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ABSTRACT

This booklet provides best practice recommendations for building functional and frugal schools in Florida. Seventeen best practice construction recommendations are addressed, including recommendations for sitework, concrete, masonry, metals, wood and plastics, thermal and moisture protection, doors and windows, finishes, equipment, furnishings, mechanical and electrical, and technology systems. Application procedures are also provided for design professionals to have their design evaluated and designated as a "SMART School Design." A final document is included that lists guidelines for partially determining a school's inclusion as a "SMART School Design." (GR)

SMART SCHOOLS

C L E A R I N G H O U S E

Frugal Construction Standards

Available at:

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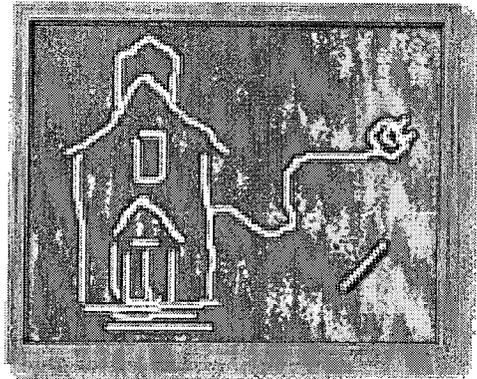
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The Florida Legislature, during its 1997 Special Session, established the SMART Schools Clearinghouse as the agency responsible for administering several programs designed to assist and encourage Florida's school districts to build S.M.A.R.T. schools. SMART schools were defined as schools which are Soundly Made, Accountable, Reasonable, and Thrifty.

As part of the SMART Schools initiative the Legislature directed the SMART Schools Clearinghouse to develop Frugal Construction Standards that ensure appropriate industry standards and optimal life cycles and that may include, but are not limited to, standards for optimal size of core facility space, design-build, performance contracting, energy efficiency, and life-cycle systems costing.

As the first step in meeting that obligation the SMART Schools Clearinghouse developed this booklet of "best practice" recommendations for building functional and frugal schools in Florida. The Clearinghouse recognizes that it would be difficult, and sometimes contradictory, to incorporate all of the standards described here and, therefore, these frugal construction standards are recommendations only.

The SMART Schools Clearinghouse encourages school districts to consider the recommendations described in this booklet and incorporate as many as practical and possible into their schools. By following a determined and straightforward approach to designing and building SMART schools Florida's school districts can make a significant impact on reducing the cost of building and maintaining schools while continuing to provide a high quality learning environment for our students.

The Clearinghouse gratefully acknowledges the participation and support of the SMART Schools Clearinghouse Workgroups and the time and effort devoted to making these Frugal Construction Standards meaningful. While we recognize that not everyone involved got everything they wanted, these standards represent a consensus of the broad spectrum of workgroup members and school district policy. The many hours workgroup members devoted to this project have been repaid with a document which has the potential to positively and significantly impact the way we design and build schools in Florida.

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SMART Schools
Clearinghouse
Frugal Construction
Standards

**DIVISION 1
GENERAL
REQUIREMENTS**

- 1.1 The school district should endorse and support a Partnering, or “Team Building” program and encourage all owner team members, design team members, and construction team members to actively participate and work toward maintaining a positive relationship throughout the project duration.
- 1.2 The design team should be encouraged to comply with the district’s SMART school design philosophy and develop practical design solutions that are functional and cost effective.
- 1.3 When applicable, the design team, CM , and district facilities staff can help control construction costs by:
 - a. Being involved in development of the educational specifications and monitoring the cost implications of decisions made by the district’s ed spec committee.
 - b. Studying the educational specifications and helping translate them into a precise program.
 - c. Being involved in site selection and helping determine the best utilization of potential school sites.
 - d. Questioning the Occupant Design Criteria Tables and looking for better and more efficient ways to allocate space within the school.
 - e. Seeking simple and straightforward architectural, civil, structural, mechanical, and electrical design solutions.
 - f. Monitoring the architectural, civil, structural, mechanical, and electrical planning and design solutions to control costs.
 - g. Producing complete, high quality construction documents.
- 1.4 The district should designate one person with the authority, and responsibility, to keep facilities construction projects within budget and on schedule.
- 1.5 The school district should develop a general project description that includes a brief statement as to why each facility is being built, where it will be located, the population of students it is intended to serve, its estimated cost, the method of financing, the estimated time schedule for planning and construction, and the estimated date of occupancy. Copies of the project descriptions should be

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**DIVISION 1
GENERAL
REQUIREMENTS**

made available to the public to help them better understand the needs of the district, and to help ensure that those persons responsible for delivering the project on time and on budget remain accountable.

- 1.6 Educational planners, instructional staff, and district facilities staff should cooperate to develop a complete set of educational specifications before the architect begins to design the facility. The educational specifications should include a description of activity areas that describe the type, number, size, function, special characteristics, and spatial relationships of instructional areas, administrative areas, and service areas in sufficient detail that the architect will be fully aware of what will occur in each of these areas.
- 1.7 The school should be designed to facilitate rapid and economical construction.
 - a. The design should utilize standard sizes, types, shapes and readily available materials and trades to avoid waste and excessive labor costs.
 - b. Architectural details should be simplified, durable, and contribute to rapid and economical construction and long-term low-cost maintenance and repair.
- 1.8 The facility should be designed with consideration given to long term ease of maintenance and repair. The facility's mechanical and electrical systems and building materials and systems should be determined, by value engineering or some other industry standard, capable of providing a minimum 20-year life-cycle.
 - a. Exterior walls should be constructed with building materials that will provide long-term moisture and thermal resistance, low maintenance and ease of repair.
 - b. Interior walls in corridors, cafeterias, and other high traffic unsupervised areas should be constructed with durable impact resistant materials.
- 1.9 New school plants should be planned to accommodate siting of future portables or expansion of permanent facilities when changes in demographics or rapid growth can be anticipated.
- 1.10 The facility should be adaptable to changes and innovations in education and flexible enough to

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**DIVISION 1
GENERAL
REQUIREMENTS**

- accommodate a variety of program uses. Interior spaces should be simple with inherent versatility.
- 1.11 Interior walls and partitions within and/or separating instructional areas should be non-load bearing so the spaces can be reconfigured as instructional programs and needs change.
- 1.12 The school should be designed to be compatible with its surroundings but not be a trendy design that may be out of favor in a decade.
- 1.13 School districts should consider building one, or more regional multi-use sports/music/drama... complexes to be shared by several middle and high schools. Individual schools should have practice gyms, fields, and stages, when appropriate, but have their competitive games and performances at a regional complex. This would eliminate duplicating expensive facilities at each school and help reduce the construction costs of schools. A school district should also develop joint-use agreements and share the construction, operation, and maintenance costs of a multi-use complex with a local municipal or county government, further reducing the construction costs of its schools.
- 1.14 Consideration should be given to sharing parts or all of a facility, and its construction, operation and maintenance costs, with other governmental agencies. Also, consider developing policies that would allow leasing or renting parts of the facility after hours to other public or private entities.
- 1.15 Schools should be designed as compact, rather than campus, plans whenever possible to eliminate the additional costs associated with an extensive infrastructure, covered walks, and grounds maintenance. Designs should be developed to minimize gross floor area per student station while maintaining adequate floor area in instructional spaces.
- 1.16 The shape of buildings and rooms should be designed to help ensure the maximum and most efficient use of the space. Angled, circular, and other odd shaped rooms should be avoided except where a functional requirement.

