STATE OF MINNESOTA
STATE BOARD OF EDUCATION

Statement of Need and Reasonableness

In the Matter of the Proposed Rules Relating to Graduation Standards, Minnesota Rules: Chapter 3501 (3501.0010 - 3501.0180).

I. BACKGROUND

Past graduation requirements have been credit-based. Historically, the statewide criteria for awarding a high school diploma in Minnesota public schools have been expressed in credits (Carnegie Units) earned by the student in required and elective subjects. *The Department of Education Rules Relating to Education* Chapter 3500, established the number of hours of instruction (120) for each credit, the required subjects (communication, social studies, mathematics, science, health, and physical education), the minimum credits required for each subject, and the total credits in grades 9-12 needed for a diploma (20). School districts were allowed to set higher local requirements. While school districts have been required by state rules to certify students for graduation based on "successful completion" of credits, the content to be achieved and the level of performance considered "successful completion" have been determined locally (often by individual teachers). Therefore, employers, postsecondary institutions and the public did not know what knowledge and skills an individual high school graduate had actually achieved.

The rules stating these credit requirements were repealed by legislation effective 1993. While most local districts are continuing with the requirements for graduation, there are no statewide graduation requirements currently in effect.

Credit-based system has not ensured consistent student achievement. Current rules that are scheduled to be repealed in 1996 do specify learner goals (part 3500.1060), program level learner outcomes (part 3500.1075) which schools must use to develop course offerings and courses that high schools must offer to students (part 3500.2020). However, the rules do not specify individual student expectations or the quality of work that is to be considered "successful completion" of the courses required for graduation. The learner goals specified for courses within high schools are broad outcome statements which are interpreted by local districts, schools, and teachers, resulting in inconsistencies in course content and learner expectations among districts in Minnesota and even among classrooms within the same school. For example, English 12, a course offered in high schools, may or may not include speaking, poetry, or vocabulary. As a result, a high school transcript which reports that an individual student has earned a "C" in English 12 cannot be interpreted effectively because there is no consistency in what a student's English 12 course included or what grading criteria were used to award the "C" grade to the student. Some students who cannot read, spell, or write at even a basic level have actually graduated with passing grades in English 12. A parallel lack of mathematics skills has been found among students who have fulfilled the required mathematics credit and have graduated from Minnesota high schools.

Earning a diploma has not guaranteed adequate preparation. As a result of the structure of this current system, many students with high school diplomas have been discovered to have inadequate skills to succeed in further education and/or employment. Employers and postsecondary education institutions have found it necessary to remediate essential skills such as reading and mathematics in order for these high school graduates to function in jobs and/or postsecondary learning.

A growing concern, supported by local, state, national, and international test results as well as the experiences of businesses hiring graduates and postsecondary institutions admitting them, has been expressed. Many students are graduating unprepared. High school diplomas do not necessarily signify even minimum skills or knowledge; and, in general, there has been a failure to meet the responsibility to be accountable to each student and to the changing needs of our society.

Graduating unprepared students has led to a call for accountability. Unprepared high school graduates are entering the job market and/or are trying to succeed in postsecondary education. This has led to a call for public education to be accountable. The public wants results; Minnesota's parents, communities, business leaders, and higher education have voiced the need for high standards statewide, for assuring the "basics," and for accountability in determining what a graduating student knows and is able to do.

Legislation has required accountability and reform. In 1983 -- when the national report, *A Nation At Risk*, clearly sent the message that there was need for reform and accountability in public education -- Minnesota's response was already under way. Specifically, the 1976 Minnesota Legislature had enacted the Planning, Evaluating, and Reporting (P.E.R.) law (M.S. 123.74, 1976) which required school districts, with the involvement of the community, to plan for continuous improvement. The P.E.R. process was strengthened by mandates for an annual review of curriculum, instruction, and assessment (1978 and 1979), for aligning local curricula with State Board of Education goals (1983), for involvement of parents, community members, and staff on local P.E.R. committees (1984), for Assurance of Mastery programs (1985), for the state's development of Essential Learner Outcomes and tests of those outcomes for district use (1987), and for district periodic collection and reporting of consumer opinions (1992). The P.E.R. law (M.S. 126.663, 1994) has provided on-going local study, testing, and evaluation within local districts. The findings of these studies yield local plans for improvement which have been reported to both the department and the community. School districts establish cycles which ensure that all curricular areas are reviewed and assessed.

The P.E.R. process has provided for the study of curricula. The annual P.E.R. report has provided a vehicle for citizens to know the "state" of their local schools.

The proposed rules will provide accountability. The proposed results-oriented graduation requirements provide a way to meet the need for accountability. The proposed rules put into place a system that will assure that a student must demonstrate competency in required statewide standards to receive a high school diploma.

The purposes of the graduation standards are: 1) to focus the learning of each student receiving a high school diploma on skills, concepts and processes that define what an educated adult knows and can do and 2) to provide a means of accountability for a student's demonstrated accomplishment of those statewide standards.

The Legislature, the State Board of Education and the Department have worked toward a results-oriented graduation rule. In the 1980s, the State Board and the legislature heard demands from business leaders, parents, and other stakeholders in education for higher standards and better ways of determining what graduating students should know and be able to do. As a result, the State Board and the legislature decided to reduce the number of "input" rules and to develop "output" rules instead. Input rules included everything from detailed descriptions of required school bus parts to the required number of clock hours for each subject area. Outputs were identified by various names, including "guarantees," "expectations," "outcomes," and "results." Essentially, though, outputs were defined as specific knowledge and skills that students must demonstrate in order to graduate.

The first formal step toward required outcomes for students came in 1987 as an outgrowth of one of the State Board's eight strategic goals. Specifically, the State Board determined that the state should develop a performance-based education system, including personalized learning plans, in 10 or 15 exemplary demonstration sites. Also, the legislature directed the State Board to develop a set of "essential learner outcomes" for subject areas.

The development of graduation standards began in 1990, the year that the Graduation Standards Committee and a subgroup -- the Graduation Standards Executive Committee -- were formed. The executive committee has 16 members who represent Minnesota's major education and business groups, parents, and other community members. Its charges are to guide the process of review of proposed drafts of graduation standards, consider input from the interested parties, review proposed solutions to issues, and make recommendations to the State Board for changes in Minnesota's graduation requirements.

In 1991, the State Board of Education conducted twenty-three (23) public hearings statewide to get citizen input and responses to the first draft of "Outcome-Based Graduation Rules." That input, as well as information contributed in 20 public meetings, produced the current proposed results-oriented graduation standards. The standards for graduation include basic requirements and the required profile of learning. The basic requirements represent areas of minimum knowledge and skills that each student must demonstrate to graduate. The profile of learning represents rigorous high standards that all student must work toward.

Through the series of public meetings, on-going opportunities for input, and on-going distribution of new drafts as the standards were developed, the schools and the public were kept informed and given opportunities to respond and comment as draft revisions of the proposed graduation standards were developed.

The Legislature, in 1993, 1994 and 1995, enacted into law (M.S. 121.11 Subd. 7c) a commitment "to establishing a rigorous, results-oriented graduation rule for Minnesota's

public school students. . . . starting with students beginning ninth grade in the 1996-1997 school year." The legislature also allocated funds to develop and pilot the proposed graduation standards and the performance assessments for the standards.

Thirteen school districts in 1994 and 10 more districts in 1995 were selected as sites for the development and piloting of the standards. Teams, representing more than 1,000 pilot site teachers, assessment specialists, MDE staff and national experts worked to define the standards and assessments. Teams of teachers representing the entire state also developed, discussed and validated each step of the development of tests for the basic requirements.

In 1993, 1994 and 1995 the State Board reviewed, discussed and endorsed drafts of the various components of the developing proposed rule. The Board adopted a schedule of rulemaking to phase in the basic requirements and the profile of learning over a three year period. Phase one of the graduation standards rules will affect students entering ninth grade in 1996.

In anticipation of a results-oriented graduation rule, the P.E.R. law is scheduled for repeal in 1996.

II. INTRODUCTION

The Legislature mandated results-oriented graduation rules. The 1993 legislature enacted M.S. 121.11 Subd. 7c, which was amended in 1994 and 1995. M.S. 121.11 Subd. 7c (Laws of 1995) [RESULTS-ORIENTED GRADUATION RULE.] reads:

> (a) The legislature is committed to establishing a rigorous, results-oriented graduation rule for Minnesota's public school students. To that end, the state board shall use its rulemaking authority under subdivision 7b to adopt a statewide, results-oriented graduation rule to be implemented starting with students beginning ninth grade in the 1996-1997 school year. The board shall not prescribe in rule or otherwise the delivery system, form of instruction, or a single statewide form of assessment that local sites must use to meet the requirements contained in this rule.
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> (b) Assessments used to measure knowledge required by all students for graduation must be developed according to the most current version of professional standards for education testing.
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> (c) The content of the graduation rule must differentiate between minimum competencies and rigorous standards. When fully implemented, the requirements for high school graduation in Minnesota, including both basic requirements and the required profile of learning, shall include a broad range of academic experience and accomplishment necessary to achieve the goal of preparing students to function effectively as purposeful thinkers, effective communicators, self-directed learners, productive group participants, and responsible citizens.

(d) The state board shall periodically review and report on the assessment process and student achievement with the expectation of raising the standards and expanding high school graduation requirements.

The State Board then acted to carry out the Legislature's rulemaking mandate. The State Board of Education is committed to a continuously improving, results-oriented education system for students in Minnesota's public schools. The Board is further committed to the goal that graduates be able to function effectively as purposeful thinkers, effective communicators, self-directed learners, productive group participants, and responsible citizens. The ability to perform effectively in these roles requires that graduates are able to use essential lifelong learning skills, concepts and processes at the highest possible level.

Consistent with the Board's commitment and M.S. 121.11 Subd. 7c, the results-oriented graduation standards have been developed to include both basic requirements and the required profile of learning. The proposed **basic requirements** areas are: reading, mathematics, writing, science, government, physical health and safety, and geography. Within each of those seven subject areas, statewide standards will define what a student must know and be able to do. The proposed rules require that the student demonstrate competency in the standards in order to be eligible for a high school diploma.

The proposed **required profile of learning** contains standards in the concepts and processes that represent rigorous standards. To meet these statewide standards, students must have a record of demonstrated academic work in the following elements:

1. Comprehending, interpreting, and evaluating information received in English through reading, listening and viewing;
2. Writing and speaking in English clearly for academic and technical purposes with a variety of audiences;
3. Understanding the processes and meaning of artistic expression;
4. Applying mathematical concepts to solve problems;
5. Applying methods of inquiry needed to conduct research, draw conclusions, and communicate and apply findings;
6. Understanding and applying scientific concepts in natural and human-made environments;
7. Understanding how principles of interaction and interdependence operate in societies and cultures;
8. Applying informed decision-making processes to promote personal growth and the well-being of society;
9. Understanding the effective management of resources in a household, business, community, and government.

The State Board of Education plans to phase in graduation requirements. Consistent with the law (M.S. 121.11 Subd. 7c), beginning with the class entering ninth grade in 1996, all Minnesota public school districts shall initiate new statewide standards for earning a high school diploma. In October, 1994, the State Board of Education adopted the following schedule for promulgating the rules governing graduation standards in three phases.

Phase one: rules will be adopted by 1996 that require students entering ninth grade in 1996 and beyond to demonstrate competency in the basic requirements of reading and mathematics.

Phase two: rules will be adopted by 1997 that require students entering ninth grade in 1997 and beyond to demonstrate competency in reading, mathematics, writing and science.

Phase three: rules will be adopted by 1998 that require students entering ninth grade in 1998 and beyond to demonstrate competency in reading, mathematics, writing, science, government, physical health and safety, and geography; and to demonstrate a record of academic work in the required profile of learning.

By phasing in the new graduation standards, schools and students are allowed a period of transition to adjust to the new requirements.

Requirements for each phase will be adopted through the rulemaking process, consistent with the Administrative Procedures Act (M.S. 14.05 - 14.36).

The proposed rules (Parts 3501.0010 - 3501.0180) and this Statement of Need and Reasonableness address only the phase one requirements: the basic requirements of reading and mathematics that affect entering 9th graders in 1996.

III. STATEMENT OF BOARD'S STATUTORY AUTHORITY

The 1993 legislature directed that "the state board shall use its rulemaking authority. . . to adopt a statewide, results-oriented graduation rule." (M.S. 121.11, Subd. 7c) Minnesota Statutes (1994) Section 121.11, subdivision 7c further charges the State Board of Education with the responsibility to "adopt a statewide, results-oriented graduation rule to be implemented starting with students beginning ninth grade in the 1996-1997 school year."

M.S. 121.11, Subd. 7c stipulates that "the board shall not prescribe in rule or otherwise the delivery system, form of instruction, or a single statewide form of assessment that local sites must use to meet the requirements contained in this rule." Further, the statute requires that "assessments used to measure knowledge required by all students for graduation must be developed according to the most current version of professional standards for educational testing" and "the content of the graduation rule must differentiate between minimum competencies and rigorous standards."

The 1995 legislature amended M.S. 121.11 Subd. 7c to stipulate that "when fully implemented, the requirements for high school graduation in Minnesota, including both basic requirements and the required profile of learning, shall include a broad range of academic experience and accomplishment necessary to achieve the goal of preparing students to function effectively as purposeful thinkers, effective communicators, self-directed learners, productive group participants, and responsible citizens," and that "the state board shall periodically review and report on the assessment process and student

achievement with the expectation of raising the standards and expanding high school graduation requirements."

IV. OVERVIEW OF STATEMENT OF NEED FOR BASIC REQUIREMENTS

Evidence to support the need for the proposed rules comes primarily from four major sources:

1. Mandates from the Minnesota Legislature (M.S. 121.11 Subd. 7c - 1993, 1994, 1995) to adopt a statewide results-oriented graduation rule and a history of public policy enacted by the legislature and the Minnesota State Board of Education that moved toward increased accountability and steered the public education system in Minnesota to look at results. These are overviewed in Section I: Background, Section II: Introduction, and Section III: Statutory Authority in this document.

2. The continuing call from Minnesota's parents, communities, businesses, higher education institutions, and the general public for reform and accountability that will assure that a high-school graduate has certain basic knowledge and skills necessary to succeed in employment, in further education and as a responsible citizen. Evidence of this gathered from surveys, public meetings, and studies will be used throughout this document to support the need for the proposed rules.

3. Education research, studies and reports giving data and evidence of the need for basic requirements and a system of accountability for results. This evidence will be used throughout the document to support the need for the proposed rules.

4. Current federal education law calling for improvement through education standards and accountability. The federal law supports the need for standards and accountability as stated in the following paragraphs.

Federal Education Law

In order for states and their local educational agencies (school districts) to participate and be funded under the *Goals 2000: Educate America Act,* Public Law 227 (H.R. 1804) March 31, 1994, the states must develop state plans. The plans must include a process for "developing or adopting state content standards and state student performance standards for all students" including "the adaptations and accommodations necessary to permit such participation." Goals 2000 funding subsumes various funds previously disbursed to the states as planning and implementation grants under the Elementary and Secondary Education Act of 1965 for educational reform initiatives -- particularly programs to improve student achievement, staff development/inservice, technology, and teacher pre-service. The new Goals 2000 effort seeks to develop state and local partnerships among stakeholders for the purpose of raising achievement opportunities for all students.

States, according to Section 308 of the *Goals 2000: Educate America Act*, shall disburse 90% of their Goals 2000 allocations to local schools "for the implementation of the State improvement plan and of local improvement plans." These plans are to include designs

for achieving the eight national goals: school readiness; school completion; student achievement and citizenship; teacher education and professional development; mathematics and science excellence; adult literacy / lifelong learning; safe, disciplined / alcohol and drug-free schools; and parental participation.

In August of 1994, Minnesota became one of the first eight Goals 2000-funded states when the federal government approved its application for funds under Title III (state and local systemic improvement). The first local grants for district systemic improvement, professional inservice and teacher/administrator pre-service proposals selected through a competitive application process were awarded. During this same time, the state's Goals 2000 panel was named by the Minnesota Commissioner of Education and the Governor. This panel was charged with developing the state plan, an integral part of achieving continued funding for Minnesota schools. Both the grant application procedure materials and the state panel focused on the proposed results-oriented graduation rule as the centerpiece for Minnesota's Goals 2000 involvement.

V. OVERVIEW OF STATEMENT OF REASONABLENESS FOR BASIC REQUIREMENTS

In preparing these proposed rules, the Department of Education and the State Board of Education sought information, input, and advice extensively over a five year period. The reasonableness of these rules rests, for the most part, on four major points:

1. The scope and extensiveness of involvement and participation of primary stakeholders in Minnesota in the development process;

2. An ongoing, consistent process structured around the Graduation Standards Executive Committee to gather and review suggestions and input during the two-year development period for the results-oriented graduation standards;

3. The involvement of professionally recognized experts in education and education assessment and the use of widely recognized, credible sources of current best practice and professional standards; and

4. The piloting of the standards and assessments in school districts with the involvement of teachers, students and communities.

Stakeholder Involvement

Parents, interested individuals and groups, and the public in general were involved in 43 public meetings about graduation requirements between 1990 and the present. Public comment periods set by two publications of the Notice to Solicit Outside Information allowed for input from interested individuals and groups, and parent involvement in the particular pilot sites gave specific involvement opportunities for parent input into the development of the graduation standards.

Over 1,000 educators, specifically teachers with expertise in the various content areas, principals and assessment specialists representing 23 school districts throughout the

state, worked over two years in groups to develop and revise standards and assessments for the profile of learning and to go ahead of the rest of the state in implementing the basic requirements. Designated representatives of business and postsecondary institutions have been convened six times to review the drafts of standards and to provide input for the profile of learning. Eight meetings specifically convened for communities of color to review drafts of standards and to provide input were conducted in 1994-1995.

In the fall of 1994, Minnesota Department of Education established an external consumers information and input process to represent and to provide suggestions and comments from business, industry, the military, labor, and higher education regarding their needs from high school graduates and to provide recommendations to assist in making the proposed rule appropriate to the needs of the lives of students after high school.

The department's public information activities were increased substantially in the fall of 1994 to ensure the broad distribution of information about the proposed graduation. Over 150,000 brochures and information packets were developed and disseminated to every school district, education-related organization, and all individuals and groups attending meeting and workshop or requesting materials. These were designed to inform parents and the general public and to provide ongoing opportunities for citizens to react and communicate their ideas and concerns to the department, thus participating in the development process.

Prior to commencing the formal rulemaking process, the State Board of Education reviewed in their open board meetings the various components of the rules as they were developed. This has given the public yet another opportunity to comment and make suggestions.

In accordance with M.S. 14.10, the State Board of Education adopted a resolution to publish the Notice of Intent to Solicit Outside Information in the State Register on November 19, 1994. Eighteen letters and ten phone responses were reviewed. These were considered by department staff, the Executive Committee and the State Board of Education. On June 12, 1995, the State Board adopted a resolution to publish a second Notice of Intent to Solicit Outside Information in the State Register to comply with the 1995 amendments to M.S. 14.10. This Notice appeared on June 19, 1995 offering a comment period through August 1, 1995. Five additional letters and one phone comment were received and considered by the department staff, the Executive Committee and the Board.

Graduation Standards Executive Committee

Between 1990 and 1995, moving toward uniform statewide standards and continuing to focus on results, the Graduation Standards Executive Committee worked with department staff and the State Board to bring forward comprehensive results-oriented graduation standards that require students to demonstrate competencies to graduate.

Through the several revisions of the drafts during the development of the proposed graduation standards, the Graduation Standards Executive Committee established the

following process for receiving input and suggestions, for responding to input received and for considering what was received in further revisions and refinement of the graduation standards, which are the basis of the proposed rules.

1. Any individual, group, or organization may submit comments and suggestions to the Department of Education at any time during the 1993 - 1995 development process. These comments are acknowledged by phone or mail and forwarded to the various groups working on revisions for their consideration.

2. All suggestions for revision received are forwarded to the Executive Committee with recommendation from staff and pilot sites to accept, reject, or modify the suggestion for inclusion in the redraft of standards.

3. The Executive Committee examines recommendations received, as well as the original comments, letters, transcripts, etc., to act on the recommendations.

4. The Executive Committee makes decisions after verifying that all suggestions have been considered and that rationale for inclusion or non-inclusion in the rule has been evaluated.

5. The Executive Committee makes recommendations to the State Board of Education for the Board's review and approval of the graduation standards under development.

Professional Experts and Best Practice

Evidence of the use of best practice and professional experts will be used throughout this document to support the reasonableness of the decisions in the development of these proposed rules.

Documents cited throughout this statement of need and reasonableness are listed in the bibliography in Appendix E.

Pilot Sites

Beginning in 1993, pilot sites were involved in a continuous process of development, revision, and implementation of the proposed rules in cooperation with the MDE. MDE selected 13 Tier I pilot sites to assist in development of the standards and assessments for the proposed rules. The sites began their work in 1993 and have worked primarily on the Profile of Learning standards and assessments, but have also implemented reading and mathematics basic requirements as conditions for graduation in their schools. A fourteenth Tier I pilot site was added in 1994. These sites includes two urban, five suburban, and seven rural districts. Two education districts, which represent consortia of smaller districts in their regions, are among the rural sites.

Two of the pilot sites were already involved in developing district standards and assessments before beginning work on the graduation rule. The graduation rule supplemented and expanded previous work that was done at the district level. The

previous experience of the pilot sites provided an important foundation for the development of the standards.

Teachers from the Tier I pilot sites have found their activities to be productive and beneficial. Teachers state that their involvement in the pilot sites has caused them to evaluate critically the assessment and teaching tasks they use in the classroom. Their activities prompted them to re-examine the kind of learning opportunities available for students. Teachers also felt that the standards were beneficial to students; students performed better when they were provided with clear expectations (Winking, Hawkes & Morehouse, 1994).

In the winter of 1994, nine Tier II pilot site high schools were added. These sites agreed to implement basic reading and mathematics requirements as well as receive training in performance assessment and implement Tier I assessment packages for the Profile of Learning in their schools as well. These Tier II sites represent every greater Minnesota Educational Cooperative Service Unit.

VI. STATEMENT OF NEED FOR PHASE-ONE OF A NEW RESULTS-ORIENTED SYSTEM

A Statewide Framework for Demonstrated Student Competency in Basic Requirements.

In response to the call for accountability for results, the Minnesota Department of Education developed a framework that sets standards and assesses student performance. This framework is composed of six interrelated components: (1) **basic requirements**; (2) **statewide standards**; (3) **required demonstrated student competency**; (4) **test specifications**; (5) **tests**; and (6) **passing scores**. For the system to provide accountability for results, each component must be included, and each must fulfill the integrity of its role in the framework.

The **basic requirements** are those academic areas which are essential for functioning as an adult in society. They represent skills and knowledge that all students are entitled to possess as a result of their educational experience.

The **statewide standard** is a broad statement of what a student should know and be able to do in the basic requirement area (e.g. solve mathematical problems derived from situations commonly encountered in adult life; read and comprehend English passages representative of widely circulated material). The statewide standard sets out clear expectations that must be met to be eligible for a diploma. The statewide standards in basic requirements are content standards.

The proposed rules **require demonstrated student competency** in a statewide standard. This provides accountability for results at the individual student level. Under the proposed graduation rule, Minnesota high school students will be required to demonstrate competency by taking a test. Demonstration of competency requires meeting the passing score on tests of the statewide standards in the basic requirements.

A statewide system of standards and assessment is essential because it generates accountability for individual results. Assessment provides a mechanism which schools use to determine individual competencies for purposes of determining learning opportunities, need for remediation, and eligibility for a diploma. Without assessment, there is no accountability at the individual student level.

The **test specifications** provide detail about the content within the statewide standard and the level of difficulty of the content to be tested. They describe the scope and difficulty of the domain of the content to be tested. The specifications for the state tests represent consensus of representative content-area experts in reading and mathematics from across Minnesota. The state test specifications were used to develop the state tests of a basic requirements.

The use of **tests** is an effective and efficient way to determine that students have demonstrated competency in the basic requirements. It is possible to assess the knowledge required in mathematics and the ability required in reading through a pencil-paper test. Multiple choice items can be written to assess these competencies.

Testing is a means of assessing all students in a given school at the same time, so it is the most efficient means of eliciting student demonstrations. The time involved for testing all students is approximately one to two hours for each basic requirement. Since time spent in assessment is time taken from instruction, the most efficient method of assessing basic competencies is desirable for students.

Testing is perhaps the best way to ensure equity of decisions and fairness among students in a high-stakes situation. Once a test has been agreed upon and developed, there is no variation of judgment about the performance of students. While the system may be too rigid for all individuals, it is an appropriate way to certify most students. These rules provide ample methods of dealing with individuals whose life situations dictate that other means should be used in making decisions about their competency.

A **passing score** is a means of setting a statewide performance standard for a basic requirement when a test is the means of assessment. Not only does the state need to establish the content to be tested; the state must also determine how high the score must be to exhibit the competencies required by the standard to a sufficient degree. In these rules, where options are allowed in determining the test instrument to be used, an appropriate and comparable passing score must be set for any option the school district selects. The district is then bound to make its decision regarding the individual student on the basis of that passing score. This assures fairness in judgments regarding students.

When an individual student has been determined through an established process to be unable to obtain the predetermined statewide passing score, the record of the student must indicate that an exception has been made and that an individualized performance standard has been set for each case. This preserves the integrity of an established performance standard and provides a firm and fair basis for any decision to withhold a diploma.

The graduation rule will not function as a system of accountability for results in education in Minnesota without all six of the essential components in place.

Current Graduation Requirements Do Not Ensure Student Competency.

The basis for earning a high school diploma in Minnesota has been credits in the required subjects. To graduate in Minnesota a student has had to successfully complete 20 credits in the required subjects for grades 9-12 and in elective subjects. These credits must include 4 credits in English, 3 credits in social studies, 1 credit in mathematics, 1 credit in science, and fractions of full credits in health and physical education. The remaining credits are earned in elective courses unless the local school board has established additional required credits. The current rules also specify essential learner outcome goals that schools must use to develop curriculum course offerings, but they do not specify individual student expectations or the quality of work that is to be considered "successful completion" of the courses required for graduation. The content to be learned, the method of assessing achievement, and the level of performance considered to be passing are determined locally.

School districts are not required to measure individual student performance against statewide standards; Minnesota does not have uniform, statewide standards for high school graduation. Consequently, what knowledge and skills an individual high school graduate actually has achieved is not evident from the holding of a diploma and is not comparable from graduate to graduate.

Minnesota Students Need Basic Requirements.

While Minnesota ranked third highest of 41 participating states in the 1992 overall mathematics proficiency exam of the National Assessment of Educational Progress (NAEP), 21% of Minnesota's eighth graders ranked below the national basic level for eighth graders. Among fourth graders tested in the NAEP 1994 test in reading, Minnesota's students tied for 14th (out of 41 participating states), with 38% of Minnesota's students scoring below the Basic level (National Center for Education Statistics, 1994). The 1994 NAEP reading results showed a decline in the number of Minnesota students scoring at the Basic levels compared to 1992 results. In reading, 44% of the nation was performing below the basic level, while in Minnesota 38% were performing below the basic level. In mathematics, 21% of Minnesota students scored below the basic level, compared to a national average of 39% performing below the basic level (National Center for Education Statistics, 1993).

While Minnesota averages are above the national averages, the patterns are similar to national patterns in achievement by students in mathematics and reading.

The need for basic requirement is borne out in the 1995 pilot testing of the proposed Minnesota basic requirements. In March 1995, the proposed Minnesota state test of the basic requirement in mathematics was administered to a representative sample of 10,000 Minnesota eighth graders. The results of this field test indicate that a significant number of Minnesota students are not proficient in basic mathematics skills. For example, if 70% were to be the score selected as the score needed to pass, only 62% of eighth grade students would have passed the test. If a score of 80% were needed to pass, only 41% of these students would have passed. The content of this test is designed to represent realistically what a high school graduate should know in mathematics in order to

function in the adult world. In a parallel process in April 1995, the state test of the Basic Requirement in reading was administered to a representative sample of 11,000 10th and 11th graders. The results of the field test indicate that a large number of students lack basic reading skills. At a passing score of 70%, 69% of the students passed the reading test. If a passing score of 80% was selected, only 56% of the students taking the test passed. The state test of reading was designed to reflect what a high school graduate must be able to read and comprehend in order to function in society. The field test shows that significant numbers of students are not achieving this basic level of reading skills. The results of the reading and mathematics field tests indicate that there is a need to require students to achieve at a basic level and a need for assessment of basic requirements as a prerequisite for obtaining a high school diploma.

Twenty-eight percent of the eighth graders in mathematics and 25% of the 10th grade students in reading did not score 70% correct on the basic requirements tests. The content of these tests reflected knowledge and comprehension regarded as essential to post-high school life. It was similar to the content of other states' competency exams. Not an exception to the national trends, Minnesota students need basic requirements.

Basic Requirements Consistent with Nationwide Movement.

Minnesota's move toward increased requirements is reflective of the nationwide movement and a national perception that students need to graduate from high school with stronger demonstrated skills and abilities. Minnesota's postsecondary schools and businesses, like those nationally, have called for improvement of high school graduates' performance in basic requirement areas.

A recent review of standards and requirements in all states shows that 17 states have preceded Minnesota in adopting statewide minimum competency testing as a part of their graduation requirements and several others are at present in the process of doing so. Specifically, Alabama, Florida, Georgia, Hawaii, Louisiana, Maryland, Mississippi, Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, South Carolina, Tennessee, Texas, and Virginia already use passing one or more basic requirement tests as a condition of high school graduation.

Business and Postsecondary Support Need for Basic Requirements.

Business in Minnesota, consistent with the national business community, has expressed growing concern regarding the lack of basic skills among high school graduates (Minnesota Business Partnership, 1993). Employers and postsecondary education institutions have found it necessary to remediate essential skill areas such as reading and mathematics in order for these high school graduates to function in jobs and/or postsecondary learning.

