMENTATION

General Transportation Network Characteristics

A transportation network is the system of infrastructure that allows movement of people or freight on private or public property. In Copperas Cove, the total network is comprised of roadways, railways, sidewalks, bikeways, and transit. Each element in the network serves a specific purpose, primarily the movement of either freight, vehicles, or people. This movement is guided by land use patterns and the interconnection of the various pieces. The characteristics of a transportation network falls somewhere between two ends of a range. On one end is ***mobility*** -- this is the ability to make trips efficiently either by moving high volumes of traffic or shortening travel times. On the other end of the range is ***access*** -- the ability to connect a destination to the network. All elements on a network must, by their very purpose, achieve a balance of mobility and access. For example, interstate highways move large numbers of vehicles quickly, but have exits spaced about a mile apart. This is one end of the range - high mobility but limited access. On the other end of the range, a local residential street will have driveways spaced just feet apart, granting high access, but has travel speeds of less than 30 miles per hour, limiting mobility.

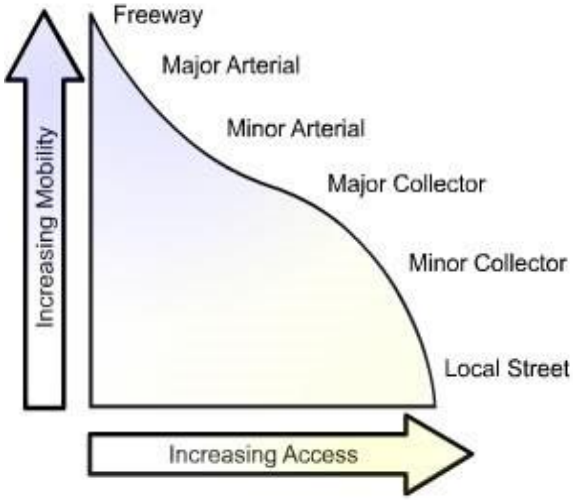


Chart 6 – Transportation Network Characteristics

A transportation network must be about more than simply the need for speed. The appropriate balance of access and mobility is the key to creating an effective transportation network that maximizes usability, livability, and economic vitality.

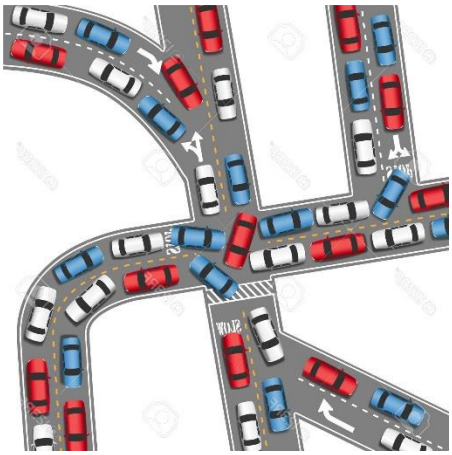
Copperas Cove Network Characteristics

The existing transportation network is a natural evolution of the City's growth, heavily influenced by decades of land use changes. As time has passed, areas have developed and the infrastructure grew either in response to growth or to promote further growth. At the time of these developments, most considered the impact of specific portions of the City. However, little evidence suggests that they were planned and implemented with the entire City in mind. Looking at the whole network allows projects to be understood and prioritized in relationship to each other. It also ensures centralized purpose behind improvement choices. Currently, all the subnetworks have their strengths and weaknesses. Determining what works and what needs to be improved will ensure smart future growth.

The City's Road Network

Spontaneous growth does not consider the effects that changing roadways will have on the shortest routes across a city. This can create traffic along certain streets that were not designed to handle through trips. Additionally, the surrounding land use may not be compatible with such high volumes, e.g. residential areas or places with little available right-of-way from nearby buildings. To better understand this, two overlays of classification are created. The first is the current network by usage. This classification is based on the volume of traffic and the path that traffic is taking across the City. Whether desired or not,

it shows how roadways are behaving in the overall network. These functional classes are shown on the Active Transportation Network map in **EXHIBIT A**. What this current classification tells us is that there are certain streets that are not acting as they should, given the network as a whole. Either they are not carrying a large enough volume of traffic or, more likely, they are attracting more traffic than is desirable, given the access needs.



Graphic 2 – Streets not acting as they should

Correcting these traffic effects can be done in two possible ways. The first is to increase roadway capacity. This decreases congestion, but may be undesirable due to the effect on pedestrian safety and neighborhood cohesion. Further, there is diminishing returns in the investment needed to increase capacity. Once capacity is increased, demand will again slowly reach capacity. Once congestion reappears, the cost of increasing capacity is exponentially higher than the original increase. This process of incrementally increasing capacity to match increasing demand becomes unsustainable.

The second method is to divert demand from one route to another. This is accomplished through roadway network planning and roadway design. On a network planning level, a desired shortest path is determined based on a balance of mobility and land access. On the roadway design level, construction plans are designed to the appropriate design speeds. This promotes safety where necessary and diverts the existing traffic to what is laid out on a planning level. This transition is best seen through the proposed classification network. The proposed core network, shown as **EXHIBIT A**, redefines roads based on how they should fit into the paths that cross the City. The locations where the operational classification differs from the desired classification are locations of potential future capital improvement projects.

The Road Network

Roads create the foundation of the transportation network. Due to the significant amount of public space they occupy, they require the largest amount of public capital investment. Roadways are also the most complex element of the transportation network, so it is important to divide them into understandable categories. There are many descriptions of roadways, but classifying mobility versus access can be accomplished through four categories: major arterials, minor arterials, collectors, and local streets. Understanding and applying the appropriate roadway categories is important in determining the correct speeds and design parameters in handling the traffic volumes being generated.

Major Arterials

General Description

These are the largest and busiest roadways in a network. Named after the cardiovascular system, these roads move the largest volume of traffic into and around a network. A major arterial typically represents the roadway with the highest mobility and the lowest access.

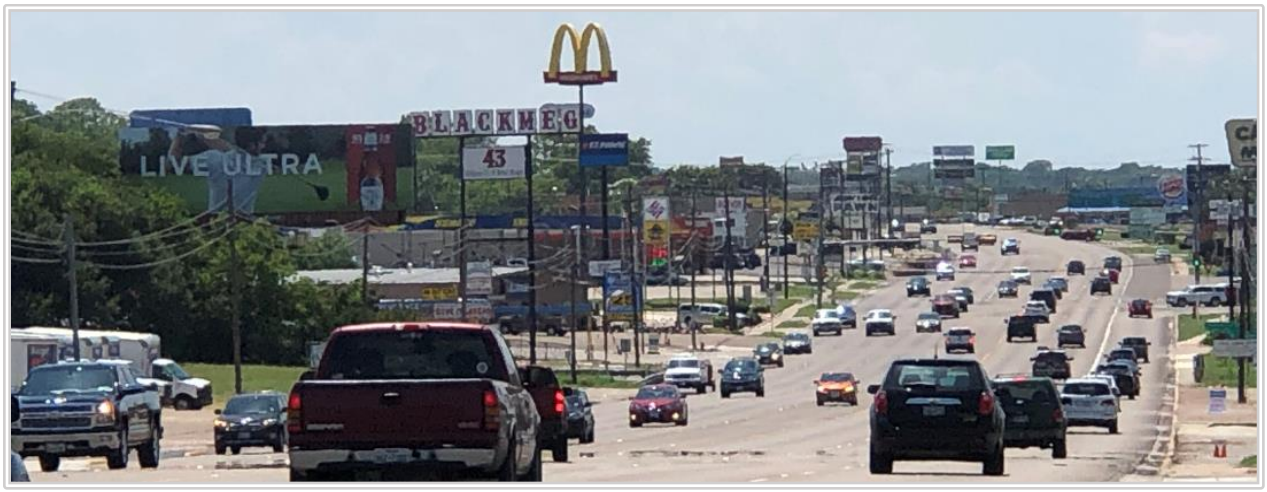
Within the major arterial classification, there are two types present in Copperas Cove. The first is a primary corridor. It is the roadway with the largest number of businesses and recreation locations. Many trips within the City either start or end on this road. Major arterials typically are one of the oldest routes in a city. This means they usually provide access to either the city center or primary points of interest and the city has developed around it. Also, major arterials carry high volumes of commuter traffic to areas beyond the city limits in addition to traffic generated by citizens within the City. One of the primary concerns in

planning primary corridors is balancing the need to move vehicles through the network while still providing access to the existing businesses.

The second type of major arterial is a congestion reliever that goes around the city center, commonly called a bypass. These trips can begin and end in the City, go around the City altogether, or involve coming to or leaving the City. Either way, this type of arterial is meant to provide very high mobility. Typical characteristics are lack of signalization, ramps instead of intersection, and high design speeds.

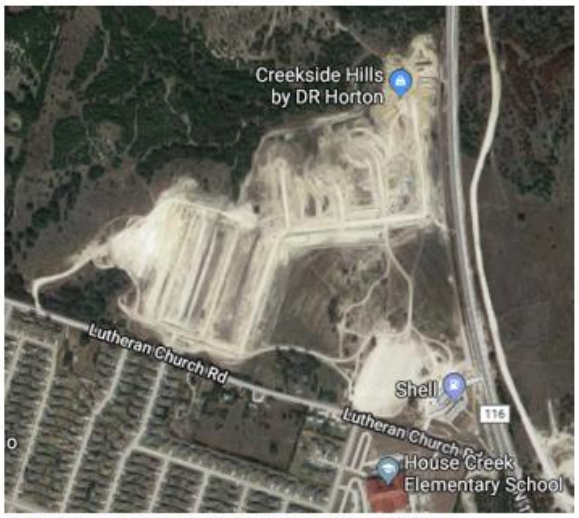
Major Arterials in Copperas Cove

There are three major arterials in Copperas Cove. The first is Business 190. As one of the older streets in the City, businesses have developed along its length. This has led to the progressive widening of the roadway over time. Such widening did not alleviate the high level of congestion along this primary route to Ft. Hood. As such, the other two major arterials were constructed. The new US Hwy 190 serves as a bypass primarily for traffic traveling between Ft. Hood to the east and the various municipalities to the west. It also gives a secondary route for neighborhoods in the southern part of town, alleviating traffic along Business 190. The third major arterial is the SH 9 bypass on the northern portion of town.



East and west bound commuters traveling along Business 190

The recent future land use plan changes in the City have occurred along Lutheran Church Road and along FM116 to the north. In all, these roadways are serving their primary purposes, but are being improved to distinguish the two types more thoroughly. The current plans for Business 190 are focused on improving the access of the neighboring businesses while still maintaining an acceptable traffic flow. The planned widening on US Hwy 190 to its originally designed capacity will further increase the mobility along the corridor and divert more through trips from Business 190. The improvement to the SH 9 and FM116 intersection is also for the improvement of mobility and to divert through traffic out of downtown as well as handle the projected increase in traffic from continued development to the north.



New development along Lutheran Church Rd and FM 116

Minor Arterials

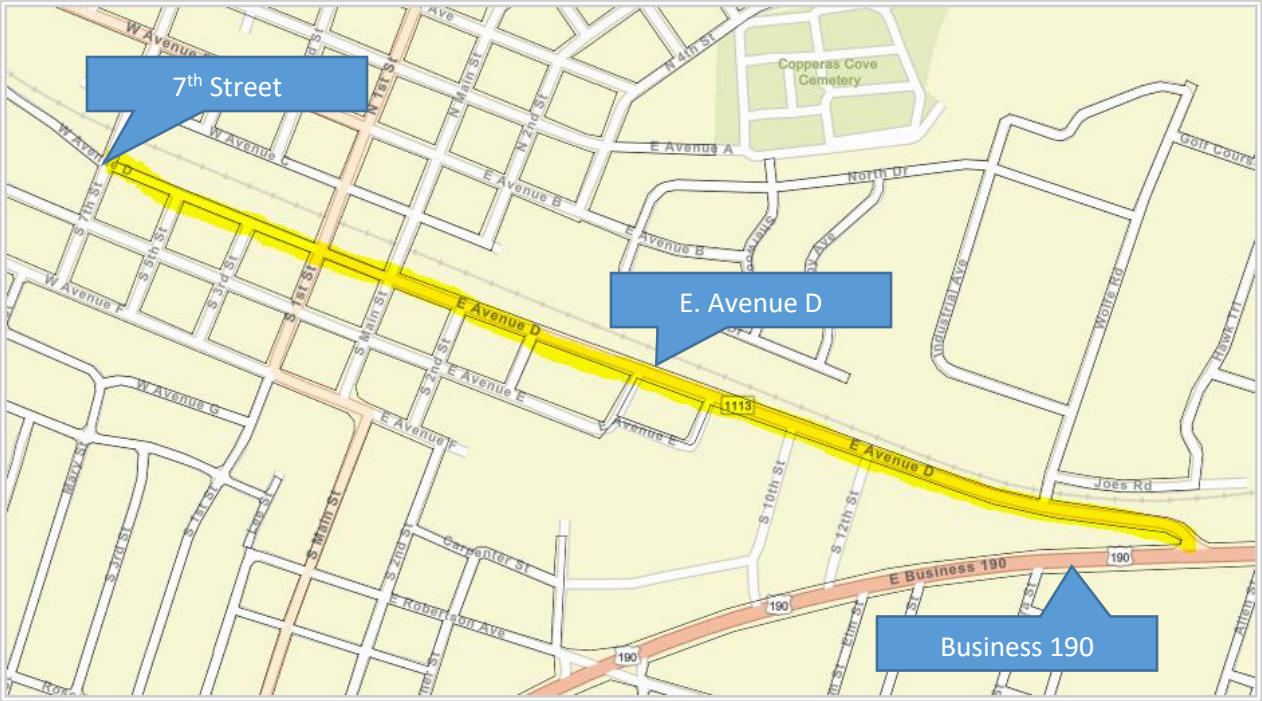
General Description

This smaller classification of arterials known as minor arterials share the same primary purpose of the major arterials and that is to move larger volumes of traffic. The difference is that minor arterials generally do not run through the center of the City or bypass it. Rather, minor arterials feed into the major arterials and generally run from the outskirts of a network to its center. This is by intent and design, primarily due to the desired lower design speed. A low speed is required since there is typically more access points and constraints on the corresponding right-of-way. This is the primary challenge in minor arterials – dictating an appropriate vehicle speed while still allowing the free movement of traffic.

Arterials can also have different design characteristics based on whether they pass through a developed, urban area or whether they pass through more rural areas.

Minor Arterials in Copperas Cove

FM116 is the largest minor arterial in the City. It connects neighborhoods in the north and in the south with the City center, Business 190, and the US Hwy 190 bypass. Along its length, it varies from urban to rural characteristics. Further, in the City center between Avenue D and Business 190, it stops being an artery and instead functions as a collector. Also providing rural access to the City center are the two farm-to-market roads in the south, FM2657 and FM3046. The last minor arterial is East Avenue D from 7th Street to Business 190. This stretch provides a large amount of mobility in the City center and connects to a major arterial at one of the key intersections in the City. These roadways are operating as desired. They guide traffic into the desired locations and have sufficiently limited access to prevent traffic congestion.



Map 14 – Minor Arterial in Copperas Cove-Avenue D

Collectors

General Description

These streets serve as the intermediaries in the roadway network. The primary difference between these roadways and minor arterials is the interaction with neighborhoods. Minor arterials will pass through many neighborhoods and provide inter-neighborhood connectivity, while collectors will run through a single or a few connected neighborhoods and do not facilitate trips from one neighborhood to another. This is again by design to ensure appropriate speeds and right-of-way usage. Instead, these streets connect neighborhoods to the arterials that cross the City.

Collectors in Copperas Cove

There are many collectors across the network. They can be found in almost every neighborhood, connecting areas to the roads mentioned above. Avenue B between 7th Street and Bermuda Street serves a high volume of traffic leading to and from the City center. However, it is limited to one through lane in each direction which limits overall capacity. It has a sufficient volume and enough access locations to warrant its improvement from collector to a minor arterial. The two-way center turn lane is likely unnecessary given the trip routing along the roadway. Adjusting the center-lane, altering the shoulder, and a minor purchase of right-of-way will prove sufficient space to expand to two through lanes in either direction, with turning bays at certain intersections if a more detailed study deems necessary.

A second area of note is the stretch of roadway including Colorado Drive, Skyline Drive, and Veterans Avenue running through the western portion of the City. These streets are part of the shortest route to the City center and Ft. Hood for many western neighborhoods including the recent Skyline Drive extension. This travel pattern causes volumes and speeds aligned with that of a collector street. However, the access needs and residential density of these roads require that they be local streets. Design and planning decisions are intended to reduce the traffic volume to acceptable levels by diverting traffic to other, more preferable options. The exact road chosen for each trip is dependent upon where final destination lies. This encouragement is done through improving travel time by adding vehicle capacity on these routes and by improvements to specific areas such as the new railroad crossing at Grimes Crossing and Bea Powell Road.

Local Streets

General Description

The remainder of streets fall into this classification. They have the lowest vehicle volumes, but also constitute most of the network by mileage. Their primary purpose is access with low speeds due to high volumes of pedestrians and many vehicles stopping and turning. Through trips on local streets are highly discouraged to ensure lower speeds.

There are two primary types of local streets. The first type is found in residential areas. These provide access to individual homes and often schools and churches. As such, there are more pedestrians and cyclists. For these streets, a primary concern is maintaining the lower speeds to ensure the safety of those outside of vehicles and for vehicles making frequent stops and turns.

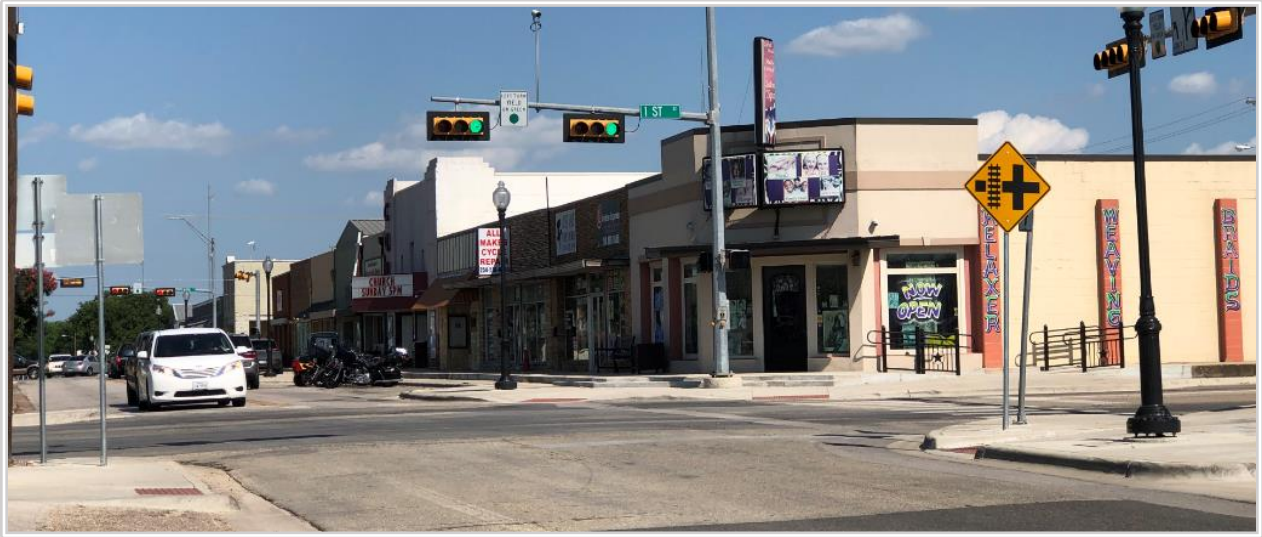
The second type of local streets are found in a centralized business district. Such roads have a high density of access points and trips being made for both business and recreational reasons. The economic vitality of the area can be improved through specific design decisions. Choices made with the entire district in mind attract patrons to the area rather than to a specific business. Those attracted to a certain area are

likely to spend more than those whose trip is based around a single purchase at a single location.

To promote this, commercial local streets have high pedestrian accommodations, aesthetic elements, efficient parking, and a strong sense of location identity.

Local Streets in Copperas Cove

The vast majority of Copperas Cove's streets are local streets. All streets in the historic downtown area, with the noted exception of Avenue B, fall into this category. They provide access to many businesses, but some are congested due to the high volume of through trips from the northwest portion of town. Improvement to the capacity and flow of such commercial intersections is complicated, because some changes may harm the attractiveness of the area to potential business. As such, major alterations to this specific area of the City are best done as part of a holistic update to the Downtown Master Plan.



Historic Downtown at Avenue D and 1st Street

The Railway Network

The BNSF Railway's Lampasas subdivision line is the only current rail network in the City. This line creates special issues. Being privately owned limits the municipality's influence over it, as ownership sets specific design standards and requirements for crossings. Further, the rail line creates a strong physical barrier between neighborhoods in a community, and impacts both the roadway and active transportation networks.

BNSF Railway through Copperas Cove

At Grade Railroad Crossing at 1st Street

In considering rail in the context of an overall transportation network, it is crossings that are most important. These can be at-grade or grade separated. Grade separated is safer, but more costly and harder to implement in flat terrain. At-grade intersections are cheaper, but require a large amount of coordination with the railroad to ensure safety and traffic flow. Determining the correct type of crossing, additional crossings, or closure of crossings should be considered within the context of the overall transportation network.

Active Transportation Network

General Description

This subnetwork is made up of sidewalks, bikeways, and transit and is collectively called the active transportation network. In short, it is the elements which a person can travel without the use of a personal automotive vehicle. The need for such a network is multifaceted, but the primary concept is promoting livability. Livability can be defined as how a network promotes the well-being of residents and improves the quality of life of its residents.

There is a known portion of the population that has specific mobility needs making them dependent on such a network. These include the elderly, the disabled, and those unable to afford an automobile. For them, a viable active network connects three primary areas of interest. The first is their residences, which may be scattered across the City. The second is necessities such as grocery stores and municipal services. The third is recreational areas such as parks, shopping, and meeting halls. An active transportation network should connect these locations as much as possible.

EXHIBIT A provides a map of the core roadways that are part of the Active Transportation Network.

Active Network in Copperas Cove

The largest amount of infrastructure in the active transportation network is sidewalks. The City's natural growth over the last half century shows great differences in sidewalk connectivity across different neighborhoods. Newer areas show consistency in the installation of sidewalks, whereas in areas of older housing, sidewalk construction appears more on a lot-by-lot basis. This leads to the sidewalk network as shown on the Active Transportation Sidewalk Network map in **EXHIBIT B**. Within this sidewalk network, gaps can also be found around specific schools. Likely, the schools filled the location at the time and paved the sidewalks on school grounds, but did not include new sidewalks on adjacent properties. Also, there is a distinct lack of sidewalks on collectors and arterials, which effectively divides the network along neighborhoods.

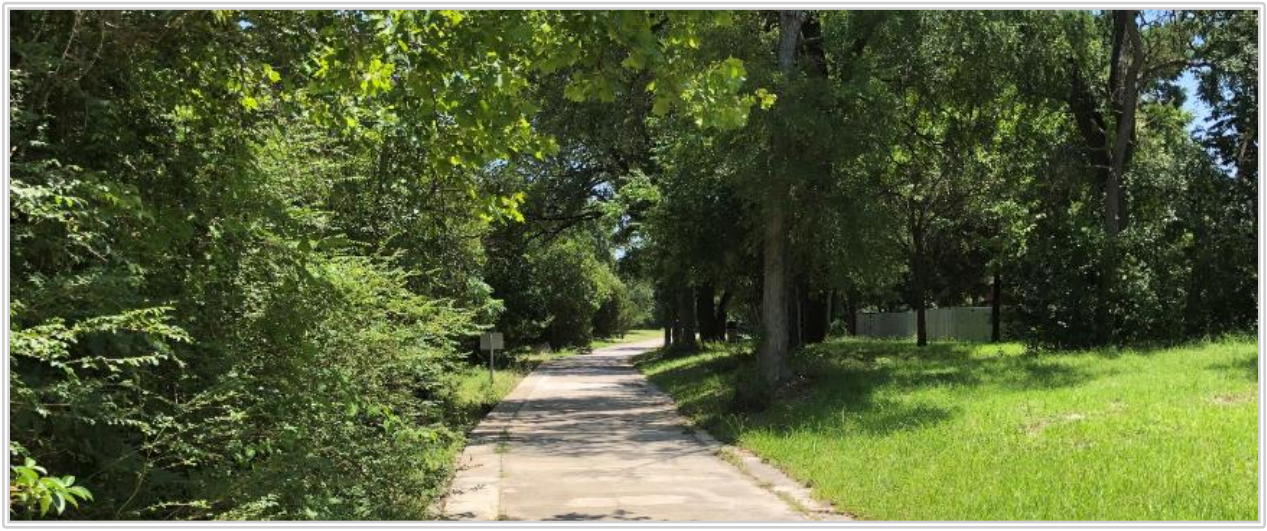
Photo Showing Sidewalk Gap

Coinciding with this sidewalk network is the transit system. Copperas Cove is served by the HOP which runs a local route and a connector route between the City and the greater Killeen-Temple System. This system primarily serves captive riders, those for whom personal automobile travel is not an option, i.e. the elderly and disabled. As such, the stops are located around services oriented towards them. A single route runs through these stops. Such stops are WalMart and HEB, the VFW, the Department of Housing, and the Park. These bus routes, along with their stops and stop types, are shown on the Transit Network map in **EXHIBIT C.**

The map shown in **EXHIBIT D**, the Active Transportation Primary Routes map pulls together the primary active routes and the transit stops. This map shows the primary active routes, bus stops, as well as parks and schools -- important destinations for active transportation.

An effective active transportation network serves four primary purposes. The first is to be continuous, there should be no isolated portions. The second is to promote pedestrian and cycling activity to specific areas, i.e. schools, parks, and downtown. The third is to connect to as many transit stops as possible to provide safe multimodal connections. The fourth is to penetrate every neighborhood with an access point, providing an option to as many people as possible.

To accomplish these four primary purposes, a proposed core active transportation network is shown on the Active Transportation Network map in **EXHIBIT A**. This map shows how this proposed active transportation network will be incorporated with the existing sidewalk network to increase the overall connectivity between the neighborhoods. On this map is an additional facility that is not already present in Copperas Cove. The area to the northwest will be served by a new multi-use path connecting the newer neighborhoods with the City Park. This network provides the high degree of connectivity.



Multi-use path along Clear Creek to South Park

The map in **EXHIBIT A** shows the core roadways that are on the active network and which ones are not on the active network.

Another primary concern is in providing for short trips, those less than two miles. As the length of a trip shortens, the number of such trips increases. Such short duration trips are very common and are often done without an automobile. For example, children who regularly walk to school. Such trips are common and require extra safety attention. This consideration is currently under discussion at the national, state,

and regional level. Programs like the Safe Routes to School provide education and funding for promoting an active transportation program that encourages these trips.

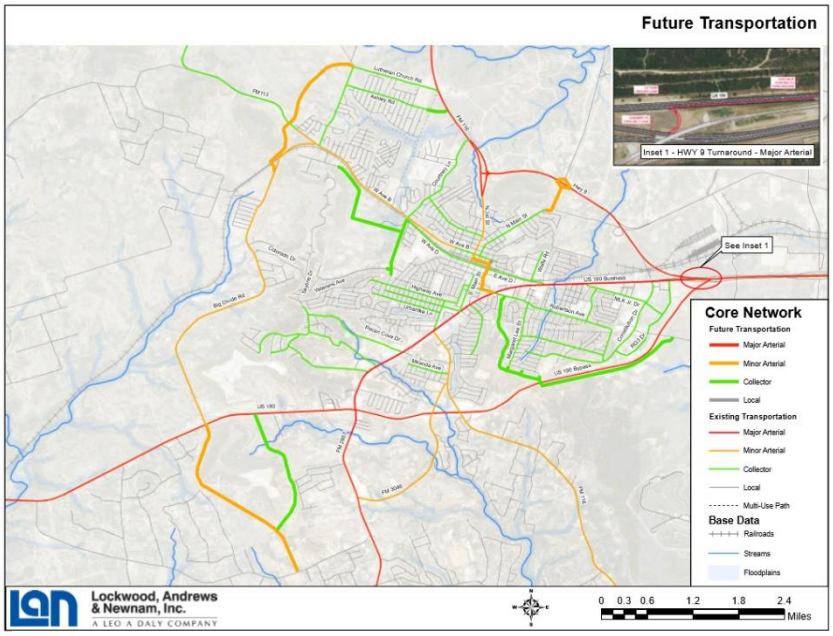
A well-designed network is also a benefit to the local economy. In residential areas, active infrastructure increases the feeling of community and impacts home values. In commercial areas, people walking or biking creates a feeling of vibrancy that attracts investors. Also, there is a positive correlation between foot traffic and consumer spending.

For these reasons, an active transportation network is a necessity in a livable community. The network requires investment, but there are many resources to aid in this investment. In creating this subnetwork, it is important to connect the specific points of interest. Along with this, a good active transportation network enhances the feeling of community within a city. Promoting pedestrian and cycling trips creates vibrancy. This directly translates into a healthier housing market and higher spending at retail and leisure locations.

Future Transportation Network

General Description

Planning the City's Future Transportation Network serves a vital role to meet the future transportation demands of population, employment and economic growth. Future updates of the Transportation Master Plan should consider all transportation modes including roadway expansion, high-occupancy vehicle lanes (HOV), transit options and bicycle/pedestrian facilities. The future transportation network should be considered the ultimate roadway vision as best known today. The network shows existing and planned arterials, collectors and local streets for the ultimate growth of the City. These functional classes are shown on the map in **EXHIBIT F**.



Map 15 - Future Transportation

The future transportation plan network does encompass the active transportation system within the City limits as well as the extraterritorial jurisdiction (ETJ).

To maintain the quality of life enjoyed by the citizens of Copperas Cove, extensive future planning for the City's transportation infrastructure is essential. An adequate transportation network is considered by many as the backbone to organized growth in any community. The total development of land within the present City limits, as well as, the ETJ at a certain time in the future is a reasonable conclusion from studying the development of communities that are similar to Copperas Cove. By planning for the ultimate growth of the City, the Future Transportation Plan establishes the ultimate roadway network and protects adequate rights-of-way to meet future transportation needs. The plan also provides property owners with a tool to minimize conflicts during development.

DESIGN STANDARDS GUIDELINE

Roadway Cross Sections

The proposed roadway classifications in combination with the active transportation network determine the applicable cross section for any given segment. The Plan does not specify exact design elements, but provides a guideline to design the roadway to fit the land use context of the development and to serve all the potential users of that roadway. **Table 3** lists the road classifications along with the core active transportation network. This list provides roadway design options that might be applied to best fit the given land use and proposed development. A description of the commonly used roadway cross sections is discussed below. Typical cost per mile for cross section listed is provided in **Table 5** on page 50.

Classification	Typical Section	Note
Major Arterial	P8D (Per TxDOT)	TxDOT class 8-lane arterial section with 12’ lanes
Major Arterial	P6D (Per TxDOT)	TxDOT class 6-lane arterial section with 12’ lanes
Minor Arterial	P4D (Bike or Park)	12’ lanes with 8’ dedicated lanes for bikes or parking
Minor Arterial	P4D (MUP)	12’ lanes with 12’ multi-use path for hike or bike trail segments
Minor Arterial	P4D	Basic 4-lane arterial section for high speed roads (>40 mph)
Collector & Minor Arterial	C5U	4-lane section with two-way left-turn lane
Collector & Minor Arterial	C4D (Bike or Park)	2 striped outside lanes for bikes or parking
Collector & Minor Arterial	C4D	Basic 4-lane arterial section with no on-street parking
Collector	C4U (Bike or Park)	2 striped outside lanes for bikes or parking
Collector	C4U	Basic 4-lane collector section
Collector	C3U	2-lane section with two-way left-turn lane
Collector	C2U	Wider section for residential or commercial areas; outside lanes for parking
Collector	C2U (Bike or Park)	Wider section for residential or commercial areas; 2 outside lanes for bikes or parking
Local	L2U (Major)	Wider 2-lane section for residential, commercial or industrial areas
Local	L2U (Urban)	Basic 2-lane section for direct lot access in urban areas
Local	L2U (Rural)	Basic 2-lane section for direct lot access in rural areas
Multi-Use Path	MUP	12’ bi-directional multi-use path

Table 4: Typical Section Summary
P = Principal, C = Collector, L = Local, # = Number of lanes, U = Undivided, D = Divided

Typical Section	ROW	Cost Estimate (per Mile)	
		w/o ROW Cost	w/ ROW Cost
P8D - Major Arterial	150'	$11,800,000	$27,600,000
P6D - Major Arterial	130'	$10,300,000	$24,000,000
P4D - Minor Bike or Park	110'	$9,000,000	$20,600,000
P4D - Minor MUP	110'	$8,700,000	$19,000,000
P4D - Minor Arterial	105’	$8,300,000	$17,500,000
C5U	80'	$7,600,000	$16,000,000
C4D – Bike or Park	90'	$8,500,000	$18,000,000
C4D	80'	$7,400,000	$15,800,000
C4U – Bike or Park	80'	$7,700,000	$16,100,000
C4U	70'	$6,700,000	$14,100,000
C3U	60'	$6,300,000	$12,600,000
C2U	60'	$6,100,000	$12,400,000
C2U - Bike or Park	60'	$6,200,000	$12,500,000
L2U - Major	54'	$5,500,000	$11,800,000
L2U - Urban	50'	$5,500,000	$11,800,000
L2U - Rural	64'	$3,600,000	$7,400,000
MUP	24'	$900,000	$3,400,000

Table 5 - Typical Section Cost Estimate

Major Arterials

The roadways classified as major arterials in the Plan are roadways that are maintained and operated by Texas Department of Transportation (TxDOT). The cross section and design elements of these roadways are controlled by the TxDOT *Roadway Design Manual.* As future opportunities to improve these roadways occur, the City will work with TxDOT to determine the roadway cross section required and the detail design elements. The primary function of an arterial road is to deliver traffic from collector roads to freeways or expressways, and between urban centers at the highest level of service possible. As such, many arteries are limited-access roads, or feature restrictions on private access.

Major Arterials Four Lane Undivided and Divided Highways

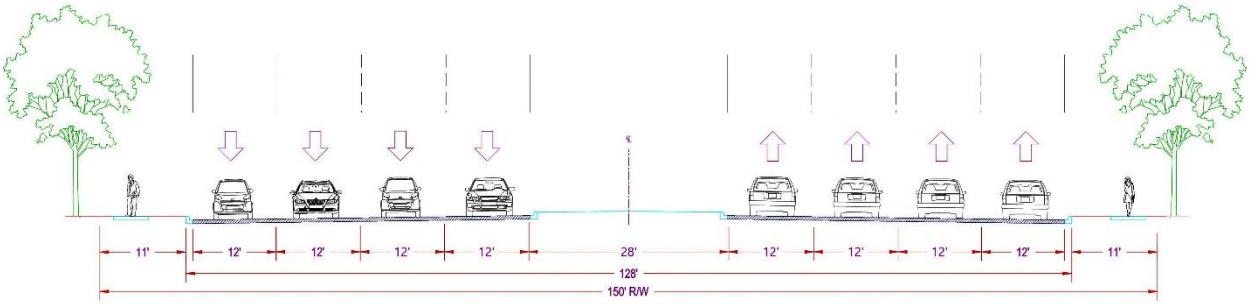
A four-lane undivided highway (not depicted) is the most common rural major arterial cross section by TXDOT. This design has a specific lack of signalized intersections in favor of access ramps. Lanes are usually 12 feet to 14 feet to accommodate freight traffic and high free flowing speeds. This design also includes a hard shoulder on either side. These facilities are typical of a Texas Department of Transportation with restricted access cross section which are often characteristic of Farm to Market (FM) roadways.

Likewise, a four-lane divided highway is similar to the undivided one, but is notably safer due to the lower incidence of head-on collisions. Its implementation is more heavily dictated by the availability of right-of-

way. These facilities are typical of a Texas Department of Transportation full access freeway cross section. This type of highway is represented by the I-14 bypass and SH 9 bypass.

TxDOT Class Eight-Lane Divided Highway

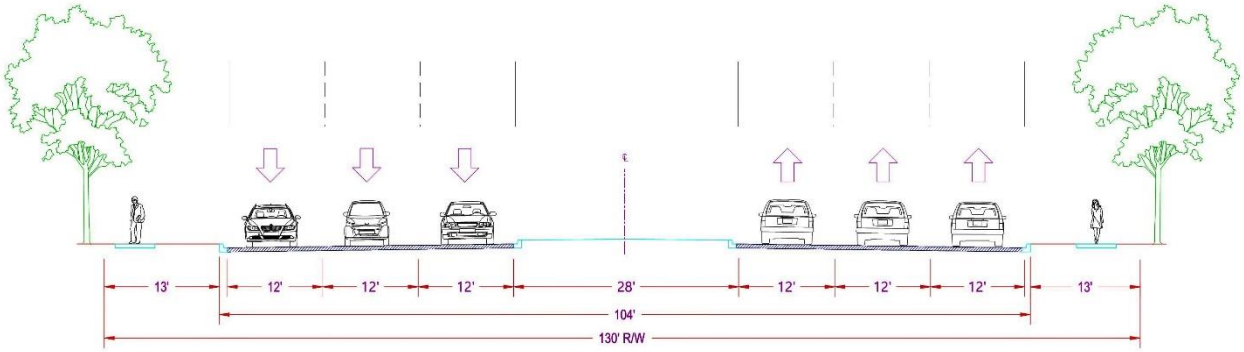
The eight-lane divided highway is similar to the undivided one, but is notably safer due to the lower incidence of head-on collisions. Its implementation is more heavily dictated by the availability of right-of-way. These facilities are typical of a Texas Department of Transportation full access freeway cross section.



Major Arterial being a principal roadway with 8 lanes and raised median. ***(P8D)***

TxDOT Class Six-Lane Divided Highway

Likewise, the six-lane divided highway is similar and is notably safer due to the lower incidence of head-on collisions. Its implementation is less dictated by the availability of right-of-way. Also, these facilities are typical of a Texas Department of Transportation full access freeway cross section.



