



E

# SAFE STREETS & ROADS FOR ALL (SS4A) SAFETY ACTION PLAN

April 2024





# SAFE STREETS & ROADS FOR ALL (SS4A) SAFETY ACTION PLAN

"Disclaimer: This correspondence and the information contained herein is prepared solely for the purpose of identifying, evaluating, and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 407"



# City of Clarksville Leadership Commitment

Ensuring safe, accessible, and desirable transportation in the City of Clarksville is central to our mission. It is our vision that residents and workers in the City of Clarksville will be able to use a transportation system designed to accommodate all users safely, regardless of age and ability. Safety will be incorporated as part of the entire transportation network and ultimately achieve our long-term safety goal of zero fatalities and serious injuries by 2050.

As the Mayor and a resident of the City of Clarksville, my colleagues and I are deeply concerned about transportation safety within the city. From 2018-2022 our city had nearly 27,000 crashes which resulted in 97 fatalities. Additionally, 180 of these crashes involved pedestrians and more than 40 involved bicyclists. These incidents are tragedies for the victims and their friends and families, and they have profound, devastating impacts in our communities.

Fatal and serious injury traffic crashes are preventable, and the City of Clarksville is committed to making transportation safer for residents and visitors within the city. The Safe Streets for All (SS4A) Safety Action Plan is an important first step toward ending these avoidable deaths and injuries. As a data-driven, comprehensive, and actionable approach, the Safety Action Plan is designed to improve safety throughout the entire transportation network and ultimately achieve our long-term safety goal of zero fatalities and serious injuries by Year 2050.

Safe travel is not exclusive to a specific set of the community. Everyone should arrive at their destination alive and unharmed, regardless of where they live, their age, or preferred mode of transportation. The City cannot achieve our goal without the support and engagement from local partner agencies and their communities. Each of the area's residents can improve the safety of our roadways every day.

Thank you for your interest in safety within the City, and please do not hesitate to contact us if you have questions or suggestions.

Joe Pitts, Mayor, City of Clarksville Phone: (931) 645-7444





#### **RESOLUTION 2024-09**

#### ADOPTION OF THE SAFE STREETS AND ROADS FOR ALL (SS4A) SAFETY ACTION PLAN

WHEREAS, the Infrastructure Investment and Jobs Act (Public Law 117-58, also referred to as the "Bipartisan Infrastructure Law" or "BIL") authorized and appropriated funds for the Safe Streets and Roads for All (SS4A) Discretionary Grant Program; and

WHEREAS, the purpose of SS4A grants is to improve roadway safety by significantly reducing or eliminating roadway fatalities and serious injuries through safety action plan development and implementation focused on all user, including pedestrians, bicyclists, public transportation users, motorists, and commercial vehicle operators; and

WHEREAS, the Clarksville Urbanized Area Metropolitan Planning Organization (MPO) developed the SS4A Safety Action Plan in coordination with the City of Clarksville. The completion of the SS4A Safety Action Plan qualifies the City of Clarksville for consideration of US DOT SS4A Implementation Discretionary Grant; and

**WHEREAS**, the locally developed Participation Plan has been followed. The 14 - day public review period began on April 10, 2024 and ended April 24, 2024. Said document was made available for review; and

**WHEREAS,** members of the TCC recommended the adoption of the Safe Streets and Roads for All (SS4A) Safety Action Plan to the Executive Board;

**NOW, THEREFORE, BE IT RESOLVED**, that the Clarksville Urbanized Area Metropolitan Planning Organization's Executive Board does adopt the Safe Streets and Roads for All (SS4A) Safety Action Plan.

Resolution Approved: April 25, 2024

Mayor Joe Pitts, Chairman Clarksville Urbanized Area

#### **RESOLUTION 47-2023-24**

#### ADOPTION OF THE SAFE STREETS AND ROADS FOR ALL (SS4A) SAFETY ACTION PLAN

WHEREAS, the Infrastructure Investment and Jobs Act (Public Law 117-58, also referred to as the "Bipartisan Infrastructure Law" or "BIL") authorized and appropriated funds for the Safe Streets and Roads for All (SS4A) Discretionary Grant Program; and

WHEREAS, the purpose of SS4A grants is to improve roadway safety by significantly reducing or eliminating roadway fatalities and serious injuries through safety action plan development and implementation focused on all user, including pedestrians, bicyclists, public transportation users, motorists, and commercial vehicle operators; and

WHEREAS, the City of Clarksville developed the SS4A Safety Action Plan in coordination with the Clarksville Urbanized Area Metropolitan Planning Organization (MPO). The completion of the SS4A Safety Action Plan qualifies the City of Clarksville for consideration of US DOT SS4A Implementation Discretionary Grant; and

WHEREAS, the draft Action Plan was available for public input and review April 4, 2024 through April 18, 2024 both on the City and MPO's websites;

WHEREAS, the City of Clarksville desires to formalize their commitment to the principles of the Safe System in order to achieve the long-term safety goal of zero fatalities and serious injuries on our roadways by 2050;

WHEREAS, the City of Clarksville commits to this goal by establishing three specific goals to achieve a safer roadway system. These goals include: educating residents about transportation safety, initiating campaigns to improve driver behaviors and implementing projects to improve transportation infrastructure.

# NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CLARKSVILLE, TENNESSEE:

That the City of Clarksville adopts the Safety Action Plan, as a first step to make our roadways safer for all.

Adopted: April 25, 2024

Joe Pitts, Mayor

ATTESTED:

Lisa Canfield, City Clerk

# **Table of Contents**

1.0	Introduction1
1.1	Demographic Profile1
2.0	Goals, Objectives, and Regional Vision4
2.1	Strategic Framework4
2.2	Performance Measures
3.0	Existing Conditions Safety Data Review7
3.1	Existing Plans, Policies, and Procedures7
3.2	Crash Analysis
3.3	High-Injury Network
4.0	Equity Considerations
4.1	Transportation Disadvantaged Communities (TDC)
4.2	Areas of Persistent Poverty (APP)41
4.3	Environmental Justice (EJ) and Communities of Concern (CoC)44
4.4	Equity Analysis
5.0	Public Engagement
5.1	Steering Committee
5.2	Public and Stakeholder Involvement Phase 159
5.3	Public and Stakeholder Involvement Phase 274
5.4	Public and Stakeholder Involvement Phase 379
6.0	Project Prioritization and Recommendations81
6.1	Safe System Approach
6.2	Proposed Local Infrastructure Projects
6.3	Project Prioritization
6.4	Countermeasure Toolbox
7.0	Progress and Transparency98
7.1	Advocacy
7.2	2 Data Maintenance



7.3	3 Plan Implementation	
7.4	4 Transparency & Reporting	
8.0	Appendices	100
Ap	ppendix A: All-Crash Safety Statistics	100
Ap	ppendix B: Public Outreach Phase 1 Documentation	104
Ap	ppendix C: Public Outreach Phase 2 Documentation	119
Ap	ppendix D: Public Outreach Phase 3 Documentation	135
Ap	ppendix E: Project Prioritization Scores	145
Ap	ppendix F: Self-Certification Worksheet	149



# List of Tables

Table 1.1: Commuting Modes within Clarksville	3
Table 2.1: Safety Action Plan Performance Measures	5
Table 3.1: Fatal and Serious Injury by Crash Type and Year	22
Table 3.2: Fatal and Serious Injury by Contributing Circumstances	23
Table 3.3: DUI Involved Crashes, 2018-2022	26
Table 3.4: Pedestrian/Bicycle Fatal and Serious Injury Crash Conditions, 2018-2022	27
Table 3.5: Clarksville Crash Summary, 2018-2022	28
Table 3.6: Top 25 Fatal and Serious Injury Crash Segments, 2018-2022	32
Table 3.7: Top 25 Fatal and Serious Injury Crash Intersections, 2018-2022	34
Table 3.8: Top 10 Fatal and Serious Injury Vulnerable User Crash Segments, 2018-2022	35
Table 3.7: Top 10 Fatal and Serious Injury Vulnerable User Crash Intersections, 2018-2022	36
Table 5.1: Ranking of Strategies to Reduce Distracted Driving	75
Table 5.2: Ranking of Strategies to Reduce Speeding	76
Table 5.3: Ranking of Strategies to Improve Safety at Intersections	77
Table 5.4: Ranking of Strategies to Improve Safety of Roadways	78
Table 5.5: Ranking of Strategies to Improve Bicycle, Pedestrian, and Transit Safety	80
Table 6.1: Typical Project Costs	84
Table 6.2: Project Prioritization Criteria	85
Table 6.3: Project Locations and Prioritization Results	86
Table 6.4: Crash Countermeasure Toolbox	91
Table 8.1: All Crashes by Crash Type and Year	100
Table 8.2: All Crashes by Contributing Circumstances	101
Table 8.3: DUI Involved Crashes, 2018-2022	101
Table 8.4: Pedestrian/Bicycle Fatal and Serious Injury Crash Conditions, 2018-2022	102
Table 8.5: Clarksville Crash Summary, 2018-2022	103



# List of Figures

Figure 1.1: Population by Age	2
Figure 1.2: Population by Race	2
Figure 2.1: Safety Action Plan Strategic Framework	4
Figure 3.1: Fatal and Serious Injury Crashes by Year	22
Figure 3.2: Fatal and Serious Injury Crashes by Month, 2018-2022	24
Figure 3.3: Fatal and Serious Injury Crashes by Day of Week, 2018-2022	25
Figure 3.4: Fatal and Serious Injury Crashes by Time of Day, 2018-2022	25
Figure 3.5: Bicycle/Pedestrian Fatal and Serious Injury Crashes, 2018-2022	
Figure 3.6: High Injury Network – All Users	
Figure 3.7: High Injury Network – Vulnerable Users	
Figure 4.1: Transportation Disadvantaged Communities	40
Figure 4.2: Areas of Persistent Poverty	43
Figure 4.3: Communities of Concern	
Figure 4.4: Households Without a Vehicle	
Figure 4.5: Population of 65 Years and Older	50
Figure 4.6: Limited English Proficiency Population	51
Figure 4.7: Minority Population Areas	52
Figure 4.8: Low-Income Populations	53
Figure 4.9: Persons with Disabilities	54
Figure 4.10: Clarksville Equity Area Analysis	55
Figure 5.1: Behavior Risk Factor Rankings by Age Group	62
Figure 5.2: Behavior Risk Factor Rankings by Minority Status	63
Figure 5.3: Behavior Risk Factor Rankings by Poverty Status	64
Figure 5.4: Infrastructure Risk Factor Rankings by Age Group	65
Figure 5.5: Infrastructure Risk Factor Rankings by Minority Status	66
Figure 5.6: Infrastructure Risk Factor Rankings by Poverty Status	67
Figure 5.7: Identified Transportation Safety Challenges	68



Figure 5.8: Roadway Safety Concerns	69
Figure 5.9: Public Transit Safety Concerns	70
Figure 5.10: Walking Safety Concerns	71
Figure 5.11: Bicycling Safety Concerns	72
Figure 5.12: General Safety Concerns	73
Figure 6.1: Safe System Approach Elements	82



# **1.0 Introduction**

The City of Clarksville, Tennessee, is a dynamic city in the southeastern United States. As the county seat of Montgomery County, it has 163,518 residents<sup>1</sup>, and is the fifth-largest city in the state. Nestled along the banks of the Cumberland River, Clarksville boasts a rich historical heritage dating back to its establishment in 1784.

Clarksville's strategic location, strong economy, thriving arts scene, and natural beauty has resulted in the city becoming a hub for growth and opportunity in the region.

# 1.1 Demographic Profile

While the SS4A Safety Action Plan considers transportation safety needs throughout the entire City, it also focuses on the needs of areas identified as a Transportation Disadvantaged Community (TDC) or Area of Persistent Poverty (APP) as required by the Federal Highway Administration (FHWA). Environmental Justice (EJ) areas are incorporated through an analysis of the American Community Survey (ACS) 2021 5-year estimates to determine equity needs within the region. This section analyzes the existing demographic makeup of the City of Clarksville to aid these efforts.

### Age/Race

**Figure 1.1** displays the age breakdowns within the city, while **Figure 1.2** displays the city's mix of racial backgrounds.



<sup>&</sup>lt;sup>1</sup> American Community Survey, 2021 5-Year Estimates

Figure 1.1: Population by Age



Source: ACS 5-Year Estimates, 2021



#### Figure 1.2: Population by Race

Source: ACS 5-Year Estimates, 2021



#### **Existing Travel Patterns**

While commuting patterns are only a portion of the total travel within the city, they can provide insight into overall travel patterns. According to the 2021 ACS estimates the average commute time for employees within the city is less than 25 minutes.

Most commuters in Clarksville (84 percent) drove alone to work, as shown in **Table 1.1**. By contrast, eight (8) percent carpooled. Other modes, such as walking and public transportation, were used by a small percentage of commuters.

These commuting trends can also offer insights into possible equity and equality imbalances in access to transportation and job opportunities in the city. Most residents within the city choose to drive alone to work which could be challenging for residents with restrictions or without access to a vehicle such as low-income persons who depend more on public transit or shared transportation alternatives.

Recognizing the causes of differences in travel patterns can be vital for equity and equality analysis, since it can guide efforts to create a safer, inclusive, accessible transportation system for all users.

Commute Mode	Percent of Commuters
Drive Alone	84%
Carpool	8%
Public Transportation	1%
Walk	1%
Work at Home	5%
Other	1%

#### Table 1.1: Commuting Modes within Clarksville

Source: ACS 2021 5-Year Estimates



# 2.0 Goals, Objectives, and Regional Vision

# 2.1 Strategic Framework

Public and stakeholder input were used to develop a vision statement, goals, and objectives to guide the development of the Safety Action Plan (SAP). The vision statement describes the transportation safety status that the City strives to achieve. It is supported by three (3) goals, each with corresponding objectives that clarify and expand upon the goal statement. These activity-based objectives are used to identify specific projects and strategies that help the City achieve its stated goals. These elements form the strategic framework of the plan, shown in **Figure 2.1**.

#### Figure 2.1: Safety Action Plan Strategic Framework





# 2.2 Performance Measures

Performance measures are used to show progress towards meeting the SAP's Vision, Goals, and Objectives. This SAP uses four (4) performance measures which are displayed in **Table 2.1** along with the Goals and Objectives that they measure.

Table 2.1: Safety Action Plan Performance Measures

Performance Measure	Goal	Objective				
	Goal 1	Implement a safe driving campaign on the City's website and social media platforms.				
	Goal 1	Utilize local media outlets to publish crash statistics and safe driving tips.				
	Goal 2	Develop and distribute educational materials explaining potential results of unsafe driving behaviors.				
Percent Reduction in the Number of Fatal	Goal 2	Perform targeted enforcement for distracted driving, speeding, and red light running.				
Crashes	Goal 2	Develop and post signage to explain the proper use of roadway crossings.				
	Goal 3	Implement intersection and roadway projects as identified in this plan.				
	Goal 3	Perform a city-wide study to determine where roadway lighting will be most beneficial.				
	Goal 3	Implement regular targeted enforcement at Focus Areas.				
	Goal 1	Implement a safe driving campaign on the City's website and social media platforms.				
	Goal 1	Utilize local media outlets to publish crash statistics and safe driving tips.				
	Goal 2	Develop and distribute educational materials explaining potential results of unsafe driving behaviors.				
Percent Reduction in the Number of Serious	Goal 2	Perform targeted enforcement for distracted driving, speeding, and red light running.				
Injury Crashes	Goal 2	Develop and post signage to explain the proper use of roadway crossings.				
	Goal 3	Implement intersection and roadway projects as identified in this plan.				
	Goal 3	Perform a city-wide study to determine where roadway lighting will be most beneficial.				
	Goal 3	Implement regular targeted enforcement at Focus Areas.				



Performance Measure	Goal	Objective				
	Goal 1	Implement a safe driving campaign on the City's website and social media platforms.				
	Goal 1	Develop an outreach strategy to promote bicycle and pedestrian visibility and awareness.				
	Goal 2	Develop and distribute educational materials explaining potential results of unsafe driving behaviors.				
Percent Reduction in	Goal 2	Develop and post signage to explain the proper use of roadway crossings.				
Motorized Fatal Crashes	Goal 3	Implement intersection and roadway projects as identified in this plan.				
	Goal 3	Identify gaps in sidewalks and other pedestrian infrastructure and develop a plan to provide missing connections.				
	Goal 3	Perform a citywide study to determine where roadway lighting will be most beneficial.				
	Goal 3	Implement regular targeted enforcement at Focus Areas.				
	Goal 1	Implement a safe driving campaign on the City's website and social media platforms.				
	Goal 1	Develop an outreach strategy to promote bicycle and pedestrian visibility and awareness.				
	Goal 2	Develop and distribute educational materials explaining potential results of unsafe driving behaviors.				
Percent Reduction in the Number of Non-	Goal 2	Develop and post signage to explain the proper use of roadway crossings.				
Motorized Serious Injury Crashes	Goal 3	Implement intersection and roadway projects as identified in this plan.				
	Goal 3	Identify gaps in sidewalks and other pedestrian infrastructure and develop a plan to provide missing connections.				
	Goal 3	Perform a citywide study to determine where roadway lighting will be most beneficial.				
	Goal 3	Implement regular targeted enforcement at Focus Areas.				



# 3.0 Existing Conditions Safety Data Review

# 3.1 Existing Plans, Policies, and Procedures

#### **Existing Plans**

#### RIGHT-OF-WAY PLANS: STATE ROUTE 237 (SURVEYED 2011)

#### Plan Overview

This set of right-of-way plans shows improvements for State Route 237 (Rossview Road) from West of Keysburg Road to West of I-24 and the intersection at Dunbar Cave Road and Cardinal Lane realignment.

#### **Goals and Objectives**

The goal of these plans is to provide right-of-way limits, drainage, striping details, and a plan layout view of a roadway realignment project along State Route 237.

#### Key Findings

- The plan shows sidewalks, non-mountable curb, and a two-way left turn lane will be included in the roadway realignment.
- A list of adjacent stakeholders is provided as well as the project limits for adjacent projects.

- Incorporate ADA compliance and sidewalks within the plan, particularly at locations with traffic signals, sidewalks, and non-mountable curb.
- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into this project based on needs outlined in the Metropolitan Transportation Plan.
- The survey should be revisited since it took place over 10 years ago. Land use, property owners, and stakeholders may have changed during this time.



#### CONSTRUCTION PLANS: ALLEN ROAD BID SET (2023)

#### Plan Overview

This set of construction plans shows roadway improvements leading up to the intersection of Tiny Town Road and Allen Road.

#### **Goals and Objectives**

The goal of this project is to provide a bid plan set for intersection improvements including drainage, left turn lanes, and striping details including stop bars at the intersection of Allen Road and Tiny Town Road.

#### Key Findings

- A traffic control plan is not included in the plan set. Notes state that the contractor is to develop this plan and coordinate with Clarksville Street Department (CSD) prior to implementation.
- The plan shows left turn lanes with stop bars and a signalized intersection.

- Incorporate Americans with Disabilities Act (ADA) compliance and sidewalks within the plan, particularly at locations with traffic signals, sidewalks, and non-mountable curb.
- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into this project based on needs outlined in the Metropolitan Transportation Plan.



#### CONSTRUCTION PLANS: FIRE STATION BID SET (2023)

#### Plan Overview

This set of construction plans shows roadway widening and sidewalks on Fire Station Road from State Route 76 to Trough Springs.

#### **Goals and Objectives**

The goal of this plan is to provide a bid plan set for roadway improvements including widening and sidewalks on Fire Station Road.

#### Key Findings

- The plan includes utility relocations, sidewalks, a parking lot, two-way left turn lanes, and stop bars.
- A pedestrian crosswalk is present on Winn Way at Fire Station Road.

- Incorporate ADA compliance within the plan, particularly for sidewalks and crosswalks within the project limits.
- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into this project based on needs outlined in the Metropolitan Transportation Plan.



#### CONSTRUCTION PLANS: TED CROZIER BID SET (2023)

#### Plan Overview

This set of construction plans shows intersection improvements at the intersection of Ted A. Crozier Sr. Boulevard and Dunlop Lane.

#### **Goals and Objectives**

The goal of this project is to provide a bid plan set for intersection improvements including widening and sidewalks at the intersection of Ted A. Crozier Sr. Boulevard and Dunlop lane.

#### Key Findings

- A traffic control plan is not included in the plan set. Notes state that the contractor is to develop this plan and coordinate with CSD prior to implementation.
- The plan shows left turn lanes with stop bars and a signalized intersection.

- Incorporate ADA compliance to accommodate all roadway users.
- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into this project based on needs outlined in the Metropolitan Transportation Plan.



#### CONSTRUCTION PLANS: WILMA RUDOLPH BOULEVARD (2023)

#### Plan Overview

This set of construction plans shows an adaptive signal system on Wilma Rudolph Boulevard (State Route 13) from 101<sup>st</sup> Airline Boulevard at the I-24 Westbound Ramp.

#### **Goals and Objectives**

The goal of this plan is to provide signal equipment and pavement markings on Wilma Rudolph Boulevard.

#### Key Findings

- The plan shows crosswalks but does not specify connectivity to a sidewalk.
- The plan shows signal plans with pavement striping and closed caption televisions with dynamic message signs.
- The plan set includes a traffic control layout for shoulder work.

- Incorporate ADA compliance to accommodate all roadway users, particularly regarding sidewalks and traffic signals.
- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Collaborate across agencies to incorporate transportation safety elements into this project based on needs outlined in the Metropolitan Transportation Plan.



#### CONSTRUCTION PLANS - WHITFIELD ROAD/NEEDMORE ROAD (2020)

#### Plan Overview

This set of construction plans shows improvements on Whitfield Road and Needmore Road from south of Tracy Lane to Glen Ellen Way and from South Centerstone Court to Ann Drive.

#### **Goals and Objectives**

The goal of these construction plans is to show proposed roadway improvements that are planned within the vicinity of Whitfield Road and Needmore Road.

#### Key Findings

- The plans include drainage, a retaining wall, utility relocations and identified utility owners, right-of-way acquisition, sidewalks, turn lanes, pavement striping, roadway realignment, lighting, traffic signals, and signage.
- The plans propose a roundabout at the intersection of Whitmore Road and Needmore Road.

- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into roadway projects based on the Metropolitan Transportation Plan.



#### 2050 CLARKSVILLE METROPOLITAN TRANSPORTATION PLAN – TECHNICAL REPORT #4: NEEDS ASSESSMENT (2023)

#### Plan Overview

This report discusses transportation needs for the Clarksville Metropolitan Planning Area. It is an assessment of future needs based on current and forecasted trends, existing plans, and public and stakeholder input.

#### **Goals and Objectives**

The goal of this plan is to outline the transportation needs of the Clarksville Metropolitan Area through the year 2050.

#### Key Findings

- Emerging trends include changing demographics and travel patterns, shared mobility, connected and autonomous vehicles, and electric and alternative fuel vehicles.
- The plan includes an overview of congestion relief for roadways and bridges based on data gathered through the stakeholder involvement process with a list of recommendations. These recommendations include access management, signal timing modifications, and roadway widening.
- The plan identifies a need for pavement maintenance on I-24 and specifically at the interchange of I-24 at US 41-A/Fort Campbell Boulevard.
- The highest number of crashes in the Metropolitan Planning Area were rear end crashes between 2017 and 2021 comprising nearly a third of all collisions.

- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into roadway projects based on this needs assessment.



#### FINAL REPORT ROAD SAFETY AUDIT ALONG STATE ROUTE 76 (2018)

#### Plan Overview

This report documents a road safety audit for State Route 76 from State Route 112 to I-24.

#### **Goals and Objectives**

The goal of this report is to summarize the need for road safety improvements along the designated corridor based on a review of the county highway map, aerial photographs, U.S. Geological Survey (USGS) quad map, TRIMS route feature, traffic and geometric reports, crash diagrams, crash reports, and an on-site visit.

#### Key Findings

- The total cost of roadway improvements listed in the report was \$154,000; however, these values are in 2018 dollars. Right-of-way acquisition is not anticipated. Neither a maintenance agreement nor a local match will be required.
- The project location was selected for safety improvements by the Clarksville Metropolitan Planning Organization (MPO) due to crashes along the route between Log Mile 14.43 and 17.53. It includes crash data from 2011 through 2017.
- The document includes recommendations within the project limits along with plans for a roadway widening on State Route 76.

- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into roadway projects based on this audit.
- The audit was conducted in 2018.



#### PEDESTRIAN ROAD SAFETY INITIATIVE (PRSI) REPORT FOR STATE ROUTE 12 (2023)

#### Plan Overview

This report provides a pedestrian road safety initiative report for State Route 12 (Providence Boulevard) from Beech Street (Log Mile 16.01) to Peachers Mill Road (Log Mile 16.48).

#### **Goals and Objectives**

The goal of this report is to summarize the need for pedestrian road safety improvements along the designated corridor based on a review of the county highway map, aerial photographs, FEMA FIRM map, Annual Average Daily Traffic collected by TDOT, an on-site visit, Enhanced Tennessee Roadway Information System Historic Crash Data, route feature description listings, and geometric reports.

