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A STUDY OF HIGH SCHOOL
PHYSICAL EDUCATION FACILITIES IN
JO DAVIESS COUNTY, ILLINOIS

Ronald McMorris

A STUDY OF HIGH SCHOOL
PHYSICAL EDUCATION FACILITIES IN
JO DAVIESS COUNTY, ILLINOIS

A Paper Presented To The
Faculty of Eastern
Illinois University

In Partial Fulfillment Of
The Requirements For The Degree
Master of Science in Education
Education 581
Plan B

by
Ronald McMorris

August 1959

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E Z E R A S E
C O T T O N C O N T E N T

CHAPTER I

INTRODUCTION

In Jo Daviess County, Illinois, since 1950, a considerable program of expansion and providing of new buildings have affected six of the seven high schools within the county.

In view of the number of persons affected and the total amount of expenditures, it was felt that a study of the adequacy of the physical education facilities provided would be of interest and importance.

PURPOSE. The purpose of this study was twofold: (As suggested by LaPorte.)

1. An attempt was made to evaluate the physical education facilities of the secondary schools in Jo Daviess County.

2. An attempt was made to determine the adequacy of the physical education facilities when compared to an accepted standard for physical education facilities.

LIMITATION OF THE STUDY AND DEFINITION OF TERMS. In this study, only indoor physical education facilities of public, secondary schools of Jo Daviess County, Illinois, were evaluated.

FACILITIES. Throughout this study, the term "facilities" was interpreted as referring to those portions of the school building, designed, arranged, equipped, or set aside for the performance of activities which are a part of the physical education program of the school being evaluated.

STANDARD. The term "standard" was interpreted as referring to a fixed, much-used criterion for a unit of facility.

SURVEY OF THE LITERATURE. Much has been written in regard to physical education facilities. While there were many variances in opinion, the trend

of thinking of most authors in the facilities field shared similar views as to needs and requirements. It was noted that most were in agreement that score cards or other instruments for rating could not be completely adequate. All agreed, however, that ratings as nearly objective as possible have a definite value.

It was found that the most used guide for planning facilities was drawn up by the participants of the National Facilities Conference.¹ The participants included outstanding community and college leaders engaged in athletics, recreation, health, and physical education programming, as well as various specialists who plan facilities for such programs.

The purposes of the conference were:

1. To establish principles for the planning of a system of community-wide, interrelated facilities.
2. To determine the kind of facilities needed.
3. To develop standards for functionally-designed facilities.

The planners felt that there was a lack of essential structures and space, and that faulty planning had wasted existing resources. The results of the conference were a detailed work which could be used as a guide for planning facilities as well as for rating existing facilities. In making recommendations, the participants gave consideration to various types of communities in different geographical locations.

M. M. Stamy² pointed out the desirability of isolation and sound-proofing of gymnasiums. He also felt that a remedial room of at least 20 by 30 feet was a necessity. He also explored the possibilities of a laundry room in

¹Anon., A Guide For Planning Facilities For Athletics, Recreation, Physical and Health Education (Chicago: Athletic Institute, 1947), pp. 1-70.

²M. M. Stamy, "Gymnasium Facilities for Large Secondary Schools," Athletic Journal, LXIX (August, 1956), pp. 55-56.

conjunction with the drying and storage rooms.

Blair,³ gave detailed information on facilities and evaluation by use of score cards. One major complaint was his failure to incorporate new concepts. It was his contention that planners too often were afraid to adopt new designs and techniques.

O'dell⁴ was concerned with standards to be used in evaluating the secondary school building. He also included a score card to be used in connection with his standards. O'dell felt that facilities should not merely be suitable for the present-day program but should be adaptable to change to meet future needs.

La Porte's⁵ book was based on a nine year study by a committee of the College Physical Education Association. La Porte presented a simple but complete score card which had been completed with the aid of a group of leading city and state supervisors of physical education programs.

HYPOTHESIS. On the basis of information gleaned from literature, it was possible to ascertain that there were standards available on which to evaluate the adequacy of physical education facilities. Based on the information gained from the literature plus first hand knowledge gained from personal observations of the facilities of the various schools in Jo Daviess County, it was felt that, in some respects, the physical education facilities were inadequate.