American companies spend an estimated $20 billion a year -- and colleges and universities spend billions more -- on remedial education programs to teach what should have been learned in high school (Fiske, 1992). In 1984, the U.S. Army spent more than $14 million to bring its new recruits up to the ninth grade level in reading -- and 90% of them were high school graduates (Applebee, 1987).

The vast majority of employers do not even ask to see a transcript. They realized long ago that it is possible to graduate from high school and still not possess basic reading skills (National Center on Education and the Economy, 1990).

Fifty-two percent of 350 Twin Cities employers surveyed believe that today's job applicants lack adequate basic skills in three areas: reading, writing and mathematics. About one-third of employers in the Twin Cities and Greater Minnesota stated that applicants are most often rejected because of a lack of basic skills (Minnesota Business Partnership, 1993).

An April 1993 study prepared by the Minnesota Community College System Research (based on results using the Academic Skills Assessment and Placement (ASAP) process) showed that only 7% of entering students in 1990 were ready for college algebra. The report indicated that these results were not a surprise due to the community college's 'open door' policy and the minimal levels of mathematics required of high school graduates in Minnesota (SciMath^{MN}, MDE). Research from the Minnesota State University System Task Force on Preparation Standards agrees that many students have taken too little mathematics in their high school years to prepare them properly for college (Minnesota State University System Task Force on Preparation Standards, 1991).

According to the U.S. Dept. of Education, as many as three out of five high school graduates who enter college require some remediation work. Nine out of ten colleges offer noncredit remedial courses in English to their incoming freshmen.

Many adults who earned a high school diploma on the basis of "seat time" read well below the secondary level. Consequently they are disadvantaged in pursuing postsecondary education programs and in adapting to job changes requiring greater literacy skills (Literacy Summit Action Coalition, 1995).

There has been a national call to raise performance levels significantly in our nation's schools and colleges to prepare young people for lifelong learning, and to educate all students well -- not only those identified as college bound. The publication, *Educating Americans for the 21st Century* (National Science Board, 1983), asks state governments and local school districts to establish programs that will provide a system for measuring student achievement and participation. It says that every state should establish rigorous standards for high school graduation and local school districts should provide rigorous standards for grade promotion.

Public Opinion Supports Need for Basic Requirements.

Currently in Minnesota, schools are "accountable" to the public for many components of the education system: for example, for expenditure of funds, for offering the required courses to provide students with the opportunity to graduate and for reporting their local P.E.R. plan and evaluation to their communities. They are not, however, required to account for an individual student's ability to demonstrate specified results to be eligible for a diploma.

With many high school graduates unable to succeed in employment and/or further education, public confidence in the public schools has decreased. Sixty percent of

Americans say that "not enough emphasis on the basics such as reading, writing, and math" is a serious problem in their local public schools. Focus group participants repeatedly expressed frustration with their children's lack of command of the basics (Public Agenda, 1994).

When asked to rate the quality of public education in the U.S., 25% of parents with children in public schools gave the current system a grade of 1 or 2 on an increasing scale of 1 to 5 (Choice in Education Foundation, 1995).

As the economy has worsened, the call for accountability has further intensified.

Public education receives the largest single portion of the state budget expenditures in Minnesota. Approximately thirty percent (30.6%, $5,134,534,000) of the Total General Fund Expenditures and Budget Reserve are devoted to K-12 education (Minnesota Tax Foundation, 1994).

In its survey of over 600 Minnesotans, the Choice in Education Foundation (CEF) discovered an overwhelming sentiment that tax dollars are not being well-spent: 64% of those at Project Listen focus groups disagreed or strongly disagreed with the assertion that we are currently getting our money's worth in education. Forty-eight percent of public school employees said that they think we are not getting our money's worth in education. Fifty-nine percent of public school parents said that they were disappointed with what their education dollar was buying (Choice in Education Foundation, 1995).

Minnesota's parents, communities, business leaders, and higher education have voiced the need for assuring the "basics" and for accountability for what a graduating student knows and is able to do.

Minnesota public opinion supports the basic requirement in mathematics and reading. Two surveys (of parents and non-parents) were conducted by the Minnesota Department of Education in January and February of 1994 to gauge public responses to the proposed graduation standards. Almost all of the people surveyed (96% of parents and 95% of non-parents) supported the requirement that students pass a test in reading, writing and mathematics in order to receive a diploma.

When asked "Should MN Students Have to Pass a Test In Order to Graduate?" callers to one Minneapolis-St. Paul area television station answered three to one in favor of the test. 1,759 - Yes; 613 - No (KSTP-TV, 06/07/95).

A KARE 11 poll consisted of telephone interviews with 806 randomly selected adults who said they regularly vote in state elections. Only 38% of respondents said the status quo is good enough. Eight-nine percent said that students should prove competence in reading, mathematics, and science before receiving a diploma (O'Connor, 1994).

According to an independent poll commissioned by the Minnesota Education Association (MEA), more than 91% of Minnesotans support a graduation rule which would require all students to meet a certain level of academic achievement before they receive a diploma (Schaubach, 1995).

In a study initiated by the Department of Education, 1,000 public school parents / guardians were surveyed about requiring minimum competency tests for graduation. Eighty-eight percent favored it while only 7% opposed it (Decision Resources, Ltd., 1994).

Seven focus groups (each attended by 8 to 20 participants), representing parents from Urban and Greater Minnesota regions, the African-American community, recent high school graduates, current high schools seniors, teachers and superintendents, were convened by Decision Resources to consider the proposed graduation rule. Current high school seniors and recent high school graduates provided the most positive feedback about having basic requirements. Parents and students supported the concept of the graduation rule change and felt the draft presented was a solid step forward; they considered it to be an excellent response to the criticism of the declining educational quality in the public schools (Decision Resources, Ltd., 1994).

Every fall since 1966, the Cooperative Institutional Research Program (CIRP) has collected survey data to profile the characteristics, attitudes, values, educational achievements, and future goals of students entering colleges in the United States. In a review of educational trends which have occurred over the last 25 years, it was found that the percentage of students who indicate that an "important" or "very important" reason for deciding to go to college is "to improve my reading and study skills" has steadily increased since 1966, nearly doubling between 1971 (22%) and 1990 (43%) (Dey, Astin & Korn, 1991).

In 1992 and again in 1994, 90% of 350 Twin Cities employers surveyed said they would like to see a set of minimum standards enacted in which high school graduates would be certified to be competent. More than 80% said they would be more likely to hire applicants who had such certification (Minnesota Business Partnership, 1993).

The public schools need to show improved results. There is a need for accountability for the money being spent to educate students. There is a need for schools to be accountable for individual student performance for all students. The schools need to be accountable for producing graduates who can demonstrate basic knowledge and skills.

Proposed Rules Respond to the Need.

The proposed results-oriented graduation requirements provide a way to meet this need for accountability for results. The proposed rules put into place a system to assure that to receive a high school diploma, a student must demonstrate competency in required statewide standards in basic requirement areas.

The proposed rules provide accountability for results by setting specific statewide content standards in the areas designated as basic requirements and by setting performance standards that must be demonstrated by the student.

The criterion for designating an area as a basic requirement is that the knowledge and skills in that subject areas are essential to functioning as an independent adult in today's society. The two basic requirements in these proposed rules are the subject areas of mathematics and reading. To function in today's society, a high school graduate needs

a solid foundation in mathematics skills and reading. The need for requiring mathematics and reading specifically as basic requirements is defended in section VII of this document. However, selecting basic requirements, whatever subject areas they may be, is integral to a system of accountability for results.

The *SCANS Report of the U.S. Department of Labor* (1991) indicates that because low skills equal low wages, many who have low skills will not earn a decent living. The report urges that all high school students must develop good basic skills in order to live a productive and satisfying life.

The Results-Oriented Graduation Rule legislation in Minnesota and the federal *Goals 2000: Educate America Act* both mandate what is recognized as needed. The need includes minimum competencies, rigorous standards, and measuring knowledge required by all students for graduation, as well as state content standards and state performance standards for all students.

With the proposed rules, the public education system will be held accountable for the results of each student's learning. The student will know clearly what must be achieved and demonstrated to be eligible for a diploma. The school will know what learning opportunities to offer; and employers, postsecondary institutions, parents and the public at large will know that achievement of the standards in the basic requirements has been demonstrated by a high school graduate. This is accountability for results; this is accountability for each student who graduates from a Minnesota public high school. This is accountability for preparing high school graduates for employment, further education and citizenship.

VII. DETAILED STATEMENT OF NEED AND REASONABLENESS BY SUBPART

3501.0010 PURPOSE

The purpose of parts 3501.0010 to 3501.0180 is to establish statewide standards that define what a Minnesota public high school graduate should know and be able to do to function effectively as a purposeful thinker, effective communicator, self-directed learner, productive group participant, and responsible citizen.

3501.0020 SCOPE

Parts 3501.0010 to 3501.0180 govern the graduation standards that Minnesota public school must require for a high school diploma for all students who enter ninth grade in 1996 or a subsequent year.

3501.0030 DEFINITIONS

Definitions are needed to assist the reader with clarity of meaning for terms as they are used in the proposed rules.

3501.0040 STATEWIDE GRADUATION STANDARDS

Subpart 1. Basic requirements. The basic requirements for mathematics and reading are established in this chapter. The statewide standards for mathematics are specified in subpart 2 and the statewide standards for reading are specified in subpart 3.

In the past, the State Board of Education rules concerning graduation requirements have required one credit in mathematics and three in English. Elementary students spend most of the school day study in reading and mathematics. Middle school and junior high schools require all students to take mathematics, and may require reading as well. Past practice in Minnesota schools indicates that these subject areas are considered "basics."

Basic Requirement in mathematics is needed.

Mathematics is an essential skill for survival as an independent adult in our society. National reports such as *SCANS: What Work Requires of Schools; A SCANS Report for America 2000* state that most people do not leave mathematics behind in school. According to the SCANS report (Secretary's Commission on Achieving Necessary Skills, 1991), they are required to use mathematics on the job to perform necessary tasks. More than half of high school graduates leave school without the knowledge or foundation required to find and maintain a good job.

According to the article, "EdTalk: What We Know about Mathematics Teaching and Learning," virtually everyone will need mathematics to function well in work and society (Kober, 1990). The National Research Council (NRC) published in its findings, *EVERYBODY COUNTS: A Report to the Nation on the Future of Mathematics Education* (1989), that mathematics is a prerequisite to many jobs. In fact, the report indicates that the fastest growing jobs require much higher mathematics, language, and reasoning capabilities than current jobs, while slowly growing jobs require less (National Research Council, 1989). Without a solid foundation in the basics of mathematics, Minnesota students will be disadvantaged in the fastest growing job markets. Levels of education in general, and specifically in mathematics, must be raised if students are to competently cope with the technological, information-based society of the 21st century (Kober, 1990).

The report, *EVERYBODY COUNTS* (National Research Council, 1989), points out that mathematical concepts such as chance, logic, and graphs permeate daily news and routine decisions. In order to have a functioning democracy, there is a need for an educated citizenry who are capable of making informed judgments on public issues (Carnegie Forum on Education and the Economy, 1986).

Businesses are finding that many of their employees do not have the basic skills necessary to acquire more sophisticated technical skills. According to a study conducted by Henry and Raymond in 1983, employers complain about workers' computational skill deficiencies, especially miscalculations of decimals and fractions,

resulting in expensive production errors (Carnevale, Gainer & Meltzer, 1990). The Center for Public Resources (CPR) study entitled *Basic Skills in the U.S. Work Force* in 1983 indicates that on average, 43% of employees across many job categories and at all required performance levels have deficiencies in mathematical skills. The report emphasizes that this figure represents 43% of those actually hired (Carnevale et al., 1990).

To be a successfully independent individual in today's society, high school graduates need a solid foundation in mathematics skills. According to the publication, *Workplace Basics* (Carnevale et al., 1990), basic skills are the keys to greater opportunity and a good quality of life. However, mathematics skills are needed not only for students to participate in higher education or in the job market. In today's society, mathematics is needed to function as a family member, independent individual, and participatory citizen. Students will need to function as family members who know how to manage a household budget, determine loan payments and interest, pay bills, and balance a checkbook.

To function as good family members later in life students need to understand how to use mathematics to be better consumers. They need to learn how to use mathematics for common tasks: for example, to make change and measure quantities of food, lumber, or fabric. They need to understand which item is a better deal in the supermarket, or how to balance their checkbook correctly. More important, they need to understand and be able to determine what means is appropriate to the task (Content Outcome Team, 1993).

Mathematics is also important because of the habits of mind it develops. The habits of mind that mathematics develops include the ability to inquire, deal with complexity and new ideas and to deal with ambiguity and change (Clemens, 1995). This is important in developing students into lifelong learners. With a good foundation in the basics of mathematics, Minnesota high school graduates will be able to build on their knowledge and succeed in the world around them. According to *Workplace Basics* (Carnevale et al., 1990), people who are cognizant of their skills and abilities are able to realistically understand where their talents lie in any capacity they may find themselves -- parent, citizen, worker. These basic skills will also encourage positive self-esteem.

Basic Requirement in reading is needed.

The basic requirement in reading is necessary because in order for the individual to function successfully in society, he or she must be able to read. According to the NALS Literacy Survey, lower literacy skills mean a lower quality of life and more limited employment opportunities. Adults with limited literacy skills are likely to find it more challenging to pursue their goals -- whether these involve job advancement, consumer decisionmaking, citizenship, or other aspects of their lives (Kirsch, Jungblut, Jenkins & Kolstad, 1993). Literacy use has expanded and is intertwined with nearly every function of modern society. The complexity of literacy tasks has increased in reaction to the increased complexity of occupational and social tasks (Mikulecky, 1990).

Basic reading skills are necessary for the individual to function in society as a citizen, worker, family member, and self-directed learner. Modern citizenship requires basic reading skills for full participation in the processes of society -- work, home,

management, child rearing, and voting (Venezky, Wagner, & Ciliberti, 1990). Reading skills are necessary for the success of the individual as a worker. Weekly wages and hours worked per week rise with literacy level: adults at higher levels of literacy earn 2 1/2 times more than adults with minimal literacy skills, and work more than twice as many weeks. Poverty and literacy are closely related: 43% of adults at the lowest level of literacy are poor or near poor compared with 4% at the highest level of literacy (Policy Information Center, 1994).

Basic reading skills and the exercise of citizenship in a democracy are strongly related. The ability to read goes hand-in-hand with voting or obtaining information from newspapers and magazines (Policy Information Center, 1994).

However, many high school graduates do not possess the basic reading skills necessary to function in society. The results of the Minnesota basic competency test in reading indicate that a significant number of Minnesota students are not achieving a basic level of reading skills. Almost one-third of the 11,000 students tested failed the reading exam. Concern about students' lack of reading skills was recently expressed in the Minnesota media. On April 28, 1995, both the *Star Tribune* and the *St. Paul Pioneer Press* published articles declaring the need for basic competency testing in reading.

The results of the Minnesota basic competency reading test should be interpreted in the context of results nationwide. According to the NAEP Literacy Assessment, the average reading proficiency of 12th grade students declined significantly from 1992 to 1994. This decline was evident across a broad range of subgroups. The percentage of 12th grade students reaching the proficient and basic levels of reading achievement also decreased considerably since 1992. The problem which emerges from the national studies that have been completed is not so much one of "illiteracy" among the few adults who simply cannot read or write, but of a skills gap between the basic level of literacy obtained by most high school graduates and the increasing demands of work and society (National Governors' Association, 1992).

Currently, the possession of a high school diploma does not necessarily indicate that a student has learned basic reading skills. The Minnesota Adult Literacy Campaign states that the number of years completed in high school does not necessarily correspond to an individual's functioning skill level in reading. Testing results and enrollment information show that many adults actually function at a level in reading significantly lower than their grade level completion (Davis, 1987). Thirty-five to 40% of the participants on the JPTA and ES/UI Literacy Assessment by the US Dept. of Labor who had a high school diploma tested at the lowest levels of literacy (Kirsch, 1992).

The growing demands of citizenship and employment require a population equipped with basic reading skills (National Governors' Association, 1992). The majority of high school graduates lack the basic skills for all but the most menial jobs and cannot move beyond minimum-wage chore positions (US Department of Education, 1993). The Center of Public Resources Survey of Basic Skills in the United States Workforce found that of the 101 companies surveyed, 30% reported secretaries having difficulty reading at the level required by the job. Sixty-five percent reported that basic skills deficiencies limit the job advancement of their high school graduate employees (U.S. Department of Education & U.S. Department of Labor, 1988).

Mathematics and reading are necessary minimum competencies that are used in other subject areas and that are essential for further learning. They are, therefore, reasonable choices as the first two basic requirements areas for the requirement of statewide standards.

3501.0040 Subp. 2. Statewide standard in mathematics. To meet the basic requirement in mathematics, a student shall demonstrate the ability to solve mathematical problems derived from situations commonly encountered in adult life. Among common situations is the estimation of distance traveled when the elapsed time and average rate are known.

Real World Applicability.

The statewide standard in mathematics is reasonable because it requires students to demonstrate "the ability to solve mathematical problems derived from situations commonly encountered in adult life".

The statewide standard in mathematics is reasonable.

A national report, *The Mathematics Report Card: Are We Measuring Up?*, recommended that students acquire a basic foundation of facts and knowledge of how to carry out basic procedures (Carnegie Forum on Education and the Economy, 1986).

Real-world applicability is important because mathematics is applied in everyday work and life (Dossey, Mullis, Lindquist & Chambers, 1988). However, half of students in grades 7 through 11 who were tested and surveyed by the Educational Testing Service in 1988 did not expect to work in an area requiring mathematics skills.

Because virtually all occupations involve responsibilities that rely on a mastery of basic quantitative concepts and procedures -- such as estimating costs, scheduling tasks, and calculating budgets (NRC, 1989) -- it is reasonable to have basic requirements to assure that Minnesota high school graduates can market their skills in state, national and international society and economy.

Daggett (1994) states that countries whose students achieve the highest scores on international exams base curriculum and assessment on real world application. According to the executive director of SciMath^{MN}, there has been a shift in mathematics from "figuring" to "figuring out" and from memorization and rote procedure to reasoning and problem-solving (Clemens, 1995). Problem-solving is the focus in national mathematics standards. This means using math thinking and reasoning in the realm of everyday problematic situations. The proposed statewide standard is consistent with this focus.

Current Capacity of Schools.

According to those developing the standard, it is not beyond the reach of current school capacity to offer. The statewide standard in mathematics is consistent with the current practice of Minnesota school districts. For example, the St. Paul and Anoka-Hennepin

School Districts have graduation requirements that require a student to demonstrate basic competency in mathematics in order to receive a high school diploma. Experiences of those districts were used in developing the statewide standard.

Minnesota public schools are already required by the P.E.R. laws (126.663) to adopt essential learner outcomes in subject areas including mathematics. The P.E.R. laws also require that school districts develop a process for evaluating student progress in attaining learner outcomes. They must also remediate students who are having difficulty attaining such levels of achievements. The proposed rule requires the same components and adds another component -- accountability at the time of graduation.

A statewide standard will not pose an undue burden to Minnesota school districts, but will cause improvement in districts not already meeting the requirements and make the standard in mathematics consistent across districts.

Currently, Minnesota high school students are required to take only one high school credit of mathematics (120 hours of mathematics instruction). If students have not achieved basic competency in mathematics, there is no safety net to catch them. As a consequence, some students do not achieve basic competency. It is reasonable to require competency in basic mathematics because it is useful and beneficial to the student's future life experiences. *Educating Americans for the 21st Century* (National Science Board, 1983), holds that school districts should participate in assisting students whose level of achievement is inadequate to enable them to move to their next step in life.

The proposed requirement for demonstrating the statewide standard in mathematics in order to receive a diploma is reasonable because it allows for the testing of mathematical skills and remediation if necessary for every student up to their completion of the 12th grade. This provides multiple learning opportunities for students in mathematics until they are able to demonstrate competency in the statewide standard.

Other States.

The statewide standard in mathematics is reasonable because it is consistent with and similar to what other states are doing as they move toward accountability, school improvement and compliance with the *Goals 2000: Educate America Act* requirements. Seventeen states have implemented required standards in mathematics. All of these states offer statewide standards in mathematics and stress practical application, such as requiring students to be able to calculate auto mileage or the cost of buying on credit.

The report of the U.S. Department of Labor entitled *SCANS: What Work Requires of Schools* (1991) argues that schools must set clear-cut standards so students will acquire the knowledge they need to succeed in the work force. The report points out that assessment of students' abilities will test students' workplace readiness so that parents and employers will know where they stand -- if they can demonstrate the competency at an acceptable level, the student can be assumed to have certain skills. In fact, the nation's mathematics teachers, the National Academy of Sciences, the country's major business organizations, the national education groups, and the Bush and Clinton administrations have endorsed standards-based reform. If U.S. students are to achieve

on acceptable levels, what they are to learn must be agreed upon and a greater mastery of these skills must be achieved (Jennings, 1995).

Involvement of Stakeholders: Best Practice

The process used to determine the standard was reasonable because it included a wide representation of stakeholders and used best practice sources and criteria.

Standards developed by the National Council of Teachers of Mathematics (NCTM) were used in developing the statewide standard for Minnesota. The process used by NCTM of soliciting feedback from the profession was also closely followed (Lewis, 1995).

Primary stakeholders were given repeated opportunities to play a part in the development of the statewide standard in mathematics. Those involved were teachers, parents, and community groups. Mathematics teachers from around the state of Minnesota were invited to attend sessions to develop and review the specifications for the assessment of the mathematics basic requirement. Consensus was used in making changes or adding to the test specifications. The MDE Standard Specialist in mathematics who headed the development of the test specifications traveled to Brainerd, Dover-Eyota, Richfield, Moorhead, Freshwater Educational District and Annandale to present the proposed test specifications and mathematics basic requirement to mathematics departments in many school districts.

Principals and superintendents from Minnesota school districts were surveyed and their responses tallied in regard to their opinions about the proposed graduation rule. The data collected were used in the development of the statewide standard. Town meetings were arranged across the state with the purpose of soliciting opinions from parents and community groups. They had the opportunity to share their opinions with department representatives. Their testimonies were recorded by a court reporter and were used in the development of the statewide standards. A summary of eight public meetings from around the state regarding the proposed graduation rule (from November to December 1992), reveals that there is no question that mathematics (as well as reading and writing) is an important content outcome (Miller, 1992). Those involved brought thorough knowledge of current learning opportunities in mathematics in Minnesota.

3501.0040 Subp. 3. Statewide standard in reading. To meet the basic requirement in reading, a student shall demonstrate the ability to read and comprehend English passages representative of widely circulated material commonly encountered in adult life. Among widely circulated material is a newspaper feature article.

The statewide standard in reading is reasonable.

The statewide standard in reading is reasonable because it requires students to demonstrate "the ability to read and comprehend English passages representative of widely circulated materials commonly encountered in adult life."

This is consistent with the need to have basic reading skills for employment, further education, and citizenship.

Real World Applicability

Basic reading skills are taught primarily in elementary school. If a student has not achieved competency in basic reading skills by the end of junior high school, the rest of the subjects taken through high school suffer. The student will likely graduate lacking basic competency in reading or may fail to complete high school. It is reasonable to require students to demonstrate the standard in reading because this leads to regular assessment of reading skills and reading remediation as needed for every student through 12th grade. This provides learning opportunities in reading that will enable them to demonstrate competency in the statewide standard.

Other States

The statewide standard is the result of extensive research in reading and related fields, and current research supports the proposed basic requirement. The statewide standard in reading is consistent with requirements and standards of other states. The following states have a statewide standard in reading similar to the Minnesota requirement: Alabama, Connecticut, Florida, Georgia, Hawaii, Illinois, Louisiana, New Mexico, Maryland, Mississippi, Nevada, New Jersey, New York, North Carolina, Ohio, South Carolina, Tennessee, and Texas. All of these states except Nevada conduct criterion-referenced reading tests that assess components of literal and inferential comprehension.

Involvement of Stakeholders: Best Practice

The statewide standard in reading is consistent with nationally recognized criteria. The NAEP (National Assessment for Educational Progress), SCANS, the NALS (National Adult Literacy Survey), ADVANCE Workplace, and IEA Reports were used as guidelines for developing the criteria for the statewide standard in reading.

The standard requires competency in reading in the English language. In Minnesota, English is the language of business and of public information. Economic success in this region is dependent on the ability to communicate in English. The policy of most Minnesota schools in regard to students who are native speakers of another language is to provide an English as a Second Language program with the purpose of making students fluent in English as quickly as possible. Extended bilingual programs are rare in the state. Meetings with LEP educators, administrators, and representatives of Hispanic, Asian, and Native American communities supported the expectation that students be competent in English (Brockton, 1995).

The statewide standard in reading was developed with the involvement of local district teachers and administrators, who provided input on current practice in local schools. Licensed reading teachers provided knowledgeable and informed input on the viability of implementing the standard.

National and local experts were consulted by MDE throughout the development process of the reading standard. These included psychometricians Hill-Katien and Associates from Chicago, National Computer Systems, and a Reading Specifications Review Committee composed of reading teachers, statewide and MDE assessment

specialists, a statewide reading specialist, pilot site directors, and teachers and administrators from 50 school districts.

An extended process of consultation with stakeholders contributed to the development of the statewide standard in reading. Teachers, parents, and community groups were included in this process. MDE held regular public hearings from 1991-1994 in a representative number of school districts. The comments and suggestions made by stakeholders were considered in the formulation of the reading standard. In a summary of eight public meetings from November to December, 1992, there was general agreement that reading should be implemented as a basic requirement in secondary education (Miller, 1992).

In a summary of meetings conducted in December 1992, a statewide standard in reading was determined to be an essential component of a high school diploma by representatives of the community (Tillmann, 1994).

A series of four regional meetings were held from February 1995 to May 1995 in which the statewide standard, as well the content of the test specifications, were presented to teachers and administrators from throughout Minnesota. Representatives were invited to submit their comments and suggestions. The February 13, 1995 meeting at Deer River convened 26 representatives from 7 school districts; the February 14, 1995 meeting at Eveleth, 23 representatives from 9 school districts; the March 15, 1995 meeting at Brainerd, 61 representatives from 13 school districts; and 73 representatives from 29 school districts attended the May 15, 1995 meeting in Rochester.

The meetings were organized by MEEP (Minnesota Education Effectiveness Program) to inform teachers and administrators about the first stage of the implementation of the proposed graduation rule. The basic requirement reading specifications and a sample reading assessment were presented. Legal issues regarding assessment and options for schools to meet the basic requirement were discussed. The representatives were able to ask questions and address concerns pertaining to the basic requirement and the standard. The representatives filled out a questionnaire at the end of the meeting where they could submit additional comments and questions. They agreed that students should demonstrate basic reading skills in commonly circulated adult reading material.

The MDE Standard Specialist in Reading conducted a point-by-point discussion of the proposed basic requirement in reading on January 17 and March 10, 1995 in the Rosemount/Apple Valley/ Eagan school district. Almost 100 total district administrators and classroom teachers attended these meetings. The basic requirement was examined and discussed in detail, a sample reading assessment was presented, and legal issues in testing were discussed. The representatives approved of the basic requirement.

In addition to the public meetings, MDE considered input from teachers' organizations, including the Minnesota Council of Teachers of English, Home Economists in Education, and the Minnesota Music Educators Association, in the form of letters and memos. MDE also considered statements and letters from the business community, special interest groups, and minority groups.

Studies conducted by the Minnesota Adult Literacy Campaign indicate that at least 236,000 Minnesota adults, including high school graduates, are functioning well below a 12th grade level in reading. Over 671,000 adults age 16 and over are currently in need of reading remediation. At least 15% of the adults presently enrolled in Minnesota's basic reading skills programs are high school graduates, while the remaining 85% did not graduate from high school (Davis, 1987).

Current Capacity of Schools

Currently, reading is not generally taught in most Minnesota high schools as a separate academic subject. Although high schools are required to offer courses in English language arts, the emphasis of the courses are usually on the interpretation of literature. Also, the courses typically do not address reading for information. Although literary reading skills are an important component of basic reading competency, literary reading skills alone are not adequate to prepare students for reading the kinds of print material they are likely to encounter in the world of work. Students must also learn expository reading skills that will enable them to read and understand informative material. According to statistics compiled by the MDE Office of Teaching and Learning, there are less than ten content area or developmental reading courses that focus on expository reading at the secondary level in Minnesota school districts. These courses are electives and not part of the requirements for high school graduation. High school reading remediation courses in any form of reading are currently offered in only 59 of the 393 Minnesota school districts.

The statewide standard is a reasonable way of providing state level leadership and support to an already emerging response from school districts to a recognized need for students with basic reading skills. The Anoka-Hennepin, Brainerd, Dover-Eyota, and St. Paul school districts have developed or were in the process of developing basic competency tests in areas such as reading before becoming pilot sites. The Rosemount / Apple Valley / Eagan district recognized the need for assessing basic skills and began developing reading assessments prior to becoming a pilot site. In the Freshwater Education District, Minneapolis Public Schools, Moorhead, and Richfield, the proposed rule is seen as a supplement to these districts' previous work in results-oriented education. The St. Cloud School District was already in the process of developing graduation standards, and Minnesota River Valley Education District had initiated a dialogue with the local community on implementing graduation standards. In addition, teachers from Robbinsdale School District have reported their commitment to developing graduation standards and basic competencies (Winking et al., 1994).

MDE has formed 13 Best Practice Reading Teams to serve as a resource for school districts and individual teachers in adapting curriculum to meet the standard. These teams are composed of 64 reading specialists representing over 50 school districts. The specialists serve as consultants to school districts and individual teachers, providing current information about best practice.

A statewide standard will not pose an undue burden to Minnesota school districts, but will cause improvement in districts not already meeting the requirements and make the standard in reading comparable across districts.

