

DULUTH
INDEPENDENT SCHOOL DISTRICT # 709

EDUCATIONAL ADEQUACY

OVERVIEW

December 2006

JOHNSON
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**Duluth Public Schools Educational Adequacy Assessment
December 2006**

Part of the Long Range Facilities Planning Process

The planning process so far

The Duluth Public Schools' Long Range Facilities Planning Process began in Spring 2006, as a partnership between the schools, Duluth citizens and Johnson Controls, a nationally-recognized facilities management expert. Our shared goal is to do an in-depth analysis of school facilities and future needs to ensure we're providing the very best for our community in the coming decades.

A Citizens Group, representing all aspects of Duluth, has been meeting frequently during the past few months to ask questions and provide input. The Citizens Group has also held dozens of meetings with groups all over the city to get further input on this important planning process.

During that same time, Johnson Controls conducted four thorough studies:

1. Analysis of how population changes will impact school enrollment in future
2. Analysis of the physical condition of all buildings and spaces, and what it would cost to upgrade them
3. Assessment of the market value of each school property
4. Analysis of the educational adequacy of all school buildings and spaces

The first three reports – on Duluth's population and school enrollment projections, on the cost to upgrade all school property and on the market values of each property – were presented to the community in late November and early December. The fourth report, assessing the educational adequacy of each school property, is now complete.

What does “educational adequacy” mean?

With Duluth's public schools being an average of 53 years old, nearly all of them were built during times when teaching and learning were done differently than they are today. At the time, school designs properly met the needs for effective education. But as the decades have passed, there have been many changes in what constitutes adequate designs for effective education. For example, back then no one had ever dreamed of computer work stations for students. Handicap access to all floors and rooms was not taken into consideration. Strong security measures were not needed in those simpler times.

Today, those and many other enhancements are needed for a school to be considered adequate in providing an effective, modern learning environment.

How were the schools analyzed for educational adequacy?

This educational adequacy report highlights 13 categories that were analyzed in each school. Johnson Controls rated each category in each school as, 1) meeting modern requirements, 2) not meeting all requirements, but acceptable, or 3) not acceptable.

In categories that received a “not acceptable” ranking, Johnson Controls identified the cost for bringing the categories up to acceptable levels.

What categories were analyzed in the schools?

During a six month period this past spring and summer, multiple specialists from the Johnson Controls’ team spent 500 hours inspecting all school buildings. Here are the 13 areas they analyzed, with brief descriptions of how adequacy was determined:

1. Classroom Size – Classroom size refers to the physical dimensions (in square feet) of the classroom. The size requirements of modern classrooms has increased as teaching methods have changed from lecture-styles, where children sit in rows of desks listening to a teacher standing in the front of the classroom, to participatory-styles, where children work in groups on a variety of activities arranged around the classroom. The new methods require the physical dimensions to be large enough to allow a variety of activities to occur simultaneously. In addition to the traditional student desk/chair space requirements, classrooms should be designed to accommodate the following components: teacher work station, computer work stations, storage.

Square footage guidelines are provided by the Minnesota Department of Education. Utilizing these guidelines along with priorities established by the Duluth Public Schools, Johnson Controls established the following criteria to objectively evaluate the classrooms in each school:

- Green – above 900 square feet
- Yellow – above 800 square feet
- Red – below 800 square feet

2. Cafeteria/Serving – The cafeteria area within educational environments needs to provide a safe, comfortable and healthy place for students to dine. The standard for the exact size of the dining area is defined by allowing for three lunch periods and approximately 12 square feet per elementary student, 14 square feet per middle school student, and 16 square feet per high school student. Serving areas for food service need to provide flexible space to allow for the easy adjustments of equipment and be large enough to ensure students have a minimum wait in line.

- Green – All dining, kitchen and serving areas meet requirements.
- Yellow – Dining area acceptable, but kitchen and serving areas are below best practices
- Red – Dining area, kitchen and serving areas below best practices

3. Security/Supervision – Security and proper supervision are major concerns in today’s schools. Many of the concerns can be addressed with electronic viewing and monitoring. Main daytime entries to the facilities need to be located adjacent to the main administration area and should be monitored at all times. All other doors into the facility should be locked during school hours.