It was felt that certain common errors pointed out by the participants to the National Facilities Conference had, in many cases, been duplicated.

³Herbert Blair, Physical Education Facilities For Modern Junior and Senior High Schools (New York: A. S. Barnes Company, 1938), pp. 1-33.

⁴C. W. O'dell, Standards for the Evaluation of Secondary School Buildings (Ann Arbor: Edward Brothers Incorporated, 1950), pp. 44-48.

⁵William R. La Porte, The Physical Education Curriculum (Los Angeles: The University of Southern California Press, 1947), pp. 65-76.

The certain common errors⁶ pointed out were as follows:

1. Planning for outside appearance rather than inside functional arrangements.
2. Failure to provide for possible remodeling, additions, and extensions.
3. Emphasis on accommodations for spectators rather than on multiple function requirements of instruction and recreation.
4. Provision of combination gymnasium and auditorium.
5. Failure to provide suitable storage space.
6. Failure to provide suitable office and dressing room suites for staff members.
7. Failure to construct shower and toweling rooms with sufficient floor fall and drains.
8. Failure to provide for panel doors in areas of heavy usage.
9. Failure to provide sufficient ventilation in shower, toilet, and locker rooms.
10. Failure to provide convenient access to field facilities.

⁶National Facilities Conference, op. cit., pp. 47-49.

CHAPTER II

PROCEDURE

After a study was made of the material found in the literature, it was possible, through the comparison of ideas and opinions, to draw up a list of relatively universal general service provisions.⁷ This list contained the combined ideas of the texts revealed. The list of general service provisions comprised the standard by which schools were evaluated. The list was used as an aid in the selection of a score card and as a supplement to it in the actual rating process.

The score card chosen was devised by La Porte.⁸ The card was selected because it was both inclusive and usable. It was chosen after carefully checking **its** contents against the standards set up by the list of general service provisions. The card in itself was felt to be self-explanatory, thus lightening and simplifying the task of evaluating and scoring.

Following the selection of La Porte's score card, permission was granted, from the Principal or Superintendent, to visit and evaluate the various schools. This evaluation was completed using both the list of general service provisions and La Porte's score card. The list of general service provisions was used as the standard by which schools were rated on the score card. While the standard for evaluation was partially explained on the score card, it was necessary to refer to the general service provisions for clarifications and guidance. After the actual scoring began, questions were answered in the light of the standards decided upon and no opinions, beliefs, likes, or

⁷See Appendix A.

⁸La Porte, op. cit., pp. 65-76. See Appendix B.

dislikes were given consideration. All schools were rated on separate score cards and on different dates. It was hoped that this procedure would help to eliminate inadvertant comparisons which might tend to influence scoring.

SCHOOLS VISITED.

Galena Community Unit District. This school is a new structure housing approximately 350 pupils. It is situated in a town of about 5,000 inhabitants.

Hanover Community High School. This school is an old structure housing 142 pupils. It is located in a town of approximately 1,600. A new gymnasium is planned for the near future.

East Dubuque High School. This school is a new structure with an enrollment of 118 students. The gymnasium was built in 1952. The size of the community is about 2,000.

Stockton Community High School. This school is a relatively new unit having been built in 1954. There is an enrollment of about 275 students. Population of the town is approximately 1,700 inhabitants.

Scales Mound Unit District. The Physical Education plant is relatively new, having been built in 1950. It was attached to a somewhat older building. Both grade and high school students are in one building. Size of the community is about 500.

Elizabeth Community High School. The gymnasium at this school is under construction at present. It is being attached to an old building. The towns of Elizabeth and Woodbine are both served by this school. Both grade and high school students are housed in one building. The population of Elizabeth is approximately 750 and that of Woodbine approximately 200.

Warren Community Unit District. This is a new school having been constructed in 1958. The enrollment is 175 students. To a certain extent, both grade and high school students use the same building. Population of the

community is approximately 1,500 inhabitants.

