I. Executive Summary

A. Rationale and Importance for Space Utilization Standards

1. Education

It is important for CPS to codify space utilization standards so that it can clearly define what is adequate teaching and learning space within all of the school facilities it operates. These standards will help to ensure that all students have equal access to a learning environment that effectively supports strong instructional programs. At the early childhood, primary, intermediate, middle and high school levels, the foundation for success is a facility where the amount of existing space and its utilization enables the broad array of instructional programs available and is sufficient to accommodate superior new programs.

CPS is focused on introducing a capacity and space utilization methodology that principals, parents and guardians and community stakeholders can understand. Rather than narrowly prescribe the manner of classroom use, the standards were developed to promote flexibility and to ensure that the space can be programmed to fit student needs.

2. Operations

In an effort to achieve its educational goals, the space utilization standards will also help ensure that each school facility is utilized in a manner that improves efficiency, thereby ensuring that the district’s limited resources are deployed and operated in an effective manner. Optimizing efficiency can only be accomplished when the district, in partnership with families, local school council members, and community agencies, can rely upon a comprehensive set of measurable indicators that portray the availability and usage of classrooms spaces.

B. Summary of P.A. 097-0474


(1) the method by which design capacity is calculated, including consideration of the requirements of elementary and secondary programs, shared campuses, after school programming, the facility needs, grade and age ranges of the attending students, and use of school buildings by governmental agencies and community organizations; (2) the method to determine efficient use of a school building based upon educational program design capacity; (3) the rate of utilization; and (4) the standards for overcrowding and underutilization.
105 ILCS 5/34-205 (a)(1)-(4).

CPS must also publish a space utilization report for each school building operated by CPS by December 31 of each year.

C. Summary of Standards

For elementary schools, CPS provides an enrollment efficiency range based primarily upon the total number of instructional classrooms available in the main/permanent school building. Each elementary school building is allotted a number of dedicated general education homeroom classrooms, equaling approximately 76% of the total classrooms available. Each elementary school building is also allotted a number of ancillary classrooms equal to approximately 24% of the total classrooms available. As an elementary school’s enrollment increases above the efficiency range, a school may be considered overcrowded as programming options are reduced and/or compromised. As an elementary school’s enrollment decreases below the efficiency range, a school may be considered underutilized as classrooms are unused and/or poorly programmed making the use of limited resources less effective.

For high schools, CPS provides an enrollment efficiency range based primarily upon the total number of instructional classrooms available in the main/permanent building. Each high school’s design capacity, aka maximum capacity, is identified as function of the total number of instructional classrooms multiplied by 30. A high school’s enrollment that remains within the 75-80% of design capacity is considered efficiently enrolled, while a high school’s enrollment that decreases below 75% of design capacity is considered underutilized and a high school’s enrollment that increases above 80% is considered overcrowded.

II. Core Concepts

A. Elementary Schools - Definitions

The proposed changes to the way the district calculates space utilization and capacity provides a greater level of detail and will allow principals to better align instructional programming to physical capacity. The new space utilization standards rely upon both familiar defined concepts from the historical methodology and new concepts defined below.

Maximum Capacity is defined as the number of classroom spaces designed as such in a given facility multiplied by 30.

Allotted Dedicated General Education Homerooms Classrooms (“Allotted Homeroom Classrooms”) is defined as the number of classrooms spaces required for homeroom use derived as a consistent and adequate proportion of the total number of classrooms present in a given facility.

Allotted Ancillary Classrooms is defined as the number of classrooms spaces required for non-homeroom uses, such as science labs, computer labs, art rooms, music rooms, resource rooms,
special education rooms, governmental agencies and/or community organization special programs, after school programs, and other appropriate uses.

*Ideal Program Enrollment* is defined as allotted homerooms multiplied by 30\(^1\).

*Enrollment Efficiency* is defined as an enrollment range defined as Ideal Enrollment less 20% to Ideal Enrollment plus 20%.

*Overcrowded status* is defined as an enrollment range greater than Enrollment Efficiency.

*Underutilization* is defined as an enrollment range less than Enrollment Efficiency.