#### Key Findings

- The total cost of roadway improvements listed in the report is \$2,732,000.
- The project was requested by the TDOT Multimodal Transportation Resources Division as a priority project to reduce pedestrian crashes along corridors and intersections throughout the State of Tennessee.
- The list of improvements identified include pedestrian infrastructure such as sidewalks, crosswalks, and pedestrian hybrid beacons, turning radii reduction, commercial access consolidation, access restrictions, channelization markings and improvements, signage, and traffic signal improvements.

- Collaborate across agencies to coordinate adjacent project schedules, funding, and stakeholder involvement. Stakeholders include utility companies for relocations, driveway owners regarding possible permits, community members, and developers and property owners along the corridor who may be affected by access, drainage, or acquisitions.
- Coordinate across agencies to incorporate transportation safety elements into roadway projects based on recommendations in this report.



#### **Existing Policies and Procedures**

#### Access Management

Access Management regulations are necessary in managing state and local roadway systems. These regulations promote safe and efficient movement of vehicles entering and/or exiting sites to/from the roadway system and provide for efficient and safe operations between state-maintained highways and locally maintained roadways.

The Tennessee Department of Transportation (TDOT) has active access management policies and procedures along state highways. Published in 2015, the *Highway System Access Manual* (HASM) Volumes 1 through 3 focus on different areas of access management along state highways:

- Volume 1 pertains to the planning portion of access management including corridor management agreement guidance and model land development regulations. This guide provides overviews of national best practices for incorporating access management standards and model ordinance language that local jurisdictions may adopt into their local regulatory code or as a stand-alone ordinance.
- Volume 2 focuses on the Intersection and Interchange Evaluation (IIE) process, which assists practitioners in selecting the best possible intersection or interchange design at a given location. This tool requires data including project and location data, traffic data including pedestrian counts, multimodal activity, and crash history and intersection crash rate. Effective intersection and interchange design is also a crucial part of access management as it is one part of creating an efficient transportation system for users.
- Volume 3 focuses on the geometric design criteria of intersections and access locations along state highways. Access regulations as defined in Volume 3 apply to access connections including any driveway, public roadway/street, or other means of movement for vehicle users and pedestrians to or from public roadway systems. Access spacing standards in Volume 3 of the HSAM include general spacing requirements, traffic signal spacing requirements, unsignalized intersection requirements, driveway spacing requirements including the number of entrances allowed per property, spacing of median opening, spacing of interchange ramps, and spacing requirements for access points located on the opposite side of the roadway.

TDOT also requires the submittal of a Highway Entrance Permit application for both single family residential driveways and commercial entrances that can be prepared and submitted to TDOT for review and approval.



In addition to the HSAM, the City of Clarksville has active ordinances in place pertaining to access management found in *Title 12 – Streets and other Public Ways and Places, Chapter 11 – Driveway Access.* These ordinances include:

- plan requirements for review and approval,
- minimum design standards for the design of driveways to arterial, collector, and other local roadways, and
- other driveway design requirements such as
  - o minimum length restrictions,
  - o width requirements, and
  - o driveway radius requirements.

The Access Regulations appendix in *Title 12* includes a list of roadways within Clarksville-Montgomery County classified as either arterial, collector, or local roadways. This list allows designers to easily identify which roadway classification should be used when designing their proposed driveway.

#### **Complete Streets**

The U.S. Department of Transportation describes Complete Streets as streets that are designed and operated to enable and support safe mobility for all users. Complete Streets consider multiple forms of transportation including roadways, sidewalks, bicycle paths, or public forms or transportation. Complete Street policies can be set at state, regional, and local levels and are usually supported by roadway design guidelines.

TDOT published a Planning Grants Fact Sheet specifically pertaining to Complete Streets Plans. This fact sheet includes an explanation of what a Complete Streets plan entails and why it is important to communities to implement this type of plan. It highlights the benefits of developing a Complete Streets network, which include promotion of healthy and active living by:

- implementing pedestrian and bicycle facilities,
- adding safety improvements for multiple use streets,
- mitigating existing traffic issues, and
- planning systems that include identification of network locations that can be incorporated into the complete streets design to potentially reduce the impact of costly retrofits.

The TDOT factsheet has defined steps for communities to prepare a Complete Streets plan and identified potential funding sources to implement the plan.



The recently completed 2050 Metropolitan Transportation Plan from the CUAMPO, whose Metropolitan Planning Area includes the City of Clarksville, identifies the expansion of bicycling and walking infrastructure using a Complete Streets approach. However, neither TDOT nor the City of Clarksville currently have a Complete Streets policy. The City of Clarksville should develop a local Complete Streets policy and participate in the development process if TDOT develops a similar policy.

#### Subdivision Sidewalk Regulations

Development of subdivisions within a community should include the implementation of pedestrian facilities to promote connectivity and safety. Planning standards and regulations are needed to encourage cohesive sidewalk networks within proposed subdivisions and existing networks.

In 2023, TDOT revised its *Roadway Design Guidelines* which cover a wide range of design standards. Chapter 3 of the guidelines covers the design of multimodal transportation systems and includes standards for:

- pedestrian facilities,
- pedestrian route selection,
- sidewalk design on curbed and non-curbed roadways,
- pedestrian crossings,
- pedestrian crossing safety considerations, and
- bicycle facilities.

The goal of these guidelines is to create policies that encourage the use of multimodal accommodations in all transportation planning activities at the local, regional, and statewide level to develop a comprehensive and connected transportation network.

The City of Clarksville has active ordinances in place pertaining to sidewalk requirements in *Title 12 – Streets and other Public Ways and Places, Chapter 1 – In General.* This section also covers the implementation of public sidewalks in public roadway projects and the minimum design standards associated with public sidewalks including the note that all facilities along state highways will be constructed in accordance with TDOT design standards. This section also notes that all sidewalks will be constructed in accordance with the Americans with Disabilities Act (ADA) and shall be ADA compliant at the time of installation.

Work Zone Management/Requirements of Traffic Management Plans

In 2019, TDOT) published the *Work Zone Safety and Mobility Manual*. The purpose of this manual is to systematically consider and manage work zone impacts by developing and implementing work zone management procedures. All projects submitted to the state, both



significant and non-significant, are required to develop a Transportation Management Plan (TMP). The TMP requires projects to submit work zone impacts and management strategies, including temporary traffic control (TTC) plans for the project, which must be prepared in accordance with Part 6 of the *Manual of Uniform Traffic Control Devices (MUTCD)* and Chapter 9 of *American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide*.

Work zone management is not specifically mentioned within the City of Clarksville ordinances. As work zones often contribute to highway congestion, it is important to establish work zone management plans at the local level to continue efficient operations while construction is ongoing.

The City currently has ordinances in place pertaining to traffic management for neighborhoods in *Title 12 – Streets and other Public Ways and Places, Chapter 10 – Neighborhood Traffic Management*. The goal of this chapter is to protect the quality of life and enhance the safety of City residents. Some regulations under this section include prohibiting cut-through traffic from residential streets to collector streets, reducing speed to a safe and appropriate speed limit, and providing access for emergency vehicles at all times. Neighborhood planning under this section requires input from neighborhood associations, residents, planners, police, fire officials, the office of community development, and engineers. It is also prohibited for trucks and other inappropriate vehicle types to access residential streets.

#### Emergency Response Time Goals vs. Actual

A crucial part of emergency response is the time that it takes for emergency responders to reach their destinations. Currently, no information is publicly available regarding response time goals for emergency responders. It is encouraged that all emergency responders, including the fire department, police department, and Emergency Management Services (EMS), coordinate amongst their organizations to identify deficiencies in response time and develop strategies/policies to improve efficiency where necessary.

#### Incident Management/Traveler Information System

TDOT has published Incident Management Plans for each region. The City of Clarksville is part of Region 3's plan which was published in 2023. This plan's goal is to decrease response time during Interstate roadway closures by providing Region 3 with action plans and pre-established detour routes based on location. As part of the plan, work zone traffic control must be detailed to inform maintenance staff of what control measures need to be implemented. Included in the Region 3 *Incident Management Plan* is the acknowledgment



that providing incident notifications in a timely manner is one of the most crucial components of an incident management plan. However, the required use of dynamic message signs, which should be incorporated in incident management, is not mentioned.

Incident Management pertains to protocols and procedures designed to restore roadway capacity as quickly and efficiently as possible after traffic incidents have occurred. A well-established plan benefits not only emergency responders during traffic incidents, but also vehicle operators as the plan assists in reducing delays and improving safety. Incident management is not specifically mentioned within the City of Clarksville's ordinances. Implementation of an Incident Management Plan could greatly improve operations and safety for roadway users in the Clarksville-Montgomery County area.

The City of Clarksville currently acknowledges the use of dynamic Speed Limit Message Signs in Appendix B of the Clarksville Neighborhood Traffic Management Program. This section allows dynamic speed limit signs that inform drivers of their speed as they approach the sign compared to the actual speed limit of the roadway on which they are traveling.



# 3.2 Crash Analysis

The crash analysis uses five years of crash data provided by the Tennessee Department of Transportation's (TDOT) Tennessee Integrated Traffic Analysis Network (TITAN).

The analysis reviewed data from January 1, 2018 through December 31, 2022 to evaluate patterns and trends based on:

- crash type
- location
- contributing circumstances
- temporal trends

From 2018 through 2022, 26,875 crashes were reported within the City of Clarksville. This section focuses on the 486 crashes within the city that resulted in fatalities and/or serious injuries. The statistics for all crashes within the City of Clarksville are displayed in **Appendix A**.

Shown in **Figure 3.1**, there were 92 fatal crashes and 394 serious injury crashes reported in the City of Clarksville from 2018 through 2022.



#### Figure 3.1: Fatal and Serious Injury Crashes by Year



Source: TITAN, 2023

#### **Crash Types and Summaries**

During the five-year analysis period, the most common crash types among the fatal and serious injury crashes were "no collision with vehicle" (41 percent) and "angle" (33 percent), contributing to over two-thirds of fatalities and serious injuries. **Table 3.1** presents the fatal and serious injury crashes reported from 2018 through 2022 by crash type and year. **Table 3.1: Fatal and Serious Injury by Crash Type and Year** 

Crash Type		Total (%)					
Crash rype	2018	2019	2020	2021	2022		
Angle	34	34	32	26	36	162 (33.0%)	
Head-On	8	5	8	13	11	45 (9.0%)	
No Collision W/ Vehicle	37	33	42	43	46	201 (41.0%)	
Other	1	1	1	2	0	5 (1.0%)	
Rear To Rear	0	0	0	0	0	0 (0.0%)	
Rear To Side	0	0	0	0	0	0 (0.0%)	
Rear-End	20	13	5	10	7	55 (11.0%)	
Sideswipe, Opp Dir	0	1	0	0	0	1 (0.2%)	
Sideswipe, Same Dir	1	2	6	2	3	14 (2.9%)	
Unknown	0	2	1	0	0	3 (0.6%)	
Blank	0	0	0	0	0	0 (0.0%)	
Total	101	91	95	96	103	486	

Source: TITAN, 2023



#### **Environmental Circumstances**

Understanding the environmental circumstances, such as lighting, weather, and surface conditions, that contribute to crashes can be helpful in determining potential areas of improvement. **Table 3.2** displays the environmental circumstances at the time of the fatal and serious crashes reported in the City of Clarksville from 2018 through 2022.

Approximately 20 percent of fatal and serious injury crashes were identified as 'dark-not lighted' indicating that there was no street or intersection lighting present at the time of the crash.

Lighting Conditions	Year					
	2018	2019	2020	2021	2022	10tal (%)
Dark-Lighted	28	19	15	27	25	114 (24.0%)
Dark-Not Lighted	15	13	28	24	15	95 (20.0%)
Dark-Unknown Lighting	0	0	0	0	2	2 (0.4%)
Dawn	0	2	3	5	4	14 (2.9%)
Daylight	53	57	46	37	54	247 (51.0%)
Dusk	4	0	2	2	3	11 (2.3%)
Unknown	1	0	1	0	0	2 (0.4%)
Blank	0	0	0	1	0	1 (0.2%)
Total	101	91	95	96	103	486
Surface Conditions	Year				Total (%)	
Surface conditions	2018	2019	2020	2021	2022	TOLAI (%)
Dry	82	78	81	81	92	414 (83.0%)
Ice	0	0	0	0	1	1 (0.2%)
Oil	0	0	0	0	0	0 (0.0%)
Other (Narrative)	0	0	0	0	0	0 (0.0%)
Sand, Mud, or Dirt	0	0	0	0	0	0 (0.0%)
Snow or Slush	0	0	1	0	2	3 (0.5%)
Wet	19	13	12	12	7	63 (13.0%)
Water-Standing/Moving	0	0	1	2	0	3 (0.6%)
Unknown	0	0	0	1	1	2 (0.4%)
Total	101	91	95	96	103	486

#### Table 3.2: Fatal and Serious Injury by Contributing Circumstances

Source: TITAN, 2023



#### **Temporal Patterns**

The analysis also considers temporal patterns by analyzing the months, day of the week, and hours that fatal and serious injury crashes occurred. The data shows that:

- Fatal and serious injury crashes were more likely to occur in the summer and late fall months, particularly October. **Figure 3.2**
- Friday experienced the most fatal and serious injury crashes, while Monday experienced the fewest. **Figure 3.3**
- 4 PM to 6 PM, which corresponds with the evening peak hour period, experienced the most fatal and serious injury crashes. **Figure 3.4**







Source: TITAN, 2023





Source: TITAN, 2023



#### Figure 3.4: Fatal and Serious Injury Crashes by Time of Day, 2018-2022

Source: TITAN, 2023
## Driving Under the Influence (DUI)

Of the 486 reported fatal and serious injury crashes in the City of Clarksville from 2018 through 2022, 73 crashes (15 percent) involved DUI. This trend has increased since 2020 as shown in **Table 3.3**.

Table	3.3:	DUI	Involved	Crashes.	2018-20	22
IGNIC	0.0.		III OIV CO	crashes,	2010 20	the last

Population	Alcohol			DUI C	rashes		
(2020 Census)	Sales	2018	2019	2020	2021	2022	Total
166,722	Yes	13	11	9	20	20	73

Source: TITAN, 2023

### Pedestrian and Bicycle Crash Summary

Of the fatal and serious injury crashes from 2018 through 2022, there were 59 pedestrian crashes and 4 bicycle crashes in the City of Clarksville, shown in **Figure 3.5**. 19 of the pedestrian-involved crashes were fatal and 40 resulted in serious injuries. The bicycle-involved crashes resulted in a fatal crash and three (3) serious injury crashes.

#### Figure 3.5: Bicycle/Pedestrian Fatal and Serious Injury Crashes, 2018-2022



Source: TITAN, 2023

The greatest number of pedestrian-involved crashes resulting in fatalities or serious injuries occurred along US 41A (Fort Campbell Boulevard) which experienced three (3) fatalities and eleven (11) serious injuries.

It should be noted that more than a quarter (24 percent) of pedestrian crashes and nearly a fifth (19 percent) of bicycle crashes occurred during dark conditions which indicates a need for increased lighting along roadways with bicycle and pedestrian facilities. **Table 3.4** summarizes the lighting and surface conditions for fatal and serious injury pedestrian and bicycle crashes.



# Table 3.4: Pedestrian/Bicycle Fatal and Serious Injury Crash Conditions, 2018-2022

	Dry	Ice	Oil	Other	Sand, Mud, or Dirt	Snow or Slush	Wet	Water- Standing/Moving	Unknown	Total
					Pede	estrian				
Dark-Lighted	14	0	0	0	0	0	4	0	0	18
Dark-Not Lighted	17	0	0	0	0	0	5	0	1	23
Dark- Unknown Lighting	0	0	0	0	0	0	0	0	0	0
Dawn	1	0	0	0	0	0	0	0	0	1
Daylight	15	0	0	0	0	0	1	0	0	16
Dusk	0	0	0	0	0	0	0	0	0	0
Unknown	1	0	0	0	0	0	0	0	0	1
Total	48	0	0	0	0	0	10	0	1	59
					Bio	cycle				
Dark-Lighted	2	0	0	0	0	0	0	0	0	2
Dark-Not Lighted	0	0	0	0	0	0	0	0	0	0
Dark- Unknown Lighting	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0
Daylight	1	0	0	0	0	0	0	0	1	2
Dusk	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0
Total	3	0	0	0	0	0	0	0	1	4

Source: TITAN, 2023



### **Crash Summary**

Table 3.5 displays the crash data previously discussed. Key findings include:

- The most common crash type within the city was "no collision with vehicle" crashes which typically involves single vehicles running off the roadway.
- Nearly half (49 percent) of fatal and serious injury crashes occurred under dark conditions, indicating that roadway lighting may need to be improved.
- Fifteen percent of fatal and serious injury crashes involved DUIs.
- Most crashes occurred on dry pavement (85%).

Crash Type	2018	2019	2020	2021	2022	Total
Angle	34	34	32	26	36	162
Head-On	8	5	8	13	11	45
No Collision W/ Vehicle	37	33	42	43	46	201
Other	1	1	1	2	0	5
Rear To Rear	0	0	0	0	0	0
Rear To Side	0	0	0	0	0	0
Rear-End	20	13	5	10	7	55
Sideswipe, Opp Dir	0	1	0	0	0	1
Sideswipe, Same Dir	1	2	6	2	3	14
Unknown	0	2	1	0	0	3
Blank	0	0	0	0	0	0
Total	101	91	95	96	103	486

Year

Table 3.5: Clarksville	e Crash Su	mmary, 2018-2	022
------------------------	------------	---------------	-----

		Year						
Light Conditions	2018	2019	2020	2021	2022	Total		
Dark-Lighted	28	19	15	27	25	114		
Dark-Not Lighted	15	13	28	24	15	95		
Dark-Unknown Lighting	0	0	0	0	2	2		
Dawn	0	2	3	5	4	14		
Daylight	53	57	46	37	54	247		
Dusk	4	0	2	2	3	11		
Unknown	1	0	1	0	0	2		
Blank	0	0	0	1	0	1		
Total	101	91	95	96	103	486		

Surface Conditions	2018	2019	2020	2021	2022	Total
Dry	82	78	81	81	92	414
Ice	0	0	0	0	1	1
Oil	0	0	0	0	0	0
Other (Narrative)	0	0	0	0	0	0
Sand, Mud, or Dirt	0	0	0	0	0	0
Snow or Slush	0	0	1	0	2	3
Wet	19	13	12	12	7	63
Water- Standing/Moving	0	0	1	2	0	3
Unknown	0	0	0	1	1	2
Total	101	91	95	96	103	486

Source:	TITAN,	2023

DUI

Yes

No Total



Total

# 3.3 High-Injury Network

The High-Injury Network (HIN) analysis identifies locations with historical safety concerns to guide local investments in infrastructure and safety programming. Two separate HINs were developed: one focused on all roadway users and the other on vulnerable road users (bicyclists and pedestrians).

Each HIN consists of roadway segments and intersections that experience the crash frequency of fatal and serious injury crashes and are shown in **Figure 3.6** and **Figure 3.7**.

#### **Segment Analysis**

The segment analysis identified the top 25 segments in the City of Clarksville with the highest frequency of fatal and serious injury crashes. The following process was used to determine those segments:

- 1. Segments with at least one fatal and/or serious injury crash were sorted based on the number of fatal and/or serious injury crashes.
- 2. While maintaining the order of fatal and serious injury crash frequencies, segments were then sorted based on the number of total injury crashes (this included all injury classifications).
- 3. Segments were then sorted based on the total number of crashes, while maintaining the order established in the prior steps.

#### **Intersection Analysis**

The intersections analysis identified the top 25 intersections the City of Clarksville that has the highest frequency of fatal and serious injury crashes, using the same process discussed for segment crashes.

**Table 3.6** and **Table 3.7** display the top 25 focus areas for segments and intersections, respectively.

#### Vulnerable Road Users HIN

The vulnerable road users HIN consists of segments and intersections that experienced bicycle and pedestrian fatal and serious injury crashes within the City of Clarksville from 2018 through 2022. Only segments and intersections that experienced at least one (1) fatal or serious injury vulnerable road user crash were considered.

**Table 3.8** displays the top 10 segment focus areas for the vulnerable users HIN, while **Table 3.9** displays the top 10 intersection focus areas for the vulnerable users HIN.



Figure 3.6: High Injury Network – All Users



Figure 3.7: High Injury Network – Vulnerable Users





# Table 3.6: Top 25 Fatal and Serious Injury Crash Segments, 2018-2022

Roadway	From	То	Length (mi)	Fatal Crashes	Serious Injury Crashes
I-24 WB	I-24 WB On-Ramp at SR-76	I-24 WB Off-Ramp at SR-237 (Rossview Rd)	2.0	2	7
I-24 EB	US 79	I-24 EB Off-Ramp at SR-237 (Rossview Rd)	2.9	0	5
I-24 WB	US 79	I-24 WB On-Ramp at SR-237 (Rossview Rd)	2.8	0	5
I-24 EB	I-24 EB Off-Ramp at SR-76	I-24 EB On-Ramp at SR-237 (Rossview Rd)	2.0	2	2
SR-48 (Trenton Rd)	Branson Way	SR-236 (Tiny Town Rd)	0.1	0	4
US 41A (Fort Campbell Blvd)	Ashbury Rd	Quin Ln	0.2	1	2
I-24 EB	SR-48 (Trenton Rd)	US 79 (Wilma Rudolph Blvd)	2.2	0	3
US 79 (College Blvd)	US 79 (Kraft Blvd)	0.3 miles south of Old Trenton Rd	0.4	1	2
I-24 EB	I-24 EB Off-Ramp at SR-237 (Rossview Rd)	I-24 EB On-Ramp at SR-237 (Rossview Rd)	0.6	1	2
US 41A (Fort Campbell Blvd)	Leeland Dr	West Concord Dr	0.3	1	2
I-24 WB	I-24 WB Off-Ramp at Christian County Welcome Center	SR-104	1.7	3	0
Power Bl∨d	US 41A	E Blvd	0.0	1	2
Evans Rd	0.1 miles south of Lou Ann Ln	Timber Ridge Dr	0.2	0	3
US 79 (Providence Blvd)	Beech St	Locust St	0.1	0	2



From	То	Length (mi)	Fatal Crashes	Serious Injury Crashes
Victory Rd	Pkwy Pl	0.5	0	2
SR-48 (Trenton Rd)	US 79 (Wilma Rudolph Blvd)	2.2	0	2
Concord Dr	Taylor Rd	0.3	0	2
Old Trenton Rd	Wylma Van Allen Pl	0.4	1	1
0.2 miles south of Needmore Rd	Needmore Rd	0.2	1	1
I-24 EB On-Ramp at Tennessee Welcome Center	SR-48 (Trenton Rd)	0.5	0	2
I-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)	I-24 WB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)	0.7	0	2
I-24 WB On-Ramp at SR-237 (Rossview Rd)	I-24 WB Off-Ramp at SR-237 (Rossview Rd)	0.7	1	1
Tara Blvd	0.2 miles west of Tara Blvd	0.2	1	1
State Garage Ln	0.2 miles west of State Garage Ln	0.2	0	2
I-24 EB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)	I-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)	0.7	0	2
0.11 miles south of SR-374 (101st Airborne Division Pkwy)	SR-374 (101st Airborne Division Pkwy)	0.1	0	0
Dunbar Cave Rd	Powell Rd	0.4	0	0
SR-374 (Richview Rd)	US 41A (MLK Pkwy)	0.4	0	1
Channing Pl	Landrum Pl	0.3	0	0
	FromVictory RdSR-48 (Trenton Rd)Concord DrOld Trenton Rd0.2 miles south of Needmore RdI-24 EB On-Ramp at TennesseeWelcome CenterI-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)I-24 WB On-Ramp at SR-237 (Rossview Rd)Tara BlvdState Garage LnI-24 EB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)O.11 miles south of SR-374(101st Airborne Division Pkwy)Dunbar Cave RdSR-374 (Richview Rd)Channing Pl	FromToVictory RdPkwy PlSR-48 (Trenton Rd)US 79 (Wilma Rudolph Blvd)Concord DrTaylor RdOld Trenton RdWylma Van Allen Pl0.2 miles south of Needmore RdNeedmore Rd1-24 EB On-Ramp at Tennessee Welcome CenterSR-48 (Trenton Rd)1-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)1-24 WB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)1-24 WB On-Ramp at SR-237 (Rossview Rd)1-24 WB Off-Ramp at SR-237 (Rossview Rd)Tara Blvd0.2 miles west of State Garage Ln1-24 EB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)1-24 WB On-Ramp at SR-374 (NILK. Jr Pkwy)State Garage Ln1-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)Shate Garage LnSR-374 (NIL M DON-RAMP AT SR-76 (M.L.K. Jr Pkwy)Dunbar Cave RdPowell RdSR-374 (Richview Rd)US 41A (MLK Pkwy)SR-374 (Richview Rd)Landrum Pl	FromLengthVictory RdPkwy Pl0.5SR-48 (Trenton Rd)US 79 (Wilma Rudolph Blvd)2.2Concord DrTaylor Rd0.3Old Trenton RdWylma Van Allen Pl0.40.2 miles south of Needmore RdNeedmore Rd0.2I-24 EB On-Ramp at TennesseeSR-48 (Trenton Rd)0.5I-24 WB On-Ramp at TennesseeSR-48 (Trenton Rd)0.7I-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)1-24 WB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)0.7I-24 WB On-Ramp at SR-237 (Rossview Rd)0.20.2State Garage Ln0.2 miles west of Tara Blvd0.2Sk-76 (M.L.K. Jr Pkwy)SR-76 (M.L.K. Jr Pkwy)0.7State Garage Ln1-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)0.2I-24 EB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)0.20.2Skate Garage Ln0.2 miles west of State Garage Ln0.2I-24 EB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)0.70.1Inmiles south of SR-374 (101st Airborne Division Pkwy)0.10.1Dunbar Cave RdPowell Rd0.4SR-374 (Richview Rd)US 41A (MLK Pkwy)0.4Channing PlLandrum Pl0.3	FromToLength (mi)Fatale CrashesVictory RdPkwy Pl0.50.0SR-48 (Trenton Rd)US 79 (Wilma Rudolph Blvd)2.20Concord DrTaylor Rd0.30Old Trenton RdWylma Van Allen Pl0.410.2 miles south of Needmore RdNeedmore Rd0.211-24 EB On-Ramp at TennesseeSR-48 (Trenton Rd)0.501-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)0.7101-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)0.7111-24 WB On-Ramp at SR-237 (Rossview Rd)0.2111-24 WB On-Ramp at SR-26 (M.L.K. Jr Pkwy)0.7111-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)0.2011-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)0.2011-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)0.1001-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)0.1000