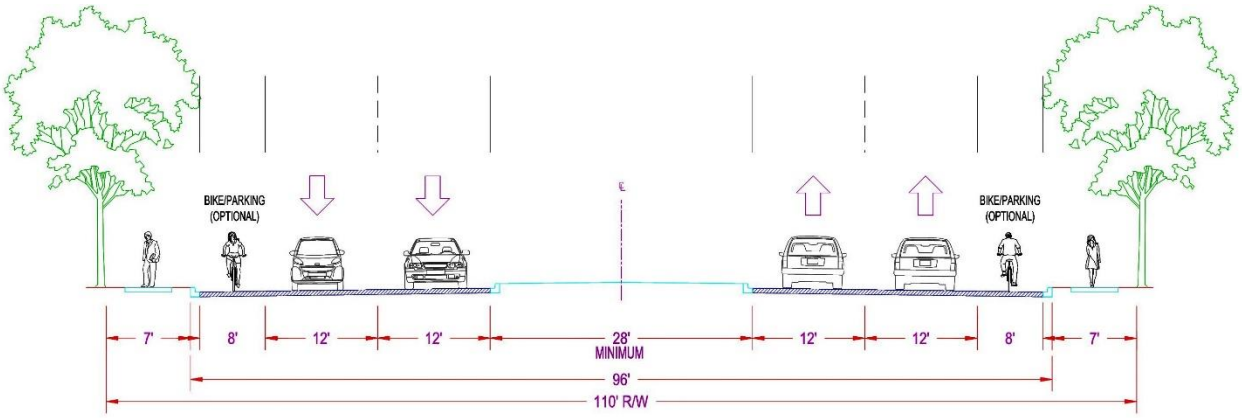
Major Arterial being a principal roadway with 6 lanes and raised median. ***(P6D)***

Minor Arterials

Minor arterials are those streets that provide the primary access from major arterial streets to collector streets or from the points of interest within the City such as downtown to the surrounding neighborhood areas. These streets are the largest traffic handling streets within the City's transportation system, provided they are not in the TxDOT network.

Four-Lane Divided Street on Active Network, Bike Lanes

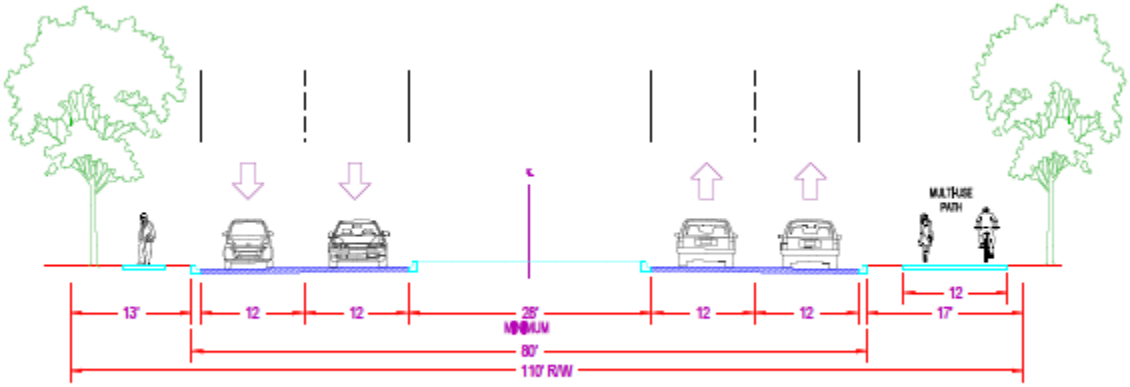
On the active network, the most preferred urban solution is dedicated bike or parking lanes on a four-lane street. A separate sidewalk is offset far as the right-of-way allows to ensure pedestrian comfort. This can include an additional center two-way turning lane or turning bays as necessary and space allows at major intersections. The lane widths are 12 feet to accommodate moderate speeds, buses, and the occasional heavy vehicle.



Minor Arterial being a principal roadway with 4 lanes, divided median and bike path. ***(P4D - Bike)***

Four-Lane Divided Street on Active Network, Multi-Use Path (MUP)

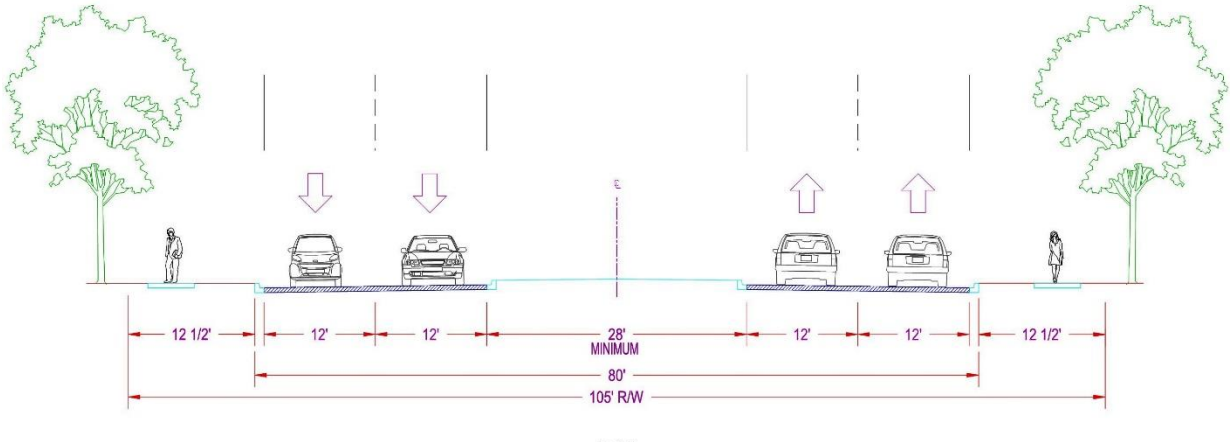
This cross section is similar to the previous section, but is driven by a difference in right-of-way availability. In locations where right-of-way is cheaper on one side of the street versus the other side, a single path for bicyclists and pedestrians is a viable option. However, it is generally not preferable over active transportation options on both sides of the street. The multi-use path should be between 8 feet and 10 feet wide to allow bidirectional traffic of cyclists and wheelchairs, per the American's With Disabilities Act.



Minor Arterial being a principal roadway with 4 lanes, divided median and multi-use path. ***(P4D - MUP)***

Four-Lane Divided Street off of Active Network

This cross section is similar to the previous sections, but is located off of the active network, reducing the need for bike lanes and width of right-of-way.



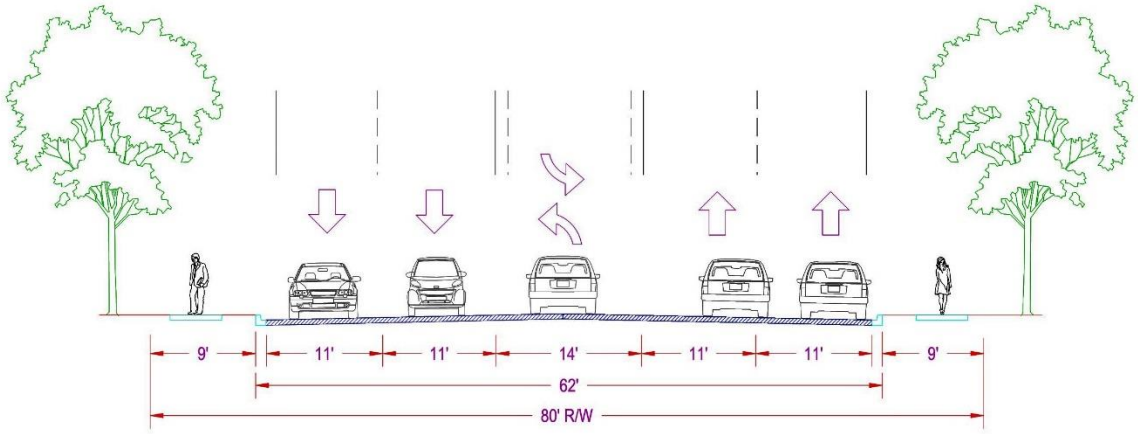
Minor Arterial being a principal roadway with 4 lanes and divided median for higher speeds >40 mph. ***(P4D)***

Collectors & Minor Arterials

The cross sections below can be used for either smaller minor arterial or larger collector streets. These sections are recommended to provide some additional options to enable the City some flexibility in working with topography and available right-of-way.

Four-Lane Section with Two-way Turn Lane off of Active Network

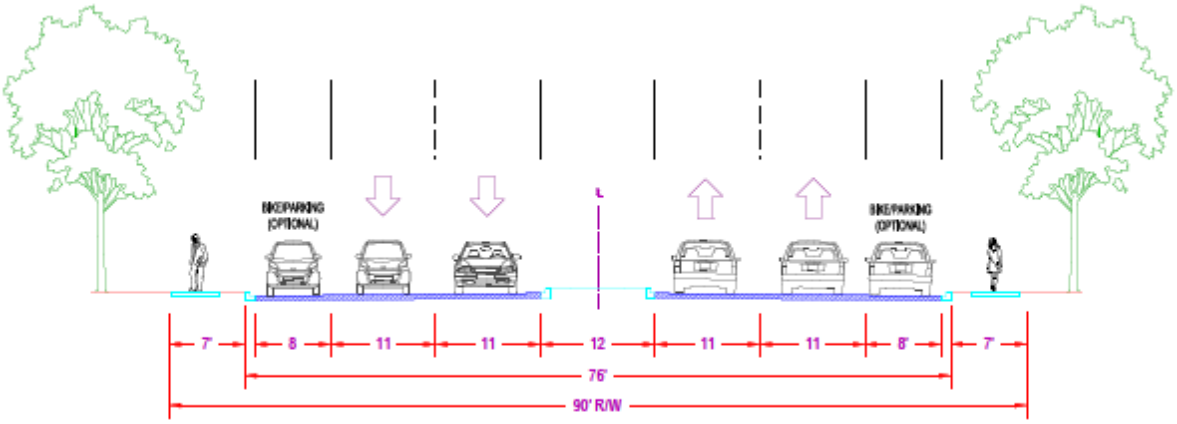
Similar to the previous cross section, this cross section is also found in areas with lower desired design speeds than the previous divided median cross sections. However, active transportation elements are not as critical to achieving network goals or are cost prohibitive. The presence of a center turn lane is to provide increased access for business areas or points of interest within the City while balancing the mobility requirements of a minor arterial or collector. The use of a center turn lane will require some analysis as the potential for car accidents is notably increased over controlled access such as medians.



Collector & Minor Arterial roadway with 4 lanes and two-way left-turn lane. ***(C5U)***

Four-Lane Divided Street off of Active Network

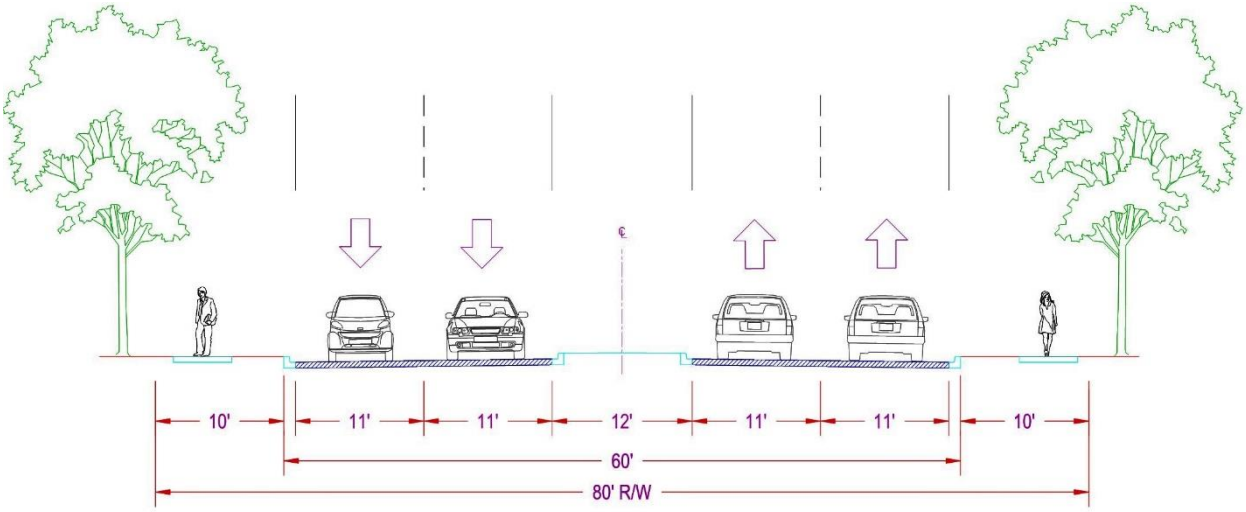
This cross section is often found in areas with lower desired design speeds than the previous minor divided median cross sections. This means that the lanes and medians can be reduced to accommodate the lower speeds. The presence of active transportation elements is in keeping with the direction of the Complete Streets Policy. As with the divided median cross sections, the addition of a two-way turning lane or a turning bay may be warranted.



Collector & Minor Arterial roadway with 4 lanes, divided median and parking. ***(C4D - Park)***

Four-Lane Divided Street off of Active Network

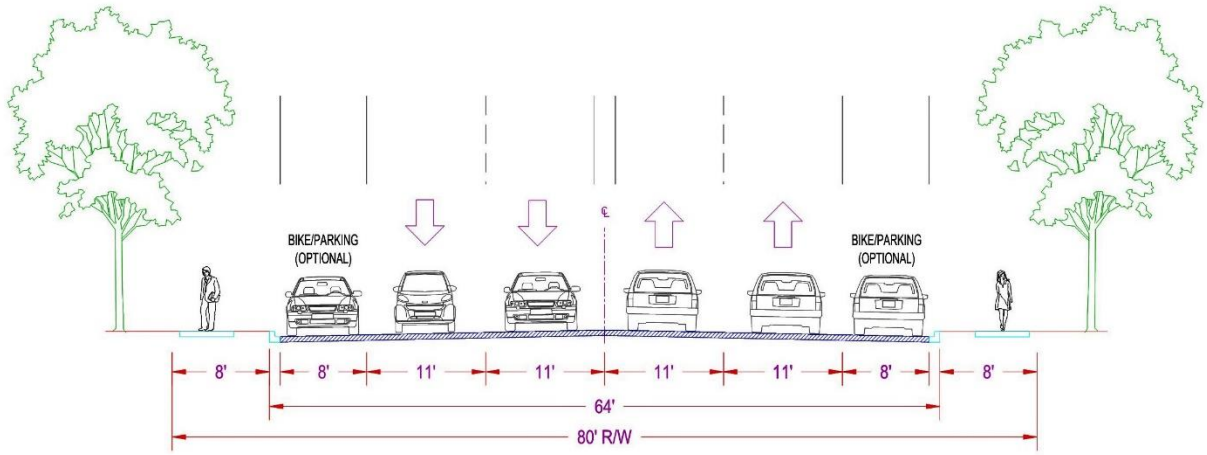
This cross section is similar to the previous section with a divided median but no parking lanes.



Collector & Minor Arterial roadway with 4 lanes and divided median. ***(C4D)***

Four-Lane Undivided Street on Active Network

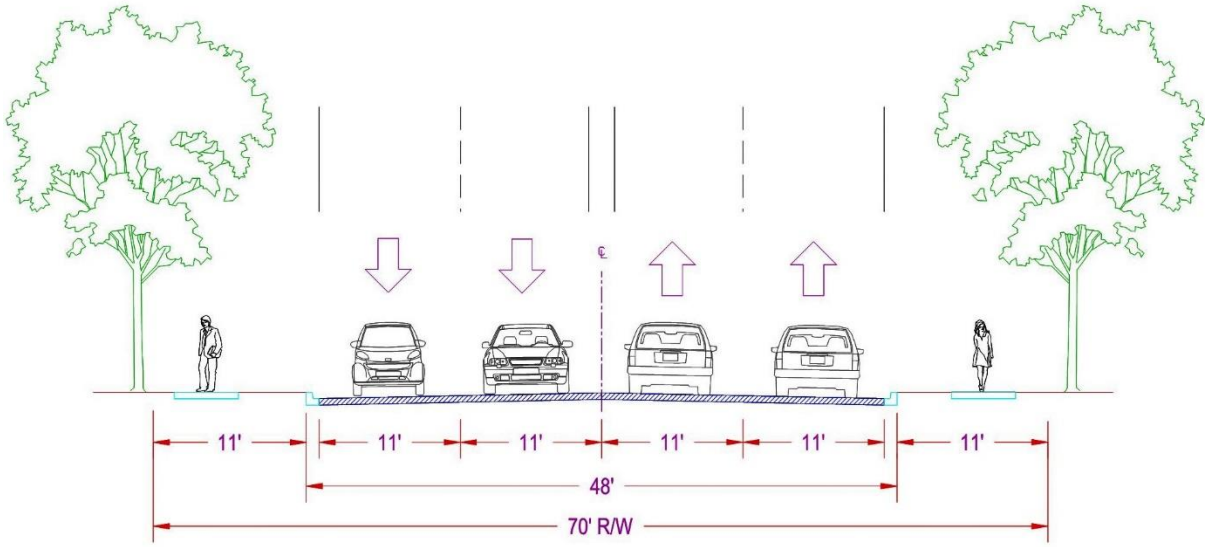
This cross section is a basic four-lane collector section, with outside lanes dedicated for bikes or parking. This section is intended for even lower design speeds than the previous sections, with the reduced lane widths and lack of a center dividing device such as a median or turning lane.



Collector roadway with 4 lanes undivided and park. ***(C4U - Park)***

Four-Lane Undivided Street off of Active Network

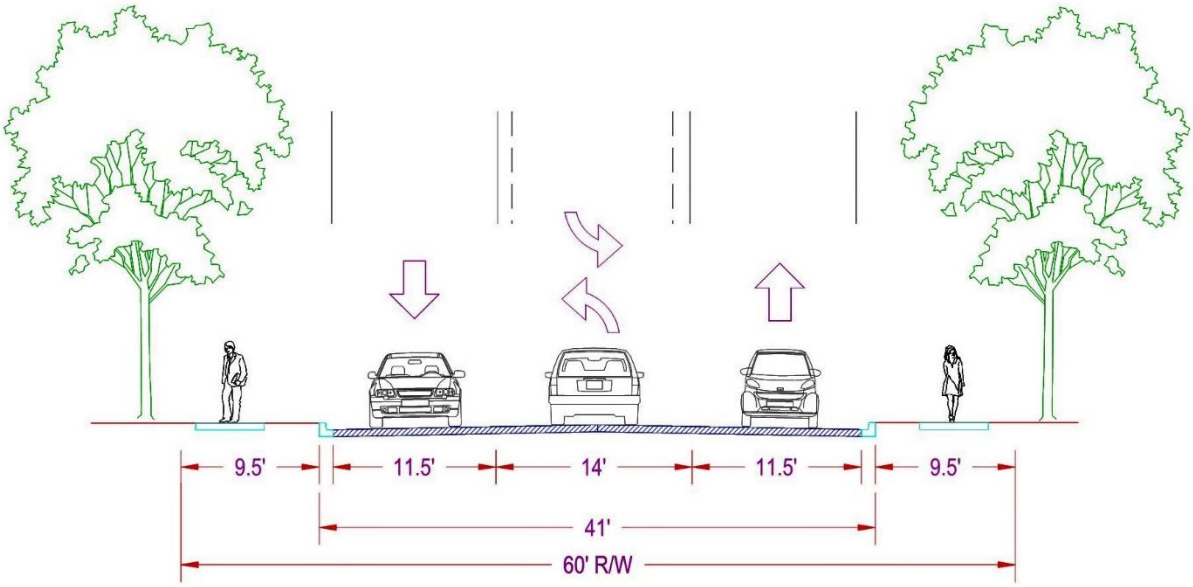
This cross section is a basic four-lane collector section off of the active network. The outside bike or parking dedicated lanes have been removed, reducing the right-of-way width requirement.



Collector roadway with basic 4 lanes undivided. ***(C4U)***

Four-Lane Undivided Street with Two-way Turn Lane off of Active Network

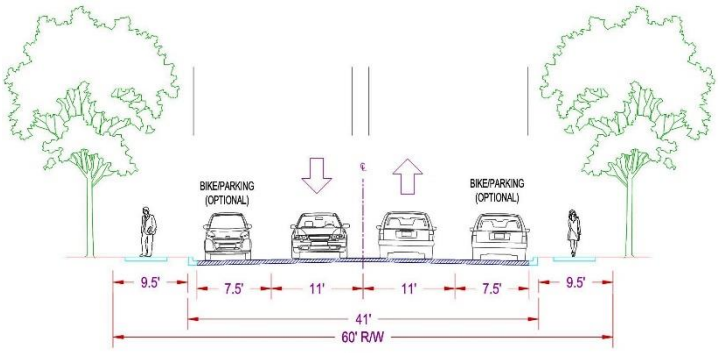
This cross section is a basic two-lane collector section with a two-way turn lane for increased access. This street section is for areas such as business parks, commercial strips, or areas with similar access requirements.



Collector roadway having 2 lanes with two-way left-turn undivided. ***(C3U)***

Two-Lane Street on Active Network

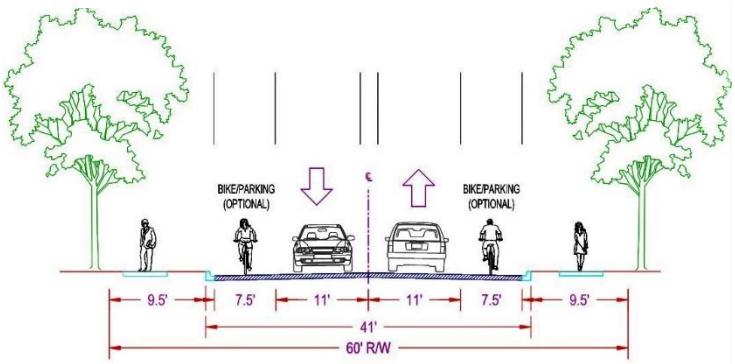
This section is for active network areas where the traffic density is such that a two-lane roadway is adequate. When space does not permit dedicated bike facilities, shared vehicle and bicycle lanes are acceptable. On-street parking on these sections is not recommended to prevent a cyclist from riding between a parked car and a faster moving vehicle.



Collector roadway with basic 2 lanes undivided. ***(C2U)***

Two-Lane Street on Active Network with Bike Lanes.

Along such collectors, there can be a conflict between cycling paths and parked vehicles. These sections have typically wider lane widths to ensure the comfort of the driver and cyclist. Depending on the density of residential access points along these roadways, if the street side parking is of lower necessity it can be converted to a dedicated bike lane, if desired.

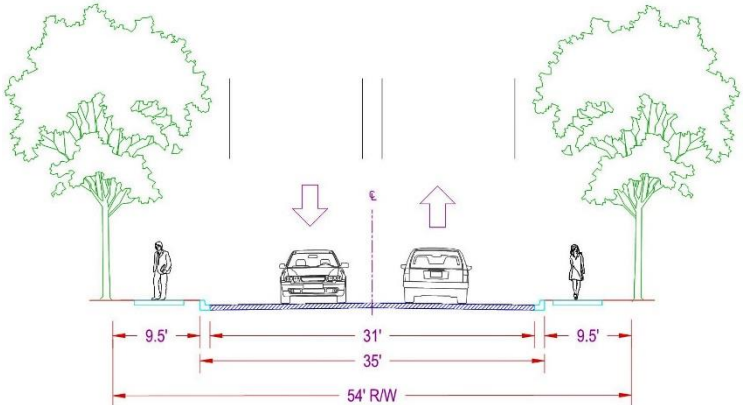


Collector roadway with basic 2 lanes undivided. ***(C2U - Bike)***

Local Street

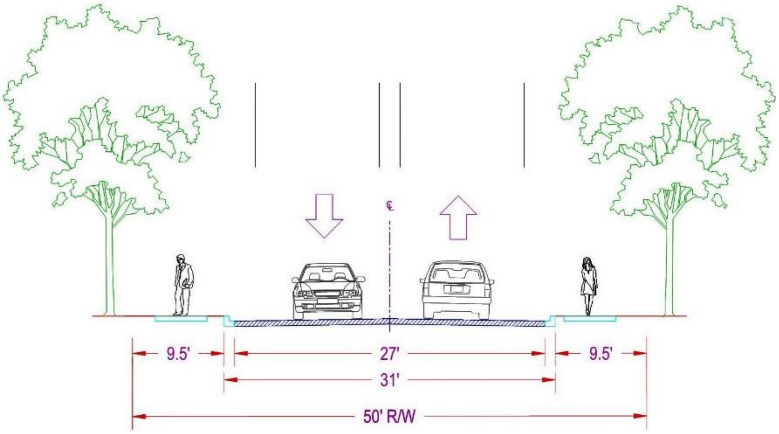
The local street differs primarily from the collector in the presence of on-street parking and the lack of through trips. For these streets, the total volume of vehicles is low enough to allow the sharing of a bike lane and a parking lane. The likelihood of a cyclist being passed while also passing a parked vehicle is much smaller than on a collector street.

When off the core active network, bike lanes are unnecessary, but space for sidewalks is still required in urban areas. This cross section should not be made more than one lane in either direction as this could lead towards higher free-flow speeds when balanced against the access needs. Intermediate parking lanes are acceptable if there is available space.



Local street with wider 2 lanes for heavier use. ***(L2U - Major)***

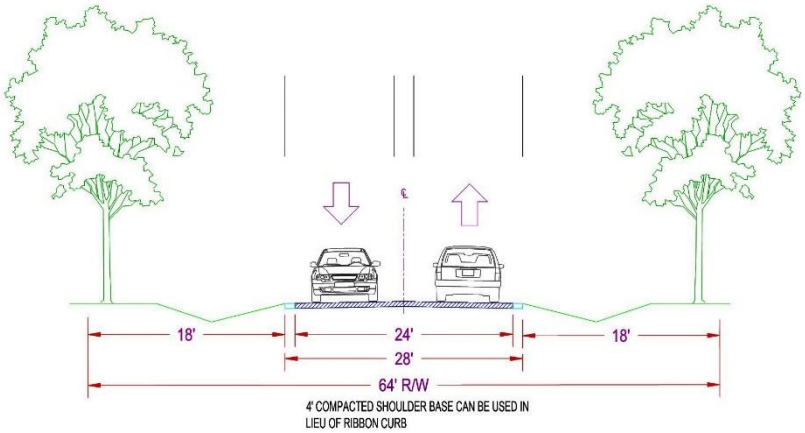
Local Major – This is applicable to residential, commercial and/or industrial areas. This street provides movement from the nearest collector street or higher classification and attract low traffic volumes of up to two thousand (2,000) vehicle trips per day.



Local street with 2 lanes regularly used. ***(L2U - Urban)***

Local Urban - This is the most common street by mileage. Its design is typical to what is already present in most of the City. Heavily dictated by right-of-way and adjacent housing, major changes to the cross section are not typical. However, such segments in the older portion of the City lack sidewalk connectivity and therefore a sidewalk implementation plan is important.

Local Rural - Off the active transportation network, the local rural roadway cross section may be appropriate for the surrounding land use context. This section has a larger right-of-way to accommodate open channel drainage.

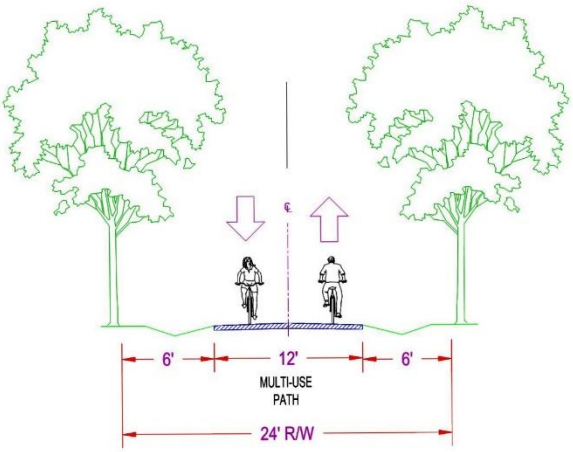


Local street with 2 lanes in rural areas. ***(L2U - Rural)***

Multi-Use Pathway

The City transportation network will also include shared pathways. These pathways may be located adjacent to streams, floodways or railways. This network element can serve both cyclist and pedestrians for travel or for recreation. Often, they connect to points of interest, such as the downtown area, parks or schools, but may also be constructed to serve as an alternative transportation option to major regional employers, such as Ft. Hood.

For two-way traffic, each lane should be 6-feet wide to provide a minimum of 12-feet of pavement. Two-foot shoulders should be provided to permit cyclist to safely pass a pedestrian or jogger, or allow pedestrians to walk side-by-side and not cross over into the oncoming lane.



Multi-Use Path. ***(MUP - Bike)***

SUMMARY

This Transportation Master Plan update recommends three basic roadway classifications and develops a set of possible roadway cross sections that may be applied based on the planned land use. The TMP does not specify exact design elements, but provides a guideline to design the roadway to fit the land use context of the development and to serve all the potential users of that roadway. The TMP classifies existing roadways based current traffic demand and connectivity in the network. This map provides a guide for future capital improvement projects. The Plan also identifies near term roadway and sidewalk improvements at the regional level that impact the City transportation system.

Arterials	Major	Active
		Non-Active
	Minor	Active
		Non-Active
Collectors	Active	
	Non-Active	
Locals	Active	
	Non-Active	
Multi-Use Pathway		

Chart 7 – Basic Roadway Classifications

The Plan also meets state and federal transportation planning requirements for projects to be included in the regional Transportation Improvement Program (TIP) and qualify for financial assistance to complete.

As previously mentioned, **Table 5** of page 50 can be used to assist with the planning process for future Capital Improvement Program projects. The Typical Section table provides a guide to determine the estimated cost per mile of roadway that may be applied for a proposed development. TxDOT's average annual bid item cost for the full year of 2016 was used to develop these costs.

