Facility Capacity Needs Analysis Subcommittee
ACPS & City of Alexandria
February 10, 2014

Joint City Council/ACPS Subcommittee
(4 members)

LREFP Work Group
Explores the major issues that will impact public school facilities over the long term and guides staff in the development of a draft Long-Range Educational Facilities Plan for consideration by the School Board and City Council.

Sub Committees
- Enrollment Forecasts / Demographics
  Establishing sustainable short and long-term enrollment forecast program
- Facility Capacity Needs Analysis
  Understanding current conditions and needs of the existing facilities
- Educational Specifications / School of the Future
  Planning for our future and matching of facilities to our students and our vision.

Joint Long-Range Educational Facilities Plan
To improve facilities planning, accommodate the growing student population, and enhance educational programs and services.
Agenda

- Review Work Program
- Progress by Hughes Group Architects
- Capacity Discussion
- Next Steps

Tonight’s goal is to discuss different methods of calculating capacity using fictional PK–3rd grade school
Goals
- Assess existing conditions
- Review capacity analysis methodology
- Review how existing capacity is allocated to meet demand
- Establish guidelines for adding capacity, supporting education
- Identify potential school site types
Review Work Program

Approach

- Develop a school facility and site inventory
- Develop a capacity and utilization assessment for each school site
- Identify space needs by type of use
- Review findings of Enrollment Subcommittee and Educational Specifications Subcommittee
- Reallocate existing capacity to meet current demand
- Develop guidelines for adding capacity
- Review potential future school sites
Review Work Program

1\textsuperscript{st} meeting
- Reviewed Work Program/ HGA Scope of Work
- ACPS Elementary Standard Program/Room Allocations
- Methodology for Elementary and Secondary Capacity Analysis

2\textsuperscript{nd} meeting
- Reviewed data collected on pilot school
- Community uses of school facilities
Status on School Facility Inventory– Building Interiors

- Package #1 and #2 delivered to staff
  - Samuel Tucker, James K. Polk, Lyles–Crouch, Charles Barrett
  - Minnie Howard, Cora Kelly, George Mason, Matthew Maury, John Adams

- Sites remaining
  - George Washington, Douglas MacArthur, William Ramsay, Mt. Vernon, Francis C. Hammond, T.C. Williams King Street
Capacity Discussion

Physical
Programmatic
Core
Level of Service
Example
Physical Capacity

- Also known as design or building capacity
- How many students can a school building accommodate with a traditional instructional program?
- Number of full-size classrooms $\times$ Number of students a classroom is designed to accommodate
Program Capacity

- How many students can a school building accommodate based upon the specific educational program
- Four different models illustrated
  - #1 – actual student/teacher ratio
  - #2 – class-size caps
  - #3 – design capacity
  - #4 – actual square feet
Core Capacity

- Core spaces include cafeteria, gymnasium, multipurpose room, library/media center
- Calculated based on square foot allowance per student
- VDOE Guidelines depend on type of furniture
  - Cafeteria
    - Elementary 8–14 SF/student
    - Middle 9–14 SF/student
    - High 11–14 SF/student
  - Art 45 SF/student
  - Music 15–20 SF/student
Utilization Factor

- Percentage applied to the optimum capacity to account for the uneven distribution of students across grade levels and cohort groups

- Recommended rates
  - Elementary 90%–100%
  - Middle School 70%–85%
  - High School 80%–85%
Level of Service

- Goal for acceptable level of service provided by a facility based on the operational characteristics
- Can vary based on program and level
- Reaching a certain level can trigger a study or project
Hybrid/Combination
- Uses a combination of factors to provide a more realistic capacity calculation

Net Area
- Gross square feet of permanent facilities (minus SPED & ELL classrooms)/square foot per student
Capacity Example

- Fictional Pk–3rd School
  - 21 Instructional Classrooms
  - 5 Core Spaces
- 632 Design Capacity

- 534 Program Capacity Model #1
  - Student/Teacher Ratio of 23
  - 95% Utilization
- 541 Program Capacity Model #2
  - Current ACPS Class-Size Caps
  - 95% Utilization
- Calculations provided in handout
Capacity Example Cont.

- Fictional Pk–3rd School
  - 21 Instructional Classrooms
  - 5 Core Spaces

- 602 Program Capacity Model #3
  - All classrooms can accommodate 26 students
  - 95% Utilization

- 568 Program Capacity Model #4
  - Assumes standard goal of 35 SF/student in general ed. and 75 SF/student in special ed.
  - 95% Utilization

- Range between high and low models: 93

- Calculations provided in handout
### Capacity Example Cont.

#### Level of Service

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## Capacity Example Cont.

### Capacity Analysis Enrollment and Capacity

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Discussion/Next Steps

- Next meeting
  - Review progress of architect
  - Review methodologies and finalize recommendation
  - Apply recommended methodology to individual schools