# Table 3.7: Top 25 Fatal and Serious Injury Crash Intersections, 2018-2022

Intersection	Fatal Crashes	Serious Injury Crashes
SR-12 (Fort Campbell Blvd) @ Concord Dr	1	7
US 41A (Providence Blvd) @ Peachers Mill Rd	0	6
SR-374 (101st Airborne Division Pkwy) @ SR-48 (Trenton Rd)	0	4
US 41A (Madison Blvd) @ Memorial Dr	0	4
SR-374 (Warfield Blvd) @ SR-237 (Rossview Rd)	0	4
US 41A (Fort Campbell Blvd) @ Britton Springs Rd	2	2
SR-236 (Tiny Town Rd) @ Peachers Mill Rd	1	3
SR-76 (M.L.K Jr Pkwy) @ Old Farmers Rd	1	3
SR-374 (101st Airborne Division Pkwy) @ Peachers Mill Rd	2	1
SR-374 (101st Airborne Division Pkwy) @ Whitefield Rd	0	3
US 79 (Wilma Rudolph Blvd) @ East Old Trenton Rd	0	3
US 79 (Wilma Rudolph Blvd) @ West Dunbar Cave Rd	1	2
I-24 EB @ SR-48 (Trenton Rd)	1	2
SR-13 (North Riverside Blvd) @ SR-48 (College Blvd)	3	0
US 79 (Wilma Rudolph Blvd) @ Fair Brook Pl	2	1
SR-13 (South Riverside Dr) @ West Washington Blvd	1	2
SR-12 (Fort Campbell Blvd) @ Charlemagne Blvd	0	3
SR-236 (Tiny Town Rd) @ Tara Blvd	0	3
US 41A (Madison Blvd) @ SR-76 (M.L.K Jr Pkwy)	1	1
US 41A (Fort Campbell Blvd) @ Jack Miller Blvd	0	2
SR-374 (101st Airborne Pkwy @ Pkwy Pl	0	2
US 79 (Wilma Rudolph Blvd) @ Needmore Rd	0	2
US 41A (Fort Campbell Blvd) @ Quin Ln	1	1
SR-13 (South Riverside Dr) @ Crossland Ave	0	2
US 41A (Fort Campbell Blvd) @ Dover Crossing Rd	0	2
Dunbar Cave Rd @ SR-374 (Warfield Blvd)	0	1
Source: TITAN, 2023		



# Table 3.8: Top 10 Fatal and Serious Injury Vulnerable User Crash Segments, 2018-2022

Roadway	From	То	Length (mi)	Fatal Crashes	Serious Injury Crashes
US 41A (Fort Campbell Blvd)	Leeland Dr	West Concord Dr	0.3	1	2
Fair Brook Pl	US 79 (Wilma Rudolph Blvd)	Westfield Court	0.3	0	2
US 79 (College Blvd)	US 79 (Kraft Blvd)	0.3 miles south of Old Trenton Rd	0.4	1	2
US 79 (Providence Blvd)	Oak Blvd	Plum Blvd	0.0	1	1
US 79 (Wilma Rudolph Blvd)	Old Trenton Rd	Wylma Van Allen Pl	0.4	1	1
US 41A (Fort Campbell Blvd)	Quin Ln	Old Hopkinsville Rd	0.2	0	1
US 41A (Fort Campbell Blvd)	Concord Dr	Taylor Rd	0.3	0	2
Terminal Rd	Cobalt Dr	US 79 (Wilma Rudolph Blvd)	0.5	1	0
SR-48 (Trenton Rd)	Branson Way	SR-236 (Tiny Town Rd)	0.1	0	4
US 41A	Ashbury Rd	Quin Ln	0.2	1	2



# Table 3.9: Top 10 Fatal and Serious Injury Vulnerable User Crash Intersections, 2018-2022

Intersection	Fatal Crashes	Serious Injury Crashes
US 79 (Wilma Rudolph Blvd) @ Fair Brook Pl	2	1
US 41A (Providence Boulvard) @ Peachers Mill Rd	0	6
SR-12 (Fort Campbell Blvd) @ Quin Ln	1	1
US 79 (Wilma Rudolph Blvd) @ West Dunbar Cave Rd	1	2
SR-236 (Tiny Town Rd) @ Tobacco Rd	1	1
SR-374 (101st Airborne Division Pkwy) @ Whitefield Rd	0	3
US 79 (Wilma Rudolph Blvd) @ East Old Trenton Rd	0	3
SR-13 (South Riverside Dr) @ SR-48 (College Blvd)	3	0
US 41A (Fort Campbell Blvd) @ Hermitage Rd	0	1
SR-374 (Warfield Blvd) @ Stokes Rd	0	1
Source: TITAN, 2023	·	•



# **4.0 Equity Considerations**

Equity is a central guiding principle in the process of identifying the HIN, engaging stakeholders, and determining project priorities within the SS4A program. The program strongly emphasizes inclusive public outreach and input gathering. Data sets provided by the FHWA and Census Bureau are used to identify and locate equity populations so that fairness and equity can be considered in safety solutions. The equity analysis employed in this effort incorporates the communities required by the FHWA through TDCs and APPs. Additionally, the plan incorporates an EJ element to identify areas which are a Community of Concern (CoC) and specific and equitable safety strategies tailored to their needs. This EJ analysis uses the same ACS year that was used to determine the TDCs.

This section displays the methodology used to identify the TDCs, APPs, and CoCs within the city with an emphasis on an inclusive and equitable process.

# 4.1 Transportation Disadvantaged Communities (TDC) Determining TDCs

Transportation is a vital aspect of society, enabling individuals to access essential services, education, employment, and social opportunities. Despite this need, some communities face significant challenges in accessing reliable and affordable transportation options, leading to isolation, limited economic opportunities, and decreased quality of life. These communities are known as Transportation Disadvantaged Communities and are defined by the FHWA<sup>2</sup> as:

"A **"Historically Disadvantaged Community"** is defined by the Justice40 Interim Guidance Addendum, issued by the White House Office of Management and Budget (OMB), White House Council on Environmental Quality (CEQ), and Climate Policy Office (CPO):

- any Census Tract identified as disadvantaged in the Climate & Economic Justice Screening Tool (geoplatform.gov) (CEJST), created by CEQ, which identifies such communities that have been marginalized by underinvestment and overburdened by pollution; or
- 2.) any **Federally Recognized Tribe or Tribal entity**, whether or not they have land."



<sup>2</sup> https://www.transportation.gov/grants/dot-navigator/equity-and-justice40-analysis-tools

The TDCs defined by FHWA are displayed in the Climate and Economic Justice Screening Tool (CEJST).

TDCs are typically characterized by limited access to affordable transportation options, including:

- public transit services,
- sidewalks,
- bike lanes, and
- safe pedestrian infrastructure.

These communities are often comprised of:

- low-income individuals
- older adults, aged 65+
- minority populations
- persons with disabilities
- persons living in geographically isolated or underserved areas

The lack of accessible transportation options in these communities adds to the existing social and economic disparities.

#### **Issues Faced by TDCs**

- Limited Access to Essential Services: Lack of transportation options hinders access to healthcare facilities, grocery stores, educational institutions, and employment opportunities, leading to reduced quality of life and potential economic hardships.
- **Social Isolation:** Inadequate transportation prevents community members from participating in social and recreational activities, leading to feelings of isolation and exclusion.
- **Health Disparities:** Limited transportation options contribute to poor health outcomes as individuals struggle to reach medical appointments, engage in physical activities, or access healthy food options.
- **Environmental Impact:** Inadequate public transportation infrastructure may lead to increased reliance on private vehicles, resulting in traffic congestion, air pollution, and negative environmental consequences.



# Location of TDCs

Within the City of Clarksville, there are two (2) areas that comprise the majority of its TDCs:

- The area north of the Cumberland River and east of US 41A consists of several lowincome and minority clusters where residents may have limited transportation resources.
- The area encompassing Downtown Clarksville and Crossland Ave is a historically lowincome neighborhood. A high number of minority populations also reside in this area. Access to employment opportunities, educational institutions, and healthcare facilities can be challenging, particularly for residents without personal vehicles. These transportation barriers can exacerbate existing social and economic disparities within the community.

Figure 4.1 displays the TDCs in the study area.



Figure 4.1: Transportation Disadvantaged Communities







# Addressing Challenges for TDCs

To address the challenges faced by TDCs, a comprehensive and multi-faceted approach is necessary. Potential strategies include:

- **Enhancing Public Transportation:** Expanding and improving public transit services, including increased frequency, extended operating hours, and improved accessibility for individuals with disabilities.
- **Rideshare Programs:** Developing subsidized or on-demand transportation services tailored to the specific needs of transportation disadvantaged communities.
- **Infrastructure Improvements:** Investing in safe and accessible sidewalks, bike lanes, and pedestrian-friendly infrastructure to promote active transportation options.
- **Community Partnerships:** Collaborating with community organizations, social service agencies, and educational institutions to identify transportation needs and develop solutions.

# 4.2 Areas of Persistent Poverty (APP)

# **Determining APPs**

APPs within the study area were defined and identified by the FHWA through the Bipartisan Infrastructure Law (BIL). These communities also need targeted strategies to foster equitable and sustainable development while providing access to jobs and social opportunities.

According to the U.S. Department of Transportation<sup>3</sup>, a project falls within an APP if it meets one (1) of the following criteria:

- The county in which the project is situated has consistently had a poverty rate of 20 percent or higher in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the most recent Small Area Income Poverty Estimates available as of 2021.
- The project is located in a Census Tract where the poverty rate is at least 20 percent, as determined by the 2014-2018 5-year data series from the American Community Survey conducted by the Bureau of the Census.
- The project is situated in any territory or possession of the United States.

The identification process for APPs involves a comprehensive analysis of various socioeconomic indicators, including income levels, educational attainment, employment rates, and access to essential services. Valuable insights are gathered from data sources such as



<sup>&</sup>lt;sup>3</sup> <u>Areas of Persistent Poverty & Historically Disadvantaged Communities | US Department of Transportation</u>

the U.S. Census Bureau, the American Community Survey, and local government reports, offering a clear understanding of the spatial distribution of poverty and its persistence over time. FHWA displays APPs in the RAISE Grant Project Location Verification Tool.

#### **Issues Faced by APPs**

The enduring poverty within APPs can be attributed to a combination of factors, including:

- Limited Economic Opportunities: A shortage of diverse industries, initiatives for job creation, and access to quality employment opportunities hampers economic mobility and the residents' capacity to enhance their socio-economic conditions.
- **Education Disparities:** Inequalities in accessing quality education, spanning from early childhood to vocational training, can limit residents' acquisition of skills and qualifications necessary for improved employment prospects.
- **Inadequate Infrastructure:** Insufficient infrastructure, including transportation networks and community facilities, can impede economic growth and limit access to essential services, contributing to the perpetuation of poverty.
- **Social and Racial Inequities:** Persistent poverty often intersects with social and racial inequities, with marginalized communities facing discrimination, limited social capital, and reduced access to resources and opportunities.

## Location of APPs

APPs within the City of Clarksville were identified in the following areas:

- New Providence is a neighborhood northwest of Downtown Clarksville that has faced ongoing economic challenges. It is characterized by a high concentration of low-income households, a diverse population, and limited economic opportunities. Residents may encounter difficulties in accessing quality education, healthcare services, and employment opportunities. The lack of economic mobility and resources often contributes to the cycle of poverty in this area.
- Located near the Fort Campbell military base and Oak Grove, the northwestern area of the city has pockets of persistent poverty. Many of the residents are low-income, and a significant portion of the population is comprised of older adults. Factors such as limited job opportunities, inadequate transportation infrastructure, and a shortage of affordable housing options contribute to the economic challenges faced by residents in this area.
- Downtown Clarksville and the adjacent areas struggle with persistent poverty. Despite being located near employment opportunities, educational institutions, and healthcare facilities, residents in these areas continue to experience poverty which is often a result of socioeconomic status and background, in addition to inadequate infrastructure and transportation.

Figure 4.2 displays the APPs in the city.



Figure 4.2: Areas of Persistent Poverty



Source: RAISE Grant Project Location Verification Tool



# Addressing Challenges for APPs

Strategies that can address the needs of TDCs will often be able to address the needs of APPs as well.

- Enhancing Public Transportation: Expanding and improving public transit services, including increased frequency, extended operating hours, and improved accessibility for individuals with disabilities. This strategy offers a lower cost transportation method that persons in poverty can use to commute.
- **Rideshare Programs:** Developing subsidized or on-demand transportation services tailored to the specific needs of those in poverty.
- **Infrastructure Improvements:** Investing in safe and accessible sidewalks, bike lanes, and pedestrian-friendly infrastructure to promote active transportation options and connectivity that allows persons in poverty to reach employment.
- **Community Partnerships:** Collaborating with community organizations, social service agencies, and educational institutions to identify transportation needs and develop solutions.

# 4.3 Environmental Justice (EJ) and Communities of Concern (CoC)

While not required by the FHWA as part of the SS4A process, EJ is a critical aspect of any safety planning process. It focuses on providing equitable outcomes for all communities, particularly those that have historically faced disparities in environmental decision-making. These disparities have led to disproportionate environmental impacts on disadvantaged communities from transportation and infrastructure projects. The inclusion of the EJ analysis aligns with the broader goals of the SS4A plan and the Justice40 Initiative which emphasizes inclusivity and equitable solutions.

### Determining EJ Areas and Communities of Concern

To obtain data for this analysis that is consistent with the FHWA's APP data, the American Community Survey (ACS) 2021 5-Year Estimates were used. The EJ analysis considered six (6) populations to create a CoC indicator.

The populations analyzed during the EJ analysis included:

- Minority Population: Persons who are part of one or more racial or ethnic minorities.
- **Households Without a Vehicle:** Households that are heavily reliant on public transportation.
- **Poverty or Low-Income:** Persons facing persistent or increasing poverty rates.



- Older Adults: Persons aged 65 and older.
- Limited English Proficiency (LEP): Persons who face language barriers and do not speak English well or at all.
- Persons with Disabilities: Persons diagnosed as having a disability.
- **Persons with Disabilities:** Populations who identify with having a disability.

Potential EJ Census Tracts are identified where the percentage of the analyzed population that reside in the tract is higher than the county average. Tracts that contain three (3) or more populations that qualify as potential EJ locations are considered CoCs. Clarksville's CoCs, as displayed in **Figure 4.3**, are specific neighborhoods or populations that would be disproportionately impacted by environmental hazards or lack access to environmental benefits. These communities are often characterized by a high concentration of minority and low-income residents who experience increased exposure to pollution, compromised health outcomes, and limited access to green spaces and other environmental resources.

#### Location of Communities of Concern

Within the City of Clarksville, there are several areas that comprise the Communities of Concern:

- New Providence, located northwest of Downtown Clarksville, has ongoing economic challenges. It has many low-income households. Residents might find it challengint to obtain quality education, healthcare, and jobs.
- A significant African American population resides northeast of downtown Clarksville. These communities may experience environmental justice concerns related to industrial pollution, lack of green spaces, and infrastructure disparities.
- The southern neighborhoods of Clarksville have a relatively high proportion of Hispanic residents. These communities may face similar issues such as pollution exposure, inadequate access to green spaces, and transportation challenges. This area also has a large number of LEP and low income populations.
- The northwest neighborhoods of Clarksville near Fort Campbell have a higher concentration of low-income households, zero vehicle households, and LEP populations. These communities may experience pollution exposure, inadequate housing conditions, limited access to green spaces, and other environmental justice challenges.
- The southern portion of the city, the Greenland and Ashland Hills areas, contains a higher concentration of older persons, people with disabilities, and households without access to a vehicle. These communities struggle with access to the transportation system and are typically more dependent upon safe and efficient transit systems.



#### Figure 4.3: Communities of Concern



# Addressing Challenges for Communities of Concern

To address the challenges faced by CoCs, a comprehensive and multi-faceted approach is necessary. Some potential strategies include:

- **Community Engagement and Empowerment**: Foster partnerships between community organizations, advocacy groups, and government agencies to actively involve residents in decision-making processes, provide platforms for community input, and amplify the voices of marginalized communities. This strategy also includes outreach to faith-based organizations and places where these communities gather or access services.
- **Equitable Policy Development**: Implement policies and regulations that prioritize environmental justice and promote fair treatment for all communities. Policies may include stricter pollution control measures, equitable distribution of green spaces, and targeted infrastructure investments in underserved areas.
- Accessible Transportation: Improve public transportation infrastructure and services in underserved communities provide affordable, reliable, and accessible transportation options that connect residents to essential services, employment opportunities, and recreational areas.
- Education and Awareness: Develop educational programs and initiatives focused on environmental justice andawareness of environmental issues, health impacts, and sustainable practices. These programs can empower communities to advocate for their rights and actively participate in the improvement process.

### **Equity Focus Groups**

While Communities of Concern indicate which areas within the city need the greatest focus, the needs of these communities will vary depending upon their unique challenges. **Figure 4.4** through **Figure 4.9** display the locations of the various EJ communities used to determine the CoCs.

**Figure 4.4** shows households without vehicles. This population group faces challenges related to transportation and mobility. Lack of personal vehicles restricts their ability to access essential services, such as healthcare, education, employment, and grocery stores. These households often rely on public transportation, shared mobility services, or walking and cycling.

The older adult population, shown in **Figure 4.5**, often faces challenges related to accessing essential services, such as healthcare, social support, and transportation. Providing equitable access to these services is crucial for their quality of life. Many of the older population coexist with households without a vehicle.



Clarksville's LEP population, shown in **Figure 4.6**, should have equal opportunities to enjoy and benefit from the city's offerings. Many of the LEP populations overlap with the minority and low-income groups.

Minority populations in Clarksville, displayed in **Figure 4.7**, face a disproportionate burden of environmental hazards in addition to racial discrimination. They may reside in areas with higher pollution levels, proximity to industrial sites, or inadequate access to clean air, water, and green spaces.

Transportation costs can be a significant burden for low-income households, particularly if they rely on private vehicles. Most employees within the city commute alone in a vehicle, while transit and non-motorized transportation use are limited. This trend affects the development of the transportation system and how low-income persons, shown in **Figure 4.8**, can access it.

Accessible transportation options are vital for persons with disabilities, shown in **Figure 4.9**. The ability to use the transportation system provides access to education, employment, healthcare, and essential services.



Figure 4.4: Households Without a Vehicle



Source: Neel-Schaffer; ACS 2021 5-year Estimates

Figure 4.5: Population of 65 Years and Older



Figure 4.6: Limited English Proficiency Population



Figure 4.7: Minority Population Areas



Figure 4.8: Low-Income Populations



Source: Neel-Schaffer; ACS 2021 5-year Estimates

#### Figure 4.9: Persons with Disabilities





# 4.4 Equity Analysis

As discussed in the previous sections, Equity Areas for the plan included TDCs, APPs, and CoCs. This data was used to develop an assessment of equity concerns in the study area. These Equity Areas were also used during the project prioritization process which is discussed later in this report. An analysis was conducted for each Equity Area in the study area to determine which areas experience a disproportionate number of specific crash types and/or severities when compared to the overall network. The results of the Equity Area analysis are displayed in **Figure 4.10**.

	Total Crashes	Percent of Crashes	Centerline Miles	Percent of Miles	Are Crashes Disproportionate?
Study Area	26,875	100.00%	1,435	100.00%	
TDC Areas	5,716	21.27%	230	16.01%	Yes
APP Areas	6,925	25.77%	418	29.09%	No
CoC Areas	22,805	84.86%	1,133	78.95%	Yes

#### Figure 4.10: Clarksville Equity Area Analysis

	Fatal Crashes	Percent of Crashes	Centerline Miles	Percent of Miles	Are Crashes Disproportionate?
Study Area	92	100.00%	1,435	100.00%	
TDC Areas	21	22.83%	230	16.01%	Yes
APP Areas	23	25.00%	418	29.09%	No
CoC Areas	79	85.87%	1,133	78.95%	Yes

	Serious Injury Crashes	Percent of Crashes	Centerline Miles	Percent of Miles	Are Crashes Disproportionate?
Study Area	394	100.00%	1,435	100.00%	
TDC Areas	90	22.84%	230	16.01%	Yes
APP Areas	111	28.17%	418	29.09%	No
CoC Areas	346	87.82%	1,133	78.95%	Yes

	Motorized Crashes	Percent of Crashes	Centerline Miles	Percent of Miles	Are Crashes Disproportionate?
Study Area	26,703	100.00%	1,435	100.00%	
TDC Areas	5,651	21.16%	230	16.01%	Yes
APP Areas	6,866	25.71%	418	29.09%	No
CoC Areas	22,645	84.80%	1,133	78.95%	Yes

	Non-Motorized Crashes	Percent of Crashes	Centerline Miles	Percent of Miles	Are Crashes Disproportionate?
Study Area	172	100.00%	1,435	100.00%	
TDC Areas	65	37.79%	230	16.01%	Yes
APP Areas	59	34.30%	418	29.09%	Yes
CoC Areas	160	93.02%	1,133	78.95%	Yes

Note: Crashes are disproportionate if the percentage of total crashes that occur in an Equity Area exceeds the percent of roadway miles within the Equity Area compared to the total roadway network.

Source: TITAN, 2023; Replica, 2023



### **Total Crashes**

**Figure 4.10** illustrates that the TDCs and CoCs within the City of Clarksville experience a disproportionate number of crashes when compared to the overall roadway network. The disproportionate number of total crashes in TDCs and CoCs can be attributed to a variety of factors, such as:

- Inadequate infrastructure, such as poorly maintained roads or insufficient traffic signage.
- Higher concentrations of vulnerable road users, such as pedestrians and cyclists, who are more susceptible to crashes due to limited access to safe transportation options.
- Socioeconomic factors, including limited access to quality transportation and higher levels of traffic congestion, which can contribute to higher incidents of crashes in these communities.

Addressing these disparities requires a comprehensive approach that considers infrastructure improvements, access to safe transportation options, and community-specific safety initiatives.

#### **Fatal Crashes**

As shown in **Figure 4.10**, the TDCs and CoCs experienced a disproportionate number of fatal crashes within the City of Clarksville. The disproportionate number of fatal crashes in TDCs and CoCs can be attributed to the same factors that are shown in *Total Crashes* above. Additional factors include:

- Lack of safety features, such as clear signage or pedestrian crosswalks, which could contribute to a higher risk of crashes with serious injuries.
- A higher presence of pedestrians and cyclists who may experience increased risk of serious injury in a crash since they lack the protection provided by a vehicle.
- Economic factors that may limit residents' access to newer vehicles with updated safety technology that could decrease the risk of more serious outcomes in the event of a crash.

### **Serious Injury Crashes**

As shown in **Figure 4.10**, the TDCs and CoCs experience a disproportionate number of serious injury crashes which can be attributed to the same factors that are shown in *Fatal Crashes* above.

To reduce serious injury crashes in TDCs and CoCs, a focused strategy that includes infrastructure upgrades, increased road maintenance, and safety measures tailored to the needs of these communities would be beneficial. Educating residents on road safety and





promoting the use of safety features in vehicles could further help in reducing the rate of serious injury crashes.

