

Figure 78: Metro Areas by Fatal Crashes and Annual Transit Trips (Source - American Public Transportation Association)

Cycling is one of the most sustainable, efficient, and healthy modes of transport available, especially in urban environments. Despite its benefits, cycling adoption is hindered by perceived and real safety concerns. Planning for safe cycling networks is critical to Vision Zero effort. Most important is reducing vehicle speeds, as discussed in the Speed Focus Area. But more than that, the different user modes should be separated wherever possible by constructing dedicated bicycle and dedicated pedestrian facilities. Where the users can't be separated, such as at intersections, safe crossings should be considered.

Constructing the network of protected bike lanes as proposed in the 1-year and 5-year bike networks will be essential to achieving Vision Zero. Additionally, these separated facilities should be maintained so that users feel most safe using their dedicated facility. Protected bicycle lanes should be maintained by regular sweeping and upkeep of the vertical separation as well as pavement markings and signage.



Figure 79: RideKC Bus with bike rack (Image Source: BikeWalkKC)



Land use planning will be a key step to achieving Vision Zero. Considerations should be given to street layout and block sizes. A safe street layout supports low traffic speeds, three-way intersections, and roundabouts. Long blocks often tend to result in higher vehicle speeds due to fewer intersections as well as pedestrians more likely to cross traffic at midblock locations rather than at intersections. On the other hand, very short blocks can also decrease road safety. In addition to there being more land devoted to streets, short blocks also mean that vulnerable road users are more exposed to motor vehicle traffic at intersections because there are more conflict points.

Proven safety countermeasures for multimodal networks include:

- Improve Pedestrian Crossings at Signalized Intersections—increase the yield rate of motorists by improving pedestrian signal timing and visibility—projected 15% reduction in crashes
  - Crosswalk Visibility Enhancements –augment the existing intersections the visibility of vulnerable users at the crosswalks to increase the rate of yielding of motorists—projected 9-55% reduction in crashes
  - Implement Leading Pedestrian Interval—providing pedestrians a few second's head start at an intersection in advance of a green light—projected 13-55% reduction in crashes
- Improve Pedestrian Crossings at Uncontrolled Locations—install safe crossing locations for pedestrians to increase the yield rate for motorists to pedestrians—projected 55% reduction in crashes
  - Rectangular Rapid Flashing Beacons—provide a pedestrian activated push-button warning system to increase the yield rate of motorists this is an improvement meant for lower-speed connector type roadways—projected 47% reduction in pedestrian crashes
  - Pedestrian Hybrid Beacons—provide a pedestrian activated push-button warning system to increase the yield rate of motorists this is an improvement meant for higher speed roadways—projected 29% reduction in crashes and 55% reduction in pedestrian crashes
- Pedestrian Refuge Islands—create a safe location to protect pedestrians while they wait for adequate gaps in traffic or for vehicles to yield—46% reduction in pedestrian crashes
- Construct Sidewalks and Trails—create safe separated paths for pedestrians to navigate safely around the city—projected 59% reduction in pedestrian crashes
- Construct Dedicated Bicycle Infrastructure—create safe facilities for cyclists of all comfort levels—projected 73% reduction in vehicle/bike crashes



## Safe Users

A fundamental principal of Vision Zero is to strengthen the system and place less reliance on driver behavior and the attempt to perfect that behavior. But road users share responsibility for traffic safety in addition to the system designers, elected officials, and system operators. Creating safer users starts with providing a road environment and speeds in which they can safely operate. At the same time these efforts are underway, education opportunities and encouragement campaigns should also be conducted.

### Top Safe Users

#### Countermeasures

- Advocate for Driver Education Classes
- Support Local Education Programs run by Advocacy Groups
- Conduct campaigns focused on speeding

Certain behaviors and certain users have much more impact on and are impacted more by fatal and serious injury traffic crashes. The Focus Areas that these countermeasures will target to reduce fatal and serious injuries for are male drivers, young drivers, and reckless drivers, particularly drivers who are speeding and driving while intoxicated. Countermeasures for these Focus Areas will typically work on safety campaigns that inform drivers of the importance of driving safely. These campaigns will generally work towards emphasizing the importance of driving at a safe speed for the roadway conditions and training drivers to be watchful and cognizant of vulnerable road users.

On top of public safety campaigns, it will also be important to support external non-profit and advocacy groups already working towards educating the driving public. Examples of these countermeasures include:

- Advocating for Driver Education classes at public schools—providing support for in-school or non-profit based drivers education courses for young people—projected 5-11% reduction in crashes
- Volunteer drivers to help young adults meet driving hour requirements to obtain licenses—creating an environment for young adults with busy parents opportunities to receive their drivers' permit is expected to greatly decrease the number of crashes involving unlicensed drivers, but there is currently no quantifiable data to estimate the projected reduction in crashes.
- Supporting multimodal educational programs run by advocacy groups like BikeWalkKC—through the SRTS program and other similar programs, communities can feel safe using alternative means of transportation—projected 16% reduction in vulnerable road user crashes





### Safe and Equitable Enforcement

Law enforcement is a key component of traffic safety and the Vision Zero approach. Law enforcement officers from KCPD cannot be everywhere at all times, so it is most important to change our infrastructure and educate our drivers on safe behaviors, but enforcement remains a key tool to address the worst reckless and negligent behaviors of drivers.

Law enforcement raises special equity issues. When enforcement is deployed, it is imperative that it is done in an equitable manner. Many of our worst safety issues exist in transportation disadvantaged areas. These areas have historically had a strained relationship with law enforcement. Enforcement activities in these areas should be accompanied by public information and education campaigns about the enforcement activities. Targeted speeding enforcement should also be structured to provide warnings for minor speeding infraction first with tickets starting on the second offence, subject to police officer judgement. This way, lower income residents that may be significantly impacted by a traffic ticket can have an opportunity for behavior change prior to that happening.

Laws related to speeding and aggressive driving should be considered one of the top priorities for enforcement activities to achieve Vision Zero goals. A secondary focus should be placed on intoxicated driving. Leveraging multiple strategies will increase the likelihood of success in improving the current system's equity and safety. Some strategic enforcement can be taken to develop an equitable safety plan that address the crash issue through both infrastructure and behavioral improvements. Traffic safety enforcement activities should be promoted through partnership with KCPD. The following countermeasures should be utilized:

- Data Driven Policing & Traffic Safety Data Collaboration—safety data orientated collaboration should be provided to the KCPD officers to focus their traffic safety efforts in a data-driven way and information gathering to support safety activities from other Kansas City departments
- Interim Speed Safety Cameras—speed cameras that automatically issue a speeding ticket after identifying the vehicle and driver—projected 32% reduction in crashes
- High Visibility Targeted Speed Enforcement—posting police patrol cars and motorcycles in highly visible locations for speed enforcement in targeted safety corridors—projected 15-42% reduction in crashes
- Speeding and DUI Saturation Patrols—could be implemented to better avoid crashes caused by reckless or aggressive driving behaviors at high crash locations based on a data-driven and safety targeted approach

Top Safe and Equitable Enforcement Countermeasures

- Interim Speed Safety Cameras
- Data driven & traffic safety focused policing
- Equitable enforcement



### Accurate Data

Accurate data is critical to identifying key safety issues, planning safety countermeasures, and tracking progress as countermeasures are implemented. The analysis framework established in this action plan combines crash reports, roadway infrastructure, and demographic data to draw conclusions about key safety issues in the region and areas for high-impact safety improvements. However, this analysis framework would benefit from investment in data quality and accuracy.

#### Top Accurate Data and Reporting Countermeasures

- Create Roadway Safety Data System
- Partner with KCPD to improve reporting accuracy

Law enforcement is the primary source of information on motor vehicle crashes. Critical information like the location of the crash, actions of people involved, and other contributing circumstances to the crash are all based on investigations conducted by law enforcement. The Public Works Department can partner with the Kansas City Police Department to improve crash reporting to make it more thorough and less biased. Providing law enforcement with context to roadway infrastructure, behavior and responsibilities of all roadway users, and equity can help law enforcement produce more accurate reports.

Establishing a centralized roadway safety data system is another critical step to a data-driven safety program. The data system should include provisional and final crash data provided by MoDOT, MARC, and KCPD. The data system should take care to accurately geocode the crash location and associate it with a stable ID linking it to the City's Centerline features. Roadway attribute data should be updated and include time series information (so as roadways are changed and made safer, the linkages between these improvements and crash rates can be tracked). Roadway attributes could include:

#### Centerline Attributes:

- Roadway functional class
- Access type (limited access, full access, or partially limited access)
- Number, direction, and width of through lanes
- Presence and type of median (including turn lanes)
- Presence and condition of sidewalks
- Presence and type of bicycle facility
- Presence of on-street parking
- Presence and type of mid-block crossings
- Speed limit
- Number of driveways or access points
- Pavement condition
  - Date of most recent resurfacing
  - Date of planned resurfacing
- Average daily traffic volumes
- Direction of travel (one-way vs. two-way)
- Estimated roadway capacity
- V/C Ratios (peak and off-peak)



- Prevailing speeds
- Presence and type of crosswalks
- Safety countermeasures or other traffic calming used

#### Intersection Attributes

- Type of control (all-way stop, two-way stop, roundabout, signal)
  - Operational attributes – protected left turn phase, leading pedestrian interval
- Average AADT per intersection leg
- Total pedestrian volume at signalized intersections (expand to 24-hour volumes)
- Safety countermeasures used
- Number of curb ramps (include number of ADA compliant curb ramps)
- Crosswalk style

The crash safety system should include adopted High Injury Networks and Intersections as well as initial risk scores for centerline segments and intersections.

As many as 20% of all serious injury crashes and 30% of pedestrian and bicycle serious injury crashes are unreported to the police. Non-traditional and innovative data sources should also be explored and included to address this reporting issue. By partnering with the health department and area Level 1 Trauma Centers, problems related to under-reported injury crashes can be addressed. The outcomes of patients, which are sometimes not fully investigated by law enforcement, may also be made more accurate. A partnership with a public hospital, such as University Health, may be a good partnership to start with.

More accurate and comprehensive data on roadway speeds would also assist with safety analysis and helping measure the effectiveness of road diets and safety countermeasures. Existing infrastructure from the City's traffic management center or data from Operation Green Light signals may be able to provide some data on speeds already. Certain models of mobile speed feedback displays also record speed data, which could be used for regular speed studies throughout the city. Finally, vendors like INRIX supply cell phone-derived speed data, which can provide typical speeds on higher-volume streets.

Additional traffic volume data should also be included in the safety data system by including manual traffic movement counts and machine counts already collected throughout the city. These could be further supplemented and expanded by making use of big data vendors such as Streetlight Data, which can provide multimodal traffic volume estimates on street segments using anonymized cell phone location data.

Finally, up-to-date operational and roadway characteristic data is a must. Information on speed limits, the number of lanes, lane width, median type, on-street parking, etc. should be recorded in an asset management system (currently Cartegraph) and included in the safety data system. Intersection data, including details on signal operations (e.g. leading pedestrian intervals, left turn phases), should also be included.



## ACTION STEPS

Achieving Vision Zero will not happen without a coordinated, concerted effort from many different departments and projects. The action steps in this plan provide a framework to guide this effort. These steps form the framework of a 10 year program designed to achieve Vision Zero in Kansas City. The program contains three primary pillars:

- Policy and Process Actions - designed to integrate the Vision Zero approach to all aspects of city governance
- System-Wide Action Steps - distributed low-cost, high value systemic projects identified for implementation in all parts of the city to prevent future crashes
- Targeted Project Action Steps - major projects addressing the highest crash locations in the city

The following sections detail the action steps included in these pillars.

### Policy and Process Actions

The first pillar of this action plan is to update the relevant policies and processes in the city to bring all our actions in line with the Vision Zero fundamentals. By doing this, Vision Zero will become an integral and enduring part of doing business in the city. The below policies, processes, and educational efforts can begin in year one of this action plan. Many of these action items are already underway as official city policy or process. Other action items have been piloted or previously identified as a priority but would benefit from formal adoption and expansion to more parts of the City.

#### *Immediate Policy Action Steps*

- Provide dedicated [Vision Zero funding](#) in annual budget. The City currently has a specific Vision Zero line item in its Capital Improvements Plan. It also uses major capital projects budget, street resurfacing budget, and neighborhood capital projects budgets to implement safety projects. Continued budgeting for Vision Zero safety projects and inclusion of safety in CIP planning is essential to realizing Vision Zero.
- Consider revisions to the [Major Street Plan](#). The City is already implementing [road diets and half road improvements](#) on certain streets. Updating this policy document could formalize this and many other safety measures as a standard practice. The update should focus on safety, multimodal access, creating roadway environments sensitive to their context, and roads that foster targeted low vehicle speeds.
- Conduct a city-wide [Speed Limit](#) review. Evaluate whether speed limits are safe for their context and all road users. Following this review, adjust speed limits as





necessary, consistent with community engagement and equity principles established by the forthcoming Spirit Playbook comprehensive plan recommendations.

- Increase support for expanded [public transit service](#) and access. Public transit is the safest form of transportation today. Increasing service and safe access to transit fosters increased transit mode share. The city should continue to support regional transit funding mechanisms, continue to fund transit at increasing levels, and work on improving pedestrian and bicycle access to transit stops consistent with the forthcoming KC Spirit Playbook comprehensive plan recommendations.
- Continue to work with BikeWalkKC on [Safe Routes to School efforts](#), which help improve access and safety around school facilities through educational programming, community engagement, and planning.



Figure 80: KC Streetcar (Image Source: KC Streetcar Authority)

#### *Immediate Process Action Steps*

- Continue to refine a [public engagement process](#) that is consistent with comprehensive plan recommendations. This process should guide staff and the City Council on when and how to engage residents and stakeholders through Citywide or areawide project planning and prioritization as well as project-specific design and implementation activities. Special care should be taken that residents living in Transportation Disadvantaged areas are actively involved in decisions that impact their safety, can help staff identify safety needs and prioritize projects, and understand the safety countermeasures available to help improve safety in the area.
- Continue to refine the Project [Prioritization Process](#) in Capital Improvements Planning and Vision Zero project planning. Scarce resources can have a bigger impact if spent on the right projects and in areas with the highest needs. Continue to center equity, safety, and asset preservation in project planning and prioritization.
- Continue to coordinate with private development so that any required traffic





impact studies for new development prioritize safety, asset preservation, and multimodal access.

- Review and Revise [City Engineering and Design Guides](#) to focus on accessibility, transparency, and usability by all parties and to prioritize safety outcomes over all other considerations. This includes:
  - Create a Complete Street Design Manual. The 2017 [Complete Streets Ordinance](#) codified the need to develop and update a context-sensitive manual on the design of streets for all modes. Still yet to be developed, this manual would be a comprehensive resource for street design in the city that could be used by staff, consultant engineers and landscape architects, private developers, residents, and other stakeholder groups. Such a manual would reference and/or be incorporated into other Public Works and Parks department design guidelines, policies, and procedures.
  - Update the Traffic Calming Manual to allow traffic calming measures to be applied in more places.
  - Update the Traffic Engineering and Operations Manual to focus on safety and update crash reporting and analysis methods to align with Vision Zero best practices.
  - Use [Intersection Control Evaluation](#) to determine the best solution for intersection control based on operations and safety.
  - Update the Walkability Plan to reflect current day circumstances and incorporate safety principles to all aspects of the plan.
  - Update Parkway & Boulevard Standards to focus on safety and multimodal access while still maintaining the historic integrity of the system.
- Develop a [Safety Data System](#) that can be used to plan safety improvements and measure Vision Zero progress over time.
  - Collaborate with KCPD on crash investigation efforts to continuously improve crash investigation and data collection.



Figure 81: Gillham Road Cycle Track



- Use and update existing data on street and intersection conditions and operations.
- Create a new data source recording all safety projects, locations, types of countermeasures used, and the date of implementation. Use the data system to conduct before/after studies and evaluate the effectiveness of the safety project. Optionally conduct speed studies and include observations in the safety data system.

*Immediate Education and Enforcement Action Steps (Complete for KCMO Review)*

- [Create a Driver's Education Task Force for Teens](#). Many teen drivers in disadvantaged areas lack a licensed adult guardian in their lives that can help them obtain the necessary training hours to obtain a graduated driver's license. This task force will explore options to include the availability of driver's education through methods such as advocating for returning driver's education curriculum to high schools, partnering with non-profits to support driver training, and providing driver training through a City funded program.
- [Conduct a Speeding Public Information Campaign](#). This campaign could be aimed at helping drivers understand the impacts of speed and today's heavier automobiles on vulnerable road users, like pedestrians and bicyclists, and encourage safer driving habits.
- Coordinate with the Kansas City Police Department for traffic enforcement should not be used to enforce safe speeds and driving behavior only, not as a tool for criminal enforcement. Special care should be taken to assign resources so that Transportation Disadvantaged communities are not over-policed.