MILLERS FALLS
ERASE
COTTON CONTROL

CHAPTER III

EVALUATION OF SCHOOLS

The actual rating of schools consisted of an evaluation of the school's facilities and the allotment of points to the school. Point allotments for all schools are found in the Tables I and II on pages 10 and 11. The completed tables show where the schools failed to meet the standard suggested by the list of general service provisions found in Appendix A.

Table I shows the extent to which Indoor Areas met the suggested standard. Table II indicates the extent to which the standards for the Locker and Shower areas were met.

The schools were evaluated on a point basis suggested by La Porte:

- 3 points - Standard fully met
- 2 points - Standard approximately met
- 1 point - Standard unsatisfactory

La Porte's Score Card, Appendix B, provided the basis for the allotment of points to schools.

By using the point system of rating, it was possible to determine the over-all point total of each school and compare that total with the score suggested by La Porte's Score Card as standard. It was also possible to determine the specific areas in which schools failed to fully meet the standards. The point system also facilitated analyzing the over-all results of the evaluation. The analysis of the evaluation was used to show, in broad terms, the extent to which the schools, rated as a group, met the standard. The explanation of the evaluation of individual schools shows the specific

areas in which schools did not meet the standard. Table I presents the point evaluation of the schools in the study.

MILLERS FALLS

ERASE

COTTON CONTENT

TABLE I
EVALUATION OF INDOOR AREAS OF
SECONDARY SCHOOLS OF JO DAVIESS COUNTY ,

| School | A | B | C | D | E | F | G |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|
| Gymnasium | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Gymnasium Floors | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Additional Classrooms | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Special Rooms | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| Boys' Rest Rooms | 2 | 2 | 3 | 2 | 3 | 3 | 1 |
| Girls' Rest Rooms | 2 | 3 | 3 | 2 | 2 | 3 | 1 |
| Faculty Rest Rooms | 2 | 3 | 3 | 3 | 3 | 3 | 2 |
| Equipment | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Instructor's Office | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Combined Facilities | <u>2</u> | <u>2</u> | <u>2</u> | <u>2</u> | <u>2</u> | <u>2</u> | <u>2</u> |
| Total | 22 | 24 | 26 | 23 | 24 | 25 | 19 |

Possible Score: 30

It could be noted that the high score for any school was 26 points out of a possible 30 and the low as 19. The building with the highest score was the newest building. The building with the lowest score was the oldest building.

Table II shows the evaluation of the outdoor areas of secondary schools in Jo Daviess County.

MILLERS FALLS
ERASE
COTTON CONTENT

TABLE II
 EVALUATION OF LOCKER AND SHOWER AREAS OF
 SECONDARY SCHOOLS OF JO DAVIESS COUNTY

| School | A | B | C | D | E | F | G |
|---------------------|----------|----------|----------|----------|----------|----------|----------|
| Locker Rooms | 2 | 2 | 3 | 2 | 2 | 2 | 2 |
| Locker Facilities | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| Locker Protection | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Supervision | 2 | 2 | 3 | 2 | 2 | 2 | 2 |
| Dressing Area | 2 | 2 | 2 | 2 | 2 | 3 | 2 |
| Shower Type Room | 2 | 2 | 2 | 2 | 2 | 3 | 2 |
| Shower Room Space | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| Water Control | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Toilet Facilities | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| Football Facilities | <u>3</u> | <u>3</u> | <u>3</u> | <u>2</u> | <u>3</u> | <u>2</u> | <u>2</u> |
| Total | 25 | 25 | 27 | 24 | 25 | 26 | 21 |

Possible Score: 30

It could be noted that the high score for any school was 27 points out of a possible 30 and the low was 21. The building with the highest score was the newest building. The building with the lowest score was the oldest building.

MILLERS FALLS
 ERASE
 COTTON CONTENT

ANALYSIS OF EVALUATION. In the rating a 420 point over-all score was possible for the seven schools, 60 points being the highest possible score per school. The actual over-all point total was 336. The highest point total for a single school was 53 points with the lowest score being 40. The mean score was 48. This average means that the schools were rated at 80% of the maximum possible score of 60 points as recommended by La Porte.

A further breakdown of the results was felt necessary to evaluate the effect of the new construction. The facilities completed after 1950 were considered as being new facilities. Old facilities were those completed prior to 1940. In the survey there were six new structures and one old.

