

# **COMMONWEALTH TRANSPORTATION BOARD**

## **POLICY AND PROCEDURES**

### **CONTROL OF RESIDENTIAL CUT-THROUGH TRAFFIC**

#### **INTRODUCTION**

Section 46.2-809.1 provides that the Commonwealth Transportation Board (CTB) *may develop a residential cut-through traffic policy and procedure for the control of residential cut-through traffic on designated secondary highways.*

This document sets forth the CTB policy and procedures for the control of residential cut-through traffic on such secondary highways.

#### **POLICY ON RESIDENTIAL CUT-THROUGH TRAFFIC**

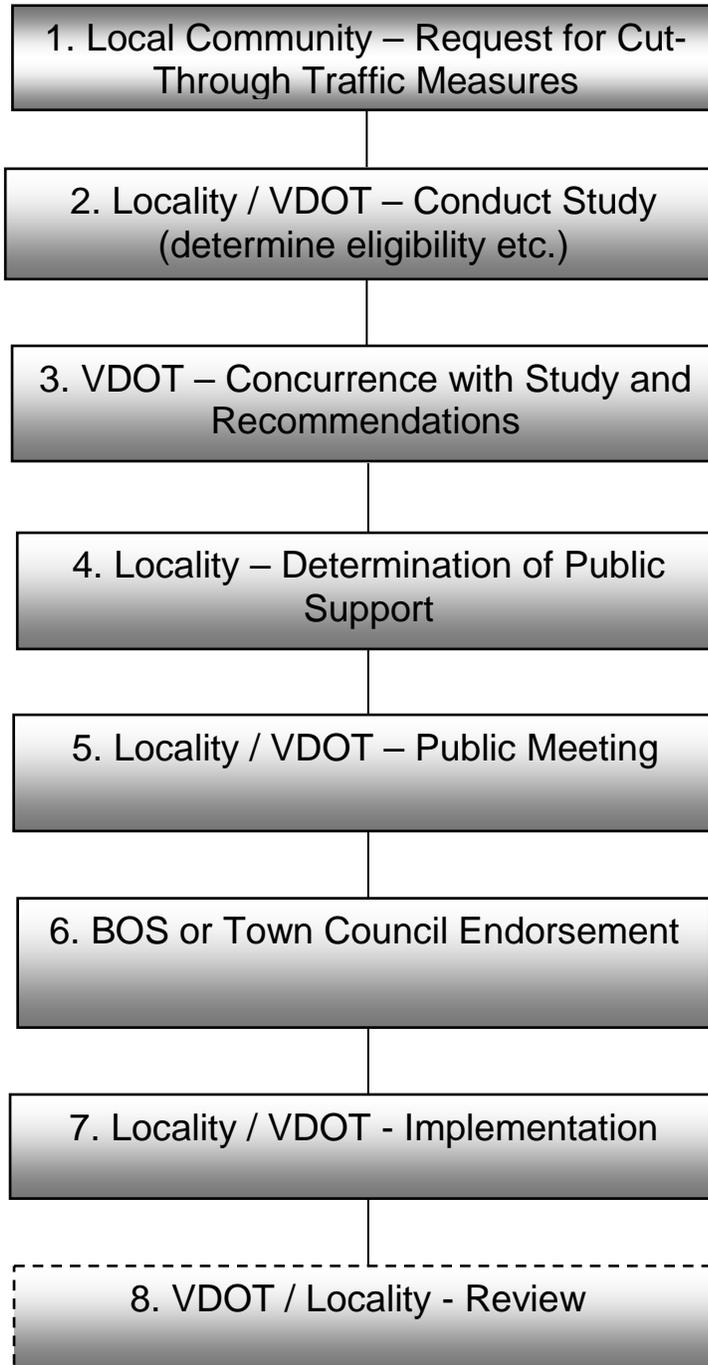
The policy of the Commonwealth Transportation Board is that the Virginia Department of Transportation (VDOT) will recognize the problems associated with residential cut-through traffic on secondary highways and consider reasonable corrective measures that conform to national standards, use and practice for traffic engineering applications.

#### **PROCEDURE**

The procedure for identifying, studying and addressing issues of residential cut-through traffic on secondary highways and the respective roles of the locality and VDOT are laid out in this document.

An overview of the process and the responsible party for each respective task is below:

## THE CUT-THRU TRAFFIC PROCESS



## DEFINITIONS

Residential Cut-Through Traffic is defined in Section 46.2-809.1 as *vehicular traffic passing through a residential area without stopping or without an origin or destination within the area*. Such traffic utilizes a “local residential street” rather than streets whose primary function is to accommodate through traffic.

Local Residential Street is a street within a neighborhood with a functional classification of “local” that primarily provides direct access to residences and other abutting land uses intended for the neighborhood’s use (e.g. a playground or recreation center) or for mobility within the neighborhood. Such streets generally have a speed limit of 25 mph or less.

Note: Streets with a functional classification of “local” that historically served through traffic in an undeveloped or rural area and subsequently experienced significant residential development without provision of other higher functioning roads to accommodate that historical pattern of through traffic, are presumed to still be intended for through traffic and are not considered a “local residential street” for purposes of this policy.

Primary Use Area includes all streets whose residents must traverse the cut through street as the most direct vehicular travel route to their residence, regardless of county or town boundaries.