EXHIBITS

EXHIBITS

EXHIBIT A – Active Transportation Network

EXHIBIT B – Active Transportation Sidewalk Network Map

EXHIBIT C – Transit Network Map

EXHIBIT D – Active Transportation Primary Routes Map

EXHIBIT E – Potential Project Listing and Prioritization

EXHIBIT F – Future Transportation Network

EXHIBIT G – Complete Streets Policy Ordinance

EXHIBIT H – Public Survey Questions and Results

EXHIBIT I – Public Workshop Announcements

EXHIBIT A – ACTIVE TRANSPORTATION NETWORK

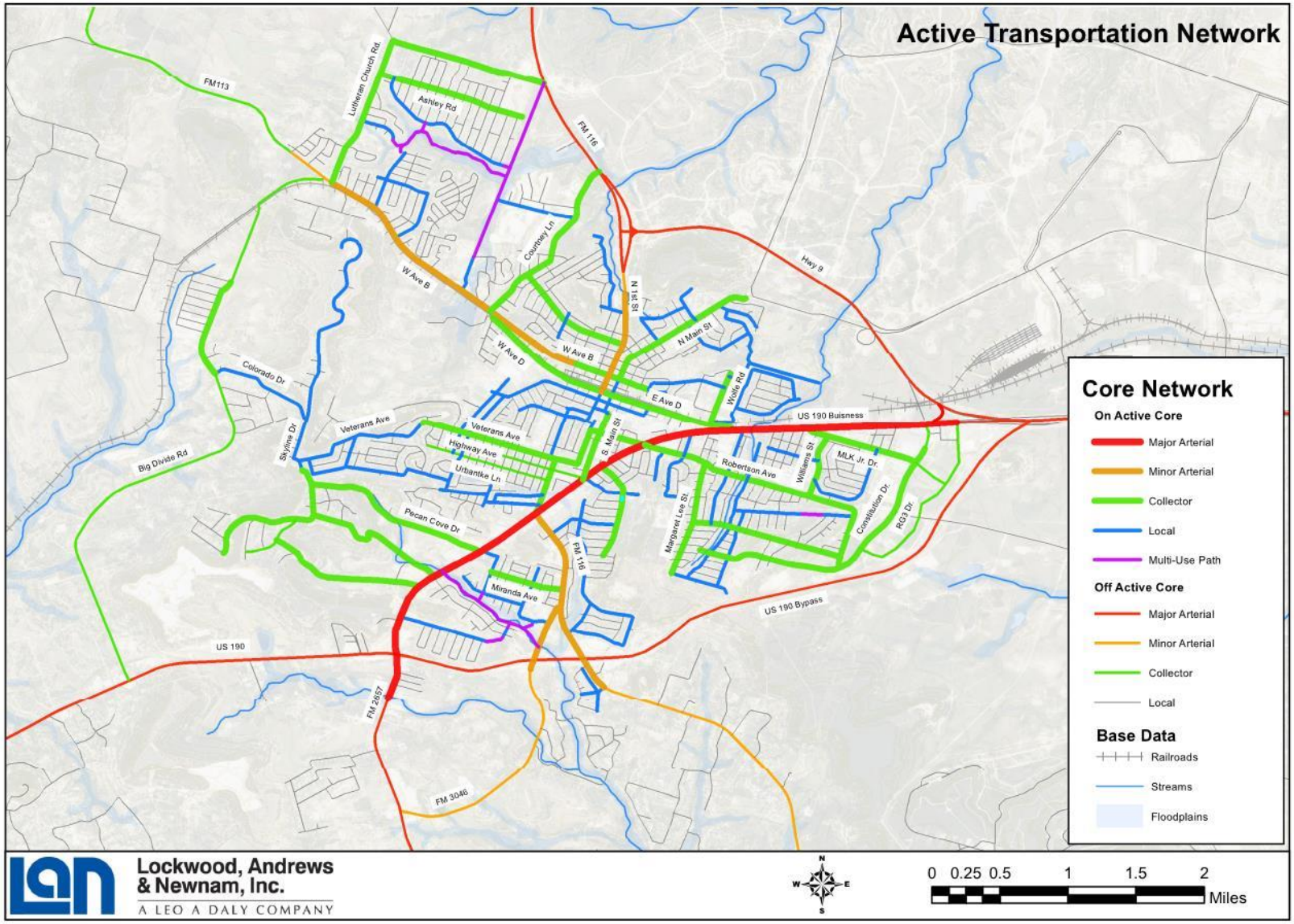


EXHIBIT B – ACTIVE TRANSPORTATION SIDEWALK NETWORK MAP

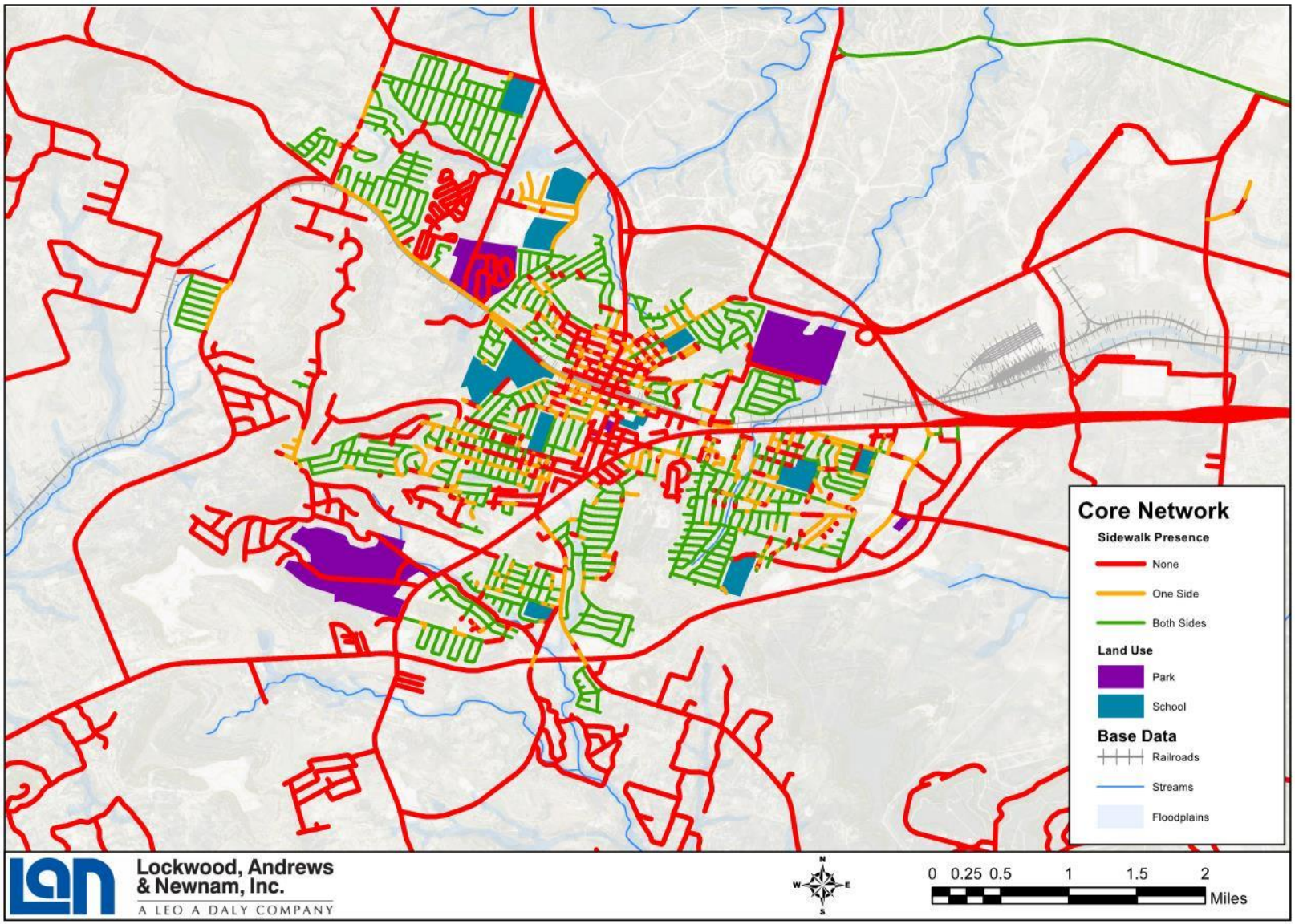


EXHIBIT C – TRANSIT NETWORK MAP

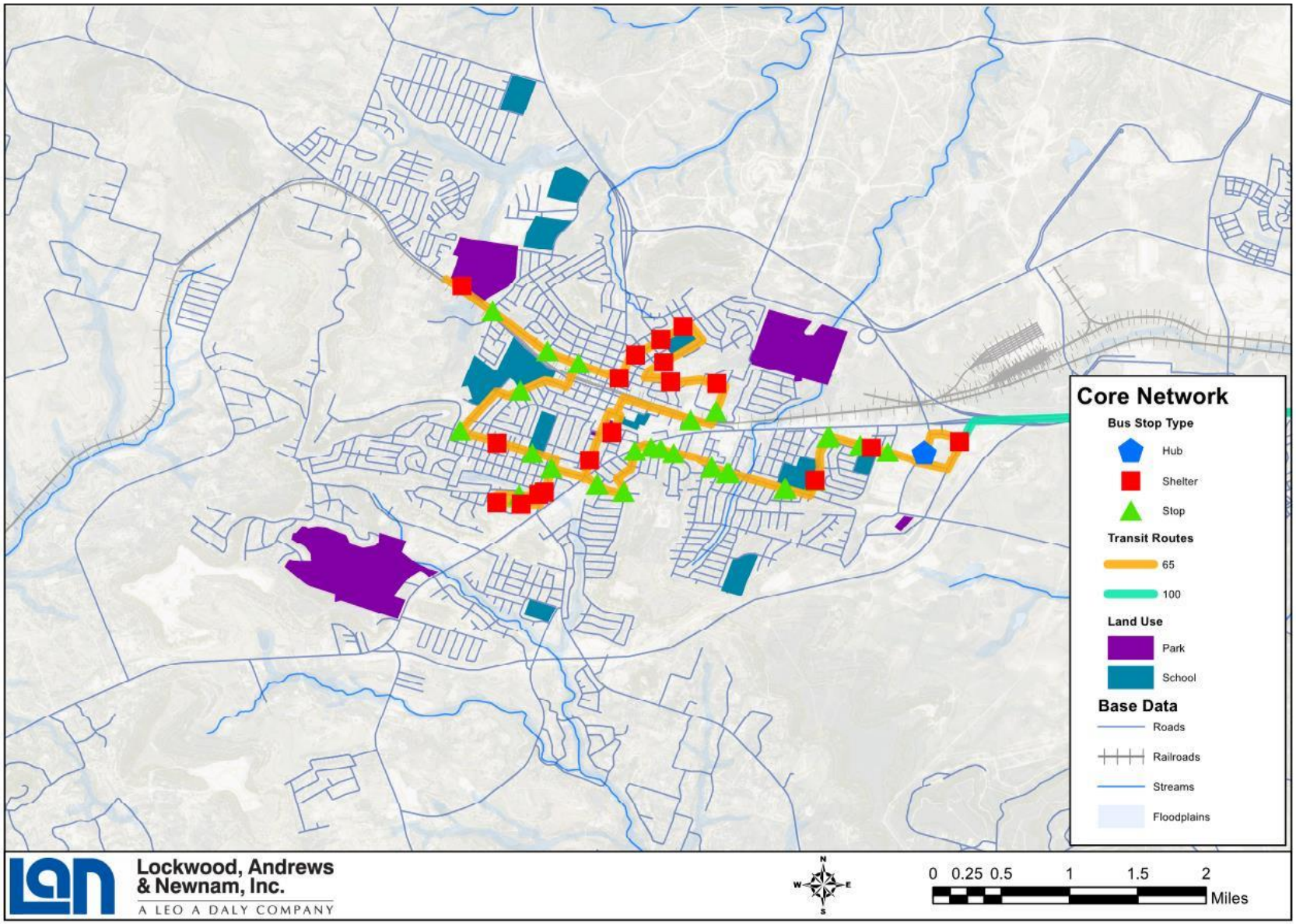


EXHIBIT D – ACTIVE TRANSPORTATION PRIMARY ROUTES MAP

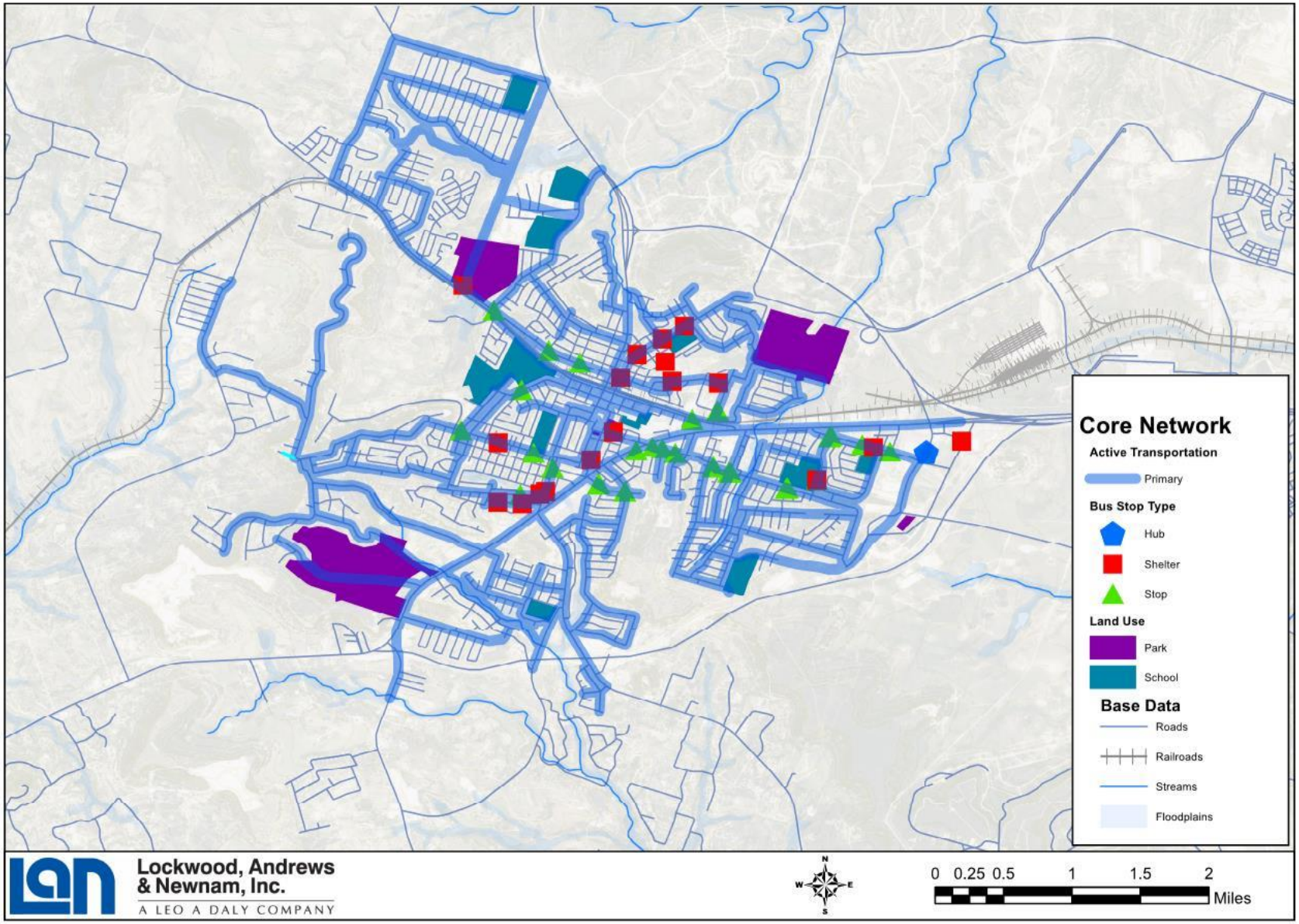


EXHIBIT E – POTENTIAL PROJECT LISTING AND PRIORITIZATION

Project Name:	Railroad Crossings – 1st Street and Main Street	Rank:	1
From:	Ave B	To:	Ave D

One of the major traffic bottlenecks in the city, many possible alternatives exist for improving the flow of vehicles through the center of town. Grade separation, conversion of the roads to one-way and road widening are all possibilities. The most likely alternative is grade separation and plans are already in progress towards achieving this.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	8	Vehicle Connectivity	7	Activity Center	5	ROW Acquisition	2
AT Safety	6	Vehicle Delay	5	Future Land Use	0	Plan Coordination	4
		AT Connectivity	3	Jobs Access	4	Current Need	7
		Modal Choice	2				

Project Name:	BUS190 - Phase 1	Rank:	2
From:	Ave D	To:	HWY 9

Phase 2 of the US HWY 190 Business project covers the northern section extending from the historic downtown area east past the HEB. Its improvements are similar to those in Phase 1 and highlight the need for additional vehicular safety improvements. Similar to Phase 1, this stretch of roadway is also in coordination with regional planning efforts.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	10	Vehicle Connectivity	0	Activity Center	6	ROW Acquisition	3
AT Safety	6	Vehicle Delay	5	Future Land Use	3	Plan Coordination	4
		AT Connectivity	4	Jobs Access	4	Current Need	7
		Modal Choice	0				

Project Name:	BUS190 - Phase 2	Rank:	3
From:	FM116	To:	Ave D

The busiest road in Copperas Cove, US HWY 190 Business is a major arterial with access points for various businesses. It has the highest volume of traffic and the worst historic crash record. It also serves as the primary corridor for a large portion of the population commuting towards Ft. Hood. Improvements to this roadway are already in progress and are continuing with coordination from regional planning authorities. Improvements will include lane reallocation, addition of a center median, improved signals, and an offset pathway for pedestrians and cyclists.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	10	Vehicle Connectivity	0	Activity Center	5	ROW Acquisition	2
AT Safety	5	Vehicle Delay	4	Future Land Use	2	Plan Coordination	4
		AT Connectivity	4	Jobs Access	4	Current Need	8
		Modal Choice	0				

Project Name:	W Avenue B - West	Rank:	4
From:	Bermuda St	To:	Courtney Ln

As a prominent minor arterial, West Avenue B serves to funnel a large volume of traffic from the western portion of the city. This volume will likely increase with and westward or northwestward development. In addition, it runs adjacent to the City Park and the Parks and Recreation Department. The roadway is to be widened to two lanes in each direction with the possible removal of the center turning lane except at the entrance of the park. In addition, existing pedestrian facilities will remain with the possibility of widening the path to easily accommodate cyclists.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	5	Vehicle Connectivity	5	Activity Center	4	ROW Acquisition	7
AT Safety	7	Vehicle Delay	5	Future Land Use	2	Plan Coordination	4
		AT Connectivity	4	Jobs Access	0	Current Need	4
		Modal Choice	1				

Project Name:	Constitution Drive – BUS190 to Risen Star Lane	Rank:	5
From:		To:	

Complementing the recent vehicular improvements, active transportation elements will be added along this collector. Connecting the new apartment complex, future multi-family dwellings, the movie theatre, and HEB are prime concerns. This will likely occur as part of a routine maintenance cycle.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	5	ROW Acquisition	8
AT Safety	6	Vehicle Delay	0	Future Land Use	4	Plan Coordination	4
		AT Connectivity	7	Jobs Access	3	Current Need	6
		Modal Choice	3				

Project Name:	Veterans Ave - Central	Rank:	6
From:	Babb St	To:	Lyons St

In addition to the issues experienced alongside the western Veteran Avenue project, the central section of Veterans Avenue also runs near multiple churches, the VFW, and Fairview/Miss Jewell Elementary School. Due to this, active transportation improvements are a higher priority. Other notable improvements are traffic calming elements and the consideration of signalization at the Georgetown Road intersection.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	7	Vehicle Connectivity	4	Activity Center	2	ROW Acquisition	6
AT Safety	9	Vehicle Delay	2	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	6
		Modal Choice	3				

Project Name:	Main Street - Central	Rank:	7
From:	Ave F	To:	BUS190

This stretch of roadway is one of the oldest in the city and contains many of the city's municipal buildings. On the north end is Avenue F with a tight s-curve and a church. On the south is a five-way intersection and a car wash. The roadway currently experiences a high volume of through traffic and is on the state highway network designated as an arterial. Improvement to this roadway focus on retaining the local street nature of the roadway and avoiding additional widening that will necessitate the destruction of municipal, neighborhood, and residential buildings. To alleviate the volume on this roadway, other projects will create better routes between the northern half of the city and BUS190 going southbound.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	6	Vehicle Connectivity	5	Activity Center	5	ROW Acquisition	8
AT Safety	8	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	2	Jobs Access	2	Current Need	7
		Modal Choice	2				

Project Name:	Connection - East Avenue D and BUS190	Rank:	8
From:	Ave D	To:	BUS190

Due to the high volume of north to south crosstown traffic and Main Street's inability to handle such a volume, a new or improved connection must be made east of the historic downtown to connect Avenue D and US190 Business. There are multiple possible paths for this new connection depending on the difficulty of land acquisition and the necessity of demolishing existing structures. Three possible alternatives are connecting 6th Street and School Street, expansion of 10th Street, and expansion of 12th Street.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	7	Vehicle Connectivity	7	Activity Center	6	ROW Acquisition	0
AT Safety	3	Vehicle Delay	4	Future Land Use	4	Plan Coordination	0
		AT Connectivity	2	Jobs Access	4	Current Need	7
		Modal Choice	1				

Project Name:	Connection - Cline, Clovis, FM116	Rank:	9
From:		To:	

Two neighborhoods are to be connected. The first is the neighborhood around Clovis Drive and the second is the neighborhood around Cline Drive. The new connection will also connect with FM3046. This will allow vehicular traffic to more easily reach US190 and it will allow pedestrian traffic to reach the South Park pool and Martin Walker Elementary School.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	6	Vehicle Connectivity	7	Activity Center	4	ROW Acquisition	3
AT Safety	5	Vehicle Delay	3	Future Land Use	1	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	5
		Modal Choice	3				

Project Name:	Neff Drive	Rank:	10
From:		To:	

A collector that bisects a recent development and an imminent development, Neff Drive will receive improvements that promote active transportation connectivity in coordination with adjacent projects. These improvements are not predicted to be new construction, but new signage and striping as part of the routine maintenance cycle.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	5	ROW Acquisition	8
AT Safety	7	Vehicle Delay	0	Future Land Use	5	Plan Coordination	0
		AT Connectivity	7	Jobs Access	0	Current Need	6
		Modal Choice	3				

Project Name:	Veterans Ave - West	Rank:	11
From:	Skyline Dr.	To:	Babb St

Similar to Skyline Drive, Veterans Avenue experiences a large volume of cut-through traffic. The western intersection of Babb Street is historically unsafe. There is little sidewalk coverage in an area that is highly residential. Improvements will address these concerns.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	6	Vehicle Connectivity	5	Activity Center	0	ROW Acquisition	6
AT Safety	8	Vehicle Delay	1	Future Land Use	1	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	7
		Modal Choice	1				

Project Name:	Railroad Crossing – West Avenue B to West Avenue D	Rank:	12
From:	Ave B	To:	Ave D

Due to its proximity to the High School, this railroad crossing experiences higher volume than the current quality should allow. Improvements will include wider pavement, better signage and striping, active transportation accommodations, and better train crossing guards. Of note, due to the negotiation process with BNSF, this railroad interaction will likely occur as part of an overall change to all railroad crossings in Copperas Cove.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	8	Vehicle Connectivity	6	Activity Center	3	ROW Acquisition	2
AT Safety	6	Vehicle Delay	4	Future Land Use	0	Plan Coordination	1
		AT Connectivity	5	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	NW Multi-use Path	Rank:	13
From:		To:	

In the northwest portion of the city, there is an area enclosed by West Avenue B, Summers Road, Lutheran Church Road, FM116, and Courtney Lane. Within this area are many neighborhoods, City Park, and three separate schools. Presently, a large disconnect exists between all of these locations due to prevailing roadway network being built to avoid the flood plain in the area. A new multi-use path, similar to South Park Trail, is proposed to connect these neighborhoods and destinations. The routing of this path is to closely follow the path of the existing dry creek beds in the area.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	5	ROW Acquisition	6
AT Safety	8	Vehicle Delay	0	Future Land Use	5	Plan Coordination	1
		AT Connectivity	7	Jobs Access	0	Current Need	6
		Modal Choice	3				

Project Name:	Ashley Road	Rank:	14
From:		To:	

A collector through a pre-planned development, this roadway bisects a large residential community. Implementation of active transportation elements are to be done to promote connectivity. No acquisition is projected, merely a restriping and the possible implementation of traffic calming measures. The new roadway will feature a painted bike lane that will promote connectivity with other proposed improvements.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	7	Vehicle Connectivity	0	Activity Center	4	ROW Acquisition	8
AT Safety	9	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	5
		Modal Choice	2				

Project Name:	North Main Street	Rank:	15
From:	Ave B	To:	Tank Destroyer Blvd

As a collector adjacent to Hettie Halstead Elementary School, this roadway will receive extensive active transportation treatments. An existing inspection of the area shows that the lack of sidewalks is not preventing pedestrian from traveling alongside the roadway. Sidewalks, crosswalks, and biking facilities will improve the safety of non-motorized transportation to both the school and adjacent neighborhoods.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	4	ROW Acquisition	8
AT Safety	10	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	8
		Modal Choice	3				

Project Name:	East Avenue D			Rank:	16	Priorities							
From:	Main St	To:	BUS190			Safety		Mobility		Development		Implementation	
Alterations to this stretch of roadway are meant to align with proposed changes in adjacent roadways and to address safety concerns that come from the high number of and density of driveways. In addition, the sharp intersection angle with BUS190 is likely to be the cause of the high historic crash rate.						Vehicle Safety	8	Vehicle Connectivity	7	Activity Center	5	ROW Acquisition	2
						AT Safety	2	Vehicle Delay	4	Future Land Use	0	Plan Coordination	0
								AT Connectivity	2	Jobs Access	3	Current Need	6
								Modal Choice	1				

Project Name:	FM116 – South			Rank:	17	Priorities							
From:	FM3046	To:	South of Paula St			Safety		Mobility		Development		Implementation	
A minor arterial leading to the largely undeveloped southern part of town, this roadway is likely to experience an increase in traffic due to future development and the proximity of the US190 bypass. Improvements will include an increase in the number of lanes to match FM116 north of US190. In addition active transportation connectivity will be improved to connect the neighborhoods with the adjacent churches.						Vehicle Safety	7	Vehicle Connectivity	5	Activity Center	0	ROW Acquisition	4
						AT Safety	4	Vehicle Delay	4	Future Land Use	5	Plan Coordination	4
								AT Connectivity	3	Jobs Access	0	Current Need	4
								Modal Choice	0				

Project Name:	BUS190 - Phase 3 - South			Rank:	18	Priorities							
From:	US190	To:	FM116			Safety		Mobility		Development		Implementation	
The southern section of BUS190 serves a much different purpose than the northern and central sections. Also, unlike the other sections, the southern section is not currently on any regional plans. Commuting and through traffic is not as high on this stretch. There are specific intersections that pose safety issues. Improvements along this roadway will focus on providing a beneficial environment for future development. In addition, active transportation connectivity improvement will join the unconnected southern neighborhoods.						Vehicle Safety	8	Vehicle Connectivity	0	Activity Center	2	ROW Acquisition	5
						AT Safety	4	Vehicle Delay	3	Future Land Use	5	Plan Coordination	0
								AT Connectivity	5	Jobs Access	3	Current Need	4
								Modal Choice	0				

Project Name:	Highway Avenue			Rank:	19	Priorities							
From:		To:				Safety		Mobility		Development		Implementation	
A collector through multiple residential areas, improvements focus on improving specific locations with safety issues and providing west to east active transportation connectivity. Some of these improvements will require small construction, but many can be achieved as part of a routine maintenance cycle.						Vehicle Safety	7	Vehicle Connectivity	3	Activity Center	2	ROW Acquisition	7
						AT Safety	7	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
								AT Connectivity	5	Jobs Access	0	Current Need	6
								Modal Choice	2				

Project Name:	Ogletree Pass			Rank:	20	Priorities							
From:		To:				Safety		Mobility		Development		Implementation	
This local road connects the hilly neighborhoods along Freedom Lane to BUS190. It also runs adjacent to Ogletree Gap Preserve and Pavilion. Of note on this road is the prominent S-curve mid-way up the hill. The curve has a historically bad crash record and has many blind spots for both vehicles and pedestrians. Remediation involves the purchasing of right-of-way and considerable earth moving to create an acceptable slope for vehicles and active transportation.						Vehicle Safety	10	Vehicle Connectivity	2	Activity Center	3	ROW Acquisition	0
						AT Safety	8	Vehicle Delay	1	Future Land Use	0	Plan Coordination	0
								AT Connectivity	6	Jobs Access	1	Current Need	6
								Modal Choice	1				

Project Name:	Mueller Street	Rank:	21
From:		To:	

A local street, Mueller will likely be impacted by the recent construction of Constitution Drive. As the new roadway creates a shorter path to desirable locations, traffic calming considerations will be made to ensure a safe through speed. In addition, active transportation elements will be provided to connect Robertson Avenue to Constitution Drive.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	5	Activity Center	4	ROW Acquisition	6
AT Safety	3	Vehicle Delay	0	Future Land Use	5	Plan Coordination	0
		AT Connectivity	4	Jobs Access	2	Current Need	5
		Modal Choice	1				

Project Name:	Skyline Drive - South	Rank:	22
From:	Veterans Ave	To:	White Mesa Cir

This local street is on the shortest path between the city center and the neighborhoods along Colorado Drive and Big Divide Road. Due to this, there is a high volume of cut-through traffic and subsequently a worse than expected safety record. Improvement here will focus on lowering vehicular speeds and encouraging cut-through traffic to take alternative paths. This specifically includes improvements to the intersection at Colorado Drive. In addition, the high density of housing and the connections to surrounding neighborhoods makes active transportation elements a priority.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	6	Vehicle Connectivity	5	Activity Center	0	ROW Acquisition	4
AT Safety	7	Vehicle Delay	1	Future Land Use	1	Plan Coordination	0
		AT Connectivity	5	Jobs Access	0	Current Need	7
		Modal Choice	1				

Project Name:	Courtney Lane - South	Rank:	23
From:	Fairbanks St	To:	Ave B

Improvement here are intent on providing cyclist connectivity and reducing the impact of cut-through traffic. Specifically, the street will be restriped to provide bicycle lanes and a narrower travel way. This will ensure appropriate vehicle travel speeds and connect the surrounding neighborhoods with the schools in the north and the parks in the south.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	2	ROW Acquisition	8
AT Safety	7	Vehicle Delay	0	Future Land Use	2	Plan Coordination	2
		AT Connectivity	6	Jobs Access	0	Current Need	4
		Modal Choice	3				

Project Name:	Risen Star Lane	Rank:	24
From:		To:	

With the recent completion of Constitution Drive and the proximity to Hollie Parsons Elementary, improvements here will focus on ensuring that cut-through traffic is not too high for the school zone and that active transportation is connected between the neighborhoods along Joe Morse Drive and the areas on the northern portion of Constitution Drive.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	4	Activity Center	0	ROW Acquisition	7
AT Safety	8	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	5	Jobs Access	0	Current Need	6
		Modal Choice	3				

Project Name:	FM3046 - North	Rank:	25
From:	US190	To:	FM116

An urban minor arterial, FM 3046 is adjacent to Martin Walker Elementary School, Cove Charter Elementary School, and the South Park pool. Improvements will provide pedestrian and cycling access to both schools, connect to the South Park trail, and tie-in to the new proposed connector as part of a different project.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	3	ROW Acquisition	8
AT Safety	8	Vehicle Delay	0	Future Land Use	0	Plan Coordination	4
		AT Connectivity	4	Jobs Access	0	Current Need	6
		Modal Choice	2				

Project Name:	Connection - Ashley Road to FM116	Rank:	26
From:		To:	

As a collector in a residential area, traffic from adjacent local streets, i.e. Terry Drive and Griffin Drive, is better served by a direct connection to FM116 than by diverting north towards Lutheran Church Road and then past House Creek Elementary School. This connection will also alleviate the projected high volume of traffic that the intersection of Lutheran Church Road and FM116 is expected to receive with future development.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	7	Vehicle Connectivity	6	Activity Center	2	ROW Acquisition	3
AT Safety	4	Vehicle Delay	4	Future Land Use	4	Plan Coordination	0
		AT Connectivity	2	Jobs Access	0	Current Need	2
		Modal Choice	1				

Project Name:	West Avenue E	Rank:	27
From:	25th St	To:	1st St

A local connector and adjacent to Copperas Cove High School, improvements here will focus on intersection safety, specifically at 7th Street. In addition, active transportation connectivity will be provided between the high school, the neighborhoods, and the historic downtown.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	9	Vehicle Connectivity	0	Activity Center	2	ROW Acquisition	7
AT Safety	6	Vehicle Delay	1	Future Land Use	0	Plan Coordination	0
		AT Connectivity	4	Jobs Access	0	Current Need	5
		Modal Choice	1				

Project Name:	Lutheran Church Road	Rank:	28
From:		To:	

This collector street is likely to be heavily impacted by adjacent land development to the north. Also, the stretch of roadway has a higher crash record than would be expected. This is likely due to traffic traveling higher than the desired speed. Improvements here will focus on providing connectivity to northern developments and on bringing travel speeds down to safe ranges. This means restriping, all ways stop signs, sidewalks and crosswalks, and improved signage. Also, as part of this project, the intersection of Lutheran Church Road and FM116 will receive improvement. Improving the angle of intersection closer to 90 degrees will improve safety and changing in lane allocations and timing will improve traffic flow.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	7	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	3
AT Safety	5	Vehicle Delay	3	Future Land Use	4	Plan Coordination	1
		AT Connectivity	4	Jobs Access	0	Current Need	6
		Modal Choice	1				

Project Name:	Grimes Crossing / Big Divide	Rank:	29
From:	US190	To:	Railroad Crossing

As a long, rural stretch of roadway, Big Divide Road has a large potential for future development and to serve as a major piece in the City's overall traffic congestion mitigation plan. Improvement to multiple lanes in each direction and signalized intersection considerations will improve travel times to West Avenue B in the north and US190 in south. Cumulatively, with other proposed projects, this will reduce the amount of cut-through traffic moving through neighborhoods in the city's center. This will also include reconstruction of the currently insufficient railroad crossing.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	7	Vehicle Connectivity	7	Activity Center	0	ROW Acquisition	0
AT Safety	2	Vehicle Delay	3	Future Land Use	5	Plan Coordination	4
		AT Connectivity	2	Jobs Access	0	Current Need	4
		Modal Choice	0				

Project Name:	Robertson Avenue	Rank:	30
From:		To:	

An urban collector, improvements will be a combination of restriping, improved signage, and spot traffic calming improvements. Specific intersections have safety concerns and providing active transportation connectivity between the neighborhoods and Copperas Cove Junior High is a priority.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	6	Vehicle Connectivity	2	Activity Center	1	ROW Acquisition	7
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	5	Jobs Access	0	Current Need	5
		Modal Choice	2				

Project Name:	Pecan Cove Drive	Rank:	31
From:		To:	

A local street, improvements to Pecan Cove Drive focus on improving the roadway from the quality of a rural roadway to the quality of an urban roadway. Wider pavement, pavement markings, and sidewalks will improve the connection between the neighboring businesses, the neighborhoods on the hill, and US HWY 190 Business.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	7	Vehicle Connectivity	5	Activity Center	1	ROW Acquisition	3
AT Safety	5	Vehicle Delay	2	Future Land Use	2	Plan Coordination	0
		AT Connectivity	3	Jobs Access	1	Current Need	3
		Modal Choice	1				

Project Name:	FM116 - North			Rank:	32	Priorities							
From:	BUS190	To:	FM3046			Safety		Mobility		Development		Implementation	
A prominent minor arterial, this stretch of FM116 connects BUS190 to adjacent neighborhoods and neighborhoods farther south. There are sufficient lanes to accommodate current and projected vehicle traffic, but there are deficiencies in providing for non-automobile modes. Large swaths of the roadway are missing sidewalks on one side or the other. The places where sidewalks exist, they are immediately adjacent to moving traffic with no separation or protection. Also, there is no safe means of crossing from one side of the street to the other. Missing sidewalk will be installed, existing sidewalk will be offset if possible, and cycling accommodations will be implemented either by restriping and providing dedicated bike lanes or a physically separated facility.						Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	1	ROW Acquisition	6
						AT Safety	7	Vehicle Delay	0	Future Land Use	0	Plan Coordination	3
								AT Connectivity	6	Jobs Access	0	Current Need	5
								Modal Choice	2				

Project Name:	Courtney Lane - North			Rank:	33	Priorities							
From:	FM116	To:	Fairbanks St			Safety		Mobility		Development		Implementation	
This collector is heavily impacted by recent land development. This segment is largely a school zone due to SC Lee Junior High and JL Williams Ledger School. The increased residential development will put more traffic alongside the schools. Traffic calming measures and possible signalization at the intersections of Neff Drive and/or Lubbock Drive will promote free flowing traffic to move at the recognized speed limits. In addition, cyclist facilities will connect the schools to southern neighborhoods and promote modal choice.						Vehicle Safety	5	Vehicle Connectivity	0	Activity Center	1	ROW Acquisition	6
						AT Safety	8	Vehicle Delay	0	Future Land Use	5	Plan Coordination	1
								AT Connectivity	2	Jobs Access	0	Current Need	3
								Modal Choice	1				

Project Name:	W Avenue B - East			Rank:	34	Priorities							
From:		To:				Safety		Mobility		Development		Implementation	
Unlike the western segment of West Avenue B, this stretch of road has a much higher driveway density. As such, the alteration to a two-lane road would reduce the safety of those living there. Instead, the existing center turning lane will remain and the intersections will be improved. Of note, Courtney Lane and the intersection near the railroad crossing both have traditionally high crash records.						Vehicle Safety	6	Vehicle Connectivity	3	Activity Center	3	ROW Acquisition	3
						AT Safety	4	Vehicle Delay	3	Future Land Use	0	Plan Coordination	2
								AT Connectivity	4	Jobs Access	0	Current Need	2
								Modal Choice	2				

Project Name:	Post Office Road			Rank:	35	Priorities							
From:		To:				Safety		Mobility		Development		Implementation	
Improvements include additional pavement from the existing hill neighborhoods to BUS190. In addition, improvement will be made to ensure safe access to the existing Ogletree Gap Pavilion. Other improvements will improve the walkable environment to promote the natural environment of the park.						Vehicle Safety	4	Vehicle Connectivity	3	Activity Center	4	ROW Acquisition	6
						AT Safety	6	Vehicle Delay	1	Future Land Use	0	Plan Coordination	0
								AT Connectivity	4	Jobs Access	0	Current Need	3
								Modal Choice	1				

Project Name:	West Avenue D - West			Rank:	36	Priorities							
From:	Railroad Crossing	To:	7th St			Safety		Mobility		Development		Implementation	
This stretch of road is immediately adjacent to Copperas Cove High School. As such, it sees a large volume of both pedestrian and vehicular traffic. Improvements focus on the interaction with the high school and active transportation connections between the western neighborhoods and downtown.						Vehicle Safety	4	Vehicle Connectivity	5	Activity Center	3	ROW Acquisition	4
						AT Safety	5	Vehicle Delay	2	Future Land Use	0	Plan Coordination	0
								AT Connectivity	4	Jobs Access	0	Current Need	2
								Modal Choice	2				

Project Name:	North Drive	Rank:	37
From:	Ave B	To:	Barber Dr.

A local road adjacent to a senior center, improvement here focus on providing safe active transportation elements and connecting the greater active transportation network.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	3	ROW Acquisition	8
AT Safety	8	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	3	Jobs Access	0	Current Need	6
		Modal Choice	1				

Project Name:	Casa Drive	Rank:	38
From:		To:	

Improvement to this roadway are focused on providing active transportation improvements around the Department of Human Services and the adjacent HOP bus stops.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	8
AT Safety	8	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	6
		Modal Choice	3				

Project Name:	Williams Street	Rank:	39
From:		To:	

This local street is adjacent to Copperas Cove Junior High and shows evidence of extensive pedestrian activity. Improvement here will ensure a safe school route and accommodations for the partially isolated HOP covered bus stop.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	1	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	6
AT Safety	10	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	4	Jobs Access	0	Current Need	8
		Modal Choice	2				

Project Name:	Miranda Avenue	Rank:	40
From:		To:	

A local street adjacent to Martin Walker Elementary School, improvements focus on providing better accommodations to school children. Around a thousand feet of missing sidewalk will be added. As part of the maintenance cycle, lanes will be restriped and bicycle lanes will be added. Traffic calming may be implemented at the intersection of Dennis Street if necessary.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	3	ROW Acquisition	8
AT Safety	8	Vehicle Delay	0	Future Land Use	0	Plan Coordination	1
		AT Connectivity	2	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	Cline Drive	Rank:	41
From:		To:	

Coinciding with other proposed improvements, Cline Drive will receive bicycle and pedestrian improvement to promote active transportation connectivity between the adjacent neighborhoods, Martin Walker Elementary School, and the South Park Pool and trail. This is expected to mainly occur as part of routine maintenance activities and not to require additional right-of-way.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	3	ROW Acquisition	8
AT Safety	7	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	5	Jobs Access	0	Current Need	4
		Modal Choice	3				

Project Name:	Margaret Lee Street	Rank:	42
From:		To:	

A prominent connector for multiple neighborhoods and cul-de-sacs, improvements here will focus on providing active transportation connectivity to the businesses around BUS190. This restriping effort will likely occur as part of a routine maintenance plan.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	8
AT Safety	7	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	5
		Modal Choice	2				

Project Name:	Creek Street	Rank:	43
From:		To:	

This roadway is a local street that runs through many neighborhoods and crosses paths with multiple collector streets. Traffic calming elements will ensure that through speeds are not excessive around dense residential areas. Restriping and the dedicated bicycle facilities will ensure active transportation connectivity. There are also locations with a notable lack of sidewalk coverage, specifically where it crosses the utility area.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	7
AT Safety	7	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	5
		Modal Choice	2				

Project Name:	Connection - West Avenue D to Bradford Drive	Rank:	44
From:	Ave D	To:	Bradford Dr.

A new collector is proposed to run from the presently mildly developed Bradford Drive to West Avenue D going parallel to the railroad track. This new connection, along with a new proposed connection to Skyline Drive, will provide an alternative route for traffic to get to Copperas Cove High School and to the historic downtown. This will alleviate the demand currently placed on the internal neighborhood road of Veterans Avenue, on West Avenue B, and on the existing railroad crossings at 1st Street and Main Street. In addition, it will provide active transportation connectivity to the local high school.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	4	Vehicle Connectivity	7	Activity Center	1	ROW Acquisition	2
AT Safety	3	Vehicle Delay	4	Future Land Use	2	Plan Coordination	0
		AT Connectivity	2	Jobs Access	0	Current Need	3
		Modal Choice	1				

Project Name:	Summers Road	Rank:	45
From:		To:	

Running adjacent to multiple disconnected neighborhoods and at the edge of the city, this collector will receive improvements that connect non-vehicle modes while also accommodating for the possible growth northwest of the city along the rural stretch of Lutheran Church Road.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	5	Vehicle Connectivity	2	Activity Center	0	ROW Acquisition	6
AT Safety	4	Vehicle Delay	1	Future Land Use	3	Plan Coordination	0
		AT Connectivity	4	Jobs Access	0	Current Need	2
		Modal Choice	2				

Project Name:	Tyler Drive & Phyllis Avenue	Rank:	46
From:		To:	

Two adjoined local streets, the focus of improvements here is to promote active transportation connectivity. Gaps in sidewalks will be finished and restriping will occur to provide a continuous bike facility from the southern portion of the city to the central portion. This restriping is likely to occur as part of a maintenance effort.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	8
AT Safety	7	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	Robertstown Drive	Rank:	47
From:		To:	

As a local road that connects multiple neighborhoods to West Avenue B, Robertstown Drive will receive additional improvement to improve active transportation connectivity. These will not likely not require new construction or right-of-way acquisition, but will occur as signing and striping improvements along with the routine maintenance cycle.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	2	ROW Acquisition	8
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	5	Jobs Access	0	Current Need	3
		Modal Choice	2				

Project Name:	25th Street	Rank:	48
From:	Veterans Ave	To:	Ave E

A local street, this roadway is on the primary route from many neighborhoods to the high school. It is also one of the entrances to student parking. These combinations of things lead to a higher than expected crash rate at the intersection of 25th and Avenue E. Improvements will highlight this and other intersections. In addition, restriping will provide for biking facilities that improve active transportation connectivity.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	8	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	0
AT Safety	7	Vehicle Delay	0	Future Land Use	1	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	Lindsey Drive	Rank:	49
From:		To:	

As a local street with many adjacent roadway connections, Lindsey Drive will receive additional cycling improvement to promote active transportation connectivity in coordination with other proposed projects. A restriping with the addition of dedicated bike lanes is projected to occur alongside the regular maintenance cycle.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	8
AT Safety	8	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	4	Jobs Access	0	Current Need	3
		Modal Choice	2				

Project Name:	Hill Street	Rank:	50
From:		To:	

As a local road that connects multiple neighborhoods to both N 1st Street, a minor arterial, and Courtney Lane, a school centric collector, Hill Street's improvement focus on providing activity connectivity between the two end destinations while implementing traffic calming measure to prevent cut-through traffic operating at higher than desired speeds.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	2	ROW Acquisition	8
AT Safety	5	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	4	Jobs Access	0	Current Need	3
		Modal Choice	2				

Project Name:	Little Street	Rank:	51
From:		To:	

A local street, improvements here will focus on active transportation connectivity with safety improvements at specific intersections. This will provide a dedicated bicycle facility from central neighborhoods to BUS190 and provide access points to HOP bus stops.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	8
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	5	Jobs Access	0	Current Need	3
		Modal Choice	2				

Project Name:	Martin Luther King Junior Drive	Rank:	52
From:		To:	

A collector, this roadway connects BUS190, adjacent neighborhoods, other connectors, and the shopping areas on Constitution Drive. Active transportation elements including missing gaps in sidewalks and dedicated bike facilities will improve overall connectivity.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	6
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	5	Jobs Access	0	Current Need	5
		Modal Choice	2				

Project Name:	North 1st Street	Rank:	53
From:	HWY 9	To:	Ave B

As one the minor arterials in Copperas Cove, N 1st Street is on the state highway network and serves to connect a large portion of the city's northern neighborhoods with the city center. This stretch of urban roadway will receive a complete redesign. Dual lanes in either direction to match the northern section, possible signalization, and extensive active transportation considerations for the adjacent communities will greatly improve both mobility and safety for this corridor.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	3	Activity Center	4	ROW Acquisition	1
AT Safety	2	Vehicle Delay	3	Future Land Use	5	Plan Coordination	0
		AT Connectivity	5	Jobs Access	2	Current Need	1
		Modal Choice	1				

Project Name:	Railroad Crossing – Bradford Road	Rank:	54
From:	Railroad Crossing	To:	Ave D

Improvements at this railroad crossing are to correspond with a projected increase in traffic from development west of the railroad and diverted traffic from proposed new road connections. As with other railroad crossing improvements, this project will likely during cumulative negotiations with BNSF.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	6	Vehicle Connectivity	4	Activity Center	0	ROW Acquisition	4
AT Safety	3	Vehicle Delay	2	Future Land Use	2	Plan Coordination	0
		AT Connectivity	1	Jobs Access	0	Current Need	3
		Modal Choice	0				

Project Name:	Connection - Skyline Drive to Bradford Drive	Rank:	55
From:	Skyline Dr.	To:	Bradford Dr.

