DRAFT 2012

Capital Program Planning Issues

April 11, 2012

Purpose

This document outlines the planning principles of the Wake County Public School System (WCPSS) long-range capital building program.

These planning principles will be used to identify and quantify the investment to construct new schools to accommodate the growing student enrollment and to ensure that existing schools are safe quality places for students to learn. The resulting project list will be prioritized and accomplished through multiple building programs. Future bond programs will be based upon a comprehensive capital improvement plan that addresses construction of new schools and renovation of existing schools.

Project priorities should:
           1) ensure the health and safety of children and staff;
           2) ensure adequacy of facilities and technology for effective learning;
           3) reduce school overcrowding; and
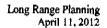   4) provide sustainable facilities.

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PROGRAM

1. <u>School Grade Configurations:</u>

   a. Current grade configurations of Pre-K-5, 6-8 and 9-12 will be retained;
   b. Other grade configurations may be considered based upon educational suitability, space needs, and cost analysis.

2. <u>Educational Program:</u>

   Space will be provided to appropriately house programs to deliver the Standard Course of Study as prescribed by the State Board of Education; additional space may be provided in order to house additional educational programs approved by the WCPSS Board of Education.

   Children with disabilities will continue to be served in accordance with the Strategic plan that complies with federal and state requirements. New school design models will include spaces to accommodate these requirements.

   a. Classrooms Dedicated to Serving Students with Disabilities:
      Disability law requires the provision of special education and related/special needs services to students with disabilities, ages 3 through 21, as per the Individuals with Disabilities Education Act (IDEA), Section 300 (Placement Decisions) and Section 504 of the Rehabilitation Act, Americans with Disability Act (ADA), and the NC Procedures Governing Programs and Services for Children with Disabilities.

      Student/teacher ratio changed from 9 to 8 as a result of The North Carolina Policies Governing Services for Children with Disabilities, June, 2007, which modified the student class size requirements (NC 1508-3). These modifications remain in effect. Go to: http://www.ncpublicschools.org/docs/ec/policy/2007policies.pdf; NC 1508 Class Size School Age and Preschool on page 139.

      Elementary: 2 Adaptive Curriculum classrooms @8 students average and 6 Special Education Services classrooms

      Middle: 4 Adaptive Curriculum classrooms @8 students average and 9 Special Education Services classrooms

      High: 2 Adaptive Curriculum classrooms@8 students average, 3 Occupational Course of Study (OCS) classrooms @ 12 students average, and 10 Special Education Services classrooms @ 12 students average.

   b. Classrooms Dedicated to Serving General Education Support:
      The general population of students with special needs is housed in regular classrooms with "pulled out" programs for special services to include:

1) Classrooms dedicated to serving <u>Academically Gifted</u> (AG) programs: — G.S.115C-150.7 requires local school districts "...to demonstrate it "is providing appropriate services to meet the diversity of identified academically or intellectually gifted students".

2) <u>Intervention</u> - State Board Policy 16 NCAC 6D.0505 requires local school districts to provide "...focused intervention to all students who do not meet statewide student accountability standards."

3) <u>English as a Second Language (ESL):</u> Title VI of the Civil Rights Act of 1964 and subsequent federal and state legislation and case law require local school districts to serve limited English proficient (LEP) students. LEP students are given special instruction in English.

4) <u>Title I</u>: Title I of the Elementary and Secondary Education Act of 1965 requires local school districts "... to ensure that all children have a fair, equal, and significant opportunity to obtain a high quality of education and reach, at a minimum, proficiency on challenging state academic standards and state academic assessments.

General Education Support (AG, Intervention, LEP, Title I):

        Elementary: 4 classrooms

        Middle: 3 classrooms

        High: 2 classrooms

Additional classroom spaces may be considered for some schools in order for special needs students to remain in close proximity to their residence — a requirement of federal law.

3. <u>Pre-kindergarten, Ages 3 through 4</u>:

Elementary schools will include two classrooms and an outdoor learning environment for students at risk or with disabilities, ages 3 through 4, in accordance with the Individuals with Disabilities Education Act (IDEA) Part B, the federal law that states that children with disabilities age 3 – 21 "have the right to free and appropriate education." Title I Guidance strongly supports Pre-K programs and Section 1112(c)(1)(F) of the Elementary and Secondary Education Act requires LEAs to provide an assurance that they will take into account the experience of model programs for the educationally disadvantaged.

