VIRGINIA DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

INSTRUCTIONAL & INFORMATIONAL MEMORANDUM

GENERAL SUBJECT:
Signs
Speed Limit Control

NUMBER:
IIM-TE-183.1

SUPERSEDES:
TE-183.0

SPECIFIC SUBJECT:
Requirements for the Establishment, Operation, and Maintenance of School Zone Speed Limits (SZSLs)

DATE:
March 29, 2016

SUNSET DATE:
None

DIRECTED TO:
District Administrators/Engineers
Regional Operations Engineers/Directors
Regional Traffic Engineers
Regional Operations Maintenance Managers
District Transportation & Land Use Managers
Residency Engineers/Administrators
District Location & Design Engineers

APPROVAL:
/ Original signed by/
Raymond J. Khoury, P.E.
State Traffic Engineer
Richmond, VA
Approved March 29, 2016

SUMMARY OF REVISIONS TO MEMORANDUM

- Provides additional, updated guidance for establishing, operating, and maintaining School Zone Speed Limit (SZSL) signage, consistent with the Code of Virginia § 46.2-873 and the Manual on Uniform Traffic Control Devices (MUTCD).
- Removes references to details of sign post construction.
- Additional explanation on cost responsibilities of VDOT and of the School Board.
- Clarifies that § 46.2-873 disallows the use of non-portable, non-tiltable, static sign assemblies to indicate a SZSL.
- Revises the Agreement form to eliminate references to outdated technologies and explicitly specify the hours of operation.
- Adds guidance on establishing SZSL zones that encompass signalized intersections.
- Addresses the 2015 revision to § 46.2-873 that allows Counties within Planning District 8 (Loudoun, Fairfax, Prince William, and Arlington) to increase or decrease statutory 25 mph SZSLs, based on engineering studies.

EFFECTIVE DATE

Existing SZSLs:
- SZSLs that are being operated and maintained appropriately may remain. VDOT may initiate the removal of existing installations that are not being operated and maintained appropriately including SZSLs that are being operating during times other than indicated in § 46.2-873 (as further detailed in this memorandum). In those cases the School Board
shall provide evidence that such extended operating hours are appropriate and meet the requirements of the Code.

- VDOT and the School Board may agree to modify, or remove altogether, an existing SZSL installation that does not conform to the revised Memorandum.
- Existing SZSL equipment that does not conform to the MUTCD can remain until the end of its useful service life, at which time such equipment shall be replaced by the School Board with equipment that meets these requirements as stipulated in the original agreement or permit.

Proposed SZSLs:
- All SZSL requests received after the effective date of this Memorandum shall be evaluated in accordance with this document.
- SZSL requests already under evaluation when this Memorandum becomes effective should be evaluated in accordance with this Memorandum to the extent feasible, but may be approved in accordance with prior guidance.

PURPOSE AND NEED

This Memorandum is intended to set forth a uniform, statewide practice for the establishment, signing, operation, and maintenance of school zones in accordance with the Code of Virginia §46.2-873, the MUTCD, and standard engineering practice.

BACKGROUND

This Memorandum compiles the legal and engineering requirements and documentation for the appropriate establishment, signing, operation, and maintenance of SZSLs in accordance with § 46.2-873 as revised effective July 1, 2015.

SZSLs may be established for public or private elementary, middle, or high schools.

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1 The MUTCD defines a “school” as a public or private educational institution applying to one or more of grades K-12. Therefore, SZSLs shall not be established for pre-schools, day cares, colleges, or universities.
STANDARDS
The Standards for the establishment, operation, and maintenance of SZSLs are established in the following Attachments, which are attached hereto and made a part hereof:

- Attachment A – detailed standards and guidelines
- Attachment B - the typical signage of a school zone
- Attachment C - the engineering study included in this memorandum
- Attachment D - template Agreement between VDOT and the School Board for the establishment and operation of SZSL flashing beacons