Due to the large volume of cut-through traffic on Veterans Avenue generated by recent development on Skyline Drive, a new connection between Skyline Drive and an a near arterial is needed. A connection down the hill from Skyline Drive to Bradford Drive then across the existing railroad crossing to West Avenue B accomplishes this. The project will involve considerable acquisition of right-of-way and engineering challenges in achieving an acceptable grade going up the hill.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	7	Activity Center	0	ROW Acquisition	0
AT Safety	2	Vehicle Delay	4	Future Land Use	2	Plan Coordination	0
		AT Connectivity	1	Jobs Access	0	Current Need	4
		Modal Choice	0				

Project Name:	Meggs Street	Rank:	56
From:	Cove Ave	To:	1st St

A local street, improvements here will focus on active transportation connectivity. Sidewalks near 5th Street and Miss Jewell Elementary are of specific note. A restriping to provide a dedicated bike lane will also be implemented as part of a routine maintenance plan.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	2	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	7
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	3	Jobs Access	0	Current Need	3
		Modal Choice	2				

Project Name:	Colorado Drive	Rank:	57
From:		To:	

As a local street, this roadway experiences undesirable cut-through traffic due to the surrounding network. Traffic calming measures that specifically consider the adjacent hill will promote drivers to use alternative, more desirable routes on their way to the city core.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	4	Vehicle Connectivity	6	Activity Center	0	ROW Acquisition	2
AT Safety	3	Vehicle Delay	2	Future Land Use	0	Plan Coordination	0
		AT Connectivity	1	Jobs Access	0	Current Need	4
		Modal Choice	0				

Project Name:	Virginia Avenue	Rank:	58
From:		To:	

The primary improvement on Virginia Avenue is the construction of a multi-use path between the two disconnected portions of the street. A drivable roadway will likely create unnecessary cut-through traffic, but an active transportation element will improve connectivity throughout the

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	4
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	Highway 9 Turnaround	Rank:	59
From:		To:	

The intent of Highway 9 and US 190 was to bypass the downtown area and reduce local traffic. One of the primary drivers for local trips within the City is the large commercial area on the east side of town. The Highway 9 bypass currently does not have a connection with the east end of Copperas Cove. The improvement would consist of a turnaround from Highway 9 to the westbound Business 190.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	7	Activity Center	6	ROW Acquisition	7
AT Safety	2	Vehicle Delay	5	Future Land Use	5	Plan Coordination	4
		AT Connectivity	2	Jobs Access	4	Current Need	8
		Modal Choice	1				

Project Name:	Lutheran Church/Big Divide Extension/Connection	Rank:	60
From:	Summers Rd	To:	FM 1113

This improvement is to extend Lutheran Church Road to FM 1113 (Avenue B) and to reorganize the intersection of Big Divide and FM 1113 to meet the Lutheran Church Road intersection. This would create a western loop and encourage potential development in the northwestern portion of the City.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	4	Vehicle Connectivity	6	Activity Center	0	ROW Acquisition	2
AT Safety	3	Vehicle Delay	2	Future Land Use	0	Plan Coordination	0
		AT Connectivity	1	Jobs Access	0	Current Need	4
		Modal Choice	0				

Project Name:	Ashley Road Extension	Rank:	61
From:	Jesse Dr	To:	FM 116

Ashley Road was originally designed as a major collector to serve approximately 1,000 homes. The connection to FM 116 was not completed, pushing a majority of traffic to Lutheran Church Road, which was not originally designed as a collector. This improvement would aid in reducing traffic loading and safety for the school on Lutheran Church Road.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	4
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	Old Georgetown Road Intersection	Rank:	62
From:		To:	

This improvement would aim to increase the interconnections of the Highway 9 bypass with Copperas Cove. By improving Old Georgetown, another point of access from the City onto Highway 9 would be added, without the requirement of an overpass or cloverleaf arrangement.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	7	Activity Center	6	ROW Acquisition	7
AT Safety	2	Vehicle Delay	5	Future Land Use	5	Plan Coordination	4
		AT Connectivity	2	Jobs Access	4	Current Need	8
		Modal Choice	1				

Project Name:	27th Street Extension	Rank:	63
From:	Veterans Ave	To:	W. Ave D

To encourage development within the City and promote traffic circulation, this improvement would extend South 27th to West Avenue D and create an improved intersection with Oak Hill Drive.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	4	Vehicle Connectivity	6	Activity Center	0	ROW Acquisition	2
AT Safety	3	Vehicle Delay	2	Future Land Use	0	Plan Coordination	0
		AT Connectivity	1	Jobs Access	0	Current Need	4
		Modal Choice	0				

Project Name:	Bradi Drive to Bradford Drive Extension	Rank:	64
From:	Myra Lou	To:	Bradford Drive

In conjunction with the 27th Street Extension project, this improvement would encourage development and traffic movement in this area of the City.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	4
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	4th Street/Avenue C Extension	Rank:	65
From:	E Ave B/N 1st St	To:	4th St/Robertson Ave

To facilitate movement in the downtown area of Copperas Cove, this project would reconfigure 4th street into an underpass underneath the railroad and Avenue D, to a connection with Robertson Avenue. The intersection of Avenue C and North 1st Street would be reconfigured so that through

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	7	Activity Center	6	ROW Acquisition	7
AT Safety	2	Vehicle Delay	5	Future Land Use	5	Plan Coordination	4
		AT Connectivity	2	Jobs Access	4	Current Need	8
		Modal Choice	1				

Project Name:	New Road at Starkey Gap	Rank:	66
From:	US 190	To:	Big Divide South Extension

To encourage development within the City and promote traffic circulation, this improvement would create a new collector between Highway 190 and the Big Divide Extension south of US 190. This new road would require significant routing due to existing topography.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	4	Vehicle Connectivity	6	Activity Center	0	ROW Acquisition	2
AT Safety	3	Vehicle Delay	2	Future Land Use	0	Plan Coordination	0
		AT Connectivity	1	Jobs Access	0	Current Need	4
		Modal Choice	0				

Project Name:	Big Divide Extension South of US 190	Rank:	67
From:	US 190	To:	CR 2808

In conjunction with the new road at Starkey Gap, this extension would encourage development in the southwestern part of the City. This extension would also aid in developing an improved road system for the future.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	0	Vehicle Connectivity	0	Activity Center	0	ROW Acquisition	4
AT Safety	6	Vehicle Delay	0	Future Land Use	0	Plan Coordination	0
		AT Connectivity	6	Jobs Access	0	Current Need	4
		Modal Choice	2				

Project Name:	Mashburn Overpass	Rank:	68
From:		To:	

To encourage development within the City and promote traffic circulation, this improvement would create a new collector from Northern Dancer to Mashburn Road. An overpass will extend over US 190 to connect the two sides.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	3	Vehicle Connectivity	7	Activity Center	6	ROW Acquisition	7
AT Safety	2	Vehicle Delay	5	Future Land Use	5	Plan Coordination	4
		AT Connectivity	2	Jobs Access	4	Current Need	8
		Modal Choice	1				

Project Name:	Alfred Extension	Rank:	69
From:	Robertson Ave	To:	Northern Dancer

In conjunction with the Mashburn Overpass, this improvement would encourage development and promote connectivity within this area, specifically the dead-end streets Margaret Lee and Ascot.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	4	Vehicle Connectivity	6	Activity Center	0	ROW Acquisition	2
AT Safety	3	Vehicle Delay	2	Future Land Use	0	Plan Coordination	0
		AT Connectivity	1	Jobs Access	0	Current Need	4
		Modal Choice	0				

Project Name:	FM2657 Center Turn Lane	Rank:	70
From:	Highway 190 Bypass	To:	FM 3046 (Southern City's Limits)

Improvements to FM2657 will continue a center turn lane from the existing 4 lane with center turn lane to the Lampasas/Bell County Line. This will enhance mobility to Copperas Cove as well as promoting future development for the long-range expansion of FM 2657 to US HWY 183.

Priorities							
Safety		Mobility		Development		Implementation	
Vehicle Safety	4	Vehicle Connectivity	3	Activity Center	0	ROW Acquisition	5
AT Safety	0	Vehicle Delay	2	Future Land Use	3	Plan Coordination	2
		AT Connectivity	0	Jobs Access	2	Current Need	2
		Modal Choice	0				

EXHIBIT F – FUTURE TRANSPORTATION NETWORK

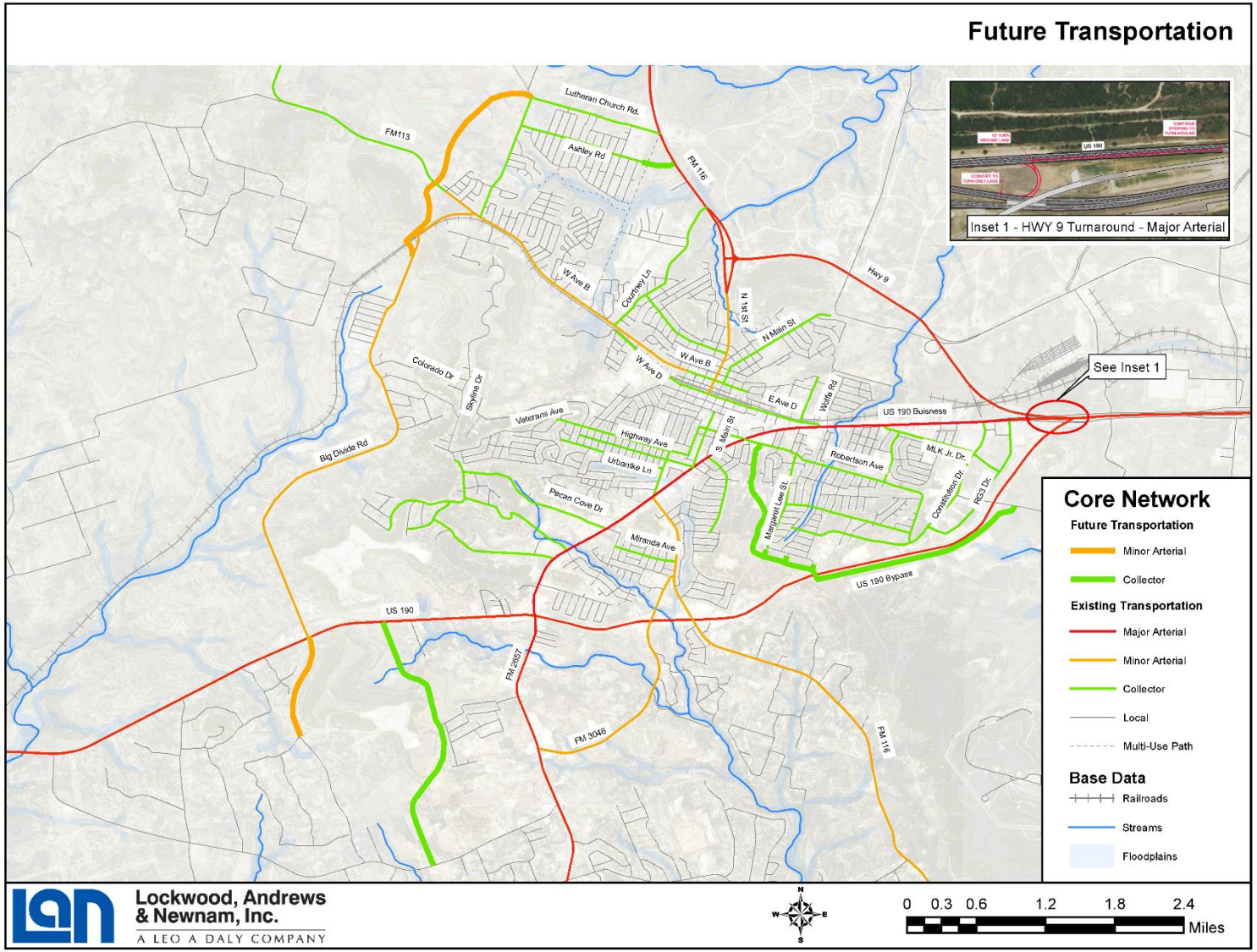


EXHIBIT G – COMPLETE STREETS POLICY ORDINANCE

ORDINANCE NO. 2017 - 35

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COPPERAS COVE, TEXAS ADOPTING A COMPLETE STREETS POLICY; PROVIDING FOR REPEALER AND SEVERABILITY CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the vision of the City of Copperas Cove is to be a premiere family oriented community; and

WHEREAS the mission of the City of Copperas Cove is to enhance the community's quality of life; and

WHEREAS the goal of the City of Copperas Cove is to create a long-term plan with an emphasis on sustainable practices, development and improvement of infrastructure, and continued public safety; and

WHEREAS, streets are a significant but restrained public space that is shared between personal automobiles, freight, pedestrians, cyclists, and transit; and

WHEREAS, complete streets are spaces designed, planned, and operated to promote safety, economic development, sustainability, public health, community connectivity, and alleviate traffic congestion.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COPPERAS COVE, TEXAS:

SECTION 1.

The City of Copperas Cove Code approve Ordinance 2017-35 adopting a Complete Streets Policy as outlined in Exhibit A;

SECTION 2.

That should any section, clause, or provision of this ordinance be declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of this ordinance or any other ordinance of the city as a whole or any part thereof, other than the part so declared to be invalid.

SECTION 3.

That this ordinance shall become effective upon passage.

PASSED, APPROVED AND ADOPTED this 18th day of July 2017, at a regular meeting of the City Council of the City of Copperas Cove, Texas, which meeting was held in compliance with the Open Meetings Act, *Tex. Gov't. Code* §551.001, et.seq., at which meeting a quorum was present and voting.

Frank Seffrood, Mayor

ATTEST:

Lucy C. Aldrich, City Secretary

CITY OF COPPERAS COVE
TEXAS

APPROVED AS TO FORM:

Denton, Navarro, Rocha,
& Bernal, P.C., City Attorney

Exhibit A

City of Copperas Cove

Complete Streets Policy

Vision

Our transportation network serves many purposes. Streets are a shared, public space and should consider all aspects of the public quality of life. A livable street, first and foremost, is a safe street. It is safe for motorists as well as pedestrians and cyclists. Ensuring safety for all users is the paramount concern. In addition, streets should promote health and wellbeing by creating a convenient and comfortable place to maintain an active lifestyle. This coincides with the need to create equity in a public space. Streets should consider users of all abilities, especially the young, the elderly, and the disabled. Achieving all of these goals generates prosperity for the City. Streets with varied users and transportation modes create vibrancy and economic growth. Copperas Cove's streets should accomplish these things and this policy is guidance to achieve this goal.

Definitions

Complete Streets – A Street that is designed holistically with considerations given to many different priorities.

Street – A right-of-way intended for the movement of the public, regardless of naming convention.

Users – All persons intending to use a street, regardless of age or ability, including the young, the elderly, and the disabled.

Active Transportation – Methods of transportation that are done through human or similar power, including walking, cycling, skateboarding, wheelchairs, and the use of mobility assistance devices.

Project – Any planning, design, construction, reconstruction or other activity on a street.

Transportation Master Plan (TMP) – A vetted, planning document highlighting future transportation projects, priorities, and implementation strategies.

Functional Classification – A system of dividing streets by their intended form and use.

Typical Cross Section – A form based description of the lateral allocation of street space between roadway, sidewalk, cyclist elements, and clear space.

Application

Not all streets are the same. Each street has a unique need, purpose, and surrounding land use pattern. Because of this, Complete Streets are a form based solution, not a prescriptive one. Guidance is supplied, but judgement shall be made on a project by project basis for best implementation. This judgement shall be applied at all stages of a project's life including planning, design, construction, or reconstruction. Throughout this process, all projects shall be seen as an opportunity to implement Complete Streets.

Projects shall consider all users in determination of priorities and street form. This means consideration of special locations that may be applicable for certain demographics including schools for the young, retirement communities for the elderly, and human services for the disabled. Further, elements shall be made not only available, but also usable for all users, for example bike facilities shall be designed around the casual user and not the more dedicated user.

All projects shall provide nominal safety for all modes as outlined in the relevant design standard. Beyond this, substantive safety shall be provided to modes starting with those at highest risk, e.g. disabled pedestrians, and moving to those less at risk. Risk is determined by the level of exposure to potential incidence and the consequence of such an occurrence.

The traffic master plan (TMP) should be consulted for guidance on desired functional class and desired cross section. Cost saving measures should be pursued where possible. Grants for improvement projects are available through sources like the Federal Transit Administration's (FTA) Transportation Improvement Program (TIP), the Safe Routes to School program, or other spot grants. In some cases, it may be possible to integrate multiple small projects into one larger construction project, leading to a cost savings. Also, coordination with other local groups should be sought to partner on a mutually beneficial project. Possible partners include the Killeen-Temple Metropolitan Planning Organization (KTMPO), Fort Hood, or the Central Texas HOP.

Design Standards

Many different publications and guidelines from different organizations exist to assist in implementing Complete Streets. For each project, context shall be applied to determine the reference that is most applicable. The most recent version of each publication shall be used. Note that, the following list is inclusive but not exhaustive. Further, it is not listed in any order of importance.

- National Association of City and Transportation Officials (NACTO)
  - *Urban Street Design Guide*
  - *Urban Bikeway Design Guide*
- Federal Highway Administration (FHWA)
  - *Small Town and Rural Multimodal Networks*
- American Association of State and Highway Transportation Officials (AASHTO)
  - *A Policy on Geometric Design of Highways and Streets (The Green Book)*
  - *Guide for Planning, Designing and Operating Pedestrian Facilities*
  - *Guide for the Development of Bicycle Facilities*
- The Institute of Transportation Engineers (ITE)
  - *Designing Walkable Urban Thoroughfares: A Contest Sensitive Approach*
- The Texas Department of Transportation
  - *The Texas Manual on Uniform Traffic Control Devices (TMUTCD)*
- The State of Texas
  - *Texas Accessibility Standards*

Exceptions

Due to the contextual nature of Complete Streets, there may be times when Complete Streets elements may be omitted. This is at the discretion of the City Manager or other city staff and shall be adequately documented. Some reasons for exception include:

- When the use of the street by a certain user is prohibited by law, e.g. pedestrians on an interstate.
- When these is a documented lack of present or future need, e.g. certain rural roads.
- When the cost of a Complete Streets improvement is excessively disproportionate to the cost of the project overall.

EXHIBIT H – PUBLIC SURVEY QUESTIONS AND RESULTS

1.0 Primary Questions:

How many live in your household?
Input for any number

Where do you live?
Input for any answer

Where do you work / go to school?
Input for any answer

How do you get to work / school?					
Drive Alone	Carpool	Vanpool	Public Transit	Bike	Walk

How long is your morning commute?
Input for any number.

What time do you arrive?
Input for any time.

How long is your evening commute?
Input for any number.

What time do you depart?
Input for any time.

How many days a week do you work / go to school?					
None or N/A	1-3	4	5	6	7

How many non-commute trips do you make on an average week?
Input for any number.

On a weekly basis, how often do you travel to:				
Public Parks	None	1-2	3-4	5+
Ft. Hood	None	1-2	3-4	5+
Kempner / Lampasas	None	1-2	3-4	5+
Killeen	None	1-2	3-4	5+
Austin	None	1-2	3-4	5+
Temple	None	1-2	3-4	5+
Waco	None	1-2	3-4	5+

For recreation, how many times in an average week do you:	
Walk	*Input for any number.*
Bike	*Input for any number.*

What is your level of satisfaction with the following:				
Traffic congestion				
Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Road safety				
Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Sidewalk connectivity				
Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Transit availability				
Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Environmental impact of transportation				
Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Infrastructure maintenance				
Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied

How much should the city spend on transportation:				
20%+ less	0% to 20% less	The same amount	0% to 20% more	20%+ more

2.0 Secondary Questions:

What is your age?				
Under 18	18-24	25-44	45-64	65+

Do you have a unique mobility need?	
Yes	No

Are you, or have you been, in military service?	
Yes	No

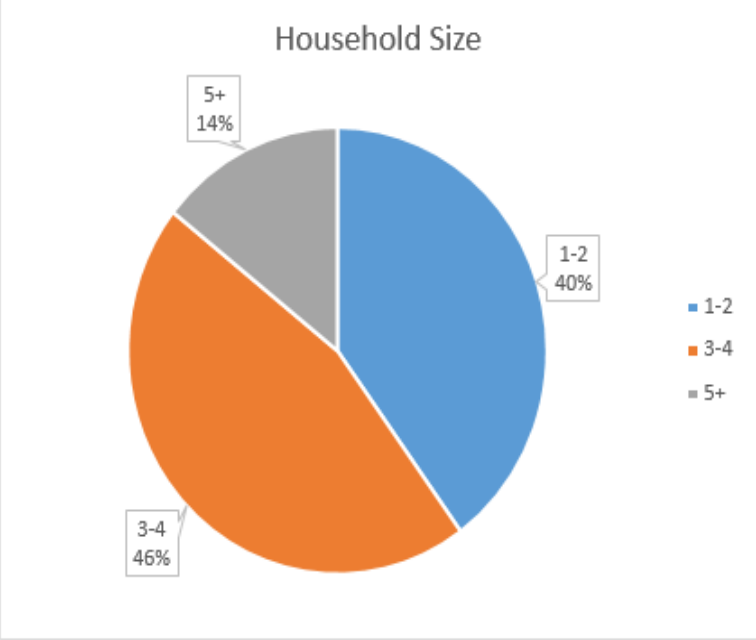
If yes are you:			
Active Duty	National Guard	Reserves	Retired

Does your commute involve dropping off / picking up anyone else?	
Yes	No

Rank the following in order of importance:	
	Ranking:
Traffic congestion	
Road safety	
Sidewalk connectivity	
Transit availability	
Environmental impact	
Infrastructure maintenance	

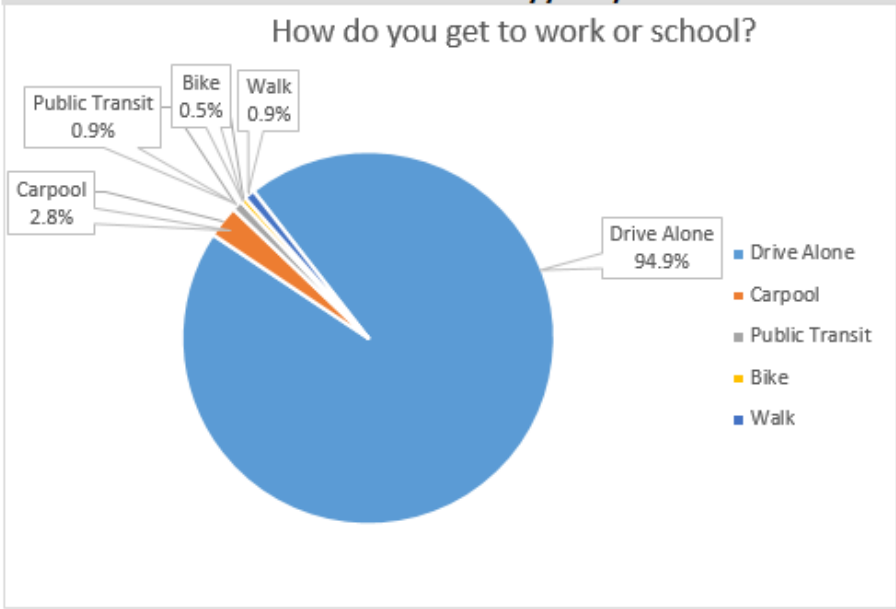
How many people live in your household?

Answer Options	Response Count
	230
answered question	**230**
skipped question	**0**

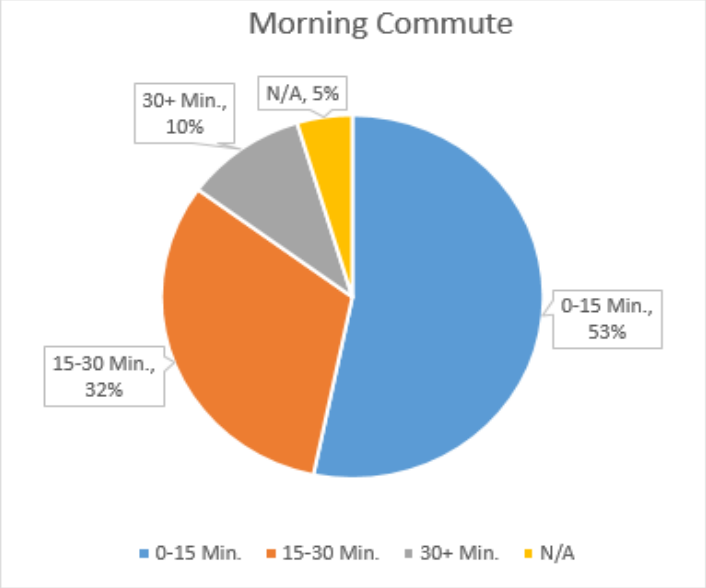


How do you get to work or school?

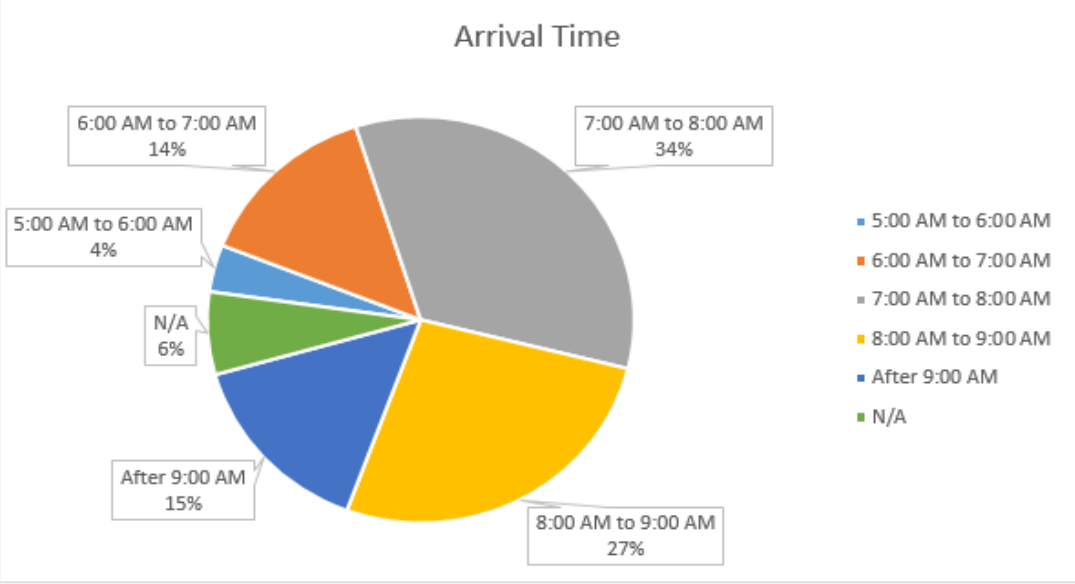
Answer Options	Response Percent	Response Count
Drive Alone	94.9%	205
Carpool	2.8%	6
Vanpool	0.0%	0
Public Transit	0.9%	2
Bike	0.5%	1
Walk	0.9%	2
answered question		**216**
skipped question		**14**



How long is your morning commute?	
Answer Options	**Response Count**
	214
answered question	**214**
skipped question	**16**

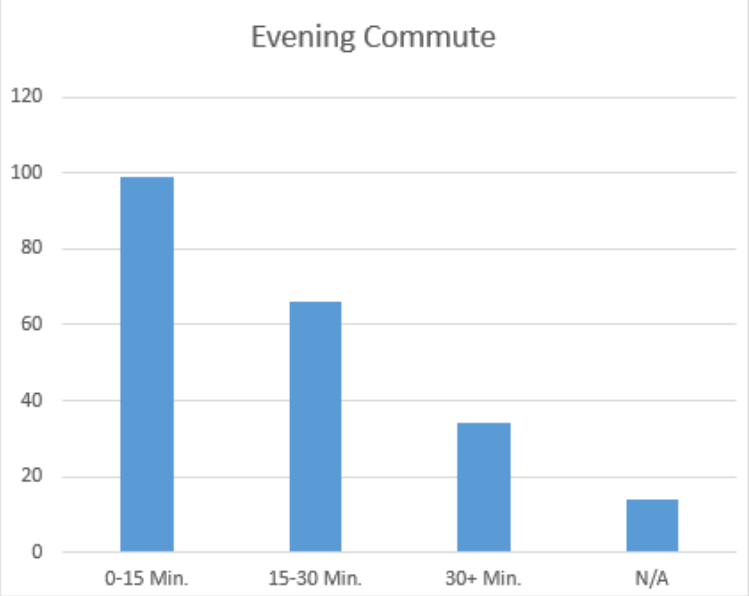


What time do you arrive?	
Answer Options	**Response Count**
	213
answered question	**213**
skipped question	**17**



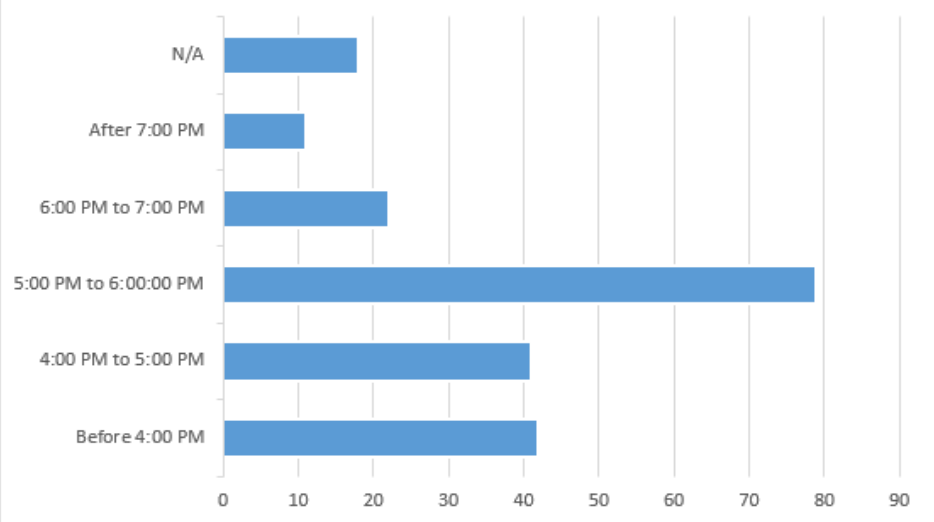
How long is your evening commute?

Answer Options	Response Count
	213
answered question	213
skipped question	17

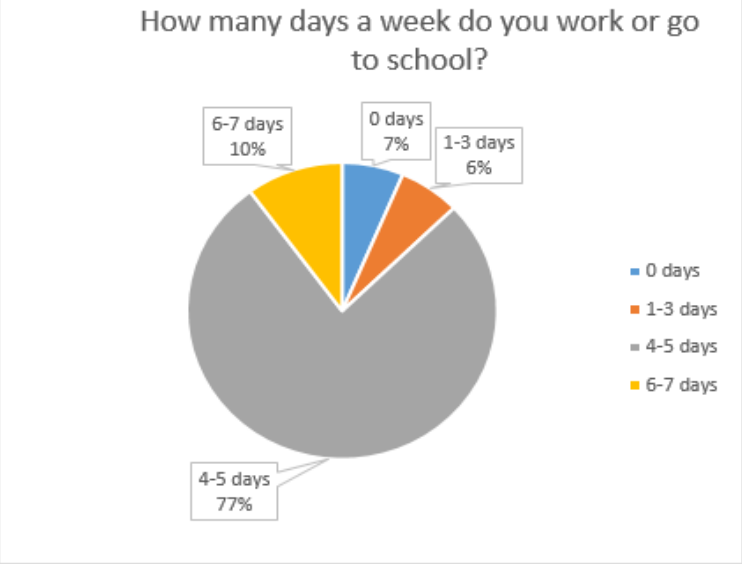


What time do you depart?

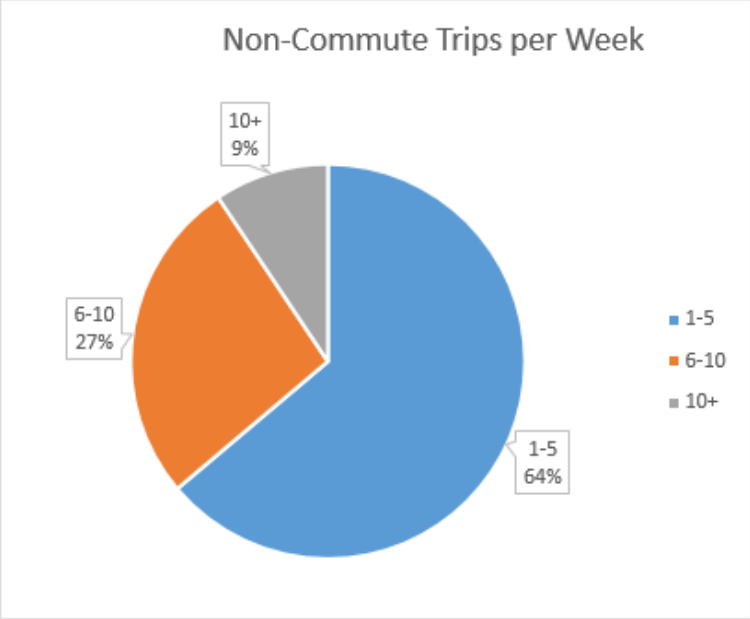
Answer Options	Response Count
	213
answered question	213
skipped question	17



How many days a week do you work or go to school?		
Answer Options	**Response Percent**	**Response Count**
0 days	6.4%	14
1-3 days	6.4%	14
4-5 days	77.1%	168
6-7 days	10.1%	22
answered question		**218**
skipped question		**12**

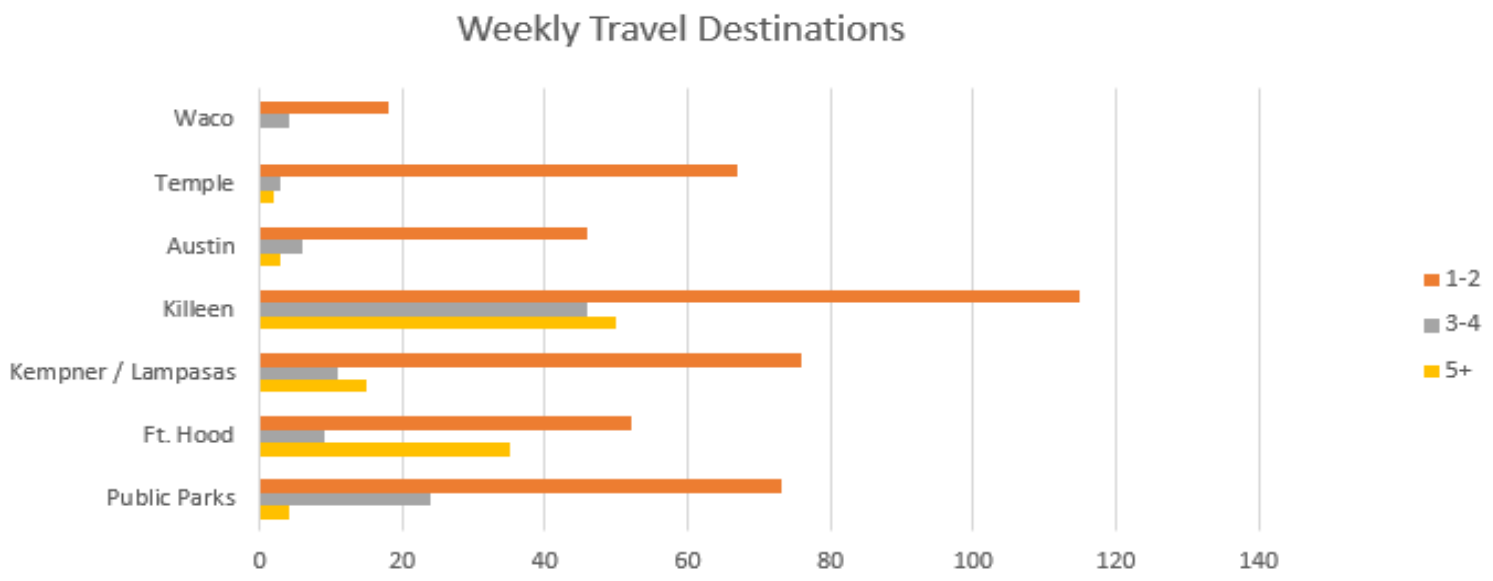


How many non-commute trips do you make on an average week?	
Answer Options	**Response Count**
	213
answered question	**213**
skipped question	**17**



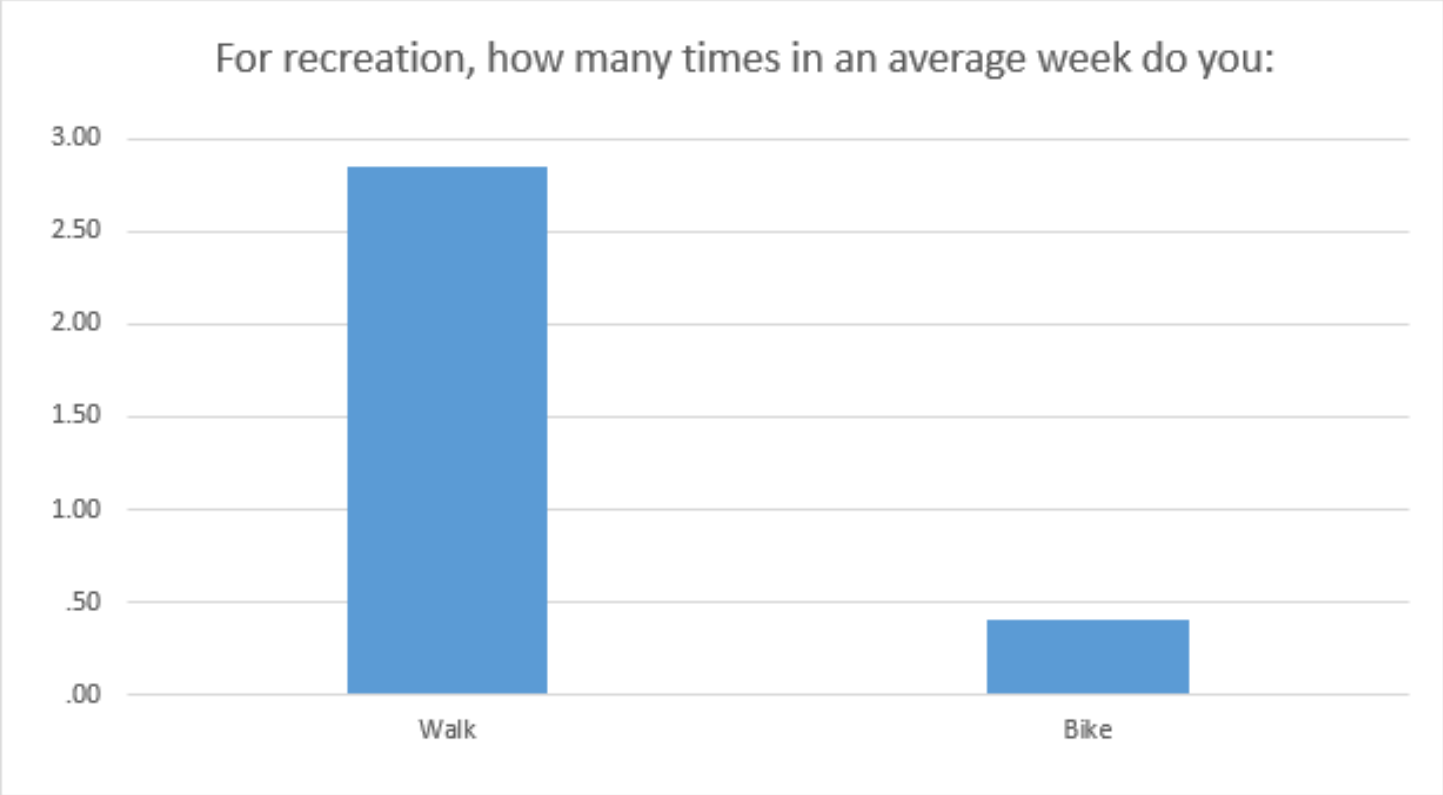
On a weekly basis, how often do you travel to:

