

VIRGINIA DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

MEMORANDUM

GENERAL SUBJECT: Flashing School Speed Limit Signs		NUMBER: H&TS-183
SPECIFIC SUBJECT: Agreement for the Installation and Maintenance of Time Actuated Flashing School Speed Limit Signs		DATE: July 23, 1985
DIRECTED TO: District Engineers		SUPERSEDES: T&S-107
		SIGNATURE: <i>A. L. Thomas, Jr.</i>

Attached are Forms T&S-163 (Agreement for the Installation and Maintenance of Time Actuated Flashing School Speed Limit Signs), 163-A (Typical Location of School Zone Signs and Time Actuated Flashing School Speed Limit Signs), and T&S-163B (Specifications for the Time Actuated Flashing School Speed Limit Signs) revised July 1, 1985. Form T&S-163C (Time Actuated Flashing School Speed Limit Sign Support Specifications) has been added.

These revisions reflect changes necessary to conform to current standards as shown in the Virginia Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways and applicable AASHTO requirements for breakaway supports. It should be noted that the transverse pavement ~~marking lines adjacent to the school property lines~~ as shown on page 901 in the Virginia Supplement to the MUTCD are no longer required. All previous issues of this assembly are now obsolete and should be destroyed.

Sufficient copies of the revised assembly are being sent to your District Highway and Traffic Safety Engineer for distribution to the Residencies as needed. Additional quantities are available from this office on request.

TRV.-dws
Attachments

- cc: Mr. H. C. King
- Mr. O. K. Mabry
- Mr. J. M. **Wrciy**, Jr.
- Mr. J. T. Warren
- Mr. H. W. Worrall I
- Mr. J. S. Hodge
- Mrs. Sally H. Cooper
- Mr. J. G. Ripley
- Division Administrators
- Mr. R. N. Robertson
- Resident Engineers
- District Highway and Traffic Safety Engineers

AGREEMENT FOR THE INSTALLATION AND MAINTENANCE OF
TIME ACTUATED FLASHING SCHOOL SPEED LIMIT SIGNS
COUNTY OF -- _____

ROUTE _____ LOCATION _____ SCHOOL _____

WHEREAS, it is the desire of the _____, hereinafter referred to as BOARD, to enter into an agreement with the Virginia Department of Highways and Transportation, hereinafter referred to as DEPARTMENT, to install and maintain _____ time actuated flashing school speed limit signs, hereinafter referred to as SIGNS, DEPARTMENT standard VR- _____ lens size _____ inches, bearing the message _____ and indicating _____ MPH speed limit, at the following locations:

REVISED

- (1) - _____
- (2) - _____
- (3) - _____
- (4) - _____

SEE LAST PAGE FOR REVISED FORM

THEREFORE, it is mutually agreed between the BOARD and the DEPARTMENT that (1) all SIGNS shall conform to Section 46.1-193 of the Code of Virginia, as amended, in design, placement, and operation, (2) the BOARD will bear all costs in connection with the purchase, installation and maintenance of the signals, poles, conduits, cables, motors, relays, bulbs, and other parts and accessories necessary for proper and efficient operation of the SIGNS, plus the cost of electric current, (3) the DEPARTMENT will furnish to the BOARD, without cost, _____ sign panels bearing the standard message and drilled to fit the signals installed, and (4) in the event the BOARD should fail to operate the signs in accordance with Section 46.1-193 of the Code of Virginia or maintain the signs to the satisfaction of the DEPARTMENT, the SIGNS will be removed by the DEPARTMENT at the expense of the BOARD.

SIGNATURE FOR THE BOARD

Title

Date

(The Board shall submit the original and five copies of both this AGREEMENT and a sketch showing each location as describe(above to the Resident Engineer for the DEPARTMENT.)

