REGULATIONS GOVERNING PUPIL TRANSPORTATION ~~INCLUDING MINIMUM STANDARDS FOR SCHOOL BUSES IN VIRGINIA.~~

PART I.

DEFINITIONS.

8 VAC 20-70-10. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise:

"Color-black" means federal standard No. 595, black.

"Color-yellow" means national school bus yellow ~~SBMI~~ SBMTC color standard 008.

"Nonconforming bus" means any vehicle designed to carry more than ten (10) passengers that is used to transport children to or from school or school-related activities which does not meet the federal standards, Title 49, CFR Part 571, specific to school buses. These vehicles are not approved for transporting students to and from school or school-related activities.

"School bus" means any motor vehicle described in this chapter as "Type A1 and A2," "Type B1 and B2," "Type C," or "Type D," which is designed and used for the transportation of pupils, which is painted yellow with the words "School Bus" in black letters of specified size on [the] front and rear, and which is equipped with the required warning devices **[**as stated in Section 46.2-100 of the Code of Virginia].

Note: This definition includes school buses owned and operated by school boards, private contractors, local governments, and transit systems that are used for the transportation of public school pupils.

~~"School bus Type A" means a conversion or body constructed upon a van-type compact truck or a front-section vehicle, with a gross vehicle weight rating of 10,000 pounds or less, designed for carrying more than four persons. Range from four to 20 passenger capacity.~~

"Type A school bus" means a van conversion or bus constructed utilizing a cutaway front-section vehicle with a left side driver's door. The entrance door is behind the front wheels. This definition includes two classifications. Type A1, with a Gross Vehicle Weight Rating (GVWR) less than or equal to 10,000 pounds; and Type A2, with a GVWR greater than 10,000 pounds.

~~"School bus Type B" means a conversion or body constructed and installed upon a van or~~

~~front-section vehicle chassis, or stripped chassis, with a gross vehicle weight rating of more than 10,000 pounds, designed for carrying more than 10 persons. Part of the engine is beneath or behind the windshield, or both, and beside the driver's seat. The entrance door is behind the front wheels. Range from 16 to 71 passenger capacity.~~

"Type B school bus" means a bus with a body constructed utilizing a stripped chassis. The entrance door is behind the front wheels. This definition includes two classifications: Type B1, with a GVWR less than or equal to 10,000 pounds; and Type B2, with a GVWR greater than 10,000 pounds.

~~"School bus Type C" means a body installed upon a flat back cowl chassis with a gross vehicle weight rating of more than 10,000 pounds, designed for carrying more than 10 persons. All of the engine is in front of the windshield and the entrance door is behind the front wheels. Range from 34 to 64 passenger capacity.~~

"Type C school bus" means a bus with a body constructed utilizing a chassis with a hood and front fender assembly. The entrance door is behind the front wheels.

~~"School bus Type D" means a body installed upon a chassis, with the engine mounted in the front, midship, or rear, with a gross vehicle weight rating of more than 10,000 pounds, designed for carrying more than 10 persons. The engine may be behind the windshield and beside the driver's~~

~~seat; it may be at the rear of the bus behind the rear wheels, or midship between the front and rear axles. The entrance door is ahead of the front wheels. Range from 72 to 84 passenger capacity.~~

"Type D school bus" means a bus with a body constructed utilizing a stripped chassis. The entrance door is ahead of the front wheels.

~~"School activity vehicle" means any school bus as defined in this section with the modifications authorized in Part VII of this chapter (8 VAC 20-70-1510 et seq.). Type A, B, C, D school buses are recommended for transporting pupils to and from school activity events; however, a school activity vehicle may be used solely for extra-curricular activities, when deemed necessary and appropriate by the local school board.~~

"Specially equipped bus" means a school bus designed, equipped, or modified to accommodate students with special needs.

~~Note: A standard or mini-size passenger van which has not been reconstructed to meet Virginia state and federal school vehicle construction standards does not meet this definition.~~

~~"Undercoating modified test procedure" means test panels are to be prepared in accordance with paragraph 4.6.12 of TT-C-520a of the Federal Code, incorporated by reference, with modified procedure requiring that test be made on a 48-hour air-cured film at thickness recommended by~~

~~compound manufacturer.~~

PART II.

GENERAL REGULATIONS.

8 VAC 20-70-20. Transportation of children.

The greatest care shall be exercised at all times in the transportation of school children.

8 VAC 20-70-30. Safe speeds.

A school bus transporting school pupils shall be operated at a safe speed as stated in Section 46.2-871, Code of Virginia. ~~not in excess of 45 miles per hour, or minimum legal speed allowable; except, 55 miles per hour on interstate highways. However, for any such vehicle which takes on or discharges children, the maximum speed limit shall be 35 miles per hour between the first stop and the last stop, not including the school. The school and the designated school bus parking area shall not be considered the first or last stop.~~

8 VAC 20-70-40. Seating.

The number of pupils who may ride a school bus shall be determined by the total number who

can be seated on the seat cushion facing forward, safely seated within the seating compartment, and shall not exceed the manufacturer's capacity. During the first 30 instructional days of the school year standees may be permitted for short distances in the aisle back of the driver's seat. Pupils may not be permitted to stand after the first 30 instructional days, except under unforeseen emergency conditions as identified by the local school board.

8 VAC 20-70-50. Written employment agreement.

A written employment agreement shall be made by the school board with all regular school bus drivers before they begin their duties. Substitute drivers shall meet the requirements prescribed for regular bus drivers and shall be approved and paid by the local school board.

8 VAC 20-70-60. Entrance door.

The school bus driver shall open and close the entrance door and keep it securely closed while the bus is in motion. This responsibility shall not be delegated to any other person.

8 VAC 20-70-70. Traffic warning devices.

Every school bus operated at public expense for the purpose of transporting school children shall be equipped with traffic warning devices as stated in Sections 46.2-1090 and 46.2-1090.1 of

the Code of Virginia. ~~of the type prescribed in the standards and specifications of the Board of Education. The warning lights shall indicate when the bus is about to stop, is stopped, and when it is loading or discharging children. The warning lights shall be in operation for a distance of not less than 100 feet before the bus stops, if the lawful speed limit is less than 35 miles per hour, and for a distance of at least 200 feet before the bus stops if the lawful speed limit is 35 miles per hour or more. The warning sign and crossing control arm shall be extended when, and only when, the bus is stopped to load or discharge children.~~

8 VAC 20-70-80. Loading or discharging pupils.

When loading or discharging pupils on the highway, stops shall be made in the right-hand lane and shall be made only at designated points where the bus can be clearly seen for a safe distance from both directions. Pupils shall be picked up and discharged only at designated school bus stops approved by the local school division except in the case of an emergency. While stopped, the driver shall keep the school bus warning devices in operation to warn approaching traffic to stop and allow pupils to cross the highway safely. Pupils who must cross the road shall be required to cross in front of the bus. They shall be required to walk to a point 10 feet or more in front of the bus, stop before reaching a position in line with the left side of the bus, and wait for a hand signal from the bus driver before starting across the highway.

On dual highways divided by a physical barrier, unpaved area, or five lane highway with

turning lane, buses shall be routed so that pupils will be picked up and discharged on the side of the road on which they live. **[**See Sections 46.2-893 and 46.2-918 of the Code of Virginia.**]**

8 VAC 20-70-90. Safety belts.

Persons operating a school bus shall wear the appropriate safety belt system **[**~~in accordance with manufacturer's recommendations~~**]** while the bus is in motion.

8 VAC 20-70-100. Passenger restraint belts.

Pupils riding in ~~Type A~~ school buses required by federal law to be equipped with passenger restraint belts shall wear them as required by state or federal law while the bus is in motion. See Federal Motor Vehicle Safety Standards No. 209 [and No. 210.]

8 VAC 20-70-110. Pupil rider safety instruction.

Pupil rider safety instruction shall be included in the school curriculum, including demonstration and practices of safety procedures.

1. At the Pre-K-1 grade levels, initial safety training shall occur during the first week of school ~~and~~ **[with]** additional training on a periodic basis during the year.

2. Emergency exit drills shall be practiced by all pupil riders at least twice a year, the first occurring during the first 30 instructional days and the second in the second semester. Summer session evacuation drills should be performed as needed.

3. A copy of bus rider safety rules shall be sent to parents at the beginning of the school year. The information shall include a request that parents or their designee accompany their young children to and from the bus stop.

8 VAC 20-70-120. Insurance.

~~[Section 22.1-190, Code of Virginia states that]~~ Every vehicle used in transporting school pupils and personnel at public expense shall be covered by insurance that will provide financial assistance to pupils and personnel in case of injuries or deaths resulting from an accident [as stated in Section 22.1-190 of the Code of Virginia.] ~~Insurance is required by law in the following minimum amounts:~~

~~1. Public liability or bodily injury, including death:~~

~~a. per person, or lower limit ..... $ 50,000~~

~~b. per accident, or upper limit ..... $200,000~~

~~2. Property damage liability ..... $ 20,000~~

~~3. Uninsured motorists coverage - equal to aforesaid limits of~~

~~liability~~

~~4. Medical payment - per person ..... $ 1,000~~

8 VAC 20-70-130. Maintenance Inspection.

All school buses and school activity vehicles used to transport public school pupils to and from school and school activity events shall be inspected and maintained by competent mechanics immediately before being used in the fall and at least once every 30 operating days or every 2,500 miles traveled, [~~whichever occurs first~~**].** The inspections and maintenance shall be conducted in accordance with provisions of the "Preventive Maintenance Manual for Virginia School Buses**["]** [~~Bus Personnel and School Administrators, 1983~~] and recorded on the prescribed inspection forms or in a format approved by the Department of Education. If the inspection and maintenance are not made in a shop operated by the school board or the local governing body, the school board shall designate one or more inspection centers to make the inspections and require a copy of the results of the inspections to be furnished to the division superintendent.

~~School divisions are encouraged to employ staff to perform maintenance and inspection functions on a timely basis consistent with these regulations.~~

Maintenance and service personnel shall be encouraged to attend approved workshops or training institutes and shall receive all necessary service and maintenance publications for equipment

serviced.

8 VAC 20-70-140. ~~Report.~~ Crash/Incident Reporting.

A report, on forms or ~~on the~~ [in a] format furnished by the Department of Education, of any ~~accidents~~ crashes or incidents involving school buses, pupils, and personnel who ride school or activity buses (including injury or death while crossing the road, waiting at bus stops, etc.) shall be sent to the Pupil Transportation Service, Department of Education by the division superintendent or designee at least once a month. The report shall give the apparent cause of the ~~accident~~ crash or incident, [and] the extent of injuries to pupils or others. The division superintendent or designee shall notify the Pupil Transportation Service of any school bus ~~accident~~ crash or incident involving serious injuries~~,~~ requiring professional medical treatment~~,~~ or death within the next working day from the date of the ~~accident~~ [crash or incident].

A crash ~~i~~[~~s an accident~~ occurs] when property damage is $1,000 or more or when persons are injured. An incident [~~is an accident~~ occurs] when property damage is $999 or less and there are no injured individuals.

8 VAC 20-70-150. Route schedule.

All school buses in operation shall be ~~carefully~~ scheduled ~~on routes~~ to maximize safety and efficiency ~~to schools~~. The schedule shall show the time the bus starts in the morning, the time it leaves each point at which pupils are ~~taken on~~ [picked up**]**, and the time of arrival at school. One copy of such schedule shall be kept in the bus and one copy shall be kept in the office of the division superintendent or designee. ~~of schools~~.

8 VAC 20-70-160. Review of routes.

School bus routes, school sites, and safety of pupils at designated school bus stops shall be reviewed at least once each year. Bus routes shall be reviewed for safety hazards, fuel conservation, and to assure maximum use of buses. Local school administrators shall evaluate the safety of pupils at bus stops periodically and shall at the request of the local school board report the results annually to the school board. Hazardous or unusual situations, to include railway crossings, shall be marked on the route sheet and made available to drivers and substitutes.

A written vehicular and pedestrian traffic control plan for each existing school site shall be reviewed annually for safety hazards. All new school site plans shall include provisions which promote vehicular and pedestrian safety.

8 VAC 20-70-170. Railway crossings.

School buses shall stop, as required by law, at railway grade crossings. The 4-way hazard lights shall be activated when approaching the railway grade crossing and deactivated before crossing the track. The bus driver shall turn off all noisy equipment, open the entrance door of the bus and determine when it is safe for the vehicle to cross the railroad tracks. The entrance door shall be closed when the bus is in motion. No stop need be made at any grade crossing where traffic is directed by a police officer or a green traffic-control signal [as stated in Section 46.2-886 of the Code of Virginia].

8 VAC 20-70-180. Driver reports.

School boards shall require that a report on the number of pupils transported and miles traveled be made by all school bus drivers to principals or other designated school officials.

8 VAC 20-70-190. Policies.

Local school boards shall adopt policies, consistent with provisions of ~~Virginia School Laws~~ the Code of Virginia, before establishing a practice of collecting transportation fees from pupils or receiving contributions from other sources for activities sponsored by schools under their authority. No pupil whose parent or guardian is financially unable to pay the pro rata cost of the trip may be

denied the opportunity to participate. See э 22.1-176 of the Code of Virginia.

8 VAC 20-70-200. Identification and lights covering.

The lettered identification and traffic warning lights on the front and rear of school buses shall be covered with opaque detachable material when they are used for purposes other than to transport pupils on regular routes to and from school, or on special trips to participate in contests of various kinds, and for supplementary education purposes as required by Section 22.1-183 of the Code of Virginia. This does not apply when the bus is being used to transport elderly or mentally or physically handicapped persons.

8 VAC 20-70-210. Advertising material.

The use of posters, stickers, or advertising material of any kind is prohibited in or on school buses [unless permitted by state law.]

8 VAC 20-70-220. Passage restriction.

No object shall be placed ~~in the~~ on any bus carrying passengers that will restrict the ~~passage~~ access to ~~the entrance or emergency doors~~ any exit.

8 VAC 20-70-230. Required materials.

All vehicles used to transport students to and from school or school-related activities shall carry reflective triangles, first aid kit, body fluid clean-up kit and fire extinguisher. ~~(See 8 VAC 20-70-1010~~.)

8 VAC 20-70-240. Funding for Pupil Transportation.

Funding for pupil transportation shall be pursuant to the provisions of the appropriation act.