The proposed space utilization standards for elementary school essentially creates a range of efficiency based primarily upon a school facility’s total number of classrooms, estimated requirements for dedicated homeroom use, and estimated requirements for ancillary, non-dedicated homerooms use.

\(^1\) See Board of Education of the City of Chicago Policy on Class Size 10-0615-PO1

**B. Elementary Schools - Calculations**

The baseline efficiency ranges are derived from the district’s new construction prototype schools.

The prototype new construction school elementary school contains 39 classrooms: 30 dedicated general education homeroom classrooms and 9 ancillary classrooms. The 9 ancillary classrooms are generally programmed—though not required to be used—as 1 science room, 2 music/art rooms, 1 technology lab, 3 specialized education rooms, and 2 specialty classrooms.

The proportion of homeroom classrooms to ancillary classrooms in this example is roughly 3-to-1; 76.9% of total classrooms are allotted for homeroom use with remainder allotted to ancillary use.

The district will apply this proportion of homeroom-to-ancillary room use model to all elementary schools effective 2011-12 school year and plans to publish annually a list of all elementary schools with associated space use statistics referenced above by December 31 of each school year.

CPS finds this methodology to be consistent with approaches used by other K-12 school districts and resembles calculation strategies referenced by the Council of Educational Facility Planners International (CEFPI)\(^2\).

\(^2\) Calculating School Capacity: Local, State & National Perspectives, CEFPI Workshop, October 6, 2007
### C. High Schools - Definitions

A completely departmentalized high school operates a different type of instructional program from most elementary schools and thus the space utilization standards for high schools must be different than those of elementary schools. While all high school students are generally assigned to homeroom classrooms, the homeroom class size is sometimes larger than the number of students assigned for regular instructional programs.

For high school facilities, CPS will establish both a Maximum Capacity—equal to the total number of instructional classrooms X 30—and an Ideal Enrollment range where total enrollment is 80% of Maximum Capacity.

CPS will also establish the same standard elementary school definition of enrollment efficiency range, where a school’s enrollment efficiency is determined to be within +/- 20% of its ideal enrollment.

CPS finds this methodology to be consistent with approaches used by other K-12 school districts and resembles calculation strategies referenced by the Council of Educational Facility Planners International (CEFPI).³

### D. High Schools - Calculations

<table>
<thead>
<tr>
<th>Total # of Classrooms Within Main Facility</th>
<th># of Allotted Homeroom Classrooms¹</th>
<th># of Allotted Ancillary Classrooms²</th>
<th>Enrollment Efficiency Range</th>
<th>Maximum Facility Capacity Aka Design Capacity⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>20</td>
<td>6</td>
<td>480 -20% Ideal</td>
<td>600 Ideal Program Enrollment³</td>
</tr>
<tr>
<td>39</td>
<td>30</td>
<td>9</td>
<td>720 -20% Ideal</td>
<td>900 Ideal Program Enrollment³</td>
</tr>
<tr>
<td>52</td>
<td>40</td>
<td>12</td>
<td>960 -20% Ideal</td>
<td>1,200 Ideal Program Enrollment³</td>
</tr>
</tbody>
</table>

¹ equal to 76.9% of Total # of Classrooms Within Main Facility
² equal to Total # of Classrooms Within Main Facility less # of Allotted Homeroom Classrooms
³ equal to # of Allotted Homeroom Classrooms X 30
⁴ equal to Total # of Classrooms Within Main Facility X 30

³ Calculating School Capacity: Local, State & National Perspectives, CEFPI Workshop, October 6, 2007
<table>
<thead>
<tr>
<th>Total # of Classrooms Within Main Facility</th>
<th>Enrollment Efficiency Range</th>
<th>Maximum Facility Capacity Aka Design Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-20% of Ideal</td>
<td>Ideal Program Enrollment^2</td>
</tr>
<tr>
<td>30</td>
<td>576</td>
<td>720</td>
</tr>
<tr>
<td>50</td>
<td>960</td>
<td>1,200</td>
</tr>
<tr>
<td>70</td>
<td>1,344</td>
<td>1,680</td>
</tr>
</tbody>
</table>

^1 equal to Total # of Classrooms Within Main Facility X 30
^2 equal to 80% of Maximum Facility Capacity

E. Alternate Approaches

Alternate approaches were considered regarding model type. Some models make distinctions for different subject matter. The conclusion was that wide variability in program type does not make such a model dependable across the entire system. CPS finds the classroom-centric methodology on which the Guidelines are based to be significantly more sound and reliable than alternative models such as Building Gross Square Footage (GSF) models, where space utilization is measured on the basis of gross square footage per enrolled student. The conclusion was that wide variability among building types and ratios of non-instructional spaces to instructional spaces does not render an equitable or reliable measure of space utilization.