CC:
Wayne Fedora – FHWA Virginia Acting Division Administrator
Mohammad Mirshahi, P.E. – Deputy Chief Engineer
District Engineers/Administrators
Barton Thrasher, P.E. – L&D Division Administrator
Dr. Jose Gomez, P.E. – VTRC Director
Marsha Fiol – Transportation Mobility & Planning Division Administrator
JoAnne Maxwell – Policy Division Administrator
Julie Brown – Local Assistance Division Administrator
Vanloan Nguyen, P.E. – Traffic Engineering Division ADA for Traffic Control Devices
Mena Lockwood, P.E. – Traffic Engineering Division ADA for Engineering Studies
Virginia Code Section § 46.2-873 establishes a maximum (statutory) SZSL of 25 mph for school crossings or school areas. In addition, the section defines and describes the characteristics of such school areas that justify the establishment of a SZSL and the location of such zones as well as certain signage and operational requirements.

In order to increase or decrease a 25 mph statutory SZSL established under § 46.2-873, Virginia Code Section § 46.2-878 requires, just as for other statutory limits, that (1) an engineering study be conducted (2) that such increased or decreased statutory speed limits (on highways maintained by the commonwealth) be prescribed in writing by the Commissioner of Highways and (3) that such writings be kept on file in VDOT’s Central Office.

VDOT’s policies and procedures for establishing speed limits in accordance with § 46.2-878 are laid out in TE Memo 365. As indicated in the policy, records pertaining to the establishment of all speed limits (statutory or non-statutory) on highways maintained by the commonwealth are conveyed to the Central Office Traffic Engineering Division (COTED). For statutory SZSLs, conveying the agreement between VDOT and the locality for the operation etc. of the SZSL flashers school to COTED satisfies this policy requirement. For non-statutory SZSLs, the engineering study, along with the signed resolution, comprise “the writings of the Commissioner” required as per § 46.2-878 on highways maintained by the commonwealth, and shall be conveyed to COTED.

The completed engineering study in Attachment C intends to encompass the considerations, recommendations, and guidance laid out in this document for the appropriate establishment of SZSL’s. The study is intended to be applied, and signed and sealed, in order to establish a non-statutory SZSL. The study may be applied as well to document the establishment of a statutory (25 mph) SZSL, however there is no Code of Virginia or VDOT requirement to sign and seal such a study.

The various Code of Virginia sections and VDOT policies, considering the appropriate traffic engineering principles and practice in conjunction with Part 7 of the MUTCD and the Virginia Supplement to the MUTCD, as further detailed in this document, form the basis for the various requirements and guidelines laid out in this document.

**Section 1 – Determination of the need for a special warning in a school area**

§ 46.2-873 defines a “school crossing zone” as “an area located within the vicinity of a school at or near a highway where the presence of children on such school property or going to and from school reasonably requires a special warning to motorists.” This provides the basis for the following recommendations for determining where it is appropriate to provide a special warning and the nature of the warning - either posting a reduced SZSL or implementing other measures (e.g. non-SZSL warning signage).

When evaluating an SZSL request, the following should generally be considered:

- The school location (for existing schools) or school site plan (for proposed schools)
- The number of children that are attending or are expected to attend the school
- The school route plan, if one exists
- Physical roadway conditions (e.g. sight distance)
• Nature of traffic operations at the school entrance(s) and on the road(s) fronting the school
• Pedestrian and bike facilities
• Pedestrian and bicyclist traffic characteristics
• Crash records
• The presence of adult crossing guards

As per 2015 revisions to § 46.2-873, The governing body of a County in Planning District 8 (Loudoun, Fairfax, Prince William, and Arlington Counties) may increase or decrease statutory 25 mph SZSL within those Counties. SZSLs in those Counties should be established in accordance with this document and the procedures put in place between VDOT’s Northern Region Operations (Northern Virginia District) and those Counties.

**Posting a Reduced SZSL** – SZSLs may be established on the roadway that intersects with the school’s main entrances/exits, or on intersecting roadways in the immediate vicinity of the school, if it is determined that a “special warning to motorists” is necessary because of the presence of children traveling to or from school on that intersecting road. However SZSLs should not be established on Interstate or other limited access roadways.

