

# EXECUTIVE SUMMARY

## PROBLEM AND PROJECT CONTEXT

The City of North Las Vegas (City) requires a study for the purposes of updating the Master Plan of Streets and Highways (MPSH). This update is intended to satisfy the master planning requirements in the Nevada Revised Statutes. This study aims to update the functional classifications for roadways within the City and will provide typical cross sections for each right-of-way width. In order to catalyze the transformation of key areas in the City in accordance with established visions, the typical cross sections will take into account the context of the land uses along each roadway corridor and will incorporate elements from the City's Complete Streets Policy.

## BACKGROUND RESEARCH

In order to design safe, equitable streets, it is important to understand the fundamentals of streetscape design. The streetscape is made up of three parts: the streetside, the traveled way, and the context (Harvey, 2014). Each part of the streetscape is important to different types of street users, and the parts of a street must work together and complement each other to create a comfortable and safe environment (Jones, Marshall, & Boujenko, 2008). There are two main types of users: link users and place users. Link users use streets to get from point A to point B, usually as quickly as possible. Place users spend time on the street, treating it like an outdoor room (Jones, Marshall, & Boujenko, 2008). Complete streets are designed to meet the needs of all users, whether they are on foot, in a car, using public transportation, or traveling by another means. They are inclusive to people of all ages and ability levels (US Department of Transportation, 2021). Complete streets are context-sensitive, meaning that their design takes into consideration what is going on on either side of the street. Land-use, site design and urban form, and building design help create surrounding context.

## METHODOLOGY

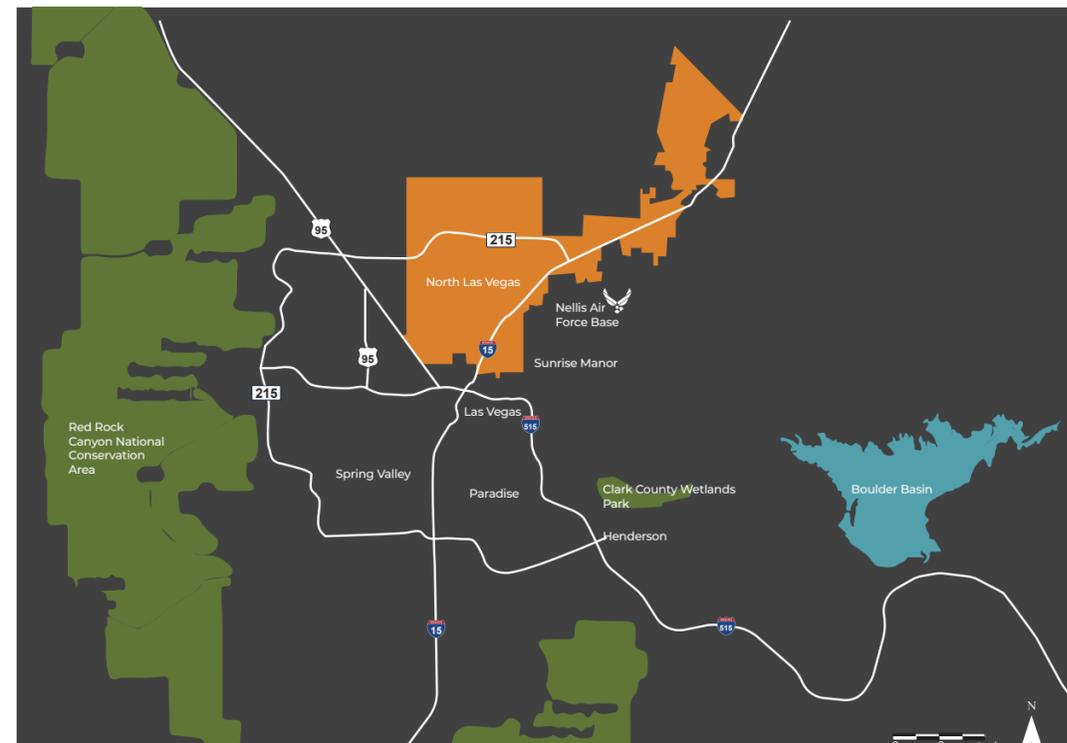
This project has five stages: background research, existing conditions, case studies, concept development, and final project development. The background research stage focused on reviewing existing plans, reviewing academic literature on streetscape design, finding case studies to develop methodology, and making connections between the City's vision and goals and urban

design factors. The existing conditions phase focused on understanding the current character of the city, and the case studies phase focused on gathering precedents for excellent complete streets. Lastly, the concept development phase focused on identifying key streets and contexts in the city, their characteristics, and designing typical street sections.