For example, School A and School B have identical gross square footages of 100,000 sq. ft. but School A has 43 classroom spaces and School B has 35 classroom spaces (School B may have wider hallways or a larger auditorium). Under the Building GSF model, these schools have equal capacity despite the significant difference in instructional spaces present in each building.

III. Other Circumstances
Main/Permanent Space vs. Temporary Space

CPS defines Main/Permanent Space as classrooms present within a CPS Board-owned structure built with a fixed foundation that has permanently attached walls, roof, and floor that cannot be moved or transported either as a unit or in sections. Approximately 85 schools supplement permanent capacity with temporary capacity, typically in the form of modular classroom units or leased facilities. While these temporary classrooms are necessary in most cases to prevent overcrowding, they are not incorporated into the school’s total classroom count for the purpose of establishing Ideal Enrollment.

Sharing Space

A co-location is where two or more school units co-share a single facility. In co-location facilities, efficiency is achieved when each elementary school has access to the appropriate number of allotted homerooms and ancillary classrooms as determined by its enrollment. For high schools efficiency is achieved when each high school has access to the appropriate number of total classrooms as determined by its enrollment. Identification of schools’ room uses in co-location facilities is required by the Shared Facility Policy (05-0126-PO1).

This is accomplished by assigning to each school the appropriate proportion of total classroom spaces available according to the proportion of students enrolled. For example, in a 50-classroom facility shared by two schools where School A’s enrollment is 600 and School B’s enrollment is 300, the total number of classrooms available to School A is 33 and the total number of classrooms available to School B is 17. Homeroom and ancillary classroom allotments are than established in accordance with the existing methodology.

In-Area Enrollment vis-a-vis Out-of-Area Enrollment

For elementary and high schools with traditional geographic attendance area boundaries (e.g., neighborhood schools), CPS is compelled to measure the school’s actual enrollment efficiency, based on total enrollment relative to capacity, as well as the school’s notional enrollment efficiency, based on the percentage of enrollment consisting of students residing within that school’s attendance area boundary. As explained further in Appendix A, the notional enrollment efficiency rating assists the District in determining the extent to which a neighborhood school’s efficiency or inefficiency relates to a high or low number of out-of-area students enrolled relative to the facility’s capacity.

II. Space Utilization for Each School Building

A list of the space utilization assessments for each school will be provided once enrollment data for the 2011-2012 school year has been finalized.
III. Conclusion

The Chicago Public Schools Space Utilization Standards and school-by-school reports will be published annually after 20th Day enrollment data is available and before December 31st of each year. These reports, which identify the ideal enrollment capacities of all Board-operated public school facilities compared to school enrollment, will better enable principals, community members, and district leadership to render solid decisions concerning the allocation of building space to meet all schools’ instructional program needs.
Appendix A

Key School Demographics Statistics and Indicators

For the statistics and diagrams identified below, six examples are used to help explain the meaningful relationships between school demographics and enrollment efficiency.

Example - School A

Total Attending (TA) aka “Enrollment”: The total number of students enrolled in School A is 1,073.

Total Residing (TR): The total number of public school elementary school students (grades PK-8) residing within School A’s attendance boundary is 1,224.
Residing and Attending (RA): The total number of students that reside INSIDE School A’s attendance area and are enrolled in School A is 932. These students are commonly referred to as “in-area” students and can be expressed either as a percentage of School A’s enrollment (87%) or as a percentage of TR (76%).

Attending, Not Residing (ANR): The total number of students that reside OUTSIDE of School A’s attendance area and are enrolled in School A is 141. These students are commonly referred to as “out-of-area” students and can be expressed as a percentage of School A’s enrollment (13%).