Generally, posting a reduced SZSL is appropriate when one or more of the conditions indicated below are considered to warrant a “special warning” to motorists during the periods when school is regularly in session and there are children traveling to and from school:

i. Pedestrian- or bicyclist-related crashes or incidents or; due to a combination of factors (ii) (iii) or (iv) below, where the risk of such incidents is judged to be significant

ii. The extent or nature of children walking or bicycling to school, either in proximity to the roadway or crossing the roadway at marked or unmarked crosswalks

iii. Speed-related vehicle crashes or incidents related to vehicles entering or exiting the school, including school buses and students driving (or being driven) to school or; due to a combination of factors (iv) (v) or (vi) below, where the risk of such incidents is judged to be significant

iv. The extent or nature of traffic (e.g. heavy trucks, high traffic volumes, high vehicle speeds etc.)

v. Insufficient stopping sight distance on a roadway approaching the school area

vi. Insufficient intersection sight distance at the school entrance(s). If intersection sight distance is the primary justification for an SZSL, an SZSL should not be established unless it is infeasible to eliminate the intersection sight distance impediments (e.g. by trimming vegetation). For new school facilities, intersection sight distance shall be provided for the school entrance(s) and shall be based on normal (non-school) speeds, in accordance with the [Road Design Manual](#).

The conditions specified above are applied in the engineering study in [Attachment C](#). Where there are additional considerations or special circumstances the engineering study must be modified accordingly.

**Reduced SZSLs Encompassing Signalized Intersections**

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2 If present, adult crossing guards shall be equipped with a STOP paddle and shall control traffic in accordance with § 46.2-834 and Section 7D.05 of the MUTCD. They shall wear Class 2 or better safety vests as required by Section 7D.04 of the MUTCD.
Special considerations may apply when a traffic control signal or hybrid beacon is located within a proposed SZSL section that reduces the normal speed limit.

If the need for an SZSL is driven by a desire to provide sufficient breaks in traffic flow to allow pedestrians and/or vehicles to safely enter or exit the school, the traffic control signal or hybrid beacon may already adequately provide such breaks in traffic flow. Before establishing an SZSL, the SZSL engineering study should consider whether other signal timing, phasing, pedestrian signal improvement, and/or other operational strategies could improve site conditions and thus negate the need for a SZSL.

VDOT’s policy for timing yellow change and red clearance intervals, outlined in the latest version of TE Memo 306, considers roadway operating speeds. An active SZSL may temporarily adjust the roadway operating speed. When a traffic signal is located within a SZSL section and operating speeds are different during SZSL time periods (as determined by engineering judgment), the yellow change and red clearance intervals may be adjusted based on the SZSL, subject to the technical capabilities of the controller unit and failsafe coordination between the signal controller & the flashing SZSL sign.

If the controller is not capable of adjusting the yellow change and red clearance intervals in coordination with the SZSL signs, then those intervals should be set based on the normal (non-SZSL) operating speeds.

**Other School Zone Improvements instead of an SZSL** - If the engineer determines that a reduction to the normal vehicle speeds is not warranted, the engineer may evaluate whether other improvements (such as non-SZSL school warning signs, pedestrian/bicycle improvements, or entrance improvements) are reasonable and prudent measures to address safety and/or operational concerns at the school.
Section 2 - Setting the SZSL

The appropriate SZSL is dependent on site conditions and shall consider conditions specific to the individual site. Guidelines for the recommended minimum SZSLs are shown in the chart below; they depend on whether the primary justification for a proposed SZSL is based on (1) pedestrian activity where conditions in (i) or (ii) above apply or (2) vehicle-related activity (with no pedestrian-related component) where conditions (iii), (iv), (v) or (iv) above apply. However, consideration of the above factors for a particular site may indicate a higher, or (for unusual cases) a lower speed limit is appropriate. Note that justification for a reduced SZSL may be due to a combination of factors, where any single factor of itself may not justify a reduced SZSL.