For DEPARTMENT Use Only

Recommended for approval: _____, 19_____
(Resident Engineer)

Recommended for approval: _____, 19-_____
(District Highway and Traffic Safety Engineer)

Recommend for approval: _____, 19-_____
(District Engineer)

Approved: _____, 19_____
(State Highway and Traffic Safety Engineer)

(Original and five copies shall be executed. Approved original to be returned to apphcant. State Highway and Traffic Safety Engineer, District Engineer, District Highway and Traffic Safety Engineer, Resident Engineer, and Permit Truck Weight Manager each shall receive one approved copy.)

TYPICAL LOCATION OF SCHOOL ZONE SIGNS AND TYPICAL ACTUATED FLASHING SCHOOL SPEED LIMIT SIGN.

School speed limit signs may be installed on approaches to school not more than 600' in advance of the school property or crossing in the vicinity of the school, which is used by children going to and from the school; provided that "school crossing" signs may be placed in any location where an engineering and traffic investigation establishes a need therefore and the Virginia Department of Highways and Transportation or the council of the city or town or the board of supervisors of the county maintaining its own system of Secondary roads approves the said crossing for such signs.

2. Pavement markings shall be applied in accordance with standards in the Manual on Uniform Traffic Control Devices.
3. School zone signs and sign panels for the school speed limit signs will be furnished by the Virginia Department of Highways and Transportation.
4. All equipment shall be installed and maintained in accordance with properly executed agreement and permit between the County or School Board and the Virginia Department of Highways and Transportation.
5. On divided highways where raised median width is over 8', the school speed limit signs shall be mounted over the roadway or ground mounted on both sides of the roadway to provide double indications.
6. The S1-1 sign may be omitted when the VR-6 or VR-7 school speed limit signs are in place. When used, the S1-1 sign shall be placed approximately 150' to 300' in advance of the VR-6 or VR-7 school speed limit signs.
7. Under extenuating circumstances, deviations from the requirements of this agreement concerning lateral sign placement or service connection may be considered upon written request by the permittee applicant to the Department.

SUPPORTS

Sign support shall be breakaway, either alternate design number 1 or 2.

