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135TH STREET COMMUNITY PLAN STREETSCAPES

Streets provide the framework for future development in the 135th Street corridor. This chapter outlines a potential complete network of streets for the area and defines a character for three street types that will create this network. Additionally, the option of a multi-way boulevard is explored for the future of 135th Street.



Heading north on Pawnee Lane towards 135th Street.

Purpose of the Plan

This document serves as the base plan for future development in the 135th Street corridor. As a supplemental guide to the City of Leawood Comprehensive Plan, this chapter outlines the opportunities for development that could most successfully serve the community, environment, economics and arts and culture of the 135th Street community that can be employed to inform future plans. This plan builds upon the Comprehensive Plan by providing a tool kit of parts additions to and alterations of the existing Leawood Development Ordinance.

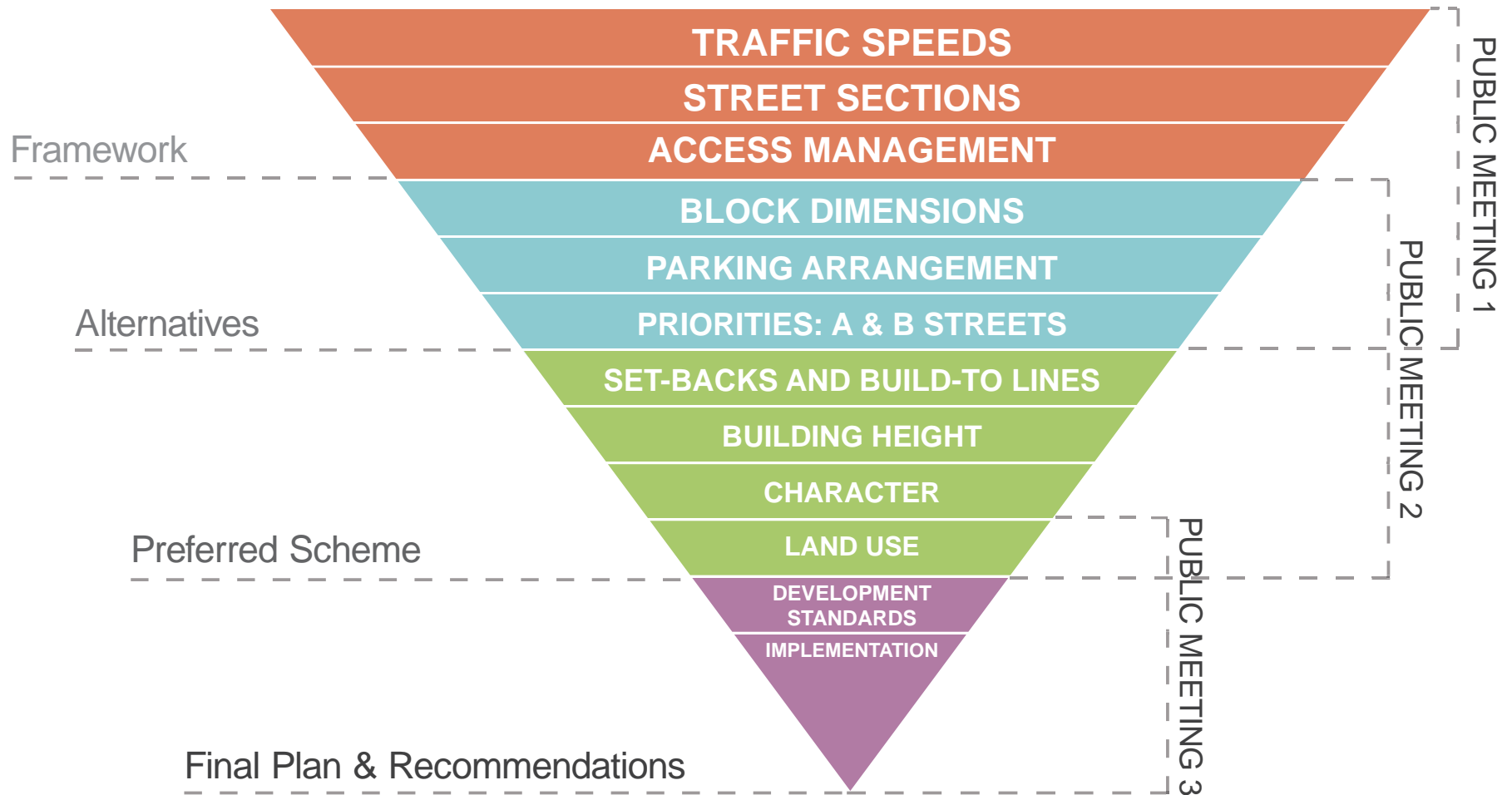
The strategies outlined in this chapter are designed to help the City and the 135th Street community better communicate their vision to property owners and developers in the area. These recommendations are flexible and will be further developed through the completion of a future Implementation Plan guided by the City of Leawood.

Process

The project team guided the City and the 135th Street community through a series of form-based decisions. This process allowed the team to understand the community's vision for what the corridor could and should be, while developing dimensional guidelines that will create the 135th Street Community character and identity.

Figure 16 below illustrates this process and provides an outline for the final recommendations of this effort.

Figure 16: *Design and Decision-Making Process*



Potential Street Network

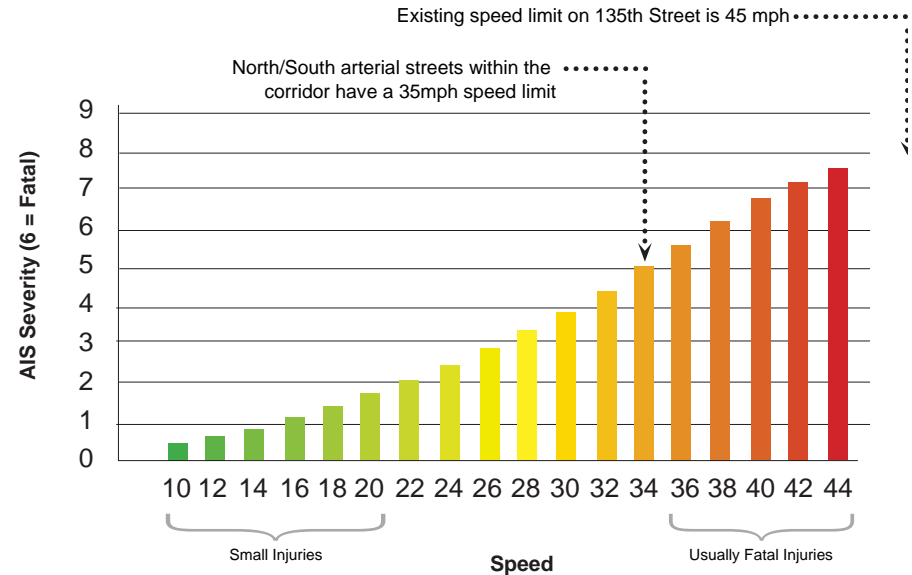
A street network and complete street grid help to set the framework for future development to take place in the 135th Street community. Additionally a complete street grid will help the study area:

- Improve traffic flow
- Provide more marketable real estate at four-way intersection
- Improve connectivity between districts and destinations in the corridor

This potential street network builds connections to existing infrastructure while taking advantage of existing and potential destinations. By providing a flexible hierarchy of streets, this network also optimizes areas with the greatest potential for creating unique, special places that will serve the Leawood community into the future.

