

Re-Imagining a Neighborhood Center: Completing Mixed-Use Streets in the Elmwood
Neighborhood Utilizing Dallas' Complete Streets Design Manual

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Abstract

Walkable neighborhoods with adjacent commercial centers have the ability to encourage mode shifts to walking, bicycling, or transit. Mode shifts from single-occupancy vehicles (SOV) to the destinations within a neighborhood center of Elmwood's size may result in approximately 3,000 SOV trip reductions per day (H-GAC, 2018). This study examines the Dallas Complete Streets Design Manual (2016) and applies the Dallas Complete Streets Vision to a 1,400 foot (.3 mile) segment of Edgefield Avenue, adapting the guidelines to Edgefield Avenue with site-specific consideration. This study refers to the Dallas Complete Streets Design Guidelines in the development of a complete street proposal for Edgefield Avenue. This study consists of an existing conditions review, a site conditions analysis, a community visioning workshop, and culminates in a streetscape cross-section proposal to address the pedestrian, intersection, and street zones. Recommendations are made for potential sources of funding, and next-steps for the Elmwood Neighborhood Association.

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Chapter One: Project Overview

The Research Question

The Elmwood neighborhood, located two-and-one-half miles south of the rapidly transforming Bishop Arts District in Oak Cliff, offers charming, historic housing stock centered on a small, walkable business district platted in 1924. The quality-of-life strengths of Elmwood are many: churches and elementary schools are accessible via a walkable grid of narrow residential streets; a mixed-use business district on Edgefield Avenue is supported by locals; and two DART light rail stations are within a one-half-mile walk of the neighborhood's center. Tudor revival homes look onto a picturesque greenway with a new concrete trail and iron pedestrian bridge which connects the neighborhood to Kiest Park and Recreation Center one-half mile to the south. Homes in the neighborhood have steadily increased in value over the past five years, exceeding the Dallas average increase. Presently, though, vacant and tired storefronts, too many-auto oriented businesses, an unshaded sidewalk, and overly wide intersections and a wide roadway makes walking along Edgefield Avenue dreary and unpleasant for pedestrians.

This study seeks to see how well the Dallas Complete Streets Design Manual can guide design of Complete Streets on smaller residential and minor mixed-use streets. Is the Dallas Complete Streets Design Manual a good starting point for a neighborhood interested in redesigning a street? What role will the neighborhood association need to take to prototype the proposal and what funding mechanisms might there be to assist them? A redesign of Edgefield Avenue could foster a stronger sense of place and prove to be an economic development catalyst in Elmwood. By changing neighborhoods that offer quick gains, such as in Elmwood, the City of Dallas can show local case study examples of complete streets that are embraced by the

community to more reluctant neighborhoods.

The Potential of Complete Streets

The origin of the term “complete streets” and the impetus for its creation was the frustration of American bicyclists to use roadways safely. America Bikes outlined the safety risk inherent in a roadway designed solely to be used by drivers of automobiles. Despite being a public right-of-way, roadways could not meet the needs of all potential users to safely use them. By 2003 America Bikes had written a policy initiative that stated, “A complete streets policy ensures that the entire right-of-way is routinely designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street” (American Planning Association, 2010, p. 12). “Truly complete streets go beyond accommodating bicycling and walking to consider children, the elderly, and people with a disability. More often than not, the elderly and people with disabilities rely on the pedestrian and transit infrastructure for access and mobility (American Planning Association, 2010, p. 2).”

Once every household was likely to own an automobile, streets became the almost exclusive realm of the automobile. As a result design speeds went up and roads were optimized for the automobile with wide right-of-way and large turning radius on intersections and driveways. Widening roads and intersections ensure a high level of service (LOS) for the driver, and although this was easier and safer for the driver it often overlooked the differing needs of pedestrians and bicyclists. For decades automobile LOS has been the benchmark for road design, but complete streets policy changes the focus “to routinely design and operate the entire right-of-way to enable safe access for all users, regardless of age, ability, or mode of transportation (Smart Growth America, 2018).” When road design begins to focus on all users, consideration for the level of service provided to pedestrians, bicyclists, and mobility impaired persons can be

given equal weight in questions of optimizing level of service. Sidewalk connectivity and condition, comfortable places to stop or rest, safety in crossing streets, shelter from the summer heat, protection from fast moving vehicles, a dry path in seasonal rain – all these improve pedestrian comfort and ease of ROW use. By focusing on all roadway users, complete streets can make walking or bicycling a sensible option, rather than the less desirable option.



Figure 1: Complete streets accommodate all ages and abilities of bicycles riders (top) and pedestrians (bottom). Source: NACTO.

The City of Dallas has developed a complete streets policy and a guidelines document to promote the consideration of pedestrians and bicyclists on all City streets. “The Dallas Complete Streets Vision is to build streets that are safe and comfortable for everyone; young and old, motorists and bicyclists, walkers and wheelchair users, and bus and train-riders alike (City of Dallas, 2016, p. 43)”. The City’s vision for complete streets includes a consideration of impacts on the stormwater system in keeping with national trends in green streets as a component of

complete streets. The Dallas Complete Streets Vision has adopted a goal “where safe, comfortable, and healthy streets are the preferred design choice (p. 43)”.

Edgefield Avenue has a posted speed of 35 miles per hour, which makes the area generally safe for pedestrians and bicyclists, but the wide roadway encourages fast or distracted driving. Any speeds over 35 mph have a much greater chance of serious injury to pedestrians. Narrowing the lanes of a conventional roadway with “skinny streets” and “road diets” can improve inter-street connectivity and complement complete streets policies. “Narrower traffic lanes result in slower travel speeds that translate into safer, more accessible, and more pleasant thoroughfares for all users (American Planning Association, 2010, p. 1)”. The width of driving lanes can be narrowed visually, without moving the curb or center stripe, through the addition of bike lanes and on-street parking. By visually narrowing the thoroughfare, drivers will perceive the road will be safer to drive at a lower speed.

A narrowed road also offers safety benefits to a child or slower adult by making the distance shorter to cross. The residential area surrounding Edgefield Avenue has a very high level of sidewalk connectivity, allowing a person to choose a direct route to any destination within Elmwood. For this reason, “complete streets in areas with higher levels of street connectivity will produce greater overall accessibility for all travelers, regardless of the mode they choose” says the American Planning Association (2010). Destinations within the Elmwood neighborhood include church, school, and recreation rather than a large retail anchor of a shopping destination. However, by highlighting the possibility of a pleasant walk or safe bicycle trip to a local destination, residents of the Elmwood neighborhood may begin to incorporate healthier options and visitors to the area may begin to expect similarly well-connected neighborhoods throughout the city. By changing neighborhoods that offer quick gains, such as in Elmwood, the City of Dallas can show local case study examples of complete streets that are

embraced by the community to more reluctant neighborhoods.

Previous and Nearby Studies

The City of Dallas planning department has placed Elmwood on a list of future authorized hearings to rezone the commercial district of Edgefield Avenue. The rezoning work will entail outreach to the community, where the neighborhood will have an opportunity to encourage the adoption of complete streets. The private sector could redevelop the infill sites with wider sidewalks, for example, and rezoning the commercial district should include context-sensitive design requirements.

As development interest has turned to Oak Cliff several marketing studies have been conducted for area shopping centers. The Red Bird Mall near IH-20 and US-67, and Wynnewood Village shopping are two such studies. Wynnewood Shopping Center is adjacent to the Elmwood neighborhood and many residents of the neighborhood were present for the Wynnewood Village community outreach. Also of interest is the Bishop Arts district, at Bishop Avenue and Davis Street. An overview of the Wynnewood and Bishop Arts planning studies of these areas is discussed below.

The forwardDallas! Comprehensive Plan

A goal of the forwardDallas! vision is to create a healthy balance between jobs and households throughout Dallas by adding about 220,000 households and about 400,000 jobs between the years 2000 and 2030. “By 2035, Dallas County is projected to grow by nearly 800,000 people,” states the City of Dallas Neighborhoods Plus Plan (2015). This City of Dallas comprehensive plan report identifies six strategic goals to capture some of that growth within the City. Neighborhood Plus Goal 4: *Attract and Retain the Middle Class* gives a nod to the importance of walkability, stating “Dallas should capitalize on its intrinsic qualities and promote its unique attributes to people who appreciate the best

elements of urban living – walkable neighborhoods, abundant art and cultural venues, diverse entertainment options, and independent restaurants (Neighborhood Plus, 2015).” A clear path for implementation is not identified, however, and recommendations have been left vague – possibly so that possible solutions are not ruled out. ForwardDallas! Land use element guidance given in Policy 1.1.5 *Strengthen existing neighborhoods and promote neighborhoods' unique characteristics* also speaks to the importance of neighborhood walkability, saying, “New neighborhoods must be pedestrian- friendly, have a sense of community and exhibit long-term viability.”

Implementation of complete streets can be part of an effort to support small businesses. Local governments can play important roles in creating supportive environments for small business growth. For example, planners, local officials, and others engaged in the local planning system can make space for small businesses to grow, invest in capital projects and special events that improve quality of life and provide technical assistance to targeted sectors. “Strategic investments in infrastructure and the public realm can improve quality of life by making it convenient and attractive for small business owners and workers to walk bike, or take public transportation to work and by improving access to parks and public open spaces. Similarly, investments in streetscape improvements, public art, and special events can help reinforce local character and foster a sense of community (American Planning Association, 2016, p. 5).” In this way strengthening places like Elmwood as a successor to Bishop Arts is good for the City and for Elmwood. More information on how to implement complete streets on Edgefield Avenue is developed in Chapter 4.

Rising rents in the Bishop Arts District and along Davis Street will invariably push out entrepreneurs and artists into less popular areas in search of more affordable commercial space. The City of Dallas can support goals of increased space for small business incubators,

mobility, middle class housing by supporting small business district of Elmwood. Core neighborhoods of Dallas that were unattractive to the middle class only ten years ago are undergoing neighborhood revitalization, reinvestment, and rapid change as Dallas follows national real estate trends towards growth in walkable neighborhoods (Leinberger, 2013). The popular Bishop Arts District serves as an example of Elmwood's potential to develop into a locally important, mixed-use neighborhood center. If some features of complete streets were implemented in Elmwood as was done for Bishop Arts in 2000, it would encourage renewal.

The Bishop Arts District

A review of the growth of Bishop Arts gives valuable insight into the value of public investment in creation of economic renewal. In 1992 the City of Dallas formed a TIF district in the area along Colorado Boulevard and Zang Boulevard, near Methodist Dallas Medical Center and Lake Cliff Park. Seven years later, in 1999, \$2.67 million in federal and city funds began to be spent on the Bishop Arts District for new curbs, streetlights, bricked streets and sidewalks, street trees and other amenities along three blocks of north Bishop Avenue and the cross streets of West Davis, West Seventh and West Eighth Street. Redevelopment of the area proceeded slowly and a police substation was one of the only filled storefronts on Bishop Avenue for several years in the early 2000s. The mid 2000s saw several barbershops, a ballet studio, and architectural salvage stores come and go. Auto oriented businesses selling car repair, auto detailing, tire repair and rims were the main retailers along Davis Avenue. Several absentee owners kept their properties vacant long after the area had become popular, slowing the renewal.

The first Better Block demonstration project was staged in 2010 on Tyler Street at Davis Street, six blocks west of Bishop Street, to fill the vacant buildings and highlight the need for wider sidewalks, café seating, and slower traffic and bike lanes. The one-day demonstration reduced the roadway lanes from three to one plus a bike lane. Then-City Councilwoman Delia

Jasso was moved to advocate for complete streets after seeing the demonstration. New zoning was codified in 2010 along Davis Street to allow 5-story building heights, reduced parking requirements for older buildings, and a phased approach to discouraging automotive oriented businesses. Later that year, a 23 million dollar Tiger Grant was won for the streetcar that now runs from Union Station in downtown to Beckley Avenue at Davis Street.

Plans and funding put in place 18 years ago are well into the payoff phase. Recent data shows that the neighborhood is undergoing transformative growth across many sectors: home renovations, new restaurants, and new commercial mixed use construction that will bring additional residents to the area along with disposable income to spend in surrounding neighborhood commercial districts. Developer Alamo Manhattan is building 220 apartments and 25,000 square feet of shops in two buildings on both sides of Davis at Zang Boulevard. Across the street on Zang Boulevard., Crescent Communities is building a project with more than 300 apartments and ground floor retail space. Grocer Central Market has confirmed plans for a new store in that same area. The CVS opened for business in 2017 at the terminal end of the Dallas Streetcar. Several blocks south of Bishop Arts district, north of Jefferson Boulevard, Exxir Capital plans to open 246 multi-family units along with 50,000-square-foot of retail and restaurant space at Bishop Avenue and Melba Street. These new developments will bring 766 luxury residential units to Bishop Arts district, adding significant population and disposable income within three miles of the Edgefield Avenue study area.

The Parks at Wynnewood & Wynnewood Village

City Councilman Scott Griggs has said he plans to rezone Wynnewood Village Shopping Center and the surrounding area. “Those are areas that we’ve identified that haven’t had the growth that we’d like to see,” Griggs says (Stone, 2014, p. 1). The western boundary of the Wynnewood Shopping Center shares the eastern boundary of Elmwood at Vernon Avenue.

Edgefield Avenue is under half a mile from Vernon Avenue. A trade area study for Wynnewood was conducted for Brixmor, the owner, and contains market data applicable to Elmwood. A property brochure is included in the appendix. The Extended Demographic Report with 1990-2000-2010 census data, 2016 estimates, and 2021 projections is included in the appendix.

The City of Dallas Planning & Urban Design Department's CityDesign Studio conducted a master plan for the Parks at Wynnewood and the Wynnewood Village shopping center, approved by Dallas City Council in 2015, to guide projects and programs affecting the Wynnewood Study Area. Wynnewood Village opened in the late 1950s as the centerpiece of a new residential neighborhood, offering professional services, banks, grocery stores, and shopping to serve the new homes. Currently, the Parks at Wynnewood encompasses 48 acres of low income housing that the City desires to redevelop as low-income multifamily housing and low-income senior housing units in a reduced footprint to allow surplus land be developed as market rate residential, commercial, office and retail. The first phase is complete, with attractive multifamily housing built along S. Zang Boulevard.

The Parks at Wynnewood conducted public involvement event to create a vision for area streets. It identified a desire by area neighborhoods to have a high level of pedestrian connectivity to Wynnewood Village, and to make connectivity, walkability, and livability of foremost importance (City of Dallas, 2015). Residents of area neighborhoods in attendance at the 2014 charrettes included Elmwood residents, Wynnewood North, Summit Lawn, Beckleywood and Wynnewood Heights. The public realm characteristics most mentioned in the public input sessions were streetscape and complete streets concepts. Residents most wanted tree lined streets and linear parkways with comfortable, safe sidewalks and amenities, and for the Dallas Bike and Trail plan to help coordinate Wynnewood area paths and trails to nearby amenities and neighborhoods.

Planning For the Elmwood Neighborhood

Most small area plans, economic development plans, and complete streets pilot projects respond to the need for planning based on the desire to pull a neighborhood out of poverty. Conversely, the expected high return on investment of undertaking a project is the draw for the private sector. Dallas's Neighborhoods Plus has identified areas of Dallas to prioritize due to evidence of disinvestment and deteriorating housing – high vacancy, unemployment and poverty rates are greater in other areas of South Dallas and will get priority investment and attention. The portion of Oak Cliff where Elmwood is located has suffered disinvestment and neglect while retaining private sector interest, if not investment action.

Compare this to cities such as Denver and Houston, where small area planning is considered important for those areas where significant change is occurring or anticipated; physical improvements need to be addressed; opportunities for substantial infill or redevelopment are present; opportunities may arise to influence site selection or higher density development; existing transit infrastructure usage could be increased through catalytic projects. These conditions exist in the Elmwood neighborhood and merit prioritizing the area for further study. Promoting complete streets in the Elmwood neighborhood would increase transportation choice and strengthen the growth potential of this central area. The City of Dallas has, like many other communities, adopted complete streets policies for broader goals. Safety, health, sustainability, and mobility for transit dependent populations can be achieved, but equity goals and economic development benefits are also realized from implementing complete streets projects.

