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The Tahlequah Transportation Safety Action Plan (TSAP) was developed using three guiding principles to help Tahlequah achieve its goal of zero traffic-related fatalities in the City: Vision Zero, the Safe System Approach, and the Six Es of Safety.



CHAPTER 1: CREATING A VISION

VISION AND PURPOSE

INTRODUCTION

The Tahlequah Transportation Safety Action Plan (TSAP) was developed over a 6-month period to help Tahlequah achieve its goal of a 50% reduction in fatalities and serious injuries by 2035. The TSAP will assist City Staff and local partners in making informed decisions when identifying projects that will improve traffic safety in the City. **Chapter 1** includes detailing the Safety Guiding Principles and **Chapter 2** outlines the Community Engagement involved in the development of the plan.

SAFETY GUIDING PRINCIPLES

The Tahlequah Transportation Safety Action Plan (TSAP) was developed using three guiding principles to help Tahlequah achieve its goal of zero traffic-related fatalities in the City: Vision Zero, the Safe System Approach, and the Six Es of Safety. This chapter highlights the importance of each guiding principle and how they can be utilized to enhance traffic safety in the City.

VISION ZERO

Vision Zero is a traffic safety initiative pioneered in Europe that utilizes a holistic approach in efforts to eliminate all traffic safety fatalities and severe injuries. Vision Zero enacts change through prioritizing the principles of safe road design, enforcement, education, and community engagement. Through the emphasis of a comprehensive approach to crash-related injury, cities can experience improvements in quality of life, safety, and community mobility. Although the Vision Zero goal is ambitious, every step closer to the goal, every reduction in traffic-related injuries or fatalities has a tremendous positive impact on a community.

The Vision Zero initiative is different from other approaches because it recognizes that human error is inevitable; road systems should be designed to mitigate the consequences of mistakes. By acknowledging this aspect of traffic safety, Vision Zero works to create a shift in the community. This shift from the idea that traffic injuries and fatalities are simply a byproduct of modern transportation networks to the idea that creating a safe and accessible transportation system for all is possible opens the opportunity to influence impactful change in a community.

SAFE SYSTEM APPROACH

The Safe System Approach was pioneered in the 1990s by Swedish road safety expert **Claes Tingvall**. The Safe System Approach is the framework and mechanism by which this Vision Zero Action Plan can be implemented. The six key principles that can be utilized to implement the elements of the Safe System Approach are as follows:



Death or serious injury is unacceptable

Focusing attention on preventing fatal and severe crashes over minor crashes so residents are better protected on the public roads.



Humans make mistakes

Human error is inevitable, inevitably leading to crashes, but a roadway system that accounts for and accommodates this fact can mitigate the effects (avoiding serious injury or death).



Humans are vulnerable

Human tolerance to crashes is a recognized and measurable benchmark (kinetic energy transfer can be measured) and should be incorporated into design considerations.



Responsibility is shared

No single party is responsible for crash prevention alone, but collectively all parties are responsible. This includes transportation designers and engineers, users, law enforcement, vehicle manufacturers, and publicly appointed decision-makers.



Safety is proactive

Rather than responding to tragedy, measures should be taken beforehand to identify and mitigate potential risks.



Redundancy is crucial

Affecting change requires strengthening all Safe Systems elements. If one element fails, redundancy prevents system-wide failure, ensuring people are protected.

The Safe System Approach is a principle-based approach intended to eliminate serious and fatal injuries by acknowledging that humans make mistakes. Traffic safety planning can accommodate human error through roadway design features, such as reducing speeds and physically separating automobiles from other road users, as well as vehicle advancements, such as lane departure assist and autonomous emergency braking.

There are five complementary objectives outlined by the U.S. Department of Transportation (USDOT) that correspond to and support the implementation of the Safe System Approach detailed below:

-  **Safe Roads**
Safe Roads are not defined by their design alone. Instead, the road design, construction, maintenance, operation, and countermeasures work collaboratively to improve safety.
-  **Safe Speeds**
Safe Speeds are directly correlated with an increased rate of survival in crashes. Reducing speeds reduces impact, improves visibility, and affords drivers additional breaking time.
-  **Safe Vehicles**
Safe Vehicles are responsible for preventing crashes or mitigating their consequences. Active safety measures can help prevent crashes, while passive measures can lessen the implications of a crash.
-  **Safe Road Users**
Safe Road Users bear the burden of responsibility for complying with the rules and regulations of the roadway.
-  **Post-Crash Care**
Post-Crash Care accounts for the actions of those responding to a crash, whether emergency services, law enforcement, or cleanup.

