

**STATEMENT OF NEED AND REASONABLENESS
FOR PROPOSED MINNESOTA RULES, PART 3520.0200
THROUGH PART 3520.5920
RELATING TO SCHOOL BUSES**

Background

Rules relating to pupil transportation aid and school buses were last revised in 1974 and 1977 respectively. Since that time, additional state laws have been enacted, related Federal safety standards regularly updated, and national minimum standards for school buses and operations continually revised. Further improvement in school bus equipment, new technology, the need to safely transport severely handicapped children, and enhanced adaptations for Minnesota climatic conditions also contribute to the need to revise and update school bus rules.

Minor language changes have been made throughout the proposed rules; in other instances, where more extensive changes have been made, new parts or subparts have been inserted and the existing repealed.

The process of updating the school bus rules was formally begun in May of 1985. Numerous representatives of the Minnesota Association for Pupil Transportation, Minnesota School Bus Operators' Association, and school bus distributors, as well as Minnesota Department of Public Safety and Minnesota Department of Education personnel have been involved in a series of discussion meetings regarding needed changes in the rules, and have repeatedly reviewed and reacted to drafts of the proposed rules.

The changes in the rules, as reviewed below, are necessary for several reasons. First, much of the old material is obsolete. It has been more than a decade since these rules were last revised. There have been changes in state laws and Federal standards which needed to be incorporated in the rules. Over the same period, school bus manufacturers have developed or adopted new technology which is designed to improve vehicle performance. In some cases, the old rules would not permit the use of the newer technology. An example would be the single, longitudinal multi-grooved belt drive for the alternator. The proposed rules are regrouped for better organization. Under the old rules, changes were sometimes added as "exceptions" to Type I requirements. These "exceptions" have now been pulled together and listed under either Type II or Type III rules, as appropriate.

Throughout the balance of this document, the term "clean-up changes" appears with some frequency. This term refers to changes in wording or style that are required by the Revisor of statutes but that do not change the meaning of the rule. Examples would be changing "shall" to "should" or "must" and inserting "the" at appropriate places in sentences.

The proposed rules are reasonable in light of the many changes that were needed. They are now up-to-date with current state statutes and Federal Motor Vehicle Safety Standards. Section 3520.3680 incorporates by reference a number of standards, guidelines, and documents which are widely recognized and

accepted by the school bus industry. This is a reasonable means for incorporating the content of these standards, guidelines and documents into the rules without repeating them. The proposed rules have been updated to accept appropriate new technology in vehicle manufacturing. Attempts were made to word the new rules so that improved vehicle technology would be accepted without the need to further amend the rules. The regrouping of many former "exceptions" under sections for Type II and Type III vehicles is a reasonable change. With these proposed changes, all rules specific to a Type II or Type III school bus will be logically and conveniently found together. A final justification for the reasonableness of the proposed rules is the industry involvement in their development. A number of meetings were held to work out these changes. At these meetings, there were representatives of: the school district transportation supervisors, school bus contract operators, school bus manufacturers, school bus body distributors, school bus parts suppliers, the Department of Public Safety, and the Department of Education. Every proposed change was thoroughly scrutinized and discussed. Changes were made only after there was agreement from all persons involved. The participants in these meetings represented all the groups most knowledgeable about pupil transportation.

Standards for Aid

3520.0200-3520.2300 Proposed changes in these rules are necessary to conform to changes in Minnesota statutes affecting standards for transportation aids.

Sections 3520.0200-3520.0400 were amended to update statutory references and eliminate outmoded language. Some sections of the changes involve reorganization of certain rules to provide greater clarity. For example, the rule that students can only be claimed in one to-and-from school category was moved from Section 3520.0300 Aid Limitation to 3520.0400 Transportation Data Reporting Requirements, where it is now found, in modified form, as Subp. 5.

Section 3520.0500 Full-time Equivalent Pupil Units was deleted because current transportation aid formulas do not require that information.

Section 3520.0700 Determination of Transportation Costs was also deleted because it is obsolete. Present rules relating to costs, amount of aid and payment schedule are no longer appropriate.

Section 3520.0800 Transportation Aid Other Than School to Home has been repealed. The main purpose for these rules was to require prior application from school districts providing these types of transportation. The 1988 Legislature deleted the prior approval requirements from the statutes. Applications for these programs will no longer be required.

Section 3520.0900 Transportation Aids for Handicapped Children was repealed because it is covered in statute.

Sections 3520.1000 and 3520.1200 were amended to remove the requirement that transportation contracts be submitted to, and in some cases, approved by, the commissioner. It is the responsibility of the school districts to assure that any contract they sign is legal.

Section 3520.1100 Bus Rental Contracts was repealed. This section merely required districts to submit copies of their bus rental contracts to the commissioner. The districts have the responsibility to approve only legal contracts.

Section 3520.1700 Depreciated Aid is repealed. The current aid formula does not contain a separate depreciation aid payment, so this section is obsolete.

Section 3520.1800 Transportation of Nonresident Pupils is amended to delete the requirement for a written application. Some minor amendments help to clarify remaining language.

Sections 3520.1900 to 3520.2300 are repealed. These sections covered qualifications, tests, physical examinations, background checks, and requirements for driver license renewal and school bus endorsements. All these items are, by law, the responsibility of the Department of Public Safety. They are repealed from Department of Education rules to eliminate the necessity of the Department of Education amending its rules every time Public Safety makes a change.

In summary, Rules 3520.0200-3520.2300 were repealed or amended to bring them into compliance with current state laws relating to standards for aid. The changes are reasonable in the fact they comply with applicable laws and, in some cases, have eliminated unnecessary reporting requirements for school districts.

Rules, Operation of School Buses and Pupil Transportation Safety Education Program

Section 3520.2400 Operation of Type I and Type II School Buses. This section was amended to include Type II with the operation of Type I buses since their operation is identical. A sentence on pulling trailers with school buses was deleted as it is covered in statute. The rule governing the backing of a school bus has been expanded for greater clarification and to increase the level of safety for students.

These changes were necessary to consolidate operating rules for vehicles outwardly equipped and identified as school buses (Types I and II). They are reasonable in the fact that they consolidate like operating rules for two classes of vehicles. They also clarify certain backing rules and increase the safety of students.