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**DIVISION 1
GENERAL
REQUIREMENTS**

- 1.17 All general purpose classrooms and instructional spaces should be a similar size and shape so that any curriculum can be taught in any one of them.
- 1.18 Ancillary and support spaces such as teacher planning, lounges, storage rooms, and conference rooms should be grouped, and centralized, where practicable, to help reduce the overall size of the school and its related infrastructure. Custodial closets, toilet rooms, and some other spaces may still have to be dispersed for practical reasons.
- 1.19 Consideration should be given to reducing the size of the library stacks area in the media center. Many books, reference, and resource materials are now readily available on electronic media eliminating some of the need for extensive shelving and casework to store books and resource materials.
- 1.20 Consideration should be given to maximizing passive design and “green architecture” concepts and techniques such as building orientation, shading walls and fenestration, using light colors on exterior walls and roofs, etc. to take advantage of, or minimize the negative impact of, the prevailing environmental influences.
- 1.21 The facility should be designed to allow after school hour activities to occur while keeping these activities segregated from the rest of the school for security, maintenance and operational needs.
- 1.22 Schools should only be designed and built with automatic fire sprinkler systems when required by code or when the total cost to build and maintain the school with fire sprinklers is determined to be less than the total cost to build and maintain the school with conventional Type IV construction and other requirements for schools without fire sprinklers. Vandalism to sprinkler heads and the consequences of inadvertent discharge should also be considered.

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**DIVISION 2
SITEWORK**

- 2.1 Site development and landscaping should be designed to be functional, simplified, and easy to maintain and repair.
- 2.2 Parking and walks should be designed and constructed to efficiently move vehicular and pedestrian traffic and use as little area as practical.
- 2.3 School districts should consider the use of recycled asphalt for parking areas and drives whenever possible and practical.
- 2.4 PVC utilities (less irrigation lines) should have a tracer wire located directly above the line and terminated on a metal device accessible from the surface without excavation.
- 2.5 Storm water outfalls should have protection grates and horizontal energy dissipation pads.
- 2.6 Ground floor slabs should be designed to ensure that finished floor elevations are above adjacent finish site grades. Finish grades should be designed to shed surface water runoff away from the structures and buildings. Swales and runoff collection systems should be designed to ensure drainage away from all buildings. Renovation and remodeling projects should be designed to make modifications to the spaces and adjacent grades such that the above criteria is met.
- 2.7 The landscaping design and plant selection should include the use of plants native to Florida and other low maintenance materials. Xeriscape landscaping principals should be followed.
- 2.8 Landscape irrigation requirements should be kept to a minimum. Plant materials should be selected that will survive and flourish with comparatively little supplemental irrigation.
- 2.9 Site design and orientation should show awareness of the principles of "Crime Prevention Through Environmental Design" (CPTED) including natural access control, natural surveillance, and territorial reinforcement.
- 2.10 Preferably, downspouts should be connected to an underground drainage structure. However, as a minimum, splash blocks and drainage controls should be provided at

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**DIVISION 2
SITEWORK**

- the base of all downspouts to help reduce soil erosion and standing water around the buildings.
- 2.11 The civil engineer should be encouraged to design grades and earthworks such that the site is balanced as much as possible and import or excess fill is kept to a minimum.
- 2.12 The use of decorative brick, stone, and tile pavers should be avoided, when possible, at walking and driving surfaces.
- 2.13 Where possible, retention ponds should be shallow and dry to avoid the cost of fencing wet ponds.

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**DIVISION 3
CONCRETE**

- 3.1 The school district should consider the use of other low cost and maintenance alternatives to reinforced masonry and concrete construction in school buildings.
- 3.2 The structural engineer should be encouraged to specify the minimum compressive strength concrete mix necessary to satisfy the design requirements of the specific component.
- 3.3 Stained or stamped concrete and decorative architectural precast components should be avoided.

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**DIVISION 4
MASONRY**

- 4.1 Exposed concrete masonry units (CMU) and brick veneer mortar joints should be tooled concave or V-notch. Raked joints should be limited to interior use.
- 4.2 Brick, mortar, and CMU color and type should be selected from the suppliers and manufacturers standard utility types. Closure type brick, special fired colors, glazed block, architectural faced brick, and custom brick and CMU units should be avoided unless shown to be more economical for the given application.
- 4.3 Avoid using decorative glass block as exposed exterior wall surfaces.
- 4.4 Single wythe CMU exterior walls should only be considered if they can be designed and built to meet energy requirements, prevent leaks, and control the transmission of water vapor from the outside to the inside. Painted single wythe CMU is deemed to not meet this requirement. Such walls, if used, should extend below the finish floor slab elevation and not terminate on top of the finish floor slab. Cavity wall systems are preferred.

**DIVISION 5
METALS**

- 5.1 Exposed exterior structural steel and framing members should be kept to a minimum and not designed solely for aesthetic purposes.
- 5.2 The structural engineer should be encouraged to specify the minimum yield strength of structural and reinforcing steel necessary to satisfy the design requirements of the specific component and avoid exceeding the minimum required to meet code or design constraints.
- 5.3 Where possible, structural members should be readily available common sizes and shapes in lieu of special order or fabricated pieces.

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**DIVISION 6
WOOD AND
PLASTICS**

- 6.1 Fire retardant treated wood treated with salt solutions should be avoided. FRTW should not be used except where specifically required by code or design constraints.
- 6.2 Toe boards of base cabinets, in contact with floors which are often mopped or shampooed, should be constructed of pressure treated lumber and finished with plastic laminate or vinyl base material.
- 6.3 Plastic laminate colors and patterns should be from the manufacturers readily available standard product lines.
- 6.4 Plastic laminate counter tops and back splashes within 4-feet of either side of a sink should be built of 3/4-inch exterior grade plywood with plastic laminate finish. Seams in plastic laminate should not be within 18-inches of a sink opening.
- 6.5 Built-in casework should be kept to a minimum in classrooms to help reduce initial building costs and ensure that the spaces remain flexible and responsive to future changes in program.
- 6.6 Science and chemistry lab casework counter tops should be acid resistant pressure laminated plastic in lieu of "chem-resin" composite materials unless the district requires the use of concentrated acids in the curriculum.

