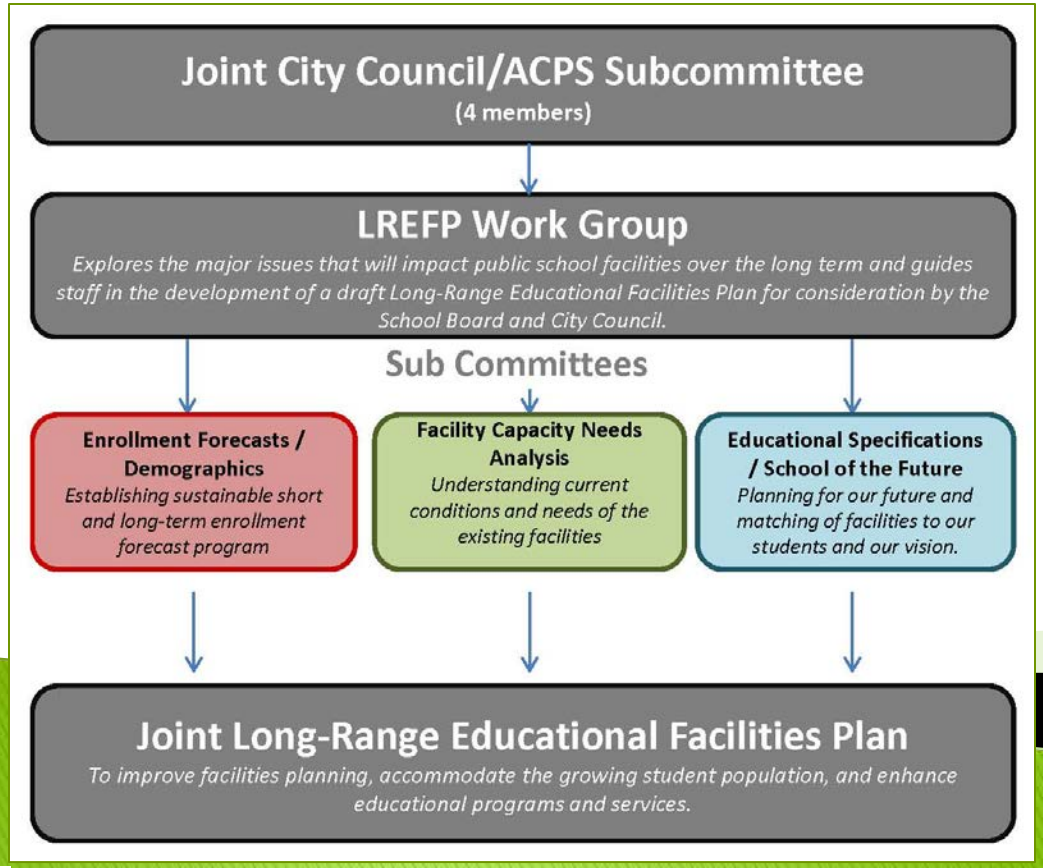
Facility Capacity Needs Analysis Subcommittee

ACPS & City of Alexandria



Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

CITY OF ALEXANDRIA VIRGINIA

Calculating School Capacity

- The number of students that can be reasonably accommodated by a school, building and site
  - 3 variables:
    - Physical: building size, # of teaching stations
    - Operational: utilization rate, staffing, space management
    - Programmatic: class-size caps, educational program

- Capacity numbers are not fixed. Can increase number of classrooms, change or move programs, etc. that will result in a new capacity figure for a particular building. Must be updated annually to stay current.

Scope of Work– Hughes Group Architects

- Phase I
  - Inventory spaces of building's interiors
  - Classify space & appropriateness
  - Document general space quality
  - Provide electronic floor plans of each school
  - Attend meetings with stakeholders

- Phase II
  - Describe property ownership and boundaries
  - Document usable acreage of open space & recreational features
  - Document general size & condition of playgrounds
  - Document natural resource areas
  - Describe adequacy of site utilities to accommodate new construction
  - Provide electronic site plans
  - Attend meetings with stakeholders

Phase I– Building Interior Inventory

- Goals and Objectives

- Establish an inventory of school facility floor plans with supporting quantitative data for analysis
- Analyze existing educational space as relative to ability to meet current educational standards
- Evaluate appropriateness and viability as an educational environment
- Compare against benchmark standards (Virginia Dept. of Education (VDOE) guidelines)
- Provide data and baseline analysis to allow for informed decision making as to where to focus ACPS resources most effectively
- Empower ACPS and its Facilities department with a building information model as a tool for managing future changes and analysis
- Analyze existing auxiliary educational spaces as relative to current facility standards for education and community use
- Assess community use of educational facilities in terms of appropriateness and viability as an educational environment as compared to benchmarks

Phase I- Building Interior Inventory

- Community Use of Educational Facilities
  - Three Major Users
    - Campagna Center- after school programs
    - Recreation, Parks & Cultural Activities- after school programs, youth & adult sports, summer camps
    - PTAs- after school clubs, tutoring programs
  - Each group has space needs and standards
  - Continue to investigate the needs and include in space considerations

Phase I– Building Interior Inventory

- Baseline provided by Architect will inform the subcommittee's next tasks:
  - Review existing capacity analysis methodology
  - Make recommendations for modifications to the methodology for both elementary and secondary
  - Develop a capacity and utilization assessment for each school site
- Completed three elementary schools