3520.3000 Operation of Type III School Buses. (Includes Automobiles, Station Wagons, and Other Vehicles Designed for Carrying Nine or Fewer.) The title of this section was changed to lower the maximum size of Type III vehicles from 16 to 9 pupil passengers. When Type III buses were first incorporated into the rules (1974), some school districts and private contractors owned the larger sized vehicles and they were allowed to continue to operate such vehicles. The maximum age limitation of 10 years for Type III vehicles now makes the vehicles of over 9 pupil passenger capacity illegal.

These changes were necessary to bring the Type III school buses into compliance with current laws. They are reasonable in the fact they fulfill this need and eliminate certain types of Type III school buses which are no longer legal.

Section 3520.3680 Incorporation By Reference is an all new section. Many of the items required on school buses are subject to compliance with standards which are developed by other governmental agencies, professional groups, and other entities. These generally recognized and accepted standards are subject to frequent change and such changes would necessitate frequent revision of these subject rules. Through incorporation by reference, applicable amendments to the incorporated standard become a part of the Department of Education standards as they are adopted and made conveniently available to the public.

This incorporation by reference is necessary to keep these standards current with the changing state-of-the-art in the various areas. This method was chosen as the most reasonable means of keeping these standards continuously in line with progressive development and new technology affecting school bus construction.

Design of School Transportation Equipment Standards

Section 3520.3700 Design of school transportation equipment standards was changed in several ways. Subpart 1 was amended to clarify some existing language which describes the conditions under which school bus design rules will apply. Language was added to clarify that these standards are minimum standards and that the standard can be exceeded if there is no conflict with federal standards, state laws, or rules.

Subparts 2 and 3 were repealed. These subparts explained the different conditions which applied to new and used school buses. Such requirements are not pertinent to a section on design. The differing treatment of new and used school buses is now found under Section 3520.3701 Vehicle Descriptions. A new Subpart 2a Variances has been added. This section gives the commissioner the authority to grant variances to existing standards in Parts 3520.3700 to 3520.5710.

The rapid advancement of technology has effected school bus construction as it has effected almost all areas of our lives. There is a real need for the Department of Education to be able to test improved technology for possible incorporation into the rules. The ability to grant variances to existing rules will enable the Department to test the new technology and to determine its feasibility before submitting it to the entire rule making process.

This subpart contains restraints to the Department's authority. It allows for flexibility but does not give the Department unlimited power. This is the most reasonable method of responding to these concerns.

Section 3520.3701 Vehicle Descriptions is shown as all new material. In fact, it is in large part a gathering together of previously existing material which was scattered in many locations. For example, Subparts 4 and 5 were located in Section 3520.3700, Subparts 2 and 3.

There was a need to place all vehicle descriptions together under one heading. Prior to this time, the descriptions have been located in widely scattered parts of the rules. This change is reasonable in the fact that it will provide for greater convenience for persons using the rules.

Section 3520.3800 repealed. This section was merely a listing of the subjects covered in following sections.

Section 3520.3801 Type I Chassis is new material. However, it is an updating of the repealed 3520.3800 to restrict its application to Type I school buses. This change is necessary because of the many differences in specifications for various components of different sizes or types of vehicles that are used as school buses. It is reasonable to group the specifications for the various types of vehicles in separate sections.

Section 3520.3802 Compliance is new material. It is necessary to clearly establish that the chassis manufacturer is responsible for compliance. This is also reasonable in that the manufacturer must comply with many Federal Motor Vehicle Safety Standards and is the only reasonable entity to accept responsibility.

Section 3520.3900 Air cleaner is amended to require an air cleaner that meets engine specifications. This change is needed as some of the stricken language was very outdated. It is reasonable to expect the air cleaner to meet the engine specifications.

Section 3520.4000 is repealed, but replaced by a new Section 3520.4001 Axles. This change simplifies the structure of the section on axles. It incorporates new technology such as gross weight rating and gross vehicle weight rating which are now standard in school bus manufacturing.

This change was needed because the old language is outdated and no longer generally used. The change is reasonable in that it incorporates current state-of-the-art technology and terminology.

Section 3520.4100 Battery is amended in part with one subpart repealed. Subparts 1 to 3 are amended by replacing older terminology with current terminology commonly accepted in the battery manufacturing industry. The content of old Subpart 4 is relocated as paragraph B under Subpart 2 Options.

These changes were needed to incorporate current battery rating terminology into the standards. The old ampere hours has been replaced with cold cranking amperes. This change is reasonable in that the new terminology is far more common and much more easily understood than the former terminology.

Sections 3520.4200-3520.4260 are repealed and are now grouped together under new Section 3520.4201 Brakes. Under this new section, all requirements for brakes on Type I school bus chassis are regrouped and reworded to bring them into compliance with current standards. Many of the brake requirements are dictated by Federal Motor Vehicle Safety Standards 105, 106, and 121.

These changes were needed to bring the brake requirements into compliance with commonly acceptable standards. The changes are reasonable in that they now incorporate Federal Motor Vehicle Safety Standards and National Minimum Standards as they apply to brake systems.

Section 3520.4300 is repealed and reintroduced as Section 3520.4301 Front Bumper. The old Subpart 1 is retained with slight modifications. Old

Subparts 2-4 are dropped. The subjects of these subparts are either covered in state law or in other sections of these rules. There was no need to retain them in Section 3520.4301.

Section 3520.4400 Certification is amended to require a chassis distributor or dealer, rather than the manufacturer, to certify that its products meet all minimum standards that are not covered by Federal standards.

This change is needed to put the responsibility for certification at the level where variations might take place. The chassis manufacturer will still be certifying to compliance with Federal Motor Vehicle Safety Standards. The change is reasonable in that the party responsible for variations will be certifying their compliance.

Section 3520.4500 Clutch is amended to greatly simplify the language and relate the clutch standard to torque capacity rather than physical size. The clutch must be compatible with engine output.

This change is necessary because mere physical size of the clutch will not ensure its compatibility with the various engines available. Linking clutch torque capacity to engine torque output will ensure compatibility of clutch to engine. This is the most reasonable method of achieving compatibility.

Section 3520.4510 Color is amended in part and repealed in part. Subparts 1 and 2 are repealed. Subparts 3 and 4 are amended. These amendments provide basically clean-up changes to help clarify the rule.

Old Subparts 1 and 2 are obsolete and needed to be deleted. This was the most reasonable method of updating the color section because it involves only cosmetic changes.

