Guidelines of Best Practices for School Building Projects

A Companion to 702 KAR 4:160

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Introduction

Each day the District Facilities Branch of the Division of District Support receives numerous inquiries regarding the regulations related to school facility construction, or the solutions to a variety of facility problems. The Guidelines of Best Practices for School Building Projects is intended to be a handy reference for school district administrators and the design professionals involved in school facility projects and to further clarify the building, design and administrative process noted in 702 KAR 4:160. The information contained in this document does not uniformly apply to each and every project, but is meant to highlight some important considerations. Each individual project may require an entirely different approach from the last. The Architect's Memorandum section in the Appendix is included to collect periodic communications of new information on topics of immediate interest. We would suggest that a 3-ring binder is the appropriate container for the Guidelines, so that new material may be added when it is

available. We intend to up-date holders of the Guidelines via our mailing list. It is our hope that these efforts provide useful information and assistance, and reinforce our role as a school district support service. For further discussions of all facility issues, please contact our office at (502) 564-4326.

In 1994 when the Kentucky Education Reform Act (KERA) was implemented to respond to the concerns of those involved in providing instructional space, the entire process of school facility planning, design and construction came under review. Increased community involvement of this process began with the revisions to the facility survey program in the Kentucky School Facilities Planning Manual (702 KAR 1:001). With the adoption of Capital Construction Process (702 KAR 4:160) in 1994, the responsibilities of local school boards, architects and construction managers were given more definition. In 1994 Facility Programming and Construction Criteria (702 KAR 4:170), concluded the overhaul of the process.

In addition to these initial efforts to bring order to the school building process, a reduction in the quantity of regulations became a priority. 702 KAR 4:160 and 702 KAR 4:170 are consolidations of existing administrative regulations. With the adoption of 702 KAR 4:170 on March 2, 1995, three existing regulations: 702 KAR 4:060, Construction criteria, 702 KAR 4:070, Mechanical, electrical, sanitary, heating and ventilation design, and 702 KAR 4:080, Temporary or supplemental units were combined.

Through the adoption of 702 KAR 4:170, the minimum areas for the program spaces identified in Kentucky School Facilities Planning Manual for planning and funding purposes, were required to be constructed at no less than the minimum sizes noted.

In 2004 the Kentucky School Facilities Planning Manual (702 KAR 1:001) was revised and in 2008 the regulation along with the Master Educational Plan was replaced by 702 KAR 4:180. This new manual combined both documents and more clearly defined the purpose of the planning process and the roles of those involved.

In 2011 KDE again proposed to revise 702 KAR 4:160 to update the contract documents used in the construction of schools in Kentucky. This update was expanded by the Commissioner of

Education to further streamline the process of regulatory review. This revised regulation was adopted by the General Assembly in 2013.

Section 1 – Definitions and Acronyms

AIA - American Institute of Architects – is a professional organization for architects in the United States. Headquartered in Washington, D.C., the AIA offers education, government advocacy, community redevelopment, and public outreach to support the architecture profession. The AIA also works with other members of the design and construction team to help coordinate the building industry. One of their major contributions is the development of a "family" of construction and contract documents that have become the industry standard and are used in Kentucky school projects.

ADDENDA - the written (sometimes including graphics) instruments issued by the Architect or CM (if used) during bidding to clarify, revise add to or delete information in the original bidding documents or in previous addenda. All addenda must be reviewed and approved by KDE prior to bid opening. The Addenda become part of the Contract Documents.

AMENDMENT TO THE DFP - changes to the District Facilities Plan (DFP) that are undertaken by the district during the four (4) year DFP cycle. The local board of education may request an amendment to its DFP to accommodate major enrollment changes, major curriculum changes, major disaster or unforeseen occurrences. These changes are sometimes required to allow projects to be undertaken using restricted construction funds.

ARCHITECT – the use of this term in 702 KAR 4:160 refers to a "design professional" licensed in the Commonwealth of Kentucky under KRS Chapter 323 (Engineers), 322 (Architects), or 323A (Landscape Architects) which includes architects, engineers, and landscape architects providing services within their respective practice areas. The Architect's roles and responsibilities are outlined in greater detail in **Section 4 – Architectural Services.**

ATTENDANCE BOUNDARY - the boundaries established by the local board of education that determine the student's school of attendance.

BASE CAPACITY means the number of students per middle and high school standard classroom that are used to determine the "calculated" capacity. For standard classrooms larger than 700 sf. the base capacity is 25 students. This base capacity is reduced for standard classrooms that are smaller than 701 sf. as noted in 702 KAR 4:180. The individual standard classroom base capacities are combined to create the building base capacity. This is then divided by 75% to establish the building's "calculated capacity". (See definition of CALCULATED CAPACITY).

BASIC "CONSTRUCTION MANAGEMENT (CM)" SERVICES – the work to be provided by the Construction Management team for their roles in the development of a construction project for which they will be paid as outlined in the CONSTRUCTION MANAGER FEE GUIDELINES. This work effort is generally described in the American Institute of Architects – AIA Document C132-2009, Standard Form of Agreement Between Owner and Construction Manager as Adviser – KDE Version, 2013 as required by 702 KAR 4:160,. Like the "BASIC DESIGN SERVICES" the work effort is generally divided into two (2) parts, Pre-Construction Phase and Construction Phase Services. The CM's role in the Pre-Construction Phase contains the first four (4) of the five (5) parts included in the BASIC "DESIGN" SERVICES; Schematic Design, Design Development, Contract (or Construction) Documents and Bidding/Negotiation. The final phase; "Contract Administration" runs parallel with the design team in this phase. The Construction Manager's roles and responsibilities in each phase are outlined in greater detail under **Construction Manager** in the definition section of this Manual and in **Section 5 – Construction Management Services.** *Please note that the definition noted herein if for "Construction Manager as Advisor". Districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used.*

BASIC "DESIGN" SERVICES – the work to be provided by the design team for their roles in the development of a construction project for which the design team will be paid as outlined in the ARCHITECT/ENGINEER FEE FOR BASIC SERVICES. This work effort is generally described in the American Institute of Architects – AIA Document B101-2007, Standard Form of Agreement Between Owner and Architect – KDE Version, 2013 as required by 702 KAR 4:160, with the required KDE Amendments, based upon the project delivery method selected. The work effort is generally divided into five (5) parts; Schematic Design, Design Development,

Contract (or Construction) Documents, Bidding/Negotiation and Contract Administration. The design team's roles and responsibilities are outlined in greater detail in the definition section of this Manual and in **Section 4 – Architectural Services**.

BEST PRACTICES - guidelines used in the administration of the activities of the Facilities Branch that have been established based on successful programs and methods of planning, design, construction, maintenance, contract administration and project development.

BIDDING AND NEGOTIATION PHASE "CONSTRUCTION MANAGEMENT (CM)" SERVICE – the last phase of "preconstruction phase" service. The Design Teams services are similar to those noted in the definition of **BIDDING AND NEGOTIATION PHASE "DESIGN" SERVICES** except some of the responsibilities are shifted to the CM. In this phase the CM assists in the presentation of the bid documents to potential contractors for pricing. The CM will "package" the bid documents into individual "bid packages" to secure bids for each group of like work efforts. It is critical that the CM understands not only the documents and scope of work, as developed by the design team, but also the construction trades available to perform the work. The Contract Document set includes specific information necessary for successful price bids. For most projects, the architect, owner, and CM elect to have a prebid meeting for potential contractors. After bid sets are distributed, the CM assists the contractors in their understanding of the intent of the documents in both written and verbal form. The owner, with the help of the architect and CM, evaluates the bids and selects a appropriate bid for each bid package. The final step is to award the contracts to the selected bidders with a formal letter of intent to allow construction to begin. The Construction Manager's roles and responsibilities are outlined in greater detail in **Section 5 – Construction Management Services.** *Please note that the definition noted herein is for "Construction Manager as Advisor". Districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used.*

BIDDING AND NEGOTIATION PHASE "DESIGN" SERVICE - the last phase of "preconstruction phase" service, this phase includes the presentation of the bid documents to potential contractors for pricing. The bid document set includes information necessary for successful price bids. For most projects, the architect and owner elect to have a prebid meeting for potential contractors. After bid sets are distributed, the design team assists the contractors in

their understanding of the intent of the documents in both written and verbal form. The owner, with the help of the architect, evaluates the bids and selects a winning bid. The final step is to award the contract to the selected bidder with a formal letter of intent to allow construction to begin. The design team's roles and responsibilities are outlined in greater detail in **Section 4 – Architectural Services.**

BIENNIUM - the two-year cycle (on even years) beginning July 1 of the year the state legislature establishes the biennial budget.

BOARD (BOE) - the local board of education which is the elected governing body of a public school district serving grades Preschool through grade 12; see also BOE, LEA, LBE, Owner.

BOARD ORDER – the written record of a decision or action by the BOE regarding the business of the district as reflected in an official published copy of the Board Meeting Minutes, or an unofficial excerpt (a selected portion of the meeting minutes directly related to a particular KDE project) signed by the board secretary verifying authenticity, and in accordance with KRS 160.270.

BOE - local **board of education** which is the elected governing body of a public school district serving grades Preschool through grade 12; see also BOARD, LEA, LBE.

BONDS (Performance & Payment Bonds) - completed and notarized AIA documents outlining responsibilities, requirements and conditions for insuring the performance and complete payment of the identified project in accordance with 702 KAR 3:030. The execution of these bonds represents that a bonding or surety company, with offices in the Commonwealth of Kentucky, has agreed to underwrite a contract to insure payment

BOND (Bid Bond) – is a document purchased by prospective bidders and issued as part of a bidding process by a surety company, with offices in the Commonwealth of Kentucky, to the project owner (BOE), to guarantee that the winning bidder will undertake the contract under the terms at which they bid. This surety can be in the form of a completed AIA Document or a certified bank check, generally in the amount of 5% of the total cost of the selected bidder's proposed construction contract amount. The "bond" is subject to full or partial forfeiture if the

winning contractor fails to either execute the contract or provide the required performance and/or payment bonds.

BOND (Revenue Bonds) - are a type of municipal bond distinguished by its guarantee of repayment solely from revenues generated by a specified revenue-generating entity associated with the purpose of the bonds. These types of bonds are generally used to finance school construction projects. The ability to repay and the issuance of these bonds is determined by the funding available to the district based on; the property tax revenues generated within the district, the number of students in the district and the relative district need as determined by the District Facility Plan.

BUILDING ADMINISTRATORS - principals and assistant principals.

BUILDING CAPACITY - the number of students that can be accommodated within a school building based on the requirements established by the Kentucky Department of Education. (See definition for **Calculated Capacity**)

BUILDING SYSTEMS - individual components of a building including; sitework, foundations, exterior walls, roofing, doors, building hardware, windows, interior finishes, structural components, mechanical (HVAC), electrical (including lighting), plumbing, sewage, technology, life safety and security, data and fixed equipment. For additional information as to how these items are used see the definition for **Major Renovation**.

CSSO - Chief State School Officer

CALCULATED CAPACITY - the number of students determined to be able to be equitably accommodated within a school building. For Elementary, Middle and High only standard classrooms are used in this calculation. The number of students to be housed depends on the size of the classroom. For standard classrooms larger than 700 sf. the base capacity is 25 students (except Preschool which is 20 students). This base capacity is reduced for standard classrooms that are smaller than 701 sf. as noted in 702 KAR 4:180. The individual standard classroom base capacities are combined to create the building base capacity. For Elementary schools this “base capacity” is also the “calculated capacity”. For middle and high schools, it is

assumed that 25% of the student time will be spent in spaces other than standard classrooms in spaces such as Special Education, Music, Art, Science Labs, Computers Labs, Career and Technical Centers/KY Tech Area Technology Centers or programs, etc. For this reason the "base capacity", determined by the number of standard classrooms and their sizes, is modified to reflect the unique nature of middle and high school design. (See definition of **BASE CAPACITY**). To determine the "calculated capacity" for a middle or high school, the base capacity is divided by 75% in order to account for the time spent outside standard classrooms. [For example, an elementary school with 21 standard classrooms of 800 sf. each shall have a capacity of 525 students (21 classrooms x 25 students/classroom = 525 students) a middle school with 21 standard classrooms or 750 sf. each shall have a capacity of 700 students (21 classrooms x 25 students/classroom = 525 divided by 75% = 700 students)].

CENTRAL OFFICE STAFF - certified or classified staff assigned to the central office.

CERTIFICATE OF OCCUPANCY - is a document issued by a governmental agency or building department certifying that a building is in compliance with applicable building codes and other laws governing it's use, and indicating that all or a portion of a building to be in a condition suitable for occupancy.

CHANGE ORDER - a written instruction to the contractor, signed by the owner, the architect/engineer, (the CM if such services are employed) and the contractor issued after execution of the contract, authorizing additional work, deletion, or revision in the scope of work or an adjustment in the contract sum or the contract time. **See Section 9 – Contract Change** Orders for additional information.

CHIEF STATE SCHOOL OFFICER (CSSO) – Commissioner of Education

CONSTRUCTION - the process of building, altering, repairing, improving or demolishing any structures or systems of buildings, or other improvements of any kind to any real property owned or leased by a school district.

CONSTRUCTION COST - the dollar amount identified for all labor and material to perform the work of a project as identified in the Contract Documents.

CONSTRUCTION DOCUMENT PHASE "CONSTRUCTION MANAGEMENT (CM)" SERVICES - the third of the Pre-Construction Phase services. The Design Teams services are similar to those noted in the definition of **CONSTRUCTION DOCUMENT PHASE "DESIGN" SERVICES** except some of the responsibilities are shifted to the CM. The CM works with the owner and the design team to assist in developing the documents that will be used for bidding and constructing the project. The CM will continue to focus in greater detail on material selections, buildability relating to certain construction methods, costs of various solutions and the project schedule. The CM will review the drawings and the specifications and break the project up into individual "bid packages" that will be presented to the contractors for bidding. The CM will prepare sections of the specification that outline these bid packages and the work that is to be included in each. The CM will also develop the sections of the specification that describe project administration and how the contractors are to work toward the goals of the project as outlined in the Construction or Contract Documents. It is critical that the CM carefully outline the items to be included in each bid package since only those items noted will be bid and included by the contractors in their prices. It is also critical that the CM update the budget and schedule at this time to determine if the project is in scope. The CD phase ends with a formal presentation to, and approval by, the local board and KDE. The CM's roles and responsibilities are outlined in greater detail in **Section 5 – Construction Management Services**. *Please note that the definition noted herein is for "Construction Manager as Advisor". Districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used.*

CONSTRUCTION DOCUMENT PHASE "DESIGN" SERVICES – in the third phase of design services, the design team develops the documents that will be used to bid and then construct the project. The approved documentation of the design developed in the previous project phases will be used to establish the project scope. Generally called CDs, the design team will develop the project scope in much greater detail, noting specifically how the site will be developed, structural components will be fabricated and assembled, building materials and equipment will be placed, and how mechanical, electrical, plumbing and life safety systems will be supplied and installed. The documents will consist of a set of drawings and a written manual called a "specification or project manual" that will include instructions for bidding and building the project as well as the material that will be included and how they will be installed. The CD

phase ends with a formal presentation to, and approval by, the local board and KDE. The design team's roles and responsibilities are outlined in greater detail in **Section 4 – Architectural Services**.