The average score for new construction was 49.3 while the average score for old construction was 40 points. This would suggest that facilities put in since 1950 were more nearly adequate as measured by standards used. In this evaluation, new construction rated 82.1 per cent of the standard 60 points, while old construction rated only 66.6 per cent.

A separate analysis of indoor areas for instruction and shower-locker areas separately yielded the following information: The evaluation of indoor areas found the seven schools scoring 163 points, while scoring 173 points on their shower and locker areas. The possible individual score in this rating was 30 points. The highest score was 26 for indoor areas and 27 for locker and shower areas. The low scores were 19 for indoor areas and 21 for locker and shower areas. The average score per school was 23.28. This shows the schools attaining 77.06 per cent of the standard of 30 points. The 173 points given for locker and shower areas shows an average of 24.71 points per school for locker and shower areas. This average was 82.36 per cent of the standard.

New construction attained 144 of a possible 180 points for indoor areas and older structures attained 19 points. The average was 24 for newer structures and 19 for the older one. The percentage scores were 80 per cent for the newer and 63.3 per cent for the older structure.

New construction was given 152 and older construction gained 21 of a possible 180 points for locker and shower areas. The average per school was 25.33 for new and 21 for old construction. The averages gave new construction 80.4 per cent of the standard 30, while older structures were rated at 70 per cent of standard.

EXPLANATION OF EVALUATION OF INDIVIDUAL SCHOOLS. School A was a new structure which presented excellent outside appearance, but which failed to provide adequate facilities outside of the gymnasium. No special classrooms or corrective rooms were provided. The locker and shower areas were too small and there was insufficient drying and toweling space. It was found that, at peak load, the drainage system did not meet the need, and the shower floor often held three to five inches of water.

One major fault was that no office and storage space was provided for the girls physical education teacher. The area provided in the girls shower and locker area was inadequate.

It was also found that, at peak load, the ventilating system failed to remove the moisture which condensed on the walls and lockers. Since no drying rooms were provided, towels and equipment failed to dry properly.

School B was a new structure. This building failed to provide additional rooms for instruction and recreation. There was only one instructor's office provided. In bad weather, boys and girls classes must share the gymnasium which was not adequate to provide for such eventualities.

The locker rooms in this school were inadequate in that window space was not sufficient to give enough natural light. Windows were at one end of rooms, far removed from some areas of usage.

The layout of the locker rooms and instructor's office was such that supervision was difficult. Offices were opposite each other in the building from the outdoor play area. The drying room which was excellent in itself, was located so that it must be used as a passageway from office to shower and locker room.

School C was a new structure. The facilities of this school ranked high in the study. Major shortcomings were the failure to provide additional rooms for coeducational activities and class work. This school also failed to provide a separate office for the girls physical education instructor. Due to lack of extra rooms, this school encountered difficulties during bad weather.

The shower rooms failed to provide sufficient shower heads for peak load. Toweling space was not sufficient and at peak load the rooms became very humid.

School D was a new structure. This school also failed to provide the additional rooms recommended in the List of General Service Provisions. The equipment room was located away from the offices and locker rooms at the end of a hall. The offices were very small and did not provide for the girls physical education instructors.

Shower rooms in this school were in the basement and had no windows for light or ventilation. The walls of the shower rooms were unpainted concrete blocks. No baffle door was provided for the shower room, and much water splashed into the locker room because of this. The shower room provided

installation of equipment were provided, and lack of other rooms made scheduling of classwork difficult.

Shower and locker rooms were located in the basement. Ventilation for these rooms was provided by very small windows which opened on a passageway. Locker rooms were not protected by baffle doors, and this resulted in spray and flooding from the shower rooms. Standard size lockers were placed in the middle of each room and were not securely fastened. Drying and equipment rooms were adjacent to the locker room and were separated from it by wire mesh.

No room was provided for women physical education personnel, and the mens' office was upstairs and down a corridor from the shower and locker rooms. The office was not located so as to afford supervision of any activity area.