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<thead>
<tr>
<th>Speed Limit</th>
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<td>50, 55, or 60 mph</td>
<td>Consider on case-by-case basis. Pedestrian activity is not typically present on roads with speed limit 50 mph or more.</td>
<td>35 mph</td>
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Section 3 – Termini and Length of SZSL

The SZSL signs should be located based on engineering judgment. The SZSL limits should encompass the school and area that accommodates the conditions specified under Section 1 for “Posting a Reduced SZSL.” SZSLs should start and end at the same point for each approach. The SZSL signs should be placed where they will be visible to approaching traffic.

The SZSL signs should be placed far enough away to provide adequate warning to motorists of the approaching area where children are entering or exiting the school. However, if placed too far away from the school then the SZSL signs may be less likely to be respected by motorists.

SZSL zone limits should be based on the location of the school entrances or marked crosswalks, rather than the “limits of the school's property” referenced in § 46.2-873. Many schools have large parcels where there is little schoolchildren activity in the outlying areas of the parcel during opening or closing hours.

Minimum distance from school: In accordance with Section 7B.15 of the MUTCD, the SZSL signs should be at least 200 feet in advance of the "school grounds, school crossings, or other related activities", but a distance greater than 200 feet should be used if the SZSL is 30 mph or higher. “School grounds”, in this context, is interpreted to mean the school building and immediate vicinity; it does not necessarily encompass the entire school property.

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3 Note that § 46.2-873 provides for establishing SZSLs of 15 mph in residential areas where requested by the School Board and when enacted by ordinance of the locality.
Maximum distance from school: Typically, the SZSL signs should not be more than 500 feet upstream of the first school entrance or marked crosswalk unless site conditions dictate otherwise.

In rare cases it may be necessary to extend the SZSL limits more than 200-500 feet from the first school entrance or marked crosswalk, due to unique site conditions. If so, then the SZSL signs may be moved further away from the school, but as per § 46.2-873 shall not be placed more than 600 feet from the limits of the school’s property except when approved by VDOT.

Section 4 – Required SZSL Signage and Equipment

SZSL signs shall be in accordance with Part 7 of the MUTCD and the Virginia Supplement to the MUTCD.

§ 46.2-873 prescribes two options for the type of SZSL signs that may be used to designate where a reduced SZSL applies:

- “portable”/“tilt-over” signs, or
- “fixed blinking” signs bearing the word "school" or "school crossing."

§46.2-873 precludes the use of static sign assemblies to indicate a reduced SZSL, as such assemblies are not portable, tiltable, or blinking. This would include assemblies using static S4-1P/S4-6P “7:30-8:30am 2:30-3:30 pm” “Mon-Fri” plaques, or S4-2P “When Children are Present” plaques.

1) Flashing Beacons – A sign assembly that includes flashing beacons, (referred to as “fixed blinking” signs in § 46.2-873) are widely used statewide and are VDOT’s recommended method for establishing a SZSL.

   a. Flashing beacons shall be designed and operated as per Section 4L.04 of the MUTCD and VA Supplement to the MUTCD.
   
   b. There should be two beacons, one above and one below the sign, to provide redundancy in case one beacon fails. It is also acceptable to embed the lights, vertically arranged, within the sign panel.

   c. The primary sign shall be a S5-1 “Speed Limit XX MPH When Flashing” sign, or a combination of multiple sign panels with the same message.

   d. R2-6P “Fines Higher” or R2-6BP “$250 Fine” signs shall be placed below the S5-1 sign.

      i. § 46.2-873 imposes an additional fine up to $250 for speeding in a SZSL zone, even if the SZSL value is identical to the road’s normal speed limit. Therefore, MUTCD Section 7B.15 requires the use of these signs beneath the portable/tiltover or flashing beacon SZSL sign4.

   e. Flashing beacons may be hardwired (through the electric utility) or solar powered. If solar powered, it is recommended that the School Board ensure the signs are not placed in excessively shaded locations, and that the solar panels and battery backups are sized to ensure reliable operation during winter months.