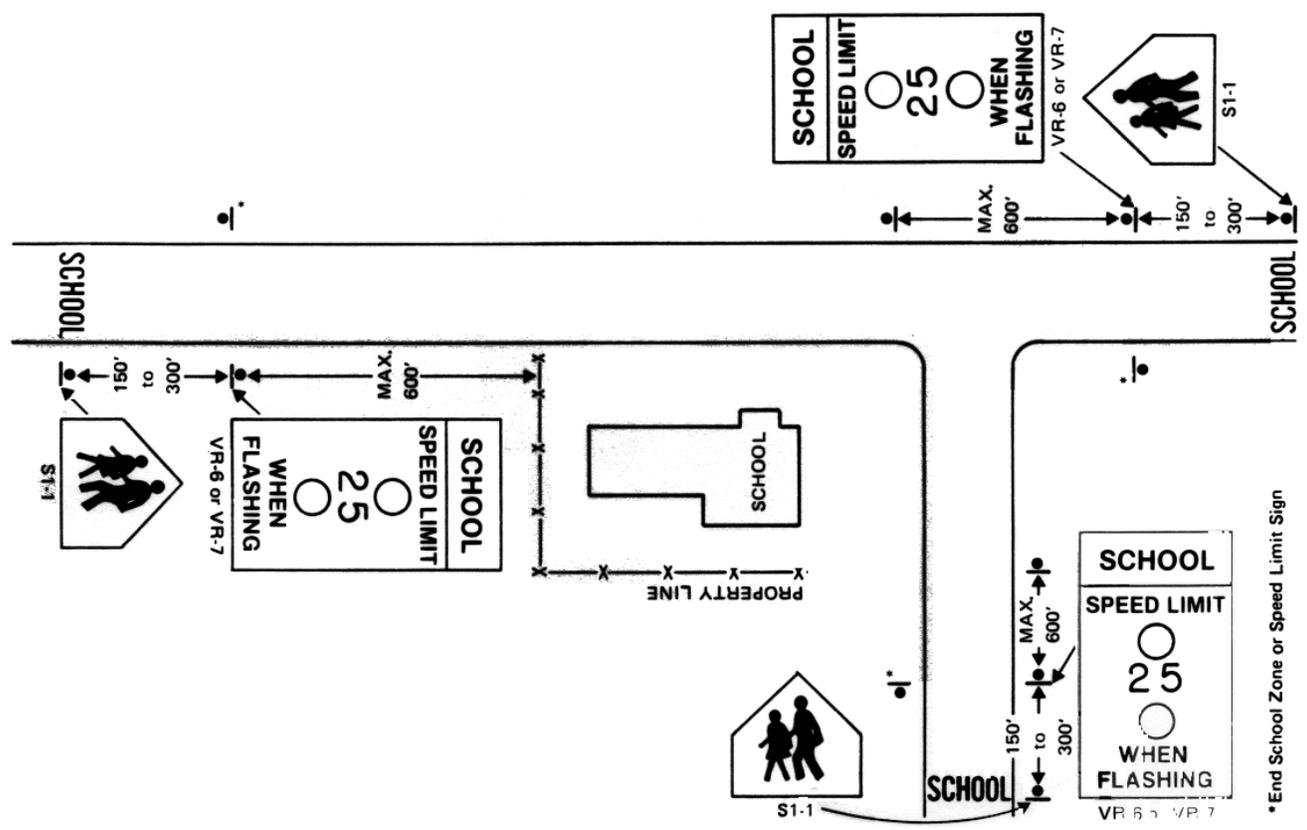
ALTERNATE DESIGN NUMBER 1

1. Support system shall be in accordance with details as shown.

ALTERNATE DESIGN NUMBER 2

1. Breakaway support system shall be designed in accordance with AASHTO "Standard Specifications For Structural Supports For Highway Signs, Luminaires and Traffic Signals." Aluminum frangible bases shall conform to ASTM B108, Alloy 356-T6 or T53, or other approved material.
2. Unfused waterproof quick disconnect connectors, Y-type, straight through, and neutral as necessary shall be installed in the base of support with electrical conductors.
3. The permittee applicant shall secure certification from the manufacturer or supplier and shall attach such certification and supportive calculations where required to each copy of this Agreement, which states that the breakaway support system conforms to AASHTO "Standard Specifications For Structural Supports For Highway Signs, Luminaires and Traffic Signals." Unless otherwise specified, breakaway support system shall be installed in accordance with the manufacturer's recommendations

TYPICAL PLACEMENT DIAGRAM



* End School Zone or Speed Limit Sign

SPECIFICATIONS FOR THE TIME ACTUATED FLASHING SCHOOL SPEED LIMIT SIGNS

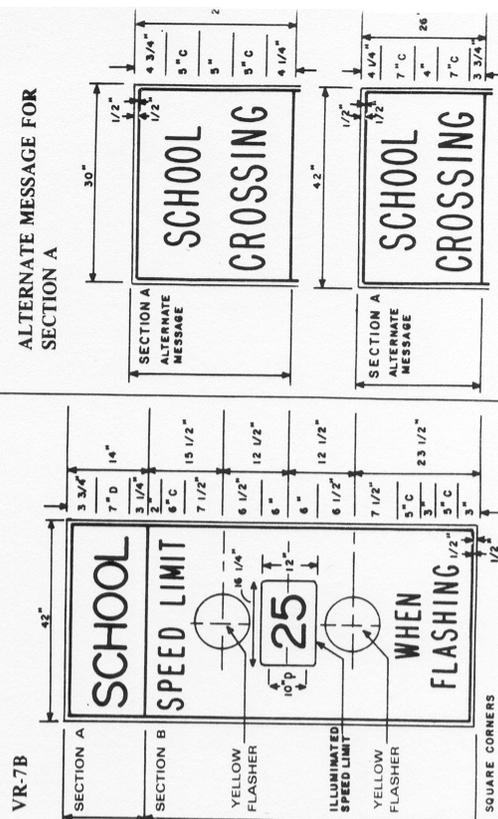
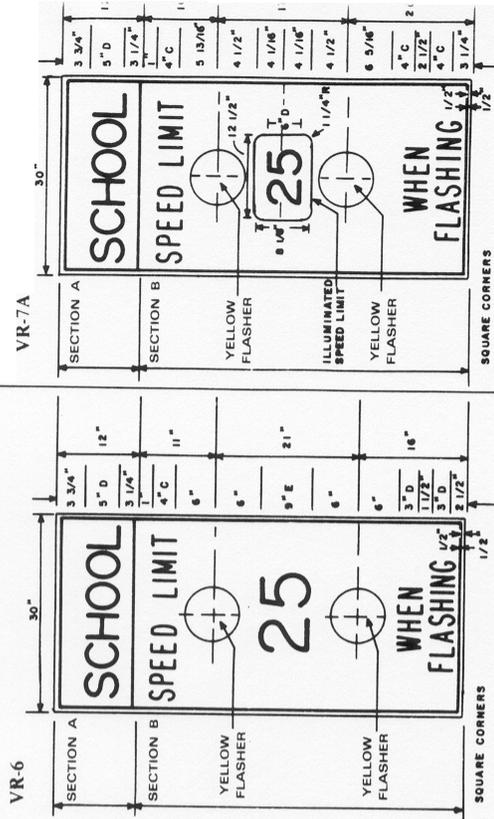
TRAFFIC SIGN