#### **Motorized Crashes**

**Figure 4.10** presents an overview of motorized crashes within the City of Clarksville that involve automobiles, buses, and trucks (heavy vehicles). The data reveals a disproportionate concentration of motorized crashes within TDC and CoC areas. Factors that may contribute to motorized crashes in these areas include:

- Inadequate road infrastructure, including poorly maintained roads and insufficient traffic control measures.
- Socioeconomic factors, including limited access to quality transportation and higher levels of traffic congestion.
- Lack of safety features, such as clear signage.

Reducing crashes requires a multifaceted approach that encompasses infrastructure enhancements, improved access to safe transportation options, and the implementation of community-specific safety initiatives.

#### **Non-Motorized Crashes**

**Figure 4.10** shows that all of the Equity Areas experienced a disproportionate number of non-motorized (bicycle and pedestrian) crashes within the city.

Bicyclists and pedestrians are vulnerable users, and many residents within the equity areas use biking and walking as their primary modes of transportation. Factors that may contribute to non-motorized crashes include:

- Higher concentrations of vulnerable road users, such as pedestrians and cyclists, who are more susceptible to crashes due to limited access to safe transportation options.
- Inadequate or poorly maintained pedestrian and bicycle infrastructure, such as sidewalks, crosswalks, bicycle lanes, or trails.
- Socioeconomic factors that restrict access to quality transportation, and heightened levels of non-motorized traffic that increase the likelihood of non-motorized crashes occurring.

Reducing non-motorized crashes requires a comprehensive approach that encompasses infrastructure enhancements, improved access to safe transportation options for nonmotorized roadway users, and the implementation of community-specific safety initiatives tailored to the needs of pedestrians and cyclists.



#### **Strategies and Needs**

#### **Strategies**

- **Targeted Infrastructure Enhancements:** Identify and prioritize projects that improve transportation safety conditions in disproportionately affected Equity Areas. Additional emphasis should be placed on roadways that experience higher crash rates. Example improvements include the addition of safe bicycle and pedestrian infrastructure, wider roadway lanes, improved signage, and traffic calming measures.
- **Community Engagement and Education:** Implement community outreach programs to educate residents about safe driving practices and raise awareness about the risks associated with high crash rates. Engaging the community in the improvement process fosters a sense of ownership and responsibility.
- **Collaboration with Local Authorities:** Collaborate with local law enforcement agencies to enhance traffic enforcement and implement measures to deter reckless driving behaviors. Increased presence and enforcement can contribute to a safer driving environment.
- Environmental Justice Impact Assessment: Conduct in-depth environmental justice impact assessments in Communities of Concern to identify specific environmental vulnerabilities and integrate the findings into safety improvement strategies or prioritization during transportation planning efforts.

#### Needs for Improvement

- **Data Collection and Monitoring:** Establish a comprehensive data collection and monitoring system to continually assess crash rates, identify emerging patterns, and adapt improvement strategies.
- **Multi-Agency Collaboration:** Facilitate collaboration between transportation authorities, environmental agencies, and social services to address the multifaceted challenges posed by the elevated crash rates.
- **Public Transportation Options:** Invest in and promote public transportation options as an alternative to personal vehicle usage, reducing overall traffic volumes and crash risks.
- **Equitable Resource Allocation:** Allocate funding and resources for safety improvements in an equitable manner and prioritize areas with the highest needs, particularly areas characterized by environmental justice concerns, persistent poverty, and transportation disadvantaged communities.



# 5.0 Public Engagement

Public outreach and stakeholder input provided increased understanding of safety conditions and concerns within the City of Clarksville. This input was used along with the technical analysis discussed in Chapter 3 to develop potential safety projects and strategies for the Safety Action Plan.

# 5.1 Steering Committee

To guide development of the Safety Action Plan, a Steering Committee was formed of representatives from the City of Clarksville staff. This committee represented the following departments:

- Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO)
- Communications
- Grants
- Street Department
- Clarksville Police Department
- Clarksville Transit System

The Steering Committee met monthly to discuss plan development, approve outreach materials, review plan findings, and provide input on local priorities and project selection. The Steering Committee is also responsible for plan implementation and monitoring.

# 5.2 Public and Stakeholder Involvement Phase 1

Phase 1 of community engagement focused on introducing the Safety Action Plan and listening and learning to seek input on the community's goals, needs, concerns, and priorities for safety improvements.

Input collected during this phase was also used to develop the Vision, Goals, and Objectives discussed in Chapter 2.

During Phase 1, input was requested from the following:

- local officials,
- planners, engineers, and other professionals,
- transportation service providers,
- community leaders.
- nonprofit advocacy organizations,
- the business community, and
- the general public.

During this phase, the project team engaged with 1,062 people



The primary goals for this phase of engagement were to:

- Inform everyone in the City of Clarksville about the development of Safety Action Plan.
- Educate the general public about the plan and how it will affect the community and roadway safety.
- Notify and provide opportunities for the public to actively engage in the development process.
- Encourage and collect meaningful feedback from stakeholders and the general public to help identify safety needs and prioritize improvement projects and strategies.

A public input survey was launched to gather input from residents and employees on safety priorities and concerns within the city, ideas for improving safety on the city's transportation system, and specific areas where improvements are needed. The survey was promoted using business cards with a QR code; the city's project web page<sup>4</sup>; social media; and emails to the stakeholder database, local community groups, and Austin Peay State University faculty and students. The survey was open for input from October 26, 2023, through December 16, 2023.

Additionally, the study team attended the Christmas at the Cumberland event on November 18, 2023, from 11:00 AM to 2:00 PM. During this event, attendees were asked to participate in an interactive exercise to provide the same input as the online survey's middle three slides.

The survey, display boards, and outreach materials are displayed in Appendix B.



<sup>&</sup>lt;sup>4</sup> <u>SS4A Grant | Clarksville, TN (clarksvilletn.gov)</u>

The outreach asked respondents to provide their input on behavioral risk factors, infrastructure risk factors, and the identification of transportation challenges. Each are discussed below.

# Behavioral Risk Factor Ranking

Participants were asked to identify their top three (3) roadway user behavior concerns from among:

- speeding,
- distracted driving
- walking/biking on the wrong side of the roadway
- improper roadway crossings
- red light running, and
- impaired driving.

**Figure 5.1 through Figure 5.3** display the ranking results of the exercise based on age group, minority status, and poverty status.

### Infrastructure Risk Factor Ranking

Participants were asked to identify their top five (5) roadway user behavior concerns from among:

- emergency response time,
- system connectivity,
- insufficient law enforcement presence,
- poor roadway design,
- lack of roadway lighting,
- lack of public transportation,
- lack of bicycle infrastructure,
- lack of pedestrian infrastructure, and
- unsafe intersections.

**Figure 5.4 through Figure 5.6** displays the ranking results of the exercise based on age group, minority status, and poverty status.

# Identifying Transportation Challenges

Respondents were asked to identify locations where and what type of transportation safety challenges they experience during their daily commute or activities and what improvements they suggest for areas of concern. **Figure 5.7** through **Figure 5.12** display respondents' current concerns, proposed solutions, and locations of their concerns. In Figure 5.7, The larger the text, the more times it was mentioned.






#### Figure 5.2: Behavior Risk Factor Rankings by Minority Status







#### Figure 5.3: Behavior Risk Factor Rankings by Poverty Status







65

#### Figure 5.5: Infrastructure Risk Factor Rankings by Minority Status







#### Figure 5.6: Infrastructure Risk Factor Rankings by Poverty Status



#### Figure 5.7: Identified Transportation Safety Challenges

#### **Current Concerns**

Respondents identified their biggest safety concerns with the existing transportation system, and how they describe it.

bottlenecks, **congestion**, construction, **crashes**, debris, **distracted driving**, drainage, **general safety**, growth outpacing infrastructure, insufficient sidewalks, lack of bicycle reflectors, narrow lanes, noise, poor roadway signage, potholes, **speed limit concerns**, **speeding**, **tractor trailers**, **traffic**, **unsafe bike conditions**, unsafe crossings, **unsafe driver behavior**, unsafe driver conditions, **unsafe intersection geometry**, unsafe left turns, **unsafe merge**, unsafe parking conditions, **unsafe pedestrian behavior**, **Unsafe pedestrian conditions**, unsafe right turns, unsafe roadway access, unsafe roadway design, **unsafe turns** 

#### Needs & Potential Solutions

Respondents identified their biggest needs or potential solutions.

add bike lanes, add blockades, add bus lanes, add bus stop/shelter, add cameras, **add capacity**, add crosswalks, add light rail, add medians, add overpasses, add ramps, **add roadway signage**, add roundabouts, add shoulders, **add sidewalks**, add signage, add speed bumps, **add traffic signals**, add turn arrows, **improve connectivity**, **improve infrastructure**, improve intersection, improve landscaping, improve pedestrian infrastructure, **improve public transportation**, **improve roadway design**, **improve visibility**, **increase maintenance**, **increase police presence**, lengthen turn lanes, new I-24 exit, new intersections, reduce congestion, reduce lanes, reduce speed limits, remove left turns, remove traffic signals, replace roadway signage, **restripe roadways**, **synchronize traffic signals**, widen bridges, widen intersections, **wider lanes** 

#### **Roadways & Intersections**

Respondents identified roadways and intersections most in need of safety improvements.

101st Airborne Pkwy, 4th St, Ashland City Rd, Barkers Mill Rd, Clearview, College Dr, Cumberland Dr, Dover Rd, Dunbar Cave Rd, Dunlop Blvd, E Old Ashland Rd, Excell Rd, Fort Campbell Blvd, Franklin St, "Gary the Guardrail", Greenwood Dr, Hazelwood Rd, Hickory Point Rd, Hillcrest Dr, Holiday Dr, Home Ave, I-24, I-24 Exit 1, I-24 Exit 11, I-24 Exit 8, Kennedy Ln, Lowes DR, Madison St, Memorial Dr, Meriwether Rd, MLK Blvd, Needmore Rd, New Providence Blvd, Oakland Rd, Old Ashland City Rd, Old Russellville Pike, Peacher's Mill Rd, Providence Blvd, Richview Rd, Ringgold Rd, Riverside Rd, Rollow Rd, ROSSview Rd, Rossview Rd @ Rollow Rd, Sango Rd, SR-12, SR-374, Stateline Rd, Tiny Town Rd, Tiny Town Rd @ Allen Rd, Tiny Town Rd @ Peacher's Mill Rd, Tiny Town Rd @ Trenton Rd, Trenton Rd, Trenton Rd @ Meriwether Rd, Twelve Oaks Rd, Tylertown Rd, US 41-A, Warfield Blvd, whitfield Rd, Whitfield Rd @ Peacher's Mill Rd, Wilma Rudolph Blvd



#### Figure 5.8: Roadway Safety Concerns





Figure 5.9: Public Transit Safety Concerns





Figure 5.10: Walking Safety Concerns



Figure 5.11: Bicycling Safety Concerns





Figure 5.12: General Safety Concerns



# 5.3 Public and Stakeholder Involvement Phase 2

Phase 2 of community engagement focused on presenting systemwide strategies and establishing the public and stakeholder priorities for roadway segments and intersection improvements.

Input was requested from the same groups as Phase 1. Efforts for this phase included a survey and two in-person events held at Manna Café in Clarksville, TN on March 14<sup>th</sup> and 15<sup>th</sup> from 10:00 AM to 12:00 PM.



The primary goals for this phase of engagement were to:

- Identify which safety strategies have public and stakeholder support.
- Identify roadways and intersections that the public and stakeholders determine to be high safety priorities improvements.

The public survey launched on March 4<sup>th</sup> and closed on March 18<sup>th</sup>. It was promoted through the city's project web page; social media; and emails to the stakeholder database, local community groups, and Austin Peay State University faculty and students.

The survey and outreach materials are displayed in Appendix C.

Respondents were asked to provide input on systemwide safety strategies, prioritize safety focus areas, and provide input on bicycle, pedestrian, and transit safety strategies. Each strategy is discussed below.

### Systemwide Safety Strategies

Participants were asked to identify their preference, from low (1 star) to high (5 stars), for strategies that address:

• distracted driving,

• unsafe intersections,

• speeding, and

• poor roadway design.

**Table 5.1** through **Table 5.4** display the ranking results of the exercise based on age group,minority status, and poverty status. Higher values reflect higher rankings.



### Table 5.1: Ranking of Strategies to Reduce Distracted Driving

		Continue and Strengthen Graduated Driver Licensing (GDL) Program	High Visibility Cell Phone Enforcement	Communications and Outreach on Distracted Driving	Employer Programs
	16-24	3.20	2.60	3.60	4.00
A.c.o.	25-40	4.23	4.12	2.94	3.22
Age	41-64	4.20	4.16	3.45	3.52
	65+	4.59	4.90	3.90	3.76
	- -				
Minority	No	4.21	4.26	3.32	3.48
Minority	Yes	4.29	3.87	3.14	3.48
Dovortv	No	4.24	4.22	3.33	3.48
Poverty	Yes	4.14	4.00	4.00	4.00
Average Ranking (All Respondents)		4.20	4.20	3.33	3.48



### Table 5.2: Ranking of Strategies to Reduce Speeding

		Modify Speed Limits	Traffic Law Enforcement	Automated (Camera) Enforcement	Higher Penalties
	16-24	3.00	3.00	2.20	3.40
Age	25-40	3.20	4.20	2.52	3.67
	41-64	3.09	4.24	3.07	3.84
	65+	4.43	4.88	3.69	4.52
Minority	No	3.20	4.38	3.01	3.98
MINORICY	Yes	3.35	3.77	2.90	3.47
Doverty (	No	3.26	4.29	3.04	3.86
POVELLY	Yes	3.14	3.33	2.57	3.57
Average Ranking (All Respondents)		3.31	4.28	2.99	3.87



### Table 5.3: Ranking of Strategies to Improve Safety at Intersections

		Corridor Access Management	Dedicated Left and Right Turn Lanes at Intersections	Roundabouts	Low-cost Countermeasures at Stop- Controlled Intersections	Lighting
	16-24	3.80	4.00	3.60	4.00	3.60
100	25-40	4.58	4.61	3.24	3.77	4.44
Age	41-64	4.68	4.64	2.97	3.97	4.29
	65+	4.42	4.76	3.03	3.76	4.32
Minority	No	4.58	4.64	3.03	3.81	4.25
MINORICY	Yes	4.60	4.77	3.24	3.93	4.52
Dovortv	No	4.58	4.65	3.08	3.91	4.30
Poverty	Yes	4.00	4.14	4.14	4.00	4.14
Average Ranking (All Respondents)		4.56	4.61	3.01	3.83	4.30



### Table 5.4: Ranking of Strategies to Improve Safety of Roadways

		Add Lighting	Roadway Striping and Signage	Roadway Maintenance	Road Diet	Add Multimodal Accommodations
	16-24	4.20	4.60	5.00	3.60	5.00
Age	25-40	4.39	4.38	4.71	3.26	3.99
	41-64	4.36	4.55	4.73	3.59	3.91
	65+	4.26	4.39	4.52	3.67	4.00
Minority	No	4.25	4.48	4.68	3.43	3.95
MINORICY	Yes	4.66	4.52	4.90	3.97	3.90
Dovortv	No	4.36	4.50	4.71	3.48	3.95
Poverty	Yes	3.86	4.00	4.43	3.14	3.57
Average Ranking (All Respondents)		4.31	4.44	4.70	3.50	3.92



### **Prioritizing Areas with Safety Concern**

Respondents were presented roadway segments and intersections that were identified through a technical analysis and public input from Phase 1. They were asked to provide their input on the priority level (low, medium, or high) that the location should receive for safety improvements. These results were used to determine local priority during Project Prioritization which is discussed in Section 6.3.

### **Multimodal Safety Strategies**

Participants were asked to identify their preferences regarding the following bicycle, pedestrian, and transit safety strategies:

- add bicycle lanes
- crosswalk visibility enhancements
- add more walkways
- road diets (reducing lanes but adding medians, bike lanes, etc.)
- medians and pedestrian refuge islands
- pedestrian hybrid and rectangular rapid flashing beacons
- public transportation improvements

**Table 5.5** displays the ranking results of the exercise based on age group, minority status, and poverty status.

# 5.4 Public and Stakeholder Involvement Phase 3

Phase 3 of the public and stakeholder involvement included posting of the draft SAP on the City of Clarksville's website from April 4th through April 19th. Comments submitted to the CUAMPO and the City of Clarksville during this time are displayed in **Appendix D**.



### Table 5.5: Ranking of Strategies to Improve Bicycle, Pedestrian, and Transit Safety

		Add Bicycle Lanes	Crosswalk Visibility Enhancements	Add More Walkways (Shared Use Path, Sidewalk, Shoulder)	Road Diets (Reduce Lanes)	Medians and Pedestrian Refuge Islands	Pedestrian Hybrid and Rectangular Rapid Flashing Beacons	Public Transportation Improvements
	16-24	4.20	4.80	5.00	3.40	5.00	4.80	4.20
Age	25-40	3.30	4.32	4.51	3.20	3.96	4.28	4.18
	41-64	3.19	4.33	4.41	3.38	4.09	4.22	3.88
	65+	3.55	4.43	4.34	3.27	3.86	4.10	4.16
			·	·			·	·
Minority	No	3.27	4.23	4.40	3.20	4.04	4.22	3.94
MINORILY	Yes	3.00	4.59	4.61	3.77	3.93	4.22	4.16
Dovortv	No	3.29	4.34	4.47	3.30	4.08	4.25	4.02
Poverty	Yes	3.63	5.00	4.29	3.50	4.38	4.88	4.13
Average Ranking (All Respondents)		3.31	4.35	4.45	3.31	4.05	4.23	4.04



# 6.0 Project Prioritization and Recommendations

# 6.1 Safe System Approach

#### The FHWA<sup>5</sup> states that:

"Reaching zero deaths requires the implementation of a Safe System approach, which was founded on the principles that humans make mistakes and that human bodies have limited ability to tolerate crash impacts. In a Safe System, those mistakes should never lead to death. Applying the Safe System approach involves anticipating human mistakes by designing and managing road infrastructure to keep the risk of a mistake low; and when a mistake leads to a crash, the impact on the human body doesn't result in a fatality or serious injury. Road design and management should encourage safe speeds and manipulate appropriate crash angles to reduce injury severity.

There are six principles that form the basis of the Safe System approach:

- deaths and serious injuries are unacceptable,
- humans make mistakes,
- humans are vulnerable,
- responsibility is shared,
- safety is proactive, and
- redundancy is crucial."



Source: FHWA



<sup>&</sup>lt;sup>5</sup> Zero Deaths and Safe System | FHWA (dot.gov)

### Safe System Elements

The FHWA defines five (5) elements that comprise a Safe System Approach. These are:

• Safe Roads

• Safe Speeds

• Post-Crash Care

-

• Safe People

Safe Vehicles

**Figure 6.1** displays the FHWA definition<sup>6</sup> of each element and how the Safe System approach differs from traditional roadway safety practices.

#### Figure 6.1: Safe System Approach Elements



#### Safe Road Users

The Safe System approach addresses the safety of all road users, including those who walk, bike, drive, ride transit, and travel by other modes.



Vehicles are designed and regulated to minimize the occurrence and severity of collisions using safety measures that incorporate the latest technology.



Humans are unlikely to survive high-speed crashes. Reducing speeds can accommodate human injury tolerances in three ways: reducing impact forces, providing additional time for drivers to stop, and improving visibility.



Roads

Designing to accommodate human mistakes and injury tolerances can greatly reduce the severity of crashes that do occur. Examples include physically separating people traveling at different speeds, providing dedicated times for different users to move through a space, and alerting users to hazards and other road users.

#### Post-Crash Care

When a person is injured in a collision, they rely on emergency first responders to quickly locate them, stabilize their injury, and transport them to medical facilities. Post-crash care also includes forensic analysis at the crash site, traffic incident management, and other activities.

#### THE SAFE SYSTEM APPROACH VS. TRADITIONAL ROAD SAFETY PRACTICES

### **Traditional**

#### Safe System

Prevent crashes	Prevent deaths and serious injuries	strive
Improve human behavior	Design for human mistakes/limitations	and p Syste
Control speeding	Reduce system kinetic energy	transp opera
Individuals are responsible	Share responsibility	mistal
React based on crash history	Proactively identify and address risks	and s

Whereas traditional road safety strives to modify human behavior and prevent all crashes, the Safe System approach also refocuses transportation system design and operation on anticipating human mistakes and lessening impact forces to reduce crash severity and save lives.

Source: FHWA

<sup>6</sup> <u>THE SAFE SYSTEM (dot.gov)</u>



# 6.2 Proposed Local Infrastructure Projects

### **Project Location Development**

A preliminary list of safety project locations was developed for several modes of transportation. The list included:

- Projects requested through public oureach comments.
- Projects requested by the City of Clarksville.
- Projects identified based on the results of the technical crash analysis.
- Projects identified in existing plans.

The proposed project locations are displayed with the results of the project prioritization process (Section 6.3) in **Table 6.3**.

### **Estimating Project Costs**

Order of magnitude cost estimates for potential safety projects, in 2023 dollars, were estimated using average unit cost from various projects bid from 2022-2023. It should be noted that:

- Quantities are based on typical conditions for each improvement type.
- Costs associated with the purchasing of right-of-way, utility relocations, and engineering fees were estimated based on a percentage of the total construction cost.
- An additional contingency amount, 20 percent, was added to the overall improvement cost to account for unexpected costs that arise with projects.

The typical cost estimates for various types of improvements are shown in Table 6.1.

# 6.3 Project Prioritization

Safety projects were prioritized by a variety of factors. **Table 6.2** shows the criteria and weights that were utilized to prioritize the identified projects. This methodology is intended to support the previously stated goals and objectives and was developed using input received during Phase 1 of the public outreach. The full scores of the project prioritization process are displayed in **Appendix E.** 



### Table 6.1: Typical Project Costs

Improvement Type	Unit	Unit Cost
Single Lane Roundabout*	Each	\$2,900,000
Left Turn Lane*	Each	\$665,000
Right Turn Lane*	Each	\$225,000
Rumble Strip (Centerline)	Mile	\$2,100
Rumble Strip (Shoulder)	Mile	\$1,125
Cable Barrier	Ln-Ft	\$450
Cable Barrier	Mile	\$2,376,000
Advance Warning Signs	Sq. Ft	\$40
Advance Warning Signs	Each	\$350
5' Sidewalk (Concrete)	Mile	\$450,000
5' Sidewalk (Asphalt)	Mile	\$250,000
10' Multiuse Path (Concrete)	Mile	\$900,000
10' Multiuse Path (Asphalt)	Mile	\$500,000
Bike Lane (Striping Only)	Mile	\$80,000
Bike Lane (New Pavement, Concrete)*	Mile	\$1,000,000
Bike Lane (New Pavement, Asphalt)*	Mile	\$950,000
12' Lane (Concrete)*	Mile	\$4,600,000
12' Lane (Asphalt)*	Mile	\$3,100,000
Pavement Patching	Sq. Yd	\$185
Pavement Markings	Ln-Ft	\$8
8' Shoulder (Asphalt)*	Mile	\$2,100,000
8' Shoulder (Concrete)*	Mile	\$3,100,000
Crosswalk (Striping)	Each	\$1,500
Raised Median	Sq. Yd	\$215
Traffic Signal (Re-Timing)	Intersection	\$5,000
Traffic Signal Installation	Intersection	\$200,000
Intersection Lighting	Each	\$25,000
ADA Curb Ramp	Each	\$5,000
2" Asphalt Milling/Overlay - 2 Lane Road	Mile	\$590,000
* includes engineering, ROW, and Utility Relocation		



### Table 6.2: Project Prioritization Criteria

Critorian	Dationalo	Magaura		Scoring Scale (	Points Possible)		
Criterion	Kationale	Measure	0	5	10	15	20
Crash Severity	Prioritize projects that will address fatalities and serious injuries.	Total number of fatal and serious injuries over a 5-year period.	No fatal or serious injury crashes	1 or 2 serious injury crashes	1 fatal crash OR 3 fatal and serious injury crashes	2 fatal crashes OR 4 fatal and serious injury crashes	3 or more fatal crashes OR 5 or more fatal and serious injury crashes
Multimodal	Prioritize projects that address safety concerns involving more than one mode of travel.	Total number of non-motorized fatal and serious injuries over a 5-year period.	No fatal or serious injury non-motorized crashes	N/A	1 serious injury non- motorized crash	2 or more serious injury non-motorized crashes	1 or more fatal non- motorized crashes
Focus Areas	reas Prioritize projects that will address high crash Annual crash frequency locations.		Fewer than 5 annual crashes	5>= annual crashes <20	20>= annual crashes <30	30 or more annual crashes	
E suite :	Prioritize projects that	ize projects that Project is located in an Equity		Project is in a single Equity Area type	Project is in two Equity Area types	Project is in all three Equity Area types	
Equity	communities.	or CoC*	*An additional 5 points, n type that experie				
Infrastructure	Prioritize projects that affect concerns regarding infrastructure.	Project has potential to address the ranked infrastructure concerns expressed during public outreach.	Project does not address higher tier infrastructure concerns.	Project improves roadway lighting OR increases law enforcement presence OR adds system connectivity	Project redesigns roadways OR improves intersections OR adds pedestrian infrastructure		
Existing Plans	Prioritize projects that support existing plans or policies.	itize projects that port existing plans or ies. Project is in an existing plan or policy document.		Project is in an existing plan or policy document	Project is in two or more existing plans or policy documents		
Public Concerns	Prioritize projects that the general public has proposed.	Project was derived from, or seconded by, public input.	Project not derived from public input.	Project derived from public input.	Project came from general public AND is on a Top 10 Focus Area.		