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4 Previous editions of the MUTCD did not require the use of R2-6P “Fines Higher” or similar signs. Virginia officially adopted the 2009 edition of the MUTCD on January 1, 2012, so any SZSL signs installed before that date without the R2-6P signs are grandfathered in – they met the standards in effect at the time and do not need to be revised until the end of their useful life.
f. Flashing beacon signs should be equipped with a flasher controller capable of automatically operating the beacons only during the times outlined in the Agreement.

g. It is recommended that the SZSL signs include a confirmation light on the back of the sign to confirm when the sign is in operation.

2) **Portable/Tiltover Signs** – Portable/tiltover signs shall only be used if they meet all of the following requirements:

- The sign panel matches the size and design of the standard signs in the MUTCD, and
- The sign support is placed outside the clear zone; is placed behind guardrail or barrier; or is on an approved crashworthy support; and
- The sign meets the minimum lateral distance from the road and minimum height above the road surface as specified in the MUTCD and VA Supplement.
- As per § 46.2-873, portable signs shall be placed and removed by the “principal or chief administrative officer of each school or a school board designee, preferably not a classroom teacher”.

Portable/tiltover signs are not recommended due to the safety concerns with the required manual setup and removal on a daily basis.

The required and recommended SZSL signage (using flashing beacon signs) is shown in Attachment B.

The S5-1 SZSL signs and (if provided) the S4-5 “Reduced School Speed Limit Ahead” signs, should be placed on both sides of the road for divided highways with normal speed limit of 45 mph or greater and with median width of at least 8 feet. If the S5-1 signs are placed on both sides of the road, the left-hand sign may be installed without beacons.

S4-5a signs (word-message “XX MPH School Zone Ahead”) signs may be used in lieu of S4-5 “Reduced School Speed Limit Ahead” symbol signs.

**Section 5 - SZSL Hours of Operation**

SZSLs should be operational during the periods of the day when significant numbers of children are traveling to or from school. They should not be operational outside those periods. Drivers may lose respect for the SZSL if the signs are operational during times of day with little noticeable activity in front of the school, such as the midday hours when most of the children are inside the building.

The Agreement between VDOT and the School Board (see Attachment D for Agreement Template) shall specify the SZSL hours of operation in accordance with the following, as per § 46.2-873:

- During those times that the conditions prompting the establishment of the reduced SZSL exist.
- When school is regularly in session (e.g. excluding summer months and holidays where schools have a traditional break) or during such other special occasions identified in the Agreement.
• 30 minutes before to 30 minutes after the school's regularly scheduled opening and closing hours. For example, if school hours are 8:00 am – 3:00 pm, then the SZSL hours of operation typically should be 7:30 am-8:30 am and 2:30 pm-3:30 pm.
  o Note that the School Board may elect to shorten those times, for example 7:30-8:10am instead of 7:30-8:30 am, if it determines that motorists no longer require the “special warning” referenced in the statute after 8:10 am.
• During special occasions identified in the Agreement when children will be present outside the normal school opening and closing hours, such that a “special warning to motorists” is warranted.

Section 6 – Installation, Operation, and Maintenance Responsibilities

The Agreement between VDOT and the School Board in Attachment D details the respective responsibilities for furnishing, installing, maintaining, and operating SZSL and related signs. In general, those responsibilities shall be as follows:

• The School Board is responsible for all installation, maintenance, and operational costs (including electric utility bills) for all hardware pertaining to the SZSL assemblies, including signs, posts, foundations, and flashers. The School Board is also responsible for any S5-2 and S4-5/S4-5A signs.
  o Signs shall be erected, maintained, and operated in accordance with the VDOT Road & Bridge Standards, VDOT Road & Bridge Specifications, the MUTCD, and the VA Supplement to the MUTCD.
• VDOT is responsible for installing and maintaining other school-related signs and pavement markings on VDOT-maintained roads, including S1-1 signs, “SCHOOL” pavement markings, and marked crosswalks and related crosswalk signage.

VDOT reserves the right to modify or remove the SZSL if the School Board is not operating or maintaining the signs in accordance with the Agreement.