Speed limits not only affect drivers but can significantly impact the feel and character of a neighborhood for pedestrians and bicyclists. The speed limits defined in this diagram provide the corridor with a transportation network that attempts to maximize multi-modal level of service (MMLOS), create slower-paced areas for destination districts and create safe conditions for all users of the 135th Street corridor.

Figure 17: Vehicle Impact Speed vs. Potential Pedestrian Injury



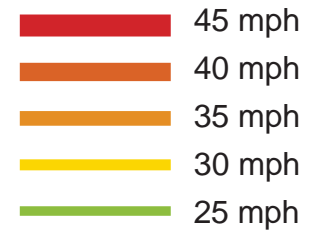
This diagram illustrates the importance of roadway speed limits. Collisions between pedestrians and vehicles usually result in fatality when cars are travelling above 34mph. Managing speeds in the corridor is an important strategy to improve safety and walkability in the community.

Figure 18: Potential Street Grid and Speed Limits



Leawood Development Ordinance (LDO) Recommendations

The implementation of the future street network is imperative to the infrastructural and transportation needs for future development and density in the corridor. The city should coordinate the development of various parcels within the corridor to ensure new development plans include the implementation of a fair percentage of street network infrastructure. That is to say, if simultaneous development takes place on two adjacent parcels, each developer is responsible for 50% of shared road building costs. The city can determine these percentages based on a variety of factors including but not limited to: amount of street frontage; primary and secondary access needs; traffic requirements as they respond to proposed densities.



Street Character

Once city staff and the community voiced support for the potential street network, the project team developed a series of alternative street sections. A street section defines dimensions of elements that compose a streetscape, such as travel lanes, sidewalks, and landscaped areas. These dimensions respond to traffic needs and the potential for pedestrian and bicycle amenities while helping to create a specific atmosphere for all users along a street.

Alternatives for existing streets were presented to the community during the first public meeting. After gathering feedback on these alternatives, a second series of section options were created and presented at the second public meeting (refer to Appendix B to review these alternatives). The project team used all of this feedback to redefine some existing streetscapes and create three Street Character options for new and some existing roads in the 135th Street Corridor. The location of these street types may change based on future needs and development applications.

LDO Recommendations

The elements of streetscape character will help distinguish districts and bring identity to neighborhoods. The street sections provided in this document present a unified character for the corridor but allow for flexibility in material and design to help the City and developers work together to build unique and distinct places in Leawood.

- Development plans should identify any proposed street character types and their associated elements.
- The implementation of particular street character elements, which include but are not limited to: rain gardens, seating amenities, bicycle facilities, can qualify development plans for density bonuses defined by the City.

Potential LDO Revisions

The existing development ordinance works to ensure that all buildings will have “street frontages” but the series of associated regulations doesn’t clearly define what a street frontage is or should be. The following points could be revised to help better explain this term and further establish street character throughout the corridor:

16-1-6

Use the below definition to help explain what it means for buildings to “front” upon a public street or approved private street.

16-2-9.2D1;3;4

Combine these three points to help define what a building frontage is and should be:

All buildings shall be designed to create a strong physical relationship with their adjacent streets by:

- Providing a clearly defined, highly visible entrance
- Orienting the entrance toward the street-side of the building
- Connecting the entrance and the street with a sidewalk.

Figure 19: Potential Street Character



This diagram represents one potential option for street character. The City should work with the community, property owners, and developers to refine this diagram and create a street network that best responds to Leawood's needs.

The following six pages outline a recommended kit of parts that will make each street character type unique, vibrant and important to the quality of the 135th Street corridor.

- Destination Street
- Active Pedestrian Street
- Neighborhood Street

Destination Streets

Destination streets lay the foundation for activity centers in the corridor and in Leawood. These streetscapes have the highest quality of design and material investment. They can have their own brand within the community to promote the street and surrounding area as a retail and shopping, entertainment, and/or dining district. As such, signage and wayfinding elements bring this street to life by announcing festivals, seasons, cultural events, or celebrations and reminding visitors that they are in the 135th Street corridor in Leawood, Kansas.

Overhead tree canopy and softscape understory plantings work throughout the seasons to give the street a visual rhythm and provide year-round interest through elements of structure, texture and color. Other vertical elements that should balance the planting system are street and pedestrian light fixtures. A destination street is still vibrant and alive with people, music and activity at night.

Traffic moves at a relatively slow pace on a destination street. Drivers travel cautiously amidst pedestrian activity and cars pulling in and out of on-street parking spaces. These convenient parking stalls allow travelers to pull over at a great restaurant or do some quick shopping in the corridor. Window shoppers and groups of friends pass each other easily on these wide sidewalks. At some locations these sidewalks are converted to outdoor cafes and sunny street-side bistros.

Open, Active Storefronts

There is no better advertisement for a shop or restaurant than seeing actual customers and merchandise. Maximizing storefront windows and ensuring in-store visibility will encourage and welcome shoppers and thereby boost activity on the street.

Intense Plantings

Shade is key to pedestrian comfort and the creation of destination places. In addition to shade, understory plantings with a designed raised structure and color palette that perform through all four seasons will enhance the street and create a vibrant, aesthetically pleasing streetscape throughout the year.

11'-6" Driving Lanes

Eleven and a half foot driving lanes create the best conditions for both drivers and pedestrians on this active street.

9' On-Street Parking

Destination Streets are the heart of the 135th Street nodes. Shopping, dining and entertainment storefronts line these streets and promote a 24/7 active streetscape. To bring people to the street and district, these streets include convenient, on-street parking.

Signage

Signage and wayfinding elements on a Destination Street help to brand the district.

16' Sidewalks

Of the three street character types identified, the Destination Street has the highest quality sidewalk paving. Choosing durable, attractive materials are essential to the design and continual success of this area.



Typical Street Section for Destination Street



Active Pedestrian Streets

Active Pedestrian streets are the bones of the street grid. They serve as the main thoroughfares for cars, bikes, people, and potentially transit or bus riders. Because of this, these highly visible streets should represent the 135th Street community with quality materials and elements of visual interest, but also be composed of highly durable and sustainable materials that will withstand the high volume of activity into the future.

As their name would infer, active pedestrian streets are designed to be highly conscious of people walking through the corridor. Wide sidewalks provide room for groups of walkers, strollers, or runners while also allowing room for dining and retail establishments to generate activity and maximize storefront visibility. Intersections with active pedestrian streets provide highly visible crosswalks, pedestrian lighting, and Americans with Disabilities (ADA) accessible curb ramps. Due to the potential for higher volumes of car traffic and faster traffic speeds, active pedestrian streets may also be equipped with a planted median. In crossing an active pedestrian street the median acts as pedestrian refuge island for those crossing the four lanes of traffic on these streets. Trees along these streets not only bring shade and aesthetic character to the corridor, but also act as a safety barrier between moving cars and pedestrians.

These streets also serve bicyclists travelling in the local area. Creating bike lanes and providing signage that acknowledges bicyclists on the road will help alert drivers to bicycle traffic in Leawood. Bike lane and bike route signage goes a long way to provide safe passage for bicyclists. This type of signage can also act as a wayfinding element to bring new visitors to the area from nearby bike routes that exist north and east of the study area.