Answer Options	0	1-2	3-4	5+	Response Count
Public Parks	99	73	24	4	200
Ft. Hood	104	52	9	35	200
Kempner / Lampasas	100	76	11	15	202
Killeen	11	115	46	50	222
Austin	140	46	6	3	195
Temple	130	67	3	2	202
Waco	172	18	4	0	194
					Question Totals
				answered question	228
				skipped question	2

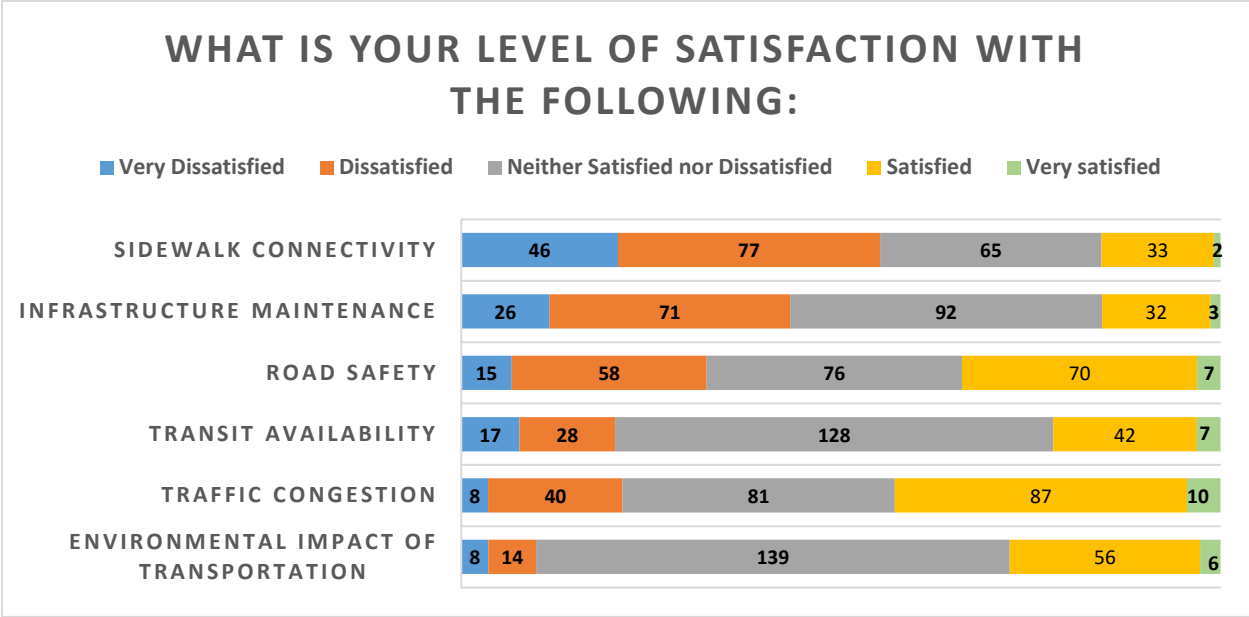


For recreation, how many times in an average week do you:

Answer Options	Response Average	Response Total	Response Count
Walk	2.85	609	214
Bike	.40	82	203
		answered question	**214**
		skipped question	**16**

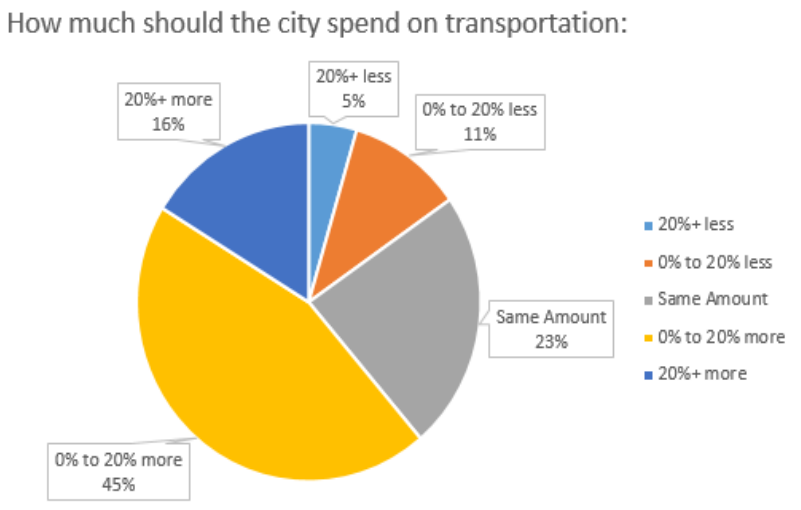


Answer Options	Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied	Response Count
Environmental Impact	8	14	139	56	6	223
Transit Availability	17	28	128	42	7	222
Traffic Congestion	8	40	81	87	10	226
Road Safety	15	58	76	70	7	226
Infrastructure Maintenance	26	71	92	32	3	224
Sidewalk Connectivity	46	77	65	33	2	223
						Question Totals
				Answered question		226
				Skipped question		4



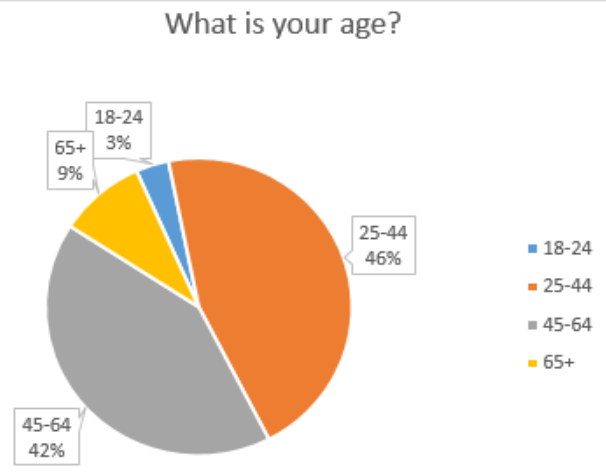
How much should the city spend on transportation:

Answer Options	Response Percent	Response Count
20%+ less	4.5%	10
0% to 20% less	10.8%	24
Same Amount	23.4%	52
0% to 20% more	45.0%	100
20%+ more	16.2%	36
answered question		222
skipped question		8



What is your age?

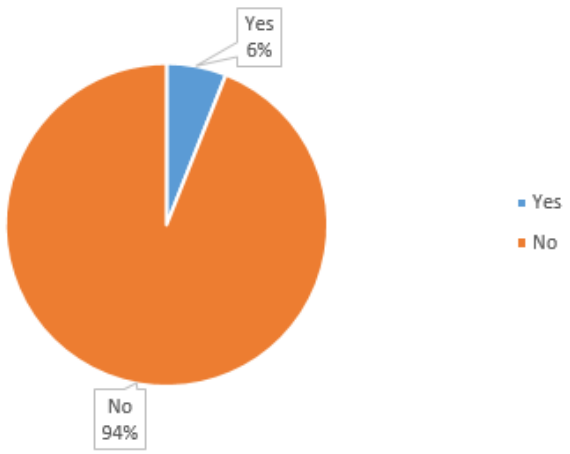
Answer Options	Response Percent	Response Count
Under 18	0.0%	0
18-24	3.5%	8
25-44	45.6%	104
45-64	41.7%	95
65+	9.2%	21
answered question		228
skipped question		2



Do you have a unique mobility need?

Answer Options	Response Percent	Response Count
Yes	6.0%	13
No	94.0%	203
answered question		216
skipped question		14

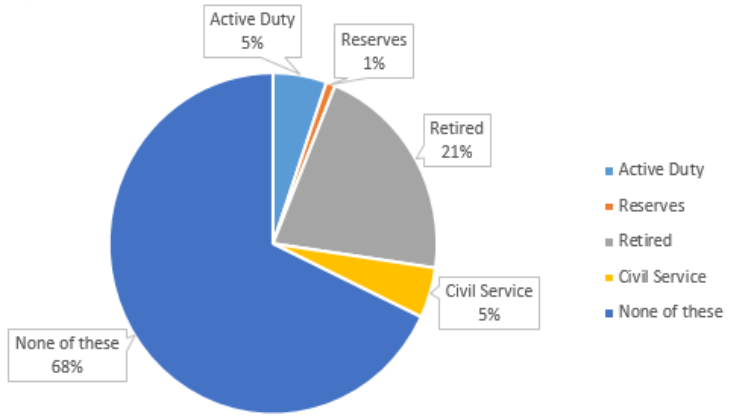
Unique mobility needs:



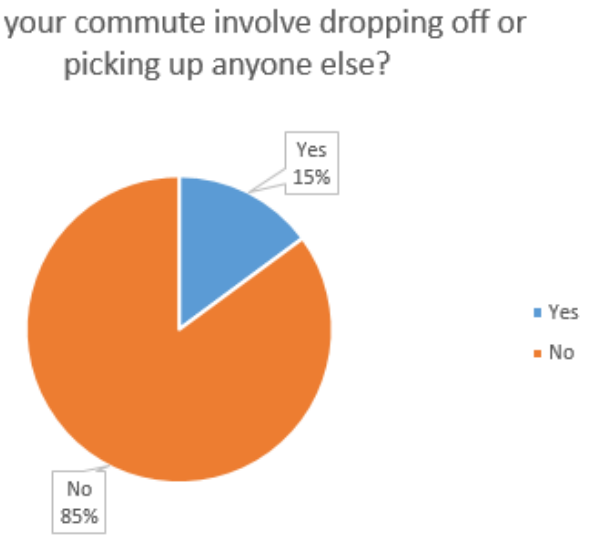
Are you currently:

Answer Options	Response Percent	Response Count
Active Duty	5.3%	12
National Guard	0.0%	0
Reserves	0.9%	2
Retired	21.1%	48
Civil Service	4.8%	11
None of these	68.0%	155
answered question		228
skipped question		2

Are you currently:



Does your commute involve dropping off or picking up anyone else?		
Answer Options	**Response Percent**	**Response Count**
Yes	14.9%	31
No	85.1%	177
	answered question	**208**
	skipped question	**22**



Rank the following in order of importance with 1 being the most important and 6 being the least important:

Answer Options	1st	2nd	3rd	4th	5th	6th	Rating Average	Response Count
Road Safety	79	74	28	12	9	8	2.15	210
Traffic Congestion	65	54	28	29	12	12	2.53	200
Infrastructure Maintenance	37	36	56	44	28	25	3.29	226
Sidewalk Connectivity	23	21	56	41	43	22	3.61	206
Environmental Impact	10	12	29	48	65	52	4.40	216
Transit Availability	8	13	17	36	49	92	4.77	215
							answered question	227
							skipped question	3

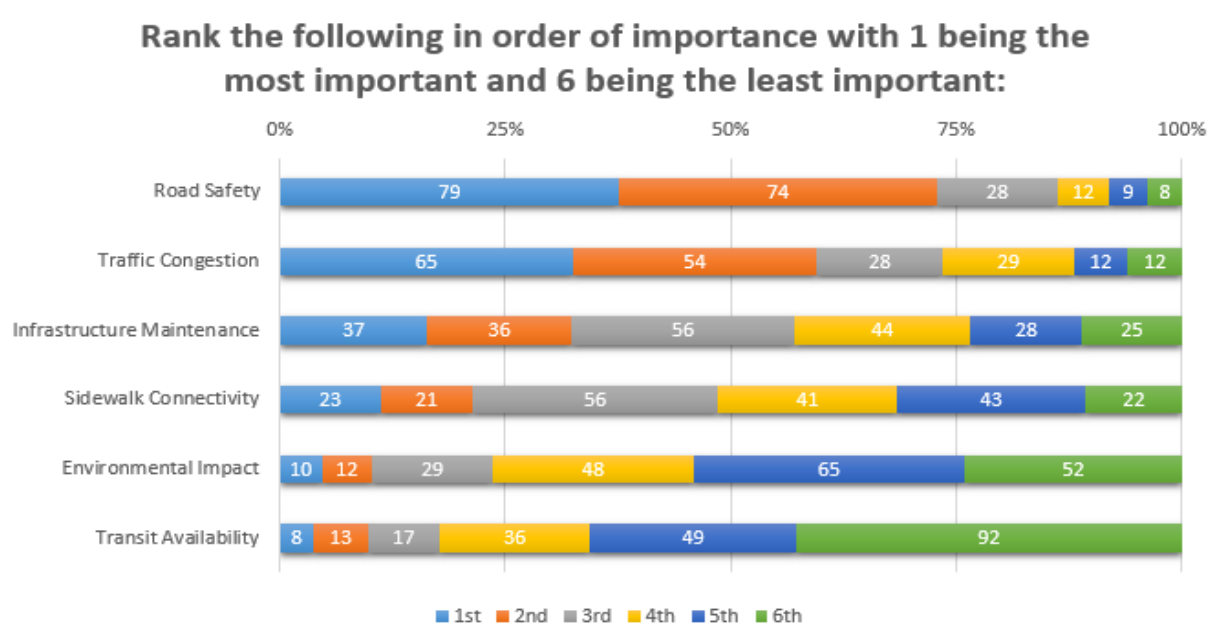


EXHIBIT I – PUBLIC WORKSHOP ANNOUNCEMENTS

FOR IMMEDIATE RELEASE
June 14, 2016

City of Copperas Cove

Kevin Keller, Public Information Officer
kkeller@copperascovetx.gov
Fax: (254)542-8915

914 South Main Street, Suite D
Copperas Cove, Texas
Phone: (254)547-4221

Transportation Master Plan – Community Survey

Copperas Cove, Texas – The City of Copperas Cove, with the assistance of Lockwood, Andrews & Newnam, Inc. (LAN) engineering firm, is developing a new Transportation Master Plan. As the region's population continues to grow, transportation issues will become increasingly important and complex. The effort is meant to lay out framework for how the City will spend money and make decisions on roads, sidewalks, trails, and transit over the next decade. Developing a comprehensive plan will promote efficient use of future funding and resources with the goal of achieving an improved and sustainable transportation future. Participation by the public and municipal officials is critical to developing a relevant plan.

A survey has been launched in effort to gain input from the citizens operating in and around our community. Information from the survey will assist in the preparation of graphs, maps and presentations. The survey can be located on the homepage of the City's website at www.copperascovetx.gov or at https://www.surveymonkey.com/r/6HGYQG7. The on-line survey takes just a few short minutes to complete.

Any questions or concerns regarding the Transportation Master Plan or survey should be directed to Public Information Officer Kevin Keller at kkeller@copperascovetx.gov or (254)547-4221.

FOR IMMEDIATE RELEASE
August 16, 2016

City of Copperas Cove

Kevin Keller, Public Information Officer
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914 South Main Street, Suite D
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Phone: (254)547-4221

Transportation Master Plan / Comprehensive Plan – Public Meeting

Copperas Cove, Texas – The City of Copperas Cove, with the assistance of Lockwood, Andrews & Newnam, Inc. (LAN) Engineering Firm, is developing a new Transportation Master Plan. As the region's population continues to grow, transportation issues will become increasingly important and complex. The effort is meant to lay out framework for how the City will spend money and make decisions on roads, sidewalks, trails, and transit over the next decade. Developing a thorough plan will promote efficient use of future funding and resources with the goal of achieving an improved and sustainable transportation future.

The first Public Meeting/Workshop will be held on ***Wednesday, August 24, 2016, at 6pm*** in the Copperas Cove Police Department Community Room, 302 East Avenue E. The workshop will consist of an education session that will include an explanation of what the Transportation Master Plan is and the process by which the plan is developed. A brief assessment of the information obtained thus far will also be provided and public input will be collected to assist with future planning. Participation by the public is critical to developing a relevant plan thus we welcome the community members to attend.

K Friese & Associates, Inc. Engineering Firm is also in the process of updating the City of Copperas Cove's Comprehensive Plan. Representatives from their organization will also be present to provide a brief introduction of the plan during this same community forum.

Any questions or concerns regarding the Transportation Master Plan should be directed to Public Information Officer Kevin Keller at kkeller@copperascovetx.gov or (254)547-4221 or City Planner Charlotte Hitchman at chitchman@copperascovetx.gov or (254)547-4221.

FOR IMMEDIATE RELEASE
November 19, 2016

City of Copperas Cove

Kevin Keller, Public Information Officer
kkeller@copperascovetx.gov
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914 South Main Street, Suite D
Copperas Cove, Texas
Phone: (254)547-4221

Transportation Master Plan & Comprehensive Plan – 2nd Public Meeting

Copperas Cove, Texas – The City of Copperas Cove, with the assistance of Lockwood, Andrews & Newnam, Inc. (LAN) Engineering Firm, is developing a new Transportation Master Plan. As the region's population continues to grow, transportation issues will become increasingly important and complex. The effort is meant to lay out framework for how the City will spend money and make decisions on roads, sidewalks, trails, and transit over the next decade. Developing a comprehensive plan will promote efficient use of future funding and resources with the goal of achieving an improved and sustainable transportation future. Further, the City of Copperas Cove is working with K Friese + Associates to update the Comprehensive Plan to address the City's future infrastructure needs.

The second Public Meeting/Workshop will be held on ***Wednesday, November 30, 2016, at 4pm*** in Economic Development Corporation meeting room, 210 S. First Street. Planners from K Friese + Associates will present summaries of research of population and economic trends, as well as an assessment of land use and housing patterns in the City. They are hoping to receive input from the community about areas of concern or other observations which should be accounted for when looking forward to 2036. LAN will then present a summary of the City's current transportation infrastructure, public response to desired priorities, and example projects of how the City can achieve these priorities. Further feedback on this sampling of projects will be collected and used to determine the complete project list and priority.

Any questions or concerns should be directed to Kevin Keller, Public Information Officer, at kkeller@copperascovetx.gov or (254)547-4221, or Charlotte Hitchman, City Planner, at chitchman@copperascovetx.gov or (254)547-4221.

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FOR IMMEDIATE RELEASE
September 27, 2017

City of Copperas Cove

Kevin Keller, Public Information Officer
kkeller@copperascovetx.gov
Fax: (254)542-8965

508 South 2nd Street
Copperas Cove, Texas
Phone: (254)547-4221

Transportation Master Plan – 3rd Public Meeting

Copperas Cove, Texas – The City of Copperas Cove, with the assistance of Lockwood, Andrews & Newnam, Inc. (LAN) Engineering Firm, is developing a new Transportation Master Plan. As the region's population continues to grow, transportation issues will become increasingly important and complex. The effort is meant to lay out framework for how the City will spend money and make decisions on roads, sidewalks, trails, and transit over the next decade. Developing a comprehensive plan will promote efficient use of future funding and resources with the goal of achieving an improved and sustainable transportation future.

The third Public Meeting/Workshop will be held on ***Tuesday, October 10, 2017, at 530pm*** in the Technology Center Council Chambers, located at 508 South 2nd Street. This final public meeting is meant to be less interactive and more informative than the previous two. The majority of analysis, assessment, and feedback has already been collected and the presentation will focus on the identified improvements and the implementation plan. Public input will still be accepted for consideration on final decisions and revisions.

Questions or concerns should be directed to Kevin Keller, Public Information Officer, at kkeller@copperascovetx.gov or (254)547-4221, or Charlotte Hitchman, City Planner, at chitchman@copperascovetx.gov or (254)547-4221.

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City of Copperas Cove

T E X A S

City Built for Family Living

APPENDIX C:

2020 PARKS MASTER PLAN

City of Copperas Cove

2020 PARKS MASTER PLAN

City Built for Family Living

MRB group

15 W Central Ave
Temple, TX 76501

(254) 774-9611

www.mrbgrouptexas.com

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SECTION 1: INTRODUCTION

The City of Copperas Cove recognizes the importance of recreation opportunities in today's active society and health conscious attitudes prompts a community to assess what it has regarding parks and recreation. Urban sprawl and development of rural land has made the creation of parks and preservation of open space a major priority for our community. Parks and open space add economic value to local properties and an intangible value to the local quality of life. To preserve this open space and create parks, a Park, Recreation and Open Space Master Plan has been written.

The purpose of this Parks Master Plan is to examine and analyze existing park and recreation spaces and facilities, to identify issues related to present and future community needs, and to make recommendations on how the City of Copperas Cove's park and recreation facilities can be integrated into a cohesive system. The Plan evaluates existing, facilities, establishes facility criteria and standards, and provides a comparative analysis of the City's park system to accepted park standards, and identifies park-related issues that the City will need to address in the short-term and long-term.

Brief Historical Background

The City of Copperas Cove, once spelled Coperas Cove, was established in the 1870s. It was primarily a rural community located approximately two miles southwest of the present city. The name Cove was submitted for a post office, but with an already existing location with the name, the name was rejected. An application was resubmitted with the additional name of Coperas added. The name was inspired by the mineral taste of the water in a nearby spring. The Coperas Cove post office was established in March 1879.

The Chisholm Trail passed through Coperas Cove bringing with it the cattle industry which became a primary importance to the local economy. The Gulf, Colorado, and Santa Fe Railway built its track across the southern corner of Coryell County in 1882 and residents of Coperas Cove moved their community two miles to the northeast in order to better utilize the rail service. Cattle production continued to be important to the local economy, however, area farmers began directing more of their resources to the production of cotton, small grains and feed crops. Farming was the dominant occupation by 1900.

The spelling of the city's name officially changed in 1901. The first mayor was elected in 1913 at which time the population had grown to 600. The population increased through the 1920s to a high of 650 in 1929. Copperas Cove's population declined with the onset of the Great Depression in the early 1930s. The population in the 1940s had decreased to 356 residents.

Copperas Cove realized a boost in population in the early 1940s when the United States government chose southeastern Coryell and northwestern Bell counties as the site for Camp Hood, a new military training center. The 1950 census saw an increase in the population to 1,052 residents. As Fort Hood was established as a permanent base in 1950, the city's population grew at an even faster rate. The establishment of the fort drastically altered the city's character, diversifying the ethnic and religious composition of the city. Populations for

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the 1960 census showed 4,567, at 10,818 in 1970 and in 1980, 19,469. By 1990 Copperas Cove's population had grown to 24,079 and in 2000 the population was 29,592. The 2010 census indicated the population increased to 32,032.

POPULATION CHARACTERISTICS AND DEMOGRAPHICS

Basic demographic data provides valuable information about the community. Data such as population growth and age composition may be used to create a snapshot of the City at a given point in time. The data also provides insight as to the segments of the population who might need and utilize park and recreation facilities.

The information below is based on the 2010 census data. Also, information from the Texas State Data Center was used to present a better picture of the growth in the City of Copperas Cove as it is influenced by growth in Coryell County.

Population Growth

Table 1.1 shows population growth for the City of Copperas Cove. The City has exhibited growth and is anticipating additional growth. This anticipated growth makes the provision of park and recreation services even more important to address in the short-term and long-term.

Table 1.1
Population Change
City of Copperas Cove, Texas

1990 Census Count	24,079
2000 Census Count	29,592
2010 Census Count	32,032
2018 Estimated (Res. 2018-16)	34,272
2023 Projection	36,253
2028 Projection	41,385

Table 1.2 shows population projections for Coryell County and the State of Texas. Coryell County's growth, including Copperas Cove, is anticipated to increase.

Population Projection

Table 1.2
Population Projection
Texas State Data Center

	County	State
2010	75,388	25,145,561
2015	76,750	27,326,252
2020	78,315	29,677,772
2030	97,771	33,913,233
2030	82,198	34,894,429

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Race and Ethnicity Distribution

Table 1.3 depicts Copperas Cove's race and ethnic distribution in the 2010 Census.

Table 1.3
Race & Ethnic Distribution
City of Copperas Cove, Texas

Race/Ethnicity	Census Data
White Alone	18,750
Black or African American Alone	5,039
American Indian and Alaska Native Alone	184
Asian Alone	763
Native Hawaiian and other Pacific Islander Alone	495
Some Other Race Alone	25
Two or More Races Alone	1,961
Hispanic or Latino	5,627

Age Distribution

Table 1.4 contains information on various age groups and how they are represented within Copperas Cove. Age is an important population characteristic because it is a strong indicator as to the types of services and facilities that the city will need to provide. This data suggests that the largest segment of population is the 25 to 34 age group which is typically represented by families having children under 19 years of age. The majority of the population is between 20 and 54 years of age and make up 52.8% of the population of Copperas Cove. Younger populations are typically more active and demand more city amenities like parks and recreation centers. The median age for the City of Copperas Cove is 31.9 years. The figures are reflective of the 2010 Census.

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Table 1.4
Age Distribution
Copperas Cove, Texas

Age Group	Census Population	Percent of Population
Under 5 years	2,412	7.3
5 to 9 years	2,445	7.4
10 to 14 years	2,521	7.7
15 to 19 years	2,139	6.5
20 to 24 years	2,711	8.3
25 to 34 years	6,100	18.6
35 to 44 years	4,539	13.8
45 to 54 years	3,961	12.1
55 to 59 years	1,421	4.3
60 to 64 years	1,232	3.8
65 and older	3,363	10.2

Household Income Levels

Table 1.5 shows income data for the City of Copperas Cove as determined in the 2010 Census. The largest percentage of households in Copperas Cove specifically fell into the range of $50,000 to $74,999 annually. The median income level was $52,017.

Table 1.5
Household Income
Copperas Cove, Texas

Income Level	Census Data	Percentage of Population
TOTAL	**12,358 Households**	
Less than $10,000	717	5.8%
$10,000 to $14,999	581	4.7%
$15,000 to $24,999	1,347	10.9%
$25,000 to $34,999	1,100	8.9%
$35,000 to $49,999	2,224	18.0%
$50,000 to $74,999	2,682	21.7%
$75,000 to $99,999	1,607	13.0%
$100,000 to $149,999	1,545	12.5%
$150,000 to $199,999	333	2.7%
$200,000 or more	222	1.8%

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SECTION 2: GOALS AND OBJECTIVES

Parks and recreation have three values that make them essential services to communities.

1. Economic Value
2. Health and Environmental Benefits
3. Social Importance

Just as water, sewer and public safety are considered essential public services, parks are vitally important to establishing and maintaining the quality of life in a community, ensuring the health of families and youth, and contributing to the economic and environmental well-being of a community.

There are no communities that pride themselves on their quality of life, promote themselves as a desirable location for businesses to relocate or maintain that they are environmental stewards of their natural resources, without such communities having a system of parks and recreation programs for public use and enjoyment.

To keep up with the ever-changing population and demographics of the area, this plan will cover a time period of 2019 through 2024. The City will reevaluate the plan every five years to confirm they are proceeding in the direction the citizens of Copperas Cove desire.

The economic value:

- Parks improve the local tax base and increase property values. Property values increase the value of privately owned land the closer such land is to parks. This increase in property values due to the proximity to parks increases property tax revenues and improves local economies.

- People are willing to pay a larger amount for property located close to parks and open space areas than for areas that do not offer this amenity.

- Quality parks and recreation are cited as one of the top three reasons that businesses locate in an area.

- Parks and recreation programs produce a significant portion of operating costs from revenue generated from fees and charges.

- Parks and recreation programs provide significant indirect revenues to local and regional economies from sports tournaments and special events.

The health and environmental benefits:

- Parks are places people go to get healthy and stay fit.

- Parks and recreation programs and services contribute to the health of children, youth, adults and seniors.

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- According to studies by the Centers for Disease Control and Prevention, creating, improving and promoting places to be physically active can improve individual and community health and result in a 25 percent increase of residents who exercise at least three times per week.

- Parks and open space lands are proven to improve water quality, protect groundwater, prevent flooding, improve the quality of the air we breathe, provide vegetative buffers to development, produce habitat for wildlife, and provide a place for children and families to connect with nature and recreate outdoors together.

The social importance:

- Parks are a tangible reflection of the quality of life in a community. Parks and recreation services are often cited as one of the most important factors in surveys of how livable communities are.

- Parks provide gathering places for families and social groups, as well as for individuals of all ages and economic status, regardless of their ability to pay for access.

- A majority of the public view parks as an essential priority for government spending.

- Parks and recreation programs provide places for health and well-being that are accessible by people of all ages and abilities, especially to those with disabilities.

- Studies indicate that community involvement in neighborhood parks is associated with lower levels of crime and vandalism.

- Access to parks and recreation opportunities has been strongly linked to reductions in crime and to reduced juvenile delinquency.

- Parks have a value to communities that transcend the amount of dollars invested or the revenues gained from fees. Parks provide a sense of public pride and cohesion to every community.

Based upon the values that make park and recreation essential services to a community, the following goals and objectives were established utilizing a collaborative effort of the City of Copperas Cove, Copperas Cove Quality of Life Committee, and citizens input.

Goal 1: Maintain all of the Copperas Cove parks and recreational facilities in superior condition.

Objectives:

- Provide City parks staff with the manpower and funding resources to maintain all parklands and facilities in a superior manner.
- Provide additional operations and maintenance resources as new recreational facilities are developed and added to the Copperas Cove parks system.
- Implement renovation/improvement master plans for each park as they

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age over time and identify a tentative schedule for phasing in improvements.

- Discuss the inclusion of Parks during the planning and development review process, ensuring that all people have access to the benefits of local parks and recreation.
- Promote the use of native plant materials and xeriscape to reduce maintenance and irrigation costs in parks and on City properties.
- Explore and implement innovative techniques to partner with other governmental, non-profit or private organizations to reduce the City's park maintenance burden.
- Use low-maintenance design techniques for future park properties.

Goal 2: To promote respect, conservation, and enhancement of important natural features and resources within the community.

Objectives:

- Develop and implement guidelines to identify and preserve important natural features.
- Preserve major tree lines and stands of trees.
- Develop standards for the preservation, and where appropriate, dedication of floodplain and other flood hazard areas in their natural states in order to ensure that the City's natural drainage systems are not compromised.
- Support acquisition of open space for the purpose of future expansion of the park system.

Goal 3: Create a park system that will improve the physical form and appearance of Copperas Cove.

Objectives:

- Acquire park and open space sites that are prominent and highly visible in the neighborhoods that surround them.
- Provide adequate landscaping and aesthetic elements in new parks as they are built, such as stone walls and pavement accents, large caliper trees, attractive pavilions and other elements.
- Construct trail and pedestrian corridors, along with landscaping, trees, attractive lighting and streetscape furniture so as to promote visual quality along major roads.
- Utilize landscape at key City portals and along selected streets to create a positive and attractive image of the City.
- Develop high quality signage for all parks and major municipal facilities.

Goal 4: Create mechanisms to work with public and private entities to provide resources to acquire, develop and maintain parks, recreation facilities, services and open space.

Objectives:

- Encourage private cooperation through donations of park-land, labor and financial contributions.

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- Establish a program where community and business groups and neighborhood associations can help improve and maintain parks and open space areas.
- Consider establishing a general park fund where donations for park improvements may be provided by organizations and the private sector.
- Foster a close working relationship between the City of Copperas Cove and the Copperas Cove Independent School District.

Goal 5: Include a citizen participation process in all ongoing park planning and design, as well as updating of the Parks Master Plan.

Objectives:

- Periodically update the long-range plan and standards to reflect changing conditions in the City and to provide a forum for citizen input.
- Encourage and provide multiple opportunities for citizens to provide input in development, maintenance, and operation of the City's parks and open space system. Utilize public meetings, workshops, regular meetings of the Parks Committee, citizen surveys, and regular meetings with key user groups.

Goal 6: Ensure that adequate parks and recreation facilities are distributed equitably throughout the City to meet the needs of each and every citizen.

Objectives:

- Establish a hierarchy of park classifications that will provide for the adequate and equitable distribution of park facilities throughout the community.
- Establish guidelines that create standard specifications for each park classification.
- Develop standards for the preservation and/or dedication of land for park facilities to ensure that adequate park amenities will be provided through the planning process.
- Provide for an integrated system of parks, which are connected in a linear fashion throughout the community. Said linear connections may be achieved by utilizing the alternative transportation systems, major easements, and preserved floodplains/open spaces.
- Utilize existing utility easements and rights-of-way to provide connectivity for the linear park system.

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SECTION 3: PLAN DEVELOPMENT / PUBLIC INPUT PROCESS

The City of Copperas Cove employed a private consulting firm, MRB Group, to prepare the Parks Master Plan. The consultant worked with the City of Copperas staff, Quality of Life Committee, and citizens to develop the Parks Master Plan. Meetings were conducted to gather information from various sources. From these meetings, needs, findings, and preliminary recommendations were obtained. To obtain a comprehensive and complete analysis of the City's park and recreation needs and park system, a two-phase process was used for this evaluation.

- Phase 1 involved base map preparation, inventory/supply analysis, population analysis, standards analysis, and community input process.
- Phase 2 involved the prioritization of needs/recommendations, expenditure analysis, action plan and final report.

The Master Planning Process

Phase 1

Step 1 – Base Map Preparation
A computer generated base map from digital data was prepared by the consultant. The base map illustrates information such as streets, drainage corridors, vegetation, park sites, school sites, municipal facilities, city limits, etc.

Step 2 – Inventory/Supply Analysis
An inventory of all parks and facilities owned by the City in Copperas Cove was performed.

Step 3 - Population Analysis
Demographic and population characteristics of the community were analyzed. This included evaluating factors of age, income, gender, education, ethnicity, median income and projection of population changes.

Step 4 – Standards Analysis
Park classifications and acreage guidelines were developed which apply to the City of Copperas Cove. Existing facilities were compared against standards to determine acreage and facilities required to meet present and future needs of the community.

Step 5 – Community Input Process
A series of steps were utilized to determine the park and recreation needs of the community.This included public meetings and a survey that was provided to citizens in either hard copy form or by using Survey Monkey. (See attachments) From the feedback it was possible to quantify the specific needs of the community.

Step 6 – Review of Previously Completed Parks Needs Assessment
The City had a Parks Needs Assessment on parks performed in 2011. The document includes components that address parks and recreation. This information was referred to during the development of this Parks Master Plan.

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SECTION 4: AREA FACILITY / CONCEPTS AND STANDARDS

Copperas Cove has a network of eight parks and a municipal golf course distributed throughout the City. While the parks have great potential, many lack the level of amenities such as internal walking trails and lighting. This section identifies where park service is deficient and discusses park standards and the general condition of Copperas Cove's parks.

In order to provide the parks, recreational, and open space facilities needed by Copperas Cove's residents, a set of standards and design criteria should be followed. The National Recreation and Park Association (NRPA) has developed such standards for parks, recreation, and open space development, which are intended to guide communities in establishing a hierarchy of the park areas. The general standard established by the 2019 NRPA for park acreage for cities the size of Copperas Cove is 10.1 acres per 1,000 people and one (1) park for 2,181 residents. Copperas Cove currently has 471 acres of developed public parkland.

The following analysis identifies the NRPA classification of parks, their description, location criteria within the community, and criteria for size. Each park type is discussed in order to:

1. Identify the function of each park type
2. Identify the recreational activities generally associated with each park type
3. Define the general service area and the physical relationship of each type of park to the population residing within its service area

These various park types will be considered within the Parks Master Plan as possible components of Copperas Cove's park system.

Mini Park

The mini park is the smallest classification. This type of park provides open space in densely populated urban neighborhoods. It is used to address limited and/or isolated recreational needs.

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Specific attributes of a Mini Park:

- Size: Less than one (1) acre
- Service area radius: ¼ mile
- Location and access: Mini parks are centrally located within a neighborhood; frontage on two (local or collector) streets; easily accessible by residents; all parts of the park are visible from the street.
- User groups: Generally for families with children from toddlers through 12 to 13 years of age.

Neighborhood Park

The neighborhood park, sometimes referred to as a playground, is considered to be the most important feature of a park system and is one of the major cohesive elements in neighborhood design. Its primary function is the provision of recreational space for the entire neighborhood which surrounds it. Space in the neighborhood park should be distributed between active and passive uses.

Specific attributes of a Neighborhood Park:

- The neighborhood park should be located near the center of a planned neighborhood and have a park service area of approximately one-half mile to one-quarter mile.
- The size should be related to the service area population and the menu of activities chosen for placement in the park. Five (5) to ten (10) acres is the optimal size for this park. An appropriate standard in relation to size and population for this type of park is 2.5 acres per 1,000 persons.
- Safe and convenient pedestrian access is considered important to a neighborhood park location.
- Generally, the location should not be adjacent to a heavily traveled major or minor thoroughfare.
- When it is possible to combine elementary or middle school with this type of park, the two features further enhance the identity of the neighborhood by providing a central location for recreation and education and a significant open space feature within the neighborhood.
- As a general rule, roughly 50% of the park's acreage should be used for active recreational facilities and 50% for passive activities.
- Facilities normally provided at a neighborhood park consist of:
    1. Playground equipment for small children
    2. Multi-purpose hard surfaced play area(s)
    3. An athletic area (non-lighted) for games such as baseball, football and soccer, and a surfaced area for such sports as volleyball, basketball and similar activities
    4. Pavilions with tables and grills for picnics
    5. Drinking fountains
    6. A passive area with landscaping, trees and natural elements

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Community Park

A community park is larger in size than a neighborhood park and provides service to several neighborhoods or specific sections of the community. They allow for group activities and offer other recreational opportunities not feasible, nor perhaps desirable, at the neighborhood level. The community park should be conveniently accessible by automobile and should include provisions for off-street parking.

Specific attributes of a Community Park:

- Should serve two or more neighborhoods.
- Site should be serviced by arterial and collector streets
- Optimal size for a community park is between 20 and 50 acres, based upon the land area needed to accommodate desired uses
- Should provide active and passive activities
- Service radius of a community park play field is a minimum of one mile
- Designed to serve a medium to large population
- Appropriate size standard in relation to size and population is 5 acres per 1,000 persons.

Activities provided in these parks include:

1. Game and practice fields for baseball, football, soccer and softball
2. Walking or biking trails
3. A community building / recreation center
4. Tennis courts
5. A surfaced multiple-purpose play area
6. Playground structures
7. A passive area for picnicking

Sports Complex

The sports complex classification consolidates heavily programmed athletic fields and associated facilities at larger and fewer sites strategically located throughout the community. This allows for:

- Economies of scale and higher quality facilities
- Improved management/scheduling
- Improved control of facility use
- Greater control of negative impacts to neighborhood and community parks, such as overuse, noise, traffic congestion, parking, and domination of facilities by those outside the neighborhood.