Residing, Not Attending (RNA): The total number of students that reside inside of School A’s attendance area and are NOT enrolled in School A is 292. These students are commonly referred to as “choice out” students and can be expressed as a percentage of School A’s TR (24%).

In this example, School A’s design capacity is 1,440 and ideal enrollment is 1,034. Because School A’s enrollment is 1,073, the actual enrollment efficiency rating for this school is +4% (efficiently enrolled-actual).

School A’s notional enrollment efficiency rating is calculated by replacing the school’s enrollment by RA, that is, the in-area students enrolled in School A. Because School A’s RA is 932, the notional enrollment efficiency rating for this school is -10% (efficiently enrolled-notional).

<table>
<thead>
<tr>
<th>Design Capacity</th>
<th>Actual Total Enrollment</th>
<th>Efficiency Range</th>
<th>In-Area Enrollment</th>
<th>Notional Total Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,440</td>
<td>1,073</td>
<td>827 – 1,241</td>
<td>932</td>
<td>-10%</td>
</tr>
</tbody>
</table>

Because both actual and notional efficiency ratings fall within the range of +/-20%, **School A is determined to be efficiently enrolled regardless** of whether the District gauges actual utilization or notional utilization. In such cases, the District finds that the presence of a relatively small number of out-of-area students enrolled relative to the facility’s capacity has little to no bearing on the utilization of the school.
Example – School B

Total Attending (TA) aka “Enrollment”: The total number of students enrolled in School B is 692.

Total Residing (TR): The total number of public school elementary school students (grades PK-8) residing within School B’s attendance boundary is 710.

Residing and Attending (RA): The total number of students that reside INSIDE School B’s attendance area and are enrolled in School B is 639. These students are commonly referred to as “in-area” students and can be expressed either as a percentage of School B’s enrollment (92%) or as a percentage of TR (90%).

Attending, Not Residing (ANR): The total number of students that reside OUTSIDE of School B’s attendance area and are enrolled in School B is 53. These students are commonly referred to as “out-of-area” students and can be expressed as a percentage of School B’s enrollment (8%).
Residing, Not Attending (RNA): The total number of students that reside inside of School B’s attendance area and are NOT enrolled in School B is 71. These students are commonly referred to as “choice out” students and can be expressed as a percentage of School B’s TR (10%).

In this example, School B’s design capacity is 660 and ideal enrollment is 474. Because School B’s enrollment is 692, the actual enrollment efficiency rating for this school is +46% (overcrowded-actual).

School B’s notional enrollment efficiency rating is calculated by replacing the school’s enrollment by RA, that is, the in-area students enrolled in School B. Because School B’s RA is 639, the notional enrollment efficiency rating for this school is +35% (overcrowded-notional).

<table>
<thead>
<tr>
<th>Design Capacity</th>
<th>Ideal</th>
<th>Efficiency Range</th>
<th>Total Enrollment</th>
<th>Actual Enrollment</th>
<th>Actual Utilization</th>
<th>In-Area Enrollment</th>
<th>Notional Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>660</td>
<td>474</td>
<td>379 – 569</td>
<td>692</td>
<td>+46%</td>
<td>639</td>
<td>+35%</td>
<td></td>
</tr>
</tbody>
</table>

Because both actual and notional efficiency ratings fall well outside the range of +/-20%, School B is determined to be overcrowded regardless of whether the District gauges actual utilization or notional utilization. In such cases, the District finds that the presence of a relatively small number of out-of-area students enrolled relative to the facility’s capacity is little to no bearing on the overcrowded status of the school.
Example – School C

Total Attending (TA) aka “Enrollment”: The total number of students enrolled in School C is 568.

Total Residing (TR): The total number of public school elementary school students (grades PK-8) residing within School C’s attendance boundary is 284.

Residing and Attending (RA): The total number of students that reside INSIDE School C’s attendance area and are enrolled in School C is 196. These students are commonly referred to as “in-area” students and can be expressed either as a percentage of School C’s enrollment (35%) or as a percentage of TR (69%).