Figure 82: Micromobility hub (Image Source: Street Smarts Design + Build)



**System-Wide Action Steps**

The second pillar of this action plan is implementation of system-wide improvements. These improvements, also known as “systemic” improvements, are distributed low-cost improvements designed to eliminate risk and thereby eliminate future fatal and serious injury crashes before they happen. Based on the systemic risk analysis, we can identify factors on roads that lead to an elevated risk of crashes. By utilizing distributed improvements throughout the city address weaknesses in the transportation system, we can lower risk everywhere in a low cost and equitable manner.

*Immediate System-Wide Steps (Year 1)*

The systemic countermeasures in the Core Safety Principles section of this plan will serve as a basis of systemic improvement projects. A prioritized list of highly effective systemic improvements is further included in the list below. Some of these installations are already underway at high-risk locations. The Immediate Year 1 System-Wide activities will include:

- Complete deployment of current neighborhood traffic calming, major street traffic calming, and lead pedestrian interval implementations currently underway
- Complete construction of sidewalks and curb ramps currently underway
- Develop a prioritized system-wide deployment program for years 2 - 10. This strategy will identify specific locations based on the systemic risk analysis to deploy specific systemic

countermeasures based on project prioritization metrics and identify funding needs for program.

- Develop prioritized sidewalk construction program based on project prioritization metrics and identify funding needs for the program as part of GO Bond program and identify additional funding needs as necessary.

*Ongoing System-Wide Steps (Year 2 - 10)*

System-wide improvements will become an ongoing part of Vision Zero implementation being undertaken on an annual basis every year for the next 10 years. The yearly activities for system will include:

- Annually construct system-wide systemic improvements identified in the prioritized system-wide deployment strategy.
- Annually construct sidewalks and curb ramps identified in the prioritized sidewalk construction program
- Complete an annual review and refinement of the prioritized system-wide deployment strategy for the remainder of the 10-year program.
- Coordinate resurfacing maintenance projects where road diets, lane narrowing, or bicycle facility installation are needed for safety improvements through the Mobility Committee and implement safety treatments with resurfacing projects.



Table 13: System-Wide Project Priority List

	Countermeasure Description	Typical Components	Typical Locations
Neighborhood Traffic Calming	Using self-enforcing physical roadway features to slow vehicles or reduce volumes to support livability and vitality of neighborhood streets in Kansas City. This is primarily includes adding vertical elements to slow down cut through traffic on local streets.	Speed humps, speed cushions, raised crosswalks, curb extensions/bulb-outs, traffic circles, pedestrian mid-block crossings with refuge islands	Local neighborhood roadways, typically coinciding with requested improvements from neighborhood
Major Street Traffic Calming	Making geometric changes at intersections to narrow the overall roadway width, lanes, and tighten the curve radii to help manage speeds and decrease the width of travel lanes pedestrians need to cross.	Curb extensions/bulb-outs, pedestrian refuge islands, road diet with potential bicycle facilities retrofitting	Wide collector roadways, minor/major arterials
Road Diets (Roadway Reconfiguration)	Converting existing 6-lane and 4-lane roadways to 5-lane and 3-lane roadways. Median can be either raised with left turn lanes at intersections or a continuous two-way left-turn lane. Can be implemented with a resurfacing performed for maintenance reasons or stand alone.	Reducing the number of lanes and using the space for turn lanes, on-street parking, or bicycle facilities; curb extensions/bulb-outs, pedestrian refuge islands	Wide collector roadways, minor/major arterials



Countermeasure Description		Typical Components	Typical Locations
Improvement of Sidewalks and Trail Network	Both filling in the missing gaps in the pedestrian network or repairing sidewalks and ADA curb ramps in disrepair to create a comfortable environment for pedestrians.	Sidewalk construction or sidewalk repair	Identified missing or poor-quality sidewalk locations
Improved Pedestrian Crossing (Mid-block)	Creating safe locations for pedestrians to cross at uncontrolled locations so they do not have to go out of their way to cross at signalized intersections.	Installation of RRFBs, pedestrian hybrid beacons, pedestrian refuge islands, crosswalk visibility, and sidewalk/walkway improvements	Locations between signalized intersections in urban areas especially at pedestrian attractors such as transit stops and entrances to multifamily buildings, businesses, and parks.
Traffic Signal Improvements - Leading Pedestrian Intervals (LPI)	LPIs provide pedestrians a 3-7 second head start to enter a signalized intersection before vehicles are given a green light. This provides the pedestrians the opportunity to better establish their presence in the crosswalk before vehicles have the priority to turn.	Updated traffic signal phasing plan, updated ADA compliant pedestrian signals, crosswalk visibility enhancements	Signalized intersections in urban areas



	Countermeasure Description	Typical Components	Typical Locations
<p>Traffic Signal Improvements - Protected/Permissive Left-turn Phasing</p>	<p>Many of Kansas City's major throughfare Corridors currently only provide permissive left-turn phasing or no left-turn phasing at all (with many intersections restricting left-turns during the peaks), which can make it difficult for motorists to navigate through the City and create safety issues. Implementing a protected left-turn phase will provide a designated left-turn priority</p>	<p>Added designated left-turn lanes at signals, potential installation of two-way left-turn lane in conjunction with road diets, added left-turn signal heads, traffic signal timing changes</p>	<p>Signalized intersections currently lacking left turn lanes, left turn signals, or protected/permissive signal phasing; potential road diet locations</p>
<p>Traffic Signal Improvements - Flashing Yellow Arrows</p>	<p>Flashing yellow arrows tend to warn left-turning motorists to yield to vehicles and pedestrians better than the conventional green ball + green arrow configuration.</p>	<p>Added designated left-turn lanes at signals, potential installation of two-way left-turn lane in conjunction with road diets, added left-turn signal heads, traffic signal timing changes</p>	<p>Signalized intersections currently lacking left turn lanes, left turn signals, or protected/permissive signal phasing; potential road diet locations</p>
<p>Traffic Signal Improvements - Red/Yellow Change Intervals</p>	<p>Appropriately timed red/yellow change intervals based on the reviewing the signal performance measures can reduce the number of red light running as well as the speed through the intersections.</p>	<p>Traffic signal timing changes</p>	<p>Signalized intersections</p>



	Countermeasure Description	Typical Components	Typical Locations
Installing Designated Left-turn Lanes on Arterial Corridors	Adding left-turn lanes will allow for increased mobility and safety for all roadway users, giving motorists an opportunity to make safe left-turns will decrease the number of angle and rear end crashes	Protected/permissive left-turn phasing, adding left-turn lanes, adding two-way left-turn lanes, road diets, corridor access management, flashing yellow arrow signal phasing	4+ lane roads currently lacking turn lanes, potential road diet locations
Improved Curve Delineation and Signage	Increasing the visibility of curves to decrease the chances of motorists to run off the road or cross the centerline	Striping wider edge lines, enhanced curve warning and delineation signing, rumble stripes, and safety edge treatments	Horizontal curve locations especially in rural or parkland/open space areas
Reduced School Speed Limits and Safe Routes to School	Review the existing school speed zones and signing around schools to upgrade the schools' signing plans to adhere to the MUTCD and add active flashing beacons to reduced school speed limit zone signs	Safe routes to schools planning, improving built environment for multimodal, installation of reduced school speed limits flashing assemblies	Roadways adjacent to schools
Street Lighting	Improved lighting increases the nighttime visibility of the roadway environment and potential non-motorized users, thus increasing the safety for all users.	Horizontal and vertical illuminance	Locations near transit stops, mid-block crossings, and locations with high numbers of night-crashes

### Targeted Project Action Steps

The third pillar of this action plan is implementation of targeted project improvements. These improvements are individual projects along specific corridors and intersections that were previously identified as unsafe. These locations were chosen based on the high injury network (HIN) ranking, high injury intersection scores, and input from project stakeholders. By leveraging site specific improvements in the transportation system, we can lower risk at the most dangerous intersections and roadway corridors.

### Prioritization Metrics

The highest level prioritization metric is the High Injury Network priority. The HIN was broken down into Top, High, Medium, and Moderate priority segments, solely based on their weighted KSI score. After narrowing the corridor list down to those ranked priority HIN corridors, a further prioritization metric is used to rank projects within the HIN groups. This metric includes:

- Equity
- Inclusion on the proposed bike network
- Inclusion on the road diet candidate network.
- Leveraging other adjacent projects
- Feasibility of quick implementation

Equity was a top concern of the project team. The results of the equity analysis were used to complete initial refinements of the targeted project list.



Three types of locations will be prioritized in this analysis: Extensions of existing or recent projects, locations on the High-Injury Network or Road Diet Network, and locations where protected bike facilities had been planned but not yet implemented. Corridors listed as "Analysis" under the Road Diet Candidate column implies that further study may be needed.

These locations will then be analyzed for the feasibility of implementing known countermeasures for intersections. Intersections with a higher number of KSI crashes will be prioritized above intersections with a lower number of KSI crashes. Intersections already being addressed in existing or planned projects, and intersections which met the above criteria but would require a substantial amount of study or planning before countermeasures could be identified were put on the next tier of priority.

This method of project prioritization was applied to the Immediate Targeted Steps (Year 1) to identify the initial project list. This prioritization metric will be applied to the Short Term (Year 1 - 3) projects identified for planning and concept development in Year 1 and in subsequent years.

### Immediate Targeted Steps (Year 1)

The countermeasures in the Core Safety Principles section of this plan will serve as a basis of targeted improvement projects. Due to the large number of corridors and intersections present on the high injury and high-risk networks, project prioritization is a key element for success. For first round of projects, high injury corridors and high injury intersections were considered that were also prioritized using the



prioritization metric and through stakeholder input. The Immediate Targeted Steps (Year 1) will include:

- Implement countermeasures on identified roadway corridors, shown on Table 14. These and all following tables are listed alphabetically, not in order of priority. This list reflects top priority projects, but there is no prioritization between projects on this list.
- Implement countermeasures at identified intersections, shown on Table 15
- Planning/Concept development for Top Priority HIN Corridors and high injury intersections according to the project prioritization metrics
- Coordinate with MODOT to Implement quick build improvements on US-71 corridor as described below.
- Protected Bikeway Construction (30 mile network)

*Short Term Targeted Steps (Year 1 - 3)* Targeted steps are an ongoing part of Vision Zero and a moving target. After implementing Immediate Targeted Steps (Year 1), activities to follow for Short Term Targeted Steps (Year 1 - 3) will include:

- Implement countermeasures on Top Priority HIN Corridors, shown on Table 16.
- Implement countermeasures on high injury intersections, shown on Table 17.

- Planning/concept development for US-71 Improvements as described below.

- Planning/Concept development for High and Medium Priority HIN Corridors according to the project prioritization metrics
- Continue construction of protected Bikeway network every year

*Medium Term Targeted Steps (Year 3 - 5)*

After implementing Short Term Targeted Steps (Year 1 - 3), Medium Term Targeted Steps (Year 3 - 5) will include:

- Construct Projects on High and Medium Priority HIN Corridors, shown on Table 18 and Table 19, respectively.
- Planning/Concept development for Moderate Priority HIN Corridors according to the project prioritization metrics
- Continue planning/concept development for US-71 Improvements as described below
- Continue construction of protected Bikeway network every year

*Long Term Targeted Steps (Year 5 - 10)*

Projects are listed for the first five years of targeted steps. A part of the Vision Zero processes is re-evaluating priorities on a continual basis, year after year. Long Term Targeted Steps (Year 5 - 10) will include:



- Reassess HIN and high injury intersections lists.
- Complete, or continue to complete, an annual review and refinement of the prioritized targeted projects for the remainder of the 10-year program.
- Implement Projects on Moderate Priority HIN Corridors
- Construct US-71 Improvements as described below.

In addition to the above steps, the target of overall roadway fatalities reaching zero by 2030 should continue to be assessed. Depending where actual numbers are at in relation to the goal set by this plan, more resources or different strategies may have to be implemented.

*Bruce R. Watkins US-71 Highway*

The US-71/Bruce R. Watkins Drive (US-71) corridor was first proposed in the 1950's to provide a direct connection between downtown Kansas City with the growing southern areas of the region. Decades prior to the planning and construction of the US-71 corridor, residential segregation, restrictive covenants, and redlining in Kansas City had restricted where African Americans could rent or purchase property to east of the Troost Avenue corridor. This legally sanctioned practice at the time led to the development of many thriving and prosperous, middle-class African American communities and neighborhoods on the east side of Kansas City. The US-71 corridor tore through these neighborhoods and negatively impacted the African

American communities that were physically divided for its construction in the 1990s and early 2000s.

The project was initially known as the South Midtown Freeway, and as planning and engineering progressed, community members that were being displaced filed a lawsuit in 1973 to halt the construction of the project and request that it be redesigned to lessen the overall impact to the adjacent neighborhoods and provide enhanced connectivity across the highway facility. In total, nearly 1,800 families, mostly African American, were vacated from their homes to allow for the construction of US-71 between 1968 and 1978.

In 1985 a federal consent decree was issued that the South Midtown Freeway project was to be reevaluated and to be designed as “less than a freeway, and more than a parkway.” This consent decree also determined that the eventual US-71 facility would be constructed with three at-grade, signalized intersections located at Gregory Boulevard, 59th Street, and 55th Street. Following a reassessment of the project and the inclusion of the at-grade intersections, along with commitments for enhanced landscaping and other beautification elements, the project was allowed to proceed to construction. The three signalized at-grade highway intersections were thought to aid in maintaining east/west connectivity for the neighborhoods on either side of US-71 (Figure 2). These intersections and signals have made this five-mile segment of US-71 the highest crash location for pedestrians and cyclists in the entire city and have proven to be a poor design for all users of the highway creating unintended challenges for decades.



Figure 83: The Bruce R. Watkins (US-71 Highway) Corridor HIN Detail

Six intersections on the US-71 corridor are included on the top 30 high KSI crash intersections. The entire length of the corridor and Prospect Avenue directly adjacent to it are on the Top Priority HIN. The corridor also crosses one other Top Priority HIN corridor (Gregory Blvd), two High Priority HIN corridors (Meyer Blvd and 63<sup>rd</sup> Street), and one Medium Priority HIN corridor (59<sup>th</sup> Street). Nearly the entire section is in a Transportation Disadvantaged area.

To fully address the grave safety issues on this corridor, a long-term planning and construction strategy is needed. This will likely consist of a Planning and Environment Linkages (PEL) study, environmental assessment according to the National Environmental Policy Act (NEPA). This process should be started as soon as possible in coordination with MoDOT and would likely extend through Year 5 of this action plan, with eventual constructing extending through the end of Year 10 of this action plan.

Because the safety issues are so great in the area, interim improvements will be considered and are included in this plan. Year 1 improvements will include coordinating with MoDOT on performing improvements starting at Gregory Blvd and Meyer Blvd such as:

- Performing a road safety audit
- Improving street lighting
- Improving sidewalks
- Constructing major street traffic calming measures
- Implementing Lead Pedestrian Intervals and other traffic signal timing improvements



Table 14: Immediate Targeted Projects (Year 1) Corridor Improvement Locations

Immediate Targeted Projects (Year 1) Corridor Improvement Locations								
Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)		
23rd St (Chestnut Ave - Topping Ave)	Top	Yes	Yes	7	18	1.48		
31st St (Troost Ave - Topping Ave)	High	Yes	Yes	3	38	3.96		
Hardesty / Van Brunt Ave (Independence - 23rd St)	High	Yes	Yes	5	20	2.39		

Table 15: Immediate Targeted Projects (Year 1) Intersection Improvement Locations

Immediate Targeted Projects (Year 1) Intersection Improvement Locations			
Primary Roadway	Intersection	Disadvantaged Area?	Safety Risk Score
23rd Street	<ul style="list-style-type: none"> <li>• Hardesty Ave</li> <li>• Van Brunt Ave</li> </ul>	Yes	9 / 10
31st Street	<ul style="list-style-type: none"> <li>• Paseo</li> <li>• Brooklyn Ave</li> <li>• Benton Blvd</li> <li>• Indiana</li> </ul>	Yes	9 / 10
63rd Street	<ul style="list-style-type: none"> <li>• Prospect Ave</li> <li>• Indiana Ave</li> <li>• Swope Pkwy</li> </ul>	Yes	10 / 10



Immediate Targeted Projects (Year 1) Intersection Improvement Locations			
Primary Roadway	Intersection	Disadvantaged Area?	Safety Risk Score
Cleveland Avenue	<ul style="list-style-type: none"> <li>E 45<sup>th</sup> Street</li> <li>E 59<sup>th</sup> Street</li> </ul>	Yes	9 / 10
Emanuel Cleaver II Blvd	<ul style="list-style-type: none"> <li>Elmwood Ave</li> <li>Cleveland Ave</li> <li>Prospect Ave</li> </ul>	Yes	9 / 10
Independence Blvd	<ul style="list-style-type: none"> <li>Woodland Ave</li> <li>Prospect Blvd</li> <li>Cleveland/Monroe</li> </ul>	Yes	10 / 10
Paseo Blvd	<ul style="list-style-type: none"> <li>Gregory Avenue</li> </ul>	No	6 / 10
US Highway 71	<ul style="list-style-type: none"> <li>Gregory Ave</li> <li>Meyer Ave</li> </ul>	Yes	N/A