CONSTRUCTION MANAGER (CM) - a qualified and experienced contracting organization which plans, coordinates, budgets, and supervises construction projects from early development to completion. For Kentucky school projects they must have a minimum of three (3) years' construction management experience on projects of $2,000,000 or more, and the ability to provide the services required. These professionals are hired in much the same manner as the Architect and work with the local board and design team in the development and construction of the project.

CONSTRUCTION PHASE "CONSTRUCTION MANAGEMENT (CM)" SERVICES - the final phase of a project. The Design Teams services are similar to those noted in the definition of **CONSTRUCTION PHASE "DESIGN" SERVICES** except some of the responsibilities are shifted to the CM. The CM services are to help the contractors build the project specified in the CDs as developed by the design team and approved by the owner. The CM will have an on-site representative to help coordinate the work effort of the contractors and to assist in their communications with the owner and design team members. The CM will also receive the individual applications for payment from the contractors and prepare master applications for payment to be reviewed by the owner and design team before individual payments are submitted to the local board. The Construction Manager's roles and responsibilities are outlined in greater detail in **Section 5 – Construction Management Services**. *Please note that the definition noted herein if for "Construction Manager as Advisor". Districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used.*

CONSTRUCTION PHASE "DESIGN" SERVICES – is the final phase of design services. The design team works with the contractors as they build the project specified in the CDs and as approved by the owner. Questions may arise on-site that require the architect to develop written or graphic instructions to be issued after construction documents have been released that offer additional clarification to finish the project properly. In addition, the design team will make periodic observations of the work and inform the owner of the conditions and efforts being

undertaken during construction. The design team will also review the contractor's Applications for Payment and advise the owner on the percentage of the work's completion and the amount of money to be paid periodically to the contractors. The design team's roles and responsibilities are outlined in greater detail in **Section 4 – Architectural Services**.

CONTINGENCY - the dollar amount representing 5% of the Construction Cost that is required by KDE to be set aside in a construction project to address unforseen items that may occur during the course of the project. These monies are to be listed on the BG-1 Form. As the project progress the likelihood of problems which would need to be addressed by these funds generally diminishes. With KDE approval, the contingency funds can then be spent to add items to the project that could not be afforded at bid time or to purchase items such as furnishings and equipment to be used on the project.

CONTRACTOR and GENERAL CONTRACTOR - an individual, corporation, estate, trust, partnership, limited liability company, association, joint venture or any other legal entity performing construction and having a contract with the owner (BOE) as approved by KDE to construct a project as outlined on the construction documents prepared by the Architect.

CONTRACT - the agreement between the owner (school district) and an architect, engineer, contractor, vendor or construction manager in the form of either an approved AIA document, KDE approved Purchase Order, or a letter of agreement (if recommended by KDE Project Checklist), for the purposes of designing a new or renovating an existing facility to be used by the school district in accordance with all applicable laws and regulations.

CONTRACT or CONSTRUCTION DOCUMENTS – written and graphic information which includes; the owner-contractor agreement, conditions of the contract (general, supplementary, and other conditions), purchase orders, drawings, specifications, addenda issued prior to execution of the owner-contractor agreement, other documents listed in the owner-contractor agreement, and modifications issued after the execution of the agreement all of which are incorporated as part of the agreement between the local board and those individuals and companies that are executing a project.

DFP – District Facilities Plan

DEPARTMENT - the Kentucky Department of Education;

DESIGN DEVELOPMENT PHASE "CONSTRUCTION MANAGEMENT (CM)" SERVICES – the second of the Pre-Construction Phase services. The Design Teams services are similar to those noted in the definition of **DESIGN DEVELOPMENT PHASE "DESIGN" SERVICES** except some of the responsibilities are shifted to the CM. In this phase, the CM works with the owner and the design team using the initial design documents from the schematic phase and expands on the construction, pricing and schedule issues of the project. In this phase the CM advises the owner and design team during the development of the site, mechanical, electrical, plumbing, structural, and architectural documents. The CM's review and comments will focus in greater detail on material selections, buildability relating to certain construction methods, costs of various solutions and the project schedule. The DD phase ends with a formal presentation to, and approval by, the local board and KDE. The CM's roles and responsibilities are outlined in greater detail in **Section 5 – Construction Management Services**. *Please note that the definition noted herein if for "Construction Manager as Advisor". Districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used.*

DESIGN DEVELOPMENT PHASE "DESIGN" SERVICES – the second phase of design services in which the design team uses the initial design documents from the schematic phase and take them one step further. This phase lays out site, mechanical, electrical, plumbing, structural, and architectural details. Typically referred to as DD, this phase results in drawings that often specify design elements such as material types and location of windows and doors. The level of detail provided in the DD phase is determined by the owner's request and the project requirements. Typically, at the conclusion of DD no further changes to the building structure, envelop, or plan are anticipated. The DD phase ends with a formal presentation to, and approval by, the local board and KDE. The design team's roles and responsibilities are outlined in greater detail in **Section 4 – Architectural Services**.

DESIGN PROFESSIONAL – a person licensed in the Commonwealth of Kentucky under KRS Chapter 323, 322, or 323A which includes architects, engineers, and landscape architects providing services within their respective practice areas.

DISTRICT - the local board of education.

DISTRICT FACILITIES PLAN (DFP) - District Facilities Plan means the comprehensive review and evaluation of a school district's facilities that is prepared every four years. This evaluation is undertaken by a Local Planning Committee with the assistance of the district administrative staff, Architects, Engineers, KDE and other consultants. The District Facilities Plan and its preparation are governed by 702 KAR 4:180 and is the determinate of a district's Needs Calculation and the trigger for expending restricted construction funds.

DISTRICT TECHNOLOGY PLAN - the plan developed by the local district and the Department of Education and approved by the Kentucky Board of Education upon the recommendation of the Council for Education Technology;

DISPUTE RESOLUTION - the procedure for resolving a complaint between contracted parties, in this case, relating to a construction project. The complaint must be filed first with the Kentucky Circuit Court located in the same Kentucky County as the School district, and upon agreement by all parties and as directed by the court, KDE requires the complaint be decided by mediation and then consider other measures if the issues are not resolved by mediation.

DISCRETIONARY PROJECT - a project noted on the District Facilities Plan that does not qualify to be completed using restricted funds or used to determine a district's need. These projects may be completed using non-restricted funds as they become available.

EDUCATIONAL PROGRAM SPECIFICATION (EPS) - a brief description of the curriculum (i.e. Standardized K-12, Alternative Education, Vocational Technical, Next Generation Learning, Career & College Ready, etc.), provided by the district and approved by the BOE, submitted to KDE in conjunction with either the BG-1 Project Application and or with the Schematic Design documents. In addition to curricula information, the EPS shall include criteria confirming compliance with 702 KAR 4:170.

EFFICIENT SCHOOL DESIGN - a school building design that meets, at a minimum, the requirements of the United States Green Building Council's Leadership in Energy and

Environmental Design (LEED) for schools at the "Certified" level or certification under a comparable system with equivalent requirements or other building performance certification systems, such as the United States Department of Energy's Energy Star program; that ensures energy savings from a building design that equates to or exceeds ten percent (10%) over the American Society of Heating, Refrigerating, and Air Conditioning Engineers energy standard 90.1-2007; and for which whole building life-cycle cost analysis illustrates that the design is cost-effective. (As used in this section: 157.455 Definitions -- Legislative findings -- Kentucky efficient school design trust fund -- Development of guidelines -- Assistance to school districts -- Annual report.)

EPS – Educational Program Specification

ELIGIBLE DISTRICT - any local school district having an unmet facilities need, as defined in this section, in excess of one hundred thousand dollars ($100,000) or a district qualifying for education technology funding.

EMERGENCY - the loss of use of physical facilities resulting from an unforeseen occurrence which requires prompt action with priorities being placed in order of importance with #1 being the most important; 1. Classroom or Instructional Space; 2. Food Services; 3. Administration; 4. Physical Education. Emergencies shall be declared by the Superintendent in accordance with KRS 424.260 or 45A.380, whichever is applicable, and confirmed by board action through a special called meeting within seventy-two (72) hours of the incident.

ENGINEER - a licensed design professional permitted by KRS 322.360 to be involved in certain aspects of public school projects including Civil, Mechanical, Plumbing, Electrical, and Structural.

EQUIPMENT (Fixed or “Moveable) - useable functioning devices not included in the primary structural and mechanical operating systems for the building, but necessary for the ordinary operation of a public school facility. Such devices are typically purchased and installed in accordance with the BG-1 Project Application.

EQUIVALENT TAX RATE - estimated permissive tax revenue plus the current year's levied real estate tax rate, tangible tax rate and motor vehicle tax rate per $100 of assessed value times the current year's assessment of real estate, tangible property and motor vehicles times the prior year's collection rate divided by the total current year's property and motor vehicle assessment

ESTIMATED CONSTRUCTION COST - the projected cost of construction for all labor and material to perform the work of the project as identified in the Contract Documents that is developed by either the Architect or CM (if used) prior to bidding. Since this cost is based on the best "opinion of probable construction costs" it is not an exact cost for the contract determination.

FEMA - Federal Emergency Management Assistance

FSPK – Facility Support Program of Kentucky

FACILITIES BRANCH - the Division of District Support Services

FIXED EQUIPMENT - a device or appurtenance secured or fastened in a permanent manner to the building structure.

FINDING - a "minor" change to the District Facilities Plan that is undertaken by the district during the four (4) year planning cycle. (See the Section 503 for additional requirements).

GC – General Contractor

GROSS BUILDING/FLOOR AREA – The cumulative total of the net area of all program spaces (i.e. Classrooms, Media Centers, Kitchen, Cafeteria, Specialty Classrooms, Office Areas, etc.), the net area of all non-program spaces (Toilets, Corridors, Storage Rooms, Mechanical Rooms, etc.) and the space allocated for interior and exterior walls. This would include all space contained within the limits of a line drawn around the outside face of the exterior wall.

GESC – Guaranteed Energy Savings Contracts - a process for construction delivery and implementation of energy conservation measures that proposes the renovation and replacement of various building systems, primarily those that would save energy, and the review of operational procedures that could be changed to save energy. These items would be included in a procurement method that requires a "qualified provider" to make a review of the district's buildings, energy use and operating procedures. This delivery method includes: reviewing the district buildings and analysis, design engineering costs, provision of all equipment, installation and commissioning of the work. The proposed changes are "guaranteed" to save a specified amount of energy within the district which translates into a guaranteed annual district cost saving.

HEALTH SERVICES - preventive and health care services provided in a school setting and includes but is not limited to supplemental classroom instructional services related to health by an advanced practice registered nurse, registered nurse, or licensed practical nurse; As used in KRS 156.496, 156.4975, and 156.4977:

HEADSTART SERVICES - are a Federal Program for children of ages up to 4 years old. These programs may be operated in some districts with the local district leasing space to the program for payment or "in-kind" service in the education of the district's young students who qualify for the program. In general, the classrooms that are to be used for this use are on the ground level with direct access to fenced outdoor plan areas, are larger than standard classrooms and have adjacent private toilets for student use. Because the programs vary from district to district, the students in these programs are not counted in the district enrollment calculation. Likewise, the spaces for these programs are not used in the building capacity calculation but are handled in the same manner as Special Education, Music, Art and Computer classrooms as "break-out" program space.

PRESCHOOL SERVICES - are for children of ages up to 4 years old. In general, the classrooms that are to be used for this use are on the ground level with direct access to fenced outdoor plan areas, are larger than standard classrooms and have adjacent private toilets for student use. Because the programs vary from district to district, the students in these programs are not counted in the district enrollment calculation. Likewise, the spaces for these programs

are not used in the building capacity calculation but are handled in the same manner as Special Education, Music, Art and Computer classrooms as “break-out” program space.

KBE - Kentucky Board of Education

KDE - Kentucky Department of Education - means (for purposes of this regulation concerning the design and construction of public school facilities) the Kentucky Department of Education, Facilities Branch.

KENTUCKY EDUCATION TECHNOLOGY SYSTEM - the statewide system set forth in the technology master plan issued by the Kentucky Board of Education with the recommendation of the Council for Education Technology and approved by the Legislative Research Commission;

KFICA – Kentucky Fairness in Construction Act

KINDERGARTEN SERVICES - are for children of age 5 and are currently only required to be ½ day programs although some districts have undertaken full day programs using local monies. In general, the classrooms that are to be used for this use are on the ground level and designed as standard classrooms. With the age of the students served in mind, some have adjacent private toilets for student use. These programs are counted in the district enrollment calculation. Likewise, the spaces for these programs are used in the building capacity calculation.

LBE - Local Board of Education

LEA - Local Education Agency

LPC - Local Planning Committee

LEASE or LEASE INSTRUMENT - a written agreement for the renting of space by a board of education as lessee, or as lessor. Such agreements must be approved by KDE.

LEASE/PURCHASE AGREEMENT - a lease between the school district or the department and a vendor that includes an option to purchase the technology equipment or software at the end of the lease period;

LOCAL AVAILABLE REVENUE - the sum of the school building fund account balance; the bonding potential of the capital outlay and building funds; and the capital outlay fund account balance on June 30 of odd-numbered years. These accounts shall be as defined in the manual for Kentucky school financial accounting systems.

LOCAL EDUCATION AGENCY - the elected local school board and administration.

LOCALLY IDENTIFIED CAREER AND TECHNICAL EDUCATION SPACE ALLOWANCE - an allowance in the High School and Middle School Model Programs to be added, at the discretion of the district, to respond to individual district Career and Technical Education Program needs. The allowance has been determined using the most common programs noted in Middle and High School facilities. This allowance has been included for the purpose of Needs Assessment and to provide a Model Program that represents an "adequate" facility. The district shall coordinate the inclusion of these spaces with the Education Cabinet, Department of Workforce Investment, Office of Career and Technical Education and the Kentucky Department of Education, Division of Career and Technical Education. This space is in addition to those programs that may be considered for a complete Career and Area Technology Center.