Table 6.3: Project Locations and Prioritization Results

ID	Туре	Source	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Local Priority	Total Prioritization Score
I-O-14	Intersection - Overall	Technical Analysis	SR-13 (North Riverside Dr)	@ SR-48 (College St)		Safety Study			High	85
I-BP-08	Intersection - Bike/Ped	Technical Analysis	SR-13 (South Riverside Dr)	@ SR-48 (College St)		Restripe crosswalks; signal retiming		\$11,000	High	85
I-BP-01	Intersection - Bike/Ped	Technical and Public	US 79 (Wilma Rudolph Blvd)	@ Fair Brook Pl		Add intersection lighting		\$25,000	High	85
I-O-15	Intersection - Overall	Technical and Public	US 79 (Wilma Rudolph Blvd)	@ Fair Brook Pl		Safety Study			High	80
S-O-06	Segment - Overall	Technical and Public	US 41A (Fort Campbell Blvd)	Ashbury Rd	Quin Ln	NB sidewalks; increased enforcement	0.25	\$112,500	High	80
I-O-02	Intersection - Overall	Technical Analysis	US 41A (Providence Blvd)	@ Peachers Mill Rd		Signal retiming; replace intersection lighting; reduce line of sight restriction in SE corner; continuous sidewalks along corridor; protected pedestrian crossings		\$30,000	High	75
I-BP-02	Intersection - Bike/Ped	Technical Analysis	US 41A (Providence Blvd)	@ Peachers Mill Rd		Restripe crosswalks; signal retiming; replace intersection lighting; continuous sidewalks along corridor; protected pedestrian crossings		\$36,000	High	75
S-O-03	Segment - Overall	Technical and Public	I-24 WB	US 79	I-24 WB On-Ramp at SR-237 (Rossview Rd)	Repave from SR-237 to railroad tracks, with new rumble strips	2.84	\$1,600,000	High	70
S-BP-09	Segment- Bike/Ped	Technical and Public	SR-48 (Trenton Rd)	Branson Way	SR-236 (Tiny Town Rd)	Add sidewalks to both sides; add bike lane striping	0.08	\$84,800	High	70
S-BP-10	Segment- Bike/Ped	Technical and Public	US 41A (Fort Campbell Blvd)	Ashbury Rd	Quin Ln	NB sidewalks; increased enforcement	0.25	\$112,500	High	70
S-0-12	Segment - Overall	Technical Analysis	Power St	US 41A (Providence Blvd)	E. St	Safety Study; protected pedestrian crossings	0.04	\$30,000	High	70
S-O-05	Segment - Overall	Technical and Public	SR-48 (Trenton Rd)	Branson Way	SR-236 (Tiny Town Rd)	Resurface NB lanes; replace CTL with median	0.08	\$138,200	High	65
S-0-11	Segment - Overall	Technical and Public	I-24 WB	I-24 WB Off-Ramp at Christian County Welcome Center	SR-104	Safety Study	1.71		High	60
S-O-01	Segment - Overall	Technical and Public	I-24 WB	I-24 WB On-Ramp at SR-76	I-24 WB Off-Ramp at SR-237 (Rossview Rd)	Repave with new rumble strips	2.02	\$1,200,000	High	60
S-O-09	Segment - Overall	Technical and Public	I-24 EB	I-24 EB Off-Ramp at SR-237 (Rossview Rd)	I-24 EB On-Ramp at SR-237 (Rossview Rd)	Repave and add lighting at ramps	0.60	\$404,000	High	60
S-O-04	Segment - Overall	Technical and Public	I-24 EB	I-24 EB Off-Ramp at SR-76	I-24 EB On-Ramp at SR-237 (Rossview Rd)	Repave with new rumble strips; increase enforcement	2.00	\$1,185,000	High	55
S-O-07	Segment - Overall	Technical and Public	I-24 EB	SR-48 (Trenton Rd)	US 79 (Wilma Rudolph Blvd)	Increase enforcement	2.18	TBD	High	55
I-O-13	Intersection - Overall	Technical and Public	I-24 EB	@ SR-48 (Trenton Rd)		Safety Study			High	55
I-O-19	Intersection - Overall	Technical and Public	US 41A (Madison St)	@ SR-76 (M.L.K Jr Pkwy)		Safety Study			High	55
I-O-18	Intersection - Overall	Technical and Public	SR-236 (Tiny Town Rd)	@ Tara Blvd		Safety Study			High	50
S-0-23	Segment - Overall	Technical and Public	SR-236 (Tiny Town Rd)	Tara Blvd	0.2 miles west of Tara Blvd	Safety Study	0.24		High	45
S-0-14	Segment - Overall	Technical Analysis	US 79 (Providence Blvd)	Beech Blvd	Locust Blvd	Safety Study; continuous sidewalks along corridor; protected pedestrian crossings	0.13	\$700,000	High	45



ID	Туре	Source	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Local Priority	Total Prioritization Score
I-O-24	Intersection - Overall	Technical Analysis	SR-13 (South Riverside Dr)	@ Crossland Ave		Safety Study			High	45
I-O-22	Intersection - Overall	Technical and Public	US 79 (Wilma Rudolph Blvd)	@ Needmore Rd		Safety Study			High	45
S-BP-01	Segment- Bike/Ped	Technical and Public	US 41A (Fort Campbell Blvd)	Leeland Dr	West Concord Dr	NB sidewalks; replace CTL with median	0.29	\$460,500	Medium	85
I-BP-05	Intersection - Bike/Ped	Technical and Public	SR-236 (Tiny Town Rd)	@ Tobacco Rd		Add crosswalks; add intersection lighting; retime with pedestrian signal		\$41,000	Medium	85
S-O-10	Segment - Overall	Technical and Public	US 41A (Fort Campbell Blvd)	Leeland Dr	West Concord Dr	NB sidewalks; replace CTL with median	0.29	\$460,500	Medium	80
S-BP-05	Segment- Bike/Ped	Technical and Public	US 79 (Wilma Rudolph Blvd)	Old Trenton Rd	Wylma Van Allen Pl	Replace CTL with median; increase enforcement	0.36	\$409,000	Medium	80
I-O-01	Intersection - Overall	Technical and Public	SR-12 (Fort Campbell Blvd)	@ Concord Dr		Add intersection lighting; add sidewalks; retiming signal		\$210,000	Medium	70
S-O-02	Segment - Overall	Technical and Public	I-24 EB	US 79	I-24 EB Off-Ramp at SR-237 (Rossview Rd)	Repave from SR-237 to railroad tracks, with new rumble strips	2.89	\$1,600,000	Medium	70
I-BP-03	Intersection - Bike/Ped	Technical and Public	US 41A (Fort Campbell Blvd)	@ Quin Ln		Add intersection lighting; retime signal		\$30,000	Medium	70
S-O-18	Segment - Overall	Technical and Public	US 79 (Wilma Rudolph Blvd)	Old Trenton Rd	Wylma Van Allen Pl	Safety Study	0.36		Medium	70
S-O-19	Segment - Overall	Technical and Public	SR-48 (Trenton Rd)	0.2 miles south of Needmore Rd	Needmore Rd	Safety Study	0.21		Medium	70
S-O-08	Segment - Overall	Technical and Public	US 79 (College Blvd)	US 79 (Kraft Blvd)	0.3 miles south of Old Trenton Rd	Increase enforcement	0.41	TBD	Medium	65
I-O-23	Intersection - Overall	Technical and Public	US 41A (Fort Campbell Blvd)	@ Quin Ln		Safety Study			Medium	65
S-BP-07	Segment- Bike/Ped	Technical and Public	US 41A (Fort Campbell Blvd)	Concord Dr	Taylor Rd	NB sidewalks; increased enforcement	0.32	\$144,000	Medium	65
I-O-04	Intersection - Overall	Technical and Public	US 41A (Madison Blvd)	@ Memorial Dr		Retime signal; add intersection lighting; conduct redesign study		\$30,000	Medium	60
I-O-06	Intersection - Overall	Technical and Public	US 41A (Fort Campbell Blvd)	@ Britton Springs Rd		Retime signal; conduct redesign study		\$5,000	Medium	60
I-O-07	Intersection - Overall	Technical and Public	SR-236 (Tiny Town Rd)	@ Peachers Mill Rd		Improve intersection lighting; retime signal		\$30,000	Medium	60
S-BP-03	Segment- Bike/Ped	Technical Analysis	US 79 (College Blvd)	US 79 (Kraft Blvd)	0.3 miles south of Old Trenton Rd	Add bike lanes	0.41	\$65,600	Medium	60
S-O-22	Segment - Overall	Technical and Public	I-24 WB	I-24 WB On-Ramp at SR-237 (Rossview Rd)	I-24 WB Off-Ramp at SR-237 (Rossview Rd)	Safety Study	0.67		Medium	55
I-O-10	Intersection - Overall	Technical Analysis	SR-374 (101st Airborne Division Pkwy)	@ Whitfield Rd		Add crosswalks; increase intersection lighting; retime with pedestrian signal		\$41,000	Medium	55
I-BP-06	Intersection - Bike/Ped	Technical Analysis	SR-374 (101st Airborne Division Pkwy)	@ Whitfield Rd		Add crosswalks; increase intersection lighting; retime with pedestrian signal		\$41,000	Medium	55
S-0-17	Segment - Overall	Technical and Public	US 41A (Fort Campbell Blvd)	Concord Dr	Taylor Rd	Safety Study	0.32		Medium	55
I-O-09	Intersection - Overall	Technical Analysis	SR-374 (101st Airborne Division Pkwy)	@ Peachers Mill Rd		Add crosswalks; increase intersection lighting; retime with pedestrian signal		\$41,000	Medium	50
S-BP-02	Segment- Bike/Ped	Technical Analysis	Fair Brook Pl	US 79 (Wilma Rudolph Blvd)	Westfield Court	Add sidewalks to both sides	0.27	\$243,000	Medium	50



ID	Туре	Source	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Local Priority	Total Prioritization Score
I-BP-10	Intersection - Bike/Ped	Technical Analysis	SR-374 (Warfield Blvd)	@ Stokes Rd		Traffic signal study; add intersection lighting		\$225,000	Medium	50
I-O-21	Intersection - Overall	Technical Analysis	SR-374 (101st Airborne Pkwy)	@ Parkway Pl		Safety Study			Medium	40
S-0-25	Segment - Overall	Technical and Public	I-24 EB	I-24 EB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)	I-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)	Safety Study	0.70		Medium	40
S-BP-08	Segment- Bike/Ped	Technical Analysis	Terminal Rd	Cobalt Dr	US 79 (Wilma Rudolph Blvd)	Widen roadway shoulder; add roadway lighting	0.46	\$966,000	Low	70
S-BP-04	Segment- Bike/Ped	Technical Analysis	US 79 (Providence Blvd)	Oak St	Plum St	Add/Reconstruct sidewalks; continuous sidewalks along corridor; protected pedestrian crossings	0.04	\$492,700	Low	65
I-BP-04	Intersection - Bike/Ped	Technical and Public	US 79 (Wilma Rudolph Blvd)	@ West Dunbar Cave Rd		Add crosswalks; signal retiming		\$11,000	Low	65
I-BP-07	Intersection - Bike/Ped	Technical and Public	US 79 (Wilma Rudolph Blvd)	@ East Old Trenton Rd		Add crosswalks; add intersection lighting; retime with pedestrian signal		\$41,000	Low	65
S-BP-06	Segment- Bike/Ped	Technical and Public	US 41A (Fort Campbell Blvd)	Quin Ln	Old Hopkinsville Rd	NB sidewalks; increased enforcement	0.18	\$81,000	Low	65
I-O-03	Intersection - Overall	Technical and Public	SR-374 (101st Airborne Division Pkwy)	@ SR-48 (Trenton Rd)		Restripe intersection; add/improve lighting; retime signal		\$31,500	Low	60
I-O-11	Intersection - Overall	Technical and Public	US 79 (Wilma Rudolph Blvd)	@ East Old Trenton Rd		Safety Study			Low	60
I-O-12	Intersection - Overall	Technical and Public	US 79 (Wilma Rudolph Blvd)	@ West Dunbar Cave Rd		Safety Study			Low	60
I-BP-09	Intersection - Bike/Ped	Technical and Public	US 41A (Fort Campbell Blvd)	@ Hermitage Rd		Add/improve intersection lighting; increase enforcement		\$25,000	Low	60
I-O-05	Intersection - Overall	Technical Analysis	SR-374 (Warfield Blvd)	@ SR-237 (Rossview Rd)		Add intersection lighting; retime signal		\$30,000	Low	50
I-O-16	Intersection - Overall	Technical Analysis	SR-13 (South Riverside Dr)	@ West Washington Blvd		Safety Study			Low	50
I-O-17	Intersection - Overall	Technical Analysis	US 41A (Fort Campell Blvd)	@ Charlemagne Blvd		Intersection geometry improvements; signal modifications; protected pedestrian crossings; add access management		\$1,879,900	Low	50
I-O-20	Intersection - Overall	Technical and Public	US 41A (Fort Campbell Blvd)	@ Jack Miller Blvd		Safety Study			Low	50
I-O-25	Intersection - Overall	Technical and Public	US 41A (Fort Campbell Blvd)	@ Dover Crossing Rd		Safety Study			Low	50
I-O-08	Intersection - Overall	Technical Analysis	SR-76 (M.L.K Jr Pkwy)	@ Old Farmers Rd		Advance warning signs; pavement markings; add intersection lighting		\$51,700	Low	45
S-O-16	Segment - Overall	Technical and Public	I-24 WB	SR-48 (Trenton Rd)	US 79 (Wilma Rudolph Blvd)	Safety Study	2.24		Low	45
S-O-20	Segment - Overall	Technical and Public	I-24 EB	I-24 EB On-Ramp at Tennessee Welcome Center	SR-48 (Trenton Rd)	Safety Study	0.47		Low	45
I-O-26	Intersection - Overall	Public Outreach	Dunbar Cave Rd	@ SR-374 (Warfield Blvd)		Safety Study			Low	45
S-0-13	Segment - Overall	Technical Analysis	Evans Rd	0.1 miles south of Lou Ann Ln	Timber Ridge Dr	Safety Study	0.16		Low	40
S-0-24	Segment - Overall	Technical and Public	US 79 (Wilma Rudolph Blvd)	State Garage Ln	0.2 miles west of State Garage Ln	Safety Study	0.19		Low	40
S-O-28	Segment - Overall	Public Outreach	Madison St	SR-374 (Richview Rd)	US 41A (MLK Pkwy)	Safety Study	0.40		Low	40



ID	Туре	Source	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Local Priority	Total Prioritization Score	
S-O-15	Segment - Overall	Technical Analysis	SR-374 (101st Airborne Division Pkwy)	Victory Rd	Pkwy Pl	Safety Study	0.51		Low	35	
S-O-21	Segment - Overall	Technical and Public	I-24 WB	I-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)	I-24 WB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)	Safety Study	0.72		Low	35	
S-O-26	Segment - Overall	Public Outreach	Peachers Mill Rd	0.11 miles south of SR-374 (101st Airborne Division Pkwy)	SR-374 (101st Airborne Division Pkwy)	Safety Study	0.10		Low	35	
S-0-27	Segment - Overall	Public Outreach	SR-237 (Rossview Rd)	Dunbar Cave Rd	Powell Rd	Safety Study	0.42		Low	35	
S-O-29	Segment - Overall	Public Outreach	Memorial Dr	Channing Pl	Landrum Pl	Safety Study	0.30		Low	35	
	*Improvements shown in this table are recommended countermeasures based on planning level technical analysis. This plan recommends final selection of countermeasures and reasonable limits during implementation phase.										



# 6.4 Countermeasure Toolbox

**Table 6.4** displays a toolbox of countermeasures that can be used to improve safety within the City of Clarksville. A safety study should be conducted at a location to determine which countermeasures are appropriate for the type and severity of crashes experienced at that location. Some countermeasures may be inappropriate at one site yet be the best choice for another site. At times, multiple countermeasures may be necessary. Countermeasures displayed in **bold, italicized text** in **Table 6.4** benefit vulnerable users and equity populations.



#### Table 6.4: Crash Countermeasure Toolbox

Safety Concern	Countermeasure	Pros	Cons
Speeding	Select appropriate speed limits	<ul> <li>Low cost</li> <li>Crash severity reduction</li> <li>Safer for all roadway users</li> <li>Traffic calming</li> </ul>	<ul> <li>Opposition from regular roadway users</li> <li>Excess violations issued if not implemented properly</li> </ul>
	Install speed cameras	<ul> <li>Significant reduction in crashes and severities</li> <li>Increased driver attentiveness</li> </ul>	<ul> <li>Opposition from regular roadway users</li> <li>Additional monitoring and enforcement required</li> <li>Improved behavior only where enforcement exists</li> </ul>
	Implement variable speed limits	<ul> <li>Significant reduction in all crashes and severities</li> <li>Allows drivers to react to ongoing situations</li> <li>Assists in maintaining speed and flow during congestion periods, incidents, work zones, and inclement weather</li> </ul>	<ul> <li>Driver confusion caused by inconsistent speeds</li> <li>Additional monitoring, equipment, and maintenance required</li> </ul>
	Add bicycle lanes	Reduced bicycle related crashes	• Additional right-of-way required



Safety Concern	Countermeasure	Pros	Cons
Improve vulnerable roadway user (bicyclist and pedestrian) safety	Implement crosswalk visibility enhancements	<ul> <li>Increased pedestrian safety</li> <li>Pedestrians cross at designated locations</li> </ul>	<ul> <li>Not ideal on high-speed roadways (greater than 45 MPH)</li> <li>Costly lighting options</li> </ul>
	Retime signals to provide a leading pedestrian interval	<ul> <li>Low cost</li> <li>Increased likelihood of motorists yielding to pedestrians</li> <li>Enhanced safety for pedestrians with disabilities</li> </ul>	• Additional delays for vehicles
	Add medians and pedestrian refuge islands	• Safer pedestrian crossings	<ul> <li>Increased median width (must be at least four feet wide)</li> <li>Hard to implement at intersections</li> </ul>
	Install pedestrian hybrid beacons	• Safer pedestrian crossing option on high-volume, high-speed roadways	<ul> <li>Costly</li> <li>Additional delays/stops for vehicles</li> </ul>
	Install Rectangular Rapid Flashing Beacons (RRFB)	<ul> <li>Safer pedestrian crossing</li> <li>Motorists yield to pedestrians</li> <li>Cheaper than traffic signals</li> </ul>	• Not recommended for higher speed roadways (>45 MPH)



Safety Concern	Countermeasure	Pros	Cons
	Road Diets	<ul> <li>Low cost</li> <li>Reduction in lanes allows for additional bicycle and pedestrian features through Complete Streets</li> <li>Traffic calming</li> </ul>	<ul> <li>Not effective on high volume roadways (ADT &lt;20,000)</li> <li>Roadway capacity reduction</li> <li>Additional right-of-way required</li> </ul>
	Add walkways	• Pedestrians separated from the roadway	• Comparatively high cost
	Enhanced delineation for horizontal curves	<ul> <li>Low cost</li> <li>Reduction of night-time crashes</li> <li>Reduction of head-on, runoff-road, and sideswipe crashes</li> <li>Reduction of fatal and injury crashes</li> </ul>	• None
Roadway departure	Longitudinal rumble strips or stripes	<ul> <li>Centerline rumble strips reduce head-on crashes</li> <li>Shoulder rumble strips reduce run-off-road crashes</li> <li>Relatively low cost</li> </ul>	• Noise concerns
	Median barriers	Reduction of head-on and cross-median crashes	<ul> <li>Cost-effectiveness analysis required</li> </ul>



Safety Concern	Countermeasure	Pros	Cons
	Roadside design improvements at curves	<ul> <li>Adequate clear zone reduces fixed object crashes</li> <li>Flattened side slopes reduce single-vehicle crashes</li> </ul>	<ul> <li>Not all options are cost effective</li> </ul>
	Safety edge	<ul> <li>Low Cost</li> <li>Reduction in run-off-road and head-on crashes</li> <li>Reduction in crash severity</li> </ul>	<ul> <li>Typically constructed only during overlay projects</li> </ul>
	Wider edge lines	<ul> <li>Increased visibility of curves</li> <li>Low Cost</li> <li>Reduction in roadway departure crashes</li> </ul>	• None
	Signal backplates with retroreflective borders	<ul><li>Increased visibility of traffic signals</li><li>Low cost</li></ul>	<ul> <li>Structural limitations due to wind loads</li> <li>Additional cost to retrofit existing signals without the backplates</li> </ul>
Intersections	<i>Corridor Access Management</i>	<ul> <li>Enhanced safety for all modes of transportation</li> <li>Reduced congestion along the corridor</li> <li>Reduction in overall crashes for all users due to fewer access points</li> </ul>	• Opposition from businesses (driveway consolidation)



Safety Concern	Countermeasure	Pros	Cons
	Dedicated turn lanes at intersections	<ul> <li>Reduced left turn and rear end crashes</li> <li>Deceleration lane provided</li> <li>Increased visibility for opposing left turns with positive offset</li> </ul>	<ul> <li>Additional ROW required</li> <li>Left turns with zero or negative offset result in turning vehicles blocking line of sight</li> </ul>
	Reduced left-turn conflict intersections	<ul><li>Reduced conflict points</li><li>Increased traffic flow on the mainline</li></ul>	Longer travel distances for minor movements
	Install roundabout	<ul> <li>Reduction of total conflict points</li> <li>Lowered vehicle speeds resulting in a high reduction in injury/fatal crashes</li> </ul>	• High cost
	Low-Cost countermeasures - signing, pavement markings, remove sight obstructions	<ul> <li>Low cost</li> <li>Reduction in injury/fatal crashes</li> </ul>	• None



Safety Concern	Countermeasure	Pros	Cons
	Yellow change intervals	<ul> <li>Improved intersection safety</li> <li>Reduced red light running violations</li> <li>Reduced fatal crashes</li> <li>Additional time for pedestrians to cross intersections</li> </ul>	• None
Crosscutting (other safety focus areas)	Add/Improve lighting	<ul> <li>Reduced night-time crashes</li> <li>Reduced pedestrian crashes</li> </ul>	• Installation and increased maintenance costs
	Local Road Safety Plans	<ul> <li>Increased safety for all users</li> <li>Collaboration with local stakeholders</li> </ul>	• None
	Pavement friction management	<ul> <li>Reduced roadway departure crashes at horizontal curves</li> <li>Reduced crashes at intersection approaches and interchange ramps</li> </ul>	• None
	Road Safety Audit	• Early identification and mitigation of safety issues	• None



Safety Concern	Countermeasure	Pros	Cons
Distracted driving	Graduated Driver Licensing	<ul><li>Reduced teenage driver crashes and injuries</li><li>Low cost</li></ul>	<ul> <li>Implementation time (requires several months)</li> <li>After implementation, 1-2 years before all provisionally licensed drivers are subject to new restrictions</li> </ul>
	High visibility cell phone enforcement (HVE)	<ul> <li>Reduction in cell phone usage while driving</li> </ul>	<ul> <li>Effect of HVE campaigns on crashes is not certain</li> <li>HVE campaigns are expensive</li> <li>Enforcement of cell phone use is challenging</li> </ul>
Impaired driving	License revocation and suspension	<ul> <li>Recent study suggests that policy reduces fatal crash involvement by 5 percent or 800 lives</li> <li>Drivers are less likely to repeat offense</li> </ul>	<ul> <li>Required funds to design, implement, and operate</li> </ul>
	Publicized sobriety checkpoints	<ul> <li>Analysis shows that checkpoints reduce alcohol related crashes by 17 percent and all crashes by 10-15 percent</li> <li>Public support</li> </ul>	<ul> <li>Can be costly if paid media is used</li> </ul>
	High visibility saturation patrols	<ul> <li>More research is needed, but saturation patrols can be effective in reducing alcohol related fatal crashes</li> </ul>	• Can be costly if paid media is used
# 7.0 Progress and Transparency

The Safety Action Plan serves as a living document that provides a variety of crash countermeasure projects and system strategies that can be implemented to reduce fatal and serious injury crashes within the City of Clarksville. The plan can be used in coordination with partner agencies and long-range planning efforts, such as those conducted by Montgomery County, the Clarksville Urbanized Area MPO, and TDOT. This chapter describes the future actions needed to keep this living document current and relevant to the City's needs.

## 7.1 Advocacy

The Steering Committee should continue to meet on an as-needed, semi-regular basis to discuss SAP recommendations, projects, and strategies. These meetings should incorporate:

- public concerns and comments,
- additional safety projects that have recently been identified,
- grant application opportunities, and
- ongoing strategy implementation.