Attending, Not Residing (ANR): The total number of students that reside OUTSIDE of School C’s attendance area and are enrolled in School C is 372. These students are commonly referred to as “out-of-area” students and can be expressed as a percentage of School C’s enrollment (65%).
Residing, Not Attending (RNA): The total number of students that reside inside of School C’s attendance area and are NOT enrolled in School C is 88. These students are commonly referred to as “choice out” students and can be expressed as a percentage of School C’s TR (31%).

In this example, School C’s design capacity is 570 and ideal enrollment is 409. Because School C’s enrollment is 568, the actual enrollment efficiency rating for this school is +39% (overcrowded-actual).

School C’s notional enrollment efficiency rating is calculated by replacing the school’s enrollment by RA, that is, the in-area students enrolled in School C. Because School C’s RA is 196, the notional enrollment efficiency rating for this school is -52% (underutilized-notional).

<table>
<thead>
<tr>
<th>Design Capacity</th>
<th>Ideal Enrollment</th>
<th>Efficiency Range</th>
<th>Total Enrollment</th>
<th>Actual Enrollment Utilization</th>
<th>In-Area Enrollment</th>
<th>Notional Enrollment Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>570</td>
<td>409</td>
<td>327 – 491</td>
<td>568</td>
<td>+39%</td>
<td>196</td>
<td>-52%</td>
</tr>
</tbody>
</table>

Because actual and notional efficiency ratings yield two different statuses, both outside the range of +/-20%, School C is determined to be actually overcrowded yet notionally underutilized.

In such cases, the District finds that the presence of a relatively large number of out-of-area students enrolled relative to the facility’s capacity has a meaningfully negative impact on the utilization of the school.
Example – School D

Total Attending (TA) aka “Enrollment”: The total number of students enrolled in School D is 633.

Total Residing (TR): The total number of public school elementary school students (grades PK-8) residing within School D’s attendance boundary is 720.

Residing and Attending (RA): The total number of students that reside INSIDE School D’s attendance area and are enrolled in School D is 561. These students are commonly referred to as “in-area” students and can be expressed either as a percentage of School D’s enrollment (89%) or as a percentage of TR (78%).

Attending, Not Residing (ANR): The total number of students that reside OUTSIDE of School D’s attendance area and are enrolled in School D is 72. These students are commonly referred to as “out-of-area” students and can be expressed as a percentage of School D’s enrollment (11%).
Residing, Not Attending (RNA): The total number of students that reside inside of School D’s attendance area and are NOT enrolled in School D is 159. These students are commonly referred to as “choice out” students and can be expressed as a percentage of School D’s TR (22%).

In this example, School D’s design capacity is 690 ideal enrollment is 495. Because School D’s enrollment is 633, the actual enrollment efficiency rating for this school is +28% (overcrowded-actual).

School D’s notional enrollment efficiency rating is calculated by replacing the school’s enrollment by RA, that is, the in-area students enrolled in School D. Because School D’s RA is 561, the notional enrollment efficiency rating for this school is +13% (efficiently enrolled-notional).

<table>
<thead>
<tr>
<th>Design Capacity</th>
<th>Ideal Enrollment</th>
<th>Efficiency Range</th>
<th>Total Enrollment</th>
<th>Actual Enrollment Utilization</th>
<th>In-Area Enrollment</th>
<th>Notional Enrollment Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>690</td>
<td>495</td>
<td>396 – 594</td>
<td>633</td>
<td>+28%</td>
<td>196</td>
<td>+13%</td>
</tr>
</tbody>
</table>

Because actual and notional efficiency ratings yield two different statuses, the former outside the range of +/-20% and the latter within, School D is determined to be actually overcrowded yet notionally efficiently enrolled.

In such cases, the District finds that the presence of a relatively large number of out-of-area students enrolled relative to the facility’s capacity has a meaningful negative impact on the utilization of the school.
Example – School E

Total Attending (TA) aka “Enrollment”: The total number of students enrolled in School E is 690.

Total Residing (TR): The total number of public school elementary school students (grades PK-8) residing within School E’s attendance boundary is 504.

Residing and Attending (RA): The total number of students that reside INSIDE School E’s attendance area and are enrolled in School E is 359. These students are commonly referred to as “in-area” students and can be expressed either as a percentage of School E’s enrollment (52%) or as a percentage of TR (71%).