## EXISTING CONDITIONS AND CASE STUDIES

North Las Vegas is a city in the Las Vegas valley that lies north of the City of Las Vegas and west of Sunrise Manor. Figure 1 shows the City's regional context. The city is suburban in nature and primarily residential. Designed for automobiles, the city features roads as wide as 150', expansive surface parking lots, narrow sidewalks, strip style commercial development, and buildings set back far from the street. Additionally, the City has many vacant parcels of land available for infill development.

Figure 1: North Las Vegas Regional Context Map



The City can be divided into three specific planning areas: residential neighborhoods, activity centers, and employment areas. In terms of residential areas, the City has six existing neighborhoods, each with its own age, character, and demographics. Activity centers are areas with an existing or planned mix of land-use that encourage pedestrian-friendly development. These areas are the North Fifth Street Transit Corridor, the Downtown Redevelopment Area, and the Northern Development Area, according to the 2006 Comprehensive Plan. Lastly, employment districts are areas where employment is and will remain the primary activity. These areas include the Cheyenne Technology Corridor, industrial lands, and military areas (City of North Las Vegas, 2006).

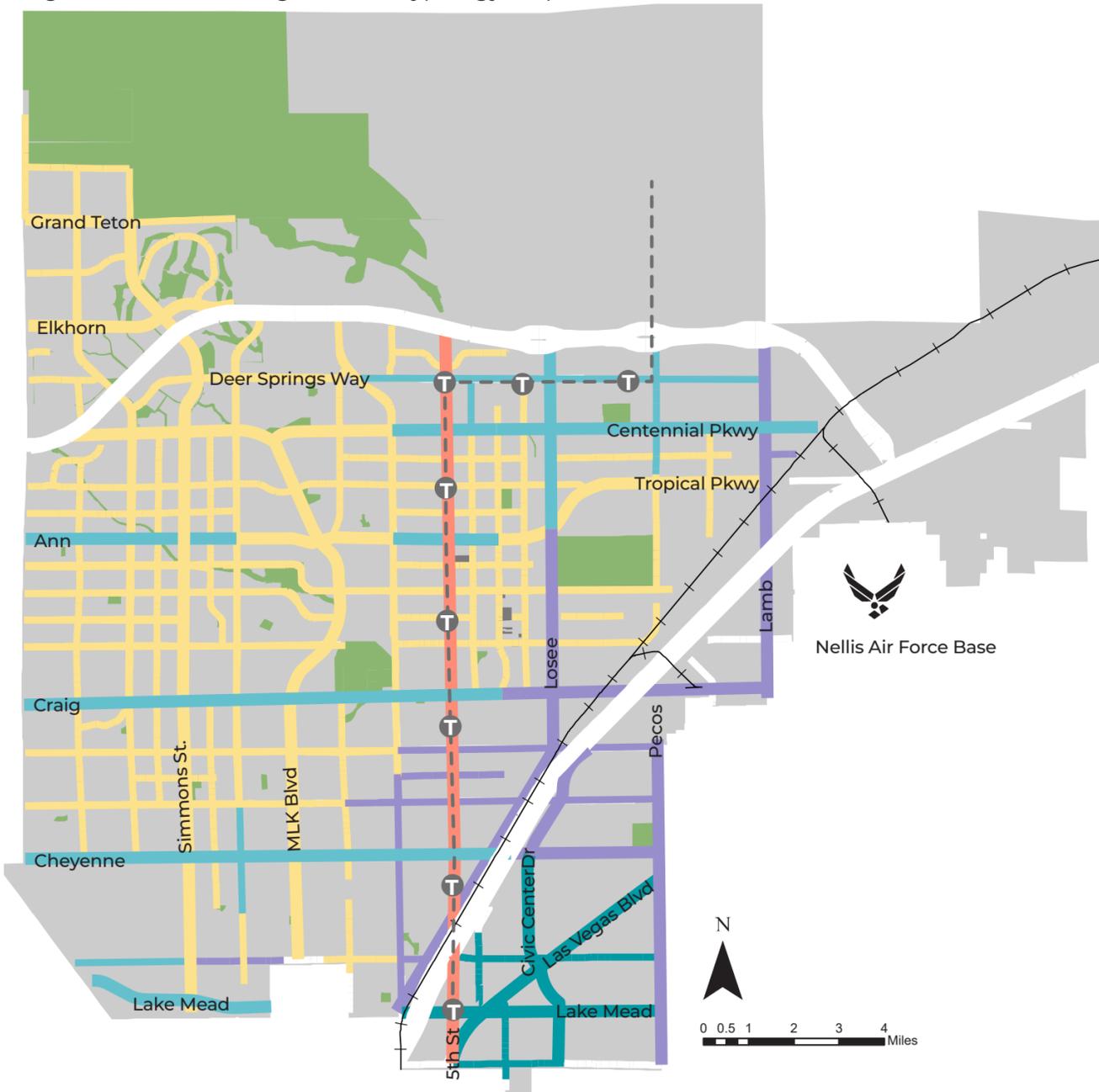
The City of North Las Vegas (City) envisions being a “community of choice” for residents by having people-centered, amenity-oriented design and vibrant, walkable public spaces. The City aims to create connected, cohesive neighborhoods, mixed-use, and employment areas, each with their