These programs are funded from state and federal initiatives. WCPSS has self-contained and blended classes, based on the needs of the students. If the classrooms are not used for these programs, then the room(s) converts to space to accommodate students in grades K-5. Otherwise, capacity for this space is reported separately from the K-12 calculations.

4. <u>Kindergarten Program</u>:

Full-day kindergarten will continue to be offered.

5. Technology:

Development of 21st century skills in our students, effective instruction by our teachers, and assessment of student progress, requires the utilization of technology in our classrooms and schools. Effective utilization of technology leverages the capacity of the teacher, expands the physical boundaries of the classroom to the world, and engages students in ways that other instructional tools cannot. It is paramount that the next WCPSS Capital Program provides resources to equip new schools and renovate technology in existing schools to meet the expectations and challenges of our teachers and students.

a. General Assumptions

1) Technology is in a continual state of change. Assumptions made at the beginning of a Multi-Year Capital Program may become stale or no longer appropriate before the end of the Program. It is important the plan have capacity to amend the technology component of the Program during its term.

2) WCPSS targets attainment of a one to one student computing device ratio to provide the basis for development of 21st century technical skills and provide basis for delivery of 21st century learning content. Such initiatives are becoming the norm across the country. Meeting this standard will require a complete implementation of one to one devices for all students and the deployment of the necessary underlying infrastructure to support one to one devices. North Carolina currently has over 50 LEA's implementing initiatives to provide universal access to personal learning and teaching devices for both students and teacher

3) Costs associated with the deployment of technology infrastructure in new schools, deployment of technology renovation in existing schools, and deployment of technology in mobile modular classrooms is an integral component of the overall Program

4) Central Administration Leadership from Instructional and Technology areas will guide the decisions and standards for the technology infrastructure of newly built schools and the technology renovation of existing schools

5) The leadership of the Wake County Public School System recognizes that the utilization of technology is a key component of the learning and teaching process and preparation of our students for graduation and competing in the world. Further, the leadership understands the need for Central Administration to continue to drive the infusion of technology into curriculum, the expectation that School Administrators and Teachers understand how to effectively utilize technology infrastructure during instruction, and the provision of professional development to Central Administration, School Administrators, and Teachers to accomplish this.

6) Central Administration leadership recognizes that development of instructional technology standards for the district, and comprehensive utilization of technology infrastructure in the schools is essential for leveraging the capacity of teachers, engaging all students, developing 21st century skills in our students, and maximizing return on the significant investment made in technology.

b. New School Assumptions

1) One to one devices for students and staff will become the norm. Networking, wired, and wireless infrastructure must have capacity to support fully implemented one to one device initiatives for students and staff.

2) Decreasing unit costs for laptop computers to a point close to desktop units, directs that the primary computer devices become a laptop creating utilization flexibility.

3) During the transition to a one to one device environment, the practice of equipping all classrooms with a minimum of 5 desktop computers should be revised with a shift to laptop carts capable of bringing an entire "computer lab" to the classroom.

4) Alternative one to one devices, including tablet computers, will provide a complement to traditional laptop computers as instructional tools. Deployment of one to one carts will provide maximum utility and flexibility.

5) All instructional areas should be equipped with an interactive device such as a Smartboard or Promethean board and student response devices.

6) Acquisition of underlying operating system licenses, office productivity software licenses, and other application software licenses, device management applications, and initial set-up/installation, shall be a component of the program. Technology hardware, operating systems, and applications are all components of the technology itself, and all must be present and installed for use.

7) For new schools built in areas not having adequate signals from WCPSS' cell phone provider, funding shall be allotted for in building repeaters and related equipment to ensure emergency phones and communications take place in an effective manner.

8) Voice over IP is becoming the new norm for wired phone communication and shall be considered for all new schools.

