frame at each main floor sill in such a manner as to prevent shifting or separation of the body from the chassis under severe operating conditions.

B. Isolators shall be installed at all contact points between the body and the chassis frame on Types A-2, C and D buses, and shall be secured by a positive means to the chassis frame or body to prevent shifting, separation, or displacement of the isolators under severe operating conditions.

MUD GUARDS (MUD FLAPS)

Mud guards shall be rubber and meet requirements of Mississippi Code Ann. § 63-7-73. Mud guards shall be at least the width of the vehicle's tires.

NOISE SUPRESSION SWITCH (Optional)

A manual noise suppression switch may be installed in the control panel. This switch or switch background shall be red or yellow and labeled. This switch shall be an on/off-type (not momentary) that deactivates all body equipment that produces noise including at least the AM/FM radio, heaters, air conditioners, fans, and defrosters. This switch shall not deactivate safety systems such as windshield wipers, lighting or warning systems.

OIL FILTER

An oil filter with a replaceable element shall be provided and connected by flexible oil lines if it is not a built-in or an engine-mounted design. The oil filter shall have a capacity in accordance with the engine manufacturer's recommendation.

OPENINGS

All openings in the floorboard or firewall between the chassis and the passenger compartment (e.g., for gearshift selector and parking brakes lever) shall be sealed.

OVERALL LENGTH

The overall length of the bus shall not exceed forty-five feet (45'), excluding accessories.

OVERALL WIDTH

The overall width of the bus shall not exceed one hundred two inches (102"), excluding accessories.

PASSENGER LOAD

A. Actual gross vehicle weight (GVW) is the sum of the chassis weight plus the body weight, plus the driver's weight, plus total seated student weight. For purposes of calculation, the driver's weight is 150 pounds, and the student weight is 120 pounds per student.

B. Actual GVW shall not exceed the chassis manufacturer's GVWR for the chassis, nor shall the actual weight carried on any axle exceed the chassis manufacturer's Gross Axle Weight Rating (GAWR).

PUBLIC ADDRESS SYSTEM (Optional)

A. Buses may be equipped with an AM/FM/audio and/or public address system having interior and exterior speakers. Interior speakers shall be flush mounted with the bulkhead.

B. No internal speakers other than the driver's communication systems may be installed within four feet of the driver's seat back in its rearmost, upright position.

RETARDER SYSTEM (OPTIONAL)

A retarder system, if used, shall limit the speed of a fully loaded school bus to 19.0 mph on a 7% grade for 3.6 miles.

RETROREFLECTIVE MATERIAL

A. The front and rear bumper shall be marked diagonally 45 degrees down to the centerline of the pavement with 2" x ¼" wide strips of non-contrasting retro reflective material.

B. The rear of the bus body shall be marked with strips of retro reflective National School Bus Yellow (NSBY) material to outline the perimeter of the back of the bus using material which conforms to the requirements of FMVSS 571.131 (Table I). The perimeter marking of rear emergency exits per FMVSS 217 and/or the use of retro reflective SCHOOL BUS signs partially accomplish the objective of this requirement. To complete the perimeter marking of the back of the bus, strips of at least one-inch retro reflective NSBY material shall be applied horizontally above the rear windows and above the rear bumper, extending from the rear emergency exit perimeter marking outward to the left and rear corners of the bus. Vertical strips shall be applied at the corners connecting these horizontal strips. Multifunctional school activity buses (MFSABs) shall be exempt from these color requirements.

C. "SCHOOL BUS" signs, if not a lighted design, shall be marked with retro reflective

NSBY material comprising a background for lettering of the front and/or rear SCHOOL BUS signs.

D. The sides of the bus body shall be marked with retro reflective NSBY material at least 1 ¾ in width, extending the length of the bus body and located vertically between the floor line and the belt line.

E. If used, signs placed on the rear of the bus relating to school bus flashing signal lamps or railroad stop procedures may be retroreflective material, as specified by each state.

ROAD SPEED CONTROL

When it is desired to accurately control vehicle maximum speed, a vehicle speed limiter may be utilized.

RUB RAILS

A. There shall be one (1) rub rail located on each side of the bus approximately at the seat level which shall extend from the rear side of the entrance door completely around the bus body (except for the emergency door or any maintenance access door) to a point of curvature near the outside cowl on the left side.

B. There shall be one (1) additional rub rail on each side located 10 inches or less above the floor line. The rub rail shall cover the same longitudinal span as the upper rub rail, except at wheel housing, and shall extend only to the longitudinal tangent of right and left rear corners.