LOCALLY IDENTIFIED PROGAM SPACE ALLOWANCE - an allowance in all school Model Programs to be added, at the discretion of the district, to respond to individual district needs. This allowance shall place educational spaces as the first priority. The ability to add space for consideration on the DFP and for Needs Assessment shall be justified against spaces within the existing building that are in excess of those identified in the Model Program.

LOCAL PLANNING COMMITTEE - an advisory committee to the local board of education charged with the development of a four (4) year District Facilities Plan. The committee is made up of a maximum of twenty (20) members and a minimum of ten (10) members that include; parents, teachers, building administrators, facilities directors, central office staff, local board members, local governmental building, code enforcement or planning officials and the school

superintendent, who is a non-voting member of the committee. This committee studies information concerning the district's buildings, financial information, demographics and other information at its discretion to develop a plan for addressing the districts construction needs. The committee's role and duties are further clarified in this School Facilities Planning Manual.

LIFE CYCLE COST ANALYSIS - to calculate and compare different building designs and systems to identify which is the best investment over the long term. Life-cycle costs include design and construction costs, operating costs, maintenance costs, and repair and replacement costs.

MAJOR PROJECTS - a project listed in the District Facility Plan which would include; new buildings, expansion or "major renovation" of a permanent center, campus enlargement or construction of support space at permanent centers if its need can be documented and justified.

MALFEASANCE - wrongdoing or misconduct especially by a public official or professional. As it relates to design and construction; failure to act in a manner consistent with the tenets or responsibilities that would be "reasonably" expected by a person in the same profession under the same circumstances in the area in which the act occurred.

MAJOR RENOVATION - a renovation project at a permanent center, including three (3) or more building systems and an estimated cost of 20 percent of the current replacement cost of the building, or portion thereof. The building shall be a minimum of **thirty (30) years old or thirty (30) years** shall have passed since its last major renovation with the exception of restructuring an open space school for conventional classrooms. The building may be the entire permanent center or a clearly definable portion (i.e., 1973 addition, senior high wing, physical education facility, etc.).

As an exception to the definition, the following building systems may be included for replacement as a single system within 15 years of their original installation or if required by a change in regulation or code;

1) Heating, Ventilation and Air Conditioning Systems and Controls
2) Systems to provide full use of a facility by the physically handicapped and to bring a facility into compliance with the Americans with Disabilities Act

3) Life Safety and Security Systems
4) Roofing Systems, Flashings and Accessories

MINOR PROJECTS - a project not listed in the District Facility Plan in "funding" priorities which would include; expansion of a permanent center to include a maximum of four (4) classrooms, campus enlargement, renovation of buildings and building systems with a budget of less than $25,000, or construction of support space at permanent centers if its need can be documented and justified. Renovation of any building which includes the replacement of two or fewer systems except as defined in other sections of this regulation for "Major Renovation".

MODEL PROGRAM - the spaces allowed to be included in each building type for Needs Assessment and the development of local district facility needs as outlined in the District Facilities Plan. This program is to be used to evaluate each existing to justify additional space being added and new building to determine the spaces to be included and their sizes.

MODEL PROGRAM BUDGET - the maximum monetary amount allowed per priority project for Needs Based funding and the generation of local district facility needs.

MECHANICAL, ELECTRICAL AND PLUMBING (MEP) – refer to heating/ventilating and cooling systems, electrical/power/lighting and water distribution and sewage components of a building or the Engineers who are licensed design professionals either under contract with the architect or directly contracted to the district who design these systems.

NEEDS CALCULATION - the total cost of new construction, renovations and additions that qualify to be included in the assessment priorities of the District Facilities Plan. The qualification to be included in the DFP shall be as noted within this regulation. On July 1 of each odd year the current District Facilities Plan for each school district is reviewed. The costs are updated to the most current costs and all projects listed on the DFP that have been initiated since the DFP's development are subtracted. The costs for the remaining projects are then added to form the district's Needs. The district's Local Available Revenue is then subtracted from the "Need" to determine the "Unmet Need". The Unmet Need for each district is then combined and presented to the General Assembly. The General Assembly may then, if it is their will, to fund a portion of the Unmet Need. Each district is then granted an Offer of Assistance which is based on their per

rata share of the monies allocated.

NET ZERO BUILDING - a building in which the amount of energy provided by on-site renewable energy sources is equal to the amount of energy used by the building.

NET PROGRAM AREA – the actual area of each program space within a building when measured to the face of the most predominant feature of the inside walls. This information is used in a verity of ways; the actual net area is compared to the areas noted for each space in the Model Programs outlined in 702 KAR 4-180 and when added to the areas of non-program spaces such as corridors, toilets, storage and mechanical rooms and the space displaced by walls the resulting sum is the Gross Building Area.

NONFEASANCE – failure to act; *especially* **:** failure to do what ought to be done. As it relates to construction, the term would mean the failure of an entity involved in a project to act on information that they have received that is pertinent to the project, or fails to act in their contractual capacity during the course of the work.

OWNER - the local board of education or finance corporation established for the purpose of financing school construction.

PERMANENT CENTER - a facility meeting permanent center criteria established for an existing school. Criteria include (1) student assessment, (2) transportation, (3) fiscal equity, (4) equitable educational opportunity, (5) building/site evaluation, and (6) parent/community support. The center qualifies for additions and renovations when the establishment of such needs are in compliance with the requirements of this regulation and are a part of the district facility plan approved by the Kentucky Board of Education.

A permanent center designation requires meeting four (4) of the six (6) criteria. Centers meeting less than four (4) required criteria shall be designated transitional, should the local board of education desire to continue their operation. A transitional designation shall be given to any center the local board of education has determined will be phased out as an educational center or for which a project to house its students is listed in the DFP.

Criteria are as follows:

1) Student Assessment - The school meets or exceeds the curriculum threshold for one (1) of the two (2) most recent testing cycles.
2) Transportation - A one-way transportation system for a school allowing the maximum of a forty-five (45) minute bus ride for seventy-five percent (75%) of students in grades P-5/6 and the maximum of a sixty (60) minute bus ride for seventy-five percent (75%)of the students in grades 6-12. Transportation time includes riding time, stops, and transfers. These criteria do not apply to schools within a district that are the only school of that grade organization. (For example; for a district with only one (1) high school, that high school will not be required to meet these requirements. If there are multiple elementary schools within the same district, the elementary schools will be required to meet the requirements.)
3) Fiscal Equity - The school meets within one hundred fifty percent (150%) of the lowest cost for all schools of similar grade organization, within the district, based on cost per student.
4) Equitable Educational Opportunity - The school currently provides ninety percent (90%) equivalent educational offerings. The district shall provide an evaluation of curriculum offered by schools accommodating like grades.
5) Building/Site Evaluation - The school complies with an inspection by a Kentucky registered architect and engineer evaluating site location, site, and life expectancy of the building. It must be determined that the facility can accommodate the projected student population and has a remaining minimum thirty (30) year life expectancy. The cost of renovation shall not exceed eighty percent (80%) of replacement cost.
6) Parent/Community Support - The school has exceptional parent and community support exhibited by meeting three of the four following criteria:
    a. Documented annual volunteer hours equal to the number of pupils enrolled that year;
    b. PTA/PTO membership equal to seventy-five percent (75%) of the enrollment that year;
    c. One program annually is supported by an outside business or professional organization; and
    d. The school is available for, or has sponsored, at least one community service program annually.

PERMANENT ISOLATED CENTER - an existing center serving students in isolated areas remote from all current and proposed permanent centers. KDE shall agree that extreme transportation or other factors exist to allow this designation. Student exchange arrangements with neighboring districts have been sought and are inappropriate. If destroyed, the status of permanent isolated center shall be re-evaluated.

PHASED CONSTRUCTION – during a construction project circumstances may dictate that either the entire project cannot be built for the monies in hand or only certain parts of the project may be constructed during a given time. In these instances portions of an entire project or simply individual components will be constructed at certain times called “phases”. The phases may be undertaken over a period of months or years to complete the entire project.

PRECONSTRUCTION PHASE – the planning, design, document development, bidding and negotiation portions of a project that are undertaken before construction begins. These steps and process are noted in greater detail in **Sections 2 through 8**.

PRIORITY PROJECT - a new building, addition or major renovation including academic and operational support facilities that are included in the District Facility Plan in any priority, except discretionary. These projects are eligible for restricted funding and used to establish a district’s “Need”.

PROCEDURAL CHECKLIST - any of a number of KDE Facilities Branch documents designed to convey to districts and their consultants items required to achieve compliance with applicable laws and regulations for a given project. These are generally sent to each district with the approval letters for each phase and they include lists of actions that must be undertaken by the district as the project progresses.

PROJECT - a defined item of need to construct new facilities, additions to existing facilities or renovation of existing facilities.

PROJECT COST - the total cost of a construction project to include; cost to finance, design services, construction and equipment. The total project cost shall be the sum of all line items of cost which appear in the “Statement of Probable Cost” in the BG-1 Project Application Form.

RECORD DRAWINGS - a set of reproducible drawings revised to indicate significant changes in the work during construction, including addenda, change orders, and construction change directives.

REQUEST FOR PROPOSALS (RFP) – is a document prepared by KDE which the district provides to Architects and Construction Managers that are interested in projects envisioned by the district. It acts as a template for submission of professional qualifications to provide service to the district. For projects with construction budgets which exceed $1,000,000 an RFP is required to select a design team, for projects with construction budgets which exceed $2,000,000 an RFP is required if a Construction Manager is to be selected. **See Section 4 – Architectural Services and Section 5 – Construction Management Services for more information.**

RESIDUAL FUNDS – the remainder of money allocated for a project, including the original funds and earned interest on those funds, which has not been expended and remain in the districts accounts at the completion of the project. These funds may be used, upon the approval of KDE. The rules for spending any residual funds are to be the same rules which govern the most restricted funds in the project from which the funds remain.

RESTRICTED FUNDS - funds available to a local district the expenditure of which is defined by statute for a specific purpose. In the context of this regulation the funds have been defined for the purpose of construction. Currently these funds include; School Facilities Construction Commission (SFCC), Facilities Support Program of Kentucky (FSPK) and Capital Outlay. The defined purposes of each fund are noted in the statute which describes then; SFCC (KRS 157.611), FSPK (KRS 157.440) and Capital Outlay (KRS 157.420).

RETAINAGE - the money due to a contractor or vendor that is withheld by the owner (district) for a time as noted in the contract documents, and as determined by the Architect and or CM to insure that the work is undertaken as required in the contract documents.

SBDM - School Based Decision Making Council

SCHEMATIC DESIGN "CONSTRUCTION MANAGEMENT (CM)" PHASE SERVICES – the first of the Pre-Construction Phase services. The Design Teams services are similar to those noted in the definition of **SCHEMATIC DESIGN PHASE SERVICES** except some of the responsibilities are shifted to the CM. In this phase the CM consults with the owner and design team to determine how the project goals and requirements are affected by the budget, schedule and constructability issues. The CM will note the challenges created by the program and include estimated square footage of each usage type and any other elements that achieve the project goals. During schematic design, CM will commonly review the design team's documents and advise the owner and design team on issues relating to construction. Costs and schedules are estimated based on overall project volume. The SD phase ends with a formal presentation to, and approval by, the local board and KDE. The CM's roles and responsibilities are outlined in greater detail in **Section 5 – Construction Management Services**. *Please note that the definition noted herein if for "Construction Manager as Advisor". Districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used.*

SCHEMATIC DESIGN PHASE SERVICES – the first phase of design services in which the design team consults with the owner to determine project goals and requirements. Often this determines the program for the project. The program, or architectural program, is the term used to define the required functions of the project. It should include estimated square footage of each usage type and any other elements that achieve the project goals. During schematic design, an architect commonly develops study drawings, documents, or other media that illustrate the concepts of the design and include spatial relationships, scale, and form for the owner to review. Schematic design also is the research phase of the project, when zoning requirements or jurisdictional restrictions are discovered and addressed. This phase produces a final schematic design, to which the owner agrees after consultation and discussions with the architect. Costs are estimated based on overall project volume. The design then moves forward to the design development phase. The SD phase ends with a formal presentation to, and approval by, the local board and KDE. The design team's roles and responsibilities are outlined in greater detail in **Section 4 – Architectural Services**.

SCHOOL - the grouping of grades to provide an educational program consistent with the approved school district's organization plan. More than one school may be located within a

single building or on an individual campus.

SCHOOL FACILITIES CONSTRUCTION COMMISSION - (SFCC) is a separate state agency that provides funding to districts based on the facility need as identified in the District Facilities Planning process and adjusted by the amount of local available revenue to determine the district's Unmet Need. Funding for this program is requested from the General Assembly by the Commission every two (2) years. The "Unmet Need" of all of the districts in the State is combined to create the State Unmet Need. A portion of the total is funded by the General Assembly and each district is allocated money based on their percentage share of the total fund. SFCC funds can only be used on priority projects, based on their priority order. All projects within the highest category are considered equivalent and can be selected by the LEA in any order desired, subject to the approval of the Facilities Branch. All projects in the highest priority category must be complete before SFCC funds can be used on lower priority projects.

SCOPE or SCOPE OF WORK - the entire project or job responsibility for the contracted entity (architect, engineer, CM, contractor, vendor) as identified first in the district's BG-1 Project Application, and as further defined in the contract between the owner (district) and contracted entity.

SFCC - School Facilities Construction Commission

SITE DEVELOPMENT COSTS - the costs associated with acquiring and developing a public school building in accordance with 702 KAR 4:050 and shall include but not be limited to: mass site excavation, cost of bringing utilities to site and infrastructures, on-site roadway access (less paving), geotechnical survey (drilling a minimum of four (4) holes for subsurface conditions) with associated above normal footing requirements, any costs for hazardous condition cleanup, and acquisition cost.

SUBSTANTIAL COMPLETION - the point at which, as certified in writing by the architect, a project is at the level of completion, in strict compliance with the contract, where: Necessary approvals by public regulatory authorities have been given; The board has received all required warranties and documentation; and the board may enjoy the beneficial use or occupancy and may use, operate, and maintain the project in all respects, for its intended purpose. Partial use

or occupancy shall not necessarily result in the project being deemed substantially complete and shall not be evidence of substantial completion.

SUPERINTENDENT - the superintendent of the local school district or the employee the superintendent has selected to represent the board regarding construction issues.

TEACHER - all certified staff at a school with the exception of the principal and assistant principal.

TECHNOLOGY MASTER PLAN - the long-range plan for the implementation of the Kentucky Education Technology System as developed by the Council for Education Technology and approved by the Kentucky Board of Education and the Legislative Research Commission;

TEMPORARY SUPPLEMENTAL CLASSROOM UNITS - Mobile pre-manufactured units which can be delivered and installed on school property after having been approved by the local board subject to KDE approval and via the BG-1 Project Application process. All units and the proposed location for each must comply with requirements under 702 KAR 4:170 and the KBC. Please NOTE: KBC approvals may be limited to 180 days for temporary units and the board may only lease the unit(s) in accordance with statute and regulatory limitations by board actions to 24 months.