- Green – Acceptable location or control of front entry
- Yellow – Limited supervision of front entry
- Red – Very limited or no supervision of front entry

4. Science Lab (Quantity) – Modern curriculums require additional science courses. As such, there is greater demand for properly equipped lab spaces than there were 50 years ago. Furthermore, these spaces need to be flexible to meet the evolving needs of a variety of programs.

Green – Acceptable in regards to current curriculum and Minnesota Department of Education guidelines (i.e. best practices)

Yellow – Not acceptable for current curriculum and best practices, but using other spaces to accommodate

Red – Not acceptable for current curriculum and best practices

5. Art – The evolution of curriculum is very evident in the area of Art. The influx of technology combined with the diverse requirements of traditional art programs all occurring within the same space causes some challenges. Easy access for delivery and outdoor learning is also important. Based on input from Duluth Public Schools’ staff and Minnesota Department of Education guidelines, Johnson Controls established the following criteria to objectively evaluate the schools’ art spaces:

Green – Acceptable

Yellow – Acceptable space, but limited amenities and incorrect location

Red – Unacceptable space, amenities and location

6. Teacher Planning (TPC) – As teaching delivery methods have evolved and increased in complexity, there is greater emphasis on teacher preparation and collaboration between teachers. Modern facilities accommodate these new methods by providing professional work environments that promote collaboration and teamwork. Depending on the grade level and the initiatives of the particular group of staff members, this could be as small as a conference room to a combination office/work area/ collaboration space. Based on the school (elementary, middle school, high school) and the best practices used in modern schools, Johnson Controls established the following evaluation criteria:

Green – Acceptable and appropriate spaces available

Yellow – Approximately half of required space available

Red – Appropriate spaces are not available

7. Student Break-out Areas – Students either need specialized additional attention or they are required to work in small groups more and more frequently. Student break-out areas provide flexible and supervised educational environments for staff and students to work in a variety of different modes.

Green – Acceptable location and quantity available

Yellow – Some acceptable space available per best practices

Red – No acceptable spaces available per best practices

8. Gymnasiums – Flexible space for physical education classes that allows for safe participation of required activities by all students is very important. These spaces can also double as performance spaces for a variety of school events. Well-designed gymnasium spaces often are the center of many community groups and events. As the number of extra-curricular activities has increased, so has the need for adequate gym space. Based on Minnesota Department of Education guidelines, the following criteria were used to evaluate the gymnasium space available across the district:

Green – Meets or exceeds MDE guidelines for # of stations and station size

Yellow – Meets MDE guidelines for # of stations but not station size

Red – Does not meet # of stations requirement

10. Auditoriums – Performing Arts spaces play an important role in the educational system. It is important that the facilities be safe while allowing students to challenge themselves within the drama and music curriculum and extra curricular activities. It is also important that these facilities be easily accessible for the community to encourage attendance while allowing for overall building security.
- Green – acceptable amenities, size and location
 - Yellow – acceptable amenities, unacceptable location or size
 - Red – Unacceptable amenities, size and location
11. Site Suitability – Amenities – In regards to the site, or the area around the buildings themselves, it is important to provide the appropriate areas and equipment to allow for safe use. Such as adequate green space and playground equipment, or acreage for fields.
- Green – Acceptable amenities
 - Yellow – Partially acceptable amenities
 - Red – Very little or no amenities
12. Site Suitability – Circulation – Safety is the utmost concern in regards to site circulation. At the beginning and the end of the school day, there are students walking to and from school, students being picked up in cars and students riding the busses. All of this traffic needs to be carefully considered to ensure safe and efficient use of the area around the building.
- Green – Acceptable traffic circulation
 - Yellow – acceptable amount of space allocated, but separation could be improved
 - Red – unacceptable circulation and separation
13. Parking Capacity – Based on the age group that the building is serving, there are a number of concerns for parking of vehicles on the site. There should be sufficient parking for the staff and a dedicated area for any visitors to the building in addition to any student parking that may be required.
- Green – No parking in neighborhoods, meets event requirements
 - Yellow – Limited parking in neighborhoods, event parking troublesome
 - Red – significant parking in neighborhoods at all times

Approximately \$40 million in upgrades identified

As might be expected with schools that average 53 years of age, all but four of the Duluth public schools were found to need some upgrades to their educational adequacy. The district’s four newer schools – Lakewood Elementary, Lowell Magnet School, Rockridge Elementary and Stowe Elementary – were determined to not need any upgrades at this time.