MILLERS PADS
ERASE
COTTON CONTENT

CHAPTER IV

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

SUMMARY. Study of the final analysis indicated that the schools of Jo Daviess County failed to meet the ideal requirements of the selected standard. It was found that as a group, the schools which were evaluated achieved approximately three-fourths of this standard. The breakdown of the evaluation showed slightly higher ratings for the locker and shower areas. In only three schools were the indoor areas rated as high or higher than the locker and shower areas. These three schools were of older construction, and this might indicate a trend of thought in school construction.

As a group, new schools rated higher than the older school. The higher ratings for the new schools was given for both indoor and locker and shower areas. From these ratings it might be possible to assume that a definite attempt toward more adequate facilities had been made. To further evaluate the progress of new construction, it was felt necessary to study the list of common errors in school construction cited by the Guide.⁹

The results of that study were as follows:

1. In two cases it was felt that the gymnasium and it's accompanying areas were planned for outside appearance rather than for inside functional arrangement. In one building the rooms set aside for the physical and health education program were not conveniently adjacent and were poorly located in relation to outside areas. In the other instances, the floor of the gymnasium

⁹ A Guide for Planning Facilities for Athletics, Recreation, Physical and Health Education (Chicago: Athletic Institute, 1947).

is some feet below the ground level. Dampness has already caused the floor to buckle in two instances. Since the school is a low modern structure, it was felt that the sunken gymnasium was the desire to conform to the architectural plan being used.

2. In most cases it was found that class rooms, shops, heating plants, and location in relation to streets would make it difficult to remodel and enlarge existing structures.

3. It was found that fixed bleachers often occupied one-third of the gymnasium proper while no additional rooms for recreation or health education were available. In some schools, bleacher space for 800 spectators was provided while the total enrollment was under 150.

4. Only one school provided an auditorium separate from the gymnasium. Three schools were so arranged that bleachers could be utilized to observe activities on the stage. All other arrangements necessitated the use of folding chairs.

5. While most schools provided office facilities for male instructors, only two schools provided offices for women.

6. Storage space for equipment was generally adequate. Open space under bleachers had been utilized, and in many cases, this space was located some distance from shower and locker rooms and instructors' offices. In some cases storage rooms were separated from shower areas by wire mesh, and as a result, the problem of drying equipment and keeping it dry was unsolved.

7. In four schools it was noted that shower and toweling rooms became flooded because of poor drainage. Three schools did not provide sills between shower and toweling rooms. This often resulted in overflow when the shower room was at peak use.

8. In all schools checked, access to physical education areas from

dressing areas and instructors' offices was through single panel, one-way doors. These doors caused much crowding and confusion and presented a safety problem as well.

9. In several cases, access to outdoor areas was at the end of a school corridor or across the end of the gymnasium floor.

10. In only two schools were properly equipped drying rooms provided. In five schools, locker rooms were at the basement level and two locker and shower rooms had only northern exposure. These rooms could not get adequate sunlights and fresh air.

11. The physical education facilities of Jo Daviess County Secondary Schools attain slightly under 75 per cent of adequacy when viewed in the light of an accepted standard.

CONCLUSIONS. Upon completion of this study, it was possible to arrive at the following conclusions:

1. New construction in Jo Daviess County has resulted in improved facilities.

2. Common errors of construction have been repeated, indicating possible failure on the part of school planners to fully utilize the available material on physical education facilities.

RECOMMENDATIONS.

1. School planners should emphasize inside functionalism rather than outside appearance. It should be remembered that beauty in design fails to provide for the physical and health education needs of the students.

2. A very careful study of available materials should be made before a plan is accepted.

3. Existing facilities should be studied to determine the areas in which they are adequate.

4. Planners should consider spectator accommodations as of secondary importance when compared to student needs.

5. More planners should give consideration to folding bleachers as a means of avoiding "dead" or wasted space.

6. Planners should make more use of their own "experts." The coaches, physical education instructors, and athletic directors of their own systems have the most knowledge of problems to be encountered in providing suitable physical education programs. While the architect constructs, it is the physical education people who must provide the instructional program in the facilities.

7. Planners should remember that remodeling and enlargements usually are more costly and less satisfactory than adequate original structures.