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**DIVISION 7
THERMAL AND
MOISTURE
PROTECTION**

- 7.1 Roofs should be designed and constructed with durable building materials which provide rapid and economical construction and long-term low-cost maintenance and repair.
- 7.2 School districts using built-up roofs should consider specifying coal tar saturated felts and coal tar pitch. Asphalt saturated felts and asphalt pitch should be avoided. If there is concern about the toxic fumes produced by coal tar pitch and its derivatives, alternative roofing systems should be considered.
- 7.3 Parapets should be minimized, or avoided, where possible; however, recognize that parapets may help minimize wind damage on low slope (flat) roofs. Coping should be mechanically fastened to the structure and no adhesive type coping should be used.
- 7.4 New roofs should have positive drainage with all runoff collected into gutters and downspouts. Avoid interior roof drains when possible.
- 7.5 Roof gutters and downspouts should be provided as required to direct waterflow away from exterior walls and sidewalks.
- 7.6 Avoid installing mechanical and other equipment on roofs. However, if it is necessary to have rooftop mounted equipment it should be provided with maintenance and walkway pads.
- 7.7 Districts using asphalt shingles should specify that they be nailed with hot-dipped galvanized (not electro galvanized) nails. Staples of any type should not be used.
- 7.8 Roof penetrations should be kept to a minimum. Roofs and roof systems should be designed to minimize the need for flashing and complicated flashing details should be avoided.
- 7.9 School districts using metal roofs should specify that the materials and installation will be warranted watertight for hurricane force winds. Metal roofs should be specified with concealed fasteners.

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**DIVISION 7
THERMAL AND
MOISTURE
PROTECTION**

- 7.10 If used, Exterior Insulation and Finish Systems (EIFS) should be durable, long lasting and easily maintained and repaired. Specify EIFS systems with internal drains, weeps, or other mechanism which will ensure that water entering the system will drain back out. EIFS wall systems should be avoided in areas that may be subject to damage or vandalism.

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**DIVISION 8
DOORS AND
WINDOWS**

- 8.1 Exterior doors should be designed to ensure that wind driven rain and water from roofs does not enter the building through exterior door heads, jambs or sills.
- 8.2 All exterior doors and frames should be protected from the weather, i.e., by roof overhangs, eyebrows or recesses.
- 8.3 The finish on steel and aluminum door and window frames should be selected from the manufacturers' readily available standard colors and finishes. Avoid special order colors and finishes.
- 8.4 To the greatest extent possible, standardize finish door hardware and window hardware and specify that it all be from the same manufacturer.
- 8.5 Window areas should be kept small enough to allow a high degree of efficiency in heating and cooling while maintaining compliance with SREF and other building codes. Window areas should not be oversized unless required by an overriding design constraint.
- 8.6 The district should consider using interior doors with a stretched head door frame, which aligns with CMU and brick coursing, to eliminate the need for installing custom headers.
- 8.7 Soft coating, low 'e' type glazing should be avoided unless tradeoffs can be made in first costs to justify installing and maintaining this type of glass in schools.
- 8.8 School districts should consider using impact resistant shutters in lieu of impact resistant glazing when the cost of installing and maintaining the shutters is less, or when an exposed laminate layer of the glazing is susceptible to scratching.
- 8.9 Districts should consider using hollow metal doors with an STC rating of 38, in lieu of the standard STC 42, when the increased sound transmission can be tolerated.

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**DIVISION 9
FINISHES**

- 9.1 Finishes should be of durable materials which contribute to the facility's rapid and economical construction and long-term low-cost maintenance and repair.
- 9.2 Where ceramic, glazed and quarry floor tile is used, it should be non-slip and finished with an appropriate sealer. Consider limiting ceramic tile in restrooms to only fixture walls and floors. Decorative ceramic tile should be avoided.
- 9.3 Vinyl wall coverings, and other impermeable interior finishes should be avoided.
- 9.4 Fire rated ceiling tile should be used only where required by code or application.
- 9.5 Consider using carpet as a floor covering only in administration offices, media centers, band and chorus rooms, or where the curriculum and program require carpeted floors.
- 9.6 When used, acoustical tile ceiling systems should be standard 2x4 or 2x2 configurations. 2x2 systems are preferred. Avoid the use of curved or architectural type ceiling systems and components. Consider using acoustic rated tile ceiling systems in lieu of sound insulated walls above the ceiling where sound transmission is a concern.

**DIVISION 10
SPECIALTIES**

- 10.1 Aluminum walkway canopies and covers should be selected from the manufacturers' readily available standard colors, shapes, and sizes. Avoid using custom colors or extrusions unless shown to be economically feasible.
- 10.2 The district should consider using stainless steel mirrors, in lieu of glass, in all student toilets.
- 10.3 Avoid locating fire extinguisher cabinets on the exterior of any building.
- 10.4 Toilet partitions should be constructed of seamless, solid material with homogenous composition and color throughout. Toilet partitions should be floor mounted and overhead braced, with tamper resistant, rust proof fasteners, brackets, latches, and hinges. Urinal partitions should be avoided where possible; however, when provided they should be solidly anchored and braced.
- 10.5 If student toilets are equipped with wall hung lavatories, the lavatories should be mounted with a modified wall bracket suitable for use in the school environment. If counters are used for installation of lavatories in student toilets, the counter should be constructed of seamless, solid material with homogenous composition and color throughout.
- 10.6 Flagpole heights should be limited to no higher than thirty feet (30') above finished grade.
- 10.7 Site signage should be economical in design and compatible with the surrounding neighborhood. Decorative architectural details and enhancements should be avoided.
- 10.8 Specialties and accessories should be standardized throughout the school district.

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**DIVISION 11
EQUIPMENT**

- 11.1 Equipment should be durable and easy to maintain and repair.
- 11.2 Select equipment from well known “brand name” manufacturers with a reputation for good customer service and the resources to promptly respond to warranty and repair claims.

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**DIVISION 12
FURNISHINGS**

- 12.1 Telescoping bleachers should be specified and installed using the manufacturers' standard modular system dimensions in lieu of a custom manufactured type and size.
- 12.2 Methods for walking off dirt and sand should be provided at all entrances to buildings. These areas should be designed for ease of maintenance and, if grates, grids or mats are used they should be in sections light enough for one person to remove and replace.

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**DIVISION 13
SPECIAL
CONSTRUCTION**

- 13.1 Special constructed facilities such as air supported structures, clean rooms, and sound conditioned rooms should be avoided unless required to support a specialized curriculum or need.
- 13.2 Pre-engineered structures should be considered as an alternative to “traditional” reinforced concrete and CMU structures for school facilities. If pre-engineered structures are specified, exposed fasteners on roof surfaces, except those required for maintenance, should be avoided.

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**DIVISION 14
CONVEYING
SYSTEMS**

- 14.1 Schools should be designed to minimize the need for duplicate elevators and lifts to accommodate the physically disabled and repair and maintenance operations.
- 14.2 Moving stairs, walks, and other costly, high maintenance conveying systems should be avoided.