~~**PART III.**~~

~~**DISTRIBUTION OF PUPIL TRANSPORTATION FUNDS.**~~

~~**8 VAC 20-70-240. Regular approved school bus fund.**~~

~~The regular approved school bus fund shall be allocated for pupils transported on approved school buses to the extent that these provisions are consistent with the annual Appropriation Act:~~

~~1. School divisions shall be eligible for reimbursement for transportation of pupils in kindergarten through grade 12 and for students with disabilities ages two to 21 as defined in ɔ~~

~~22.1-213 of the Code of Virginia, paragraph 1.~~

~~2. No reimbursement shall be made for pupils transported on any bus or for any bus which does not meet the provisions of the annual inspections required by the Department of State Police, the fleet assessment by the Department of Education and regulations of the Board of Education.~~

~~NOTE: Any required reduction in the fund will be based on a pro rata share of the total "Regular Approved Bus Fund" allocation.~~

~~3. No reimbursement shall be made for pupils or buses unless the pupils are transported and the bus is used both from home to school and from school to home.~~

~~4. No reimbursement shall be made from this fund for pupils or buses if transportation assistance is received from other state or federal sources. Fares/fees shall not be collected from the pupil/parent, except as provided for in §§ 22.1-6 and 22.1-176 of the Code of Virginia, and Board of Education Regulations.~~

~~5. The computation for reimbursement shall be based on the number of pupils transported in average daily attendance (average number transported daily) and the prevailing number of buses for a prior years.~~

~~6. The computation for reimbursement of school divisions during their first year of school bus operation shall be based on the number of pupils and buses for the current year.~~

~~7. Before final reimbursement for the transportation of pupils to and from public schools is made to a school division, a report shall be submitted by the division superintendent to the Superintendent of Public Instruction certifying the number of pupils transported, the correct net operating cost of transporting pupils (actual expenditure, less gas tax refunds), and the average daily mileage of each bus meeting the standards and specifications of the Board of Education used in transporting pupils for the preceding school year. Such report shall include information covering the type of bus, make and model of the body and chassis, and the number of bus inspections. Information for the review of pupil transportation programs shall be furnished annually on forms provided by the Department of Education. Records of vehicle inspections and maintenance shall be presented for review at the time of the annual fleet assessment conducted by the Department of Education or at other times necessary to ensure compliance with 8 VAC 20-70-130 and 8 VAC 20-70-380 of this chapter.~~

~~8. Regular fund reimbursement will be included in basic aid payment.~~

~~9. For purposes of costing the standards of quality, the Board of Education assumes a 12-year school bus replacement cycle.~~

~~**8 VAC 20-70-250. Fund for Exclusive Transportation of Students with Disabilities on approved school buses.**~~

~~The Fund for Exclusive Transportation of Students with Disabilities shall be allocated on the following bases to the extent that these provisions are consistent with the annual Appropriations Act:~~

~~1. All provisions in 8 VAC 20-70-240 "Regular Approved Bus Fund" shall apply to the computation of the reimbursement from this fund;~~

~~2. Reimbursement shall be allowed only for transportation of students with disabilities who have been classified as such in the Rehabilitation Act of 1973, ↄ 504, the Individual with Disabilities Education Act of 1975, the Code of Virginia, and regulations of the Board of Education, and for those pupils who have not been identified but whose handicapping conditions dictate exclusive transportation;~~

~~3. No reimbursement authorized by this article shall be made when both nonhandicapped pupils and students with disabilities are transported on the same trip;~~

~~4. Exclusive fund reimbursement will be included in basic aid payment; and~~

~~5. For purposes of costing the standards of quality, the Board of Education assumes a 12-year~~

~~school bus replacement cycle.~~

~~8 VAC 20-70-260. Special transit fund.~~

~~The special transit fund shall be allocated for pupils transported on public transit systems.~~

~~1. The amount of reimbursement shall be based on the number of pupils riding public transit buses multiplied by the comparable prevailing regular program per pupil cost consistent with the annual Appropriations Act.~~

~~2. Transit funds shall be available to school divisions for eligible pupils transported in transit buses through contracts with public transit systems listed and recognized as public transit systems by the Virginia Department of Transportation. School divisions will not be eligible to include pupils transported in vehicles commonly referred to or licensed as passenger cars, cabs, vans, taxis, school activity vehicles, and school buses.~~

~~3. The local school board shall make provisions when such transportation is provided that each vehicle be operated and maintained so as to ensure safe service to the pupils. Insurance shall be provided by the owner of such vehicles in amount not less than those provided for in § 22.1-190 of the Code of Virginia. Evidence of such insurance shall be on file in the school board office.~~

~~4. Reimbursement shall be available for pupils who are transported to and from public schools for the regular school session and will not be available for special trips and extracurricular activities.~~

~~5. In no case, shall reimbursement exceed local school board expenditures for transporting such pupils.~~

~~6. Transit fund reimbursement will be included in basic aid payment.~~

~~8 VAC 20-70-270. Special Arrangements Fund for Transportation of Students with Disabilities.~~

~~The special arrangements fund for transportation of students with disabilities shall be allocated on the following bases to the extent that these provisions are consistent with the annual Appropriations Act:~~

~~1. Funds shall be available to school divisions for eligible students with disabilities, ages two to 21 inclusive, transported by contract with approved private schools, taxicabs, airlines, intercity/interstate passenger buses, school board-owned cars, or for the transportation by parents in lieu of the school board providing transportation services.~~

~~2. No reimbursement shall be allocated for pupils transported on vehicles which are not in compliance with all applicable federal school vehicle regulations.~~

~~3. Data on attendance, actual cost, and type of vehicles related to the special arrangement transportation to public, approved private, and regional schools shall be submitted each semester on forms provided by the Department of Education.~~

~~4. Pupils eligible for or claimed in reimbursement from any other transportation fund, state or federal, shall not be eligible for reimbursement from the Special Arrangements Fund.~~

~~5. Special Arrangements Fund reimbursement will be included in basic aid payment.~~

PART ~~IV.~~ III.

REQUIREMENTS FOR SCHOOL BUS DRIVERS.

8 VAC 20-70-280. Requirements for school bus drivers both for employment and continued employment.

Sections 46.2-339, 340, and Section 22.1-178, Code of Virginia requires drivers of school and activity buses ~~shall~~ to:

1. Have a physical examination of a scope prescribed by the Board of Education with the advice of the Medical Society of Virginia and furnish[ed on] a form prescribed by the Board of

Education showing the results of such examination.

a. No person shall drive a school bus unless that person is physically qualified to do so and has submitted a School Bus Driver's Application For Physician's Certificate signed by the applicant and the doctor or a licensed nurse practitioner for the applicable employment period.

b. ~~A person is physically qualified to drive a school bus if the individual:~~ The physical form describes the basic physical qualifications for school bus drivers; however, the examining physician or licensed nurse practitioner shall make the final determination of the individual's physical capacity to operate a school bus based upon their assessment of the individual's overall physical condition.

~~(1). Has no loss of a foot, a leg, a hand, or an arm which interferes with the ability to control and safely drive a school bus without reasonable accommodations;~~

~~(2). Has no impairment of the use of a foot, a leg, a hand, fingers, or an arm, and no other structural defect or limitation likely to interfere with the ability to control and safely drive a school bus without reasonable accommodations;~~

~~(3). Has no known medical history or clinical diagnosis of diabetes mellitus currently~~

~~requiring insulin for control likely to interfere with the ability to control and safely drive a school bus without reasonable accommodations;~~

~~(4). Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure;~~

~~(5). Has no known medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with the ability to control and drive a school bus safely without reasonable accommodations;~~

~~(6). Has no known current clinical diagnosis of high blood pressure likely to interfere with the ability to operate a school bus safely without reasonable accommodations;~~

~~(7). Has no known medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which would interfere with the ability to control and operate a school bus safely without reasonable accommodations;~~

~~(8). Has no known medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a school bus without reasonable accommodations;~~

~~(9). Has no known mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with the ability to drive a school bus safely without reasonable accommodations;~~

~~(10). Has both distant and near visual acuity of at least 20/40 (Snellen) in each eye with or without corrective lenses, and field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber;~~

~~(11). First perceives a forced-whispered voice in the better ear at not less than five feet with or without the use of a hearing aid or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, and 2,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951; and~~

~~(12). Does not use an amphetamine, narcotic, or any habit-forming drug without appropriate physician supervision.~~

2. Furnish a statement or copy of records from the Department of Motor Vehicles showing that the person, within the preceding five years, has not been convicted of a charge of driving under the

influence of intoxicating liquors or drugs, convicted of a charge of refusing to take a blood or breath test, convicted of a felony, or assigned to any alcohol safety action program or driver alcohol rehabilitation program pursuant to ə 18.2-271.1, of the Code of Virginia or, within the preceding 12 months, has not been convicted of two or more moving traffic violations or has not been required to attend a driver improvement clinic by the Commissioner of the Department of Motor Vehicles pursuant to ə 46.2-498, of the Code of Virginia.

3. Furnish a statement signed by two reputable ~~residents~~ persons who reside in ~~of~~ the school division or in the applicant's community that the person is of good moral character.

~~4.~~ Exhibit a license showing the person has successfully undertaken the examination prescribed by ə 46.2-339, of the Code of Virginia.

5. Be at least 18 years old

6. Submit to testing for alcohol and controlled substances which is in compliance with the Omnibus Transportation Employee Testing Act of 1991 (Public Law 102-143, Title V) ~~and the amendments~~ [as amended] and is in compliance with 49 CFR, parts 40 and 382.

8 VAC 20-70-290. First aid course.

Any school board may require successful completion of the American Red Cross first aid course or its equivalent as a condition to employment to operate a school bus transporting pupils as required by Section 22.1-178, Code of Virginia.

8 VAC 20-70-300. Required documents.

The documents required pursuant to 8 VAC 20-70-280 ~~A and B~~ shall be furnished annually prior to the anniversary date of the employment to operate a school bus.

8 VAC 20-70-310. Filing.

The documents required pursuant to this section shall be filed with, and made a part of, the records of the school board employing such person as a school bus operator.

8 VAC 20-70-320. Forms for applicants.

The Department of Education shall furnish to the division superintendents the necessary forms for applicants to use to provide the information required by this section. Insofar as practicable, such forms shall be designed to limit paperwork, avoid the possibility of mistakes, and furnish all parties involved with a complete and accurate record of the information required.

8 VAC 20-70-330. Health certificate.

As a condition to employment, every school and activity bus driver shall submit a certificate signed by a licensed physician stating that the employee appears free of communicable tuberculosis. The school board may require the submission of such certificates annually, or at such intervals as it deems appropriate, as a condition to continued employment.

8 VAC 20-70-340. Highway driving.

[~~Section 46.2-339, Code of Virginia requires that~~**]** No person shall drive a school or activity bus upon a highway in the Commonwealth unless such person has had a reasonable amount of experience in driving motor vehicles, and shall have passed a special examination indicating the ability to operate a school bus without endangering the safety of pupil passengers and persons using the highway [as stated in Section 46.2-339 of the Code of Virginia]. To prepare for the examination required by this section, any person holding a valid operator's license and Commercial Driver's License (CDL) Instruction Permit issued under the provisions of ∋46.2-325, of the Code of Virginia, may operate, under the direct supervision of a person holding a valid school bus license endorsement, a school bus which contains no pupil passengers. The Department of Motor Vehicles is required to adopt such rules and regulations as may be necessary to provide for the examination of persons desiring to qualify to drive such buses in this Commonwealth and for the granting of permits to qualified applicants.

8 VAC 20-70-350. Training.

No person shall operate a school or activity bus transporting pupils unless the person shall have:

1. Received classroom, demonstration, and behind-the-wheel instruction in accordance with ~~the minimum provisions of the "Virginia School Bus Driver Training Curriculum Guide."~~ a program developed by the Department of Education, pursuant to Section 22.1-181, Code of Virginia. ~~specifications developed by the Department of Education.~~

~~2. [Completed a minimum of 20 classroom hours and 20 hours of behind-the-wheel training. A minimum of 10 of the 20 hours of behind-the-wheel time shall involve the operation of a bus with pupils on board while under the direct supervision of a designated bus driver trainer. Drivers of Type D buses will be required to complete eight (8) additional hours of training behind-the-wheel.~~

~~Every driver who transports students with disabilities shall receive an additional six hours of appropriate instruction, training and demonstration from an approved instructor using Department of Education approved curriculum.]~~

[2. Completed a minimum of 24 classroom hours and 24 hours of behind-the-wheel training. A minimum of 10 hours of the 24 hours of behind-the-wheel shall involve the operation of a bus with

pupils on board while under the direct supervision of a designated bus driver trainer. All drivers shall receive training in the operation of a Type D bus and transportation of students with special needs.

The superintendent or his designee shall maintain a record showing that the applicant has completed the training and has been approved to operate a school or activity bus.

8 VAC 20-70-360. In-service training.

~~[Prior to the beginning of each school year, school divisions shall determine the amount of training and a schedule that is needed for experienced drivers and new drivers.]~~

[In-service training (at least two hours before opening of schools and at least two hours during the second half of the school year) devoted to improving the skills, attitudes, and knowledge including orientation to maximize benefits of using safety programs and safety components shall be provided to all school or activity bus drivers.]

8 VAC 20-70-370. Supervision.

The drivers of school and activity buses shall be under the general direction and control of the superintendent or designee ~~and school board or the supervisor of transportation~~, and shall also be

accountable to the principal of the school to which transportation is provided.

8 VAC 20-70-380. Pre-trip safety inspection.

The drivers of school and activity buses shall perform a [daily] pre-trip safety inspection of the vehicle [~~immediately~~] prior to transporting children. The items checked and recorded shall be at least equal to the pre-trip inspection procedure as prescribed by the Department of Education.

~~**8 VAC 20-70-390. Misconduct reports.**~~

~~The drivers of school and activity buses shall report to the principal the misconduct of pupils on the school bus or at waiting stations or stops on the way to or from school and shall be guided by the principal's advice and direction, subject to the regulations of the school board. When it becomes necessary for the driver to correct pupils, the driver shall stop at the nearest and safest place and restore order before proceeding. In no case shall a driver put a pupil off the bus between the home and school as a disciplinary measure.~~

8 VAC 20-70-400. ~~Performance~~ Evaluation.

~~The performance of~~ Each school and activity bus driver shall be evaluated by the transportation director or designee at least once each year. The results of the evaluation shall be discussed with the

driver and included in the driver's personnel file.

8 VAC 20-70-410. Emergency equipment.

The driver of activity or extracurricular trip buses shall advise the pupils and/or sponsors of the location of the required emergency equipment and exits prior to the beginning of any such trip.

8 VAC 20-70-420. Instructor course certificate.

Local school bus driver training instructors shall hold a certificate for completion of an instructor course conducted or ~~sponsored~~ approved by the Department of Education and shall attend a recertification course every five years.

8 VAC 20-70-430. Driver data.

The names and driver license numbers of persons operating school and activity buses used to transport pupils shall be submitted to the Department of Motor Vehicles annually as required by Section 46.2-340, Code of Virginia. ~~These data for each new driver employed during the school year shall be submitted by the 10th of each month.~~

8 VAC 20-70-440. Responsibility for compliance.

The responsibility for compliance with these school bus and activity vehicle specifications issued by the Department of Education rests with dealers and manufacturers. If any dealer or manufacturer sells school buses or school activity vehicles which do not conform to any or all of these specifications issued by the Department of Education, a general notice will be sent to all school divisions advising that equipment supplied by such dealer or manufacturer will be disapproved for school transportation until further notice. A copy of the notice will be sent to the dealer or manufacturer and will remain in effect until full compliance by the dealer or manufacturer is assured.