1. Entire sign to be fabricated from 0.80" thick aluminum alloy sign sheet conforming to ASTM B209, Alloy 5052-H38, 5154-H38 or 6061-16.
2. Field of Section A to be yellow (non-reflectORIZED).
3. Field of Section B to be white (non-reflectORIZED).
4. When regularly scheduled classes begin or end during hours of darkness, the field of Sections A and B shall be reflectORIZED, and shall be reflectORIZED when there is use of school buildings by children during hours of darkness.
5. Message and border to be black (non-reflectORIZED).
6. On VR-6 sign, holes for yellow flashers are to be cut to accommodate either 6 3/8" diameter lenses or 8 3/8" diameter lenses on 21" centers as shown. County or School Board will advise as to the size of holes desired.
7. On VR-7A sign, holes for yellow flashers are to be cut to accommodate lenses of not less than 6 3/8" diameter nor more than 7 5/8" diameter. On VR-7B sign, holes for yellow flashers are to be cut to accommodate lenses of not less than 8 3/8" diameter nor more than 12 1/32" diameter. County of School Board will advise as to the size of holes desired. Holes for internally illuminated speed limit unit on VR-7A and VR-7B signs are to be cut as shown. If different size holes are required, the County or School Board will furnish a template or the necessary dimensions.
9. The sign shall be removed or covered during summer months when school is closed.

FLASHING LIGHTS

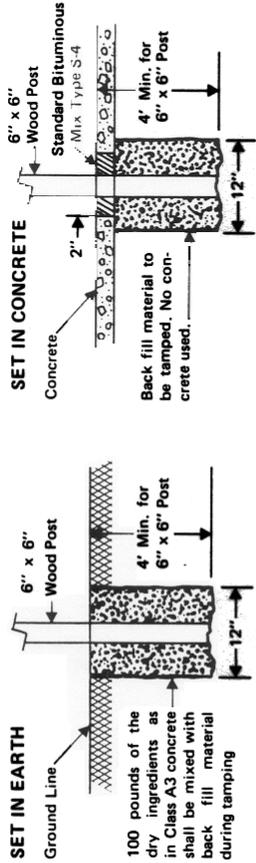
1. The yellow lenses shall be not less than 6 3/8" nor more than 12 1/32" in diameter.
2. The yellow lenses shall conform to the Institute of Transportation Engineers' latest specifications as to color quality and transmission of light.
3. On VR-7A and VR-7B school speed limit signs, the numerals in the speed limit unit shall be illuminated only when the yellow flashers are in operation, and the illuminated numerals shall not flash. The numerals shall be legible in direct sunlight and the speed limit unit shall be fitted with a visor to reduce sun phantom.
4. The flashing yellow lights shall flash alternately at a rate of not less than 50 nor more than 60 times per minute.
5. Each flashing unit shall be controlled by an electronic time clock with a ten-hour reserve spring, providing three "ON" and three "OFF" positions per day, and eliminating operation on Saturday and Sunday. No flashing unit shall be manually operated.
6. Periods during which the flashing unit is to operate shall be pre-set on the program dial in accordance with Section 46.1-193 of the Code of Virginia, as amended.

