Wake County Public School System and Wake County Government

Citizens' Facilities Advisory Committee

Meeting Summary

Wednesday, January 31, 2007
Wake County Office Building, 4:00 PM – 6:30 PM

Highlights

1. Committee Call to Order & Opening Remarks
2. Brief Discussion of Committee Work Plan
3. Presentation: School District Comparisons Project
4. Preliminary Questions and Answers Regarding School District Comparisons Project

Committee Call to Order & Opening Remarks

John Mabe, co-chair of the Citizens' Facilities Advisory Committee called the meeting to order at 4:10 PM.

The committee discussed the December 18, 2006 meeting summary, and approved the minutes, subject to follow-up regarding a question posed at the December 18th meeting regarding the interest costs of financing $970 million in general obligation bonds for school construction. This data was provided to the committee in a subsequent email.

Brief Discussion of Committee Work Plan

Mr. Mabe also discussed future meetings of the Citizens' Facilities Advisory Committee, including a work session for CFAC members on February 13, 2007 and a public hearing for interested stakeholders on February 27, 2007. Further CFAC meetings were announced for March 27, April 24, May 22, June 26, and July 24, 2007.

Presentation of School District Comparisons Project

Billie Redmond, co-chair of the Citizens' Facilities Advisory Committee, introduced Carolyn Staskiewicz, Vice President of DeJong Inc. and Robert Kelly Jr., Senior Associate, Summit Consulting Services LLC. Ms. Statskiewicz and Mr. Kelly presented the findings from the school district comparisons project.

Ms. Statskiewicz reviewed the process of the study with committee members. The study's process included development of a survey template, comparison district selection and solicitation, district site visits and data collection, data analysis, and report development. Ms. Statskiewicz noted that a significant challenge was data collection. She reported that there was a vast amount of data requested for districts to voluntarily provide and that the study authors made every attempt to get the data. Ms. Statskiewicz noted that not all of the participating districts had standards for programming or capacity clearly stated in planning assumptions, or nor did they have readily available and updated education specifications. In addition she reiterated that there is no standard for collection of school construction data. Ms. Staskiewicz stated

that the actual data provided by participating districts was included in the appendix for review.
Ms. Statskiewicz then provided an overview of the districts included in the study. Nine districts, in addition to Wake County Public School System (WCPSS), were asked to participate. Seven chose to participate in addition to WCPSS: Charlotte-Mecklenburg Schools, Clark County School District (NV), Fairfax County Public Schools (VA), Guilford County Schools, Gwinnett County Public Schools (GA), Orange County Public Schools (FL), and Winston-Salem/Forsyth County Schools. Austin Independent School System (TX) and Johnston County Schools were invited to participate but declined. The largest system included in the study was Clark County NV and the smallest district included in the study was Winston Salem Forsyth County Schools. The district with the largest growth was Clark County NV. Of the 156 schools included in the construction cost analysis portion of the study, Clark County NV built the most (57 schools) and Guilford County built the fewest (3 schools).

The CFAC was then presented with a summary of the various planning assumptions and a comparison of those amongst the various school districts. These covered topics such as grade configuration, school year calendar, class size rations, temporary seats, renovation triggers, school capacity models, school size and space standards, square footage comparisons, school site size, property acquisition, utilities and maintenance, and capital budgeting practices.

Ms. Statskiewicz noted that the planning parameters reported by the school districts might not necessarily match the actual parameters of the schools included in the cost portion of the study. She stated that the reason for the difference was because the district cost data included buildings that were built earlier than when some of the planning assumptions were adopted.

Ms. Statskiewicz reported that all of the systems used K-5, 6-8 9-12 grade configurations except for Fairax County which used a K-6, 7-8, and 9-12. All offered full-day kindergarten except for Fairfax County and Clark County. None of the systems offered universal pre-kindergarten, and all offered special needs pre-kindergarten except for Gwinnett County. Year-round schools were offered by Wake County Public Schools, Guilford County Public Schools, Clark County Public Schools, and Fairfax County offered a modified calendar. Clark County had the highest percentage of students on a year-round calendar, even though the year-round calendar is only offered to K-5 students; 43 percent of elementary students attend year-round schools.

The study found that Wake County class sizes for K-3, 4-8, and 9-12 were very close to the average class sizes for the systems. Class sizes for K-3 ranged from 16-26 students, 4-8 ranged from 17-30 students, and 9-12 ranged from 16-30 students. WCPSS class sizes for K-3 was 21, 4-8 was 26, and 9-12 was 24.

The study showed that Wake County was the only system that reported a target number or goal (8%) for the number of temporary seats, or mobiles and modulars, in the system. All of the districts in the study utilized mobiles, except for Winston-Salem/ Forsyth. The percentage of mobiles ranged from 11 to 19 percent, although Charlotte-Mecklenburg, Orange, and Clark did not provide data on the use of temporary seats.