Dealers and manufacturers shall be given at least 30 days notice of any changes in the specifications.

8 VAC 20-70-450. Minimum standards.

Minimum standards are applicable to all school buses and school activity vehicles, new or used, procured by purchase, lease or operational contract from another person or entity.

PART ~~V.~~IV.

GENERAL REQUIREMENTS ~~MINIMUM STANDARDS~~ FOR SCHOOL BUSES IN VIRGINIA.

~~**ARTICLE 1.**~~

~~**GENERAL REQUIREMENTS.**~~

8 VAC 20-70-460. Specifications.

It is the intent of the Board of Education to accommodate new equipment and technology that will better facilitate the safe and efficient transportation of students. When a new technology, piece of equipment, or component is desired to be applied to the school bus, it must have the approval of Virginia Department of Education and must meet the following criteria:

A. The technology, equipment, or component shall not compromise the effectiveness or integrity of any major safety system.

B. The technology, equipment, or component shall not diminish the safety of the interior of the bus.

C. The technology, equipment, or component shall not create additional risk to students who are boarding or exiting the bus or are in or near the school bus loading zone.

D. The technology, equipment, or component shall not require undue additional activity and/or responsibility for the driver.

E. The technology, equipment, or component shall generally increase efficiency and/or safety of the bus, generally provide for a safer or more pleasant experience for the occupants and pedestrians in the vicinity of the bus, or shall generally assist the driver and make his/her

many tasks easier to perform.

Buses and school activity vehicles must conform to the specifications relative to construction and design effective on the date of procurement. Any variation from the specifications, in the form of additional equipment or changes in style of equipment, without prior approval of the ~~Pupil Transportation Service,~~ Department of Education, is prohibited. The Department of Education shall issue ~~[guidelines on the]~~ specifications and standards for public school buses to reflect desired technology or safety improvements for the then current model year.

8 VAC 20-70-470. Adjustments.

The Superintendent of ~~Pupil~~ Public Instruction is authorized to make such adjustments from time to time in technical specifications as are deemed necessary in the interest of safety and efficiency in school bus operation. This includes the issuance of chassis specifications by size, type and model year. Authority is also granted for conducting investigations and field tests of certain pertinent vehicle components.

8 VAC 20-70-480. Bus identification.

All publicly owned, part publicly owned, or contract school buses, transporting pupils to and from public school, shall be painted a uniform color, national school bus yellow, and shall be

identified and equipped as outlined in the standards and specifications. A yellow school bus may have a white roof provided the vehicle is painted in accordance with specifications.

8 VAC 20-70-490. Purchase.

The responsibility for purchasing school buses and school activity vehicles which meet state and federal requirements rests with division superintendents and local school boards.

A schedule for the replacement of buses on a continuing basis shall be developed and implemented by each school division.

8 VAC 20-70-500. Sale of surplus school buses.

A. Before a surplus school bus is sold or released for nonschool transportation purposes, the bus shall have the traffic warning signal system and crossing control arm removed and all school bus lettering shall be covered by an opaque paint. A written notice shall be attached to the Certificate of Title stating that the vehicle does not meet the requirements of §§ 46.2-100 and 46.2-1089 and that its operation on the highway would be in violation of § 46.2-917, ~~of the~~ Code of Virginia.

B. In the event that the bus is sold to a private school or a licensed dealer, the written notice shall contain a reminder that the bus shall be painted a different color, and shall have the bus signal

systems and lettering removed before release for nonschool transportation purposes.

8 VAC 20-70-510. Vehicles powered by alternative fuels.

A. The Board of Education will continue to promote the use of alternative fuels for school buses. Any vehicle powered by alternative fuels will be subject to inspection and approval by the Virginia Department of Education.

B. Local school divisions, in consultation with the Department of Education, may purchase and use school buses using alternative fuels as covered in ə 22.1-177, ~~of the~~ Code of Virginia)

C. Installation of alternative fuel tanks and fuel systems shall comply with all applicable Federal Motor Vehicles Safety Standards (FMVSS) 301, 49 CFR ə 571, and all applicable fire codes.

D. A sign with black letters on clear or school bus yellow background, indicating the type of alternative fuel being used, may be placed on the side of the bus near the entrance door. No sign shall be more than 4- 3/4 inches long or more than 3- 1/4 inches high.

~~**8 VAC 20-70-520. Road speed control.**~~

~~School divisions may, at their discretion, set road speed control to a maximum of 55 miles per~~

~~hour.~~

PART ~~VII.~~ V.

ACTIVITY VEHICLES.

8 VAC 20-70-~~1510.~~ 525. Regulations and standards.

Activity vehicles owned or operated under contract by or for the school board, which are used solely to transport pupils to and from school activity events, shall comply with all applicable regulations and standards prescribed for school buses except as noted in this article.

1. Exceptions, general regulations.

   a. An activity vehicle transporting school pupils shall be operated at a safe, legal speed not in excess of 55 miles per hour.

   b. No standees shall be permitted.

   c. The eight-inch school bus lettered identification and traffic warning devices shall be removed by the local school division as required by §§ 46.2-100 and 46.2-1090 of the Code of Virginia. The name of the school division or individual school shall be

placed on both sides of the vehicle.

d. Stops for the purpose of loading or discharging pupils on the travel portion of the highway shall not be permitted.

2. Exceptions, minimum standards for school buses in Virginia.

a. School activity vehicles shall not be painted national school bus yellow.

b. Other type seats and increased spacing may be used provided all provisions of FMVSS 222, 49 CFR ə 571.222, are met.

~~**ARTICLE 2.**~~

~~**THE BUS CHASSIS.**~~

~~**8 VAC 20-70-530. Air cleaner.**~~

~~A. The engine intake air cleaner system shall be furnished and properly installed by the chassis manufacturer to meet the engine manufacturer's specifications.~~

~~B. An air cleaner restriction indicator shall be furnished and installed by chassis manufacturer.~~

~~8 VAC 20-70-540. Alternator.~~

~~A. All Type A and B buses up to 15,000 pounds gross vehicle weight rating (GVWR) shall have a minimum 90 ampere alternator.~~

~~B. Type B buses over 15,000 pounds GVWR and all Type C and D buses shall be equipped with a heavy duty truck or bus type alternator meeting Society of Automotive Engineers (SAE) J-180; having a minimum output rating of 100 amperes, alternator shall be capable of producing a minimum of 50% of its maximum rated output at the engine manufacturer's recommended idle speed.~~

~~C. All buses equipped with an electrical power lift shall have an alternator capable of producing a minimum 75 amperes at engine manufacturer's recommended idle speed.~~

~~D. Belt drive shall be capable of handling the rated capacity of the alternator with no detrimental effect on other driven components. Direct-drive alternator is permissible in lieu of belt drive.~~

8 VAC 20-70-550. Axles.

A. The front axle and rear differential, including suspension assemblies, shall have a gross axle weight rating at ground at least equal to that portion of the load as would be imposed by the chassis manufacturer's maximum gross vehicle weight rating.

B. Rear axle shall be single speed, full-floating type.

8 VAC 20-70-560. Battery.

A. No bus shall be equipped with a battery of less than 700 amperes cold cranking current at O0 F with 170 minutes reserve capacity at 800 F.

B. Battery shall be mounted in the engine compartment or temporarily mounted to chassis. When battery is temporarily mounted to chassis by chassis manufacturer, the chassis manufacturer shall furnish and install one-piece cables of sufficient length to allow battery to be mounted in slide-out tray in body skirt on left side of bus. Cable shall be at least one gauge color coded (positive-red, negative-black). Annual chassis requirements will specify battery location for different types of chassis.

8 VAC 20-70-570. Brakes.

~~A. Four-wheel brakes, adequate at all times to control bus when fully loaded, shall be provided in accordance with Federal Motor Vehicle Safety Standards.~~

~~B. Service brakes shall meet FMVSS 105, 49 CFR 571.105, for hydraulic brakes, and FMVSS 121, 49 CFR 571.121, for air brakes. Brake lining shall not contain asbestos.~~

~~C. Chassis shall be equipped with auxiliary brakes capable of holding vehicle on any grade on which it is operated under any conditions of loading on a surface free from snow or ice. Operating controls of such auxiliary brakes shall be independent of operating controls of service brakes.~~

~~D. Buses having full compressed air systems shall be equipped with:~~

~~1. A minimum 12 cubic feet per minute engine oil-fed air compressor.~~

~~2. Air supply for air compressor shall be taken from the clean side of engine air cleaner system.~~

~~3. An air dryer with automatic purge and drain cycle and a heating element.~~

~~E. Buses using hydraulic brakes shall have power assist brakes. Hydraulic line pressure shall not exceed recommendation of chassis or brake manufacturer.~~

~~**{See Diagram 1.}**~~

~~**8 VAC 20-70-580. Bumper, front.**~~

~~A. Front bumper shall be heavy-duty, channel steel at least eight inches in height with 3/16-inch thickness, painted black, and shall be furnished by chassis manufacturer as part of chassis.~~

~~B. Front bumper shall extend to outer edges of fenders at bumper top line (to assure maximum fender protection) and be of sufficient strength to permit pushing, lifting or towing without permanent distortion to bumper, chassis, or body.~~

~~C. Exception Type A vehicles.~~

~~Bumper shall be manufacturer's standard painted black.~~

~~D. Exception Type D vehicles. Same as above, except that front bumper shall be furnished by body manufacturer.~~

~~**8 VAC 20-70-590. Clutch.**~~

~~Torque capacity shall be equal to or greater than the engine torque output. Clutch facing shall be nonasbestos.~~

~~8 VAC 20-70-600. Color.~~

~~A. Chassis, including wheels, and front bumper shall be black.~~

~~B. Hood, cowl, and fenders shall be national school bus yellow.~~

~~C. Grill shall be national school bus yellow, if painted; otherwise, it shall be chrome or anodized aluminum.~~

~~D. All paint shall meet the lead-free standards.~~

~~8 VAC 20-70-610. Drive shaft.~~

~~Drive shaft shall be protected by metal guard or guards to prevent it from whipping through floor or dropping to ground if broken.~~

~~**8 VAC 20-70-620. Electrical system.**~~

~~A. Battery - see 8 VAC 20-70-560.~~

~~B. Alternator - see 8 VAC 20-70-540.~~

~~C. Lights and signals - see 8 VAC 20-70-730.~~

~~D. Wiring - see 8 VAC 20-70-1350.~~

~~E. Power terminal. Chassis manufacturer shall provide an electric power source terminal for bus body power connection. Wiring from the power source in wiring terminal shall have a current carrying capacity of 125 amperes continuous (minimum 4 gauge wire).~~

~~This conductor shall be of continuous size uninterrupted by fusible links, fuses, or circuit breakers. The terminal shall be of the single post-type, minimum of one-fourth inch (1/4") stud and located on the fire wall above the toeboard on the left-hand side, subject to approval of the pupil transportation service, Department of Education.~~

~~F. Light terminal. The chassis manufacturer shall provide a wire terminal adjacent to or in the~~

~~under dash area of the left side panel accessible to the body company for connection of rear brake lights, tail lights, turn signal lights, and back-up lights. A terminal strip consisting of individual terminals with each terminal properly identified shall be provided to meet this requirement.~~

~~G. Fuse. All fuses shall be located in fuse block and properly identified for the circuit protected.~~

~~H. Each chassis circuit shall be color coded and a diagram of the circuits shall be included with the chassis.~~

~~I. Wiring harness. All conductors from the alternator to the battery shall be continuous in length. The conductors shall be sized to provide at least a 25% greater current carrying capacity than the design output of the alternator (minimum 4 gauge wire). The conductor between the alternator and the battery shall be routed in a manner that will provide the least distance between points of termination. A separate ground conductor from alternator to engine shall be provided (minimum four-gauge).~~

~~J. Safety switch shall be installed on the clutch linkage and prohibit engine from being started unless clutch pedal is depressed.~~

~~8 VAC 20-70-630. Engine.~~

~~The engine shall be of the internal-combustion, four-stroke cycle type, having not less than six cylinders. Thermostats with not less than 1750 F - 1950 F rating shall be provided.~~

~~8 VAC 20-70-640. Exhaust system.~~

~~A. Exhaust pipe, muffler, and tail pipe shall be outside bus body attached to chassis.~~

~~B. Tail pipe shall be constructed of seamless or electrically welded tubing of 16-gauge steel or equivalent, and shall extend at least five inches beyond chassis frame. (See 8 VAC 20-70-1260)~~

~~C. Size of tail pipe shall not be reduced after it leaves muffler.~~

~~D. Exhaust system shall be properly insulated from fuel tank and tank connections by securely attached metal shield at any point where it is 12 inches or less from tank or tank connections.~~

~~E. Muffler shall be constructed of corrosion-resistant material.~~

~~F. Exception Type A and B Vehicles less than 15,000 pounds (GVWR).~~

~~Tail pipe may exit behind rear wheel.~~

~~8 VAC 20-70-650. Fenders, front.~~

~~A. Total spread of outer edges of front fenders, measured at fender line, shall exceed total spread of front tires when front wheels are in straight-ahead position.~~

~~B. Front fenders shall be properly braced and free from any body attachment.~~

~~C. Chassis sheet metal shall not extend beyond rear face of cowl.~~

~~8 VAC 20-70-660. Frame.~~

~~A. Frame shall be of such design as to correspond at least to standard practice for trucks of same general load characteristics which are used for severe service.~~

~~B. When frame side members are used, they shall be of one-piece construction. If frame side members are extended, such extension shall be designed and furnished by chassis manufacturer with a guarantee, and installation shall be made by either chassis or body manufacturer and guaranteed by~~

~~company making installation. Extensions of frame lengths are permissible only when such alterations are behind rear hanger of rear spring, and shall not be for purpose of extending wheel base.~~

~~C. Holes in top or bottom flanges of frame side rails shall not be permitted except as provided in original chassis frame. There shall be no welding to frame side rails except by chassis or body manufacturer.~~

~~8 VAC 20-70-670. Frame length.~~

~~Frame length - (See 8 VAC 20-70-890)~~

~~8 VAC 20-70-680. Fuel tank.~~

~~A. Fuel tank equipped with protective cage to meet FMVSS 301, 49 CFR ↄ 571.301, shall have minimum fill capacity of 30 gallons, with a minimum draw of 25 gallons, and be mounted directly on right side of chassis frame, filled and vented entirely outside body. All fuel tanks shall be vented from the top of the tanks.~~

~~B. Fuel filter with replaceable element shall be installed between fuel tank and engine.~~

~~C. No portion of the fuel system which is located to the rear of the engine compartment, except the filler tube, shall extend above top of chassis frame rail.~~