H&TS-163B REVISED 7-1-85

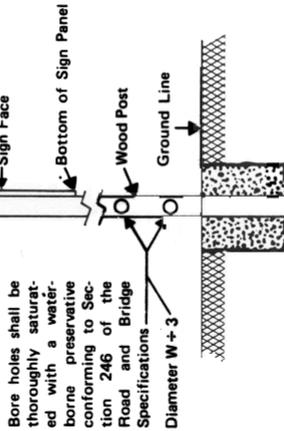


TIME ADJUSTED FLASHING SCHOOL SPEED LIMIT SIGN SUPPORT SPECIFICATIONS
ALTERNATE DESIGN NUMBER 1

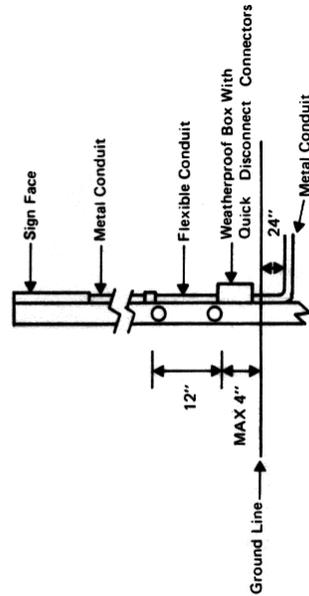
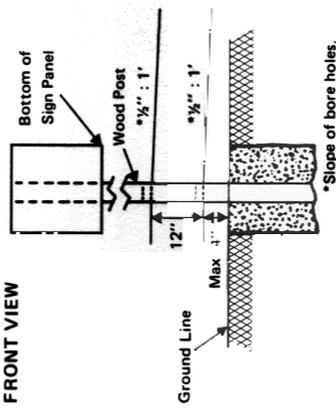
INSTALLATION DETAILS



SIDE VIEW

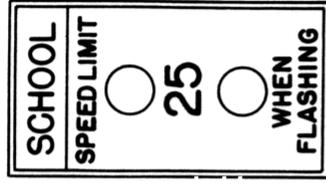


FRONT VIEW



ALTERNATE DESIGN NUMBER 2

INSTALLATION DETAILS



Mounting Height:

Ground Mounted: 7' from bottom of sign to pavement or curb.

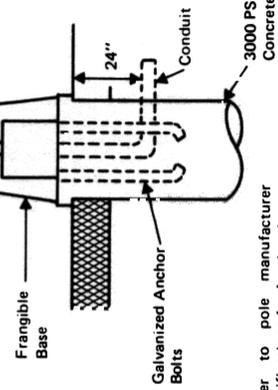
Overhead * 19' from highest point of roadway to sign bottom

*When signs are to be mounted overhead, a sketch showing mounting details shall be submitted with this agreement.

Sign Placement from Sign Edge to Curb Face or Pavement Edge:

Urban - not less than 12'

Rural - not less than 6' from edge of shoulder, or if none, 12' from edge of roadway.



Refer to pole manufacturer specifications for footing design.

@OLO C.,G. COW"S-OMN
EDG" SACON@ @XSWLU. =5@ DISIRICR
STE@6" A MUSULWTE. ROANO" &AL" DISMCT
LMg L D.VMSM. JR. LYNCNBVM LYWNBEW DISMCT
m *A"FGWUTM, Riamam AICHM-1) DisRKT
A; MM. "WINU MA@ W"DU D&IMICF
a e,s.m. wmu FWEDEKICKM'XG MMWCT
CMST@E 0 WCMgLoc. aamoqm aamm Disytwr
Roofmi w S.LLE@ ammmIA& stru@MON ofsrw@
'OSE" . Gu.f,mc @Dnm NO&MMM @EGINU Damcr T EUGE.6
S@ MDXAN. ArLARGIAnt&-N
MOSERT A OU"E. @C3LW@K ATLANGS STR@L