9) Building automation infrastructure shall be incorporated within new facilities.

c. Existing School Assumptions

1) School facility and technology infrastructure life cycles differ significantly. Components of the facility have life cycles of decades, while most technology life cycles run in the three to five year range. The Program must recognize this and provide for renovation of technology in existing schools to be on par with the equipping of newly constructed schools.

2) The technology infrastructure of a large number of existing WCPSS schools is significantly overdue for renovation. Technology shifts from blackboards and chalk to white boards and dry erase markers have not been maintained to the current technology of interactive boards. Many existing schools have limited access for all students in a class utilizing one to one devices on a regular basis during the course of instruction. Regular leveraging of teacher's time through utilization of technology cannot be accomplished in many of our existing schools.

3) Technology infrastructure in the schools also includes all aspects of the technology backbone required to support end devices used by students and teachers. Infrastructure supporting student and teacher device use includes wired and wireless networking equipment, wiring, servers, backup UPS systems, switches, etc. In the effort to drive costs down and improve levels of service, as school renovations take place, alternatives for provision of the back-bone infrastructure will be considered including cloud based technology.

4) To drive the renovation of technology infrastructure and equipment in existing schools to be on par with technology in newly built schools, the Program will target investment of $200 per WCPSS student per year for the term of the Program. Further, the Program will seek funding streams to maintain this level of investment in technology renovation on an ongoing basis subsequent to the termination of the facility building/renovation component.

5) Voice over IP is becoming the new norm for wired phone communication and shall be considered for all existing schools.

d. Mobile/Modular Unit Assumptions

As mobile or modular units are added to a school campus, the Program will provide for a technology infrastructure on par with that found in a regular classroom. This will include the investment necessary to provide the temporary classrooms with interactive devices and related assessment systems, access to laptop and or tablet carts, and complete wired and wireless networking capacity. In the 21st century, the utility of network/internet wired and wireless access is a basic requirement similar to water and electricity.

SCHOOL CAPACITY & MEMBERSHIP

6. School Campus Capacity:

Facilities utilization will be based on class size averages and the optimum number of temporary classrooms supported by each school's program and site. The new Choice Student Assignment Plan provides controls for capacity to ensure optimal facility utilization at 100%. This plan offers the opportunity to align overcrowded schools with under-utilized ones and eventually bring all schools' utilization in line with their core facilities and site constraints. This will require the reallocation and eventual reduction of temporary classroom units, targeting those older than 25 years.

School models will be based upon allowable system-wide class-size ratios for numbers of students per classroom. NCGS 115C-301 and Session Law 2011-145 (House Bill 200) governs class sizes and teaching loads. "Local boards of education must maintain a LEA-wide class size average no higher than the class size ratio of teachers to students of the following: [Kindergarten – Grade 3: 1 to 21]"

Grade Level	Class Size Requirements (Grade Span Average)
K-3	21
4-8	26
9-12	24
Special Needs - Self-Contained	8 (Range of 4 to 12)
Pre-K	10 (Range 4 to 18)

Note: Special Education average usage is based on Policies Governing Services for Children with Disabilities: NC 1508-3 Class Size Chart. See Planning Issue #2. High school total reflects average usage.

See Appendix

7. Temporary Classrooms:

Optimum temporary classrooms should not exceed the maximum that can be supported by the core facilities (dining, office support, parking, playfields, etc.) with consideration of site limitations. Standard designs accommodate ~100 more seats or the equivalent of four temporary classrooms when the site allows. This does not include units utilized as swing-space for renovation projects. Mothballed or surplus units will be redistributed to better align a campus' efficiencies with its program.

The six 2003 adopted criteria for determining optimum instructional temporary classrooms (what the core can support) are reflected in the annual Facilities Utilization report:
  1) can be physically accommodated on the site;
  2) are permissible by the authorities having jurisdiction and by zoning, etc.;
  3) can be supported by no more than one toilet trailer unit;

4) can be supported by dining room facilities with no more than 3 seatings based on Department of Public Instruction Guidelines;

5) can be accommodated within 300 feet of the closest building access point; and,

6) can be supported by specialized educational program spaces like Career Technical Education, science, gym, etc.

7) can be supported by vehicle traffic patterns.