Current P.E.R. laws (M.S. 126.663) already require school districts to adopt essential learner outcomes in subject areas such as communications (including English language arts skills) and a process for evaluating each student's progress toward attaining learner outcomes. Assessments must be conducted among at least a sample of students in the chosen subject areas. The proposed rule is an extension of the P.E.R. legislation with an added component of accountability.

In M.S. 126.663, Subp. 3a, the Assurance of Mastery Program, the law stipulates that each school district shall adopt a process to establish individual student mastery in communications (including English language arts skills.) The school districts shall periodically evaluate students on their progress and provide for individualized remediation plans for students who are not making sufficient progress. The proposed rule builds upon this legislation by providing a systematic method of assessing students' reading competency and identifying those in need of remediation.

3501.0040 Subp. 1 (2nd paragraph) **To qualify for a high school diploma, a student shall demonstrate competency in the statewide standards for mathematics and reading through one of the testing options in this chapter except for decisions consistent with parts 3501.0090 and 3501.0100.**

This provision is needed to establish that the district must hold a student responsible for demonstrating competency through a test. The provision is necessary to clarify the need to stay within the methods specifically laid out in this rule for demonstrating competency in the basic requirements. With so many choices about how to deal with a student, a district might assume that other methods would do as well, such as a subjective judgment or an exemption based on parent request. This provision places a boundary around choice of methods that may be used to assess student. Every student enrolled in the school will be accounted for by one of them. Each of the methods requires formal documentation of the assessment of the results. If districts operate within these parameters, the result will be a documented demonstration of the basic requirements for every student.

The provision is reasonable because it is consistent with the authorizing legislation (M.S. 121.11 subd. 7c.) prohibiting a single statewide form of assessment. The methods listed provide for the needs of many different types of students. There is also a method for dealing with an individual student that does not fit any of the general categories, i.e. the request for accommodations for any senior after April 1.

3501.0040 Subp. 1. (2nd paragraph). **School districts may require higher standards in mathematics and reading than the statewide standards.**

Setting higher standards is reasonable.

Currently Minnesota public school districts each award their own high school diploma. There is no state diploma in Minnesota. While the proposed rules require statewide minimum competencies to be the basis of school districts certifying a student as eligible for a diploma, there is no interest in or intent to restrict individual school districts in going above the statewide minimums and adding additional requirements for achieving a diploma from its high school.

The proposed rules, therefore, grant discretion to local school districts to set higher standards than the statewide standards in mathematics and reading. This allows local school districts that have higher standards to continue to do so and any district that wishes to have higher standards to establish them.

This local school discretion is reasonable because it continues and protects the current authority and practice of local school districts, and it is consistent with the tradition of local autonomy in Minnesota. This discretion is consistent with the legislation authorizing these proposed rules (M.S. 121.11 Subd. 7c) which mandates no single statewide form of assessment.

3501.0050 TESTING FOR STATEWIDE STANDARDS IN BASIC REQUIREMENTS.

Testing for statewide standards in basic requirements is needed.

In order to provide statewide accountability for individual results, the statewide content standards for student achievement must be demonstrated through testing.

> Measurement of outcomes, or assessment, must be a critical part of our educational system. Given all of the resources put into education, and the phenomenal importance of the success of education's mission, it is imperative that we have the ability to measure how well we are doing in preparing our children for the jobs and society of tomorrow (Minnesota Business Partnership, 1991).

The tradition of achievement testing in Minnesota schools has been one of local decision. "Districts use more than 80 different standardized tests to assess their curricula and measure students' academic achievement, skills and aptitudes." (Office of the Legislative Auditor, 1988)

The P.E.R. (1976) and A.O.M. (1985) programs initiated a critical accountability effort throughout Minnesota for the content of school programs and the overall student achievement of that content. The A.O.M. and P.E.R. programs were designed to facilitate the planning and improvement of learning for schools in Minnesota. M.S. 126.661 Subd. 6, states, "P.E.R. process means a process...to establish a cycle for curriculum identification, implementation, review, and improvement that is reported to the community and the state." While P.E.R. and A.O.M. were important tools for district and state accountability, neither program established a clear set of standards and assessments with regard to the individual student. According to the Minnesota Legislative Auditor, "First, students are not required to achieve minimum levels of competency in tested subject matters to be promoted. Second, the state does not review district's minimum standards to ensure some degree of consistency. Thus, students offered remedial help in one district may not be offered remedial help in another."

"The state holds no one accountable for districts' achievement scores reflected by the department's assessment tests or their own tests. Although districts must publish summaries of test results in a consistent manner, they need not disclose how many

students fail to achieve state learner objectives or district assurance of mastery standards. And although districts receive some additional state funds for satisfying reporting requirements, the Department of Education in the past simply allocates these monies to all districts which submitted reports regardless of content."

The report of the legislative auditor points out weaknesses in the current Minnesota system of tests. "Because the state has not defined minimum levels of acceptable performance for either districts or students, there is no assurance that students graduating from high school around the state possess minimum competencies in basic skills. This is especially worrisome in view of declining test scores and student dissatisfaction. Further, we found that required district reports to communities concerning student and district performance often are promotional and vary so much in form that they make inter-district performance comparisons impossible." (Office of the Legislative Auditor, 1988)

The proposed rules require a district to test each student in the statewide standards for basic requirements. This testing is necessary to establish the integrity of a results-oriented system that is accountable to the individual student and to society. Education stakeholders, such as business leaders, have demanded accountability for results at the individual level.

Requiring testing is reasonable.

It is reasonable to require a district to assess the statewide standards in the basic requirements through testing.

The requirement for testing holds individuals accountable for what they know and are able to do and holds school districts accountable for administering tests to students and providing learning opportunities to meet the statewide standards as stated in part 3501.0100.

The system of assessment of the statewide standards in the basic requirements provides a mechanism for schools to use in determining individual competencies for purposes of remediation decisions and eligibility for a diploma. Consequences for failing to meet the statewide standards ensure that only those students who can demonstrate competency in the basic requirements in reading and mathematics at the passing level will receive a diploma.

Testing each student is reasonable because the competency of each student is measured by an objective instrument. Tests can be administered fairly to the entire statewide population, thus maximizing the efficiency with which the assessment can be conducted. Valuable human and financial resources can be conserved by using tests to assess the statewide standards.

"It has become a truism, especially in this era of school reform, that assessment is a most potent and cost-effective investment...on a dollar-for-dollar basis, Assessment may get more action -- and more focused action than any other lever available to school reformers." (California State Department of Education, 1990)

Currently, seventeen other states employ statewide assessments as part of a high school graduation requirement.

National experts in the area of assessment support the use of standardized testing as part of a system of high school graduation requirements.

> High-quality MCT [Minimum Competency Testing] programs will have decisively positive effects on students, on the curriculum and teaching, and on public perceptions of schooling...High-quality minimum competency testing programs will restore meaning to the high school diploma and honesty to the appraisal of students' progress. Furthermore, by systematically detecting, and eliminating basic skills deficiencies, MCT programs will markedly improve U.S. public schooling (Popham, 1981).

Studies of minimum competency testing as a requirement for high school graduation in other states have found that student achievement increases as a result of MTC implementation (Rodgers, 1991).

It is reasonable to require school districts to test the statewide standards in the basic requirements because testing is effective in identifying students who lack skills. Statewide testing maximizes fairness to all students and it is the most efficient means of assessment.

3501.0050 Subpart. 1. School district testing options. A school district shall test for competency in the statewide standards in basic requirements by using:

A. a state test;

B. one of the state-approved nationally normed, commercially published tests; or

C. a local test.

The proposed rules grant the district discretion to select and use one of three testing options: A. the state test of the basic requirement, B. a nationally normed, commercially published test reviewed and approved for use by the State Board of Education, or C. a local test of the basic requirement.

All states with high-stakes basic requirements testing require districts to use a state-developed assessment. Minnesota is unique in allowing district flexibility in choice of assessments. The legislature prohibited a single form of assessment. Multiple assessments can be used to measure statewide standards in the basic requirements because criteria have been established to ensure comparability.

MDE, consistent with the tradition of local control in Minnesota, has developed a statewide system of assessments which allows for local district flexibility in assessment of the statewide standards while holding individual students accountable to demonstrate competency in statewide standards.

The objective of the assessment system developed by MDE is not for students simply to pass a particular test in reading and mathematics, but to find out whether a student can read and understand mathematical concepts at a functional level. The state has provided

several options for local school districts to choose from when assessing mathematics and reading. Multiple options for testing decrease the likelihood of false negatives (false negative score occurs when a student, who possesses competency at the level of the statewide standard in the basic requirement, fails the test of the basic requirement and is misclassified as not competent for that basic requirement).

This system of assessment developed by MDE maintains local autonomy in decision making, while requiring that districts hold students accountable. Having testing options is consistent with the mandate from the Legislature: "The board shall not prescribe in rule or otherwise the delivery system, form of instruction, or a single statewide form of assessment that local sites must use to meet the requirements contained in this rule." (Minnesota Laws 1995 Article 7 Section 1, (MS 121.11, Subd. 7c (a)).

The use of options in assessment includes the concept that a district may choose to use more than one instrument for a cohort group. For example, the first mathematics test given in eighth grade may be a nationally normed standardized test administered to all students. Those who fail to earn the designated passing score could be retested on a locally constructed test in grades nine and ten. Then, as graduation approaches, the district may choose to use the state test in grades eleven and twelve. The student has an opportunity to pass the standard on any one of the tests he/she will encounter.

Although the concept of a common standard throughout the state is widely recognized as advantageous, the imposition of a single state test on school districts has often resulted in poor cooperation among district staff and students with the state program. Three issues arise when districts are faced with a state testing program. First, it is likely that state tests, particularly those covering reading and mathematics, cover content that is already being tested by the standardized tests also used in most districts. Nearly every district of the state gives nationally-normed standardized tests that include major components assessing basic skills in reading and mathematics. These tests provide ongoing data regarding the achievement of students relative to national norms. Districts will be reluctant to give up these tests because they are regarded as valuable within the community to show how well students are doing, and they have a long tradition of use. Minnesota districts use different tests and administer them to different grade levels, so at the present time the results cannot be aggregated at the state level. Nevertheless, considerable assessment data regarding reading and mathematics is already being collected. It is reasonable that existing data could be used to fulfill the requirements of the state standards in reading and mathematics.

Secondly, there is little disagreement with the concept that all time spent by students taking tests is time taken from instruction. A drawback of statewide testing is the resulting increase in the amount of instructional time consumed by taking the tests. This problem is magnified for those students who must take the tests a number of times before they pass. The design of a state testing program should restrict testing time as much as possible.

A third issue in establishing a test standard is obtaining maximum ownership of district staff and students in the fair administration of the test and their concern for valid results. Teachers and students often regard tests imposed by the state as unwanted outside interference with the work of the classroom. The integrity of any state testing program

relies on full cooperation of district staff in keeping tests secure, following prescribed procedures during the testing process, using the scores fairly, and helping students succeed.

The design of a state testing program must seek to establish local ownership of the process of applying the standard. Ownership is established if participants in a program have a voice in determining the program. The proposed testing program allows district staff to evaluate options for testing and to administer the test which best meets the needs of each district. It is reasonable to assume that such participation will increase the likelihood that the program will be applied fairly and effectively.

In summary, the use of options in the system of assessment developed by the state maximizes the use of data already available within school districts, keeps the amount of time spent in test-taking to an absolute minimum, and maximizes the sense of ownership of the processes and results.

Multiple options are reasonable for districts because they allow each district to select a test option that assesses the statewide standards in the basic requirements in a way that most closely matches the curriculum of that district.

3501.0050 Subp. 1 (paragraph 2). **The district shall use one particular form of a test no more frequently than once in three school years for the same group of students.**

In order to be fair to all members of the test-taking population, multiple forms of the tests are needed to ensure that students who take the test several times do not benefit from remembering information about individual test items. "Multiple forms of a test are required in many testing situations...different forms are used in different administrations so that information about specific items on the test cannot be made available to test takers at a second administration, thereby possibly giving them an unfair advantage over the people who took that test on the first administration." (American Educational Research Association, American Psychological Association & National Council on Measurement in Education, 1985)

The proposed rule will restrict the use of exactly the same test more frequently than once in three years for any student. This restriction is reasonable because, according to psychological and psychometric literature, three years provides sufficient time for students to forget test items and reestablish the reliability of the test. This is reasonable for students because no student has the unfair advantage of taking the "same" test that was just taken and failed one year earlier.

At the same time, the provision allows a test form to be readministered after three years, minimizing the expense that must be incurred in developing or purchasing alternate forms of a test. This is reasonable for school districts.

Restrictions and guidelines governing when and how often tests are administered are needed to ensure no undue advantage for students in retaking tests of basic requirements.

3501.0050 Subp. 2. Offering tests in basic requirements. A district shall not offer the test of a basic requirement before grade 8 but shall offer it no later than grade 10. Once a test has first been offered to a group of students, the district shall continue to offer a test of that basic requirement to that group of students at least once a year.

The purpose of the basic requirements tests is to certify that students have sufficient basic skills in reading and mathematics to function in society as adults. The extensive assessment program needed to fulfill this purpose must be constructed to benefit students rather than harm them. Beginning testing in the eighth grade allows sufficient time for students to become aware of the level of difficulty of information required for graduation and to select the programs in high school that will help them develop the ability to pass the test. It is during the 9th and 10th grade that most schools provide curricula to address the skills included in the basic requirements. If students are not aware of the knowledge they will eventually need to graduate, they may neglect to apply maximum effort during their first two years of high school to attain that knowledge.

It is not desirable to place a high-stakes assessment program for adult competencies into schools earlier than eighth grade. It would not be desirable for elementary schools to certify students, thus possibly creating an elitist attitude among students who are able to pass the high school test in elementary school. There is no need to begin certification earlier than eighth grade.

Testing must begin early enough in the high school to allow ample time for remediation if the student does not pass. Beginning the testing process in the 10th grade permits three regular administrations of the state test plus the opportunity to have the additional test as a senior. It is reasonable for students to have at least four opportunities to pass the test when the diploma is at stake.

"Students who must demonstrate mastery of certain skills or knowledge before being promoted or granted a diploma should have multiple opportunities to demonstrate the skills." (AERA/APA/NCME, 1985)

This guideline establishes the absolute minimum number of opportunities a student will have to pass the basic requirements tests. Under this guideline, each student will have a minimum of three opportunities to pass the tests. Districts may provide more opportunities than the minimum. Multiple opportunities are necessary to ensure that students who enter high school without the essential basic skills in reading and mathematics will be identified, remediated and provided with an opportunity to pass the tests at a later time. The guideline which requires testing to begin at least by 10th grade is needed because students who do not possess the basic skills need to be identified early on in high school and provided with opportunities for remediation.

This guideline is reasonable for students because it allows students a sufficient number of opportunities to pass the tests. In addition, this guideline is reasonable for districts because it protects local districts from any undue burden incurred as the result of being forced to have multiple testing administrations every year, since each test administration takes up valuable classroom time as well as human and financial resources.

3501.0050 Subp. 3. Additional testing opportunities. A district shall establish a process for additional testing of students, who by April 1 of their anticipated graduation year have not passed one or more of the basic requirement tests. The process shall include:

A process for additional testing of seniors is needed to maximize the likelihood that students who possess the basic skills in reading and mathematics will be given adequate opportunities to demonstrate their skill level and graduate. The more opportunities a student has to pass the basic requirements tests, the smaller the chance of a decision being made on the basis of an inaccurate score.

In addition, a test administration after April 1 of the graduation year will allow the student to demonstrate skills that may have been acquired through remediation during the final year.

3501.0050 Subp. 3. A. how a parent student, or both can request:
(1) an additional opportunity to take basic requirement tests; and
(2) testing accommodations;

It is necessary and reasonable to provide a way for parents and/or students to request an additional testing opportunity and testing accommodations. Testing accommodations may be necessary to overcome the influence of test anxiety or misinterpretation of a particular test format. Such accommodations usually involve greater resources from the district, often requiring a one-to-one administration of the test. It is reasonable for the district to extend this opportunity to those who have difficulty with test instruments before denying a diploma to a student. It is also reasonable that this opportunity cannot be mandated earlier in the process unless students have been identified as having special needs which place them in special education or a 504 plan (in which case, accommodations are provided with every testing opportunity). This provision will limit the district's responsibility for accommodations to individuals presenting a valid reason through the appeal process and thus control costs.

3501.0050 Subp. 3. B. the procedure that a district shall use to act on a request in item A; and

Districts will allow seniors to take an additional test just before graduation, as requested by parents and/or students. The granting of testing accommodations is an individualized decision that must be made on a case-by-case basis. It is essential to have an established process for making such judgments. These processes must be open to input from students and/or parents. It must provide equitable consideration for requests from all students.

3501.0050 Subp. 3. C. how a parent, student, or both can appeal the district's action under item B.

In addition, the district must be accountable for its decisions. An appeal system is necessary and reasonable to allow parents and students a voice in the decision-making

process. To ensure due process, all students and parents must be informed of how to appeal decisions.

3501.0050 Subp. 3. (2nd paragraph). **In addition to the regularly scheduled annual availability of the state tests, the state tests shall also be made available by the department at a district's request for one additional retesting of seniors.**

This provision is necessary and reasonable because the state test is routinely made available only once a year. To provide an additional administration of the state test as an option to be given to students in their graduation year, the department must make the state test available twice for seniors who have not passed.

3501.0050 Subp. 4. Transfer students. A student transferring into a district shall not be required to take a test of a basic requirement if the student's former school record verifies that the student has already passed a test of that basic requirement consistent with this part. This subpart applies even if the student transfers into a district that has higher standards than the statewide standard in the basic requirement.

A provision which deals with students transferring into a district after passing the basic requirements is needed because of the high mobility of students. In some schools, more than one-third of the students enter as new to the district each year. A student who has already passed the basic requirements tests in Minnesota should not have to retake the tests in the event of a transfer to a new district. Since the mandate for basic requirement comes from the state, once a student has been notified that he/she has passed the state's requirement, it is reasonable that no other district should be allowed to reverse that notification. This practice is similar to the current practice by which districts accept credits from transfer students.

3501.0060 STATE TEST OPTION.

3501.0060 Subpart 1. District use of state test.

A. The department shall establish and maintain state tests in the basic requirements.

When testing options are allowed, it is necessary to have an anchor instrument to which other testing instruments are related. There is no existing commercially published test in either reading or mathematics that exemplifies the complete Minnesota standard. While several nationally normed commercially published tests will be useful as optional tests in assessing the standard, none of them can be the anchor test for all testing options. The tests developed by the department rather than tests created by district or commercially developed tests shall serve as the needed anchor.

It is reasonable that the department be in charge of the development of the state tests because no other entity would be able to focus its work on building a public consensus regarding the Minnesota standard in each basic requirement. The department has the capability of involving teachers, citizens, business representatives, and postsecondary representatives from the entire state. The department is also capable of employing

processes that meet professional requirements for test development, as required by Minnesota law. "Assessments used to measure knowledge required by all students for graduation must be developed according to the most current version of professional standards for educational testing." (MN Laws 1995, 121.11 Subd. 7c (b)).

Professional standards are not clearly delineated, per se, in any one source document. There are several documents that together set out guidelines currently recognized by most states and most testing companies as "professional standards." Among them are the following, which were used by the department:

- American Educational Research Association (AERA), American Psychological Association (APA), National Council on Measurement in Education (NCME). (1985). *Standards for Educational and Psychological Testing*. Washington, DC: American Psychological Association.

- Mehrens, William A. (1993). *Issues and Recommendations Regarding Implementation of High School Graduation Tests*. The Regional Policy Information Center of the North Central Regional Educational Laboratory, Oak Brook, IL.

The tests developed by the department meet professional standards as presented in the sources listed above. Professional standards are associated with three basic concepts: **validity, reliability, and freedom from bias.** The following is information that defines the concepts and describes the department's application of those concepts to test development.

Validity

Validity as an overall concept is the extent to which an assessment actually measures what it is supposed to measure or the degree to which a certain inference from a test is appropriate. The overall validity of a test is determined by its content validity and its construct validity.

Content validity is the alignment of all the decisions that determine what knowledge the test is to measure and the test itself. The state tests were developed by first determining the learning, including its scope and its difficulty, that the test would include. These decisions are reflected in the test specifications for each test.

Content validity decisions regarding the basic requirements included consideration of what is being taught and what needs to be learned by every student in order to function in our society. The philosophical underpinning of this process is that the state must begin the practice of accountability for individual students by requiring content that is close to what is being taught in schools today. The first stage of this process is to train the system to require demonstrations, keep records, improve the alignment of curriculum, and build methods of remediation. Then, when the system has developed the capacity to bring all individual students to this level, the content may be expanded in scope and/or increased in difficulty.

The content of the state tests was determined by using research information from national sources, knowledge most valued by employers in today's job market, the

preferences of educators, and the opinions of community members. The content of the tests is listed in the test specifications discussion section VII of this document.

Committees of teachers met to discuss the information found in the research, validate the presence of this information in current curriculum, and discuss the methods by which it could be reflected in the state test. The department has documentation of participation of the following groups in creating the mathematics test.

Initial Content Review Committee (9 members), March 29, 1994:
Purpose: Review test items and determine what content students have had the opportunity to learn.
Decisions: Specific test items were judged to represent competencies which students in Minnesota have had the opportunity to learn by the end of grade 8.

Statewide Specifications Review Group (30 members), May 26, 1994:
Purpose: To obtain statewide perspectives on student opportunity to learn content of the specifications.
Decisions: By group consensus, with no dissenters, the specifications were judged to represent competencies that students in Minnesota have had the opportunity to learn by grade 8.

Item Review Group (11 members), December 8, 1994:
Purpose: To examine the results of test items and further discuss the fairness of those items in regard to the opportunities offered in current curricula.
Decisions: Items identified by this group as inappropriate in relationship to the students' opportunity to learn were eliminated from the test.

The following group assisted in creating the reading test:

Reading Specifications Review Committee (10 members), January 19, 1995:
Purpose: To address issues of defining the content to be tested, opportunity to learn, how to select reading passages, and how to construct items.
Decisions: The committee agreed that the skills and knowledge needed to demonstrate reading comprehension of nonfiction material, such as articles from the newspaper, are presently being addressed in reading curricula.

The Degrees of Reading Power readability formula, a nationally recognized method of determining the difficulty of reading passages, was used to define the range of difficulty of reading material that would represent the standard. Reading passages from newspapers of the state were screened through this readability formula to select passages that were within this range of difficulty. Professional test writers assisted the department in selecting appropriate reading passages and constructing the test items.

The following nationally and professionally accredited sources were consulted when determining the domain of competencies to be measured by the basic requirements tests:

Mathematics

- *What Work Requires of Schools: A SCANS Report for America 2000.* (1991). The Secretary's Commission on Achieving Necessary Skills.

- *Workplace Basics: The Essential Skills Employers Want.* (1990). Carnevale, Gainer & Meltzer.
- *Transformation: What Minnesota Business Needs from Education,* A Report of the Academic Agenda Subcommittee, Minnesota Business Partnership, July 1993.
- *Preparation for Success,* Report from the Minnesota State University System Task Force on Preparation Standards, May 1991.
- *Curriculum and Evaluation Standards, (*1989) National Council of Teachers of Mathematics.
- *Mathematics Assessment Framework:* Grades 4, 8, and 12 Achievement Level Description. National Assessment of Educational Progress. Excerpt from source document. In Sources for Requirement for Mathematics Notebook II compiled by MDE, 1995.
- *Transforming Ideas for Teaching and Learning Mathematics,* Office of Research, U.S. Department of Education, Office of Educational Research and Improvement. Excerpt from source document. In Sources for Requirement for Mathematics Notebook II compiled by MDE, 1995.
- *Project 2061, Mathematics: A Panel Report,* American Association for the Advancement of Science.
- *Standards for competency,* St. Paul Public Schools. Excerpt from source document. In Sources for Requirement for Mathematics Notebook II compiled by MDE, 1995.
- *Preparing for University Study,* University of Minnesota. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

Reading

- *What Work Requires of Schools: A SCANS Report for America 2000.* (1991). The Secretary's Commission on Achieving Necessary Skills. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.
- *Workplace Basics: The Essential Skills Employers Want.* (1990). Carnevale, Gainer & Meltzer.
- *Incomplete Work of the Task Forces of the Standards Project for English Language Arts.* (1993) National Council of Teachers of English.
- Oregon Department of Education. (1993). *Certificate of Initial Mastery: Task Force Report.* Salem, OR: Oregon Department of Education. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.
- *Becoming Literate About Literacy.* (1994). Policy Information Center, Princeton, NJ: Educational Testing Service. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.
- *Analysis Report: Young Adult Literacy and Schooling.* (October 1988). National Center for Education Statistics, U.S. Department of Education, Office of Educational Research and Improvement. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.
- *A Five Year Plan for Addressing the Problem of Adult Functional Illiteracy in Minnesota.* (1987). Minnesota Adult Literacy Campaign. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *1992 Goals Report.* National Adult Literacy Survey. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Transformation: What Minnesota Business Needs from Education,* A Report of the Academic Agenda Subcommittee, Minnesota Business Partnership, July 1993. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Standards for English Language Arts.* Draft (1994). National Council of Teachers of English. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Standards for Reading and Language Arts.* (1994). International Reading Association. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Advance Curriculum Series "A".* (1993). Advance Educational Spectrums, Inc. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *WorkKeys.* (1992). American College Testing Program. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Reading Literacy in the United States: Technical Report of the U.S. component of the IEA Reading Literacy Study.* (1994). National Center for Educational Statistics, U.S. Department of Education, Office of Educational Research and Improvement. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Recommendations to Minnesota State Board of Education from Higher Education Coordinating Board (HECB).* Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Model Learner Outcomes for Language Arts Education.* (1988). St. Paul: Minnesota Department of Education, 1988. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Objectives of Competency Tests,* St. Paul School District #625. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Reading and Math Graduation Requirements for Brainerd Students,* Independent School District #181, Brainerd Public Schools. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *IEA Reading Literacy Study,* U.S. National Study data, National Center for Educational Statistics, 1991. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Reading Literacy in the United States* by International Association for the Evaluation of Educational Achievement. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *New Directions in Reading Instruction,* An International Reading Association Gertrude Whipple Professional Development Project, 1988. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *National Assessment of Educational Progress,* Grades 4, 8 & 12 Achievement Level Description. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- Degrees of Reading Power as Virginia's Passport to Literacy. (1989). *Reading in Virginia,* vol. XIV, Spring 1989, pages 6-13. Virginia State Reading Association. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Degrees of Reading Power & Degrees of Word Meaning: An Overview.* (1995). Touchstone Applied Science Associates, Inc. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- Degrees of Reading Power. (1985). *Readability Report,* 7th edition. New York: The College Board. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

During the process of developing the test specifications and corresponding test items, several opportunities were provided to allow discussion and suggestions from educators and the public. The sections of this document regarding the test specification contains detailed descriptions of these opportunities for input.

Forty-three public meetings held across the state of Minnesota between 1991 and 1995 to address concerns about the basic requirements proposal. Audience members submitted written comments, asked questions, and gave testimony regarding basic requirements testing and implementation. Results are summarized in the following reports:

"Comments, Concerns, and Communications," (December 2, 1991)
"Reports of Public Meetings," (December 17, 1992)
"Summary of Written Comments," (April 29, 1994)
"Summary of Testimony," (April 30, 1994)
"Summary of Questions," (April 30, 1994)

The department of education received letters from content organizations, including: the Minnesota Council of Teachers of Mathematics and the Minnesota Council of Teachers of English.

The second type of validity requirement in professional standards for writing tests is construct validity. Construct validity is a concept that describes the degree to which the test instrument actually measures the knowledge that it is supposed to measure. It is established through sound decisions about writing the instrument. Does its score specifically measure what it purports to measure? Do the parts of the test work together to measure a single domain, or is it likely that students will do well in some parts and poorly in others?

In the technical report entitled, *A Psychometric Evaluation of Field Test Results: The Minnesota Department of Education Basic Requirements Graduation Test in Mathematics (1995),* Mark L. Davison, John Bielinski, and NoHoon Kwak of the University of Minnesota Department of Educational Psychology, present evidence for a unified construct of the Minnesota Basic Requirements Math Assessment.

> ...many interstrand correlation coefficients are larger than the split-half reliabilities for a given strand. This result suggests that the strands are not really distinct. Students who perform well on one strand are likely to perform well on another. This lack of distinction was not surprising particularly when considering that 5 of

the 8 strands are said to measure concepts in "real life" contexts. Both examination of the strand content descriptions and the data [from this study] suggest that the strands overlap and that the distinctions between strands are very fine distinctions.

In the technical report entitled, *A Psychometric Evaluation of Field Test Results: The Minnesota Department of Education Basic Requirements Graduation Test in Reading (1995),* Mark L. Davison, John Bielinski, and NoHoon Kwak of the University of Minnesota Department of Educational Psychology, present evidence for the unified construct of the Minnesota Basic Requirements Reading Assessment.

> One indicator of whether a test measures a unitary skill is the ratio of the first to the second eigenvalue in a principal component analysis. A ratio of at least 3.0 is indicative of a test that is essentially unidimensional; that is, there is one skill which seems to dominate any other measured by the test... All the eigenvalues are much greater than 3.0, suggesting that each test is heavily dominated by a unitary skill... other method to determine the extent to which each passage is measuring a unique skill would be to examine the interrelationships among the passages... The moderate to high inter-passage correlations indicate that the passages are measuring very similar skills. That is, each passage is measuring a single skill... There seems to be a single, dominant skill of reading comprehension tapped by all passages and by Literal and Inferential items alike. As reflected in the corrected item total correlations, virtually all passages measure Reading Comprehension quite well...The factor analyses, intercorrelations of passages, and internal consistency reliabilities suggest that the items primarily measure general reading comprehension. There is little to suggest that different passages tap distinctly different skills. Nor is there evidence for sharply distinct Literal and Inferential Comprehension skills.