Table 16: Short Term Targeted Projects (Year 1 - 3) Top Priority HIN Corridors

Short Term Targeted Projects (Year 1 - 3) High Injury Corridors						
Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)
39th St (Southwest Trfwy - Indiana Ave)	Top	Yes	Partial	4	48	2.74
Blue Pkwy (Swope Pkwy - 435)	Top	No	Yes	5	37	3.47



Short Term Targeted Projects (Year 1 - 3) High Injury Corridors

Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)
Bruce R Watkins Dr (51st St - Blue River Rd)	Top	No	Partial	19	40	8.74
Emanuel Cleaver II Blvd (Main St - E 31st St)	Top	Yes	Partial	8	72	9.09
Gregory Blvd Swope (River - Ewing Ave)	Top	No	Partial	15	43	2.92
Independence Ave (The Paseo - 435)	Top	Analysis	Yes	7	69	4.20
Prospect Ave North (31st St - 55th St)	Top	No	Partial	12	35	3.00
Prospect Ave South (63rd St - Hickman Mills Dr)	Top	No	Partial	6	21	2.24
Troost Ave (670 - Bannister Rd)	Top	Yes	Partial	16	65	8.96
Truman Rd (Grand Blvd - Hardesty Ave)	Top	Analysis	Partial	12	67	6.38



Table 17: Short Term Targeted Projects (Year 1 - 3) High Injury Intersections

Short Term Targeted Projects (Year 1 - 3) High Injury Intersections			
Primary Roadway	Intersection	Disadvantaged Area?	Safety Risk Score
31 <sup>st</sup> Street	• Jackson Street	Yes	8 / 10
	• Van Brunt Blvd		9 / 10
Truman Road	• Askew Avenue	Yes	7 / 10
	• Oak Street		6 / 10
Blue Parkway	• Coal Mine Road	Yes	7 / 10
Blue Ridge Blvd	• 87 <sup>th</sup> Street	Yes	8 / 10
	• Bannister Road		
	• Sni-A-Bar Road		
Broadway Blvd	• 31 <sup>st</sup> Street	No	7 / 10
	• 39 <sup>th</sup> Street		
Bruce R Watkins Drive	• 53 <sup>rd</sup> Street	Yes	N/A
	• 60 <sup>th</sup> Street		
	• Gregory Avenue		
Church Road	• M-162	No	N/A
Eldon Avenue	• M-210	No	N/A
Front Road	• Chouteau Trafficway	Yes	10 / 10
	• River Front Drive		6 / 10
Hardesty Avenue	• 9 <sup>th</sup> Street	Yes	9 / 10
Main Street	• 43 <sup>rd</sup> Street	Yes	10 / 10



Short Term Targeted Projects (Year 1 - 3) High Injury Intersections		
Primary Roadway	Intersection	Disadvantaged Area? Safety Risk Score
Swope Parkway	• 51 <sup>st</sup> Street	Yes 6 / 10
Troost Avenue	• Meyer Blvd	No 6 / 10

Table 18: Medium Term Targeted Projects (Year 3 - 5) High Priority HIN Corridors

Medium Term Targeted Projects (Year 3 - 5) High Priority HIN Corridors									
Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)			
35th St (Michigan Ave - Bellefontaine Ave)	High	No	Yes	4	9	0.74			
63rd St (Rockhill Rd - Swope Pkwy)	High	Yes	Partial	6	21	1.86			
75th St (Holmes Rd - South Benton Ave)	High	Yes	No	2	28	1.85			
Broadway North (Independence Ave - Truman Rd South)	High	No	No	0	6	0.90			
Broadway South (31st St - Westport Rd)	High	Analysis	No	2	26	1.54			
Cleveland Ave North (Emanuel Cleaver II Blvd -	High	Yes	Partial	4	11	1.04			



Medium Term Targeted Projects (Year 3 - 5) High Priority HIN Corridors

Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)
Swope Pkwy)						
Cleveland Ave South (67th St - Gregory Blvd)	High	No	Yes	2	1	0.44
Front St (River Front Rd - 435)	High	No	Yes	5	17	2.30
Linwood Blvd (SW Trfwy - Cleveland Ave)	High	Analysis	Partial	3	24	3.00
Meyer Blvd East (Presson Dr - Swope Pkwy)	High	Yes	No	4	13	2.06
Meyer Blvd West (Troost Ave - E 63rd St)	High	Yes	No	0	2	0.38
Paseo (Independence Ave - E 41st St)	High	Yes	Partial	7	32	5.35
Southwest Trafficway (I-35 - Westport Rd)	High	No	No	14	18	4.00
Swope Pkwy (Prospect Ave - 67th St)	High	Yes	Yes	1	35	5.39
Van Brunt Blvd (26th St - 31st St)	High	Yes	Yes	3	11	1.25



Table 19: Medium Term Targeted Projects (Year 3 - 5) Medium Priority HIN Corridors

Medium Term Targeted Projects (Year 3 - 5) Medium Priority HIN Corridors									
Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)			
103rd St (State Line Rd - Wornall Rd)	Medium	Yes	No	0	2	0.62			
27th St (The Paseo - Van Brunt Blvd)	Medium	Yes	Partial	2	15	2.42			
43rd St (Jarboe St - Oak St)	Medium	No	Partial	2	15	0.91			
47th St (Madison Ave - Main St)	Medium	No	No	0	21	1.14			
Bannister Rd (Wornall Rd - Blue Ridge Rd)	Medium	Yes	No	8	24	4.75			
Barry Rd (I-29 - N Oak Trfwy)	Medium	Yes	No	0	34	9.09			
Belmont Blvd (Front St - BNSF Railroad)	Medium	Yes	Yes	3	12	2.20			
Benton Blvd (Independence Ave - Truman Rd)	Medium	Yes	Partial	0	16	1.01			
Blue Ridge Blvd (Bannister Rd - I-49)	Medium	Analysis	Yes	2	26	3.33			
Blue River Rd (Red Bridge Rd - Blue Ridge Blvd)	Medium	No	Partial	1	5	1.77			



Medium Term Targeted Projects (Year 3 - 5) Medium Priority HIN Corridors

Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)
Hillcrest Rd (Oldham Rd - Memorial Park Cemetery)	Medium	No	Yes	0	4	0.69
Holmes Rd (75th St - Red Bridge Rd)	Medium	Analysis	Partial	2	13	4.86
M 150 Hwy (State Line Rd - Union Pacific Railroad)	Medium	No	No	2	2	1.75
Madison Ave (43rd St - 47th St)	Medium	Analysis	No	0	4	0.50
Main St (31st St - 47th St)	Medium	Analysis	Partial	2	17	1.99
Mill Creek Pkwy (43rd St - 47th St)	Medium	Yes	No	0	5	0.50
Oldham Rd (Gregory Blvd - Oakwood Rd)	Medium	No	Yes	4	7	0.64
Red Bridge Rd (Wornall Rd - Blue Ridge Blvd)	Medium	No	Partial	0	10	4.95
State Line Rd (W Tam-O-Shanter Dr - 135th St)	Medium	Analysis	No	0	4	0.83
Topping Ave (23rd St - 26th St)	Medium	No	Yes	3	2	0.37
Vivion Rd	Medium	Analysis	Partial	1	11	3.25

Medium Term Targeted Projects (Year 3 - 5) Medium Priority HIN Corridors

Roadway	High Injury Network Rank	Road Diet Candidate?	Disadvantaged Area?	Fatalities (2015 - 2019)	Serious Injuries (2015 - 2019)	Length (miles)
(N Oak Trfwy - I-35)						
Ward Pkwy (75th St - 89th St)	Medium	Analysis	No	3	17	3.70
Wornall Rd (Bannister Rd - Red Bridge Rd)	Medium	No	No	1	17	2.08



Figure 84: Troost Avenue (Image Source: Google)



# MONITORING

One of the most important steps of a Vision Zero Safety Plan is monitoring the annual progress toward zero transportation related deaths or serious injuries on Kansas City Streets. To achieve the goal of zero deaths and serious injuries per year, the City must achieve dramatic reductions in these crashes every year. The city must eliminate approximately 40 fatal and serious injury crashes every year until 2030. This equates to approximately a 25% decrease in fatal and serious injury crashes every year for the next 8 years until 2030.

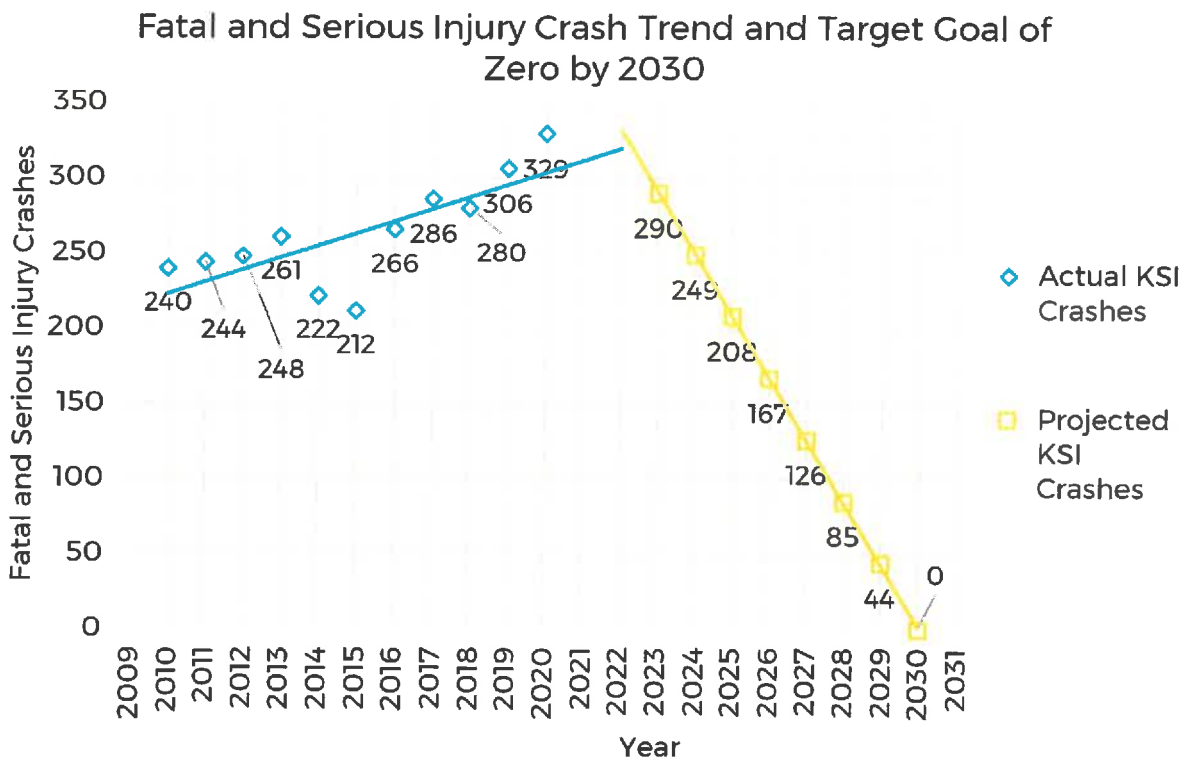


Figure 85: Actual fatal and serious injury (KSI) crashes in Kansas City 2010 - 2020 and targeted KSI crashes to achieve 2030 goal of Zero

To monitor the progress towards zero deaths and serious injuries, the City pledges to annually record and report the key performance indicators shown in the tables below by the 15<sup>th</sup> of July each year covering data for the previous year, as data is available. For the crash-focused key performance indicators, there is an inherent delay in data accessibility, as crash data for a full calendar year is not typically available until Spring or Summer of the next year. These key performance indicators will be made available to the public via a dedicated Vision Zero page on the City Website. This reporting should be used in the Public Improvements Advisory Committee (PIAC) process and budget development process. If no notable progress has not been reached, the City Council will reassess this Action Plan, current projects completed, and funding dedicated to Vision



Zero projects and programs.

Table 20: Crashes-focused KPI for KCMO Vision Zero Plan (Note: KPI include Freeway Crashes)

KPI Measurement	Baseline		Baseline	
	3-yr avg. 2018-2020	3-yr avg. 2019-2021	1-yr 2020	2021
Fatal and Serious Injury Crashes (Citywide, Non-Freeway)	305		329	
Fatal and Serious Injury Crashes (Disadvantaged Areas, Non-Freeway)	171		195	
Number Killed (Citywide, Non-Freeway)	55.3		66	
Number Seriously Injured (Citywide, Non-Freeway)	313		333	
Number Killed or Seriously Injured (Vulnerable Users, Non-Freeway)	49		51	
Rate of Traffic-related fatalities per 100 million vehicle miles travelled (Non-Freeway)	2.16		2.58	
Rate of Traffic-related Serious Injuries per 100 million vehicle miles travelled (Non-Freeway)	12.23		13.01	

Table 21: Investment-focused KPI for KCMO Vision Zero Plan

KPI Measurement	Baseline	
	1-yr 2022	2023
Miles of HIN improved	6.7	
Number of Safety Improved Intersections	7	
Miles of Reduced Speed Limits	0	
Number of Systemic Improvements	1	
Number of Traffic Calming Projects	50	
Proportion of CIP dedicated to Safety	n/a	

# KCMO Safe Streets and Roads for All Comprehensive Speed Limit Review

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## Background

In 2020, Kansas City adopted their Vision Zero Plan, providing an approach to achieve their goal of eliminating traffic deaths and serious injuries by 2030. This was codified by the city through Resolution 200019 passed in 2020. Achieving safe speeds through lower speed limits, roadway design that discourages speeding, and driver education is a core principle of Vision Zero, and reducing vehicle speed dramatically reduces the likelihood of death or severe injury.

Speed related crashes remain a significant issue for Kansas City in the effort to eliminate fatal and injury crashes. Speed related crashes represent a modest portion of overall crashes in the city but a very high portion of fatal and injury crashes. The following is a summary of speed related crashes withing the Kansas City limits from 2014 to 2023:

- Of the 71,781 crashes reported, 8% of them were coded as “speed related”.
- Of the 337 fatal crashes – 47% were attributed to speed.
- Of the 1538 serious injury crashes – 24% were attributed to speed.
- Of the 20,942 minor injury crashes – 10% were attributed to speed.

One of the immediate policy action steps listed in the Vision Zero Action plan was to conduct a city-wide speed limit review to evaluate whether speed limits are appropriate for their context and all road users. In addition, Kansas City adopted the KC Spirit Playbook, which established the following goal:

*Decrease statutory speed limits on all local streets to 20 mph and collector and arterial streets to 30 mph. Evaluate all streets in the city with posted speed limits over 35 mph and consider reducing posted speed limits on these streets.*

In 2023, Kansas City was awarded funds by the U.S. Department of Transportation to advance the findings of the city’s Vision Zero Plan, including conducting a comprehensive speed limit study, updating the city’s High Injury Network, and development of new and updated city design guides. One goal of the project is to inform Kansas City’s efforts to reduce speed-related fatal and serious-injury crashes. This memo details the work of the comprehensive speed limit study as part of this grant.

## Study Goals

The speed study performed aimed to advance several elements of the City's overall speed management and traffic safety promotion strategy. Specific goals of the study include:

- Collect and analyze speed data at locations identified as having high operating speeds or a high proportion of speed-related injury crashes to understand the vehicle speed trends within these corridors.
- Collect and analyze roadway attributes and compare those to speed data to understand any trends between the attributes of the roadway and speeding.
- Develop specific speed mitigation strategies for corridors selected based on low speed-compliance rates, excessive operating speeds, or were prioritized by the city for improvement.
- Model select corridors using USLimits2 to provide baseline data for the city to consider if and how to utilize this speed limit recommendation tool in the future

In addition to the above goals, the analysis tools and recommendation development process can serve the city as a model for how speed limits can be set and speed can be managed.

## Methodology

### Corridor Selection

A high injury network (HIN) is a safety screening tool utilized to identify locations within a jurisdiction with high rates of server and injury crashes. Kansas City updated their HIN as part of their USDOT grant to capture crashes between 2019 and 2023. To identify the 70 corridor segments analyzed in the speed study, the study team considered:

- severity score on the updated HIN;
- functional class (focusing on arterial and collector corridors);
- proportion of crashes that were speed-related;
- geographic distribution;
- distribution of land uses and economic conditions;
- reports of excessive speeding, and
- public input
- feedback from police department

Five additional locations were included as “control” corridors; these sites were not identified on the High Injury Network and had no public reports of speed compliance concerns. The control corridors represent all six Kansas City council districts, with one of the control corridors spanning both districts 3 and 4.

Table 1 below lists speed data collection locations. For purposes of this study, the corridors were categorized by their street typology as identified in Kansas City's Major Street Plan. The five control locations are identified with an asterisk in the table. Location No. 6 was removed from the analysis because it was under construction during the study window.

From the 70 locations selected for data collection, 20 were further prioritized for analysis to develop corridor specific countermeasure recommendations. These locations were selected based on their speed distribution, crash rate, and geographic distribution. Locations with planned or ongoing studies or improvements were excluded. The 20 locations selected for corridor-specific countermeasure recommendations are identified in bold in the table below.

