



Town of Knightdale

Staff Report

Title: Safety Action Plan

Staff: Andrew Spiliotis, Senior Planner

Date: December 18, 2024

Director Signature:

Asst. Town Manager Signature:

Town Manager Signature:

PURPOSE:

To adopt the Safe Streets for All Safety Action Plan and associated Standard Specifications additions.

ENGAGEMENT:

The SAP process included the creation of a Vision Zero Task Force which included representatives from Administration, Development Services, Fire, Police, Public Works and Town Council. The Task Force met multiple times throughout the year long process to provide direction and review of the SAP. The process also included a SAP kickoff open house, an open house on the draft SAP, a presence at the Comprehensive Plan's open house and tables at the Latin American Festival and the Arts and Education Festival. Social media posts were made advertising both open house events, a public input survey and the draft plan. The SAP's website included an interactive map survey where staff received helpful feedback around priorities and safety concerns.

SAFETY ACTION PLAN OVERVIEW:

The Town was awarded a USDOT Safe Streets for All planning grant to create a Safety Action Plan in February of 2023. After finalizing the USDOT agreement and securing Kimley-Horn and Associates as the consultant, the Town kicked off the plan in December of 2023. The year long process began with an existing conditions State of Safety analysis alongside public outreach and stakeholder interviews. The draft SAP develops recommendations for a High Injury Network Map, Priority Corridors for Safety Projects, Quick Build Projects, Roundabout Design Guidance, Roundabout Feasibility Analysis, and CTP Corridor Speed Limit Audits. These SAP components are summarized below.

State of Safety Report

- *State of Safety Report* - The State of Safety Report is an existing conditions report that compares crash data from the last five years against relevant demographic variables.
- *High Injury Network Map* - The report also breaks out crash data according to whether or not crashes are fatal, severe injury or a minor crashes. The Task Force agreed to assign higher weights to fatal and severe injury crashes, as well as pedestrian crashes, in order to develop a concentrated corridor heat map or High Injury Network Map. This map depicts areas in Knightdale's planning area where future safety projects should be focused due to the concentration of serious crashes.

Priority Corridors for Safety Projects

- The High Injury Network map was overlaid with public comments and staff feedback to identify corridors where future safety improvements should be targeted. Identifying these corridors and intersections will allow for staff to apply for Safe Streets for All Implementation Grants.



Town of Knightdale

Staff Report

Roundabout Design Guidance

- The SAP developed flexible standard specifications for the design of roundabouts and traffic calming infrastructure. The guidance is designed to adapt to different intersection geometries and constraints. The guidance covers improvement types including a single lane roundabout, a roundabout where a second through lane/slip lane drops off, a mini roundabout, roundabout signage and traffic calming elements such as chokers, medians and chicanes.

Roundabout Feasibility Analysis

- The SAP analyzed twenty-five intersections to determine if roundabouts are feasible given constraints such as roadway grade, traffic congestion and whether a traffic signal or stop sign would function better than a roundabout. The locations selected were all intersections where the Unified Development Ordinance calls for a roundabout based on collector and/or arterial roadways intersecting. The analysis determined fourteen intersections where a roundabout is feasible and the preferred solution. Traffic volumes on Smithfield and Hodge roads near I-87 ruled out several potential roundabouts.
- As a separate deliverable, the SAP included conceptual roundabout designs and cost estimates at five locations: Old Crews Road @ Forestville Road, Hodge Road @ Mingo Bluff Boulevard, Smithfield Road @ Mailman Road, Widewaters Parkway extension @ Old Faison Road, and Laurens Way @ Lynwood Road (mini roundabout).

CTP Corridor Speed Limit Audits

- The SAP analyzed all Comprehensive Transportation Plan (CTP) classified roadways to determine if speed limit adjustments are needed given speed is a major safety variable. The analysis compared observed versus posted speed limits for all CTP roadways. The analysis also provided a more thorough analysis of twenty five corridor segments using the US Limits 2 tool which includes additional variables in developing target speed limits such as the number of driveways and pedestrian activity. The consultant also coordinated with staff to include Town concerns around slower speeds needed in downtown and around schools and transit. The final maps include short term (1-5 years) and long term (6-10 years) speed limit recommendations. The corridor recommendation timelines were coordinated against approved development and corridor urbanization timelines.

Actions

- The draft SAP includes a list of actions that the Town may pursue in order to achieve a safer transportation system. Notable examples include updating the Town's Traffic Calming Policy, implementing speed limit reductions, ongoing safety data monitoring and implementing sidewalk and roundabout projects.

Quick Build Projects - The SAP identified six "quick build" lower cost safety projects that are easier to implement. These projects include:

- *Main Street between Smithfield Road and 1st Avenue*: Parallel parking striping, traffic calming, lane striping and/or sharrows.
- *Hodge Road at Mingo Creek Greenway Crossing*: Restripe excess outer lane pavement for greenway parking and traffic calming.