~~D. If tank sizes other than 30 gallons are supplied, location of front of tank and filler spout must remain as specified by the School Bus Manufacturer's Institute Design Objectives, January 1985 edition, and have a minimum draw of 83% of fill capacity.~~

~~E. Measurements shown below are for guidance of chassis manufacturers and serve only to prevent need for replacement of original tank. (Inspectors concerned with state or local approval of vehicle need not consider them unless tank does not fit.)~~

~~1. Tank or cage shall not extend in height above side member of chassis.~~

~~2. Distance from center line of chassis to outside of tank cage shall not be more than 44 inches.~~

~~3. Bottom of tank cage shall not be more than 190 inches below top of frame.~~

~~4. Center of fillpipe cap shall be one inch below top of frame with plus or minus tolerance of 1/4 inch permitted.~~

~~F. Exceptions.~~

~~1. For Type A vehicles, the fuel tank shall be manufacturer's standard, mounted, filled, and vented outside of body.~~

~~2. For Type B of body-on-chassis or vehicles constructed with a power lift unit, the fuel tank may, due to space limitation, be mounted behind rear wheels with fillpipe on right or left side of body and have capacity of less than 30 gallons.~~

~~3. For Type D vehicles, the fuel tank may be mounted between frame rails with fuel filler pipe extending to right side of body between frame rails and body floor. Bottom of cage shall not extend below the level of the front axle.~~

~~8 VAC 20-70-690. Governor.~~

~~A. An approved engine governor set by engine manufacturer is required on vehicles equipped with gasoline engines.~~

~~B. An approved road speed control shall be required on all buses and may be set at a maximum~~

~~speed of 55 mph.~~

~~8 VAC 20-70-700. Heating system, provision for.~~

~~The chassis engine shall have plugged openings for the purpose of supplying hot water for the bus heating system. The opening shall be suitable for attaching 3/4-inch pipe thread/hose connector. The engine shall be capable of supplying water having a temperature of at least 1700 F at a flow rate of 50 pounds per minute at the return end of 30 feet of one-inch inside diameter automotive hot water heater hose. (SBMI Standards No. 001-Standard Code for Testing and Rating Automotive Bus Hot Water Heating and Ventilating Equipment.)~~

~~8 VAC 20-70-710. Horn.~~

~~Bus shall be equipped with dual horns of standard make which meet requirements of Federal Motor Vehicle Safety Standards, 49 CFR 571.~~

~~8 VAC 20-70-720. Instrument and instrument panel.~~

~~A. Chassis shall be equipped with following instruments and gauges:~~

~~1. Speedometer which will show speed;~~

~~2. Odometer which will show accrued mileage, including tenths of miles;~~

~~3. Ammeter or voltmeter with graduated scale;~~

~~4. Oil pressure gauge;~~

~~5. Water temperature gauge;~~

~~6. Fuel gauge;~~

~~7. Upper-beam headlamp indicator; and~~

~~8. Tachometer.~~

~~B. All instruments or gauges shall be mounted on instrument panel in such manner that each is clearly visible to driver in normal seated position. Lights in lieu of gauges are not acceptable.~~

~~C. Exceptions. On all Type A vehicles, both the ammeter or voltmeter and its wiring are to be compatible with generating capacity.~~

~~8 VAC 20-70-730. Lights and signals.~~

~~A. Each chassis shall be equipped with not less than two sealed beam headlights - beam controlled, and stop and tail lights, and two front turn signal lamps mounted on front fenders.~~

~~B. Lights shall be protected by fuse or circuit breakers.~~

~~C. Self-canceling directional signal switch shall be installed by the chassis manufacturer. The directional signals shall activate only when ignition is in "on" position.~~

~~8 VAC 20-70-740. Oil filter.~~

~~Oil filter of replaceable element type shall be provided and shall have oil capacity of at least one quart.~~

8 VAC 20-70-750. Openings.

All openings in floorboard or firewall between chassis and passenger-carrying compartment, such as for gearshift lever and auxiliary brake lever, shall be sealed unless altered by body manufacturer. (See 8 VAC 20-70-960)

8 VAC 20-70-760. Overall length.

Annual body specifications shall specify overall length.

8 VAC 20-70-770. Passenger load.

Gross vehicle weight (i.e., wet weight, plus body weight, plus driver's weight of 150 pounds, plus weight of maximum seated pupil load based on not less than 120 pounds per pupil) shall not exceed maximum gross vehicle weight rating as established by manufacturer.

8 VAC 20-70-780. Retarder system (optional).

~~Retarder system, if used, shall maintain the speed of the fully loaded school bus at 19 mph on a 7.0% grade for 3.6 miles and shall be approved by the Department of Education.~~

~~8 VAC 20-70-790. Shock absorbers.~~

~~Bus shall be equipped with front and rear double-acting shock absorbers compatible with manufacturer's rated axle capacity.~~

~~8 VAC 20-70-800. Springs.~~

~~A. Springs or suspension assemblies shall be of ample resiliency under all load conditions and of adequate strength to sustain loaded bus without evidence of overload.~~

~~B. Springs or suspension assemblies shall be designed to carry their proportional share of gross vehicle weight in accordance with requirement for "Weight Distribution" as shown in 8 VAC 20-70-850.~~

~~C. Rear springs shall be of progressive or variable type.~~

~~D. Stationary eye of the front spring shall be protected by full wrapper leaf in addition to main leaf.~~

~~Exception Type A vehicles.~~

~~Springs that are regular equipment on vehicle to be purchased may be used.~~

~~8 VAC 20-70-810. Steering gear.~~

~~A. Steering gear shall be approved by chassis manufacturer and designed to assure safe and accurate performance when vehicle is operated with maximum load and maximum speed.~~

~~B. No changes shall be made in steering apparatus which are not approved by chassis manufacturer.~~

~~C. There shall be clearance of at least two inches between steering wheel and cowl instrument panel, windshield, or any other surface.~~

~~D. Power steering is required and shall be of the integral type with integral valves.~~

8 VAC 20-70-820. Tires and rims.

A. Tire and rim sizes, based upon current standards of Tire and Rim Association, shall be required.

B. Total weight imposed on any tire shall not be above current standard of Tire and Rim Association.

C. Dual rear tires shall be provided on all vehicles.

D. All tires on given vehicles shall be of same size and ply rating.

E. Spare tire, if required, shall be suitably mounted in accessible location outside passenger compartment.

Exception Type A conversion van.

Same as above, except that dual rear tires are not required.

8 VAC 20-70-830. Transmission.

~~A. Mechanical type transmission shall be synchromesh except first and reverse gears. Its design shall provide not less than four forward and one reverse speeds. With five-speed transmission, fifth gear shall be direct.~~

~~B. Automatic transmissions are permissible when equipped with a parking pawl or approved parking brake system.~~

~~Exception Type A vehicles.~~

~~Three-speed transmissions are acceptable.~~

~~8 VAC 20-70-840. Turning radius.~~

~~Chassis with a wheel base of 264 inches or less shall have a right and left turning radius of not more than 42 1/2 feet, curb to curb measurement. Chassis with a wheel base over 264 inches shall have a right and left turning radius of not more than 44 1/2 feet curb to curb measurement.~~

~~8 VAC 20-70-850. Weight distribution.~~

~~A. Weight distribution of fully loaded bus on level surface shall be such that not more than 75% of gross vehicle weight is on rear tires, and not more than 35% is on front tires.~~

~~B. Exception Type D vehicles. With engine inside front of body, if entrance door is ahead of front wheels, not more than 75% of gross vehicle weight shall be on rear tires, nor more than 50% on front tires. If entrance door is behind front wheels, not more than 75% of gross vehicle weight shall be on rear tires, nor more than 40% on front tires. With engine in rear, not more than 75% of gross vehicle weight shall be on rear tires, nor more than 40% on front tires.~~

~~8 VAC 20-70-860. Wheels.~~

~~Disc wheels are required.~~

~~ARTICLE 3.~~

~~THE BUS BODY.~~

~~8 VAC 20-70-870. Aisle.~~

~~A. Minimum clearance of all aisles, including aisle (or passageway between seats) leading to emergency door, shall be 12 inches. Aisles shall be unobstructed at all times. (See 8 VAC 20-70-990~~

~~B. Aisle supports of seat backs shall be slanted away from aisle sufficiently to give aisle clearance of 15 inches at top of seat backs.~~

~~C. Exceptions.~~

~~1. Type D vehicles with engine inside front of body: Minimum distance between barrier at rear of entrance stepwell and engine cover shall be 14 inches, measured at floor level.~~

~~2. Type A vehicles to have minimum aisle width of 15 inches.~~

~~3. Type B, forward control to have minimum aisle width of 14 inches.~~

~~4. Buses equipped with wheelchair positions. See 8 VAC 20-70-1370 of this chapter.~~

~~8 VAC 20-70-880. Battery.~~

~~The battery shall be located in the engine compartment, except when otherwise specified on annual chassis specifications. (See 8 VAC 20-70-560 B) when mounted outside engine~~

~~compartment.~~

~~8 VAC 20-70-890. Body sizes.~~

~~Sizes are based on knee-room clearance between rows of forward-facing seats, overall width, center aisle width, and average rump width. Body lengths for various capacity units will be designated in Specification Notices, issued periodically by the Pupil Transportation Service, Department of Education.~~

~~8 VAC 20-70-900. Bumper, front.~~

~~See 8 VAC 20-70-580 of this chapter.~~

~~8 VAC 20-70-910. Bumper, rear.~~

~~A. Rear bumper shall be of pressed steel channel at least 3/16 inch by 9 1/2 inches.~~

~~B. It shall be wrapped around back corners of bus. It shall extend forward at least 12 inches,~~

~~measured from rear-most point of body at floor line.~~

~~C. Bumper shall be attached to chassis frame in such manner that it may be easily removed, shall be so braced as to develop full strength of bumper section from rear or side impact, and shall be so attached as to prevent hitching of rides.~~

~~D. Rear bumper shall extend beyond rear-most part of body surface at least one inch, measured at floor line.~~

~~Exception Type A vehicles.~~

~~Rear bumper shall be standard type furnished by chassis manufacturer as part of chassis on conversion vans. Body manufacturer will furnish bumper on cutaway chassis.~~

~~8 VAC 20-70-920. Ceiling.~~

~~See insulation and interior, 8 VAC 20-70-1070 and 8 VAC 20-70-1080.~~

~~8 VAC 20-70-930. Chains.~~

~~See wheel housings, 8 VAC 20-70-1300 D.~~

~~8 VAC 20-70-940. Color.~~

~~A. School bus body including hood, cowl, external speakers and fenders shall be painted uniform color, national school bus yellow.~~

~~B. Grill shall be national school bus yellow, if painted; otherwise it shall be chrome or anodized aluminum.~~

~~C. Rear bumper, body trim, and required rub rails shall be painted black.~~

~~D. The roof of the bus may be painted white extending down to the drip rails on the sides of the body except that front and rear roof caps shall remain national school bus yellow.~~

~~E. All paint shall meet the lead-free standards.~~

~~F. Retroreflective tape.~~

~~Reflective material shall be installed on all buses ordered after July 1, 1994. Material shall be Type V or better, as determined by the American Society of Testing Materials (ASTM): D4956-90. "Standard specifications for reflective sheeting for traffic control."~~

~~1. The material shall retain at least 50% of reflectance values for a minimum of seven years.~~

~~2. Reflective materials and markings shall include all of the following:~~

~~a. On the rear, a strip of reflective yellow material two inches in width to be applied on the back of the bus, extending from the left lower corner of the "SCHOOL BUS" lettering, across to left side of the bus, then vertically down to the top of the bumper, across the bus on a line immediately above the bumper to the right side, then vertically up to a point even with a horizontal strip terminating at the right lower corner of the "SCHOOL BUS" lettering. (See diagram 2.)~~

~~**{See Diagram 2.}**~~

~~b. "SCHOOL BUS" signs shall be marked with reflective yellow material comprising background for lettering of the front and rear "SCHOOL BUS" signs. (See diagrams 2 and 3.)~~

~~**{See Diagram 3.}**~~

~~c. Sides of the bus body shall be marked with reflective yellow material, two inches in width, extending the length of the bus body and located (vertically) as close as practicable to the beltline. (See diagram 4.)~~

~~**{See Diagram 4.}**~~

~~3. Reflective material shall be installed on the rear and sides of school activity buses, following the same specifications in subdivisions 2 a and 2 c of this subsection. There will be no "SCHOOL BUS" signs on either the front or the rear of the vehicle. Color of the reflective material shall match, as closely as possible, the color of the bus body.~~

~~4. OPTION: Rear bumpers on school or activity buses may be marked with a maximum three-inch wide continuous black strip of reflective material which continues around corners to the ends of the bumpers. (See diagram 2.)~~

~~**8 VAC 20-70-950. Communication system - optional equipment.**~~

~~A. Two-way communication systems. If two-way communication systems are installed on school buses, the systems shall be subject to written policies adopted by the local school board.~~

~~Installation shall be subject to the Department of Education Annual Fleet Assessment.~~

~~1. The radio mounting shall be in the driver's compartment in a safe, secure location, so as not to interfere with normal bus operation.~~

~~2. Mounting shall be permanent type (temporary or slide-in mounting will not be acceptable).~~

~~3. Wiring shall be protected by a proper fuse or circuit breaker and permanently connected to an accessory circuit shut off by ignition switch. Plug-in type connections are not acceptable.~~

~~4. Antenna shall be permanently mounted to cowl or roof so as not to interfere with driver's vision of roadway. Antenna lead-in cable shall be permanently secured with the proper clamps, grommets, and sealant. Antenna cable may not pass through window opening.~~

~~B. Public address system. For use by driver, the system contains an inside speaker and an external speaker which is of special use when driver needs to caution pupils about surrounding dangers at school bus stops. Inside speakers shall be recessed type.~~

~~C. AM/FM radios and cassette players. If AM/FM radios or cassette players are installed, they shall be properly mounted by the body manufacturer or local shop personnel. All wiring shall be properly connected and concealed and any speakers shall be of recessed type.~~

~~D. Video camera. Advanced approval must be received from the Department of Education when video camera equipment use on school buses is desired by the local school division. Both equipment and installation shall be subject to the Department of Education annual fleet assessment.~~

~~1. Equipment shall not extend more than six inches from the front header panel into the driver's compartment.~~

~~2. Camera boxes shall be mounted securely to the header without use of brackets or other supports.~~

~~3. Mounted equipment shall be located on the left side of the front header and shall not interfere with passenger ingress and egress.~~

~~8 VAC 20-70-960. Construction. Type B, C, and D vehicles.~~

~~A. Construction of body shall meet all requirements of FMVSS 220 (Roll-over), 49 CFR ↄ 571.220, FMVSS 221 (Joint Strength), 49 CFR ↄ 571.221, and all other applicable federal standards.~~

~~B. Construction shall be of prime commercial quality steel or other metal with strength at least equivalent to all-steel as certified by bus body manufacturer. All such construction materials shall be fire resistant.~~