TOTAL CONSTRUCTION COST - the dollar amount required to pay for all labor and material to perform the work of the project as identified in the Contract Documents as well as the costs associated with design fees, CM fees (if used), bonding, site investigation, printing, plan review, inspections and reimbursable expenses.

TRANSITIONAL CENTER - a center that the local board of education has determined will be phased out as an educational center, or a project to house its students is listed in the DFP. The center is not eligible for new construction or major renovation without the KDE's approval. Only minor renovation projects required to maintain the building in a safe condition or offer a healthy environment are permissible. The center shall not be included on the District Facilities Plan as a priority item and may not be replaced if destroyed.

UNMET FACILITIES NEED - the total cost of new construction and major renovation needs as shown by the approved District Facilities Plan less any available local revenue. This calculation is undertaken in July of the odd calendar year. The most current District Facilities Plan that has been approved by the State Board as of June of the odd year is used in this calculation. All construction costs are updated from the date of the DFPs approval. All projects that have been completed since the DFP's approval are removed and the remaining work is used to calculate the district's Need. The district's Local Available Revenue is then subtracted from the Need total to determine the district's Unmet Facilities Need, which is used to determine each district's offer of assistance from the General Assembly allocated through the SFCC.

UNMET TECHNOLOGY NEED - the total cost of technology need as shown by the approved technology plan of the local district.

UNRESTRICTED FUNDS – typically referred to as "General Funds", these funds are available to a local district is for any educational purpose. In general these funds are used for personnel expenses, including salaries, operating costs, transportation, utilities, maintenance and may be used for construction. These funds may be used for any construction purchase approved by the local board regardless of whether the work is shown on the District Facilities Plan or not.

WAIVER (CSSO) - a request made by the local district to the chief state school officer to set aside provisions of a regulation for individual projects that are unusual and specific to those districts and projects. The waiver is specific and cites the section, subsection and or sentence to be waived. The waiver does not constitute a violation of any statutory requirement for the specific regulation to be waived. The waiver does not constitute a violation of any other agency having jurisdiction. The waiver is made upon receipt of a written request by the superintendent stating good cause and accompanied by a board order authorizing the request to be made.

WAIVER (KBE) - a request made by the local district to KBE to set aside provisions of the "The Kentucky School Facilities Planning Manual" 702 KAR 4:180 for individual projects that are unusual and specific to those districts and projects.

Section 2 – Construction Project Application

The KDE Project Review Process

The implementation of 702 KAR 4:160 requires DFB to provide a clear, standardized submittal and approval process. Refer to and utilize the Submittal Checklist for School Building Projects (incorporated into 702 KAR 4:160) enclosed with each BG-1 Project Application approval letter issued by the DFM. The document submittals required for each project will be indicated on the Checklist.

The precise sequence of the following activities or events may vary (or not occur at all) for each particular project. Most project types will require the district to prepare and submit a BG-1 Project Application in accordance with the provisions of 702 KAR 4:160. (Please review Architect's Memorandum No. 1 for description of work to be submitted to KDE and the design professionals to be involved.) As noted below, some information on the BG-1 may need to be provided by some of the district's consultants such as Architects, Engineers and Fiscal Agents. Also note that local board approval is required at each step before KDE can give its approval to allow the project to proceed.

Identify the Project Type

Which of the following project types best describes this project?

- Projects on the District Facility Plan (DFP) in priority order (exclusive of discretionary projects) per 702 KAR 4:180 will require a BG-1.
- Projects on the DFP in discretionary priority 5 will require a BG-1 submission if they include new buildings or renovations to existing buildings of any type, have a total construction cost greater than $20,000 or make substantial changes to the project site.
- Minor projects, not on the DFP will require a BG-1 submission if they include new buildings or renovations to existing buildings of any type, have a total construction cost greater than $20,000 or make substantial changes to the project site.
- Emergency projects per 702 KAR 4:160 will require a BG-1 submission if they include renovations to existing buildings of any type, have a total construction cost greater than $20,000 or make substantial changes to the project site, but these projects are generally extraordinary and have different rules than those generally associated with standard projects. (Please review Architect's Memorandum No. 20 for description of steps to be undertaken in the event of an "Emergency" declaration.)

- Cooperative Purchasing Projects will require a BG-1 submission if they include renovations to existing buildings of any type, have a total construction cost greater than $20,000 or make substantial changes to the project building or site.
- Guaranteed Energy Savings Projects will be initiated by the district by the submission of a letter outlining the district's intent to pursue this type of project delivery. Once the scope of work is developed with the service provider selected by the district, if the changes include renovations to existing buildings of any type, have a total construction cost greater than $20,000 or make substantial changes to the project building or site a BG-1 will be submitted at that time.

Determining the Maximum Project Budget

The submission of a BG-1 Project Application requires a project budget to be estimated. There are two basic sources for estimating this cost:

1) If the project is listed on the DFP, cost estimates noted on the Plan may be used. Verify with KDE that these figures are current. If not, update the estimates based on inflation.

2) Use estimated costs provided by the design consultants based on the scope of work.

A combination of these two sources is generally used. Each method involves an estimate, but accuracy is important in order to proceed in a realistic manner, minimize confusion with the local board and to identify adequate funding early in the process. In addition to the construction costs, you will need to include; ~~Add~~ professional services fees, financing costs (if any) obtained from the fiscal agent, a minimum 5% contingency, equipment and some consideration for field investigation services and reimbursable expenses.

Determining the Method of Project Financing

Identification of the method of project financing should involve the district finance officer and the **Fiscal Agent** (if the project is large enough to require bonding). Prior to the submission of the initial BG-1 Form, the district shall contract with a Fiscal Agent to assist in the development of the BG-1 Plan of Financing and in the effort of selling bonds. Consultation with the District Financial Management Branch may also be necessary (Please review Architect's Memorandum No. 21 for a detailed description of funding and the concepts behind it for statewide school projects). Each project may be funded with one or more of the following sources:

- KSFCC (per KRS 157.611); for projects in the highest priority on the DFP
- SEEK building fund: for projects in listed priorities, other than "discretionary", on the DFP

- KRS 157.440(1)(b)); for projects in listed priorities, other than “discretionary”, on the DFP
- Growth district levy (per KRS 157.621); for projects in listed priorities, other than “discretionary”, on the DFP
- Building funds (per KRS 160.476, 477); for projects in listed priorities, other than “discretionary”, on the DFP
- General fund; for any project designated by the district.
- Donations (i.e., booster club); for any project designated by the district for the use of these funds.

Please note that the description above assumes that the district has the funds available in each funding source. This is one of the critical items that will be reviewed by KDE.

Section 3 – Local Board Oversight

In addition to their other duties, the local board of education has responsibilities for the district’s existing buildings and grounds as well as new construction, leasing, acquiring and disposing of real property.

Selecting and Acquiring a Site (702 KAR 4:050)

- Determination of the location of the site must follow the criteria established in the DFP as outlined 702 KAR 4:180. The need for new sites and buildings is outlined on the DFP along with the “vicinity” in which the site is to be selected. For this reason, it is critical that the local board review the DFP submitted by the Local Planning Committee (LPC) to see if they are in agreement with the vicinity in which a new facility is noted.
- The site selection process shall be completed according to the provisions of 702 KAR 4:050. The steps that must be taken by the local board are outlined in the regulation and will be summarized herein. The process is in two parts. The first part is the evaluation of several sites by the district to determine which site would best address the needs of the project. The district’s design team and consultants will review several sites in a “broad brush” manner to narrow down the search options. Consideration should be given to initial cost, road accessibility, adequacy of utilities and the costs associated with site development and grading. **At that time the district shall send a letter to KDE requesting a site visit.** Once these preliminary studies are complete, if acceptable, tentative approval will be granted by KDE for the purchase of this site and the district may proceed with obtaining an option, which in no way obligates the district, to purchase the property. For final approval, the following information will need to be submitted:

1. Letter from an attorney indicating fee simple title may be obtained. The title opinion shall be for a period of sixty (60) years.
    a. Should the mineral rights not be acquired, a forbearance agreement to ensure surface support shall be required.
2. Certificate of Title Insurance.
3. Plat by a registered surveyor indicating property boundaries, acreage, road access, easements, and certification that property is above the 100 - year flood plain.
4. Photos of the property in question.
5. Letter from professional engineer and/or municipal government agency providing assurance of adequate site utilities to include water, power, natural gas, and sewage treatment.
6. Letter from local government or state highway office confirming road adequacy.
7. Site survey of site development costs by architects or engineers
8. Projected acquisition cost for the proposed site.
9. Appraisal by a certified general property appraiser and the current assessed value and classification by the Property Valuation Administrator.
10. Letter from architect or engineer relating to any potential environmental or safety hazards in the vicinity of the proposed site.
11. A phase 1 environmental report noting any potential environmental hazards in the building or on the site may be required if environmental issues are raised by the design team.

Property Leases and Easements (702 KAR 4:090)

Lease agreements for, or easements upon public school property are to be considered by the local board of education. During their review, the local board should consider;

1. Lease and easement agreements shall be submitted to the local board of education for its consideration and written recommendation
    a. The legal counsel for the district should draft the agreements
    b. KDE will review the unexecuted agreements prior to final execution
    c. Local boards cannot encumber future boards with any agreements, so a lease shall be for one fiscal year only, to be renewed annually by the local board.
    d. Easements may be granted for longer periods of time as long as fair market value is secured for the easement.

2. Provide a fair market evaluation for a facility of this type in your area or for the land on which an easement is to be granted.
3. For leases, include an accurate survey of the spaces within the building, their size and which areas are to be included in the lease agreement (rough drawing).
4. For leases, the facility shall be reviewed by a licensed Architect to determine if the building meets the requirements of the Kentucky Building Code.
    a. Careful review shall be made if there is a change in the building's occupancy from its previous use to the new intended use.
    b. Life safety items shall have the highest priority to be addressed.
5. For leases, make clear who provides and pays for;
    a. Utilities
    b. Property insurance
    c. Maintenance
    d. Security
    e. Custodial Services
6. For leases, if a portion of the building is going to continue to be used by the district, how will this affect the points noted in item 3?
7. Use of the site by the Lessee and the district (both during and after hours)
    a. For instance, the district may want to continue to use a Gymnasium and other sports site features exclusive of the lease.
8. For leases, include digital photos of the facility to allow this office to determine the nature of the facility.
9. Outline any known environmental hazards within the facility or on the site. At the district's option, a survey of environmental hazards may be made.

Property Disposal - Surplus (702 KAR 4:090)

School property proposed for disposal is also to be considered by the local board of education; The property shall be surplus to the need for the educational program of the district as determined by the effective DFP. The local board shall take this action as a motion in a regular or special called meeting. A request for approval shall be submitted in writing to the chief state school officer. Once the local board has voted in an open meeting to declare the property, "surplus to the educational needs of the district", disposition of the property may be made by one of the following three methods:

1. By public auction
2. By accepting sealed bids. A bid received by public auction or a sealed bid is a competent factor in establishing the fair market value. The property must be advertised in accordance with KRS 424.130 (1)(c). Include in the advertisement a statement noting:
    a. Any and all bids may be rejected or,
    b. Set a minimum acceptable price.
3. The local board may establish a price for the property as authorized in OAG opinion 76-291, and may sell to any purchaser willing and able to meet that price if the figure represents at least the fair market value of the property, as determined by an appraisal made by a currently certified general property appraiser.

The board's attorney should confirm that the statutes have been met relative to advertisement, sale and price prior to the board of education consummating the sale with the buyer. Once the property has been disposed of in a manner noted above, please submit an unexecuted purchase agreement for review by this office, prepared by your legal counsel.

Construction (702 KAR 4:160)

Construction projects and their management are also to be addressed by the BOE. In any construction project there are generally three primary groups which act together to complete the work. The owner is represented by the local board and its designees, the design team is generally represented by the Architect or Engineer in conjunction with their consultants and the construction team is represented by the General Contractors, subcontractors, Construction Managers and prime contractors, depending on the project delivery method. Each party has responsibilities that are outlined in the individual contracts that codify the terms of these responsibilities.

Scheduling – While the design and construction team have the greatest input on the development of the project schedule, the BOE should understand the time that it actually takes to undertake a project. This will allow the Board to be realistic in the amount of time that they set aside to undertake a project. Schedules can always be compressed, but when this happens it can result in mistakes being made and increased cost to the district. The time needed to complete a project varies widely based on the scope of the work. We will outline four (4) scenarios that the BOE can use as a guideline as they proceed with a project. Please note that these are simply projections based on our experience, but the BOE should realistically address

the issue of schedule with the other members of the team from the opening interview to the final move in. Coordinating project milestones with monthly board meetings will help to minimize the project timeline.