The preceding recommendations and conclusions are offered in hope that they may in some small way serve as a guide to more adequate provisions for physical education in our schools. While the findings of this paper cannot be applied to all schools, they do indicate certain inadequacies in Jo Daviess County. Since it was found that there is an abundance of literature available, it must be assumed that much of the fault for inadequacies should be placed upon the planners who have failed to acquaint themselves with literature or may not have consulted the physical education people who must use the facilities. It would then appear that a major contribution in the field would be the educating of architects and school officials who will plan new construction and/or remodeling of existing facilities.

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APPENDIX A

The source of Appendix A is:
La Porte, William R.
National Facilities Planning Conference

GENERAL SERVICE PROVISIONS

Gymnasium

1. Satisfactory provisions of either a gymnasium or field house should be given full credit.
2. The general location of a gymnasium should be such that its use will not disturb activities in other portions of the building.
3. Direct entrances from out of doors should be provided in addition to at least one which leads directly to play areas.
4. The minimum size of a gymnasium should be 40 by 60 feet. If basketball is to be played, the floor should be not less than 40 by 80 feet with at least 5 or 6 feet surrounding it on all sides. There should be a minimum of 50 square feet per pupil for the greatest number taking physical education therein at any one time. Clear height from floor to ceiling should be at least 18 feet. When gymnasium and auditorium are combined, the construction should be such that the stage can be used as a small physical education room separated from the main floor by its' curtain. In schools of more than 200 pupils, one or more recreation rooms should be provided to lessen the demands upon the gymnasium. In cases which have a cafeteria, large lobby, or wide corridor, they may be employed.
5. The best wood for gymnasium floors is maple; but birch, cypress, and yellow pine are fairly good. While wood is the only really satisfactory material, linoleum, cork, or asphalt tile serves fairly well. Floors should be neatly and properly marked for basketball and other games likely to be played. Plates and anchors for equipment should be inserted in the floor so that they do not protrude. When equipment is not in use, the recesses should be covered with plates.
6. Floors should be surrounded by smooth, hard wainscoting, preferably

of glazed brick, to a height of 10 feet. Above this it is desirable to employ some type of acoustical material. Soft, restful, cool colors should be used; ceilings are best in tints of wall colors.

7. There should be a minimum of projections of any sort from the walls, particularly to a height well above that of the tallest pupil likely to be exercising in the room.

8. Radiators should be recessed and screened as should switches, bolts, vents, and so forth.

9. Window, clocks, and lights should be screened.

10. It is desirable that ceilings as well as upper walls be acoustically treated.

11. There should be provisions for the suspension of ropes, ladders, goals, and any other type of equipment that may be utilized. The arrangement for these should be such that it is easy to remove them from playing areas when it is desired to have the latter free.

12. Gymnasiums should have adequate numbers of doors connecting with corridors, public approaches, play areas, shower, locker, and dressing rooms. Double doors are advisable to reduce the amount of noise transmitted elsewhere.

13. Skylights may be employed to furnish adequate natural light. Solid tiers of windows at least 12 feet above the floor on both sides of the gymnasium are satisfactory. Pupils shooting goals and playing other games should not have to face windows. Windows should open outward to provide ventilation and should be provided with shades unless on the north.

14. Enough overhead electric lights should be provided to light the entire floor, avoiding shadows. These lights should be properly recessed and protected. The lights should be easily serviced and outlets should be provided in walls and floors.

15. Heating and ventilation equipment should be provided which can be operated apart from that of the remainder of the building. Natural or gravity ventilation is not satisfactory and should be supplemented by a fan system.

16. Although physical education facilities are primarily to serve the pupils, spectator interests should not be neglected. Usually the most desirable type of seat is folding bleachers which permit the use of more floor space for physical education activities when not needed for spectators. When balconies are used, they should not overhang the playing floor and should slope sufficiently to give an unobstructed view. Seats at the end of the playing floor are undesirable. No roof support members should come in front of the seats. Entrances and exits should permit spectators to reach their seats without walking on the playing floor.

17. Sanitary drinking fountains and cuspidors with running water should be recessed in the walls of the gymnasium itself, or in an immediate joining lobby or dressing room.