**Table 1: Speed Study Locations**

No.	Street Name	Start	End
1	<b>Chouteau Trfy</b>	Deramus Street	1521 Chouteau Trfy
2	Independence Ave	Hardesty Ave	4519 Independence Ave
3	Truman Rd	U.S. Hwy 71	980 Truman Rd
4	Truman Rd	Indiana Ave	3118 Truman Rd
5	18th St	Askew Ave	Prospect Ave
6	23rd St	<i>Corridor Under Construction</i>	
7	<b>Van Brunt Blvd</b>	<b>27th St</b>	<b>29th St</b>
8	Prospect Ave	38th St	31st St
9	<b>Southwest Trfy</b>	<b>31st St</b>	<b>Roanoke Rd</b>
10	39th St	Indiana Ave	Chestnut Ave
11	<b>Cleaver II Blvd</b>	<b>Vinyard Dr</b>	<b>Elmwood Ave</b>
12	<b>Ward Pkwy</b>	<b>79th St</b>	<b>Meyer Blvd</b>
13	<b>Oldham Rd</b>	<b>Oakwood Rd</b>	<b>Hillcrest Rd</b>
14	<b>Troost Ave</b>	<b>81st St E</b>	<b>85<sup>th</sup></b>
15	<b>87th St</b>	<b>Newton Ave</b>	<b>Blue Ridge Blvd</b>
16	<b>31st St</b>	<b>Jackson Ave</b>	<b>Prospect Ave</b>
17	Blue Ridge Blvd	104th St	113th Terr
18	Cleveland Ave	46th Terr	53rd Terr
19	Broadway Blvd	Linwood Blvd	29th St
20	<b>Eastwood Trfy</b>	<b>Palmer Dr</b>	<b>Crabapple Ln</b>
21	<b>Gregory Blvd</b>	<b>Agnes Ave</b>	<b>The Paseo</b>
22	75th St	Walrond Ave	Park Ave
23	US-56	Roanoke Pkwy	Mill Creek Pkwy
24	Broadway Blvd	41st St	39th Terrace
25	<b>The Paseo</b>	<b>43rd St</b>	<b>39th St</b>
26	<b>Ward Pkwy</b>	<b>51st St</b>	<b>Brush Creek Pkwy</b>
27	Prospect Ave	Hickman Mills Dr	77th St
28	11th St	Grand Blvd	Harrison St
29	Truman Rd	Hardesty Ave	Winchester Ave
30	39th St	Pennsylvania Ave	McGee St
31	80th St	Troost Ave	The Paseo
32	Blue Ridge Blvd	79th St	77th Terr
33	Blue River Rd	116th St	Bo Ho Ca Trl
34	View High Dr	Longview Rd	Meers Rd
35	NW Barry Rd	N Marston Ave	N Madison Ave



No.	Street Name	Start	End
36	N Oak Trfy	NE 90th St	NE 82nd St
37	E 35th St	Wayne Ave	31st St
38	Hwy 8-S	Hillcrest Rd	Banister Rd
39	St John Ave	Askew Ave	Jackson Ave
40	NW Barry Rd	Green Hills Rd	N St Chair Ave
41	N Oak Trfy	NE 54th St	NE Englewood Rd
42	Winner Rd	E Winner Rd	Blue Ridge Blvd
<b>43</b>	<b>Blue Ridge Cutoff</b>	<b>43rd St</b>	<b>39th St</b>
<b>44</b>	<b>Troost Ave</b>	<b>Meyer Blvd</b>	<b>67th St</b>
<b>45</b>	<b>Wornall Rd</b>	<b>89th St</b>	<b>84th St</b>
46	Prospect Ave	46th St	Dr Martin Luther King Jr Blvd
47	Troost Ave	54th St	57th St
48	Blue Ridge Blvd	Longview Rd	Frontage Rd
49	Independence Ave	Cypress Ave	Benton Blvd
50	Troost Ave	72nd St	79th St
51	Meyer Blvd	Benton Ave	Olive St
52	18th St	Troost Ave	Prospect Ave
53	Armour Blvd	The Paseo	Charlotte St
54	12th St	Brooklyn Ave	Bales Ave
55	N Oak Trfy	NE Windrose Dr	NW 96th St
<b>56</b>	<b>Blue Ridge Blvd</b>	<b>29th St</b>	<b>31st St</b>
<b>57</b>	<b>Southwest Blvd</b>	<b>25th St</b>	<b>Broadway Blvd</b>
<b>58</b>	<b>NE Parvin Rd</b>	<b>Worlds of Fun Ave</b>	<b>N Belmont Ave</b>
<b>59</b>	<b>29th St</b>	<b>The Paseo</b>	<b>Prospect Ave</b>
60	63rd St	College Ave	Swope Pkwy
<b>61</b>	<b>85th St</b>	<b>Wayne Ave</b>	<b>Euclid Ave</b>
62	Linwood Blvd	Forest Ave	The Paseo
63	Linwood Blvd	Montgall Ave	Cleveland Ave
64	Benton Blvd	12th St	9th St
65	NE 48th St	N Brighton Ave	N Bennington Ave
66	59th St	Olive St	71 Hwy
67	55th St	Prospect Ave	71 Hwy
68	17th St	Fremont Ave	Belmont Ave
69*	Holmes Rd	99th St	Bannister Rd
70	Blue Ridge Blvd	Greenwood Rd	87th St
71*	Troost Ave	Manheim Rd	36th St
<b>72*</b>	<b>87th St</b>	<b>James A Reed Rd</b>	<b>Elm Ave</b>
73*	N Oak Trfy	NE 109th St	NE 112th Terr
74*	NW 68th St	N Edison Ave	N Bell St
75	N Brighton Ave	Hwy 152	N Lister Ave

\*Control study site

**Bold:** Site selected for development of corridor specific speed management improvements



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During the corridor selection process some additional speed analyses were performed on corridors beyond the 20 that were ultimately selected. A list of all the analysis products developed for each study corridor can be found in Appendix D.

## Speed Data

On weekdays Between September 25 and October 2, 2024, Gewalt Hamilton Associates (GHA) collected speed data for individual vehicles at the 75 corridors identified in Table 1 (see Appendix B). At each location 24 hours of data and the posted speed limit for that section were collected. In addition to the individual vehicle speed data, GHA provided summary statistics for each corridor including the average speed, 85<sup>th</sup> percentile speed, and percent of vehicles complying with the posted speed.

### Table of speed data

Several different data visualization tools were considered for use in the analysis. Ultimately, a box and whisker graph showing the speed quartiles, maximum speed, and minimum speed at each hour of the day was selected as the best tool to visualize speed distribution. The following figures show the different elements of the box and whisker plot and examples of the plots.

Figure 1: Elements of a Box and Whisker Plot

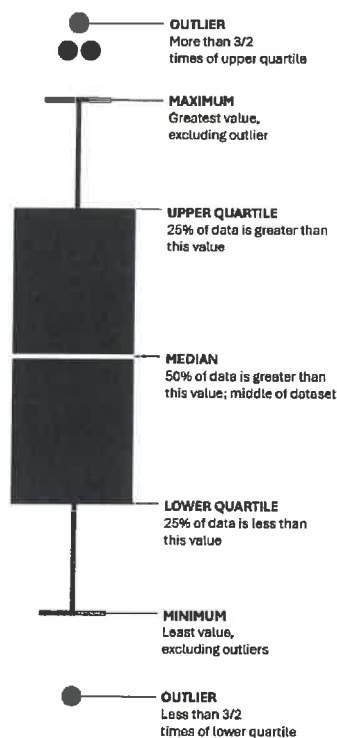


Figure 2: Example (Blue Ridge Boulevard) Box-and-Whisker Plot without Outliers

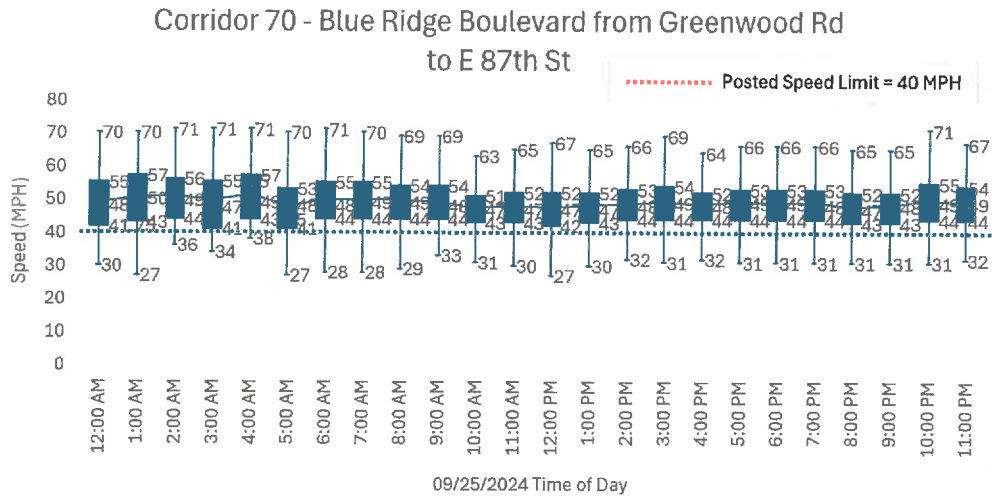
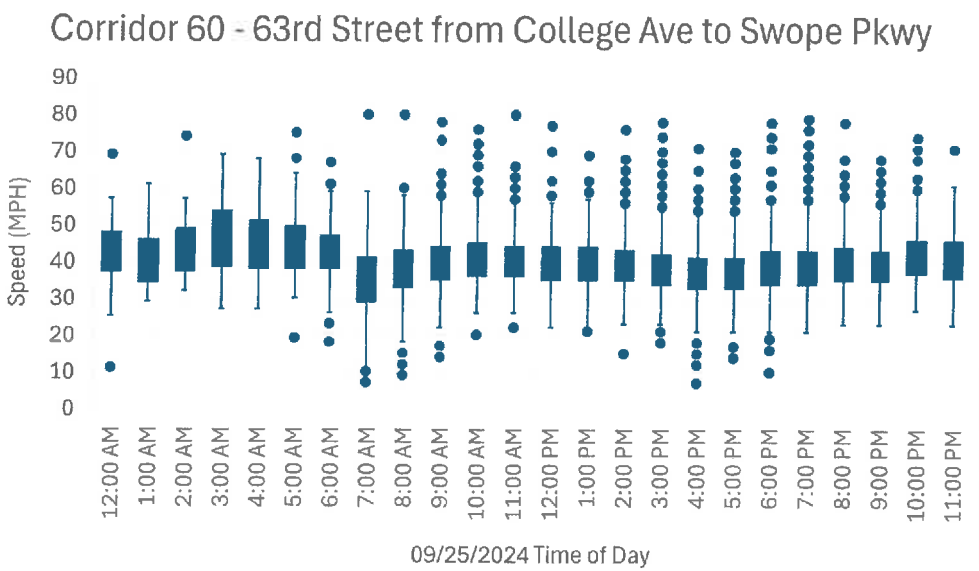


Figure 3: Example (63rd Street) Box-and-Whisker Plot with Outliers



Plots were developed with and without outlier data visualized and can be found in Appendix D. Plots with the outlier data graphed demonstrate the volume and severity of extreme speed trends during the day. Due to the scale of the plot with outlier, the median and quartile data can be obscured, so the plots without the outlier data graphed are easier to visualize.

The hourly distribution provides the ability to assess the relationship between speed behavior and time-of-day. Time-of-day can also help to visualize the relationship of speed and congestion,

assuming that congestion is higher during peak hours and lowest during the night at most locations. The posted speed limit is shown on the plot for comparison.

## Volume Data

The same GHA data set was used to collect hourly and daily traffic volume and vehicle type distribution along the corridors. Daily traffic volumes in the study set ranged from 1,271 VPD on 80<sup>th</sup> Street, a local link, to 41,529 VPD on Southwest Trafficway, a thoroughfare. Of all locations:

**Table 2: Distribution of Corridors by Volume**

Observed	VPD
12	fewer than 5,000
22	5,000–10,000
17	10,000–15,000
15	15,000–20,000
6	20,000–25,000
0	25,000–30,000
1	30,000–35,000
0	35,000–40,000
1	greater than 40,000

The GHA provided speed and volume summaries for each corridor can be found in Appendix B.

## Roadway Data

Between October 3 and October 10, 2024, SE3 collected supplemental field data at each speed study site, including speed limit signage, land use, utilization and roadway cross-section characteristics. The specific fields are listed below along with the frequency they were identified on a corridor.

- Posted speed limit (100%)
- Street cross section (100%)
- Land use (100%)
- Traffic control along corridor (100%)
- Transit Route (77%, 58 of 75 corridors)
- On-Street parking (55%, 41 of 75 corridors)
- Existing sidewalk (85%, 64 of 75 corridors)
- School (21%, 16 of 75 corridors)
- Observed pedestrians (30%, 23 of 75 corridors)
- Observed cyclists (8%, 6 of 75 corridors)

The “school” designation was determined to be a corridor with a school located anywhere along the length of the corridor regardless of whether the corridor was signed with a school zone speed limit. The “observed pedestrian” and “observed cyclist” designation was used if either a pedestrian or

cyclist respectively was observed traveling along the corridor during the time that roadway data characteristics were being gathered.

A summary of all the filed collected data can be found in Appendix A. The individual data collection sheets can be found in Appendix C.

## Supplemental Data

The city's street type GIS layers were queried to assign a street type to each corridor. The following is the distribution of corridor by street type.

- Activity Street: 1
- Boulevard: 3
- Commerce / Mixed-Use: 3
- Established Arterial: 11
- Established Boulevard: 9
- Established Parkway: 4
- Local Link: 19
- Parkway: 2
- Thoroughfare: 22
- Thoroughfare / Local Link: 1

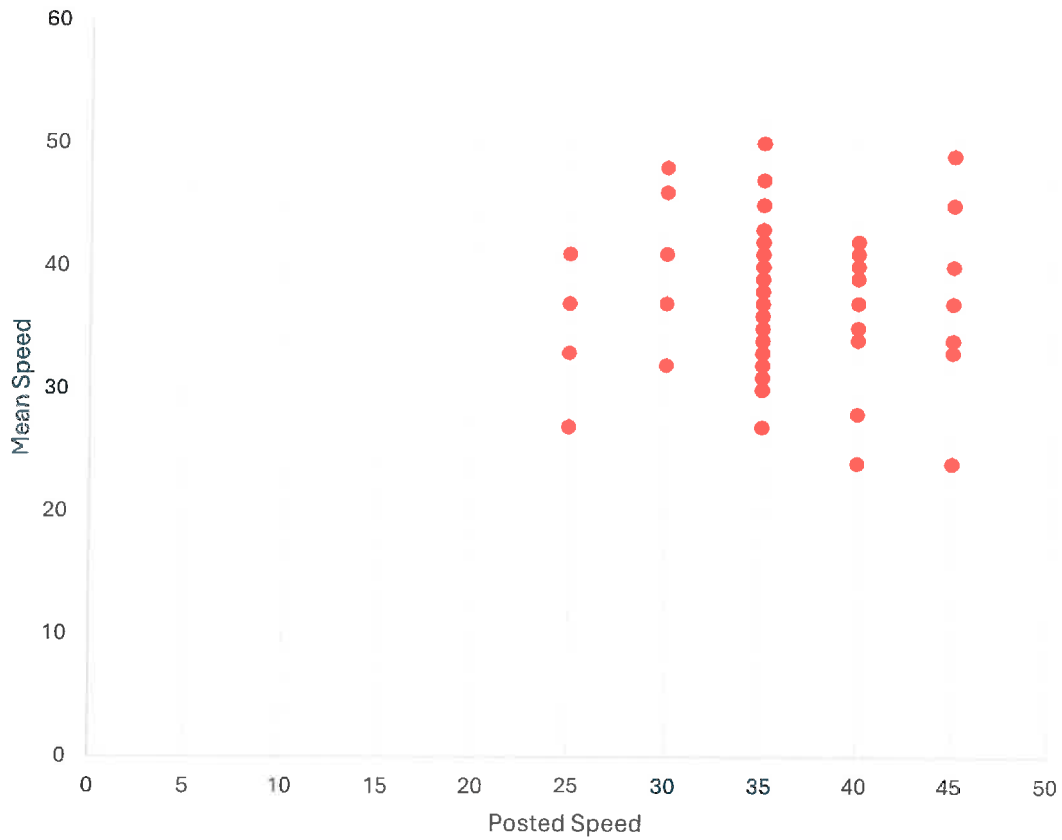
## Results

### Speed Trends

The 5 control corridors display speed distribution characteristics very similar to the 69 selected corridors. Mean speeds for the control corridors averaged 2.6 MPH above the posted speed for those corridors. The 85<sup>th</sup> percentile speeds averaged 9.0 MPH above the posted speed. Though a limited sample size, this relationship would indicate that the speeding and speed management issues persist on locations beyond just those on the HIN and as identified as having a high proportion of speed related crashes. Because of the similar performance of control and non-control corridors, the other analysis performed with this study are inclusive of all corridors.