Scenario 1 - $500,000 Simple Roofing Project (less than $1,000,000 need design team, but no requirement for design team RFP process)

- Hire Architect/draft contract – 2 weeks (need local board approval)
- KDE Review – 2 weeks
- Investigate Roof and Provide Preliminary Study with costs – 2 weeks
- Local Board and KDE approval – 2 weeks
- Construction Document Preparation – 4 weeks
- Local Board and KDE approval – 2 weeks
- Housing Building and Construction Review – 6 weeks (to run concurrent with KDE review and bidding)
- Bidding and Negotiations – 4 weeks
- Local Board and KDE approval of bids – 2 weeks
- Construction Period – 10 weeks
- **Start to Finish Total – 30 weeks (7 ½ months)**

Scenario 2 – $2,500,000 HVAC Replacement Project (greater than $1,000,000 design team RFP required – greater than $2,000,000 CM RFP required if one is needed)

- Undertake RFP Process – 4 weeks
- Hire Architect/Engineer and draft contract – 2 weeks (need local board approval)
- KDE Review – 2 weeks
- Investigate HVAC System and Provide Schematic Design Documents with costs – 4 weeks
- Local Board and KDE approval – 2 weeks
- Construction Document Preparation – 8 weeks
- Local Board and KDE approval – 2 weeks
- Housing Building and Construction Review – 6 weeks (to run concurrent with KDE review and bidding)
- Bidding and Negotiations – 4 weeks

- Local Board and KDE approval – 2 weeks
- Construction Period – 24 weeks
- **Start to Finish Total – 56 weeks (15 months)**

Scenario 3 – New $10,000,000 Elementary School Project (greater than $1,000,000 design team RFP required – greater than $2,000,000 CM RFP required if one is needed)

- Undertake RFP Process – 4 weeks
- Hire Architect/draft contract – 2 weeks (need local board approval)
- KDE Review – 2 weeks
- Educational Specification, Programming and Schematic Design – 4 weeks
- Local Board and KDE approval – 2 weeks
- Design Development – 6 weeks
- Local Board and KDE approval – 2 weeks
- Construction Document Preparation – 12 weeks
- Local Board and KDE approval – 2 weeks
- Housing Building and Construction Review – 6 weeks (to run concurrent with KDE review and bidding)
- Bidding and Negotiations – 4 weeks
- Local Board and KDE approval – 2 weeks
- Construction Period – 60 weeks (15 months)
- **Start to Finish Total – 102 weeks (25 ½ months – a little over 2 years)**

Scenario 4 – New $40,000,000 High School Project (greater than $1,000,000 design team RFP required – greater than $2,000,000 CM RFP required if one is needed)

- Undertake RFP Process – 5 weeks
- Hire Architect/draft contract – 2 weeks (need local board approval)
- KDE Review – 2 weeks
- Educational Specification, Programming and Schematic Design – 8 weeks
- Local Board and KDE approval – 3 weeks
- Design Development – 12 weeks
- Local Board and KDE approval – 3 weeks

- Construction Document Preparation – 20 weeks
- Local Board and KDE approval – 3 weeks
- Housing Building and Construction Review – 6 weeks (to run concurrent with KDE review and bidding)
- Bidding and Negotiations – 5 weeks
- Local Board and KDE approval – 3 weeks
- Construction Period – 96 weeks (24 months)
- **Start to Finish Total – 162 weeks (40 ½ months – a little under 3 ½ years)**

Filing - The administration of a construction project can be a daunting task. The amount of paperwork and digital information can be staggering, but like anything, the key is organization. We recommend that a separate filing system be developed for each project using the BG number as the project identifier. These files should be kept in a secure, dry location in either the Central Office or within the office of the district project administrator. Within each file we recommend that separate folders be provided for;

1. BG-1s and related board orders
2. General Correspondence (filed sequentially by date received) to include; Letters, emails and meeting minutes, etc.
3. Design team information including; advertisements, Requests for Proposals, and Contracts with all of the information about their insurance and consultants included.
4. Construction Management information including; advertisements and Requests for Proposals, and Contracts with all of the information about their insurance included (if this type of project delivery is used)
5. Design Presentation Materials (Educational Specifications, Drawings, Meeting Minutes)
6. Construction Documents - Final Drawings and Specifications
    a. Construction Contracts, insurance certificates and all required bonds.
    b. Price or Scope Change information including; Proposal Requests, Change Orders and supporting documentation.
    c. Applications for Payment and lien releases
7. Bidding information and documentation (Forms of Proposals, Bid Tabulations, etc.)

In the following sections we will discuss the various aspects of the process at which time the documents noted above will be placed in their proper context.

Team Oversight - The BOE's oversight also includes oversight of members of the design and construction team. It is the responsibility of the BOE and their attorney to review the contracts for each consultant and contractor and to understand the roles and rights of each as it relates to any project.

Design Team Oversight - For all projects with a construction budget that is larger than $1,000,000, the BOE must solicit proposals for design services. A description of this process is fully explained in **Section 4 – Architectural Services**. Once an Architect is selected and the scope of work has been established, the Architect will prepare a contract using the **American Institute of Architects Owner/Architect Agreement B-101 2007 – Kentucky Version.** Although this is a standard document, it should be reviewed by the Board attorney. The Board attorney should review any document that the BOE is to sign. Along with the contract the Architect will need to submit the following documents for BOE review: certificates of insurance and Non-Collision Affidavits for the prime contract holder and each consultant.

For projects with a proposed budget of less than $50,000, the district may contract with the design team with a letter of agreement instead of using the AIA contracts.

Construction Management Team oversight – At some point, very early in the process, the BOE will need to make a decision as to what type of delivery method will be employed to construct the project. The two (2) options currently available to the BOE are, General Construction (GC) and Construction Management – as Advisor (CMA). Descriptions of these processes are explained in greater detail in **Section 5 – Construction Management Services**.

If one of the Construction Management options is selected, the CM should be hired at the same time as the design team. This allows the BOE to reap the full benefits of the CM expertise and services through the design process. In general a construction budget must be larger than $2,000,000 for a CM delivery to be considered, but provisions are made in the regulation to allow these services on project that are developed in phases or if the complexity or budget constraints dictate the inclusion of a CM to the team. In any event the BOE must solicit proposals for CM services in much the same manner as for the design team. A description of this process is fully explained in **Section 5 – Construction Management Services**. Once a CM

is selected and the scope of work has been established, the CM will prepare a contract using the **American Institute of Architects Owner/CM Agreement CMa-100 2007 – Kentucky Version.** Although these are standard documents, they should be reviewed by the BOE attorney. The local board attorney should review any document that the local board is to sign. Along with the contract the CM will need to submit the following documents for the BOE review; certificates of insurance and Non-Collision Affidavits for the firm.

Please note that the information noted herein is for "Construction Manager as Advisor". Districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used. Please review ***Section 5 – Construction Management Services of this document for a more detailed discussion of these options****.*

Guaranteed Energy Savings Contract Team - For all projects that are to be provided by a Guaranteed Energy Savings Contract (GESC), the local board must solicit proposals for these services. A description of this process is fully explained in **Section 7 – Guaranteed Energy Savings Contracts**. Once a GESC qualified provider is selected and the scope of work has been established, the GESC qualified provider will prepare a BG-1 and contract using the **American Institute of Architects Design Build Agreement DB-100 2007 – Kentucky Version.** Although this is a standard document, it should be reviewed by the BOE attorney. The Board attorney should review any document that the local board is to sign. Along with the contract the GESC qualified provider will need to submit the following documents for BOE review; certificates of insurance and Non-Collision Affidavits for the prime contract holder and each consultant.

Building Construction Process – As noted above, construction projects and their management are also to be addressed by the BOE. Although the BOE hires a team to undertake the work, it is still the responsibility of the local board and their designees to administer the work as outlined in the contracts that are in place to codify the individual relationships and roles. We have noted above the fact that processes are in place to select this team of consultants along with formally approving the contracts and receiving this documentation, the BOE will need to submit for KDE review; BG-1s, evidence that the Proposal

Request Process was followed in consultant selection, all contracts with consultants, insurance certificates and affidavits. These should all be approved by the local board.

Once design is underway, the BOE must approve the work at each phase before it is submitted to KDE for review. The design and construction of a school project should develop in a linear fashion with design decisions based on previous decisions so that work can move forward without backing up. Generally the large issues are developed in the beginning of the process. These decisions are agreed upon by the team and then the large issues are developed in greater detail as the process proceeds.

Educational Specification – this document is developed by the BOE in conjunction with local staff and the design team to act as a "road map" of the items to be considered in the project design. The District Facilities Plan will outline what is generally to be included in a major project. 702 KAR 4:180 includes Model Programs that outline the number of spaces and their sizes to be provided in a new building. The Model Programs are also used to evaluate the spaces in an existing facility to justify any changes. Once a project is undertaken, there is latitude provided in the regulations to allow additional space to be added and consideration for adjusting the manner in which some space is used depending on the district's educational vision. The ideas of the district and the design team will be codified in written form at the beginning of design. The Educational Specification will include; the spaces to be provided, how they will be placed together within the building, what kinds of equipment will be included in each space, how the site will be used and what kinds of features will be included on the site. In general, the local board will delegate some of their authority to the administration, faculty and staff in the development of their specific needs during the design. The minutes of the meetings between the design groups should be included in the Specification to allow those reviewing and using the document to see why, how and when decisions were made.

Project Phases – As noted above, the design of any project is broken into phases to provide stopping points at which the design and construction teams (on CM projects) can present "in progress" reports to the BOE and KDE. The paragraphs above on Scheduling will give the local board an understanding of the time devoted to each phase. We will touch on the process in this paragraph, but will review each phase in greater depth in **Section 6 – Project Documents for General Construction and Construction Management.** In general, the typical school project

process is broken into two (2) major phases; Design and Document Preparation and Construction.

- **Design and Document Preparation** is broken into four (4) sub-phases; Programing/Schematic Design, Design Development, Construction Documents and Bidding/Negotiations. The design team will work with the district through all of these phases and should meet with the local board at the end of each phase to present for approval drawings which show the scope of work, estimates of probable cost and schedule updates. The drawings and other information submitted at the Schematic Design phase will have much less detail then the drawings and information submitted at the Construction phase, but each phase's information should satisfy the BOE as to the project scope, budget and schedule before approval is given. A more extensive description of the Design and Document process may be found in **Sections 4 through 8.**

  Once the final Construction Documents are complete and have been approved by the BOE and KDE, they are submitted to contractors by the BOE for bidding. Advertisements are placed in the local paper and the project is reviewed by those interested in building the project and providing material and equipment. The Architect and the CM (if used) take the lead role in this effort. On bid day sealed bids are presented for public viewing and the successful contractor is generally determined by the lowest bid. The Architect and CM (if used) will evaluate the bids and place them in an understandable presentation to the local board with a recommendation as to who should receive the contract to undertake the work. The local board will be asked to vote to approve the bids and the contracts for construction that have been prepared by the Architect or CM. This information will then be sent to KDE for final approval. **It is critical that this information along with revised BG-1s be submitted in a timely fashion for projects which will require bonding since KDE must receive the information at least 10 days prior to the scheduled bond sale.** A more extensive description of the bidding process may be found in **Section 6 – Project Documents for General Construction and Construction Management.**

  Construction will require that the BOE be involved in the administration of the contract. The BOE will be given periodic updates by the Architect and CM (if used). These

updates should be presented at each board meeting and include minutes of every site meeting and A/E field observation reports. In addition the BOE must approve all contract changes. These will be submitted in the form of Change Orders and should include a written explanation as to the change and a review of any cost or schedule adjustments. Each month the local board will be asked to review and approve the contractor's Application for Payment. This application will be submitted on a form that allows the local board to see how much is being paid to each contractor and what percentage of the work is complete in each construction category. A more extensive description of the construction process may be found in **Section 9 – Change Orders, Section 10 – Construction Contract Retainage and Payments, Section 11 – Construction Project Dispute Resolution and Section 12 – Construction Contract Closeout Process.**

Section 4 – Architectural Services

Hiring the Design Consultant(s)

Large Projects - For projects with a construction budget that is larger than $1,000,000, the BOE must solicit proposals for design services. The district may advertise in the local paper and then select firms to be reviewed more carefully or simply contact firms directly to solicit a least three (3) firms to be considered. The firms shall complete the standard KDE Architect's Request for Proposal Form. Although it is a "standard form" it does allow for districts to request additional information from the firms being considered. Part of the form is the Architect/Engineer Fee for Basic Services. This fee schedule is a guideline for fees that can be charged by the design team for "basic services". This schedule is noted in the Appendix as ARCHITECT/ENGINEER FEE FOR BASIC SERVICES. These Basic "Design" Services are defined in this manual and outlined in the **AIA Standard Form of Agreement Between Owner and Architect B101- 2007 for a General Construction Contract and B141 CMa 1992** if Construction Management is to be utilized by the district as a project delivery method.

We recommend choosing a design team based on qualifications, project experience, current work load and the ability to communicate well with the district rather than making the decision based solely on the fee amounts. This determination can be made from simply viewing the Request for Proposal information provided by each perspective design team. The board is also free to conduct interviews of each team to solicit additional information and to see how they can

relate to each team. In any such interview situation allow each team enough time to prepare and present their information. Generally it will take a week or two to develop a presentation and about 45 minutes to make an effective presentation to the local board. Also allow about 15 minutes for questions and answers. After the interviews are conducted contact the references given or contact any school district of which you are aware that has worked with the design team.

Districts are free to negotiate with each design professional team, keeping in mind what is included in “Basic Design” services. An “ARCHITECT/ENGINEER FEE FOR BASIC SERVICES” guideline is provided as part of this regulation. These guidelines outline a fee based on a percentage of the construction cost. This percentage would translate into the costs to be paid to the design team for providing “Basic Design” services. By using a percentage of construction as the basis for design payment, it allows for adjustment as the project cost changes during the design, bidding and construction process. In general, these services are for the design of items that will be included in the construction contract on which a fee percentage can be charged. For instance, the design fee of the HVAC system is generally a percentage of the HVAC system cost as determined on bid day and included in basic services. In addition to the actual cost for materials and labor paid to the contractors, the fees paid to the Construction Manager are also included to determine the base on which the design team’s fee percentage is calculated. The rationale being that this would be included in the General Contractors price if the GC method of construction was used and the design team would actually be penalized monetarily if Construction Management was selected as the project delivery method for a project. There are other items encountered during the design and construction process that require action from the design team that may not be included in the “Basic Services” on which the percentage fee is charged. Items such as; ground water downstream flow calculation studies that may be required by governmental fiat, work required to document and certify a building for Leadership in Energy and Environmental Design (LEED) or other “green” initiatives that the district may wish to consider and design of roadway access to be paid by others (the design fees for roadway access may be included in the cost to be borne by the entity that is actually building the access), would be additional services since the studies or actions do not result in any construction that is included in the project. Individual studies such as this vary widely from project to project and jurisdiction to jurisdiction.

The Revenue Cabinet has determined that districts can “break out” the major material components of a General Construction project and purchase the materials directly by issuing a district purchase order. This process saves district the cost of the Kentucky Sales Tax that would have been paid if the materials were included in the contractor’s bid. The design team’s effort to document and administer this action would also be an additional service from the Basic Design Services since these costs would have been included in the original construction costs on which the A/E fee would have been calculated and their work effort is actually greater. A standard for determining an equitable fee for this service would be to determine the tax cost savings of the direct purchase materials and multiply this by the design fee. The rationale here is similar to that applied to the inclusion of the CM fee in the construction cost, these taxes would have been included in the General Contractors price and the design team would actually be penalized monetarily if the taxes are excluded from a project

For most projects, the primary design consultant will be the Architect who will then hire civil, structural, mechanical and electrical engineers to assist in the design of the project. The fees noted on the KDE schedule are generally paid to the Architect who then pays the consultants who are contracted directly with the Architect. In addition to the basic services Architect/Engineering fees noted, the district may need to hire special consultants who are contracted directly with the district. These may include; civil engineers who are required to perform governmental required studies for water or environmental safety, land surveyors to provide a site survey, soils engineers to provide subsurface investigations and environmental engineers to test for asbestos and other hazardous materials. In addition to the fees associated with the project, the district may pay for reimbursable expenses such as mileage, costs of renderings, if desired by the owner, computer modeling, if desired by the owner, physical building and site models, if desired by the owner, and other items not included in the basic services. These items should be discussed with the design team as they are being considered and clearly understood before a contract is signed. **(the ARCHITECT/ENGINEER FEE FOR BASIC SERVICES” guideline is included in 702 KAR 4:160)**

Small Projects - For projects with a construction budget that is less than $1,000,000, the local board may select the design team without going through any formal selection process. For projects that have a construction budget that is greater than $50,000 the information noted in **Large Projects** will still be relevant except the information regarding selection. For projects with

construction costs that are less than $50,000 the district would not need to use the AIA contracts, but could set up an agreement with the design team by using a simple “letter of agreement” which outlines the services needed, the terms of the agreement and the conditions under which the services are to be rendered and is developed by the local board’s legal counsel.