The Active Pedestrian Street is a thoroughfare for all modes of transportation but through careful selection of design elements and material quality, these streets could also become the unifying ribbon that ties the corridor together.

16' Sidewalk

Permeable materials allow water to penetrate the ground, reducing stormwater runoff and associated costs.

11'-6" Travel Lanes

Lane width is directly related to pedestrian safety. 11'-6" lanes are the optimal width for this pedestrian-oriented street.

12' Planted Median

Leawood already enjoys the look and feel of planted medians in the corridor. By repeating this element on new streets, the 135th Street Community will continue to define its aesthetic. Additionally, medians act as safety islands for crossing pedestrian.

13' Sharrow

In addition to their environmentally-friendly mode of travel, studies have found that streets who accommodate bicyclists experience an increase in retail and dining sales.

6' Rain Garden

Rain gardens are a beautiful option for managing stormwater new developments and improving regional water quality.



16' Sidewalks



11'-6" Inside Lanes



12' Planted Median



13' Sharrow



6' Rain Garden

Typical Street Section for Active Pedestrian Street



Neighborhood Streets

Neighborhood Streets are low-traffic, secondary passageways for community members travelling on foot or in a car. The travel lanes on these streets are wide enough to accommodate trucks that will need to access neighborhoods and local businesses.

Primarily hosting residential building frontages, these streets create a welcoming atmosphere for visitors and those living in the corridor. Overhead tree canopies and ground-level lawns create comfortable conditions for those travelling in the area and bring a “neighborhood feel” to the street. Neighborhood streets maintain Leawood’s aesthetic and add to the sustainability of the development.

4’ Rain Garden

In addition to collecting storm water, building-adjacent rain gardens help collect water from other impervious surfaces, like roofs.

8’ Tree Lawn

Trees on neighborhood streets provide great opportunities for shade. They also act as a buffer between pedestrians and moving cars.

12’ Travel Lanes

Neighborhood Streets can also act as service streets for trucks. The extra half foot of lane gives those trucks a bit more room to maneuver the corridor.

6’ Sidewalk

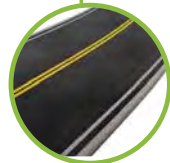
Pervious concrete is an affordable and easily implementable option for creating “green” sidewalks on neighborhood streets. Water is allowed to percolate into the ground, reducing runoff and its associated pollutants.



4' Rain Garden



8' Tree Lawn



12' Travel Lanes



6' Sidewalk

Typical Street Section for Neighborhood Street



Potential Revisions to Existing Streets

During the course of the public engagement process, community members were presented a number of options for potential alterations to existing streets. These alternatives were designed to fit within existing right-of-ways and respond to both existing and potential needs of the street as development occurs in the corridor. Public preference for each alternative was measured during a public meeting keypad polling session and through an online survey. The preferred alternative for each street section is indicated.

The green box indicates the community's vote for a preferred option during public polling sessions. On 133rd Street, the public preferred the existing conditions over proposed alternatives.

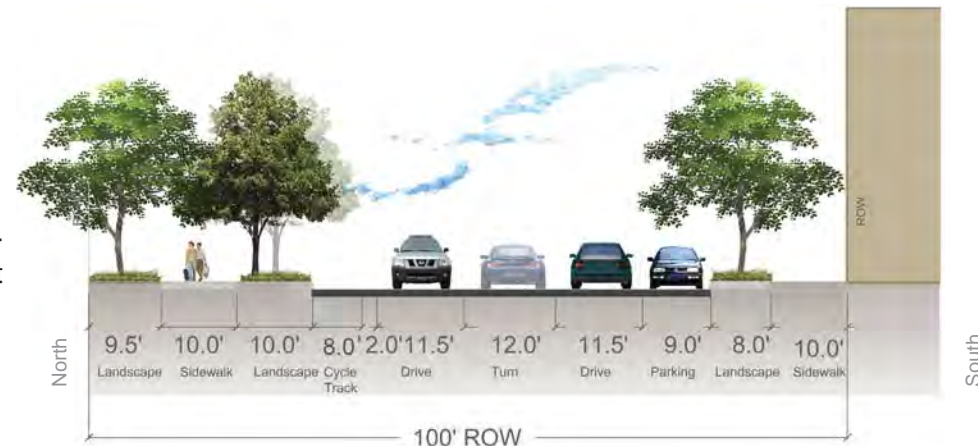
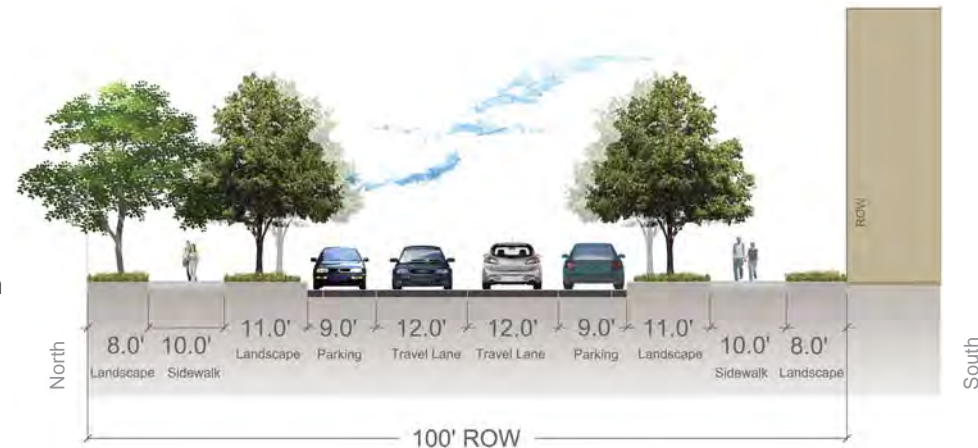
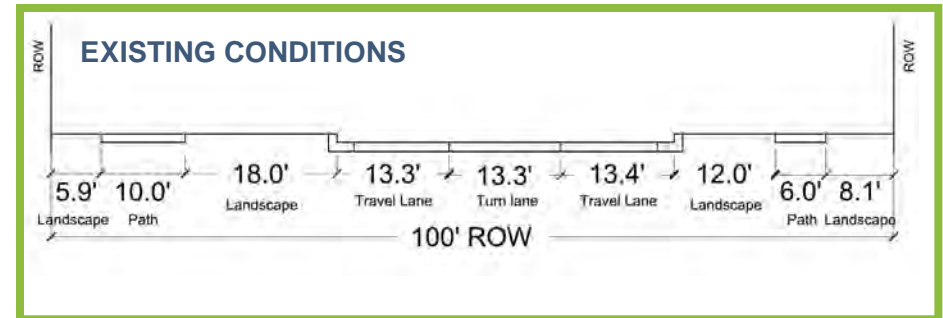
Alternative 1

Changes within the right-of-way could include reductions in lane width to improve pedestrian safety and accommodate on-street parking.

Alternative 2

By reducing lane widths and changing buffer sizes, this alternative incorporates a cycle-track on the north side of the street and on-street parking on the south side.