## 7.2 Data Maintenance

The City of Clarksville should work with TDOT to update the crash and equity data associated with the Safety Action Plan on an annual basis. This task should include the development of a dashboard placed on the City's website that should display:

- progress towards the performance measures discussed in Section 2.2,
- the number of fatal and serious injury crash data over the last five years, and
- plan progress and information about upcoming meetings.

# 7.3 Plan Implementation

Activities that the city can take to implement the plan include:

- Coordination with partner agencies for data collection, public outreach, and analysis.
- Discuss funding opportunities with partner agencies and pursue grant funds when available.
- Use a data-driven process to select projects and strategies in coordination with public outreach.



# 7.4 Transparency & Reporting

Regular documentation and reporting on the plan's implementation progress is necessary for its success. Documentation should be prepared and reported for funding opportunities, Steering Committee meetings, public outreach, and other appropriate activities.

The Safety Action Plan should be posted on the City of Clarksville's website, along with the dashboard displaying progress towards the plan's goals.



# 8.0 Appendices

# Appendix A: All-Crash Safety Statistics

#### Table A.1: All Crashes by Crash Type and Year

Crash Type				Total (%)		
Crash Type	2018	2019	2020	2021	2022	10tal (90)
Angle	1,671	1,832	1,665	1,939	1,898	9,005 (34%)
Head-On	91	102	100	110	103	506 (2%)
No Collision W/ Vehicle	896	882	864	826	828	4,296 (16%)
Other	101	74	60	51	60	346 (1%)
Rear To Rear	9	11	7	11	4	42 (0.2%)
Rear To Side	71	63	46	55	47	282 (1.0%)
Rear-End	2,189	2,067	1,661	1,869	1,943	9,729 (36.2%)
Sideswipe, Opp Dir	60	69	51	68	65	313 (1.2%)
Sideswipe, Same Dir	375	414	385	441	445	2,060 (7.7%)
Unknown	46	45	45	52	48	236 (0.9%)
Blank	5	6	8	13	28	60 (0.2%)
Total	5,514	5,565	4,892	5,435	5,469	26,875



Lighting Conditions		Year						
	2018	2019	2020	2021	2022	TOLAI (%)		
Dark-Lighted	28	19	15	27	25	114 (24.0%)		
Dark-Not Lighted	15	13	28	24	15	95 (20.0%)		
Dark-Unknown Lighting	0	0	0	0	2	2 (0.4%)		
Dawn	0	2	3	5	4	14 (2.9%)		
Daylight	53	57	46	37	54	247 (51.0%)		
Dusk	4	0	2	2	3	11 (2.3%)		
Unknown	1	0	1	0	0	2 (0.4%)		
Blank	0	0	0	1	0	1 (0.2%)		
Total	101	91	95	96	103	486		
Surface Conditions		Total (%)						
Surface conditions	2018	2019	2020	2021	2022	10tal (%)		
Dry	4,336	4,540	3,962	4,605	4,573	22,016 (82%)		
Ice	35	21	2	5	62	125 (0.5%)		
Oil	0	0	0	0	0	0 (0.0%)		
Other (Narrative)	1	2	1	2	2	8 (0.0%)		
Sand, Mud, or Dirt	0	2	2	0	0	4 (0.0%)		
Snow or Slush	77	31	6	42	139	295 (1.1%)		
Wet	1,015	918	876	729	635	4,173 (16%)		
Water-Standing/Moving	17	14	17	19	6	73 (0.3%)		
Unknown	33	37	26	33	52	181 (0.7%)		
Total	5,514	5,565	4,892	5,435	5,469	26,875		

#### Table A.3:DUI Involved Crashes, 2018-2022

Population	Alcohol		rashes				
(2020 Census)	Sales	2018	2019	2020	2021	2022	Total
166,722	Yes	126	128	147	145	20	698



## Table A.4:Pedestrian/Bicycle Fatal and Serious Injury Crash Conditions, 2018-2022

	Dry	Ice	Oil	Other	Sand, Mud, or Dirt	Snow or Slush	Wet	Water- Standing/Moving	Unknown	Total
Pedestrian										
Dark-Lighted	36	0	0	0	0	1	14	0	0	51
Dark-Not Lighted	35	1	0	0	0	0	9	1	1	47
Dark- Unknown Lighting	1	0	0	0	0	0	0	0	0	1
Dawn	3	0	0	0	0	0	1	0	0	4
Daylight	58	0	0	0	0	1	12	0	0	71
Dusk	3	0	0	0	0	0	0	0	0	3
Unknown	2	0	0	0	0	0	1	0	0	3
Total	138	1	0	0	0	2	37	1	1	180
				·	Bio	cycle			· · · · · · · · · · · · · · · · · · ·	
Dark-Lighted	8	0	0	0	0	0	0	0	0	8
Dark-Not Lighted	3	0	0	0	0	0	0	0	0	3
Dark- Unknown Lighting	0	0	0	0	0	0	0	0	0	0
Dawn	3	0	0	0	0	0	0	0	0	3
Daylight	22	0	0	0	0	0	1	0	1	24
Dusk	4	0	0	0	0	0	0	0	0	4
Unknown	0	0	0	0	0	0	0	0	0	0
Total	3	0	0	0	0	0	0	0	1	4



## Table A.5:Clarksville Crash Summary, 2018-2022

		Year							
Crash Type	2018	2019	2020	2021	2022	Total			
Angle	1,671	1,832	1,665	1,939	1,898	9,005			
Head-On	91	102	100	110	103	506			
No Collision W/ Vehicle	896	882	864	826	828	4,296			
Other	101	74	60	51	60	346			
Rear To Rear	9	11	7	11	4	42			
Rear To Side	71	63	46	55	47	282			
Rear-End	2,189	2,067	1,661	1,869	1,943	9,729			
Sideswipe, Opp Dir	60	69	51	68	65	313			
Sideswipe, Same Dir	375	414	385	441	445	2,060			
Unknown	46	45	45	52	48	236			
Blank	5	6	8	13	28	60			
Total	5,514	5,565	4,892	5,435	5,469	26,875			

		Year						
Light Conditions	2018	2019	2020	2021	2022	Total		
Dark-Lighted	865	886	753	813	710	4,027		
Dark-Not Lighted	546	580	549	568	495	2,738		
Dark-Unknown Lighting	28	29	30	39	36	162		
Dawn	145	124	103	196	163	731		
Daylight	3,713	3,777	3,314	3,654	3,855	18,313		
Dusk	149	123	101	117	136	626		
Unknown	63	30	31	29	44	207		
Blank	5	6	11	19	30	71		
Total	5,514	5,565	4,892	5,435	5,469	26,875		

		Year							
Surface Conditions	2018	2019	2020	2021	2022	Total			
Dry	4,336	4,540	3,962	4,605	4,573	22,016			
Ice	35	21	2	5	62	125			
Oil	0	0	0	0	0	0			
Other (Narrative)	1	2	1	2	2	8			
Sand, Mud, or Dirt	0	2	2	0	0	4			
Snow or Slush	77	31	6	42	139	295			
Wet	1,015	918	876	729	635	4,173			
Water- Standing/Moving	17	14	17	19	6	73			
Unknown	33	37	26	33	52	181			
Total	5,514	5,565	4,892	5,435	5,469	26,875			

DUI	2018	2019	2020	2021	2022	Total
Yes	126	128	147	145	152	698
No	5,388	5,437	4,745	5,290	5,317	26.177
Total	5,514	5,565	4,892	5,435	5,469	26,875



## Appendix B: Public Outreach Phase 1 Documentation

#### **Outreach Survey**





City	of Cl	arksv	ille's Safety Action Plan	Nore at: 🖸 <u>https://www</u>	cityofclarl	ksville.cor	<u>n/1247/ss</u>	4agrant
~	2	Beh Please ra	avioral Risk Factor Ranking nk your top three safety risk factors currently in Clarksville	i) 🗩	<b>»</b>	3	4	5
WELCOME	BEHAVIORAL SAFETY CONCERNS		Order your top 3 items above this line Speeding Distracted Driving Walking/Biking on the Wrong Side Improper Roadway Crossings Red Light Running Impaired Driving Maired Driving	invites crashes.		INFRASTRUCTURE SAFETY CONCERNS	MAP MARKERS	FINAL QUESTIONS
	saved							4
	2 of C	arksv 3	Infrastructure Risk Factor Ranking	More at: C <u>https://www</u>	cityofclari	ksville.cor	<u>n/1247/ss</u> 4	4agrant
WELCOME	TY CONCERNS	Y CONCERNS	Please rank your top five safety risk factors currently in Clarksville ↑ Order your top 5 items above this line ↑ Time Emergency Response Time System Connectivity	cy Respons	e	-	AP MARKERS	QUESTIONS
	BEHAVIORAL SAFE	INFRASTRUCTURE SAFET	Insufficient Law Enforcement Presence Poor Roadway Design Lack of Roadway Lighting Lack of Public Transportation Lack of Bicycle Infrastructure Lack of Pedestrian Infrastructure Unsafe Intersections	ency response tir re enhances the f crashes through ess to emergency	ne and		M/	FINAL





City of Clarksville's Safety Action Plan

More at: 12 https://www.cityofclarksville.com/1247/ss4agrant

~	2	3	4	5 You are almost done! Tell us a bit about yourself. Please click finish when you are done.	i 🗩
WELCOME	BEHAVIORAL SAFETY CONCERNS	INFRASTRUCTURE SAFETY CONCERNS	MAP MARKERS	Select One   What is your race?   Select One   What is your race?   Select One   What is your race?   Select One   Now many people live in your household?   Enter Number of People   What is your nousehold income level?   Select One   Now many people live in your household?   Enter Number of People   Now the upestions you choose, and then click Finish.	bu! his survey! Site other Clarksville survey on social



## Christmas on the Cumberland Display Boards

















#### **Emails**

Re: [External] External Inbox

Dunn, Brian L. <dunnb@apsu.edu> to Jill, Charles, Nicholas, me, Lauren Hi Jill! We'll get this in our Monday student email. Thank you for reaching out!

Brian Dunn Senior Director of Communication PR & Marketing

Austin Peay State University 931-221-7637 dunnb@apsu.edu www.apsu.edu

Austin Peay State University

From: Jill Hall <jill.hall@cityofclarksville.com>

Date: Thursday, November 2, 2023 at 10:29 AM

To: Booth, Charles W. < boothcw@apsu.edu >, Dunn, Brian L. < dunnb@apsu.edu >

Cc: Nicholas Broussard <<u>nicholas.broussard@neel-schaffer.com</u>>, Stan Williams <<u>stan.williams@cityofclarksville.com</u>>, Lauren Winters <<u>lauren.winters@cityofclarksville.com</u>> Subject: [External]

\*\*\* This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - APSU IT Security. \*\*\*

Mr. Booth/Mr. Dunn,

I'm with the Clarksville Metropolitan Planning Organization (MPO), which is under the Clarksville/Montgomery County Regional Planning Commission (CMCRPC). The MPO is working with Neel Schaffer consultants to develop the SS4A Safety Action Plan for the City of Clarksville.

The SS4A Safety Action Plan is to help prevent roadway fatalities and serious injuries for all users including motorists, pedestrians, cyclists, and public transit riders. We would like to have the students opinions on the safety of the roadways they travel as pedestrians, bicyclist, transit riders and drivers.

The consultants have a public outreach survey to assist in the development of the SS4A. Will you please send this link out to your campus community through your email system? The link is active and shown below.

https://live.metroquestsurvey.com/?u=ve6u6l#//?o=web&pm=dynamic&s=1&popup=WTD Please leave the link on your website and social media through December 16, 2023.

If you need any additional information please let me know. Thank you, Jill Hall Clarksville MPO 931-645-7448 10:34 AM (3 hours ago)



11/7/23. 9:18 AM

City of Clarksville Mail - MPO Meeting Nov. 16th at 11:00-Agenda and Info packet attached

	City
$( \triangle ] \triangle )$	of
Ton P	Clarksville

Jill Hall <jill.hall@cityofclarksville.com>

#### MPO Meeting Nov. 16th at 11:00-Agenda and Info packet attached 5 messages

#### Jill Hall <jill.hall@cityofclarksville.com>

Wed, Nov 1, 2023 at 1:20 PM To: "Jeffers, Jared D (KYTC)" </a>jared.jeffers@ky.gov>, Michael Tindzley </tinmantindzley187@yahoo.com>, Jeff Bryant <jhbryant@mcgtn.net>, Sandy Amanor <sandyg.amanor@ky.gov>, "Christopher J USA CIV Chris Brown (US)" <christopher.i.brown18.civ@mail.mil>. "Sean Santalla (FHWA)" <sean.santalla@dot.gov>. Theresa Claxton Hayzlett <robert.hayzlett@tn.gov>, max Baker <max.baker@gnrc.com>, Kimery Grant <kimery.grant@tn.gov>, Chasity Bell <Chasity.bell@tn.gov>, Contact <tabitha.martin@ky.gov>, Ed Quillian <ed.quillian@rjcorman.com>, "Murphy, Melanie (FHWA)" <melanie.murphy@dot.gov>, Kathryn McClung <Kathryn.McClung@tn.gov>, Nick Powell <nbpowell@mcgtn.net>, "Vail, Nick (FHWA)" <nick.vail@dot.gov>, James Halford <james.halford@cityofclarksville.com>, Kim Brymer <Kim.Y.Brymer@tn.gov>, Daniel McDonell <daniel.mcdonell@tn.gov>, Nick Hall <nick.hall@ky.gov>, Andres Ramirez <andres.ramirez@dot.gov>, Shane Hester <shane.hester@tn.gov>, Lauren Winters <lauren.winters@cityofclarksville.com>, "Cowan, Chris" <chris.cowan@cityofclarksville.com>, John Hilborn <john.hilborn@cityofclarksville.com>, Kyle Johnson <kdjohnson@mcgtn.net>, Angela Hemdon <angelas.herndon@ky.gov>, Jeffrey Tyndall <jeffrey.tyndail@cityofclarksville.com>, John Patterson <jpatterson@clarksvilleairport.com>, Sarah Larocca <Larocca.sarah@epa.gov>, Contact <jason.orange@ky.gov>, Marc Corrigan <marc.corrigan@tn.gov>, Herman Wright <hernan.wright@tn.gov>, Deneatra Henderson <Deneatra.henderson@ky.gov>, Lisa Dougan <Lisa.Dougan@tn.gov>, Mikael Pelfrey <mikael.pelfrey@ky.gov>, Jennifer Keller <jennifer.keller@cityofclarksville.com>, Mayor Golden <mayorgolden@mcgtn.net>, Sean Pfalzer <SPfalzer@gnrc.org>, Michael Ringgenberg <michael.ringgenberg@cityofclarksville.com>, Thomas Witt <Thomas.Witt@ky.gov>, Bill Chaudoin <br/><br/>
</br> Britton <Tbritton@comdev-services.com>, Melisa Smith <mfsmith@mcgtn.net>, Jackie Oliver

The Clarksville MPO's meeting will be Thursday, November 16th at 11:00am at the RPC lower conference room. The link below is to a live youtube video for those watching virtually: https://www.youtube.com/watch?v=ZFkqp5o9hpQ (This link is on the www.cuampo.com homepage also.)

I have attached the agenda and information packet. The adjusted urban boundary resolution may have to be moved to the January meeting. The map submitted to TDOT is still under review. I hope everyone will be able to attend. Thanks, Jill

#### Additional MPO Information:

The MPO is having 2 separate public input meetings for the draft 2050 MTP on Nov. 16th at Oak Grove City Hall and Nov 17th at the Clarksville/Montgomery County Library; both starting at 4:00pm. The information for these meetings is also attached

The Consultants developing the SS4A Safety Action Plan will have a booth at the Christmas on the Cumberland on Saturday, November 18th from 11:00 to 2:00. Anyone wanting to speak with them or give input, this would be a great time. The MPO has a survey for the SS4A Safety Action Plan at the following link: https://live.metroquestsurvey.com/?u= ve6u6l#!/?p=web&pm=dynamic&s=1&popup=WTD

Please take the time to do a short survey about your concerns on safety issues along Clarksville's transportation system. I've attached the flyer for the Christmas on the Cumberland event.

#### 3 attachments

- Agenda & Info Packet 111623.pdf 811K
- SignedStakeholderLttrPublicMtgs.pdf 🔁 74K

Clarksville SS4A Flyer.pdf 1588K

Mail Delivery System <MAILER-DAEMON@zh-gw.zixsmbhosted.com>

Wed, Nov 1, 2023 at 1:20 PM

https://mail.google.com/mail/u/0/?ik=cf3c7b3c98&view=pt&search=all&permthid=thread-a;r4247891142185727342&simpl=msg-a;r850998855321468... 1/3



#### Website Announcements and Letters



# Planning for Clarksville's Growth

Clarksville MPO Obligation Report for FY 2023

**RFP for Congestion Mitigation Process** 

Live MetroQuest Survey For Clarksville Safety Action Plan - Link Below:

https://live.metroquestsurvey.com/?u=ve6u6l#!/?p=web&pm=dynamic&s=1&popup=WTD

Clarksville\_MTP\_2050\_Main\_Report\_092823

Complete 2050 MTP CDR

CTS TDOT-PTASP Update 07.2022 Final

The Bipartisan Infrastructure Law FHWA Link

**TDOT Improve Act Presentation** 

Participation Plan 2020

# CLARKSVILLE







#### CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

Stan Williams MPO Director stanwilliams@cityofclarksville.com 329 MAIN STREET CLARKSVILLE, TN 37040 PHONE: (931)645-7448 Jill Hall Transportation Planner jhall@cityofclarksville.com

November 1, 2023

Dear Sir/Ma'am:

Please display the enclosed Public Outreach Flyer on your bulletin board or where everyone will see it. Public participation and comments will aid in the development of the SS4A Safety Action Plan for the City of Clarksville. This plan will help us plan a safer travel experience for motorists, pedestrians, bicyclists, and public transit riders in Clarksville.

As a non profit your efforts reach the disadvantage that understand the safety issues within our transportation system. Their input would be greatly appreciated to improve the safety for our pedestrians and bicyclist within Clarksville.

Thank you for your assistance in this matter.

Sincerely,

J. Stan Williams MPO Director



#### Press Release

Safe Streets and Roads for All Safety Action Plan - City of Clarksville NEWS RELEASE - 10/30/23



#### NEWS RELEASE

Contact:

Jimmy Settle, Communications Director 931.648.6102 jimmy.settle@cityofclarksville.com

FOR IMMEDIATE RELEASE October 30, 2023

#### CITY OF CLARKSVILLE DEVELOPING SAFETY ACTION PLAN PUBLIC INVOLVEMENT ENCOURAGED

CLARKSVILLE, TENNESSEE – The City of Clarksville is developing a Safe Streets and Roads for All (SS4A) Safety Action Plan to help prevent roadway fatalities and serious injuries for all users including motorists, pedestrians, cyclists, and public transit riders, according to Clarksville Mayor Joe Pitts.

"The objective of the Safety Action Plan is to provide specific projects for creating safer transportation in our community, reviewing our policies to ensure safety is an underlying theme in all that we do, and ultimately to strive towards Vision Zero, a mission to eliminate severe injuries and fatalities related to transportation," Mayor Pitts said. "To provide the most benefit to the community and to understand the priorities of our public, it is imperative that we hear from the citizens and traveling public that use the City's transportation facilities every day whether that be a public street, sidewalk, bike lane, or the Clarksville Transit System."

Interested individuals may participate by visiting https://www.cityofclarksville.com/1247/SS4AGrant and taking a brief, five-minute survey which provides a way for a citizen's voice to be heard.

The SS4A Safety Action Plan will identify a wide array of risk factors related to transportation fatality and injury including the following:

speeding

unsafe road infrastructure

impaired driving

- nonuse of motorcycle helmets, seat belts, and

distracted driving

child restraints

Clarksville's SS4A Safety Action Plan is funded by a grant from the US Department of Transportation and the Federal Highway Administration. It is expected to be completed by Summer of 2024. Opportunities for the public to review and make comments on the draft SS4A Safety Action Plan will be provided both online and during in-person meetings before final decisions are made. Times and dates for review opportunities will be published when available. The completion of the SS4A Safety Action Plan will allow the City to apply for implementation of capital construction grant funds through the federal discretionary grant program.

###

#### Social Media Announcements



City of Clarksville, TN Government · Follow October 31, 2023 · 🚱

Learn more here about the exciting Safe Streets and Roads For All (SS4A) planning effort in City of Clarksville, TN Government ...

# Transportation safety begins with you!

CITYOFCLARKSVILLE.COM City of Clarksville developing safety action plan Public involvement encouraged



3 comments 2 shares

...





Montgomery County, Tennessee

The City of Clarksville, TN Government is developing a Safe Streets and Roads for All (SS4A) Safety Action Plan to identify challenges and solutions needed to help make roadways safer for everyone.

If you would like to learn more about the project, please take this brief five-minute survey which gives residents an opportunity to be heard.





•••



City of Clarksville, TN Government

🖉 December 8, 2023 · 🕤

BE HEARD ON SAFE STREETS AND ROADS: We want your input on traffic safety within the City of Clarksville for our Safe Streets and Roads For All (SS4A) plan.

This is the final week of the survey which closes on December 16th. Learn more at https://www.clarksvilletn.gov/1247/SS4A-Grant .



...

## Appendix C: Public Outreach Phase 2 Documentation

#### **Outreach Survey**

City of Clarksville's Safety Action Plan - Round 2 More at: 12 https://www.cityofclarksville.com/1247/ss4agrant City of Clarksville SS4A Safety Action Plan Learn a bit about this initiative before you begin. **i**) >> 1 2 3 4 WELCOME SYSTEMWIDE STRATEGIES AREAS OF CONCERN MULTIMODAL STRATEGIES The City of Clarksville needs to hear from you! FINAL QUESTION The City of Clarksville is developing a Safe Streets and Roads for All (SS4A) Safety Action Plan. The intent of the plan is to develop a holistic, well-defined strategy to prevent roadway fatalities and serious injuries for all users. Your feedback will help inform the study team of your safety concerns that were shared in the previous survey. Next The Safe System approach to road safety is focused on ensuring safe transportation for all road users. The main CLARKSVILLE principles of this approach are - Safe speeds - Safe vehicles - Safe roads - Safe road users



#### City of Clarksville's Safety Action Plan - Round 2





City of Clarksville's Safety Action Plan - Round 2

More at: 12 https://www.cityofclarksville.com/1247/ss4agrant



City	City of Clarksville's Safety Action Plan - Round 2 More at: [2] https://www.cityofclarksville.com/1247/ss4agrant						
~	2	3	4	Multi Please pro	modal Systemwide Strategies	3 🛛 🕉 🕇	
WELCOME	SYSTEMWIDE STRATEGIES	AREAS OF CONCERN	MULTIMODAL STRATEGIES	E F ( ( - - - - - - - - - - - - - - - - - -	Bicycle and Pedestrian Safety Countermeasures Please rate your preference of strategies from low (1 s 5 stars). Add Bicycle Lanes Can be added throughout the transportation system Crosswalk Visibility Enhancements Can be used to improve visibility at crosswalks Add More Walkways (Shared Use Path, Sidewalk, Sho Can provide safe space for pedestrians when crossing meanes Road Diets (Reconfiguration) Can reconfigure / repurpose lanes, e.g. 4-lane road can b P-lane road with center median and multimodal elements Medians and Pedestrian Refuge Islands Can provide safe space for pedestrians crossing multiple Pedestrian Hybrid and Rectangular Rapid Flashing Be Can flash to let drivers know a pedestrian is trying to cros Public Transportation Improvements Public transportation options added throughout the study	star) to high (*****) (****) (*****) (***) (****) (****) (****) (***)	
City	of Cl	arks\ ₃	/ille's 4	Safety	/ Action Plan - Round 2 You are almost done!	More at: C <u>https://www.cityofclarksville.com/1247/ss4agrant</u>	
<u>~</u>	2	3	4	5 	ell us a bit about yourself. Please click finish when you are done.		
MELCOME	SYSTEMWIDE STRATEGIE	AREAS OF CONCERN	MULTIMODAL STRATEGIE	FINAL QUESTION	Final Questions (Optional)  What is your 5-digit home zip code?  12345  What is your 5-digit work or school zip code?  12345  What is your age group? Select One  What is your race? Select One  How many people live in your household? Enter Number of People  What is your household income level? Select One  What is your household income level? Select One  What is your primarily commute around Clarksville?	Thank You!   Thank you for completing this survey!   Project Site   Please help us involve other Clarksville residents by sharing this survey on social media!   Image: Completing the survey of the survey	

**脚 Finish** 

#### **In-Person Survey**

#### The City of Clarksville Needs to Hear from You!

The City of Clarksville is developing a Safe Streets and Roads for All (SS4A) Safety Action Plan. The intent of the plan is to develop a strategy to prevent roadway fatalities and serious injuries for all users. Your feedback will help the study team prioritize safety concerns that were shared by stakeholders and the public earlier in the study.

The study team has developed potential strategies to address systemwide trends discovered during Phase 1. The questions below ask you to provide your input on these potential strategies and their imporance to you from Low (1) to High (5).

