



Town of Knightdale

Staff Report

Title: Safety Action Plan

Staff: Andrew Spiliotis, Senior Planner

Date: November 21, 2024

Director Signature:

Asst. Town Manager Signature:

Town Manager Signature:

PURPOSE:

The Joint Public Hearing will conclude the comment period on the draft Safety Action Plan (SAP) that began on October 25, 2024. The Joint Public Hearing presentation will include: 1) a recap of the SAP process and the contents of the SAP; and 2) an overview revisions to the October 25 draft SAP.

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.



Town of Knightdale

Staff Report

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.

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.



Town of Knightdale

Staff Report

REVISIONS TO THE DRAFT:

The consultant has incorporated ongoing staff comments on the initial draft that was released on October 25. The attached draft has been updated since October 25 to include the following:

- *Appendices* - The draft's appendices have been finalized and 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
- *Actions* – Staff provided comments on the table of proposed actions to clarify actions that the Town is already undertaking.
- *Project Prioritization Scoring* – Staff provided direction to adjust project prioritization criteria to provide additional points for roadways that are Town owned versus NCDOT owned given Town owned facilities are more feasible for project implementation.
- *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.
 - *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.
- *Roundabout Guidance (edit underway)* – Based on staff input, the guidance will be revised to specify developers provide an audit of a proposed roundabout's physical dimensions as part of the design package they submit in order to aid staff review. This was consistent with prior recommendations but was not explicitly listed.



Town of Knightdale

Staff Report

PUBLIC COMMENTS RECEIVED:

- A comment was provided using the SAP website ahead of the public comment period but was not discovered by the consultant until during the public comment period due to the comment being accidentally logged as spam by the website. The comment was a request from the Glenmere Home Owners Association management company requesting the SAP explore a recommendation for traffic calming on Glen Manor Trail which will experience cut through traffic to the Village Gate development. Staff responded that the SAP includes a quick build project intended to slow traffic on Glen Manor Trail.

APPLICABLE REGULATIONS:

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

ATTACHMENTS:

- Draft SAP
- Draft SAP Appendices

RECOMMENDED ACTION:

- After receiving public comment, close the public hearing and refer to the December 9, 2024 Land Use Review Board Meeting for an advisory statement and recommendation.