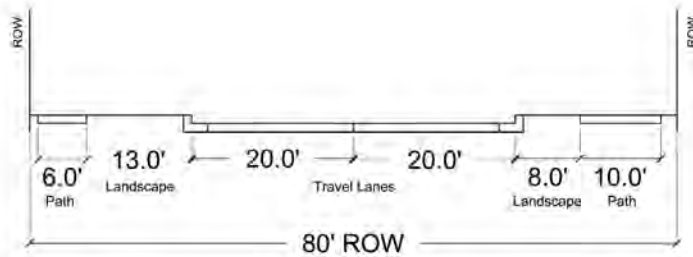
133RD STREET



137TH STREET

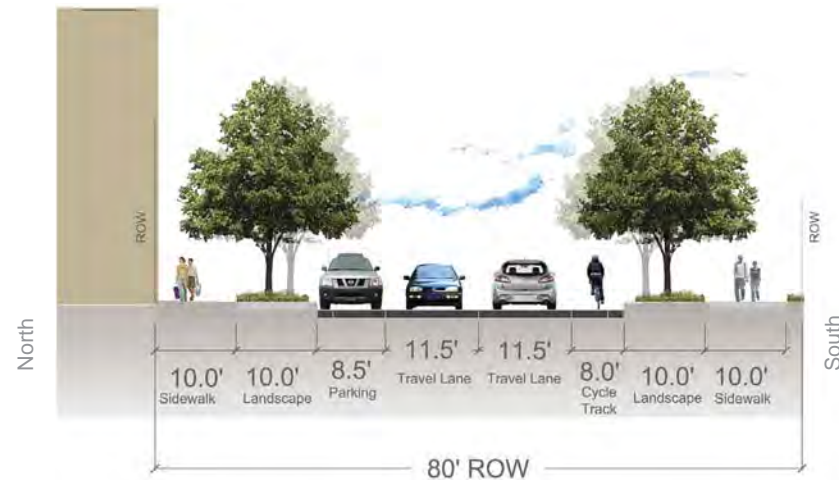
Existing Conditions

Existing conditions contain extremely wide travel lanes, asymmetrical landscaping, and a multi-use path on the south side.



Alternative 1

Shorter land widths leave room for on-street parking and a larger sidewalk on the north side of the street.



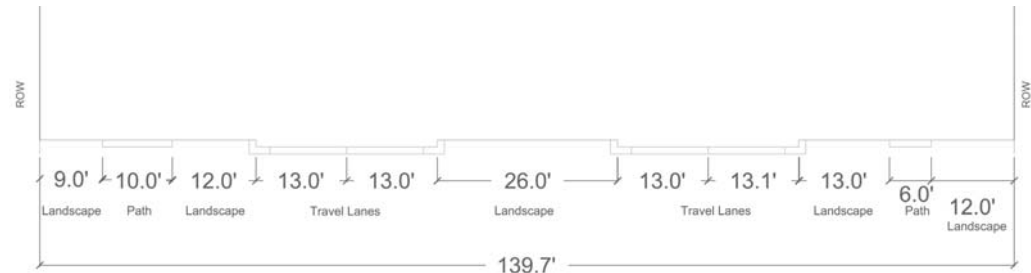
Alternative 2

This option provides a cycle track for bicyclists adjacent to the residential area to the south of 137th and provides room for on-street parking on the north side of the street.

NALL AVENUE

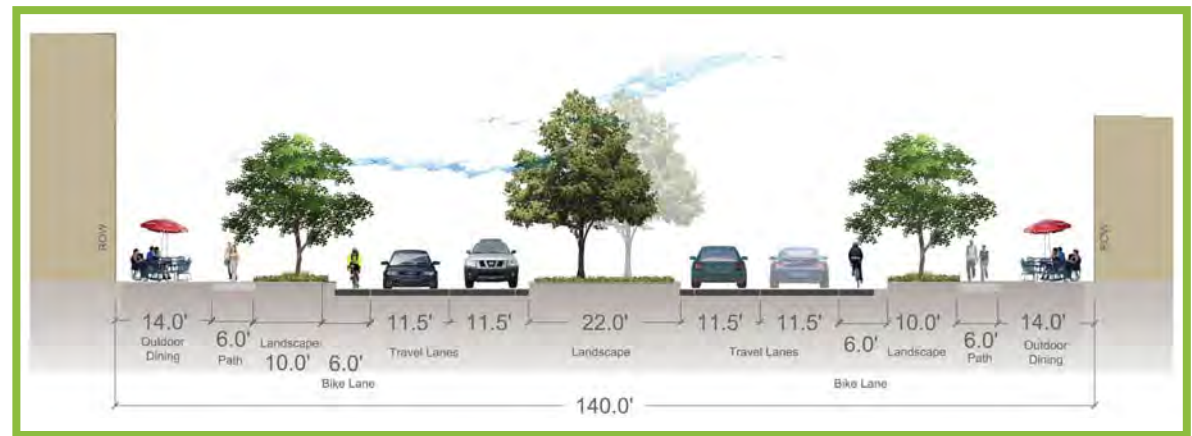
Existing Conditions

Wide travel lanes, and a small sidewalk on the south side limit the potential for activity on Nall Avenue



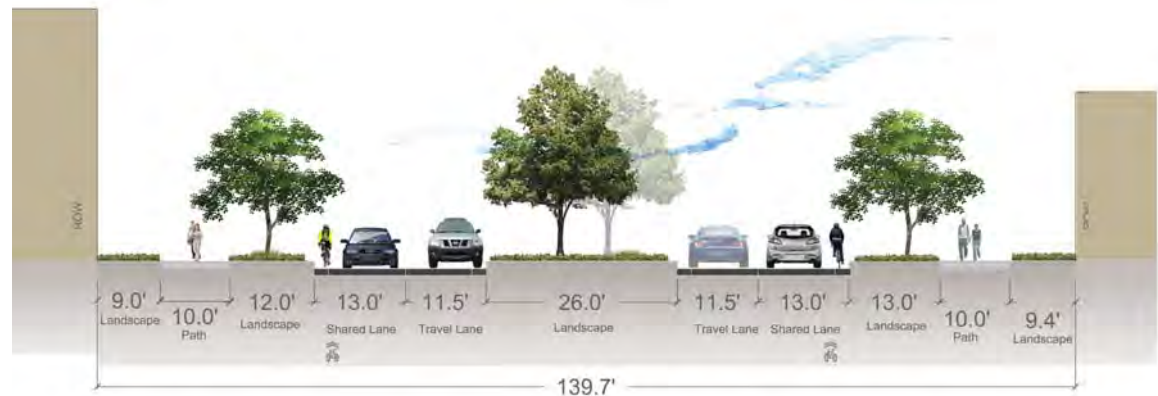
Alternative 1

Taking a few extra feet from the median and travel feet, this alternative allows for bike lanes on both sides of the street and can create sidewalks wide enough to allow outdoor dining.



Alternative 2

Keeping the median width as it is, outside lanes could be converted to sharrows, allowing shared travel for drivers and bicyclists.

