

SECTION 12.00
TRAFFIC CALMING AND PEDESTRIAN SAFETY

TABLE OF CONTENTS

12.01 POLICY STATEMENT

12.02 DEFINITIONS

12.03 PROGRAM OUTLINE

A. Process-List

B. Special Radar Signs

12.04 PROCESS FLOW CHART

FIGURE 4.1: Process Flow Chart

APPENDIX A: Priorization Criteria

APPENDIX B1: Permitted Devices

APPENDIX B2: Non-Permitted Devices

APPENDIX C: FAQ's

12.01 POLICY STATEMENT

The TOHS Neighborhood Traffic Calming and Pedestrian Safety program's purpose is to address that all requests as they pertain to transportation safety concerns on town-maintained roadways. The program aims to prioritize and implement police enforcement, traffic calming, and pedestrian safety measures based on safety, applicability, budget, efficacy, and partnerships. The aim of this program is to standardize and keep residents informed throughout the process.

The core of the program relies on data driven decisions and observations. As requests for enforcement and operation improvements are received, the program's goal is to concur that the actual data matches the request with data collected by standard transportation analysis methods.

All requests will be confirmed and prioritized using measured traffic data. Requests that are received but not supported by traffic data will be prioritized by the actual measured data and not by anecdotal reports.

If the request is supported by field verified data, this program will utilize traffic calming measures that are proven and supported by past experience, industry standards, and minimal impact to emergency response times. The town will prioritize solutions that provide effective, feasible, and fiscally responsible solutions.

12.02 DEFINITIONS

Affected Residents – An affected resident is a resident that lives on the street under study within the Area of Influence as determined by staff.

Affected Street – A roadway section with residential land use within the area of influence.

Area of Influence – The area of influence includes properties abutting the street under study and properties on intersecting streets within a reasonable distance of the roadway section as determined by staff.

If the roadway section or specific location under study is near a neighborhood amenity like neighborhood pool, playground, etc., property owners that access the amenity by foot but live further than 300' feet away are strongly encouraged to participate as well.

Direct Fronting – A property is considered direct fronting when its address and driveway are oriented to the roadway section or as staff determines appropriate.

Request Petition – Petition for traffic calming measures submitted by the property owners in the Area of Influence.

Neighborhood Representative- A single point of contact that acts as a link between Town staff and the residents initiating the Request Petition.

Sight Distance- The distance within which the operator of a vehicle from a specified height has a clear, unobstructed view of an object of a specified height standing on it. As sight distance increases so does the ability to avoid traffic incidents.

Street Index Score (SIS)- Numeric score (0-100+) generated from traffic data by staff.

Traffic Calming – The Institute of Transportation Engineers defines traffic calming as “the combination of mainly physical measurements that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users” (ITE Journal, January 1997).

Pedestrian Safety measure- Safety improvements implemented as countermeasures to manage the conflict between pedestrians and motor vehicles (FHA Publication: Pedestrian Facilities Users Guide – Providing Safety and Mobility, March 2002).

12.03 PROGRAM OUTLINE

Traffic enforcement and calming requesters may submit requests for the neighborhood safety and traffic calming process by contacting the Utilities and Infrastructure Department or by submitting an Action Request (AR) application to the Town. Digital submissions are encouraged; however, paper versions will be available at Town Hall along with staff assistance.

Minimum Requirements of Action Requests (AR):

- Description of specific police enforcement, neighborhood safety, or traffic issue;
- Contact information for a neighborhood representative;
- Petition with signatures from 75% of residents whose properties are directly fronting the affected street segment and are located in the Areas of Influence (*only one (1) property owner signature per household will be accepted*);

Please note that the AR's may be submitted at any time and TOHS staff will review the request as resources allow (typically within 2-4 weeks of receipt).