Section 5 – Construction Management (CM) Services

Determining the Construction Process - As noted previously, at some point, very early in the process, the BOE will need to make a decision as to what type of delivery method will be employed to construct the project. With the oversight needed on a complex project many districts have opted to hire a construction specialist to assist in the project in much the same manner as in hiring the design team. This construction specialist is called a Construction Manager. Currently KDE recognizes only one (1) form of Construction Management Service delivery; Construction Management – as Advisor (CMa).

It should be noted at this time that districts may petition KDE to consider other forms of Construction Management services to determine if they meet statutory requirements and to establish the contracts and submittals that will be used. The most prevalent form would be Construction Management – as Constructor (CMc). We will outline how that form of CM would work for consideration by local boards.

Hiring a Construction Manager (CM)

In general a construction project’s budget must be larger than $2,000,000 for a CM delivery to be considered. Provisions are made in the regulation to allow these services on projects that are developed in phases or if the complexity or budget constraints dictates the inclusion of a CM to the team. The local board must solicit proposals for CM services in much the same manner as for the design team. The district may advertise in the local paper and then select firms to be reviewed more carefully or simply contact firms directly to solicit at least three (3) firms to be considered. The firms shall complete the standard KDE Construction Management Request for Proposal Form. Although it is a “standard form” it does allow for districts to request additional information from the firms being considered. Part of the form is the Construction Management Fee Guidelines. This schedule is noted in the Appendix as **CONSTRUCTION MANAGER FEE GUIDELINES. This Base Fee is defined in this manual and outlined in the AIA Document**

C132-2009, Standard Form of Agreement Between Owner and Construction Manager as Adviser – KDE Version, 2013. Unlike the Architectural fees, the CM fees are broken up into two (2) categories; Base Preconstruction Service Fee and Monthly On-Site Service Fee. The **Base Preconstruction Fee** is a percentage of the construction cost and varies based on the size of the project, much like the Architect's fee. This fee covers the preconstruction services noted below and outlined in the Definition Section of this Manual and the administrative services provided within the CM home office during the construction phase.

Where Construction Management as Constructor is utilized, the Base Fee, noted on the schedule, may be increased by up to 1.50% to accommodate the additional costs of providing Performance/Payment Bonds and Insurance for the entire project instead of only for the amount of the CM fee as is the requirement for CM as Advisor. This adjusted cost must be substantiated by the CM when the terms of the contract are negotiated. It should be noted that the additional cost noted should be offset somewhat by the fact that the bonding cost will not be included in the trade contractor's bids.

The **Monthly on Site Service Fee** pays for the CM's; On-Site Supervision, Payroll Taxes, Fringe Benefits, Out-of-Town Expense (Superintendent), Mobilization-Demobilization, Automobile or Truck (Superintendent), Automobile or Truck Expense (Depreciation, Gas, Oil Tires, Maintenance), Office Trailer, Office Furniture, Office Suppliers, Telephone, Fax Machine and Computer.

As with the design team, we would recommend choosing a CM team based on qualifications, project experience, current work load and the ability to communicate well with the district rather than making the decision based solely on the fee amounts. This determination can be made from viewing the Request for Proposal information provided by each perspective design team. The board is also free to conduct interviews of each team to solicit additional information and to see how they can relate to each team. In any such interview situation allow each team enough time to prepare and present their information. Also allow about 15 minutes for questions and answers. After the interviews are conducted contact the references given or contact any school district that has work with the design team of which you are aware.

Districts are free to negotiate with each CM team, keeping in mind what is included in the Base Fee services and the type of CM delivery method noted below.

Construction Management – as Advisor (CMa) – In this CM delivery method the Construction Manager is contracted by the school district to act as a consultant. The CM works with the BOE and the design team during the preconstruction, programming and design phases of the project to address issues of costs, scheduling, constructability and material/methods of construction. The CM should be hired at the same time as the design team. This allows the BOE to reap the full benefits of the CM expertise and services through the design process. In this method of construction, the CM provides a Performance and Payment Bond only for the amount of the CM fees and insurance only to cover the CM's employees and property.

Once the design process is complete, during the development of the construction documents, the CM will divide the project into individual "bid packages" that represent similar work to be bid as separate contracts. It is important to have an experienced CM that works well with the design team to insure that everything that is included in the construction documents is also included within the individual bid packages. The CM will work with the BOE and the design team during the bidding process to insure that a sufficient number of contractors are reviewing and ultimately bidding each package. On bid day, the CM will conduct the bidding and track the bids for labor and materials in each bid package. Once bids are complete, the CM will tally the bids and, along with the design team, make recommendations to the BOE as to which bid packages and contractors to select with the monies available for use. The CM will then draft all of the individual contracts and purchase orders for each bid package to be executed by the BOE. Each bid package is held by an individual contractor who is directly contracted with the BOE. Each of these contractors provides a separate Performance and Payment Bonds in the amounts of their individual contracts including the costs of labor and direct purchase orders. These individual contractors also provide their own insurance in the amounts noted on the construction documents. In this way the project is Bonded and insured for 100% of the total cost. The CM will submit the contracts to the BOE and KDE for review and approval.

After contracts are executed and approved by the BOE and KDE, the construction begins. The CM continues to act as the BOE's consultant during construction. The CM will have a trailer with a construction observer and additional staff, if required, on the site to coordinate communications between all parties and to review the work which is to be in compliance with the contract documents. Within the CM home office, staff members will process paperwork such as shop drawings and other submittals to be reviewed and sent to the design team. This effort is

to verify that the work to be installed is as specified and that he contractors understand the requirements of their contracts. The CM will develop a Schedule of Values to be used to evaluate each Application for Payment that is submitted monthly for review by the design team and local board. The individual contractors will submit their pay information to the CM. The CM must schedule submission of the payment documents to the design team with enough lead time to allow for review and evaluation before they are submitted to the BOE in their monthly meetings for payment authorization. These documents will include any purchase orders to be paid as well as the submission of lien releases and insurance certificates for materials stored off site.

The CM's On-Site representative will prepare daily reports which will be submitted to the design team and BOE to outline the construction activity. The CM will provide updates to the schedule as work progresses. Questions and issues that arise on the site will be discussed between the CM, design team and BOE representatives who will work together to resolve these issues. Changes in the work will be documented and any change that affects the project cost, schedule of significantly changes the terms of the contract will be executed in a Change Order that will be submitted to the local board for action. A more extensive explanation of this process is included in **Section 9 – Construction Change Orders.**

Once the project nears completion, the CM will assist the district in closing out the construction activity as noted in **Section 12 – Construction Project Closeout Process.**

Construction Management – as Constructor (CMc) *– As noted previously, districts may petition KDE to consider forms of Construction Management other than CM as Advisor to determine if they meet statutory requirements and to establish the contracts and submittals that will be used. The most prevalent form would be* ***Construction Management – as Constructor (CMc).***

In this CM delivery method the Construction Manager is contracted by the school district to act as a consultant during the design, construction document preparation and bidding phases, but during the construction phase the CM's role changes to a role more similar to a General Contractor. (see description above for CM as Advisor for a description of the preconstruction CM role)

On bid day, the CM will conduct the bidding and track the bids for labor and materials in each bid package as noted for CM as Advisor. Once bids are complete, the CM will tally the bids and make recommendations to the local board as to which bid packages and contractors to select with the monies available for use. The next step is where the major change from CM as Advisor begins to occur. Following bidding, the CM as Contractor (CMc) will then assume control of all of the individual bid packages and purchase orders. The CMc will then enter into a contract with the BOE *with all of the individual bid contractors then signing contracts with the CMc, thus making the CMc responsible for all of the construction. The CMc will provide a single Performance and Payment Bond in the amounts of all individual contracts including the costs of direct purchase orders and CMc post bidding fees. The CMc will also provide insurance in the amounts noted on the construction documents. In this way the project is Bonded and insured for 100% of the total cost. Major subcontractors such as HVAC, plumbing, electrical, roofing and masonry may be required to issue a Performance and Payment Bond for their work directly with the CMc.*

After the contract is executed and approved by the BOE *and KDE, the construction begins. The CM as Constructor's role will change from their role under CM as Advisor. All of the individual trades contractors' paperwork will go to the CMc for incorporation into a single communication from the CMc office because they are actually now subcontractors to the CMc. The work flow will also now be more similar to that of a General Contractor since the CMc will now be contractually responsible for the entire project.*

The Construction Manager as Contractor is the most common variation to the method of Construction Management practiced on Kentucky school projects. Other methods would be considered by KDE, but the burden proof that these methods meet the statutes and regulations that govern the work will be on the district.

Section 6 – Project Documents for General Construction and Construction Management

Once the BG-1 has been submitted and approved by KDE as noted in **Section 2 – Construction Project Application** and the design (and construction, if CM is employed) teams

have been selected as noted in **Section 4 – Architectural Services and Section 5 – Construction Management Services,** the district will begin the actual design of the building. As noted previously in **Section 3 – Local Board Oversight**, the project will proceed through the three documentation phases; (1) Programing/Schematic Design, (2) Design Development and (3) Contract Documents. The BOE may wish to form an ad hoc committee to assist in development of the building design. In this event, a building planning committee should be organized with members including: parents, business leaders, teachers, administrators, maintenance staff and local board members (two or less). This group will then be responsible for meeting in the various phases of the project with the design professionals to provide input into design and to represent the district. The BOE still has final oversight for this committee and the design.

No documents should not be submitted (other than the BG-1 Form and Board Order authorizing it) until the BG-1 Form is approved by Kentucky Department of Education and a BG- number or project number is assigned. All subsequent communications regarding the project shall have the BG number affixed. When phoning, have the BG-number ready to insure prompt action.

(1) Programming/Schematic Design

When the project is a new building or an addition/renovation listed on the District Facility Plan (DFP), programming and Schematic Design should begin with the requirements identified by the Local Planning Committee (LPC) on the DFP. Note that the DFP is governed by 702 KAR 4:180 and the Model Space Programs noted therein. The spaces noted on the Model Program are those that are to be used to establish the district's Need within a statewide building system. Once the district begins the design of the buildings noted on the DFP, there is some leeway in the use of this program to allow districts to make adjustments to accommodate their individual needs. For instance, in each program there is included a Locally Identified Program Space Allowance that ranges from 2,027 gsf. for a small elementary school to 25,059 gsf. for a large high school. In addition, the Model Program for middle and high schools also includes a Locally Identified Career and Technical Education Allowance that varies from 5,070 gsf. to 11,618 gsf. These allowances can be used to provide additional spaces or to increase the size of the spaces noted in the Model Programs. This is the first way that the regulations provide districts flexibility to add and modify spaces to meet their individual programs.

The requirements of 702 KAR 4:160 provide districts a second method to increase space over the Model Program Area. The regulation allows the district to exceed the Model Program Area by 15% for elementary schools and 20% for middle and high schools. This again gives districts considerable flexibility to add and modify spaces to meet their individual program needs. For instance, a 300 student elementary school with a maximum area of 43,000 gsf. noted in the Model Program, could add 6,450 gsf. to the base area using the 15% increase. The adjusted building area would then total 49,450 gsf. **Of this total, 8,477 gsf. (almost 21%) is unprogramed** and could be used to accommodate specific district needs**.** A 1,500 student high school with a maximum area of 189,596 gsf. noted in the Model Program, could add 37,192 gsf. to the base area using the 20% increase. The adjusted building area would then total 227,515 gsf. **Of this total, 73,869 gsf. (48%) is unprogramed** and could be used to accommodate specific district needs**.**

Discussion of curriculum/service considerations should be conducted by the committee. These topics should include, basic instructional program needs, enrichment programs, physical education, food service, maintenance/repair requirements, and special features or needs. Program needs may generate some of the spatial/physical relationships and characteristics of the facility, such as, type of building (one or two story), campus or single building style.

The building planning committee's work output would be a written **Educational Specification** for submittal to KDE and for use by the design consultants. This specification shall summarize the conclusions (based on the considerations outlined above) of the building planning committee regarding the building requirements. In addition to a calculation of the total net areas required for all building spaces, this document should list the building features needed to support the specific curriculum for the various instructional spaces and present a clear statement of the committee's expectation of the building performance. An effort should be made to prioritize these expectations to facilitate the consideration of alternatives if questions of cost or practicality arise during the design phase.

The committee should review the minimum standards for instructional spaces found in 702 KAR 4:170, they may be asked to make decisions related to the actual exterior components to be used in the building such as: roof systems, windows, doors, exterior finishes, and energy conservation programs, and interior components such as surface finishes (walls, floors, etc.),

lighting, heating, ventilation and air conditioning, special plumbing, technology; and special equipment or requirements for specific spaces.

During the **Schematic Design** phase the Educational Specification will be used by the design team to develop the building options for consideration by the building committee. The design team will develop site drawings showing the building location, parking areas, entrances and roads, play fields and utility locations. The spaces within the building will be drawn in a floor plan for each floor and labeled showing door and window locations and the net area of each space. Rough building sections will be drawn to show the height of spaces and their configurations. A site plan will be prepared showing access from public right of way, traffic patterns, and play/athletic field layouts as needed. Tabulations of all program areas should be included on each plan which should also show the building efficiency and unassigned space percentages to be calculated with the gross area. These will be compared to the Model Program and the spatial adjustments noted in the first paragraph of this section.

Exterior views will be provided which show the proposed materials and fenestration that will be employed. The drawings in this phase will be at a relatively small scale with not much detail because it is the intent for the group to focus on the large issues of spatial arrangement and size rather than details that will be developed in subsequent phases.

These drawings should be presented to the planning committee and, if approved, to the BOE for review and comment. If the BOE approved the Schematic Design, the drawings and the Educational Specification are submitted to KDE. It is recommended that the design team present the schematic design to KDE in person to allow for discussion of the issues noted within the project and to help orient KDE staff at the beginning of the project. KDE staff will then follow up with a letter to the district and a copy to the design team which outlines any issues that should be addressed in the next phase.

The architect (or CM if employed) is to advise the owner regarding the projected budget and schedule. Should the projected cost exceed the approved BG-1 budget, the architect shall request the owner to increase the budget or scale back the scope of work to come within budget.