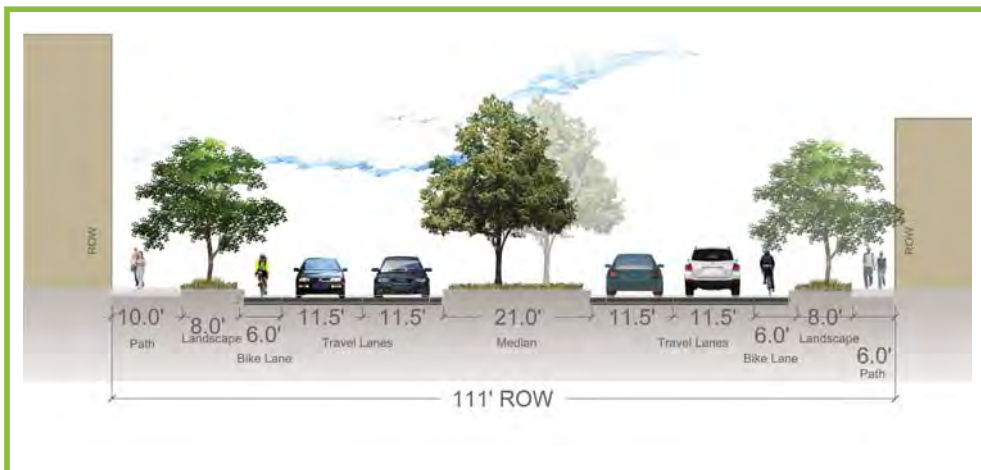


ROE AVENUE



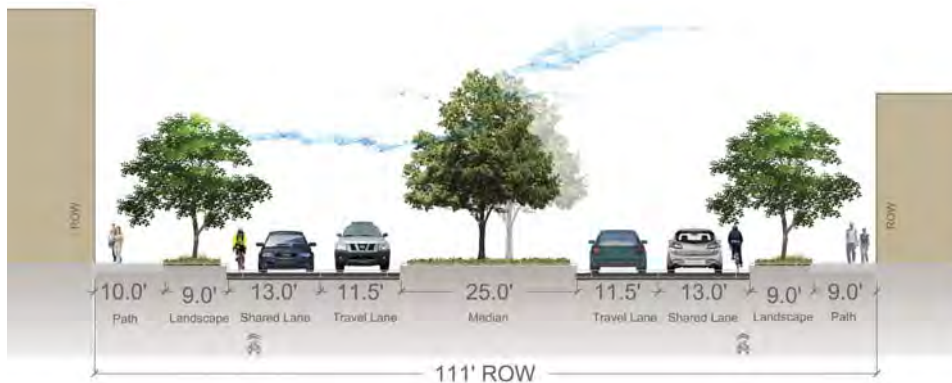
Existing Conditions

A smaller median gives extra space within the right-of-way to accommodate bicyclists.



Alternative 1

A smaller median gives extra space within the right-of-way to accommodate bicyclists.



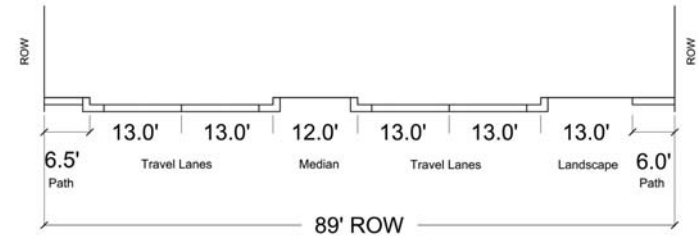
Alternative 2

This alternative keeps the median at a 25 foot width but is able to provide sharrowes and a wider sidewalk.

MISSION ROAD

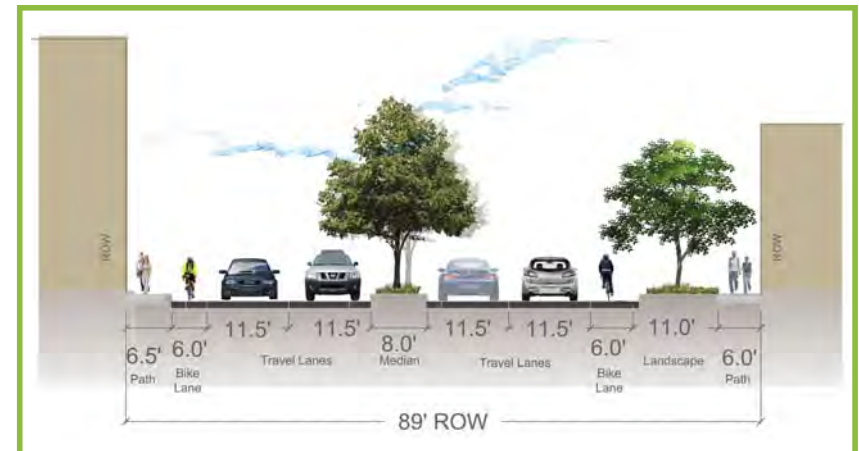
Existing Conditions

Wide travel lanes within the right-of-way present an opportunity to add new amenities to Mission Road.



Alternative 1

Reducing lane widths and the median width gives bicyclists a lane on the road.



Alternative 2

Removing the buffer zones to allow for large sidewalk and outdoor dining opportunities.

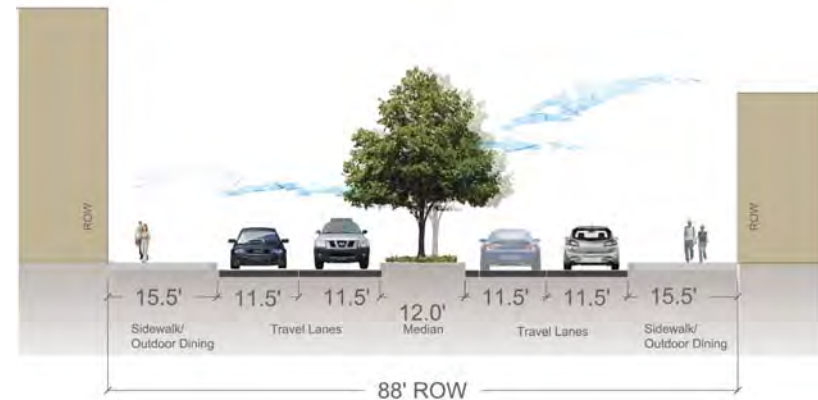


Figure 20: *Multi-way Boulevard Examples in Paris, France*



Multi-way boulevards are particularly popular in European cities for creating walkable spaces and great retail environments, while still accommodating traffic.

135TH STREET

A Potential Multi-Way Boulevard

Classic multi-way boulevards have central travel lanes for relatively fast-moving through-traffic bordered by tree-lined medians with walking paths. They have narrow one-way access roadways on each side for slower traffic and parking, and finally, at the edges, tree lined sidewalks. The combination of the median, narrow access roadways, and sidewalks create extended pedestrian realms, where movement is at a slow pace.

In the 135th Street study area, a local lane could potentially be developed on private property.

Benefits of a Multi-Way Boulevard

- Provides a connected, high-quality pedestrian realm linking multiple properties.
- Encourages walkers to park once and access more stores and other land uses, thus reducing car trips on the faster moving center lanes.
- Enhanced pedestrian environments attract other possible building uses including office, hotels, and even residential.
- Because the parking lane is accessed at one point (at the beginning of every block) rather than at every parcel, there are fewer accesses interrupting the faster moving center lanes
- Attractive boulevards build value for the municipality, increases livability, increases tax base per infrastructure, and becomes a destination for visitors.