Section 3520.4520 Fan-Radiator Cooling System is repealed. This section is not needed as chassis and/or engine manufacturers will not install an inadequate cooling system because they would have to make costly engine replacements under warranty if damage results from overheating. The National Minimum Standards, 1985, do not contain a section on Fan-Radiator cooling system.

Section 3520.4530 is repealed and replaced by **Section 3520.4531** Drive Shaft. Under the new section, the drive shaft for Type I vehicles is retained with only very minor, clean-up changes.

Section 3520.4540 Electrical System is amended. Most of the amendments are of a clean-up nature. A Subpart 5a was added to allow for the substitution of a voltmeter in place of the required ammeter. Subpart 6 is amended to require color or number coding of the wiring and the wiring diagram provided is now required to coincide with the actual wiring of the chassis.

Some bus operators prefer the use of a voltmeter over an ammeter because they believe it provides more useful information. The former rule did not require the wiring diagram to coincide with the actual wiring of the chassis. It was assumed that it would. The language change now leaves no doubt that the

diagram provided must coincide with the chassis wiring. These changes are reasonable in that the first provides an option preferred by some operators, and the second clarifies the requirement for a wiring diagram that is meaningful.

Section 3520.4550 Exhaust System is amended. This section is greatly expanded with the addition of Subparts 2-5. Much of this material is what has been commonly accepted in the school bus industry. The incorporation in this section merely gives it legitimacy.

It is necessary to incorporate the changes in order to legitimize current practices. It is reasonable to legitimize practices that are in common usage and readily acceptable by the industry as a whole.

Section 3520.4560 Fenders, Front is amended. These amendments are basically of a cosmetic or clean-up nature.

Section 3520.4570 Frame is amended. Many of the amendments are to clean up old language. Welding of the frame to allow for the installation of trailer hitches is now permitted.

There are two significant changes in this Section. In the first, modifications to the original chassis frame have to be covered by guarantee from the modifier. In the second, welding to install a trailer hitch is permitted. Both of these changes were needed to permit greater utilization of the vehicles. The first is reasonable in the fact that it provides a safeguard by virtue of a guarantee of performance and materials. The second is reasonable in that welding to attach a trailer hitch will not weaken the frame so as to create a hazard.

Section 3520.4580 is repealed. The standard for frame lengths is now contained in Section 3520.4570.

Section 3520.4600 Fuel Tank. Subpart 1 is amended. Subparts 2-5 are repealed. Subparts 6 and 7 are added. The repealed Subpart 2 consisted of standards for fuel tanks larger than 30 gallon capacity. These standards are now combined with Subpart 1 which includes all sizes of 30 gallons or more. The repealed Subparts 3-5 contained exceptions applicable to several classes of vehicles. Those that applied to other than Type I vehicles will be found in the appropriate sections for those vehicles. Subpart 4, which applied to Type I vehicles is now included in Subpart 1. Subpart 6 adds fuel tank rules for buses with rear engine power. Subpart 7 covers those vehicles which are fueled by liquefied petroleum or by compressed or liquefied natural gas. It requires that they meet applicable standards of the Minnesota Uniform Fire Code. School buses powered by these types of fuels must comply with state laws and rules requiring display of appropriate markings.

These changes are needed to bring the rules into compliance with federal standards. They are reasonable because they refer to federal or state standards when appropriate and use commonly acceptable practices when other standards do not apply.

Section 3520.4610 Generator or Alternator. Subparts 1 and 2 are amended. Subparts 3 and 4 are repealed. A new Subpart 5 is added. In addition to some

clean-up changes, Subpart 1 was amended to permit single longitudinal multi-groove belt drive or direct drive for generators or alternators. These two drive methods represent state-of-the-art technology and will become increasingly more common in the future. Subpart 2 was amended to substitute the newer term cold cranking amps for the outmoded ampere hours terminology. The newly added Subpart 5 allows the use of a single belt drive, without requiring that it be the longitudinal multi-grooved type, for Type I vehicles under 15,000 pounds GVWR.

These changes are needed to incorporate new technology and terminology. The changes are reasonable in that they eliminate outmoded terminology and replace it with state-of-the-art.

Section 3520.4620 Governor is amended with clean-up changes.

Section 3520.4630 Heating system is amended by expanding the wording for greater specificity of the capacity of the system.

These changes are necessary to provide measurable standards. The old standard merely required inlet and outlet holes for attaching heater system water lines. The new language is reasonable in that it is specific, measurable, and referenced to the applicable standard of the School Bus Manufacturer's Institute.

Section 3520.4640 Horn is amended by deleting very detailed criteria with the basic requirement that the horn will be audible from at least 200 feet.

The changes are needed because the existing rule is unnecessarily detailed and required instrumentation to determine compliance. The revised rule merely states that the horn should be audible from at least 200 feet. This is a reasonable change in that it is much more easily understood and measured.

Section 3520.4650 Instruments and Instrument Panel is amended. In Subpart 1, some minor and clean-up changes were made. Item D was incorporated into Item C and Items E through I were realigned to maintain unbroken alphabetical order. Item J, Tachometer was changed to turn signal indicator lights and realigned to become Item I. In Items G, H and I, indicator lights can be used in place of gauges. Some of the existing wording was given a new heading as Subpart 2 Accessibility, mounting, illumination. A requirement for illumination of the shift selector indicator for automatic transmissions was added.

The changes incorporated are needed to provide greater clarification such as allowing the use of indicator lights for certain functions. These changes are reasonable in that they now incorporate commonly acceptable instruments and indicator lights.

Section 3520.4660 Oil filter is repealed. This section is not needed as the engine manufacturer will not install an engine without an oil filter. If they did, they might have to replace damaged engines under warranty.

Section 3520.4670 Openings is amended with only clean-up changes.

Section 3520.4680 Passenger Load is amended. This section is divided into 2 subparts. Subpart 1 is drawn from the previously existing rule and defines the term gross vehicle weight. The previous requirement that the gross vehicle weight rating be furnished by the manufacturer to the Department of Education was stricken. Subpart 2 has been added to clarify that the actual gross vehicle weight must not exceed the gross vehicle weight rating of the chassis manufacturer.