~~C. Construction shall provide reasonable dust proof and watertight unit.~~

~~D. Bus body (including roof bows, body posts, strainers, stringers, floor, inner and outer linings, rub rails and other reinforcements) shall be of sufficient strength to support entire weight of fully loaded vehicle on its top or side if overturned. Bus body as unit shall be designed and built to provide impact and penetration resistance.~~

~~E. Side posts and roof bows. There shall be a body side post and roof bow fore and aft of each window opening. This may be a continuous bow or two separate pieces effectively joined.~~

~~F. Floor shall be of prime commercial quality steel of at least 14-gauge or other metal or other material at least equal in strength to 14-gauge steel. Floor shall be level from front to back and from side to side except in wheel housing, toeboard, and driver's seat platform areas. When plywood is used, it shall be of 1/2-inch exterior B.B. Grade or equivalent and securely fastened to the existing steel floor.~~

~~G. Roof strainers. Two or more roof strainers or longitudinal members shall be provided to~~

~~connect roof bows, to reinforce flattest portion of roof skin, and to space roof bows. These strainers may be installed between roof bows or applied externally. They shall extend from windshield header and, when combined with rear emergency door post, are to function as longitudinal members extending from windshield header to rear floor body cross member. At all points of contact between strainers or longitudinal members and other structural material, attachment shall be made by means of welding, riveting or bolting.~~

~~H. Side strainers. There shall be one or more side strainers or longitudinal members to connect vertical structural members and to provide impact and penetration resistance in event of contact with other vehicles or objects. Such strainers shall be formed (not in flat strip) from metal of at least 16-gauge and three inches wide.~~

~~1. Side strainers shall be installed in area between bottom of window and bottom of seat frame and shall extend completely around bus body except for door openings and body cowl panel. Side strainers shall be fastened to each vertical structural member in any one or any combination of the following methods as long as stress continuity of members is maintained:~~

~~a. Installed between vertical members;~~

~~b. Installed behind panels but attached to vertical members; and~~

~~c. Installed outside external panels.~~

~~2. Fastening method employed shall be such that strength of strainers is fully utilized.~~

~~3. Side strainers of longitudinal members may be combined with one of required rub rails (see 8 VAC 20-70-1170), or be in form of additional rub rail, as long as separate conditions and physical requirements for rub rails are met. No portion of side strainer or longitudinal member is to occupy same vertical position as rub rail.~~

~~I. Rear corner reinforcements. Rear corner framing of bus body between floor and window sill and between emergency door posts and last side posts shall consist of at least three structural members applied horizontally or vertically, two of which shall be vertical, to provide additional impact and penetration resistance equal to that provided by frame members in areas of sides of body. Such structural members shall be securely attached at each end.~~

~~Exception: Extra vertical member required in subsection I above may be deleted on units of less than 90 inches in width.~~

~~J. Floor sills. There shall be one main body sill at each side post and two intermediate body sills on approximately 10-inch centers. All sills shall be of equal height, not to exceed three inches. All sills shall extend width of body floor except where structural members or features restrict area.~~

~~Main body sill shall be equivalent to or heavier than 10-gauge and each intermediate body sill shall be equivalent to or heavier than 16-gauge, or each of all body sills shall be equivalent to or greater than 14-gauge. All sills shall be permanently attached to floor.~~

~~Connections between sides and floor system shall be capable of distributing loads from vertical posts to all floor sills.~~

~~K. All openings between chassis and passenger-carrying compartment made due to alterations of body manufacturer shall be sealed. (See 8 VAC 20-70-1130)~~

~~L. A cover shall be provided for the opening to the gasoline tank fillpipe.~~

~~M. A moisture and rustproof removable panel shall be provided in the floor for access to the fuel tank sender gauge. It shall be designed for prolonged use and adequate fastening to the floor.~~

~~Exception Type B vehicles.~~

~~Subsection M of this section does not apply.~~

~~**{See Diagram 5.}**~~

~~**8 VAC 20-70-970. Construction Type A vehicles.**~~

~~A. Construction of body shall meet all requirements of FMVSS 220 (Roll-over), 49 CFR ɔ 571.220, and all other applicable federal standards.~~

~~B. Body joints created by body manufacturer shall meet the 60% joint strength provision required in FMVSS 221, 49 CFR ɔ 571.221, for Type B, C & D buses.~~

~~C. Construction shall be of prime commercial quality steel or other metal strength at least equivalent to all steel as certified by bus body manufacturer. All such construction materials shall be fire resistant.~~

~~D. Construction shall provide reasonably dustproof and watertight unit.~~

~~E. Bus body (including roof bows, body posts, strainers, stringers, floor, inner and outer linings, rub rails and other reinforcements) shall be of sufficient strength to support entire weight of fully loaded vehicle on its top or side if overturned. Bus body as unit shall be designed and built to provide impact and penetration resistance.~~

~~F. Floor. Plywood of 1/2 inch exterior B.B. Grade or equivalent shall be applied over the~~

~~existing steel floor and securely fastened. Floor shall be level from front to back and from side to side except in wheel housing, toeboard and driver seat platform areas.~~

~~Exception. Plywood may be deleted when provisions of subsection D and subdivision H 1 of 8 VAC 20-70-960 for Type C and D are met.~~

~~G. Roof strainers. Two or more roof strainers or longitudinal members shall be provided to connect roof bows to reinforce flattest portion of roof skin, and to space roof bows. These strainers may be installed between roof bows or applied externally. They shall extend from windshield header to rear body header over the emergency door. At all points of contact between strainers of longitudinal members and other structural material, attachment shall be made by means of welding, riveting, or bolting.~~

~~After load as called for in Static Load Test Code has been removed, none of the following defects shall be evident:~~

~~1. Failure or separation at joints where strainers are fastened to roof bows;~~

~~2. Appreciable difference in deflection between adjacent strainers and roof bows;~~

~~3. Twisting, buckling, or deformation of strainer cross section.~~

~~H. Side strainers. There shall be one longitudinal side strainer mounted at shoulder level (window sill level) and extending from front main vertical post to rear corner post. This member shall be attached to each vertical structural member. Such strainer shall be formed of metal (not in flat strip).~~

~~1. There shall be one longitudinal side strainers installed in the area between bottom of window and bottom of seat frame extending from front main vertical post to rear corner post. This member shall be attached to each vertical structural member.~~

~~2. Strainers may be fastened in any one or any combination of the following methods as long as stress continuity of members is maintained:~~

~~a. Installed between vertical members;~~

~~b. Installed behind panels but attached to vertical members; or~~

~~c. Installed outside external panels.~~

~~3. Fastening method employed shall be such that strength of strainers is fully utilized.~~

~~I. Area between floor and window line shall be restructured inside to include at least four vertical formed reinforcement members extending from floor to window line rail. They shall be securely attached at both ends.~~

~~J. Rear corner reinforcements. Rear corner framing of the bus body between floor and window sill and between emergency door post and last side post shall consist of at least one structural member applied horizontally to provide additional impact and penetration resistance equal to that provided by frame members in areas of sides of body. Such member shall be securely attached at each end. Bodies over 90 inches in width shall comply with 8 VAC 20-70-960 I.~~

~~K. All openings between chassis and passenger carrying compartment made due to alterations by body manufacturers shall be sealed. (See 8 VAC 20-70-1130.)~~

~~8 VAC 20-70-980. Defrosters.~~

~~Defrosters shall be of sufficient capacity to keep windshield clear of fog, ice, and snow and to defog the window to the left of the driver. (See 8 VAC 20-70-1040) An auxiliary fan of sufficient capacity to defog the entrance door glass shall be installed above the windshield on the right side. An additional fan to the left of the driver is permissible. Fans shall be placed so as not to block driver's view of outside rearview mirrors.~~

~~Exception: Type A vehicle, Auxiliary fan not required.~~

~~8 VAC 20-70-990. Doors.~~

~~A. Service door.~~

~~1. Service door shall be manually or power-operated, under control of driver, and so designed as to afford easy release and prevent accidental opening. No parts shall come together so as to shear or crush fingers.~~

~~2. Service door shall be located on right side of bus opposite driver and within his direct view.~~

~~3. Service door shall have minimum horizontal opening of 24 inches and minimum vertical opening of 68 inches.~~

~~4. Service door shall be of split-type, jack knife type, or sedan-type. (Split-type door includes any sectioned door which divides and opens inward or outward.) If one section of split-type door opens inward and other opens outward, front section shall open outward. The jack knife-type shall fold inward at the front of the door opening.~~

~~5. Lower as well as upper panels shall be of approved safety glass. (See 8 VAC 20-70-1320 1) Bottom of lower glass panel shall not be more than 35 inches from ground when bus is unloaded. Top of upper glass panel shall not be more than six inches from top of door.~~

~~6. Vertical closing edges shall be equipped with flexible material to protect children's fingers.~~

~~7. There shall be no door left of driver.~~

~~Exception Type A vehicles. Standard does not apply.~~

~~8. All doors shall be equipped with padding at the top of each door opening. Pad shall be at least three inches wide and one-inch thick and extend the full width of the door opening.~~

~~B. Rear emergency door Type B, C, and D vehicles.~~

~~1. Emergency door shall be located in center of rear end of bus.~~

~~2. Rear emergency door shall have minimum horizontal opening of 24 inches and minimum vertical opening of 45 inches measured from floor level.~~

~~3. Rear emergency door shall be hinged on right side and shall open outward and be equipped with an adequate strap or stop to prevent door from striking lamps or right rear of body. Such strap or stop shall allow door to open at least at a 90 degree angle from closed position.~~

~~Exception: Type D vehicles with rear engines.~~

~~Emergency door shall be located on the left side, shall be hinged on the left side and open outward. Door shall meet all requirements of FMVSS 217, 49 ↄ CFR 571.217.~~

~~4. Upper portion of rear emergency door shall be equipped with approved safety glass, exposed area of which shall not be less than 400 square inches. (See 8 VAC 20-70-1320 1) Lower portion of door shall be equipped with approved safety glass, area of which shall not be less than 12 inches in height and 20 inches in width. This glass shall be protected by metal guard on inside. This guard shall be free of any sharp edges that may cause injury to passengers.~~

~~5. There shall be no steps leading to emergency door.~~

~~6. No seat or other object shall be so placed in bus which restricts any part of passageway leading to emergency door to an opening smaller than rectangle of 12 inches in width and 48 inches in height, measured from floor level.~~

~~7. When not fully latched, emergency door shall actuate signal audible to driver by means of mechanism actuated by latch.~~

~~8. Words "EMERGENCY DOOR," both inside and outside in black letters two inches high, painted or vinyl, shall be installed directly above emergency door. Words may be placed on the top of door outside if space is available.~~

~~9. The emergency door shall be designed to open from inside and outside bus. It shall be equipped with a slide bar and cam-operated lock located on left side of door and fastened to the door framing.~~

~~The slidebar shall be approximately 1 1/4 inches wide and 3/8 inch thick and shall have a minimum stroke of 1 1/4 inches. The slidebar shall have a bearing surface of a minimum of 3/4 inch with the door lock in a closed position. Control from driver's seat shall not be permitted. Provision for opening from outside shall consist of nondetachable device so designed as to prevent hitching to, but to permit opening when necessary. Door lock shall be equipped with interior handle and guard that extends approximately to center of door. It shall lift up to release lock.~~

~~10. All doors shall be equipped with padding at the top edge of each door opening. Pad shall be at least three inches wide and one inch thick and extend the full width of the door opening.~~

~~C. Rear emergency door Type A vehicles.~~

~~1. Emergency door shall be located in center of rear end of bus and shall be equipped with fastening device for opening from inside and outside body, which may be quickly released but is designed to offer protection against accidental release. Control from driver's seat shall not be permitted. Provision for opening from outside shall consist of device designed to prevent hitching to but to permit opening when necessary.~~

~~2. When not fully closed, emergency door shall actuate signal audible to driver.~~

~~3. Emergency door shall be marked "EMERGENCY DOOR" on inside and outside in painted or vinyl black letters two inches high immediately above the emergency door.~~

~~4. There shall be no steps leading to emergency door.~~

~~5. No seat or other object shall be placed in bus which restricts passageway to emergency door to less than 15 inches.~~

~~6. All doors shall be equipped with padding at the top edge of each door opening. Pad shall be at least three inches wide and one inch thick and extend the full width of the door opening.~~

~~D. Security locking system. A locking system designed to prevent vandalism, which is approved by the Pupil Transportation Service, Department of Education, may be installed provided it is equipped with an interlock in the chassis starting circuit and an audible alarm to indicate to the driver when an emergency exit is locked while the ignition is in the "on" position. A cutoff switch on the interlock circuit or a lock and hasp on emergency exits shall not be permitted.~~

~~8 VAC 20-70-1000. Electrical system.~~

~~1. Battery - see 8 VAC 20-70-560.~~

~~2. Alternator - see 8 VAC 20-70-540.~~

~~3. Lights and signals - see 8 VAC 20-70-730.~~

~~4. Wiring - see 8 VAC 20-70-1350.~~

~~8 VAC 20-70-1010. Emergency equipment.~~

~~A. Fire extinguisher.~~

~~1. Bus shall be equipped with one dry-chemical fire extinguisher of at least five pound capacity with pressure indicator, mounted in extinguisher manufacturer's bracket of automotive type, and located in full view and in an accessible place in the front of the bus excluding floor and area above bottom line of windshield.~~

~~2. Fire extinguisher shall bear label of Underwriters' Laboratories, Inc., showing rating of not less than 2A-10-B C.~~

~~3. Fire extinguisher shall have aluminum, brass, or steel valves, heads, check stems, siphon tubes, levers, safety pins, chain, handles and metal hanging brackets. Plastic shall not be used for those named parts.~~

~~B. First aid kit.~~

~~1. Bus shall carry Grade A metal first-aid kit, unit-type, mounted in full view and in accessible place in the front of the bus and identified as a first-aid kit.~~

~~2. The first-aid kit shall contain the following items:~~

~~Item..... Unit~~

~~Bandage compress (sterile gauze pads) 4-inch 13~~

~~Bandage compress (sterile gauze pads) 2-inch 12~~

~~Adhesive absorbent bandage (nonadhering pad) 12~~

~~1 x 3 inch~~

~~Triangular bandage, 40-inch 12~~

~~Gauze bandage, 4-inch 12~~

~~Absorbent-gauze compress 11~~

~~Antiseptic applicator (swab type) 10 per unit 12~~

~~(Zephiran Chloride/Green Soap type)~~

~~Bee sting applicator (swab type) 10 per unit 11~~

~~C. Warning devices.~~

~~1. Bus shall be equipped with a kit containing three reflectorized triangular warning devices meeting requirements of FMVSS-125, 49 CFR ↄ 571.125.~~

~~2. Kit shall be securely mounted on the right of toeboard as far forward as practical or in the area to the left of the driver's seat.~~