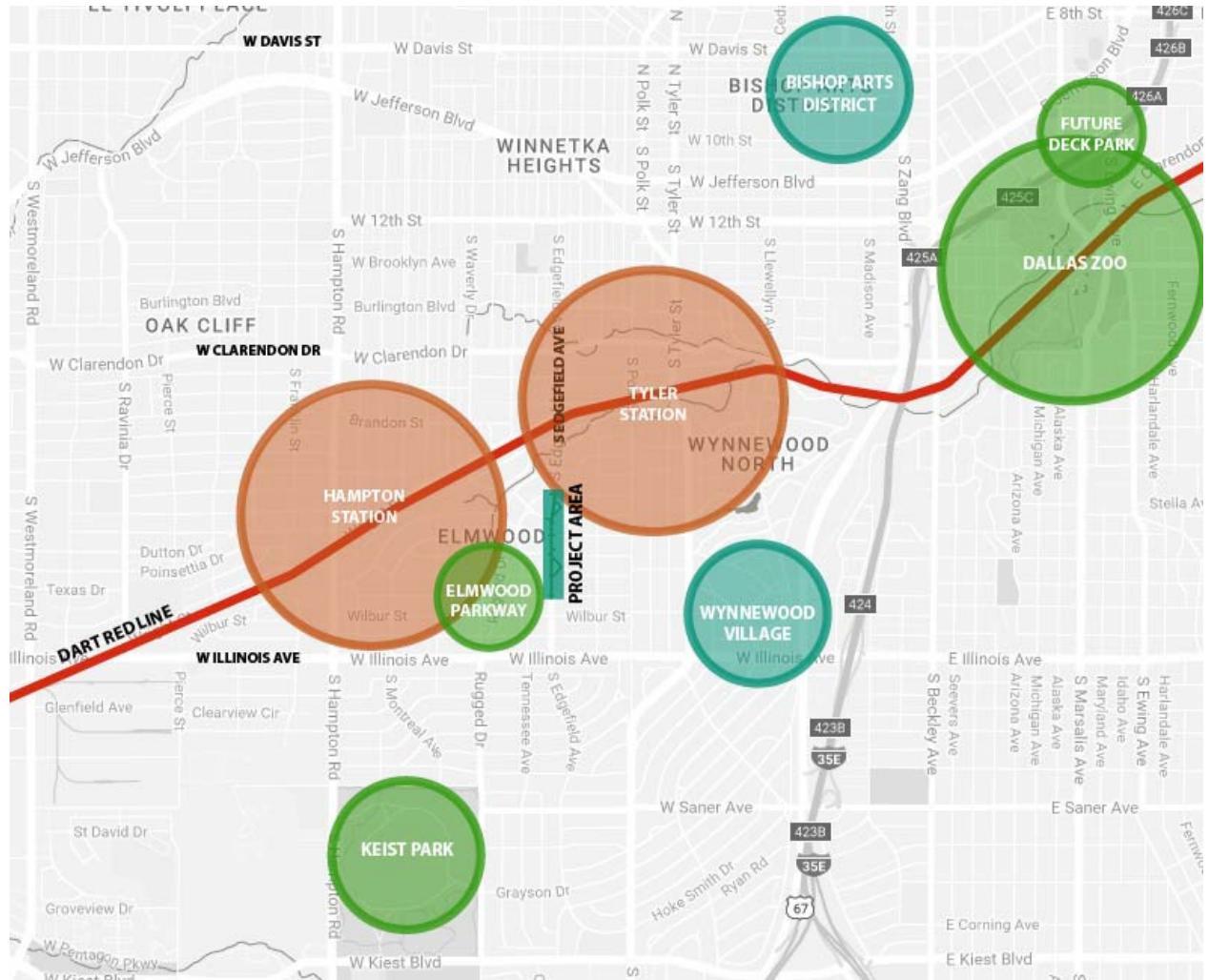


Figure 2: The Edgefield Avenue project is surrounded by shopping, parks, and transit connectivity. The project area is at the center of Oak Cliff, one half-mile walk from two DART light rail stations.

Walkability and Connection to Transit

Oak Cliff neighborhoods are special for the pockets of pedestrian-scaled commercial and mixed-use buildings. These areas have a small-town Main Street scale and should be preserved and enhanced wherever possible. Throughout the country, areas with historic and walkable urban form, especially near transit stations, have been revitalized as private investment seeks out this popular form. Elmwood has the potential for new development as north Oak Cliff continues to develop into a more expensive neighborhood and people seek more affordable options for historic homes near transit.

Location and Sense of Place

The Elmwood neighborhood is in the North Oak Cliff area of Dallas, approximately 6 miles southwest of the Central Business District. Two DART light rail stations, Hampton Avenue and Tyler Vernon Station, are within $\frac{1}{4}$ mile walking distance of the Edgefield Avenue project area. Bus service is available from several stops along Edgefield Avenue, the main street of the Elmwood neighborhood. The neighborhood is bounded by the commercial corridors of Hampton Street to the west, Tyler Street/Vernon Avenue to the west, and Illinois Avenue to the south.

Elmwood Neighborhood Association's Vision

The neighborhood association is very active, hosting monthly meetings and running a blog and website. In 2017, local developer Monte Anderson and the Elmwood Neighborhood Association leadership met to discuss the potential for Edgefield Avenue. The Elmwood Neighborhood Association fully supported plans for streetscape improvements in the municipal bond program. That bond program repaved Edgefield Avenue and restriped the street to include a striped sidewalk at the intersection closest to the elementary school. The ENA was supportive of more thorough streetscape improvements to include lighting, parks, and more bike and pedestrian improvements to make the commercial district safer and more walkable.

Informal discussions with developers and residents of Elmwood reveal that a place like the neighborhood commercial area has the potential to redevelop as live-work mixed-use properties and neighborhood oriented commercial and community facilities. Goals for the neighborhood included:

- Use existing light rail to attract economic development.
- Improve the pedestrian network and create bikeways throughout the community.
- Improve the visual appearance of Edgefield Avenue storefronts while preserving historic

housing stock and commercial structures.

- Create vibrant community gathering places from remnant right-of-way.
- Create a permanent dog park in the southern green triangle.
- Create an activity plaza in the vacant lot across from the northern green triangle.

In early 2019, the Elmwood Neighborhood Association members worked for and won a \$500,000 grant for new pedestrian and street lighting. They have chosen new light fixtures from an Oncor lighting catalog and expect the project to commence in fall of 2019.

Study Purpose & Conclusion

The Dallas Complete Streets Design Manual offers a policy framework for making investments that support walking, bicycling, and transit. This study examines the Dallas Complete Streets Design Manual and applies the Dallas Complete Streets Vision to a 1,400 feet (.3 mile) segment of Edgefield Avenue, adapting the guidelines to Elmwood's minor streets with site-specific consideration. Particular attention is given to points of transition from one street type to another, as the mixed-use district of Edgefield Avenue meets the residential cross streets. This study consists of a preliminary inventory analysis; a community visioning workshop; and provides streetscape cross-section scenarios to address the pedestrian, intersection, and street zones. This study will utilize the Dallas Complete Streets Design Manual for guidance as well as best practices literature from the federal and state level.

The City of Dallas published the Dallas Complete Streets Design Manual in 2016. Since that publication, and the temporary Knox Street pilot project in 2011, the City of Dallas counts 10 miles completed, 5 miles under construction, and 18 miles in design. These projects have been installed on multi-lane arterials near DART transit hubs, and on main collectors through popular mixed-use areas. None of the Dallas complete streets projects have yet to redesign a minor mixed-use street for a local neighborhood center.

Chapter Two: Building the Project Criteria and Scope of Work

The purpose of this study is to identify the key conceptual design components and priorities for specific street improvements, and to adapt those general complete streets design guidelines to a specific neighborhood thoroughfare. Chapter Two examines the Dallas Complete Streets Design Manual (DCSDM) as a guide for creating a project application for Edgefield Avenue. The practical application of the Guidelines to the limited right-of-way space on Edgefield Avenue will develop the character and potential of this thoroughfare. The project segment length is 1,400-feet (.3 mile) along the commercial district of Edgefield Avenue. The sections of this chapter will culminate in a scope of work that will address the complete streets elements needed for Edgefield Avenue to meet the parameters of a safe, fair complete street. This chapter will discuss complete street design elements by the specific street type (categorized by traffic volumes and speeds) to highlight elements that should appear on a street like Edgefield Avenue. Secondly, a description of the functional zones making up a Complete Street will be outlined. These are the pedestrian zone, the intersection zone, and the street zone and each has features that are crucial to building a complete street. Finally, a project checklist will be built from the DCSDM Policy Guidance to define a pragmatic proposal specific to Edgefield Avenue, laying the groundwork for the proposals in Chapter Four.

General Complete Streets Policy Guidance

Design of streets with Complete Streets principles result in streets that are safe, multimodal, and green. The Dallas Complete Streets Design Guidelines is the City policy document that encourages the acceptance of reallocating space for wider sidewalks, bikeways, on-street parking, and green spaces. The DCSDG identifies preferred principles to apply to all complete streets projects across the City. These principles urge broadening the concept of road design from a priority on vehicular speed and volume to involve modes including

walking, bicycling, and transit. Incorporation of complete streets guidance can contribute to a vibrant public life at the city, district and neighborhood level. Five different street types have been defined in the DCSDG in order to implement complete streets principles in site specific applications.

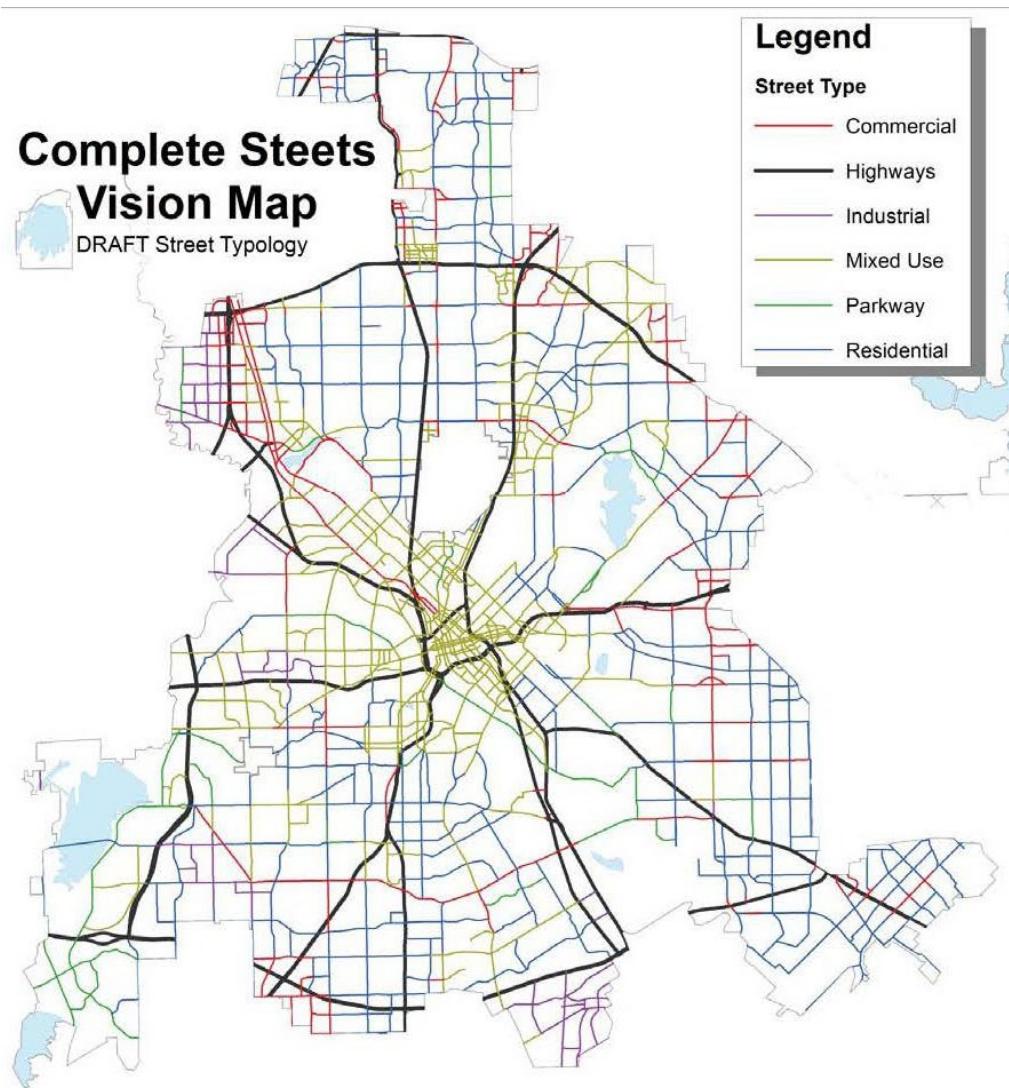


Figure 3: The Complete Streets Vision Map is part of the City of Dallas Master Thoroughfare Plan

Mixed-Use Street Classification

The complete streets redesign of Edgefield Avenue should begin with an evaluation of the contextual street type and functional classification. “The Dallas Complete Streets approach designs streets for all modes of travel and pairs this with surrounding neighborhood character

and capacity needs, along with the street type. The desired look and feel of the street should be considered (City of Dallas, 2016, p. 44)". The forward!Dallas plan identifies two overall categories for understanding street context: conventional, separate use context and a walkable, mixed-use context. The conventional, separate-use street context is typified by distinct use areas for housing, job, and shopping. A walkable, mixed-use street context features housing, jobs, and shopping in close proximity, allowing for short automobile trips, transit use, bicycle or walking to nearby destinations.



Figure 4: State Street at Allen Street has a character that Elmwood Neighborhood mentioned as desirable in the public meeting: a two-lane, mixed-use street with on-street parking, buffer, and sidewalk. Photo credit: page 48 of the DCSDG.

The DCSDM Vision Map has identified Edgefield Avenue as both a Mixed-Use Street and a Bike and Transit Network Street. A portion of the 2011 Dallas Bike Plan route is on Edgefield Avenue, and it is an important transit network street as well, for the higher level of bus rapid transit service routes to the nearby DART light rail stations. The need for walkable, mixed-use streets near the 1/4 mile (5-minute walk) radius around DART light rail stations is prioritized by the Guidelines, stating that "all streets within these zones should follow the guidance for Mixed-Use Streets (page 68)". This underscores the need to redevelop Edgefield as a mixed-use street, with special consideration given to pedestrian, bike, and transit feeder linkages.



Figure 5: Greenville Avenue at Alta Avenue, a two-lane local road, a mixed-use Main Street. This is the most mentioned corollary street type mentioned at the Elmwood Neighborhood Association meeting. Photo credit: page 47 of the DCSDG.

Edgefield Avenue, with its small-town Main Street feel, fits the mixed-use street type description: small shops are pulled close to the street and bicycle and pedestrian activity is present due to the mix of jobs, work and housing nearby. The DCSDM describes the mixed-use street type this way: “On Mixed-Use Streets, the focus is on slower traffic speeds and a greater emphasis on pedestrian, bicycle, and transit choices. The goal is on creating a more desirable environment for people (page 46)”. Key Features of a Mixed-Use Street include:

- Higher pedestrian activity
- Reduced motor vehicle speeds
- Bike lanes or shared use of travel way
- Pedestrian-oriented development, street furniture, lighting
- Mix of commercial, residential, civic uses oriented to the street
- Maximized on-street parking
- Higher transit accessibility

Conceptual Design in Complete Streets Planning

The DCSDM describes a development process for the design of a complete street project in three phases: concept design, engineering, and maintenance. This project concentrates on the conceptual design phase and does not develop the other two phases. “Designs must adhere to the

Dallas Complete Streets policies and design guidelines. The conceptual design phase should explore and present detailed design considerations to ensure that proposed elements are feasible (p. 29)".

A conceptual design should:

- Conduct a street and sidewalk inventory of existing conditions
- Define conceptual street cross-sections
- Propose a roadway and urban design plan with alignment and dimensions of sidewalks
- Propose lane functionality for motor-vehicles, bicycles, parking and transit
- Propose proactive accommodation for the disabled
- Propose street furniture
- Propose intersection geometry
- Develop programming for the street and areas of excess pavement
- Integrate green features to promote sustainability
- Flag potential right-of-way issues, easements, and area-ways
- Concepts should be developed to 30% design

Right-of-Way and Complete Streets Functional Zones

Design for a complete street starts with an understanding of the available right-of-way on any particular city street. The right-of-way extends beyond the street's travel way paving, past the curb, gutter, parkway and sidewalk, to the private property lot boundary line. It is within this city-owned right-of-way that a city has the ability to change the look of the street. Improvements outside of the right-of-way are on private property and can only be made with the approval of the abutting property owner or through zoning regulations. Most cities are very unlikely to acquire additional right-of-way for a street project and Dallas is unlikely to purchase additional right-of-way for improvements along Edgefield Avenue. Therefore, it is important to understand the

available width of the right-of-way and prioritize the most necessary complete street elements that may be developed within it. The right-of-way falls into three main zones for the purpose of conceptualizing complete street elements: the pedestrian zone, the street zone and the intersection zone.

Pedestrian Zone | Frontage Zone, Sidewalk Clear, Buffer & Furnishings

The pedestrian zone encompasses the area between the curb and the facade of the building. Pedestrian zones are multipurpose zones – walking along the street, entering a business, and socializing happen here. Vibrant city sidewalks may have any or all of these features: café seating placed up close to a restaurant, and a clear walking zone for pedestrians to travel while observing the street and the café diners. On wider sidewalks there may be a buffer zone of benches, streetlights, trees, and magazine kiosks between the pedestrian and the street. These are the three functional zones of the sidewalk, and each play a role in the safety and vitality of the street.

