

Priority Safety Corridor Plan

Existing Conditions Summary | July 30, 2018

Introduction

The Priority Safety Corridor Plan will recommend short-term and long-term ways to make Broadway Avenue between 3rd Street and 11th Street safer and more inviting for people traveling along and across Broadway.

This memo describes the process to select a corridor for study and details the way the Priority Safety Corridor Plan builds on previous plans and studies. It describes current conditions along the corridor including assets, crash history and safety concerns, multimodal traffic conditions, key destinations and land use, health and equity, and challenges and opportunities.

Maps illustrating existing conditions and previous plans and studies in the project area are provided as attachments and include:

- Figure 1: Corridor Prioritization
- Figure 2: Previous Plans and Studies
- Figure 3: Street Design Guidelines Two-Way Decision Tree
- Figure 4: Multimodal Traffic Conditions
- Figure 5: Surface Parking
- Figure 6: Crashes
- Figure 7: Land Use
- Figure 8: Destinations and Opportunities

Corridor Selection Process

The Wichita Pedestrian Master Plan identifies Broadway, Central, and Douglas Avenues as Priority Safety Corridors due to high numbers of pedestrian crashes and opportunities for significant and concentrated improvements to pedestrian safety. These three corridors were analyzed using safety, demographic, and demand criteria to select a one-mile focus area for further analysis and conceptual planning and design.

The following roadways were divided into segments and analyzed block by block:

- N Broadway Avenue between Kellogg Street and E 13th Street
- E Central Avenue between N Seneca Street and Olive Avenue
- E Douglas Avenue between S Broadway Street and S Hillside Street

Safety, equity, and demand were given equal weighting in determining segment scores. A summary of how points were assigned is provided below. A detailed description of corridor evaluation methodology and point allocation is provided in the *Methodology for Priority Corridor Evaluation Memorandum*.

- Points for safety were determined based on the number of pedestrian or bicycle-involved crashes along a segment. Fatal crashes had twice the weight of non-fatal crashes.
- Points for equity were determined based on rates of vehicle ownership, areas of concentrated poverty, areas with high concentration of people of color, population with a disability, population over age 65, and proximity to facilities for young children.
- Points for demand were based on daily bus ridership volume per stop, proximity to regional destinations, population density, and number of jobs.

Segments along Broadway Avenue generally scored higher than segments along Central and Douglas Avenues.

The one-mile focus area shown in Figure 1 was selected by the Wichita Pedestrian and Bicycle Advisory Board. Upon reviewing corridor analysis results and considering existing and planned projects, implementation opportunities, and community support, the Pedestrian and Bicycle Advisory Board selected Broadway Avenue from 11th Street to 3rd Street as the focus area for this project.

Previous Plans and Studies

Plans and studies impacting the project area include:

- Wichita Pedestrian Master Plan (2014)
- Wichita Bicycle Master Plan (2013)
- Midtown Neighborhood Transportation and Streetscape Plan (2011)
- Project Downtown: The Master Plan for Wichita (2010)
- Street Design Guidelines (2014)

Figure 2 shows the geographic overlap between previous plans and studies and the Priority Safety Corridor Plan.

Wichita Pedestrian Master Plan

The Wichita Pedestrian Master Plan (Pedestrian Plan) guides improvements to conditions for walking over a ten-year period. The Pedestrian Plan vision states “By 2024, the City of Wichita will be a pedestrian friendly community and a place where walking is an easy choice in all people’s daily lives. Wichita residents and visitors will have access to high quality and safe walking environments that connect all neighborhoods, destinations, and other modes of transportation, while contributing to a stronger, healthier, and more vibrant Wichita.”

The main goals of the pedestrian plan are to provide a safe and welcoming pedestrian network, to improve community accessibility and connections for pedestrians, and to promote a citywide culture of walking.

Applicability to Wichita Safety Corridors Plan

As noted above, the Pedestrian Plan found that the highest number of pedestrian-involved crashes occurred on Broadway, Central, and Douglas Avenues. This finding formed the basis of the corridor selection process for the Wichita Safety Corridors Plan.

Chapter Seven of the Pedestrian Plan highlights design treatments for pedestrians. This plan will take these treatments into consideration in the design process for Broadway.

Wichita Bicycle Master Plan

The Wichita Bicycle Master Plan (Bicycle Plan) envisions “an interconnected network of on-and off-street bicycle facilities that accommodates bicycle riders of all skill levels; and links all areas of the City of Wichita-including employment centers, schools, parks, and other activity centers.”

The goals of the plan are:

1. Increase the amount of bicycling in Wichita.
2. Improve the safety of bicyclists in Wichita.
3. Foster and promote a culture where bicycling is a viable and acceptable form of transportation.

Applicability to Wichita Safety Corridors Plan

The Wichita Safety Corridors Plan can support the goals of the Bicycle Plan by improving safety for people bicycling along and crossing the study corridor.

Broadway is identified as a corridor where further study is needed to determine an appropriate bicycle facility. Murdock Avenue, Central Avenue, and 3rd Street are also identified as needing further study. The Priority Safety Corridor Plan will take proposed shared-lane markings on 11th Street and Murdock Avenue into account to support safe, comfortable crossings of Broadway Avenue for bicyclists.

The Bicycle Plan recommends bicycle lanes on Market Street and Topeka Avenue which parallel Broadway Avenue one block east and west. These recommendations have been implemented since the Bike Plan's completion.

Midtown Neighborhood Transportation and Streetscape Plan

The central dilemma the Midtown Neighborhood Transportation and Streetscape Plan (Midtown Plan) proposes is "In an era of limited resources and in a neighborhood with limited economic strength, increased crime, a history of urban decline, and limited civic organization, how can the design team create transportation, streetscape and related revitalization strategies to help Midtown transform in a meaningful way over the next few decades?"

The thesis the plan advances in response to this dilemma is "By creating recommendations for commercial corridors and residential streets that maximize safety, reduce crime, enhance commercial viability, improve aesthetics, better unite the neighborhood and draw from its historic strengths, and leverage the latest thinking in green stormwater and sustainable design, the design team will create recommendations grounded in political and fiscal realities that will maximize value for Midtown and accelerate its revitalization..."