Specific attributes of a Sports Complex:

- Developed to accommodate the specific needs of user groups and athletic associations based on demands and program offerings
- Should be located within reasonable and equal driving distance from

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populations served
- Located adjacent to non-residential land uses is preferred
- Buffering (topographic breaks, vegetation, etc.) is used where facilities are located adjacent to residential areas
- Accessible from major thoroughfares
- Accessible by way of interconnecting trails
- Site size should be a minimum of 40 acres, with 80 to 150 acres being optimal.
- Parking lots to accommodate participants and spectators
- Lighting facilites for security and safety
- Field lighting

Activities and Amenities provided in these parks:

1. Programmed athletic use such as organized baseball, softball, etc. and tournaments.
2. Play structures
3. Hardcourt and volleyball courts
4. Internal trails
5. Group picnic areas and shelters
6. Multi-purpose buildings, restrooms, and common space

Special Use Parks

These parks or recreational spaces are identified by a single use and fall into three categories:

1. Historical / Cultural / Social Sites - which offer recreational opportunities because of their unique characteristics;
2. Recreational Facilities - single purpose facilities such as a senior center, community center or golf course;
3. Outdoor Recreational Facilities - uses such as tennis center, stadium, or possibly a special type of sports complex designed specifically for a single sport.

Specific attributes of Special Use Parks:

- Location is influenced by recreation need, community interests, type of facility, and land availability
- Should be viewed as strategically located community-wide facilities rather than as serving well-defined neighborhoods or areas
- The facility space requirements are the primary determinants of size
- Geographically central site is optimal

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Private Park / Recreation Facility

Private park/recreation facilities are often created as part of a subdivision development in response to market desires for park facilities and competition of builders to meet the housing needs of buyers. Also, this encourages cooperation between the private and public sectors toward meeting a growing park and recreation demand.

Specific attributes of a Private Park / Recreation facility:

- Private parks are generally within a residential area developed for the exclusive use of residents
- Maintained through a neighborhood association
- Can fill voids which the public sector cannot
- Frees up limited public funds to meet high priority needs for land and facilities
- Location often negotiated between developer and city
- Size is dependent upon its intended use
- Development of private park/recreation facility should be determined by other park classifications

Activities provided in these parks:

1. Private Parks - swimming pools, tennis courts, and party houses
2. Private Recreation Facilities - For-profit enterprises, such as health and fitness clubs, golf courses, water parks, amusement parks, and sports facilities

Open Space/Conservation Areas

In this classification are lands set aside for the preservation of significant natural resources, remnant landscapes, open space, and visual aesthetics. These spaces are generally natural corridors along creeks/flood prone areas unsuitable for development or along easements containing a man-made feature.

Examples of this classification include parcels with steep slopes and natural vegetation, drainageways and ravines, surface water management areas (man-made ponding areas), and utility easements. Also included are protected lands, such as wetlands/lowlands along waterways, lakes and ponds.

The objective of dedicating areas as open space/conservation areas is to enhance the livability and character of a community by preserving as many of its natural amenities as possible. To accomplish this, a city may:

- Designate specific conservation and open space areas for preservation purposes.
- Regulate development to preserve conservation areas and open space.
- Work with conservation agencies i. e. Corps of Engineers. Watershed districts, floodplain and wetland districts, etc. to protect the conservation areas and

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ecosystems.

Greenbelt Areas

Attributes of greenbelt areas:

- Tie park components together to form a cohesive park, recreation, and open space system.
- Provide uninterrupted and safe pedestrian movement between parks throughout the community.
- Provide users with a resource based outdoor recreational opportunity and experience.
- Can enhance property values.
- Preserves natural resources, mediating between larger habitat areas, open space, and corridors for wildlife.
- Natural greenbelts generally follow suitable conservation areas.
- Man-made corridors built as part of development projects or renovation of old development areas (i.e. abandoned railroad beds, revitalized river/creek fronts, old industrial sites, safe powerline rights-of-way, pipeline easements, etc.).
- Minimum greenbelt width is 50 feet with widths of 200 feet being considered optimal.
- Utilized for different modes of recreational travel.
  - Hiking, walking, jogging, bicycling
  - Horseback riding
  - Canoeing where there are navigable creeks or streams
  - Automobiles in boulevard or parkway setting

Park Trails

Park trails are multi-purpose trails located within parks, conservation areas and greenbelts.

Attributes of park trails:

- Provide harmony with the natural environment.
- Allow for relatively uninterrupted pedestrian movement to and through the city's park system and development areas.
- Tie the various parks and recreation areas together to form a comprehensive park and trail system.
- Provide connectivity of urban development and associated transportation network.
- Provide accommodations for pedestrians and bicyclists.

Trail Types:

- Type I - used in situations where recreational activities dictate separate paths for pedestrians and bicyclists.
- Type II - suited to lighter use patterns, such as from a housing subdivision to a conservation area.
- Type III - suited for areas requiring minimum impact, such as nature preserves.

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Connector Trails

The connector trails emphasize safe travel for pedestrians and bicyclists to and from parks and around the community. They are generally located within existing road rights-of-way and utility easements or along artificial drainageways. They accommodate walkers, bicyclists, and horseback riders.
Trail Types:

- Type I - used in situations where patterns dictate separate paths for pedestrians and bicyclists.
- Type II - suited to lighter use patterns, such as a link between a parkway or thoroughfare and a nearby housing development.

Bikeways

Bikeways are paved segments of roadways that serve to safely separate bicyclists from traffic.

Bike lanes are designated portions of the roadway for the preferential or exclusive use of bicyclists. They should be used in situations where traffic volumes are heavy enough to warrant clear separation between bicycles and vehicles.

Bike routes are essentially paved segments of roadway that serve to increase the level of safety and security by separating bicyclists from vehicular traffic.

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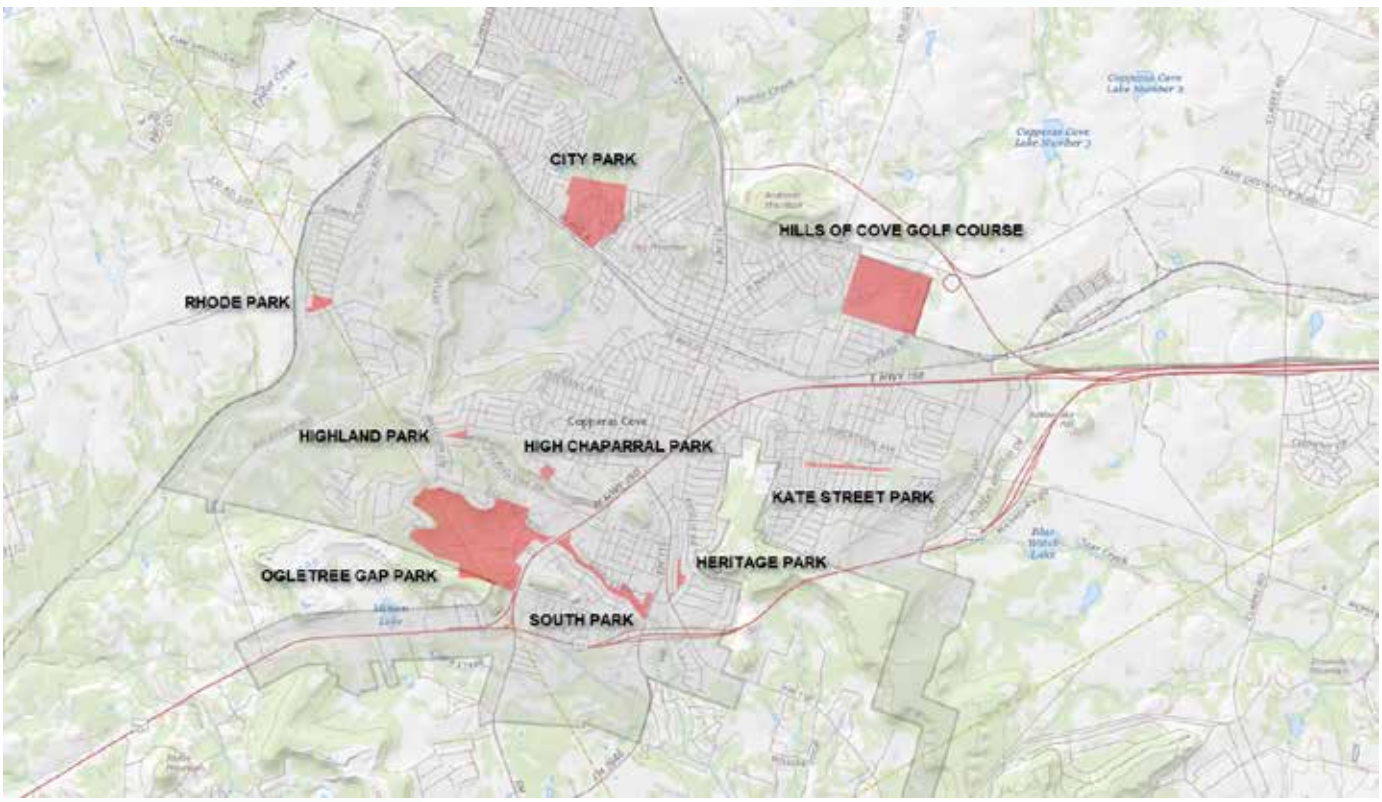
SECTION 5: INVENTORY OF EXISTING PARK, RECREATION AND OPEN SPACE AREAS FACILITIES

The City of Copperas Cove has eight parks and a public golf course. The park locations are shown in the exhibit below.



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1. City Park

Size:	88 acres
Location:	1206 W Avenue B
Park Classification:	Community Park
Recreation Amenities:	1 adult baseball field, 3 youth baseball fields, 2 outdoor basketball courts, 9 covered picnic areas, 3 playground areas, 4 public restrooms, 4 soccer fields, 2 softball fields, 1 outdoor swimming pool

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2. Heritage Park

Size:	7 acres
Location:	1929 Pleasant Lane
Park Classification:	Neighborhood Park
Recreation Amenities:	2 uncovered picnic areas, 1 playground area

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3. High Chaparral Park

Size:	5 acres
Location:	1310 High Chaparral
Park Classification:	Neighborhood Park
Recreation Amenities:	1 covered picnic area, 1 playground area, 1 youth baseball practice field

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4. Highland Park

Size:	4 acres
Location:	1203 Craig Street
Park Classification:	Neighborhood Park
Recreation Amenities:	1 uncovered picnic area, 1 playgound area

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5. Kate Street Park

Size:	23 acres
Location:	603 Kate Street
Park Classification:	Neighborhood Park
Recreation Amenities:	2 uncovered picnic areas, 1 playground area

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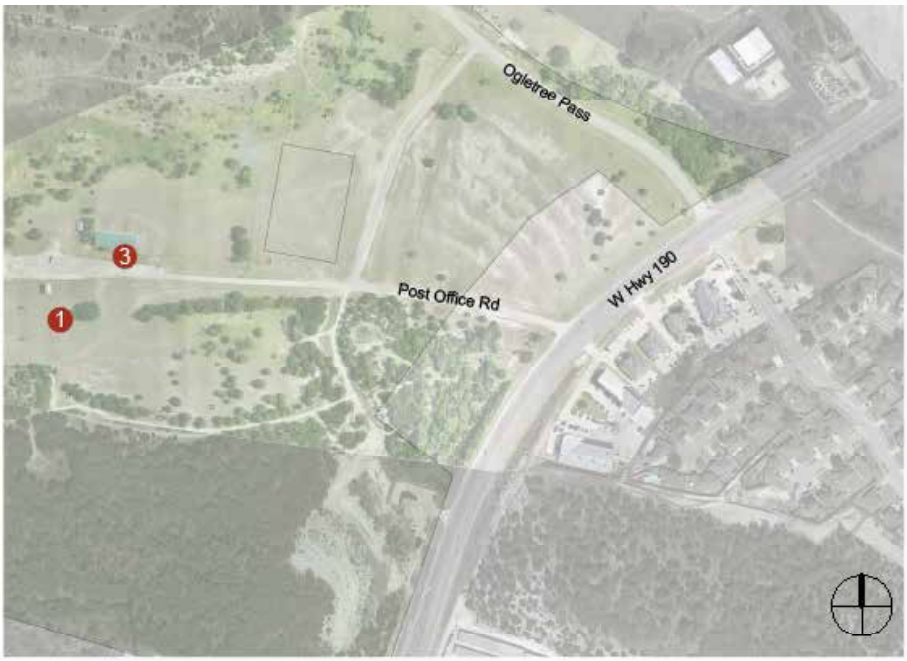
6. Ogletree Gap Park

Size:	218 acres
Location:	1878 Post Office Road
Park Classification:	Park Preserve / Passive
Recreation Amenities:	1 large event pavilion, 1 public restroom, 1 trail (bike/ walk/run)



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7. Rhode Park

Size:	4 acres
Location:	3514 Rhode Way
Park Classification:	Neighborhood Park
Recreation Amenities:	1 multi-use sports field

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8. South Park

Size:	22 acres
Location:	2602 Dennis Street
Park Classification:	Community Park
Recreation Amenities:	1 covered picnic area, 1 playground area, 1 public restroom, 2 soccer fields, 1 trail (bike/walk/run), 1 outdoor swimming pool, 1 splash pad

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9. Golf Course

Size:	100 acres
Location:	1408 Golf Course Road
Park Classification:	Golf Course
Recreation Amenities:	18-hole golf course, golf range, tennis courts

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SECTION 6: NEEDS ASSESSMENT AND IDENTIFICATION

Development of a Parks Master Plan must be reflective of community values and the public's vision of what is needed to provide park and recreation amenities. The City of Copperas Cove was very committed to having an open public dialogue in the development of the plan. In order to accomplish this objective, the City organized public outreach to receive input from the public on what they wanted to have in terms of facilities. Quarterly Town Hall meetings were conducted to provide the community with an opportunity to learn about the parks and to gather input to determine community needs.

Surveys distributed through Survey Monkey were conducted and made available for a period of 60 days. (A sample of this survey is included in the attachments.)

Various types of analysis may be used to determine the types of facilities a community wishes to include within its jurisdiction. Those types of analysis are:

Demand-Based Analysis
The Demand-Based approach relies on information gathered from participation rates, surveys, and other information that indicates how much of the population wants certain types of facilities.

Standard-Based Analysis
This approach is used to assist in assessing the future recreational needs, and follows established and recognized standards for assessing the quantity of parkland and the number of facilities that are required to meet the needs of a given population.

Facility-Recreation Standard
One source is the National Recreation and Park Association (NRPA). The NRPA has functioned as a source of guidance for park standards and development for a number of years. The NRPA's standards are suggested to be a guide for determining park and open space needs. From community to community, differences will be found in the socio-economic and cultural characteristics, and in climatic conditions. Therefore, the range of demands and preferences for recreational activities will vary with these differences. Obviously, these variances will directly influence a uniform standard for all locations. NRPA is very specific to point out that their data is to be used only as a guide to the development of local standards. Therefore, the NRPA provides input to the formation of local needs. NRPA provides recommendations on activity/facility standards for municipalities to utilize in developing what the amenities their parks may include based on population. Below is an exhibit which illustrates those standards.

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2019 NRPA PARK FACILITY STANDARDS

ACTIVITY / FACILITY	NRPA RECOMMENDED STANDARD	EXISTING CITY OWNED FACILITIES IN COPPERAS COVE
Amphitheater	1 per 32,000	0
Baseball Fields (adult)	1 per 21,000	1
Baseball Fields (youth)	1 per 5,000	3
Basketball Courts (outdoor)	1 per 7,000	2
Community Centers	1 per 27,000	1
Community Gardens	1 per 25,000	0
Dog Park	1 per 28,000	0
Football Fields	1 per 18,000	0
Disc Golf	1	0
Swimming Pool (outdoor)	1 per 26,000	2
Swimming Pool (indoor)	1 per 50,000	0
Large Event Pavilion (200 person or larger)	1 per 20,000	1
Multi-Use Courts (basketball, volleyball)	1 per 14,000	1
Pavilions/Covered and Un-covered Picnic Areas	1 per 4,000	11
Playgournd Areas	1 per 3,000	6
Recreation Centers	1 per 28,000	0
Skate Park	1 per 28,000	0
Soccer Fields (youth)	1 per 5,000	6
Soccer Fields (adult)	1 per 10,000	0
Softball Fields (youth)	1 per 8,000	0
Softball Fields (adult)	1 per 11,000	2
Splash Pad	1	1
Tennis Courts	1 per 4,000	2
Tot Lots	1 per 11,000	0
Trails (bike/walk/run)	1 system	2

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NRPA also provides guidance on the size and requirements for different types of parks located within a municipality. Below is a recap of those.

NRPA PARK ACREAGE GUIDELINES

TYPE	SIZE/ACRES	SERVICE AREA	Acres per 1,000 Population
Mini-Park	2,500 sf-1 Acre	Less than 1/4 mile distance in residential setting	Variable
Neighborhood Park	1 - 15 Acres	One neighborhood 1/4 to 1/2 mile radius	1.0 - 2.0 Acres
Community Park	16 - 99 Acres	Several neighborhoods 2-mile radius	5.0 - 8.0 Acres
Regional Park	100 - 499 Acres	Several communities under 1-hour drive	5.0 - 10.0 Acres
Special Use Areas	Varies	No applicable standard	Variable
Greenways / Linear Park	Sufficient width to protect the natural resource and provide maximum use	No applicable standard	Variable
Natural Resource Areas	Resource availability and opportunity	Variable	Variable

Based upon the NRPA's suggested number of acres, Copperas Cove offers for its citizens a sufficient number of neighborhood parks. However, the city is lacking in community park based upon NRPA standards and the current population of Copperas Cove.

Responses and comments received identified recreational facilities desired by the community.

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SECTION 7: IDENTIFICATION OF NEEDS

The identification of needs in this section are a result of incorporating the inventory, demographics analysis, standards analysis, and needs assessment into an action plan to direct the growth, development, and maintenance of the parks system over the next five to ten years.

Recommended Improvements

City Park

City Park

Proposed Park Amenities	Estimated Cost
• Walking Trail	$30 - $110 per foot *
• Multi-Use Sports Field	$ 245,000
• Splash Pad with Shade Structure	$ 300,000
• Playscape with Shade Structure	$ 155,000
• Batting Cages	$ 78,000
• Fitness Stations	$ 1,500 EA.
• Pavilion (25 People)	$ 165,000
• Restroom/Storage/Concession	$ 380,000
• Security Lighting	$ 135,000
• Renovation of Civic Center into	$ 1M-8M **
• Recreation Center	
• Additional Parking	$ 750,000

* Dependent upon trail construction
** Dependent upon amenities included in renovation

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LEGEND:

1. BATTING CAGES
2. FITNESS STATIONS
3. PARKING AREA WITH FUTURE EXPANSION
4. PAVILION WITH BBQ GRILL
5. PLAYSCAPE SHADE STRUCTURE
6. RESTROOM / STORAGE / CONCESSION
7. WALKING TRAIL
8. MULTI-USE SPORTS FIELD
9. SPLASH PAD W/ SHADE STRUCTURE
10. RECREATION CENTER

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CONCEPT PLAN
CITY PARK

City of Copperas Cove

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Heritage Park

Proposed Park Amenities	Estimated Cost
• Walking Trail	$30 - $110 per foot *
• Benches	$ 750 / each
• Playscape with Shade Structure	$ 155,000
• Pavilion (10 People)	$ 115,000
• Covered Picnic Areas (4-8 People)	$ 95,000
• Barbeque Grills	$ 700 / each
• Pedestrian Bridge (50' Span)	$ 230,000
• Security Lighting	$ 45,000
• Landscaping	$ 28,000

* Dependent upon trail construction

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LEGEND:

1. BENCH
2. LANDSCAPING
3. PAVILION WITH BBQ GRILL
4. PICNIC SHELTER W/ BBQ GRILL
5. PLAYSCAPE WITH SHADE STRUCTURE
6. SECURITY LIGHTING
7. WALKING TRAIL
8. PEDESTRIAN BRIDGE

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CONCEPT PLAN
HERITAGE PARK

City of Copperas Cove

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High Chaparral Park

Proposed Park Amenities	Estimated Cost
• Walking Trail	$30 - $110 per foot *
• Shade Structure over Existing Playscape	$ 45,000
• Pavilion (10 People)	$ 115,000
• Barbeque Grills	$ 700 / each
• Multi-Use Sports Field	$ 245,000
• Security Lighting	$ 45,000
• Landscaping	$ 15,000

* Dependent upon trail construction

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LEGEND:

1. LANDSCAPING
2. PAVILION WITH BBQ GRILL
3. SHADE STRUCTURE OVER EXISTING PLAYSCAPE
4. WALKING TRAIL
5. SECURITY LIGHTING
6. MULTI-USE SPORTS FIELD

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CONCEPT PLAN
HIGH CHAPARRAL PARK

City of Copperas Cove

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Highland Park

Proposed Park Amenities	Estimated Cost
• Benches	$ 750 / each
• Walking Trail	$30 - $110 per foot *
• Playscape with Shade Structure	$ 155,000
• Covered Picnic Areas (4-8 People)	$ 95,000
• Barbeque Grills	$ 700 / each
• Security Lighting	$ 45,000
• Landscaping	$ 35,000

* Dependent upon trail construction

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LEGEND:

1. BENCH
2. LANDSCAPING
3. PICNIC SHELTER W/ BBQ GRILL
4. PLAYSCAPE WITH SHADE STRUCTURE
5. SECURITY LIGHTING
6. WALKING TRAIL

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CONCEPT PLAN
HIGHLAND PARK

City of Copperas Cove

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Kate Street Park

Proposed Park Amenities	Estimated Cost
• Walking Trail	$30 - $110 per foot *
• Covered Picnic Areas (4-8 People)	$ 95,000
• Barbeque Grills	$ 700 / each
• Playscape with Shade Structure	$ 155,000
• Benches	$ 750 / each
• Security Lighting	$ 45,000

* Dependent upon trail construction

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LEGEND:

1. BENCH
2. PICNIC TABLE WITH BBQ GRILL
3. SHADE STRUCTURE OVER EXISTING PLAYSCAPE
4. PLAYGROUND EQUIPMENT UPDATE
5. SECURITY LIGHTING
6. WALKING TRAIL

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CONCEPT PLAN
KATE STREET PARK

City of Copperas Cove

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Ogletree Gap Park

Proposed Park Amenities	Estimated Cost
• Nature Hike/Bike Trail	$ 45.00 per foot (Granite 12' wide)
• Disc Golf (21 holes)	$ 800.00 per hole
• Sand Volleyball Court	$ 27,000
• Covered Picnic Areas (4-8 People)	$ 95,000
• Barbeque Grills	$ 700 / each
• Benches	$ 750 / each
• Obstacle Course Trail	$ 30-$55 per foot* $4500 per Obstacle
• Outdoor Auditorium	$ 178,000
• Dog Park	$ 7,500
• Multi-Use Sports Fields	$ 245,000
• Ornamental Fencing Surrounding Old Post Office	$ 85.00 per foot

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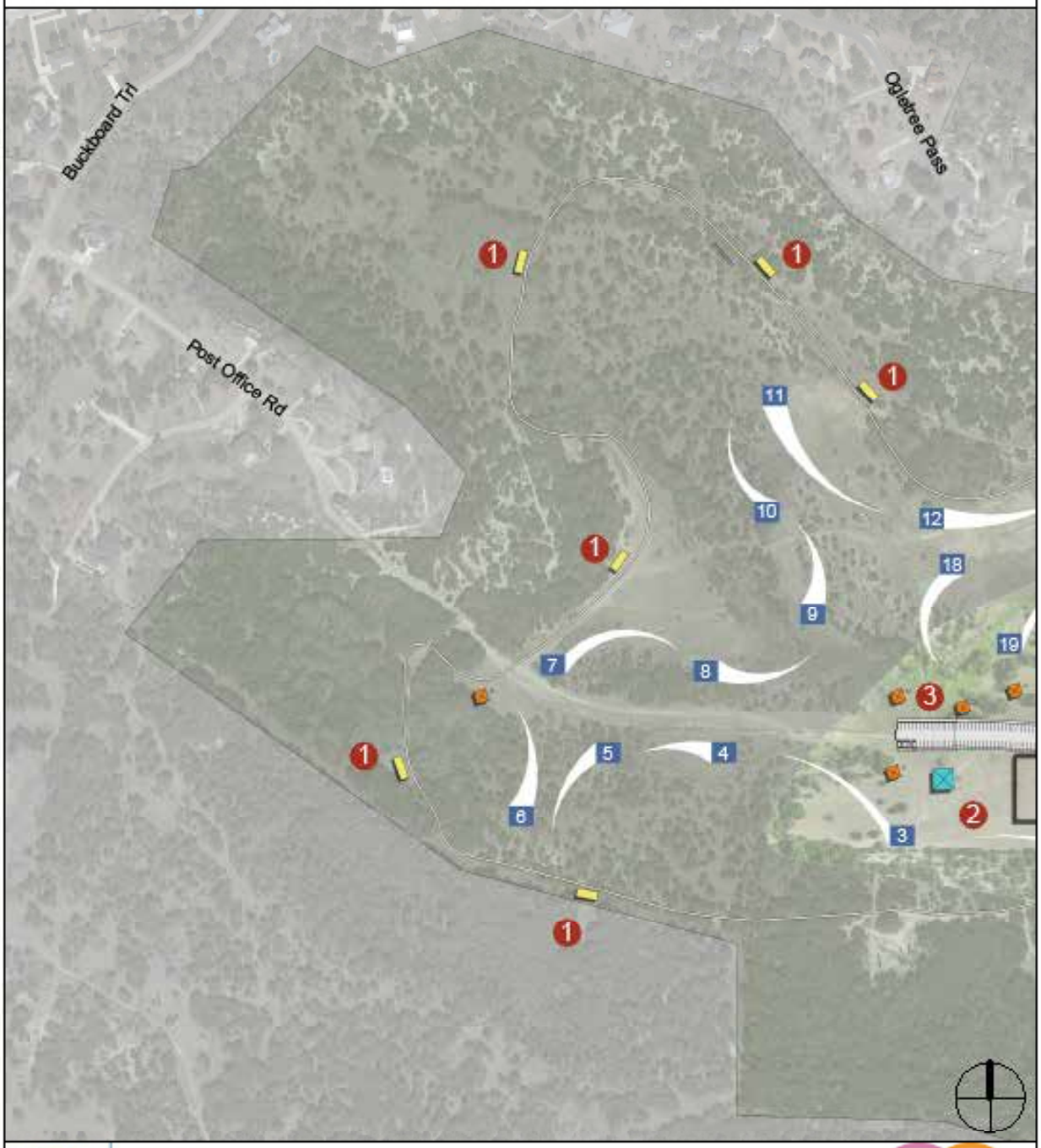
LEGEND:

1. BENCH
2. PAVILION WITH BBQ GRILL
3. PICNIC SHELTER W/ BBQ GRILL
4. DISC GOLF, 21-HOLE COURSE
5. DOG PARK
6. OBSTACLE TRAIL
7. SAND VOLLEYBALL COURT
8. NATURE HIKE/BIKE TRAIL
9. MULTI-USE SPORTS FIELD
10. ORNAMENTAL FENCE SURROUNDING OLD POST OFFICE
11. OUTDOOR AUDITORIUM



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CONCEPT PLAN
OGLETREE GAP PARK

City of Copperas Cove

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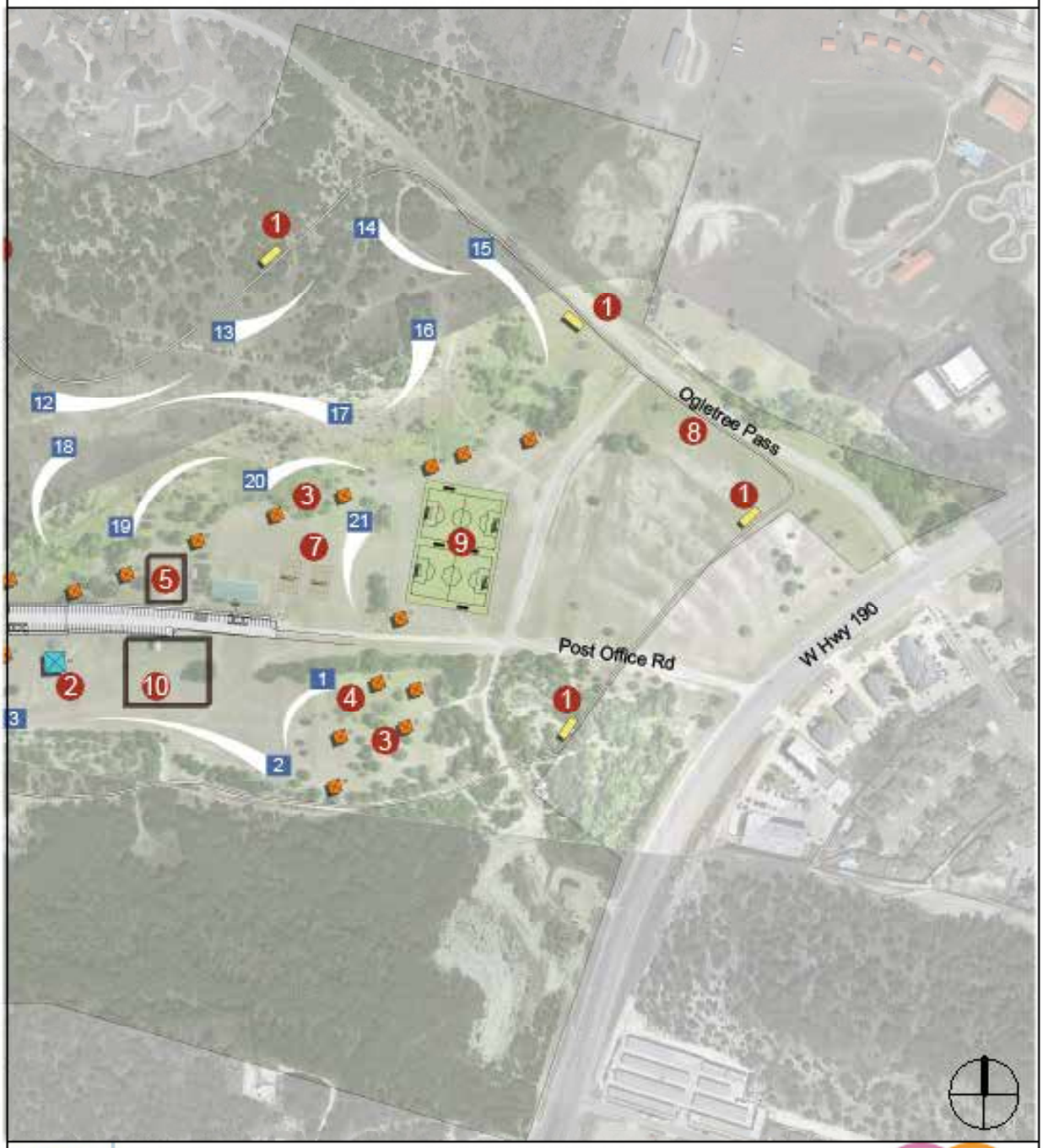
LEGEND:

1. BENCH
2. PAVILION WITH BBQ GRILL
3. PICNIC SHELTER W/ BBQ GRILL
4. DISC GOLF, 21-HOLE COURSE
5. DOG PARK
6. OBSTACLE TRAIL
7. SAND VOLLEYBALL COURT
8. NATURE HIKE/BIKE TRAIL
9. MULTI-USE SPORTS FIELD
10. ORNAMENTAL FENCE SURROUNDING OLD POST OFFICE
11. OUTDOOR AUDITORIUM



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CONCEPT PLAN
OGLETREE GAP PARK

City of Copperas Cove

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Rhode Park

Proposed Park Amenities	Estimated Cost
• Walking Trail	$30 - $110 per foot *
• Adaptive Use Playscape with Shade Structure	$ 155,000
• Covered Picnic Areas (4-8 People)	$ 95,000
• Pavilion (10 People)	$ 115,000
• Restroom	$ 120,000
• Adaptive Use Sports Field	$ 245,000
• Barbeque Grills	$ 700 / each
• Benches	$ 750 / each
• Landscaping	$ 29,000

* Dependent upon trail construction

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LEGEND:

1. BENCH
2. LANDSCAPING
3. PAVILION WITH BBQ GRILL
4. PICNIC SHELTER W/ BBQ GRILL
5. ADAPTIVE USE PLAYSCAPE WITH SHADE STRUCTURE
6. RESTROOM
7. WALKING TRAIL
8. ADAPTIVE USE SPORTS FIELDS

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CONCEPT PLAN
RHODE PARK

City of Copperas Cove

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South Park

Proposed Park Amenities	Estimated Cost
• Pavilion (10 People)	$ 115,000
• Multi-Use Sports Fields	$ 245,000
• Updated Playscape with Shade Structure	$ 155,000
• Fitness Stations	$ 1,500 EA.
• Benches	$ 750 / each
• Security Lighting	$ 45,000

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LEGEND:

1. BENCH
2. PAVILION WITH BBQ GRILL
3. UPDATE PLAYSCAPE AND ADD SHADE STRUCTURE
4. FITNESS STATION
5. SECURITY LIGHTING
6. IMPROVED WALKING TRAIL
7. MULTI-USE SPORTS FIELD

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CONCEPT PLAN
SOUTH PARK (SOUTH)

City of Copperas Cove

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LEGEND:

1. BENCH
2. PAVILION WITH BBQ GRILL
3. UPDATE PLAYSCAPE AND ADD SHADE STRUCTURE
4. FITNESS STATION
5. SECURITY LIGHTING
6. IMPROVED WALKING TRAIL
7. MULTI-USE SPORTS FIELD

MRB group
Engineering, Architecture & Surveying, D.P.C.

CONCEPT PLAN
SOUTH PARK (NORTH)

City of Copperas Cove

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Golf Course

The City has previously made improvements to the facility. A multi-phase plan to repair or replace cart paths has been implemented. It is recommended that these improvements continue.

Proposed Amenities	Cost Estimate
• Phase II	$175,425.00
• Phase III	$163,439.00

City-wide Trail system

Walking trails were ranked as a top priority by the community. Linkage of parks by a city-wide trail/sidewalk system will provide for active transportation for the community. Trails are an important component of the future park system, as they serve recreational, transportation, and linkage purposes.

Funding Sources

Improvements to the parks is a substantial public investment.The various sources of funds for these improvements are as important as the diversity of those sources. When there are several sources of funds for implementing this Parks Master Plan, then no one source is over-burdened and the Parks Master Plan has a better probability of being successfully implemented. The sources discussed below relate to the development and renovation of parkland and facilities.

GENERAL FUND

This source of funding is supported by ad valorem tax revenues and is generally the primary source of funds for maintenance and operation of the existing park system. The general fund is also the source for projects requiring smaller amounts of capital investment. Although projects funded by this source make a small annual contribution to the expansion of the park system, analysis over a number of years usually reflects a major accomplishment in improvements to the park system. It is important to include funding for on-going maintenance and staff requirements for new developments and improvements.

BONDS

Bonds are generally the most common source used by cities for the purchase of land and for providing development monies. There are two types of bonds which are used for parks, both of which must be approved by referendum.

• General Obligation Bond - The General Obligation Bond is amortized using ad valorem taxes and is used for the funding of capital projects which are not supported by a revenue source. These projects include water service, sanitary sewer service, and park acquisition and development. The availability of bonding for parks is often dependent upon the overall municipal needs financed by this source. Capital items such as purchase of land and physical improvements with a useable life expectancy of 15 to 20 years can be funded with general obligation bonds.

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• Revenue Bonds - Revenue bonds finance projects which produce enough revenue to retire their debt, such as golf courses, batting cages, and enterprise-oriented park projects.

Private Donations

This source of financial assistance would usually come from citizens, organizations or businesses which have an interest in assisting with the development of the park system. Land dedication is not an uncommon occurrence with property that is being developed. The location of a neighborhood park within a residential development offers additional value to residential units within that neighborhood, especially if the residential development is occupied by younger families with children. Once property is acquired through this method, the City should be prepared to improve the facility for use within a reasonable length of time.

Private donations may also be received in the form of funds, facilities, recreation equipment, or in-kind services. Donations from local and regional businesses as sponsors for events or facilities should be pursued.

Texas Recreation and Parks Account (TRPA) Program

The Texas Recreation and Parks Account (TRPA) is administered by the Texas Parks and Wildlife Department (TPWD). The TPWD program allows a city to request matching funds for both the acquisition and construction of park facilities. Currently funds are available on a fifty percent (50%) cost share basis. The grant is secured through submission of an application which follows a standard format for applicants. All applications received are ranked on a point system which is designed to evaluate the need for the purchase or construction being requested. Funds are distributed among the applicants having the greater number of points until all allocated funds are expended.

Applications to TPWD can be made annually with a six-month waiting period following the submission date before the successful applications are notified. The number of applications a city may submit at any given time is based on past performance on grants and TPWD evaluation criteria. This funding source is used by many communities. The competitiveness of the program generally allows cities having bona fide park needs to prevail in obtaining grant funding for recreation and parks.

GRANT PROGRAM	Eligible Population (2010 Census)	Grant Ceiling
Small Community	< 20,000	$150,000
Outdoor Recreation	< 500,000	$750,000
Indoor Recreation	< 500,000	$1 million
Urban Outdoor Recreation	> 500,000	$1.5 million
Urban Indoor Recreation	> 500,000	$1.5 million

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The Local Parks Grant Program

The Local Parks Grant Program consists of 5 individual programs. Funding for these programs comes from a portion of the state sales tax on sporting goods through the TRPA, the Texas Large County & Municipality Recreation and Parks Account and from off-shore gas royalties through the federal Land and Water Conservation fund.

The Local Park Grant Program provides 50% matching grants on a reimbursement basis to eligible applicants.

Outdoor Recreation Grant

This grant provides 50% matching grant funds to municipalities, counties, MUDs, and other local units of government with populations less than 500,000 to acquire and develop park-land or to renovate existing public recreation areas. Eligible projects include sports fields, picnic facilities, splash pads, trails, camp sites, community gardens, basketball courts, volleyball courts and other sports courts, small amphitheaters, small bandstands, rodeo arenas, golf courses, landscaping using native plants, etc. Projects must be completed within three years of approval.

The Recreational Trails Grants

TPWD administers the National Recreational Trails Fund in Texas under the approval of the Federal Highway Administration (FHWA). This federally funded program receives its funding from a portion of federal gas taxes paid on fuel used in non-highway recreational vehicles. The reimbursable grants can be up to 80% of project cost with a maximum of $200,000 for non-motorized trail grants and a maximum award of $400,000 for motorized (off-highway vehicle) trail grants. Funds can be spent on both motorized and non-motorized recreational trail projects such as the construction of new recreational trails, to improve existing trails, to develop trailheads or trailside facilities, and to acquire trail corridors.