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**DIVISION 15
MECHANICAL**

- 15.1 HVAC and plumbing systems should be designed to ensure rapid and economical construction and contribute to the facility's long-term low-cost maintenance and repair.
- a. Mechanical systems should utilize standard sizes, types, and readily available materials and components.
 - b. Materials and components should be traditional and durable.
- 15.2 The school district should consider a decentralized HVAC system when it would be more cost effective and provide greater operational flexibility than a large centralized chiller. Consideration should also be given to including alternatives such as geothermal, ice storage, and solar components in the HVAC system.
- 15.3 All buildings should be designed to operate in a positive pressure state, using adequately conditioned outside air to achieve pressurization. Ideally, buildings should be pressurized at all times to avoid infiltration of moisture and contaminants. Consideration should also be given to separating the ventilation/pressurization system from the temperature/humidity system.
- 15.4 If used, an energy management system should be designed and installed which is appropriate for the level of training and expertise of personnel available to operate and maintain it.
- 15.5 When possible, HVAC systems, controls and components should be standardized throughout the district.
- 15.6 HVAC equipment, conduits and piping should not be installed on roofs except where vandalism, safety, or other economic and operational factors are a concern.
- 15.7 Mechanical rooms should be of sufficient size to allow recommended service and maintenance clearances for all mechanical equipment. Air handling units serving classrooms should be accessible from outside of the classroom unless design and operational constraints dictate otherwise.
- 15.8 Air handling units, VAV boxes, fan coil units, and other equipment which generate condensate, handle fluids, or require frequent servicing or filter changes should be

**DIVISION 15
MECHANICAL**

- located to minimize damage from leaks and to allow easy access for maintenance and repair.
- 15.9 Operation and maintenance manuals should include, as a separate item, preventive maintenance requirements along with time schedules for each item.
- 15.10 Complete sequence of operations manuals and equipment control training should be provided to the maintenance personnel at the completion of the project. Ideally, training should be video taped and filed for future reference.
- 15.11 Whenever possible, intakes and exhausts should be installed in soffits, overhangs or gable ends of buildings in lieu of on the roof. Exhaust fans should be provided with back draft dampers.
- 15.12 Fresh air intakes should be located away from loading docks, exhaust fans, dumpsters, cooling towers, boiler exhaust, and sanitary vents to help ensure that obnoxious odors, fumes, and gases are not drawn into the air supply.
- 15.13 Glass and plastic acid waste pipe should not installed in schools unless required by code or needed for a specific curriculum application.
- 15.14 All copper water lines through masonry and concrete walls and floor slabs should be sleeved. Consideration should be given to using schedule 80 PVC for domestic waterlines in lieu of copper.
- 15.15 Wall mounted water closets should be installed using a modified wall bracket designed to withstand the rigors of a school environment. Ideally, water closets should be floor mount type fixtures.
- 15.16 Stop valves should be installed on all fixtures and isolation valves located to allow shut off of individual groups of plumbing fixtures. Hose bibbs should be operated by a removable key only.
- 15.17 Lavatories should be equipped with metered water faucets or sensor controls.

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**DIVISION 15
MECHANICAL**

- 15.18 Mechanical rooms, as well as toilet rooms, should have floor drains with trap primers, hose bibbs, and adequate lighting.
- 15.19 Potable, chilled, and hot water piping systems should be designed with accessible isolation valves entering each building.
- 15.20 Where applicable, the entire potable hot and cold water system should be installed within the thermal envelope of the building to minimize damage to the system during freezing. All water piping above grade and outside the thermal envelope should be protected from freezing by providing heat tracing and insulation.
- 15.21 PVC should be used for condensate lines, in lieu of copper or other more costly materials, when conditions permit and algae growth can be controlled.
- 15.22 PVC should be considered for waste lines and risers, except in air plenums, in lieu of cast or ductile iron, when conditions permit.

**DIVISION 16
ELECTRICAL**

- 16.1 All empty raceways should be equipped with continuous pull strings and marking tags, showing opposite destination building and closet number, at each end.
- 16.2 Gas line shutoff valves activated by the fire alarm system should have reset switches accessible from a convenient location.
- 16.3 Fluorescent lighting, if used, should be T-8 lamps with electronic ballasts. When practicable, use the same type and size of lamp throughout the facility.
- 16.4 Consider using motion or heat sensing light switches only in offices or other spaces with infrequent or sporadic lighting needs. Classrooms and other instructional spaces should be equipped with manual lighting controls such as shades, blinds, and/or multiple light switches.
- 16.5 Surge protection should be provided for all wiring entering and leaving buildings.
- 16.6 The school's artificial lighting system should be designed to take full advantage of available natural lighting to help reduce operation and maintenance costs. Window areas should be designed to allow a high degree of efficiency in heating and cooling and to aid in lighting interior spaces and during power or equipment failures.
- 16.7 Exit lights should be the LED type, when conditions permit.
- 16.8 Districts should consider using plain aluminum, fiberglass, or precast concrete parking lot light poles with economical, energy efficient fixtures in lieu of decorative aluminum or architectural type poles and fixtures.
- 16.9 Interior light fixtures, and their placement should be designed to minimize the amount of glare on chalk boards, marker boards, computer screens, and other teaching aides.
- 16.10 The electrical distribution system should be sized with spare ampacity and spares/spaces for future breakers.
- 16.11 Lightning protection should be considered when the location of the school indicates a need and warrants the additional cost of providing the protection.

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**DIVISION 17
TECHNOLOGY
SYSTEMS**

- 17.1 The facility should be designed and constructed for technology connectivity.
- a. Voice, video, and data connections should be installed in every classroom and every other occupied space should be equipped with an appropriate number of voice, video, and data transmission connections.
 - b. Internet access should be provided in all instructional areas and other appropriate locations throughout the school.
- 17.2 All underground and riser raceway communications cable systems, and electrical systems cabling should be installed continuous (with no splices) between buildings and floors, when possible. If distance makes this impossible, above ground enclosures should be provided.
- 17.3 All voice, video, and data transmission raceways, wall and floor boxes should have individual, direct pathways (“homeruns”) to the appropriate communications closet or communications equipment room, as applicable.
- 17.4 Surge protection should be provided for all wiring entering and leaving buildings.
- 17.5 To permit the data distribution system to be replaced with new future technology (i.e., wireless), the data distribution system should not be integrated with other more stable types of systems.
- 17.6 Voltage drops and spikes can cause damage to files and computer components. It is recommended that computer power be separated from the HVAC power supply, other circuits with motors, and other devices which may cause voltage drops and spikes or, install constant voltage transformers and MOV surge protectors, whichever is more cost effective.
- 17.7 The Institute of Electrical and Electronics Engineers (IEEE) does not recommended isolated ground systems for computers. Therefore, the district should consider not installing isolated ground outlets (special outlets) or isolated ground circuits and transformers, if appropriate considering local conditions and circumstances.