SIX Es OF SAFETY

Similar to the Safe System Approach, the Six Es of Safety are components of an integrated and comprehensive framework. While every community’s composition and understanding of safety varies, the Six Es can be deployed at all levels to enhance the user experience and improve safety.

ENGINEERING	Engineering projects and interventions in support of Vision Zero may be implemented through the built environment to improve safety. The primary goal is to calm traffic and improve safety for all road users. Examples of proven engineering project enhancements include the implementation of safety countermeasures or traffic calming measures that reduce speeding.
EDUCATION	Education can improve safety by raising awareness of transportation choices, furthering or establishing the benefits of multimodal transportation, and demonstrating the proper use of the system.
EVALUATION	Evaluation can support both proactive and responsive measures. Understanding the when, where, and why of crashes allows us to respond to historical trends and adjust to improve future safety. Similarly, careful evaluation can help head off potential issues before they reach greater severity.
EQUITY	Equity efforts must be made to acknowledge and rectify the imbalance and additional burden that disadvantaged populations carry. Vulnerable and disadvantaged populations are historically under-served and deserve access to the same information and infrastructure as everyone else.
ENFORCEMENT	Enforcement can ensure that system users follow traffic laws and regulations while also preventing profiling. Enforcement can also target and prioritize problem behaviors like speeding and other dangerous behaviors over minor infractions.
ENCOURAGING	Encouraging the community to further their knowledge and understanding of safety principles can be fun and interactive. Events and activities can support and promote better behavior.

EXISTING CONDITIONS

An inventory of Tahlequah’s existing conditions was taken to examine the current state of their roadway network and highlight potentially vulnerable communities in the City. A clear understanding of the existing conditions plays a vital role in the plan’s development, ensuring that project recommendations are tailored to the community and that project locations are determined based on a holistic view. This process equips the project team to make the most effective recommendations to improve safety and create the greatest positive impact on the community. To gather a better understanding of the City of Tahlequah’s transportation network, five (5) different data analysis maps were created:

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Road Network
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Local/ODOT Projects
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Traffic Volumes
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Demographics

A thorough understanding of the existing conditions in Tahlequah enabled the project team to make informed decisions and recommendations that aligned with the community’s values and goals, bringing the City of Tahlequah closer to its goal of eliminating traffic fatalities and serious injuries.