Substantial similarity of a test to other measures that are designed to measure the same content also support construct validity. A correlational study of the relationship between scores in the state mathematics test and the total mathematics scores in the Iowa Test of Basic Skill, Level 14, for 648 students showed a correlation of .74. This result can be interpreted to mean that the two measurements are producing similiar results.

The department used the following nationally recognized tests as a source of information for the construct of the state test.

Mathematics

- *The Academic Skills Assessment Program for Minnesota Community Colleges,* published by The College Board. Excerpt from source document. In Sources for Requirement for Mathematics. Notebook II compiled by MDE, 1995.
- *The NAEP 1992 Mathematics Assessment.* Excerpt from source document. In Sources for Requirement for Mathematics. Notebook II compiled by MDE, 1995.
- State of Ohio, Department of Education, *Mathematics Assessment.* Excerpt from source document. In Sources for Requirement for Mathematics. Notebook II compiled by MDE, 1995.

- *Personnel Tests for Industry, Mathematics Assessment,* published by The Psychological Corporation through Harcourt Brace Jovanovich, Inc. Excerpt from source document. In Sources for Requirement for Mathematics. Notebook II compiled by MDE, 1995.

- *Texas Assessment of Academic Skills, Mathematics Objectives and Measurement Specifications, 1990-1995.* Excerpt from source document. In Sources for Requirement for Mathematics. Notebook II compiled by MDE, 1995.

- *WorkKeys, Test of Applied Mathematics,* American College Testing, Inc. Excerpt from source document. In Sources for Requirement for Mathematics. Notebook II compiled by MDE, 1995.

Reading

- State of Florida. (1989). *Minimum Student Performance Standards of Florida Schools.* Tallahassee, FL: State of Florida Department of Education. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *WorkKeys.* (1992). American College Testing Program. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *Test of Adult Basic Education (TABE),* Testing and Assessment Department, Dawson Technical Institute. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *New Jersey High School Proficiency Test Skill Array: Reading*, New Jersey Department of Education, Division of General Academic Education, 1985. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

- *National Assessment of Educational Progress,* Grades 4, 8 & 12 Achievement Level Description. Excerpt from source document. In Sources for Requirement for Reading Notebook compiled by MDE, 1995.

Reliability

Reliability is another professional standard that is essential to accurate and fair assessment. Reliability refers to the degree to which test scores are free from errors of measurement.

Reliability describes the extent to which measurements can be depended on to provide consistent, unambiguous information. Measurements are reliable if they reflect "true" rather than chance aspects of the trait or ability measured. To the extent that chance or random conditions have been reduced, reliability will be high, and measurements will provide dependable knowledge. Chance factors include conditions within the examinee (fatigue, boredom, lack of motivation, carelessness), characteristics of the test (ambiguous items, trick questions, poorly worded directions), and conditions of scoring (carelessness, disregard or lack of clear standards for scoring, and counting and computational errors) (Sax, 1989).

The final criterion for a usable test is a calculation of reliability of the scores. An adequate test for high-stakes decision-making should have a reliability coefficient of at least .85.

The results from the pilot tests were analyzed and reliability calculations for the state tests of mathematics and reading were reported in the papers, *A Psychometric*

Evaluation of Field Test Results: The Minnesota Department of Education Basic Requirements Graduation Test in Reading (1995), and *A Psychometric Evaluation of Field Test Results: The Minnesota Department of Education Basic Requirements Graduation Test in Mathematics (1995).*

The following statement summarizes the analysis of the mathematics test scores:

Spearman-Brown split-half reliabilities were computed for each package...as a measure of internal consistency reliability. The split-half reliabilities for packages ranged from 0.89 for Package 1 to 0.90 for Packages 2 and 3. Taking the minimum acceptable reliability for pass/fail decisions to be 0.85, the total test scores meet this reliability standard (Davison et al., 1995).

The following statement summarizes the analysis of the reading test scores:

Spearman-Brown split-half coefficients were used to estimate internal consistency reliability...the internal consistency reliability for each package exceeds the target reliability of 0.85 set by the Minnesota Department of Education. Thus, it is reasonable to conclude that these total package scores meet reasonable reliability standards (Davison et al., 1995).

A technical advisory committee composed of specialists in educational assessment reviewed the reports and discussed other issues related to the administration of the test. The committee of seven members met in June 1994 and January 1995 to discuss technical issues related to high stakes test development. They also reviewed and approved the statistical reports on the pilot test.

Freedom from bias

A third major area of professional standards for writing tests is the development of a test that is free from bias and is sensitive to diversity issues. The content of the test must be inoffensive to all groups of students, and the results of the test must show that differences in performance are not due to biases embedded in the construction of the test.

A recognized method of handling issues related to bias is to convene a committee to review all of the content of the test in regard to known concerns regarding bias. Mehrens indicates that the item sensitivity reviews should be completed by a committee that is selected and trained specifically for this task. Most members should represent the state's predominant minority groups (Mehrens, 1993).

Bias and item sensitivity reviews involved representatives from predominant minority groups around the state and experts in bias review experts.

Mathematics

Bias Review Committee (12 members)

Purpose: To review original item pool for items which were offensive or were constructed in a way as to possibly reflect systematic bias against one or more ethnic groups.
Decision: Assessment staff would edit items to reflect discussion.

Math Review Group (4 members)
Purpose: To review items after they had been edited by assessment staff.
Decision: Edited items were approved.

Reading

Bias Review Committee #1 (8 members)
Purpose: To examine the reading test passages and items for sensitivity to issues likely to offend readers or cause disparate performance on the test.
Decision: A report was produced reflecting the discussion of the committee, and recommendations were considered in further development of the test.

Bias Review Committee #2 (9 members)
Purpose: To examine the reading test passages and items for bias using an item analysis of pilot test results showing the performance of each cultural and gender group. As a result of the work of the bias committees, reading passages were discarded and items were rewritten.
Decision: Some passages were eliminated from the test and some items from passages retained on the test were edited.

3501.0060 Subp. 1. B. When a district uses a state test, it shall:
(1) accept as final and conclusive the department's determination on the content of the test, the scoring of the answers, and the determination of the minimum passing score;

The content, the scoring, and the passing score are critical decision points in the testing process. This provision is reasonable because the state has conducted processes involving representatives from the entire state in order to make a fair decision in behalf of the entire state. Once the process has been conducted and formal decisions made, a district must accept the state's decision. It is important that a statewide decision be made in order to establish an anchor for the state standard. Therefore, the state test and its scoring processes cannot be adjusted for different districts.

3501.0060 Subp. 1. B.(1) (2nd sentence) **a district may use other test options on subsequent testing occasions;**

This provision is also reasonable because it allows for district flexibility in use of different assessment tools.

Since the tests are linked to the state test, a passing score on any test that has been validated for the population tested can be a satisfactory means of demonstrating the standard. Each option employed by a district, of course, must have been validated against the state test to determine the passing score.

3501.0060 Subp. 1. B.(2) administer the state test according to the standard conditions for administration that shall be provided to the district with each state test of basic requirements;

The directions for administration are unique to the test instrument. The test developer will provide instructions about the use of the test booklets, the answer sheets, and the process for recording the answers.

Because a variety of instruments may be used to test the basic requirements, it is reasonable to require that each instrument be administered according to the directions of the developer. Examples of administration issues include how the directions are given to students, how answers are to be placed on the answer sheet, or how the test may be paced. Each test developer created a plan that fits the instrument, and following the directions of the developer is necessary to maintain the integrity of the instrument.

3501.0060 Subp. 1. B.(3) return the administered state test to the state for scoring; and

This provision is reasonable because it decreases the likelihood of differences in test results based on variances in scoring methods.

3501.0060 Subp. 1. B.(4) adopt a passing score no lower than the passing score given in part 3501.0170 for that basic requirement test.

It is necessary to require all school districts to use the score set for the state test as passing because doing so ensures comparability across students in the level of competency that must be demonstrated to be eligible for a diploma. The passing score on the state test sets the minimum performance standard statewide. Stating that the district shall adopt a score "no lower than" the score given in part 3501.0170 of the proposed rules protects the discretion of a school district to set graduation requirements higher than the state minimum standard

3501.0060 Subp. 2. Specifications for state test of mathematics. The state test of mathematics shall assess the statewide standard in mathematics by including the topics described in items A to H:

A. problems involving whole numbers, fractions, decimals, and integers; for example, finding the change from a $20 bill after purchasing two items of known cost;

B. problems involving percents, rate, ratios, and proportions; for example, determining which size of a grocery item represents the best buy;

C. problems using concepts of number sense, place value, and number relationships to compare, order, and determine equivalence of whole numbers, fractions, decimals, percents, and integers; for example, determining which of two numbers is larger if one is in fraction form and one in decimal form;

D. problems using estimation; for example, estimating the approximate distance traveled when the elapsed time and average rate are known;

E. problems applying measurement concepts; for example, using a ruler to determine the length of the side of a figure;

F. problems in reading, interpreting, and using one-and two-dimensional graphic forms to analyze data, identify patterns, and make predictions; for example, using a table to determine in which month a show had the highest attendance;
G. problems using elementary concepts of probability and statistics; for example, finding the average of five bowling scores; and
H. problems applying geometric and spatial relationships; for example, finding the total number of boxes stacked in a display.

3501.0060 Subp. 2 A student shall be permitted to use a calculator on the state test of mathematics.

The test specifications for the state test in mathematics define in detail content of the statewide standard in mathematics. The test specifications were developed to include mathematical problems (A.-H.) derived from situations commonly encountered in adult life. These test specifications make explicit the decisions that were made in writing the mathematics test. Through those decisions the level of difficulty of the content is established and the content that students will need to know in order to pass the test is clarified.

The specifications require all test items to be problems derived from situations commonly encountered in adult life. The skills represented by these problems on the state test are ones that students need to master not only to hold a job, but also to function as family members who know how to manage a household budget, determine loan payments and interest, pay bills, and balance a check book.

The test specifications for the state test which define the problem areas for mathematics match those that employers are demanding of their workers (Minnesota Business Partnership, 1993; Carnevale et al., 1990).

On the job, the mathematical skills that are needed include: quantification, computation, measurement and estimation, problem-solving, comprehension, equivalents, organization of data, algebra and geometry (Carnevale et al., Collier, 1990).

The problems (A.-H.) in the specifications for the statewide test are reasonable because they are representative of "basic" knowledge. Quantitative literacy, according to the Literacy Council, is considered one of three components of adult literacy. Those who cannot effectively interpret quantitative data are functionally illiterate (Palmer, 1993). Slightly less than half of U.S. adults (47%) function at or below Level 2 (at which one should be able to calculate total costs of a purchase from an order form). According to the MDE mathematics education specialist, the test items used in the state test of basic requirements are written substantially at Levels 1 (able to total a bank deposit entry) and 2 (U.S. Department of Education, 1993.)

The specifications and test item development were reasonable because the process followed was closely modeled after what national organizations and other states have done in the past to set graduation requirements and assessment procedures. The process was also reasonable because it allowed for input from all aspects of the Minnesota

public -- the business community, the public including parents and non-parents, mathematics experts, teachers etc.

A MDE specialist in mathematics assessment headed the process and consulted many others in the profession in developing the test specifications. Test specification and item development were the result of extensive research, using materials from three Minnesota school districts, four other states, state and national tests, and standards from academia and industry. An Educational Research Information Center (ERIC) search was conducted through which 109 abstracts covering work in eight states and two multistate initiatives were consulted.

The processes for the development of the specifications for assessment tests and basic requirement standards for other states were studied. The work of the following states in writing specifications and sample tests were used in the development of the Minnesota test specifications in mathematics: Arizona, Florida, Illinois, Ohio, and Texas.

National Standards were used to develop standards for the state. The National Council of Teachers of Mathematics (NCTM) standards have influenced many other standard-setting projects and were consulted and considered heavily during the development of specifications for the Minnesota test. Other national projects used include: NAEP process of test development and specifications, sample problems and specifications from the Teacher's Manual for the Official GED Practice Tests, SCANS competency specifications, WorkKeys Applied Mathematics Test Description by ACT, competency areas for mathematics as set by *Project 2061, Mathematics: A Panel Report*, American Association for the Advancement of Science, 1993.

The Curriculum and Evaluation Standards of the National Council of Teachers of Mathematics (NCTM), mathematics benchmarks from Great Britain, and the specifications and tests from 15 states, especially California and Kansas, were primary documents used by the Content Outcome Team, a group of three Minnesota mathematics experts, who in 1992 developed a Mathematics Framework. The Content Outcome Team developed outcomes using these documents and shared them with teachers from around the state and the Board of the Minnesota Council of Teachers of Mathematics, using their input to make revisions. The Framework that was developed was used in determining the specifications for the Minnesota test.

Those examining the national and state information included a significant number of teachers and mathematics specialists. They worked collaboratively in order to produce a fair and reasonable test which will accurately test the statewide basic requirements. In addition, all questions were examined extensively by subject matter and measurement specialists to ensure that no question contained any bias or lack of sensitivity to particular groups. National tests and standards were reviewed in a similar manner utilizing the knowledge of teachers, scholars, policy makers, measurement specialists, and school administrators, and so forth.

The first draft of the specifications was written by an MDE mathematics standard specialist using the products of the research and the mathematics framework. Once the specifications were drafted, statewide perspective and response were sought and frequent revisions were made in the draft as a result of the feedback. The mathematics

specialist traveled around the state meeting with district math departments in pilot and non-pilot schools, as well as content organizations and community groups. Each suggested revision in the standard was sent to the MDE mathematics content specialist and the MDE assessment specialist.
The process used to develop the test specifications for the state test in Mathematics followed this sequence.

January 1994 - May 1994:
Mathematics Standard Specialist traveled to both pilot sites and non-pilot sites to gain input from teachers.

March 29, 1994:
Content Review Group of nine members including MDE specialists, teachers and one member from a postsecondary institution met with the purpose of reviewing drafts of specifications for opportunity to learn at the strand level. The group made recommendations for changes in content within the strands. The President of the MCTM (Minnesota Council of Teachers of Mathematics) as well as other very active MCTM teachers were members of this group.

May 26, 1994:
Statewide Specifications Review Group met with the intent of determining if students have the opportunity to learn the content of the standards (A-H) included in the test. This group was put together by the MDE mathematics content specialist and the MDE assessment specialist. Modifications were made to the specifications. Of 53 people from around the state who were invited, approximately 30 attended. The teachers from various locations across the state, from different grade levels, and from different backgrounds used a process of consensus in discussing the specifications.

July 1994 and August 1994:
An Item Generation Team of three teachers and three MDE staff wrote and revised test items utilizing revised specifications as determined by previous groups. The item writers were trained by assessment staff before beginning their work.

September 1994:
The Mathematics Review Group met to review item editing. The group was conducted by three MDE staff members. The group also used the observations of the Bias Review Committee and also determined appropriate procedures in finalizing item pilot tryout design. The resulting work is entitled "Item Development Framework."

September 1994:
The Bias Review Committee met to review the original item pool to flag items that were offensive or were constructed in such a way as to possibly reflect systemic bias against one or more ethnic groups. The committee, made up of twelve members, modified items and brought more overall balance to the item development process.

October 1994:
Item Editing and Revision Group met to review and further edit and refine the existing item pool relative to the principles of the item development framework that was generated by the Math Review Group in September. Two hundred forty items were deemed worthy of piloting. The group consisted of six teachers and three MDE staff.

December 1994:
Teacher Item Level Opportunity to Learn Group consisted of 17 teachers of grades 5-8 who were recommended by MEEP staff within congressional districts. The purpose of the group was to determine student opportunity to learn content measured by the items. Items were eliminated through this process.

In addition to information from national projects and work from other states, test specifications and test item development processes and ideas were taken from tests used by school districts in Minnesota. The following tests and specifications were used in the process:

- Anoka-Hennepin Independent School District #11, *Assurance of Basic Learning, Mathematics* (Note that there is already a graduation requirement in this school district and this was the test used to measure competency for that requirement in mathematics).
- Minnesota Educational Assessment Program, *Basic Mathematics*, 1980.
- Mathematics, *District 196 Achievement Tests, Middle School, Levels 12 and 19*, 1993.
- Minnesota Educational Assessment Program, *Essential Learner Outcome Test, Grade 8*, March 1993.
- Minnesota Educational Assessment Program, *Essential Learner Outcome Test, Grade 11*, March 1993.
- Minnesota Community Colleges: *Academic Skills Assessment Program.*
- Test used by Minnesota business in hiring employees (*Personnel Tests for Industry*: *Numerical Test A*, Jerome E. Dopplelt -- used by a company in Fridley).
- Areas noted as required for employees to be able to do were outlined in *Transformation: What Businesses Need From Education,* Minnesota Business Partnership, Updated July 1993.
- *Math Learner Competencies For Success in a Minnesota State University*, The Minnesota State Universities, May 1993 -- outlines what skills high school graduates need for use at the university level.

The specifications were reviewed after the item try-outs and again after the pilot test was given to be certain that the actual experience demonstrated by the results of piloting was aligned with the statements of expectations contained in the specifications.

3501.0060 Subp. 3. Specifications for state test of reading. The state test shall assess the statewide standard in reading. The test shall be written according to items A to D.

The state test of reading assesses comprehension of the type of material a student is expected to be able to read and comprehend after graduating from high school. The test specifications for the state test of reading describe the domain of the content to be tested and decisions regarding the construction of test items.

The specifications for the state test of reading are reasonable because they were developed in a documented process which involved extensive research, national and local experts, and primary stakeholders.

The specifications for the state test of reading are consistent with national criteria for literacy testing. The NAEP and NALS literacy testing guidelines, the IEA Reading Literacy Study, and the GED testing guidelines were referenced in developing the reading test specifications.

The reading test specifications are consistent with the reading tests of other states. The following states' reading tests served as sources in the development of the test specifications: Virginia, Oregon, Florida, and New Jersey. In addition, draft recommendations by the Higher Education Coordinating Board (HECB) to the State Board of Education were consulted in the development of the test specifications.

The development of the reading specifications also included continuous involvement and advice from educators in both formal and informal settings. The first draft of the specifications was written following the review of current research and practice in the field of reading assessment. The draft was read and discussed during the drafting process by individual reading specialists and teachers. It was presented to the Pilot Site Directors on October 18, 1994, with a request to solicit feedback from teachers in their district.

On December 13, participants in an assessment training workshop gathered from throughout greater Minnesota and offered suggestions and input on the reading test specifications. On December 19, the reading test specifications were presented to elementary school administrators in the Rosemount/Apple Valley/Eagan school district, and they were encouraged to get feedback from their staffs.

In January, 1995 a Reading Specifications Committee composed of reading experts was formed to conduct a formal rigorous review of the state test specifications. The Committee was made up of secondary reading specialists from six Minnesota school districts. These specialists represented rural schools, out-state districts from the north and the south, large suburban districts, and urban schools. The members of the Committee were experienced in reading program development, assessment, and teaching reading in the secondary classroom. The Committee members were also members of the Regional Reading "Best Practice" Teams for the state of Minnesota. The members include six secondary reading teachers, a statewide reading specialist, MDE standards specialist, and an MDE psychometrician. The specifics and drafted items modified based upon their recommendations in a subsequent meeting with MDE and NCS.

The test items for the reading test were written cooperatively by language arts teachers and reading experts. In November, 1994, psychometricians from National Computer Service (NCS) and representatives from Richfield Schools selected passages and drafted test items.

The test items of the state test have been rigorously examined to assess their validity. Expert review by members of Hill-Katien and Assoc. and the Reading Specifications

Review Committee addressed the issues of number of questions per passage, contextual meanings, prior knowledge, bias, interest, and readability.

A preliminary item try-out was conducted on 273 eighth and eleventh graders from South St. Paul High School. The students' response to the test was collected in surveys and the input was submitted to NCS to modify the test and create item distractors.

A preliminary pilot test was conducted of the reading test in the Richfield Pilot Site. A psychometric report on test reliability based upon this pilot test was produced and reviewed.

MDE staff members and a consultant from NCS reviewed and shaped the reading test passages and items. This review determined the construction of the field test, consisting of four packages with four passages each and approximately ten items per passage.

In April, 1995, a statewide field test was administered to a random sample of 11,000 10th and 11th graders representing various types and sizes of districts and various ethnic populations of the state. The results of this field test were reviewed by psychometricians in the University of Minnesota's Department of Educational Psychology. They concluded that the reading test met the target reliability of .85 (Davison et al., 1995).

The test has been examined for bias. Two bias reviews were conducted. The first took place on April 12, 1995 and consisted of a content/item analysis for possible bias in areas of race, gender, national origin, physical attributes, and other areas that could affect student performance. The review committee consisted of a group of teachers from rural, urban, and suburban districts around the state. The committee brought with them diverse ethnic and gender perspectives, representing African American, Hispanic, Native American, Asian American, and Western European viewpoints. The purpose of this committee was to identify areas of sensitivity in the test passages which may adversely affect student performance.

A second bias review of the test took place in June, 1995. A committee examined an item analysis of the responses of various ethnic groups and of each gender. Passages and items that showed statistical bias were reviewed, and some were dropped from the test. The committee consisted of African American, Asian, Hispanic, and Native American members, as well as a multi-cultural specialist.

The specifications were reviewed after the results from the pilot test were available to be certain that the actual experience demonstrated by the results of the piloting aligned with the specifications.

3501.0060 Subp. 3. A. Test questions shall test reading comprehension as an integrated skill, with no testing of subskills or strategies.

The goal of the reading test is to assess how well the student comprehends an overall text rather than specific strategies or skills within the text. Therefore the reading test assesses reading comprehension as an integrated skill, with no testing of strategies or subskills. It is reasonable to assess reading comprehension as an integrated skill because assessing specific skills such as vocabulary or word attack may not determine whether

the student can comprehend the overall text. The test is based upon standard models of accredited reading comprehension tests, as stated earlier.

3501.0060 Subp. 3. B. The test shall be composed of passages of English nonfiction prose that are either narrative or expository.

Since the purpose of the test is to assess the reading comprehension skills that most adults use on a regular basis to gather information, the types of passages have been designated as expository and narrative. The majority of the passages are expository, which include informational text, some of which may also be intended to persuade the reader. Some passages are narrative and include stories that are examples of ideas. It is reasonable to restrict the domain of reading comprehension to these types of passages because they represent the means by which most information is conveyed in the world of work.

The material contained on the test is consistent with NAEP and NALS guidelines and definitions. The following additional sources were used in developing the domain of the statewide test in reading: draft recommendations by the HECB to the State Board of Education, IEA Reading Literacy Study, present reading outcomes of Minnesota school districts, GED testing guidelines, and state assessments from Virginia, Oregon, New Jersey, and Florida.

3501.0060 Subp. 3. C. Passages shall be selected from published readings commonly used by adults as sources of information.

The passages are taken from newspaper articles and magazines articles published in Minnesota that are representative of the types of information an adult must be able to read to function in society. It is reasonable to select passages from published readings commonly used by adults as sources of information because the purpose of the test is to assess practical, real-world reading skills. In order to function as an informed adult, high school graduates must demonstrate comprehension of commonly circulated adult reading material.

3501.0060 Subp. 3. D. Passages shall have a level of difficulty measured by the Degrees of Reading Power Index of Readability. The total test shall have an average difficulty of at least 64 DRP units.

The difficulty of the passages on the state test is measured by the Degrees of Reading Power Index of Readability (DRP), (Touchstone Applied Science Associate, Inc., 1986). A readability analysis according to a research-based formula is the accepted means of determining how difficult a passage is to read. Such formulas consider length of sentences and length of words as indicators of difficulty. The DRP index can be used to determine the difficulty of a given text and select material appropriate for assessing basic reading skills at an adult level (Koslin, Koslin & Zeno, 1989). The DRP index was chosen for this test because it is a nationally recognized formula.

The use of the DRP index is consistent with the practice of other states. In Virginia, tests based on this readability analysis are administered as part of the Literacy Passport Testing Program. The Concept Teacher Certification Test in Connecticut uses DRP

criteria, and DRP tests are administered as part of the Connecticut Mastery Testing program in elementary and middle school. In New York, tests related to the DRP are part of the Regent's Competency Testing Program which students must pass to receive a high school diploma (Touchstone Applied Science Association, Inc., 1995).

DRP tests are already being used in some Minnesota school districts, including Anoka-Hennepin, Brainerd, and Richfield.

The range of the DRP scale is from 0 to 99, with 99 representing the most difficult reading material analyzed by the developers of the formula. The developers actually analyzed hundreds of textbooks, literary selections, materials from the media and technical literature to determine the difficulty of various sorts of reading material. They list the difficulty of adult reading commonly found in informational material of wide circulation as ranging from 35 to 85. For example, adult general interest magazines have a difficulty rating between 62 and 71 DRP units, and texts on business related topics such as accounting, business principles, and human relations most commonly fall within a range of 62 to 68.(Koslin, Koslin & Zeno, 1989). See Appendix A.

The range of 64 to 67 was selected for the development of the specifications for this test because it corresponds to reading material addressing general information, consumer information, and information needed for daily living according to the DRP manual.

The average difficulty level of 64 DRP units is reasonable and consistent with the practice of other states. A DRP score of 71 must be obtained in order to pass the reading subtest for teacher certification in the state of Connecticut (Connecticut Board of Education, 1987). See Appendix B.

3501.0070 NATIONALLY NORMED, COMMERCIALLY PUBLISHED TEST OPTION.

A. A district may choose a test from the nationally normed, commercially published tests that have been reviewed and approved by the department according to the criteria in item D. The department shall publish the list of approved tests annually by August 1.

Many districts currently administer nationally normed, commercially published tests.

They have been using the comparison between local and national scores as a means of knowing whether or not they are improving. Since this use of data is well-established in Minnesota, it is desirable to continue its use, at least for a time. Changing performance can best be detected when it is being monitored by a long-term sequence of similar tests.

All of these tests use the domains of basic skills in reading comprehension and problem-solving in mathematics as the bulk of the content to be tested. It is reasonable to assert that a student can prove the abilities required through adequate performance of one of these tests. It is also reasonable that schools can identify students who are having difficulty with basic skills through the use of these tests. Chapter I identification has historically been based on such test scores, and the new version of the program called

Title I also allows the use of such instruments for both individual identification and program assessment.

If norm-referenced testing is to continue independent of tests connected with the Minnesota basic requirement, the schools face doubling the time spent by students taking tests that cover the same domain and that are likely to produce similar information. The scoring of both tests is also a drain on resources which seems unnecessary and unreasonable.

A problem with designating any one of the nationally normed tests as the official test for the Minnesota basic requirements is that districts have had the freedom to select the test they wish to use, and a number of different tests are in use in Minnesota schools. To force schools to change their test would interrupt the data base for a large number of schools. Since it is desirable to continue the effective use of many different nationally normed tests, it is reasonable to devise a way to enable districts to continue using a number of such tests to fulfill the basic requirements.

Because latitude in selecting the test is to be allowed, it is necessary for the state to set the parameters within which tests can be selected. The state has established a list of tests using the criteria indicated in Subp. D. The list will be established by having a group of people qualified in the area of assessment review each form of each test for each grade level in light of the criteria. The result of this process is to determine that the published test being examined and the state test cover similar objectives. This review process will be conducted once each year so that newly published tests, or tests that have been newly selected by districts, will be examined and added to the list if they meet the criteria. The state will publish the current list of approved tests annually by August 1. The announcement of this date will assist schools and test publishers in knowing when new decisions can be expected.

3501.0070 B. A district shall set the passing score on the selected nationally normed, commercially published test to be comparable to the state set passing score on the state test in the same basic requirement as follows:

The passing score on the nationally normed test must be set by each district through a process of linking the test to the state test. It is necessary to establish a uniform process that can be used by the districts to determine the passing score on an approved test. The process is necessarily a district process and the passing score must pertain only to the students in the district. While it would be more convenient to publish a statewide passing score, the determination of that score is problematic. A statewide score can be derived only if a representative sample of the entire state population is tested. It is simply not possible to set up such samples among districts who happen to have selected a particular test. It is also true that some of the elements of that representative sample occur only in the urban districts. Those districts cannot be expected to conduct testing in each of the many tests included on the state list. Rather than risk a poorly structured statewide passing score, it is more reasonable to ask each district to determine the score for its own population through an established process. This ensures that the comparative passing score is correctly set and used only with the population involved in setting it.

3501.0070 B. (1) the first time the commercially published test is given to students, the state test in the same basic requirement shall also be given within the same school year to the same students;

Because the similarity of the content has already been established by the state's process of approving the published test, the parallel administration of the two tests will provide data that can be used to establish similar standards of performance. The performance standard, or the passing score, on the state test is common to all districts because it is set by the state through a standard-setting process. The passing score on the published test can be found by determining a score that represents comparable ability. To do this, it is necessary to generate a set of data that can be statistically compared. Having the same students take both tests within a reasonable amount of time, which has been determined to be within the school year, will provide the needed data.

3501.0070 B. (2) the state test shall be scored by the state;

This provision ensures that no variability can occur in the accuracy of the score on the state test due to differences in the scoring process. The state test must be scored by state processes throughout all provisions of this rule.

3501.0070 B. (3) the statistical correlation of scores of students in that district who have taken both tests shall be no less than .70;

This provision is reasonable because it requires that the national test must exhibit significant similarity in its score distribution to the state test in order to maximize comparability.

A perfect correlation, which is 1.00, may be best explained through an example. Place the students in rank order based on their scores on the state test. Then reorder the same students based on their scores on the published test. If the correlation is 1.00, there would be absolutely no change in the order of the students. However, a perfect correlation rarely occurs, even when exactly the same test is given to the same students a second time. Variables include the difference in students from day to day as well as the difference in the situation in which the test is given. In the testing industry, a reasonable correlation to establish similarity between tests is .70 (National Computer System, 1995).