Applicability to Wichita Safety Corridors Plan

The Midtown Plan makes recommendations specific to Broadway:

- Convert Broadway to a three-lane street with two travel lanes and one center turn lane
- Add parallel parking on one or both sides of the street as roadway widths allow
- Install mid-block crossings to create more walkable blocks and connect mid-block crossings to alleys
- Widen sidewalks to support retail businesses and outdoor dining
- Install large street trees
- Enhance crossings with curb ramps
- Slow traffic speeds to support retail success

The Midtown Plan describes four stages for improving Broadway:

1. City re-stripes the street with a center turn lane and two through lanes. City stripes a parking lane on one side from Murdock to 21st Street N. City installs public art and street furniture.
2. City adds streetscape components including rain gardens, enhanced and widened sidewalks, curb extensions, and porous pavement in parking bays. City continues to install public art and street furniture.
3. City enhances lighting and signage. City continues to install public art and street furniture.
4. City's investments spark redevelopment of properties along the street, likely beginning with the intersection of Broadway and Murdock.

Project Downtown: The Master Plan for Wichita

Project Downtown provides a 20-year vision for Downtown Wichita: "Downtown is a place that enables people to live, work, shop, play, and learn...all within a short walk of each other. Downtown celebrates Wichita's rich history and vibrant future, and it invites people from every walk of life to share their sense of community. 150 years after Wichita took root here, Downtown is the reinvigorated heart of a region committed to a vital future."

Applicability to Wichita Safety Corridors Plan

Project Downtown notes that for decades, downtown streets have been designed to serve cars better than people walking. The plan advocates for Complete Streets to allow property owners with opportunities to capture the

enhanced value of walkable development. Complete Streets include convenient transportation choices, greenery, aesthetic improvements and stormwater management.

Project Downtown identifies Broadway as an “automobile balanced street.” Broadway at Central Avenue is identified as a key downtown gateway. The southern part of the study corridor (Broadway from Pine to 3rd Street) is in the Renaissance Square area. Key themes for this area include:

- Encourage walkable retail and riverfront connections complementing Via Christi hospital, Governmental Center, and other institutions
- Infill housing opportunity
- Create a park amenity

Street Design Guidelines

The Street Design Guidelines provide guidance on the design of intersections, bus stops, and streets to support a multimodal transportation system.

Applicability to Wichita Safety Corridors Plan

The Street Design Guidelines include decision trees intended to help designers determine the proper accommodations for multi-modal transportation on a particular street. The Priority Safety Corridors Plan can use the two-way street decision tree (Figure 3).

Context considerations in the decision tree include development intensity, primary land use, street classification, and drainage. Street function considerations include off-street bike/ped facilities, transit level of amenity, on-street parking type, on-street bike facilities, travel lanes, and center lane/median. Further guidance is provided for the design and width of each street functional zone: the sidewalk zone (including the pedestrian, amenity, frontage, and curb zone) and the travel zone (including the parking zone, travel lanes, bicycle lanes, and turn lanes).

The Priority Safety Corridor plan can draw on intersection guidance to improve high-crash intersections along the corridor and draw on transit guidelines to improve the experience of transit riders in the project area.

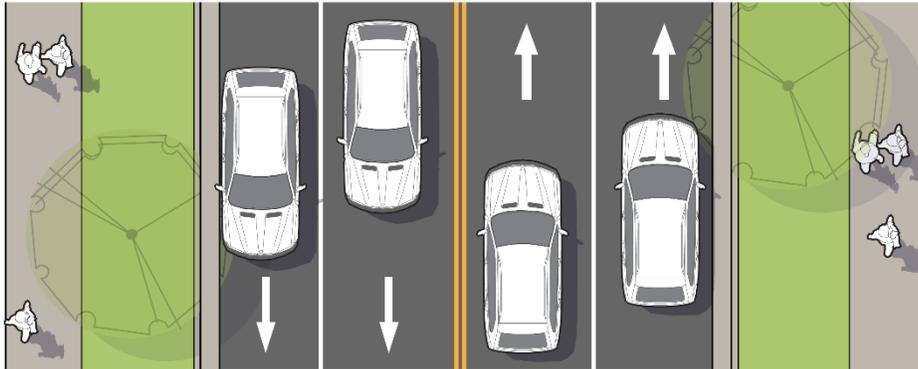
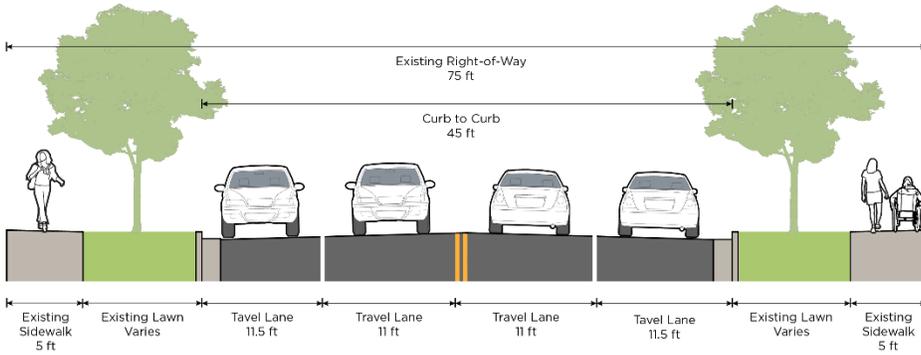
Corridor Conditions

Multimodal Traffic Conditions

Broadway Avenue is a four-lane undivided roadway with two northbound and two southbound travel lanes. The corridor does not have dedicated turn lanes. On-street parking is permitted in the project area south of Central, but not provided or permitted in the project area north of Central Avenue. Sidewalks are present on both sides of the street and are separated from the roadway by planted boulevards. There are no dedicated bicycle facilities on Broadway Avenue. Broadway Avenue is served by multiple Wichita Transit bus routes.