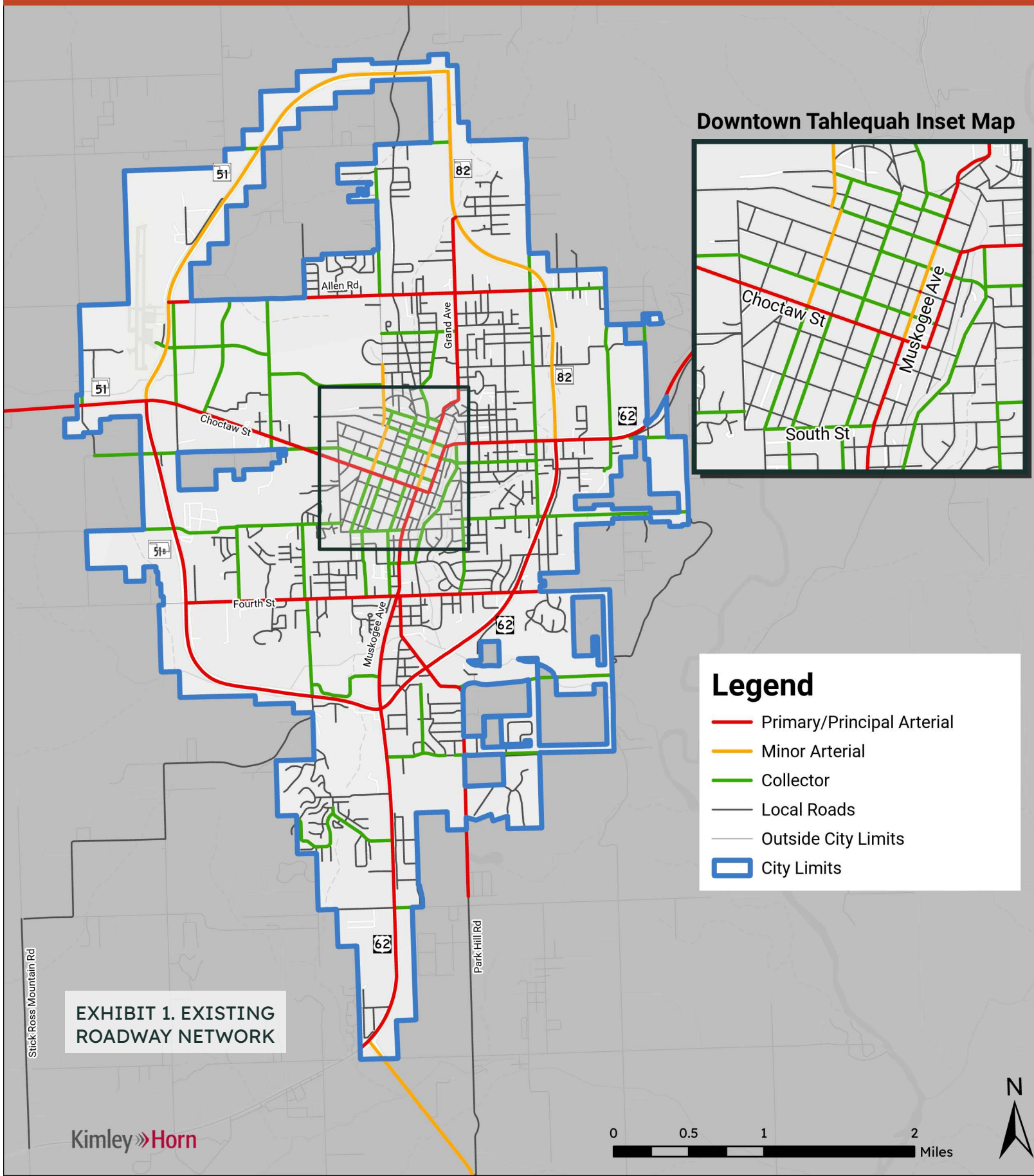
ROADWAY NETWORK

Tahlequah’s existing Roadway Network, seen in **Exhibit 1**, is designed with a grid pattern of local and collector roads concentrated in the downtown region. Downtown Tahlequah is designed with primary and minor arterials that cross through the region, allowing traffic to flow through and out of downtown. These primary and minor arterials connect Tahlequah to adjoining cities and create a loop around the City for an efficient traffic flow.



Existing Roadway Network

Source: My Tahlequah 2040 Comprehensive Plan (2021)