The department will provide a computer program to districts that calculates the correlation and will assist districts with the calculation if requested.

3501.0070 B. (4) the passing score of the commercially published test shall be set at the point at which the percent of the students who pass the commercially published test is the same as or less than the percent of students who have passed the state test;

This provision is reasonable because it establishes that achievement of the statewide standard in a basic requirement on a nationally-normed test will be of comparable difficulty to achievement of the same standard on the state test.

Given the establishment of two tests with similar content and two sets of scores with a high correlation, it is reasonable to assume that the same percentage of students who

pass one test would probably possess the skills to pass the second test. Therefore, the district is asked to calculate the percentage of students that would pass the second test and set the passing score by finding the score point above which the same percentage of students (or less) has passed.

The department will provide a computer program to districts that calculates the passing score of the second test. Districts may request assistance from the department in computing the passing score.

3501.0070 B. (5) if the state or the commercially published test changes, a district shall repeat the steps in subitems (1) to (4) the next time the commercially published test is administered to a new group of students; and

This provision is reasonable because a change in the content of either test will necessitate resetting the passing score of the national test by redoing the process indicated in 1-4. If a publisher issues a new set of norms for the same test, the translation of scores provided by the publisher may provide sufficient data to reset the passing score without repeating the process of administering both tests.

3501.0070 B. (6) at a district's request, the department shall assist a district with less than 200 scores at a grade level with the statistical analysis required in subitem (3) by combining those scores with similar sets of scores from other districts to create a large enough number of scores to analyze.

This provision is reasonable because it creates a way that the state can assist small districts that have so few students they may find it extremely difficult to reach the required 0.70 statistical correlation. With a particular group of students the state can combine similar sets of scores from districts of similar make-up using the same tests to create a data set with enough scores for accurate statistical analysis.

3501.0070 C. A district may choose to recognize as passing a score at or above the 75th percentile on any of the nationally normed, commercially published tests on the state-approved list.

A score at or above the 75th national percentile on any of the approved commercially published tests is assumed to be significantly higher than the score that would be established for that test if the validation process were to be followed. Validation data is available for a sample of 648 eighth grade students on the Iowa Test of Basic Skills (ITBS). The passing score on the ITBS that was comparable to 70% correct on the state test is the 48th national percentile. Since all of the tests on the approved list have passed rigorous screening for technical adequacy in their norming, it is reasonable to assume that the 75th national percentile on those tests will represent a level of performance that can safely be recognized as sufficient for a basic requirement.

This provision is reasonable because it expedites the handling of transfer students from outside Minnesota who enter a school with test records that demonstrate achievement well above the basic requirement. If the student has scored very high on a different test from the test used in the district, the score can be recognized as passing. If the

transferred score is below the 75th percentile, the student must be tested at the next testing opportunity in the receiving district.

3501.0070 D. The following criteria shall be used by the state to review and approve nationally normed, commercially published tests in mathematics or reading:

The initial step in validating a published test for use in meeting the basic requirements must be done by the state. A list of approved tests will be provided to districts based on a review of the tests using predetermined criteria as a means of evaluating them. Criteria are needed to ensure that the process of placing tests on the approved list is impartial and disciplined. The criteria were developed by assessment professionals from MDE and National Computer Systems (NCS).

3501.0070 D. (1) 75 percent of the specifications for the state test in mathematics under part 3501.0060, subpart 2, are met by the commercially published mathematics test or 75 percent of the test items on the commercially published reading test meet the specifications for the state test in reading under part 3501.0060, subpart 3, items A and B:

The content listed by the publisher as tested in the published test would be compared with the content listed in the specifications for the state test. To be approved, it is reasonable to expect that at least 75% of the content in the state test specifications is clearly and specifically listed in the content of the published test.

No two tests are written from exactly the same point of view. A published test on reading comprehension may include strategies or items about details, which are not included in the state objectives. These tests are often written to cover a broad range of curriculum represented by most textbooks and most reading programs nationally. The Minnesota test focuses on a narrower band of content. Its objectives may be more detailed concerning that narrow band. In other words, the list of objectives may not be a parallel list. It is reasonable to expect that a clearly evident match can be made to at least 75% of the objectives for the state test. The publisher's objectives will be accepted as satisfactory evidence of the content of the test.

D. (2) the publisher's stated intention for the instrument conforms with the district's use of the instrument;

The district's primary use of the test instrument, in the case of the basic requirements, is to screen students who have accomplished the standard from those who have not. It is necessary to establish that the published test was written to be used as a screening instrument, and that its structure supports this use. An example of a test not built for screening would be a test that diagnoses individual reading strategies. Each part of the test may be directed to a particular strategy. The total score may not reflect overall comprehension because the parts are not balanced properly to reflect a general ability. The publisher's statement of the intent of the test and the use of processes to validate the instrument as a screening device will be sufficient to satisfy this criterion.

D. (3) there is published evidence of instrument reliability of at least .80 or higher;

An industry standard for reliability ratings of published tests used for individual decisions is at least .80 (NCS, 1995). The state tests have exceeded .85. High reliability ratings ensure that the test is free from error in measurement. The technical material provided by the publisher will contain the reliability statistics for a published test.

D. (4) there is published evidence for the commercially published test of instrument validity that cites research and development processes that support or contribute to construct validity;

A reputable published test has been constructed through a process of research and development to make sure that the content of the test is appropriately measured. The technical material supplied by the publisher lists the steps of the process, the experts involved, and the sources consulted in determining how the test should be constructed.

D. (5) there is published evidence of norming data and procedures to show that the norming population was appropriate for the type of students taking the test; and

This criterion is of particular importance in any test selection process. The norms of the test determine how many items must be correct to attain a particular percentile score. Since a percentile score refers to the student's rank within the group of students tested, the test scores actually represent only that population. Most test publishers work hard to build their norms on a representative sample of the national population. However, sometimes budgets or difficulty in getting schools to cooperate with the norming process causes that sample to be skewed. Sometimes the intended use of the test causes the publisher to intentionally use a skewed sample. For example, some tests have been normed using students attending elite private schools because the test is marketed primarily among those private schools. The publisher's technical material contains a description of the norming groups, and this description will constitute evidence of this criterion.

D. (6) there is a current technical report or manual on development of the testing instrument, the uses of the instrument and analyses of instrument data.

The major thrust of this criterion is the appropriate linkage of a test's technical information with a reasonable length of time for the development of the instrument. While no exact amount of time can be specified, it is reasonable to expect that the test being approved is the most recent edition of the publisher's test and that it is supported by technical information actually generated in the development of this newest edition. Evidence of this criteria would be that the technical material supporting a new test shows that all processes of development were conducted within a few years prior to the publication of the current edition of the test.

3501.0080 LOCAL TEST OPTION

Subpart. 1. Adoption of local test. A district may adopt its own test for the statewide standards in the basic requirements providing that the conditions in subpart 2 are met.

The option to create a local test for the basic requirements complies with the law stating that MDE may not prescribe one assessment tool that local districts must use, nor may MDE prescribe a single curriculum.

There are two main reasons why this option is a reasonable way of fulfilling this mandate. The first reason is that if a district has fully exercised its right to adopt a unique curriculum, the construct of the state test may not be appropriate for those students. For example, if the district has not permitted students to use calculators in mathematics throughout all instruction, the required use of calculators on the state test may confuse students who have never used them. A second example might occur if a district adopts a mathematics textbook series in which mathematical symbols are different from those used on the state test. It would be appropriate to construct a test that uses the symbols in the same manner in which the students have been instructed. A third example would be the need to tailor the content of the situations used in a mathematics problem to an environment familiar to students. Students from rural southern Minnesota may be able to envision the situation presented in a problem about raising soybeans, while a student from northern Minnesota would relate more readily to problems about stocking the lakes with fish. An inner city student can solve problems about city bus routes, while a rural student may better understand the routing of the school bus or the mail carrier.

A second reason for this option is the desirability of increasing the ownership of the results of the test among the local staff and community. State tests are sometimes perceived as an outside intrusion on the curriculum, and the results of state tests are sometimes disregarded by the staff because the test is not to their liking. This option allows the local staff to engage in the process of writing a test, and involvement in the process usually increases the interest in the results and the commitment to make changes to improve the results. In a time in which rapid change is required of schools to protect the interests of all students, a proven method of increasing ownership of test results can be important in accelerating this change.

The adoption of a local test should be an action of the local school board. The district is responsible for checking to see that the test submitted for adoption has been developed according to the processes following this section of the rule. It is extremely important that the test be formally reviewed for adoption by a group representing the entire district, and that the decisions regarding a test not be left entirely to the department responsible for teaching the content. This provision also makes clear the expectation that there be a single, official test used for all students in the district. The various tests of individual classroom teachers cannot be used as a "local option".

3501.0080 Subp. 2. Local test. The local test must measure the standards for mathematics and reading as specified in part 3501.0040, subparts 2 and 3, respectively.

This provision is needed to ensure that local tests measure the same standards as the state tests, thereby maximizing comparability between the two tests.

The first method of establishing comparability is to be sure that the content of each local test is similar to that of the state test. Specifications for the state test describe each component of the test in detail, including the difficulty of the material to be handled and the type of questions that may be written. It is reasonable to expect local test writers to use the same specifications in writing the local test, so that the state specifications become a blueprint for the local test. If the specifications are followed carefully, the content of the two tests will be similar, and the two tests are likely to test the same domain of knowledge.

3501.0080 Subp. 2 A. The test must be written according to state test specifications for the content and level of difficulty of the test items in mathematics and reading specified in part 3501.0060, subparts 2 and 3, respectively.

(1) The state test specifications for local tests of mathematics shall include those specified in part 3501.0060, subpart 2, and the following:

(a) the total test shall contain at least 40 items;

A test must be long enough to provide a sufficient number of items for the test-taker to demonstrate understanding of the eight concepts listed in the state specifications in 3501.0060 Subp. 2 (A.-H.). According to the Department of Educational Psychology at the University of Minnesota, forty questions are necessary to meet a target reliability of 0.85. If the number of questions were to drop below forty, statistical reliability for the test would be difficult to establish (Davison et al., 1995).

3501.0080 Subp. 2 (1)(b) test items shall represent applications to realistic situations;

The statewide standard in mathematics requires that a student demonstrate the ability to solve mathematical problems derived from situations commonly encountered in adult life. Among common situations is the estimation of distance traveled when the elapsed time and average rate are known. Mathematics is a part of everyday work and life (Dossey et al., 1988) and therefore it is reasonable to require that high school graduates are able to perform the types of operations they will need to perform in their adult life.

3501.0080 Subp. 2 (1)(c) tests may be multiple choice or may require students to supply answers;

This is reasonable because it allows local districts options when designing or choosing the test they will use to measure the basic requirement in mathematics. Both are effective methods of assessing student achievement.

A main reason for the use of multiple choice items on a state test is efficiency and accuracy in scoring a large number of tests. However, if teachers in a local district are willing to score items in which the students write down the answers without seeing choices, the validity of the test is likely to increase. It is desirable to allow districts increased latitude in this aspect of test design.

3501.0080 Subp. 2 (1)(d) incorrect options on multiple choice items shall reflect plausible errors in concept or procedures, represented by the problem; and

This provision for the writing of a local test ensures that the writers of the test exhibit considerable skill in test-writing. A mark of a poorly written multiple choice test is the

lack of quality of the incorrect answer options. A student may be able to figure out the right answer just because all the other answers are so obviously wrong that nobody could plausibly come up with them using any standard operation. Using options that represent plausible but wrong decisions about how to solve the problem increases the validity of the test. When local tests are audited by the state it is reasonable that they should be critiqued on the basis of the quality of the options.

3501.0080 Subp. 2 (1)(e) the use of a calculator by the student may be permitted.

While the specifications for the state test require the use of calculators, the district has the option in constructing a local test to permit or disallow their use. In this regard testing procedures must fit instructional practice. While calculators are widely used in teaching mathematics, some districts have not yet introduced students to their use. Exercising the local option for testing provides a way for districts to maintain their local autonomy in curricular decisions and to align testing procedures to their decisions regarding instruction.

3501.0080 Subp. 2 A.(2) The state test specifications for local tests of reading include those specified in part 3501.0060, subpart 3, and the following:

(a) each passage shall contain at least 500 words;

Recent trends in the testing of reading advocate the use of passages long enough to thoroughly engage the reader in processing the ideas presented. This concept must be balanced with the need to create a test of a particular length to conveniently administer and to include enough items on the test to establish high reliability. There are also reasonable limits to the number of items that can be written about each passage without requiring the reader to recall minute or insignificant details that competent readers probably would not be able to recall. The length established by this provision is a compromise of all those considerations as well as a realistic expectation for adult-level basic reading. A standard feature article in the newspaper tends to have 600-900 word (MDE, 1995).

3501.0080 Subp. 2 A.(2)(b) each passage shall represent a difficulty level of at least 60 DRP units;

This provision establishes a minimum level of difficulty for each passage included on a local test. The local test writers will also be required to observe the average difficulty of 64 DRP included in the state specification. Together, these limits provide a means of ensuring comparability between the state and local tests.

If there were no minimum specified for individual passages, local tests could have a passage of 40 DRP and a passage of 90 DRP and still meet the requirement of an overall average of 64 DRP. However, passages of 40 DRP do not test adult level reading and passages of 90 DRP are too difficult for basic skills reading. Neither of these is consistent with the goal of the state test. The 60 DRP minimum level assures that the local tests will assess adult-level basic reading skills.

3501.0080 Subp. 2 A.(2)(c) each test shall contain at least four reading passages and no fewer than 40 questions;

Each test must contain at least four reading passages and no fewer than forty questions. A test must be long enough to provide more than one opportunity for the test-taker to demonstrate understanding of a concept.

The test must have a sufficient number of passages and questions to establish reliability. It is reasonable to require that each test contain no fewer than 40 questions in order to establish statistical reliability for the test. According to the Department of Educational Psychology at the University of Minnesota, forty questions are necessary to meet a target reliability of .85. If the number of questions were to drop below forty, statistical reliability for the test would be difficult to establish (Davison et al, 1995). Most passages of 500 words have enough main and subordinate ideas to support up to ten questions, but few passages of that length can support more than 10 reasonable questions. If forty questions are necessary to establish statistical reliability, then the number of passages must have a minimum limit of four.

The test must also represent a variety of material to address diverse interests. Test-takers may perform better when reading content they already know about or find interesting. Including four passages on the test dealing with different topics increases the likelihood that students will encounter topics they find personally interesting. In addition, using multiple passages decreases the impact on the score of a student having either a great deal of knowledge about one particular topic or no prior knowledge about a topic.

3501.0080 Subp. 2 A.(2)(d) narrative passages shall not compose more than 25 percent of the passages in each test;

It is reasonable to limit the amount of narrative text (e.g. stories) on the test to 25%. The reading skills necessary for identifying information in narrative text differ from that of identifying information in expository (e.g. explanatory and informative) text (Sweet, 1993). Narrative text is easy to comprehend and remember compared with expository text (Graesser, Golding & Long). Narrative texts contain certain inherent structural characteristics. They are more predictable and allow readers to "fill in gaps" more easily. Most high school curriculums address narrative reading skills. The ability to read narrative material is a valued and important skill; and therefore, is included on the test.

The goal of the test is to assess the basic reading skills that enable adults to gather and interpret information in their daily lives. The ability to gain information from expository text is an essential skill. Therefore, it is reasonable that the test be composed of at least 75% expository material because this is the manner in which most public information and job-oriented material is written. The types of skills assessed for expository reading are different from narrative reading. The structures of expository text are significantly different from narrative text. Expository texts present information and may take a variety of forms, including description, comparison and contrast, and cause and effect. As a result, expository reading more effectively assesses comprehension of commonly circulated adult reading material (Bolt & Ackerman, 1994).

3501.0080 Subp. 2 A(2)(e) at least 60 percent of the test questions shall require a student to show knowledge of material that is explicitly stated in the test. This category shall include questions on main ideas, supporting ideas, and may include meanings of words from context. At least 30 percent of the test questions shall

require students to draw understanding that is not explicitly stated in the text, but must be inferred by the reader. This category may include identifying the author's perspective, drawing conclusions, or distinguishing between facts and opinions; and

Reading is an integrated skill that comprises both literal and inferential comprehension. At least 60% of the test questions shall require a student to show knowledge of material explicitly stated in the text, a literal level of understanding. This is reasonable because the first and foremost task of the basic competency test in reading is to determine whether a student can comprehend what an author actually presents in a straightforward manner. The test emphasizes literal comprehension in order to determine comprehension at a basic level.

At least 30% of the test questions shall require students to draw understanding that is not explicitly stated in the text, including identifying author's perspective, drawing conclusions, and distinguishing between facts and opinions. It is reasonable to include a limited number of questions assessing such inferential information. Inferential comprehension draws on higher levels of thinking and in many cases requires previous experience and knowledge. The integrated function of reading is composed of both inferential and literal comprehension skills. However, for the purpose of the basic skills test, inferential comprehension is less emphasized because it assesses a higher level of reading skills.

It is necessary to require how 90% of the test be written to ensure comparability with the state test. The composition of the remaining 10% of the test may be determined locally, thus allowing the emphasis of the local curriculum to be represented by the test.

3501.0080 Subp. 2 A.(2)(f) the questions and answers options must be phrased in words different from those of the reading passage.

The question and answer options must be phrased in words different from those of the reading passage. This provision requires skill in writing test items for local test. If questions and options mirror segments of the passage, students can simply locate the correct answer without reading the passage. If a student can pass the test without actually reading the passages, the test has poor construct validity. When questions and answer options use different words from those used in the reading passages, the student will have to read and process the passage in order to answer the question. As a result, the student's reading comprehension skills will be assessed consistent with the goal of the test.

3501.0080 Subp. 2. B. The passing score on the local test is determined through the process established in the subitems (1) to (4) for determining a score comparable to the passing score on the state test in the same basic requirement. The district shall set the passing score on the local test as follows:

The second method of establishing comparability is to demonstrate that the passing score of the local test has been set at a point at which the same percentage of students has passed both tests. To set the passing score, the same students must take both tests during the first year of administration and two sets of scores are analyzed. Once the relationship between the tests has been established, both tests need not be given every

year. However, if either test is changed, the relationship must be reestablished by comparing sets of scores.

3501.0080 Subp 2. B. (1) the first time the local test is given to students, the state test in the same basic requirement shall also be given in the same school year to the same students;

(2) the state test shall be scored by the state;

(3) the statistical correlation of scores of students in that district who have taken both tests shall be no less than .70;

(4) the passing score of the local test shall be set at the point at which the percent of students who pass the local test is the same as or less than the percent of students who have passed the state test; and

(5) if the state test changes or if a district changes its local test, a district shall repeat the steps in subitems (1) to (4), at the next time the local test is administered to a new group of students.

This proces for determining a passing score for the local test is the same process as that for setting the passing score for the nationally normed, commercially published test stated in 3501.0070 B.(1) to (5). The same statements of reasonableness given there apply here to the local test situation.

3501.0080 Subp. 3. Level of knowledge. The district may require more knowledge, a higher level of difficulty, or both, than the state test specifications if the district has established graduation standards that are higher than the statewide graduation standards.

This provision meets the needs of some local districts for higher minimum standards. Some districts may be ready to accept a more challenging standard for their students. The state has no interest in placing a ceiling on the accomplishment of the districts. However, the state will also assume that districts who increase state standards are able to explain and justify their decisions within their local communities. The provision is reasonable because it is consistent with a local district school board's authority to set graduation requirements beyond the statewide minimum (M.S. 123.33 Subd. 1 (1994) and 123.35 Subd.). In fact, many districts now require more credits for graduation than are required by the state.

3501.0090 STUDENTS WITH INDIVIDUALIZED EDUCATION PLANS OR SECTION 504 ACCOMMODATION PLANS.

The proposed rules are needed.

It is helpful to understand the differences between an Individualized Education Plan and a Section 504 plan before addressing the need and reasonableness of the testing accommodations and modifications that the proposed rules delineate.

Section 504 plans are mandated by Section 504 of the civil rights law known as the Rehabilitation Act of 1973. The purpose of Section 504 as a broad civil rights law is to protect the rights of individuals with disabilities in programs and activities that receive or

benefit from federal financial assistance from the U.S. Department of Education. Section 504 implementation is the responsibility of regular education providers. Section 504 requires a plan for appropriate educational modifications or accommodations in the school environment to address the needs of an individual student with disabilities. "Appropriate" in this case means an education comparable to the education provided to non-disabled learners. Evaluation through Section 504 draws on information from a variety of sources; decisions are made by a group knowledgeable about the learner, evaluation data, and placement options.

Individualized Education Plans (IEPs) differ from Section 504 plans. IEPs are mandated by the Individuals With Disabilities Education Act (IDEA) which is an education act and a federal funding statute (P.L. 101-476) whose purpose is to provide financial aid to states in their efforts to ensure a free appropriate public education for learners with disabilities. The enforcement of IDEA is the responsibility of special education providers. The IDEA requires schools to provide Individualized Education Plans (IEPs). "Appropriate education" in this case means a program designed to provide "educational benefit." A full comprehensive evaluation is required. All areas related to the suspected disability must be assessed. The learner is evaluated by a multidisciplinary team. The Minnesota requirements to implement IDEA are included in Minnesota Statutes, section 120.17 (MDE, 1994) and State Board rules, Chapter 3525.

In the 1993-94 school year, Minnesota public schools served 810,000 students. According to the MINCRIS database (Minnesota Civil Rights Information System), more than 109,000, or 13.5 percent, of these students received special education services. Of them, 85% do not participate in the current assessments (national and local) with their non-disabled peers.

Currently, the Children With Disability Chapter of Minnesota Rules Relating to Education, (part 3525.2750, Educational Assessment) Subp. 1, requires assessment for students with disabilities every three years to determine proper special educational placement. This assessment is for entrance and exit decisions for special education services, but not necessarily for student achievement. Nationally, in special education, there is a trend to concentrate on program entrance and exit data, while paying little attention to student achievement.

Special education outcomes, as a whole, have been examined in two ways. First, they have been measured in terms of post-school measures, such as gainful employment and enrollment in postsecondary schooling. Second, they have been examined in terms of attainment of individually established goals and objectives as written in the student's IEP. Because the state and most districts do not specify learning outcomes, the extent to which the IEP goals and objectives correlate with general education curriculum is not known. In contrast, regular education student assessments have focused on in-school measures such as achievement and attendance.

There is no requirement that schools assess students with special needs on the same outcomes as other students or with the same tests used with other students. In fact, Minnesota statutes (M.S. 120.17 Subp. 1b) provide that a student with an IEP shall be granted a general diploma if the student achieves the goals stated in the IEP. This is true in spite of the lack of information relating to the correlation between course

requirements that non-disabled students must meet to be awarded a diploma and the IEP goals and objectives that a student with a disability may be required to meet to be awarded a diploma. Currently, according to Ingels (1993), practical testing considerations (who is easy to test) determines who gets tested. There is a need to define appropriate content standards, assessment procedures, and results for all students (Brauen, O'Reilly & Moore, 1994).

Achievement test data show that special needs students in Minnesota are currently not attaining the norms of standardized tests, or are not being tested at all. This is consistent with the current trend in national assessment and data collection concerning students with special needs. Recent research of the degree to which students with disabilities are allowed to participate in major national data collections used in measurement-driven educational reform suggests that 40% to 50% of students with disabilities are typically excluded from major assessments (Ingels, 1993). For example, most states, when reporting scores for the National Assessment of Educational Progress (NAEP), exclude students with disabilities even if they have tested them (Ingels, 1993).

Even when students with special needs are included in assessments, they are not included in assessment data with other students who do not have disabilities. This results in a situation where educational reforms are influenced by inaccurate data that do not represent the entire student population (Ysseldyke, 1995).

It is generally believed that those who are not measured within educational accountability systems and reflected in such data tend to be ignored when educational reforms are enacted. It is, therefore, important for the public education system to begin to examine the extent to which students with disabilities are included in statewide assessment programs, including the extent to which accommodations and modifications are allowed in assessment programs to meet their needs (Thurlow, Shriner & Ysseldyke, 1994).

Since special needs students are often not included in assessments, these students do not have the opportunity to demonstrate competency at the same level of standards applied to non-disabled students. Individual students with disabilities, therefore, do not have the opportunity to show their individual level of achievement. Students with disabilities perform on a wide range of levels and should have the opportunity to demonstrate their own level of achievement. If such students can be served in regular classrooms, which the majority are, Ingels (1993) argues that it should be possible to include such students in the national testing programs that seek to measure student learning. There is a need, also, to apply this to the testing required at state level.

Mehrens argues that in order to assure that all students learn at higher levels, all students must be included in assessment programs (Mehrens, 1993). The failure to hold schools accountable for the outcomes of students with disabilities is ill-advised when evidence exists that students with disabilities are not reaching satisfactory levels on such outcomes as understanding basic mathematics concepts, school completion, and employment. Without outcomes clearly in focus, students receiving special education services may be consigned to curricula that fail to include challenges they can meet (Brauen et al., 1994).

The IEP and 504 processes are already in place in schools and are required to be used to make all decisions about students with disabilities that vary from the standards that apply to all students. With the proposed rules, the goals and objectives contained in IEPs and 504 plans will be written to lead to student achievement of the established state graduation standard. This has the effect of applying the same standards to all students while providing the means by which individual differences and needs are met in both expectations and assessment procedures.

As Anderson's view of school climate research indicates, higher expectations are associated with higher achievement (Fetler, 1986). The proposed rules provide students with disabilities with high expectations and the opportunity to demonstrate achievement against the same expectations as other students. The key, of course, is to assure that each student is provided the opportunity to learn the necessary curriculum and that the state and Federal laws and rules for special education are met.

Many students who are disabled are capable of demonstrating the skills required for a regular high school diploma (Georgia Department of Education, 1994). Other states have recognized that the needs of special populations will be fully considered only if teachers, schools, and the state are accountable for the performance of all students.

The passage of *Goals 2000: Educate America Act* represents a significant move toward including all students in education reform efforts. Goals 2000 defines "all students" as including students with disabilities. In the proposed rules, all students, including students with disabilities, will be expected to work toward the state standard and participate in statewide testing.

Because the proposed rules apply to all students, they set up for the first time a requirement that students with special needs be tested. However, the proposed rules set out special considerations (i.e. accommodations and modifications) so that students with disabilities can be tested in accordance with the IEP process.

Accommodations in testing procedures must be provided for students with disabilities because the unique characteristics of many students with disabilities prevent them from demonstrating their level of achievement in traditional ways.

This rule provides that IEP and 504 plan development teams may alter a standard, or declare an individual exempt from a standard, only on an individual basis through the IEP or 504 plan processes. There is a need for this because it is expected that most students with disabilities, if provided appropriate programs of instruction and services, will achieve at the same level as their non-disabled peers.

In order to make schools accountable for the individual achievement of all students, including students with disabilities, all students need to be a part of the requirements of the proposed graduation rule. It is estimated that 85% of the students with disabilities in Minnesota can participate in state assessment programs. However, consideration of special needs students must take place during the development and modification of tests, the administration of assessments, and the reporting of results (Ysseldyke, Thurlow, McGrew & Shriner, 1994).

According to the *Standards for Educational and Psychological Testing* manual (AERA/APA/NCME, 1985), there are a number of accommodations in test and test administration procedures that make it possible for people with certain disabilities to take a test developed for the general population. For example, accommodations have been used which modify the manner of presentation of the test materials or which modify the method of responding to the test materials.

Reasonable accommodations are needed so that otherwise qualified students with disabilities can be assessed on their knowledge and abilities and not by their disabilities. With accommodations, students with disabilities are allowed the opportunity to demonstrate proficiency in the basic requirements without being limited or unfairly restricted by the existence of disabilities (New York Department of Education, 1986).

At the local, state and national level, there has been consensus about special considerations for students with special needs in regards to assessment procedures. The proposed rules allow for the accommodations, modifications, or exemptions needed by students with special needs.

It is essential to make every effort to see that special needs students are well prepared to meet the challenges of the 21st century. The proposed rules will include students with disabilities in the statewide standards and the requirements for demonstrated competency, and will provide them with reasonable accommodations.

In the proposed rules, all students with disabilities are expected to participate in the graduation standard process. IEP and 504 teams will hold all students with disabilities to the state standard except in the most essential instances which are to be decided individually in the IEP and 504 plan processes. Reducing expectations will be allowed only on an individual basis. Adoption of individual standards or exempt status for each individual student shall occur concurrently with the adoption of transition goals and objectives. All IEP or 504 plans for students with disabilities will identify the necessary testing accommodations.

The proposed rules are reasonable.

3501.0090 Subpart 1. Considerations for students with IEPs or section 504 accommodation plans.

The Special Education Advisory Council (SEAC) developed and recommended to the State Board of Education procedures in the proposed rules for students with IEPs and 504 plans. SEAC met four times to discuss the means through which students with disabilities would participate in the proposed rules. SEAC is required by federal rules (34 CFR 300.650-653) and is appointed by the State Board of Education to advise the Board and the Department on matters relating to the education of children and youth with disabilities.

SEAC membership includes parents, consumers, general and special education teachers and administrators, and other related stakeholder groups with a broad scope of experience and knowledge. They are able to advise the Board and the Department on how best to assure alignment of special education requirements and the needs of

students with disabilities with the changing design and requirements of an evolving general education system.

The proposed rules for providing these options for students with disabilities are consistent with what other states are doing. A recent review of inclusion/accommodation procedures for students with disabilities for all 50 states was conducted by MDE. Forty-four states have such inclusion/accommodation guidelines. Of the 17 other states that have recently developed new graduation standards, all accommodate for their students with disabilities.

The following cases were consulted by the Department of Education in developing the IEP/504 policy in the proposed rules:

SOUTHEASTERN COMMUNITY COLLEGE v. DAVIS (1979)
United States Supreme Court

In this case, the Supreme Court defined "otherwise qualified" as a person who, regardless of disability, can meet all educational or employment requirements.