The study also included data on renovation triggers, or when the cost of renovation exceeds the cost of new construction, so a new building would be constructed. Guilford, Gwinnett, Mecklenburg, and Orange County did not report a trigger for renovations, Wake County uses 75%, Fairfax uses 65%, Forsyth uses 60%, and Clark County uses a combination of age and condition.

Ms. Staskiewicz, presented information about the school capacity models included in the districts planning parameters. The average capacity model for elementary schools, excluding WCPSS, was 872. Gwinnett County built the largest capacity elementary schools and Clark County built the smallest capacity elementary schools. The average square footage of an elementary school, excluding WCPSS was 92,000 square feet. Clark County built the smallest elementary school; however it was noted that Clark County and Orange County school systems use a lot of outdoor corridors due to their moderate temperatures, which reduces the amount of square footage of their buildings.

The committee was also presented information on the planned capacities and square footages of middle and high schools of new schools built by the system. The average capacity excluding WCPSS for a middle school was 1,277 and the average square footage was 155,000 square feet. Clark County's middle schools had the highest capacity (1,750 students) and Guilford County's had the smallest capacity (878 students). Gwinnett County's middle school model had the largest amount of square feet (200,000 sq feet). The average capacity excluding WCPSS for a high school was 2,216. Forsyth County plans the smallest capacity high schools at 1,000 while Gwinnett builds the largest at 3,000 students. The average square footage was 155,000 square feet.

Ms. Staskiewicz also reported findings concerning average classroom square footage, net square footage per student, and gross square footage per student for elementary, middle, and high schools. Wake County's classroom square footage was below average for elementary, average for middle, and above average for high schools. However, WCPSS was above average for net square footage per student for elementary and middle schools, and below average for net square footage per high school student. Likewise, WCPSS was above average for gross square footage for elementary and middle schools, and below average for gross square footage per high school student.

The presentation also included a brief summarization of school site size standards, property acquisition and land-banking, utilities and maintenance, and capital budgeting costs and assumptions.

The presentation to the CFAC committee also included data concerning academic program and specialty requirements amongst the districts in relation to the education spaces provided in new school construction. These elements included general classrooms, special programs, visual arts, music, media center, physical education, staff requirements, administration spaces, student support services, child nutrition services, plant operations, pre-k spaces, theater arts/auditorium, career and technology education, business and office education, video production, technology, and non-

assignable spaces. DeJong reviewed the amount of space designated for a particular program as a percentage of the total square footage of the building.

WCPSS was below or at average for the percentage of space allocated for all programs at the elementary level except for special programs and plant operations/non-assignable spaces. WCPSS was below or at average for all programs at the middle school level except for special programs, music/arts/theater, physical education, and plant operations/non-assignable spaces. WCPSS was below or at average for all programs at the high school level except for special programs, administration/support services/technology, and plant operations/non-assignable spaces.

DeJong Inc. also compared specialty requirements, or kitchens, cafeteria spaces, multipurpose rooms, auditoriums, stadiums, and practice fields between the systems. Half of the districts provide full service kitchens at the elementary level and half provided warming kitchens. Ms. Staskiewicz noted that most of the school districts in the study did not build a separate auditorium at middle schools; of those that build a separate auditorium (WCPSS, Guilford, and Clark County), WCPSS built a significantly larger auditorium for middle school students. At high schools, notably, all of the systems built separate stadiums, but the number of seats at the stadiums varied considerably (627-8000).

Ms. Statskiewicz then transitioned into discussing the school district construction cost comparison portion of the report. Ms. Staskiewicz briefly reviewed with the committee the process used to adjust time and location factors using RS Means. She reported to the committee that 156 schools were studied from the comparison districts, using a variety of contract delivery methods. Of the schools included in the study, 22 percent were delivered using the construction manager at-risk method, three percent were built via design build, 63 percent were contracted using a general contractor arrangement, and 12 percent were provided via multi-prime.

DeJong compared school construction costs amongst 16 Construction Specifications Institute (CSI) divisions. The divisions studied were:

- Division 1: General Requirements
- Division 2: Site Development
- Division 3: Concrete
- Division 4: Masonry
- Division 5: Metals
- Division 6: Woods & Plastics
- Division 7: Thermal & Moisture Protection
- Division 8: Doors & Windows
- Division 9: Finishes
- Division 10: Specialties
- Division 11: Equipment
- Division 12: Furnishings
- Division 13: Special Construction
- Division 14: Conveying Systems
- Division 15: Mechanical
- Division 16: Electrical

For each division, Ms. Staskiewicz presented four specific pieces of information for elementary, middle, and high schools: the minimum cost per square foot, the maximum cost per square foot, an average of all other districts, and the WCPSS cost per square foot. All costs were reported as location adjusted and escalated to the fourth quarter of 2006.