(2) Design Development

During the **Design Development** phase the Educational Specification will still be used by the design team and the Schematic Design documents will be used as a basis for the work in this phase. The scale of the overall drawings will increase and greater detail such a materials of construction, opening sizes and equipment will be shown.

The design team will continue to work with the planning committee, but additional members may be added to the team to provide direction on specific areas. For instance, the district Food Service Director would provide input on the Kitchen layout and suggest equipment that should be included, the Media Specialist will provide input on how the Media Center is to be laid out and the types of shelving and special equipment should be included and the Science staff will discuss the layout of the Science Labs and all fixed equipment and casework. Specialty spaces such as; Science Labs, Office Administration, Kitchen, Media Center, Music Rooms, Art Rooms, Special Education Spaces, Computer Labs, and other specialty areas will be drawn at an even larger scale so that furnishings, equipment, fixtures, power/data outlets and other utility connections can be drawn to see how the spaces will actually function. These will be reviewed by appropriate curriculum consultants at KDE.

At this time the structural, mechanical, electrical and plumbing drawings will begin to be developed and submitted in enough detail to understand how the building will be constructed and equipped for operation. The design team will also prepare outline specifications that will describe the materials and equipment to be included. The design team will complete the KETS Building and Wiring Checklist Form for submission to KDE for review and comment.

Like the floor plans, the exterior views will be enlarged and the materials and fenestration will be noted in much greater detail to allow the district to see exactly how the building will look. The roof will be shown to allow the local board to see how the roof plane will be designed and the manner in which water runoff will be handled. The site drawings will be enlarged as well to show site features including, the building outline, paving (walks, roads and parking), play areas and equipment, plantings and a detailed grading plan showing how the site will be shaped and molded.

Like the Schematic Design, the **Design Development Presentation** should be presented to the planning committee and, if approved, to the BOE for review and comment. If the local board approves the Design Development; the drawings, the Outline Specification, BG-2 and BG-3, and the Energy Design Criteria are submitted to KDE. KDE staff will review the documents and the Schematic Design review letter to determine if the items noted in the previous review have been addressed and will send a letter to the district with a copy to the design team which outlines any issues that should be addressed in the next phase. With the approval of Design Development the building design should be essentially complete, with only minor modifications during the next phase.

Again, the architect (or CM if employed) is to advise the owner regarding the projected budget. Should the projected cost exceed the approved BG-1 budget, the architect shall request the owner to increase the budget or scale back the scope of work to come within budget.

(3) Construction Documents

Once the **Design Development** phase of the project is approved by the BOE and KDE, the design team (and CM team if employed) begins work on the Construction Documents. These include; drawings, specifications and project manuals that will be used to bid and then to construct the building project. The drawings will be much less “pictorial” and more technical than those that were presented at Schematic Design and Design Development. They will include; site plans and details, Structural plans, details and schedules, Architectural plans, sections, elevations, details and schedules, and Mechanical/Electrical/Data/Plumbing plans, details and schedules. A tremendous amount of information will be included in the package. The design and construction team (if CM is used) will also prepare a project booklet called a Technical Specification. This document will be broken into sections that correspond to the various types of work and products to be included in the project. The first sections (typically Volume 1) include all of the bidding and project information, descriptions of the project, contracts to be used, bid bonding requirements (5% bid bond or certified check must be submitted with each bid greater than $50,000), Performance and Payments (bonds equal to 100% of the construction costs are required for projects with budgets greater than $50,000) and how the contractors are to comport themselves during construction. These opening sections are also used by the Construction Manager to describe the Bid Packages in a CM project and to outline the work to be included in each Bid Package. The majority of the specification booklet (typically Volume 2 and 3 if the

project is large) describes the products and materials to be used in the project, how the products and materials are to be installed, what type of warranties are to be provided and how to coordinate the work with the other products and materials to be included.

Like the Schematic Design and the Design Development Presentation, the **Construction Documents** should be presented to the local board of education for review and comment. If the BOE approves the Construction Documents; the drawings, the Specification, BG-2 and BG-3 are submitted to KDE and the other agencies that have jurisdiction over the work. KDE staff will review the documents and the Design Development review letter to determine if the items noted in the previous reviews have been addressed and will send a letter to the district with a copy to the design team which outlines any issues that should be addressed in order to proceed. Allow a 15 business-day review turn-around time of acceptable contract documents. Upon rejection of submitted documents, a resubmission of requested information will begin a new 15 business day review period. We will attempt to shorten time as staff is available.

Submission of supplemental drawings, specifications, project manuals, or other data, for inclusion with the contract documents after the initial submittal is made, will not be allowed. Any substantial changes made after the initial submittal documents will re-start the review turn-around time period stated above.

A minimum 5% contingency fund must be included on the BG-3 as part of the total project cost. With the final Construction Documents, the design team shall submit a copy of the document transmittal letter to Department of Housing, Buildings and Construction. (Include copies of transmittals to other regulatory agencies in authority.)

The district, design team and construction team (if CM process is used) must provide confirmation of the applicability of the Prevailing Wage Law which may be obtained from the Kentucky Department of Labor. Again, the architect (or CM if employed) is to advise the owner regarding the projected budget. Should the projected cost exceed the approved BG-1 budget, the architect shall request the owner to increase the budget and submit a revised BG-1 or scale back the scope of work to come within budget.

Advertisement for bids shall not occur until written approval has been issued by the Facilities Branch.

Section 7 – Guaranteed Energy Savings Contracts

General - In 1996, the General Assembly enacted legislation to authorize a process for construction delivery and implementation of energy conservation measures that varies from those construction processes previously used for public school projects in Kentucky. This delivery method proposes the renovation and replacement of various building systems, primarily those that would save energy, and the review of operational procedures that could be changed to save energy. These items would be included in a procurement method that requires a "qualified provider" to make a review of the district's buildings, energy use and operating procedures. These qualified providers then submit a contract to the district which proposes renovation and procedural changes. The contract includes: reviews of the district buildings and analysis, design engineering costs, provision of all equipment, installation and commissioning of the work. The proposed changes are "guaranteed" to save a specified amount of energy within the district which translates into a guaranteed annual district cost saving. These cost savings are then used to pay the annual bond payments on the proposed renovation and procedural changes. Since the district's energy bills are paid from the General Fund, the paid from savings on these projects are a General Fund expenditure and do not count toward the district's bonding potential.

The replacement of poor and failing systems under a Guaranteed Energy Savings Contract represents "capital cost avoidance" by circumventing the future cost of the replacement of these systems. These "capital cost avoidance" items cannot exceed 50% of the value of the entire contract and may be paid for with restricted funds if they comply with the District Facilities Plan. Items of "capital cost avoidance" include the replacement of: storm windows and doors, insulated glazing, HVAC major components, lighting, and may include the reduction of exterior glass area and the installation of new life safety systems or upgrades determined to be necessary to meet current code requirements.

Initiation - To initiate this type if project, the local board shall send to KDE a "letter of intent" to undertake the project. Since at this point the total scope of the work has not yet been determined, a BG-1 is not required. KDE will give the project a BG number and send the district

a KDE project submittal checklist, along with a “Request for Proposals” package which they will use to organize the project and solicit proposals from the qualified providers. The local board shall place an advertisement in the local paper which the largest district wide circulation to solicit proposals from firms interested in providing service. The district should allow ample time for the qualified providers to study the facilities and district energy records to allow them to make a detailed and reasonable proposal. The individual firms should present their proposals to the local board of education or their designated agents. From these proposals, the BOE shall then select a firm to undertake the project.

Scope Documents – Once a qualified provider has been selected, the local board shall submit the following “scope documents” to KDE: the board approved proposal from the selected qualified provider, the BG-1 form summarizing the scope of the project along with a list of the buildings to be affected, the work to be done at each site, the total project cost, the proposed funding source and the financing schedule. KDE will review these “scope documents” and submit a letter to the district with directions as how to proceed. Once the KDE review comments are submitted to the district, the qualified provider will revise the scope documents incorporating the comments noted in the KDE review letter. The local board will then submit the “approved” scope documents, proposed contract and BG-2 form to KDE for review and approval.

Final Documents – Once the final KDE review comments are submitted to the district, the qualified provider will incorporate the comments noted in the KDE final review letter of the “scope documents” within the final documents (which includes the plans and specifications for all of the work). The BOE will then submit the approved final documents, contract and BG-1 form which conform to the contract amount and finance information to KDE for final review and approval. As with all KDE capital construction projects, the work performed under a Guaranteed Energy Savings Contract is subject to all KDE regulations including 702 KAR 4:170 (Facility Programing and Construction Criteria) and 702 KAR 4:180 (School Facilities Planning Manual). As in any action by the BOE, the contract should be reviewed by the BOE’s legal counsel before final approval by the Board.

The district and the qualified provider will then undertake the work in much the same way as a traditional project. Please note that all regulatory agencies having jurisdiction over building projects will need to have plans submitted for their review.

Section 8 – Construction Bids, Contracts and Bond Sales

Once assurances that the comments noted in the KDE Construction Document approval letter will be addressed by the district, KDE will issue approval for the district to advertise the project for bids. The district then submits a single “Advertisement to Bid” to the newspaper with the largest local circulation in the district to be run to allow notification of interested bidders. Some districts may also submit advertisements to larger metropolitan newspapers in their areas to alert more bidders who may be interested. For projects that have a construction cost that is greater than $1,000,000 the ads must run one time for no less than 21 days from the bid date. For projects that have a construction cost that is less than $1,000,000 the ads must run one time for no longer than 21 days and no fewer than 7 days before the bid. Although it is not a requirement, some district also send copies of the Construction Documents to a series of “plan houses” that specialize in notifying contractors who are members of their information services that the project is being bid and provide information on where they might view the Construction Documents.

Bidding Process - Once approval to bid the work is given by KDE, the district, with the assistance of the design and construction team (if CM is used), will submit the documents for bidding to interested contractors. Generally this bidding period is about 30 days. Some districts, Architects and CMs distribute the plans themselves, but this is a practice that is not generally employed because of the amount of labor and paperwork needed to undertake this effort. Most Construction Documents are distributed through a third party “plan distribution center” that specializes in this practice. The district pays to have both paper and digital copies of the Documents made and distributed. Generally contractors then pay a deposit for each set of documents that is refundable if they return the documents in good condition to the Owner after bidding. These returned documents are then used to build the project. The plan distribution center tracks who has the drawings and notifies them of changes made during bidding process.

On a major project, the design and construction team (if CM is used) will hold a pre-bid conference about half way through the bid period. The conference is generally held at the site and is conducted by the design team and CM, if one is employed. The pre-bid conference day is generally set in the Advertisement for Bids. The contractors, subcontractors and material suppliers attend the meeting to discuss the project and to pose any questions to the group. It is

important that accurate minutes be kept and that any questions that are posed be recorded and the answers noted in the minutes. Any discussions that would affect the scope or bidding of the project should be recorded in an Addendum to the Construction Documents.

Addenda - During the bidding process, the Construction Documents will receive the most scrutiny that they have had to date as the contractors try to determine the project scope and what is needed to undertake the work. The design team and CM, if employed, will receive countless phone calls with questions about the project. Data from material suppliers which demonstrates their products quality will be sent in hope of having their products be determined equal to those products that are specified and then included in the Construction Documents. Once the drawings have been submitted for bidding, the only way that any changes can be officially included in the contract is by issuing these changes in the form of an Addendum. Addenda are drafted by the design team and CM, if used, and are sent to all plan holders. This is critical since the bidders must have all of the required information from which to develop their bids. Addenda are sent to the plan holders by the third party “plan distribution center” who records the plan holders and insures that all plan holders have access to all of the bidding information.

The Advertisement to Bid also includes the date, time and place at which the bids will be received. The design team and CM, if used, will assemble and conduct the bid opening. The district generally makes a conference room or large meeting space available for the proceedings and, until the advent of the cellular telephone, made phones available. The clock on the wall in this room is generally determined to be the official clock and all bids must be received by the timekeeper before the designated bid time. Most smart bidders get to the opening well in advance of the bid time to make sure their bids are received, but there will be some who enter after the designated time and want to have their bids received. The district should not accept late bids since this practice would give the other contactors possible cause for litigation. The following KDE forms and AIA Documents must be presented in a sealed envelope for bidding; KDE Form of Proposal (with all addenda noted, subcontractors and materials listed), KDE Material Authorization Form (if direct purchase of materials by the district is specified), AIA Document A310, Bid Bond 1970/or certified check (either document is acceptable-equaling 5% of the bid total-including direct purchase materials). Once “time” is called no more bids will be received. Each bid should be publically opened and read aloud. The bids are recorded and

following the close of bids, the two or three lowest bidders are generally asked to remain for a "post-bid" review. Each bidder contacts their office to make sure that the bid information is correct and any information that was noted to be added after the bid by the contractor is then added. The contractors then indicate to the design team or CM, if used, that their bid is correct or whether there is any compelling reason why their bid is not valid.

The Architect and CM, if used, will then review the lowest bids, contact any references, review the financial status of the contractors, review the bid prices with the district's fiscal agent if bonds are to be sold to finance the project and then make a written recommendation to the BOE as to which contractor should be hired to undertake the project. Once the BOE approves the bids, they are sent to KDE for review and approval. **The actual submission documents are noted in the regulation and must be submitted to KDE at least 10 working days before the bond sale date. These include;** proof advertisement, bid tabulation, low-bidder's form of proposal with bid security and attachments, proposed contract(s) **AIA Document A101 – 2007, Standard Form of Agreement Between Owner and Contractor or AIA Document A101/CMa, Standard Form of Agreement Between Owner and Contractor, 1992 Construction Manager – Advisor Edition,** for low-bidder(s), and Direct Purchase Order tabulation, if used.

Once the initial bid information is approved by KDE, the district shall submit the **Executed Contract Documents** to include; executed construction contract, Performance and Payment Bond with Kentucky power of attorney or countersigned by Kentucky resident insurance agent, Insurance certificate and executed Purchase Orders if the direct purchase of materials in noted in the Contract Documents and was provided by the contractor.

When the construction contract is awarded, a revised financial page of the BG-1 Form is required. It shall coincide with cumulative construction cost, fees, contingencies, etc., and the projected bond sale amount, as applicable.

Bond Sale requirements – Large projects, generally, must be financed over a period of time. For schools in Kentucky, this financing is undertaken by selling school bonds. As noted in **Section 2 – Construction Project Application;** prior to the submission of the initial BG-1 Form, the district shall contract with a Fiscal Agent to assist in this development of the BG-1

Plan of Financing and to assist in the effort of selling bonds. Unlike design professional and CMs, the district may simply hire a Fiscal Agent, but it is advisable to select an agent or firm that is familiar with Kentucky bonding requirements and that has a successful “track record”. The district may wish to interview several agents or firms and contact other districts for references. The Fiscal Agent will review the district finances and determine the funds that are available for use in the school project. Unlike other states, Kentucky uses a verity of fund sources to pay for its school projects. These funding sources and how they are applied to school construction are outlined in Architect Memo No. 21, April 9, 2012. **The district is required to submit bond sale documents, ten days prior to the date of the bond sale; if the submitted documents are not in an approvable form at least five days prior to the scheduled bond sale, then the sale date will be postponed.** If the bond sale documents are in order, KDE will issue and approval letter to the district with copies to the Fiscal Agent, design team and CM (if used).