Final
1/25/2000

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**DIVISION 17
TECHNOLOGY
SYSTEMS**

- 17.8 Digital switching power supplies are immune to electrical noise. Therefore, technology power and convenience power (general use power) may not need to be separated in the classroom.
- 17.9 Classroom lighting should be separated into at least two zones, with separate switches, that allow the front of the room, where a projection screen would be located, to be darkened.
- 17.10 When designing HVAC for technology, consider that five computers can raise cooling needs by twenty-five percent and twenty computers can double the cooling needs of a room.
- 17.11 Video displays should be installed on walls adjacent to ambient or direct light sources.
- 17.12 A standard acrylic lense on a light fixture may scatter the light and cause glare on video displays. Consider using a "Paracube" lens on standard fixtures or deep cell parabolic fixtures in rooms with computers.

**SMART Schools Clearinghouse
Frugal Construction Standards**



SMART SCHOOLS CLEARINGHOUSE Smart Schools Design Information Booklet

Application Procedures

The SMART Schools Clearinghouse is committed to ensure that each application by a Design Professional to have a design designated as a “SMART School Design” be evaluated with fairness and consistency. To help achieve this, the Clearinghouse is providing this booklet which contains:

- information about the process
- a documents check list, and
- SMART Designs Information Form.

It is important that this information be up-to-date and complete before it can be posted to the SMART Schools Internet site for review by the school boards and the general public.

The Application procedures to be followed by a Design Professional to get their design designated as a “SMART School Design” start with a letter of request to the SMART Schools Clearinghouse. The Clearinghouse will schedule a 20 minute block of time on an upcoming agenda for the Design Professional to make the required personal presentation to the Board. The Clearinghouse will contact the Design Professional in writing of the scheduled date, time, and location to make the presentation, and will include a copy of the DESIGN AND PERFORMANCE STANDARDS checklist. The Design Professional must complete the DESIGN AND PERFORMANCE STANDARDS checklist and return the completed form to the Clearinghouse at least seven days prior to the personal presentation to the Clearinghouse Board. When the design is approved by the SMART Schools Clearinghouse, the documents outlined below must be submitted in the specific format shown. When all documentation is received in the specified format, the “SMART School Design”, will be posted on the Internet at

<http://smartschools.state.fl.us>

The documentation for the “SMART School Design” designation MUST contain ALL the following information, and each document must conform to the exact specifications outlined. This is the only way the data can be posted to the Internet in a uniform and consistent manner. Having all data posted on the Internet in this way will make it easier and faster for the school boards and general public to locate and view specific data.

SMART School Design Designation - Application Process

Step 1 DESIGN PROFESSIONAL

The Design Professional sends a formal letter to the SMART Schools Clearinghouse, requesting a design be reviewed and considered for designation.

Step 2 SMART SCHOOLS CLEARINGHOUSE

The SMART Schools Clearinghouse acknowledges the Design Professional's request and responds in writing providing the Date, Location, and Time to make a personal presentation to the Clearinghouse Board. Included with the initial response, will be a copy of the DESIGN AND PERFORMANCE STANDARDS checklist and the SIT Award Application Form for Single Project Construction Savings.

Step 3 DESIGN PROFESSIONAL

The Design Professional completes the DESIGN AND PERFORMANCE STANDARDS checklist and the SIT Award Application Form and returns it to the Clearinghouse at least 7 days prior to the scheduled Clearinghouse Board meeting. NOTE: Complete only Step 1, School Information and Step 2, Baseline Data on the SIT Application Form.

Step 4 SMART SCHOOLS CLEARINGHOUSE

The DESIGN AND PERFORMANCE STANDARDS checklist and the SIT Award Application Form submitted by the Design Professional will be disseminated to the Clearinghouse Board members with their agendas.

Step 5 DESIGN PROFESSIONAL

The Design Professional prepares for and makes a ten-to-twenty minute presentation to the Clearinghouse explaining the design and what feature(s) of the design should cause it to be designated a "SMART School Design".

Step 6 SMART SCHOOLS CLEARINGHOUSE

The SMART Schools Clearinghouse Board will hear the presentation, review any documentation provided by the Design Professional and approve / disapprove the design as a "SMART School Design".

Step 7 DESIGN PROFESSIONAL

After the design is approved by the Board, the documents outlined below must be submitted by the Design Professional in the specific format shown on the SMART Designs Information Sheet.

Step 8 SMART SCHOOLS CLEARINGHOUSE

When all the documentation is received in the specified format, the "SMART School Design" will be posted on the Internet at <http://smartschools.state.fl.us>

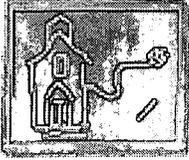
DOCUMENTATION CHECKLIST

Prior to Approval:

- Letter to the Clearinghouse requesting designation
- Completed DESIGN AND PERFORMANCE STANDARDS checklist and Step 1 and 2 on the SIT Award Application Form filed with the Clearinghouse at least 7 days prior to the presentation to the Board
- Ten-to-twenty minute presentation to the Clearinghouse

After Approval:

- Building Elevation(s) (actual color photo of building)
- Floor Plans(s) with spaces labeled (as built)
- Completed SMART Designs Information Form
- Annual Renewal of SMART School Designation
- Construction Details and Schedule of Values



SMART SCHOOLS CLEARINGHOUSE



SMART DESIGNS INFORMATION FORM

Name of School: _____
Address: _____

School Type

- Elementary
- Middle
- High School
- K - 8 School
- K - 12 School
- VoTech School
- Exceptional School
- Other

Student Population

- 450 - 750
- 751 - 1,100
- 1,101 - 1,800
- 1,801 - Above

Grade Levels: _____

DISTRICT INFORMATION

District Name: _____
Address: _____

District Phone: _____ County: _____

School District Region:

North

Alachua, Baker, Bay, Bradford, Calhoun, Clay, Columbia, Dixie, Duval, Escambia, Franklin, Gadsden, Gilchrist, Gulf, Hamilton, Holmes, Jackson, Jefferson, Lafayette, Leon, Levy, Liberty, Madison, Nassau, Okaloosa, Putnam, Santa Rosa, St. Johns, Suwannee, Taylor, Union, Wakulla, Walton, Washington

Central

Brevard, Citrus, De Soto, Flagler, Hardee, Hernando, Highlands, Hillsborough, Lake, Manatee, Marion, Orange, Osceola, Pasco, Polk, Sarasota, Seminole, Sumter, Volusia

South

Broward, Charlotte, Collier, Dade, Glades, Hendry, Indian River, Lee, Martin, Monroe, Okeechobee, Palm Beach, St. Lucie

ARCHITECT INFORMATION

Name of Firm: _____
Address: _____

Phone: _____ WEB Address: _____

CONTRACTOR INFORMATION

Name of Company: _____
Address: _____
Phone: _____

DEVELOPMENT HISTORY

Development Time: _____

Enter the amount of time it took to develop the school starting with the date of the architect's contract through the date of final completion.

Construction Start : _____ Completion Date: _____ Occupancy Date: _____

Enter the date of the construction contract.

Enter the date of substantial completion.

Enter the date the school was occupied by the school board.