~~Exception Type A vehicles.~~

~~Kit may be mounted behind left rear seat.~~

~~D. Body fluid cleanup kit.~~

~~1. Each bus shall carry a Grade A metal or rigid plastic kit, mounted in an accessible place and identified as a body fluid clean-up kit with a directions-for-use sheet attached to the inside cover.~~

~~2. The kit shall be moisture proof and properly mounted or secured in a storage compartment.~~

~~3. Contents shall include but not be limited to the following items:~~

~~a. 1 pair latex gloves;~~

~~b. 1 pick-up spatula or scoop;~~

~~c. 1 face mask;~~

~~d. Infectious liquid spill control powder;~~

~~e. Anti-microbial hand wipes - individually wrapped;~~

~~f. Germicidal disinfectant wipes - tuberculocidal; and~~

~~g. Plastic disposal bag with tie.~~

~~8 VAC 20-70-1020. Emergency exits.~~

~~Each emergency exit shall comply with FMVSS 217, 49 CFR э 571.217, regarding the number of exits, types of exits and location of exits based of the capacity of the vehicle.~~

~~1. Side emergency exit doors.~~

~~a. A dedicated aisle of at least 12 inches in width, referenced to the rear of the emergency exit door is required.~~

~~b. Side emergency exit doors shall be hinged on the forward edge.~~

~~c. A one-inch wide strip of yellow retroreflective tape shall be placed around the outside perimeter of the emergency opening, not the emergency exit itself.~~

~~d. When not fully latched, side emergency exit door shall actuate a signal audible to the driver by means of a mechanism actuated by the latch when the ignition switch is on.~~

~~e. A security locking system designed to prevent vandalism may be installed provided it meets all specifications of 8 VAC 20-70-990 D of this chapter.~~

~~2. Roof exits/vents.~~

~~a. All Type A, B, C, and D vehicles shall be equipped with a minimum of one emergency roof exit/vent approved by the Department of Education.~~

~~b. When not fully latched, this exit shall actuate a signal audible to the driver by means of a mechanism actuated by the latch when the ignition switch is on.~~

~~c. A roof exit/vent security locking system designed to prevent vandalism may be installed provided it meets all specifications of 8 VAC 20-70-990 D.~~

~~d. A one-inch wide strip of yellow retroreflective tape shall be placed around the outside perimeter of the emergency exit opening, not the emergency exit itself.~~

~~NOTE: If the roof is painted white, the one-inch wide strip shall be white retroreflective material.~~

~~e. When a single roof exit is installed, it shall be located as near as practicable to the~~

~~longitudinal midpoint of the passenger compartment, and shall be installed such that the centerline of the hatch is on the longitudinal centerline of the bus.~~

~~f. If two roof exits are utilized, they shall be located as near as practicable to the points equidistant between the longitudinal midpoint of the passenger compartment and the front and the rear of the passenger compartment.~~

~~NOTE: No removal or cutting of any roof structural component shall occur during installation. If the installation required by subdivisions 2 e and 2 f of this section cannot be accomplished as described, then prior approval by the Pupil Transportation Service will be required through a written request from the local school division.~~

~~g. Roof exits/vents shall have rust-proof hardware.~~

~~h. Roof exits/vents shall be hinged in the front and be equipped with an outside release handle.~~

~~3. Emergency exit windows.~~

~~a. Push-out emergency windows are permissible, if required by FMVSS 217, 49 CFR § 571.217.~~

~~b. When not fully latched, the emergency exit window shall actuate a signal audible to the~~

~~driver by means of a mechanism actuated by the latch.~~

~~c. A one-inch wide strip of yellow retroreflective tape shall be placed around the outside perimeter of each emergency exit opening, not the emergency exit itself.~~

~~d. No emergency exit window shall be located directly in front of a side emergency exit door.~~

~~8 VAC 20-70-1030. Floor covering.~~

~~A. Floor (See 8 VAC 20-70-960.)~~

~~B. Floor in underseat area, including tops of wheel housings, driver's compartment and toeboard shall be covered with fire-resistant rubber floor covering or an approved equivalent, having minimum over-all thickness of .125 inch. Driver's compartment and toeboard area shall be trimmed with molding strips behind the cowl face line.~~

~~C. Floor covering in aisle shall be of aisle-type fire-resistant rubber or an approved equivalent, nonskid, wear-resistant and ribbed. Minimum overall thickness shall be .1875 inch measured from tops of ribs. Rubber floor covering shall meet federal specifications ZZ-M71d.~~

~~D. Floor covering shall be permanently bonded to floor, and shall not crack when subjected to sudden changes in temperature. Bonding or adhesive material shall be waterproof and shall be of the type recommended by manufacturer of floor-covering material. All seams shall be sealed with waterproof sealer.~~

~~8 VAC 20-70-1040. Heaters.~~

~~A. Hot water heaters of fresh air or combination fresh air and recirculating type, with power defrosters, are required.~~

~~B. Heaters shall bear name plate rating affixed by heater manufacturer on top of heater shell.~~

~~C. Heaters shall be capable of maintaining inside temperature of 500 F, with an outside temperature of 200 F when the bus is loaded to one-half capacity.~~

~~D. The heater wiring shall be connected to the cold side of the ignition switch through a continuous duty solenoid relay Cole Hersee No. 24106 or equivalent. (See 8 VAC 20-70-1350 D.)~~

~~E. The power defroster shall deliver a sufficient amount of heated air distributed through a windshield duct, nozzle or nozzles to defog and deice the entire windshield, and to defog the driver's window. The duct, nozzle, or nozzles shall be designed to prevent objects from being placed in any~~

~~manner which would obstruct the flow of air.~~

~~F. Water circulation cut-off valves in the supply and return lines, a minimum of 3/4 inch diameter, shall be at or near the engine. A water flow regulating valve in the pressure line for convenient operation by the driver is also required.~~

~~G. Heater hoses, including those in engine compartment, shall be supported in such manner that hose chafing against other objects will not occur nor shall suspended water lines interfere with routine vehicle maintenance.~~

~~H. All water hoses in driver or passenger area shall be shielded.~~

~~I. An auxiliary heater of recirculating type, having a minimum capacity of 60,000 BTU output, shall be installed under the second seat behind the wheelhousing. There shall be a grille or guard over exposed heater cores to prevent damage by pupils' feet.~~

~~J. A booster pump in the intake heater line shall be provided on all Type B, C and D buses.~~

~~K. Exception Type A vehicles.~~

~~1. Front heater with high output and defroster shall be furnished by the chassis manufacturer.~~

~~2. The body manufacturer shall provide an additional underseat heater near the rear of the bus.~~

~~8 VAC 20-70-1050. Identification of school buses.~~

~~For purpose of identification school buses shall be lettered as follows:~~

~~1. Lettering shall be placed according to Diagrams 7 and 8. Lettering shall be of black paint or vinyl and conform to "Series B" for Standard Alphabets for Highway Signs.~~

~~2. Both the front and rear of the body shall bear the words, "SCHOOL BUS" in black letters eight inches in height.~~

~~3. All school buses shall have a black painted or vinyl number four inches high on the rear of the body, on the right side just back of the entrance door, and on the left side just back of the warning sign. (See Diagrams 7 and 8.) The number shall also be placed on the front bumper, approximately 18 inches from the right end in yellow letters four inches high.~~

~~4. The name of the school division shall be on each side of the bus in black letters four inches high – as ".... COUNTY PUBLIC SCHOOLS," or "... CITY PUBLIC SCHOOLS."~~

~~5. Options.~~

~~a. The bus number may be placed in the center of the bus roof with black (12-inch minimum) numbers.~~

~~b. A black number (four-inch maximum) may be placed on the inside rear header. It shall not interfere with emergency door lettering.~~

~~8 VAC 20-70-1060. Inside height.~~

~~Inside body height shall be 72 inches or more, measured metal to metal, at any point on longitudinal center line from front vertical bow to rear vertical bow.~~

~~Exception Type A conversion van.~~

~~Inside body height shall be 63 inches minimum.~~

~~8 VAC 20-70-1070. Insulation.~~

~~Ceilings and walls shall be coated with proper materials to deaden sounds and to reduce vibrations to a minimum. Fiber glass thermal insulation (minimum thickness one inch) shall be used to insulate walls and roof between inner and outer panels.~~

~~8 VAC 20-70-1080. Interior.~~

~~Interior of bus shall be free of all unnecessary projections likely to cause injury. This standard requires inner lining on ceilings and walls. Ceiling panels shall be constructed so as to contain lapped joints with all exposed edges hemmed to minimize sharpness. If lateral panels are used, forward panels shall be lapped by rear panels.~~

~~8 VAC 20-70-1090. Lights and signals - see Diagrams 7 and 8.~~

~~No lights or signals other than specified here shall be installed on school buses, except those required by federal regulations. All lights and reflectors shall be approved by the Superintendent, Department of State Police, Commonwealth of Virginia.~~

~~1. Clearance lights. Body shall be equipped with two red clearance lamps at rear, two amber~~

~~clearance lamps at front, and intermediate side marker lamps on buses 30 feet or more in length.~~

~~They shall be of armour type.~~

~~2. Identification lamps. Three amber lamps shall be mounted on front and three red lamps on rear of body.~~

~~3. Stop and tail lamps. Bus shall be equipped with two matched stop and tail lamps of heavy duty type, which shall be in combination, emitting red light plainly visible from a distance of at least 500 feet to rear, and mounted on rear end with their centers not less than 12 nor more than 24 inches from plane side of body, and not less than six nor more than 18 inches below D-glass in rear of body. They shall be approximately seven inches in diameter. These lights shall be on the same horizontal line with the turn signal units and shall not flash. A list of approved stop and tail lights will be supplied to the body manufacturers by the Pupil Transportation Service, Department of Education. The use of lights not on this list will not be approved.~~

~~4. For illumination of rear license plate, the type of stop and tail light with which the chassis is equipped may be used. The stop light connection will be made to this light.~~

~~5. Back-up lamps. Back-up lamps shall be mounted on the rear of the body and shall be illuminated when the ignition switch is energized and reverse gear is engaged.~~

~~6. Interior lamps. Interior lamps shall be provided which adequately illuminate aisles and stepwell.~~

~~7. Turn signal units. Bus shall be equipped with Class A, flashing turn signal units of heavy-duty type. These signals shall be independent units equipped with amber lenses on all faces. The turn signals/directional signal units shall activate only when ignition is in "on" position. A pilot light or lights shall indicate when these lights are activated. The front lights shall be mounted near the front corners of chassis on each side. The rear lights shall be seven inches in diameter and mounted not less than six nor more than 18 inches from plane of the side of the body and not less than six nor more than 18 inches below D-glass in rear of body. They shall be on the same horizontal line with the stop and tail lights required in 3 above.~~

~~a. In addition to the turn signals described above, two amber lenses metal turn signal lamps of armour-type with a minimum of four candlepower each shall be mounted on the body side at approximate seat level height and located just to the rear of the entrance door on the right side of the body and approximately the same location on the left side. They are to be connected to and function with the regular turn signal lamps. Such lamps shall provide 1800 angle vision and if painted, they shall be black.~~

~~b. A list of approved turn signal lights will be supplied to the body manufacturers by the Pupil~~

~~Transportation Service, Department of Education. The use of lights not on this list will not be approved.~~

~~c. Exception Type A conversion vans.~~

~~Turn signals shall be chassis manufacturer's standard.~~

~~8. Hazard warning signal. The turn signal units shall also function as the hazard warning system. The system shall operate independently of the ignition switch and, when energized, shall cause all turn signal lamps to flash simultaneously.~~

~~9. Reflex reflectors. (Class A) Two amber lights and two amber reflectors (they may be combined) shall be mounted, one on each side, near the front of the chassis. Two four-inch red reflectors shall be mounted, one on each side near the rear of the body and two four-inch red reflectors shall be mounted on the rear above the bumper. Two intermediate amber four-inch reflectors, one on each side near the middle of the bus, shall be mounted on buses 30 feet or more in length. They shall be mounted on panel above floor line rub rail and be metal encased.~~

~~10. School bus traffic warning lights.~~

~~a. Buses shall be equipped with four red lamps and four amber lamps. One amber lamp shall~~

~~be located near each red lamp, at the same level, but closer to the vertical center line of the bus. Lamps to be 80 watts, 12-volt sealed beam clear spot units five inches in diameter with seven inch acrylic lens, including component parts and location necessary for their operation. All lamps shall comply with SAE standards for school bus warning lamps. Information on such approved components will be supplied by the Pupil Transportation Service, Department of Education.~~

~~b. The traffic warning light system shall be wired so that the amber lamps are activated manually by a hand operated switch. When door is opened, amber lamps will be automatically deactivated and red lamps, warning sign with flashing lamps and crossing control arm shall be activated. When door is closed, all lamps shall be deactivated. No lamps shall come on when door is reopened unless the manual switch is depressed. There shall also be a cancellation switch in case lamps are accidentally activated or when no stop needs to be made.~~

~~c. The control circuit shall be connected to the cold side of the ignition switch with the master push button cancel switch mounted on the accessory console, clearly distinguished, visible and accessible to the driver.~~

~~d. The flasher and the relay shall be fastened in a compartment in the driver area and be easily accessible for servicing. The location of the flasher shall be approved by Pupil Transportation Service, Department of Education.~~

~~e. System shall contain an amber pilot light for amber lamps and a red pilot light for red lamps, clearly visible to the driver, to indicate when system is activated.~~

~~f. A three-inch black painted border around the lamps is required if not equipped with a black painted housing.~~

~~g. All electrical connections shall be soldered or connected by an acceptable SAE method.~~

~~h. The traffic warning lamp system shall require a separate control panel. This panel shall be as small as practicable, and switches and pilot lamps shall be located in conformance with the diagram below. All switches shall be properly identified by labels.~~

~~**{See Diagram 6.}**~~

~~i. The panel shall be located at or near the entrance door control handle within easy reach, visible, and be readily accessible to the driver.~~

~~j. There shall be an interrupt feature in the system to interrupt the traffic warning sign and the crossing control arm when their use is not desired. This feature shall consist of a double throw relay and a push button momentary switch.~~

~~k. Manual switch, cancel switch and interrupt switch shall be push button or flip-type momentary switches.~~

~~11. School bus traffic warning sign.~~

~~a. Warning sign shall be mounted on the left side near the front of the bus immediately below the window line.~~

~~b. Sign shall be of the octagon series, 18 inches in diameter, 16-gauge cold rolled steel, and be equipped with windguard. The sign shall have a red background with a 1/2 inch white border, and the word "STOP" on both sides in white letters, six inches high and one inch wide. The sign may be reflective.~~

~~c. Sign shall have double-faced alternately flashing red lamps, four inches in diameter, located at the top and bottommost portions of the sign, one above the other.~~

~~d. The sign shall be connected and energized through the red traffic warning lamps.~~

~~e. Air operated signs require air pressure regulator in addition to control valve. Source of supply shall be the main air tank with a pressure protection valve at the tank.~~