COMMONWEALTH of VIRGINIA

DEPARTMENT OF HIGHWAYS & TRANSPORTATION
1221 EAST BROAD STREET
RICHMOND, 23219

OMCION OF 0MU0.S
@X DDGE
M.ECTOR 01 ENGWEAWG
SA@@ . COOKA
O.RECTOR OF R@ -0 @6@ TRANSPMT.10.
J G NIFU@
DIRECTOR OF P@..NG -0 -OG@MIW
@EAT w c TES. 1.
DIRECTOR OF AOMIN.S-no.
w ATWEU
DIRECTOR Of 11@E

December 5, 1985

A. L. THOMAS, JR.
STATE HIGHWAY AND TRAFFIC SAFETY ENGINEER

Agreement for the Installation and Maintenance of Time-Actuated Flashing School Speed Limit Signs

MEMORANDUM

To: District Highway and Traffic Safety Engineers

Sheet 163B of the above agreement has been changed to permit manual control of the flashing school speed limit signs by uniformed crossing guards, provided the integrity of the security system to prevent unauthorized use is maintained to the satisfaction of the Department.

Please replace sheet 163B in all school agreement assemblies on hand with the attached sheets revised 12-2-85. Additional copies of the complete assembly may be obtained by calling Tom Vest at 736-0132.

If you should have any questions, please let me know.

A. L. Thomas, Jr.
State Highway and Traffic Safety Engineer

TRV-.dws
Attachments

cc: Mr. J. J. Beall, Jr.
Mr. C. O. Leigh
District Engineers
Mr. E. S. Coleman, Jr.
Mr. W. C. Nelson, Jr. Mr.
F. F. Small

AGREEMENT FOR THE INSTALLATION AND MAINTENANCE OF
TIME ACTUATED FLASHING SCHOOL SPEED LIMIT SIGNS

COUNTY OF _____
SCHOOL _____
ROUTE _____ LOCATION _____

WHEREAS, it is the desire of the _____, hereinafter referred to as BOARD, to enter into an agreement with the Virginia Department of Transportation, hereinafter referred to as DEPARTMENT, to install and maintain _____ time actuated flashing school speed limit signs, hereinafter referred to as SIGNS, DEPARTMENT standard VR-_____ lens size _____ inches, bearing the message _____ and indicating _____ MPH speed limit, at the following locations:

- (1) _____
- (2) _____
- (3) _____
- (4) _____

THEREFORE, it is mutually agreed between the BOARD and the DEPARTMENT that (1) all SIGNS shall conform to Section 46.2-873 of the Code of Virginia, as amended, in design, placement, and operation, (2) the BOARD will bear all costs in connection with the purchase, installation and maintenance of the signals, poles, conduits, cables, motors, relays, bulbs, and other parts and accessories necessary for proper and efficient operation of the SIGNS, plus the cost of electric current, (3) the DEPARTMENT will furnish to the BOARD, without cost, _____ sign panels bearing the standard message and drilled to fit the signals installed, and (4) in the event the BOARD should fail to operate the signs in accordance with Section 46.2-873 of the Code of Virginia or maintain the signs to the satisfaction of the DEPARTMENT, the SIGNS will be removed by the DEPARTMENT at the expense of the BOARD.

SIGNATURE FOR THE BOARD

Title

Date

(The Board shall submit the original and five copies of both this AGREEMENT and a sketch showing each location as describe(above to the Resident Engineer for the DEPARTMENT.)

For DEPARTMENT Use Only

Recommended for approval: _____
Date (Resident Engineer)

Recommended for approval: _____
Date (District Traffic Engineer)

Approved: _____
Date (District Administrator)

(Original and five copies shall be executed. Approved original to be returned to applicant. State Traffic Engineer, District Administrator, District Traffic Engineer, Resident Engineer, and Resident Engineer each shall receive one approved copy.)
TE-163 REVISED 12-29-94