ANDERSON v. BANKS (1981)
Federal District Court

This federal court decision determined that when the disability is extraneous to the skills tested, the person is otherwise qualified, but when the disability itself prevents the person from demonstrating the required skills, the person is not otherwise qualified.

BROOKHART v. ILLINOIS STATE BOARD OF EDUCATION (1983)
Federal Appeals Court

This case states that test administrators are required under Section 504 to provide reasonable accommodations for disabled students who are otherwise qualified. It was determined, however, that an accommodation should not 'substantially modify' the test (i.e. test questions do not have to be changed). The decision also requires that when tests are initiated as a requirement for a diploma, parents and educators must have adequate time to consider the disabled student's IEP and decide whether the tested skills should become a part of the student's educational plan. The Brookhart decision indicated that the student's IEP team (parents and educators) could determine that a student's IEP should not contain the tested skills.

DEBRA P. v. TURLINGTON (1984)
11th Cir.

This, case which is not binding law in Minnesota, states that there are two requirements in terms of what process is due students who are required to pass a test to receive a diploma. The first requirement is that tests should cover material that has been taught in the schools and the second requirement is that there be adequate notice of the testing requirement.

3501.0090 Subp. 1. A. The IEP or section 504 accommodation plan for a student with a disability shall identify one of the following decisions for each of the basic requirements:

(1) the student is expected to achieve the statewide standard with or without testing accommodations;

The proposed rules meet the need for including special needs students in the expectation that all students demonstrate competency in the statewide standards in the basic requirements. The proposed rules allow for the individual needs of students with disabilities by giving IEP and 504 teams the responsibility to decide whether or not the statewide standards are appropriate for individual students' abilities and by allowing the IEP and 504 teams to modify the standard or exempt the student from it and to provide the student modifications, accommodations, or an exemption in testing.

In order to include all students in the procedures outlined by the proposed rules, some students with disabilities must be provided accommodations for test conditions. Such accommodations allow a student the opportunity to participate in assessment procedures.

Accommodations, as stated in the proposed rules, are reasonable because they allow a student who has a disability to demonstrate their individual level of knowledge and skill in the testing process. A test accommodation, by definition, does not compromise the validity of a student's test score. Examples of testing accommodations include providing a Braille version of a reading test for a student who is blind and reading a math test to a student who has a disability that affects his/her ability to read but does not affect the ability to manipulate numbers.

3501.0090 Subp. 1. A.(2) the student is expected to achieve the statewide standard at an individually modified level of difficulty; or

In order to include all students in the procedures outlined by the proposed rules, some students with disabilities must be allowed modifications in the statewide standards. Such modifications allow a student the opportunity to work toward the statewide standards to his/her individual potential.

3501.0090 Subp. 1. A.(3) the student is exempt from the statewide standard.

An exemption from the statewide standard shall be granted to a special needs student when the student cannot demonstrate the required degree of learning with appropriate accommodations or modifications if:

(a) the student's IEP or section 504 accommodation plan does not and never has included the requirements on which the tests are based; or

(b) the student is enrolled in special education classes for the subject matter included in the test, but the student's IEP or section 504 accommodation plan does not include a majority of concepts tested.

Even with reasonable testing accommodations and instructional modifications it is reasonable to exempt some students with disabilities from some of the state standards. The exemptions may be in terms of not requiring the student to demonstrate a particular standard because the student's IEP or Section 504 plan does not include instruction on the concepts on which the test is based.

It is reasonable to provide an exemption to a student with disabilities if the student cannot demonstrate the required degree of learning with appropriate accommodations or modifications if the student's IEP or 504 plan does not and never has included the requirements on which the tests are based. It is also reasonable to provide an exemption if the student is enrolled in special education classes for the subject matter which is tested but for which the student's IEP or 504 plan does not include a majority of the concepts and skills tested. Finally, it is reasonable that test items reflect what has been actually taught in the classroom and not what school would like its students to know (Phillips, 1993). It is unreasonable to require a student to participate in the assessment procedures who was not allowed the opportunity to learn the concepts that are on the test.

If a student received an exemption for one or more basic requirements tests but achieved all the goals on their IEP or 504 plan, the student will be awarded a regular high school diploma as required by Minnesota Statute 120.17 Subp. 1B which states that all students who achieve their prescribed goals are to be awarded identical diplomas. However, the proposed rules, part 3501.0120, provide that exemptions and modifications will be recorded on the student record so there is an accurate portrayal of each student's achievement.

3501.0090 Subpart 1. B. Adoption of modifications or exemptions for a student as stated in item A, shall occur concurrently with the adoption of transition goals and objectives as required in Minnesota Statutes, section 120.17, subdivision 3a, clause (1).

Federal rules 34 CFR 300.18 and 300.340-350 require that consideration for each student's needs to make a successful transition to adult life be a part of the IEP process beginning at age 16 or younger if appropriate. State statutes M.S. 120.17 subd. 3a clause 1 and subd. 16 and State Board of Education rule 3525.2900 subp. 4 require that transition goals be incorporated in the IEP for students at grade 9 or age 14, whichever comes first.

Transition services are intended to assure that preparation for five areas of adult life are included in the IEP goals and objectives of each student with a disability. The areas are employment, postsecondary education, home living, community participation, and recreation and leisure.

It is reasonable that decisions relating to requirements that a student must meet to earn a diploma be made concurrently with decisions regarding instructional goals for the development of adult living skills. It is also reasonable that decisions relating to requirements that a student must meet to earn a diploma not be made prior to age 14. To make such decisions at an earlier age would require the skill to accurately predict the future abilities, maturation and emotional growth of a child more than 6 years in advance. Educators do not have the means to accurately make such predictions.

3501.0090 Subp. 2. Testing students with IEPs or section 504 accommodation plans.

A. All students shall be tested under standard conditions as specified by the developer of the test except those students whose IEPs specify other decisions consistent with subpart 1, item A.

The plan to accommodate students with special needs is reasonable for students because it allows all students to participate on a level appropriate to their needs. The purpose of the statewide test is to measure individual achievement and to measure what students know and are able to do. The primary purpose of tests administered relative to the basic requirements portions of the rule is to determine the degree of individual performance on generally agreed upon sets of outcomes (MDE, 1995). The test is not intended to penalize students. It is reasonable to allow accommodations, modifications, or exemptions for students with disabilities.

The proposed rules for accommodating students with disabilities in assessing their mastery of the basic requirements is reasonable because in most cases, accommodations that will be made in testing procedures will be ones that the student already receives in the classroom as outlined on a student's IEP plan (Alabama Department of Education, 1993). Thus, the rule does not pose an undue burden on school districts

3501.0090 Subp. B. Decisions regarding appropriate testing conditions including a decision to provide accommodations for a student with special needs shall be made by the local school district through the IEP process or the section 504 accommodation plan process and shall be reviewed annually.

It is reasonable to assign responsibility for decisions relating to testing accommodations to the IEP or 504 team. Those teams include membership that best know the student's skills and areas of need. The IEP team always includes the parent, the special education service providers and the student when appropriate. These people are best qualified to make decisions about the individual. The alternative (making a single decision for all students) is not reasonable and goes against the most basic precept of special education law and rule. The program is to address the individual needs of the student. Further, it is also reasonable that this be reviewed annually because students do mature and grow and federal and state laws and rules require the annual revision of each IEP.

Making these decisions as a part of the IEP process assures that schools do not systematically exempt students with disabilities and exclude them from data that will be compiled from assessment results. The proposed rules foster the accountability of schools for all students, including those with disabilities. In 37 of the 44 states that have accommodation procedures, the IEP and 504 teams are responsible for deciding whether students should receive testing accommodations and modifications, how students should participate, and whether they should participate or be exempted.

3501.0090 Subp. 2. C. Where subpart 1, item A, subitem (2), applies, the student's IEP or section 504 accommodation plan shall define an appropriate assessment of the statewide standard at a modified level of difficulty. Achievement of the individually modified standard shall be certified only through documented student performance of the defined assessment.

It is reasonable to require that achievement of a modified standard designed and adopted for an individual student be documented by the district. The State Board's purpose for proposing a graduation standard is to assure that all students who are awarded a diploma have demonstrated that they achieved a specific standard. The fact

that a different standard is established for an individual student should not alter the requirement that the district document the student's performance at the agreed upon level.

3501.0100 TESTING CONSIDERATIONS FOR LIMITED ENGLISH PROFICIENT (LEP) STUDENTS.

3501.0100 Subpart 1. Scope. This part applies to individuals whose first language is not English and whose test performance may be negatively impacted by lack of English language proficiency.

Considerations for LEP students are needed.

Limited English Proficient (LEP) students, like all students in Minnesota, need to achieve basic skills competency in reading and mathematics.

The number of LEP students being served by public schools is growing nationwide and in Minnesota. In 1990, the US Census Bureau reported that over 31.8 million people, or 14% of the national population, spoke a language other than English. This figure has increased since 1980, when 11% of the U.S. population was reported as non-English speaking. The number of non-English speaking school-age children has increased by 38% since 1980. Nationwide, 14% of the total school-age population (ages 5 through 17) do not speak English at home. Of the 50 language groups surveyed by the Census Bureau, the following groups reported limited English speaking ability. 46.3% of the Hmong population, 42.9% of Cambodian, 30.1% of Korean, 28.1% of Thai/Laotian, 27% of Russian, and 25.9% of Spanish and Armenian populations were characterized as Limited English Proficient (National Association of Bilingual Education, 1993).

According to the Literacy Summit Action Coalition, Minnesota has a large refugee population in need of literacy training. More than 28,000 Hmong live in Minnesota. Vietnamese, Cambodian, Laotian, and Russian groups also constitute large proportions of Minnesota's language minority population (Literacy Summit Action Coalition, 1995). These are also the populations reported by the US Census Bureau as having the most limited English skills.

The number of LEP students enrolled in Minnesota schools has grown rapidly in the past five years. Minnesota LEP programs served 18,556 students in 1993-4. LEP program enrollment in Minnesota has increased by 97% since 1989. However, achievement test data shows that many LEP students are currently scoring low on state tests, or they are not being assessed at all. According to the 1995 data from Minnesota Civil Rights Information System (MINCRIS), 85% of these students do not participate in the state assessment process (MDE, 1995). In the Minnesota public schools that conducted state testing in 1993-1994, 7,859 LEP students were not tested for reading skills and 8,187 were not tested for mathematics skills (MDE, 1995). Therefore, their achievement levels in these basic skills are not known.

The LEP students who did participate in statewide assessments consistently scored below English proficient students. Minnesota districts reported in 1992-3 that 50% of

LEP students tested scored below the expected score in reading English, and over 35% of those tested scored below the expected score in mathematics and language arts standardized tests. Of the approximately 8,000 LEP students that were tested in 1993-1994, 7,196 tested below norm in reading and 5,155 tested below norm in mathematics (MDE, 1995). Since there is no standard system of assessing the educational achievement of LEP students, there is no way to determine whether LEP students' lower achievement is due to limited English ability or lack of the skills tested. There is no means to demonstrate that LEP students have learned basic skills. As a result, many LEP students may graduate without basic skills or fail to complete high school. In the 1993-1994 school year, 307 LEP students were retained in one or more grades, and 379 LEP students dropped out of high school (Office of State and Federal Programs, 1995).

Schools are accountable for the educational achievement of LEP students. According to the Education for Limited English Proficient Students Act of 1980 (M.S. 126.261), school districts are responsible for providing appropriate educational services to LEP students. However, due to limited English proficiency, LEP students need to be given considerations.

Accountability in education must extend to all students in order to be effective. The *Goals 2000: Educate America Act* definition of "all students" includes students who do not speak English. The Civil Rights Act of 1964, Title IV, dictates that no one on the basis of race, color, or national origin can be excluded from the benefits of education. This was elaborated in a memo by the Dept. of Health, Education, and Welfare, which states the responsibility of school districts to provide equal educational opportunity to national origin minority group students whose proficiency in English is limited. These students cannot be excluded from any educational program on the basis of English ability (U. S. Office of Civil Rights, 1970). The *Bilingual Education Act of 1968* (amended 1974 and 1978) reaffirmed this policy. *The Equal Educational Opportunity Act of 1974* advocates the inclusion of LEP students in the statewide standards, and supports language considerations for LEP students by stating that "no state shall deny equal educational opportunity to an individual on account of his or her race, color, sex, or national origin, by the failure by an educational agency to overcome language barriers that impede equal participation by its students in its instructional programs." School districts are accountable for the educational achievement of LEP students, and for providing the LEP students with learning opportunities to reach a level of competency in basic skills. In *Lau v. Nichols*, 1974, the Supreme Court held that students with limited English proficiency need special considerations to receive a meaningful education.

The proposed rule includes all students in the statewide standards and testing for competency. School districts are required to provide learning opportunities as stated in 3501.0100. School districts must provide LEP students with the opportunity to demonstrate competency in the statewide standards. In order for this to occur, the proposed rules include considerations for LEP students. These considerations shall take the form of accommodations, translations, and temporary exemptions from the statewide standards.

Considerations for LEP students are reasonable.

The proposed rule meets the need for including LEP students in the same statewide standards and assessments as all other students. The proposed rule provides for the systematic assessment of LEP students which will determine their level of achievement and their educational needs. LEP students who do not pass the tests of the basic requirements will be given remediation in basic skills areas in accordance with 3501.0110.

3501.0100 Subp. 2. District Process. Each district shall establish a process for determining whether individual students whose first language is not English shall take basic requirements tests under standard test conditions, with language accommodations, with language translation of the mathematics test, or be temporarily exempted from testing. Parents of LEP students, teachers of LEP students and district personnel responsible for testing shall be involved in establishing this process.

It is reasonable for each local district to develop a process for testing LEP students while, at the same time, granting considerations on the basis of their limited English proficiency. This will assure that LEP students are included in the proposed rule but are not disadvantaged by the rule. This specification is consistent with the practice of other states. For example, the New York State Dept. of Education recommends that LEP students be held accountable for learning, and be held accountable to the same educational goals and standards as the general student population (New York Department of Education, 1991). Since the LEP population varies widely throughout Minnesota school districts, each district should develop a process suitable to its LEP population.

It is reasonable to involve parents, teachers, and district personnel responsible for testing in the process. This is consistent with state and federal laws of due process, and allows parents, teachers, and district personnel to make informed decisions regarding the student's demonstration of competency in the basic requirements.

The proposed rule requires school districts to apply considerations for LEP students on the statewide tests. LEP students who qualify, as stated in part 3501.0100 Supb. 3, may be granted a temporary exemption from testing until their skills reach a level where they can be assessed. LEP students who do not qualify for an exemption may take the basic skills tests with accommodations. Accommodations lend the LEP student additional language support on the basic skills tests without altering the test or changing the significance of the test score. The following types of accommodations are acceptable: adjustments to the test presentation, response format, test setting, and test schedule (MDE, 1995).

A third type of consideration is the translation of the mathematics test into the student's native language. Translations are allowable in mathematics because the purpose of the test is mathematical problem-solving which may be done in any language.

The proposed rule is consistent with the policies of other states regarding testing LEP students. The following states grant considerations to LEP students on high-stakes graduation tests: Mississippi, Nevada, Kentucky, Louisiana, Florida, New Mexico, Arkansas, and New York. Florida (Statute 229.57) and Mississippi (MS Code 37-16-9)

have enacted legislation requiring that appropriate testing accommodations and exemptions be granted to LEP students on high-stakes graduation tests. In addition, several states reported that the development of a policy for testing of LEP students was in process.

The testing considerations granted to LEP students in the aforementioned states are consistent with the proposed Minnesota rules and take the form of either specific accommodations or temporary/permanent exemptions and/or a combination of both.

The proposed rules were drafted by a team from MDE with involvement by educators, LEP directors, Bilingual and ESL teachers, and members of language minority groups from around the state of Minnesota. The rules have been subjected to review by stakeholders and have been revised and modified based upon their input.

The provisions in the proposed rules relating to limited English proficient students are based on a draft by the MDE Internal LEP Planning Committee and the MDE Program and Curriculum Specialist.

Members of the Internal LEP Planning Committee included two MDE specialists in LEP education, an MDE Standards Specialist, a psychometrician, and the team leader of the State and Federal Programs Office.

The Internal LEP Planning Committee was first convened on November 1, 1994 to elaborate policy development principles for LEP students. The first draft of the proposed rules was developed by the Internal Planning Committee and the MDE Program and Curriculum Specialist on November 14, 1994.

The next phase of the development consisted of consultations with educators around the state of Minnesota. MDE conducted five meetings with representatives from metro and rural districts with significant LEP populations. Educators reviewed the draft developed by the Internal Planning Committee and offered comments and suggestions. A revised draft based upon the modifications suggested at the meetings was produced after each successive meeting.

Since 60-70% of the LEP population in Minnesota is located in the metro area (Office of State and Federal Programs, 1995), the Internal Planning Committee first solicited input from St. Paul and Minneapolis Public Schools. On December 14, 1994, a meeting with representatives from the St. Paul Public Schools was held and the draft was reviewed. Fifteen teachers and administrators from St. Paul Public Schools attended, representing a diverse range of ethnic and linguistic backgrounds.

On December 14, 1994, a second meeting was conducted with representatives of the Minneapolis school district to review the LEP draft. Seven teachers representing three schools and one director of Bilingual/ESL education attended the meeting.

The next level of development occurred when MDE staff met with representatives of school districts having 50 or more LEP students enrolled. The school districts were selected based upon recommendations by MDE LEP program staff. Representatives from 38 school districts were invited to attend the meetings.

A meeting was held on January 13, 1995 with representatives from the West Metro area to review and revise the draft. Six representatives from area schools were in attendance.

The next meeting was held on January 20, 1995 for the East Metro area. Three representatives attended this meeting.

On January 24, 1995, a meeting was held for the school districts of Greater Minnesota to review the draft. Thirteen representatives from 8 schools were in attendance.

In addition, Native American representatives were invited to give their input and attend the three meetings which were held in January. Ten Native American representatives from seven school districts were invited to the January meetings.

The proposed rules were modified and revised based upon the input of stakeholders from the aforementioned meetings. The proposed rules regarding LEP were presented to the State Board of Education on February 13, 1995. Throughout the development process, MDE involved teachers and school administrators who would be directly involved in the implementation of the proposed rules. The provisions of the rules were considered reasonable by the stakeholders involved.

The proposed rules outline a statewide structure which provides for the educational achievement of LEP students. Currently in Minnesota, 2,822 LEP students are not enrolled in a language support program that would benefit their educational achievement (Office of State and Federal Programs, 1995). The systematic assessment of LEP students as proposed in the rules ensures that they will not be excluded from the educational process. The assessments of LEP students are operated in conjunction with providing opportunities to learn as stated in 3501.0100, which support LEP students in achieving the statewide standards.

The proposed rules are consistent with the current practice of Minnesota school districts. The Education for Limited English Proficient Students Act of 1980 (M.S. 126.261) states that school districts are responsible for providing appropriate educational services to LEP students. According to this law, school districts must provide language support to LEP students that will benefit their education. In the state of Minnesota, this support occurs in several programs designed for LEP students, including Title I Basic Programs, ESL Programs, Migrant Education, Even Start Family Literacy Programs, Vocational Education, and Bilingual Education. The proposed rule builds upon the instructional support the school districts are already providing to LEP students. In 1993-1994, 14,076 LEP students were enrolled in ESL Programs, and 3,210 students attended Bilingual Education Programs. Over 700 LEP students were enrolled in the Assurance of Mastery Program in Minnesota school districts (Office of State and Federal Programs, 1995).

While the current law provides for educational support for LEP students in the curriculum, there has been no provision for the educational assessment of LEP students. The proposed rules expand the educational support mandated by law to encompass assessment procedures for LEP students. The proposed rule builds upon the district's responsibility to provide support to LEP students by mandating considerations that will

assist LEP students in meeting the statewide standards and achieving levels of basic skills.

3501.0100 Subp. 3. Temporary exemption. A student may be temporarily exempted from participation in testing if the student has been enrolled for three or fewer years in a school in which the primary language of instruction is English. If the student is temporarily exempted, the exemption shall be reviewed annually according to the process in subpart 2.

It is reasonable for a LEP student to be temporarily exempt from participation in testing if the student has been enrolled for less than three years in an English-medium school. If the student has not had ample opportunity to gain English skills, the student's performance on a test given in English, regardless of the subject being assessed, will be adversely affected. When taking tests written in English, students for whom English is a second language are adversely affected by their developing linguistic skills (Hafner, 1994).

LEP students score at low levels on tests in English normed on native speakers. These tests are not appropriate measures of a student's ability in the first couple of years of second-language development, and it is recognized common practice for school personnel to exempt these students from tests because the tests underestimate their true ability (Collier, 1992).

Three years is a reasonable period of time for LEP students to gain sufficient English skills to perform on a basic skills test. Assessments performed after three years determine the skill level that has been acquired during the period of exemption. A consensus of LEP teachers and specialists from MDE determined that three years is a reasonable period to exempt students from testing, although current research states that it generally takes 5-7 years for students to become academically proficient in a second language (Cummins, 1984). However, to require LEP students to remain in secondary school for 5-7 years could ultimately be detrimental to them and reduce their opportunities to seek employment and postsecondary education. Capable students who could pass the test earlier may be held back if the exemption period were permitted to be longer.

It is reasonable to require that the exemption be annually reviewed according to the process in item A. This will ensure that a student who is ready to take the test will not be held back by the exemption, while students who are unprepared for the test will be exempted consistent with Subp. 3.

3501.0100 Subp. 4. Test of reading. Language accommodations and language translations to basic requirements tests shall not be applied to the testing of reading. Students shall demonstrate English language competence in the testing of reading.

Language accommodations and language translations will not be granted for the reading test. Depending upon their skill level, LEP students may be granted other accommodations. Accommodating students' test administration is a way of helping make assessments comprehensible to students with some knowledge of English (Hafner, 1994). According to the American Psychological Association, LEP students should be tested in order to measure their educational progress; however, the tests should be

conducted with sensitivity to the linguistic characteristics of LEP students. There is a great deal of variation among the abilities of LEP students, and testing accommodations that reflect this variation are recommended (AERA/APA/NCME, 1985).

Language accommodations and translations may not be granted for reading tests because the standard itself specifies that the reading test shall be a test of reading in the English language.

It is reasonable to require students to demonstrate English language competence on the tests of reading because these skills are essential to function in society. Basic English literacy is necessary for LEP students to successfully function as workers, consumers, and self-directed learners. Basic English reading skills are essential for success in postsecondary education in the United States.

3501.0100 Subp. 5. Language translations. A district may translate the mathematics test into a language other than English.

It is reasonable to allow LEP students to be assessed in mathematics in their native language. Native language assessment indicates that their skill level in mathematics will be tested rather than their level of English.

It is reasonable to allow districts to translate the mathematics test because the standard in mathematics requires students to solve real-life application problems. In real life mathematical situations that require problem-solving arise within one's experience. There may be no language at all associated with the experience. Certainly one does not read word problems, as such, in real life settings. One actually experiences the situation and translates it into a mathematical construct using whatever language one uses in thinking. Word problems are merely a written record of that process, so the language used is not important to the demonstration of the mathematical ability. Therefore, it is reasonable to allow students to perform the mathematics standard in the first language of the student.

3501.0100 Subp. 6. Learning opportunities. Part 3501.0110 applies to students granted considerations under this part.

This statement appears as a reinforcement for the concept that all students are to be provided the opportunity to learn the content of the basic requirements. The essential qualities of reading and mathematics for functional adult living apply to all students. If students are unable to speak English, the district should attend to the need to enable them to learn English. The school must also be concerned about their ability to use basic mathematical concepts, and mathematics should be part of their curriculum as well.

3501.0110 OPPORTUNITIES TO LEARN AND REMEDIATION.
A school district shall provide appropriate learning opportunities to all students in the basic requirement areas.

The change in current practice required by the proposed rules is a matter of increasing the emphasis on individual achievement of the basic requirements. While districts

routinely include basic skills instruction and remediation of individual students within the elementary curriculum, most have not insisted that these skills be verified for individuals before graduation. Continuing direct instruction on these topics is seldom part of the high school curriculum. The proposed rules require that opportunities are provided to make sure that students have continuing opportunities to actually accomplish these skills.

Requiring school districts to provide appropriate learning opportunities in the basic requirements is consistent with directives from recent state and national legal decisions. A ruling of the Minnesota State Supreme Court in a recent Minnesota case on the issue of equitable funding of school districts established that a primary purpose of the public schools is to provide instruction in basic skills (*Skeen v. State of MN* 505 N.W.2d 299 (MN 1993)). It is reasonable to give students sufficient opportunity to learn the information tested by the state if a diploma decision depends on the results of the test.

This requirement is also consistent with the current practice of other states. All states that employ high-stakes minimum competency testing require their local districts to offer the appropriate opportunities for students to learn the content covered by the test (McMillan, 1994). In presenting a review of successful practices of all states engaging in minimum competency testing, a national expert says, "Once the testable portion of the core curriculum is determined, an administrative rule or statute should specify that the local districts must teach this portion of the core." (Mehrens, 1993)

This provision of the proposed rule fits well with the Minnesota law that prohibits the establishment of a single curriculum (M.S. 121.11 Subd. 7c). While guiding the eventual results, the state will allow districts to have full latitude to decide the issues traditionally contained within a curriculum, i.e., how the topics will be taught, the materials to be used and how students will access the instruction.

For example, in mathematics, materials to teach the topics are readily available because the topics are easily recognized parts of published textbooks in mathematics that are widely used in the state. Methods of teaching the topics and particular strategies are included in the materials published by the National Council of Teachers of Mathematics (National Council of Teachers of Mathematics, 1989) as well as numerous other sources. The reading objectives encompass only reading comprehension, with no delineation of the particular strategies or methods used to teach students. This allows for district selection of a preferred philosophy and approach to teaching reading. Whatever method is used, the ability to understand what has been read is a universally accepted result. It is supported by all widely used methods and commonly purchased materials for the teaching of reading.

"Appropriate learning opportunities" means that the methods and frequency of opportunities granted to students to receive instruction are geared to the needs of the students. The district curriculum and its instructions to teachers need to show that teachers have been directed to address the needs of all students and that materials and time have been provided for them to do so. This directive is needed because individual students are held responsible for passing the requirements and individual students learn at different rates and through different methods. This emphasis on building the

knowledge required by the topics of the state test should be evident from kindergarten through the time when the student has passed the test.

Most of the efforts to remediate students at the high school level will consist of programs or classes offered to students. Such programs will be sufficient to meet the needs of most students who enroll in them. The results of the statewide pilot testing in reading show that nearly 70% of the sophomores and juniors tested were successful. But a failure rate of 30% indicates a need for schools to take further steps to assist students in achieving skills that have been declared essential. It is reasonable to doubt that continuing current practice will be effective in helping all students achieve the standard.

The provision requires a plan for remediation, but it does not require individualized instruction to be part of the plan. When the objectives which have been the primary focus of schooling have not been achieved, it is reasonable to expect districts to employ a process of focused decision-making to determine how the needs of the student can be met. The point of the provision is to determine what might be done within the resources of the district to improve achievement.

Three examples of types of students who fail may be helpful in clarifying the issue. Currently, few schools require students who do not have basic skills to complete a remediation program. The first type of student who fails is one who avoids selecting classes that require academic skills to achieve a passing grade. Therefore, during the last two years of high school a more focused approach becomes necessary, and there is a need to require those students to address their achievement in the basics.

A second common scenario occurs when students transfer during high school from schools in which basic skills were not emphasized or when they show an erratic pattern of attendance throughout school. Individualized plans may be needed to enable intensive work or personalized motivation to improve basic skills in the little time remaining.

A third type of student may be unsuccessful because usual methods of group instruction do not meet the needs of the student. Yet the profile of the student has not qualified the student for enrollment in any special education program. Continuing to offer more of what has not worked will be unfruitful. The needs of these students require a personalized approach to the problem of failure.

This provision allows time for less expensive group programs to accomplish as much as they are able to do before requiring more expensive individualized processes. Yet it allows two years to assist students who have been unsuccessful within the usual program. If the district operates group programs effectively and counsels students appropriately, it is reasonable to assume that most students will have passed the requirements before the time when individualized attention must be applied, thus keeping costs to a minimum.

3501.0120 REQUIRED NOTIFICATION TO PARENTS AND STUDENTS

3501.0120 Subpart. 1 Written notice. A school district shall establish and maintain a system to provide written notice to parents and students about graduation requirements.

It is necessary for local school districts to establish and maintain a process to provide written notice to parents and students about graduation requirements. In order to actively participate in the educational process, parents and students need to be properly informed about graduation requirements.

National law requires that parents and students be informed of factors influencing high-stakes decisions such as graduation requirements. *Title IV of the Civil Rights Act of 1964* and the *Equal Educational Opportunities Act* mandate that all students be given equal opportunity and access to public education. It is reasonable to give students and parents adequate notice of high-stakes decisions that determine whether or not a high school diploma is awarded.

In order to meet the requirements of national legislation and ensure all students educational opportunity, students and parents must be given adequate notice in writing of the graduation requirements. Since these requirements determine whether or not a student receives a diploma, they qualify as high-stakes decisions and require sufficient notice.

According to Mehrens, individual students must be given sufficient notice of graduation requirements, including information about the content of the test (1993). Students cannot be required to demonstrate certain skills unless they are informed about the nature of the required skills in a timely manner. It is reasonable to notify students about the factors determining their graduation. This will enable them to make informed decisions regarding their education and take advantage of opportunities to meet the requirements.

It is reasonable to require school districts to notify parents of graduation requirements so that they may make informed decisions regarding their children's education (Mehrens, 1993).

Notification to parents and students is consistent with Minnesota legislation and general practice in school districts. Minnesota law (M.S. 126.69 Subp. 2) currently requires school districts to inform parents and guardians in a timely way about school programs. The proposed rule builds upon current Minnesota legislation and represents a continuation of past practice in Minnesota school districts.