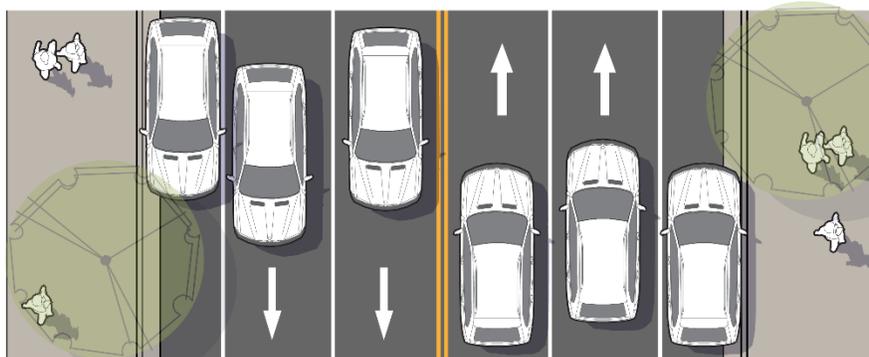
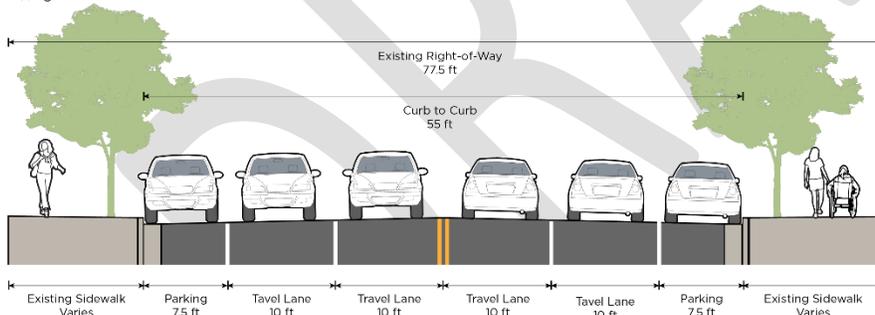
The images below show existing cross sections and traffic conditions on the corridor north of Central and south of Central. Multimodal traffic conditions and volumes are shown in Figure 4.

N Broadway Ave
Central Ave to 11th St
Existing



Existing Conditions on Broadway from Central Avenue to 11th Street

N Broadway Ave
3rd St to Central Ave
Existing



Existing Conditions on Broadway from 3rd Street to Central Avenue



Broadway north of 9th Street N looking north. Broadway is a four-lane road with sidewalks on each side.

Vehicle traffic

The design of Broadway Avenue, including the street and adjacent land uses, has changed little since the corridor served U.S. Highway 81 decades ago. When Interstate 135 was constructed in the 1960s and 1970s, traffic shifted to the interstate and vehicle volumes on Broadway Avenue declined, leaving excess capacity on the wide street.

Broadway is now classified as a Minor Arterial, with two northbound lanes and two southbound lanes. The roadway is 45 feet wide north of Central Avenue and 55 feet wide south of Central. The total right of way north of Central Avenue is 75 feet. South of Central Avenue, the total right of way is 77.5 feet.

Existing daily traffic volumes in the project area ranges from just over 11,500 vehicles per day to slightly below 14,000 vehicles per day. According to the Midtown Streetscapes plan, Broadway's highest daily capacity is 26,000. The busiest streets intersecting Broadway are Central (12,500 to 14,000 vehicles per day) and Murdock (11,000 to 14,000 vehicles per day).

The posted speed limit on Broadway is 30 mph. The highest 85th percentile speed on the corridor is 34 mph, meaning that 85% of vehicles are traveling at or below 34 mph. During engagement for this plan, participants expressed concern about improper, unpredictable driver behavior and traffic speeds.

There is no on-street parking on Broadway in the study area from Central to 11th. Off-street parking lots along Broadway have significant excess capacity: as of 2011 they were only utilized at 23%, according to the Midtown

Streetscapes plan. A utilization rate of 90% would indicate that a property is providing sufficient but not excessive parking space.

There are approximately 2,082 surface parking spaces available along the corridor, as shown in Figure 5. At the typical parking space size of 150 square feet, this means that around 316,500 square feet of space along the corridor is devoted to parking. This estimate does not include driveways and driving lanes within parking lots. For context, the Commodore apartment building on Broadway and Elm occupies 6,200 square feet—the equivalent of 39 Commodore apartment buildings could fit within the 77% of surface parking spaces that are unutilized. The high number of surface parking lots and auto-oriented businesses also result in high numbers of driveways along the corridor, resulting in potential turning conflicts and access management challenges.



Off-street parking lots along Broadway have excess capacity.

People on foot

There are sidewalks on both sides of Broadway. The Midtown Streetscapes plan examined the condition of sidewalks along Broadway north of Murdock Street in 2011. The sidewalks were rated “fair” or “good.” During a site visit for this plan, participants voiced support for wider and better maintained sidewalks, as well as improvements to curb ramps and signals to improve accessibility.

The average block length on Broadway is over 600 feet, longer than recommended to support convenient pedestrian crossings. During a site visit for this plan, several people were observed crossed Broadway outside of

crosswalks. Engagement participants noted long wait times for pedestrians crossing at intersections, especially at the 11th Street pedestrian signal, as well as insufficient pedestrian crossing time at signalized intersections.



Engagement participants observed long wait times for people waiting at the pedestrian actuated signal at 11th and Broadway.

People on bicycles

There are no dedicated facilities for people using bicycles on Broadway. The one-way streets on either side of Broadway (Marker Street and Topeka Avenue) each have bike lanes and buffered bike lanes respectively. The nearest east-west bicycle facility is south of the study corridor, a buffered bike lane on 2nd Street (one-way westbound) and a buffered bike lane on 1st Street (one-way eastbound).

During a site visit for this plan, multiple people were observed riding bicycles on the sidewalk, suggesting a demand for dedicated bicycle facilities in the corridor.



Several people were observed riding their bikes on the sidewalk.

Transit

The 13 and 27 bus routes run along Broadway Avenue. Routes 17 and 25 travel along Broadway south of Central Avenue, and turn at Central Avenue. These routes are relatively new and likely to expand. Transit stops are generally near-side (bus stops before going through intersection).

Daily ridership at stops along the corridor ranges from an average of 1.5 to 21.2 people per day. The City considers adding a bench when at least five people use a stop each day and considers adding a shelter when at least ten people use a stop each day. There are seven stops with five or more riders along the corridor, five of which have ten or more riders.

There are currently transit and parking conflicts south of Central.