It is necessary to define gross vehicle weight (GVW) in terms of actual weights of components rather than average weights as in the existing rules. This change will result in a GVW specific to each vehicle. This is a reasonable method for determining GVW because one merely has to weigh the vehicle and then add the calculated weight of occupants. The other major change requires that the GVW does not exceed the gross vehicle weight rating (GVWR) for the chassis. This is a reasonable change in that it complies with Federal standards.

Section 3520.4690 is repealed. This section becomes unnecessary because of the changes in Section 3520.4680, above.

Section 3520.4700 is repealed and replaced by **Section 3520.4701** Shock Absorbers. The recoding left the former Subpart 1 basically intact. The former Subpart 2 was deleted as it did not apply to Type I vehicles.

Section 3520.4701 is repealed and replaced by **Section 3520.4711** Springs. The rule for springs is simplified as the spring capacities are required to be compatible with the gross vehicle weight rating. The former Subpart 2 was deleted as it did not apply to Type I vehicles.

The changes were necessary to tie vehicle spring capacity to gross vehicle weight rating of the chassis. This is a reasonable change that will prevent unsafe conditions created by mounting a school bus body on a chassis which undersized or weak springs.

Section 3520.4720 Steering is amended to provide for lubrication of the steering system. An additional amendment requires that buses be equipped with power steering. Under the old rules, power steering was permitted, but not required.

The first change is needed to provide for lubrication to avoid excessive wear which might cause steering problems or failures. The second change is necessary as modern buses are larger and heavier than in the past.

3520.4730 is repealed and replaced with **Section 3520.4731** Tires and Rims. With the revised wording, tires and rim sizes and load ratings are tied in with the buses gross vehicle weight rating. The new section permits the use of different size and ply rated tires on the same bus with certain restrictions.

The changes are necessary to tie the tire size and rating with the GVWR. This is a reasonable way to relate tire requirements to a known reference point, or standard that serves as a basis for many chassis components.

Section 3520.4740 is repealed and replaced with Section 3520.4741 Transmission. The old material is reorganized and expanded in the new section. Requirements for small vehicles are removed. A minor change in the existing rule is that a three speed transmission is now acceptable where a four speed was required. The transmission shifting pattern must now be displayed where the driver can easily see it.

The change from a four speed transmission to a three speed requirement is necessary to conform to the concept of "minimum" standards. Under certain conditions, a three speed transmission is adequate. Because of the variety of transmission shifting patterns available, it becomes necessary to require that the shifting pattern be displayed. This will make it much easier for drivers who are unfamiliar with a particular vehicle to begin efficient operation without having to experiment with the shifting pattern. These changes are reasonable in that they will provide for more efficient and safer operation of buses.

Section 3520.4750 Undercoating is amended. The amendments provide that fenders made of noncorrosion materials are not required to be undercoated. The undercoating material must now meet or exceed applicable Federal specifications.

Exempting noncorrosive materials from the undercoating requirement is necessary to avoid waste. Since the purpose of undercoating is to prevent corrosion, it is a waste of resources to require they be rust proofed. Requiring any undercoating material used to comply with applicable Federal specifications is both necessary and reasonable.

Section 3520.4760 is repealed and replaced with Section 3520.4761 Weight Distribution. The weight distribution standard is now tied in with the gross axle weight ratings of both front and rear axles.

This change is necessary to assure that gross axle weight ratings are not exceeded. It is reasonable in that it ties this requirement to components of known capacity.

3520.4770 Wheels is repealed. This section is repealed because the subject is now covered in Section 3520.4731.

Section 3520.4800 is repealed and replaced with Section 3520.4801. The repealed Section 3520.4800 was a listing of the subjects in Sections 3520.4810-3520.5580 pertaining to Type I school bus bodies. The replacement Section 3520.4801 more clearly explains that the standards now found in Sections 3520.4811 to 3520.5580 apply to Type I school bus bodies.

Section 3520.4810 is repealed and replaced with Section 3520.4811 Aisle. This newly numbered section contains only minor clean up changes in language from the older Section 3520.4810.

Section 3520.4820 Battery is repealed. This subject is adequately covered in the chassis portion of these rules under Section 3520.4100.

Section 3520.4830 is repealed and replaced with **Section 3520.4831 Body Sizes**. The replacement section contains an updated table for body sizes. The new table is much more comprehensive in that it contains information on wheel bases, tire sizes, gross axle weight ratings (GAWR) and gross vehicle weight ratings (GVWR). These new standards are consistent with current Federal Motor Vehicle Safety Standards with which manufacturers must comply.

These changes are needed to bring the body size chart up to current practice and to relate it to current acceptable standards. The changes are reasonable in that they incorporate commonly acceptable standards which are frequently used in other sections of these rules.

Section 3520.4840 Book Racks is amended. Book racks are now permitted in school buses which have 72 or more inches of headroom. The size, location and construction of book racks are defined. Some school districts have expressed interest in once again installing book racks. Quite a few years back, before the NHTSA issued standards for school buses, book racks were permitted. With the advent of school bus standards, they were prohibited because buses so equipped could not meet the standards for head impact zone. These current amendments limit the installation of book racks to school buses with headroom of 72 or more inches. This and the requirement for proper padding of the book racks will allow the school bus to meet the Federal standard.

These changes are necessary because state laws were amended to allow book racks. They are reasonable in that they provide for book racks without violating Federal Motor Vehicle Safety Standards.

Section 3520.4850 Bumper. Subparts 1 and 3 are amended. Subparts 2 and 4 are repealed. Subpart 1 was amended so that it more clearly referred to the front bumper and the reference was changed to reflect the numbering of the referenced section. The amendments to Subpart 3 are generally of a clean up nature. The bumper height wording was deleted as it is covered in statute. Subparts 2 and 4 were repealed because they had no bearing on Type I school buses.

Sections 3520.4860 and 3520.4870 are repealed. Both of these sections merely referred the reader to the content of other sections and are unnecessary.

Section 3520.4900 Color. Subparts 1-5 are repealed. These sections referred to buses purchased prior to June 2, 1973. Most of these buses are no longer in service. The few that might be operating are grandfathered. Subparts 6 and 7 are amended. The amendments are basically a reorganization of existing requirements. The general color requirements are grouped in Subpart 6 and the options are grouped in Subpart 7. Subparts 8-10 are repealed. These subparts contained color options which are now incorporated in Subparts 6 and 7.

These changes are needed to eliminate unnecessary material and to reorganize the material retained for greater clarity. The changes are reasonable in that they fully comply with Federal standards for school bus color.