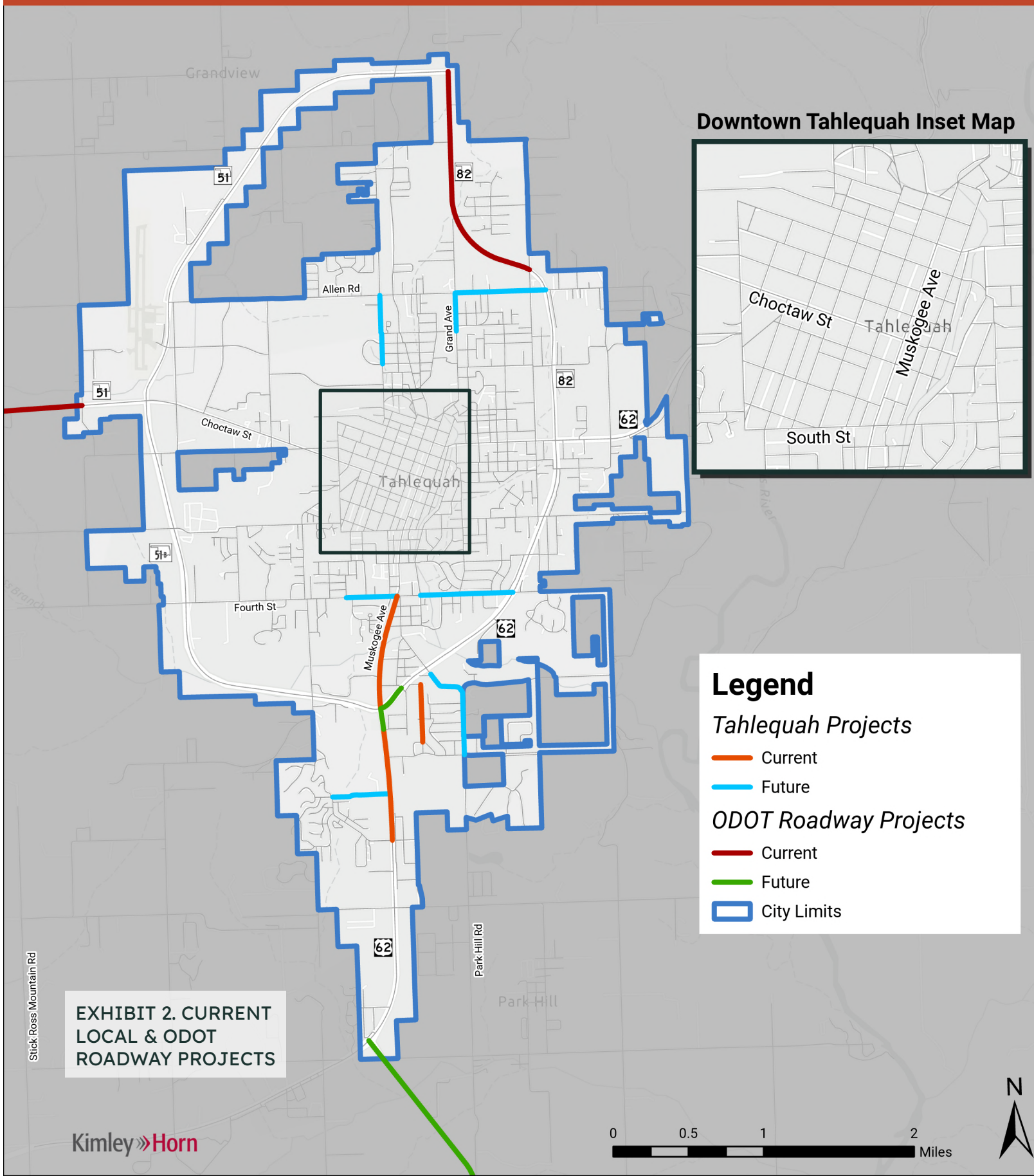
LOCAL/ODOT PROJECTS

The City of Tahlequah currently has three (3) current roadway projects, all located in south Tahlequah along Muskogee Ave and White Ave. The City also has six (6) future roadway projects in north and south Tahlequah. Oklahoma Department of Transportation (ODOT) has one current roadway project in north Tahlequah along Highway 82 and one project along Highway 51 as it enters Tahlequah from the West. ODOT has two (2) future projects planned for Tahlequah, one along Muskogee Ave connecting two current Tahlequah projects, and one project planned for Highway 82 as it enters Tahlequah from the South. The locations of these local and ODOT projects are seen in **Exhibit 2**.



Current Local & ODOT Roadway Projects

Source: ODOT (2024)