At that point the Fiscal Agent will assist the district in selling the bonds to undertake the project. Much like the project budget in which the actual costs are not known until the project is bid, the actual bonding costs will not be known until the bonds are sold. Fiscal Agents assume a bond rate based upon their experience, but the actual rate is determined when financial institutions actually “bid” on the bonds being offered. It is important to review the final bond information and actual rates with the Fiscal Agent and design/construction team after the bond sale to make sure that the finance assumptions on which the project was base are within projections and the actual project bid amount.

Once the bonds are sold and reviewed, the Fiscal Agent will assist the district in actually transferring the monies to the district’s construction account that will be used to pay the contractors and consultants, purchase equipment and to pay for the items noted on the BG-1. The district will receive the bond proceeds in a lump sum. This money will not be spent at one time, but rather paid out to the contractors as work proceeds. The district should keep the project funds separate from other district funds and deposit the money in an insured interest bearing during the course of construction. Please note that the interest received from these funds is restricted in the same manner as the original funds and must be spent under the same guidelines as the original funds.

Section 9 – Contract Change Orders

Change Orders - Throughout the course of any construction projects, changes will occur. These changes are as much a part of the process as design and bidding and should be considered so by all involved. Changes that are minor in nature and do not affect cost or time can simply be executed by written instructions from the affected parties. In any correspondence relating to changes to the work of any kind, it is critical that all of the following be copied on any documents; Owner, Architect, CM (if used) and Contractor.

Where a change occurs which affects construction cost or time, a more formalized process called a "Change Order" should be undertaken. This process starts when a need for a change is brought to the attention of the project team by any member of that team. The need for the change should be evaluated by the Architect (or CM is used) to determine if it has merit for consideration by the Owner. During the construction process, the traditional role of the Architect is expanded. Prior to this time, the Architect is the primary design consultant to the Owner and as such represents the Owner's interests in the project. But during the construction process, however, the Architect is contractually obligated to act as an impartial reviewer of the construction process and must review all actions in an impartial manner to provide decisions and advice which is solely based on interpretations of the contract documents. The evaluation of need should be documented by the Architect in written correspondence with the Owner and the contractor.

Once a determination of the need for a change is made, the Architect should solicit information from the contractor which outline the adjustment to the price and time for the change noted. The contractor should then respond to the Architect's communication by providing a breakdown of the costs and time adjustments needed for the change for review by the Architect. The Architect should then evaluate the information and, if found to be consistent with the contract, issue a Change Order to be signed by the contractor and then considered by the Owner. These changes should be issued on **AIA Document G701 – 2000, Change Order (for general construction projects) or AIA Document G701/CMa - 1992, Change Order (for CM projects).**

Each Change Order should be presented to the BOE for review and should include copies of the correspondence used to develop the Change Order. This information will allow the local

board to understand the need for the change and the effort taken to have moved the Change Order to them for consideration. The BOE should be an active member of the process, but they should consider that changes are inevitable and mistakes will be made. The construction process is not a time to add value to a project to the benefit of the Owner simply because one of the members of the team has made a mistake. The district should not pay for something twice, but it should at least pay for it once. While mistakes are common, a large number of mistakes and the nature of these mistakes by the design or construction team should be taken into consideration when it is time to select a team for the next project.

KDE is also a party to the process. Change orders approved by the local board, that have a total cost change per event, that is under $25,000 will simply be submitted to KDE after execution to allow our project records to reflect the change.

Change orders that are over $25,000 may be approved by the local board, pending final KDE approval. Once the local board reviews and gives “tentative” approval, the Change Order shall be submitted to KDE for final review. These Change Orders must be accompanied by: (1) Cost breakdown to include labor, material, profit and overhead. (If unit prices are utilized, no cost breakdown is required.) (2) Change order Supplemental Information Form (Kentucky Department of Education, current version) signed by the owner. The proposed change order, when submitted will be signed by architect, contractor, or construction manager if applicable, but not by the owner until KDE approval is issued.

For some project changes, the work is so critical that waiting for final approval of a Change Order could adversely affect the project or the Owner and contractor cannot agree to a final price. In this case, the Architect may use the AIA document **G714™–2007, Construction Change Directive** which will allow the work to proceed while the final details are completed. Please note that there is a certain risk in this effort if the groups cannot agree to a final resolution.

After KDE approval is issued in writing to the district, the owner will execute and forward a copy of the executed Change Order to the Facilities Branch.

Change orders submitted for construction management contracts will require an attached tabulation sheet for each bid package showing previous change orders submitted, in numerical order, with original approved contract amount and total accounting of additions or deletions to that contract with dates of rejection or approval by the owner and KDE.

NOTE: Change orders which create an increase in the total construction contract cost exceeding the approved BG-1 construction cost plus contingency amounts, will require submittal of a revised BG-1 financial page, prior to DFM approval of any increase in contract cost.

Section 10 – Construction Contract Retainage

Retainage – as noted in **Section 3 – Local Board Oversight and Section 8 – Construction Bids, Contracts and Bond Sales;** with school projects undertaken in Kentucky there is no prepayment of construction costs. The contractors undertaking the work will purchase material, move equipment onto the site and begin work before any payments are made by the local board. The contractors will submit payment information generally on a monthly basis to the Architect or CM, if used. Generally the forms **AIA G702 – 1992, Application and Certificate for Payment (for general construction projects) or AIA G702/CMa – 1992, Application and Certificate for Payment-Construction Manager Advisor Edition (for CM as advisor projects)** will be submitted to authorize payment. These forms layout the different branches of the work, the total costs for each branch, the costs that have been accrued in the last month and the costs that have accrued to date. This information allows the Architects and CMs, if used, to review the proposed payment to insure that it actually represents the work that is in place. If materials have been purchased, but not installed, they must be securely stored on site in a manner that will not allow them to deteriorate or in an insured facility. If stored off site, an insurance certificate will accompany the Application for Payment and the material should not be comingled with other materials in the storage facility.

Because the exact accounting of the work in place can be very subjective and to insure the BOE against damages if the contractor should abandon the work, each month 10% of the monies to be paid will be withheld by the BOE as “retainage”. When the work is 50% complete, if the contractors are in compliance with the contract document, the local board may reduce the retainage amount to 5%. This allows the contractors to have an infusion of funds to facilitate

completion of the project. This retainage adjustment will continue to be monitored and if circumstances change and the contractor is found to be in violation of the contract, the retainage amount may be increased.

School districts may allow materials that are included on their projects to be purchased through the BOE by Direct Purchase Orders, thus using the district's tax exempt status to eliminate the payment of the Kentucky Sales Tax on the project for these items. This action by the district does not eliminate the responsibility of the contractors however to be responsible and accountable for the materials in the same manner as if they were purchased by the contractor. The contractor is still responsible for the amount of material to be used, and to ensure that materials and products meet the specification. In addition, ordering, receiving and storage of the materials must be as noted in the contract documents, and the BOE shall hold retainage on these materials from the contractor as if they were purchased by the contractor.

As noted in **Section 8 – Construction Bids, Contracts and Bond Sales**, large school projects are generally financed by selling bonds. The district will receive the proceeds from these bonds in one lump sum which is to be deposited in an interest bearing construction account. Since these funds are expended as the project proceeds, as noted above, the funds, including retainage accrues interest. The interest income shall accrue only to the construction account and it shall have the same restrictions on its use as does the other funds in project.

Additional issues relating to retainage are governed by KRS 371.410(1) the Fairness in Construction Act.

Section 11 – Construction Dispute Resolution

Construction projects can sometimes, at best, be frustrating and, at worst, extremely contentious. Because of the relatively large sums of money at stake, the tight timeframes, the weather and the verity of people and personalities involved, disputes can arise. In the case of any dispute it is important that all parties involved in the project be informed about any proposed changes to the contract and be participants in the resolution to any issues. In most cases, resolution can be found through simple negotiations that result in agreement by those parties to the contracts. But, in some cases the parties involved simply cannot agree to a solution, in that

case resolution must come from a third party either through “informal” dispute resolution like Mediation or more “formal” resolution like “Litigation”.

702 KAR 4:160 requires that the local board and other parties to the contract must, “utilize the construction dispute resolution processes defined in the signed contract”. The standard contracts used are **AIA Document A101 – 2007, Standard Form of Agreement Between Owner and Contractor or AIA Document A101/CMa, Standard Form of Agreement Between Owner and Contractor, 1992 Construction Manager – Advisor Edition.** Both documents refer to **AIA A201 – General Conditions of the Contract for Construction – 2007** and require that these types of dispute must first undertake the use of Mediation as an alternate means of dispute resolution prior to court proceedings. Mediation: allows the disputing parties to take part in the equitable resolution of the dispute rather than accept a third party decision; it costs much less than litigation; can be used on large or small disputes; is sanctioned by several local courts and provides a speedy settlement compared to litigation. The Mediation is non-binding though and if the parties do not agree at the end of the negotiations, then litigation is the last recourse. Litigation can be expensive and take a considerable amount of time for a decision to be reach by a judge or jury.

Section 12 – Construction Process Closeout Procedures

Finishing a construction project can be one of the most challenging issues in the entire construction process. As you are trying to put the final touches on a building, disputes can arise from numerous situations, such as, contractors causing damage to another’s work, contractors that have left the site needing to return to complete final tasks, insufficient monies retained by the Owner (to push contractors to make final adjustments, etc.) and putting together the final “closeout” documents can be time consuming.

Once a project nears completion, the contractor will prepare a list of deficiencies to be corrected, submit the list to the Architects and notify them that the work is “substantially complete”. At that time, representatives of the local board, the design team and CM (if utilized) visit the site to review the project and the items noted on the contractor’s list of deficiencies. They will review the site, building exterior and each interior space and will prepare a list of any other deficiencies, called a “punchlist”. The punchlist will be submitted to the Owner and the

contractor. The items noted on the punchlist must be addressed before the design team can declare the project officially substantially complete. The current punchlist is referenced and attached to the Certificate of Substantial Completion as a line item indicating the amount of time the contractor has to complete the punchlist. The Certificate of Substantial Completion (AIA G704-2000) documents that the project is substantially complete for owner occupancy. The Substantial Completion Form documents when project warranties start, as well as, the change-over of security, insurance and utilities. At this time, the contractor will submit all warranties, certificates of occupancy from regulatory agencies and final lien releases and affidavits of payment to the various contractors on the project. The design team will assemble the Owner's copies of the shop drawings and record documents. The Owner will then release the retainage with sufficient monies being held to complete the project.

When all work is complete, the contractor will notify the Architect and a final observation will be completed. If the work is satisfactory and all submittals have been received, the final Application for Payment will be submitted to the Architect, reviewed and submitted to the local board for final payment.

For projects under a General Contract delivery method or for a Guaranteed Energy Savings Contract, the Architect or Qualified Provider will furnish the board a completed BG-4 Contract Closeout Form, along with a completed KDE Purchase Order Summary Form (if Purchase Orders are utilized).

For projects with Construction Manager delivery method, the CM will prepare one BG-4 Contract Close-Out Form (per Bid Package) along with a completed KDE Purchase Order Summary Form (if Purchase Orders are utilized) for each contract (Bid Package).
If the board agrees the construction contract(s) is (are) complete and all accounts are reconciled, then the board-approved BG-4 Forms shall be forwarded to KDE for review and approval. When all board-approved BG-4 Forms are submitted to or approved by KDE and the board agrees the project is completed, and all of the final project costs have been determined then the district will submit the BG-5 Project Closeout Form to KDE to close out the project.

When completing the BG-5 form, the final project cost construction contingency amount shall equal zero. Also the BG-5 Final Total Project Costs amount shall equal the BG-5 Final Total

Project Funds amount. The BG-5 form identifies “residual funds” by subtracting the BG-5 Final Total Project Cost from Current BG-1 Total Project Cost. The rules for spending any residual funds are to be the same rules which govern the most restricted funds in the project from which the funds remain. (least restrictive funds to be used first) If the BG-5 Final Total Project Costs amount is greater than the Current BG-1 Total Project Cost amount, then a Revised BG-1 is required prior to submission of the BG-5 form.

Section 13 - Penalties for Malfeasance or Nonfeasance

Professional malfeasance is wrongdoing, improper or dishonest conduct, especially by a person who holds a position of trust. Professional Nonfeasance is a term generally used in Tort Law to describe inaction that allows or results in harm to a person or to property. In both cases the assumption is the commission of an act that harms the participants in the project, including the public, either by what was done or what was not done by the professionals involved. Care should be taken in trying to make a determination of wrongdoing. Professionals must operate within a system of laws and regulations intended to safeguard the general public. Design professionals are not required to be perfect, but to work as other professionals (lawyers, doctors etc.) to “exercise reasonable skill, prudence and judgement” in their endeavors. The law sets a standard of “Reasonable Care” for the performance of work for ALL professionals to be, “What is reasonably prudent in the same community, at the same time given the same or similar circumstances?”

The professional who fails to meet the standard of reasonable care may be held “negligent” because of that failure. The law requires proof of four elements;

- **Duty** – The professional must owe a “legal duty” to the claimant, i.e. the professional has a legal obligation to do something or keep from doing something.
- **Breach** - The professional fails to perform the **duty** or does something that should not be done.
- **Cause** – The professional’s **breach of duty** is the main cause of harm to the claimant.
- **Damage** – There must be actual harm or **damage** that results from the **breach**.

While this may be the standard to initiate legal action, the standard to reprimand professionals for malfeasance and nonfeasance may not be as clear cut. Professionals whose single actions of omission or commission are significant enough to be brought to this office will be considered

for further action. In addition, construction professionals that exhibit a pattern of actions of omission or commission will also be considered for action.

Such actions will be documented and submitted to the Commissioner of Education for consideration. If, in the Commissioner's opinion, the actions are egregious enough to warrant further consideration, they will be forwarded to the Kentucky Board of Education (KBE) for action. The KBE will then consider the action and if an Architect or CM who is declared guilty of malfeasance or non-performance by the KBE, they may be placed on a maximum five-year suspension prohibiting the architect or CM from entering into a contract with a Local Board. The KBE may also prescribe alternate penalties which are less severe. In addition, these penalties may be assessed on the principles within the offending firm and follow them if they become associated with another firm within the time limit of the penalty.