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SECTION 8: PLAN SUMMARY AND IMPLEMENTATION

PLAN SUMMARY

The Parks Master Plan is a fluid planning tool which will guide the development and acquisition of new parkland and recreational facilities. The Parks Master Plan has identified the need for park improvements, recreational facilities and restoration of existing parks. As with any public or municipal project, the amount of available funding or the potential to retire debt is the controlling factor in deciding which project or projects should be completed first.

As identified, renovation projects for existing parks typically have smaller construction budgets. The renovations specified in this Parks Master Plan outline required new construction overhauls. These types of projects generally receive money from the City's general fund and/or a bond issue which requires voter approval. Projects of this nature and scope would take approximately 6 to 8 months to complete. This includes development of plans and specifications and construction.

The Parks Master Plan should be reviewed annually or after a major project or task has been accomplished.

IMPLEMENTATION

Priorities for improving and developing parks and recreation over the next ten years were determined by public input and throughout the overall master plan process.

POLICIES AND ORDINANCES

The accuracy of these implementation mechanisms is dependent upon the proper coordination of input from contributing bodies including elected and appointed City officials, City staff, sports groups, and most importantly, the citizens of Copperas Cove. All parties must communicate and work collectively toward common goals - only this will ensure the successful development of the park system. An example of this communication would be the incorporation of the Parks Master Plan during review of proposed development plans with various entities involved.

Ordinances provide the legal framework for implementation of this Parks Master Plan, and therefore, aid in park system development and protection.

FUNDING SOURCES

Funding sources for park improvements is discussed above. Utilization of the various funding sources will ensure completion of the desired outcome for providing parks, recreation, and open space amenities.

FUTURE PARKLAND

The City of Copperas Cove wishes to ensure that adequate parks and recreation facilities are being distributed equitably throughout the City to meet the needs of each and every citizen. The City will continually oversee the development of new subdivisions to ensure that park and recreation facilities are included. Provisions for open space and/or greenbelts will also

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be monitored to ensure passive recreation opportunities for citizens. It will be important for homeowners' associations within the subdivisions maintain the parks and recreation facilities established.

RECOMMENDED IMPROVEMENTS

Recommended improvements for each park have been outlined in Section 7 above.

City-Wide Trail System

Trail systems was identified as the number one need in parks within the City of Copperas Cove.

- **Purpose of the Trail System Plan**

First and foremost, a city-wide trail system plan will serve as a planning tool for the City of Copperas Cove. It will also serve to create a vision for a city-wide trails and greenway network and assist public and private entities who wish to contribute funds or resources to the development of the system. Another key purpose of the trail plan is to serve as a basis for coordinating with City departments to reduce conflicts with their developmental activities including utility installation, transportation, water quality, storm water runoff, planning services, and other activities.

- **Design Considerations**

The following is a general discussion of the parameters associated with trail design and construction.

Types of Trails

1. Separated Trails – Separate trails and trail systems are provided for each type of trail user, e.g. bicyclist, pedestrian, skaters.
2. Shared Trails – Trails are shared by two or more user groups but design parameters restrict the use of the trail by some groups.
3. Multi-Use Trails – All trail user groups occupy the same trail or trail corridor. The physical design of the trail must be modified accordingly, to accommodate the demands of the expected user groups.

Trail Surfaces

There are several different types of trail surfaces that can be considered. Those types include natural surface, mulch, gravel, asphalt, concrete, and board walks. The type of surface is dependent upon several factors including soil type, slope of ground, sensitive environmental areas, drainage, life expectancy of trail, type of users and cost to name a few.

Trail Widths

Trail width is determined by the common usage. American Disability Act (ADA) guidelines must be adhered to when designing along with American Association of State Highway and Transportation (AASHTO).

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Vertical Clearance

Vertical clearance is a minimum 9.5 feet. This may need to be greater to permit passage of maintenance vehicles. Clearance under crossings and tunnels should be ten feet (10') for adequate vertical shy distance.

Longitudinal Slope (Grade)

Grades on off-street paths should be kept to a minimum, especially on long inclines. Grades greater than five (5) percent are undesirable because the ascents are difficult for many bicyclists and the descents cause some bicyclists to exceed the speeds at which they are competent. ADA compliance must be adhered to for longitudinal slope.

Signs

Adequate signs and markings are essential on trails, especially to alert users to potential conflicts and to convey regulatory messages to both users and motorist at street intersections. In addition, guide signs, such as those indicating destination, direction, distance, route numbers and names of cross streets, should be used in the same manner as they are on highways.

Access Points

Although access to the trail will usually be available at every road crossing, the users of the trail should be encouraged to enter the trail at specific access points. By designating specific points of access, there may be an elimination of possible encroachment on private property, as well as, preventing possible congestion at busy road crossings.

Lighting

Lighting should be considered, especially if the off-street routes are intended for transportation purposes, many trail commuters may need to travel during poorly lit morning and evening hours. Fixed source lighting reduces conflicts along paths and at intersections. In addition, lighting allows the trail user to see the path direction, surface conditions and obstacles. Lighting should be considered through underpasses or tunnels and when night time security could be a problem.

Traffic Control Devices

Pedestrian signals designed to accommodate a one meter (3.2 feet) per second walking speed, should be provided at major streets where traffic volume and speed is high. ADA regulations will have to be adhered to when traffic control devices are utilized.

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SECTION 9: ATTACHMENTS

Attachments to the Parks Master Plan:

- Ordinance approving, adopting and implementing the Parks Master Plan
- Survey and Results

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ORDINANCE NO. 2020-8

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COPPERAS COVE, TEXAS ADOPTING THE 2020 COMPREHENSIVE PLAN UPDATE ALONG WITH ITS SUBORDINATE UNITS; TO BECOME EFFECTIVE UPON ITS PASSAGE AND APPROVAL.

WHEREAS, Texas Local Government Code Chapter 213 authorizes the City of Copperas Cove to adopt a Comprehensive Plan for the long-range development of the City and implement regulations regarding zoning and land within the city limits of the City of Copperas Cove for the purpose of promoting a safe, orderly, and healthful development of the City of Copperas Cove; and

WHEREAS, Tex. Loc. Gov't Code Chapter 213 empowers the City for the purpose of promoting sound development and promoting public health, safety, and welfare; and adopted under Chapter 2-16 Code of Ordinances, City of Copperas Cove; and

WHEREAS, the City retained under contract K. Friese & Associates, Inc., a professional planning consultant, Lockwood, Andrews & Newnam, Inc. (LAN), a professional engineering consultant and B.G. Services, a professional administrative consultant to assist in the updating of the 2020 Comprehensive Plan along with its subordinate units; and

WHEREAS, the first public meeting and workshop was held at the City of Copperas Cove Police Department Community Room on August 24, 2016 to present the Comprehensive Plan Update by K. Friese and Associates and the Transportation Master Plan by Lockwood, Andrews & Newman, Inc. (LAN) to receive public comments, answer questions and discuss updates to the City's planning efforts; and

WHEREAS, a draft of the Comprehensive Plan Update was presented by K. Friese and Associates on April 23, 2018 to the Planning and Zoning Commission and presented to City Council at their Workshop meeting on May 1, 2018. The City Council provided direction that future discussions be presented in smaller portions for each meeting; and

WHEREAS, the City Council on July 3, 2018, after a series of discussions and meetings, made the determination to send the entire Comprehensive Plan Update back to the Planning and Zoning Commission for further discussion, input and review before taking any final action; and

WHEREAS, the Planning and Zoning Commission held a series of fourteen meetings

in review of the Comprehensive Plan Update along with its subordinate units from July 23, 2018 to August 26, 2019 providing a thorough evaluation, review and analysis of the contents of the plan; and

WHEREAS, a public hearing notice to amend the 2007 Comprehensive Plan by adopting the Comprehensive Plan Update along with its subordinate units was published on August 15, 2019 in the Cove Leader Press; and

WHEREAS, the Planning and Zoning Commission of the City of Copperas Cove held a public hearing on August 26, 2019, and voted unanimously to recommend approval to the City Council on the request by Development Services Department to amend the 2007 Comprehensive Plan by adopting the Comprehensive Plan Update along with its subordinate units; and

WHEREAS, the City Council of the City of Copperas Cove held the required public hearing, considered testimony on September 17, 2019 and continued the adoption of the Comprehensive Plan Update along with its subordinate units to October 15, 2019; and

WHEREAS, the City Council of the City of Copperas Cove held the continued public hearing, considered testimony on October 15, 2019, closed the public hearing and voted to continue the Comprehensive Plan Update to a special workshop for November 7, 2019; and

WHEREAS, the City Council of the City of Copperas Cove held a special workshop on November 7, 2019 to review each element of the plan and providing guidance and comments, and voted to continue the Comprehensive Plan Update to November 22, 2019; and

WHEREAS, the City Council of the City of Copperas Cove voted on January 21, 2020 to adopt the 2020 Comprehensive Plan Update along with its subordinate units; and

WHEREAS, the City Council of the City of Copperas Cove hereby finds and determines it to be in the public interest to adopt the 2020 Comprehensive Plan Update along with its subordinate units, which in the best judgement promotes the health, safety, morals and general welfare and protects the use for enjoyment of properties throughout the jurisdictional boundaries of the City of Copperas Cove, TX.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COPPERAS COVE, TEXAS:

SECTION 1.

That the 2020 Comprehensive Plan Update and its subordinate units consisting of Chapters 1 through 7, Plates 1 & 2, Future Land Use Plan (FLUP) map, Appendix A, 2018 Fort Hood Joint Land Use Study (JLUS), Appendix B, 2020 Transportation Master Plan and Appendix C, 2020 Parks Master Plan (to be adopted at a later date).

SECTION 2.

That this consolidated Plan is intended to constitute the Comprehensive or Master Plan of the City of Copperas Cove, TX, for all matters relating to long-range planning and guidance relative to zoning decisions, land subdivision, transportation construction, and growth management of the City.

SECTION 3.

That the 2007 Comprehensive Plan Update is replaced by the 2020 Comprehensive Plan Update along with its subordinate units.

SECTION 4.

That it is hereby officially found and determined that the meeting at which this Ordinance is passed was properly noticed and open to the public as required by law.

SECTION 5.

Should any section, clause, or provision of this ordinance be declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of this ordinance or any other ordinance of the City as a whole or any part thereof, other ordinance of the City as a whole or any part thereof, other than the part so declared to be invalid.

SECTION 6.

This ordinance shall go into effect upon passage.

PASSED, APPROVED, AND ADOPTED this 21st day of January, 2020, at a regular meeting held by the City Council of the City of Copperas Cove, Texas, such meeting was held in compliance with the Open Meetings Act, *Tex. Gov't Code*, §551.001, et. seq. at which meeting a quorum was present and voting.

Bradi, Diaz, Mayor

ATTEST:

Lisa Wilson, City Secretary

CITY OF COPPERAS COVE ★ TEXAS ★

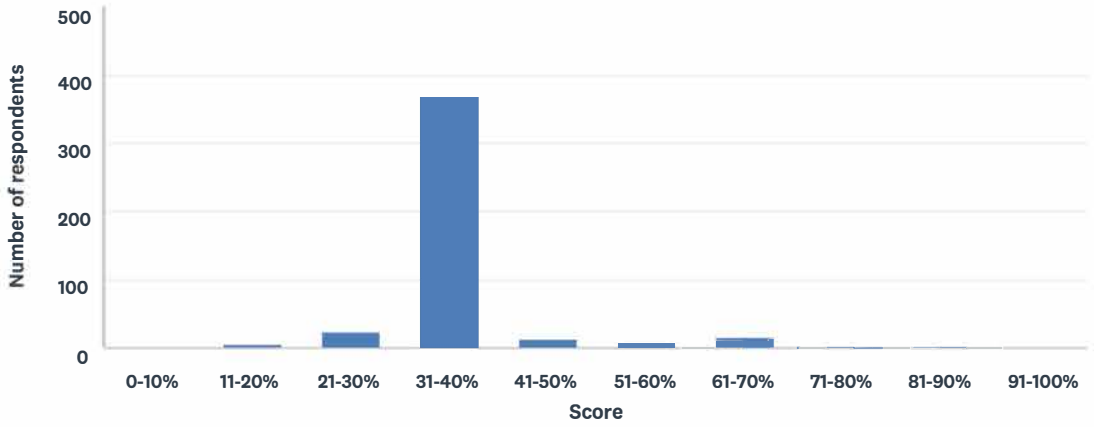
APPROVED AS TO FORM:

Denton, Navarro, Rocha, Bernal,
& Zech, P.C., City Attorney

Quiz Summary

AVERAGE SCORE

39% • 5.1/13 PTS



STATISTICS		
Lowest Score	Median	Highest Score
8%	38%	85%

Mean: 39%

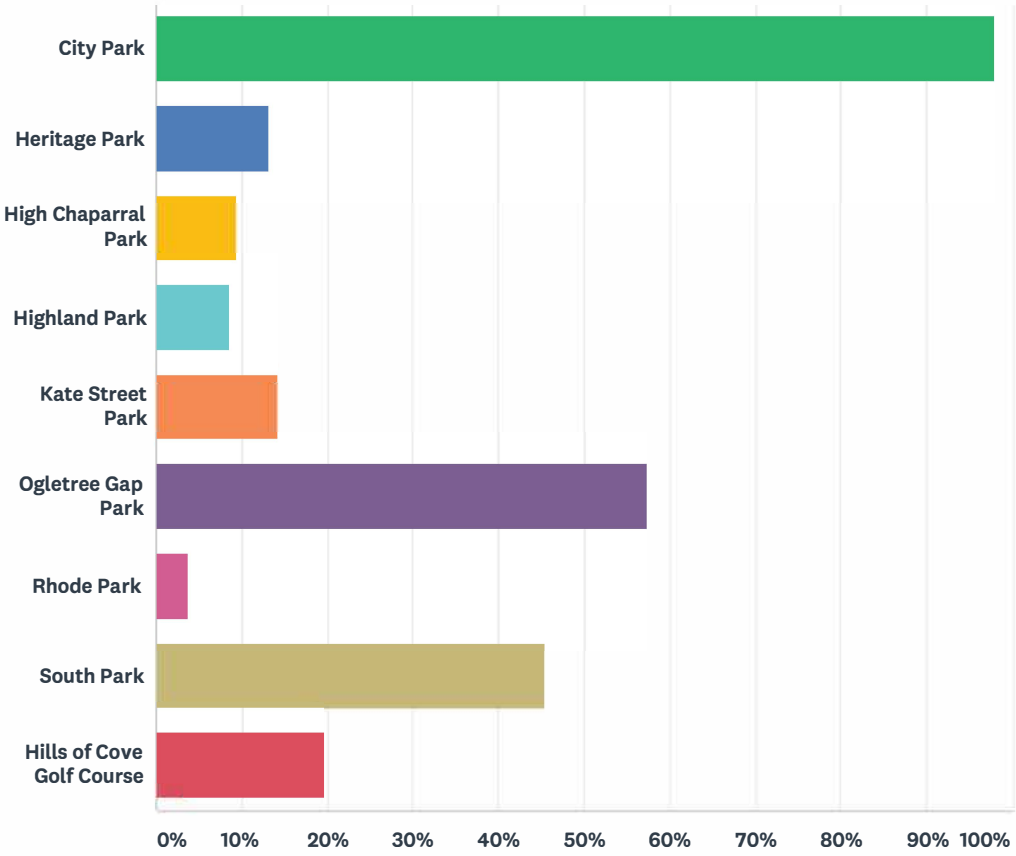
Standard Deviation: 8%

Question Ranking

QUESTIONS (3)	DIFFICULTY	AVERAGE SCORE
Q10 When choosing to participate in a sport, camp, program or class, what THREE criteria would you identify as being most important to your household?	1	35%
Q2 Are you aware that the Parks and Recreation Department is currently navigating a (5) year park improvement program?	2	50%
Q18 Would you support the construction of an additional splash pad in a park that does not currently have one?	2	50%

Q1 From the following list, please check ALL the Copperas Cove Parks that you or any member of your household has used or visited within the past 12 months.

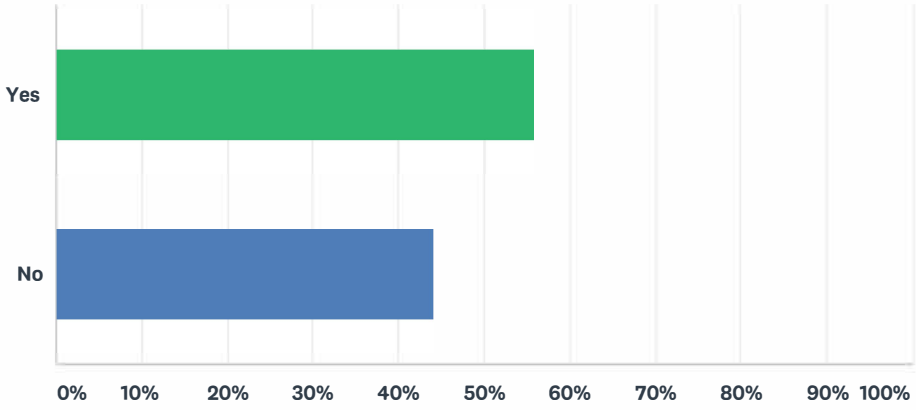
Answered: 434 Skipped: 5



ANSWER CHOICES	RESPONSES	
City Park	97.93%	425
Heritage Park	13.13%	57
High Chaparral Park	9.45%	41
Highland Park	8.53%	37
Kate Street Park	14.29%	62
Ogletree Gap Park	57.37%	249
Rhode Park	3.69%	16
South Park	45.39%	197
Hills of Cove Golf Course	19.59%	85
Total Respondents: 434		

Q2 Are you aware that the Parks and Recreation Department is currently navigating a (5) year park improvement program?

Answered: 439 Skipped: 0



QUIZ STATISTICS			
Percent Correct 0%	Average Score 1.0/2.0 (50%)	Standard Deviation 0.00	Difficulty 2/3

ANSWER CHOICES	SCORE	RESPONSES	
✓ Yes	1/2	55.81%	245
✓ No	1/2	44.19%	194
Total Respondents: 439			

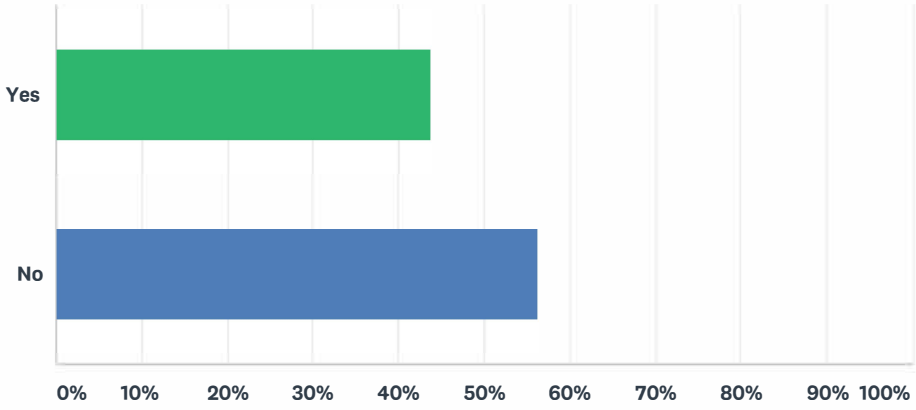
Q3 From the list in Question #1, which THREE Parks are MOST IMPORTANT to you and members of your household?

Answered: 429 Skipped: 10

ANSWER CHOICES	RESPONSES	
1st Most Important	100.00%	429
2nd Most Important	89.74%	385
3rd Most Important	72.03%	309

Q4 Overall, do you think the City of Copperas Cove has maintained parks, keeping them updated and safe for patrons to visit?

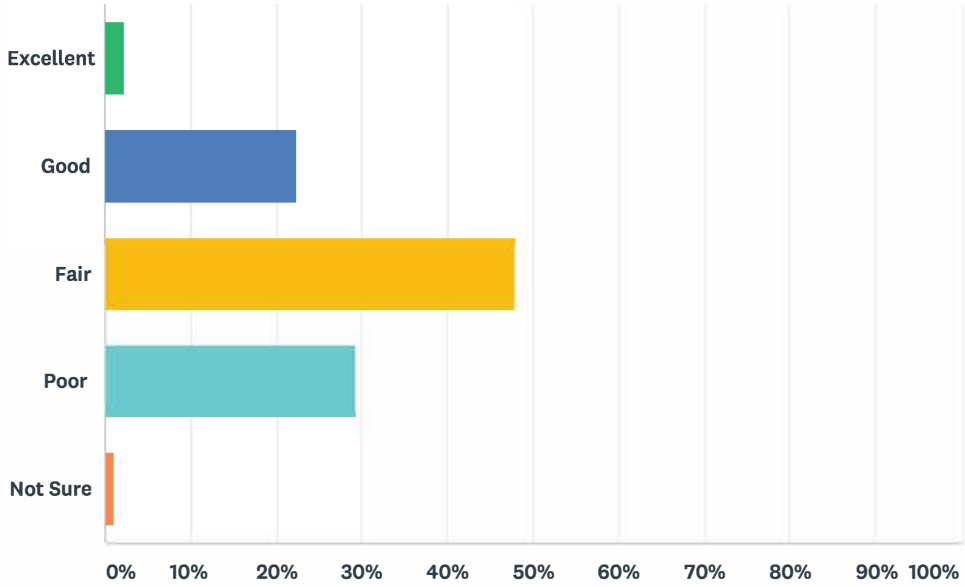
Answered: 437 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	43.71%	191
No	56.29%	246
TOTAL		**437**

Q5 How would you rate the quality of the recreational facilities that you use in the City of Copperas Cove Parks?

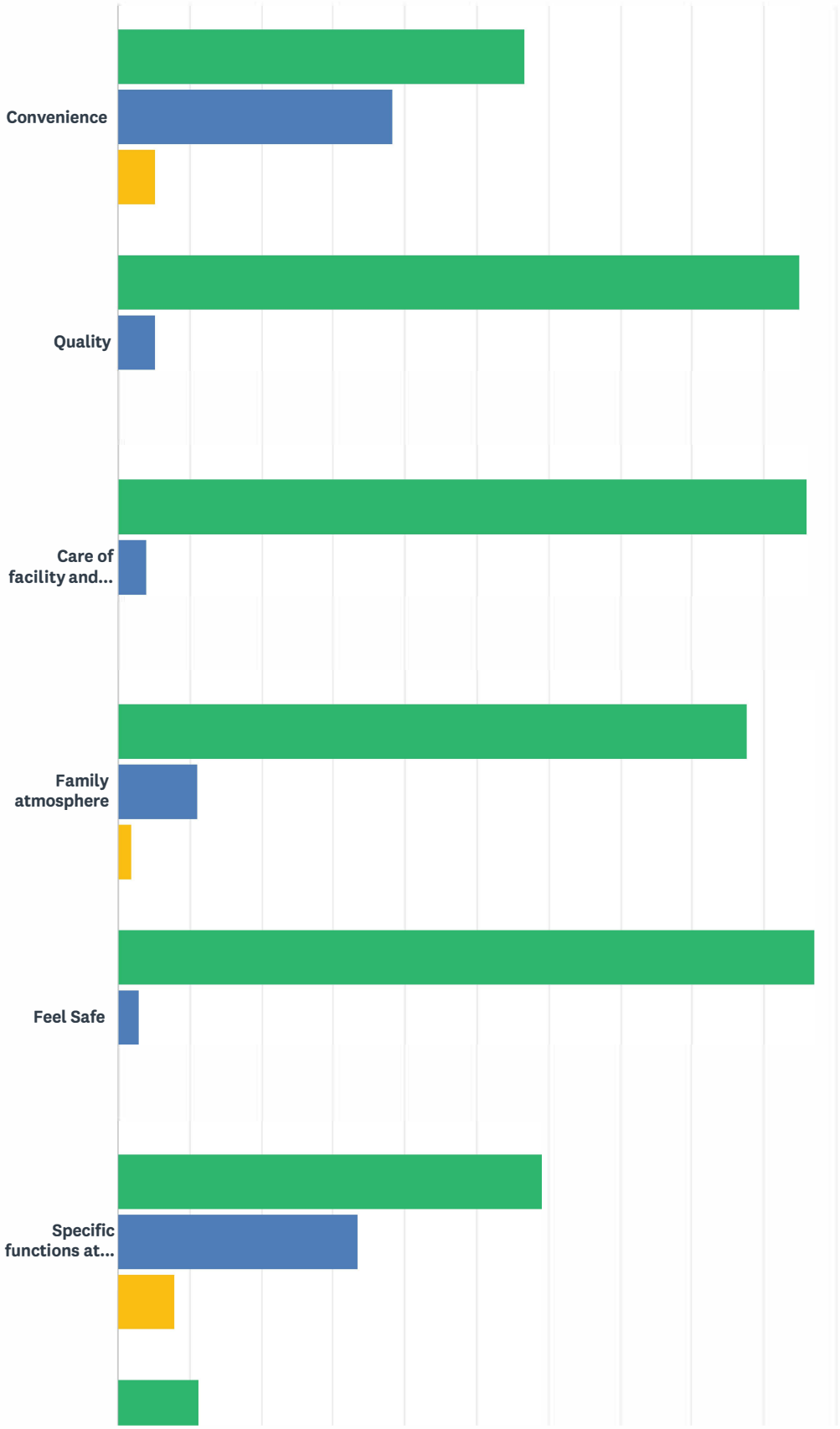
Answered: 439 Skipped: 0

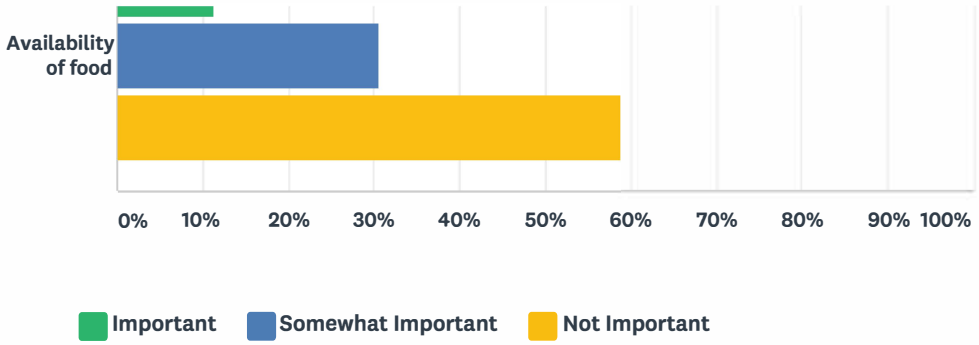


ANSWER CHOICES	RESPONSES	
Excellent	2.28%	10
Good	22.32%	98
Fair	47.84%	210
Poor	29.38%	129
Not Sure	1.14%	5
Total Respondents: 439		

Q6 When choosing to visit or use a Park, what is most important to you?

Answered: 439 Skipped: 0

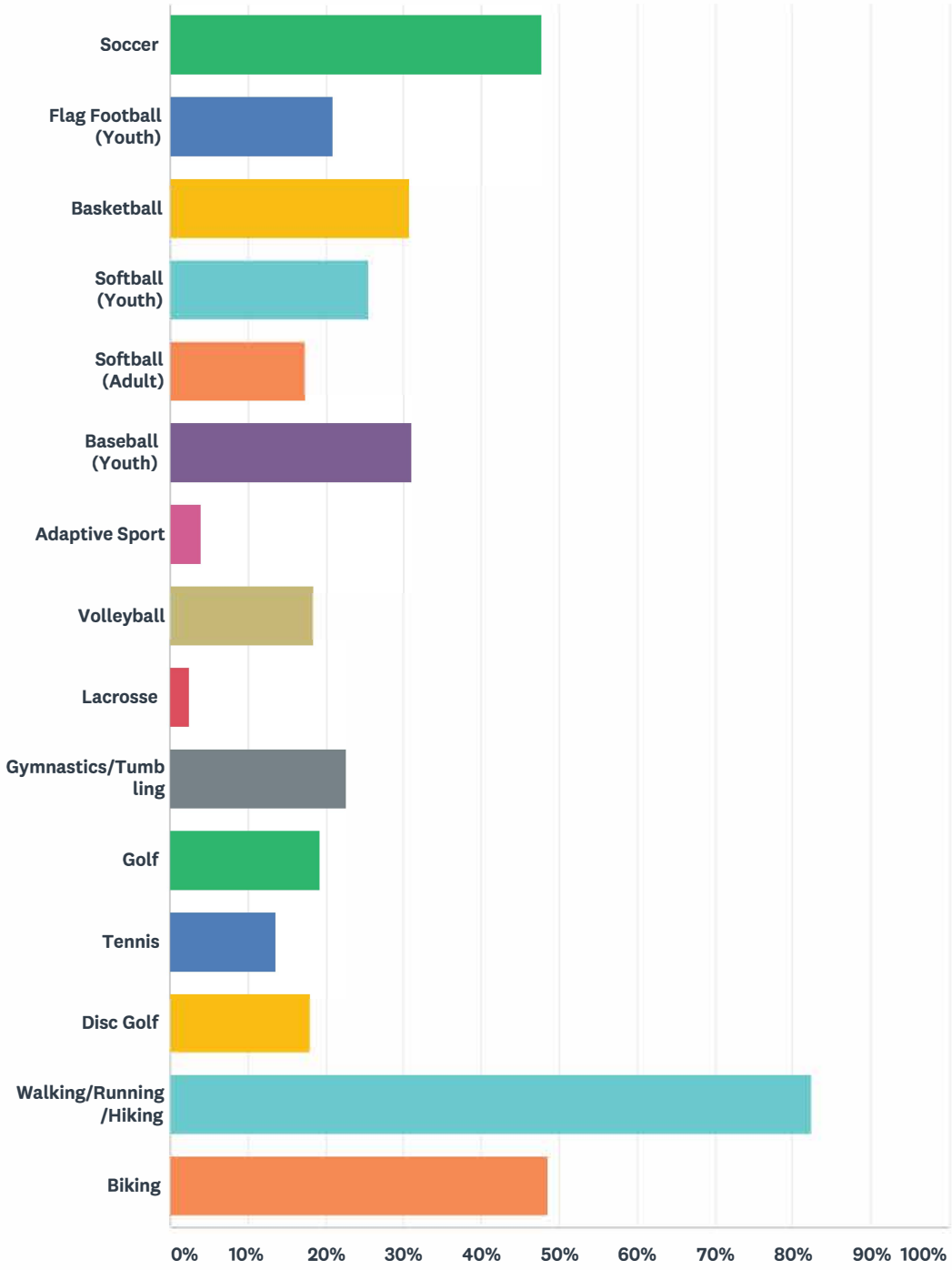




	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	TOTAL RESPONDENTS
Convenience	56.62% 248	38.36% 168	5.25% 23	438
Quality	94.97% 415	5.26% 23	0.00% 0	437
Care of facility and infrastructure	96.13% 422	3.87% 17	0.00% 0	439
Family atmosphere	87.67% 384	11.19% 49	1.83% 8	438
Feel Safe	97.04% 426	2.96% 13	0.00% 0	439
Specific functions at facility	59.23% 260	33.49% 147	7.97% 35	439
Availability of food	11.26% 49	30.57% 133	58.85% 256	435

Q7 Please check the sports listed below that you or members of your household have a need for.

Answered: 422 Skipped: 17

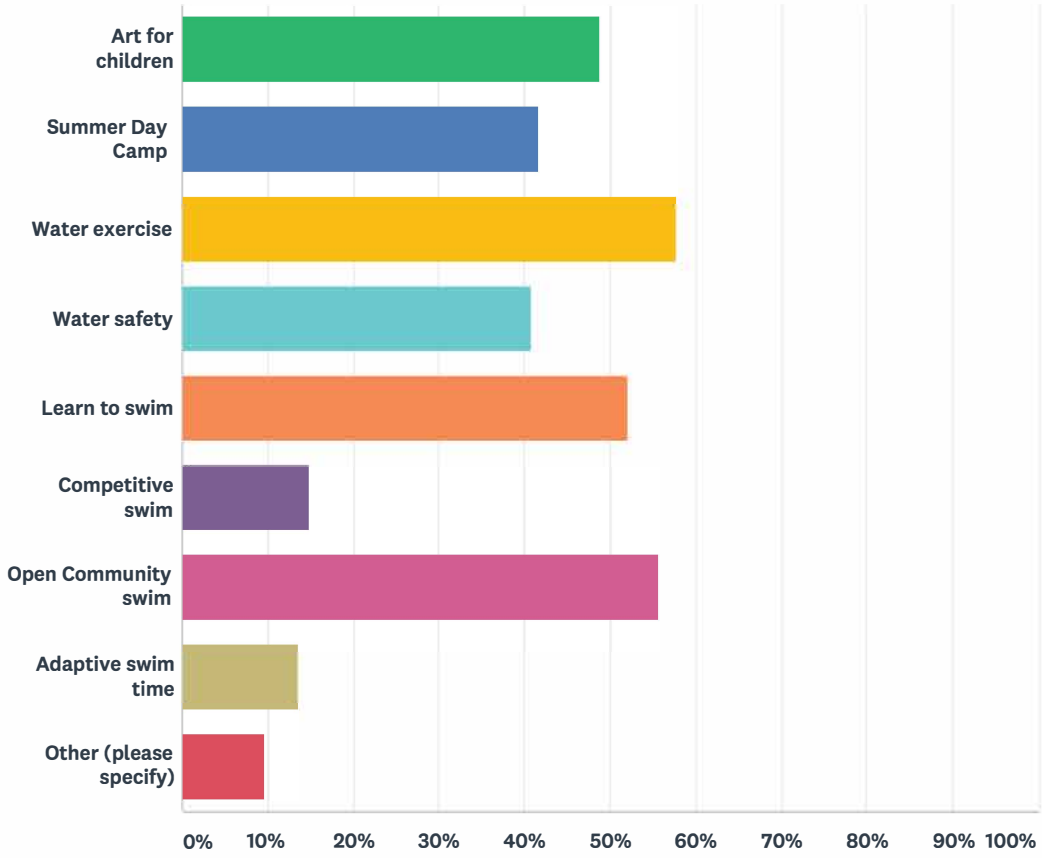


ANSWER CHOICES	RESPONSES	
Soccer	47.63%	201
Flag Football (Youth)	20.85%	88
Basketball	30.81%	130

Softball (Youth)	25.59%	108
Softball (Adult)	17.30%	73
Baseball (Youth)	31.04%	131
Adaptive Sport	4.03%	17
Volleyball	18.48%	78
Lacrosse	2.61%	11
Gymnastics/Tumbling	22.51%	95
Golf	19.19%	81
Tennis	13.51%	57
Disc Golf	18.01%	76
Walking/Running/Hiking	82.46%	348
Biking	48.58%	205
Total Respondents: 422		

Q8 Please check all programs listed below that you or members of your household have a need for.

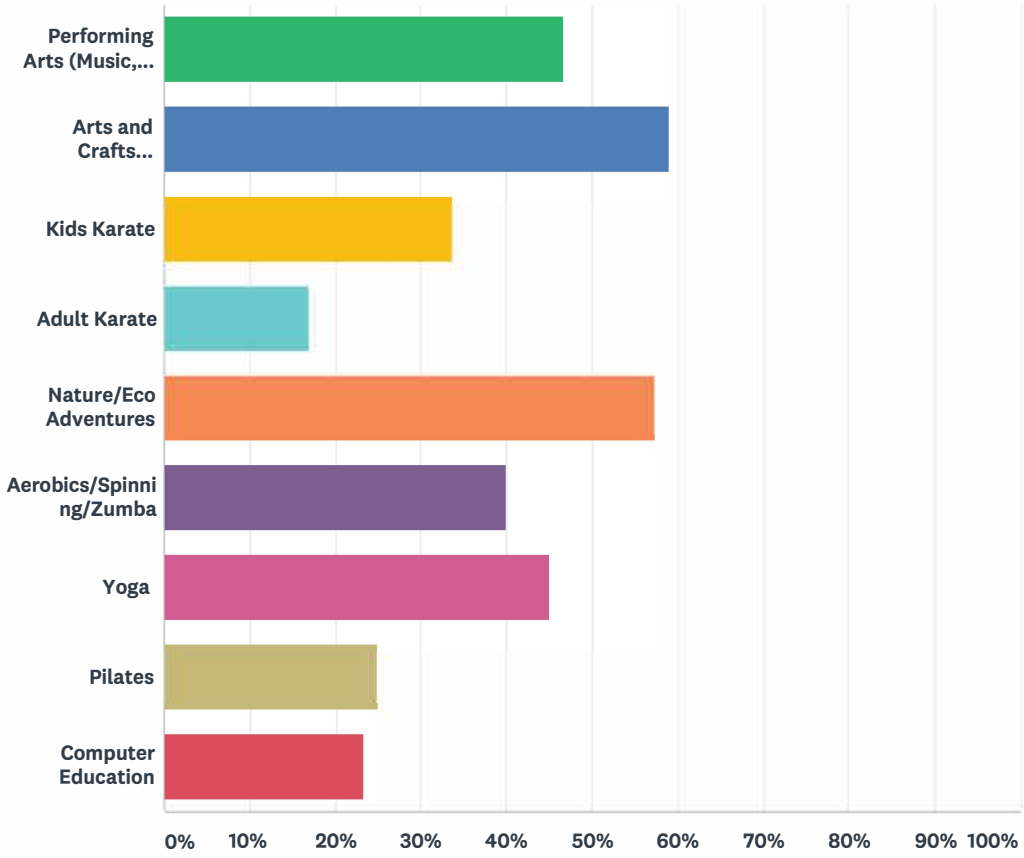
Answered: 409 Skipped: 30



ANSWER CHOICES	RESPONSES	
Art for children	48.66%	199
Summer Day Camp	41.56%	170
Water exercise	57.70%	236
Water safety	40.83%	167
Learn to swim	52.08%	213
Competitive swim	14.91%	61
Open Community swim	55.75%	228
Adaptive swim time	13.69%	56
Other (please specify)	9.54%	39
Total Respondents: 409		

Q9 Please check all classes that you or members of your household have a need for.