See Appendix

8. <u>Year-Round Calendar Schools:</u>

The multi-track, year-round school calendar is a strategy to increase the capacity of schools and, as a result, decrease the number of school buildings required to accommodate student enrollment. When new school facilities are designed and operated around a multi-track, year-round calendar, a maximum 33% gain in student capacity over a traditional calendar can be attained at full utilization with all four tracks loaded.

The number of schools to be established on a year-round calendar will be determined as part of a comprehensive facilities plan that addresses construction of new schools and renovations of existing schools, assignment choice, feeder patterns, as well as the number of year-round schools. Objective would be to maintain the minimum portion of year-round schools.

See Appendix

9. <u>Student Enrollment Projection:</u>

a. Staff from the Wake County and WCPSS will jointly produce enrollment projections. Enrollment projections will be reviewed and subsequently presented to the Board of Commissioners and Board of Education at a joint board meeting for approval.

b. Enrollment projections will be developed for operating budget and capital budgeting purposes. The methodology for capital projections may vary from the methodology used for the operating budget projection.

Capital projections are based on an economic cycle model, based on the need to project capital budgeting projections for a longer period of time over a varying economic climate. Economic indicators such as unemployment, sales tax revenue growth, building permits, as well as student enrollment indicators such as market share are taken into account. The operating budget is approached differently, based on the same rate of growth as the previous year.

LAND AND BUILDING

10. <u>Energy and Environmental Guidelines</u>:

WCPSS and Wake County support design principles that minimize life-cycle costs and energy costs, and do not have significant adverse effects on the environment. On all projects, WCPSS will comply with the Guidelines for Design and Construction of Energy-Efficient County Government Facilities and Schools, dated June 2004 (jointly developed and adopted by Wake County Government and WCPSS).

WCPSS will incorporate sustainable design features, wherever most financially responsible, consistent with the recommendations of the US Green Building Council in its LEED for Schools certification guidelines. A sustainability checklist will be used to optimize the use of "green" features in design and a sustainable energy cost benefit analysis will be conducted during Design Development of each project.

11. <u>Renovation of Existing Facilities</u>:

a. Existing facility projects will be included in one of the following categories:

   1) Life Cycle Replacements – individual systems to be replaced before failure;

     b) Systems that are approaching or have exceeded system life will be targeted based on facility assessments

     c) All Life Cycle replacement projects will be summarized in one line item in the CIP

     d) Projects will be prioritized using a priority matrix that focuses on health, safety and immediate needs

   2) Major Renovations – may include complete renewal or replacement of structural, mechanical, electrical, plumbing, codes and educational program;

     a) Facility square footage approaching or exceeding 40 years since a major renovation will be evaluated for a potential project

     b) Projects will be prioritized using a weighted evaluation sheet that includes the Facility Condition Index (FCI), academic improvement, student assignment, and health and safety...

     c) Each project will be listed as a separate line item in the CIP

     c) The amenities and finishes (walls, floors, etc.) in renovated schools will be of same standard as new schools

     f) Spaces in existing schools will be considered adequate if the size is not less than 75% of the approved space standards

     g) Renovation costs exceeding 75% of new construction will trigger a life-cycle cost analysis of major renovation vs. demolition/replacement

     h) Existing campuses will be reviewed to determine ability to add capacity

     i) Funding will be included for replacement of furniture, equipment, and technology if required

WCPSS will conduct a facility assessment on $1/7^{th}$ of the total square footage each year. The assessment will identify facility deficiencies and system life cycle due dates. This data will be used to establish initial project scopes, determine facility condition index, establish priorities and project future requirements.

See Appendix

12. New School Size and Space Standards:

a. School infrastructure, cafeteria, media center, and other core spaces will be designed to accommodate the number of students in permanent buildings plus additional seats in potential temporary classrooms. Utility infrastructure and site plans will provide for temporary classrooms where site conditions allow;

b. Alternate and non-traditional sizes of schools and sites will be considered based on availability of property.

c. Square footage totals are based on the latest space standards and subject to change pending program and operational needs. School model sizes are:

	DPI Capacity Guidelines	Building Capacity: Traditional Calendar	Building Capacity: Year-Round Calendar	Space Standards (Square Feet)
Elementary (lg)	700	780	1058	105k
Middle (std)	600-800	1,280	1,592	200k
High (std)	800-1,200	2,228	N/A	335k

1) Capacity totals reflect capacity models and the reduction in the special education student ratio;
2) Capacity totals include Special Needs teaching spaces to include both Special Education Services and General Education Support; elementary - 12; middle - 16; high - 17.
3) Elementary (lg): Year-round has all double loaded tracks with 2 temporary classrooms. Middle (lg): Year-round has 1 double loaded track and 3 single tracks.