District-wide, 78 areas were identified as “not acceptable” in relation to modern educational adequacy. Twenty-two of the not acceptable rankings were in the three high schools; the other 56 not acceptable rankings were spread among Duluth’s other 15 public schools. The estimated total cost to bring the 78 identified areas of educational inadequacy up to standards is \$41,482,970.

How this \$40 million relates to the \$202 million in estimated upgrade needs

On December 5th, Johnson Controls presented a report to the community that identified \$202 million in needed upgrades if all Duluth Public Schools facilities were to be brought up to modern standards. That report included elements ranging from heating and air conditioning systems, to building code compliance, to what areas were beyond their life expectancy and thus in need of replacement.

While those estimated costs and the estimated costs regarding educational adequacy in this report are all relevant, we should not reach the conclusion that we need to add \$202 million *plus* \$40 million to make needed improvements. That's because some of the items identified in the facilities assessment as needing upgrades are the same items identified in this educational adequacy report.

To be true to the data-gathering process, it was necessary to compile the information in this manner. Because this is indeed still the data-gathering phase – and not the decisions-on-what-to-do phase – it's not yet known what any final costs might really be. Additional factors, such as potentially consolidating some schools, will also enter into the planning.

Building Capacity Analysis

To determine the actual student capacity of our facilities, Johnson Controls also conducted a building capacity analysis. The analysis made allowances for specialty rooms, such as computer labs, music, etc., and also incorporated space allowances for special programs such as Title 1, Headstart, Special Education, etc. The analysis shows the Duluth Public Schools has an abundance of classrooms.

Does this mean that schools will definitely be consolidated? Not necessarily – first, most of the extra space does not go unused. Second, the analysis was based on the number of classrooms available, regardless of classroom size. Many of Duluth's classrooms are significantly undersized. Correcting the size of the classrooms would reduce the enrollment capacity of the schools.

Again, since decisions have not been made regarding what improvements will be made, this is simply another additional data that needs to be considered in development of the long-range facilities plan.

How to review the entire report

The entire 100-page educational adequacy report can be viewed at www.duluth.k12.mn.us, and also in Room 213 of Historic Old Central High School, at 215 N. First Avenue East.

What are the next steps?

Now that all four major studies have been concluded – the demographic study/school enrollment forecast; the facilities assessment; the market value analysis; and the educational adequacy assessment – the next step is for the community to have discussions about what might be done to improve our schools.

In January 2007, various community meetings will be held for citizens to review and ask questions about data from all four reports. After that, in February, discussions will begin regarding possible long-range plans and financial implications.

It's a process that contains a lot of detailed information to consider, but it's information that paints a realistic picture of the state of the Duluth Public Schools. We look forward to your continued, valuable input. Thank you.

Doing the right things... for the right reasons... the right way!