Note: The section of street identified for cut-through traffic measures and the associated primary use area may not be artificially terminated so as to exclude an adjacent locality or section of street whose residents must likewise traverse the cut through street as the most direct vehicular travel route to their residence.

## PROCESS FOR CUT-THROUGH TRAFFIC

### 1. REQUEST FOR CUT-THROUGH TRAFFIC MEASURES – LOCAL COMMUNITY

Requests for cut-through traffic measures originate from the Homeowners Association (HOA) or Civic Association (CA) for the neighborhood and are submitted to the BOS or Town Council. If there is no HOA or CA, the request may originate from a group comprised of at least 10 residences (or 10% of residences) along the street where cut-through traffic measures are requested. If the BOS or Town Council agrees to pursue cut-through traffic measures, they request the locality to conduct a study to determine the eligibility of the candidate street for cut-through traffic measures and identify appropriate traffic control measures to address the cut-through traffic issue.

### 2. CONDUCT STUDY (determine eligibility, identify potential measures and impacts etc.) – LOCALITY / VDOT

The locality conducts a study to determine the eligibility of the street proposed for cut-through measures, the nature of the cut-through traffic issue, potential cut-through measures to address the issue and their potential impacts. VDOT confirms interim study findings and conclusions etc. and may assist with the study, depending on the capabilities of the locality, the local VDOT District funding priorities and availability of resources. The study will address the following components.

#### i. Eligibility

To be eligible for consideration of cut-through traffic measures the locality first verifies that the street proposed for cut-through traffic measures is a secondary road (route is numbered 600 or above) in the state system of highways and is a “local residential street” as defined above.

ii. Additional Requirements

For streets meeting the above eligibility requirements, the locality then determines that the requirements listed below are met. In order to assess these requirements the locality first identifies the “primary use area” pertaining to the street identified for cut-through measures, then determines if:

- For at least one hour of the day on a typical travel day of concern (typically a weekday, excluding holidays but may be other days/times of day) in a single travel direction, the street must have a minimum “residential cut-through traffic” volume of 150 vehicles or more that comprises 40% or more of the total vehicular traffic in the same hour and travel direction (e.g. on a street for a particular travel day where there is a total hourly traffic volume of 1,375 vehicles in a single travel direction, 550 or more vehicles within the same hour and travel direction must be cut-through traffic).
- There is a reasonable alternate route for traffic to avoid potential cut-through measures on the candidate street that does not create a similar or greater cut-through traffic issue on other “local residential streets.” Residential cut-through traffic controls may only be imposed where such an alternate route can be reasonably identified. In determining a reasonable alternate routing, consideration must be made to its suitability to carry the additional traffic (operations and safety per Section iii), continuity/connectivity and the additional time and distance imposed on motorists.

iii. Identify cut-through issue, proposed measures and their impacts

If it is determined that the additional requirements are also met, the locality then identifies and documents:

- The nature and origin of the cut-through traffic issue (e.g. cut-through traffic is due to left-turning vehicles at a connecting street upstream during the a.m. peak traffic period). Note: in some cases improvements to the surrounding street network, such as updating signal timings at associated intersections etc. may alleviate the cut-through traffic issue.
- The recommended cut-through measures to address the issue (e.g. post signs restricting left turns during the a.m. peak traffic period).
- Consideration of any significant impacts on operations and safety such as on the identified alternate route due to the extent of traffic diverted by the proposed cut-through measures which may create extended traffic queues and delay at intersections or decreased safety for pedestrian circulation and activity.

iv. Selection of Cut-Through Traffic Measures

VDOT’s Guidance for Measures to Control Cut-Through Traffic provides guidance for the selection and application of the appropriate cut-through traffic measures. Traffic control techniques used for cut-through traffic measures must conform to traffic engineering standards and practice and may include regulatory signs that prohibit certain traffic movements and the use of barriers that physically prevent certain vehicular traffic movements. § 46.2-830 provides that the Commissioner of Highways may mark state highways and provide a uniform system of

traffic control devices for such highways under the jurisdiction of the Commonwealth and that all drivers of vehicles shall obey such lawfully erected traffic control devices.

v. Consultation with Local Officials

Potential impacts of the proposed cut-through measures on Fire & Rescue routes, bus routes and student commutes -walking or driving- of nearby schools shall be considered and the associated officials, including law enforcement who may be involved in enforcing the measures, consulted as appropriate. The study recommendations should consider and address concerns appropriately.

vi. Other Affected Locality's

Where the "primary use area," the candidate street for cut-through measures or the identified alternate route potentially extends into or impacts an adjacent locality, concurrence must be obtained from the affected locality for the portion of the identified streets within their boundaries and; for the operational or safety impacts on their streets imposed by the proposed cut-through measures. If agreement between the localities cannot be reached on the various issues, the VDOT District Administrator will render a binding decision.

vii. Study Documentation

Upon completion of the study that addresses the previous requirements, the locality submits the study along with the following documentation for VDOT's review and confirmation.