Overall lack of compliance with posted speed limits is a trend across the corridors studied. The following distributions show the relationship of mean speed and 85<sup>th</sup> percentile speed to posted speed.

Figure 4: Posted Speed vs. Mean Speed



Based on the data from these graphs, the speed limit shows limited impact to travel speed. At both the median and higher 85<sup>th</sup> percentile levels the speed distributions for 25 mph posted roads are very similar to 40 MPH posted roads. Similarly the distribution of 30, 35, and 45 MPH road are very similar. This demonstrates that substantial changes to enforcement and/or the addition of speed controlling infrastructure elements may be needed to bring drivers into compliance with posted speed limits.

## Speed Trends Relative to Roadway Attributes

One of the attributes that showed a strong correlation to non-compliance with posted speed is the presence of on-street parking. Of the 74 corridors for which speed data was collected, 42 of them had on-street parking, 32 did not. The following table provides a breakdown of the percentage of traffic exceeding the speed limit for roadways with different speed limits and presence of on-street parking.

**Table 3: Speeding Trends with On-Street Parking vs. No Parking**

	No. of corridors	Percent of Traffic Exceeding Posted Speed Limit					Total
		25	30	35	40	45	All
<b>On-Street Parking</b>	42	88	46	45	48	31	48
<b>No Parking</b>	32	81	77	67	67	51	64
<b>Active Parking</b>	29	88	46	41	N/A	N/A	45

The study originally captured whether on-street parking was signed and available, and not if parking spaces were actively being used. This finding demonstrates that, when space allows, the presence of on-street parking may be an effective tool for controlling excessive speeding. To supplement these findings, additional data was gathered on whether there are typically vehicles present in the available on-street parking. Though this presence is not perfectly coordinated with when the speed data was collected, it is a good likelihood the use of the spaces is consistent. On facilities with higher posted speed limits, the on-street parking is not used as frequently. When vehicles are present in the parking, there prevailing speeds are lower than when there is no on-street parking and when on-street parking is available but not utilized.

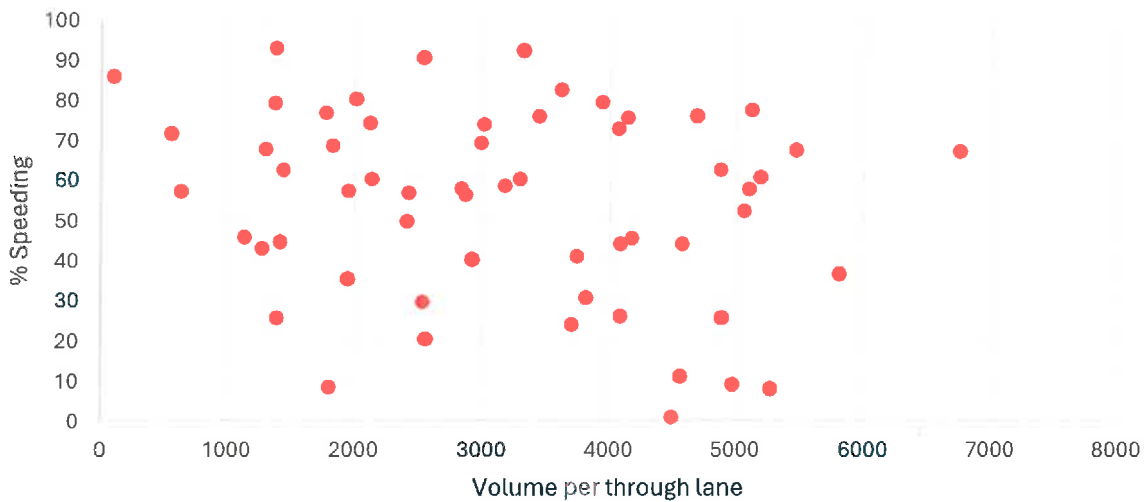
One roadway element that conventional wisdom would associate with better speed compliance is the presence of schools. Schools are traditionally a focal point for young cyclists and pedestrians with times of dense traffic. Of the 16 corridors with schools present along them, 12 demonstrated a mean speed above the posted speed including 3 of the 16 where the mean speed was 5 or more MPH above the posted speed. These corridors also demonstrated high percentages of drivers going over the speed limit with between 26% and 91% of vehicles in these corridors being measured going over the posted speed limit.

Table 4: Speeding Trends in School Zones

Corridor No.	Street Name	Posted (MPH)	Speeding (%)	Mean Speed (MPH)	Mean vs. Posted Speed (MPH)
2	Independence Ave	35	40	34	(1)
5	18 <sup>th</sup> St	35	69	38	3
9	Southwest Trfy	35	59	37	2
17	Blue Ridge Blvd	40	57	41	1
21	Gregory Blvd	35	58	37	2
26	Ward Pkwy	35	77	39	4
45	Wornall Rd	35	76	39	4
46	Prospect Ave	35	26	31	(4)
47	Troost Ave	35	41	34	(1)
50	Troost Ave	35	80	40	5
60	63 <sup>rd</sup> St	35	73	39	4
61	85 <sup>th</sup> St	35	32	33	(2)
63	Linwood Blvd	35	47	35	0
65	48 <sup>th</sup> St	40	88	47	7
68	17 <sup>th</sup> St	25	69	28	3
70	Blue Ridge Blvd	40	90	49	9

Another roadway element that did not show a strong correlation with speed is traffic volume. Speed, in the form of mean speed, 85<sup>th</sup> percentile speed, and speed limit adherence did not correlate well to either traffic volume or traffic volume per through lane.

Figure 5: Volume per through lane vs. % Speeding



## Implementation

### Process Recommendations

Overall, to meet the city's Vision Zero and broader safety goals related to speeding, investment is needed to promote speeds compliant with the target and posted speeds. The following section provides an excellent model for how infrastructure improvements targeted at speed mitigation can be identified and prioritized. In addition, enforcement and education campaigns can promote better compliance with posted speeds. In the absence of these broader initiatives, it will be difficult to improve speed compliance and reduce speed related crashes. Additional specific roadway improvements that may improve speed compliance are on-street parking and replicating the roadway contexts that are better correlated with speed compliance.

Based on a review of the decision tree for USLITMIS2, the lowest recommended speed limit appears to be the median speed. The speed data from this study identifies that the median speed for many of the corridors is too high to be consistent with the City's Vision Zero and Citywide business goals of significantly reducing speeds to promote safety. For this reason, USLIMITS2 is not recommended as a tool for recommending speed limits on City streets.

### Citywide Statutory Speed Limit

As stated in the background section of this report, the City set a goal to reduce the statutory speed limits. Statutory speed limits can represent a target Citywide speed limit but the legal speed limit for a specific road is governed by the posted speed, if one is posted. The City has a robust signing program, and all corridors reviewed for this study had posted speed limits.

Reducing the statutory speed limits for the City can be an important goal-setting action by City leadership and provide a reduction in governing speed for those routes with no posted speed limit. Additional action should be considered to reduce speed limits on roads with posted speeds, outlined in the following section.

See Appendix G for an outlined strategy to reduce posted speed limits.

### Corridor Specific Treatments

The Crash Modification Clearinghouse and FHWA Traffic Calming ePrimer were consulted to develop an initial list of proven countermeasures for mitigation of speed related crashes. The following list of effective countermeasures was summarized from those resources. Each of the 20 corridors selected for countermeasure recommendations was reviewed for any existing treatments, the speed distribution for that corridor and the geometric and traffic control attributes of that corridor that would inform the treatment type. For example, a speed hump or raised intersection would not be an effective treatment for a facility with a higher posted speed. The approximate relative cost of each treatment is qualitatively demonstrated in the table to provide context on the cost and scale of each improvement type. A summary of the treatments by corridor is allow provided below.

For each corridor a full summary sheet is provided summarizing the traffic volume, speed distribution, and context of the corridor. A brief description of the recommended countermeasures with context to the corridor has also been developed. The individual project corridor sheets can be found in Appendix F.

Table 5: Potential Countermeasures

General Countermeasures	Context	Cost	Potential Speed Reduction
Lowering Speed Limit	Reducing the speed limit for a corridor may reduce the speed of drivers that feel comfortable speeding over a fixed amount over the posted speed limit.	\$	
Speed Limit Signs	For lengths of corridors where there is a significant distance between posted speed limit signs, adding additional signs may serve to remind drivers to slow down.	\$	
Flashing Speed Feedback Signs	Radar based feedback signs detect the speeds of drivers along the corridor and flashes their speed back at them to serve as a reminder to slow down.	\$	
Lane Narrowing	Compressing lanes together reduces comfort levels for drivers going excessive speeds and results in drivers lowering their speeds. Lane widths narrower than 10' are not recommended.	\$	
Mid-Block Pedestrian Crossings	Adding mid-block traffic control in high pedestrian areas that present existing safety concerns will result in slowing vehicles down.	\$\$	
Realigned Intersection	At T-intersections, adding a physical feature will remove straight paths and lower speeds.	\$\$	
Bulbout	Extending the curb and gutter at intersections causes a narrower opening compared to upstream in the corridor.	\$\$	
Raised Crosswalk	For key intersections on corridors with a low posted speed limit.	\$\$	
Raised Intersection	For intersections with pedestrian access along the entire perimeter of the intersection.	\$\$\$	
Speed Hump	For low speed corridors without easy pedestrian access, a speed hump could minimize the frequency of extreme speeders.	\$\$	
Additional Enforcement	Coordinating with police officers to rollout additional enforcement to ticket speeding offenses would discourage drivers on the corridors selected for enforcement.	\$\$	
Education Campaign	An education campaign with the public could take many forms, from having custom speed limit signs for selected corridors to having demonstration activities.	\$-\$\$\$	
Lane Configuration	Reconfiguring the lanes to either reduce the number of lanes in a corridor, add on-street parking, a chicane, a choker, or a lateral shift is expected to cause a reduction in speed.	\$\$\$	
Roundabout Construction	Construction of a roundabout would force excessive speeding drivers to slow down at key intersections.	\$\$\$\$	

Table 6: Recommended Countermeasures by Corridor

Corridor No.	Corridor Limits	Recommended Countermeasures	Number of Lanes	2016 Street Type	ADT
7	Van Brunt Blvd from E 27 <sup>th</sup> St to E 29 <sup>th</sup> St	<ul style="list-style-type: none"> <li>• Speed Limit Signs</li> <li>• Lowering Speed Limit</li> <li>• Flashing Speed Feedback Signs</li> <li>• Education Campaign</li> <li>• Roundabout Construction</li> </ul>	4	Established Boulevard	2,939
9	Southwest Trfy from W 31 <sup>st</sup> St to Roanoke Rd	<ul style="list-style-type: none"> <li>• Speed Limit Signs</li> <li>• Coordinated Speed Limits</li> <li>• Education Campaign</li> </ul>	6	Thoroughfare	41,529
11	Cleaver II Blvd from Vineyard Dr to Elmwood Ave	<ul style="list-style-type: none"> <li>• Additional Enforcement</li> <li>• Flashing Speed Feedback Signs</li> </ul>	4	Established Boulevard	13,030
12	Ward Pkwy from W 79 <sup>th</sup> St to W Meyer Blvd	<ul style="list-style-type: none"> <li>• Speed Limit Signs</li> <li>• Lane Narrowing</li> <li>• Education Campaign</li> </ul>	6	Established Boulevard	34,161
13	Oldham Rd from Oakwood Rd to Hillcrest Rd	<ul style="list-style-type: none"> <li>• Lowering Speed Limit</li> <li>• Flashing Speed Feedback Signs</li> <li>• Mid-Block Pedestrian Crossings</li> </ul>	2	Parkway	3,460
15	87 <sup>th</sup> St from Newton Ave to Blue Ridge Blvd	<ul style="list-style-type: none"> <li>• Lane Narrowing</li> <li>• Additional Enforcement</li> <li>• Lane Reconfiguration</li> </ul>	4	Thoroughfare	15,024
18	Cleveland Ave from 46 <sup>th</sup> Terrace E to 53 <sup>rd</sup> Terrace E	<ul style="list-style-type: none"> <li>• Lowering Speed Limit</li> <li>• Speed Limit Signs</li> <li>• Mid-Block Pedestrian Crossings</li> <li>• Lane Reconfiguration</li> </ul>	4	Established Arterial	7,810
20	Eastwood Trfy from Palmer Dr to Crabapple Ln	<ul style="list-style-type: none"> <li>• Lowering Speed Limit</li> <li>• Mid-Block Pedestrian Crossings</li> <li>• Flashing Speed Feedback Signs</li> </ul>	4	Local Link	11,975
25	The Paseo from E 43 <sup>rd</sup> St to E 39 <sup>th</sup> St	<ul style="list-style-type: none"> <li>• Lowering Speed Limit</li> <li>• Speed Limit Signs</li> </ul>	4	Established Boulevard	7,127

Corridor No.	Corridor Limits	Recommended Countermeasures	Number of Lanes	2016 Street Type	ADT
		<ul style="list-style-type: none"> <li>• Additional Enforcement</li> <li>• Lane Reconfiguration</li> <li>• Education Campaign</li> </ul>			
26	Ward Pkwy from W 51 <sup>st</sup> St to Brush Creek Pkwy	<ul style="list-style-type: none"> <li>• Speed Limit Signs</li> <li>• Flashing Speed Feedback Signs</li> <li>• Education Campaign</li> </ul>	4	Established Boulevard	21,891
31	80 <sup>th</sup> St from Troost Ave S to The Paseo	<ul style="list-style-type: none"> <li>• Speed Limit Signs</li> <li>• Flashing Speed Feedback Signs</li> <li>• Speed Humps</li> <li>• Additional Enforcement</li> </ul>	2	Local Link	1,271
43	Blue Ridge Cutoff from E 43 <sup>rd</sup> St to E 39 <sup>th</sup> St	<ul style="list-style-type: none"> <li>• Additional Enforcement</li> <li>• Education Campaign</li> <li>• Lane Reconfiguration</li> </ul>	5	Thoroughfare	17,988
45	Wornall Rd from E 89 <sup>th</sup> St to W 84 <sup>th</sup> St	<ul style="list-style-type: none"> <li>• Lowering Speed Limit</li> <li>• Mid-Block Pedestrian Crossings</li> <li>• Flashing Speed Feedback Signs</li> </ul>	4	Established Arterial	16,361
56	Blue Ridge Blvd from E 29 <sup>th</sup> St to E 31 <sup>st</sup> St	<ul style="list-style-type: none"> <li>• Speed Limit Signs</li> <li>• Flashing Speed Feedback Signs</li> <li>• Lane Reconfiguration</li> </ul>	2	Thoroughfare	4,837
58	Parvin Rd from Worlds of Fun Ave to N Belmont Ave	<ul style="list-style-type: none"> <li>• Lowering Speed Limit</li> <li>• Flashing Speed Feedback Signs</li> </ul>	4	Local Link	7,857
59	29 <sup>th</sup> St from The Paseo to Prospect Ave	<ul style="list-style-type: none"> <li>• Speed Limit Signs</li> <li>• Flashing Speed Feedback Signs</li> <li>• Mid-Block Pedestrian Crossings</li> <li>• Speed Humps</li> <li>• Education Campaign</li> </ul>	2	Local Link	2,762
60	63 <sup>rd</sup> St from College Ave to Swope Pkwy	<ul style="list-style-type: none"> <li>• Flashing Speed Feedback Signs</li> <li>• Speed Limit Signs</li> <li>• Additional Enforcement</li> <li>• Lane Reconfiguration</li> </ul>	4	Local Link	13,787

Corridor No.	Corridor Limits	Recommended Countermeasures	Number of Lanes	2016 Street Type	ADT
61	85 <sup>th</sup> St from Wayne Ave to Euclid Ave	<ul style="list-style-type: none"> <li>Flashing Speed Feedback Signs</li> <li>Lowering Speed Limit</li> <li>Speed Limit Signs</li> </ul>	2	Local Link	9,784
65	NE 48 <sup>th</sup> St from N Brighton Ave to N Bennington Ave	<ul style="list-style-type: none"> <li>Additional Enforcement</li> <li>Mid-Block Pedestrian Crossing</li> <li>Flashing Speed Feedback Signs</li> <li>Lane Reconfiguration</li> </ul>	4	Established Arterial	8,057
72	87 <sup>th</sup> St from James A Reed Rd to Elm Ave	<ul style="list-style-type: none"> <li>Speed Limit Signs</li> <li>Flashing Speed Feedback Signs</li> <li>Additional Enforcement</li> </ul>	4	Boulevard	7,227

# KCMO Major Street Plan

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March 2026



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Appendix A: Glossary/Definitions

Appendix B: Major Street Plan Typologies Map

Appendix C: List of Major Streets

## Preface to the 2025 Update

Transportation is a derived demand, existing to support economic and social activities rather than being an end in itself. Kansas City's Major Street Plan is designed to recognize this role by prescribing a transportation network that aligns with the City's long-term vision for the community it aspires to be (as established in the KC Spirit Playbook – Kansas City's Comprehensive Plan). The movement of people and goods is essential to the health and vitality of a city, making the Major Street Plan a crucial contributor to Kansas City's long-term success.