It is reasonable to require school districts to provide written notice in order to fulfill the requirements of record keeping. This requirement is an extension of the current practice of school districts and ensures that a student will not be deprived of a diploma without procedural due process.

3501.0120 Subp. 2 Notice of graduation requirements. No later than 30 working days after the date of the entrance or transfer of a student into the district during or after 9th grade, the school district shall provide to the parents and the student written notice of:

A. the graduation requirements; and

B. the grade in which the student shall have the first opportunity to take a test in basic requirements.

Notification of the graduation requirement and the basic requirement tests must be given within a reasonable amount of time in order to allow students to prepare for the test. Students must be provided written notice of the graduation requirement and the date of the student's first opportunity to take that test. This notice must be received no later than 30 working days after the date of entrance or transfer into the school district during or after ninth grade.

The period of 30 working days is reasonable because it grants immediate notification to parents and students so that they may make informed decisions about a student's education. A student who enters in the ninth grade will be given four years to prepare for the test (Mehrens, 1993). Four years is a reasonable period for a student to prepare for the graduation requirements; this is consistent with the period approved by the court in *Debra P. v. Turlington.*

If a student transfers into a school district after ninth grade the same notification requirements apply. Notification to these students within 30 working days will allow these students to take immediate steps to meet the graduation requirements and pass the basic requirement tests.

It is reasonable to give school districts 30 days to inform students and parents of the graduation requirements and tests. This provides sufficient time for school districts to process the information in writing and disseminate it to parents and students.

3501.0120 Subp. 3 Notice of test results and remediation opportunities. The school district shall provide no later than 90 days after a student takes a test of basic requirements, written notice to parents and the student of:

Notification of the basic requirement test results and remediation opportunities to students and parents is reasonable. The ultimate goal of the assessment is to determine the basic skills level of the individual student and, if needed, to help the student acquire the appropriate level of basic skills necessary to function as an independent adult. In order to achieve this goal, students must be informed in a timely manner of their progress and learning opportunities.

It is reasonable to require the school district to provide written notice to the students and parents within 90 days after a student takes a basic requirement test because students who do not pass the basic requirements tests must be given adequate time to enter remediation and/or prepare to retake the test if necessary (Mehrens, 1993). The provision of 90 days gives the school district an adequate amount of time to process and disseminate the test results. If the district has opted to administer the state test, 90 days is sufficient time for the state to score and return the test to the school district.

3501.0120 Subp. 3. A. basic requirement test results; and

It is imperative to inform parents and students in a timely manner of the basic requirements test results. Students and parents must know the student's level of performance on a basic skills test in order to make informed decisions for the student. Without notice of the basic requirement test results, parents cannot direct the education of their children and assist them in learning basic skills (Phillips, 1993).

3501.0120 Subp. 3. B. consistent with part 3501.0050, subpart 3, if the student is in the graduating year:

(1) the process by which a parent or student can request additional testing and testing accommodations after April 1; and

It is reasonable to inform parents and students of the process by which students and parents may request an additional testing opportunity with or without accommodations. Accommodations may be beneficial to some students who do not qualify for special education, 504 categorization, and are not LEP. A few students may experience test anxiety or they may have some unusual circumstance that prevents them from demonstrating their ability under standard conditions. It is reasonable to require districts to consider requests for accommodations from any senior student because the number of students requesting them is likely to be small. That brings the feasibility of providing accommodations within reach of a district without incurring undue expense. Before the final administration of the test, the district must have considered each individual circumstance and attempted to provide a means for students to demonstrate abilities they possess.

It is reasonable to notify students and parents after April 1 of the student's graduating year. Students and parents are given time to request additional testing opportunities and/or accommodations before the student's intended graduation date. The test can be held in time for the student to graduate with his/her class. The April 1 date also allows adequate time for the routine annual testing and the notification of results to have occurred in the student's graduating year.

3501.0120 Subp. 3. B.(2) how a parent or student can appeal the district's decision in subitem (1).

It is reasonable to provide notice to parents and students of how they can appeal the district's decision in subitem (1) of the proposed rule. This provision meets the requirements of due process for all students as mandated in national legislation. Procedural due process requires that students and parents be given an opportunity for hearings or appeals (Mehrens & Popham, 1992).

3501.0130 STUDENT RECORDKEEPING

Under the present credit-based system, records of credits attempted and earned, class grades achieved, and individual standardized test scores are kept on an individual student record. During the student's school years, this record provides information

about the student to counselors and other school professionals who will assist the student's educational pursuits. The records may also be used after graduation to provide information for post-high school admissions and employment. If the student moves, these records are transferred from school to school so that accomplishments of the past can be credited to the student. This rule's requirement that districts maintain records of individual student accomplishment of graduation requirements (part 3501.0120) accomplishes the same purposes: it provides official documentation and facilitates the transfer of data. The record also verifies that a student being denied a diploma has had more than one opportunity to take the test, as was found to be an important criterion in the *Debra P. v Turlington* decision.

3501.0130 Subpart 1. Test results. The district shall keep a record on each student that includes:

A. the basic requirement tests taken; and

B. the results of the most recent basic requirement tests given.

This information will provide evidence of each test taken and will assist the district in evaluating the student's situation, should a request for an additional test with accommodations be filed during the senior year. By looking at the record, the district can determine what additional opportunity might allow the student to be successful. If a diploma is denied, being able to show that the student has had different types of assessments strengthens the decision that the student has been unable to demonstrate the required ability.

3501.0130 Subp. 2 Student progress. Individual student progress shall be reported on a student record as described in items A to D.

This section explains how the record for each student will indicate the status of the student. The state recognizes that special circumstances require exceptions to be made for individual students regarding any state standard. It is possible to allow students to pass the basic requirement under different conditions so long as the record accurately indicates the differences in the conditions. Therefore, the record of students who have passed under conditions that alter the standard will have a notation on their record. This maintains the integrity of the record for the use of school officials, employers, and postsecondary admissions personnel.

This provision will improve the situation created by the current record-keeping system in which the same grades can be given for widely different levels of achievement. To make this system result-oriented, the state must insist that results are reported accurately. The following system ensures that the record will convey accurate information.

3501.0130 Subp. 2 A. "Pass-state level" shall be noted on the record of a student who passes a basic requirement test under standard conditions or with an accommodation. The record for students passing with an accommodation shall not be different from the records of students passing the test under standard conditions.

"Pass-State" indicates that the student has passed at or above the level required by the state for the achievement of the standard. The test that the student passed was given either under standard conditions or with accommodations that did not alter the standard.

3501.0130 Subp. 2. B. "Pass-individual level" shall be noted on the record of a student who passes a basic requirement test with a modification established in the IEP or section 504 accommodation plan in accordance with part 3501.0090.

"Pass-Individual" shows that the student has passed a standard that has been modified through an IEP or a 504 plan. The standard may be very much different from the state standard. The record will not specifically show what the difference is, but the user of the student record will know that a significant alteration was made.

3501.0130 Subp. 2. C. "Pass-translation" shall be noted on the record of a student who passes a basic requirement test that has been translated into a language other than English and has not been validated by the state as a state test with a set passing score.

"Pass-Translation" indicates that the student has passed a test that has been translated into a language other than English. If the test has been translated and the passing score has not been statistically validated as comparable to the state standard, there is no way of knowing exactly what performance standard was applied. This notation notifies the user of the student record that an unusual condition existed.

3501.0130 Subp. 2. D. "Exempt" shall be noted on the record of a student who has been exempted from a basic requirement test.

"Exempt" shows that the student has been excused from meeting the standard through an IEP or a 504 plan. It also marks the record of a student who is attending a school in which the primary language of instruction is English for less than three years and for whom a translation of the test has not been made available. If the student completes all other graduation requirements during that three-year period, the student may graduate with this notation.

This recordkeeping provision has been developed with the participation of pilot sites, colleges, counselors, and employers. They believe this information will be reasonably efficient to record and will be useful to those who need the data. The Special Education Advisory Council and special educators in the pilot sites have been involved extensively in the decision about how to report achievement of alternative requirements for special needs students. Actual use of the recordkeeping system has been implemented in the pilot sites and is available in a computer data-entry format designed by pilot sites and the department. The program is expandable to include future graduation requirements as well.

3501.0140 TEST ADMINISTRATION

3501.0140 Subpart. 1. Testing conditions. The school district shall administer the test that the district chooses from the options given in 3501.0060 for testing a basic requirement under standard testing conditions defined by the developer of the particular test using the directions provided with the test. Test administration with

accommodations or modifications to standard testing conditions shall occur only in accordance with part 3501.0090 or 3501.0050, subpart 3.

This provision is needed to ensure that appropriate directions are followed for each type of test being given.

A test administrator's manual will be provided by the distributor of the state test. These procedures must be followed whenever the state test is used. However, when other tests are used, it is reasonable for districts to use the directions developed specifically for that test. Variations may occur such as the amount of time allowed for the test, the use of calculators in a mathematics test, or in instructions about how to record the answers.

The directions of the test manual constitute standard testing conditions, which are required for students to achieve the status of "Pass--state level". All changes in that procedure should come through IEPs or 504 plans or the provision for LEP students. The provision is needed because it notifies districts about the importance of administering tests properly in order to maintain the integrity of the standard.

3501.0140 Subp. 2. District testing plan. The district board shall annually adopt and publish a basic requirement test administration plan. This plan shall be filed with the department and delivered to all households in the district by October 15 of each year. At a minimum, the plan shall include:

This provision puts into place a monitoring system for district test administration plans. The plan is to be a dynamic document, reviewed each year, and published to the community as well as sent to the department. This type of plan has been required for the past several years as part of the Planning, Evaluation, and Reporting law (P.E.R.). The process of reviewing and updating the plan will help districts maintain continuity when staff members leave and will allow attention to be called to needed improvements. The plan will lay out for the public the entire testing system for the basic requirements. Delivering the plan to all households in the district provides ample notice to parents of students of all ages about the basic requirements for graduation. With full information available each year, the newness of the basic requirements will become less problematic for communities after a year or so of implementation.

3501.0140 Subp. 2. A. the graduation requirements;

The plan will notify all parents of the current graduation requirements. Especially during the next few years when new graduation requirements will be phased in gradually, keeping the community informed about the requirements that affect their own students will be very important.

3501.0140 Subp. 2. B. the test options that the district chooses to use to test the basic requirements;

The testing options that the district has chosen to use must appear in the plan. Parents are entitled to know in advance how the district intends to test students. This requirement is needed to ensure that districts have gone through the process of thinking through the entire sequence of testing.

3501.0140 Subp. 2. C. in what grade the test of a basic requirement shall first be offered;

Parents and students are entitled to know the grade level in which the students may first take a test in a basic requirement. That knowledge will help to plan students' schedules and guide pre-test preparation.

3501.0140 Subp. 2. D. how many opportunities a student shall have to retake tests of basic requirements during each year;

Districts need to decide in advance how many times basic requirements tests will be offered during a school year, once the first test of a requirement has been given. This provision is needed to prevent last-minute decisions to add test opportunities which would be unfair to those who would be unaware of such opportunities. The plan should be carefully considered, adopted, and then followed.

3501.0140 Subp. 2. E. the opportunities for remediation for a student who has not passed tests of the basic requirements;

Providing the public with information about opportunities to remediate when students fail a basic test is critical to the fairness of this rule. No matter how many previous opportunities to learn have been provided, the students must have another chance to learn the material. Publishing the remediation opportunities will force districts to develop a long-range plan. This process is likely to result in improved opportunities for students and greater fairness in the administration of the rule.

3501.0140 Subp. 2. F. the process used by the district for reviewing the test items of a local test in a basic requirement to determine that the material does not offend or disadvantage any particular group;

If a district has opted to create a local test, it is important that the district employ some means of reviewing and revising test items that are biased. The mandate to publish that process will ensure that districts have such a process in place. The publication of the process will also assure the citizens that this matter has been taken care of in a formal manner.

3501.0140 Subp. 2. G. the process for requesting an additional testing opportunity and accommodations for a senior who has met all other graduation requirements but has not passed one or more basic requirements;

The special process for requesting an additional test, perhaps with accommodations, during the last weeks of the senior year should be publicized widely so that parents and students know the opportunity exists. The process should also be formally set up by the district with distinct guidelines concerning dates for application and for responses to the applications. Placing this provision in the fall public report ensures that plans are in place well in advance.

3501.0140 Subp. 2. H. the process for appealing the district's response to requests in item G; and

Having formal processes in place to give reasonable audience to individual requests is an important part of this rule. The withholding of a high school diploma on the basis of test results is regarded as a serious high-stakes consequence, and the severity of this action is new to the citizens of Minnesota. The public must be well informed about the established process for requesting further consideration of a request that has been denied through the avenues initially set up by the district.

3501.0140 Subp. 2. I. how to report breaches in test security procedures to the district and the department.

The public is invited to assist in the enforcement of this rule by reporting known breaches of security to the district and the department. Perhaps the only way the people will know of this responsibility is through the annual plan issued by the district. They must be made aware that such a process exists.

3501.0150 TEST SECURITY

3501.0150 Subpart. 1. Security requirements. When administering tests for the basic requirements, the district shall observe the following test security measures:

The security of the basic requirements tests is crucial to maintain fairness in the testing process and reliability and validity of test results. The purpose of test security is to ensure that no student will have an advantage over any other student taking the test.

Best practice in assessment dictates that reasonable efforts should be made to assure the validity of test scores by eliminating opportunities for test takers to attain scores by fraudulent means (AERA/APA/NCME, 1985).

Test security provisions outlined in the rules are reasonable because procedures for maximizing test security (A.-D.) have been determined by MDE staff based on test security practices successfully used in other states. A survey of test security procedures in other states was undertaken and the most important and successful practices were incorporated by this rule. Recommendations regarding test security from Susan Phillips (1993) were used as a framework for the development of the Minnesota Basic Requirements Assessment Security procedures.

3501.0150 Subp. 1. A. all test booklets, answer sheets, and test materials shall be placed in locked storage before and after the test administration;

This precaution is needed because schools are not used to observing stringent security for state tests or for published tests. Tests such as these usually are not part of the student's grade, so they are seldom considered worth stealing. Prior to this rule it has been common to see such tests lying on teachers' desks or standing in boxes in the hallway. It is reasonable to expect school staff to find safe, locked places to store the tests.

3501.0150 Subp. 1. B. the tests, testing materials, and answer sheets are nonpublic data under Minnesota Statutes, section 13.34;

This provision of the statutes provides the standard answer to anyone other than a test-taker who asks to see a basic requirement test. District staff should not show the tests to anyone. They may exhibit test specifications and sample test items as needed. The actual tests are not open to inspection at any time.

3501.0150 Subp. 1. C. no copies of test booklets or answer sheets shall be made; and

Rather than try to define legitimate use of test copies, this provision prohibits copying itself. The school staff may not make a copy of the test for future reference. Having this provision in the rule allows those who know of such copies to have a basis for reporting a violation.

3501.0150 Subp. 1. D. school districts shall report any known violations of test security to the department. The department shall receive reports of violations of test security from anyone with knowledge of such an incident.

This provision requires districts to inform the department of security violations rather than simply address the matter themselves. The department may also receive such reports from anyone in the community. If a citizen reports a violation, and the district also reports it, the department can make a more informed judgment. This provision is needed to keep district personnel from ignoring violations or from attempting to prevent embarrassment by refusing to acknowledge a serious problem.

3501.0150 Subp. 2. Security violations. The department shall investigate any reported incidents of breaches in test security. The consequences of a violation in test security may include:

The department's response to reported violations is spelled out in this provision. The department has no option to ignore reported violations. Each must be investigated. It is necessary to include this provision in the rule to validate the department's role when a violation occurs. It will also prevent partiality in treatment of districts by the department.

3501.0150 Subp. 2. A. the invalidation of test scores if a violation is found to justify serious questions about the integrity of the results of the test administration; or

A logical consequence of many security violations is that a number of students have an unfair advantage in taking the test. Since it may be difficult to sort out which students have this advantage, the department may find it necessary to invalidate an entire set of scores. This means that none of the students who took the test during the administration when the violation occurred will have passed. The provision limits the discretion of the department to invoke this consequence by stating that this can occur only when there are serious questions about the integrity of the results of the group taking the test.

3501.0150 Subp. 2. B. other reasonable sanctions that are necessary to preserve the security and confidentiality of future tests and test administrations.

This provision is needed to allow the department to adjust the consequence of a violation to fit the nature and severity of the violation. The purpose of the consequence is the future protection of the integrity of testing situations. That would indicate that punishment is not the spirit of this provision. Rather it focuses on achieving an improved situation in the district where the violation occurred.

3501.0160 DISTRICT REPORTING REQUIREMENTS

Proposed reporting requirements are needed.

The P.E.R. law (M.S. 126.663, 1994), currently requires district testing, evaluation, findings, and local plans for improvement to be reported to both the state department and the community. Under the P.E.R. law, local school districts are required to report P.E.R. committee members, learner outcomes for each subject in the curriculum by grade and course level, results of cyclical program evaluation (by either student performance methods or program effectiveness methods), district improvement plans and a summary of actions taken to accomplish improvement plans from previous years, district wide testing programs, Assurance of Mastery (A.O.M.) information, procedures for parental review of curriculum, and consumers' opinions. Curricular areas are reviewed and assessed, but not individual student achievement. Through this P.E.R. study and report, communities and the state brought a measure of accountability to schools, at least in the areas of curricular updating and assessment. Note should of course, be made of the fact that accountability for individual student results -- even with A.O.M. -- was lacking.

The P.E.R. reporting requirement is scheduled to be repealed in 1996. This leaves no academic reporting required of districts, despite the call for increased accountability, both for individual and aggregated achievement.

The proposed rules extend the requirement for the district's report to the state and community. This first phase of the graduation standards rules require only reporting of summaries of student achievement. It is anticipated that additional reporting will be required as the graduation requirements increase.

Proposed reporting requirements are reasonable.

3501.0160 A. The district shall report the information in item C to the department annually by October 15 in a format to be determined by the department.

Requiring that the district file a report with the department is reasonable because, in so doing, the district assesses its own students' progress toward graduation standards and provides data by which the state may evaluate the status of students in each high school grade level throughout the state. This is essential to providing accountability for the progress of the students throughout the state system. Such reports will facilitate the accountability which Minnesotans are demanding of their students and schools.

While in other states this data has been readily available to those state agencies because students have been required to pass a single examination administered by the states themselves, Minnesota's provision for multiple tests, not all of which will be state-scored, needs a system of reporting which will allow the department to track the progress of the state's aggregated student population and, thus, the effectiveness of the standards. From the collected data, both current status of students and multiple-year trends in student achievement of the requirements can be examined.

By October 15th, districts have gathered and charted the data on students, including transfer students, students from the previous school year and their progress toward the standards. This is an excellent time of year for schools to have collected this data and use it for their own planning for remediation and testing needs during the school year and the years to come.

The department will assemble representative school reporting personnel and others involved in recordkeeping to design a report format that is user-friendly and most efficiently accomplished by districts.

3501.0160 B. The district shall prepare and disseminate annually by October 15 a public report of the information in item C, through the newspaper officially designated for school district notices or through publication sent to all households in the district.

Requiring that districts report data annually to local district residents is reasonable because it parallels the annual P.E.R. report timelines on which districts have successfully operated during the last decade in providing information to local district citizens about the accomplishments of the students enrolled in their schools and thus providing accountability information on a local level. Without this report, local district residents would not have current information about the results achieved by their local schools and students. This information is essential to informed local decision-making.

3501.0160 C. The reports required in items A and B shall include:

(1) the number of students enrolled at each grade level 9 through 12 according to the end of the year Minnesota Automated Reporting Student System (MARSS) report;

(2) the number of students at each grade level 9 through 12 passing each basic requirement at the state standard level;

(3) the number of students at each grade level 9 through 12 passing each basic requirement at an individualized level under an IEP and a section 504 accommodation plan;

(4) the number of students at each grade level 9 through 12 passing tests in each basic requirement that has been translated into a language other than English;

(5) the number of students at each grade level 9 through 12 exempt from testing in each basic requirement; and

(6) for grade 12 of the previous year only, the number of students currently denied a high school diploma because of not passing the state standard for a basic requirement when all other graduation requirements have been met.

It is reasonable to require districts to report the specific data items in C.(1) - C.(6) because these specific pieces of information will, in aggregate, provide the information needed to assess the effectiveness of the districts, individually and in statewide aggregate.

Item C.(1) the number of students enrolled in grades 9-12 by the end of the year, provides the baseline number of students whose achievement is being considered. Without this information, the total field of students whose progress is being considered would not be known. This number is readily available in school districts by October 15th as final records have been completed and audited by that time. The end of year report to MARSS is easily available for use.

Item C.(2) requires reporting the number of students in grades 9-12 who have passed each basic requirement at the state level. Without this data, the communities and the state could not determine how many students are achieving the published standards. This is reasonable because these school data have been gathered and charted by October 15th and will be needed to plan for student programming anyway.

Item C.(3) requires reporting the number of students in each of grades 9-12 who have passed each requirement at an individual level. This information provides accountability for special needs students and provides data which local schools and the state may use to assess the effectiveness of education for students in special education and 504 programs.

Item C.(4) requires a reporting of the number of students who have passed tests which were translated into other languages. This information provides accountability for effective provisions for students with limited English proficiency.

Item C.(5) requires reporting the number of students who have been exempted from basic requirements, thus providing the data on which to determine that students with special needs have been provided for effectively and nondiscriminatorily. It will also give effective data regarding the number of students locally and across the state whose English proficiency is so limited that they have been exempted.

Item C.(6) requires reporting the number of students who were denied diplomas in the previous year solely as a result of their having failed one or more basic requirements. This is reasonable as it provides the information to determine the net effect of the results-oriented standards on graduation. Without this information, it would be impossible to assess the number of students whose graduation is being denied because of the existence of the basic requirements. This is reasonable because it provides information with which a school (and the state) may determine how many students are not succeeding in remediation programs and how many need other assistance. Schools have this information readily available by October 15th, not only for those who graduated the previous June, but also for students who achieved the requirements and graduation during the summer following their anticipated graduation data.

With the data collected, the department may conduct research into causes and effects of the basic requirements and assist districts in providing programs which continue to enhance academic achievement results.

It is reasonable to require districts to report the specific data items in C.(1) - C.(6). The legislative mandate (M.S. 121.11.7C) requires that "the state board shall periodically review and report on the assessment process and student achievement. . . ." The proposed rule requires that these data be gathered by the districts and reported to the local community and the state, enabling the state to meet this mandate. In addition, the reporting requirements replace P.E.R. and strengthen the reporting of local assessments by adding the component of reporting achievement against consistent standards.

Because the proposed rule focuses on student achievement, it is necessary for districts to report results of testing. This gives information about the impact of statewide standards and required demonstrated competency on students and schools. This information will contribute a feedback link in the accountability system, as schools, MDE, and the public have the annual "success rate" to review. The reports will also serve as data for the state board to "periodically review and report on the assessment process and student achievement with the expectation of raising standards and expanding high school graduation requirements" (M.S. 121.11.7C).

Other states with basic requirements have a single, statewide examination which students must pass to graduate. Because these are scored centrally, the scoring site can prepare the report of student achievement on the test. Minnesota's law allowing a variety of assessments decentralizes scoring and makes local data-gathering and reporting necessary.

This process is reasonable because it merely extends the reporting of needed and useful data beyond the date of the repeal of P.E.R. Reports will give the district's citizens and the state data for making decisions about school improvement needed and the level of student success.

Goals 3 and 5 of Goals 2000 call for increasing student achievement. The report data will be also used in assessing Minnesota's fulfillment of these goals.

The proposed rule (3501.0150), requires far less data than did previous P.E.R. reports. Because schools would, as a matter of professional practice, need to keep these records about students, reporting this information will not be a burden, and will provide effective achievement data needed for continuous decision-making to improve each local school and the statewide system as a whole.

3501.0170 REQUIRED DOCUMENTATION FOR PROGRAM AUDIT
The school district shall maintain records necessary for program audits conducted by the department.

Local school districts are currently audited annually for compliance with state laws and effective use regarding school funds (M.S. 123.71: Publication of Financial Information). In addition, periodic audits are done in each local district to assess

compliance with federal programs including nutrition, special education (M.S. 124.311, 124.32, 124.321), and other discrete initiatives. These audits do not assess student achievement, but rather audit the expenditures and programs of each local system. Since 1976, when the Minnesota Legislature endorsed and encouraged all school districts to develop a curriculum review process which involves community, leads to program improvement, and provides accountability to the public, the P.E.R. [M.S. 126.661 - 126.681 Planning, Evaluating, Reporting] process has been a staple of Minnesota public education.

School districts have submitted the annual P.E.R. report of their curricular review, testing results, and plans for improvement, both to their local communities and to the department. In addition, many schools involve themselves in accreditation processes or other external reviews such as the North Central accreditation process. These studies and reports provide information of ongoing study and planning and allow state and local processes to know that the schools have been in compliance with P.E.R. legislation -- the accountability element of the credit-based system.

The audit, a results-oriented extension of the P.E.R. process, must focus on data gathered and recorded by the local district, evidencing compliance with all aspects of these rules. The rule says that districts must "maintain records necessary for program audits" (3501.0160) and that audits will be "conducted by the department." Site visits by the state to monitor for compliance with the proposed rules provides assurance that assessment is being done consistently and effectively, that learning opportunities are being provided, and that schools are fulfilling their roles in providing accountable, results-oriented policies and procedures which serve all students. Through these audits and the data they examine, students, parents, and the public are assured that the intent and integrity of the system are upheld consistently despite local variations in the methods and assessments selected.

Critical to realizing the benefits of this audit are the requirements that schools keep all necessary records for effective state review.

3501.0170 The records must include documentation that:

In order that schools statewide may be held accountable to individual students for consistent learning and assessment opportunities, it follows that local districts must be held accountable by the state for consistent program standards and assessment. This is reasonably accomplished through an audit of local programs by the state. The requirement of local documentation for these program audits (3501.0160) provides assurance of consistent implementation of the required standards throughout the state, because each district must provide evidence on audit.

3501.0170 A. tests used for the basic requirements comply with parts 3501.0060 to 3501.0080;

This shows evidence that the district used test options in compliance with this rule to assess the statewide standards. Without this, the state cannot be assured that the local district is assessing the standard accurately or student performance consistently with other schools in Minnesota;

3501.0170 B. the process that the district used to set the passing scores on approved commercially published tests or local tests meets the requirements of parts 3501.0070 and 3501.0080, respectively;

Without this, the state cannot be assured that passing scores used to demonstrate competency in the basic requirements are consistent with state standards and that students are being held accountable for expectations which are uniform and consistent across the state;

3501.0170 C. required notifications to parents and students meet the requirements of part 3501.0120;

Notice ensures knowledge of graduation requirements and adequate time for students to meet the required performance standards by their anticipated graduation dates as a condition for fair enforcement of graduation requirements;

3501.0170 D. required student records meet the requirements of part 3501.0130;

Without this, the state cannot effectively examine trends in student achievement or verify that local schools are assessing individual student achievement. The state will also use this data in its consideration of raising and passing scores to assure continuous improvement but also to assure that the performance standards are reasonable in comparison to actual student performance;

3501.0170 E. the district's process for additional testing of students meets the requirements of part 3501.0050;

Without this provision for additional testing, students who have met every other requirement for graduation and who might have graduated had they been provided with an additional testing opportunity may have to wait until the following year to retake the exam and graduate, thus incurring unnecessary additional cost both to the student and the school;

3501.0170 F. test security procedures comply with part 3501.0150;

Without test security, test results are neither valid nor reliable, so an accurate assessment of student achievement is not possible. Lacking verification of test security, schools could not accurately determine whether or not a student has met the standards;

3501.0170 G. local district decisions regarding testing accommodations, modifications, and granting exemptions are in compliance with parts 3501.0090 and 3501.0100;

Without this, the state would not be able to verify that the decision-making process at the local level serves the needs of individual students or that decisions providing fairness for special needs students are made in a timely or adequate manner. As a result, special needs students may not receive the learning or testing opportunities they need to meet the standards;

3501.0170 H. the school district's curriculum and instruction provides appropriate learning opportunities in the basic requirements in compliance with part 3501.0110;

Failure to gather this data would endanger assurance of fair practice, as required in other states' court decisions regarding enforcement of basic requirements, such as Florida's *Debra P. v. Turlington* decision; and requiring districts to maintain these data is a continuation of the alignment of curriculum that has been under P.E.R. and A.O.M.

3501.0170 I. remediation plans for students are on file consistent with part 3501.0110;

Without this data, the state could not assure that students who have difficulty meeting the standards have received adequate opportunities to learn and to meet the standards. Evidence of a remediation program will verify that individual students have received the attention and assistance they need to qualify for graduation;

3501.0170 J. the basic requirement test administration plan complies with part 3501.0140, subpart 2;

Without this information, the state cannot assure fair notice of testing opportunities to all. A districts failure to comply with these rules could result in students being unfairly deprived of a diploma.

3501.0170 K. the documentation for students granted accommodations or exempted from testing complies with part 3501.0090;

Without these records, the department cannot ensure that local policies, programs, and procedures comply with these and other state and federal provisions for special need students.

3501.0170 L. the assessments and documentation of performance for students granted modifications of statewide standards comply with part 3501.0090, subpart 2, item C; and

Without these records the department cannot ensure that the district has complied with the assessments and documentation of performance for students granted modifications of statewide standards comply with part 3501.0090 subpart 2 item C.

3501.0170 M. the district's process for testing considerations for LEP students complies with part 3501.0100.

Without these records the department cannot ensure that the district has complied with the provisions for limited English proficient students.