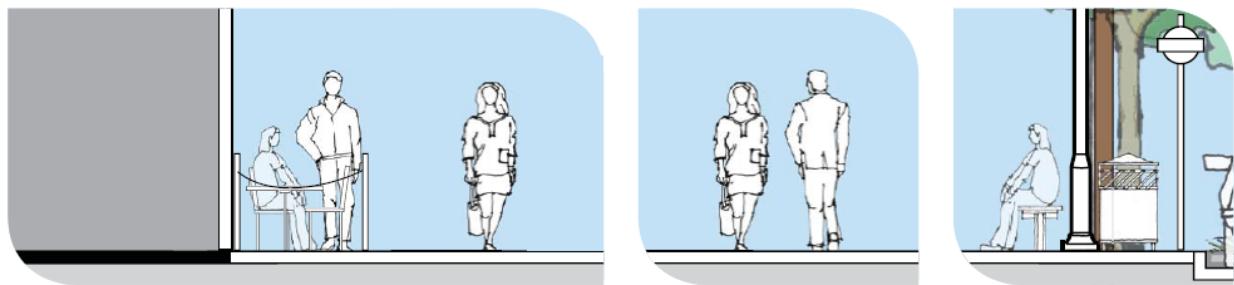


Figure 6: The Sidewalk Zone can be pictured as component puzzle pieces. Not all sidewalks have each piece in all places. Left to right: Frontage zone; Pedestrian through zone or clear zone; and the furnishings and buffer zone. Source: DCSDM page 76

1. The frontage zone is closest to the building. “This zone is ideally located on private property in the building setback area where design standards are controlled by zoning (page 76),” states the DCSDG.
2. The *sidewalk clear zone* is specifically reserved for pedestrian through-travel and must be kept clear of any obstructions.
3. The *buffer/furnishing zone* is the area between the curb and the sidewalk clear zone.

The separation and protection from moving vehicle traffic is afforded by the placement of trees or on-street parking. The buffer zone can provide space for street furniture such as benches, lighting, bus kiosks, and waste receptacles. Landscaping, grass parkway strips and trees, and above and below ground utilities are within this zone, close to the curb. “Where parking is allowed, the buffer zone creates space between the curb and vertical elements for proper clearance from moving vehicles or to allow car doors to open, and motor vehicle drivers to access the sidewalk. It also allows space for driveway aprons to ramp down from the grade of the sidewalk to the street in order to maintain a level sidewalk clear zone (page 76),” states the DCSDG.

Intersection Zone | Main Thoroughfare, Crosswalks, Bike Priority

Intersections occur at every location where a street connects to another. Along the project segment of Edgefield Avenue there are nine intersections. Every intersection is a potential conflict point for a pedestrian, bicyclist, or motor vehicle. The simple incorporation of a stop bar or marked crosswalk may help pedestrians navigate an intersection. The dynamic nature of intersections has a large impact on the safety of the street. Driveways onto the street similarly create mini intersections that can be unsafe for pedestrians and bicyclists. The reduction of driveway access points, called access management, is the second most effective change that can be made to make streets safer for pedestrians and bicyclists (Zegeer, 2005). Intersection design may treat storm-water at the source through the incorporation of sunken areas, bio swales, to improve water quality.

A road diets is a term for strategies used in conjunction with complete streets design to control intersections for pedestrian safety. Road diets reduce lane widths, control free right turns, introduce dedicated turn lanes, and reduce overly wide intersections and wide curb radii to reduce large expanses of pavement at intersections. Four intersections along the project segment

have excessive areas of pavement within the intersection zone that poses a danger to pedestrians.

Street Zone | Parking Zone, Travelway Zone, Median Zone

The Street Zone is the paved area between the curbs that accommodates vehicular travel activity, curbside on-street parking, and medians. Each of these elements should be incorporated in support of adjacent land uses and to better accommodate the needs of pedestrians, bicyclists, and transit users. Each of these elements can be described as a distinct zone within the street.

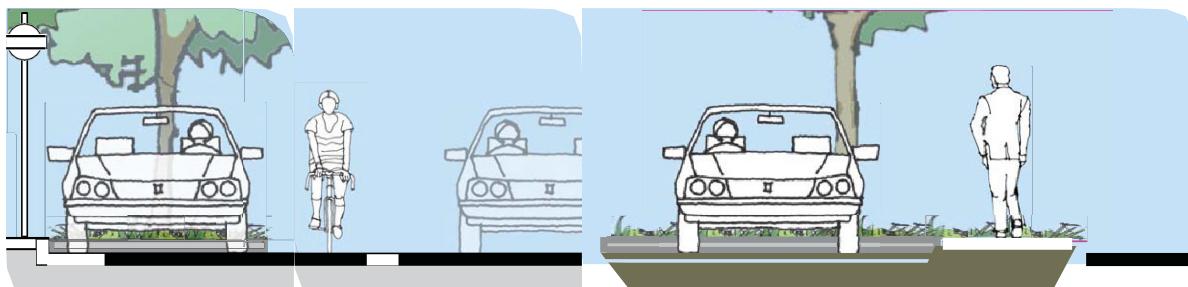


Figure 7: The Street zone also contains component parts. Shown left to right: curb zone/parallel parking; travel zone of the main lanes; and a median zone.

1. A curbside zone is encouraged to include on-street parking because parallel parking offers beneficial effects secondary to parking alone. On-street parking increases general street activity, meets the parking needs of adjacent uses, and protects pedestrians from moving traffic. “On-street parking increases pedestrian comfort by providing a buffer between pedestrians and moving traffic; slows traffic, making pedestrian crossing safer and increases the economic activity of a street (page 28),” according to the DCSDG. The parking zone may be permanently dedicated for parking by enlarging the area behind the curb at intersections, referred to as “bulb outs”. These have the added benefit of increasing the pedestrian zone at intersections, and providing more area for landscaping. On-street parking is very appropriate for a mixed-use, low traffic speed street like Edgefield Avenue, and may be necessary for the provision of a safe pedestrian zone.
2. The travel zone is the portion of the street that is reserved for vehicular travel, including public transit, bicycle and motor vehicle travel.

3. Medians are located in the center portion of a Street. Medians separate opposing directions of travel, and can be used for access management, pedestrian refuge, and for landscaping.

Guideline Priorities Charts Applied to the Design of Edgefield Ave

Table 1: Trade-Offs in Limited Right-of-Way Priorities (DSCDG, 81) was used to weigh the options for providing elements in the pedestrian zone and the street zone within the limits of the available right-of-way. Edgefield Avenue is a mixed-use street type, functioning as a collector street. The table places the highest priority on the pedestrian zone, suggesting that the Sidewalk Clear Zone and Buffer zone should be sized at the desired width, while the parking and travelway

Contextual Street Types and Functional Classifications	Pedestrian Zone		Street Zone			
	Frontage Zone (private)	Sidewalk Clear Zone	Buffer/Furnishing/Curb Zone	Parking Zone	Travelway Zone	Median Zone
Mixed Use Streets						
Principal Arterial	1	2	5	4	3	
Minor Arterial	1	2	3	4	5	
Collector	1	2	3	4	5	
Minor/Local	1	2	3	4	5	
Commercial Streets						
Principal Arterial	1	3	5	1	4	
Minor Arterial	1	4	5	2	3	
Collector	1	3	4	2	5	
Minor/Local	1	4	3	2	5	
Residential Streets						
Principal Arterial	1	2	5	3	4	
Minor Arterial	1	4	2	5	3	
Collector	1	4	2	3	5	
Minor/Local	1	4	2	3	5	
Industrial Streets						
Principal Arterial	2	3	4	1	5	
Minor Arterial	2	3	4	1	5	
Collector	2	3	4	1	5	
Minor/Local	2	3	4	1	5	
Parkways						
Principal Arterial	2	4	5	3	1	
Minor Arterial	2	4	5	3	1	
Collector	2	4	5	3	1	
Minor/Local	5	1	4	3	2	

High Priority
Medium Priority
Low Priority

Table 1: Trade-Offs in Limited Right-of-Way Priorities places the highest priority on the pedestrian zone.

zones could be designed to the lowest minimum width.

Higher priority features should be included even if they can only be provided at a minimum width. The frontage zone has a high priority on Edgefield Avenue, and should be provided on the public right-of-way or allowed to expand onto the right-of-way. To encourage more pedestrians to access the transit within $\frac{1}{4}$ mile, the expansion of the frontage zone, sidewalk clear zone and buffer zone should be prioritized.

The Recommended Width Chart for Dallas Complete

Streets Elements, Table 2, should be used to select the widths as prioritized. Edgefield Avenue, located within a 1/4-mile

the two DART light rail transit stations Hampton and Vernon/Tyler station, should provide a minimum six-foot sidewalk clear zone. Bicycle facility markings are appropriate for Edgefield Avenue because speeds are lower than 35 mph. Particular attention is given to points of transition from one street type to another, as the mixed-use district of Edgefield Avenue meets the residential

cross-streets.

RECOMMENDED WIDTH CHART FOR DALLAS COMPLETE STREETS ELEMENTS										
Recommended Designation	Mixed-Use Streets		Commercial Streets		Residential Streets ¹		Industrial Streets		Parkways	
	Min	Pref	Min	Pref	Min	Pref	Min	Pref	Min	Pref
Pedestrian Zone²										
Frontage zone: ³	-	-	-	-	-	-	-	-	-	-
Frontage zone ³	-	-	-	-	-	-	-	-	-	-
Sidewalk clear zone: ⁴	6'	8'-15'	5'	6'-10'	5'	5'-10'	5'	5'-7'	5'	8'-10'
Buffer/furnishing zone:	6'	8'	6'	10'	6'	10'	6'	10'	6'	20'
Buffer with street tree	6'	8'	6'	10'	6'	10'	6'	10'	6'	20'
Buffer (adjacent to on-street parking) ⁵	2'	6'	2'	6'	2'	7'	2'	7'	-	-
Buffer (adjacent to travel lane, on-street parking not permitted) ⁵	5'	8'	5'	10'	5'	10'	5'	7'	5'	20'
Curb zone: ⁶	6"	1'-2"	6"	1'-2"	6"	1'-2"	6"	1'-2"	6"	1'-2"
Curb zone width ⁶	6"	1'-2"	6"	1'-2"	6"	1'-2"	6"	1'-2"	6"	1'-2"
Street Zone										
Parking zone: ⁷										
Parallel parking	7'	8'	-	-	7'	8'	7'	8'	-	-
Back-in angled parking ⁸	15'	22'	-	-	15'	22'	15'	22'	-	-
Flex lane ⁹	12'	15'	-	-	-	-	-	-	-	-
Travelway zone—lanes on thoroughfares:										
General purpose inside travel lane ¹⁰	10'	11'	10'	11'	9'	10'	11'	12'	10'	11'
Inside travel lane (adjacent to bicycle lane and parking lane)	10'	10'	-	-	10'	10'	11'	12'	-	-
Inside travel lane (adjacent to bicycle lane and curb, parking not permitted)	10'	10'	10'	11'	10'	10'	11'	12'	10'	12'
Left-turn lane	9'	10'	10'	10'	9'	10'	10'	11'	10'	10'
Two-way left turn lane	10'	12'	10'	12'	9'	12'	11'	12'	-	-
Shared use lane (adjacent to on-street parking, includes streetcars) ^{10,11}	10'	12'	-	-	10'	10'	11'	12'	-	-
Shared use lane (adjacent to curb, parking not permitted), ^{10,11}	10'	12'	10'	12'	10'	10'	11'	12'	10'	12'
Travelway zone—lanes on local (non-thoroughfare plan) streets: ¹²										
Two-directional two-lane roadway (curb to curb width, parking permitted)	26'	26'-36'	-	-	26'	26'	36'	36'	-	-
Two-directional two-lane roadway (curb to curb width, parking not permitted)	18'	18'	20'	20'	18'	18'	22'	22'	18'	18'
Travelway zone—bicycle facilities: ²										
Paved shoulder (with curb)	-	-	-	-	5'	8'	5'	8'	5'	8'
Paved shoulder (without curb)	-	-	-	-	4'	8'	4'	8'	4'	8'
Bicycle lane (parking permitted)	5'	6'	5'	5'	6'	5'	5'	6'	-	-
Bicycle lane (parking not permitted, curb and gutter present)	5'	5'	5'	6'	5'	5'	5'	5'	5'	6'
Bicycle lane/paved shoulder (parking not permitted, no curb and gutter)	-	-	4'	8'	4'	5'	4'	5'	4'	8'
Buffered bicycle lane (includes buffer)	7'	9'	7'	12'	7'	12'	7'	12'	7'	12'
Cycle track (one-way, includes buffer)	8'	10'	8'	10'	8'	10'	8'	10'	8'	13'
Cycle track (two-way, includes buffer)	11'	13'-18'	13'	13'-18'	13'	13'-18'	13'	13'-18'	13'	13'-18'
Travelway zone—transit lanes:										
Bus-only lanes	11'	12'	11'	12'	11'	12'	11'	12'	11'	12'
Bus and bicycle-only lanes	11'	14'-16'	11'	14'-16'	11'	14'-16'	11'	14'-16'	11'	14'-16'
Median zone:										
Pedestrian refuge	6'	-	6'	-	6'	-	6'	-	6'	-
Continuous with landscaping ¹³	6'	15'	6'	15'	6'	15'	10'	15'	6'	20'
Continuous without landscaping	4'	15'	4'	15'	4'	15'	4'	15'	4'	20'

Table 2: Recommended Width Chart for Dallas Complete Streets Elements, used to select the widths as prioritized

The guidance in the Design Element Priorities Chart indicates the recommended elements

that are appropriate for a mixed-use street of the size and context for Edgefield Avenue, shown in

Figure 3. The chart indicates that the primary consideration should be given for wide sidewalks,

and other pedestrian amenities: buffer zone trees, seating, lighting and waste receptacles.

Additional space should be created for plazas/pocket parks, and space for sidewalk cafes.

Information kiosks and pedestrian signage would help neighborhood patrons realize how close the transit lines are to the light rail, find the best route, as well as energize the street. Managing the pavement width is crucial to creating a pedestrian-forward feeling on Edgefield Avenue. The

Design Element Priorities Chart also recommends curb extensions, bulb outs and road diets, and on-street parking in the buffer zone. These complete streets elements are solutions for decreasing crossing distances and increasing a buffer zone for pedestrian traffic.

	Pedestrian Zone				Street Zone				Intersection Zone																										
	Wide Sidewalks	Shared Use Paths	Trees and Greenscape (Buffer Zone)	Seating	Street Furniture	Bicycle Parking Facilities	Bollards	Newspaper Bins	Transit Stops	Limited Curb Cuts and Driveways	Plazas/Pocket Parks/Parklets	Sidewalk Cafes	Pedestrian Lighting	Information Kiosks	Pedestrian Signage	Bicycle Signage	Slip Streets	Couples	Shared Streets (Woonerfs) ⁴	Trees and Greenscape (Median)	On-street Parking	Road/Lane Diet ⁵	Chicanes	Midblock Pedestrian Crossings	Special Pavement Treatment/Speed Tables ⁶	Street Lighting	Multimodal Intersection Design	Curb Extensions/Bulbouts	Modern Roundabouts	Traffic Circles	Crossing Islands ²	Special Pavement Treatment/Speed Tables	Special Pedestrian Signals	Special Bicycle Treatments ³	Special Transit Treatments
Contextual Street Type Overlays																																			
Mixed-Use Streets	Y					Y	Y	Y																											
Commercial Streets	Y					Y	Y	Y																											
Residential Streets			Y				Y			Y																									
Industrial Streets			Y			Y				Y																									
Parkways		Y				Y																													
Bike and Transit Network Overlays																																			
Bike Network Overlay																	N/R																		
Transit Network Overlay ¹		N/R															N/R																		

General Notes:

- Guidance for choice of bicycle facilities and transit facilities within the travelway based on Complete Street type is provided in the Bike and Transit Network Facility Priorities Chart.
- The guidance in this chart for Bike Network and Transit Network Streets should be considered in conjunction with the underlying contextual street types on which they are overlaid.
- More detailed design guidance on each design element is provided in Chapters 4, 5, and 6.
- Incorporation of Green Street and SWM techniques to reduce stormwater run-off and improve energy efficiency are a primary

Primary Consideration
Secondary Consideration
Optional Consideration
Not Desirable
N/R Not Relevant

Table 3: Design Element Priorities Chart indicates the recommended elements that are appropriate for a mixed-use street of the size and context for Edgefield Avenue.

The Bike Network Overlay and Transit Network Overlay adds additional priorities and intensifies those priorities already identified on the Design Element Priorities Chart. These overlays recommend priority be given to wide sidewalks, trees in the buffer zone, limited curb cuts, wayfinding signage, and bicycle parking facilities along Edgefield Avenue.

Edgefield Avenue is identified on the Vision Map titled Bike Network and Transit Network Overlay, Figure 3, not only for the bike facilities and transit facilities present there but for the continued priority placed on that route by the Dallas Bike Plan and long range transit system planning efforts by DART and the City of Dallas. The vision map places Edgefield Avenue in a class of streets that are instrumental in creating cross-city connectivity. “It is anticipated that there

will be opportunities during the corridor planning stage for proposed Complete Streets improvement projects to consider and refine the choice of bike and transit facility types to be included within the travelway zone of these streets (page 94).” This is important because this indicates that revising the bike transit facility map to reroute the bike facility onto a complete street on Edgefield Avenue is feasible, as local knowledge and support of the community is incorporated.