1. Distracted driving was the highest-ranked behavioral safety issue in the study area. How important are the following strategies to reduce distracted driving?

Stratogy		2	3	4	5
Suareyy	Low				High
Continue and Strengthen Graduated Driver Licensing (GDL) Program					
Three-phase system consisting of a learner's permit, a provisional license, and a full license.					
High Visibility Cell Phone Enforcement					
Increased and highly visible law enforcement can convince drivers to put down cell phones.					
Communications and Outreach on Distracted Driving					
Paid campaigns intended to educate the general public on the dangers of distracted driving.					
Employer Programs					
In general, work culture and adherence to company safety policies can help address distracted driving.					

2. Speeding is a contributing factor to more than a quarter of crash fatalities. How important are the following strategies to reduce speeding?

Strategy		2	3	4	5
					High
Modify Speed Limits					
Lower speed limits when speed is considered a cause of crashes.					
Traffic Law Enforcement					
Targeted campaigns and increased police presence can make the roads safer for everyone.					
Automated (Camera) Enforcement					
Automated system that uses a camera and a speed measurement device to detect and capture images of					
vehicles traveling in excess of the posted speed limit.					
Higher Penalties					
Stronger penalties for speeding and aggressive driving.					

Flip over to continue 🇥



#### The City of Clarksville Needs to Hear from You!

3. A common response in Round 1 surveys and public outreach was "unsafe intersections". How important are the following strategies to improve intersections?

Strategy		2	3	4	5
					High
Corridor Access Management					
The design, application, and control of entry and exit points along a roa	dway.				
Dedicated Left and Right Turn Lanes at Intersections					
Turn lanes provide physical separation between turning traffic that is slowing or stopped and adjacent					
through traffic at approaches to intersections.					
Roundabouts					
Roundabouts at intersections can result in lower speeds and reduced conflicts.					
Low-cost Countermeasures at Stop-Controlled Intersections					
Various applications including signage and properly placed stop lines on road.					
Lighting					
Lighting can be applied at intersections to reduce the chances of a crash.					

4. Poor roadway design can include dangerous curves, no shoulders, inappropriate speed limits, and poorly maintained roads, to name a few. How important are the following strategies to improve roadway design?

Strategy		2	3	4	5
Stategy	Low				High
Add Lighting					
Lighting can be applied continuously along segments and at spot location	ons to re	educe th	ne char	nces of	а
crash.					
Roadway Striping and Signage					
Clear roadway striping and signage can improve safety.					
Roadway Maintenance					
Roadways can be maintained properly by fixing potholes and cracks in the road to help with a smoother			ther		
ride.					
Road Diet					
Can reconfigure / repurpose lanes, e.g. 4-lane road can become 2-lane road with center median and					
multimodal elements.					
Add Multimodal Accommodations					
Sidewalk/Bicycle lanes can be added to accommodate all roadway users.					

Flip to next page



#### The City of Clarksville Needs to Hear from You!

The study team also developed multimodal strategies to address non-motorized (bicycle and pedestrian) crashes. Please provide your input on these potential strategies and their importance to you from Low (1) to High (5).

5. How important are the following strategies to improve bicyclist and pedestrian safety?

Strategy	1	2	3	4	5
Stategy	Low				High
Add Bicycle Lanes					
Can be added throughout the transportation system.					
Crosswalk Visibility Enhancements					
Can be used to improve visibility at crosswalks.					
Add More Walkways (Shared Use Path, Sidewalk, Shoulder)					
Can provide safe space for pedestrians when crossing multiple lanes.					
Road Diets (Reconfiguration)					
Can reconfigure / repurpose lanes, e.g. 4-lane road can become 2-lane	road wit	h centei	r media	an and	
multimodal elements.					
Medians and Pedestrian Refuge Islands					
Can provide safe space for pedestrians crossing multiple lanes.					
Pedestrian Hybrid and Rectangular Rapid Flashing Beacons					
Can flash to let drivers know a pedestrian is trying to cross road.					
Public Transportation Improvements					
Public transportation options added throughout the study area.					

Safety analysis and public outreach shows the following locations experience the greatest safety concerns. Please check any locations you feel are a high, medium, or low priority to address for safety needs.

Location	High	Medium	Low	
I-24 from Rossview Rd to Dunlop Ln				
I-24 from MLK Jr Blvd to Red River				
Kraft St from Summer St to Ladd Dr				
Tiny Town Rd from Norstar Dr to Cannon Dr				
Golf Club Ln from Old Ashland City Rd to Madison St				
Madison St at Golf Club Ln				
Warfiled Blvd at Rossview Rd				
Providence Blvd at Peacher's Mill Rd				
SR-76 at Old Farmers Rd				
Lafayette Rd at Cunningham Ln				
Flip over for optional questions and instructions to turn in.				

Flip over for optional questions and instructions to turn in.



#### The City of Clarksville Needs to Hear from You!

All questions below are optional.

6.	What	What is your home ZIP code?			
7.	What is your work or school ZIP code?				
8.	What	t is your age? Check <u>ONE</u> below.			
	000	) Under 15       () 41 to 54         ) 16 to 24       () 55 to 64         ) 25 to 40       () 65 or old	er		
9.	What	t is your race/ethnicity? Check <u>ALL</u> tha	at apply.		
		WhiteIBlack or African AmericanIAmerican Indian or Alaska NativeIOtherI	Native Hawaiian or Other Pacific Islander Hispanic or Latino Asian		
10.	Hown	many people live in your household?			
11.	What	t is your approximate annual househo	Id income? Check <u>ONE</u> below.		
	00000	\$0 - \$14,999 () \$15,000 - \$20,000 () \$20,001 - \$25,000 () \$25,001 - \$30,000 () \$30,001 - \$35,000 ()	\$35,001 - \$40,000 \$40,001 - \$45,000 \$45,001 - \$50,000 Greater than \$50,000		

12. How do you primarily commute around Clarksville? Check ONE below.

- Automobile
- Bicycle
- Motorcycle

Public TransportationWalk

Please return completed questionnaires to planning team staff or the CUAMPO by March 18, 2024 at:

Clarksville Urbanized Area MPO c/o: Stan Williams 329 Main Street Clarksville, TN 37040



In-Person Survey – Day 2

# Manna Cafe Safe Streets For All Survey

# March 2024

#### "Why am I being asked to take this survey?"

Great question! The City of Clarksville is working to receive federal funding to make our roads safer, which includes bicycle and pedestrian safety. We want input from real people who know this area and will directly benefit from safer roads. This survey takes only a few minutes but has the ability to help make a lifelong positive impact. We are so glad you're here!

- 1. Primary Area of Residence: \_\_\_\_\_
  - a. If unsure, which of these areas are you most frequently in?
    - i. Wilma Rudolph Blvd
    - ii. Madison St
    - iii. Ft. Campbell Blvd
    - iv. New Providence Blvd
    - v. Downtown/Kraft St
- 2. How do you typically travel?
  - a. Walk
  - b. Bike
  - c. Public Transit
- 3. If you travel by bike, do you use bicycle lanes? YES NO
  - a. If yes, how important is it to you to place new bicycle lanes on a scale of 1-5, with 5 being VERY important? \_\_\_\_\_



- b. Where would you like to see new bicycle lanes placed?
- 4. How often do you use public transit?
  - a. RarelyMonthly WeeklyDaily
- 5. Do you think there are enough bus stops? YESNO
- 6. Do you currently use crosswalks?YESNO
- 7. Where would you suggest additional crosswalks? Select all that apply.
  - i. Wilma Rudolph Blvd
  - ii. Madison St
  - iii. Ft. Campbell Blvd
  - iv. New Providence Blvd
  - v. Kraft St
  - vi. Other (List Area/Road Names)
- 8. Would you use pedestrian bridges/overpasses? YESNO
- 9. If yes, where would you suggest putting them?
- 10. Do you think speed is a concern for pedestrian safety? YESNO
- 11. How important is it to lower speed limits to help prevent crashes, on a scale of 1-5, with 5 being VERY important?
- 12. What is your age?
  - a. Under 15
  - b. 16 to 24
  - c. 25 to 40
  - d. 41 to 54



- e. 55 to 64
- f. 65 or older

13. What is your race/ethnicity? Select all that apply.

- a. White
- b. African American
- c. American Indian or Alaska Native
- d. Native Hawaiian or Other Pacific Islander
- e. Hispanic or Latino
- f. Asian
- g. Other \_\_\_\_\_

14. If you could share one thing with the City of Clarksville to help improve your safety as a pedestrian, what would that be?

Thank you for taking the time to complete this survey! We are a better community when we work together and that includes listening to each other's suggestions. We appreciate you!!



#### Emails

From:	Jill Hall
To:	Jared Jeffers; Michael Tindzley; William Chaudoin Jr., PE, PLS; Daniel McDonell; Jeff Bryant; Sandy Amanor;
	Christopher J USA CIV Chris Brown (US); Sean Santalla (FHWA); Theresa Claxton; Dianna Myers; Shaun
	Armstrong: Bob Hayzlett; max Baker; Chasity Bell; Contact; Ed Quillian; Murphy. Melanie (FHWA); Katie Brown;
	Deneatra Henderson; Nick Powell; Vail. Nick (FHWA); James Halford; Kim Brymer; Nick Hall; John Hilborn;
	Andres Ramirez; Lauren Winters; Cowan, Chris; Angela Herndon; Jeffrey Tyndall; John Patterson; Sarah Larocca;
	Contacty Brian Aharty Marc Corrigan; Herman Wrighty Lisa Dougan; Mikael Pelfrey; Lee Harrell; Daniel Capparella;
	Bill Chaudoin; Jennifer Keller; Michael Ringgenberg; Mayor Golden; Stacy Morrison; Thomas Witt; Contact; Tom
	Britton: Melisa Smith: Jackie Oliver: James Knight: Mayor Pitts
Subject:	Please take the 2nd survey for the Safe Streets for All (SS4A) Safety Action Plan. Thank You!
Date:	Thursday, February 29, 2024 2:41:20 PM

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

#### To: A11

Please take the 2nd survey below for the Safe Streets for All (SS4A) Safety Action Plan. The online survey will provide feedback on proposed strategies for improving safety and reducing crashes. The survey is available from March 4 through March 18 at: <u>https://metroquestsurvey.com/ot48q</u>.

The Safe Streets for All (SS4A) Safety Action Plan is funded with a grant from the U.S. Department of Transportation and the Federal Highway Administration. The completion of the plan will allow the City to apply for implementation of capital construction grant funds through the federal discretionary grant program.

Thank you, Jill Hall Clarksville MPO



#### Website Announcements and Letters

Home > News Flash

#### All News

Posted on: March 4, 2024

#### Public invited to provide input on City of Clarksville Transportation Safety Plan

**CLARKSVILLE, Tenn.** – The City of Clarksville will conduct public involvement activities in March for the next phase of the comprehensive safety action plan. The plan's goal is to identify projects and strategies to help prevent roadway fatalities and serious injuries for all transportation users in the city, including motorists, pedestrians, cyclists, and public transit riders.

Through the first round of public outreach conducted in late 2023, the Safety Action Plan identified community priorities on a wide array of risk factors related to transportation fatalities and injuries. The public will now have an opportunity to provide input on specific projects and solutions identified to address these safety concerns.

CLARKSVILLE

https://metroquestsurvey.com/ot48q

In-person opportunities to provide feedback will be offered at Manna Café at 605 Providence Blvd on March 14 and March 15 from 10:00 AM through 12:00 PM. The public is also invited to take an online survey to provide feedback on proposed strategies for improving safety and reducing crashes. The survey is available from March 4 through March 18 at: <u>https://metroquestsurvey.com/ot48q.</u>;

This Safe Streets for All (SS4A) Safety Action Plan is funded with a grant from the U.S. Department of Transportation and the Federal Highway Administration. The completion of the plan will allow the City to apply for implementation of capital construction grant funds through the federal discretionary grant program.

To learn more about the Safety Action Plan, visit SS4A Grant | Clarksville, TN (clarksvilletn.gov).





# Planning for Clarksville's Growth

SS4A Safety Action Plan Survey Link:

https://metroquestsurvey.com/ot48q





#### **Press Release**

Safe Streets and Roads for All Safety Action Plan – City of Clarksville NEWS RELEASE – 03/04/24



#### NEWS RELEASE

Contact:

FOR IMMEDIATE RELEASE March 4, 2024

Jimmy Settle, Communications Director 931.648.6102 jimmy.settle@cityofclarksville.com

#### PUBLIC INVITED TO PROVIDE INPUT ON TRANSPORTATION SAFETY PLAN Public Involvement Opportunities and Online Survey

CLARKSVILLE, TENNESSEE – The City of Clarksville will conduct public involvement activities in March for the next phase of our comprehensive safety action plan. The plan's goal is to identify projects and strategies to help prevent roadway fatalities and serious injuries for all transportation users in the city, including motorists, pedestrians, cyclists, and public transit riders.

Through the first round of public outreach conducted in late 2023, the Safety Action Plan identified community priorities on a wide array of risk factors related to transportation fatalities and injuries. The public will now have an opportunity to provide input on specific projects and solutions identified to address these safety concerns.

In person opportunities to provide feedback will be offered at Manna Café at 605 Providence Blvd on March 14 and March 15 from 10:00 AM through 12:00 PM. The public is also invited to take an online survey to provide feedback on proposed strategies for improving safety and reducing crashes. The survey is available from March 4 through March 18 at: <u>https://metroquestsurvey.com/ot48q</u>.

This Safe Streets for All (SS4A) Safety Action Plan is funded with a grant from the U.S. Department of Transportation and the Federal Highway Administration. The completion of the plan will allow the City to apply for implementation of capital construction grant funds through the federal discretionary grant program.

To learn more about the Safety Action Plan, visit <u>SS4A Grant | Clarksville, TN (clarksvilletn.gov)</u>.

###



#### Social Media Announcements

City of Clarksville, TN Government

\*\* NEWS RELEASE\*\*

PUBLIC INVITED TO PROVIDE INPUT ON TRANSPORTATION SAFETY PLAN Public Involvement Opportunities and Online Survey

CLARKSVILLE, Tenn. – The City of Clarksville will conduct public involvement activities in March for the next phase of the comprehensive safety action plan. The plan's goal is to identify projects and strategies to help prevent roadway fatalities and serious injuries for all transportation users in the city, including motorists, pedestrians, cyclists, and public transit riders.

Through the first round of public outreach conducted in late 2023, the Safety Action Plan identified community priorities on a wide array of risk factors related to transportation fatalities and injuries. The

public will now have an opportunity to provide input on specific projects and solutions identified to address these safety concerns.

In-person opportunities to provide feedback will be offered at Manna Café at 605 Providence Blvd on March 14 and March 15 from 10:00 AM through 12:00 PM. The public is also invited to take an online survey to provide feedback on proposed strategies for improving safety and reducing crashes. The survey is available from March 4 through March 18 at: https://metroquestsurvey.com/ot48q.

This Safe Streets for All (SS4A) Safety Action Plan is funded with a grant from the U.S. Department of Transportation and the Federal Highway Administration. The completion of the plan will allow the City to apply for implementation of capital construction grant funds through the federal discretionary grant program.

To learn more about the Safety Action Plan, visit SS4A Grant | Clarksville, TN (clarksvilletn.gov).

Clarksville Street Department Clarksville Police Department Clarksville Fire Rescue Clarksville Transit System (CTS) CDE Lightband City of Clarksville Neighborhood and Community Services Clarksville Parks and Recreation @






# https://metroquestsurvey.com/ot48q



# Appendix D: Public Outreach Phase 3 Documentation

## **Press Release**

Safe Streets and Roads for All Safety Action Plan – City of Clarksville NEWS RELEASE – 4/2/24



## NEWS RELEASE

FOR IMMEDIATE RELEASE April 2, 2024

Contact:

Jimmy Settle, Communications Director 931.648.6102 jimmy.settle@cityofclarksville.com

## PUBLIC FEEDBACK REQUESTED ON CITY'S DRAFT TRANSPORTATION SAFETY ACTION PLAN

CLARKSVILLE, TENNESSEE – The City of Clarksville has completed the Safety Action Plan and requests public feedback on the draft plan. Recent crash data and public input were used to develop projects and strategies to reduce and ultimately eliminate transportation fatalities and serious injuries in the <u>City</u>.

The public is invited to review the draft plan from April 4<sup>th</sup> through April 18<sup>th</sup> on the City's website at <u>https://www.clarksvilletn.gov/1247/SS4A-Grant</u> and the Clarksville Urbanized Area MPO's website at <u>http://www.cuampo.com/</u>. In addition, a hard copy is available for review at City Hall at One Public Square, Clarksville, TN. Feedback can be provided by submitting the Google Form found on the websites.

This Safe Streets for All (SS4A) Safety Action Plan is funded with a grant from the U.S. Department of Transportation and the Federal Highway Administration. The adoption of the plan will allow the City to apply for implementation of capital construction grant funds through the federal discretionary grant program.



**Social Media Posts** 





# City of Clarksville, TN Government

Posted by Jimmy Settle 24m · 🚱

SEE THE TRANSPORTATION SAFETY PLAN: You still have time to view and make comment on the City of Clarksville, TN Government Safe Streets And Roads For All (SS4A) Transportation Safety Action Plan ...





## **Google Form**



apply for implementation of capital construction grant funds through the federal discretionary grant program.

Switch account

\* Indicates required question

Email \*

Record

as the email to be included with my response



If you wish to provide feedback about the Action Plan, please do so in the space \* provided.
Your answer
Clear form



#### Websites



# Planning for Clarksville's Growth

Google Form Link to Provide Feedback for SS4A Safety Action Plan

https://forms.gle/B5hLMr3dzJ3FkGFM6

Draft City of Clarksville SS4A Safety Action Plan





## Public Comments Received

#### Message to Mayor Pitts – April 4, 2024

Comment:

Good Morning Mayor Pitts,

In the SS4A Safety Action Plan Figure 1.1 and Figure 1.2 the charts of identifying each color is difficult to distinguish. The color block needs to be larger! Thank you!

**Response:** 

Legend text size for Figures 1.1 and 1.2 were increased.



#### **Comments Received on Google Forms**

Timestamp	Email Address	Comment	
4/3/2024 19:27:06		We need multiple overhead walkways for people to safely cross Wilma Rudolph, Ft. Campbell Blvd, and New Providence Blvd. It would greatly reduce pedestrian deaths in those locations.	Thank you for your in level solutions; howe walkways can be eva solution for a given l
4/4/2024 6:05:52		The plan for the Rossview (Hancock) to Rollow needs to be prioritized with either a line of sight adjustment to the slope or implementing a 3 way stop like the intersection behind on Rollow/Dunlop	Thank you for your in received from over 1 scoring. Additionally specific order of proj additional crash cour the most appropriate
4/4/2024 6:21:48		If there were a more visible and ACTIVE police presence on the streets it would help to "introduce" speed limits to many people. (Using those speed light up signs is good too.) Additionally—-TICKETING people for speeding, reckless driving (tailgating, weaving in/out), and using phones while driving, would seriously encourage people to drive more safely. Just go on a MAD ticketing campaign. No more police parked opposite each other chatting. No more ignoring infractions. Using several officers-and announce the location Pull out a radar gun and pull over EVERYONE going 10+ miles over. Just have a place they can pull over to-parking lot etc. It would take about six weeks of serious ticketing for the behaviors to stop. I've never seen such lax attitudes toward traffic safety. I come from a state that ticketed and people knew it. Here people drive over painted medians - that's a ticket. Fines weren't cheap either. Even if you went to traffic school you had to pay the fine. If people can't pay then have them do community service—picking up trash along city streets etc. Until this city starts valuing and upholding the laws the issues will continue.	Thank you for your in proposed as a counte visibility enforcemen
4/4/2024 6:30:58	bill.graham@fbct.org	yes	Thank you for your c
4/4/2024 7:24:58		The biggest thing Clarksville could do to cut down on accidents is enforce the speed limits. Right now there are no speed limits in Clarksville. if they are not enforced they do not exist! Every morning and evening for four years 2018/2022 I traveled the 101st Parkway from Highway 79 till I turned on Rossview Rd. I was passed every day by cars doing 80/90 mph. In that same period I saw 2 (two) cars pulled over and one of those was by MCSD.	Thank you for your in proposed as a counter visibility enforcement speed limit signs are City or TDOT to expr signs can be implem
4/4/2024 9:05:31		Pennsylvania. The numbers of motorcycle accidents and deaths are overwhelming, especially on busy commercial roads like Wilma Rudolph Blvd. These 4 lane roads with no structure to the center turning lane are too dangerous. I would suggest adding infrastructure improvements to require motorist to use designated turn lanes for U-Turns at traffic lights. Wilma Rudolph Blvd is getting so busy on the weekend that the motorists rush to get into the center turn from a local business driveways.	Thank you for your in that advise removal of median or divided ro project implementati evaluated to determina appropriate counterna movements for all us



#### Response

input. Projects proposed in this plan are highever, during project implementation, overhead aluated to determine if they are the appropriate location.

nput. Project prioritization is the result of input 1,300 participants and technical analysis 7, project prioritization does not dictate the ject implementation and during implementation ntermeasures can be considered to determine e solutions.

nput. Increased enforcement has been ermeasure and strategies involving highit have also been proposed.

comment on the Safety Action Plan.

input. Increased enforcement has been rermeasure and strategies involving highint have also been proposed. In cases where e not posted or are missing, please contact the press concerns so additional or replacement mented.

input. The plan recommends several locations of the center turn lane in favor of a raised badway with specific turning locations. During ion, each roadway or intersection can be ine if the use of median is a feasible and measure along with provision of safe sers.

Timestamp	Email Address	Comment	
4/4/2024 12:45:25		I cannot understand why individual accountability appears to be eliminated from the Action Plan. Gross negligence is unacceptable as it pertains to fatal injuries within the transportation system. While I agree shared responsibility is important to develop a transportation system that achieves our objectives, seemingly removing individual responsibility from the Action Plan appears short-sighted. There does not appear to be any discussion of the hazards to pedestrians on Kraft street, specifically between 8th Street and Summer Street. Furthermore, the action plan on Providence (S-BP-04) is insufficient for the problem which is the lack of pedestrian crossing options that are independent of the traffic on Providence. Project I-O-05 on Warfield does not address the increased risks of vehicles turning right onto Rossview road. The right-turn lane is insufficient for the volume throughout the day especially during school hours. Given the seemingly endless development underway in our city, it would seem the expansion of the capacity of our traffic infrastructure would be a critical element in this campaign. Unfortunately, I did not see a robust discussion on the increased volume and hazards we are experiencing and a plan to address those bottlenecks within the geography that contribute to congestion and increased risks to citizens. Thanks.	Thank you for your in solutions meant to ac infrastructure concern through law enforcern Kraft Street did not e pedestrian crashes to crash location table; full Injury Network. S documented and can Project recommendat high-level safety reco efforts. However, as process a more detail the most appropriate Increased volumes, h however, they are no of these topics is inclu- Transportation Plan.
4/9/2024 13:13:41	deanna.mclaughlin@cityofclarksville.com	Overall a great plan. No surprise that the majority of the roads of concern are state routes. The plan does not specifically address motorcycle crashes and fatalities which have been on the rise. It also does not mention or the need for safe pedestrian crossing from S. Jordan Rd to Jordan Rd across SR-374 to and from the new library branch.	Thank you for your in equity areas and non Crash data analysis in motorcycle related cr or minor to moderate project implementatic involvement can be c specific to those road The same applies to t not experience enoug warrant inclusion in th however, the Safety / So, if the action on th can be pursued.
4/17/2024 13:21:44		Other than the fact that ObviousMan was the author of this study, and all suggested actions should be implemented as soon as possible, why weren't any of these actions taken BEFORE all the new housing was approved????????	Thank you for your in prioritized actions that the area within the fu



#### Response

nput. The plan focuses on systemic issues and ddress overall driver behavior and roadway ns. Individual accountability is handled nent, which the plan advises be increased.

experience enough reported bicycle and b warrant inclusion in the top vulnerable user however, the Safety Action Plan includes the So, if the action on the roadway is desired, it is be pursued.

tions, such as those for S-BP-04 and I-0-05 are ommendations consistent with planning-level projects move through the implementation led analysis will be conducted that will identify countermeasures at each location.

nazards, and bottlenecks are a factor in safety; of the focus of the SS4A program. A discussion uded in the CUAMPO 2050 Metropolitan

nput. The SS4A program places emphasis on -motorized users (bicyclists and pedestrians); ncluded all reported crashes including rashes that resulted in a fatality, serious injury, e injuries. As a project moves through the on process, additional analysis of motorcycle conducted to determine if countermeasures lways users are needed.

the S. Jordan Rd crossing. This roadway did gh bicycle and pedestrian reported crashes to the top vulnerable user crash location table; Action Plan includes the full Injury Network. he roadway is desired, it is documented and

nput. The intent of this plan is to identify the at the city can undertake to improve safety in unding constraints.