- Mapping and other information identifying the candidate street for cut-through measures, the alternative routing and the "primary use area" including street names, route numbers, functional classification of streets etc.
- Documentation of the methodology used (e.g. trip generation methods) and the associated data (e.g. # of residences, trip rates, traffic count data etc.) used to determine that the candidate street meets the residential cut-through traffic volume.
- Data and related analysis demonstrating the nature and origin of the cut-through traffic
- Description of the proposed cut-through traffic measures (type, location, time of day etc.)
- The assessment of any impacts of the proposed measures such as on the identified alternate route including related data and analysis etc.

### **3. CONCURRENCE WITH STUDY AND RECOMMENDATIONS – VDOT**

VDOT reviews the study results and recommendations, notes any additional items or limitations etc. that need to be addressed and confirms the eligibility of the street for cut-through measures and approves the study results and recommendations for proposed cut-through traffic measures and their relative impacts.

Where VDOT identifies revisions to the study such as a change to the "primary use area," the nature of the identified cut-through traffic issue, the alternate route, the impacts of imposed measures etc. they will coordinate with the locality on appropriate adjustments.

#### Streets not meeting eligibility criteria

For streets not eligible for cut-through traffic measures, mitigation provided under other VDOT residential programs can be considered, as the requirements for those programs varies.

### Disagreement between Localities

Where there is a disagreement between the parties (the locality originating the proposal, an adjacent locality and/or VDOT) in regard to the study conclusions or recommendations, the VDOT District Administrator will render a binding decision.

## **4. DETERMINATION OF COMMUNITY SUPPORT - LOCALITY**

### Community Review

Upon VDOT's confirmation of the study and recommendations, the locality presents the results of the study and the recommended cut-through traffic measures to the community within the "primary use area" for a review period of 30 days. The study recommendations may be presented via a public meeting and/or by a combination of other means normally used by the locality, HOA, CA etc. to properly inform the local community such as websites, bulletins or forums, e-mail and/or postal distribution or newspapers.

### Conduct Survey, petition etc.

After the community has reviewed the proposal, the locality conducts a petition, survey, or other appropriate process to determine if the required level of community support for implementation of the proposed cut-through measures is met. At least 2/3 of the occupied residences on the streets identified in the "primary use area" must support the proposed cut-through measures as indicated by their signature on a petition or by a ballot/vote etc. where each residence gets a single ballot/vote or signature.

## **5. PUBLIC MEETING – LOCALITY / VDOT**

Upon confirmation that the proposed cut-through measures have the required community support, the locality holds a public meeting to provide for public input on the study recommendations.

### Pre-Public Meeting Requirements

Thirty days prior to the public meeting, a notice of the public meeting is made to the community. Notice shall include the action to be taken, the date of the public meeting and contact information for questions and to submit comments. Notice is made by (i) posting signs at the terminus of the route proposed for cut-through measures and (ii) a notice through media normally used by VDOT or the locality, HOA, CA etc. to inform the local community of events and activities such as websites, bulletins or forums, e-mail and/or postal distribution or newspapers. Additionally, the appropriate state and local elected officials representing the residents in the primary use area and any adjacent (affected) localities should be notified of the public meeting.

### VDOT participation in public meeting

The local VDOT office will coordinate with the locality on their involvement in the public meeting.

## **6. BOS OR TOWN COUNCIL ENDORSEMENT**

Following the public meeting, and after appropriate consideration of the public comments received, the BOS or Town Council submits a resolution to VDOT indicating their endorsement for the implementation of cut-through measures and (i) a description of the measures to be implemented (ii) confirmation that the proposal has the appropriate public support and that at least 2/3 of the occupied residences in the “primary use area” support the proposal (iii) the funding to be used for implementation (iv) confirmation that local law enforcement will enforce any proposed regulatory measures, if appropriate.

The approved resolution is conveyed to VDOT along with (i) a synopsis and transcript of the public meeting and (ii) verification and supporting documentation (survey packet, survey methodology etc.) demonstrating that a valid petition, survey or other process was conducted to determine that the required threshold for community support (2/3 of the occupied residences in the “primary use area” concur with the proposed cut-through measures) was obtained.

### Funding

The approved cut-through traffic measures may be funded with state secondary road funds with the concurrence of the board of supervisors. Due to limited secondary funding, local funds may also be needed, particularly for measures other than signs.

## **7. IMPLEMENTATION –LOCALITY / VDOT**

VDOT reviews the BOS or Town Council resolution and confirms the measures to be implemented.

### Implementation

Prior to the implementation of the identified measures:

- Notification to the BOS or Town Council is made of the pending action and the date of implementation.
- Signs providing notification of the pending action will be placed on the affected street(s) for a 30-day period with contact information of appropriate person(s) to answer questions.
- Implementation of the cut-through measures may include temporary construction to allow for the evaluation of their effectiveness.

The Locality then implements the proposed measures, in consultation with VDOT and where they have the appropriate VDOT permitting to complete such work on VDOT’s right-of-way. VDOT will assist with or carry out the implementation, depending on the capabilities of the locality and the VDOT District funding priorities and resources.

## **8. REVIEW – VDOT / LOCALITY**

After the cut-through measures have been in operation for at least 30 days, if an issue arises or as otherwise deemed necessary, a review of the installed measures may be made to determine their effectiveness and safety. If the review indicates the cut-through measures have resulted in an operational or safety issue, the modification or removal of the measures may be required. VDOT will coordinate with the locality on the appropriate actions to be taken. Typically, any modifications or removal of measures will be conducted by the party that implemented the original measures, utilizing the same source of funding.