		Bike Network Facilities				Transit Network Facilities					
		Signed Route Only (No Lane Markings)	Paved Shoulders (Signed Route)	Bike Boulevards	Shared Bicycle Lane Markings ²	Bicycle Lanes	Buffered Bicycle Lanes / Offset Bicycle Lanes ⁴	Cycle Track (One-Way or Two-Way) ⁵	Shared Lanes ³	Priority Transit Lanes ⁶	Transit Ways
Contextual Street Types and Functional Classification											
Mixed Use Streets											
Principal Arterial											
Minor Arterial											
Collector											
Minor/Local											
Commercial Streets											
Principal Arterial											
Minor Arterial											
Collector											
Minor/Local											
Residential Streets											
Principal Arterial											
Minor Arterial											
Collector											
Minor/Local											
Industrial Streets											
Principal Arterial											
Minor Arterial											
Collector											
Minor/Local											
Parkways											
Principal Arterial											
Minor Arterial											
Collector											
Minor/Local											

	Preferred
	Acceptable
	Need Site Specific Review
	Not Desired

Table 4: Bike and Transit Network Facility Priorities Chart provided general guidance for selection of appropriate bike and transit facility types.

Incorporating bike facilities will be important for the Compete Street proposal on Edgefield Avenue, but the contextual street type and functional classification must be kept in mind when designing a feasible proposal. Utilizing the chart titled Bike and Transit Network Facility Priorities Chart, Figure 4, provided general guidance for selection of appropriate bike and transit facility types for Bike and Transit Network streets. The specific recommendations for the bike and transit

network facilities on mixed-use, collector streets like Edgefield Avenue indicate bicycle lanes and shared bus lanes as the preferred configuration. Shared lanes for busses may also include a shared lane for bicycles because the target speed is 30 mph and volumes are low. Bike boulevards would only be recommended if the site specific review indicates such a need is present. Signed routes only (no lane markings) and shared bicycle lane markings (those with no reserved bicycle space) are rated “not desired” by the priorities chart.

As with many mixed-use district streets, driveway curb openings and the many intersections along Edgefield Avenue disrupt the pedestrian experience. In addition to the roadway of Edgefield Avenue, the Avenue crosses nine streets where the dominant land use is single family. There is a need to address intersection safety as well as promote safe mid-block crossings where Edgefield Avenue’s long blocks might be crossed. The presence of an elementary school and transit stops would warrant a closer look at designing median refuges and designing the intersections with road diet attributes. The Federal Highway Administration stresses that median refuges offer greater safety benefits to pedestrians than crosswalks. A median refuge should be at minimum 6-feet long and 4-feet wide.

Existing Conditions in the Pedestrian, Intersection, and Street Zones

Policy guidance for complete street project design and implementation is outlined in the DCSDG as vision statements. These policy guidance statements, presented here, review the current conditions of the three zones discussed in Chapter Two: the pedestrian zone, the intersection zone, and the street zone. Each statement was utilized to examine existing conditions in the field, so that a needs assessment could be developed for the project. The resulting questionnaire rate the existing conditions on a four point scale: Good; Mild +; Mild -; Poor/None. The Complete Street Zone Policy Guidance vision statement questionnaire is displayed in the tables below.

Pedestrian Zone Policy Guidance Questionnaire

	4 GOOD	3 MILD +	2 MILD -	1 POOR/ NONE
Policy Goal				
Maximize Safety				
Sidewalks are located on both sides of the street.	X			
Pedestrians do not cross the street in order to access a safe walking area.	X			
Driveway access and curbcuts are consolidated.	X			
Provide a Comfortable Walking Environment				
Pedestrians are buffered from adjacent motor vehicle traffic.	X			
On-Street parking is available as a sidewalk buffer.	X			
Street trees and planting strips are present.	X			
Furnishing zones are present on sidewalks.	X			
Sidewalks are not located at the back of curb.	X			
Promote Active and Inviting Building Frontages				
Ground-level land uses and building frontages encourage foot traffic.	X			
Building entrances should be visible and easily accessible from the sidewalk.	X			
The transparency of building facades should be maximized.	X			
Sidewalk cafes, parklets, landscaping, and shading devices are encouraged.	X			
Provide Pedestrian-Friendly Amenities				
The pedestrian zone incorporate pedestrian-friendly amenities.	X			
Public art, street furniture, or parks encourages pedestrians to linger.	X			
Some combination of public and private investment could occur.	X			
Public art, cafes, plazas, or parks lend character to the street.	X			
Buffer Parking Areas				
Off-street parking covers no more than 25 percent of the property frontage.	X			
Parking is placed behind buildings.	X			
Landscaping, food vendors or kiosks are provided to buffer parking.	X			
Maintenance				
A Neighborhood Association or Business Improvement Districts is invested.	X			
Provide for Universal Access and Continuity				
The pedestrian zone meets all applicable accessibility guidelines.	X			
The sidewalk is smooth, stable, and has a slip-resistant surface.	X			
Surface material and design is consistent along Edgefield Avenue.	X			
Users of all ages can safely move within and across streets.	X			
Provide a Direct Route				
Sidewalks align with crosswalks at intersections.	X			
Sidewalks are straight and follow the alignment of the roadway.	X			
Provide Connectivity				
Linkages between adjacent land uses and the pedestrian zone are safe & convenient.	X			
Access is provided to entrances with good sight lines.	X			
Pedestrian crossings at driveways and drive aisles is minimized.	X			

Table 5 - Pedestrian Zone Policy Questionnaire. Review of existing pedestrian zone conditions on Edgefield Avenue, based on the questions posed in the Dallas Complete Streets Design Guidelines.

Pedestrian Zone Policy Guidance Questionnaire, Continued

	4	3	2	1
Policy Goal	GOOD	MILD +	MILD -	POOR/ NONE

Enhance Green Infrastructure	
The pedestrian zone incorporates green infrastructure elements.	X
Planting strips enhance the sidewalk and parking areas.	X
Street trees line the sidewalks.	X
Rain gardens or pervious pavement is present.	X
Impervious surfaces have been reduced to minimize the heat island effect.	X
Promote a Cohesive and Legible Walking Environment	
Edgefield Avenue has unifying elements such as a sidewalk material and joint pattern	X
Wayfinding signage helps create a cohesive and comfortable walking environment.	X
Coordination with Land Use Decisions and Designations	
Provision of sidewalks is a priority, no matter the land use designation of adjacent properties.	X

Table 5 - Pedestrian Zone Policy Questionnaire, Pedestrian Zone, Continued.

Street Zone Policy Guidance Questionnaire

	4	3	2	1
Policy Goal	GOOD	MILD +	MILD -	POOR/ NONE

Multi-modal Street Design	
The travel way shows considerations for every mode.	X
Street space is not dominated by motor vehicles.	X
Street space balances the needs of pedestrians, bicyclists, transit riders, and motorists.	X
Motor vehicle speeds is slower - pedestrians and bicycle travel is given priority.	X
Maximize Safety	
Street design does not compromise the safety of any mode for the benefit of another.	X
Vulnerable users (youth, disabilities) have been prioritized in the design.	X
Design for Slower Speeds	
A wide variety of roadway design strategies are used to reduce motor vehicle speeds.	X
Drivers are not frustrated with slower speed.	X
Street Design Reinforces Adjacent Land Uses	
The street design complements and reinforces adjacent uses.	X
Property values are strong.	X
Foot traffic to local businesses is common.	X
People chose to walk to local businesses after arrival.	X
People chose to bike or walk to the commercial areas, churches, & school.	X

Table 6 - Street Zone Policy Guidance Questionnaire. Review of existing street zone conditions on Edgefield Avenue, based on the questions posed in the Dallas Complete Streets Design Guidelines.

Intersection Zone Policy Guidance Questionnaire

		4 GOOD	3 MILD +	2 MILD -	1 POOR/ NONE
Policy Goal					
<i>Maximize Safety</i>					
Intersections follow national guidelines for Accessible Design (ADA)		X			
Intersections have been designed for the best outcome for all users.			X		
All modes of travel have been considered.				X	
Intersections are designed to minimize conflicts between vehicles, bicycles, and pedestrians.				X	
Parental queing at pick up/drop off does not encourage children to cross mid-block.					X
Drivers and bicyclists respect the needs of pedestrians.				X	
<i>Improve Access, Mobility, and Connectivity</i>					
A dense network of intersections distribute traffic amongst different routes.		X			
Intersections efficiently move traffic, reducing delay and travel times.			X		
School queing does not block through traffic on main thoroughfares.					X
New developments offer a mix of land uses and aim to minimize block lengths.			X		
<i>Design for Predictable Movements</i>					
Intersection facilitate predictable movements by all modes.				X	
Children understand how to cross the street safely at the crosswalk during school traffic.				X	
Intersections on Edgefield Avenue encourage everyone to obey traffic laws.					X
<i>Reclaim Space</i>					
Undefined areas of pavement not necessary for the movement of motor vehicles is present.				X	
Areas of pavement could be reclaimed for pedestrians, transit users, and bicyclists.				X	
<i>Reduce Footprint and Improve Sustainability</i>					
Intersection designs incorporate green, sustainable street elements.				X	
<i>Reduce or Eliminate</i>					
Unnecessary free right-turn movements are present.					X
Free right-turn movements and configurations pose a risk to vulnerable populations.					X

Table 7 - Intersection Zone Policy Guidance Questionnaire. Review of existing intersection zone conditions on Edgefield Avenue, based on the questions posed in the Dallas Complete Streets Design Guidelines.

Chapter Three: Existing Conditions & Site Analysis

Neighborhood Details

Project Site Location

The Elmwood neighborhood is in the North Oak Cliff area of Dallas, approximately 6 miles southwest of the Central Business District. The Elmwood neighborhood is within a $\frac{1}{4}$ mile, five-minute walking distance, of two DART light rail stations. Elmwood is a ten-minute drive from the bustling Bishop Arts District and many residents in Elmwood feel that the sort of investment that Bishop Arts received from the City of Dallas would similarly turn around Elmwood. It has great potential for new development as north Oak Cliff continues to gentrify, and people seek more affordable options for historic homes near transit.

Oak Cliff neighborhoods are special for the pockets of pedestrian-scaled commercial and mixed-use buildings, typical of neighborhoods built prior to 1940. These areas have a small-town, Main Street scale and should be preserved and enhanced wherever possible. Throughout the country, areas with historic and walkable urban form, especially near transit stations, have been revitalized as private investment seeks out this popular form. Many existing buildings are prime for redevelopment and adaptive reuse, such as the historic masonic lodge one block off Edgefield. Edgefield Avenue retains its historically walkable form and has the potential to become a vibrant local center, providing much needed services for new and existing residents.

The segment of Edgefield Avenue between Melbourne and Tennessee Avenues was selected for this project. At 1,400 feet long, it is approximately the length of the Knox Street complete streets pilot project. Six important factors made Edgefield Avenue the chosen project location:

1. The street segment has a local commercial neighborhood business district
2. The street segment can be walked in less than 20-minutes or biked in 10 minutes

3. Schools and churches are within a 10-minute walk
4. The commercial district is located within a 7-minute bike or bus ride to light rail stations; and is served by DART bus routes. In addition
5. Residents perceive the cars on the street as driving too fast; and
6. The neighborhood association has been vocal about the unmet potential of the neighborhood business district.

All of these factors make the Elmwood Neighborhood Center ripe for complete streets design intervention. Figure 8 shows the proximity to transit (orange half-mile walk buffer), shopping (teal), and parks (green) with proposed and existing bike routes shown in a dashed yellow line.

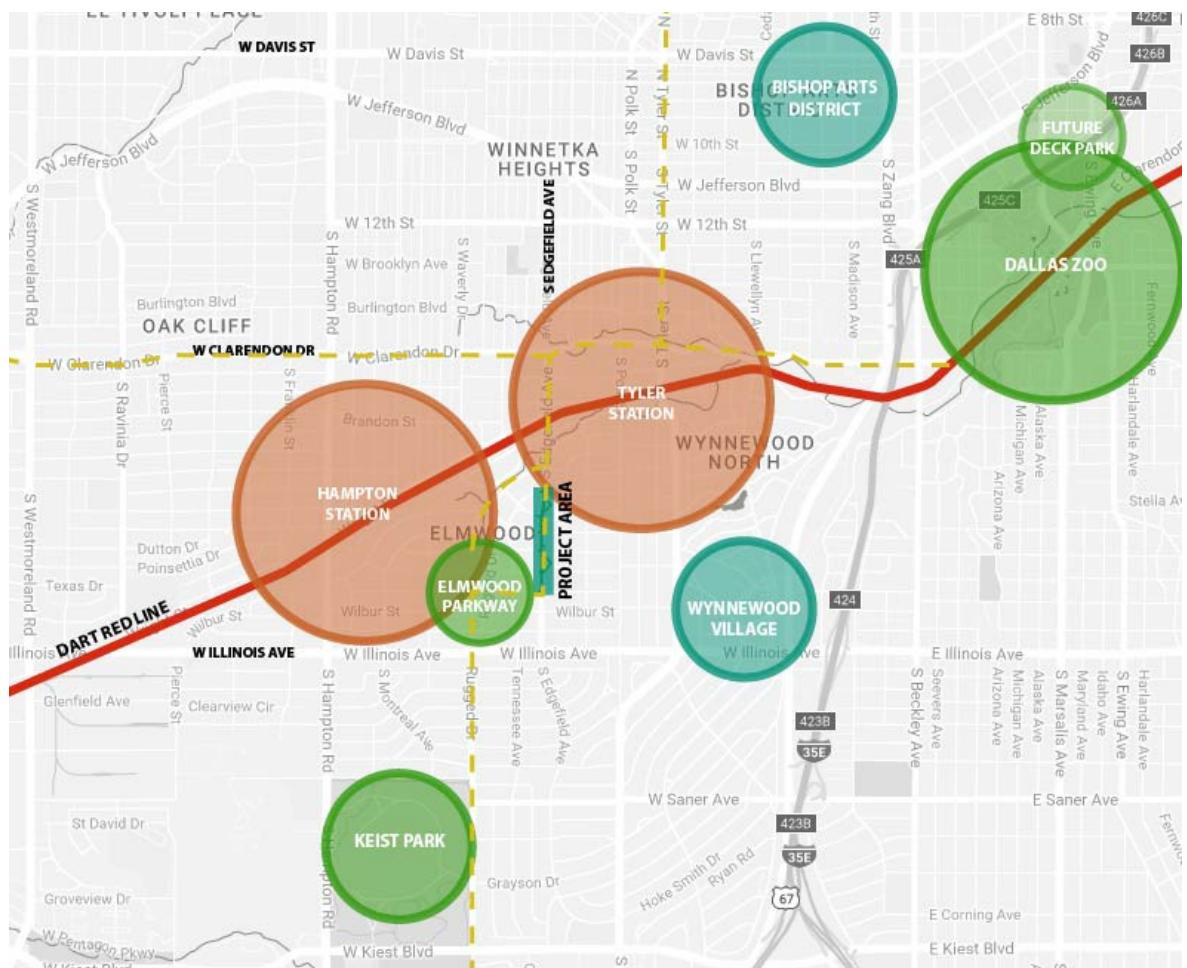


Figure 8: Edgefield Avenue's complete street will provide an important link to transit and offers a better bicycle route.

Edgefield Avenue is on the Dallas Bike Plan, and is included in the City of Dallas Master Thoroughfare Plan classified as a Community Collector street. Edgefield is a (S-2-U) street or a standard two-way street, undivided, with 56 feet of right-of-way. Head-in parking is available in front of almost half of the businesses. Many redundant curb cuts provide head-in parking at businesses, and several vacant lots disrupt the sidewalks. At the north and south ends of Edgefield Avenue, cross streets curve to create block-long triangular spaces, providing attractive, green gateways to the study segment. At the southern-most end, Margaret B. Henderson Elementary School fronts Edgefield Avenue. It is typical to see small children riding bicycles and couples walking dogs in the surrounding neighborhood streets, while Edgefield Avenue is relatively empty of social life.

Current development along Edgefield Avenue reflects the suburban model of modern development. Many newer buildings on Edgefield are set far back from the street with surface parking in front. Multiple curb cuts and driveways create a pedestrian-unfriendly condition, setting up conflict between pedestrians and autos, although continuous four-foot wide sidewalks are present. In late 2017 bond money was spent on new asphalt concrete road paving and striping, and new ADA accessible curbs were installed along Edgefield Avenue.

Existing Land Use

The local commercial area is predominately single-story, mid-century modern office and retail buildings. The neighborhood is zoned R-7.5 (A), Single Family on 7,500-square foot lots, limited to 30' tall buildings. There is a 15' front setback, 20' side/rear setback next to residential and no setback minimum for all other uses. The project area is zoned CR-Community Retail. Community Retail has a density requirement of .75 FAR overall, 0.5 office, and is height restricted to 54' or 4 stories.