Crash History & Safety Concerns

Between January 2013 and May 2018, 424 crashes were reported to the police along Broadway Avenue and on intersecting streets within one block of Broadway (Figure 6). Crashes along the corridor are concentrated at intersections, specifically where Broadway intersects Murdock Avenue, Pine Street, and Central Avenue. None of the crashes were fatal.

18 crashes involved a vehicle colliding with a person walking, and 10 crashes involved a vehicle colliding with a person biking.

Existing crash data limits analysis of causes that contributing to crashes. Making such data available could help planners and engineers better understand the cause of crashes and provide insight into the best mitigation strategies and design solutions to reduce collisions.

Key Destinations & Land Use

Broadway is a commercial corridor. In terms of development intensity, the study corridor lies partially in the “urban core” area and partially in the “general urban” area.

Land use along Broadway is primarily office, retail/commercial, multi-family residential, and public institutions/social services. In the area within a quarter-mile of the corridor, much of the land is dedicated to public institutions/social services, especially on the south end of the study corridor. Single family residential land uses are mostly to the north and west of the corridor. Figure 7 shows current land uses.

Broadway is home to multiple destinations, including several places of worship, social service agencies, mini-marts, fast-food and local restaurants, and motels. Major destinations within a quarter-mile (5-minute walk) of the corridor include a YMCA, the Via Christi Regional Medical Center, Wichita City Hall, Sedgwick County Courthouse and County Jail, Kansas African American Museum, Park Elementary School, Horace Mann Dual Language Magnet School and Alternative Junior High School, and the Gateway Alternative Program Center for middle and high school students. Figure 8 shows destinations identified during the engagement process for this plan.



Broadway is home to many fast-food chains and several local restaurants.

Health & Equity

According to data from the American Community Survey (2012-2016), on several demographic measures, census block groups along the corridor differ significantly from the city as a whole:¹

- 61.2% identify as people of color, vs. 37% in the city as a whole
- 77.5% have incomes under 200% of the poverty level, vs. 44% in the city as a whole
- 31.7% identify as having a disability, vs. 17% in the city as a whole
- 40.6% do not have access to a vehicle, vs. 7% in the city as a whole

Health data is available only at the census tract level for the city of Wichita, not at the more finely-grained block group level. Data comes from the Centers for Disease Control and Prevention's 500 Cities Project.

The southern part of the corridor (south of Murdock) is in a census tract that includes the downtown area of Wichita, potentially obscuring health disparities along the corridors. Prevalence of asthma, high blood pressure, cancer, high cholesterol, coronary heart disease, diabetes, and poor physical health is lower than the city-wide average in this census tract. Prevalence of poor mental health is slightly higher than the city-wide average.

The census tract covering the northern part of the corridor (north of Murdock) has higher rates of asthma, high blood pressure, high cholesterol, coronary heart disease, diabetes, and poor mental and physical health than the city-wide average. Prevalence of cancer is slightly lower than the city-wide average.

Other Challenges and Opportunities

Broadway is home to an engaged multicultural community, provides access to social services, has good street connectivity, and is located in close proximity to trip generators. The Priority Safety Corridor Plan will leverage these existing assets to improve the experience of people who live, visit, and travel in and along the project area and create a corridor that is safe, welcoming, and comfortable for all. The Plan is informed by the challenges and opportunities identified by residents and visitors to the corridor, including challenges related to aesthetics, noise, crime, amenities, and public and private investment.

Aesthetics

In the public engagement process for the Midtown Streetscapes plan, the vast majority of participants ranked the visual quality of Broadway as "poor" or "very poor." Contributing factors to poor visual quality include poor pavement quality, overhead utility lines, unattractive signage, and deterioration of buildings. Many driveways, expansive parking lots, litter, poorly maintained vegetation, and a lack of greenspace also make the corridor unappealing for people walking, biking and using transit. An aesthetic strength of the corridor is its location in a historic neighborhood.

Noise

The Midtown Streetscapes plan found that noise levels just north of the corridor (at Broadway & 13th) exceed levels deemed acceptable for normal conversation, discouraging bicycle and pedestrian activity.

Crime

Analysis for the Midtown Streetscapes plan indicated that criminal activity tends to occur more often along the Broadway corridor as opposed to other areas within the Midtown neighborhood. During engagement for the Wichita Safety Corridors plan, participants expressed concern with drug dealing, prostitution, and violence along

¹ Statistics for the city as a whole refer to Census block groups which are wholly or partially within the City of Wichita.

Broadway. Our survey found that personal safety was the top barrier to walking, biking, and taking transit in the project area. Law enforcement agencies have a visible presence on the corridor.

Amenities

Participants in engagement for the Priority Safety Corridor Plan noted that lighting along the corridor is minimal, and that the corridor lacks shade and amenities like benches, transit shelters, bicycle parking, and trash cans. In a survey of participants, the most popularly requested amenities were shade structures, improved bus stop amenities, and a landscaping/buffer between sidewalk and cars. Several participants would like to see fewer and/or narrower traffic lanes, dedicated space for bicycling, and high-visibility crosswalks.

Law enforcement officers noted concerns about criminal activity including drug dealing and prostitution associated with transit shelters have been a factor in decisions not to provide transit shelters.

Public and Private Investment

The Planning and Design Committee for the Priority Safety Corridor Plan noted a lack of public and private investment along the street. The corridor has not been included in the Capital Improvement Plan in recent years.

The non-profit sector and religious institutions have invested in the corridor. Many social services are available along the corridor, including shelters, a soup kitchen, and recreational facilities.