VDOT will typically conduct a review of the installed measures however, where the locality installed the measures and if VDOT agrees, they may conduct the review in consultation with VDOT, informing VDOT of the results along with the appropriate documentation.

## VDOT GUIDANCE FOR MEASURES TO CONTROL CUT-THROUGH TRAFFIC

Traffic control techniques used for cut-through traffic measures must conform to standard traffic engineering practice for such applications in conformance with the most current adopted editions of the Manual of Uniform Traffic Control Devices (MUTCD) and the Virginia Supplement to the Manual of Uniform Traffic Control Devices, VDOT's Road and Bridge Specifications and Standards and Road Design Manual.

Traffic control applications may include regulatory signs that prohibit certain traffic movements or barriers that physically prevent certain vehicular movements. Barrier applications must conform to any applicable VDOT design standards and specifications. Below is guidance for various applications however, there may be other viable applications not included here.

### Regulatory Signs

Various regulatory signs placed appropriately at an intersection in conformance with the MUTCD etc. (per above) can be used to prohibit certain traffic movements in order to control cut-through traffic. Examples of such signs that may be used are below.



To illustrate the use of these signs, where a cut-through traffic issue is due to left-turning traffic, a sign restricting left turns could be installed. Typically, such issues occur at specific times of the day therefore, a regulatory sign restricting left turns would also include a supplementary plaque specifying the times it applies (as shown on above sign on the far right).

NOTE: Where these signs are used in conjunction with Virginia Code Section 15.2-2022.1, a supplementary plaque would be added indicating "Except by Permit" or "Except Buses or by Permit" where buses are also exempted to allow residents in the designated area to make turns where they would otherwise be restricted. The application of Section 15.2-2022.1 is limited to use by a county operating under the urban county executive form of government (presently this is only Fairfax County), after an ordinance providing for the issuance of permits to residents in a designated area which allows them to make turns into or out of the area where they are otherwise restricted.

## Other Signs

Various signs are sometimes used where they are not specifically intended under standard traffic engineering practice. For example, All-Way stops (AWSC) are sometimes used at one or more intersections along a street in an attempt to reduce cut-through traffic or slow traffic. However, such use where it is not warranted may introduce additional safety risks. For example, numerous studies show that unwarranted stop signs may increase safety risks to crossing pedestrians as well as vehicles who presume motorists will stop as required at a stop sign when in reality they may proceed without stopping, in an attempt to make up lost time for stops they perceive as unnecessary.

Therefore AWSC should only be used per standard traffic engineering practice in conformance with the MUTCD which refers to their use to address a specific safety issue at an intersection such as where approaching traffic encounters an intersecting street/location with a high volume of crossing vehicles/pedestrians and/or cannot properly see such crossing vehicles/pedestrians, thus requiring a stop.

## Barriers

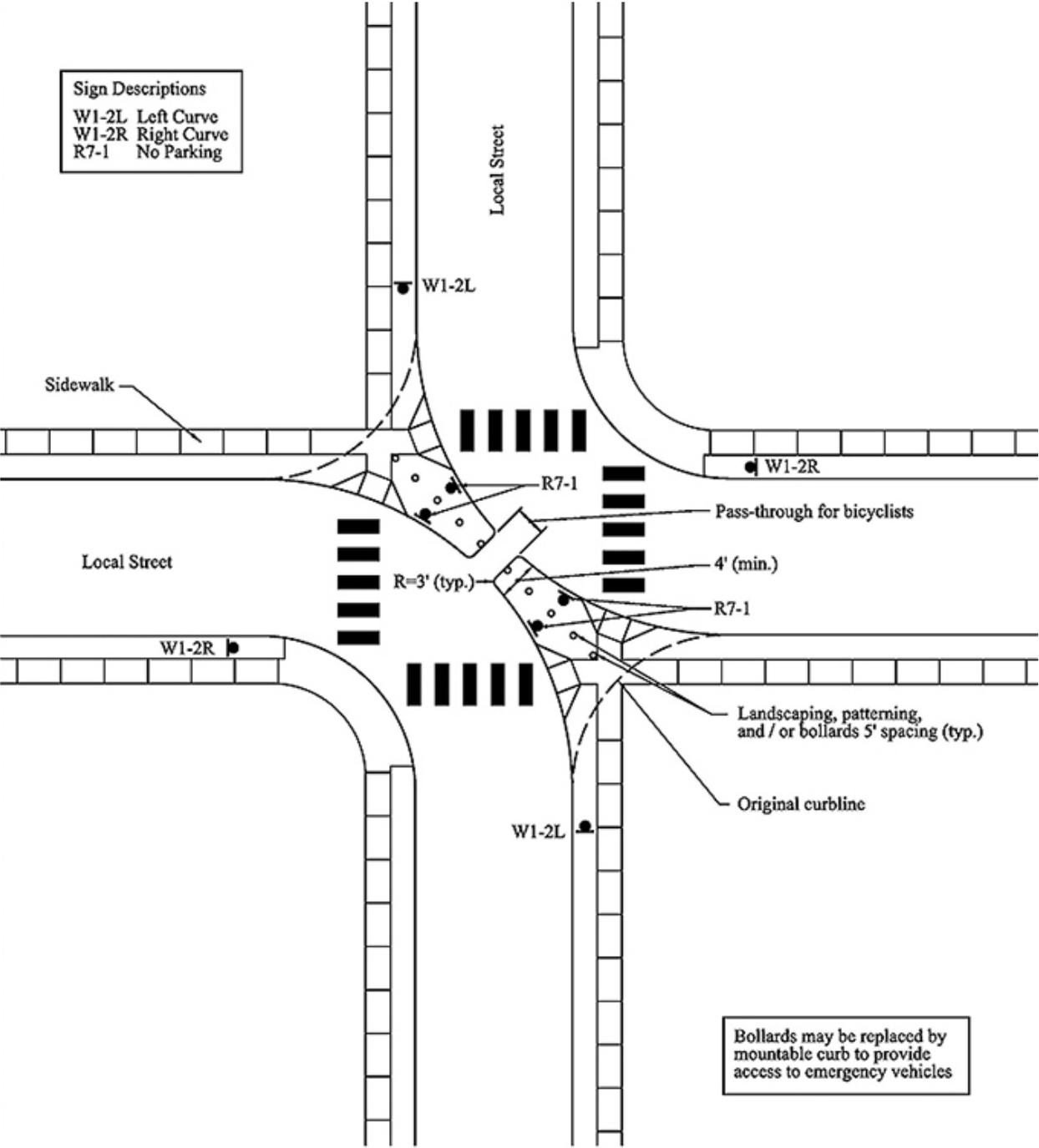
Barriers can be constructed in various configurations to physically prevent certain vehicular traffic movements while still allowing access for pedestrians and bicycles as well as emergency vehicles in some instances by utilizing mountable curb or bollards etc.

