ORANGE COUNTY PUBLIC SCHOOLS
Planning & Governmental Relations

Permanent Program Capacity: An Effective Formula to Quantify Real Space at Schools

Definitions:

Permanent Florida Inventory of School Houses (FISH) Capacity is the number of students that can be housed in the permanent portion of a school as determined by the design criteria defined in the State Requirements for Educational Facilities (SREF). The criteria is based on the square footage of classroom space divided by the allocated square footage per student station and takes into account the 18/22/25 students per classroom requirement of the class size amendment.

Permanent Program Capacity (PPC) is the true number of students that can be housed in the permanent portion of a school. This measurement takes into account the effects of the class size amendment, the school's ability to utilize space, and the assignment of special programs that require smaller class sizes.

Background:

There are two primary ways of measuring permanent capacity in schools. Permanent FISH capacity is a number generated by the State of Florida DOE that is facility driven. FISH capacity is a concrete, objective number based on the physical design of the school. As renovations and classroom additions occur, updates are made to the state database thus changing permanent FISH capacity. Permanent Program Capacity (PPC), like permanent FISH capacity, is also facility driven. However, PPC takes into account the student stations lost in satisfying curriculum needs, creating master schedules for classes and other program issues that affect space. **PPC has been the preferred capacity used by administrative staff and educators because it incorporates real-life space issues.** PPC is also recognized in the OCPS/Orange County government Inter-local Agreements for the Enhancement Agreement (CEA) process. In addition, PPC is used for transfers, pupil assignment, rezoning, and long range planning.

PPC for the District was developed in 2001 by the Pupil Assignment Department and was based on school principal surveys. Unfortunately, in some cases school administrators had to make estimations on how many students they could handle at their school without the benefit of historical data on the intended classrooms' design. Maintaining PPC was staff-intensive and many times required extensive follow-up site visits to schools.

Although the original PPC was a better reflection of true capacity, there was a need to develop a new PPC to be:

1) formulaic,
2) consistent from school to school district-wide,
3) easy to implement and maintain, and
4) stable.

Starting in February 2007, District staff from Planning and Governmental Relations, Pupil Assignment and Facilities worked together to develop a new way of evaluating the capacity at schools to formulate a permanent program capacity (PPC).

Permanent Program Capacity Formula and Components:

The formula for permanent program capacity is:

PPC = ((FISH Permanent Student Stations + In Slot Student Stations) x Utilization Percentage) – (Student stations lost due to ESE Classes);
Where (Student stations lost due to ESE Classes) = (# of ESE Classrooms x [19/22/25]) – (# of ESE Classrooms x 10)

FISH Permanent Student Stations:

The PPC formula uses FISH permanent student stations as a starting point from which additional adjustments are made for utilization and ESE programs. The FISH database provides the most accurate and available inventory of school classrooms with the maximum number of students that may be housed in the facility based on the design. Typically, pre-kindergarten through third grade classroom carries 18 student stations, fourth through sixth grades carries 22 student stations and ninth through twelfth grade classes carries 25 students per class. Classrooms designed for ESE usually carry of a capacity of 10 or 15 student stations. The calculation of permanent student stations is constant and consistent from school to school.

In-Slot Student Stations:

In-slot student stations are the buildings used as classrooms at the districts modular campuses. Although FISH does not include in-slot relocatables as permanent student stations, they are included in the formula for permanent program capacity.

Utilization Percentage:

The "Utilization Percentage" represents the school's ability to use their space. If a school has a utilization of 100% they can use all of their space all of the time. FISH capacity already includes an adjustment of 90% for Middle and 95% for High Schools. The rationale behind this is that students are moving from classroom to classroom and it is difficult to create a master schedule to utilize 100% of your classrooms all of the time.

For a high school to utilize all of their classroom space 95% of the time requires the teachers and their materials to be moved (floated) to fill up classrooms during vacant periods. District staff has raised questions about the logistics of floating in a modern day high school curriculum that requires teachers to utilize an abundance of teaching tools and materials. District staff recognizes the need for an additional utilization adjustment for high schools to minimize the number of floating teachers. **Staff will return in January 2008 with recommended changes to the permanent program capacity utilization percentage for high schools.**

FISH assumes that Elementary School classrooms should be 100% utilized because that same movement does not exist. However, **Elementary schools require a utilization adjustment programmatically due to the grade distribution of students.** In an ideal world, each primary classroom would have enrollments divisible 18 and each intermediate classroom would have enrollments divisible by 22; a distribution of this sort never occurs. A typical scenario is an elementary school has 80 kindergarten students. One can make four classes with 20 students in each class. However, the school will not meet class size. The only option is to split the students up into five classrooms with 16 students in each classroom. Each classroom has two student stations that are not being utilized for a total of ten (2 X 5) unutilized student stations for the kindergarten class.

Below is an example using the distribution of Hillcrest Elementary School students.

Hillcrest Elementary

Prek	K	1	2	3	4	5	Total
[Students]							
0	71	79	77	52	48	43	370
[Classrooms]							
0	4	5	5	3	3	2	416

Difference = 46

370 / 416 = **88.9% Utilization**

Hillcrest Elementary School would need 17 primary and 5 intermediate classrooms to accommodate 370 students. However, 17 primary and 5 intermediate classrooms according to the FISH formula are equal to 416 student stations with 46 unutilized student stations.

This potential loss of space was calculated by performing this analysis on all of the elementary schools. After modeling the utilization we found that size of the school has a lot to do with the percentage of space utilized. Larger schools have smaller percentage of vacant seats and higher utilization rates whereas smaller schools have a smaller percentage of vacant seats and lower utilization rates. The four utilization rates were determined by separating the elementary schools into four groups based on size and taking an average of the utilization rate.

Capacity	Utilization
-541	88.7%
542-678	91.3%
679-830	92.8%
831-	94.5%

These utilization rates are pulled into the formula based on each school's current permanent FISH capacity. For example, a school with a permanent FISH capacity of 650 would have a 91.3 percent adjustment to their capacity in the formula.

ESE Adjustment:

Schools with self-contained ESE populations require more space which reduces the capacity of a school. To compensate for the loss of student stations, the formula, based on an estimated number of self-contained ESE classrooms, subtracts full capacity classrooms [19 student stations] from the program capacity and adds back ESE sized classrooms [10 student stations per classroom].

(# of ESE Classrooms x 19) – (# of ESE Classrooms x 10)

At the onset the number of ESE classrooms was determined based on a five year average of self-contained ESE populations. However, District staff performs site verifications to help determine how many ESE classrooms are needed above those classrooms that have been allocated in the school's facility inventory of the state's FISH database. These changes are documented and adjustments are then made to the permanent program capacity.