Section 3520.4910 Construction is amended to reference it to Federal Motor Vehicle Safety Standard Number 220.

Section 3520.4920 Construction of the Bus Body is repealed. This section dealt with requirements that are now covered by Federal Motor Vehicle Safety Standard Number 220. This Section is no longer appropriate.

Section 3520.4930 Floor Construction is amended. The amendments allow for a greater choice in the selection of materials to meet the requirement. The plywood quality is related more specifically to the product standard PS 1-83 of the U.S. Department of Commerce. A Subpart 2 was added which permits the application of approved insulation to the underside of the metal floor.

The first changes is needed to relate the plywood quality to a specific standard for plywood quality. It is reasonable in that the standard cited is widely recognized and readily available. The second change, the option for insulation under the floor is needed for those school districts and contractors who want to provide a higher level of comfort in their buses. It is reasonable in that it is optional and that the product specified will help to prevent corrosion of the metal floor.

Sections 3520.4940-3520.4970 are repealed. These sections covered roof, side, corner and floor sills. All these components are now covered by Federal Motor Vehicle Safety Standards and are incorporated by reference in Section 3520.3680.

Section 3520.4980 Openings is amended by deleting the reference to Section 3520.4970 which was repealed.

Section 3520.4990 Exceptions is repealed. This section contained exceptions for small vehicles which are not Type I school buses and an exception for transit type vehicles to a repealed section.

Section 3520.5000 Defrosters is amended. Existing section is amended with clean up language. Additional wording is added to require defrosters to meet SAE standards relating to defrosters.

The addition of the reference to SAE Standards is necessary to relate this rule to a more specific set of criteria. It is reasonable in that the SAE Standards are widely known and accepted in the transportation industry.

Section 3520.5010 Doors is amended. The amendments include clean up language, the incorporation of references to Federal Motor Vehicle Safety Standard Number 217 and changes in the order of several paragraphs. All of these amendments were included for greater clarification and organization of the section.

The references to FMVSS 217 are necessary to relate the rule to a Federal standard with which all school buses must comply. The changes are reasonable in that they provide better organization of the material and clear reference to an applicable Federal Motor Vehicle Safety Standard.

Section 3520.5020 and 3520.5100 are repealed. Section 3520.5020 contained exceptions for small vehicles and is not appropriate in a unit for Type I school buses. Section 3520.5100 was merely a cross-reference to Section 3520.5010.

Section 3520.5110 is repealed and replaced with **Section 3520.5111 Fire Extinguishers**. The newly numbered section is a rewording and relocating of the repealed section. The changes take into account the improved technology of fire extinguisher manufacturing which has developed since the rules were last revised.

The most significant change is that the basic requirement went from a 5 pound, 8-B:C rating to a 2 1/2 pound, 10-B:C rating. While this might appear to be a lowering of the standards, it is actually an improvement. The new requirement will handle a fire of 10 square feet while the old requirement was for 8 square feet capacity. This change was needed to provide a greater level of safety for students. The change is reasonable in that it provides more safety while being more economical at the same time.

Section 3520.5120 First Aid Kit is amended with minor changes for greater clarification and only slight changes in required contents of the first aid kit.

Section 3520.5130 Floor is repealed. This section was only a cross-reference to other sections which contained the actual requirements. It was redundant.

Section 3520.5140 is repealed and replaced with **Section 3520.5141 Floor Covering**. The replacement section is basically the same as the previously numbered section. A reference to a Federal specification was deleted because it is obsolete. Subpart 2 was deleted because it applied to small vehicles and is not appropriate for this unit on Type I school buses.

Section 3520.5150 is repealed and replaced with **Section 3520.5151 Heaters**. The replacement section contains much of the same wording as the repealed section with clean up changes. Several somewhat more significant changes are included, however. In the first, the requirement for a plate bearing the heater rating was extended to all heaters. Under the repealed section, it was only required on hot water heaters. Secondly, combustion type heaters must now be approved by Motor Carrier Safety Regulations of the Code of Federal Regulations. Under the repealed section, such approval was by the Underwriter's Laboratories, Inc. The Motor Carrier Safety Regulations supersede the UL approval.

These changes are needed to ensure that the heaters are adequate and that they meet safety requirements. The changes are reasonable in that all heaters will now display their ratings and combustion type heaters will meet the most current approval criteria.

Section 3520.5160 Identification is amended. The requirement for name of owner or operator has been expanded to include home post office address and city or town. The reference cited with this requirement has been changed to M.S. 221.031, subd. 6. Optional lettering, such as manufacturer's name or logo, is now included and its location is specified.

The change in information required on side of bus is necessary for compliance with M.S. 221.031, Subd. 6. The options allowed are necessary to provide for specific identification of individual buses by students and others. Accommodation has been made for the logo or nameplates of manufacturers.

These logos and nameplates have been in use for many years and the Department of Education believes it is necessary to recognize and regulate them. These changes are reasonable in that they will provide better identification for individual buses and legitimize the use of logos and nameplates of manufacturers.

Section 3520.5170 is repealed and replaced with **Section 3520.5171 Inside Height**. The renumbered section contains basically the same requirements as the repealed section. Language is simplified for clarity and an exception for small vehicles is deleted.

Section 3520.5180 Insulation is amended to clean up language.

Section 3520.5190 Interior is amended. The existing section is amended to clean up language and is now contained in Subpart 1. Language is added to Subpart 1 to cover the methods for treating lapped joints in ceiling panels. This added language is taken from the National Minimum Standards For School Buses, 1985. Two subparts are added to cover speakers and flammability of interior materials. Speakers, except in driver's compartment, cannot protrude more than 1/2 inch. Interior materials must now meet flammability standards of Federal Motor Vehicle Safety Standard Number 302.

All the changes made in this section are needed to insure greater safety for students. The changes are reasonable in that they either use language from the National Minimum Standards or they are referred to Federal Motor Vehicle Safety Standards where applicable.

Section 3520.5200 Lamps and Signals for New Buses Only is amended. Subparts 1 through 4 are amended with clean up changes. A new Subpart 4a is added. This is merely a renumbering, with clean up changes, of an already existing part of old Subpart 4. Subpart 5 Option is repealed. This subpart made reference to a specific brand of light control unit which could be used as an option. Any unit used must meet all requirements, so such option is unnecessary. Subparts 6 through 8 are amended with clean up changes. A new Subpart 9 Options is added. This subpart includes options for a student control warning system, a crossing guard gate, an external public address system, a roof mounted strobe light and electronic sensing devices.