District Summary of Educational Adequacy Requirements

Overall Square Footage

	Congdon Park Elementary	Grant Magnet	Homecroft Elementary	Lakewood Elementary	Laura MacArthur Elementary	Lester Park Elementary	Lincoln Park K-8 School	Lowell Magnet	Nettleton Magnet	Piedmont Elementary	Rockridge Elementary	Stowe Elementary	Morgane Park Middle	Ordean Middle	Woodland Middle	Central High	Denfeld High	East High	District Total Cost Estimate
1.0 Classroom size	Yellow	Yellow	Yellow	Yellow	Green	Yellow	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Green	Red	Red	Red	\$ 15,072,210
2.0 Cafeteria/Serving	Red	Red	Red	Yellow	Red	Red	Green	Green	Yellow	Yellow	Yellow	Yellow	Red	Green	Red	Yellow	Red	Yellow	\$ 5,649,525
3.0 Security/Supervision	Green	Red	Green	Green	Red	Red	Red	Green	Red	Green	Yellow	Green	Yellow	Red	Green	Yellow	Red	Red	\$ 2,436,750
4.0 Science Lab (Quantity)	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	\$ 2,358,000
5.0 Art	Green	Green	Green	Green	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Green	Yellow	Yellow	Yellow	\$ -
6.0 Physical Attributes	Red	Red	Red	Green	Red	Red	Red	Green	Yellow	Red	Green	Green	Red	Red	Red	Red	Red	Red	\$ 2,570,000
7.0 Teacher Planning (TPC)	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	\$ 2,430,135
8.0 Student Break-out Areas	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	\$ 2,932,500
9.0 Gymnasiums	Red	Yellow	Green	Green	Green	Yellow	Yellow	Green	Green	Yellow	Green	Green	Red	Red	Red	Green	Green	Green	\$ 7,703,100
10.0 Auditoriums	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Green	Yellow	Green	Green	Green	Green	Green	Yellow	\$ -
11.0 Site Suitability - Amenities	Red	Red	Yellow	Green	Red	Red	Red	Green	Red	Yellow	Yellow	Green	Yellow	Green	Green	Green	Red	Red	TBD
12.0 Site Suitability - Circulation	Red	Red	Red	Green	Red	Red	Red	Yellow	Red	Green	Yellow	Green	Red	Red	Yellow	Green	Yellow	Red	\$ 330,750
13.0 Parking Capacity	Red	Red	Red	Green	Yellow	Red	Red	Green	Red	Yellow	Yellow	Yellow	Red	Yellow	Red	Green	Red	Red	TBD
Building Total Cost:	\$ 2,300,500	\$ 691,750	\$ 1,021,375	\$ -	\$ 1,265,250	\$ 2,552,000	\$ 1,235,500	\$ -	\$ 263,250	\$ 150,000	\$ -	\$ -	\$ 2,869,750	\$ 3,104,685	\$ 3,215,450	\$ 9,263,800	\$ 6,739,600	\$ 6,810,060	\$ 41,482,970

Building Capacity Analysis

To conduct the building capacity analysis Johnson Controls identified the number of spaces that could be used for general education classrooms. The analysis made allowances for specialty rooms, such as computer labs, music, etc., and also incorporated space allowances for special programs such as Title 1, Headstart, Special Education, etc.

The analysis shows that the district has an abundance of classrooms among the primary buildings. Four of the elementary schools, plus the Lincoln K-8 school, are operating at less than 80% capacity when comparing current enrollments to net student capacities. However, this does not mean the extra classrooms go unused.

The capacity analysis for secondary buildings shows the buildings can house their current levels of enrollment, but do so within cramped classrooms. On average, none of the secondary buildings contain classrooms that meet the Minnesota Department of Education (MDE) recommendation of 900 square feet per classroom. In fact, Duluth's high schools are all below 800 square feet with many of Denfeld's rooms being less than 600 square feet. If the Middle Schools were modified to contain student break-out areas and the High Schools were modified with larger classrooms and break-out spaces, the net capacity of these buildings would be reduced.

Many of Duluth's elementary schools have lower than average enrollments so they can get by with only one gym station. Only Congdon Park requires an additional station. The Middle School sites all require expanded gymnasium capacity to meet the MDE guidelines.

Many of the district's media centers fall below MDE space guidelines, but are acceptable to the District. The MDE guidelines are not always applicable since they take into account small group conference areas, multimedia editing, & workrooms into their space equation. Many of the District's media centers do not incorporate these types of spaces so their small size is adequate.

The cafeteria capacity analysis uses MDE space allocations per student. Johnson Controls' analysis assumed three serving periods per meal, per building. All buildings have gross cafeteria square footages that meet MDE guidelines. The problem with many is insufficient space allowed for efficient serving. The result is children spend too much time waiting in line, which can make getting all of the students through lunch in three periods difficult.