Upon receipt of the AR , Town staff will (See section 4.0 for flowchart)

- Evaluate the request
 - Evaluation may include:

- Confirmation of area of influence, direct fronting properties, affected properties
 - Site investigation
 - Data collection (vehicle and pedestrian)
 - Sight Distance Analysis
 - Accident History
 - Complaint History
- Generate a Street Index Score
 - Street index score is determined and can be anywhere from 0 – 100+.
 - As street index scores increase so does the need for traffic calming measures.
 - Each request shall meet or exceed the threshold for traffic calming to become eligible for improvements.
 - Requests received that do not meet the traffic calming threshold will be logged as a historic request and considered for possible enhanced police enforcement (if applicable) .
 - Requests not meeting the traffic calming threshold will not be eligible for a re-analysis for 12 months.
- Categorize Project
 - Eligible projects will be categorized into one of three levels
 - **Level I Measures** – May consist of treatments such as an increase in police enforcement, education, HOA outreach, and maintenance of landscaping.
 - **Level II Measures** – May consist of non-structural treatments such as pavement marking, signage analysis and maintenance.
 - **Level III Measures**- May consist of structural treatments such as curb extensions, geometric modifications, mini-traffic circles, landscaping, and center islands.
- Prioritize Project
 - Projects are prioritized based on, but not limited to criteria identified in Appendix A.
 - Eligible projects get entered into the Neighborhood Safety and Traffic Calming Community Investment Project list according to their prioritization.
- Seek Funding
 - Level I Measures generally require no capital investment from the town and may be implemented as time and resources allow.

- Level II Measures have higher costs and construction requirements and will be implemented as the yearly operating budget permits. Projects that require funding in excess of the yearly operating budget will remain on the project list for funding in a following budget year or as funds are available.
- Level III Measures require significant resources and funds and will be considered for funding as part of the town's 5-year Community Investment Plan.
- Design
 - Once a project is fully funded, Utilities and Infrastructure Department (U&I) staff will complete a construction drawing for the appropriate measure to be implemented.
 - Proposed measures will be shared with applicants for additional input.
 - Proposed improvements will be designed based on standard engineering practice and all applicable requirements, regulations, and site constraints.

Construction

- Project Review
 - Approximately 1 year after the project is implemented/constructed, a follow up meeting with residents will be held to review the effect of the work and receive feedback.
 - This meeting allows the Town to gather feedback to continuously revise and improve how we respond to Neighborhood Safety and Traffic Calming requests.

A. PROCESS – LIST (SEE FIGURE 4.1 FOR FLOW CHART):

- STEP 1 - HOA/Resident Submit Action Request, AR.
 - Perceived issue
 - Neighborhood Consensus
- STEP 2 - Town Staff evaluate request using Table A-1: Street Index Score
 - Threshold is met – street segment will advance to next step.
 - Threshold is not met – process stops. No additional requests for street segment will be accepted for 24 months.
- STEP 3 -Determine appropriate measure
 - Level I

- Level II
- Level III
- STEP 4 - Project prioritization
 - Work Order, current Fiscal Year (FY) (depending on prioritization position)
 - Community Investment Plan (CIP), future FY (depending on prioritization position)
- STEP 5 - Engineering & Cost Estimate developed
- STEP 6 – Acquire funding
- STEP 7 - Implement measure
- STEP 8 – Follow-up

B. SPECIAL RADAR SIGN PROGRAM

Radar signs have been proven to be a cost-effective solution that significantly reduces speeding problems. Signs can be installed, with staff approval, temporarily or permanently in neighborhoods to provide motorists with visual feedback on their operating speed.

Radar signs may be prescribed by staff once the request has been categorized. As project funding is available and higher priorities are met, radar signs may be implemented with town funds as previously described.