own unique identity and amenities (City of North Las Vegas, 2006). This vision is in sharp contrast with the existing conditions.

One of the most effective ways to transform the character of an area is to redefine the relationship between the streets and the adjacent context. This is often accomplished through using complete streets principles. Complete streets are designed to meet the needs of all users, whether they are on foot, in a car, using public transportation, or traveling by another means. They are inclusive to people of all ages and ability levels (US Department of Transportation, 2021). Case studies show that transforming streets that are unsafe, auto-dominant, and lacking in economic prosperity into complete streets that are built for people and a variety of transportation modes creates spaces that are vibrant, equitable, busy, and prosperous. Such transformations have the power to significantly boost development and retail sales, slow traffic, increase safety, and establish streets that have unique identities (Steuteville, 2017).

# TRANSFORMING NORTH LAS VEGAS

Figure 2: North Las Vegas Street Typology Map



To redefine the streets of North Las Vegas and encourage the design of complete streets, the researcher developed a street typology that captures both street type and primary adjacent land use. This is shown in Figure 2.

Figure 2 categorizes all of the City’s arterial and collector streets in an effort to provide a City-wide summary of the streets that exist. The researcher chose two typologies, Downtown and Residential, to further describe in terms of existing street sections and recommendations for improvement using complete street design principles and guidance from existing planning documents.