Summary of Building Capacity Analysis

Current Building Configurations

School Building	Gross Square Feet School Area	Oct-06 Enrollment	Number of Classroom Size Spaces	Classroom Allowance for Computer, Music, Art, Vocational	Gross # of General Classrooms	Assumed Average # of Students per Classroom	Classroom Schedule Rate	Total Gross Student Capacity	Classroom Allowance for Special Ed. Classrooms	Classroom Allowance for Title 1 ECFE, Kid Connect, Headstart, etc.	Net # of General Classrooms	Assumed Average # of Students per Classroom	Classroom Schedule Rate	Total Net Student Capacity	Existing Gymnasium Space (ft^2)	Current # of Gym Stations	# of Gym Stations needed per MDE and Current Enrollment	Existing Media Center Area (ft^2)	Media Center Student Capacity per Guidelines	Existing Cafeteria Space (ft^2)	MDE Cafeteria Guideline ft^2/student	Cafeteria Student Capacity (3 serving periods)
Congdon Park	66,520	512	31	3	28	23	1.0	644	3	2	23	23	1.0	529	2713	1	2	3000	480	2000	12	500
Grant	60,074	242	28	3	25	23	1.0	575	3	2	20	23	1.0	460	2500	1	1	2400	384	1400	12	350
Homecroft	46,921	348	21	3	18	23	1.0	414	1	2	15	23	1.0	345	4283	1	1	1600	256	3500	12	875
Lakewood	50,440	297	17	3	14	23	1.0	322	1	2	11	23	1.0	253	4740	2	1	1800	288	2500	12	625
Laura MacArthur	155,406	474	42	3	39	23	1.0	897	5	6	28	23	1.0	644	9200	3	2	2300	368	3000	12	750
Lester Park	48,430	327	19	3	16	23	1.0	368	0	2	14	23	1.0	322	2125	1	1	1200	192	1500	12	375
Lowell	98,873	526	32	5	27	23	1.0	621	1	2	24	23	1.0	552	8200	3	2	3400	544	2100	12	525
Nettleton	90,024	362	42	3	39	23	1.0	897	4	4	31	23	1.0	713	4850	1	1	2600	416	1800	12	450
Piedmont	47,910	199	17	3	14	23	1.0	322	3	2	9	23	1.0	207	2666	1	1	1600	256	1600	12	400
Rockridge	30,671	170	14	3	11	23	1.0	253	0	2	9	23	1.0	207	1824	1	1	1600	256	1800	12	450
Stowe	70,232	378	34	3	31	23	1.0	713	2	2	27	23	1.0	621	5442	2	2	4000	640	2100	12	525
	765,501	3836	297					6026	23	28	211			4853								
Lincoln Park	170,596	451	55	6	49	25	1.0	1225	4	4	41	25	1.0	1025	8468	3	3	2200	352	4300	12	1075
	170,596	451	55					1225	4	4	41			1025								
Morgan Park	127,331	491	34	6	28	27	0.90	680	3	0	25	27	0.90	608	5600	1	2	2700	120	3200	14	686
Ordean	127,985	767	47	7	40	27	0.90	972	4	0	36	27	0.90	875	6000	1	2	3600	429	4400	14	943
Woodland	120,087	701	44	6	38	27	0.90	923	6	0	32	27	0.90	778	5234	1	2	4500	737	4200	14	900
	375,403	1958	125					2576	13	0	93			2260								
Central HS	228,826	1062	66	7	59	29	0.85	1454	11	0	48	29	0.85	1183	17000	3	3	7200	1395	7000	16	1313
Denfeld HS	258,798	1151	59	7	52	29	0.85	1282	7	0	45	29	0.85	1109	16400	3	3	6600	1215	5000	16	938
East HS	199,140	1314	67	7	60	29	0.85	1479	5	0	55	29	0.85	1356	18200	3	3	6000	1035	7300	16	1369
	686,764	3526	192					4215	23	0	148			3648								
District Totals:	1,998,264	9771	669					14042	63	32	493			11786								

NOTE 1: Approximately 375 of the District's students are enrolled at other alternative sites (Merritt Creek, Unity, Chester Creek, Woodland Hills, AJC, etc).

NOTE 2: Gymnasium capacity is determined by the number of "stations" available per building. For all practical purposes, a station can be considered as a "court". The MDE guidelines state each elementary school should have two stations so two individual classes can use the gymnasium simultaneously. Middle Schools have more athletics and therefore also require two stations of larger dimensions than an elementary. To accommodate physical education classes, junior varsity and varsity athletics, as well as student body gatherings, High Schools require three gym stations.

NOTE 3: The analysis for elementary media centers used a simplified version of the MDE formula of 75 square feet per student, for 8% of the current enrollment. The secondary school analysis used the MDE formula that allowed for seating, circulation, stacks, computers, workroom, storage, conference, and classroom space.

NOTE 4: The cafeteria analysis divided the current square footage by the MDE recommended ft^2/student and multiplied by 3 for three serving periods. The MDE guidelines don't account for serving space.