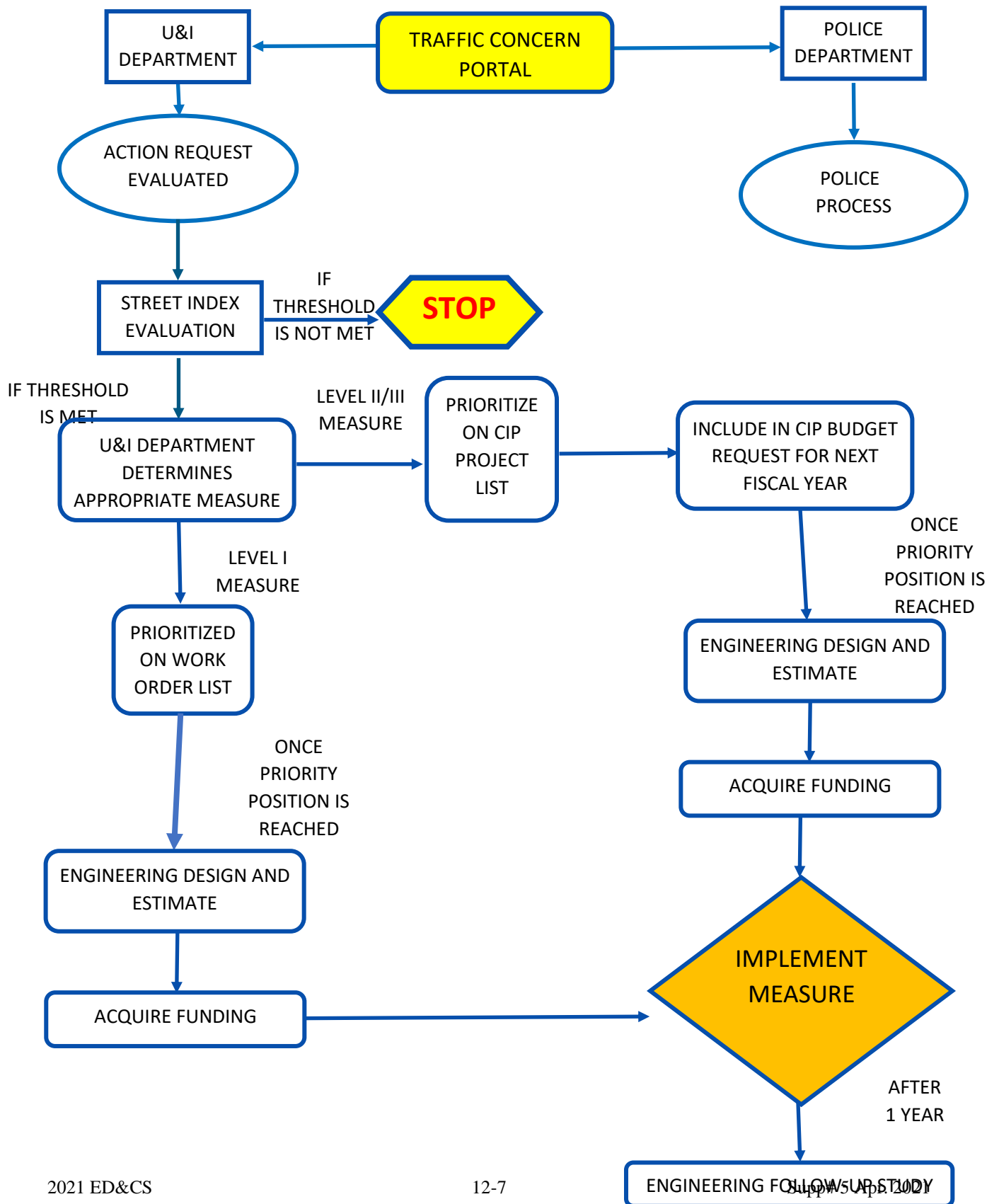
In addition to the standard town funding schedule, requesters may accelerate the implementation of radar signs by including financial contributions or by fully purchasing the equipment with the requester's/HOA funds.

Signs that are completely funded by a requestor will be the property of the requester and not the town. Operation and maintenance of the radar sign will be the responsibility of the requestor however town staff may assist with installation as resources are available.

If you or your community would like to purchase and maintain a radar sign, please indicate this on the Action Request form and your request will be expedited.

Please note that radar sign implementation within the Town's right of way requires town approval prior to installation. The town maintains the right to require relocation or removal of a sign from its right of way.