~~f. Sign and components shall comply with all provisions of SAEJ 1133. A list of approved traffic warning signs and components will be supplied by the Pupil Transportation Service, Department of Education.~~

~~12. School bus crossing control arm.~~

~~a. An approved crossing control arm shall be mounted on the right end of the front bumper with mounting brackets appropriate for the bumper configuration. Information on such approved arms will be supplied by the Pupil Transportation Service, Department of Education.~~

~~b. The arm shall be activated in conjunction with the traffic warning sign.~~

~~c. Wiring for an electric powered arm shall be grounded to a metal base at a suitable place on the bumper.~~

~~d. Source of supply for air operated arms shall be the main air supply tank with pressure protection valve at tank.~~

~~e. Appropriate grommets or a loom shall be used where wires or tubes go through holes in bumper and firewall.~~

~~13. Optional strobe warning light.~~

~~a. A white flashing strobe light may be installed on the roof of a school bus not to exceed 1/3 of the body length from the rear of the roof edge. Light shall have a single clear lens emitting light 360 degrees around its vertical axis. A manual switch and a pilot light must be included to indicate when the light is in operation.~~

~~b. The strobe light must operate only when the bus transports students during periods of reduced visibility caused by conditions other than darkness.~~

~~c. A list of approved strobe lights and components will be supplied by the Pupil Transportation Service, Department of Education.~~

~~**{See Diagram 7.}**~~

~~**{See Diagram 8.}**~~

~~**8 VAC 20-70-1100. Metal treatment.**~~

~~All metal parts that will be painted shall be chemically cleaned, etched, zinc-phosphate-coated, and zinc-chromate or epoxy-primed or conditioned by equivalent process.~~

~~**8 VAC 20-70-1110. Mirrors.**~~

~~A. Interior rear view mirror at least six X 30 inches, metal encased safety glass of at least 1/8 inch thickness, which will afford good view of pupils and roadway to rear and shall be installed in such a way that vibration will be reduced to a minimum. It shall have rounded corners and protected edges.~~

~~B. All buses shall have a mirror system which conforms to FMVSS 111, 49 CFR э 271.111 as amended.~~

~~C. Mirrors shall be rigidly braced so as to reduce vibration.~~

~~D. An adjustable convex mirror with a minimum diameter of four inches and a maximum diameter of five inches may be mounted on each side on a separate arm attached to the mounting of the regular outside mirror. This convex mirror shall be mounted so that it can be positioned immediately below the regular outside mirror. Stick-on convex type mirrors to the face of regular outside mirrors are prohibited.~~

~~E. A list of approved mirrors will be supplied to body manufacturers by the Pupil Transportation Service, Department of Education. The use of mirrors not on this list will not be approved.~~

~~Exception Type A vehicles.~~

~~Interior mirror to be six X 16 inches minimum and outside six X nine- 1/2 inches mounted on doors.~~

~~F. Heated exterior mirrors are permissible.~~

~~8 VAC 20-70-1120. Mounting.~~

~~A. Chassis frame shall extend to rear edge of rear body cross member. Bus body shall be attached to chassis frame in such manner as to prevent shifting or separation of body from chassis under severe operating conditions.~~

~~B. Body front shall be attached and sealed to chassis cowl in such manner as to prevent entry of water, dust, and fumes through joint between chassis cowl and body.~~

~~C. Insulating material shall be placed at all contact points between body and chassis frame. Insulating material shall be approximately 1/4 inch thick and shall be so attached to chassis frame or body member that it will not move under severe operating conditions.~~

~~D. Exception Type A conversion vans.~~

~~Standard does not apply.~~

~~8 VAC 20-70-1130. Openings.~~

~~Any openings in body or front fenders of chassis resulting from change necessary to furnish required components shall be sealed. (See 8 VAC 20-70-750 and 8 VAC 20-70-960 K.)~~

~~8 VAC 20-70-1140. Overall length.~~

~~Overall length of bus shall not exceed 36 feet for conventional flat faced cowl units or 40 feet for metropolitan type.~~

~~8 VAC 20-70-1150. Overall width.~~

~~Overall width of bus shall not exceed 100 inches, including traffic warning sign in closed position. Outside rearview mirrors are excluded.~~

~~**8 VAC 20-70-1160. Posts.**~~

~~Posts - See 8 VAC 20-70-960 and 8 VAC 20-70-1320 C.~~

~~**8 VAC 20-70-1170. Rub rails.**~~

~~A. There shall be one rub rail located on each side of bus immediately below window level which shall extend from rear side of entrance door completely around bus body (except for emergency door) to point of curvature near outside cowl on left side. If floor level rub rail extends to emergency door post in rear, this rub rail may stop at rear side post.~~

~~Exception. This rub rail is not required between the front body post and rear side post if an internal frame member (fortress rail) of greater strength is positioned immediately below the window level. The rub rail shall be applied from the last sidepost to the emergency doorpost.~~

~~B. There shall be one rub rail located on each side of bus approximately at seat level which shall extend from rear side of entrance door completely around bus body (except for emergency door) to point of curvature near outside cowl on left side. This rail shall be painted black.~~

~~C. There shall be one rub rail located approximately at floor line which shall extend from rear side of entrance door completely around bus body (except for emergency door) to point of curvature near outside cowl on left side, except at wheel housings. If the window level rub rail extends to emergency door post in rear, this rub rail may stop at rear side post.~~

~~D. All rub rails shall be attached at each body post and all other upright structural members.~~

~~E. All rub rails shall be of four inches or more in width, shall be of 16-gauge steel, and shall be constructed in corrugated or ribbed fashion.~~

~~F. All rub rails shall be applied outside body or outside body posts. Pressed-in or snap-on rub rails do not satisfy this requirement.~~

~~G. Certain exceptions may be approved for heater airintake and for rear engine type buses.~~

~~Exception Type A vehicles.~~

~~Rail required in subsection A of this section does not apply on conversion vans.~~

~~8 VAC 20-70-1180. Seat belt for driver.~~

~~A locking retractor type 2 lap belt/shoulder harness seat belt shall be provided for the driver. Each belt section shall be booted so as to keep the buckle and button-type latch off the floor and within easy reach of the driver. Belt shall be anchored in such a manner or guided at the seat frame so as to prevent the driver from sliding sideways from under the belt.~~

~~8 VAC 20-70-1190. Seats.~~

~~A. All seats shall have minimum depth of 14 inches.~~

~~B. In determining seating capacity of bus, allowable average rump width shall be 13 inches. (See 8 VAC 20-70-890.)~~

~~C. All seats shall be forward facing. They shall have two legs securely fastened to the floor with the other end supported by rail or bracket on side wall.~~

~~D. Seating plans for buses with wheelchair positions see 8 VAC 20-70-1370 and 8 VAC 20-70-1450. All other seating plans will be approved annually by Pupil Transportation Service, Department of Education.~~

~~E. Seat cushions shall have 24-hour glass coil-type springs interlaced and securely fastened to plywood base having minimum thickness of 1/2 inch. Urethane foam may be used in place of springs if sample is submitted and approved each year.~~

~~Passenger seat cushion retention system shall be employed to prevent passenger seat cushions from disengaging from seat frames in event of accident. Each seat cushion retention system shall be capable of withstanding vertical static load equal to minimum of five times weight of cushion. System shall also be capable of withstanding forward or rearward static load equal to 20 times weight of cushion.~~

~~F. No bus shall be equipped with jump seats or portable seats. (See 8 VAC 20-70-1500.)~~

~~G. Seat spacing shall provide a minimum of 25 inch knee room at center of seat, when measured horizontally from back to back, at cushion level.~~

~~H. Seat and back cushions of all seats shall be designed to safely support designated number of passengers under normal road conditions encountered in school bus service. Covering of seat cushions shall be of material having 42 ounce finished weight, 54 inch width, and finished vinyl coating of 1.06 broken twill. Material on polyester drill and polyester cotton twill knit backing with equal vinyl coating which meets or exceeds the laboratory test results for the 42 ounce 1.06 covering may be used. Padding and covering on all seats shall comply with provisions of FMVSS 302, 49~~

~~CFR ə 571.302.~~

~~I. Minimum distance between steering wheel and back rest of driver's seat shall be 11 inches. Driver's seat shall have fore-and-aft adjustment of not less than four inches and up and down adjustment of three inches. It shall be manually adjustable and strongly attached to floor.~~

~~J. Minimum of 36-inch head room for sitting position above top of undepressed cushion line of all seats shall be provided. Measurement shall be made vertically not more than seven inches from side wall at cushion height and at fore-and-aft center of cushion.~~

~~K. Backs of all seats of similar size shall be of same width at top and of same height from floor and shall slant at same angle with floor.~~

~~L. Seat back heights shall be between 19 and 24 inches measured from cushion level.~~

~~8 VAC 20-70-1200. Barriers.~~

~~A. A padded barrier shall be installed at rear of driver's seat in such a position as neither to interfere with adjustment of driver's seat nor to obstruct 21 inch entranceway to the aisle.~~

~~B. A padded barrier shall be installed at rear of entrance stepwell. Placement shall not restrict entrance passageway at any level to less than 21 inches. Barrier to coincide with length of the right front seat cushion with minimum width of 26 inches and shall have a modesty panel to extend from bottom of barrier to floor.~~

~~C. Lift-gate units see 8 VAC 20-70-1460 B.~~

~~8 VAC 20-70-1210. Steering wheel.~~

~~Steering wheel - See 8 VAC 20-70-810 4.~~

~~8 VAC 20-70-1220. Steps.~~

~~A. First step at service door shall be not less than 10 inches and not more than 14 inches from ground, based on standard chassis specifications.~~

~~B. Service door entrance may be equipped with two-step or three-step stepwell. Risers in each case shall be approximately equal.~~

~~C. Steps shall be enclosed to prevent accumulation of ice and snow.~~

~~D. Steps shall not protrude beyond side body line.~~

~~E. Grab handle not less than 20 inches in length shall be provided in unobstructed location inside doorway, but shall not be attached so that it will interfere with the opening of the glove compartment door. This handle shall be designed to eliminate exposed ends that would catch passenger clothing and shall be so placed in a position to aid small children entering the bus.~~

~~F. Step covering. All steps, including floor line platform area, shall be covered with 3/16-inch rubber metal-backed treads with at least 1 1/2-inch white nosing (or three inch white rubber step edge with metal back at floorline platform area).~~

~~1. Step tread minimum overall thickness shall be 3/16-inch ribbed design, similar to ribbed design of the rubber aisle;~~

~~2. Metal back of tread, minimum 24-gauge cold rolled steel, shall be permanently bonded to ribbed rubber; grooved design shall be such that said grooves run at 900 angle to long dimensions of step tread;~~

~~3. 3/16-inch ribbed step tread shall have a 1 1/2-inch white nosing as integral piece without any~~

~~joint; and~~

~~4. Rubber portion of step treads shall have following characteristics:~~

~~a. Special compounding for good abrasion resistance and high coefficient of friction;~~

~~b. Flexibility so that it can be bent around a 1/2-inch mandrel both at 200 F and 1300 F without breaking, cracking, or crazing; and~~

~~c. Show a durometer hardness 85 to 95.~~

~~8 VAC 20-70-1230. Stirrup steps.~~

~~There shall be one folding stirrup step and suitably located handle on each side of front of body for easy accessibility for cleaning windshield and lamps.~~

~~Exception Type A vehicles. Standard does not apply.~~

~~8 VAC 20-70-1240. Storage and luggage compartments.~~

~~A. Two metal storage compartments for tools, chains and supplies are required. (A local school division may waive the requirement for one of the two compartments if chains or tools are not carried on bus and a written request for deletion has been filed with the Pupil Transportation Service, Department of Education and noted in the purchase agreement.)~~

~~B. One of the metal compartments shall have adequate strength and capacity for storage of chains and other emergency tools and one of the compartments shall be moisture proof, equipped with a lock and suitable for storage of cleaning supplies. Such containers shall be located outside passenger compartment in body skirt on the right side of body with a door hinged at the top or front and equipped with an adequate fastener.~~

~~C. Vehicles may be equipped with luggage compartments in the body skirt provided they do not reduce ground clearance to less than 14 1/2 inches from bottom of compartment and that the addition of the compartments does not exceed the vehicles' GVWR.~~

~~8 VAC 20-70-1250. Sun shield.~~

~~Interior adjustable transparent sun shield, darkest shade available, not less than 60 X 30 inches shall be installed in position convenient for use by driver.~~

~~Exception Type A vehicles. Manufacturer's standard is acceptable.~~

~~8 VAC 20-70-1260. Tail pipe.~~

~~Tail pipe shall extend to but not more than 1 1/2 inches beyond outer edge of rear bumper. (See 8 VAC 20-70-640 B.)~~

~~8 VAC 20-70-1270. Undercoating.~~

~~Entire underside of bus body, including floor sections, cross members, and below floor line side panels, shall be coated with rust-proofing compound for which compound manufacturer has issued notarized certification of compliance to bus body builder that compounds meet or exceed all performance requirements of Federal Specification TT-C-520 b using modified test procedures for following requirements:~~

~~1. Salt spray resistance - pass test modified to 5.0% salt and 1,000 hours;~~

~~2. Abrasion resistance - pass;~~

~~3. Fire resistance - pass.~~

~~Undercoating compound shall be applied with suitable airless or conventional spray equipment to recommend film thickness and shall show no evidence of voids in cured film. Undercoating is expected to prevent rust under all bus service conditions for minimum of five years.~~

~~8 VAC 20-70-1280. Ventilation and air conditioning.~~

~~A. Body shall be equipped with suitable, controlled ventilating system of sufficient capacity to maintain proper quantity of air under operating conditions without opening of windows except in extremely warm weather.~~

~~B. Static-type, nonclosable, exhaust roof ventilators shall be installed in low-pressure area of roof panel.~~

~~C. Air conditioning units may be installed on an optional basis. Application requires heavier electrical components and assessment by the Pupil Transportation Service, Department of Education, on an individual unit basis.~~

~~**8 VAC 20-70-1290. Water test.**~~

~~Each and every school bus body, after it is mounted on chassis ready for delivery, shall be subjected to a thorough water test in which water under pressure equal to a driving rain is forced against the entire bus body from various directions. Any leaks detected are to be repaired before the bus is declared ready for delivery.~~

~~**8 VAC 20-70-1300. Wheel housings.**~~

~~A. Wheel housings shall be of full open type.~~

~~B. Wheel housings shall be designed to support seat and passenger loads and shall be attached to floor sheets in such manner as to prevent any dust or water from entering the body.~~

~~C. Inside height of wheel housings above floor line shall not exceed 10 inches.~~

~~D. Wheel housings shall provide clearance for dual wheels as established by National Association of Chain Manufacturers.~~