Description:

Enter a narrative describing the school.

History:

Enter any comments regarding how the need for the school was determined, how the site was chosen, how it was named, or other historical facts.

SCHOOL SIZE INFORMATION

of Students: _____

Enter the actual number of students to be housed in the school.

of Student Stations: _____

Enter the actual number of student stations in the school.

of Teacher Stations: _____

Enter the actual number of teacher stations in the school.

Site Size: _____

Enter the site size, in acres.

Net Square Feet: _____

Enter the total net square feet of the school.

Gross Square Feet: _____

Enter the total gross square feet of the school.

Primary Classroom Size: _____

Enter the average size, in net square feet, of a primary (K-3) classroom in the school.

Intermediate Classroom Size: _____

Enter the average size, in net square feet, of an intermediate (4-8) classroom in the school.

Secondary Classroom Size: _____

Enter the average size, in net square feet, of a secondary (9-12) classroom in the school.

Primary Student Stations: _____

Enter the average number of student stations in a primary (K-3) classroom in the school.

Intermediate Student Stations: _____

Enter the average number of student stations in an intermediate (4-8) classroom in the school.

Secondary Student Stations: _____

Enter the average number of student stations in a secondary (9-12) classroom in the school.

GENERAL COSTS

Cost per Gross Square Foot: _____

Enter the cost per gross square feet of the school. Divide the Educational Facility Cost by the Gross Square Feet. The Educational Facility Cost includes: legal & administrative fees; architect & engineering fees; site improvements incidental to construction; building contract cost; and furniture and equipment.

Cost per Teacher Station: _____

Enter the cost per teacher station of the school. Divide the Educational Facility Cost by the number of teacher stations.

Educational Facility Cost: _____

Enter the total cost of constructing the facility. This number includes legal and administrative fees, architect and engineering fees, site improvement incidental to construction, building construction cost, furniture & equipment.

Annual Operating Cost: _____

Enter the known, or projected, average annual cost of operation.

Construction Cost: _____

Enter the cost to construct the building only. This refers to the actual cost of construction to within five feet of the building. Include all change orders, built-in cabinets, mill work, and other furniture and equipment permanently fixed or attached to the building. Do not include the cost of movable school furniture or equipment.

Cost per Student Station: _____

Enter the cost per student station of the school. Divide the Educational Facility Cost by the number of student stations.

Plant Cost: _____

Enter the total of all plant related costs. This number includes the cost to purchase the site, the cost to make public utilities available at the site, the cost to correct site drainage, the cost to make public roads accessible, the cost to make the site free of environmental problems, the cost to make the facility a hurricane shelter, legal & administrative fees, architect & engineering fees, site improvements incidental to construction, building construction cost, furniture & equipment.

Lifecycle Cost: _____

Enter the life-cycle cost of the school's mechanical systems, as required by SREF.

CONSTRUCTION DETAILS

Site Development:

Enter a narrative description of how the site was developed to accommodate the functional and aesthetic needs of the school.

Roof:

Enter a narrative description of the roof and roof system.

Roof Cost: _____

Enter the cost per square foot of the roof system, if known.

Exterior Wall:

Enter a narrative description of the exterior walls and wall system.

Exterior Wall Cost: _____

Enter the cost per square foot of the exterior wall system, if known.

Interior Wall:

Enter a narrative description of the interior walls and wall system.

Interior Wall Cost: _____

Enter the cost per square foot of the interior wall system, if known.

Floor Finishes:

Enter a narrative description of the floors and floor system.

Floor Finish Cost: _____

Enter the cost per square foot of the floor system, if known.

Base:

Enter a narrative description of the floor base system or molding.

MECHANICAL DETAILS

HVAC:

Enter a narrative description of Heating, Ventilating, and Air Conditioning systems.

Plumbing:

Enter a narrative description of the plumbing systems.

Electrical:

Enter a narrative description of the electrical systems.

Technology Connectivity:

Enter a narrative description of the connectivity systems provided for voice/video/data technology in the school.

Technology Connectivity Cost: _____

Enter the cost per square foot to provide the technology connectivity systems.

ADDITIONAL DETAILS

Special Features:

Enter a narrative description of any special features of the school which make it unique or deserving of the SMART School designation.

Comments:

Enter additional comments about the school or other data which could not be entered elsewhere.

THE LOOK (Quality Photographs of the School)

Photos should be saved as a 72 dpi, RGB, (.jpg) file that is 3 X 5 inches in size. Please include at least 5 - 7 images. Some recommended images are: Exterior - aerial of campus, entrance view, mall area, important exterior details. Interior - lobby, media center, a typical classroom, unique features.

THE LAYOUT (Plan Drawings of the School)

Drawings should be saved as a 72 dpi, RGB, (.jpg) file. Do not send Vector files. If the plans are not on disk, please send very clear CAD drawings no larger than 8 1/2 X 11. Please include at least 2 - 6 images or drawings. Each building needs to be clearly labeled. Some recommended images are: site plan, floor plan(s) and specialized area detail(s).

Construction Details and Schedule of Values

Enter the project costs assigned to each of the technical specification divisions shown below. Also, enter a narrative description, and cost, for the major building systems.

Division 1 - General Requirements.....\$ _____

Division 2 - Sitework.....\$ _____

Enter a narrative description of how the site was developed to accommodate the functional and aesthetic needs of the school.

Division 3 - Concrete.....\$ _____

Division 4 - Masonry.....\$ _____

Enter a narrative description of the exterior walls and predominant wall systems.

Enter the cost per square foot of the exterior wall system, if known.....\$ _____

Division 5 - Metals.....\$ _____

Division 6 - Wood and Plastics.....\$ _____

Division 7 - Thermal and Moisture Protection.....\$ _____

Enter a narrative description of the roof and predominant roof systems.

Enter the cost per square foot of the roof system, if known.....\$ _____

Division 8 - Doors and Windows.....\$ _____

Division 9 - Finishes.....\$ _____

Enter a narrative description of the flooring systems.

Enter the cost per square foot of the floor system, if known.....\$ _____

Enter a narrative description of the interior walls and predominant interior wall systems.

Enter the cost per square foot of the interior wall system, if known.....\$ _____

Enter a narrative description of the interior ceilings and predominant ceiling systems.

Enter the cost per square foot of the interior ceiling system, if known.....\$ _____

Division 10 - Specialties.....\$ _____

Division 11 - Equipment.....\$ _____

Division 12 - Furnishings.....\$ _____

Division 13 - Special Construction.....\$ _____

Division 14 - Conveying Systems.....\$ _____

Division 15 - Mechanical.....\$ _____

Enter a narrative description of the predominant HVAC systems.

Enter the cost per square foot of the HVAC system, if known.....\$ _____

Division 16 - Electrical\$ _____

Enter a narrative description of the predominate lighting systems.