Primary uses are retail and personal services and office uses. Retail and commercial uses are predominately taquerias, beauty & barbershops and automotive-based businesses. A single sandwich shop, used appliance sales, dance studio, convenience store, and a Mexican bakery round out the mix along Edgefield Avenue. Commercial and service uses are concentrated along the Edgefield Avenue Corridor and adjoining streets. These streets once contained the day-to-day goods and services that catered to neighborhood residents. There is unmet demand for services for the local market. Many vacant and underutilized storefronts frustrate residents who would like to open businesses. Institutional uses include three architecturally significant churches and an elementary school on Edgefield, while several other elementary schools are available on the western side of the neighborhood.

Elmwood Neighborhood Commercial Properties - Building Class



Figure 9: BC Workshop did a preliminary study of Edgefield Avenue's commercial district in 2014. The Elmwood Neighborhood Association had hoped it would bring activity to the street.

An industrial site was recently purchased and reopened as neighborhood commercial rental space. The Tyler Station entrepreneurial center opened in 2017 in the former Dixie Wax Paper Company factory. The extensive space is situated across the tracks from the Tyler/Vernon DART light rail station. Monthly events are planned at Tyler Station that may prove to boost interest in Edgefield Avenue too.

Housing

Elmwood is made up of predominantly single-family homes, two- and three-bedroom homes, most less than 2,000 square feet. These homes, built between 1930 and 1960, provide convenient and affordable housing. Elmwood comprises Census Tract 63.02, which tallied 1,359 homes, 78% of which are owner-occupied. Although the homes are in various states of repair there are no vacant lots in Elmwood. On the whole, the area is rated a sellers' market and many homes are being improved or rehabbed before being put on the real estate market (City of Dallas, 2018). According to that same City of Dallas Market Value Analysis, Elmwood is identified in Area D for median home sales price of \$267,100 and 3% property rehabilitations (the hottest area is at 4.4%).

Block Structure

Because of its historic nature, the Elmwood neighborhood has a block pattern that is ideal for the circulation of pedestrians, bicycles and automobiles. Narrow streets are lined with vehicles from the neighborhood, effectively creating a single lane and slowing traffic. Sidewalks line both sides of the residential streets in most cases. The streets are arranged in a grid pattern, and except where streets curve along the greenway, they maintain 500' block faces for a high degree of connectivity and walkability.

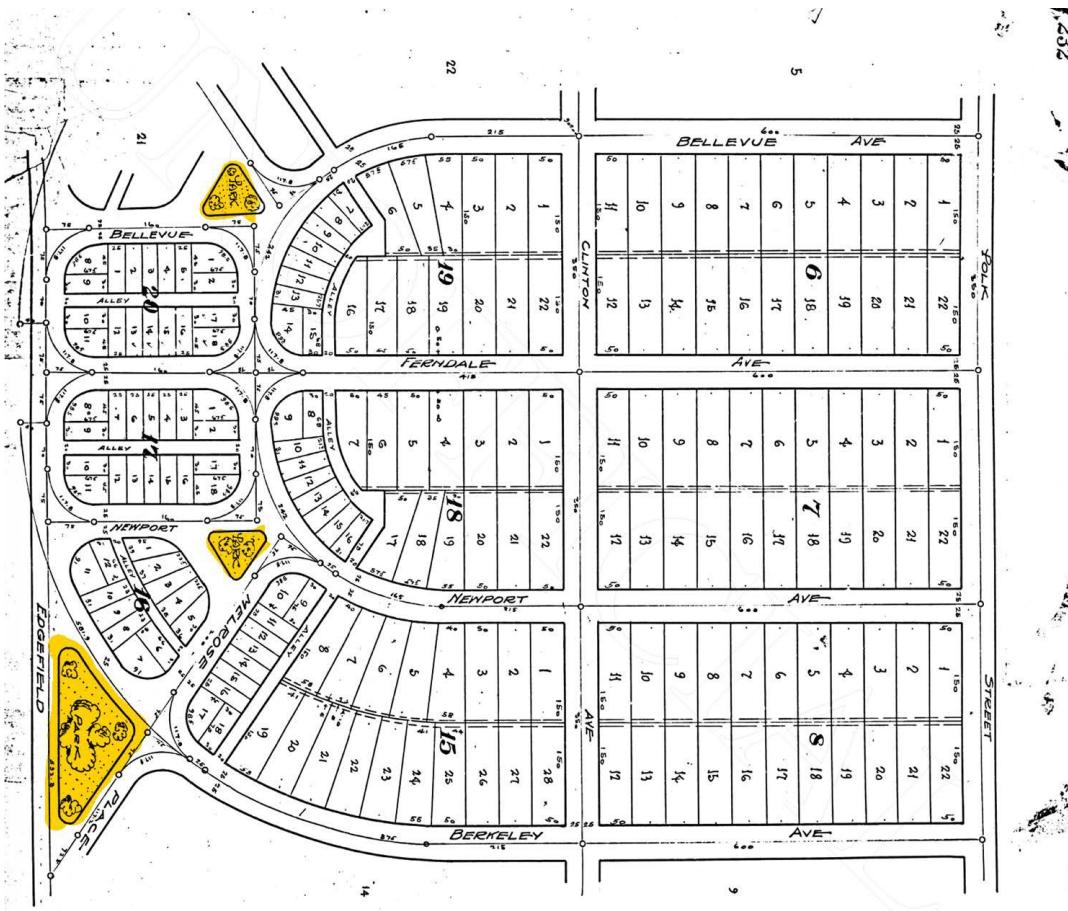


Figure 10: A page from the original plat of Elmwood Addition, 1924, shows the commercial district along with parks and wide intersections. The complete plat is in the Appendix.

Gateways

Gateways represent the entrances into the Elmwood neighborhood, as they are located at the edges of the overall district at Balboa Drive and at Berkley Avenue. Edgefield Avenue's commercial district is flanked by two entry points into the neighborhood, at the north and south edges, formed by large, grassy triangles planted with mature live oak trees. The residential nature of the neighborhood opens up into a highly visible, commercial right-of-way, before resuming a residential character at the second green triangle. The nearby light rail stations could provide gateway signage for the district, as they are the major points of entry for transit riders into the neighborhood. These gateways are the first thing a visitor sees when entering and exiting Elmwood, and offer an opportunity to be developed further into attractive and welcoming

features along with wayfinding or gateway signage.

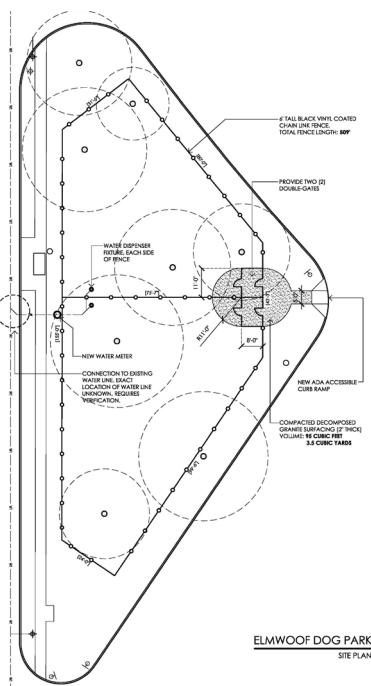
Existing Open Spaces & Parks

The commercial district of Elmwood features five triangular green spaces formed by the curving streets crossing Edgefield Avenue. Two of the largest front on the east side of Edgefield

Avenue. The largest of these, 0.3-acres, shares a boundary street with Henderson Elementary School and is in the planning stage for an off-street public dog park. The Elmwood Neighborhood Association had reached 50% of its funding goal for Elmwood Dog Park as of March 1, 2019, and is the recipient of grants from Old Oak Cliff Conservation League for Phase I of the project. Once the dog park opens it will be the first City of Dallas dog park south of IH-30 and will feature an entrance plaza, separately fenced small and large dog areas, and water.

Figure 11: The Elmwood Dog Park plan, 2019.

Just to the west of Edgefield Avenue is the Elmwood Branch of Cedar Creek, situated in the Elmwood Park and Linear Greenway. Rugged Drive splits into a one-way couplet around this curvilinear greenway. A hike and bike trail extends through the neighborhood from Edgefield Avenue and Elmwood Boulevard in the north, reinforcing the northern gateway, to Mountain Lake Road at the south end of the neighborhood. Not all of the residential streets cross the open space. Crossings of Elmwood Park exist at Berkley Avenue, reinforcing the southern gateway of the Edgefield commercial district, and at Ferndale Avenue, the midpoint Kiest Park is a 263-acre park with ball fields, open lawns, playgrounds and a recreation center. The Elmwood Park and Linear Greenway is connected to Kiest Park, 1 mile to the south, via a ten-foot wide concrete trail marked for pedestrians and bicycles. Illinois Avenue separates the two



neighborhoods, but the trail intersection is protected with a light and walk signal.

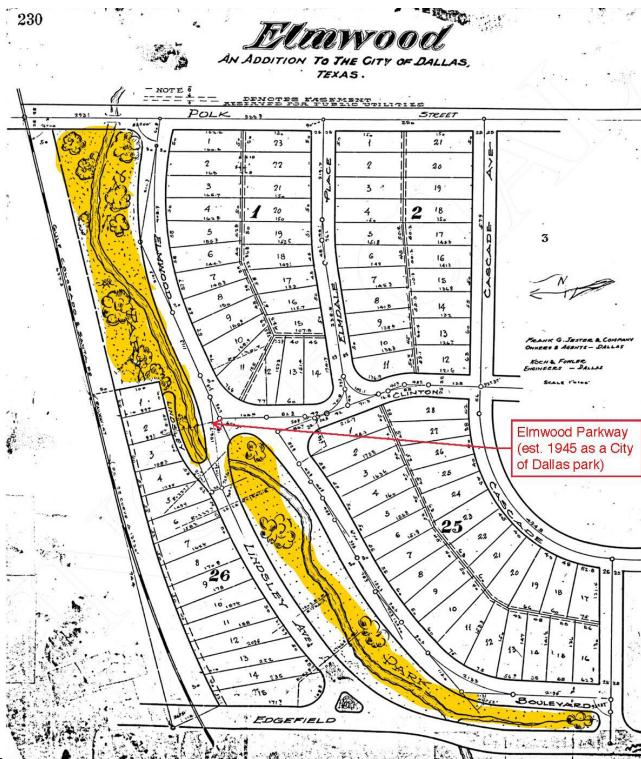


Figure 12: The greenways of Elmwood Parkway shown on the plat from 1924.

Existing Transportation Conditions

Corridor Conditions

Edgefield Avenue retains a pocket of commercial and mixed-use buildings that are pedestrian-scaled and adjacent to the sidewalk. The village-like scale should be preserved and enhanced with streetscape improvements. The historic and walkable urban form in close proximity to transit stations give Elmwood the potential to become vibrant local center, providing much needed services for both new and existing residents. The neighborhood is walkable but the change to an auto-oriented environment, both on the street and in the businesses. Some buildings have been removed and the vacancy creates gaps in the pedestrian experience. In other areas, newer one-story buildings are set back from the street with surface parking lots in front. This orientation creates a pedestrian-unfriendly suburban character in some

sections of the Avenue. Repetitive large curb-cuts break the secure sidewalk zone for pedestrians and create conflict between pedestrians and automobiles. Pedestrian infrastructure is limited and in need of improvement where connections across parking lots are missing and curb-cuts are too frequent.

Existing Transit Service

The DART light rail Red line forms the north boundary of the Elmwood neighborhood. Hampton Station is located to the west and Tyler/Vernon Station is on the east boundary. DART Rail Station Area Fact Sheets include sidewalk condition maps from the 2013 Pedestrian Routes to Rail study. The study identifies sidewalks and trails within a half-mile actual walking distance of light rail stations, including disconnections and gaps in the route. Maps for Hampton Station and Tyler/Vernon are shown in the appendix. The Edgefield Avenue study segment is within a 1/4 walk, on a continuous route, of Tyler/Vernon Station. A walk to the Hampton Station is three blocks farther, but either station is a 5-minute bus ride away.

Two bus routes run on Edgefield Avenue with service to downtown. Bus stops are on both sides of Edgefield Avenue between Berkley and Newport Avenues, near the elementary school. Local bus route 42 travels on Edgefield Avenue with service to downtown Dallas and Hampton Station, ditto route 21 with service to Tyler/Vernon Station, Kiest Boulevard, and the Red Bird Transit Center. From Hampton Station, local bus 453 has service to Southwest Center Mall, Hampton Station, and Southwestern Medical District/Parkland Station. Bus route 405 has service through Tyler/Vernon Station to Southwestern Medical District/Parkland Station and Ledbetter Station. Route 444 can be reached from Tyler/Vernon Station with service to Ledbetter Station, Illinois Station, 8th & Corinth Station, Cockrell Hill Transfer Location, and Carbondale.

Bike Routes

The 2011 Dallas Bike Plan shows that multiple routes near Edgefield are on the Dallas

Bikeway System master plan of on-street and off-street bike facilities. The nearby Elmwood greenway trail is an off-street bike facility on the Veloweb. It was completed in 2015. On-street bikeways planned for Edgefield Avenue are shared-lane markings between Wilbur Street one block south of Henderson Elementary, and Ferndale Avenue at the center of the study segment. The route then turns east on Ferndale Avenue to Vernon Avenue, continuing on Vernon Avenue as the primary planned route to Tyler/Vernon Station.

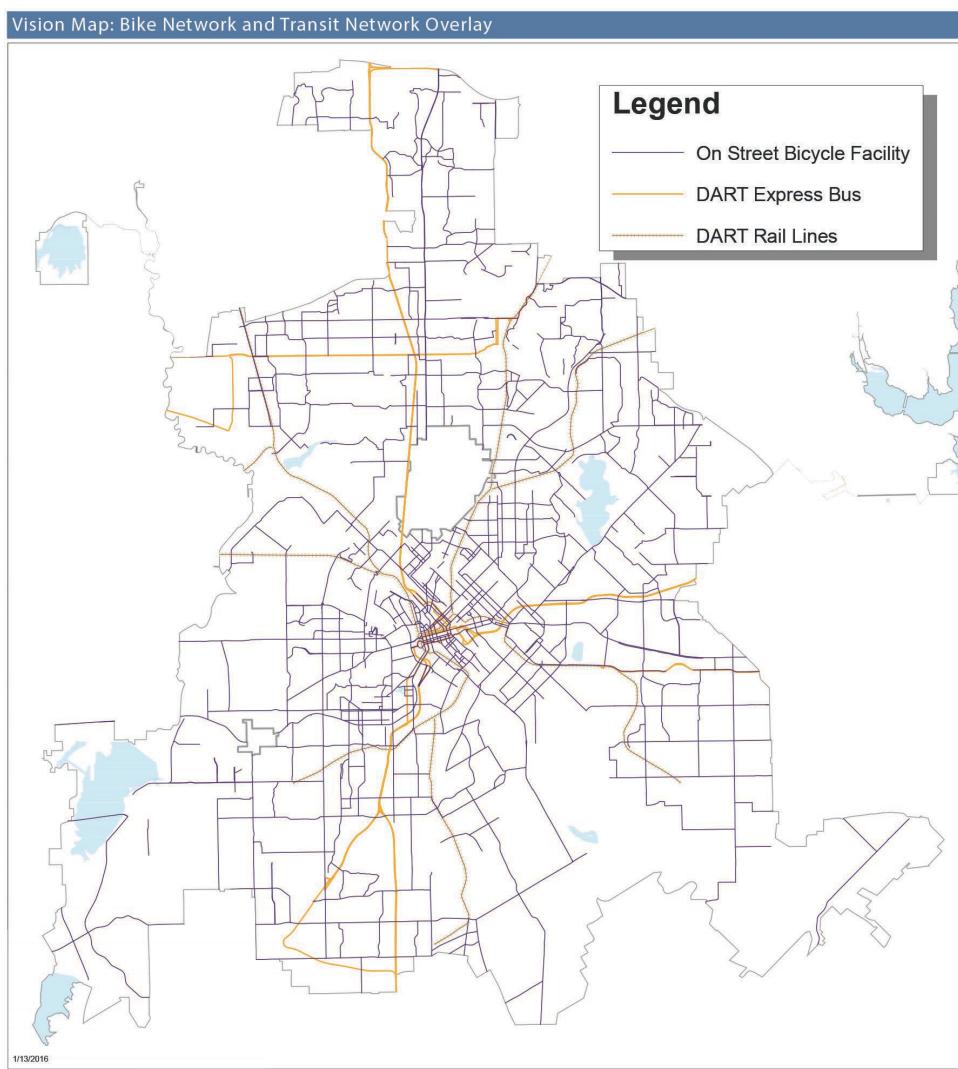


Figure 13: The Bike Network and Transit Network Overlay is a Vision Map component of the Dallas Thoroughfare Plan, 2018.

The 2011 Dallas Bike Plan identifies opportunities and constraints including “excess capacity on city streets; intersection safety and access improvements; and other barriers” (City of Dallas, 2011). These opportunities and constraints can be addressed through complete street

renovations. Excess roadway capacity, as there is on Edgefield Avenue, is an opportunity, says the Plan. It “means that street space can be more easily reallocated, often by simply using paint to re-channelize traffic to create space for on-street bicycle facilities” (City of Dallas, page 5).