There are various disadvantages with barriers such as they are in effect (i.e. restrict traffic) for all hours of the day, prohibit (apply to) all types of traffic (i.e. through-traffic as well as local traffic) and impede emergency and transit access as well as large trucks. However, barriers should be constructed to allow access by bicyclists and pedestrians and; provide access for emergency vehicles where applicable by utilizing mountable curb, bollards etc.

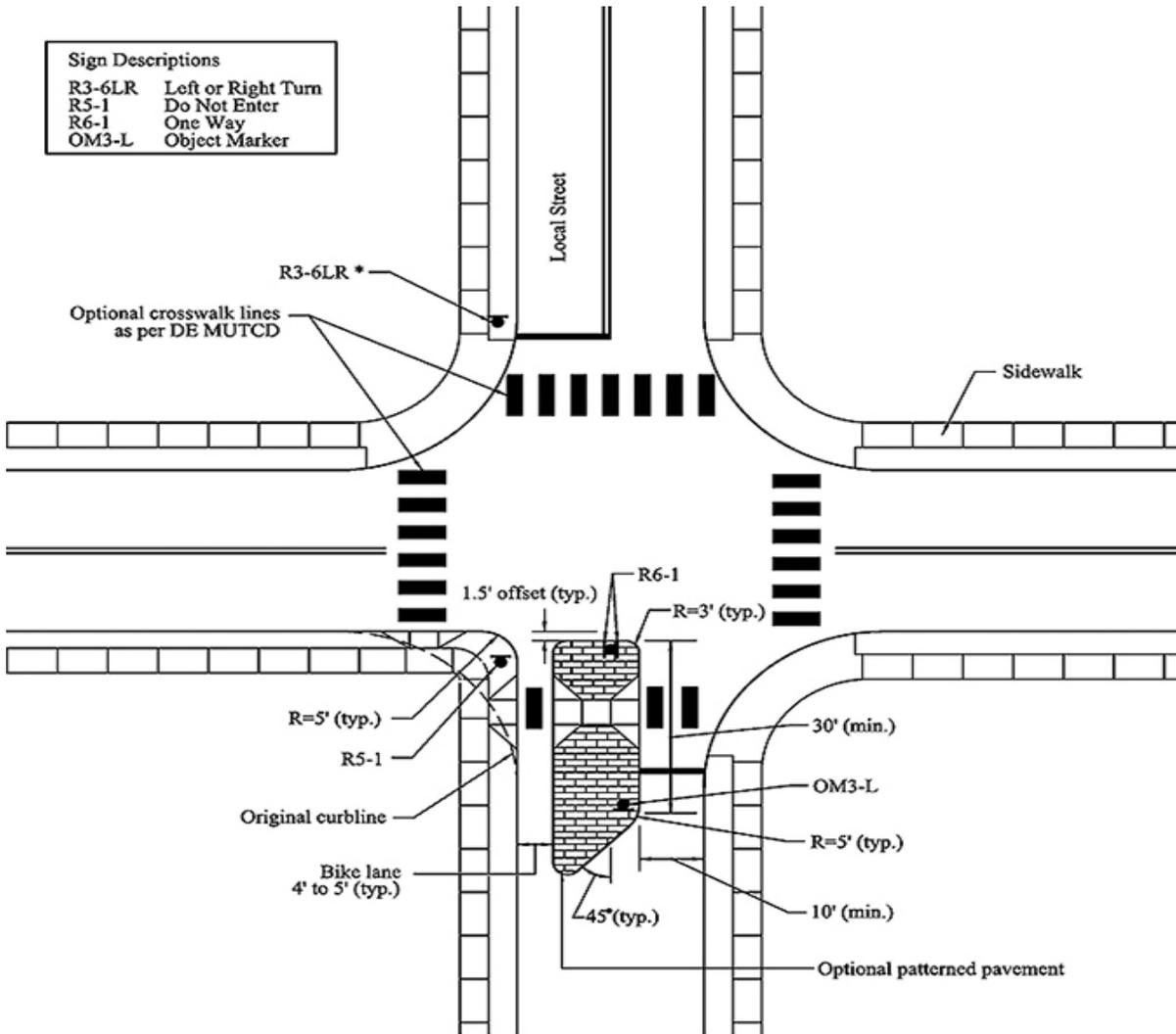
Examples of the potential application of barriers drawn from the Federal Highway Administration (FHWA) "Traffic Calming e-primer" (see [https://safety.fhwa.dot.gov/speedmgt/ePrimer\\_modules/module3pt3.cfm#mod321](https://safety.fhwa.dot.gov/speedmgt/ePrimer_modules/module3pt3.cfm#mod321)) are below and include; diagonal diverters, full closures, half closures, median barriers and forced turn islands.