Timestamp	Email Address	Comment	
4/18/2024 15:53:40		<ul> <li>Having a glance through the 151-page document. The first thing thoted</li> <li>was there was no plan on how to reduce speeding, running stop signs in neighborhoods. I walk five days a week in the morning. I must dodge cars running stop signs every day. Having the police present only on 41A or other big-name roads does nothing for the people living in the neighborhoods. It's a miracle that nobody has been run over. The school bus drivers must honk their horns to awaken the distracted drivers. You have motorcycles being driven in the neighborhood without helmets on.</li> <li>ATV going down the streets at all hours of the day, without lights and speeding. There have been two idiots, one driving a motorcycle with an infant riding on the gas tank, the other dummy has an infant riding on ATV. He had a helmet on, with a mask the baby had nothing.</li> <li>The second part of the plan is you never address the unchecked growth of the city with very poor planning on roads. It is not the street department's fault. I strongly believe they are ignored. For nobody in their right mind would have approved of the building apartments and storage unit behind the Rooms for Less store located on 41A and Lady Marion intersection.</li> <li>While I am walking in the morning, I can hear the school bus drivers honking their horns trying to get traffic stops to pick up kids from these apartments. Who signed off on that dumb plan?</li> <li>Then we have the dumping of concerts on the roadways at intersections by the ready-mix companies. Us taxpayers must pay to have a trailer with unsecured items flying off them as they go down the road, and the traffic behind them must dodge the stuff that falls off. People that do know how to properly change lanes. They think making a right turn onto 41A, and crossing three lanes of traffic at once is proper. Or driving them in the dark with no lights on or no brake lights and taillights that work. I am sure people are frustrated to know end by the screwed-up traffic lights that are mal programme</li></ul>	Thank you for your i concern in this plan included in the plan. Plan has information solutions. To address concerns unsafe driver behavi that recommend inco studies, high-visibilit can address these co implementation, add based on what is the location's needs.



## Response

input. Speeding has been identified as a safety and potential systemwide counter measures are . CUAMPO 2050 Metropolitan Transportation on growth related impacts and proposed

s about concrete dumping, vehicle condition, ior, or signal timing, the plan includes projects creased enforcement, signal retiming, corridor ty enforcement, and additional strategies that oncerns. Additionally, during project ditional countermeasures can be considered e most appropriate solution for a particular

# Appendix E: Project Prioritization Scores

ID	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Timeframe	Local Priority	Total Prioritization Score	Crash Severity Score	Multimodal Score	Focus Areas Score	Equity Score	Infrastructure Score	Existing Plans Score	Public Concerns Score
I-0-14	SR-13 (North Riverside Dr)	@ SR-48 (College St)		Safety Study			Short-Term	High	85	20	20	20	15	10	0	0
I-BP-08	SR-13 (South Riverside Dr)	@ SR-48 (College St)		Restripe crosswalks; signal retiming		\$11,000	Short-Term	High	85	20	20	20	15	10	0	0
I-BP-01	US 79 (Wilma Rudolph Blvd)	@ Fair Brook Pl		Add intersection lighting		\$25,000	Short-Term	High	85	15	20	20	10	10	0	10
I-O-15	US 79 (Wilma Rudolph Blvd)	@ Fair Brook Pl		Safety Study			Short-Term	High	80	15	20	20	10	10	0	5
S-O-06	US 41A (Fort Campbell Blvd)	Ashbury Rd	Quin Ln	NB sidewalks; increased enforcement	0.25	\$112,500	Long-Term	High	80	10	20	20	15	5	0	10
I-O-02	US 41A (Providence Blvd)	@ Peachers Mill Rd		Signal retiming; replace intersection lighting; reduce line of sight restriction in SE corner; continuous sidewalks along corridor; protected pedestrian crossings		\$30,000	Short-Term	High	75	20	10	15	15	10	5	0
I-BP-02	US 41A (Providence Blvd)	@ Peachers Mill Rd		Restripe crosswalks; signal retiming; replace intersection lighting; continuous sidewalks along corridor; protected pedestrian crossings		\$36,000	Short-Term	High	75	20	10	15	15	10	5	0
S-O-03	I-24 WB	US 79	I-24 WB On-Ramp at SR-237 (Rossview Rd)	Repave from SR-237 to railroad tracks, with new rumble strips	2.84	\$1,600,000	Long-Term	High	70	20	0	15	10	5	10	10
S-BP-09	SR-48 (Trenton Rd)	Branson Way	SR-236 (Tiny Town Rd)	Add sidewalks to both sides; add bike lane striping	0.08	\$84,800	Medium-Term	High	70	15	10	15	10	10	0	10
S-BP-10	US 41A (Fort Campbell Blvd)	Ashbury Rd	Quin Ln	NB sidewalks; increased enforcement	0.25	\$112,500	Long-Term	High	70	10	10	15	15	10	0	10
S-O-12	Power St	US 41A (Providence Blvd)	E. St	Safety Study; protected pedestrian crossings	0.04	\$30,000	Short-Term	High	70	10	20	20	15	5	0	0
S-O-05	SR-48 (Trenton Rd)	Branson Way	SR-236 (Tiny Town Rd)	Resurface NB lanes; replace CTL with median	0.08	\$138,200	Medium-Term	High	65	15	10	15	10	5	0	10
S-O-11	I-24 WB	I-24 WB Off-Ramp at Christian County Welcome Center	SR-104	Safety Study	1.71		Short-Term	High	60	20	0	15	10	5	5	5
S-O-01	I-24 WB	I-24 WB On-Ramp at SR-76	I-24 WB Off-Ramp at SR-237 (Rossview Rd)	Repave with new rumble strips	2.02	\$1,200,000	Long-Term	High	60	20	0	15	0	5	10	10
S-O-09	I-24 EB	I-24 EB Off-Ramp at SR- 237 (Rossview Rd)	I-24 EB On-Ramp at SR-237 (Rossview Rd)	Repave and add lighting at ramps	0.60	\$404,000	Long-Term	High	60	10	0	15	10	5	10	10
S-O-04	I-24 EB	I-24 EB Off-Ramp at SR-76	I-24 EB On-Ramp at SR-237 (Rossview Rd)	Repave with new rumble strips; increase enforcement	2.00	\$1,185,000	Long-Term	High	55	15	0	15	0	5	10	10
S-O-07	I-24 EB	SR-48 (Trenton Rd)	US 79 (Wilma Rudolph Blvd)	Increase enforcement	2.18	TBD	Long-Term	High	55	10	0	15	10	5	5	10
I-O-13	I-24 EB	@ SR-48 (Trenton Rd)		Safety Study			Long-Term	High	55	10	0	15	10	10	5	5
I-O-19	US 41A (Madison St)	@ SR-76 (M.L.K Jr Pkwy)		Safety Study			Short-Term	High	55	10	0	15	10	10	5	5
I-O-18	SR-236 (Tiny Town Rd)	@ Tara Blvd		Safety Study			Short-Term	High	50	10	0	15	10	10	0	5
S-O-23	SR-236 (Tiny Town Rd)	Tara Blvd	0.2 miles west of Tara Blvd	Safety Study	0.24		Short-Term	High	45	10	0	15	10	5	0	5



ID	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Timeframe	Local Priority	Total Prioritization Score	Crash Severity Score	Multimodal Score	Focus Areas Score	Equity Score	Infrastructure Score	Existing Plans Score	Public Concerns Score
S-O-14	US 79 (Providence Blvd)	Beech Blvd	Locust Blvd	Safety Study; continuous sidewalks along corridor; protected pedestrian crossings	0.13	\$700,000	Short-Term	High	45	5	0	15	15	5	5	0
I-0-24	SR-13 (South Riverside Dr)	@ Crossland Ave		Safety Study			Short-Term	High	45	5	0	15	15	10	0	0
I-O-22	US 79 (Wilma Rudolph Blvd)	@ Needmore Rd		Safety Study			Short-Term	High	45	5	0	15	10	10	0	5
S-BP-01	US 41A (Fort Campbell Blvd)	Leeland Dr	West Concord Dr	NB sidewalks; replace CTL with median	0.29	\$460,500	Medium-Term	Medium	85	10	20	20	15	10	0	10
I-BP-05	SR-236 (Tiny Town Rd)	@ Tobacco Rd		Add crosswalks; add intersection lighting; retime with pedestrian signal		\$41,000	Short-Term	Medium	85	10	20	20	15	10	0	10
S-O-10	US 41A (Fort Campbell Blvd)	Leeland Dr	West Concord Dr	NB sidewalks; replace CTL with median	0.29	\$460,500	Medium-Term	Medium	80	10	20	20	15	5	0	10
S-BP-05	US 79 (Wilma Rudolph Blvd)	Old Trenton Rd	Wylma Van Allen Pl	Replace CTL with median; increase enforcement	0.36	\$409,000	Long-Term	Medium	80	10	20	20	10	10	0	10
I-0-01	SR-12 (Fort Campbell Blvd)	@ Concord Dr		Add intersection lighting; add sidewalks; retiming signal		\$210,000	Short-Term	Medium	70	20	0	15	15	10	0	10
S-O-02	I-24 EB	US 79	I-24 EB Off-Ramp at SR-237 (Rossview Rd)	Repave from SR-237 to railroad tracks, with new rumble strips	2.89	\$1,600,000	Long-Term	Medium	70	20	0	15	10	5	10	10
I-BP-03	US 41A (Fort Campbell Blvd)	@ Quin Ln		Add intersection lighting; retime signal		\$30,000	Short-Term	Medium	70	10	10	15	15	10	0	10
S-O-18	US 79 (Wilma Rudolph Blvd)	Old Trenton Rd	Wylma Van Allen Pl	Safety Study	0.36		Short-Term	Medium	70	10	20	20	10	5	0	5
S-O-19	SR-48 (Trenton Rd)	0.2 miles south of Needmore Rd	Needmore Rd	Safety Study	0.21		Short-Term	Medium	70	10	20	20	10	5	0	5
S-O-08	US 79 (College Blvd)	US 79 (Kraft Blvd)	0.3 miles south of Old Trenton Rd	Increase enforcement	0.41	TBD	Long-Term	Medium	65	10	10	15	15	5	0	10
I-O-23	US 41A (Fort Campbell Blvd)	@ Quin Ln		Safety Study			Short-Term	Medium	65	10	10	15	15	10	0	5
S-BP-07	US 41A (Fort Campbell Blvd)	Concord Dr	Taylor Rd	NB sidewalks; increased enforcement	0.32	\$144,000	Long-Term	Medium	65	5	10	15	15	10	0	10
I-O-04	US 41A (Madison Blvd)	@ Memorial Dr		Retime signal; add intersection lighting; conduct redesign study		\$30,000	Medium-Term	Medium	60	15	0	15	10	10	0	10
I-O-06	US 41A (Fort Campbell Blvd)	@ Britton Springs Rd		Retime signal; conduct redesign study		\$5,000	Medium-Term	Medium	60	15	0	15	10	10	0	10
I-O-07	SR-236 (Tiny Town Rd)	@ Peachers Mill Rd		Improve intersection lighting; retime signal		\$30,000	Short-Term	Medium	60	15	0	15	10	10	0	10
S-BP-03	US 79 (College Blvd)	US 79 (Kraft Blvd)	0.3 miles south of Old Trenton Rd	Add bike lanes	0.41	\$65,600	Medium-Term	Medium	60	10	10	15	15	10	0	0
S-O-22	I-24 WB	I-24 WB On-Ramp at SR- 237 (Rossview Rd)	I-24 WB Off-Ramp at SR-237 (Rossview Rd)	Safety Study	0.67		Short-Term	Medium	55	10	0	15	10	5	10	5
I-O-10	SR-374 (101st Airborne Division Pkwy)	@ Whitfield Rd		Add crosswalks; increase intersection lighting; retime with pedestrian signal		\$41,000	Short-Term	Medium	55	10	10	15	10	10	0	0
I-BP-06	SR-374 (101st Airborne Division Pkwy)	@ Whitfield Rd		Add crosswalks; increase intersection lighting; retime with pedestrian signal		\$41,000	Short-Term	Medium	55	10	10	15	10	10	0	0
S-O-17	US 41A (Fort Campbell Blvd)	Concord Dr	Taylor Rd	Safety Study	0.32		Short-Term	Medium	55	5	10	15	15	5	0	5
I-O-09	SR-374 (101st Airborne Division Pkwy)	@ Peachers Mill Rd		Add crosswalks; increase intersection lighting; retime with pedestrian signal		\$41,000	Short-Term	Medium	50	15	0	15	10	10	0	0



ID	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Timeframe	Local Priority	Total Prioritization Score	Crash Severity Score	Multimodal Score	Focus Areas Score	Equity Score	Infrastructure Score	Existing Plans Score	Public Concerns Score
S-BP-02	Fair Brook Pl	US 79 (Wilma Rudolph Blvd)	Westfield Court	Add sidewalks to both sides	0.27	\$243,000	Medium-Term	Medium	50	5	10	15	10	10	0	0
I-BP-10	SR-374 (Warfield Blvd)	@ Stokes Rd		Traffic signal study; add intersection lighting		\$225,000	Short-Term	Medium	50	5	10	15	10	10	0	0
I-O-21	SR-374 (101st Airborne Pkwy	@ Parkway Pl		Safety Study			Short-Term	Medium	40	5	0	15	10	10	0	0
S-O-25	I-24 EB	I-24 EB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)	I-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)	Safety Study	0.70		Short-Term	Medium	40	5	0	15	0	5	10	5
S-BP-08	Terminal Rd	Cobalt Dr	US 79 (Wilma Rudolph Blvd)	Widen roadway shoulder; add roadway lighting	0.46	\$966,000	Short-Term	Low	70	10	20	20	10	10	0	0
S-BP-04	US 79 (Providence Blvd)	Oak St	Plum St	Add/Reconstruct sidewalks; continuous sidewalks along corridor; protected pedestrian crossings	0.04	\$492,700	Short-Term	Low	65	10	10	15	15	10	5	0
I-BP-04	US 79 (Wilma Rudolph Blvd)	@ West Dunbar Cave Rd		Add crosswalks; signal retiming		\$11,000	Short-Term	Low	65	10	10	15	10	10	0	10
I-BP-07	US 79 (Wilma Rudolph Blvd)	@ East Old Trenton Rd		Add crosswalks; add intersection lighting; retime with pedestrian signal		\$41,000	Short-Term	Low	65	10	10	15	10	10	0	10
S-BP-06	US 41A (Fort Campbell Blvd)	Quin Ln	Old Hopkinsville Rd	NB sidewalks; increased enforcement	0.18	\$81,000	Long-Term	Low	65	5	10	15	15	10	0	10
I-O-03	SR-374 (101st Airborne Division Pkwy)	@ SR-48 (Trenton Rd)		Restripe intersection; add/improve lighting; retime signal		\$31,500	Short-Term	Low	60	15	0	15	10	10	0	10
I-0-11	US 79 (Wilma Rudolph Blvd)	@ East Old Trenton Rd		Safety Study			Short-Term	Low	60	10	10	15	10	10	0	5
I-O-12	US 79 (Wilma Rudolph Blvd)	@ West Dunbar Cave Rd		Safety Study			Short-Term	Low	60	10	10	15	10	10	0	5
I-BP-09	US 41A (Fort Campbell Blvd)	@ Hermitage Rd		Add/improve intersection lighting; increase enforcement		\$25,000	Long-Term	Low	60	5	10	15	10	10	0	10
I-O-05	SR-374 (Warfield Blvd)	@ SR-237 (Rossview Rd)		Add intersection lighting; retime signal		\$30,000	Short-Term	Low	50	15	0	15	10	10	0	0
I-O-16	SR-13 (South Riverside Dr)	@ West Washington Blvd		Safety Study			Short-Term	Low	50	10	0	15	15	10	0	0
I-O-17	US 41A (Fort Campell Blvd)	@ Charlemagne Blvd		Intersection geometry improvements; signal modifications; protected pedestrian crossings; add access management		\$1,879,900	Short-Term	Low	50	10	0	15	15	10	0	0
I-O-20	US 41A (Fort Campbell Blvd)	@ Jack Miller Blvd		Safety Study			Short-Term	Low	50	5	0	15	15	10	0	5
I-O-25	US 41A (Fort Campbell Blvd)	@ Dover Crossing Rd		Safety Study			Short-Term	Low	50	5	0	15	15	10	0	5
I-O-08	SR-76 (M.L.K Jr Pkwy)	@ Old Farmers Rd		Advance warning signs; pavement markings; add intersection lighting		\$51,700	Short-Term	Low	45	15	0	15	0	10	5	0
S-O-16	I-24 WB	SR-48 (Trenton Rd)	US 79 (Wilma Rudolph Blvd)	Safety Study	2.24		Short-Term	Low	45	5	0	15	10	5	5	5
S-O-20	I-24 EB	I-24 EB On-Ramp at Tennessee Welcome Center	SR-48 (Trenton Rd)	Safety Study	0.47		Short-Term	Low	45	5	0	15	10	5	5	5
I-O-26	Dunbar Cave Rd	@ SR-374 (Warfield Blvd)		Safety Study			Short-Term	Low	45	5	0	15	10	10	0	5



ID	Roadway Name	From/At	То	Improvement	Length (mi)	Cost	Timeframe	Local Priority	Total Prioritization Score	Crash Severity Score	Multimodal Score	Focus Areas Score	Equity Score	Infrastructure Score	Existing Plans Score	Public Concerns Score
S-O-13	Evans Rd	0.1 miles south of Lou Ann Ln	Timber Ridge Dr	Safety Study	0.16		Short-Term	Low	40	10	0	15	10	5	0	0
S-O-24	US 79 (Wilma Rudolph Blvd)	State Garage Ln	0.2 miles west of State Garage Ln	Safety Study	0.19		Short-Term	Low	40	5	0	15	10	5	0	5
S-O-28	Madison St	SR-374 (Richview Rd)	US 41A (MLK Pkwy)	Safety Study	0.40		Short-Term	Low	40	5	0	15	10	5	0	5
S-O-15	SR-374 (101st Airborne Division Pkwy)	Victory Rd	Pkwy Pl	Safety Study	0.51		Short-Term	Low	35	5	0	15	10	5	0	0
S-O-21	I-24 WB	I-24 WB On-Ramp at SR-76 (M.L.K. Jr Pkwy)	I-24 WB Off-Ramp at SR-76 (M.L.K. Jr Pkwy)	Safety Study	0.72		Short-Term	Low	35	5	0	15	0	5	5	5
S-O-26	Peachers Mill Rd	0.11 miles south of SR-374 (101st Airborne Division Pkwy)	SR-374 (101st Airborne Division Pkwy)	Safety Study	0.10		Short-Term	Low	35	0	0	15	10	5	0	5
S-O-27	SR-237 (Rossview Rd)	Dunbar Cave Rd	Powell Rd	Safety Study	0.42		Short-Term	Low	35	0	0	15	10	5	0	5
S-O-29	Memorial Dr	Channing Pl	Landrum Pl	Safety Study	0.30		Short-Term	Low	35	0	0	15	10	5	0	5
*Improvements shown in this table are recommended countermeasures based on planning level technical analysis. This plan recommends final selection of countermeasures and reasonable limits during implementation phase. Short-Term projects are those that can be implemented and completed within a 5-year timeframe. Medium-Term projects are those that can be implemented and completed within a 5-year timeframe but may include elements that may require more time to implement, monitor, or enforce.																



Appendix F: Self-Certification Worksheet



# Safe Streets and Roads for All 4 A Self-Certification Eligibility Worksheet

All applicants should follow the instructions in the NOFO to correctly apply for a grant. See the <u>SS4A website</u> for more information.

Table 1 of the SS4A NOFO describes <u>eight components of an Action Plan</u>, which correspond to the questions in this worksheet. Applicants should use this worksheet to determine whether their existing plan(s) contains the required components to be considered an eligible Action Plan for SS4A.

This worksheet is required for all SS4A **Implementation Grant** applications and any **Planning and Demonstration Grant applications to conduct Supplemental Planning/Demonstration Activities only**. Please complete the form in its entirety, do not adjust the formatting or headings of the worksheet, and upload the completed PDF with your application.

## Eligibility

An Action Plan is considered eligible for an SS4A application for an Implementation Grant or a Planning and Demonstration Grant to conduct Supplemental Planning/Demonstration Activities if the following two conditions are met:

- You can answer "YES" to Questions 3, 7, and 9 in this worksheet; and
- You can answer "YES" to at least four of the six remaining Questions, 1, 2, 4, 5, 6, and 8.

If both conditions are not met, an applicant is still eligible to apply for a Planning and Demonstration Grant to fund the creation of a new Action Plan or updates to an existing Action Plan to meet SS4A requirements.

# **Applicant Information**

Lead Applicant: \_\_\_\_\_

UEI: \_\_\_\_\_

## **Action Plan Documents**

In the table below, list the relevant Action Plan and any additional plans or documents that you reference in this form. Please provide a hyperlink to any documents available online or indicate that the Action Plan or other documents will be uploaded in Valid Eval as part of your application. Note that, to be considered an eligible Action Plan for SS4A, the plan(s) coverage must be broader than just a corridor, neighborhood, or specific location.

Document Title	Link	Date of Most Recent Update

## **Action Plan Components**

For each question below, answer "YES" or "NO." If "YES," list the relevant plan(s) or supporting documentation that address the condition and the specific page number(s) in each document that corroborates your response. This form provides space to reference multiple plans, but please list only the most relevant document(s).

### 1. Leadership Commitment and Goal Setting

Are **BOTH** of the following true?

- A high-ranking official and/or governing body in the jurisdiction publicly committed to an **YES** eventual goal of zero roadway fatalities and serious injuries; and
- The commitment includes either setting a target date to reach zero OR setting one or more targets to achieve significant declines in roadway fatalities and serious injuries by a specific date.

Note: This may include a resolution, policy, ordinance, executive order, or other official announcement from a high-ranking official and the official adoption of a plan that includes the commitment by a legislative body.

Document Title	Page Number(s)

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

## 2. Planning Structure

To develop the Action Plan, was a committee, task force, implementation group, or similar bodyYESestablished and charged with the plan's development, implementation, and monitoring?NO

Note: This should include a description of the membership of the group and what role they play in the development, implementation, and monitoring of the Action Plan.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)

NO

## 3. Safety Analysis

Does the Action Plan include **ALL** of the following?

- Analysis of existing conditions and historical trends to provide a baseline level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region;
- Analysis of the location where there are crashes, the severity, as well as contributing factors and crash types;
   NO
- Analysis of systemic and specific safety needs, as needed (e.g., high-risk road features or specific safety needs of relevant road users); and,
- A geospatial identification (geographic or locational data using maps) of higher risk locations.

Note: Availability and level of detail of safety data may vary greatly by location. The <u>Fatality and Injury</u> <u>Reporting System Tool (FIRST)</u> provides county- and city-level data. When available, local data should be used to supplement nationally available data sets.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)

## 4. Engagement and Collaboration

Did the Action Plan development include ALL of the following activities?

- Engagement with the public and relevant stakeholders, including the private sector and community groups; YES
- Incorporation of information received from the engagement and collaboration into the plan; and
   NO
- Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate.

Note: This should be a description of public meetings, participation in public and private events, and proactive meetings with stakeholders.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)

## 5. Equity Considerations

Did the Action Plan development include ALL of the following?

Considerations of equity using inclusive and representative processes;
 The identification of underserved communities through data; and
 Equity analysis developed in collaboration with appropriate partners, including population characteristics and initial equity impact assessments of proposed projects and strategies.

Note: This should include data that identifies underserved communities and/or reflects the impact of crashes on underserved communities, prioritization criteria that consider equity, or a description of meaningful engagement and collaboration with appropriate stakeholders.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)

## 6. Policy and Process Changes

Are **BOTH** of the following true?

- The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and
   NO
- The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.

Note: This may include existing and/or recommended Complete Streets policy, guidelines for community engagement and collaboration, policy for prioritizing areas of greatest need, local laws (e.g., speed limit), design guidelines, and other policies and processes that prioritize safety.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)

## 7. Strategy and Project Selections

Does the plan identify a comprehensive set of projects and strategies to address the safety problems in the Action Plan, with information about time ranges when projects and strategies will be deployed, and an explanation of project prioritization criteria?

Note: This should include one or more lists of community-wide multi-modal and multi-disciplinary projects that respond to safety problems and reflect community input and a description of how your community will prioritize projects in the future.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)

#### 8. Progress and Transparency

Does the plan include **BOTH** of the following?

- A description of how progress will be measured over time that includes, at a minimum, outcome data.
- The plan is posted publicly online.

Note: This should include a progress reporting structure and list of proposed metrics.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)

## 9. Action Plan Date

	YES
Was at least one of your plans finalized and/or last updated between 2019 and April 30, 2024?	
······································	NO

Note: Updates may include major revisions, updates to the data used for analysis, status updates, or the addition of supplemental planning documents, including but not limited to an Equity Plan, one or more Road Safety Audits conducted in high-crash locations, or a Vulnerable Road User Plan.

If "YES," please list your most recent document(s), date of finalization, and page number(s) that corroborate your response.

Document Title	Date of Most Recent Update	Page Number(s)