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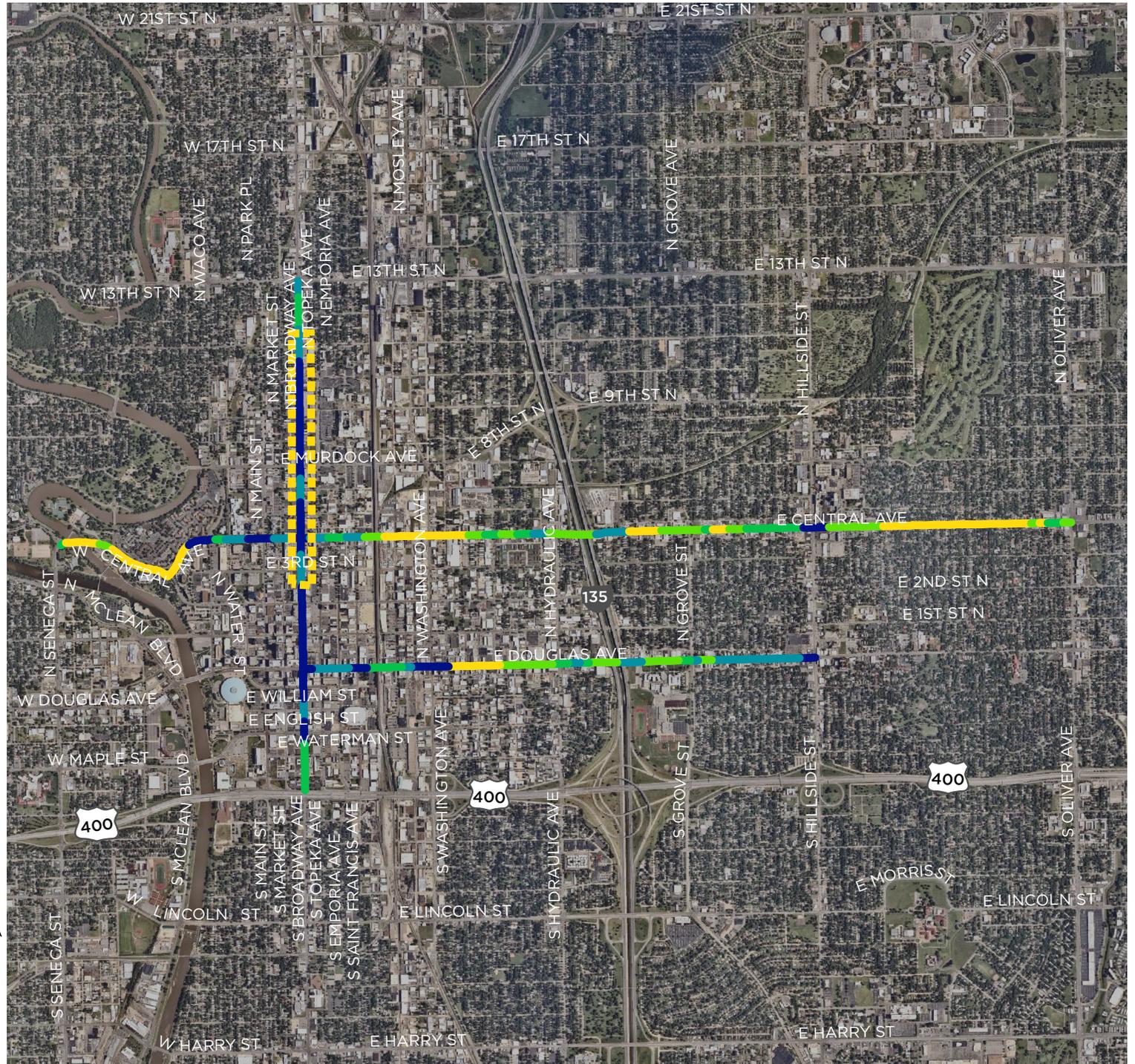
FIGURE 1. CORRIDOR PRIORITIZATION

PRIORITY SAFETY
CORRIDOR PLAN

Corridor Segment Score
(higher number = higher priority)

- █ 14 - 17
- █ 18 - 19
- █ 20 - 21
- █ 22 - 25
- █ 26 - 33

Study Area



Map produced July 2018.