4.1 PROCESS FLOW CHART



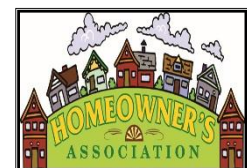
Appendix A: Prioritization Criteria

- Street Index Score is determined by using the following criteria:
 - Traffic Speed
 - Traffic/Pedestrian Volume
 - Crash History
 - Emergency Response Route
 - Existing Bike Route
 - Nearby Pedestrian Generators (pool, business, bus stop etc.)
 - Existing Sidewalks
 - Existing traffic calming measures
 - Street width
 - Posted speed limit
 - Street design and geometry
 - Street classification
- Available funding (Town funds, requester's financial participation, etc.)
- Project Costs
- Location of project (Town ROW or NCDOT ROW)
- Property needs

Appendix B1: Permitted Devices

Level 1:

- Enforcement through visible & active Police presence
 - Presence of law enforcement encourages compliance with traffic rules.
 - Limited Resources
- Neighborhood Awareness/Outreach/Education
 - Distribute safety information/ HOA communications through social media/Education
- Visibility Improvements through tree and shrub trimming
 - Removes obstructions to oncoming traffic at Intersections



Level 2:

- Radar Sign

- Displaying travel speed of oncoming vehicles on the device reminding them to slow down when travelling too fast
- HOA's or individuals in a neighborhood may purchase a radar display (subject to Town approval)
- Limited number of trailers available



- Pavement Treatments (Striping/Texture/Patterns)
 - Special pavement markings to alert drivers of special conditions



- Warning Signage
 - Inform travelers of traffic laws, advanced warnings of changes to traffic conditions (i.e. stop ahead, reduced speed ahead, etc.)
 - Must meet MUTCD warrants. Contribute to visual clutter, can result in signs being ignored



- Traffic Control Signs
 - Stop signs, one-way, etc. Signage
 - MUST meet MUTCD warrants and is NOT effective at controlling vehicles' speed.



Level 3:

- High Visibility Crosswalks/Flashing Beacons
 - Placed at uncontrolled cross-walk to increase driver visibility to drivers and increase crosswalk safety
- Geometric Modifications: Bulb-Outs/Neckdowns/Chokers
 - Travel lane width reduction
 - Depends on ex. conditions & drainage. Requires regular maintenance if landscaped
- Bike Lanes/Sharrows
 - Provide specific lanes for bicyclists on the roadway
 - Depends on existing conditions
- Median/Center Island



- Travel lane width reduction to deter speeding
- Can limited access, depends on ex. conditions & drainage. Requires regular maintenance if landscaped



- Traffic Circles/ Round-a-bouts
 - Regulates traffic at an intersection without the use of stop signs, signals
 - Requires community buy-in, depends on existing conditions. Requires regular maintenance if landscaped



- Sidewalks/Multi-Use Paths/Greenways
 - Provide separate travel routes for pedestrians and bicyclists
 - Depends on existing conditions & drainage. Requires regular maintenance



- Traffic Signals
 - Regulates traffic at higher-volume intersections
 - Must meet MUTCD warrants and depends on existing conditions



Appendix B2: Non-Permitted Devices

- Traffic Control Signs
 - Stop signs, one-way, etc. signage
 - Unless they meet MUTCD warrants, traffic control signs are NOT effective at controlling vehicles' speed.
 - If they do not meet MUTCD warrants, they are not duly erected and therefore non-enforceable by Police.
 - Studies and research show that when unwarranted stop signs are present, motorists tend to ignore them. One reason for that is that if a motorist approaching the intersection on the major road (which typically does not have a stop sign) has to slow down and stop due to an unwarranted stop sign, BUT the motorist can see that no other ARs on the minor road approaches are present, he/she will be less willing to stop.
Note: this mentioned sight distance criteria is only one criterion of the MUTCD criteria.



- Pedestrians and other motorists are being exposed to a higher risk of being hit by a vehicle because they falsely believe that the vehicle will stop.
- Overall speed will not be reduced, vehicles make up for lost time on other stretches of the road.
- Residents living near stop signs will experience an increase in traffic noise through additional stopping and starting causing increased tire and engine noise.
- Additional stopping and idling at unwarranted stop signs also increase automobile exhaust and fuel consumption.