Without gathering the data for these 13 (A.-M.) aspects of the audit, the department could not determine that local policies and procedures comply with the rule and provide uniform and consistent implementation of the basic requirements, the standards, and the

testing provisions throughout the state. By gathering and examining this data, statewide accountability to students and the public can demonstrated.

The proposed audit is comparable with P.E.R. processes which local schools have already successfully implemented. It is consistent with regional, state, and federal school monitoring and compliance methods, and has been designed, as have all aspects of these rules, through involvement of the state Goals 2000 Panel, the State Curriculum Advisory Committee, the Graduation Standards Executive Committee, school staffs, educators, parents, and citizens throughout the state.

Because schools already keep records of their systems and of their individual students, because annual reporting processes are already in place, and because schools are accustomed to auditing visits for other fiscal and special programs, the audit proposed in these rules will provide convenient and effective monitoring and compliance data as well as achievement data needed for continuous decision-making to improve each local school and the statewide system as a whole through procedures which simply extend processes already in place.

3501.0180 PASSING SCORES FOR STATE TESTS OF BASIC REQUIREMENTS.

3501.0180 Subpart 1. Setting scores. The scores in this part are established for each grade 9 class beginning with the class entering in 1996. Once set, the basic requirements passing scores shall not change for a particular group of entering grade 9 students.

Each state test of a basic requirement has a performance standard, or passing score, set by the state through a decision-making process established by the state board. The establishment of a process for determining the passing score is recommended by national experts.

> The state board of education should establish a passing score through administrative rule based upon a recommendation by the superintendent of public instruction with the advice of appropriate committees (Mehrens, 1993).

The process used in Minnesota was developed by the assessment staff of the department after consulting the practices of other states and the opinion of experts. The process was reviewed by Pilot Site Directors, the Technical Advisory Committee, a national expert in the field of assessment, and the Graduation Standards Committee prior to adoption by the State Board.

The process was a nationally recognized judgment procedure called a Modified Angoff Procedure. The use of the Angoff method is supported by assessment experts:

> As the review of the literature indicates, a multitude of methods exists for setting standards. Those that are considered most frequently are continuum models. Within this category, those used most are test-centered models. Historically, the preferred test-centered model has been the Angoff approach because it is easy to understand

and implement, provides reasonable standards, and has the best psychometric characteristics (Mehrens, 1993).

As a first step toward setting achievement levels on NAEP, the Governing Board selected the Angoff method, the most widely used and straightforward of the judgmental methods. *Setting Performance Standards for Student Achievement*, A Report of the National Academy of Education Panel on the Evaluation of the NAEP Trial State Assessment: An Evaluation of the 1992 Achievement levels (National Academy of Education, 1993).

The data used in setting the standard were collected during pilot tests of each basic requirement. A representative sample of students from the entire state plus the largest feasible number of students from each of four ethnic groups were tested during the piloting process. The ethnic groups reported separately included African American, Native American, Asian American, and Hispanic American. The adopted process included three steps all of which actually occurred in determining the state standard:

1. A group of 20 to 40 teachers and experts from the content area of each basic requirement was assembled. The group was representative of the state by region, ethnic group, and gender. Their purpose was to establish a passing score based upon direct knowledge of the students and their subject matter content. They received training in the Angoff process. As part of the Angoff process they were asked to envision a borderline group of students, those who would probably have some difficulty passing a basic requirement. In relationship to this group of students, they completed the following five steps, first on the basis of what they think would occur if that group were tested this year and secondly on what they projected as possible if teachers and students were to focus their attention more directly on the content of the test:

a. Each made and recorded an independent judgment for each item on each form of the test regarding the percent of students in the borderline group who would get the item correct.

b. They received data from the field test showing how many students in the total group tested actually got the item correct.

c. They discussed the item with small groups to explore the reasons for judgments that seemed extremely high or low. Judgments were recorded again.

d. The judgments on the items from the small group were shared with the entire group, and discussion of differences occurred.

e. Each made a final individual judgment on the item.

The percentage estimates from the individual judges were averaged. Then the average percentages of the items were averaged to calculate the passing score on the total test. This score became the recommendation of the committee to the Graduation Standards Committee.

For example, the reading content-area experts answered the following questions regarding the items on the reading test:

(1) What percent of current 10th grade borderline students could get this item correct? Answer: 66%

(2) If instruction were focused upon the outcomes of the test, what percent of 10th graders in the borderline group who would be eligible to graduate in the year 2002 would get this correct? Answer: 73%

(3) If instruction were focused upon the outcomes of the test, what percent of current 10th grade borderline students would get this item correct by the end of the 12th grade? Answer: 77%

2. The Graduation Standards Committee considered the recommendation of the content group as well as the probable impact of alternative passing scores on the students and schools. They used frequency distributions for the pilot tests to assist them in estimating the probable impact on schools. The data was presented in terms of the performance of all students in the pilot sample, various sizes and types of schools, gender, and ethnic sub-groups.

The committee is composed of representatives from major educational organizations, unions and job categories. It also includes representatives from business and ethnic groups. The committee has guided the process of establishing the graduation standards for a number of years, and they have been charged with making recommendations to the State Board on significant decisions.

The members of the committee made initial independent judgments on the proposed passing score and then discussed the rationale for each judgment. After discussion, each member of the committee submitted a second judgment. The final determinations were made by a motion to the chair of the committee.

In the case of the mathematics test, the committee submitted three passing scores, one for each ninth grade class from 1996 to 1998. In the case of the reading test, the committee reached agreement on the passing score for 1996, but they remained divided on the passing scores for later ninth grade classes.

3. The final decision on the passing score was made by the State Board. They received the recommendations of the Graduation Standards Committee and determined the passing scores.

3501.0180 Subp. 2. Mathematics. The passing score for the state test of mathematics is 70 percent for students entering grade 9 in 1996; is 75 percent for students entering grade 9 in 1997; and is 80 percent for students entering grade 9 in 1998 and thereafter.

Subp. 3. Reading. The passing score for the state test of reading is 70 percent for students entering grade 9 in 1996; is 75 percent for students entering grade 9 in 1997; is 80 percent for students entering grade 9 in 1998 and thereafter.

The desired passing score on both reading and mathematics tests was determined to be 80% of the items correct. However, because the requirement is new to students and to schools, the decision was made to allow a phase-in period of two years. In 1996 the passing score will be 70% correct, and it will increase to 75% for the ninth grade of 1997. The gradual increase is reasonable because the ninth grade class of 1996 will not have had the benefit of increased efforts by the schools to focus on the content of the tests during the years before entrance to high school. Because the score for 1998 has been released and widely publicized, the teachers of fifth graders in 1995-96 will have knowledge of this approaching challenge and have four years to work with the students prior to their first test.

The concept of an increasing standard fits the mandate and the philosophy of the standards initiative in Minnesota.

According to Minnesota Laws 1995 Article 7 Section 1, (MS 121.11, Subd. 7c (d), the State Board of Education may increase the level of achievement expected by raising the performance standard for the statewide standards in the basic requirements. "The state board shall periodically review and report on the assessment process and student achievement with the expectation of raising the standards and expanding high school graduation requirements." The legislature and board of education are committed to improving education in Minnesota. Increasing the performance standards reflects the expectation that teaching and education will improve in Minnesota.

The department has heard concerns about putting the passing score at 80%. Following are summary statements of the most frequently heard concerns followed by the responses of the department in the context of discussion carried or by the Graduation Standards Executive Committee and the State Board.

Concern: We must be cautious in moving upward so that we do not lose students along the way. Minority students, especially, have a long way to go to reach 70%. We may be overreaching reality to push the score ahead by 5 points each year.
Response: If we do not set high goals, schools will not change in order to reach them throughout the state. A low standard will encourage continued complacency. Little is done now to improve reading in the secondary schools. That practice will continue until schools regard the achievement of all students beyond eighth grade as imperative.

Concern: We are not willing to devote large amounts of resources to remediation. That will take money away from programs for students who do achieve and give even more to those who show the least potential for success.
Response: Literacy is a "must" for all students. And public schools must be ready to invest whatever it takes to guarantee that all students reach at least this functional level defined by the basic requirements.

Concern: We are not sure how to teach some of the students who will not be able to score 80% on the test. We may or may not be able to produce the improvements that the score would require.
Response: The material on this test represents survival, not a high, complex standard. We do know how to teach students to be literate. Others have demonstrated that it can

be done. We must lose no time in finding out what methods are successful elsewhere and in adopting those methods. Each graduating class puts yet another group of citizens into the society without the skill to function effectively.

Concern: We do not want to discourage students to the point that they will drop out of school because they feel they can never attain the level of the passing score. We do not trust that the system will change quickly.
Response: An improved school supplies a support system for students that provides encouragement all along the way. Early testing of students has already identified those who are having trouble. At this time the secondary schools do little with this information. If the passing score presents a challenge, they will have to support and teach students where they are instead of where the school would like them to be or assumes they are. Because the public will be watching the progress of these students very carefully, schools will make great efforts to meet the challenge.

Concern: The 80% passing scores is higher than the current achievement of many students. Based on results of the statewide pilot testing done in the Spring of 1995, many students do not possess the skills necessary to pass the basic requirements tests. Of the 11,000 10th and 11th grade students who took the reading test, 56% achieved a score of 80% or greater. Of the 9,833 eighth grade students who took the mathematics test, only 41% achieved a score of 80% or greater. Eighty percent is also slightly higher than the 77% which teachers estimated they could produce in reading with borderline students who are now sophomores and juniors. It is also slightly higher than projected by teachers of mathematics.
Response: Setting 80% passing scores reflects the Board's willingness to set high standards in order to impact the educational system immediately. Although higher than present achievement, the passing scores set by the board are reasonably close to the estimated passing scores given by the content area experts. It is reasonable to assume that given the appropriate effort by teachers, administrators and students, the scores set by the Board could be achieved for several reasons:

1. The field tests from which these results come were not high stakes tests. Students will probably perform better when a diploma is at stake. Also, because the testing process may begin as early as eighth grade, students will have four years to learn the content involved. This amount of time for remediation allows the schools enough time to work with the students involved in a variety of remedial approaches. If students are motivated by the desire to get a diploma, there is sufficient time left in their normal school years to accomplish this learning after the first official warning has been given.

2. The Minnesota state tests of the basic requirements are criterion-referenced assessments designed to evaluate a student's ability to read and to understand mathematical concepts. The content standards for the tests have been developed to represent only the basic skills that high school graduates must possess to be functional members of society after graduation. Criterion-referenced test items are of equivalent difficulty and represent those basic skills deemed essential by the content-area experts. Theoretically, students who possess the necessary basic skills should answer 100% of the items correctly since the test represents only the most essential functional skills. However, taking testing error into account, the passing mark of 80% has been set.

3. The standard seems appropriate in the content of current practices. Eighty percent correct is commonly recognized by teachers as representing mastery of content. In traditional grading systems 80% is often a "C" grade.

4. The proposed rules are reasonable because they will identify and demand remediation for all students who need help with basic skills. This rule will benefit all students who now lack basic skills by ensuring they are given opportunities to possess those skills by the time they graduate.

IX. Witnesses

John Augenblick, education finance consultant of Augenblick, Van de Water and Myers, will testify on the estimated cost to school districts to implement the proposed rules.

Sandra Eliason, director of curriculum and instruction, Edina Public Schools, Edina, Minnesota, will testify on the reasonableness of implementing the proposed rules in a district that has not been a pilot site.

Wayne Erickson, director of special education, Minnesota Department of Children, Families and Learning, will testify on the need and reasonableness of including special needs students in the graduation standards and providing special consideration for this population.

Brent Gish, superintendent, Mahnomen Public Schools, Mahnomen, Minnesota, will testify on the reasonableness of implementing the proposed rules in a small school district that is a Tier II pilot site.

Mike Latimore, education policy director, Minnesota Business Partnership, Minneapolis, Minnesota, will testify on the need for the proposed rules from the perspective of the business community.

Iris McGinnis, director of assessment and graduation standards, Minnesota Department of Children, Families and Learning, will testify on the need and reasonableness of the basic requirements of mathematics and reading and the assessment of student performance in these requirements through testing.

Jessie Montano, director, Office of State and Federal Programs, Minnesota Department of Children, Families and Learning will testify on the need and reasonableness of considerations for limited English proficient students in testing of the basic requirements.

Gary Phillips, assistant superintendent, Brainerd Public Schools, Brainerd, Minnesota, will testify on the reasonableness of implementing the proposed rules in a Tier I pilot site school district.

Mary Pfeifer, acting assistant commissioner, Minnesota Department of Children, Familes and Learning, will testify on the need and reasonableness of reporting requirements, required notification, and documentation for program audit.

Mike Tillmann, former director of graduation standards, Minnesota Department of Education, (1993-1995), and teacher in Owatonna Public Schools, will testify on the need and reasonableness of a results-oriented system for public schools.

VIII. FISCAL NOTE: ESTIMATE OF COST TO LOCAL PUBLIC BODIES TO IMPLEMENT THE PROPOSED RULES GOVERNING GRADUATION STANDARDS

M.S. 14.11, Subd. 1. requires that "if the adoption of a rule by an agency will require the expenditure of public money by local public bodies, the appropriate notice of the agency's intent to adopt a rule shall be accompanied by a written statement giving the agency's reasonable estimate of the total cost to all local public bodies in the state to implement the rule for the two years immediately following adoption of the rule if the estimated total cost exceeds $100,000 in either of the two years. For purposes of this subdivision, local public bodies shall mean officers and governing bodies of the political subdivisions of the state and other officers and bodies of less than statewide jurisdiction which have the authority to levy taxes."

The local public bodies affected by the proposed rules governing graduation standards are public school districts.

In order to provide an estimate of the cost to Minnesota's school districts for the two years following adoption, school years 1996-97 and 1997-98, the Minnesota Department of Education contracted with Augenblick, Van de Water & Myers (AVM), a consulting firm specializing in education finance issues, to do a study of projected costs of implementing phase one of the graduation standards rules. Phase one includes the basic requirements in mathematics and reading which will be required of the students entering ninth grade in 1996.

On June 30, 1995, the final report, "Projected Costs to School Districts in Minnesota Associated with Implementing Phase I of the Graduation Rule" was submitted to the department. This report accompanies the Statement of Need and Reasonableness and is available for review upon request.

The study resulted in the identification of the activities expected to be undertaken by school districts to implement the proposed rules and the estimated cost of carrying out those activities under current law and current education funding levels in Minnesota. These activities and their cost are detailed in the Charts 1 and 3 from the final report, which can be found as Appendices C and D of this document.

The following are excerpts from the final report that summarize the cost to school districts of implementing the proposed rules:

> Total cost estimate for each cost element, . . . produces a total cost of $28.4 million in 1996-97 and $36.1 million in 1997-98. Our expectation is that a significant portion of these costs, particularly those associated with staff development, can be offset by funds already committed to those activities. For example, we assume that 35 percent of the staff development funds that

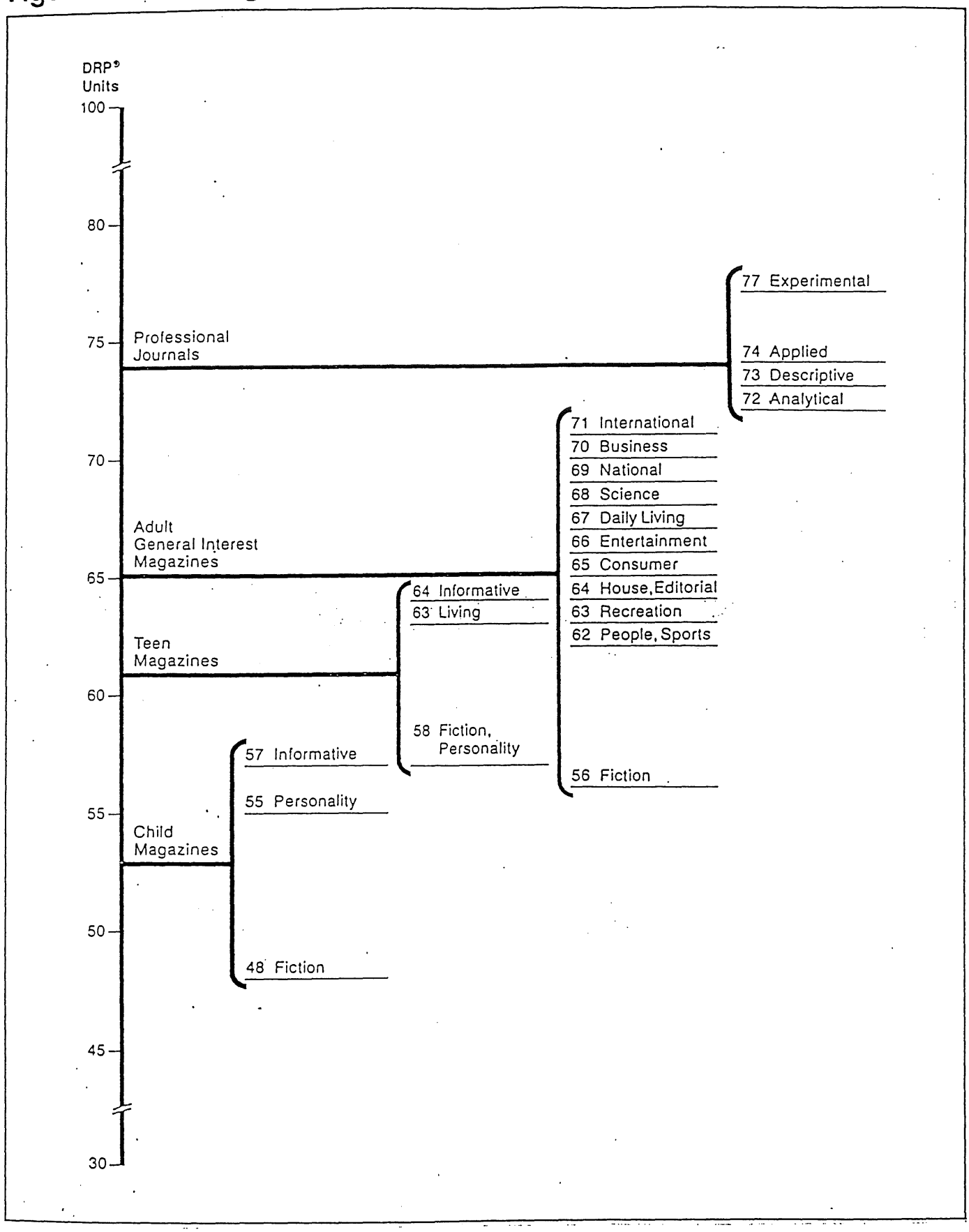
we expect to be spent in 1996-97 can be used to offset professional development costs associated with the Rule (in 1997-98, we expect that districts could devote 40 percent of their staff development budgets to activities associated with implementing Phase I).

As a result of these funds being available, the net cost of Phase I is $10.2 million in 1996-97 and $15.2 million in 1997-98. On a per student basis, this translates into $12.18 per ADM (average daily membership) in 1996-97 and $17.83 per ADM in 1997-98; in per WADM (weighted average daily membership) terms, the figures are $10.96 in 1996-97 and $16.05 in 1997-98, which is about .3 percent of the Formula Allowance in 1996-97 and .5 percent of the Formula Allowance in 1997-98 (assuming a constant level of $3,205).

Therefore, the estimated cost to local school districts on a per pupil basis is $10.96 in school year 1996-97 and $16.05 in 1997-98.

APPENDIX A

Figure 1. Average Readability of Periodicals



APPENDIX B

Table 1. Readability of Prose Samples in DRP Units

34 DRP Units

Bears are big. They need a lot of food. Bears eat meat. They eat bugs. They eat berries. They eat honey. They eat fish, too. Bears feed in the spring. They feed in the summer. They feed in the fall. Bears look for food then. They hunt. They fish. They dig roots. They pick berries. They eat a lot. They grow fat. Soon, winter comes. It gets cold. It snows. But the bears don't need to go out. They don't need food. They are fat enough. They can sleep.

39 DRP Units

A bird's wings are well-shaped for flight. The wing is curved. It cuts the air. This helps lift the bird. The feathers are light. But they are strong. They help make birds the best fliers. A bird can move them in many directions. Birds move their wings forward and down. Then they move them up and back. This is how they fly.

43 DRP Units

Many states are dry in summer. They get hardly any rain. Nearly all their water comes from melted snow. It is stored. It is kept in dammed-up ponds and lakes. It is used during the growing season to water farms and orchards. Farmers buy the water. They are told how much they will be able to get. The amount changes each year. It depends on how snowy the winter was. A farmer needs to know how much he will receive. It allows him to decide which of several crops he ought to plant. The choice is based on how much water different crops need.

47 DRP Units

The part of a beach between high and low tide is called the middle beach. It is home to many plants and animals. But life on this middle beach is hard. There is no protection against the wash of the oncoming waves. Some animals survive by digging holes in the sand. They can stay in their homes under ground. The undertow will not pull them out to sea. They are safe.

51 DRP Units

Most creatures take care to protect their eggs. The walking stick does not. It just drops its eggs, scattering them loosely on the ground. Dozens and dozens drop at a time. As the eggs fall onto dry leaves, they sound like raindrops falling. Many of the eggs do not hatch. But enough do so that the walking sticks will not die out. They have existed on earth since before the era of the dinosaurs.

56 DRP Units

The people of Greece used the alphabet of the Semites. At first the Greeks wrote from right to left and left to right in alternating lines. The Greek name for this system of writing came from their words for "ox" and "turn." The method reminded them of oxen going back and forth, plowing a field. Eventually, the Greeks wrote only in one direction, as most people do now.

60 DRP Units

The ouija board is a simple rectangular piece of wood. All the letters of the alphabet are set out in a semicircle across a long edge. The ten digits and the words "yes," "no," and "goodbye" appear below. A small heart-shaped piece of wood called a planchette is mounted on casters so it can move easily on the board. When one places his fingertips lightly on the planchette, it slides around. It moves apparently without any conscious control on the part of the operator. Its pointer is supposed to spell out the answers to questions.

64 DRP Units

Wall paintings are especially vulnerable to atmospheric change. Archaeologists know this. Hence they try to discover, before opening a tomb, whether they will find murals. Special tools have been designed for this purpose. One of the most useful is a kind of camera that can be dropped into the ground before the digging starts. If the camera indicates the presence of wall art, scientists can prepare to take steps to preserve the painting as soon as it is reached.

73 DRP Units

Hellenistic literature showed an interest in individual history and psychology, rather than man in general. Theophrastus' *Characters*, with its detailed portraits of such types as the flatterer, appeared during this time. Biography, dealing with the lives of real people, was a flourishing form. And in philosophy the emphasis was on personal conduct rather than speculation about reality.

81 DRP Units

Jefferson's preference for an agrarian society and his idealization of the independent farmer reflected a conviction that representative government required a secure and relatively prosperous economic base to function successfully. He perceived the farmer as economically independent, and thus unlikely to surrender his judgment as a citizen to the influence of demagogues. His dislike and distrust of cities derived from a conviction that urban conditions, especially for the poorer classes, forced men into such a bitter struggle for sheer self-preservation that their natural moral sense could not be relied upon to produce social harmony or to guarantee responsible citizenship.

Note: The readability calculations are based upon longer samples.

APPENDIX C

CHART 1

MATRIX OF SCHOOL DISTRICT COST ELEMENTS ASSOCIATED WITH MINNESOTA'S GRADUATION RULE WITH ADDITIONAL INFORMATION ABOUT PHASE I COSTS

	Phase In Which Cost Element Activity Will Take Place		Phase I Year	
	Phase I	Other	96-97	97-98
1. Develop and Administer Assessment Procedures				
A. Develop Basic Requirements tests and Profile of Learning assessments	✓	✓	✓	✓
B. Administer standardized tests associated with Basic Requirements (purchase tests, distribute tests, provide security, collect tests, score tests, etc.)	✓	✓	✓	✓
C. Administer state performance assessments associated with monitoring the Profile of Learning		✓		
D. Evaluate test/assessment results	✓	✓	✓	✓
E. Design and Implement procedures to deal with transfer pupils, home schools, and Postsecondary Option	✓	✓		✓
2. Provide Professional Development				
A. Inform employees of Rule requirements, expectations, procedures, etc.	✓	✓	✓	✓

From "Final Report: Projected Costs to School Districts in Minnesota Associated with Implementing Phase I of the Graduation Rule in 1995-96, 1996-97, and 1997-98," by Dr. John Augenblick and Mr. John Myers, June 30, 1995, Augenblick, Van de Water & Myers.

CHART 1 (Continued)

	Phase In Which Cost Element Activity Will Take Place		Phase I Year	
	Phase I	Other	96-97	97-98
2. Continued				
B. Provide technical assistance to employees in regard to tests and assessments, record-keeping, dealing with pupils and parents, etc.	✓	✓	✓	✓
C. Develop skills necessary to teach new curriculum elements and use new instructional techniques	✓	✓		✓
D. Develop skills necessary to deal with reorganization of a school		✓		
3. Keep Records and Advise Students and Parents				
A. Develop and operate student record-keeping procedures (including hardware, software, and other capital needs)	✓	✓	✓	✓
B. Provide information to students and parents	✓	✓	✓	✓
C. Advise students and parents	✓	✓	✓	✓

CHART 1 (Continued)

	Phase In Which Cost Element Activity Will Take Place		Phase I Year	
	Phase I	Other	96-97	97-98
4. Inform the public about the Rule, including students, parents, and others				
A. Build awareness of Rule requirements, expectations, procedures, schedules, consequences, etc.	✓	✓	✓	✓
B. Involve the public in local implementation issues	✓	✓	✓	✓
C. Report results to the public	✓	✓	✓	✓
5. Re-align the Curriculum				
A. Review existing curriculum in light of Basic Requirement and Profile of Learning expectations	✓	✓	✓	✓
B. Modify existing curriculum elements and develop new ones as needed		✓		
C. Purchase supplies, materials, and equipment	✓	✓		✓
6. Reorganize Resources				
A. Change use of time and use of personnel (at-risk, summer/ alternative schools, etc.)		✓		

CHART 1 (Continued)

	Phase In Which Cost Element Activity Will Take Place		Phase I Year	
	Phase I	Other	96-97	97-98
6. Continued				
B. Use technology in the delivery of academic services (including the purchase of hardware and software and the retro-fitting of facilities)		✓		
C. Provide linkages between schools and homes, communities, and workplaces		✓		
D. Hire new teachers and others	✓	✓		✓
7. Provide Remedial Services to Students				
A. Use tests and assessments as diagnostic tools	✓	✓		✓
B. Provide services during school time	✓	✓		✓
C. Provide services during "non-school" time, such as weekends and summer	✓	✓		✓

CHART 1 (Continued)

	Phase In Which Cost Element Activity Will Take Place		Phase I Year	
	Phase I	Other	96-97	97-98
8. Reap Savings Throughout the Education System				
A. Improve the use of employee time (increase morale, reduce sick time, focus teacher time, etc.)		✓		
B. Reduce the need for remedial services beyond high school (by colleges and businesses)		✓		
C. Make the system more efficient by increasing pupil performance relative to cost.		✓		

APPENDIX D

CHART 3

SUMMARY OF ESTIMATED COSTS ASSOCIATED WITH IMPLEMENTING PHASE I OF THE GRADUATION RULE

Cost Matrix Element	Year 1996-97	1997-98
Element 1		
1A	$30,000	$31,500
1B	$674,382	$851,117
1C	--	--
1D	$398,250	$539,760
1E	--	$404,820
Total	*$1,102,632*	*$1,827,197*
Element 2		
2A	$15,262,180	$7,947,940
2B	$6,104,818	$6,358,240
2C	--	$452,740
2D	--	--
Total	*$21,366,998*	*$14,758,920*
Element 3		
3A	$1,013,325	$242,320
3B	$805,749	$623,892

From "Final Report: Projected Costs to School Districts in Minnesota Associated with Implementing Phase I of the Graduation Rule in 1995-96, 1996-97, and 1997-98," by Dr. John Augenblick and Mr. John Myers, June 30, 1995, Augenblick, Van de Water & Myers.

CHART 3 (Continued)

Cost Matrix Element	Year 1996-97	1997-98
Element 3		
3C	$1,061,154	$1,545,080
Total	*$2,880,228*	*$2,411,292*
Element 4		
4A	--	--
4B	--	--
4C	--	--
Total	--	--
Element 5		
5A	$3,052,545	$5,443,380
5B	--	--
5C	--	$817,760
Total	*$3,052,545*	*$6,261,140*
Element 6		
6A	--	--
6B	--	--
6C	--	--

CHART 3 (Continued)

Cost Matrix Element	Year 1996-97	Year 1997-98
Element 6		
6D	--	$9,442,160
Total	--	*$9,442,160*
Element 7		
7A	--	--
7B	--	--
7C	--	$1,355,200
Total	--	*$1,355,200*
GRAND TOTAL	$28,402,403	$36,055,909
Funds Available to Districts to Pay for Phase I Costs:		
Staff Development[1]	$14,156,277	$16,375,537
Federal[2]	4,000,000	4,500,000
Total Offset Funds	*$18,156,277*	*$20,875,537*
Net Cost to Districts	$10,246,126	$15,180,372

CHART 3 (Continued)

Net Cost to Districts per ADM[3]	***$12.18***	***$17.83***
Net Cost to Districts per WADM[4]	***$10.96***	***$16.05***

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1 Assumes 35 percent of 1996-97 funds (40 percent in 1997-98) for professional development (at 1.5 percent of $3,205 per WADM in 1996-97 and 1997-98) can be used to offset Graduation Rule professional development costs (Elements 2 and 5A), not to exceed such costs.

2 Assumes that almost all of the Goals 2000 funding that must be passed on to school districts will be available for use in implementing the Graduation Rule.

3 1996-97 ADM = 841,321 and 1997-98 ADM = 851,562.

4 WADM is calculated by dividing ADM by .90.

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APPENDIX E

These documents are available for viewing at the Minnesota Department of Children, Families and Learning and will be available at the hearing.

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