Notable differences between the average of other districts and WCPSS were found in Division 4 (masonry), Division 5 (metals), Division 7 (thermal & moisture), and Division 15 (mechanical). WCPSS costs were above average for elementary schools, average for middle schools, and above average for high schools in the cost of masonry. Ms. Staskiewicz noted that most of the North Carolina schools, including WCPSS, use brick masonry because it is a local traditional material and because it lasts for 50 years. Because of the use of steel framing, WCPSS costs were above average for elementary and high for Division 5. WCPSS was above average for elementary, middle, and high for Division 7, thermal and moisture protection. DeJong explained that this attributable to WCPSS' use of standing seam metal roofs, which last the longest and have the lowest life cycle cost, but are most expensive to construct. Ms. Statskiewicz also reported that Wake County was above average for elementary, middle, and high schools in Division 15, mechanical. She attributed this to WCPSS' use of a four-pipe system with a chiller and boiler for HVAC. However, she stated that this HVAC system has a longer life and lower life cycle costs than systems used by some of the other districts.

When each of the CSI costs were compared as a total school construction cost, Wake County's building cost per square foot (excluding site development), escalated for time and location, was above average for elementary, middle, and high schools. Site costs per square foot were at the average of the other districts.

DeJong Inc. concluded the presentation with specific areas they recommend the CFAC review further. They reviewed the cost of masonry, which is more costly than other materials. They also reiterated that there were tradeoffs between roofing and HVAC choices, and that while cost savings could occur in these areas, they would be offset by higher life cycle costs. The study authors encouraged WCPSS to utilize a detailed system for construction cost collection and analysis, to incorporate material and equipment options for value engineering, and to competitive bid unpredictable work phases. DeJong also recommended the use of shared sites, which reduces site development costs, as was the case of the WCPSS middle schools included in the study.

The CFAC was also presented with programming suggestions. DeJong Inc. noted that there was a large allocation for media centers and that the role of the media center is changing. These spaces could be reconfigured and possibly made smaller. Ms. Statskiewicz also reiterated to the committee that WCPSS was one of only three systems to build a separate auditorium at the middle school, and of the three, the size of the auditorium was larger than the other districts. She recommended a cafetorium or a stage in the gymnasium, which will allow the space to have dual purposes

Preliminary Questions and Answers

The committee then spent the remaining time period of the meeting asking questions about the data contained in the report. The following is a list of questions asked and brief answers from DeJong Inc. and Summit Consulting Services LLC to those questions.

1) Where is the raw data for each school (data not adjusted for time and inflation)?
    a. The appendix contains each school, the bid date and price, and cost per CSI division.

2) Are the square foot per student numbers skewed because of the inclusion of so many schools from Clark County and Orange County who utilize outside corridors instead of interior corridors?
    a. This difference is seen in the net square footage per student.

3) Why do some schools with larger capacities require less acreage?
    a. Systems build up instead of out as acreage becomes scarce and environmental regulations differ per district.

4) Why does WCPSS have higher net and gross square footages per student?
    a. WCPSS has interior corridors and average to above average classroom sizes. At the middle school, additional square footage is devoted to an auditorium. However, it is tough to pinpoint one or two specific reasons.

5) Are class sizes based on state or local mandates?
    a. Yes. The mandates differ per system.

6) Were stadiums and fields included in the construction cost?
    a. If they were included in the original construction contract, at bid day, they were included in the cost. If they are not included in the construction contract, like Gwinnett County, they are not included in the school construction cost data.

7) Is data available on life cycle costs of specific systems?
    a. That information was discussed, but no specific data was collected.

8) Why is there consistent square footage overage in WCPSS middle schools?
    a. Everything else appears normal at the middle school level except WCPSS offers a large auditorium.

9) Did you collect information outside of the utilities and maintenance information about plant operations? Do you have any comments on plant operations?
    a. Nothing out of the norm was noticed.

10) What is the process of approving construction projects in other states?
    a. That information was not specifically collected.

11) How do other systems finance school construction?
    a. That information was not collected.

12) Were adjustments made for site issues? Was cost data adjusted because of sites and the differences in construction timeframes (e.g. Clark County may have less rain delays than Wake County)?

a. Site costs are discussed on pages 40-43 of the report. Timeframe data was collected but not analyzed together with cost.

13) Is there a specific margin of error for the cost analysis portion of the report?
    a. No, but questions about RS Means were raised during the study. The location adjustment factors by CSI are better received than other components of RS Means. We are comfortable with the data analysis, and time and location adjustments.

14) Were the number of ball fields and parking spaces per school studied?
    a. The number of ball fields and other athletic spaces are reported on page 31-32 of the report. Parking space data was not collected uniformly, but reviewed when site work projects scopes were examined.

Meeting Conclusion

John Mabe then reviewed the process for collecting other questions to forward to DeJong prior to the February 13, 2007 work session. He also reminded the committee that at the next meeting, subcommittee selections would be made. The meeting adjourned at 7:00 PM.