Intersections pose a risk for bicyclists because this is where motor vehicles are most likely to crash with a cyclist. The intersections at the curved sections of Pioneer Drive and Berkley Avenue have wide intersections, and an easy intersection geometry that allows for high-speed motor vehicle turns. “Once an intersection is improved, it has the potential to make an entire corridor more inviting and bike-friendly”, notes the 2011 Plan (page 5).

Barriers are especially bad for bicycle systems because – at a single point – they have the ability to ruin what could have been a good route. Barriers to bicycle route connectivity may be as obvious as a freeway or railroad track blocking a destination, long blocks with no through access, or a busy arterial without a stop light. For example, the intersection at Rugged Avenue was signalized in 2016 to provide reliable access between Kiest Park and the Elmwood Greenway. The bike Plan reiterates that it is important to have on-the-ground route information for better routes. This feedback is necessary to the creation of sensible bike routes.

Strava is a GPS mobile app for bicyclists, runners, and neighborhood walkers to track their activity and use their own data to aid in better performance. In 2017, Strava launched STRAVA|METRO to make this data available to transportation planners, so that transportation and bicycle planners may observe the good routes, pinch points and barriers influencing where people actually ride. NCTCOG does an annual bicycle count in November but route data is not being collected. Strava’s guide, Data-Driven Bicycle and Pedestrian Planning, says: “This information, while helpful, paints an incomplete picture of how people move through cities, and does a poor job of showing the long-term effects of improving infrastructure and promoting cycling and walking. Smart cycling and pedestrian data can show which roads they use and intentionally avoid, what

Figure 14: The Strava data map shows the bicycling routes in and around the Elmwood neighborhood.



time they travel, where they go and much more. With data like this, cities can better understand how people choose to interact with the network of roads, bike paths and intersections (Strava, 2018)." The Strava heat map shows the bicycling routes in and around the Elmwood neighborhood – it is easy to see what routes are not taken. The map indicates an absence of use, revealing a negative environment for bicyclists might exist. The problem may be little or no excess space on the roadway; sidewalks too narrow or nonexistent; or fast traffic with indifferent drivers. The maps, figure, indicates such a situation on the planned bike route from Ferndale Avenue to Vernon Avenue, and north on Vernon to Tyler/Vernon Station. The map shows that bicyclists are not choosing to take Vernon Avenue. The preferred route is Edgefield Avenue.

Existing Conditions Analysis

Analysis graphics were developed to illustrate the existing conditions in the pedestrian realm along Edgefield Avenue. Figure Two, Sidewalks Buffer Distance to Travel Lanes shows

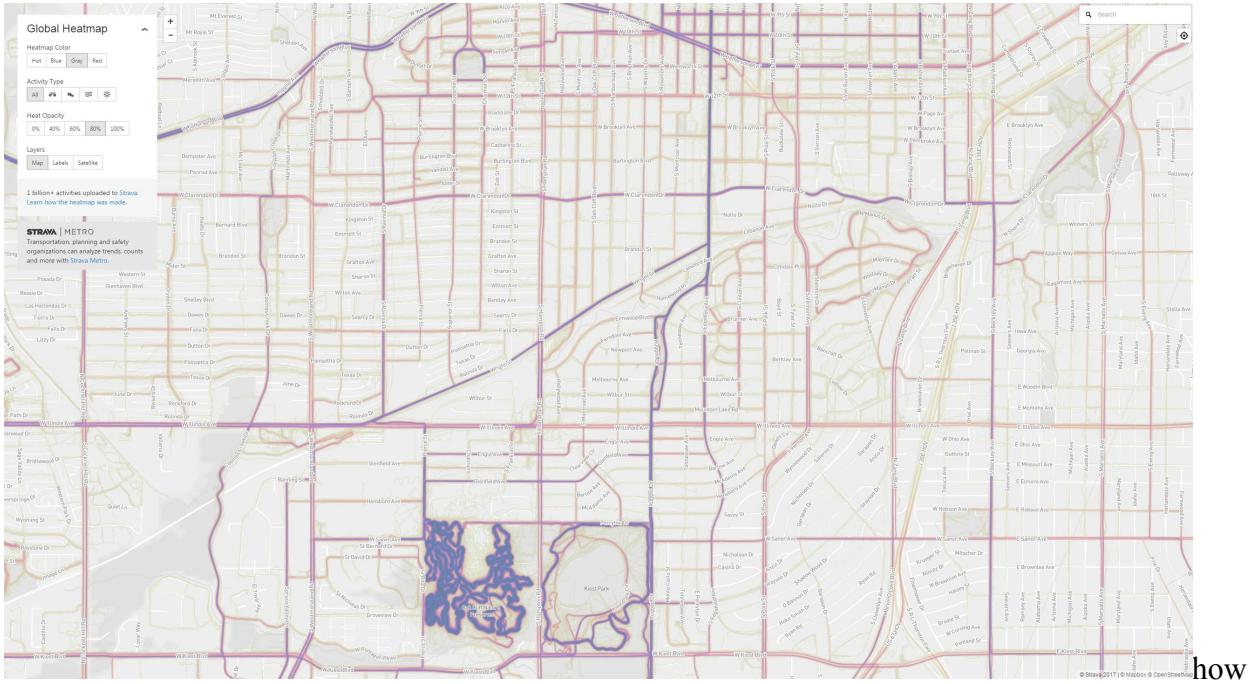


Figure 15: Strava heat map of bicycle activity in Oak Cliff. The preferred routes are Jefferson Boulevard (E-W); Edgefield Avenue (N-S); Kiest Park and Oak Cliff Nature Preserve DORBA Trail.

much of the route is within 6-feet of the traffic along the Avenue, a detrimental factor in pedestrian comfort. Figure Three, Greenspace, Plazas & Vacant Lots shows the parkway areas in the public right-of-way that are green amenities that could be planted with trees to add shade to the sidewalk. Plaza space has been shown to show those area that could be developed as festival space on private property. Figure Four, Pedestrian Conflict Points illustrates both the irregular path a pedestrian must walk as they navigate the street, not including crossing the street. Pedestrians must find the path that moves towards and away from the street just following the sidewalk and must avoid cars parked in the sidewalk. Finally, the intrepid pedestrians must cross multiple driveways per block where the sidewalk does not continue. Figure Five illustrates the treeless sidewalk conditions. Over 1,000 feet of the project area has less than 20% tree cover. The only places with existing tree canopy are the two triangular open spaces

Sidewalks Buffer Distance to Travel Lanes

PEDESTRIAN ZONE



Figure 16 - Sidewalks Buffer Distance to Travel Lanes

Greenspace, Plazas & Vacant Lots

PEDESTRIAN ZONE

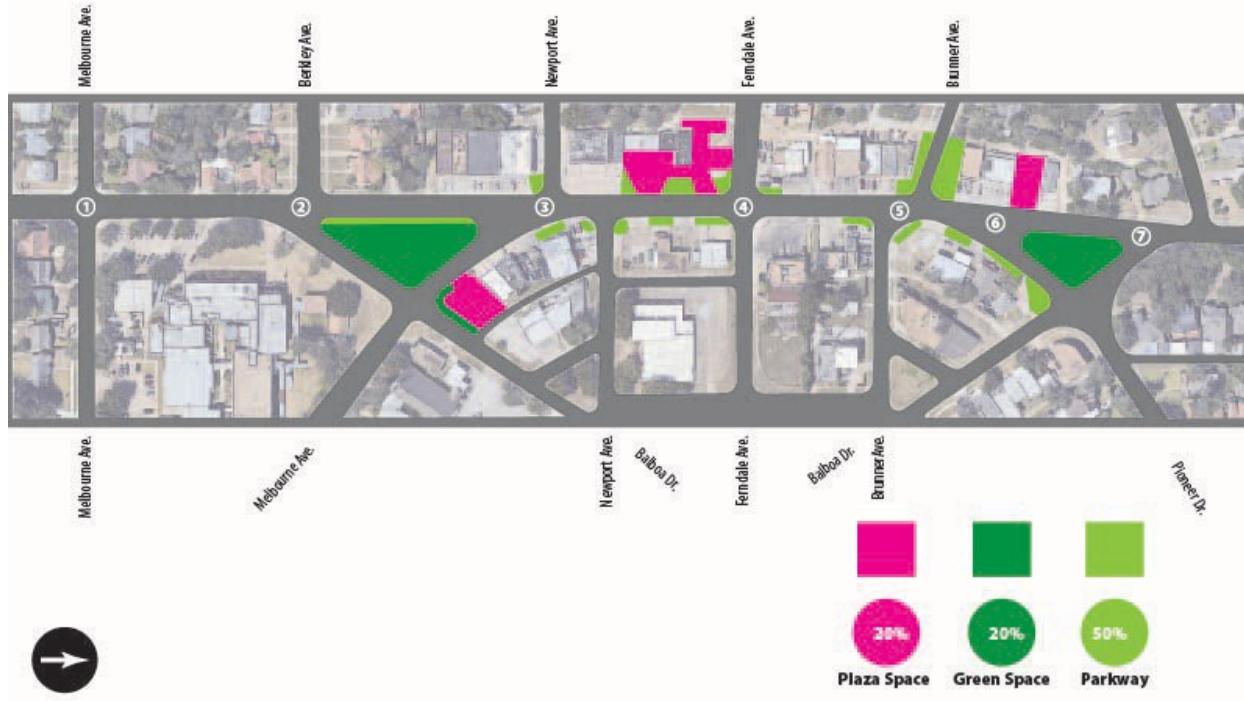


Figure 17 - Greenspace, Plazas & Vacant Lots

Pedestrian Conflict Points: Sidewalk vs. Driveway

PEDESTRIAN ZONE



Figure 18 - Pedestrian Conflict Points

Tree Canopy Cover

PEDESTRIAN ZONE



Figure 19 - Tree Canopy Cover

Block Lengths & Right of Way Width

INTERSECTION ZONE



36-foot ROW:
Berkley & Ferndale

26-foot ROW:
Melbourne, Newport, Brunner, Balboa & Pioneer

56-foot ROW:
Edgefield Avenue

Figure 20 - Block Lengths & Right-of-Way Widths

Intersections

INTERSECTION ZONE



Figure 21 – Intersections

Parking: On-Street, Head-In & Parking Lots

STREET ZONE



Figure 22 - Parking: On-Street, Head-In & Parking Lots

Bicycle Infrastructure & Transit

STREET ZONE



Figure 23 - Bicycle & Transit Infrastructure

Neighborhood Defined Development Priorities

The Elmwood Neighborhood Association has identified priorities and challenges that face the commercial district at the heart of the neighborhood. They have identified four development priorities and three development challenges through meetings to develop the Elmwoof Dog Park since 2017, and are documented in the Proposal for Elmwoof Dog Park (2019). The named development priorities are:

1. Landscaping & Pedestrian Enhancements. Improvements need to be made to the streetscape and pedestrian environment. Safety and increased night lighting need to be considered.

2. Infill & Increased Density. Infill structures should be added to the existing urban environment, increasing population density.
3. Parking Regulations. Parking requirements and location should be revised to allow for shared parking, and count on-street parking toward building use requirements. Off-street parking should be located to the rear of the buildings.
4. Public Spaces. Public spaces and traffic triangles should be landscaped to enhance the character of the built environment.

The named development challenges are:

1. Existing size of “dry” area and existing small lot sizes (25’ x 100’) discourages new infill development.
2. Current pull-in (off-street) parking and existing curb cuts inhibit implementation of walkable streetscape and landscaping.
3. Insufficient customer traffic and area’s location makes it difficult to operate viable businesses.

Conclusion

The entire pedestrian route along Edgefield Avenue could benefit from improvements to enhance the pedestrian experience. Sidewalks are present the entire length of Edgefield Avenue and tactile landings are present at each corner to meet Americans with Disabilities Act (ADA) requirements, however the path is not straight across the intersection at many locations and may pose difficulty for sight impaired pedestrians. Sidewalks exist where storefronts are closest to the street, but half of the existing sidewalks do not have a buffer between pedestrians and traffic. Pedestrian path continuity is disrupted by the many wide driveways and curb cuts. Vehicles parked along narrow sidewalks provide barriers to the path of travel.

Mending these gaps along the sidewalk network would contribute to the Neighborhood’s

development goals of improving the pedestrian environment and promoting safety. Improving the clarity of crossing locations would make the commercial district much easier for children and the elderly to navigate. Streetscape improvements focused on human comfort in the pedestrian zone could ultimately encourage residents to take more trips on foot, ultimately reducing the amount of carbon emissions by vehicles and making the Elmwood Neighborhood a destination for visitors.

Formal bike lanes and bike paths do not currently exist along Edgefield Avenue or within the Elmwood Neighborhood. Implementing bike infrastructure would contribute to the Dallas Complete Streets Design Guidelines goals of providing a valuable connection to light rail and bus service, as well as encouraging bike travel as an alternative to vehicle trips. Construction of bike lanes, either dedicated or shared lanes, would define the Elmwood Neighborhood as a destination by linking the local bike route to existing recreational opportunities and trail networks, neighborhoods, and transit via the City-wide bike system.

The Dallas Complete Streets Design Guidelines has identified storm water management and other greening strategies as an integral part of a complete street. Edgefield Avenue has very little parkway turf to buffer the sidewalks from traffic and zero shade trees along the sidewalk. The only exception is the open space triangles at Balboa Drive which are shaded by large live oak trees. Improving the tree canopy coverage over the sidewalks of the Elmwood commercial district could create a new face for Edgefield Avenue. Additional trees along Edgefield Avenue would improve human comfort through reduced temperatures, provide increased safety by buffering traffic, and could be designed to hold water after storms for slower infiltration to the planting beds rather than into the City's storm drainage system. Edgefield Avenue's commercial district is heavily paved and unshaded. By decreasing the amount of impervious surfaces, run-off to the nearby streams can be reduced, improving the water quality, and at the same time, provide more space for trees and vegetation along the street. The proposals outlined in the next chapter will seek

to maximize the Elmwood Neighborhood Association's development priorities and find solutions to these challenges.

Chapter Four: Complete Street Proposal

The Edgefield Avenue complete street proposal addresses the existing mixed land uses of residential, park, education, institutional and commercial while considering the needs identified by the Elmwood Neighborhood Association, to build the vibrant district the neighborhood residents envision. The proposed complete street redesign prioritizes pedestrian and bicycle connectivity, block by block, along with individualized intersection treatments and circulation around two triangular parkway greens. One-block portions of Ferndale and Balboa, adjacent to Henderson Elementary and the proposed Elmwoof Dog Park, have also been included in the complete streets design to provide for additional on-street parking, increase social activity zones, provide for pedestrian safety, and support the adjacent land uses. Seven irregular intersections and misaligned crossing streets – formed by the neighborhood layout of curves-meet-grid – add significant complexity to the pedestrian experience. These intersections received complete street treatments to align them better with Edgefield Avenue. These triangular parkway greens are hidden gems within a walkable street network that advances the quality of life for those in the neighborhood, and so the complete street proposal seeks to make the most of them.

Project Goals

The proposed complete street design began with the identification of complete streets requirements in the City of Dallas' Complete Streets Design Guidelines and the goals outlined by the Elmwood Neighborhood Association. These have been grouped into the following project goal outcomes:

Pedestrian Safety: The quality of the pedestrian zone should be improved with lighting, both to illuminate pedestrians and for pedestrian's ability to see at night. Buffer pedestrians from traffic and provide some seating for those walking longer distances. Provide clear zones where pedestrians have priority over parked cars. Widen sidewalks where possible.

Main Lane Management: Narrow the main lanes to shorten crossing distances, slow traffic, and accommodate on-street parking and bike lanes.

Parking Regulations: Provide on-street parking and discourage businesses from parking in the pedestrian through-zone. Clarify the queuing path for vehicles picking up and dropping off school children.

Bicycle Connections: Provide clear, safe, enjoyable routes to the two DART light rail transit stops and tie in the neighborhood bike routes to the City-wide trail system.

Access Management: Improve the safety of pedestrians and reduce crashes on the roadway by limiting driveway access. Reduce the width of individual driveways and close redundant driveways. Encourage internal connections between neighboring properties through shared driveways and cross-access agreements.

Intersection Management: Reduce the large intersection openings and tighten the radius on corners so that crossing distances for pedestrians is shortened. Repurpose overly wide right-of-way as plaza space. Provide painted crosswalks to highlight the best crossing locations and make pedestrian activity more easily anticipated by drivers. So-called continental crosswalks, also known as a ladder or zebra-striped crosswalk are preferred for pedestrian visibility.

Transit Access: Improve the DART bus shelter location and incorporate it into the block so that it ties into surrounding land uses and does not block the sidewalk.

Activity on the Street: Increase population density and promote infill of vacant lots. Encourage an influx of visitors to the area through events, food truck parking spaces, and make use of vacant lots for community activity where possible.

Green Streets: Landscape Enhancement for pedestrian comfort, environmental quality improvement, and beauty. Public open spaces should be cared for and utilized. Provide trees for shade, and planters to soften the excess pavement and cool the urban heat island.