All of these options are needed to provide a greater level of safety to the students transported, especially while they are boarding and leaving the school bus at student stops. The changes are reasonable in that they relate specific sections to applicable Federal standards and permit, as options, the use of several types of safety devices.

Section 3520.5210 Lamps and Signals for Buses Now In Service is repealed. This section became effective in August of 1974 and applied to buses which were already in service at that time. Most of these buses are no longer in service. Those that are still in service have had nearly 14 years to demonstrate their compliance. This section has outlived its usefulness.

Section 3520.5220 Turn Signal Lamps and Stop Lamps has been amended. The existing section on turn signal lamps was renumbered as Subpart 1. The amendments include some clean up changes and the addition of new language to

define the location of the turn signal lamps. Two new subparts were added. Subpart 2 Stop Lamps details the requirements for shape, size, location and operation of stop lamps. Subpart 3 Federal Motor Vehicle Safety Standard Number 108 requires that all exterior lamps must conform to the standard cited.

These changes were needed to bring the stop lamp requirement up to current standards and to incorporate stop lamps into the rule. The changes are reasonable in that they bring the signal and stop lamp requirements up to current specifications and they require all exterior lamps to conform to the applicable Federal Motor Vehicle Safety Standard.

Section 3520.5230 Warning Devices is amended. The first amendment was a change in the section's title from Flags and Flares to Warning Devices. For many years, the term flags and flares has been used. Newer methods of giving warnings are now far more common. Some of the devices formerly approved are now considered too dangerous (i.e., fuses). The existing section was renumbered as Subpart 1 and extensively amended. Colored flags are no longer required. The requirement for red electric lanterns or emergency reflectors is deleted. The option to use fuses (railroad type flares) is deleted. In place of the above requirements and option, there is now a requirement for three reflectorized triangle road warning devices. These devices are commonly recognized as the acceptable standard for warning devices. A Subpart 2 Prohibited Equipment was added to clearly identify that liquid burning "pot type" flares and fuses are not allowed. They are considered too dangerous because of the open flame.

The changes are needed to bring the Warning Devices up to currently acceptable standards and to eliminate dangerous devices. The changes are reasonable in that the old, outmoded and dangerous devices are deleted from the rule and are replaced with reflectorized triangles, the industry standard.

Section 3520.5300 Metal Treatment is amended. The old Subpart 1 is amended with clean up changes and the second and third paragraphs are renumbered as Subparts 1a and 1b, respectively. Subpart 2 is repealed as it did not apply to Type I school buses. A Subpart 3 Test Standard is added. This is the corrosion test commonly accepted by the school bus industry. It is taken, almost verbatim, from National Minimum Standards for School Buses, 1985.

Section 3520.5310 Mirrors is amended. The existing section is divided into three (3) subparts and a fourth subpart is added. Subparts 1 and 2 contain only clean up changes. Subpart 3 Required Convex Mirrors is substantially amended. Four convex mirrors are now required on conventional school buses. This increase in the number of mirrors is tied in with the requirements of Federal Motor Vehicle Safety Standards Numbers 17 and 111. Transit type buses must have at least three mirrors. The newly added Subpart 4 allows the substitution of elliptical or hemispherical mirrors for the required convex mirrors as an option.

The changes are necessary to provide the driver with a mirror system that will virtually eliminate all blind spots at the front and sides of the bus. This is a very important factor for the safety of students outside the bus. The

mirror system must comply with applicable Federal Motor Vehicle Safety Standards. These changes are reasonable in that they provide the highest known level of safety for students in the bus loading zone.

Section 3520.5320 Mounting is repealed. The mounting of body to chassis is covered in Federal Motor Vehicle Safety Standards and there is no need to include it in these rules.

Section 3520.5330 Overall Length is amended with clean up language. No basic change.

Section 3520.5340 Overall Width is amended with clean up language. No basic change.

Section 3520.5350 Posts is repealed. This section was referenced to other sections which are amended or repealed. This subject is covered by Federal Motor Vehicle Safety Standard. There is no need to retain it in these rules.

Section 3520.5360 is repealed and replaced with **Section 3520.5361** Rub Rails. The existing section contained two subparts. The new section is the old Subpart 1 with clean up changes. Subpart 2 is eliminated as it contained an exception for small vehicles.

Section 3520.5370 Sanders is amended. All amendments are for clean up of existing language.

Section 3520.5380 Seat Belt for Driver is amended. The amendments require the seat belt and its mounting to comply with Federal Motor Vehicle Safety Standards Numbers 207 to 210.

These changes are needed to provide the most up-to-date standards for seat belts and installation. Incorporation of these changes will insure that the driver is held in position so that he/she can maintain control of the bus under extreme conditions. The changes are reasonable because they incorporate the best system available for holding the driver in the driving position.

Sections 3520.5400-3520.5430 are replaced with **Section 3520.5401** Seats and Crash Barriers. Much of the language of the repealed sections was outdated because of Federal Motor Vehicle Safety Standard Number 222 which covers this subject. The replacement section incorporates Federal Motor Vehicle Safety Standard Number 222. In a few instances, language from the repealed sections is retained to cover some conditions not covered by Standard 222.

The changes are necessary to bring our bus seating into compliance with the Federal Motor Vehicle Safety Standard which is applicable to all new buses. Incorporating the FMVSS is the only reasonable thing to do since this standard is mandatory.

Sections 3520.5440 Steering Wheel is repealed. The repealed section was merely a reference to other sections. It is not needed.

Section 3520-5450 Steps is amended. Subpart 1 is amended with clean up changes. Subpart 2 is repealed. It contained an exception for small vehicles and did not apply to Type I school buses. A Subpart 3 Step Treads is added.

This is a new addition to the rules. It is needed to give more specific requirements for the materials used. The change is reasonable because the language is taken, almost verbatim, from the National Minimum Standards for School Buses, 1985.

Section 3520.5460 is repealed and replaced with Section 3520.5461 Stirrup Steps. The replacement section is taken from the National Minimum Standards For School Buses, 1985. Expanded wording takes into account the different needs of transit type school buses in that the steps can be incorporated in or on the front bumper.