Enter the cost per square foot of the lighting system, if known.....\$ _____

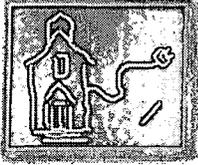
Division 17 - Technology Connectivity.....\$ _____

Enter a narrative description of the voice/video/data transmission systems.

Enter the cost per square foot of the technology system, if known.....\$ _____

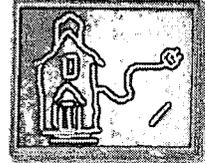
 SMART SCHOOLS
CLEARINGHOUSE

DESIGN AND PERFORMANCE STANDARDS
GUIDELINES



TO BE USED PARTIALLY IN DETERMINING A

“SMART School Design”



BY THE

SMART SCHOOLS CLEARINGHOUSE
OF FLORIDA

District Name: _____ Date: _____

School Name: _____

Type of School (*see codes below*): _____
Elem =1, Middle =2, High = 3, K-8 =4, K-12=5, VocTech = 6, Exceptional =7

Address: _____
Street Address, City, State, Zip

Architect: _____

Architect Address: _____

Phone Number: _____

DEFINITION: Functional is defined as meeting the needs of the educational program.
Frugal is defined as providing function at the best value.

Instructions: Answer every question with either Yes, No, or Not Applicable. There are no right or wrong answers. A yes or no answer does not, except as noted, automatically qualify, or disqualify, your design as a “SMART School Design”.

September, 1998

FRUGAL (A *NO* answer to the following question *disqualifies* the project as a “*SMART School Design*”.)

Will the school, upon completion, qualify for a School Infrastructure Thrift (SIT) Award based on cost per student station?

SECTION 1. INNOVATION / CREATIVITY / FUNCTIONAL

1. Does the design of the facility, space relationships, and overall floor plan appear to be sufficiently flexible to meet the requirements of both the current and future educational programs offered?

2. Does the design have innovative or creative design features that will considerably reduce the overall construction cost and/or operational cost of the facility? If yes, explain.

3. Does the design have additional innovative or creative design feature(s) that you believe qualify the design as a “SMART School Design”?

SECTION 2. UTILIZATION / COMMUNITY USE

4. Does the design of the facility accommodate the capability of sharing with the community for after school programs, and/or off campus programs?

5. Were considerations given to the feasibility of sharing parts or all of the facility with other governmental agencies?

6. Were considerations given as to ways the facility may serve its local community?

DESIGN AND PERFORMANCE STANDARDS

Y N NA

7. Does the design of the school provide for non school hour activities to occur while keeping the activities segregated for security, maintenance and operational needs?
- Items to look at are:
- Facility design for community uses; access to athletic facilities, media center, cafeteria, auditorium, gymnasium or evening classes.
 - Facility design for shared use during or after school hours.
8. Are there other unique or special design features that enhance the utilization of the facility by either the educational community or the local community in general that you care to share?

NOTE: Any responses requiring a written explanation from the Design Professional may be made here:

SECTION 3. TECHNOLOGY / CONNECTIVITY

9. Does the facility have an integrated voice, video, and data network infrastructure that is expandable?
10. Is every classroom or instructional area capable of being connected to the Internet?
11. Is every technology connection to classrooms and instructional areas capable of expansion?
12. Have provisions been made to accommodate new or emerging technology? If yes, explain at the end of this section.
13. Have provisions been made in equipment hardware and system configuration to allow the student population Internet connectivity at their homes?
14. Have considerations been made in equipment hardware and system configuration to expand Internet service to the community?
15. Are there other unique or innovative design concepts to promote the use of technology / connectivity?
16. Are there other unique or special design features that enhance the use of

DESIGN AND PERFORMANCE STANDARDS

Y N N/A

technology and connectivity of the facility by either the educational community or the local community in general that you care to share?

NOTE: Any responses requiring a written explanation from the Design Professional may be made here:

SECTION 4. BUILDING ENVELOPE

FLEXIBILITY OF SPACE

17. Is the design of instructional spaces and other major areas such that they can be reconfigured or are interchangeable to accommodate new or changing program requirements?

18. Are the partition walls between classrooms able to accommodate modifications at a minimal expense?

19. Are the mechanical, electrical and telecommunications infrastructure designed to accommodate modifications?

EFFICIENCY IN DESIGN

20. Does the design utilize standard sizes, types, and readily available materials and trades to avoid waste and excessive labor costs?

21. Does the design utilize efficiencies in land use, building size, ceiling heights and aesthetic features?

22. Does the design utilize standardized mechanical, electrical, and telecommunications systems?

ENVIRONMENTAL IMPACT

23. Does the design incorporate responsible and appropriate environmental practices, such as minimizing impact to surrounding ecosystems, and xeriscaping to reduce the use of water for irrigation?

24. Does the design use non toxic or low toxicity materials to promote good indoor air

DESIGN AND PERFORMANCE STANDARDS**Y N NA**

quality?

25. Does the design use materials with long life cycles, or materials that are recycled or can be recycled, or any other sound environmental practice?

26. Are the buildings designed and oriented in such a way as to take advantage of, or minimize the negative impact of, the prevailing environmental influences such as wind and sun?

 BUILDING**Walls**

27. Do the exterior walls prevent moisture permeability per ASHRAE and meet the minimum R-value per energy code?

28. Are the exterior walls made of durable, impact resistant, fire resistant, pest resistant, and long life cycle materials?

29. Are the interior walls, particularly in hallways and corridors, made of durable, impact resistant finishes and materials appropriate for their intended use?

 Roof

30. Is the roof water tight and eligible for a bond or warranty?

31. Does the roof/ceiling insulation meet or exceed the minimum R value per energy code?

 Design, Construction, Equipment and Maintenance

32. Is the space flexible enough to accommodate new or different instructional design concepts (easy reconfiguration of spaces)?

33. Does the facility design prevent sound transmission from different program areas, (close proximity) (i.e. band room next to media center)?

34. Are there other unique, innovative or special design features that enhance the building envelope and illustrate the use of new building methods, materials, or construction techniques?

DESIGN AND PERFORMANCE STANDARDS

Y N NA

NOTE: Any responses requiring a written explanation from the Design Professional may be made here:

SECTION 5. ENERGY / MECHANICAL SYSTEMS / OPERATIONAL COST

- 35. Does the design provide low humidity and fresh air circulation per ASHRAE Standard 62-89?
- 36. Are the lighting fixtures used efficient with electronic ballasts and energy saving lamps?
- 37. Does the facility have occupancy room sensors with a manual override for teacher use, or other energy conservation practices to reduce lighting energy costs?
- 38. Does the facility have energy efficient equipment?
- 39. Does the facility take advantage of day lighting as much as possible?
- 40. Are windows energy efficient with thermal, or other glass to reduce energy transfer?
- 41. Does the facility provide for other alternative energy sources to reduce energy demand at peak rate periods?
- 42. Does the facility provide for roof overhangs to shade walls and windows?
- 43. Does the HVAC design provide for positive building pressure under all conditions?
- 44. Does the facility have other energy saving devices, systems or equipment?
- 45. Does the facility have an energy management system (EMS)?