Town of Knightdale

Staff Report

- *Glen Manor Trail between Fayetteville Street and Village Gate Development:* stripe bike lanes and a through lane divider in order to slow Village Gate traffic.
- *Raised Intersection and/or crosswalk for 1st Avenue at Sycamore Street.* The improvement will bring visibility to the Mingo Creek Greenway crossing, slow traffic and improve stop sign adherence.
- *“No Trucks” Signage from Lynwood Road/Laurens Way/Parkside Commons Drive:* Signage would prevent heavy vehicles from cutting through the neighborhood and creating a safety concern for pedestrians and cyclists.
- *Laurens Way @ Parkside Commons Mini Roundabout:* The roundabout would slow neighborhood cut through traffic.

Appendices - The draft’s appendices include:

- Appendix A—Corridor Urbanization Decision Tree (*corridor urbanization threshold for when to request speed limit reductions*)
- Appendix B—Data Management Plan
- Appendix C—Roundabout Design Guidance
- Appendix D—Roundabout Feasibility Assessment
- Appendix E—Implementation Grant Checklist

APPLICABLE REGULATIONS:

- NCGS 160D-501 “Plans”
- NCGS 160D-605 “Governing Board Statement”

ATTACHMENTS:

- Draft SAP and Appendices

REVISIONS TO THE NOVEMBER 21 JOINT PUBLIC HEARING DRAFT SAP:

The Joint Public Hearing concluded the draft Safety Action Plan (SAP) comment period that ran from October 25 until November 21, 2024. An Open House was held on the draft before the Joint Public Hearing. The Joint Public Hearing presentation included a recap of the SAP process and the contents of the SAP, as well as an overview revisions to the October 25 draft SAP. The draft SAP has been updated since the Joint Public Hearing to address comments received through the website, at the Open House and at the Joint Public Hearing. The following edits to the draft were made:

Action Table – The changes to the draft were all related to expanding upon safety actions related to SAP implementation. The following actions were added and/or edited:

- *Table Organization:* The action table was organized according to timeline and action type.
- *School Zone Signage:* Added a recommendation to develop school zone signage plans for all schools in our planning area, not just those along the High Injury Network map and US Limits 2 analyzed corridors.
- *Pedestrian Scale Lighting:* Added a recommendation for the Town to develop a lighting approach focused on safety and identifying appropriate locations for pedestrian scale lighting.
- *Communicating Safety Data:* Added a recommendation to develop an online approach for communicating safety data to the community



Town of Knightdale

Staff Report

LAND USE REVIEW BOARD SUMMARY:

This project was heard at the Land Use Review Board on Monday, December 9, 2024. Board member Tabitha Hagen commented that enforcement is a key part of safety, particularly around vehicles stopping for pedestrians in crosswalks. Board member Taylor Norton asked what the timeline is for adding flashing school zone signage at schools. Andrew Spiliotis noted that the Vision Zero Task Force will be discussing pilot project opportunities at their first meeting on December 10th.

COMPREHENSIVE PLAN CONSISTENCY:

North Carolina General Statute §160D-604 requires that **prior to** adopting or rejecting any amendment, the governing board shall adopt a statement describing whether its action is consistent with the adopted Comprehensive Plan and why the Board considers the action to be reasonable and in the public interest.

It is staff's opinion that the proposed SAP is consistent with the KnightdaleNext 2035 Comprehensive Plan. The SAP supports the Comprehensive Plan's guiding principles of an *inclusive, livable town* and a *multi-modal transportation system* through encouraging investments in projects that promote safety for drivers, pedestrians, bicyclists and transit riders. The SAP also supports the guiding principle of *Community Facilities and Services* through recommendations for ongoing investments in transportation safety projects.

The SAP is also consistent with the Comprehensive Transportation Plan (CTP) which is a subset of the KnightdaleNext 2035 Comprehensive Plan. The SAP's recommendations and priority projects support the CTP's guiding principles of *improving multi-modal connections, improving roadway safety by reducing speeds, and focusing on pedestrian crossings along major corridors*. The SAP also supports the CTP and Comprehensive Plan's vision for Bus Rapid Transit along Knightdale Boulevard through recommendations to add pedestrian crossings along the corridor.

STAFF RECOMMENDED WRITTEN ADVISORY STATEMENT:

"The proposed Safety Action Plan is consistent with the adopted KnightdaleNext 2035 Comprehensive Plan and the adopted Comprehensive Transportation Plan. The Safety Action Plan promotes investments in multi-modal transportation which is a key component of inclusive and livable development. Additionally, the Safety Action Plan emphasizes the need to invest in pedestrian facilities along Knightdale Boulevard in order to improve safety and encourage transit oriented development. Further, it is reasonable and in the public interest as the Safety Action Plan promotes a comprehensive approach to improving safety for all modes of transportation in Knightdale."

RECOMMENDED ACTION:

- Adopt the Safe Streets for All Safety Action Plan with the forwarded statement of plan consistency and adopt Resolution #24-12-18-003.