Figure 21: Potential street section for a multi-way boulevard on 135th Street

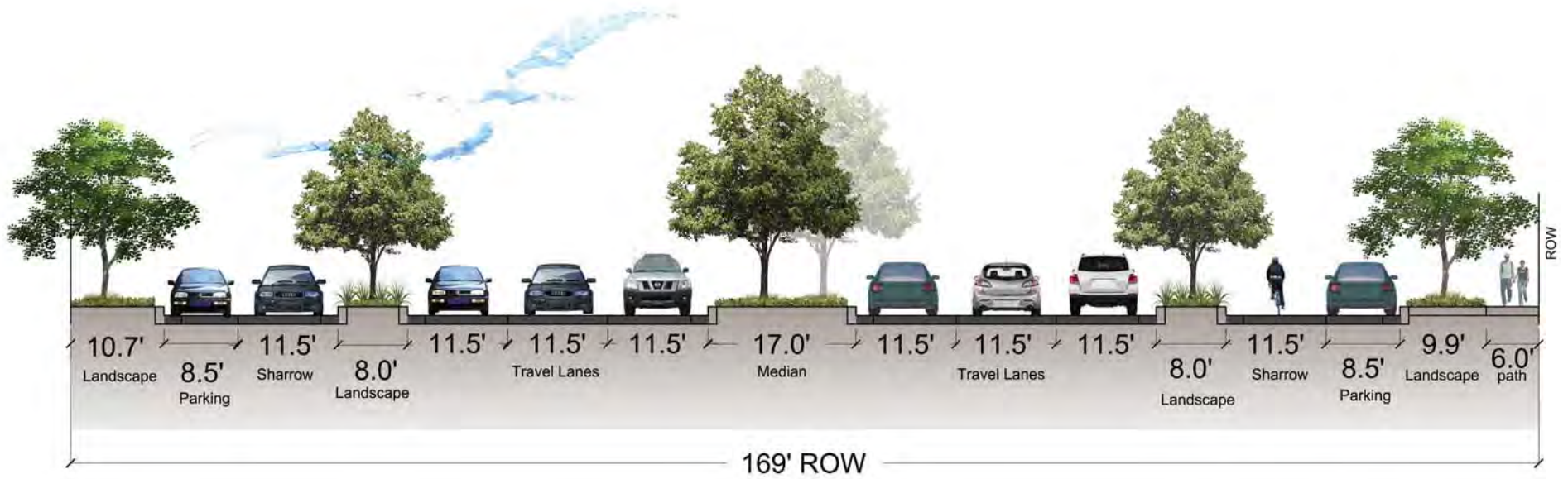
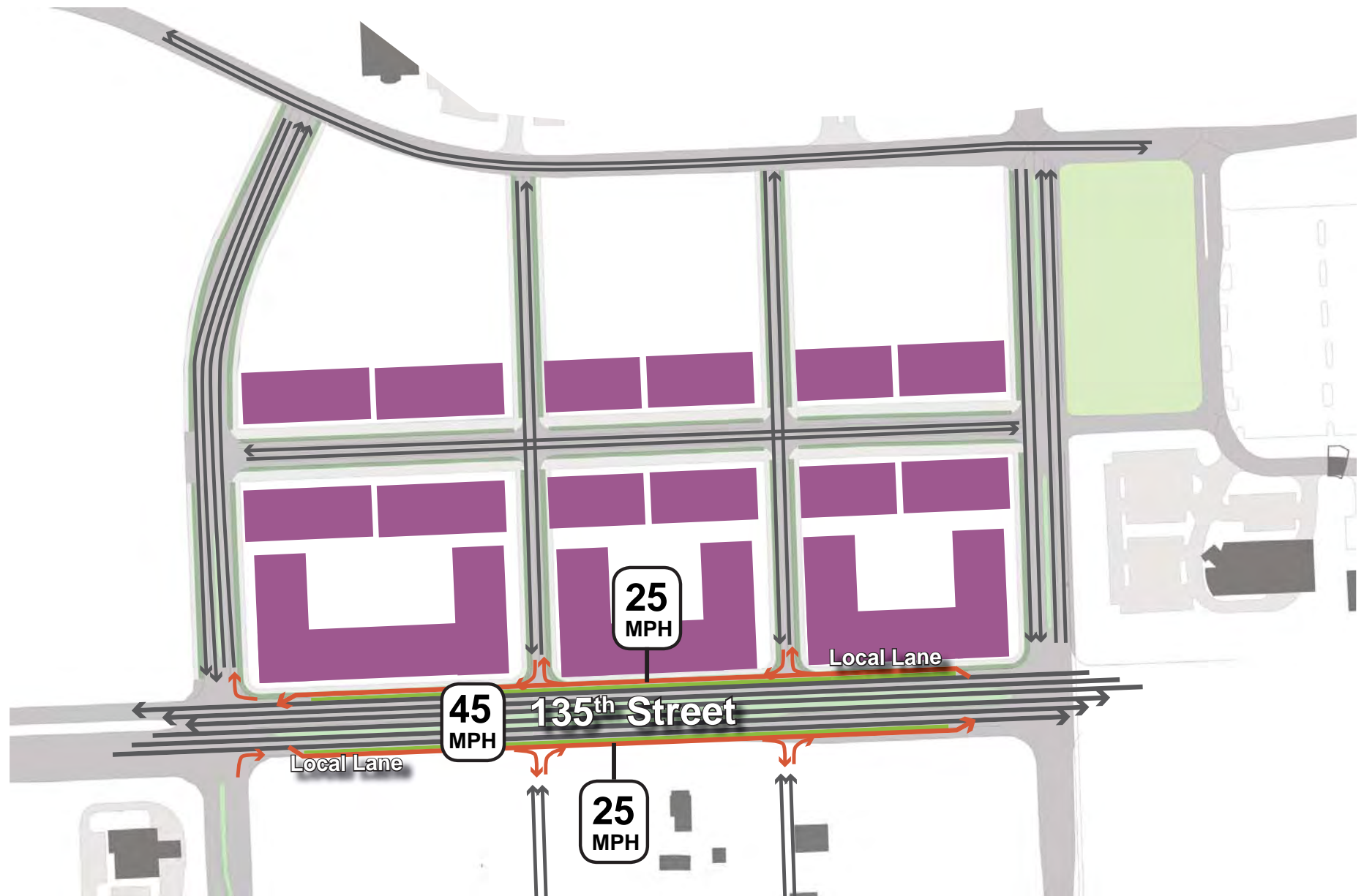


Figure 22: Potential traffic configuration for a multi-way boulevard on 135th Street



LDO Recommendations: The Kit of Parts

The existing development ordinance offers developers and their associated projects a number of bonuses for the inclusion of elements that exceed the minimum requirements. However, these helpful ingredients that encourage exceptional design and building are buried throughout the document. Providing developers with a “Kit of Parts,” or an easy-to-follow menu of elements and their associated bonuses could expedite both the communication and application processes for future development projects. The following is a list of potential elements recommended for inclusion in this kit:

Pedestrian Accommodations

Sidewalk Width

16-2-9.1 Performance Criteria-Public Sidewalks

The following represent minimum recommended widths per street character type. These widths respond to the needs of each street type and best management practices for pedestrian design.