FIGURE 3. Street Design Guidelines Two-Way Street Decision Tree

Priority Safety Corridor Plan

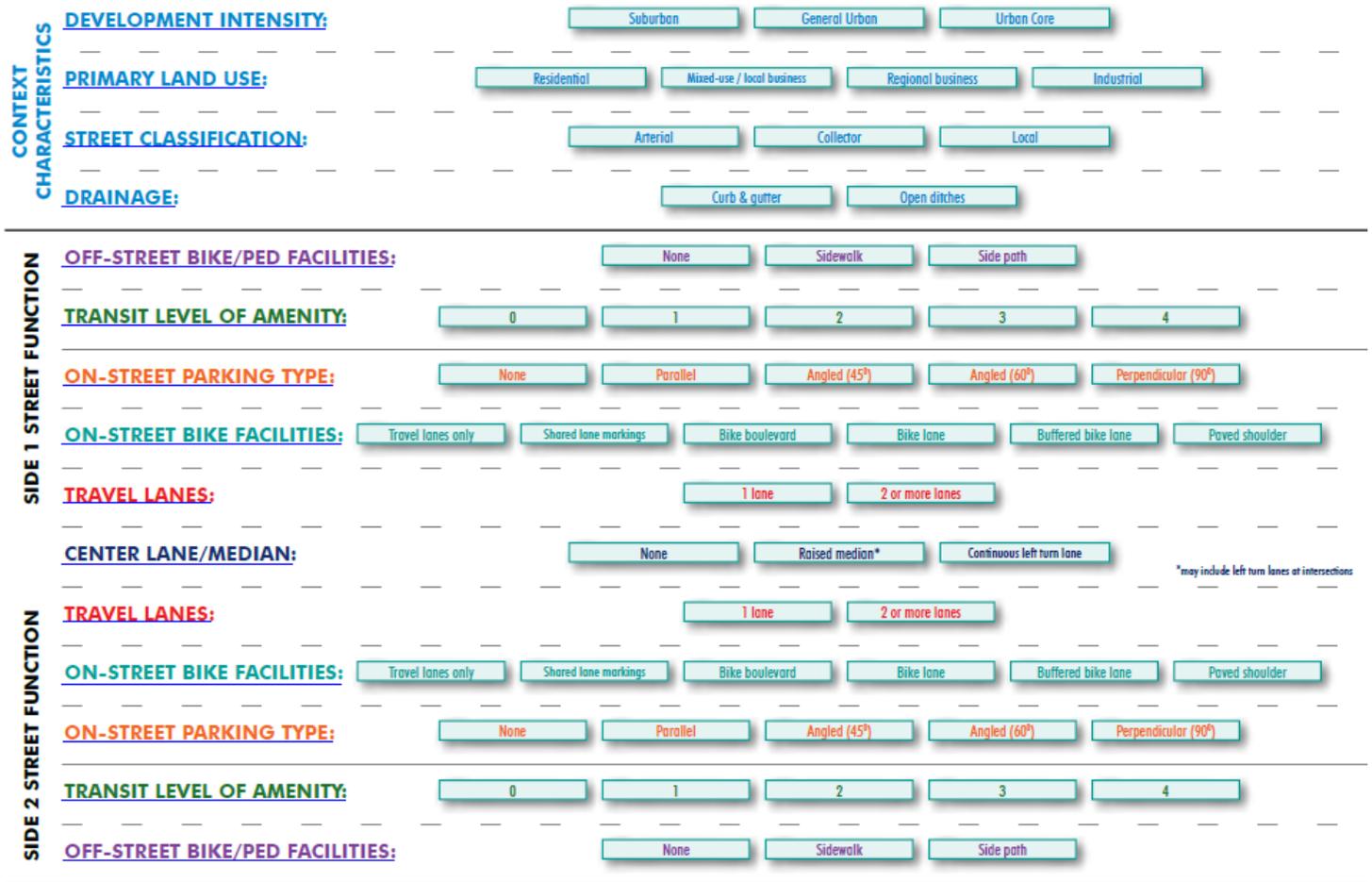


FIGURE 4. MULTIMODAL TRAFFIC CONDITIONS

PRIORITY SAFETY CORRIDOR PLAN

 Study Area

Existing Bike Facilities

-  Bicycle Lane
-  Shared Use Path
-  Sidepath

 Bus Stop

 Bus Route

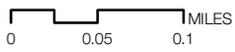
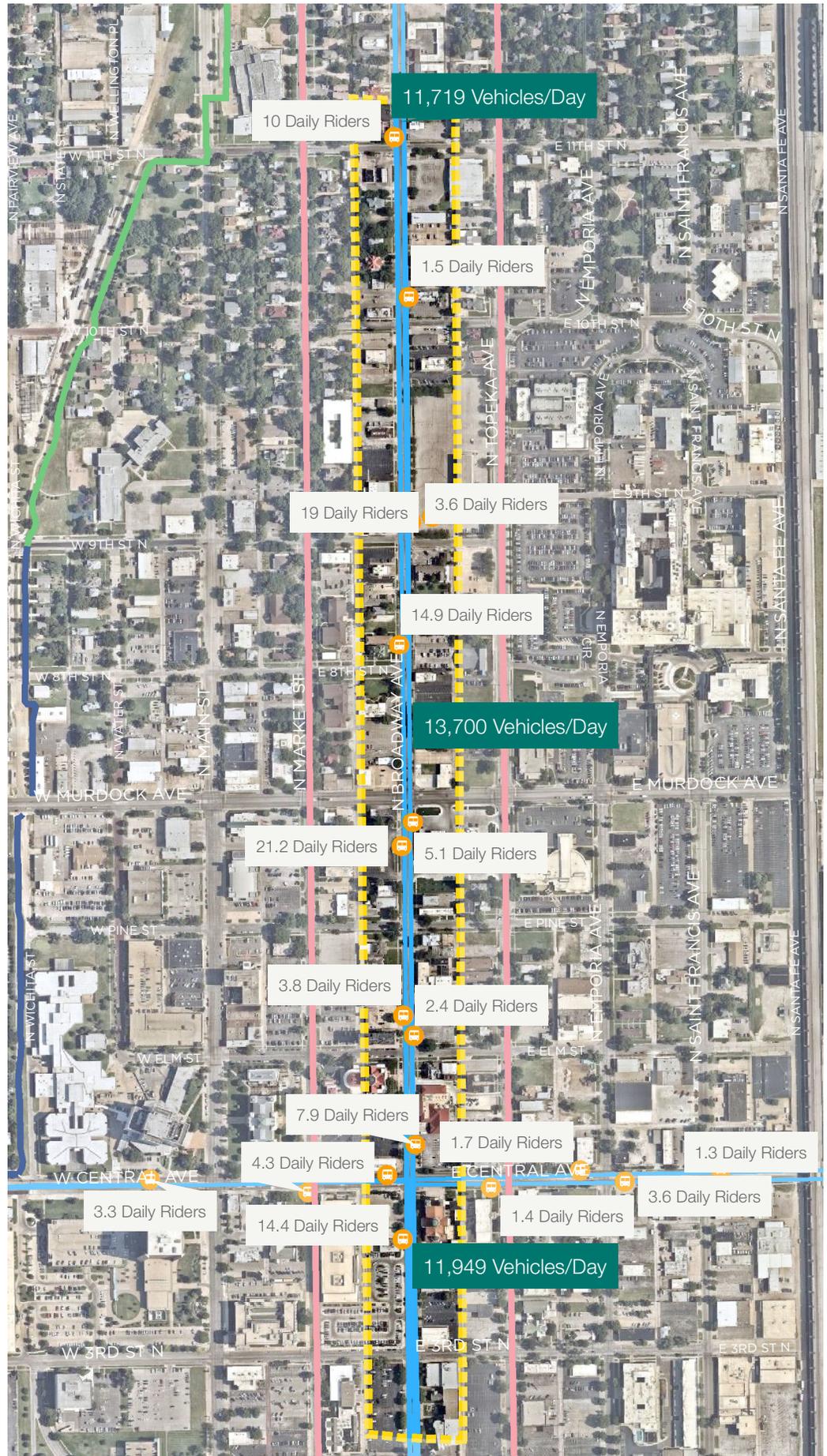