Phase I– Proposed Process

TC Williams High School Minnie Howard Campus

Analysis

Building Interior

Phase I– Proposed Process

Process: Building Assessment & Analysis

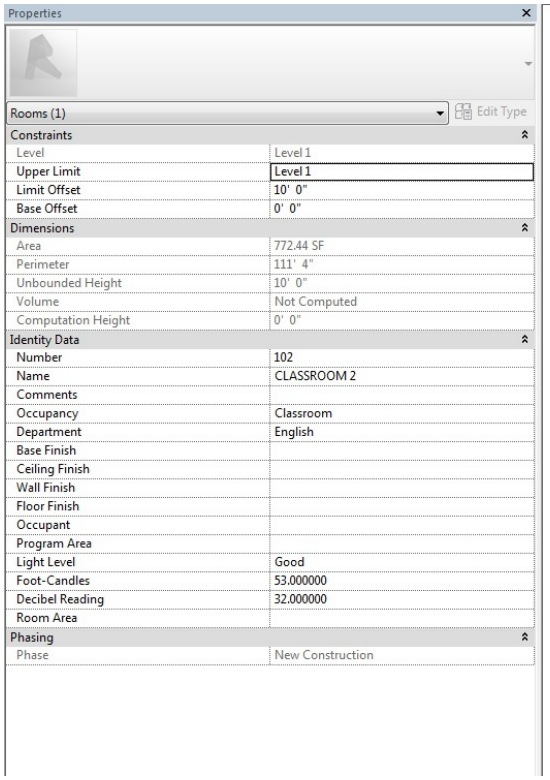
1. Evaluate Existing Records
   - completeness
   - confirmation
   - check sources
2. Develop Base CAD Floor Plan Drawings
3. Meetings
   - Principal
   - Staff
   - Maintenance

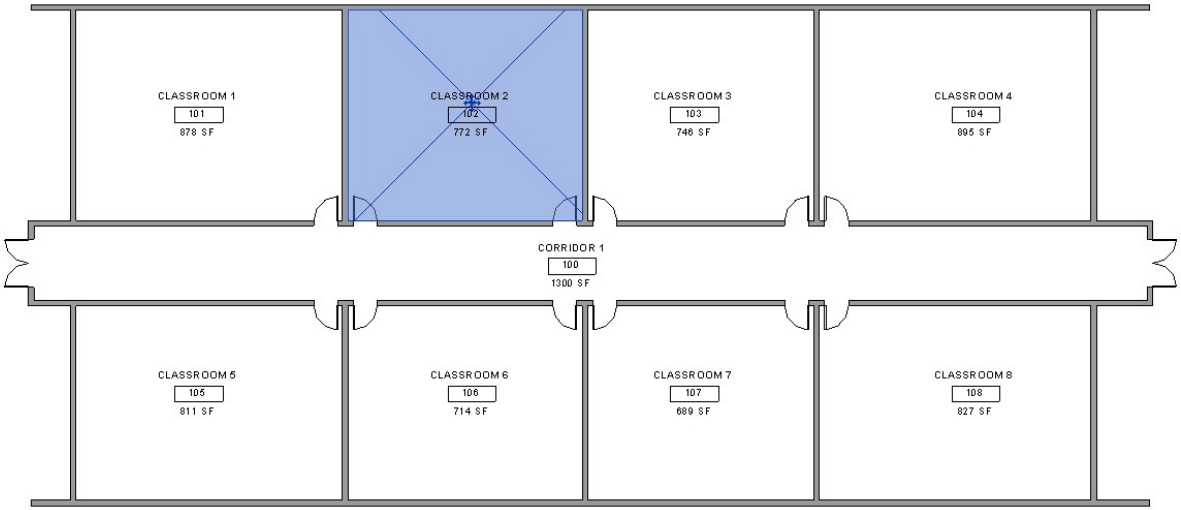
Phase I– Proposed Process

Process: Building Assessment

TC Williams High School Minnie Howard Campus

Phase I– Proposed Process





Phase I– Proposed Process

Schedule: Lighting Schedule - Test Project

<Lighting Schedule>

A	B	C	D	E
#	Room Name	Room Area	Foot-Candles	Light Level
100	CORRIDOR 1	1300 SF		
101	CLASSROOM 1	878 SF	55.00	Good
102	CLASSROOM 2	772 SF	53.00	Good
103	CLASSROOM 3	746 SF	35.00	Fair
104	CLASSROOM 4	895 SF	10.00	Poor
105	CLASSROOM 5	811 SF	30.00	Fair
106	CLASSROOM 6	714 SF	15.00	Poor
107	CLASSROOM 7	689 SF	48.00	Good
108	CLASSROOM 8	827 SF	57.00	Good

Schedule: Acoustics Schedule - Test Project

<Acoustics Schedule>

A	B	C	D
	Name	Area	Decibel Reading
100	CORRIDOR 1	1300 SF	
101	CLASSROOM 1	878 SF	20
102	CLASSROOM 2	772 SF	32
103	CLASSROOM 3	746 SF	40
104	CLASSROOM 4	895 SF	60
105	CLASSROOM 5	811 SF	24
106	CLASSROOM 6	714 SF	36
107	CLASSROOM 7	689 SF	22
108	CLASSROOM 8	827 SF	32

Live Demonstration