- Neighborhood Street 6’
- Active Pedestrian Street 8’
- Destination Street 16’

16-2-9.2 E-5 Pedestrian/Bicycle Circulation

This ordinance requires that non-residential sidewalks be placed a minimum of six feet from the façade of a building in order to provide landscaping between buildings and sidewalk. This requirement limits the possible activities that could take place on an active sidewalk or Destination Street. The city should work with property owners and developers to determine the best placement of sidewalk facilities to create active pedestrian environments while maintaining a distinct quality of design throughout the corridor.

Sidewalk Material

In recent years there have been numerous advancements made to paving material technology. Some of the latest advancements include attractive options for porous pavement (concrete) and permeable pavers. Porous pavement is a type of paving that can bear traffic loads but has a high enough porosity and permeability to significantly influence

hydrology, rooting habitat, and other environmental effects. Permeable pavers consist of a layer of concrete (or other material) pavers separated by joints which are filled with small stones. Water enters joints between the solid pavers and flows through an open-graded base back into the soil.

As development occurs in the 135th Street corridor, the amount of impervious surfaces (which include elements such as pavements and rooftops) will significantly increase. This increase impacts the quantity and quality of surface runoff water. Surface runoff from dense development of impervious areas can contribute to water pollution, flooding, erosion, and loss of groundwater recharge.

Through bonuses and/or incentives, the City should work with developers to select and install permeable materials for sidewalks that meet the U.S. Environmental Protection Agency (EPA) stormwater performance criteria as a structural best management practice. In addition to reducing the negative environmental impacts of development, use of this material can help bring attention and possible marketing opportunities to new developments through the pursuit of LEED certification and/or Sustainable SITES certification.

Crosswalk Features

To meet the City’s goals of creating a truly pedestrian-friendly environment, the following features represent some best practices for crosswalk design and implementation that should be included in the creation of new intersections:

- Differentiated Crosswalk

16-2-9.2 E-4 Pedestrian/Bicycle Circulation

The current LDO recommends differentiating the pedestrian route from the vehicular route at all intersections. This helps to protect pedestrians and gives clear signals to both pedestrians and drivers that safe passage is preserved at these locations throughout the corridor. The City should work with developers to ensure that crosswalk material is either uniform or similar at all crosswalks throughout the corridor. Uniformity and regularity in visual cues helps to reinforce the idea of safe passage to drivers and pedestrians alike. Permeable materials

at crosswalks should be considered as best practices for stormwater management in the area.

Vision Impairment Accessibility. There are a number of ways to ensure that those with vision impairments can access and use crosswalks in the corridor:

- Detectable crosswalk warnings (truncated domes) at both ends of a crosswalk
- Consider audible pedestrian signals to alert those who cannot see a signal

ADA Compatible Curb Ramps Curb ramps should be placed to enable a person with a mobility disability to travel from a sidewalk on one side of the street, over or through any curbs or traffic islands, to the sidewalks on the other side of the street.

Pedestrian Push Buttons Well-marked, visible, and accessible to all from a flat surface at crosswalk signals. Push buttons should be consistent with recommendations from the U.S. Department of Transportation's Designing Sidewalks and Trails for Access.

Crosswalk Timing The city should work to coordinate adequate crossing times for each crosswalk. Target crossing speed for visually impaired and elderly is 2.5 feet per second.

Street Furniture

16-3-9-A-4.d Pedestrian Amenities

The existing LDO offers a 10% increase in applicable maximum FAR for projects with substantial pedestrian amenities. Providing developers with a more comprehensive list of what these amenities could include will help developers and property owners better understand how to achieve the City's goals of creating excellent pedestrian-oriented spaces, and acquire the potential bonus.

Seating is an important part of vibrant public spaces. It allows pedestrians to rest, socialize, read and people-watch. The three street character types (Destination, Active Pedestrian, and Neighborhood) represent different levels of potential pedestrian activity. Urban design standards recommend one linear foot of seating for every 21 linear feet of street

frontage. The recommended block size of 360 feet would require, at a minimum, 17 feet of seating. In addition to traditional benches, the City should work with developers and designers to produce creative seating opportunities, such as seat walls, multi-functional art pieces and raised planters.

Like seating, locations and amenities that allow for outdoor dining provide excellent opportunities for community members to meet, greet, and eat. While wider sidewalks will allow restaurants to pursue expanding their space with outdoor dining options, developers and property owners could work with the City to create outdoor dining spaces in key locations or plaza spaces throughout the corridor. Either temporary or permanent outdoor dining amenities can create inviting and active spaces for community gathering and social interaction in the area.

Shade also plays a key role in human comfort and pedestrian activity in urban environments. Street trees will be the main element to produce shade for pedestrians, but other opportunities for shade structures, art pieces and building amenities should be pursued to create the best possible pedestrian experience for the community.

Street Trees

16-4-7.3 Landscaping Requirements – Other Districts

Regulations require developers to install street trees. Developers and cities could work together to select optimal tree species for development that responds positively to surrounding species and meets current city regulations for size and shade.

16-4-7.4 Installation and Maintenance of Landscaping and Screening

New technologies in tree installation and design help to protect trees, can extend their life cycle and significantly reduce the impacts of sidewalk upheaval. In urban environments, tree soil volume is most commonly the deciding factor of street tree health. The recommendation of the design team is that all street trees be planted with a **1000 cubic feet** of soil. Soil that may be counted in this calculation includes uncompacted soil with an organic matter percentage of at least three percent. There are several methods for achieving this goal.

In areas where flush walking surfaces must be maintained, the design team recommends several methods including suspended pavers and underground drainage cells. Suspended pavement utilizes a structural sound steel frame that is anchored to slabs and supports the above pavers while leaving the soil below untouched. This system is used for newly planted trees and can come in various sizes to fit necessary requirements. These systems can be coupled together to provide a continuous soil trench between street trees allowing trees to share soil. They can support both concrete and pavers and the full load of cars and trucks. These systems can be used in tight areas where the surface material is irregular. For best results these systems should be used in conjunction with proper subsurface drainage and permeable pavers to allow for air and water flow between the soil and the atmosphere.

Lighting

16-2-9.2B Non-Residential Uses: Lighting

While the existing lighting guidelines described in the LDO do set standards for the lighting of parking lots and building entries, there are a number of other lighting areas and elements that should be considered in the design and development of urban spaces. Setting some minimum standards for lighting along the 135th Street corridor will allow development in the area to meet the following goals:

- **Promote Safety** “More light” is not necessarily “better.” Unsafe glare reduces the effect of lighting, contributing to accidents and hindering visibility.
- **Reduce Costs** Following professionally recommended light levels to provide adequate illumination and efficient luminaires will be more cost-effective and reduce energy usage.
- **Conserve Natural Resources** Inappropriate or excessive lighting wastes energy sources and pollutes the air and water by unnecessarily burning fossil fuels.
- **Retain Community’s Character** while reducing “Skyglow,” Leawood’s ability to see a dark, star-filled sky should be preserved and protected. Stray and excessive lighting contributes to light pollution, clutter and unnatural “sky glow.”