18. Boards about 8 inches wide by 2 inches thick may be bolted some 5 feet above the floor as a means of attaching certain types of apparatus. It is best to attach equipment to walls rather than to girders and trusses when it is possible.

Shower, Dressing, and Locker Rooms

19. The most important of the auxiliary rooms are the shower, dressing, and locker rooms. Such rooms should be placed so that they will receive fair amounts of sunlight. Dampness from them should not enter the remainder of the building. All should be located on the same floor level as the gymnasium

and accessible from it and outdoor recreational areas.

20. A desirable arrangement for showers is to have a straight line of from three to five shower heads by which pupils pass. Another is the U-shaped shower, passage 3 or 4 feet wide. Opportunity for soaping should be given at the entrance.

21. There should be gang control of shower heads. Temperatures should range from 105° at the first head to 60° at the last. There should be a few shower heads with individual controls. Shower heads should be adjustable and located at shoulder height for girls and similarly or somewhat higher for boys. If separate shower heads are used, there should be one for each five pupils using showers at once and 12 square feet of floor area per head.

22. Medical opinion varies on the use of medicated foot baths. It has generally been recommended as desirable in the past and will be so considered.

23. Plumbing pipes should be concealed but readily accessible from the rear for maintenance.

24. Aluminum and asbestos board are good for ceilings and ceramic tile or other impervious material for walls.

25. Floors should be of such material as to minimize slipping. Terrazo or ceramic tile are the best materials.

26. At the entrance to the showers should be a sill several inches high to prevent flooding of drying or locker rooms.

27. Lavatories and toilets should be adjacent.

28. Dressing facilities and lockers should be near the showers, but not in the same room. It is recommended that the drying room be between the dressing room and showers.

29. Drying rooms should provide 18 square feet of space per shower head.

30. Dressing rooms should have dressing platforms, benches, towel hooks, and mirrors. Benches should be secured. Floors should be the same as in the

showers.

31. There are three chief locker systems. One provides for lockers for each pupil, the recommended size being 12 by 12 by 36 inches. Another provides small lockers of $7\frac{1}{2}$ by 12 by 24 inches for gymnasium equipment and a larger locker of 12 by 12 by 48 by 54 inches for street clothes. The third is also a combination system. It provides for full size lockers for street clothes and smaller lockers or baskets for gymnasium suits.

32. It is quite important that there be adequate ventilation in locker, shower, and dressing rooms. The supply of fresh air should be generous and provisions made to avoid drafts. To hasten drying of equipment, steam lines may be placed under lockers and turned on when the room is not in use.

33. All window sills should be above the tops of the lockers and there should be no opportunity for persons to look in from outside.

34. In addition to these four classes, there should be small locker and dressing rooms for teams.

Corrective and Examination Rooms

35. A small gymnasium should be provided for examination purposes. The health clinic may be used if its' location is near the gymnasium. It should contain cots, scales, medical cabinet, standard for measuring height, lavatory with hot and cold water and should be especially heated to prevent chilling.

36. A small gymnasium adjacent to the main gymnasium is desirable as a corrective room. A large stage will serve. It should have a camera for silhouettes, a triple mirror, mats, bars, benches, rings, cots, and other helpful items.

37. Toilets adjacent to dressing rooms should contain one stool for

each 30 girls and 50 boys using dressing rooms at any one time. There should be one urinal for each 25 boys and one lavatory for each 20 pupils. By careful planning, these rooms may be located to serve pupils at times other than physical education periods.

38. There should be at least one office for staff members. It is preferred to have offices for men and women staff members separate. Offices should include a desk, chairs, files, bookcase, first aid cabinet, couch, lavatory, shower, dressing booth, and toilet.

39. A storage room should be adjacent to the gymnasium. It should be large enough to care for all of the equipment that may be removed from the gymnasium at any one time.