The KC Spirit Playbook emphasizes the importance of a well-integrated and context-sensitive major street system that supports diverse modes of transportation and enhances community connectivity. It highlights the need for a transportation network that is equitable, adaptable, resilient, and reflective of the community's mobility needs and economic goals. Specifically, the Playbook advocates for:

- **Multi-modal transportation options:** Ensuring that streets are designed to accommodate pedestrians, cyclists, public transit, and vehicles, promoting a balanced and inclusive transportation system.
- **Context-sensitive design:** Tailoring street designs to the unique characteristics and needs of different neighborhoods, fostering a sense of place and community identity.
- **Sustainability and resilience:** Incorporating green infrastructure and sustainable practices to enhance the environmental performance of the transportation network and improve resilience to climate change. Guiding investments in major streets that facilitate sustainable growth.
- **Equity and accessibility:** Prioritizing investments in underserved areas to ensure equitable access to transportation and opportunities for all residents.
- **Community engagement:** Involving residents and stakeholders in the planning and design process to ensure that the transportation network reflects the community's needs and aspirations.

Major street investments play a pivotal role in helping to achieve the Playbook's goals for sustainable development patterns by:

- **Facilitating efficient land use:** Well-planned major streets support contiguous and efficient development and reduce the need for extensive road networks, thereby minimizing land consumption and preserving open spaces.
- **Promoting mobility and transit-oriented development:** Investments in major streets that facilitate biking, pedestrians and public transit can lead to the creation

of walkable, transit-oriented developments, which reduce reliance on private vehicles and encourage the use of public transportation.

- **Enhancing connectivity:** A well-designed major street network improves connectivity between different parts of the city, making jobs, services, and amenities more accessible.
- **Network Resiliency:** A well-connected major street network ensures emergency services can access all parts of the City and allows for multiple route options. Having a well-connected network with multiple connections in all directions allows for traffic and emergency vehicles to be rerouted when an original route may be blocked due to accidents, whether events or other emergencies. This level of connectivity supports both day-to-day mobility and critical response during disruptions.
- **Supporting economic vitality:** By improving access to commercial areas and employment centers, major street investments can stimulate economic growth and attract new businesses and investments to the city.

Historical records show that precursors to the Major Street Plan date back to 1911, with the first official plan adopted in 1972. Since then, the plan has been revised as needed, in response to new Area Plans, specific development projects, changes in roadway jurisdiction, updates to the Parkway and Boulevard Master Plan, and better reflection of constructed roadway alignments. These efforts have allowed the Plan to adapt to changing local conditions across the City.

The 2011 update of the Major Street Plan established a living document with a robust technical foundation and processes for ongoing meaningful updates. It addressed the capacity needs of the City's major streets with greater flexibility and introduced context-sensitive, multi-modal street designs. This update also expanded the collaborative efforts of City Planning and Development, Parks and Recreation, and Public Works to integrate their visions into a cohesive plan.

The 2025 update of the Major Street Plan creates a distinction between the design of the street and where those streets should go in the City. The Major Street Plan establishes functional classification, jurisdiction, and alignment of our through streets. The Major Street Plan map is available on the KCMO City Planning Department website at <https://www.kcmo.gov/city-hall/departments/city-planning-development/city-plans-2-0>. A Streets Design Guide is being made in partnership with the 2025 Major Street Plan update to provide a space for designers and planners to have more guidance on street design and particular elements. The Major Street Plan update provides a connection to the Streets Design Guide by listing the street typology designation.

## What is the Major Street Plan?

### *Purpose and Authority*

The Major Street Plan is defined in Section 88-810-810 of the City's Code of Ordinances as: The plan established by the city, pursuant to RSMo 89.480, showing the general alignment and classification of streets, highways and parkways of an ultimate urban arterial network. The purpose of this plan is to guide development of the arterial and collector street network and to identify appropriate street rights-of-way to be secured at the time of subdivision platting.

In fact, at least five Missouri Statutes apply to the adoption of a Major Street Plan.

- RSMo 89.340: General location, character, and extent of streets may be part of a city plan for physical development.
- RSMo 89.400.1: Approval of plats with relation to the Major Street Plan.
- RSMo 89.460: Construction and improvement of streets in relation to the Major Street Plan.
- RSMo 89.470: Issuance of building permits with respect to the Major Street Plan.
- RSMo 89.480: Regulation of building or setback lines with respect to the Major Street Plan.

The Major Street Plan serves to define the ultimate arterial network and preserve the right-of-way needed to support that network. Each of these two purposes has an important corollary:

- Defining the ultimate arterial network allows for, and supports, orderly development within the City.
- Preserving right-of-way allows the arterial network to support other modes of transportation allowed to occur within that right-of-way where appropriate, including bicycling, walking, and public transit.

Therefore, the Major Street Plan has a much broader scope than just providing roads for automobile travel. It is integral to the cultural and economic development of the city, and it is vital to basic mobility for all its citizens and roadway users.

## How was the Major Street Plan Created?

The Major Street Plan is supported largely by five “data sources”:

- The already built street network and its observable functionality.
- The topography and environmental constraints in undeveloped areas – which affects the feasibility and alignment of future roadway connections and enhancements.

- Physical constraints in built-up areas – which limit future improvements on certain facilities.
- The City’s travel demand forecasting model scenario based on buildout land-use assumptions for the City – which affects the need for future roadway connections along with the ultimate needed capacity of existing and future roads.
- Area Plans and other City planning processes – which feed the land-use assumptions in the traffic model but also serve as the basis for street typology recommendations.
- Federal Highway Administration Functional Classification map

## When To Use the Major Street Plan

The Major Street Plan should be used for the following purposes:

- **During Development Review** – As developments are reviewed through the platting, rezoning, development plan, special use permit (SUP) or similar processes, the Major Street Plan will be used to determine the general alignment and right of way needed for any future roadways that intersect or run adjacent to a site. Right of way should be dedicated at the time of platting and/or development plan approval. Major Street Plan corridors trigger specific use or development standards based on the street type that are then reviewed in the development plan/SUP review process.
- **During Roadway Design** - The Major Street Plan should be used together with the relevant area plan and the Streets Design Guide to ensure the roadway design aligns with the existing and desired community context. For design of unbuilt roadways, an alignment study may be needed.
- **During Capital Improvement Planning and Programming** – The Major Street Plan identifies roadways and typologies and helps the City plan for roadway improvements. MSP identifies a future built out system but may not identify priority segments or phasing. Area plans should be consulted to identify priority roadway segments. For design of unbuilt roadways, an alignment study may be needed.
- **During Area Planning/Land Use Planning** – The major street system and future land use patterns are integrally tied together. As future land use plans are created or revised, the major street system should be used to help guide the appropriate locations for different types of land use. Land uses with higher access needs should be located with access from an arterial road or highway (commercial or industrial uses or any use with a large number of employees and/or visitors). And land uses with lower access needs may be located away from the arterial streets but with convenient access to local or collector level streets. And future land uses can and should influence the alignment or design of streets in the Major Street Plan. The Streets Design Guide identifies appropriate street

typologies for different types of land uses. Examples include (but are not limited to) the following:

- Environmentally sensitive areas such as stream corridors or steep slopes should influence the future design and alignment of roadways to minimize the impacts on these resources.
- Industrial districts may necessitate a different street design and typology than a neighborhood mixed use land use.
- To Support Grant/Funding Requests – The Major Street Plan can be used to strengthen applications for federal and state transportation funding. Many grant programs administered by MoDOT, such as the Surface Transportation Block Grant (STBG), Congestion Mitigation and Air Quality (CMAQ), and Transportation Alternatives Program (TAP), prioritize or require that proposed projects be located on designated major streets or within planned transportation corridors. Ensuring a roadway is identified in the Major Street Plan may be a prerequisite for eligibility or scoring criteria in competitive grant processes. Using the Major Street Plan to demonstrate alignment with long-term planning and connectivity goals can improve the likelihood of securing funding.
- The Major Street Plan neither controls, nor dictates improvements to, facilities outside of Kansas City’s jurisdiction, including state-owned transportation facilities. Standards and plans for these facilities are controlled by their respective jurisdictions. The Major Street Plan’s domain is restricted to facilities controlled by the City of Kansas City. However, these other facilities are important to transportation connectivity in Kansas City, and are therefore appropriate to include on the maps as information.

## Right-of-Way Widths

The Major Street Plan includes four right-of-way widths:

80 feet	This width is generally used for two- and three- lane sections.
100 feet	This width is generally used for minor arterials and collector roads.
120 feet	This width is used for major arterials.
200 feet	This width is used for Parkways.
50 feet	Special Purpose Rapid Transit Corridor

The Right-of-Way widths noted above are intended to guide the development and planning of unbuilt or unimproved roadways. Roadways within established areas would generally

not require additional right-of-way. See Definition and Considerations of Established Major Streets in the next section for details.

### **Established Major Street – Definition and Considerations**

**Definition:** An *Established Major Street* is a roadway corridor that has been functionally and physically developed over time, typically for 10 years or more, and exhibits a consistent right-of-way (ROW) along the majority of its length. These streets are often located in the urban core or fully urbanized areas, where the surrounding land use, infrastructure, and built environment have matured and stabilized.

#### **Key Characteristics:**

- **Right-of-Way Consistency:** While the ROW may not meet current design standards, it is generally uniform and has been accepted by the community and the City.
- **Built Environment Constraints:** Adjacent properties are often platted and developed, with buildings, utilities, and landscaping that may limit the feasibility of ROW expansion.
- **Established Use and Function:** These streets have long served as arterial or collector routes, supporting significant traffic volumes, transit routes, and multimodal activity.
- **Basic Street Infrastructure:** These corridors should include fundamental elements of an improved street, such as:
  - Storm sewer systems
  - Curb and gutter
  - Sidewalks or pedestrian pathways
  - Paved travel lanes
  - Street lighting and signage
- **Design Legacy:** Roadway geometry, access points, and cross-sections may reflect older design standards, but are functionally adequate and integrated into the surrounding context.

#### **Policy Considerations:**

- **ROW Preservation vs. Expansion:** Additional ROW acquisition on Established Major Streets is generally discouraged unless:
  - A community-supported corridor plan identifies a compelling need.
  - Safety, multimodal access, or critical infrastructure upgrades require it.

- **Context-Sensitive Design:** Improvements should prioritize context-sensitive solutions that enhance safety, mobility, and aesthetics without requiring full ROW conformity.
- **Multimodal Integration:** Where feasible, incorporate bike lanes, pedestrian facilities, and transit accommodations within the existing ROW.
- **Historic and Cultural Sensitivity:** Recognize and preserve the historic character or cultural significance of established corridors.

## How does the Major Street Plan Relate To Sustainable Development Patterns?

Achieving development patterns that are fiscally and environmentally sustainable is a key goal of the KC Spirit Playbook (see Development Patterns Objective). Careful consideration must be given to how and where the City directs and accommodates growth and development. Effective development patterns recognize the importance of new growth while proactively guiding development in an equitable, sustainable, and fiscally responsible manner.

Investments in major streets play a crucial role in shaping development patterns across Kansas City. These investments should:

- **Maximize the use of existing infrastructure:** Ensure that new developments make the most of current road networks, reducing the need for extensive new construction. Focus on enhancing and utilizing existing streets to support contiguous and infill development and reduce sprawl. Prioritize investments in areas contiguous with already developed land and served by utilities to ensure efficient service delivery.
- **Increase mobility options and connectivity:** Enhance the major street network to improve access and connectivity for all modes of transportation, including vehicles, public transit, bicycles, and pedestrians. Develop major streets that support a high level of connectivity and incorporate roadway, bike, trail, and pedestrian connections.
- **Advance climate and resiliency goals:** Incorporate sustainable practices and green infrastructure to support the city's climate protection and resiliency objectives.
- **Reduce or eliminate disparities:** Ensure that major street improvements do not create new disparities and work to reduce existing ones by providing equitable access to transportation.

- **Maintain the health of environmental and natural systems:** Design and implement street improvements that protect and enhance the natural environment.

The City uses several tools to guide and encourage new growth and development, including investments in major streets and transportation systems. These investments are managed by multiple city departments and require ongoing collaboration to ensure they are well-placed, well-designed, and sustainable. By focusing on these principles, Kansas City can ensure that major street improvements contribute to a sustainable, equitable, and well-connected urban environment.

## How does the Major Street Plan Relate to the Streets Design Guide?

The Major Street Plan outlines where the City’s through streets are located. It identifies which streets are required to ensure a connected, roadway system. The design and cross section of these streets should be determined by the Streets Design Guide. The Streets Design Guide classifies each road into a roadway typology based on the Major Street Plan classification, land use, and other context items. This table below generally shows how Major Street Plan classification and Street Typology classification may overlap. Refer to the Streets Design Guide when looking for roadway design guidance.

The Major Street Plan gives us information regarding the right-of-way, functional classification, and jurisdiction of that roadway.

	Principal Arterial	Minor Arterial	Major Collector	Minor Collector
Downtown Core				
Urban Mixed Use				
Suburban Commercial				
Thoroughfare				
Connector				
Neighborhood				
Industrial/Business Park				
Boulevard				
Parkway				

## Importance of a Connected Major Street (Arterial and Collector Streets) System

A connected roadway network is a key component and goal of the KC Spirit Playbook. The benefits of a highly connected major street system include improved traffic flow and circulation, enhanced movement of goods, boosted economic activity, better achievement of the City's development goals, enhanced mobility, equitable access for all neighborhoods and users, and improved emergency response.

Kansas City was built with a grid network, and this major street plan helps identify where those grid streets are required. A highly connected street grid network allows for multiple routes to the same location, helping to distribute roadway users across various streets rather than concentrating them on a single road. A more connected grid network enhances connectivity and safety for all users.

The KC Spirit Playbook advocates for improving street connectivity in existing neighborhoods and ensuring high connectivity in new developments. Throughout Kansas City, there are opportunities to enhance the street grid and increase connectivity in both existing neighborhoods and new developments. As new developments are planned and platted, a system of arterial and collector grids should be established to create connections throughout the city. Adjacent subdivisions, whether platted by the same developer or not, should have frequent connections to neighboring streets. And should provide street connections to adjacent unplatted areas as well.

Below are Community Supported Actions (CSAs) from the Playbook related to street connectivity:

- **CN-1:** Restore the street grid or close gaps in it. Use opportunities to create, improve, and restore street connectivity in conjunction with area planning, new development, and capital projects. When street connections cannot be created, the city will pursue alternative connections that pedestrians, bicyclists, or transit users can use.
- **CN-2:** Maintain city ownership of streets by discouraging and avoiding street and alley vacations.
- **CN-3:** Ensure that streets in new development are connected to adjacent areas with as many connections as feasible. Connections should provide pedestrian and bicycle access. Connectivity should be measured and regulated using a maximum block size (scaled to be appropriate for the context of the area) and maximum distance between street connections.

- **CN-4:** Update the Major Street Plan and Area Plans to identify and establish a system of through arterial and collector streets with frequent multimodal connections. Ensure that new development incorporates these through streets.
- **CN-6:** Improve connections across barriers like railroads, highways, rivers, or other features. Particularly in places with existing connections (e.g., highway underpasses or overpasses), ensure that connections are accessible to all modes. Prioritize new or enhanced connections in areas that have been historically disinvested, where barriers have had a disproportionate impact.
- **CN-7:** Improve pedestrian crossings on major streets to the level of service recommended in the Kansas City Walkability Plan. Improve these crossings as new development occurs and as street improvements are implemented. Focus on crossings that provide access to transit stops or schools. Prioritize locations identified in area plans and other plans. Neighborhoods should use the walkability assessment tool in the Walkability Plan to identify priority locations and request improvements.

## Special Purpose Rapid Transit Corridor

The Special Purpose Rapid Transit Corridors are identified routes where the City is collecting Right of Way in a future case of building out a regional citywide transit network.

50 ft of right of way is required to be given at the time of development in addition to the street's required right-of-way width. Typically, this would make the Right-of-way required to be 150 ft.

The side of the roadway is determined by the parcel being platted.

## Considerations for Future Changes to the Major Street Plan

The Major Street Plan should be updated under the following circumstances:

- When an Area Plan or other plan is **adopted that has a material effect on the contents of the Major Street Plan (typology change, street added/re-designated).**
- When the proposed or constructed alignment of a major street changes materially from the conceptual alignment shown in the Major Street Plan.
- When subdivision platting or other development approvals/plans dictate a change to the alignment, number of through lanes, typology or designation of a major street.
- When proposed major land-use changes result in **forecasted traffic volume changes of sufficient magnitude to affect lane requirements on major streets or re-designation of a major street.**

- When MoDOT and MARC update their functional classification map.
- When a major street or highway owned and/or operated by others, but shown on the Plan for informational purposes, undergoes a material change in constructed or planned alignment.
- When the Parkway and Boulevard system is modified in a way that affects the Major Street Plan.
- When major regional transit (on-street or fixed guideway) system changes are planned or implemented.
- When parks are added to, or removed from, the City's Park System.
- When City limits change.
- When other updates are warranted as determined by the City Plan Commission and/or City Council.