DESIGN AND PERFORMANCE STANDARDS

Y N NA

NOTE: Any responses requiring a written explanation from the Design Professional may be made here:

SECTION 6. SAFETY AND SECURITY

46. Does the facility provide a safe and secure environment for students and faculty and facility during all hours (sight & sound)?
47. Can all hallways be monitored between classes by administrative personnel from a minimum number of strategic locations?
48. If auditorium or gymnasium are in use at night, can they be secured from the rest of the building?
49. Are all entry ways to the building clearly visible from a distance?
50. Can the campus be secured during school hours and after school hours?
51. Were CPTED (Crime Prevention Through Environmental Design) concepts considered during design of the facility?

NOTE: Any responses requiring a written explanation from the Design Professional may be made here:

NOTE: For each design submitted for approval as a "SMART School Design" and to be included in the design directory on the Internet, this form must be completed and mailed to the Clearinghouse at least two (2) weeks prior to the date the "design" is to be presented to the Clearinghouse for action. The design firm must make a short 10-20 minute presentation to the Clearinghouse explaining their plan prior to approval/disapproval. Once approved, the design firm must submit documents, in a format to be determined, so they can be posted to the Internet Design Directory.

SIT Award Application Form

Charter School

District Name: _____

To apply for a SIT Grant, complete the following information and submit this form to:
 SMART Schools Clearinghouse, 4050 Esplanade Way, Suite 250, Tallahassee, FL 32399-0950.

Date of Approval by School Board: _____

For School Year: _____

CHARTER SCHOOL INFORMATION	COST SUMMARY <small>(to be completed by Clearinghouse staff only)</small>
<p style="text-align: center;"><i>Capital Outlay - FTE</i></p> <p>Charter School Name _____ Elementary _____</p> <p>Street Address _____ Middle School _____</p> <p>City, State, Zip Code _____ High School _____</p> <p>Telephone Number _____</p>	<p style="text-align: center;"><i>Student Station</i></p> <p>x State Cost \$ _____ = Elementary Savings \$ _____</p> <p>x State Cost \$ _____ = Middle Savings \$ _____</p> <p>x State Cost \$ _____ = High Savings \$ _____</p> <p>Subtotal \$ _____</p> <p>Multiply Subtotal by 50% X .50</p> <p>SIT Award Recommendation \$ _____</p>
<p>Total student stations saved</p> <p>Prior total to exceed to receive additional SIT Program Award ..</p> <p>Current SS eligible for SIT Award</p>	<p style="text-align: center;">Clearinghouse staff to complete: Verification and Comments</p>

Please provide brief responses to the following. Attach pages if necessary.

1. Briefly describe the academic program being offered and the current charter school facilities, including the site size, and the type, age, and condition of the facilities housing the charter school program. Indicate whether the facility is leased, lease-purchased, or owned by the charter school, and include a front-view photograph of the school. _____

2. Briefly describe future plans (2-5 years) for the charter school in terms of facility growth, relocation, renovation, purchase of buildings or land, new construction, etc., whereby the charter school intends to provide quality, stable facilities for public students and long-term cost avoidance for the state. _____

3. The purpose of the legislation is to ensure long-term cost avoidance and quality facilities "through the operation of charter schools in non-school-district facilities". Is there a plan for the local school district to distribute a portion of these funds to the charter school which generated these funds?
 No ___ Yes ___ If yes, what percent? _____

CERTIFICATION / APPROVAL SIGNATURES

The undersigned District Board Chairman certifies that the Charter School listed above is active, open at the time of application, and is operating successfully; the School is expected to be operating the next school year; the number of CO-FTE students reported are verified; the public was given an opportunity for input; the Board discussed the School's long term viability and felt assured of the School's chance to succeed; and, the School is not housed in a facility owned by the School Board and leased, rented, lent or otherwise made available to the charter for its operation.

The undersigned District Board Chairman states that the information contained on this application is true and accurate, and that by submitting the application, certifies to the SMART Schools Clearinghouse that the information on this application is correct. The undersigned District Board Chairman acknowledges that any information contained in this application is subject to audit by the Auditor General of the State of Florida.

District Board Chairman: _____
Name Printed Signature Date

Charter School Chairperson _____
(Acknowledges that the above info. is accurate) Name Printed Signature Date

SMART Schools Executive Director: Spessard Boatright
Name Printed Signature Date

SMART Schools Chairman: William H. (Bill) Lindner
Name Printed Signature Date

SIT Award Planned Expenditure Form

This Form Must Be Attached To Each SIT Award Application

The 1997 regular and special sessions of the Florida Legislature appropriated \$250 million for School Infrastructure Thrift (SIT) Awards, of which \$200 million is from General Revenue (GR) and \$50 million from Lottery Bond Proceeds. Section 235.2155 (7), F.S. states the SIT Awards "may be used for any lawful capital outlay expenditure." Since 20% of all SIT dollars available are bonded dollars, all SIT Award applications received by the Clearinghouse after August 31, 1998, must provide the following information:

Name of New Construction Project or Charter School Earning the Award: _____

District Point-of-Contact: _____
Name Printed Job Title Phone #

List all lawful capital outlay projects for which the award, if received, is to be spent.

Bondable Capital Outlay Expenditure Projects

Generally these are new permanent construction projects such as new schools, new additions, etc., which have a life expectancy far greater than the debt service period of the bonds:

Name of Project	Description of Project	Estimated Cost of Project	Desired Start Date of Project
-----------------	------------------------	---------------------------	-------------------------------

Other Lawful Capital Outlay Expenditure Projects

Generally, these are maintenance, repair, renovation, remodeling, purchase of relocatables, and purchase of capital outlay equipment. This does not include maintenance vehicles and other vehicles, salaries, operational supplies, and expenses, etc.

Name of Project	Description of Project	Estimated Cost of Project
-----------------	------------------------	---------------------------

Should there not be sufficient bondable projects, on a state-wide basis, which were selected using the discretionary selection process, there may come a time when only bondable funds remain, and all future SIT Awards will be limited to bondable projects.

The undersigned District School Board Chairman and Charter School Chairperson, if applicable, certify that projects contained on this application are those for which the SIT Award proceeds will be expended and these projects were approved by the School Board after public discussion of the long term viability and assurances by the School Board of the Charter Schools chance to succeed. The undersigned District Chairman acknowledges that information contained in this application is subject to audit by the Auditor General of the State of Florida.

District School Board Chairman: _____
Name Printed Signature Date

Charter School Chairperson: _____
Name Printed Signature Date

Signature required only if Charter School and Award is shared)



U.S. Department of Education
 Office of Educational Research and Improvement (OERI)
 National Library of Education (NLE)
 Educational Resources Information Center (ERIC)



REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Frugal Construction Standards	
Author(s):	
Corporate Source: SMART Schools Clearinghouse	Publication Date: January 25, 2000

II. REPRODUCTION RELEASE:

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