REFERENCE

• Code of Virginia §§ 46.2-873 and 46.2-878
• FHWA's Manual on Uniform Traffic Control Devices (MUTCD)
• 2011 Virginia Supplement to the MUTCD With Revisions
• VDOT Road & Bridge Standards
• VDOT Road & Bridge Specifications
• TE Memo 365
• TE Memo 306
VDOT School Zone Speed Limit Study
February 26, 2016

Highway Facility

The roadway where a reduced school zone speed limit (SZSL) is recommended is not a limited access highway.

Conditions in vicinity of School

A review of the school location and/or school site plan, the school route plan, roadway conditions, vehicle and pedestrian traffic characteristics, number of students attending or expected to attend the school, crash records, or other appropriate information pertinent to the times when school is regularly in session, indicates that (i) on a highway in the vicinity of the school, where the highway either bounds the school property or intersects such a highway (ii) there are children traveling to and from school during school hours (iii) one or more of the conditions described below exist such that a reduction of the “normal” vehicle speeds (as indicated by the original speed limit or the operating speed, whichever is deemed appropriate) is warranted:

i. Pedestrian or bicyclist-related crashes or incidents or; due to a combination of factors (ii) (iii) or (iv) below, where the risk of such incidents is judged to be significant
ii. The extent or nature of children walking or bicycling to school, either in proximity to the roadway or crossing the roadway at marked or unmarked crosswalks
iii. Speed-related vehicle crashes or incidents related to vehicles entering or exiting the school, including school buses and students driving (or being driven) to school or; due to a combination of factors (iv) (v) or (vi) below, where the risk of such incidents is judged to be significant
iv. The extent or nature of traffic (e.g. heavy trucks, high traffic volumes, high vehicle speeds etc.)
v. Insufficient stopping sight distance on a roadway approaching the school area or a school crossing
vi. Insufficient intersection sight distance at the school entrance(s). If intersection sight distance is the primary justification for an SZSL, a SZSL should not be established unless it is not feasible to eliminate the intersection sight distance impediments (e.g. by trimming vegetation). For new school facilities, intersection sight distance shall be provided for the school entrance(s) and shall be based on normal vehicle speeds, in accordance with VDOT’s Road Design Manual.

NOTE: The presence of a school crossing guard may be an indication that one or more of the above conditions justifying a reduced SZSL exists however, the presence of such guards may mitigate the need for a reduced SZSL.

School Zone Speed Limit Determination

Guidelines for the recommended minimum SZSLs are shown in the chart below and depend on whether the primary justification for a proposed SZSL is based on (1) pedestrian activity where conditions in (i) or (ii) above apply or (2) vehicle-related activity (with no pedestrian-related component) where conditions (iii), (iv), (v), or (vi) above apply. However, further engineering review may be necessary to determine the appropriate SZSL where consideration of the above condition factors (i) through (vi) in the vicinity of the school may indicate a higher, or (for unusual cases) a lower speed limit is appropriate.

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AGREEMENT FOR THE PLACEMENT, INSTALLATION, MAINTENANCE AND OPERATION OF SCHOOL ZONE SPEED LIMITS

COUNTY OF ____
SCHOOL: ____
ROUTE ____ LOCATION ____

WHEREAS, it is the desire of the __________ School Board, hereinafter referred to as BOARD, to enter into an agreement with the Virginia Department of Transportation, hereinafter referred to as DEPARTMENT, to furnish, install, operate, and maintain School Zone Speed Limit (SZSL) Signs, hereinafter referred to as SIGNS, on the following roads: __________, and for a School Zone Speed Limit of ______ mph, in accordance with the conditions outlined in this Agreement and with Virginia Code § 46.2-873. The signs and beacons shall be in accordance with the attached diagram/sketch and as follows:

SZSL Beacon Assembly (“Speed Limit XX mph When Flashing” sign, beacons, and R2-6P “Fines Higher” sign):

<table>
<thead>
<tr>
<th>#</th>
<th>Route and Street Name (e.g. Elm St/Route 614)</th>
<th>Dir.</th>
<th>Side of road</th>
<th>Approx. Location of Signs (e.g. 450’ east of Main St/Route 725)</th>
<th>Sign Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
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</tbody>
</table>