These changes are needed to accommodate the different types of buses. They are reasonable in that they are taken from the National Minimum Standards.

Section 3520.5470 is repealed and replaced with Section 3520.5471 Stop Signal Arm. Much of the content of the repealed section is retained with clean up changes in the replacement section. New language now requires that the stop arm is equipped with flashing red lights visible from both front and rear. The flashing red lights should make the stop arm more visible and provide greater safety for school children.

The change which requires a lighted stop arm is needed to provide greater visibility and safety. Stop arm violations are still occurring much too frequently. This change is a reasonable way do draw more attention to the stop arm.

Section 3520.5480 is repealed and replaced with Section 3520.5481 Storage Compartment. The replacement section, Subpart 1, is taken from the National Minimum Standards for School Buses, 1985. Subpart 2 is an option for Minnesota school buses. It permits an overhead storage compartment in the front of the cab. Such optional storage area must provide for proper security.

The changes are needed to provide a safe way to transport items such as tools, tire chains and emergency equipment. The changes are reasonable in that they are taken from the National Minimum Standard, or in the case of Subpart 2, provide an option to accomplish the same result.

Section 3520.5490 Sunshield is amended. The amendments increase the minimum width of the sunshield from 16 to 30 inches. The sunshield must now be transparent and have a finished edge. It must be installed in a position where it will be convenient for the driver's use. These changes are necessary to provide better visibility for the driver and, therefore, greater safety for the pupil passengers. The changes are reasonable because the type and mounting of the sunshield is now in line with the industry standard.

Section 3520.5500 Tailpipe is amended. The existing language, with clean up changes, is renumbered as Subpart 1. A new Subpart 2 Trailer Hitch is added. The new subpart requires that optional trailer hitches must be flush mounted and they cannot extend beyond the rear bumper. This type of requirement is necessary to avoid projections which could contribute to increased injuries under certain conditions. It is reasonable because it allows the use of trailer hitches while it still protects the safety of students and others who might use the bus.

Section 3520.5510 Undercoating is amended. The undercoating requirement is taken from National Minimum Standards for School Buses, 1985. This incorporates specific references to Federal Specification TT-C-520a which contains performance requirements and test procedures for undercoating materials.

It is necessary, for both safety and economy, to require undercoating of buses. The proposed rules are reasonable in that they incorporate commonly recognized and acceptable standards.

Section 3520.5520 Ventilation is amended. The old Subpart 1 is amended with clean up changes. Subpart 2 is amended to eliminate the exception for small vehicles and replace it with an option for roof ventilators. Subparts 3 and 4 are added. Subpart 3 allows the incorporation of static-type exhaust vents into the design of the bus. Subpart 4 permits the use of emergency exit type roof ventilators, but requires that they must meet Federal Motor Vehicle Safety Standard Number 217, if used. The subpart also requires that a warning buzzer be included for such emergency exits.

The proposed changes are needed to give school districts and contractors options for meeting the ventilation requirement. Combination ventilator/emergency exit units may be used if they meet applicable Federal Motor Vehicle Safety Standards. These changes provide options which will meet the ventilation requirement while improving safety. The changes are reasonable in that they contribute to safety and meet Federal standards where applicable.

Section 3520.5530 is repealed and replaced with **Section 3520.5531** Wheel Housing. The replacement section retains much of the content of the repealed section with only clean up changes. Some new language, taken from the National Minimum Standards for School Buses, 1985, is added.

Section 3520.5540 Width is repealed. This subject is adequately addressed in **Section 3520.5340**.

Section 3520.5550 is repealed and replaced with **Section 3520.5551** Windshield and Windows. The replacement section contains basically the same material as the repealed section. However, it is now better organized with the use of three subparts.

Section 3520.5560 Windshield Washer is amended to require windshield washers.

This change is necessary to ensure that the school bus driver has the greatest degree of visibility possible. It is reasonable in the fact that nearly all vehicles are equipped with windshield washers and drivers have come to depend on them to guarantee good visibility.

Section 3520.5570 Windshield Wipers is amended by incorporating the language found in National Minimum Standards for School Buses, 1985. Basically, the result is only minor, clean-up type changes.

Section 3520.5580 Wiring is amended. Subparts 1 and 2 are amended with clean up changes. A Subpart 2a Additional Requirements is added. Subpart 2a is taken from the National Minimum Standards for School Buses, 1985. Subpart 3 is repealed as it applied only to small vehicles.

Subpart 2a is necessary so that the wiring rule will be complete. It is reasonable because it is taken from the National Minimum Standards for School Buses.

Section 3520.5600 Type II School Bus is amended. The definition for a Type II school bus was stricken as it is available in Section 3520.3701 Vehicle Descriptions. New wording states that Section 3520.5611 Equipment applies to Type II school busses.

Section 3520.5610 is repealed and replaced with Section 3520.5611 Equipment. The repealed section contained 15 subparts. Many other Type II standards were scattered throughout the old rules as "exceptions" to Type I standards. Under Section 3520.5611 all of these standards for Type II buses are assembled and reorganized under a single section. With this regrouping, references to those standards which are incorporated by reference in Section 3520.3680 are included whenever appropriate. There are now 29 subparts to this section.

These changes were necessary to provide better organization, under a single heading, for Type II school bus equipment. This rule is reasonable because it has not made significant changes to existing rules, but merely reorganizes them for greater convenience.

Section 3520.5700 Type III School Buses is amended. The definition for a Type III school bus was stricken as it is available in Section 3520.3701 Vehicle Descriptions. New wording states that Section 3520.5710 Equipment applies to Type III school buses.

Section 3520.5710 Equipment is amended. A new Subpart 1 is added, the old Subpart 1 is renumbered Subpart 1a. Under the newly added Subpart 1, a general statement is made that, where applicable, equipment must comply with Federal Motor Vehicle Safety Standards. The manufacturer's standard will apply to equipment items not covered by Federal Motor Vehicle Safety Standards. Subpart 1a is amended to clarify wording on maximum age of Type III vehicles. New language is added to permit an exception for vehicles which meet Federal Motor Vehicle Safety Standard 222. This standard covers structural requirements and assures that complying vehicles will be much sturdier than non-complying vehicles. They will also have a longer life expectancy and should therefore be exempt from the 10 year age limit of most Type III vehicles.