Note: Refer to the above FHWA site for further details on the appropriate application and implementation of the various barriers which may have limitations in regard to their design, operational aspects, maintenance and location/placement. Additional constraints may apply as well in regard to speed limit, vehicle speeds, traffic volumes, emergency vehicles, large buses and trucks etc. Additionally, various barriers may require regulatory or warning signage to properly inform motorists of the approaching barrier, their maximum speed and prohibited or allowable actions (e.g. right turn only, dead end etc.) etc.

**DIAGONAL DIVERTER** - A diagonal diverter is a physical barrier placed diagonally across a four-legged intersection that prevents straight-through vehicular traffic movements at an intersection, and thus creates two unconnected intersections. The design can be modified by utilizing mountable curb to allow through access by emergency vehicles. The design used by the Delaware Dept. of Transportation per below provides full pass-through access for bicycles and pedestrians.

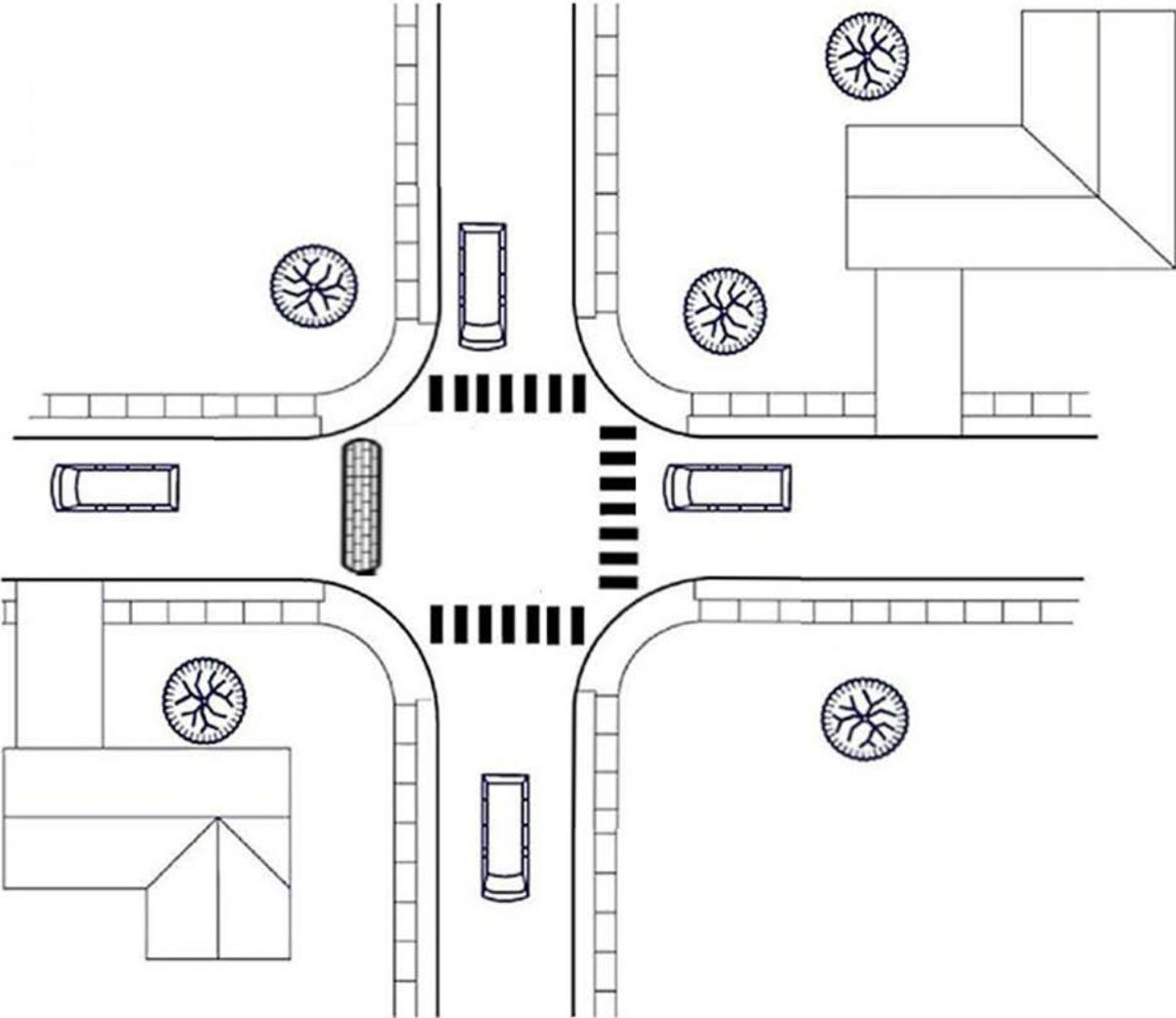


**HALF CLOSURE** - A half closure is a physical barrier placed at an intersection to prevent selected vehicle traffic movements to or from the intersection, blocking vehicle travel in one direction thus creating a one-way street for a short distance on an otherwise two-way street. A half closure can block either entering or exiting traffic, depending on its placement. The design used by the Delaware Dept. of Transportation per below provides full access for bicycles and pedestrians.

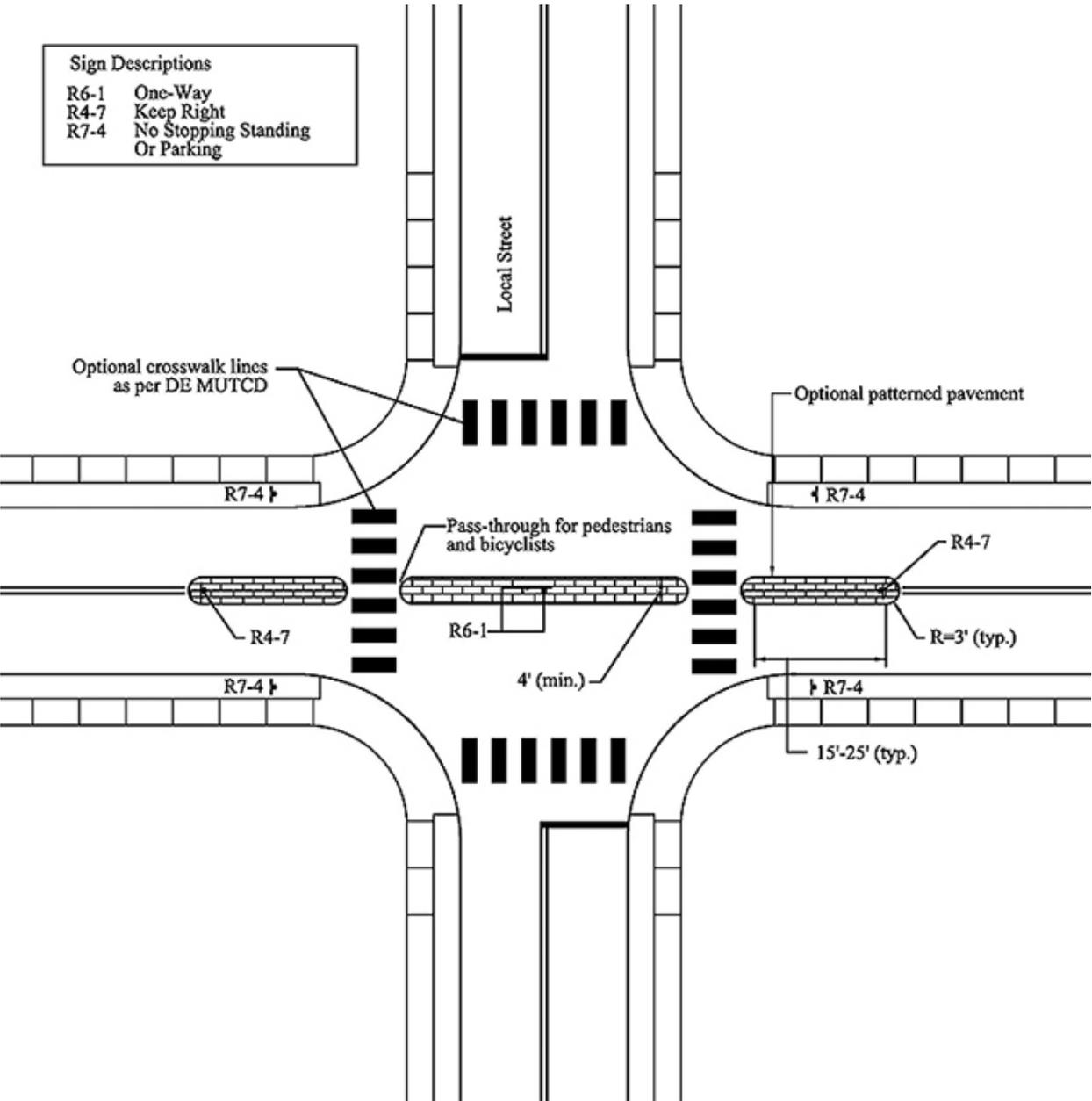


\* Optional Movement Lane Control sign (R3-6LR)