FIGURE 5. SURFACE PARKING

PRIORITY SAFETY
CORRIDOR PLAN



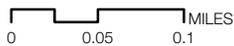
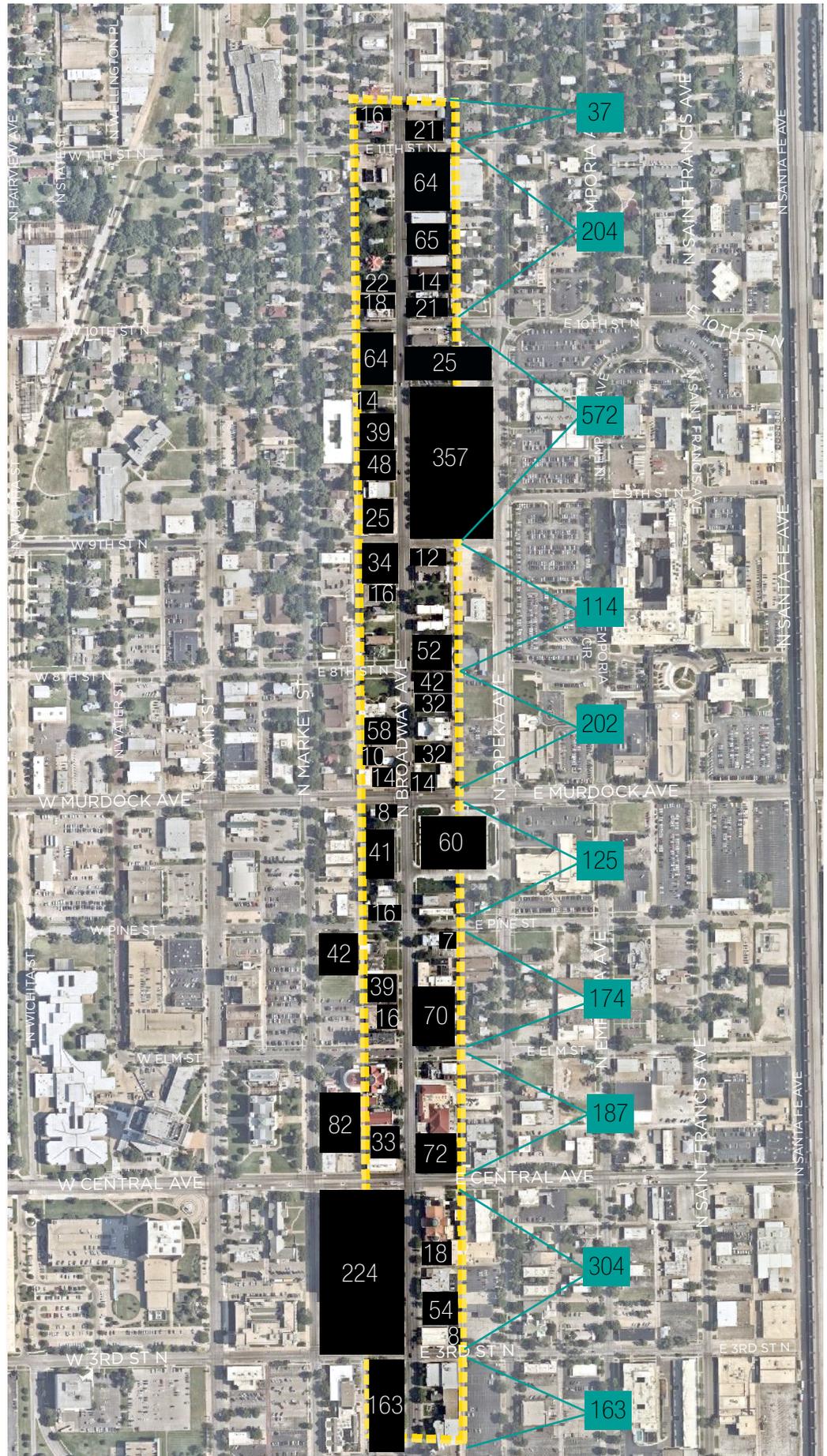
Study Area

Off-Street Surface Parking

16 Surface Parking Lot Spaces

37 Total Surface Parking Spaces per Block

There are approximately 2,082 surface parking spaces along the study corridor.



Map produced July 2018.

FIGURE 6. CRASHES

PRIORITY SAFETY CORRIDOR PLAN

Crashes

- Motor Vehicle- Bicycle Crash
- Motor Vehicle- Pedestrian Crash
- Motor Vehicle Crash



Study Area

Note: No crashes were fatal.

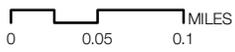
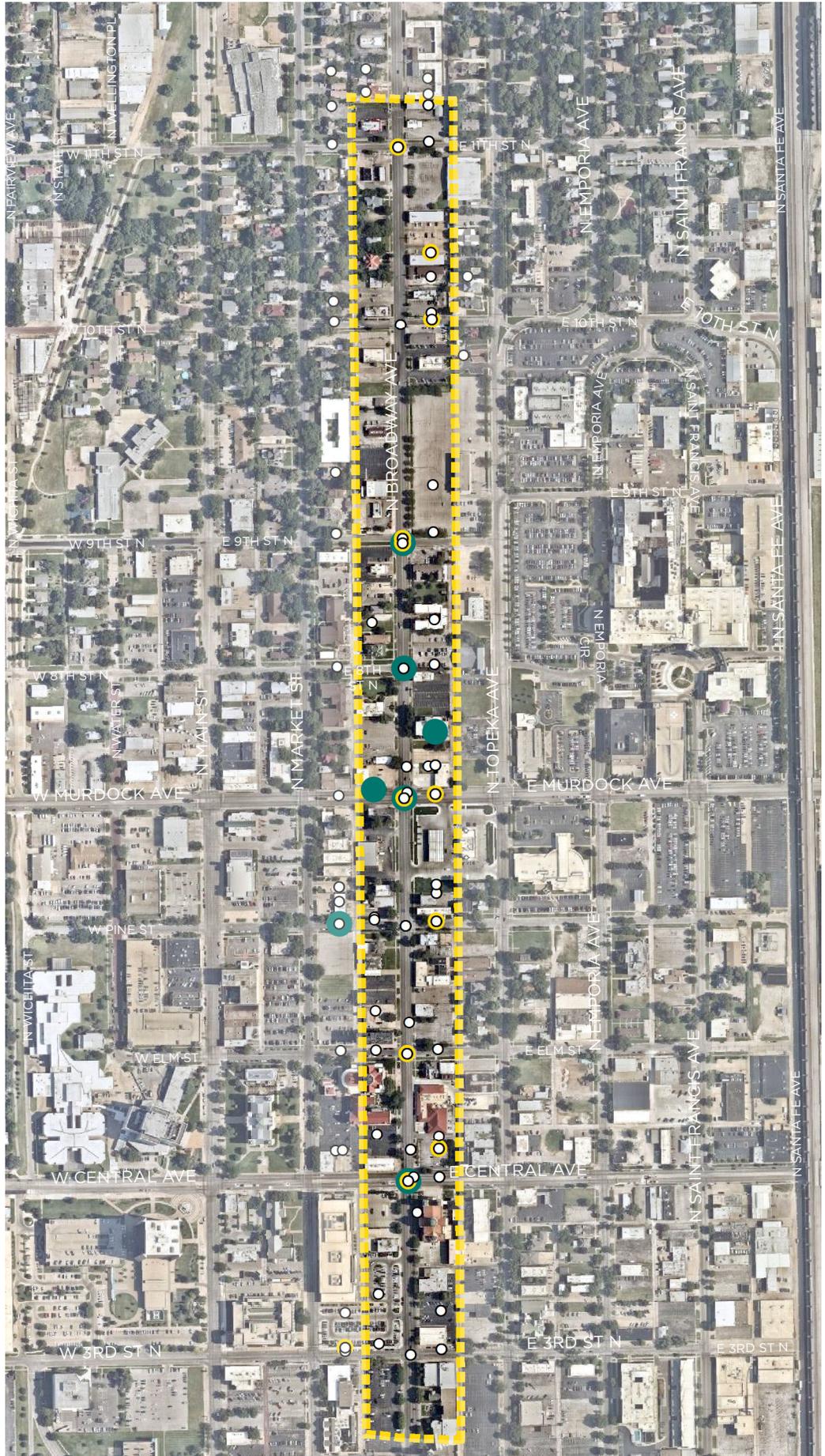