- “Slow – Children at Play” Signs

- These signs are NOT approved by the MUTCD.
- The generic message of these signs does not command sufficient motorist attention since motorists are generally aware of the increased possibility of children playing in adjacent yards and sidewalks when they are driving on any residential street.
- They are inappropriate for public streets since they convey the suggestion that playing on the street is an acceptable behavior, which it is not. Additionally, the installation of these signs may lead parents and children to believe they have an added degree of protection, which these signs do not provide.



- Speed Humps

- This measure substantially delays emergency response times since emergency response vehicles need to cross it very slowly
- This measure increases expenses on emergency response vehicles due to additional wear and tear
- Overall speed will not be reduced since vehicles make up for lost time on other stretches of the road
- Residents living near stop signs will experience an increase in traffic noise through additional stopping and starting causing increased tire and engine noise
- Additional stopping and idling at unwarranted stop signs also increase automobile exhaust and fuel consumption
- Maintenance issues during snow and ice removal



Note: Existing speed humps that are still located within the limits of Holly Springs received approval at a time before the Town’s policy on speed humps was revised.

Appendix C: FAQ's

Q: I observed vehicles driving faster than the posted speed limit in my neighborhood. What can the Town do about it?

A: In order to make sure that we treat everyone equally and manage the Town resources, we have a process we can step through before just assuming a speeding problem.

Traditional police enforcement would be the Town's first measure. Please use the email or the link below to contact the Police Department in this regard:

trafficcomplaints@hollyspringsnc.us

<http://www.hollyspringsnc.us/1248/Report-a-Concern-about-Speeding-or-Vehic>

If there appears to be an excessive speeding issue from the observation of town staff, a speed, volume, or other engineering study may be completed as resources permit.

Once study results are received, staff will consider all applicable information and may propose a traffic calming improvement to reduce the problem.

Q: Will the Town install a speed hump? I see them around town on some roads.

A: The Town no longer approves the installation of speed humps on town roads. At one time speed humps were approved on Town roads but are no longer permitted due to the following reasons:

- Delay in emergency response times
- Accelerated wear and tear on vehicles
- Ineffectiveness for speed control along the corridor
- Noise complaints from adjacent property owners
- Damage to trailers and low clearance vehicles
- Pavement maintenance issues (snow removal, repaving, drainage impacts)

Q: Will the Town install a stop sign or additional stop signs?

A: Studies and research show that stop signs that are implemented but not warranted are ineffective for speed control.

When stop signs are not warranted and an approaching vehicle can clearly see that there is no vehicle on the minor road, they roll through the intersection. Furthermore, unwarranted stop signs give a false sense of security to pedestrians and young children: they assume that vehicles will stop because of the presence of a stop sign.

So how does the Town determine if a stop sign is warranted?

Per the MUTCD (Manual on Uniform Traffic Control Devices for Streets and Highways), one or more of the following criteria's thresholds must be met: reported crash data, minimum vehicular volumes, left turn conflicts, sight distance, street characteristics.

Q: Will the Town install a crosswalk?

A: Crosswalks are permitted and encouraged when appropriate. The Town would utilize the street index score to determine if this measure should be implemented. A crosswalk should be requested for the benefit of pedestrians only and not as a general tool to prevent speeding or reduce traffic volume.

Q: Could the Town install a sidewalk?

A: The town has a process in place through the sidewalk community investment plan (CIP) to receive and prioritize sidewalk requests. The Town regularly retrofits sidewalks along Town roadways. The Sidewalk CIP map is used when sidewalk funding is available. The Town Council selects sidewalk projects to fund and bases their choice on a large number of factors including available funding, existing sidewalk connections, proximity to schools/greenways, and sidewalk connectivity to community areas. Other factors that are considered are HOA contribution to the sidewalk cost and availability of right of way.

Q: Could the Town install a "No Outlet" sign?

A: Upon request, the Town will determine the location of the sign, if applicable. No outlet signs will be installed for temporary road stubs that eventually will connect to a future adjoining subdivision, unless the Town determines that that development will not take place in the foreseeable next 2 years.

Q: Could the Town improve the sight distance at an intersection or other section of the road?

A: If it is determined that the required sight distance is not adequate and does not conform with the MUTCD (see Stop Sign Request above), then measures will be taken either remove the sight obstruction or install measures that would it make safe for motorist to use on the road.

End of Section