Proposed Edgefield Avenue Complete Streets

The following three pages show Edgefield Avenue in three segments; south, center, and north. To facilitate discussion and to act as a location key, each block has been numbered, and the two triangular green open space parks are marked A and B. The existing conditions photographs (shown in the Appendix) refer to the block numbers shown on the proposal sheets.

Streetscape and Main Lane Elements

An enhanced streetscape plan of widened sidewalks, pedestrian amenities, shaded bike lanes and on-street parking, colorful plants, and pedestrian-scale lighting will be more inviting and useful for residents, as well as providing improved neighborhood access to transit and attracting new people to the area. These streets will accommodate two travel lanes for motor vehicles with a shared bicycle lane on either side, parallel on-street parking on both sides, and 6-foot sidewalks with trees and other plantings on both sides. Also, there will be space for café seating, street lights will be added to the new light poles to enhance the safety of the pedestrian environment, and hanging Edison bulb styled lights will span the roadway to emphasize the special district.

Parallel parking will be accommodated on the east side of the street, while head-in parking is extended along the west side of the street between an established sidewalk through-zone and the curb. Street trees along the west side assist in calming traffic, creating a buffer between moving traffic and pedestrians. New bump-outs protect the parallel parking, and also provide space for new rain-gardens with street trees for shade, and provide safer gathering spaces for pedestrians waiting to cross.

EDGEFIELD AVENUE | COMPLETE STREET PROPOSAL MELBOURNE AVENUE TO NEWPORT AVENUE | SOUTH END



Figure 24 - Complete Street Proposal - South End

EDGEFIELD AVENUE | COMPLETE STREET PROPOSAL NEWPORT AVENUE TO BRUNNER AVENUE | CENTER

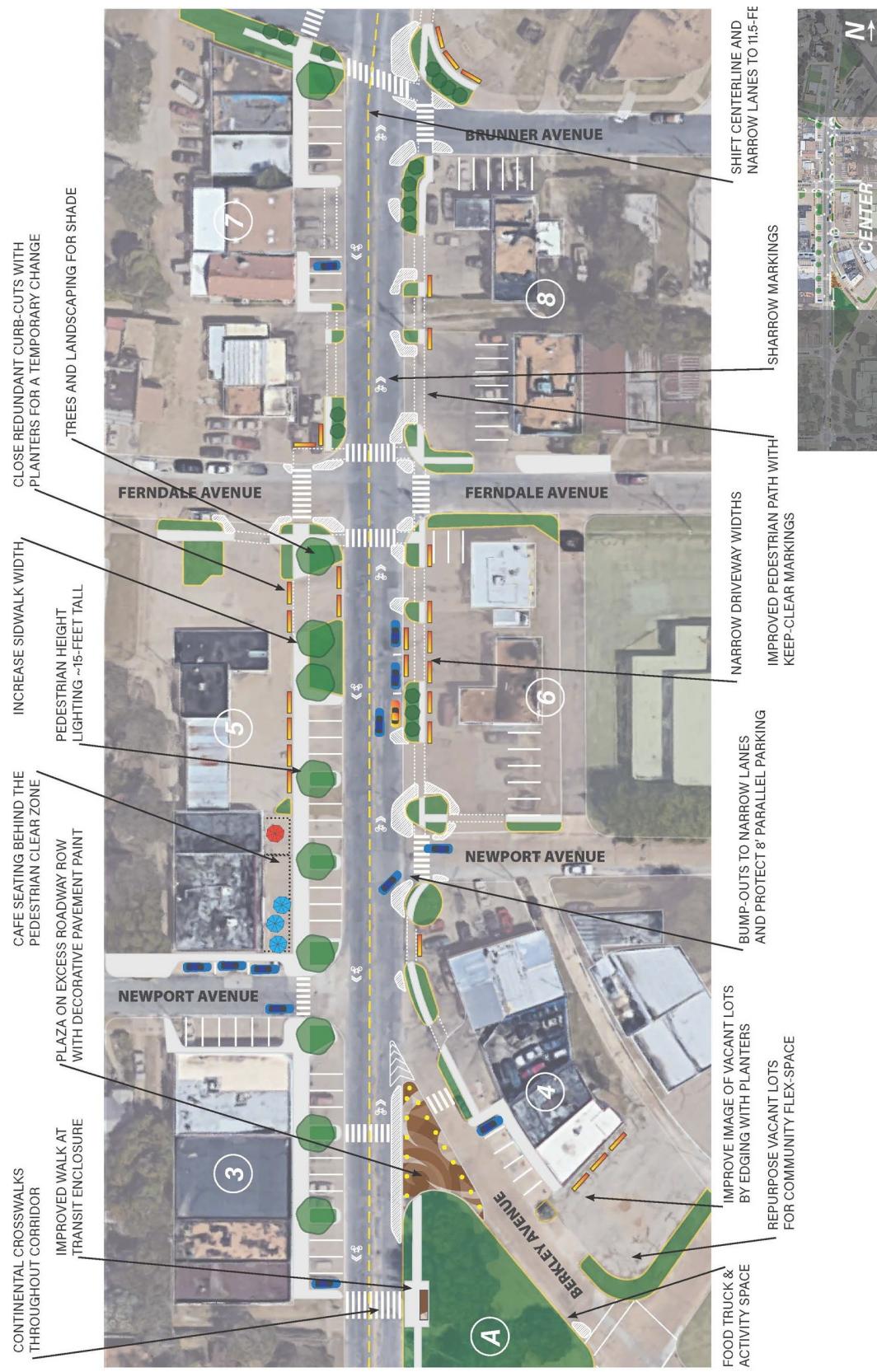


Figure 25 - Complete Street Proposal - Middle Section

**EDGEFIELD AVENUE | COMPLETE STREET PROPOSAL
FERNDALE AVENUE TO TENNESSEE AVENUE | NORTH END**



Figure 26 - Complete Street Proposal - North Section

To foster a safe, lively pedestrian environment and calm traffic, the street lanes have been reduced from 15-foot wide travel lanes to eleven-feet. The moderate speed and volume of traffic traveling on Edgefield Avenue can easily be supported by a typical 11-foot travel lane. Narrowed main lanes will shorten crossing distances, slow traffic, and accommodate on-street parking and bike lanes. Narrowing the width of travel lanes will immediately allow for parallel parking on one side of the street and dedicated bike lanes to be added to both sides of the street.



Figure 27: Narrowed main lanes creates space for parallel parking and bike lanes. Credit: NACTO.

Alternatively, shared-lane markings, called sharrows, could be provided in both 11-foot lanes. Doing so will allow room for parallel parking on both sides of the street. By removing the head-in parking from the entire west side of Edgefield Avenue and replacing it with parallel parking and parking in the rear, the sidewalk may be expanded by eight-feet with an additional five-foot sidewalk furnishing zone. The proposals do not picture this extensive a redesign at this time because of the expense and practicality of that level of reconstruction initially.

Pedestrian Zone Features

The sidewalk should maintain a minimum width of five feet and be accompanied by improved lighting; pedestrian amenities and wayfinding/signage. A widened sidewalk is proposed in

two places on the west side of the street, in blocks 5 and 9, for outdoor dining. The wider and more consistent sidewalk path along Edgefield Avenue allows for furnishings and pedestrian amenities that will activate the street: trash receptacles, shade canopies, café and path side seating, dog waste stations, bike racks, pedestrian lighting, and wayfinding signage. Reduced driveway widths and closures of redundant driveways will make the sidewalk much more safe and comfortable. The setback on the west side of the street is 15-feet, and a wider, 8-foot sidewalk is present in some locations.

The sidewalk on the east side of the street has a narrower buffer zone of five-feet, so the provision of on-street parking and curb bump-outs are an important buffer feature. Sidewalks can be improved by closing redundant curb cuts and narrowing overly wide driveways to parking lots. The interim solution of planters and painted barricades will provide a protected path for pedestrians where the sidewalk dissolves into parking lots. The permanent solution would reduce the width of individual driveways and close redundant driveways with new curbs and planting beds and buffers. Encourage internal connections between neighboring properties through shared driveways and cross-access agreements. A pedestrian path “keep clear zone” should be painted across parking lot driveways to discourage the use of the sidewalk zone for parking.

Intersection Zone Elements

The uniquely designed intersections of Edgefield Avenue require a thoughtful, careful redesign that improves pedestrian safety while retaining the unique character of Elmwood. Bulb-outs are instrumental in redefining the intersections, making them smaller and easier for pedestrians and drivers to navigate. The offset intersections at multiple locations along the Avenue should be brought to an orthogonal crossing where possible. Provide painted crosswalks to highlight the best crossing locations on the largest, irregular intersections and make pedestrian activity more easily anticipated by drivers. So-called continental crosswalks, also known as a ladder or zebra-striped

crosswalk, are preferred for pedestrian visibility over simple solid outline crosswalks.

The most significant intersections are located at the two triangular open spaces. These four intersections should repurpose the unused right-of-way as plaza space and tighten the radius on corners so that crossing distance for pedestrians is shortened. Pedestrian plazas can be implemented in these large intersection because wide sections of the roadway are underutilized. To implement the right-of-way as plaza space, a clearly defined edge is needed to identify the plaza space, and planters or painted jersey barriers are needed to maintain separation from moving vehicles. When repurposed as plaza space, these areas can promote a variety of activities such as relaxing, dining, people-watching, and event space if furnishings have activated the space.



Figure 28: Curb extensions reduce the turning radii and capture unused roadway into usable plaza space, Lincoln Hub, Chicago.
Credit: Site Design Group.

Transit Access

Conveniently located and comfortable transit stops invite people to use public transportation and helps incorporate the stop as a desirable feature in the neighborhood. Because the DART transit shelter will be located at the Elmwoof Dog Park, it should be designed as a piece of civic architecture that reflects the style and character of Elmwood.

Incorporate the transit shelter into the site so that it ties into surrounding land uses – Elmwoof Dog Park and neighborhood retail. The shelter should be placed in an enlarged paved area to allow the sidewalk to remain open to persons continuing along the sidewalk. The proposal shows the transit shelter with a chicane, or narrowed curb and crosswalk opposite the commercial strip. A painted crosswalk would make pedestrians more visible, while bump-outs located here would shorten the crossing distance to the commercial strip across the street.

Chicanes and Pinchpoints

Bulb-outs are suggested along the street to define the parallel parking spaces and narrow the driveways along Edgefield Avenue. Similar to curb extensions, chicanes or pinch-points can be used to narrow the roadway and slow drivers down. When combined with a crosswalk, such as at the DART transit shelter, a chicane can provide shortened crossing distances at midblock locations. Specialty pavement and patterned concrete sidewalks, bollards, and pedestrian-height street lights will provide improved connectivity and safety here and along the length of Edgefield Avenue.



Figure 28: Mid-block chicane with a crosswalk, New York City. Credit: NACTO

Bicycle Lanes

Bicyclists are to be expected on Edgefield Avenue, and safe, convenient, well designed and well-maintained facilities are important to accommodate and encourage bicycling. Painted bike lanes are the preferred bike facility of the Elmwood Neighborhood Association outreach participants. The painted bike lane should tie to the sharrows and shared use paths in nearby parks and trails to define a comprehensive bikeway system to parks and transit.

Bike lanes are designed to be a minimum of 5 feet. Illegal parking in bike lanes is a concern along Edgefield Avenue, so the minimum four-foot width is not appropriate. Adjacent to the parallel parking on the east side of the street, the distance from the curb face to the far edge of the bike lane (including the eight-foot parking lane and five-foot bike lane) is 13-feet.

For all bicycle facility signage, including bike lane word, symbol, and arrow markings, the Texas Manual on Uniform Traffic Control Devices (TMUTCD) requirements should be used to define the bike lane. TMUTCD codes indicate that markings should be located outside of the motor vehicle tread path to protect from wear.



Figure 29: Bike lanes can be painted for a weekend only demonstration project. Credit: Tactical Urbanism guide.

Bike lane striping width varies. A solid white line, six- to eight-inches wide, is used between the motor vehicle travel lane and the bike travel lane. A four-inch wide line is used between the bike lane and the parallel parking lane at the curb.

Green Streets

Trees have been shown at 30-feet intervals along the west side of Edgefield Avenue to establish a tree canopy, and unique garden spaces can be introduced on the east side parkways and in parking lot planters. These efforts will improve pedestrian comfort, environmental quality, and neighborhood beauty. Treeless streets exacerbate the heat island effect. Not only do trees provide shade but they cool the surrounding atmosphere through evapotranspiration. The beauty of trees is an integral part of transforming automobile-dominated streets into walkable pedestrian environments.

School Queuing

School queuing at Henderson Elementary poses serious safety concerns to students and the traveling public traveling through in school zone hours. School queuing of parents at school pick-up and drop-off time can be managed with curb bump-outs and no-parking markings so that traffic does not collect in the wide intersection at Edgefield Avenue. Balboa Avenue has on-street parking at the curb closest to the school, protected by the painted bulb-out.

Infill Redevelopment

One way to widen the sidewalk on the west side of Edgefield is to work with the City of Dallas Planning Department to allow future redevelopment to be able to build to within 6 feet of the property line, in return for allowing construction of a 6-foot easement and sidewalk with streetscape improvements. This will enable the overall sidewalk experience to expand to approximately 10 feet. In return, the private redevelopment would receive more buildable area because the front yard setback will be reduced from 15 feet to 6 feet.

Furnishings

All streetscapes should include street furnishings such as benches, lighting, waste receptacles, and bike parking. These furnishings should be chosen with care or community-built with pride because they will be used for social gathering, aesthetics, cleanup bike safety, and can be the elements to foster a unique sense of place for Elmwood. Lighting is essential in both the perceived safety and visual interest of an area. A functional and beautiful lighting design consists of many elements, including overhead street lighting, tree uplighting, pedestrian-scale pole lights, bollards, tree lights, and cross-roadway hanging light bulbs.

Walls and Screening

Buffer elements such as planters used as walls and miscellaneous screening methods are utilized to enclose and define space as well as conceal unwanted views. Screening used this way

can reinforce the pedestrian, bicyclist and vehicular experience and streetscape character. Several parking lots and vacant lots could be concealed with fencing and made more interesting with screening structures or plantings.

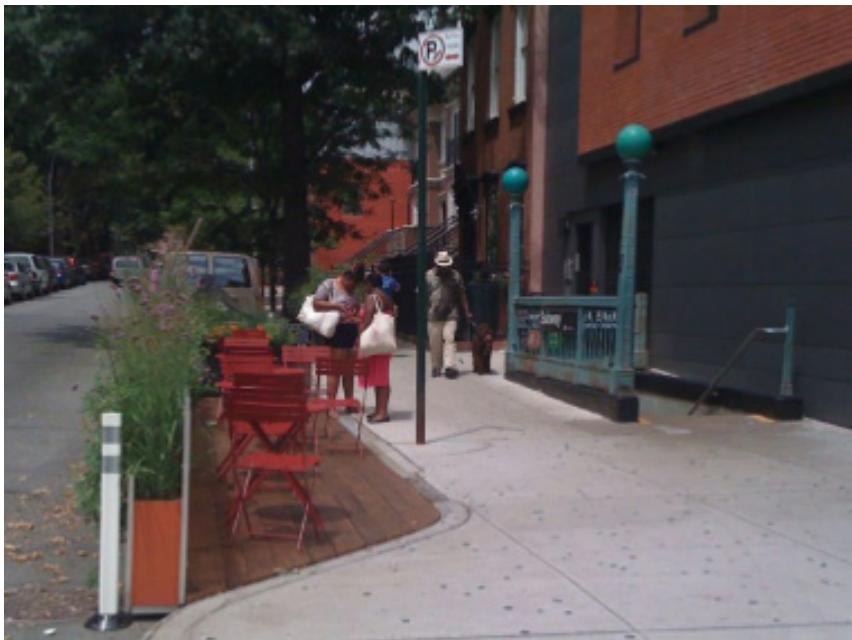


Figure 30: Planters used as walls/barriers to create additional sidewalk and cafe space. Credit: NACTO.

Implementation Roadmap

This section offers an overview of practical next steps. Priority projects are included in this section to help identify smaller sections of the street on which to begin. These priority projects can be the first steps in improving the quality of the neighborhood and the potential for encouraging private investment. The priority projects are discussed in terms of implementation strategies, funding, and timing. In addition, funding sources at the federal, state, and local level are listed to assist with the inevitable funding constraints that are often barriers to implementing neighborhood complete street projects.

Federal

Congestion Mitigation and Air Quality (CMAQ) Improvement Program

The CMAQ program is jointly administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Funds are provided to State Departments of Transportation (DoT), metropolitan planning organizations (MPO), and transit agencies to invest in projects that reduce regulated air pollutants from transportation-related sources. In our area, the Texas Department of Transportation (TxDOT), the North Central Texas Council of Governments (NCTCOG) and Dallas Area Transit Authority (DART) are those agencies. Projects meeting air pollution reduction qualifications for CMAQ funds have been broadly interpreted, and may include city-wide or regional projects that help plan and promote alternatives to automobile travel, including biking, walking, and transit.

NCTCOG selects project that will receive CMAQ funding during a 3-year funding cycle by identifying projects to be included in the Transportation Improvement Program (TIP). A local match of 20-percent or better is required to receive CMAQ funds.