13. School Site Size and Property Acquisition:

Land will be the minimum practical needed for educational program and regulatory requirements. Future capital programs will utilize Department of Public Instruction (DPI) guidelines, plus two acres for temporary classrooms and/or additional municipal requirements such as extra queuing. North Carolina Department of Public Instruction guidelines and recommended site sizes are as follows:

Grades	Developable Acreage	Applied to WCPSS Standard School Sizes (without temporary classrooms)	WCPSS Net Usable Acres
K-6	10 + (1/100 ADM)	10 + (796/100 ADM) = 17.96	20 ·
5-8	15 + (1/100 ADM)	15 + (1,304/100 ADM) = 28.04	30
9-12	30 + (1/100 ADM) + 10 acres for parking & stadium	30 + (2,223/100 ADM) + 10 = 62.23	64

a. The size of new school sites is based upon the educational program needs, the environmental/regulatory requirements of the jurisdictions in which they are located and configuration/topography of the site;

b. New school sites will be evaluated to determine the feasibility of joint development with other governmental agencies;

c. The use of smaller tracts will be considered when necessary, but may require changes to a school's capacity and educational program;

d. Sites will be sought for schools five years in advance of the construction start dates and opportunities to identify sites will be actively worked with municipalities;

e. Location and schedule of new schools will be guided by current crowding, projected growth, and needs identified from data in the Choice Student Assignment Plan; new schools may also provide temporary swing space for renovations of schools in the area;

f. The projected cost of public infrastructure and site development will be included in analyzing candidate school sites;

g. Consideration will be given, on a case-by-case basis, to acquisition of existing buildings that would be suitable for conversion to schools; some traditional program elements might be compromised if such a facility were used;

14. Support Facilities:

a. Projects for essential health and safety items in existing support facilities will be listed as prioritized needs;

b. Enrollment growth as well as needs caused by normal usage and wear may require renovation and expansion of existing support facilities and construction of new facilities such as: satellite transportation centers, infrastructure upgrades and regional shops for maintenance personnel. Where appropriate, expansion may require property acquisition.

15. Security:

Project priorities include ensuring the health and safety of children and staff; that schools are safe quality places for students to learn. To that end, the following assumptions will ensure that these objectives are met. All new and existing schools shall have consistent security systems with the most up to date technologies equivalent to those used in all new schools.

All new facilities and major renovations shall utilize Crime Prevention through Environmental Design (CPTED) principles. The purpose of these proposed assumptions is to have a centralized security system for all schools.

Crime Prevention through Environmental Design:

System	Elementary	Middle	High
Closed Circuit Television System	IP based: 16 camera system	IP based: 32 camera system	IP based: 64 camera system
Access Control	Card swipe system	N/A	N/A
Visitor Management	Networked kiosk for visitor sign-in and sex offender checks	Networked kiosk for visitor sign-in and sex offender checks	Networked kiosk for visitor sign-in and sex offender checks
Intrusion Alarm System	Upgraded to audible	Upgraded to audible	Upgraded to audible
Public Address Systems/Intercoms	Broadcast location added for designated incident command (principal conference room)	Broadcast location added for designated incident command (principal conference room)	Broadcast location added for designated incident command (principal conference room)