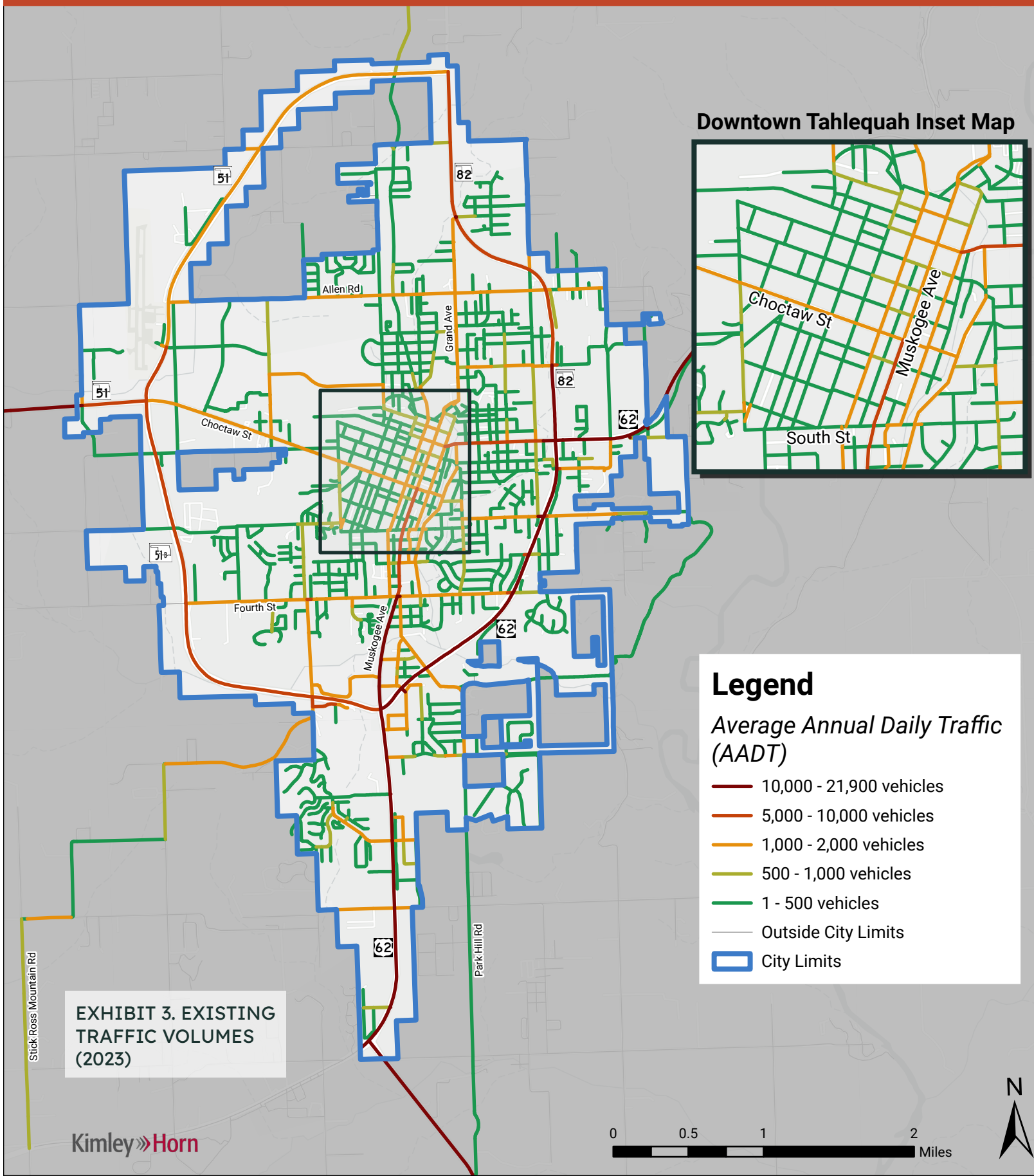
TRAFFIC VOLUMES

Tahlequah’s existing average daily traffic for many of Tahlequah’s roadways falls in the 1-500 vehicles per day range. These roadways with a lower average annual daily traffic (AADT) are primarily collector and local roadways, making up most of Tahlequah’s Road Network. The loop around Tahlequah consists of US-62, SH-82, SH-51, and SH-51B; this network of highways has the highest traffic volumes in the City, reaching up to 21,900 vehicles daily. **Exhibit 3** depicts the average annual daily traffic (AADT) of roadways in Tahlequah.



Existing Traffic Volumes (2023)