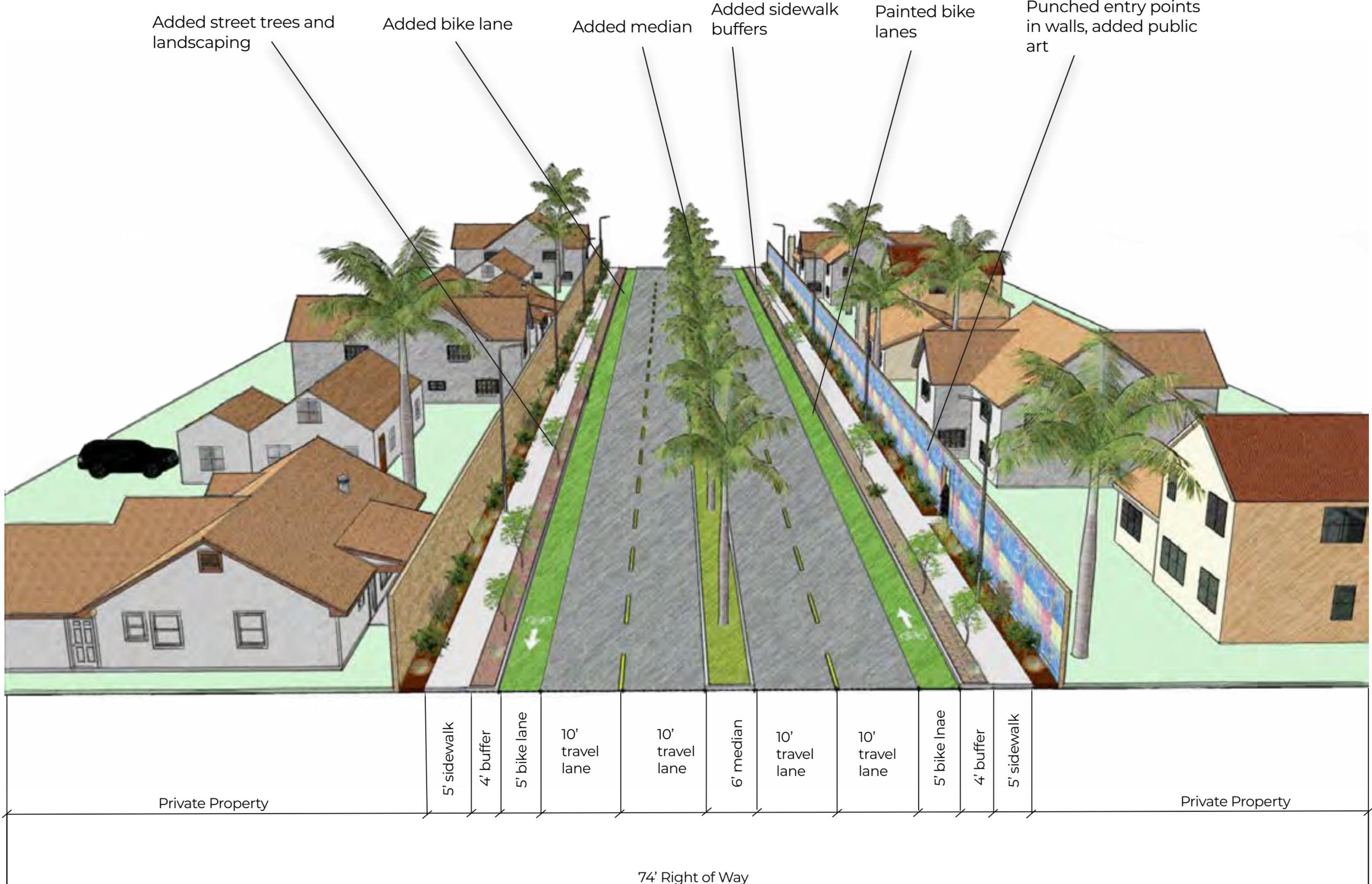
- Residential
- Mixed-Use/Commercial
- Industrial
- Downtown
- North Fifth Street Transit Corridor

# Residential

Safe Routes to School (SRTS) is an important initiative in the City, and creating safe walking and biking facilities in the residential network is paramount to encouraging students to use active transportation methods to get to school. Figure 3 shows a typical residential collector designed to be a safe walking or biking route for students of all ages and abilities. The street features planting strips

to separate pedestrians from traffic, as well as street trees to provide shade on hot days. Painted bike lanes in both directions provide safe, separate areas for students to bike, and a center median helps to slow traffic and reduce crossing distance for pedestrians. Development walls provide a canvas for public art and murals, and gated entry points increase access from neighborhoods to the street.

Figure 3: Typical Residential Avenue Street Section Redesigned



## Downtown

Downtown is another area of the City that would benefit greatly from redesigning streets using complete streets principles, as it is highly auto-dominant, has expansive surface parking lots, and lacks lively, comfortable public space. Figure 4 shows what a typical downtown section of North Las Vegas Boulevard could look like if it was redesigned as a complete street. The street features sidewalks wide enough to accommodate high volumes of pedestrian traffic, café seating, amenities

like benches, trash cans, and pedestrian lighting, and a planting strip with street trees. It has a local traffic lane and bike lane in each direction which allow access to buildings along the street and four through lanes to accommodate through traffic and public transportation. Midblock crossings provide safe areas for pedestrians to cross the local traffic lane to get to the bus stop, and ADA compliant curb ramps ensure universal access.

Figure 4: North Las Vegas Boulevard Redesigned Street Section



## CONCLUSION

The importance of streets in cities cannot be overstated. From vibrant, walkable centers, to main streets, industrial parks, transit corridors, and quiet residential roads, the streetscapes of a community help to define its identity and create comfortable shared space for all. By creating a

plan that fully coordinates street design and land-use and making streetscape improvements in targeted areas of the City, North Las Vegas can have a safer, more connected, and more comfortable public realm than ever before.