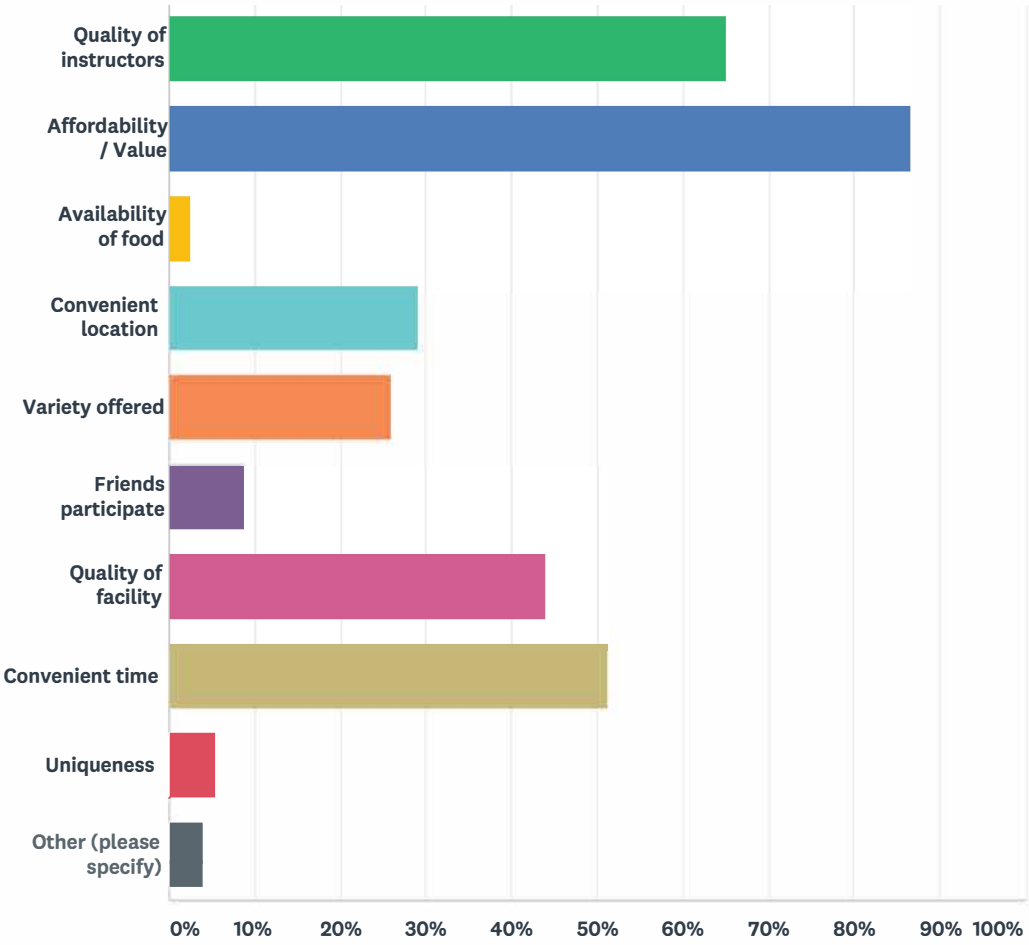
Answered: 393 Skipped: 46



ANSWER CHOICES	RESPONSES	
Performing Arts (Music, Dance, Theater)	46.56%	183
Arts and Crafts (Painting, Ceramics)	59.03%	232
Kids Karate	33.59%	132
Adult Karate	17.05%	67
Nature/Eco Adventures	57.25%	225
Aerobics/Spinning/Zumba	39.95%	157
Yoga	45.04%	177
Pilates	24.94%	98
Computer Education	23.16%	91
Total Respondents: 393		

Q10 When choosing to participate in a sport, camp, program or class, what THREE criteria would you identify as being most important to your household?

Answered: 433 Skipped: 6



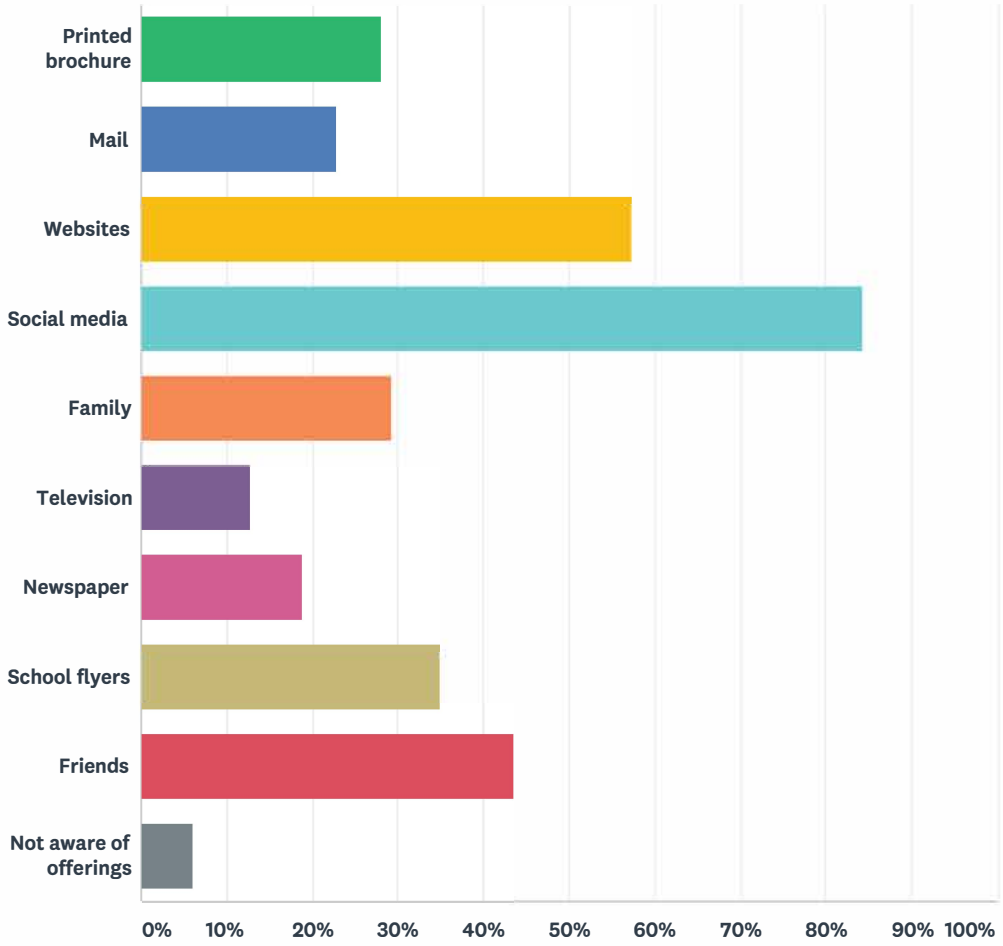
QUIZ STATISTICS			
Percent Correct 0%	Average Score 3.2/9.0 (35%)	Standard Deviation 0.94	Difficulty 1/3

ANSWER CHOICES	SCORE	RESPONSES	
✓ Quality of instructors	1/9	65.13%	282
✓ Affordability / Value	1/9	86.61%	375
✓ Availability of food	1/9	2.54%	11
✓ Convenient location	1/9	29.10%	126
✓ Variety offered	1/9	25.87%	112
✓ Friends participate	1/9	8.78%	38
✓ Quality of facility	1/9	43.88%	190

✓ Convenient time	1/9	51.27%	222
✓ Uniqueness	1/9	5.54%	24
Other (please specify)	--	3.93%	17
Total Respondents: 433			

Q11 From the following list, please check ALL the ways in which you learn about programs, classes and/or events.

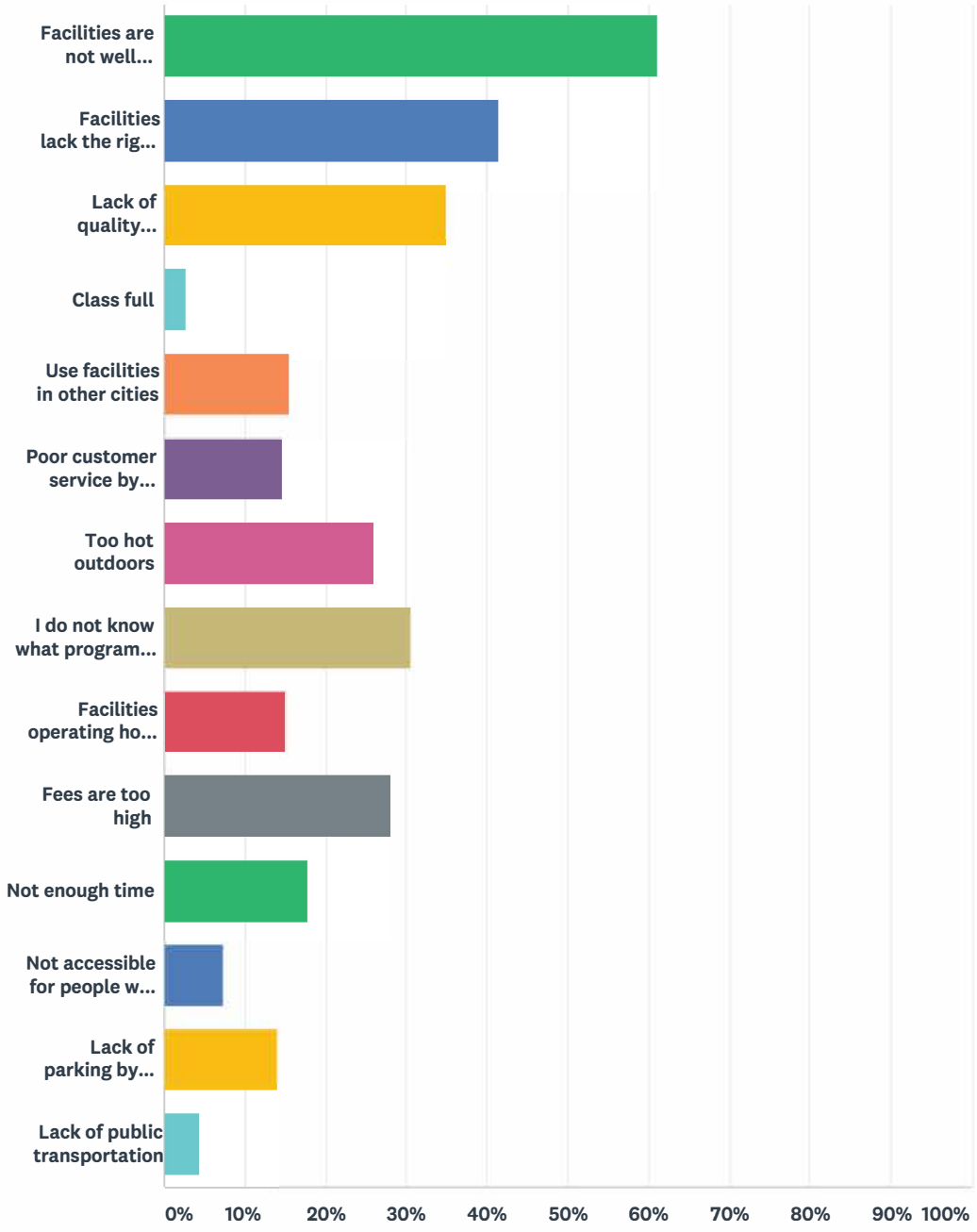
Answered: 434 Skipped: 5



ANSWER CHOICES	RESPONSES	
Printed brochure	28.11%	122
Mail	22.81%	99
Websites	57.37%	249
Social media	84.33%	366
Family	29.26%	127
Television	12.67%	55
Newspaper	18.89%	82
School flyers	35.02%	152
Friends	43.55%	189
Not aware of offerings	5.99%	26
Total Respondents: 434		

Q12 From the following list, please check ALL the reasons that prevent you from using parks, trails, recreation programs and activities in Copperas Cove more often.

Answered: 418 Skipped: 21



ANSWER CHOICES	RESPONSES	
Facilities are not well maintained	61.00%	255
Facilities lack the right equipment	41.39%	173
Lack of quality programs	34.93%	146

Class full	2.63%	11
Use facilities in other cities	15.55%	65
Poor customer service by staff	14.59%	61
Too hot outdoors	25.84%	108
I do not know what programs are offered	30.62%	128
Facilities operating hours not convenient	15.07%	63
Fees are too high	27.99%	117
Not enough time	17.70%	74
Not accessible for people with disabilities	7.42%	31
Lack of parking by facilities and parks	14.11%	59
Lack of public transportation	4.31%	18
Total Respondents: 418		

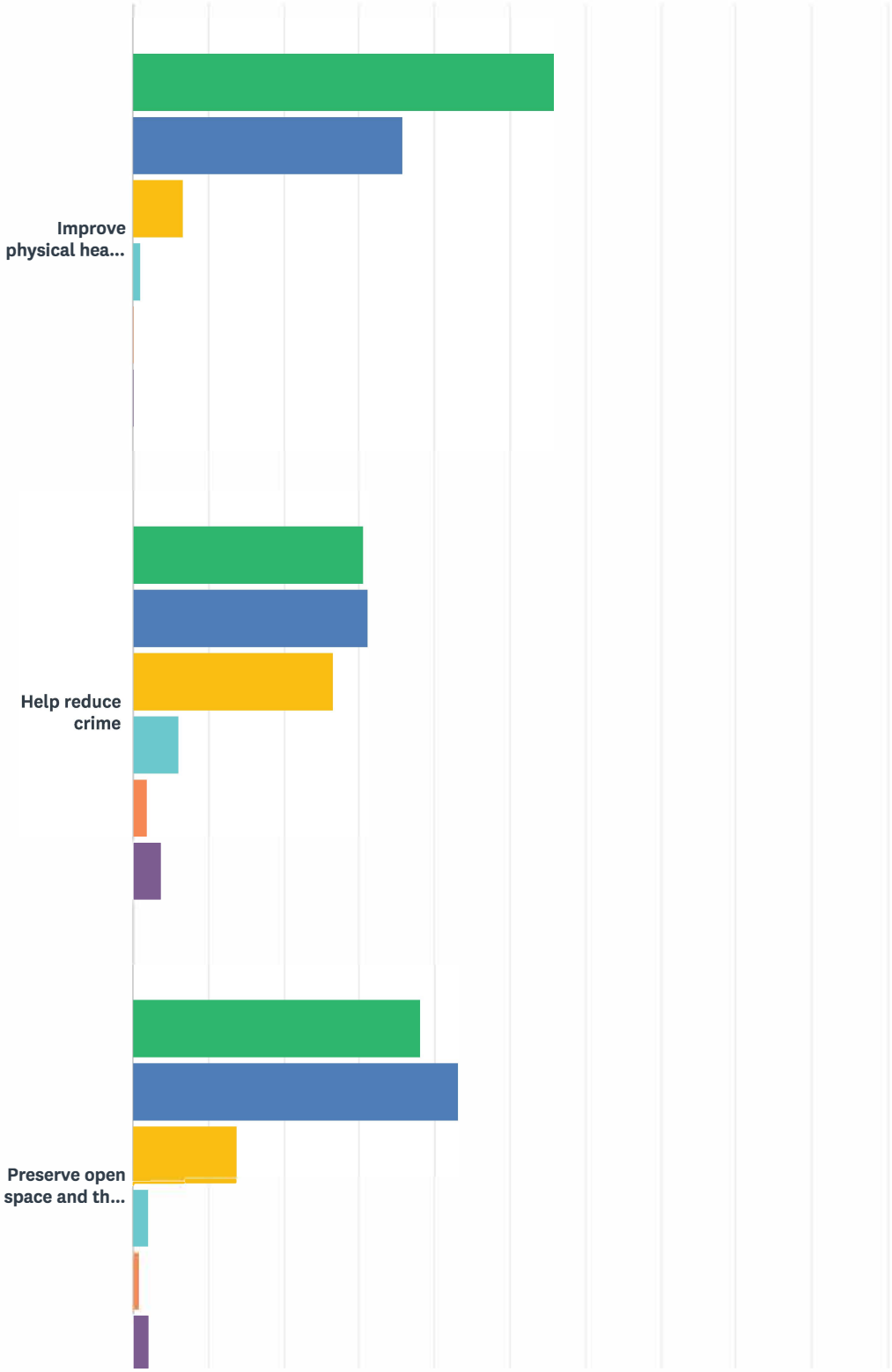
Q13 Which THREE of the reasons listed in Question 12 do you think are the major reasons preventing you and members of your household from using parks, trails, recreation programs and activities in Copperas Cove?

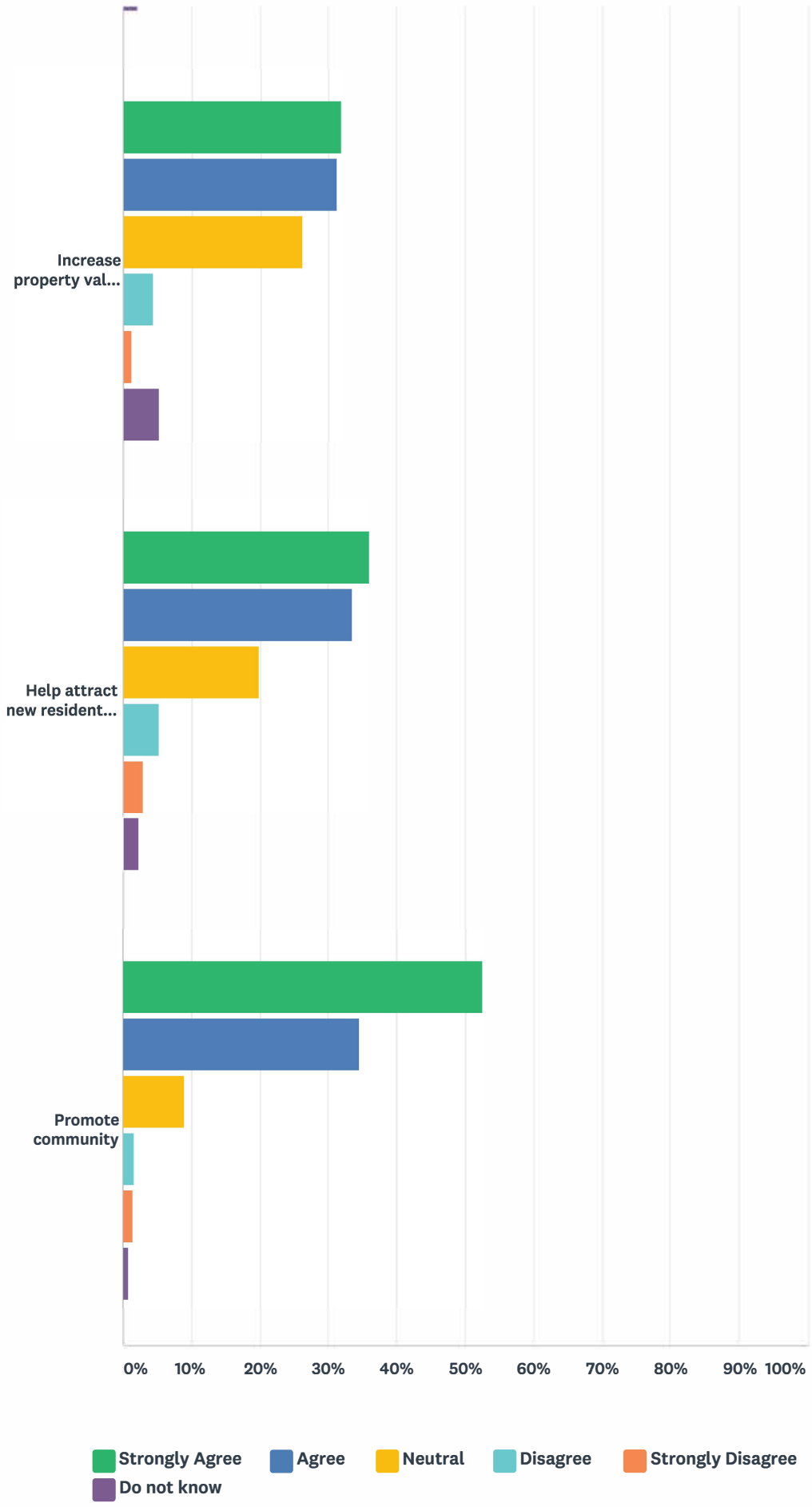
Answered: 384 Skipped: 55

ANSWER CHOICES	RESPONSES	
1st Choice	100.00%	384
2nd Choice	82.03%	315
3rd Choice	66.41%	255

Q14 The following are benefits that you and your household may receive from participating in recreational activities in parks, trails and recreational facilities. For each benefit, please indicate your level of agreement with the benefits provided by parks, trails and recreation facilities?

Answered: 435 Skipped: 4

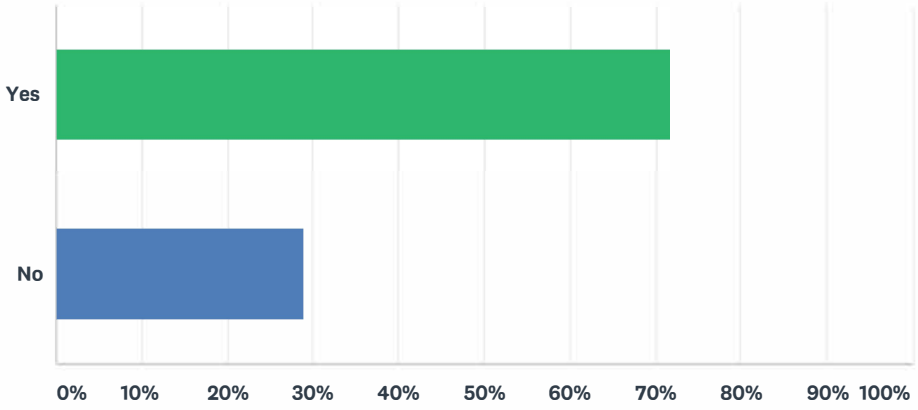



Increase property val...
Help attract new resident...
Promote community
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree
Do not know

	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	DO NOT KNOW	TOTAL
Improve physical health and fitness	55.86% 243	35.86% 156	6.67% 29	1.15% 5	0.23% 1	0.23% 1	435
Help reduce crime	30.56% 132	31.25% 135	26.62% 115	6.02% 26	1.85% 8	3.70% 16	432
Preserve open space and the environment	38.02% 165	43.09% 187	13.82% 60	2.07% 9	0.92% 4	2.07% 9	434
Increase property values in surrounding area	31.87% 138	31.18% 135	26.10% 113	4.39% 19	1.15% 5	5.31% 23	433
Help attract new residents and businesses	36.03% 156	33.49% 145	19.86% 86	5.31% 23	3.00% 13	2.31% 10	433
Promote community	52.53% 228	34.56% 150	8.99% 39	1.61% 7	1.38% 6	0.92% 4	434

Q15 When visiting a park, do you have a need for open aired pavilions?

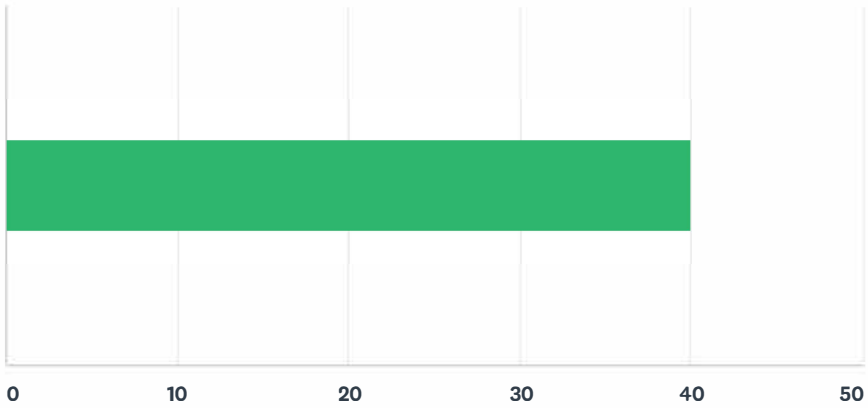
Answered: 437 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	71.85%	314
No	28.83%	126
Total Respondents: 437		

Q16 On a scale of 1 (being extremely low) to 5 (being excellent), how would you rate the walking trails within the parks in regards to safety, walkability, quantity, cleanliness and accessibility?

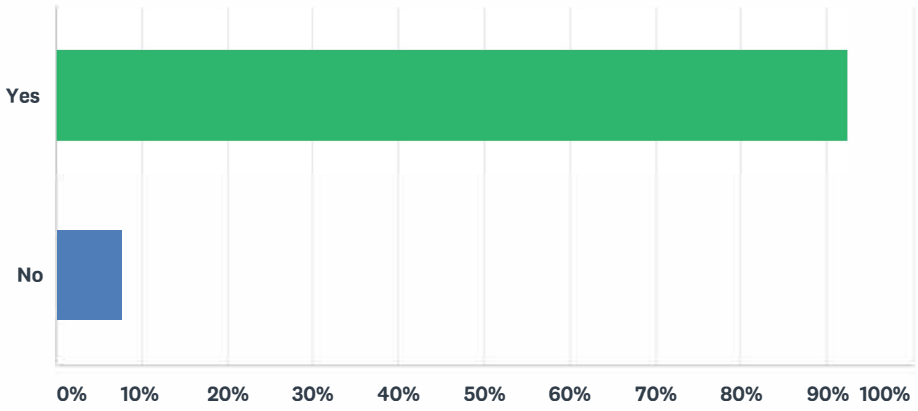
Answered: 427 Skipped: 12



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	40	17,054	427
Total Respondents: 427			

Q17 Would you support the City restructuring the City's Civic Center for use as a Community Center to serve youth sports, provide meeting and banquet rooms, fitness rooms and more?

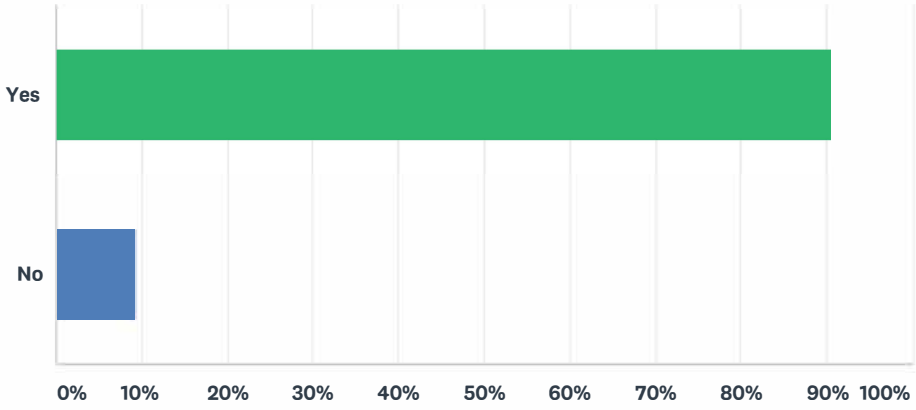
Answered: 435 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	92.41%	402
No	7.82%	34
Total Respondents: 435		

Q18 Would you support the construction of an additional splash pad in a park that does not currently have one?

Answered: 433 Skipped: 6

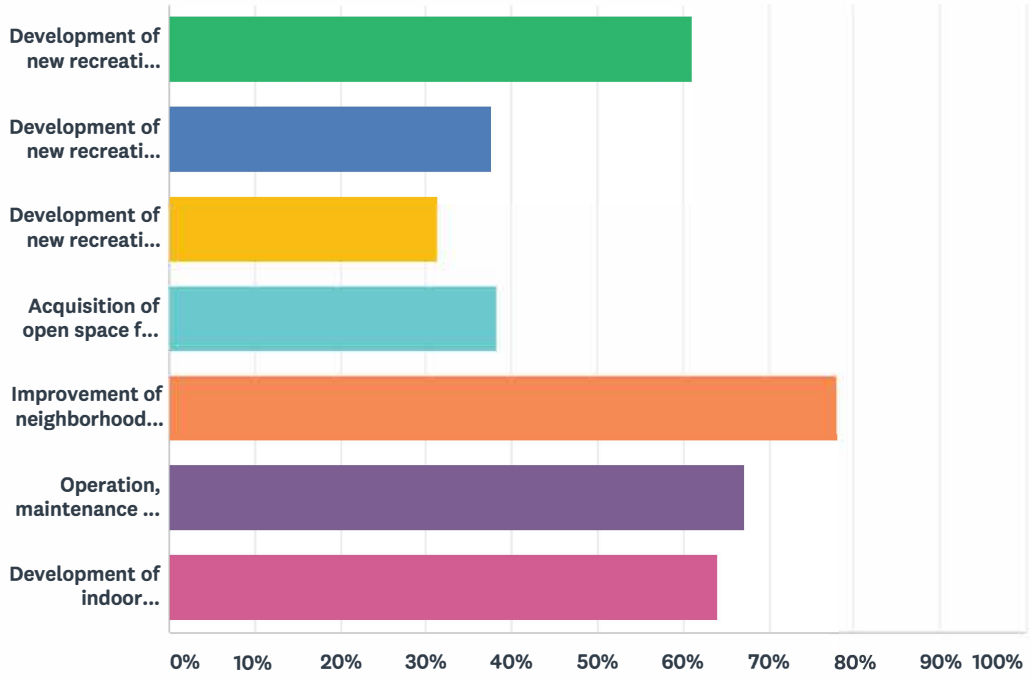


QUIZ STATISTICS			
Percent Correct 0%	Average Score 1.0/2.0 (50%)	Standard Deviation 0.00	Difficulty 2/3

ANSWER CHOICES	SCORE	RESPONSES	
✓ Yes	1/2	90.53%	392
✓ No	1/2	9.47%	41
Total Respondents: 433			

Q19 From the list below, please indicate the priorities you would most support with your tax dollars.

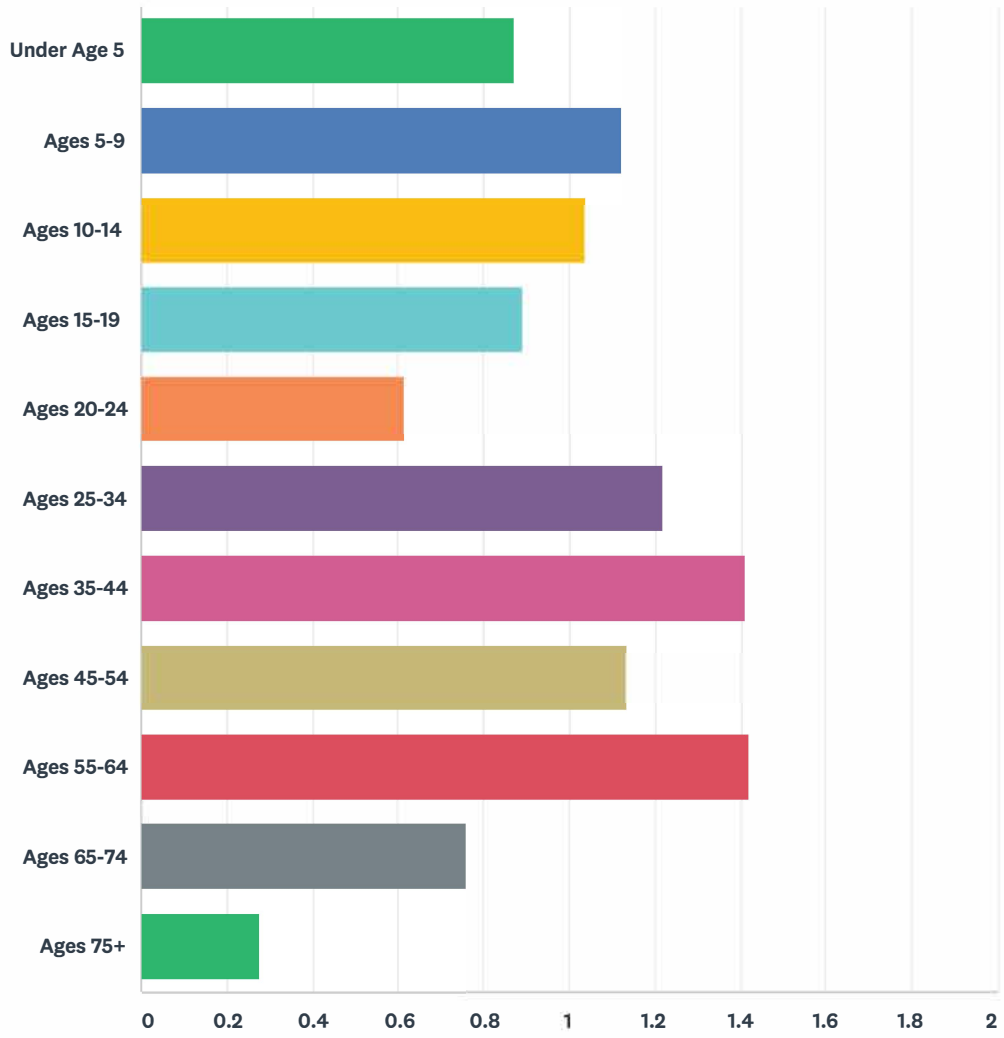
Answered: 434 Skipped: 5



ANSWER CHOICES	RESPONSES	
Development of new recreation programs for children	61.06%	265
Development of new recreation programs for adults	37.56%	163
Development of new recreation programs for seniors	31.34%	136
Acquisition of open space for sports facilities (baseball, softball, soccer, etc.)	38.25%	166
Improvement of neighborhood and community parks	78.11%	339
Operation, maintenance and security of neighborhood and community parks	67.05%	291
Development of indoor recreation facilities	64.06%	278
Total Respondents: 434		

Q20 The following demographic questions are optional and are included in order to validate the survey. All responses are confidential. Counting yourself, how many people in your household are:

Answered: 426 Skipped: 13



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Under Age 5	1	153	176
Ages 5-9	1	247	220
Ages 10-14	1	211	203
Ages 15-19	1	137	154
Ages 20-24	1	61	99
Ages 25-34	1	228	187
Ages 35-44	1	306	217
Ages 45-54	1	195	172

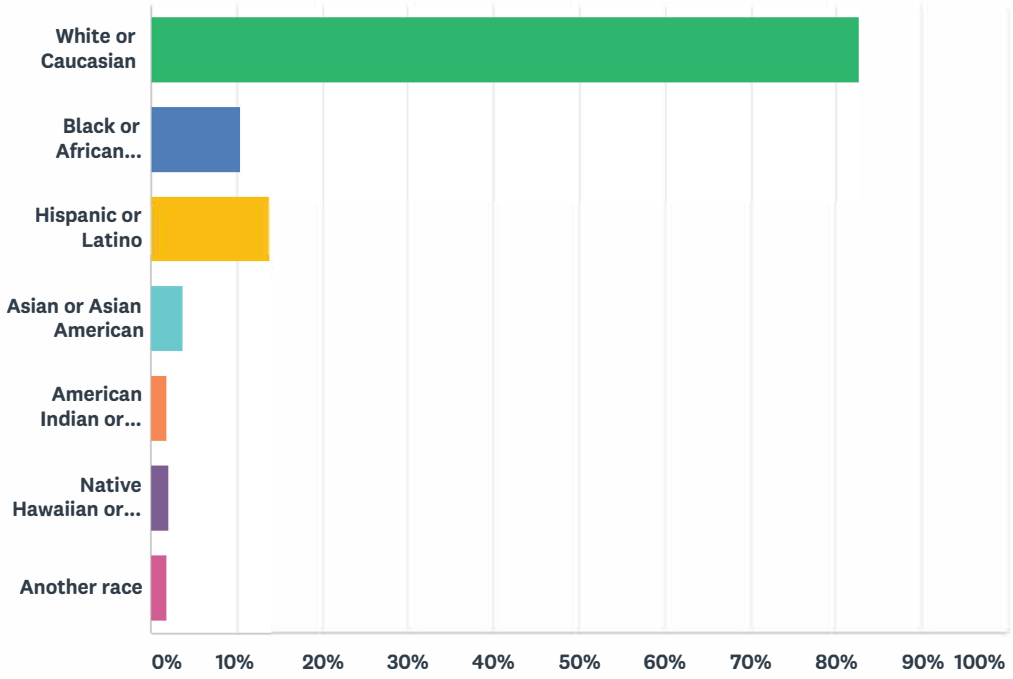
Ages 55-64	1	156	110
Ages 65-74	1	65	86
Ages 75+	0	17	62
Total Respondents: 426			

Q21 What is your age?

Answered: 423 Skipped: 16

Q22 Check ALL of the following that describes your race/ethnicity.

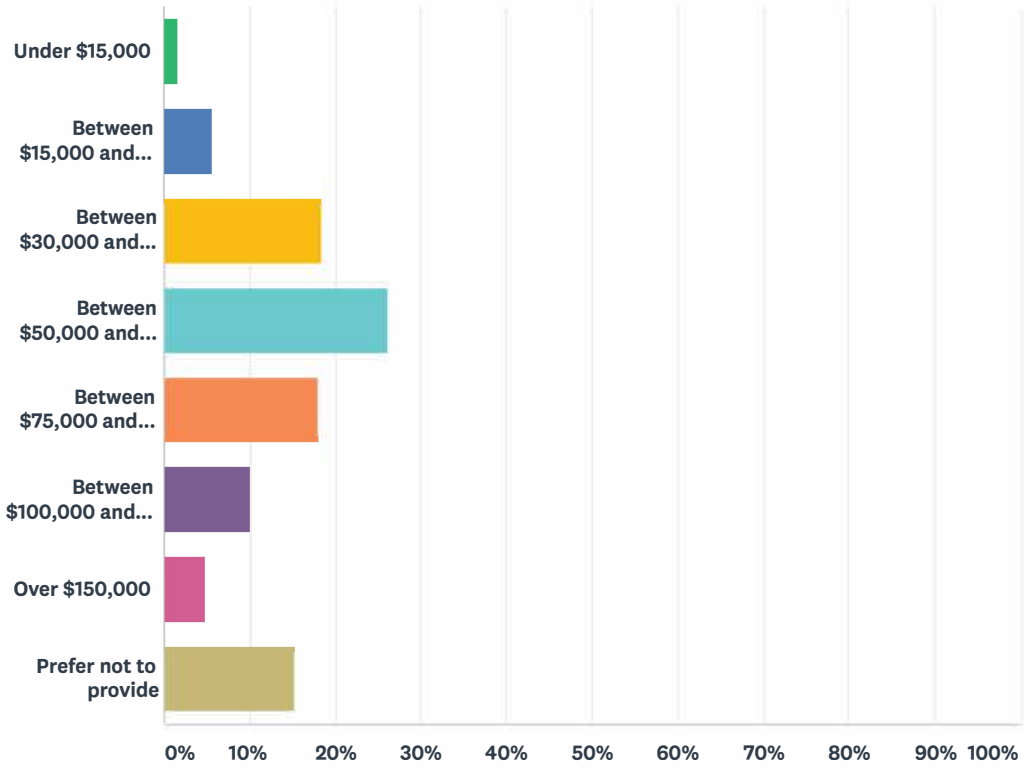
Answered: 417 Skipped: 22



ANSWER CHOICES	RESPONSES	
White or Caucasian	82.73%	345
Black or African American	10.55%	44
Hispanic or Latino	13.91%	58
Asian or Asian American	3.84%	16
American Indian or Alaska Native	1.92%	8
Native Hawaiian or other Pacific Islander	2.16%	9
Another race	1.92%	8
Total Respondents: 417		

Q23 What is your household income?

Answered: 428 Skipped: 11



ANSWER CHOICES	RESPONSES	
Under $15,000	1.64%	7
Between $15,000 and $29,999	5.61%	24
Between $30,000 and $49,999	18.46%	79
Between $50,000 and $74,999	26.17%	112
Between $75,000 and $99,999	17.99%	77
Between $100,000 and $150,000	10.05%	43
Over $150,000	4.91%	21
Prefer not to provide	15.19%	65
TOTAL		**428**