Source: Replica



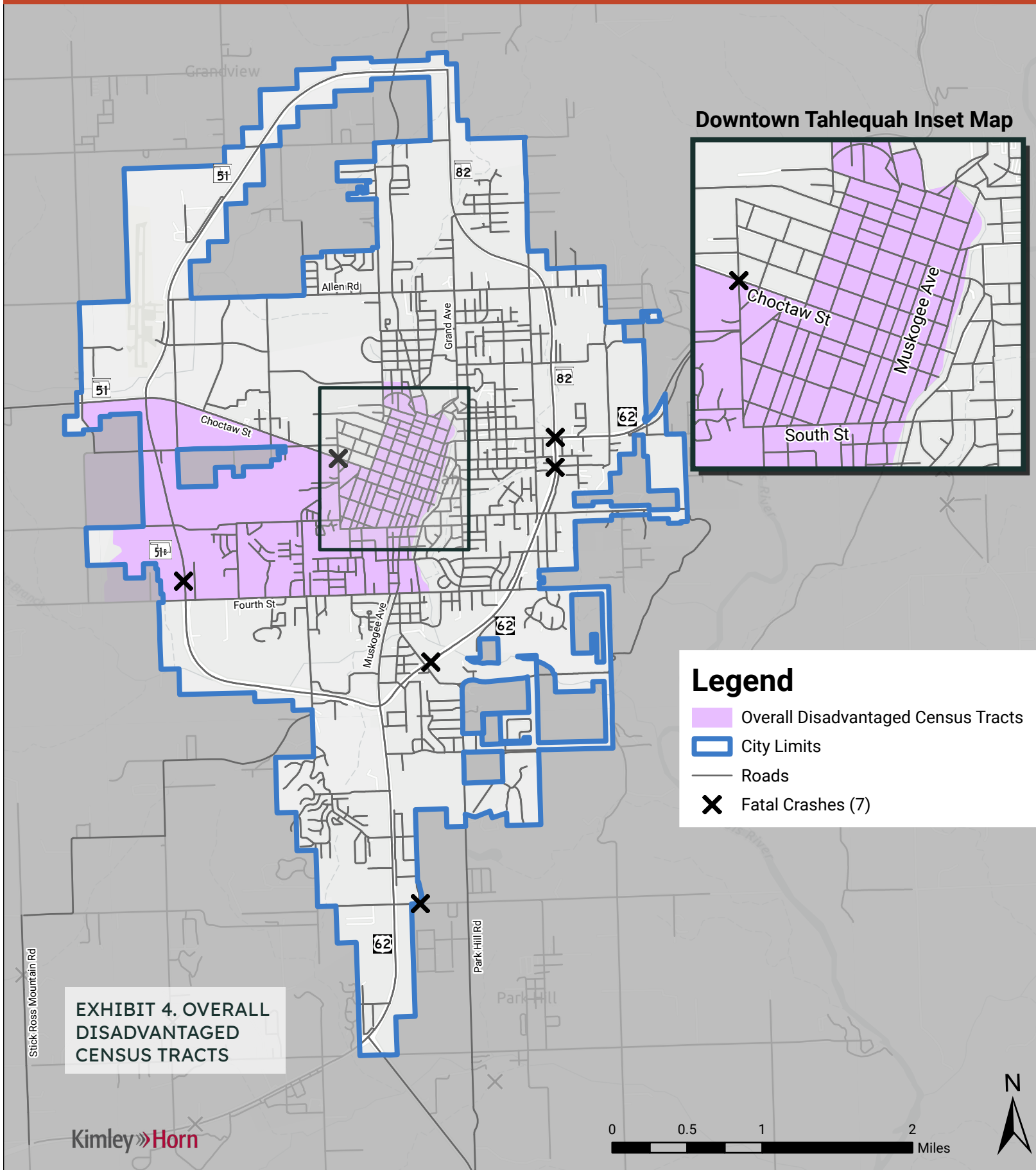
ETC EXPLORER

Exhibit 4 displays the overall disadvantaged Census Tracts in Tahlequah according to the U.S. Department of Transportation Equitable Transportation Community Explorer. The central portion of Tahlequah, which contains Downtown Tahlequah and reaches the City’s west edge, is considered disadvantaged overall. Of the seven (7) fatal crashes in the City, two (2) of these fatalities happened in disadvantaged census tracts.



Overall Disadvantaged Census Tracts

Source: USDOT Equitable Transportation Community (ETC) Explorer



TAHLEQUAH

DEMOGRAPHICS

The majority of Tahlequah comprises populations consisting of 50% minority or greater. These 50% minority and greater census tracts contain 100% of the fatal crashes occurring in Tahlequah. In comparison, three (3) of the seven (7) fatalities occur in or are bordering on census tracts containing populations of 60% minority or greater. **Exhibit 5** displays the percent minority population by census tracts in Tahlequah.



Race & Ethnicity

Source: American Community Survey (2022)