C. Rub rails shall be attached at each body post and all other up-right structural members.

D. Each rub rails shall be four inches (4") or more in width in finished form, shall be constructed of 16-gauge steel or suitable material of equivalent strength suitable to help protect body side panes from damage. Rub rails shall be constructed in corrugated or ribbed fashion.

E. Rub rails shall be applied outside body or outside body posts. (Pressed-in or snap-on rub rails do not satisfy this requirement). For Type A-1 vehicles using chassis manufacturer's body, or for Types A-2, C, and D buses using rear luggage or rear engine compartment, rub rails need not extend around rear corners.

F. The bottom edge of the body side skirts shall be stiffened by application of a rub rail, or the edge may be stiffened by providing a flange or other stiffeners.

SEAT AND RESTRAINING BARRIERS

A. Passenger Seating (Capacity and Design)

1. School bus design capacities shall be in accordance with 49 CFR, Part 571.3, *Definitions*, and FMVSS No. 222, *School Bus Passenger Seating and Crash Protection.*

2. All seats shall have a minimum cushion depth of 15 inches, a seat back height of 24 inches above the seating reference point and must comply with all other requirements of FMVSS No. 222.

3. All restraining barriers and passenger seats shall be constructed with materials that enable them to meet the criteria of the *School Bus Seat Upholstery Fire Block Test.*

4. Each seat leg shall be secured to the floor by bolts, washers and nuts in order to meet the performance requirements of FMVSS No. 222. Flange-head nuts may be used in lieu of nuts and washers. All seat frames attached to the seat rail shall be fastened with two or more bolts, washers and nuts, or with flange-head nuts. Seats may be track-mounted in conformance with FMVSS No. 222.

5. If track seating is installed, the manufacturer shall supply minimum and maximum seat spacing dimensions (applicable to the bus) which comply with FMVSS No. 222. This information shall be on a label permanently affixed to the bus.

6. All school buses (including Type A) shall be equipped with restraining barriers which conform to FMVSS No. 222.

7. A flip-up seat may be installed at any side emergency door. If provided, the flip-up seat shall conform to FMVSS No. 222 and aisle clearance requirements of FMVSS No. 217, *Bus Emergency Exits and Window Retention and Release*. The flip-up seat shall be free of sharp projections on the underside of the seat bottom. The underside of the flip-up seat bottoms shall be padded or contoured to reduce the possibility of clothing being snagged. Flip-up seats shall be constructed to prevent passenger limbs from becoming entrapped between the seat back and the seat cushion when the seat is in the upright position. The seat cushion shall be designed to rise to a vertical position automatically when it is not occupied.

8. Lap belts shall not be installed on passenger seats in large school buses (over 10,000 pounds GVWR) except in conjunction with child safety restraint systems that comply with the requirements of FMVSS No. 213, *Child Restraint Systems*.

B. Pre-School Age Seating

Passenger seats designed to accommodate a child or infant carrier seat shall comply with FMVSS No. 225, *Child Restraint Anchorage Systems*. These seats shall be in compliance with the National Highway Traffic Safety Administration's (NHTSA) "Guideline for the Safe Transportation of Pre-school Age Children in School Buses."

Note: See A.8, above.

C. Driver Seat

1. The driver's seat supplied by the body manufacturer shall be a high back seat. The seat back shall be adjustable to 15 degrees minimum, without requiring the use of tools. The seat shall be equipped with a head restraint to accommodate a 5th percentile female to a 95th percentile adult male, as defined in FMVSS No. 208, *Occupant Crash Protection*.

2. Type A buses may utilize the standard driver's seat provided by the chassis manufacturer.

D. Driver Restraint System

1. A Type 2 lap/shoulder belt shall be provided for the driver. On buses where the driver's seat and upper anchorage for the shoulder belt are both attached to the body structure, a driver's seat with an integrated Type 2 lap/shoulder belt may be substituted. On buses where the driver's seat and upper anchorage for the shoulder belt are separately attached to both body and chassis structures (i.e., one attached to the chassis and the other attached to the body), a driver's seat with an integrated Type 2 lap/shoulder belt should be used.

2. The assembly shall be equipped with an emergency locking retractor for the continuous belt system. On all buses except Type A that are equipped with a standard chassis manufacturer's driver's seat, the lap portion of the belt system shall be guided or anchored to prevent the driver from sliding sideways under the belt system. The lap/shoulder belt shall be designed to allow for easy adjustment in order to fit properly and to effectively protect drivers varying in size from 5th percentile adult female to 95th percentile adult male. The belt shall be of a high visibility contrasting color.