40. Whenever it is economical to launder towels and uniforms, a laundry room should be provided.

41. In some schools a special wrestling room may be provided. Its chief equipment consists of mats.

APPENDIX B

The source of Appendix B is:
La Porte, William R.
National Facilities Planning Conference

SECONDARY SCHOOL SCORE CARD

Indoor Areas

Possible Score -- 30 Actual Score

1. One or more gymnasium areas sufficient for boys' and girls' inside activities are available and are appropriately equipped, properly heated, lighted, and ventilated.

Score _____

2. Gymnasium floors are of hardwood; lines are properly painted; walls are smooth and clear; painting is a neutral color; radiators and drinking fountains are recessed; ceiling height is between eighteen and twenty-two feet.

Score _____

3. Additional classrooms, appropriately equipped for theory instruction and health education classes, are provided in the building or conveniently adjacent.

One room - 2

Three rooms - 3

Score _____

4. Special rooms for co-educational social activities are appropriately furnished.

Classrooms or gymnasiums partly furnished - 1 - 2

Well furnished separate rooms - 3

Score _____

5. A rest room for boys (equipped with cots, pads, blankets, and sheets) for use in injury or illness, or for rest periods.

One cot for 100 boys in peak load - 1

One cot for 75 boys in peak load - 2

One cot for 50 boys in peak load - 3

Score _____

6. A rest room for girls equipped with cots adequate to handle peak load use of building, is provided for use in injury or illness, or for rest periods.

One cot in peak load for 50 girls - 1

One cot in peak load for 30 girls - 2

One cot in peak load for 20 girls - 3 Score _____

7. Rest rooms each for men and women faculty members are provided with appropriate dressing rooms and showers.

Satisfactory facilities for women only - 2

Satisfactory facilities for men and women - 3
Score _____

8. An equipment office is provided in both boys' and girls' locker rooms, properly arranged for issuing towels, suits, and supplies for both indoor and outdoor use.

Satisfactory office for only one - 1 - 2

Satisfactory office for both - 3
Score _____

9. Properly equipped instructors' offices, with suitable facilities for medical examinations, are available, in good locations for adequate supervision of student activities.

Well-equipped offices, but poorly located for supervision - 1

Well-equipped, with good supervision of one major activity area - 2

Well- equipped, with supervision of two or more major activity areas -3

Score _____

10. The combined inside facilities (including classrooms, gymnasiums, and special rooms) are adequate to handle all classes (boys and girls) inside during bad weather.

Score _____

Locker and Shower Areas

Possible Score - 30 Actual Score

1. Locker rooms provide free floor space, exclusive of lockers, adequate to care for peak load use. (Peak load equals largest number of students dressing in any one class period.)

Eight sq. ft. per pupil - 1

Ten sq. ft. per pupil - 2

Twelve sq. ft. per pupil - 3

Score _____

2. Individual locker facilities are provided for all students.

Box lockers or narrow vertical lockers - 1

Combination box and dressing lockers - 2

Half length, standard size lockers, or self-service basket system combined with full length dressing lockers for peak load - 3

Score _____

3. Adequate lock protection is provided for lockers and baskets.

Key locks - 1

Permanent combination locks - 2

High-grade combination padlocks - 3

Score _____

4. Locker room layouts permits continuous supervision of locker areas while in use by students.

Score _____

5. Boys' dressing rooms are of open aisle type, with fixed benches in the aisles; girls' areas offer a choice of closed booth or open aisle.

Score _____

6. Boys' shower rooms are of the "gang" type, with adequate drying capacity; girls' areas offer choice of "gang" type or closed booth areas.

Score _____

7. Shower rooms provide eight to twelve square feet of floor area per shower head, and sufficient showers to take care of peak load adequately.

Seven students per shower - 1

Six students per shower - 2

Five students per shower - 3

Score _____

8. Hot water is mostatically controlled; shower heads are at neck height; soap dispensers are provided in all shower areas.

Score _____

9. Adequate toilet facilities are available in separate areas immediately adjoining locker and shower rooms; and contain adequate bowls, urinals, wash-basins, hot and cold water, liquid soap dispensers, drinking fountains, mirrors, waste paper baskets, and paper towels or drying machines.

Fair facilities - 1

Good facilities - 2

Excellent facilities - 3

Score _____

10. Antiseptic footbaths are provided for optional use, to aid control of foot ringworm.

Score _____