S4-5 “Reduced School Speed Limit Ahead” signs:

<table>
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<th>Route and Street Name (e.g. Elm St/Route 614)</th>
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<tr>
<td>(1)</td>
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<tr>
<td>(2)</td>
<td></td>
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S5-2 “End School Zone” signs:

<table>
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Further, the BOARD agrees that the SIGNS shall operate (beacons flashing) for the period(s) detailed below, and shall not operate at other times without VDOT’s written agreement:

Weekdays when school is in session (including short school holidays and unplanned closures):
From __________ am to __________ am, __________ am/pm to __________ am/pm, and __________ pm to __________ pm

Weekdays when school is not in session (including Christmas/New Year’s break and summer months):
From __________ am to __________ am, __________ am/pm to __________ am/pm, and __________ pm to __________ pm

And for the following special events/periods where the presence of children requires a special warning to motorists:
(1) __________
(2) __________
(3) __________
AGREEMENT FOR THE PLACEMENT, INSTALLATION, MAINTENANCE AND OPERATION OF SCHOOL ZONE SPEED LIMITS

THEREFORE, it is mutually agreed between the BOARD and the DEPARTMENT that (1) the BOARD will bear all costs in connection with the purchase, installation and maintenance of the signs, posts, poles, foundations, conduits, cables, cabinets, signal housings, attachment hardware, lights, solar panels, and other parts and accessories necessary for proper and efficient operation of the SZSL SIGNS, plus the cost of electric current, (2) the SZSL SIGNS shall only be in operation during the times and dates noted above, (3) if the BOARD changes the school's normal operating hours, the BOARD shall adjust the SZSL SIGNS hours of operation accordingly, (4) all SZSL SIGNS shall be designed, placed, and maintained in conformance with Section 46.2-873 of the Code of Virginia, the Manual on Uniform Traffic Control Devices (MUTCD) edition in effect at the time of this Agreement, and the Virginia Supplement to the MUTCD in effect at the time of this Agreement, (5) the BOARD shall erect the signs, posts, foundations, and beacons in accordance with the VDOT Standards and Specifications that are in effect at the time of this Agreement, and (6) in the event the BOARD should fail to operate the signs in accordance with Section 46.2-873 of the Code of Virginia or in accordance with the operating parameters of this Agreement, or fail to maintain the signs to the satisfaction of the DEPARTMENT, the SZSL SIGNS may be modified or removed by the DEPARTMENT at the expense of the BOARD.

__________________________
SIGNATURE of SCHOOL BOARD REPRESENTATIVE

__________________________
Title

__________________________
Date

(The BOARD shall submit this AGREEMENT, and the school zone location sketch showing locations of proposed SZSL signs in relation to the school, to the VDOT Area Land Use Engineer)

For DEPARTMENT Use Only

Recommended for approval: ______________________________
Date ______________________________
(Area Land Use Engineer)

Recommended for approval: ______________________________
Date ______________________________
(Regional Traffic Engineer)

Approved: ______________________________
Date ______________________________
(District Engineer/Administrator)

(Original and five copies shall be executed. Approved original to be returned to applicant. District Engineer/Administrator, Regional Traffic Engineer, and Area Land Use Engineer each shall receive one approved copy.)
NOTES

1) S5-1 beacon assembly should be 200'-500' in advance of the school entrance, school crossing, or area of school activity. Beacon assembly shall be no more than 600' from school property line.

2) Engineering judgment should be used in determining appropriate traffic control devices for marked pedestrian crossings (if present).

3) S5-1 beacon assemblies and S4-5 signs should be installed in both median and shoulder on divided highways with speed limit 45 mph or greater and median width 8' or greater.

4) S4-5 or S4-5A signs should be provided when the school zone speed limit is more than 10 mph below the normal speed limit.

See Table 2C-4 of MUTCD.

See Note 1

See Note 2

See Note 4

See Note 2