The design team recommends the use of Light-emitting diode (LED) luminaires. The following table provides standards for lamp type, uni-

form ratio and average footcandle to safely and responsibly light the corridor:

Table 4: Lighting standards by area type

By Area or Type	Lamp Type	Uniform Ratio	Footcandle
Parking	Light-emitting diode	4:1	1.0 Average
Main Trafficways	Light-emitting diode	4:1	2.0 Average
Main Pedestrian Routes	Light-emitting diode	4:1	3.0 Min/5.0 Max
Pedestrian Connections	Light-emitting diode	N/a	5.0 Average
Signage	Light-emitting diode	N/A	2.0 Min/5.0 Max

Bike Accommodations

The City of Leawood is currently engaged in a process to produce the Leawood Bicycle and Pedestrian Master Plan. In order to realize this plan within the corridor, the City should work with property owners and developers to install bike amenities that will make this plan a reality. To encourage these entities to take on bike amenities, the city may offer density bonuses or similar compensation.

On-Street Bike Lane

Bike lanes are a portion of the roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use by bicyclists. Bike lanes help make both bicyclists and motorists aware of each other and provide safer conditions for both users of the roadway.

Minimum width of bike lanes in the corridor (as recommended by the American Association of State Highway and Transportation Officials (AASHTO) is five feet. The design team recommends a six foot bike lane which includes the six inch paint stripe separating the bike lane from the car lane.

Sharrows

In some cases a *sharrow*, or shared roadway bicycle marking, may be the appropriate choice to accommodate bicyclists in the corridor. A sharrow marking designates a lane within the roadway as a shared route for both vehicles and cars. Sharrows are most commonly used on bicycle routes in travel lanes whose right-of-way is too narrow to

accommodate both a travel and bicycle lane, or along roads with adjacent to on-street parallel parking.

Bicycle Parking

In order to welcome bicyclists and bicycle activity into the corridor, sufficient bike parking must be provided along community streets. The City may work with developers and designers to select and install bike parking accommodations.

Design guidelines recommend two bike racks for every 2,000 feet of plaza space. Studies have found that the most accommodating bicycle racks are inverted “U” racks, or variations of this form. Wave racks have been found to limit parking capacity. Inverted “U” rack elements mounted in a row should be placed on 30 inch centers.

In some scenarios, potentially a plaza or park space, a bicycle “parking lot” may be appropriate. A bicycle parking lot is an area where more than one rack is installed. Aisles separate the racks. An aisle is measured from tip to tip of bike tires across the space between racks. The minimum separation between aisles should be 48 inches. This provides enough space for one person to walk one bike. Seventy-two inches (six feet) of depth should be allowed for each row of parked bicycles (conventional bikes upright bicycles are just less than 72 inches long).

Bike parking location

The location of a rack area in relationship to the building it serves is very important. **The best location for a rack area is immediately adjacent to the entrance it serves.** Racks should not be placed so that they block the entrance or inhibit pedestrian flow in or out of the building. Racks that are far from the entrance, hard to find, or perceived to be vulnerable to vandalism will not be used by most cyclists.

The rack area should be located along a major building approach line and clearly visible from the approach. The rack area should be no more than a 30-second walk (120 feet) from the entrance it serves and should preferably be within 50 feet.

Bicycle Sharing Programs

A bicycle sharing program is community service in which bicycles are made available for shared use to individuals on a short-term basis. Parking stations are located throughout a city and allow people to travel from one destination to the next, without the worry of parking, ownership, or maintenance. There are examples around the world of bike-sharing programs that Leawood could potentially model in the 135th Street corridor. Some programs are organized by local community groups or non-profits and others have formed through public-private partnerships.

The Multi-way: 135th Street

During the planning process, the design team has worked with staff to create a multi-way boulevard option for developers and property owners as new projects develop along 135th Street. To peak the interest of developers, the multi-way option should present the following benefits:

- Street frontage for projects located along the multi-way is activated by slower moving traffic and a comfortable pedestrian realm.
- Easy-in, easy-out “teaser” parking located along the multi-way frontage road provides more sales opportunities for retailers and restaurateurs located along the multi-way.

Development bonuses should be made available to developers for the installation of multi-way elements along an entire block. Throughout the design process of the multi-way, design discussions should be sure to include traffic engineers, civil engineers, landscape architects, and public works representatives to insure the successful design and implementation of the boulevard. Some components to discuss will include:

Additional median/buffer

A planted median will separate the high speed travel lanes located in the center of 135th Street from the local, slower speed frontage lane and parking. Derived from studies of the existing right-of-way, a desire to create a separated pedestrian realm, and the provision of adequate soil volumes for tree planting, the design team recommends an eight foot planted median.

On-Street “Teaser” Parking

The on-street parking is an essential element to the success of this multi-way. The design team recommends angled on-street parking, for easy-in, easy-out access. The recommended dimensions are 45 degree angles, nine foot space width and a 20 foot space depth.

Gathering Spaces

16-3-9-A-4

The existing LDO offers a ten percent increase in applicable maximum FAR for projects with substantial pedestrian amenities. Providing developers with a more comprehensive list of what these amenities could include will help developers and property owners better understand how to achieve the city’s goals of creating excellent pedestrian-oriented spaces, and acquire the potential bonus. Article 16-2-9-2F outlines some guidelines for plaza spaces. Listed here are other gathering spaces that should be provided to developers as options.

Pocket Park

Pocket parks are small park-like spaces that invite pedestrians to pause, and give urban dwellers a respite from the indoors. Seating areas and enhanced plantings can help give corridor pocket parks their own character. These features could enhance new streetscapes and contribute to the area’s developing identity.

Flexible/Festival Street

Festival streets give neighborhoods the opportunity to host tailgates, art fairs, food festivals and other large events to promote the city and celebrate its culture. A festival street expands the pedestrian environment into the street on event days, providing space for retailers, food trucks, tailgates, musicians and vendors. A festival street can attract pedestrians from all over the region and make the 135th Street Corridor stand out as a destination in Leawood. The wide variety of possible flexible events can also give corridor retailers exposure to new clientele.

Outdoor Farmers Market

Designating space for an outdoor farmer’s market has proven to be a great city amenity for developing community relationships, building activity on streets and in neighborhoods, and boosting local businesses.

Mobile Food Vending Space

Food Trucks and Carts (Mobile Food Vending) can be a vital part of more successful streetscapes. They offer seasonally changing attractions for daytime use by office workers and nighttime use by nightlife patrons. They also encourage local entrepreneurship by offering an avenue for budding chefs to build up a food and beverage business without the high expense of opening a restaurant. Many U.S. cities, like Cincinnati, Chicago and Denver, now offer programs to permit these small business owners with regulated licenses. Food trucks could represent a great asset for gathering spaces like Gezer Park. They also have the potential to create mutually beneficial relationships with local bars and other night-life venues.

Public Art

The Leawood Arts Council (LAC) supported enhancements to Gezer Park within the plan area. Coordination with the Art in Public Places Initiative (APPI) and the Leawood Arts Council for the private installation of future public art should be pursued by developers.

Signage and Wayfinding

The City of Leawood has a comprehensive set of Permanent Signage Development Guidelines to insure the aesthetic quality and character of corridor neighborhoods. The missing element of the City’s signage program is Wayfinding. Wayfinding is a series of elements, which can include but are not limited to: signage, art works, or natural features in the landscape, that improve and help to promote visitor experiences by providing essential information needed to navigate an area. A Wayfinding program for the corridor would be an excellent addition to help brand and promote the area into the future.