Major comprehensive updates should be conducted at least once every 10 years in conjunction with transportation model or Comprehensive Plan updates. At these times, it is appropriate for the City to examine its buildout land-use assumptions, and its near- and long-term multi-modal transportation needs. Public and stakeholder input should be sought in conjunction with such comprehensive updates.

When amendments and modifications to the Major Street Plan are requested or proposed, the City should use the following factors to evaluate these requests. These modifications may include the addition or removal of roadways, changes to street typology, or alterations to the proposed alignment of a roadway. Each request should be evaluated using the criteria outlined below.

### **Removing Roadways**

Removing roadway segments should generally be avoided, especially if they will significantly impact the considerations listed below. When such changes are requested, it is crucial to analyze the broader impacts on circulation, congestion, mobility and access in the larger area. Access to highways, activity centers, and neighborhoods should be maintained. The overall connectivity and circulation of the area should be evaluated and preserved. All transportation modes should be considered in the analysis, and the impacts of the change should be fully understood. While the removal of a small segment may not appear to have significant impacts on its own, the cumulative effects of these small changes over time can be substantial. Additionally, one small change can often lead to further requests to remove segments. Removals that only benefit a single site or property owner should be avoided. When a request to remove a roadway is proposed, it is important to ensure that there is adequate outreach and engagement with area neighborhoods, businesses, property owners, and other stakeholders.

Potential detriments of removing segments of the major street system include:

- **Decreased Connectivity and Increased Congestion:** Removing key segments can lead to increased traffic on remaining streets, causing congestion and longer travel times. This can also reduce important connections needed to maintain efficient circulation and access (e.g., highway interchanges, activity centers).
- **Cut-Through Traffic:** Drivers may use local streets as shortcuts, leading to higher traffic volumes and potential safety issues in those areas.
- **Business Disruption:** Businesses that rely on easy access for customers and deliveries may suffer from reduced traffic flow, potentially leading to decreased revenue.
- **Property Value Decline:** Areas that become less accessible may see a decline in property values due to reduced attractiveness and convenience.
- **Delayed Emergency Response Times:** Emergency vehicles may face delays if key routes are removed, impacting response times for fire, medical, and police services.
- **Increased Emissions:** Traffic congestion can lead to higher vehicle emissions, negatively impacting air quality.
- **Access Disparities:** Removing segments may disproportionately affect underserved communities, reducing their access to essential services and opportunities.
- **Public Transit Route Changes:** Public transportation routes may need to be altered, potentially making commutes longer and less convenient for riders. These changes may also decrease the ability to effectively serve areas with public transit in the future.
- **Growth and Development** – Major streets help accommodate existing development and future growth. Removing major streets from the system can impede future growth and should be weighed against the City’s growth goals.

### **Changing Roadway Alignments**

Realigning roadways can have similar impacts to removing roadway segments, depending on the extent of the realignment. Significant realignment proposals should be evaluated for the potential impacts listed above in the Removing Roadways section. However, roadway realignment can be warranted and even beneficial, particularly when a more detailed alignment study has been completed. Minor alignment changes that respond to topography or stream corridors, improve the feasibility/cost of roadway construction, or enhance flexibility in developing adjacent parcels should be considered. When a request to realign a roadway is proposed, it is important to ensure adequate outreach and engagement with affected property owners adjacent to the roadway occurs. The potential

impacts on adjacent properties should be weighed in the decision-making process. Changes that only benefit a single property without achieving other benefits described here should be avoided.

### **Changing Street Typology**

Changes to street typology of a street on the Major Street Plan happens under the purview of the Streets Design Guide. See the Streets Design Guide for information about changing the street typology.

## **Process to Revise Major Street Plan**

The Major Street Plan is a component of the City's comprehensive plan and, as such, the City Plan Commission and City Council may approve amendments to the Major Street Plan. The City has exclusive power to amend, realign, change designation, or remove any street on the Major Street Plan.

When the City decides to consider a revision to the Major Street Plan, it shall take into consideration existing conditions and future growth, efficiency and economy of development, and the general welfare.

Revisions to the Major Street Plan are reviewed, processed, and approved in the same manner as Area Plan Amendments and other revisions to the City's comprehensive plan. Community engagement is required to ensure that revisions are in the best interest of the public, do not create burdens to efficient and economical development, and provide for orderly and well-planned future growth.

As required by RSMo 89.360, all revisions to the Major Street Plan require at least one public hearing before the City Plan Commission after fifteen days' published notice of the time and place of the hearing.

## Appendix A:

# Glossary/Definitions

### Glossary/Definitions

**Access Management** – A policy program that seeks to consolidate and limit the number of access points (intersections, driveways, and median openings) along major roadways. The primary purpose is to provide safe and efficient conditions for the movement of through traffic.

**Area Plan** – A broadly focused planning document that takes a long-term view of a defined geographic area and formalizes the community’s recommendations of how future land use, housing, transportation and infrastructure issues are decided and prioritized. Currently, Kansas City is divided into 18 planning areas.

**Applicant** – The property owner or duly designated agent of the property owner of the land on which a building permit is requested and an arterial street impact fee is due pursuant to this chapter.

**Arterial** – A major street. See more formal definition on Page 1.

**Arterial Street Impact Fee** – A fee imposed on new development proportionate with the costs the city will incur to provide arterial street facilities needed to serve that new development at the existing level of service for arterial street facilities.

**Arterial Street Improvements** – The planning of, engineering for, and the construction of capacity-expanding improvements for the arterial system.

**Arterial Street or Arterial Systems** – All existing and planned city-maintained arterial streets and parkways and boulevards identified on the city’s adopted major street plan. In addition, the following two state-maintained roadways shall also be considered part of the arterial system eligible for funding with the city’s arterial street impact fees: M-9 from Parkville city limits to Barry Road, and M-291 and I-435 to Liberty city limits.

**Boulevard** – A type of street owned by the Kansas City Parks and Recreation Department, boulevards are typically four-lane undivided facilities within a 100-foot right-of-way and substantial setbacks. Boulevards typically offer good grades, are located in a naturally attractive locality, and abut generally residential areas.

**Building Permit** – The permit required for new construction and additions pursuant to the city’s existing building, subdivision and zoning regulations.

**Buildout** – A future analysis scenario in which all developable parcels, within the current city limits, are developed to their full planned uses and densities. There is no future year assigned to this scenario, because the exact timetable of buildout is unknown.

**City** – Refers to the City of Kansas City, Missouri.

**Comprehensive Plan** – A long-term, large-scale planning document that dictates public policy in terms of transportation, utilities, land use, recreation, and housing.

**Connector** – are streets focused on access to individual lots and neighborhood streets. They serve destination trips and generally align with the definition of collectors.

**Downtown Core** – Streets fall within areas of high development density such as central business district. They accommodate low motor vehicle speeds, high pedestrian volumes, enhanced transit connections, and freight delivery activity.

**Feepayer** – Person who is obligated to pay for an impact fee in accordance with the terms of this Chapter 39.

**Gross Floor Area** – The total area of all floors within the outside dimensions of a building including halls, lobbies, and stairways. It shall not include floor space within the building reserved for parking or loading vehicles, unimproved basement space, separate space used only for building maintenance and utilities or exterior features for the building, such as stairs, porches and walkways.

**Impact Fee Administrator** – Person or persons designated by the city to administer this chapter.

**Impact Fee Credit Holder** – Individual or entity that owns credits approved through the application process set forth in section 39-8 for the construction of arterial street improvements or a contribution/payment for arterial street improvements.

**Industrial/Business Park** – Streets are in areas zoned with heavy traffic generators. These streets serve a high volume of heavy trucks and frequent turning maneuvers.

**Kessler System** – The original, historic portion of the City’s boulevard and parkway system, as envisioned and developed by the first board of Park Commissioners and George Edward Kessler in 1893.

**Major Collector** - Collectors serve a critical role in the roadway network by gathering traffic from Local Roads and funneling them to the Arterial network. Major Collector routes are longer in length; have lower connecting driveway densities; have higher speed limits; are spaced at greater intervals; have higher annual average traffic volumes; and may have more travel lanes than their Minor Collector counterparts. See FHWA definitions.

**Major Street** – Any street defined on the Major Street Plan. These streets generally have four or more lanes, although a three-lane section is allowed in some cases. Streets with functional classifications lower than arterial (collectors and local roads) are not considered major streets. (The Historic Boulevard and Parkway system is an exception included on the Major Street Plan – see page 1.)

**Minor Arterials** - Minor Arterials provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts and offer connectivity to the higher Arterial system. In an urban context, they interconnect and augment the higher Arterial system, provide intra-community continuity and may carry local bus routes. See FHWA definitions.

**Minor Collectors** - Collectors serve a critical role in the roadway network by gathering traffic from Local Roads and funneling them to the Arterial network. See FHWA definitions.

**Multi-lane** – Used to describe a roadway/highway carrying more than one through lane.

**Neighborhood** – streets are typically residential or local streets. They are lined with single family homes, low-density multifamily homes and corner stores. They have low traffic volumes and speeds, direct interaction with the roadway by users of all ages, and integrated mobility uses.

**Nonresidential Development** – The construction of any nonresidential structures

**Parkway** – A type of street owned by the Kansas City Parks and Recreation Department, parkways are typically four-lane divided facilities within a 200-foot right-of-way including a wide landscaped median. Functionalities are much the same as for boulevards, with the additional purpose of connecting the City’s parks and other recreational facilities.

**Principal Arterial** - These roadways serve major centers of metropolitan areas, provide a high degree of mobility and can also provide mobility through rural areas. See FHWA definitions.

**Residential Development** – The construction, either separately or combined together, of residential dwelling units.

**Right-of-Way (ROW)** – In the context of this plan, an area of land used for a road and the public areas (sidewalks, etc.) along both sides of the roadway. The area is owned and maintained by a public agency (City, State, etc.), not the adjacent property owners. Improvements and modifications may be made to the right-of-way area by the owning agency without the consent of the adjacent property owners.

**Special Purpose Mass Transit Corridor** – A corridor in which right-of-way is preserved in order to accommodate a potential future on- or off street transit route.

**Streets Design Guide** – The City’s engineering design guidance for the street typologies. This design guidance applies to all City-owned streets and roads.

**Suburban Commercial** – Streets are heavy commercial corridors with standards suburban style commercial development. This may include malls, strip retail centers, drive-thru restaurants, gas/oil tire stations, car washes, and other businesses.

**Thoroughfare** – are longer corridor streets that connect major areas with limited access. They serve through trips and generally meet the definition of arterials.

**Through Lane** – On a segment of roadway between intersections, any designated automobile travel lane that is not a turn lane or parking lane.

**Trails KC** – Adopted by ordinance, Trails KC is a document that maps regional trails within Kansas City and is a guide for future shared-use trail development and corridor preservation within the city. Some of these trails are located adjacent to streets (including major streets), and some follow other natural features, such as streams.

Travel Demand Forecasting Model – A computer model used to estimate travel behavior and travel demand for a specific future time frame. A traditional model has a four-step process: (1) Trip Generation – the number of trips to be made; (2) Trip Distribution – where those trips go; (3)

Urban Mixed Use – Streets are neighborhood-level commercial corridors outside of the central business district providing access to high-level trip generators such as retail, office, and restaurant space. These areas have a defining character and typically have historic significance for the local community. The corridors are typically dense and walkable.

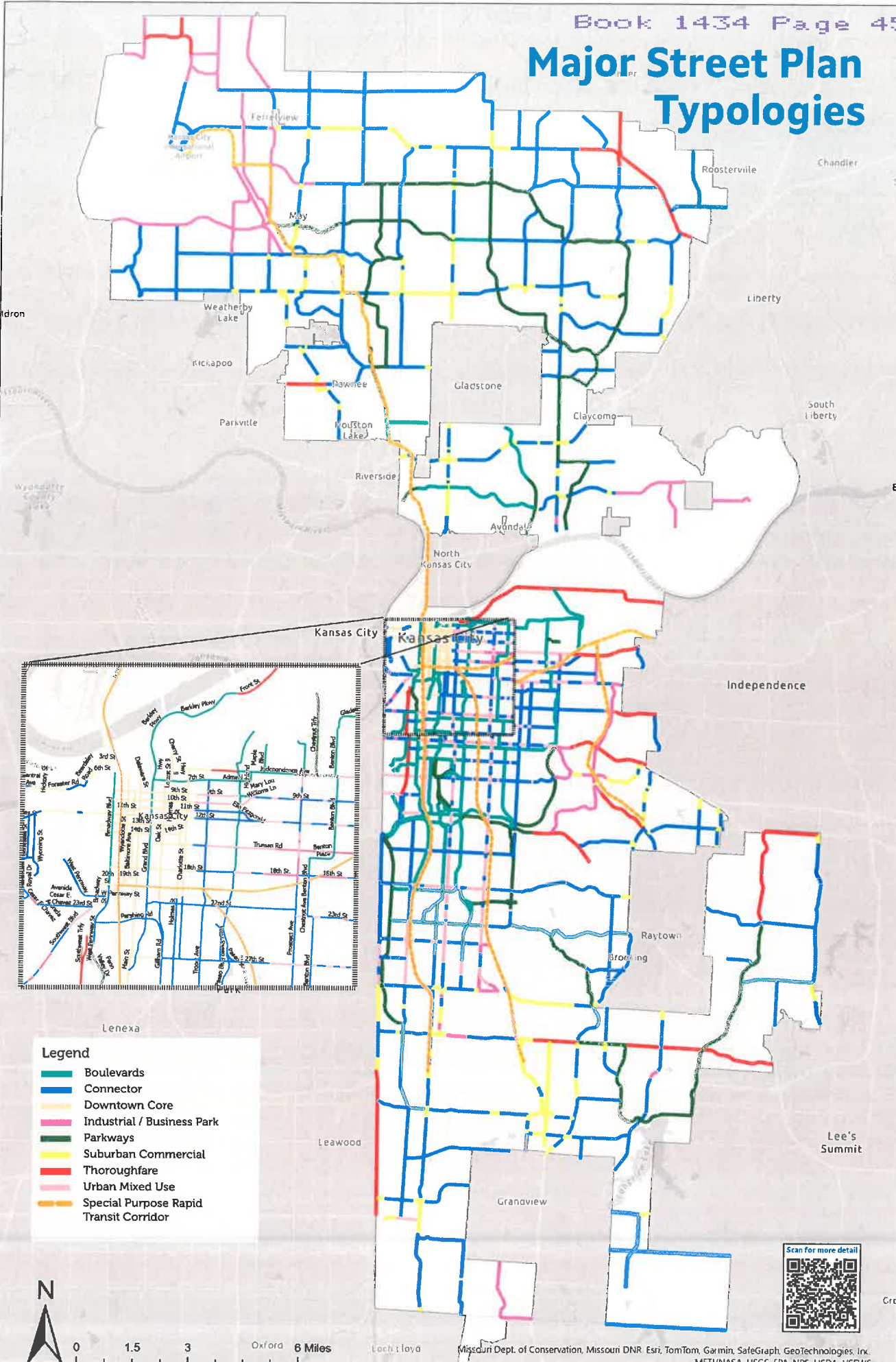
Mode Choice – how the trips are divided among the available mode choices (automobile, transit, etc.); and (4) Trip Assignment – predicting the routes that trips will take.

Typical Section – A profile drawing of a section of roadway that shows what it should look like when constructed. Elements may vary, but generally include right-of-way, sidewalk, curb and gutter, travel way, and median widths.

Typology – A method of roadway classification that is based on the roadway's surrounding uses, as well as the types of users traveling on it.

Appendix B:  
Major Street Plan Typologies Map

# Major Street Plan Typologies



### Legend

- █ Boulevards
- █ Connector
- █ Downtown Core
- █ Industrial / Business Park
- █ Parkways
- █ Suburban Commercial
- █ Thoroughfare
- █ Urban Mixed Use
- █ Special Purpose Rapid Transit Corridor



0 1.5 3 Oxford 6 Miles



Appendix C:  
List of Major Streets

STREETNAME	SDG_Typolo	From	To
Wyoming St	Connector	12th St.	American Royal Ct.
Wyandotte St	Downtown Core	Southwest Blvd.	6th St.
Wornall Rd	Urban Mixed Use	85th St.	70th Ter.
Wornall Rd	Connector	63rd St.	51st St.
Wornall Rd	Connector	51st St.	Ward Pkwy.
Wornall Rd	Connector	Ward Pkwy.	90th St.
Wornall Rd	Boulevards	101st St.	Ward Pkwy.
Wornall Rd	Boulevards	104th St.	101st St.
Wornall Rd	Connector	89th St.	85th St.
Wornall Rd	Connector	70th Ter.	63rd St.
Wornall Rd	Boulevards	Red Bridge Rd.	104th St.
Wornall Rd	Connector	135th St.	Red Bridge Rd.
Wornall Rd	Suburban Commercial	90th St.	89th St.
Woodland Ave	Connector	I-435 Hwy WB On-Ramp	126th St.
Winner Rd	Thoroughfare	Winchester Ave.	Blue Ridge Blvd.
Winner Rd	Connector	Winner Rd.	Independence Ave.
Winchester Ave	Industrial / Business Park	Truman Rd.	Independence Ave.
West Penneway St	Boulevards	Pershing Rd.	26th St.
West Penneway St	Parkways	Penn Valley Dr.	26th St.
West Penneway	Connector	21st St.	17th St.
West Paseo	Boulevards	27th St.	Tracy Ave.
West Longview Pkwy	Parkways	107th St.	109th St.
Waukomis Dr	Connector	I-29 Hwy On-Ramp	Englewood Rd.
Waukomis Dr	Parkways	62nd St.	68th St.
Waukomis Dr	Neighborhood	53' South of 60th St.	14' North of 62nd St.
Waukomis Dr	Parkways	Englewood Rd.	69th St.
Waukomis Dr	Connector	Waukomis Dr.	Line Creek Pkwy.
Waukomis Dr	Connector	Gower Rd.	68th St.
Warwick Blvd	Boulevards	Emanuel Cleaver II Blvd.	Armour Blvd.
Ward Pkwy	Parkways	Ward Pkwy.	Ward Pkwy.
Ward Pkwy	Parkways	76th Ter.	55th St.
Ward Pkwy	Boulevards	Bellevue Ave.	Broadway St.