~~Exception –~~

~~Standard does not apply to Type A conversion vans.~~

~~8 VAC 20-70-1310. Width.~~

~~Width - See 8 VAC 20-70-1150.~~

~~8 VAC 20-70-1320. Windshield and windows.~~

~~A. All glass in windshield, windows, and doors shall be of approved safety glass, so mounted that permanent mark is visible, and of sufficient quality to prevent distortion of view in any direction. Windshield shall be AS1 and all other glass shall be AS2.~~

~~B. Plastic glazing material of a thickness comparable to AS2 glass, meeting ANSI Standard Z 26.1 and FMVSS 205, 49 CFR ↄ 571.205, may be used in side windows behind the driver's compartment.~~

~~C. Windshield shall have horizontal shade band consistent with SAE J-100.~~

~~D. Each full side window shall provide unobstructed emergency opening at least nine inches high and 22 inches wide, obtained either by lowering of window or by use of knock-out type split-sash windows.~~

~~E. Approved tinted glass or plastic glazing material may be used.~~

~~F. All exposed edges of glass shall be banded.~~

~~8 VAC 20-70-1330. Windshield washers.~~

~~Windshield washers meeting federal requirements shall be provided and shall be controlled by push-button switch located on instrument panel. Reservoir shall be mounted outside passenger compartment.~~

~~8 VAC 20-70-1340. Windshield wipers.~~

~~A. Bus shall be equipped with two variable-speed windshield wipers of air or electric-type powered by two motors of sufficient power to operate wipers.~~

~~B. Blades and arms shall be of such size that minimum blade length will be 12 inches with longer blades being used whenever possible.~~

~~C. Wiper motor and arm linkage shall be shielded to prevent objects from being placed against them.~~

~~Exception Type A vehicles. One variable speed motor is acceptable.~~

~~8 VAC 20-70-1350. Wiring.~~

~~A. All wiring shall conform to current standards of Society of Automotive Engineers.~~

~~B. Circuits.~~

~~1. Wiring shall be arranged in at least 12 regular circuits as follows:~~

~~a. Head, tail, stop (brake) and instrument panel lamps;~~

~~b. Clearance lamps;~~

~~c. Dome and stepwell lamps;~~

~~d. Starter motor;~~

~~e. Ignition;~~

~~f. Turn-signal units;~~

~~g. Alternately flashing red signal lamps;~~

~~h. Horns;~~

~~i. Heater and defroster;~~

~~j. Emergency door buzzer;~~

~~k. Auxiliary fan; and~~

~~l. Booster pump;~~

~~2. Any of above combination circuits may be subdivided into additional independent circuits.~~

~~3. Whenever possible, all other electrical functions (such as electric-type windshield wipers) shall be provided with independent and properly protected circuits.~~

~~4. Each body circuit shall be color coded and a diagram of the circuits shall be attached to the body in a readily accessible location.~~

~~C. A separate fuse or circuit breaker shall be provided for each circuit except starter motor and ignition circuits.~~

~~D. A continuous duty solenoid relay, Cole Hersee No. 24106 or approved equal, operated by the ignition switch, shall be provided fans, and booster pump (Circuits i, j, k and l).~~

~~E. All wires within body shall be insulated and protected by covering of fibrous loom (or equivalent) which will protect them from external damage and minimize dangers from short circuits. Whenever wires pass through body member, additional protection in form of appropriate type of insert shall be provided.~~

~~F. All light circuits shall be such as to provide, as nearly as possible, bulb design voltage at lightbulb terminals.~~

~~G. Wires shall be fastened securely at intervals of not more than 24 inches. All joints shall be soldered or jointed by equally effective connectors.~~

~~**{See Diagram 9.}**~~

~~**{See Diagram 10.}**~~

~~PART VI.~~

~~STANDARDS FOR LIFT-GATE SCHOOL BUSES.~~

~~8 VAC 20-70-1360. General requirements.~~

~~A. School buses or school vehicles designed for transporting children with special transportation needs shall comply with Virginia's standards applicable to school buses and Federal Motor Vehicle Safety Standards as applicable to their GVWR category.~~

~~B. Any school bus that is used for the transportation of children who are confined to a wheelchair or other restraining devices which prohibit use of the regular service entrance, shall be equipped with a power lift, unless a ramp is needed for unusual circumstances.~~

~~C. Lift shall be located on the right side of the body, in no way attached to the exterior sides of the bus but confined within the perimeter of the school bus body when not extended.~~

~~D. Every driver who transports students with disabilities shall receive instruction, training and demonstration in the following areas; however, the instruction shall not be limited to these topics:~~

~~1. Characteristics and symptoms of disabilities of the children being transported;~~

~~2. Dealing with disruptive behavior;~~

~~3. Using special equipment to include but not limited to:~~

~~a. Lifts and ramps;~~

~~b. Wheelchairs;~~

~~c. Tie-down systems;~~

~~d. Restraining/assistive devices; and~~

~~e. Mobility devices.~~

~~4. Loading and unloading; and~~

~~5. Planning for and executing emergency evacuation drills.~~

~~8 VAC 20-70-1370. Aisles.~~

~~All aisles leading to the emergency door from wheelchair area shall be a minimum of 30 inches in width.~~

~~8 VAC 20-70-1380. Communications.~~

~~Special education buses may be equipped with a two-way radio communication system. (See 8 VAC 20-70-950 A.)~~

~~8 VAC 20-70-1390. Fastening devices.~~

~~Unless otherwise specified below, fastening devices shall conform to FMVSS 222, 49 CFR ↄ 571.222, as amended.~~

~~1. Wheelchair fastening devices shall be provided and attached to the floor or walls or both to~~

~~enable securement of wheelchairs in the vehicle. The devices shall be of the type that require human intervention to unlatch or disengage. The fastening devices shall be designed to withstand forces up to 3,000 pounds per tiedown leg or clamping mechanism or 12,000 pounds total for each wheelchair.~~

~~2. Additional fastening devices may be needed to assist the student due to the many different configurations of chairs and exceptionalities.~~

~~8 VAC 20-70-1400. Heaters.~~

~~An additional heaters shall be installed in the rear portion of the bus behind wheel wells as required in 8 VAC 20-70-1040 I, except a 50,000 minimum BTU heater may be used in bodies originally designed for 31-66 passenger capacity and 34,000 minimum BTU heater may be used in bodies of 30 passengers or less. Hose to rear heater, when under body shall be encased in metal tube.~~

~~8 VAC 20-70-1410. Identification.~~

~~Buses with wheelchair lifts used for transporting children with physical disabilities shall display universal handicapped symbols located on the front and rear of the vehicle below the windowline. Such emblems shall be white on blue, shall be a minimum of nine inches and a maximum of 12~~

~~inches in size, and shall be reflectorized. They shall be placed so as not to cover lettering, lamps or glass.~~

~~8 VAC 20-70-1420. Power lift.~~

~~A. Lifting mechanism shall be able to lift minimum pay load of 1,000 pounds. A clear opening and platform to accommodate at least a 30-inch wide wheelchair shall be provided.~~

~~B. When the platform is in the fully up position, it shall be locked in position mechanically and also shall have an additional support, or lug in the door to prevent the lift from resting against the door.~~

~~C. Controls shall be provided that enable the operator to activate the lift mechanism from either inside or outside of the bus. There shall be a means of preventing the lift platform from falling while in operation due to a power failure.~~

~~D. Power lifts shall be so equipped that they may be manually raised in the event of power failure of the power lift mechanism.~~

~~E. Lift travel shall allow the lift platform to rest securely on the ground.~~

~~F. All edges of the platform shall be designed to restrain wheelchair and to prevent operator's feet from being entangled during the raising and lowering process.~~

~~G. Up and down movements of the lift platform shall be perpendicular to the plane of the bus body in all positions.~~

~~H. A restraining device shall be affixed to the outer edge (curb end) of the platform that will prohibit the wheelchair from rolling off the platform when the lift is in any position other than fully extended to ground level.~~

~~I. A self-adjusting, skid resistant plate shall be installed on the outer edge of the platform to minimize the incline from the lift platform to the ground level. This plate, if so designed, may also suffice as the restraining device described in subsection H above. The lift platform shall be skid resistant.~~

~~J. A circuit breaker or fuse energized through the ignition side of the accessory solenoid, shall be installed between power source and lift motor if electrical power is used.~~

~~K. The lift mechanism shall be equipped with adjustable limit switches or by-pass valves to prevent excessive pressure from building in the hydraulic system when the platform reaches the full up position or full down position.~~

~~L. Handrails shall be required.~~

~~M. Sharp or protruding edges or components shall be padded.~~

~~8 VAC 20-70-1430. Ramps.~~

~~When a power lift system is not adequate to load and unload students having special and unique needs, a ramp device may be installed.~~

~~1. If a ramp is used, it shall be of sufficient strength and rigidity to support the special device, occupant, and attendants. It shall be equipped with a protective flange on each longitudinal side to keep special device on the ramp.~~

~~2. Floor of ramp shall be of nonskid construction.~~

~~3. Ramp shall be of weight and design, and equipped with handles, to permit one person to put ramp in place and return it to its storage place.~~

8 VAC 20-70-1440. Regular service entrance.

A. In Type D vehicles, there shall be three step risers, of equal height, in the entrance well.

B. An additional fold-out step may be provided which will provide for the step level to be no more than six inches from the ground level.

C. Three step risers in Type C vehicles are optional.

8 VAC 20-70-1450. Restraining devices.

Seat frames may be equipped with attachments or devices to which restraining harnesses or other devices may be attached. Attachment framework or anchorage devices, if installed, shall conform with FMVSS 210, 49 CFR ↄ 571.210.

8 VAC 20-70-1460. Seating arrangements.

A. Flexibility in seat spacing to accommodate special devices shall be permitted due to the constant changing of passenger requirements.

~~B. There shall be a padded barrier forward of any standard seating position and between lift-gate and first seat to rear of lift-gate. A wheelchair position immediately forward of lift-gate shall have a barrier between lift and wheelchair. (See 8 VAC 20-70-1200.)~~

~~8 VAC 20-70-1470. Special light.~~

~~Lights shall be placed inside the bus to sufficiently illuminate lift area and shall be activated from door area. An outside light to be activated when lift door is open and deactivated when lift door is closed is permissible.~~

~~8 VAC 20-70-1480. Special service entrance.~~

~~A. Bus bodies may have a special service entrance constructed in the body to accommodate a wheelchair lift for the loading and unloading of passengers.~~

~~B. The opening to accommodate the special service entrance shall be at any convenient point on the right (curb side) of the bus and far enough to the rear to prevent the doors, when open, from obstructing the right front regular service door (excluding a regular front service door lift).~~

~~C. The opening shall not extend below the floor level. Outboard type lifts shall be used.~~

~~D. The opening, with doors open, shall be of sufficient width to allow the passage of wheelchairs. The minimum clear opening through the door and the lift mechanism shall be 30 inches in width.~~

~~E. A drip moulding shall be installed above the opening to effectively divert water from entrance.~~

~~F. Entrance shall be of sufficient width and depth to accommodate various mechanical lifts and related accessories as well as the lifting platform.~~

~~G. Door posts and headers from entrance shall be reinforced sufficiently to provide support and strength equivalent to the areas of the side of the bus not used for service doors.~~

~~H. Special service entrance doors shall be equipped with padding at the top edge of the door opening. Pad shall be at least three inches wide and one inch thick and extend the full width of the door opening.~~

~~**8 VAC 20-70-1490. Special service entrance doors.**~~

~~A. A single door may be used if the width of the door opening does not exceed 43 inches.~~

~~B. Two doors shall be used if any door opening would have to exceed 43 inches.~~

~~C. All doors shall open outwardly.~~

~~D. All doors shall have positive fastening devices to hold doors in the open position.~~

~~E. All doors shall be weather sealed and on buses with double doors, they shall be so constructed that a flange on the forward door overlaps the edge of the rear door when closed.~~

~~F. When dual doors are provided, the rear door shall have at least a one-point fastening device to the header. The forward mounted door shall have at least three-point fastening devices. One shall be to the header, one to the floor line of the body, and the other shall be into the rear door. These locking devices shall afford maximum safety when the doors are in the closed position. The door and hinge mechanism shall be of a strength that will provide for the same type of use as that of a standard entrance door.~~

~~G. Door materials, panels and structural strength shall be equivalent to the conventional service~~

~~and emergency doors. Color, rub rail extensions, lettering and other exterior features shall match adjacent sections of the body.~~

~~H. Each door shall have windows set in rubber compatible within one inch of the lower line of adjacent sash.~~

~~I. Doors shall be equipped with a device that will actuate a red flashing visible signal located in the driver's compartment when doors are not securely closed and ignition is in "on" position.~~

~~J. A switch shall be installed so that the lifting mechanism will not operate when the lift platform doors are closed.~~

~~8 VAC 20-70-1500. Special optional equipment.~~

~~Special seats for attendants may be installed on an optional basis. The location, restraints, and so forth shall be assessed and approved on an individual unit basis. All equipment shall be secured properly.~~

~~PART VII.~~

~~ACTIVITY VEHICLES.~~

~~**8 VAC 20-70-1510. Regulations and standards.**~~

~~Activity vehicles owned or operated under contract by or for the school board, which are used solely to transport pupils to and from school activity events, shall comply with all applicable regulations and standards prescribed for school buses except as noted in this article.~~

~~1. Exceptions, general regulations.~~

~~a. An activity vehicle transporting school pupils shall be operated at a safe, legal speed not in excess of 55 miles per hour.~~

~~b. No standees shall be permitted.~~

~~c. The eight-inch school bus lettered identification and traffic warning devices shall be removed by the local school division as required by §§ 46.2-100 and 46.2-1090 of the Code of Virginia. The name of the school division or individual school shall be placed on both sides of the vehicle.~~

~~d. Stops for the purpose of loading or discharging pupils on the travel portion of the highway shall not be permitted.~~

~~2. Exceptions, minimum standards for school buses in Virginia.~~

~~a. School activity vehicles shall not be painted national school bus yellow.~~

~~b. Other type seats and increased spacing may be used provided all provisions of FMVSS 222, 49 CFR ↄ 571.222, are met.~~

DOCUMENTS INCORPORATED BY REFERENCE

American National Standard 224.5-1951, American National Standards Institute.

American National Standard 226.1, Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways, American National Standards Institute.

ASTM Standard D4956-90, American Society for Testing and Materials.

Federal Specification TT-C-520(b), Specifications of bus undercoating.

National School Transportation Specifications & Procedures, May, 2000

Preventive Maintenance Manual for Virginia School Bus Personnel and School Administrators, 1983.

School Bus Manufacturer's Standards for Fuel Tanks.

School Bus Manufacturer's Standards for Heating Systems.

SAE Standard J180 for Bus Alternatives, Society of Automotive Engineers.

Current Standards of the Tire and Rim Association.

~~Virginia School Bus Driver Training Curriculum Guide, 1977.~~

Statutory Authority: Article VIII, Section 4 of the Constitution of Virginia; sections 22.1-16, 22.1-176, 22.1-177, and 22.1-178 of the Code of Virginia.

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