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FISCAL

16. Program Price Bases:

   a. Project estimates and cost models will be developed for pricing the new bond and will be independently validated;

   b. Costs are based on BoE approved space standards, ed specs, design guidelines, and existing prototype designs. Cost may include: construction cost, site development, demolition, design, materials testing, surveying, hazardous materials abatement (if any), moving costs, interim housing, furniture, custodial equipment, media center equipment and books, educational equipment and technology infrastructure;

   c. Land purchases and due diligence costs are budgeted separately from construction project cost and the land acquisition budget is based on the cost trend of recent land purchases and economic projections;

   d. Public infrastructure costs will be listed in a separate line item and will be based on the actual costs of current market trends;

   e. The cost of annual facilities assessments will be budgeted as a separate line item;

   f. Renovation projects will have a 10% contingency; new school projects will have a 5% contingency;

   g. The inflation estimate will be determined based upon information provided by up to four different independent construction companies; project costs will be adjusted each year based on anticipated annual inflation.

   h. The building program will have a 1.5% funded reserve budget. This budget would be used for funding of emergency projects or in the event critical assumptions (class size, school site size, cost of property acquisition, enrollment projections, etc.) differ substantially from actual experience. The reserve budget will be the designated location for any savings and will be held by the Board of Commissioners. Board of Education will review any critical needs and, if appropriate, request reallocation of funds from the Board of Commissioners.

   i. Program management budget will be based on the number of projects and timing of delivery.

   J To maintain a continuous building program, each CIP will include funds for the property acquisition and early start design of new projects funded in the next CIP.

17. Funding

   a. The building program will be funded through a variety of funding options to potentially include general obligations bonds, pay-as-you-go funds, state and federal funding.

   b. Pay-as-you-go funds should be targeted to non-capitalized technology and equipment. Alternate means of funding schools should be considered.

   c. Lottery funds awarded to the county and WCPSS will be used towards debt service costs of WCPSS general obligation bonds

   d. Opportunities for public/private partnerships will be considered, if advantageous to the educational program and if such partnerships are evaluated as cost effective.

APPENDIX

6. <u>School Campus Capacity</u>:

System-wide Long Range School Campus Capacity [LRSCC] utilization based on 2011-12 20th day membership and optimum temporary classrooms:

	2011-12 20th Day Student Membership	LRSCC Seats	Optimal # Temporary Classrooms	% Utilization (Including Program Adj.)
Elementary	70,526	75,185	408	96.50%
Middle	33,604	34,303	60	99.00%
High	42,143	38,514	68	111.10%
Special/Optional	414	414	4	100.00%
TOTAL	146,687	148,416	540	101.20%

7. <u>Temporary Classrooms</u>:

a. Temporary classrooms compared to total school capacities as of 2011-12:

	Optimum Long-Range Temporary Classrooms (Max Supported by Core*/Site) Total # / Percentage	Actual Temporary Classrooms Total # / Percentage	Difference
Elementary	408 / 12.5%	607 / 17.1%	199
Middle	60 / 4.5%	189 / 13.2%	129
High	68 / 4.2%	309 / 17.0%	241
TOTAL	540 / 8.5%	1106 / 16.4%	566

*Core includes dining, office support, group toilets, parking, playfields, traffic, etc

b. Schools and Temporary Classrooms as of 2011-12:

	Number of Schools that Exceed Optimum Temporary Classrooms	Number of Temporary Classrooms /Number of Seats that Exceed the Maximum
Elementary	50	269 / 6,187
Middle	16	138 / 3,588
High	19	252 / 6,048
TOTAL	85	659 / 15,823

8. <u>Year-Round Calendar Schools:</u>

	Number of Year-Round Schools / Total Schools as of 2011-12	Number of Year-Round Seats / Total Seats as of 2011-12
Elementary	40 / 104	35,163 / 76,351
Middle	9 / 34	12,174 / 37,233

11. <u>Renovation of Existing Facilities:</u>

a. 900 thousand out of 21.1 million permanent square feet exceed 40 years since a major renovation as of December 2011.

b. $85 million in unfunded deferred life cycle projects have been identified as of December 2011,

   Square Footage by Year:
   1) The square footage that turns 40 in 2012 = 87,983 GSF
   2) The square footage that turns 40 in 2013 = 19,028 GSF
   3) The square footage that turns 40 in 2014 = 57,162 GSF
   4) The square footage that turns 40 in 2015 = 302,609 GSF

   Total: 2012 - 2015 = 466,782 GSF
   Total: 2016 - 2020 = 134,556 GSF (estimate)