Ward Pkwy	Boulevards	Summit St.	Mill Creek Pkwy.
Ward Pkwy	Boulevards	Mill Creek Pkwy.	Brookside Blvd.
Ward Pkwy	Parkways	Wornall Rd.	76th Ter.
Ward Pkwy	Boulevards	Broadway Blvd.	Mill Creek Pkwy
Ward Pkwy	Boulevards	Brush Creek Pkwy	Belleview Ave.
Ward Pkwy	Parkways	55th St.	Brush Creek Pkwy.
Ward Pkwy	Boulevards	Belleview Ave	Summit St.
Ward Pkwy	Parkways	Brush Creek Pkwy.	55th St.
Ward Pkwy	Boulevards	Brush Creek Pkwy.	Belleview Ave.
W. Longview Pkwy	Parkways	James A. Reed Rd.	Bannister Rd.
W Pennway St	Boulevards	Summit St.	Southwest Blvd.
W Gillham Rd	Parkways	Rockhill Rd.	Gilham Rd.
Vivion Rd	Connector	I-35 Hwy On-Ramp	Claycomo City Limit
Vivion Rd	Suburban Commercial	Old Pike Rd.	Holmes St.
Vivion Rd	Suburban Commercial	155' East of Olive St.	289' East of Bellefontaine Ave.
Vivion Rd	Suburban Commercial	98' West of Lister Ave.	I-35 Hwy On-Ramp
Vivion Rd	Suburban Commercial	Norton Ave.	Jackson Ave.
Vivion Rd	Connector	Mulberry Dr.	Gladstone City Limit
Vivion Rd	Connector	Gladstone City Limit	Old Pike Rd.
Vivion Rd	Suburban Commercial	KCMO City Limit	Mulberry Dr.
Vivion Rd	Connector	Holmes St.	155' North East of Olive St.
Vivion Rd	Connector	Jackson Ave.	Lister Ave.
Vivion Rd	Connector	200' West of Walrond Ave.	Norton Ave.
Virginia Ave	Connector	126th St.	132nd St.
View High Pkwy	Parkways	I-470 Hwy	Bannister Rd.
View High Dr	Parkways	109th St.	I-470 Hwy.
Van Brunt Blvd	Boulevards	31st St.	Bonita Ave.
Van Brunt Blvd	Boulevards	Hardesty Ave.	12th St.
Valentine Rd	Boulevards	38th St.	Broadway St.
Valentine	Boulevards	Terrace St.	Roanoke Rd.
US-40	Thoroughfare	Noland Rd.	Lee's Summit Rd.
US-40	Thoroughfare	I-70 Hwy	Independence City Limit
US-40	Industrial / Business Park	Stadium Dr.	I-70 Hwy EB On-Ramp

US-40	No typology	62' West of I-70 Hwy.	51' East of I-70 Hwy.
US-40	Thoroughfare	I-70 Hwy On-Ramp	223' East of I-70 Hwy Off-Ramp
Truman Rd	Connector	173' East of Winchester Ave.	Manchester Trfy.
Truman Rd	Urban Mixed Use	Troost Ave.	Brooklyn Ave.
Truman Rd	Downtown Core	Locust St.	187' East of Holmes St.
Truman Rd	No typology	8' East of I-435 Hwy On-Ramp	83' East of I-435 Hwy On-Ramp
Truman Rd	Connector	Campbell St.	Troost Ave.
Truman Rd	Urban Mixed Use	Cleveland Ave.	Elimwood Ave.
Truman Rd	Industrial / Business Park	Brooklyn Ave.	Cleveland Ave.
Truman Rd	Urban Mixed Use	Van Brunt Blvd.	Topping Ave.
Truman Rd	Urban Mixed Use	Fremont Ave.	170' East of Winchester Ave.
Truman Rd	Downtown Core	McGee St.	Locust St.
Truman Fd	Connector	Topping Ave.	Fremont Ave.
Truman Fd	Industrial / Business Park	68' East of Tullis Ave.	255' East of Tullis Ave
Truman Fd	Industrial / Business Park	Manchester Trfy	68' of Tullis Ave.
Truman Rd	Downtown Core	Charlotte St.	Campbell St.
Truman Rd	Connector	84' East of I-435 SB Hwy On-Ramp	I-435 Hwy NB Off-Ramp
Truman Rd	Connector	Elimwood Ave.	Van Brunt Blvd.
Truman Rd	Downtown Core	132' West of Charlotte St.	Charlotte St.
Troost Ave	Urban Mixed Use	79th Ter.	70th Ter.
Troost Ave	Urban Mixed Use	67th St.	54th St.
Troost Ave	Connector	51st St.	Dr. Martin Luther King Jr. Blvd.
Troost Ave	Urban Mixed Use	52nd St.	51st St.
Troost Ave	Urban Mixed Use	Dr. Martin Luther King Jr. Blvd.	45th St.
Troost Ave	Urban Mixed Use	44th St.	40th St.
Troost Ave	Suburban Commercial	Bannister Rd.	94th St.
Troost Ave	Connector	85th St.	79th Ter.
Troost Ave	Connector	Manheim Rd.	36th St.
Troost Ave	Urban Mixed Use	33rd St.	31st St.
Troost Ave	Urban Mixed Use	36th St.	34th St.
Troost Ave	Connector	31st St.	Admiral Blvd.
Troost Ave	Connector	68th St.	1.16' North of 67th St.
Troost Ave	Connector	54th St.	Rockhurst Rd.

Troost Ave	Urban Mixed Use	70th St.	68th St.
Troost Ave	Industrial / Business Park	94th St.	93rd St.
Troost Ave	Connector	40th St.	39th St.
Troost Ave	Urban Mixed Use	39th St.	Manheim Rd.
Troost Ave	Connector	89th St.	114' North of Commercial Access Road
Troost Ave	Industrial / Business Park	116' South of 87th St.	86th Ter.
Troost Ave	Connector	34th St.	33rd St.
Troost Ave	Connector	70th Ter.	70th St.
Troost Ave	Connector	45th St.	44th St.
Tiffany Springs Rd	Connector	Childress Ave.	Congress Ave.
Tiffany Springs Rd	Connector	Ambassador Dr.	Green Hills Rd.
Tiffany Springs Rd	Connector	Congress Ave.	Ambassador Dr.
Tiffany Springs Rd	Parkways	Line Creek Pkwy.	Platte Purchase Dr.
Tiffany Springs Pkwy	Industrial / Business Park	Private Dr.	Ambassador Dr.
Tiffany Springs Pkwy	Connector	Tiffany Springs Pkwy.	3928' North of Park Access Rd.
Tiffany Springs Pkwy	Industrial / Business Park	NW 96th St.	Amity Ave.
Tiffany Springs Pkwy	Industrial / Business Park	Amity Ave.	Private Drive
Tiffany Springs Parkway	Boulevards	73' West of Oak Trfy.	100' East of Oak Trfy
Tiffany Park Rd	Connector	KCMO City Limit	Tiffany Springs Pkwy.
Swope Pkwy	Parkways	Meyer Blvd.	Dr. Martin Luther King Jr. Blvd.
Swope Pkwy	Parkways	67th St.	Meyer Blvd.
Sterling Ave	Connector	50th Ter.	47th St.
Sterling Ave	Connector	44th St.	43rd St.
Sterling Ave	Connector	47th St.	44th St.
Sterling Ave	Suburban Commercial	43rd St.	Independence City Limit
State Line Rd	Suburban Commercial	106' South of Dyke Branch Creek	85th St.
State Line Rd	Suburban Commercial	103rd St.	100th Ter.
State Line Rd	Connector	100th Ter.	156' South of Dike Branch Creek
State Line Rd	Urban Mixed Use	81st St.	76th St.
State Line Rd	Connector	76th St.	75th St.
State Line Rd	Thoroughfare	Red Bridge Rd.	157' South of 103rd St.
State Line Rd	Thoroughfare	M-150 Hwy	Red Bridge Rd.
State Line Rd	Connector	75th St.	Shawnee Mission Pkwy.

State Line Rd	Suburban Commercial	289' South of 103rd St.	103rd St.
State Line Rd	Urban Mixed Use	85th St.	83rd St.
State Line Rd	Connector	83rd St.	81st St.
Staley Rd	Parkways	100th St.	Brighton Ave.
Staley Rd	Parkways	Staley Rd.	108th St.
Staley Rd	Parkways	Staley Rd.	100th St.
Stadium Dr	Suburban Commercial	35th St.	US-40 Hwy.
Stadium Dr	Industrial / Business Park	Big Blue River	US-40 Hwy.
Stadium Dr	Industrial / Business Park	Manchester Trfy	I-435 Hwy SB On-Ramp
Stadium Dr	Industrial / Business Park	Bennington Ave.	Manchester Trfy
Stadium Dr	Suburban Commercial	I-435 Hwy On-Ramp	16' Northeast of Farley Ave.
Stadium Dr	Suburban Commercial	Big Blue River	Bennington Ave.
Stadium Dr	Connector	Farley Ave.	35th St.
Southwest Trfy	Thoroughfare	43rd St.	I-35
Southwest Trfy	Thoroughfare	Summit St.	Southwest Trfy
Southwest Blvd	Connector	KCMO City Limit	Roanoke Rd.
Southwest Blvd	Downtown Core	I-35 Hwy.	Baltimore Ave.
Southwest Blvd	Urban Mixed Use	25th St.	I-35 On Ramp
Southwest Blvd	Connector	Wyoming St.	104' East of Genessee St.
Southwest Blvd	Connector	27th St.	25th St.
Southwest Blvd	Industrial / Business Park	I-35 Hwy	27th St.
Southwest Blvd	Connector	BNSF RR	I-34 Hwy.
Southwest Blvd	Industrial / Business Park	Private Access Rd.	BNSF RR
Southwest Blvd	Industrial / Business Park	Roanoke Rd.	Wyoming St.
Southwest Blvd	Connector	Bell St.	KCMO City Limit
Sni-A-Bar Rd	Connector	Skiles Ave.	194' East of Byrams Ford Rd.
Sni-A-Bar Rd	Suburban Commercial	194' East of Byrams Ford Rd.	Blue Ridge Ctof
Skyview Ave	Connector	Cookingham Dr.	KCMO City Limit
Skyview Ave	Suburban Commercial	41' South of 107th St.	108th St.
Skyview Ave	Connector	Tiffany Springs Pkwy.	107th St.
Skyview Ave	Connector	108th St.	I-435 Hwy EB On-Ramp
Skyview Ave	Suburban Commercial	I-435 Hwy On-Ramp	Cookingham Dr.
Skyview Ave	Suburban Commercial	Old Tiffany Springs Rd.	Tiffany Springs Pkwy

Shoal Creek Pkwy	Parkways		Mulberry St.	Maplewoods Pkwy.
Shoal Creek Pkwy	Parkways		Pleasant Valley Rd.	Shoal Creek Pkwy.
Shoal Creek Pkwy	Parkways		Maplewoods Pkwy.	108th St.
Shoal Creek Pkwy	Parkways		Searcy Creek Pkwy	NB I-435 Hwy On-Ramp
Shoal Creek Pkwy	Parkways		312' East of I-435 Hwy Off-Ramp	I-435 Hwy On-Ramp
Sherman Rd	Connector		Cookingham Dr.	1034' South East of KCMO City Limit
Shawnee Mission Pkwy	Connector		State Line Rd.	Ward Pkwy
Searcy Creek Pkwy	Connector		Birmingham Rd.	Service Rd.
Searcy Creek Pkwy	Parkways		M-210 Hwy Off-Ramp	Parvin Rd.
Searcy Creek Pkwy	Parkways		Pleasant Valley Rd.	Pleasant Valley Rd.
Searcy Creek Pkwy	Parkways		Parvin Rd.	48th St.
Scherer Pkwy	Suburban Commercial		Raytown Rd.	Lee's Summit City Limit
SB Southwest Trfy	Thoroughfare		Southwest Trfy.	43rd St.
Rockhill Terrace	Boulevards		Brush Creek Blvd.	Giltham Rd.
Rockhill Rd	Boulevards		Holmes Rd.	45th St.
Rockhill Rd	Boulevards		Gregory Blvd,	Holmes Rd.
Robinhood Ln	Connector		108th St.	KCMO City Limits
Roanoke Pkwy	Boulevards		Ward Pkwy.	Westport Rd.
Roanoke Pkwy	Neighborhood		Ward Pkwy	Roanoke Pkwy
Rhinehart Rd	Connector		Unity Village City Limit	79th St.
Red Bridge Rd	Boulevards		Wornall Rd.	Blue River Rd.
Red Bridge Rd	Suburban Commercial		College Ln.	Cleveland Ave.
Red Bridge Rd	Connector		State Line Rd.	Wornall Rd.
Red Bridge Rd	Connector		Barrymore Dr.	KCS RR
Red Bridge Rd	Connector		Cleveland Ave.	Grandview Rd.
Red Bridge Rd	Connector		Blue River Rd.	College Ln.
Red Bridge Rd	Suburban Commercial		Grandview Rd.	Hickman Mills Dr.
Red Bridge Rd	Suburban Commercial		Hickman Mills Dr.	Hillcrest Rd.
Red Bridge Rd	Suburban Commercial		KCS RR	Blue Ridge Blvd.
Red Bridge Rd	Suburban Commercial		Hillcrest Rd.	41' East of Barrymore Dr.
Raytown Rd	Connector		Grandview City Limit	I-470 Hwy WB Off-Ramp
Raytown Rd	Industrial / Business Park		Coal Mine Rd.	I-435 Hwy NB Off-Ramp
Raytown Rd	Connector		141' South of M-150 Hwy.	Highgrove Rd.

Raytown Rd	Suburban Commercial	White Creek	87th St.
Raytown Rd	Connector	Old Raytown Rd.	White Creek
Raytown Rd	Connector	Blue Ridge Ctof.	52nd Ter.
Raytown Rd	Thoroughfare	Eastern Ave.	Blue Ridge Ctof
Raytown Rd	Industrial / Business Park	Stadium Dr.	187' North of 39th St.
Raytown Rd	Industrial / Business Park	33rd St.	Manchester Trfy
Raytown Rd	Thoroughfare	I-435 Hwy Off-Ramp	Eastern Ave.
Raytown Rd	Industrial / Business Park	I-470 Hwy WB Off-Ramp	Old Raytown Rd.
Prospect Ave	Urban Mixed Use	75th St.	67th St.
Prospect Ave	Industrial / Business Park	85th St.	Hickman Mills Dr.
Prospect Ave	Urban Mixed Use	Hickman Mills Dr.	80th St.
Prospect Ave	Industrial / Business Park	77th St.	75th St.
Prospect Ave	Urban Mixed Use	36th St.	35th St.
Prospect Ave	Connector	M-150 Hwy	139th St.
Prospect Ave	Urban Mixed Use	55th St.	53rd St.
Prospect Ave	Urban Mixed Use	EB Meyer Blvd.	61st St.
Prospect Ave	Urban Mixed Use	60th St.	56th St.
Prospect Ave	Connector	55th St.	56th St.
Prospect Ave	Urban Mixed Use	51st St.	46th St.
Prospect Ave	Connector	43rd St.	40th St.
Prospect Ave	Connector	29th St.	137' North of KCT RR
Prospect Ave	Urban Mixed Use	33rd St.	30th St.
Prospect Ave	Connector	35th St.	33rd St.
Prospect Ave	Connector	13th St.	9th St.
Prospect Ave	Urban Mixed Use	I-70	13th St.
Prospect Ave	Urban Mixed Use	I-70	400' South of Truman Rd.
Prospect Ave	Urban Mixed Use	9th St.	8th St.
Prospect Ave	Connector	53rd St.	51st St.
Prospect Ave	Connector	80th St.	77th St.
Prospect Ave	Urban Mixed Use	44th St.	43rd St.
Prospect Ave	Connector	Meyer Blvd.	67th St.
Prospect Ave	Connector	60th St.	61st St.
Prospect Ave	No typology	280' South of EB M-150 Hwy.	33' North of WB M-150 Hwy.