The Livable Centers program of the Houston-Galveston Area Council (H-GAC) offers a strategy for funding complete streets in Oak Cliff. Livable Centers is a program to improve multi-modal mobility across their region. Edgefield Avenue could become a Livable Center for Elmwood and adjacent neighborhoods. Partnerships between the City of Dallas and the North Central Texas Council of Governments would facilitate funding for planning projects related to neighborhood improvement. The program seeks to build up walkable, mixed-use areas "where people can live, work, and play with less reliance on their cars (H-GAC, 2018, p. 1)". Depending on the population and employment density of a particular neighborhood center, the mode shift from a single-occupancy vehicle to walking, bicycling, or transit could result in approximately 3,700 SOV trip reductions per day, according to H-GAC's livable centers' benefits calculator planning tool. The program's studies are paid for with TIP program funds and a 20% local match. These master plans are transportation projects with interest in mode-shift; yet holistically address the neighborhood

when considering the complete street.

Surface Transportation Program (STP)

The FHwy's Surface Transportation Program provides flexible funding that may be used by localities for projects in the FHwy Bicycle and Pedestrian Program. STP funds can be applied to federally approved bicycle and pedestrian improvements, including bicycle and pedestrian planning, construction and improvements of sidewalk and crosswalks, signal improvements, and traffic calming. A portion of STP funds are set aside for Transportation Enhancement Activities, including facilities for pedestrians and bicycles, and funds are awarded to NCTCOG to allocate to local projects. More information can be found online

at https://www.fhwa.dot.gov/Environment/transportation_enhancements/guidance/tea_cat.cfm

Safe Routes to School

Henderson Elementary School is a prominent part of the Edgefield Complete Streets Plan, and as such may be eligible for FHWA's Safe Route to School funding. The Safe Routes to School (SRTS) Program promotes walking and bicycling to school through strategies from on-the-ground infrastructure improvements to safety education and incentives to encourage walking and bicycling to school. SRTS programs can be implemented by NCTCOG, the City of Dallas, a school district, or even a school. "Nationally, 10%–14% of car trips during morning rush hour are for school travel. The national center for Safe Routes to School offers extensive resources including an SRTS Guide, parent surveys, student tallies, and simple strategies, such as the walking school bus, that schools can use to support bicycling and walking (USDOT, 2019)". More information can be found online at <http://guide.saferoutesinfo.org>.

State

Statewide Transportation Enhancement Program

In Texas, the Statewide Transportation Enhancement Program is available to provide funds for

Provision of Facilities for Pedestrians and Bicycles. Project examples listed online are a good fit for a complete streets project on Edgefield Avenue, projects such as new or reconstructed sidewalks, walkways, and curb ramps, bike lane striping, bike lockers and bike parking. More information can be found online at <https://www.dot.state.tx.us/des/enhance/projcat1.htm>.

Local

Dallas Reforestation Program

The City of Dallas Dallas Reforestation Program was created to supply trees and guidance to the citizens of Dallas to encourage the growth of the urban forest. Projects project sponsored wholly or in part by a community group or neighborhood association, and must be planted on public property. Public property includes City of Dallas parks, recreation centers, approved medians, and parkways. More information can be found online at www.dallascityhall.com/arborist/fund.html and at [https://dallascityhall.com/departments/sustainabledevelopment/buildinginspection/DCH%20documents/pdf/BI_City%20of%20Dallas%20Urban%20Reforestation.pdf](http://dallascityhall.com/departments/sustainabledevelopment/buildinginspection/DCH%20documents/pdf/BI_City%20of%20Dallas%20Urban%20Reforestation.pdf)

MOWmentum

The MOWmentum Program is a cooperative program between the City of Dallas and homeowners associations, businesses, and individuals acting as sponsors and volunteers to install landscaping and irrigation. The MOWmentum Program may be used for elaborate projects such as fully landscaped rights-of-way, and reimbursement may be received for vegetation, landscaping, irrigation systems, and water meters. Applicants may request reimbursement for 50% of the improvement cost, up to \$10,000.00 per project, for as many as three projects per fiscal year.

New Markets Tax Credits

Elmwood is a Dallas New Markets Tax Credits Eligible area. The New Markets Tax Credit (NMTC) Program provides incentives for community development and economic growth through the use of tax credits. These tax credits are intended to "attract private investment and may provide

equity funding for real estate, corporate expansion, and social service projects in traditionally underserved communities" according to the City of Dallas website. NMTC eligible areas have a poverty rate of at least 20% or a median family income that does not exceed 80% of the metropolitan area.

Other Funding Sources

There are no public improvement districts (PID) or special tax increment financing (TIFF) districts working to improve central Oak Cliff.

Project Strategies

Interim projects with short turnaround times can provide an opportunity to test roadway changes, new public plazas, road diets, and other complete street components in a more cost-efficient manner. The City of Dallas is becoming more familiar with working with neighborhoods to construct neighborhood-led interim projects. Although they do not have policy guidance in place to encourage these practices, a neighborhood association may approach the City's staff in the Sustainability and Neighborhood Development Department to bring their plan to life. Nonetheless, an interim project may be initiated by any community organization with passion and a good idea, including neighborhood associations, business groups, community groups, student groups, and community advocates. Construction of a temporary cross-section with traffic signs, barricades, and pavement marking tape can provide valuable feedback on roadway geometry and lane configuration changes before permanent build out. Trials should last for at least two weeks to accurately assess traffic conditions and neighborhood sentiment about the street changes. The Knox Street Demonstration Experience was Dallas' first complete street trial and should be reviewed for future demonstration projects.

Priority Projects and Strategies

Activity on the Street: Activation of the streetscape is encouraged through the provision of wider sidewalks with furnishings and lighting. Activity at Elmwoof and periodic street fairs will

make use of vacant lots. Encourage an influx of visitors to the area through events, food truck parking spaces, and make use of vacant lots for community activity where possible. This flexible space could be used for food truck parking near the proposed dog park. To support this function, parallel parking for food trucks has been proposed for Melbourne Avenue. The paved, vacant lot across the street could be an ideal location for a flea market or other open-air market. This could become an event to be held on certain market days such as a monthly farmer's market or for holiday markets such as at Christmas.

Creative Streetscape

Smart Growth America and National Complete Streets Coalition have come together to offer a conference called *Intersections: Creating Culturally Complete Streets*. The 2018 conference highlighted neighborhood- and artist-led projects that focused on implementing only a few elements. They showed how these projects could be undertaken by the neighborhood or community group to achieve measurable impact. Local groups can spearhead design and implementation of elements such as street seating, reclaiming a vacant lot as a plaza or park, and wayfinding signage. Public plazas can be created for public use in areas that had been roadway for automobiles through the use of bollards, planters, and paint. Vacant lots can also be reclaimed as public plazas for food truck vendors, art performances, flexible or programmed activity space, neighborhood markets, dances, movies, and dog parks. Any single one of these projects or elements can deliver results immediately.

Guidance for building enthusiasm in a neighborhood around complete streets installation has long come from NACTO, the National Association of City Transportation Officials, in their Urban Street Design Guide. The chapter *Interim Design Strategies* details several ideas for getting projects rolling quickly, so those project pitfalls may be circumvented: leadership's momentum may fizzle, funding may be reallocated, and an organization might get tied up in focusing on the potential impacts of a project. However, the "implementation of small scale, interim changes can deliver

results to communities more quickly (NACTO, 2013, p 15)".

Strategies include moving the curb to create more room for pedestrians on a sidewalk, parklets, temporary street closures, street seating, and interim public plazas. "Interim design strategies allow cities to assess the impacts of their intended project in real time and realize their benefits faster than typical processes allow." NACTO goes on to caution a City when taking the lead that they should be clear about whether the changes are part of a pilot project for test purposes, or if the strategies are the final features. A three-year process is suggested as a reasonable way to phase an interim project through final design. Year one would consider the concept and plan the intervention. Year two would seek feedback on outreach efforts and install interim features. Year three would assess impacts and finalize a permanent design.

Ideas for increasing a pedestrian zone along the street are suggested in *Moving the Curb*, another NACTO guide to design of complete streets. They suggest expanding sidewalk area by spreading gravel fixed with epoxy while creating a barrier edge between cars and pedestrians with bollards or planters. Bike parking racks could be placed in former parking spaces to recapture space for the sidewalk zone. Similarly, parking spaces can be eliminated or pushed out to the right-of-way so that café seating can be installed in the sidewalk zone. NACTO provides design details for constructing a deck for level café seating in the sloped area of former parking.



Figure 31: A street fair can be set up with a Block Party permit from the City of Dallas. Credit: Tactical Urbanism Guide.

Implementing a tactical urbanism project could not only galvanize support for such streetscape improvements but could also serve as a means of attracting new customers to local businesses. Planning and hosting a block party is a strategy to help support local businesses, raise funds for Elmwoof Dog Park, and enhance the quality of life in the neighborhood. A block party or weekend flea market can be organized with current City of Dallas permits. The grand opening of the Elmwoof Dog Park will be an excellent time to put a "festival street" into action when visitors to the dog park can be encouraged to explore Edgefield Avenue's retail, restaurants, and art.

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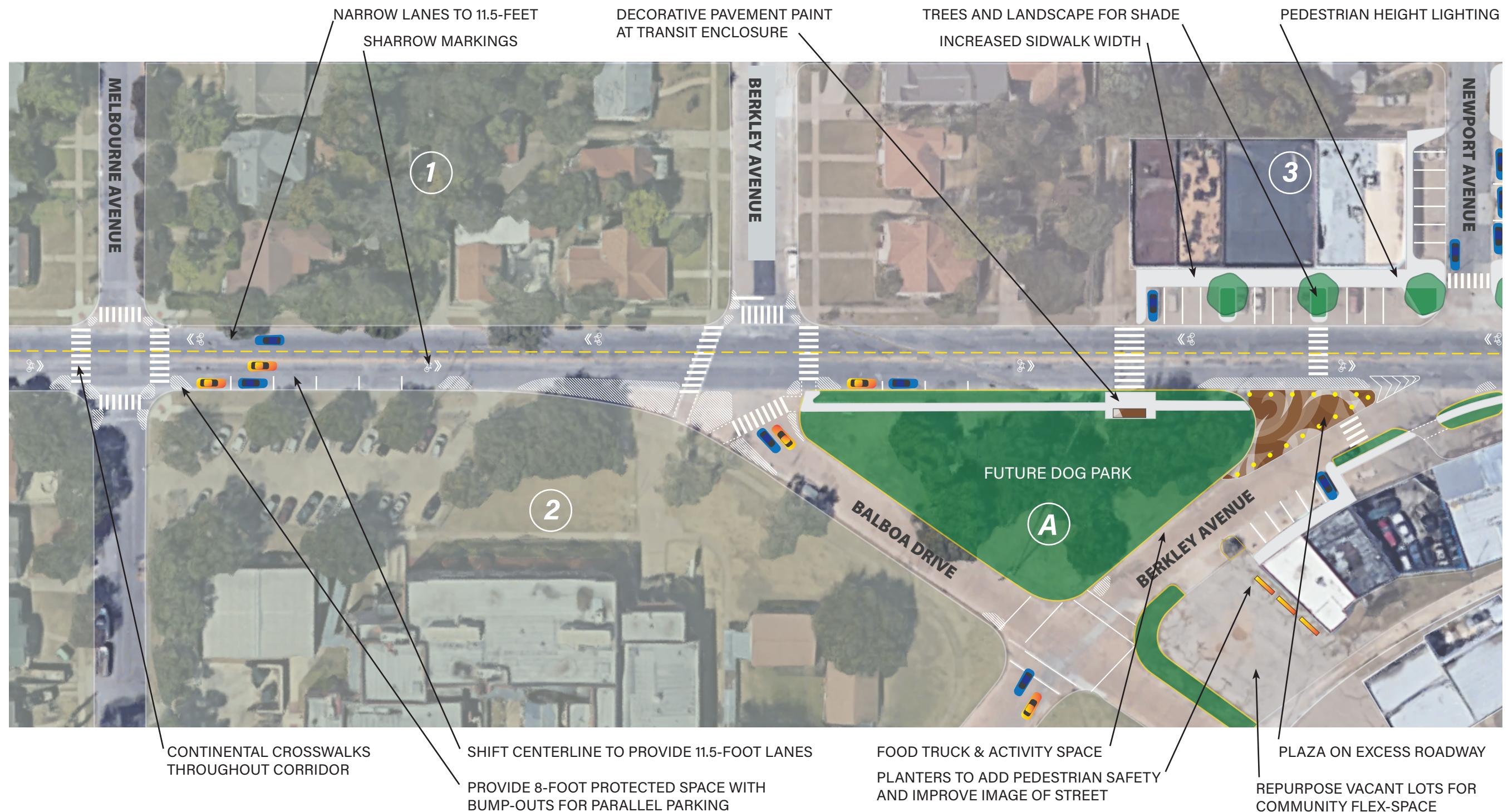
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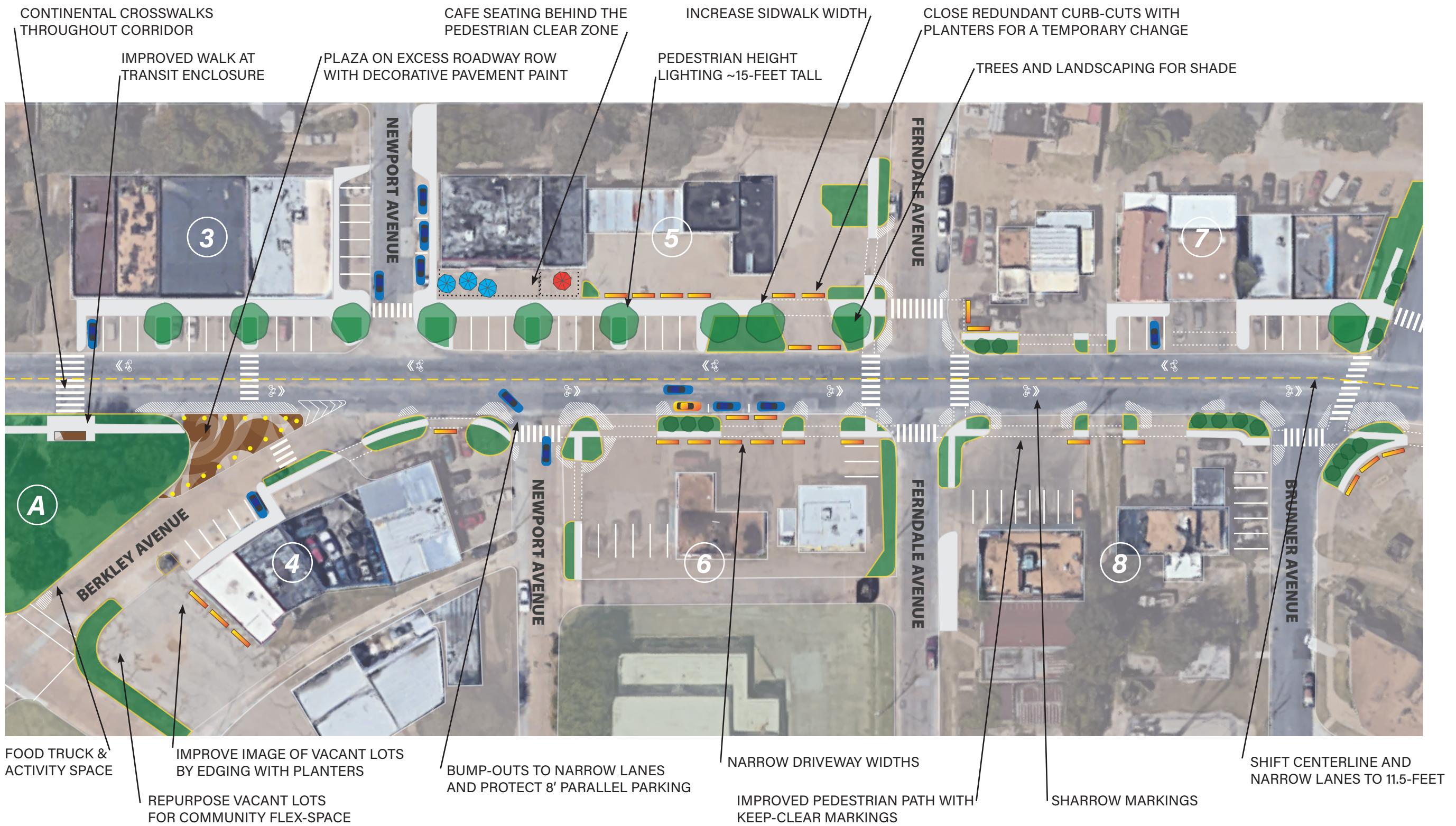
EDGEFIELD AVENUE | COMPLETE STREET PROPOSAL

MELBOURNE AVENUE TO NEWPORT AVENUE - SOUTH



EDGEFIELD AVENUE | COMPLETE STREET PROPOSAL

NEWPORT AVENUE TO BRUNNER AVENUE - CENTER



EDGEFIELD AVENUE | COMPLETE STREET PROPOSAL

FERNDALE AVENUE TO TENNESSEE AVENUE - NORTH