Subparts 2, 3, 4, and 5 are amended with clean-up changes. Subparts 2a, 2b, and 6-8 are added to this section. These subparts are collected here under Type III school buses where they apply. In the old rules the same basic requirements for fire extinguishers, first aid kit, mirrors, warning devices, and emergency doors were scattered throughout the Type I rules as "exceptions." Subpart 9 is an option which allows passenger cars and station wagons to carry the required fire extinguisher, first aid kit, and warning triangles in the trunk or trunk area of the vehicle if a label is installed in the driver's area indicating their location. This is a necessary option as many automobiles and station wagons do not have room in the passenger compartment for this emergency equipment.

These changes are necessary to provide better organization for Type III school bus equipment. This rule is reasonable because it has not made significant changes to existing rules, but merely reorganizes them for greater convenience.

Section 3520.5800 Inspection of School Transportation Equipment is repealed. This section is not needed in Department of Education rules as it is covered in statute and in the rules of the Department of Public Safety, the agency responsible for school bus inspections.

Section 3520.5900 Construction of Vehicles for Children with Mobility Problems is all new. Transportation of children with mobility problems has increased significantly over the years. Additional growth is expected in this area of pupil transportation as schooling is extended to lower age groups.

Subpart 1 Standards outlines the types of service to which this section applies. **Subpart 2** permits the alteration of vehicles to accommodate the needs of children with mobility problems. The vehicle must still comply with all federal standards. Equipment must be installed according to the manufacturer's specification. Reconversion of the vehicle to conventional passenger seating must make the power lift and special service door inoperable. **Subpart 3** Power Lift or Ramp requires that either of these devices must be installed to provide access to the vehicle. **Subpart 4** Seating Capacity requires that a sticker or label be installed to show the actual seating capacity of the vehicle, excluding wheel chairs, after modification. **Subpart 5** Special Service Opening requires a special service opening on the right side of the vehicle and specifies a minimum size for the opening. **Subpart 6** Reinforcement requires that the special opening (**Subpart 5**) be reinforced to provide the strength of an unattended vehicle. **Subpart 7** Drip Mold requires weather protection over the service opening. **Subpart 8** Header Pad requires that a pad be placed above the service opening to protect students, drivers, and aides from injury. **Subpart 9** Special Service Door Enclosure permits the use of either single or double doors. Door must open outward. **Subpart 10** Two-Panel Door gives requirements for double door installations. **Subpart 11** One-Piece Construction Door gives requirements for single panel door. **Subpart 12** Door Equipment requires a signal device which warns when the service door is not secured and the emergency brake is not on. **Subpart 13** Door Construction requires that the special service doors meet the standards of other school bus doors. **Subpart 14** Power Lift requires that any power lift installed must have a minimum capacity of 750 pounds. **Subpart 15** Power Lift Controls requires that the lift controls be portable and be located on the inside of the lift door. A master cut-off switch is required to be located in the driver compartment. **Subpart 16** Power Lift Platforms requires a non-skid surface of the lift. It also requires that vision shall be possible through the service door window even with the lift in the "up" position. **Subpart 17** Ramp gives requirements for self-adjustment, material, length, skid resistance, width, and securement of a ramp. **Subpart 18** Barriers requires a padded barrier or stanchion to be placed in front of any passenger seat located behind the special service door. **Subpart 19** Elevator-Type Lift requires that crash barriers be installed on the front and rear sides of the lift area and a covered chain must connect the two crash barriers. **Subpart 20** Wheelchair Securement Devices requires that installations comply with M.S. 299A.11. **Subpart 21** Special Student Restraining Devices allows for the

installation of restraining devices if there are no alterations to any seat component. Subpart 22 Seats requires that seats meet federal standards. It also permits attachment devices for passenger restraint systems if seat manufacturers will provide such devices.

Rule 3520.5900 is necessary to provide transportation of school children with mobility problems as safely as possible. This rule is reasonable in that it includes the best thinking of school district personnel and school bus contractors who have been actively involved in providing services to these students for many years. This is an area of concern that is generally not covered by Federal standards at this time and reliance was placed on common sense and experience to provide reasonable rules.

Section 3520.5910 Motor Coach Used for School Activities is all new material. This section was added to comply with the requirements of M.S. 169.44, Subd. 18. Subpart 1 Definitions defines motor coaches and school activities. Subpart 2 Standards requires that equipment for motor coaches must conform to Federal Motor Carrier Safety Regulations and lists relevant standards numbers. Subpart 3 Identification prohibits motor coaches from being outwardly identified as a school bus and requires that it meet the identification requirements of M.S. 168.012. Subpart 4 Inspection requires annual inspection of motor coaches using motor carrier standards found in M.S. 221.031, Subd. 1. Subpart 5 Certification confirms that upon passing the annual inspection, a motor coach will receive a motor carrier safety sticker.

This section is reasonable in that it includes the requirement of M.S. 169.44, Subd. 18 regarding definition, identification, inspection and certification of motor coaches. Basically, the rule requires that motor coaches comply with those portions of state and Federal laws and regulation which are applicable to this type of vehicle.

3520.5920 Operation of Motor Coaches Used for School Activities is all new material as required by M.S. 169.44, Subd. 18. Subpart 1 Comply With This Part requires that drivers of motor coaches used for school activities must comply with Subparts 2 and 3. Subpart 2 Driver Qualifications requires that drivers of motor coaches used for school activities have at least a [Class B license with a school bus endorsement. Subpart 3 Driving Rules requires drivers of motor coaches used for school activities to comply the driving rules of Federal Motor Carrier Safety Regulations, Chapter III, part 392. Subpart 4 Operation prohibits the use of motor coaches for transportation services that are eligible for state aid. This subpart also provides that school districts cannot lease their motor coaches for any use.

This section is reasonable in that it includes the requirement of M.S. 169.44, Subd. 18 regarding driver qualifications and operation of motor coaches used for school activities. Basically, the rule requires driver qualifications and operation of these vehicles to comply with state and Federal laws and rules applicable to that type of operation.

The Department of Education has considered the possible impact of these proposed rule changes on both local public bodies and small businesses. Representatives of local school district transportation supervisors, school bus contract operators, school bus manufacturers, school bus body distributors, school bus part suppliers and the Departments of Public Safety and Education were involved in developing the proposed rule changes. The consensus of this group was that there would be no additional financial burden imposed on local public bodies or small businesses by the adoption of the proposed rules.