Attending, Not Residing (ANR): The total number of students that reside OUTSIDE of School E’s attendance area and are enrolled in School E is 331. These students are commonly referred to as “out-of-area” students and can be expressed as a percentage of School E’s enrollment (48%).

Residing, Not Attending (RNA): The total number of students that reside inside of School E’s attendance area and are NOT enrolled in School E is 145. These students are commonly referred to as “choice out” students and can be expressed as a percentage of School E’s TR (29%).
In this example, School E’s design capacity is 915 and ideal enrollment is 657. Because School E’s enrollment is 690, the actual enrollment efficiency rating for this school is +5% (efficiently enrolled-actual).

School E’s notional enrollment efficiency rating is calculated by replacing the school’s enrollment by RA, that is, the in-area students enrolled in School E. Because School E’s RA is 326, the notional enrollment efficiency rating for this school is -35% (underutilized-notional).

<table>
<thead>
<tr>
<th>Design Capacity</th>
<th>Ideal Enrollment</th>
<th>Efficiency Range</th>
<th>Total Enrollment</th>
<th>Actual Enrollment Utilization</th>
<th>In-Area Enrollment</th>
<th>Notional Enrollment Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>915</td>
<td>657</td>
<td>526 – 788</td>
<td>690</td>
<td>+5%</td>
<td>359</td>
<td>-45%</td>
</tr>
</tbody>
</table>

Because actual and notional efficiency ratings yield two different statuses, the former within the range of +/-20% and the latter outside, School E is determined to be actually efficiently enrolled yet notionally underutilized.

In such cases, the District finds that the presence of a relatively large number of out-of-area students enrolled relative to the facility’s capacity has a meaningfully positive impact on the utilization of the school as long as the school remains efficiently enrolled.
Example - School F

Total Attending (TA) aka “Enrollment”: The total number of students enrolled in School F is 455.

Total Residing (TR): The total number of public school elementary school students (grades PK-8) residing within School F’s attendance boundary is 594.

Residing and Attending (RA): The total number of students that reside INSIDE School F’s attendance area and are enrolled in School F is 333. These students are commonly referred to as “in-area” students and can be expressed either as a percentage of School F’s enrollment (73%) or as a percentage of TR (56%).

Attending, Not Residing (ANR): The total number of students that reside OUTSIDE of School F’s attendance area and are enrolled in School F is 122. These students are commonly referred to as “out-of-area” students and can be expressed as a percentage of School F’s enrollment (27%).
Residing, Not Attending (RNA): The total number of students that reside inside of School F’s attendance area and are NOT enrolled in School F is 261. These students are commonly referred to as “choice out” students and can be expressed as a percentage of School F’s TR (44%).

In this example, School F’s design capacity is 1,200 and ideal enrollment is 861. Because School F’s enrollment is 455, the actual enrollment efficiency rating for this school is -47% (underutilized-actual).

School F’s notional enrollment efficiency rating is calculated by replacing the school’s enrollment by RA, that is, the in-area students enrolled in School F. Because School F’s RA is 333, the notional enrollment efficiency rating for this school is -62% (underutilized-notional).

Because both actual and notional efficiency ratings fall outside the range of +/-20%, School F is determined to be underutilized regardless of whether the District gauges actual utilization or notional utilization. In such cases, the District finds that the presence of a relatively small or large number of out-of-area students enrolled relative to the facility’s capacity has little to no bearing on the underutilization the school.

Summary

As the District proposes to establish standard (actual) efficiency ratings for all elementary schools, to help better portray the relationship between school demographics (in-area vs. out-of-area enrolled) and utilization, the District further proposes to establish notional efficiency ratings in addition to standard efficiency ratings for all elementary schools with established traditional geographic attendance boundaries (e.g., neighborhood elementary schools).

For all neighborhood elementary schools one of the following six status ratings is possible:

1. Efficiently enrolled-actual / efficiently enrolled-notional [Example —School A]
2. Overcrowded-actual / overcrowded-notional [Example —School B]
3. Overcrowded-actual / underutilized-notional [Example —School C]
4. Overcrowded-actual / efficiently enrolled-notional [Example —School D]
5. Efficiently enrolled / underutilized-notional [Example —School E]
6. Underutilized-actual / underutilized-notional [Example—School F]