FIGURE 7.
LAND USE
 PRIORITY SAFETY
 CORRIDOR PLAN

 Study Area

Land Use

-  Single Family Residential
-  Multi-Family Residential
-  Office
-  Retail and Commercial
-  Industrial
-  Public Institutions and Social Services
-  Parks and Recreational Facilities
-  Parking and Infrastructure
-  Highest and Best Use

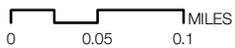
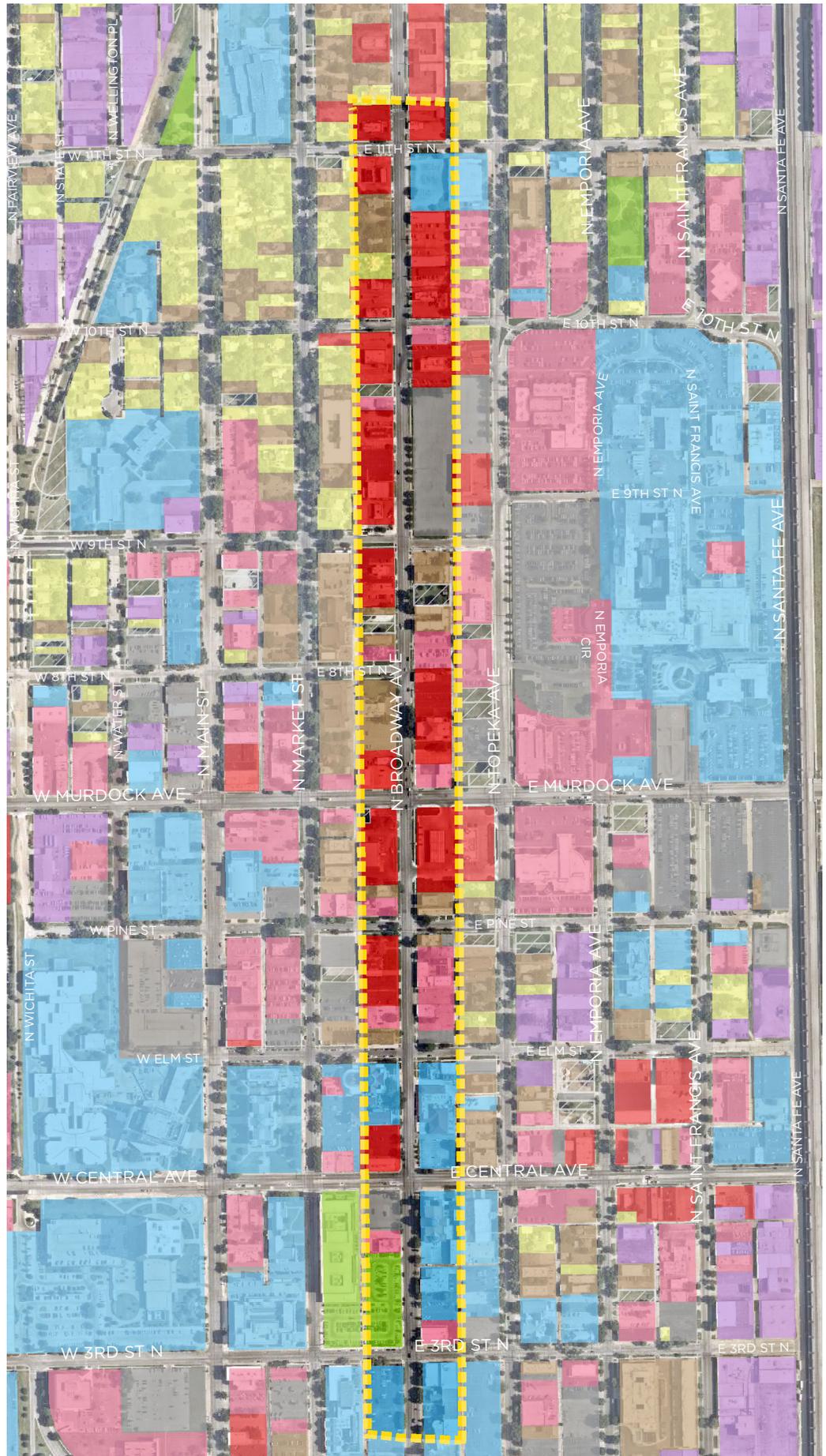
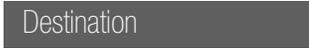


FIGURE 8. PUBLIC ENGAGEMENT COMMENTS

PRIORITY SAFETY CORRIDOR PLAN

 Study Area

 Destination

 Opportunity/Need

 Challenge