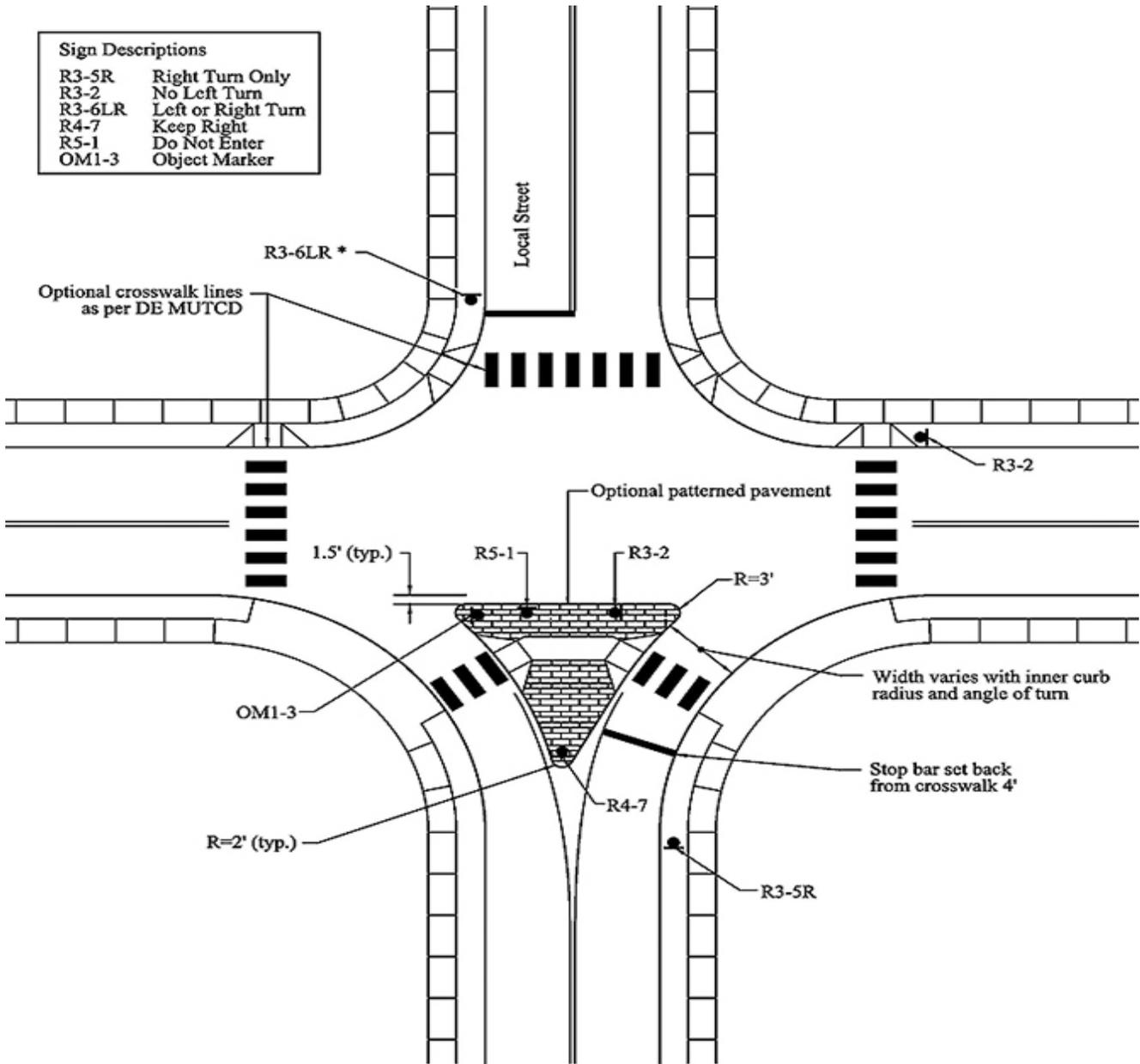
**FULL CLOSURE** – Involves a physical barrier that completely closes the street to through vehicle traffic, either at an intersection or midblock. Various types of barriers may be used to achieve full closure such as a landscaped island, wall, gate, side-by-side bollards, or any other obstruction that leaves an opening smaller than the width of a passenger car. At the entrance to the full closure block, a Dead End or Cul-de-sac sign is required. There are no pavement markings specific to this measure.



**MEDIAN BARRIER** – This is a raised island placed along the centerline of a street through an intersection that prevents vehicles from traveling straight through the intersection. It can be designed to allow turns to and from the main street, while still preventing through traffic from the side street from crossing the main roadway. The design used by the Delaware Dept. of Transportation per below provides pass-through access for bicycles and pedestrians.



**FORCED TURN ISLAND** - Involves a raised traffic island, typically triangular in shape at the mouth of an intersection that blocks certain traffic movements approaching the intersection. It channels traffic to the right and blocks left and through movements and; prevents entering traffic from the leg opposite the island and left-turning traffic from the adjacent leg. The design used by the Delaware Dept. of Transportation per below provides access for bicycles and pedestrians.



\* Optional Movement Lane Control sign (R3-6LR)

## Traffic Calming Devices

Although the primary purpose of certain traffic calming devices is to reduce vehicle speeds certain devices (speed humps, speed tables and other similar vertical devices) can also reduce traffic volumes. However, the reduction of traffic is limited to 20% on average, and may reduce local traffic as well as cut-through traffic therefore, they are not recommended as a primary means to address cut-through traffic.