

Savannah - Chatham County Public School System
Construction Design Guidelines

Division of Operations
208 Bull Street
Savannah Georgia 31401



Savannah – Chatham County Public School System

CONSTRUCTION DESIGN GUIDELINES

VERSION: 2020.10.15

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This table describes the latest changes made to the SCCPSS's (Savannah - Chatham County Public School System) minimum design parameters, standards, and guidelines (including Attachments) for New and Replacement Schools.

DATE	PERSON	VERSION	DESCRIPTION
1/18/2019	Duane Shore / Design Project Manager / Architect	2019.1.18	Latest revision[s]; revised preferred manufacturer for Stop-Valves...Brass Craft in lieu of Zurn or approved equivalent...per R. West (1/9/19); forwarded 'Tracking' and 'Non-tracking' versions to KR for distribution
3/29/2019	Duane Shore	2019.03.29	Updates completed from Guidespec Review Meeting held 2/28/19
4/22/2019	Duane Shore	2019.04.22	Revisions per review meeting for Beach HS Auditorium and auditorium seating rep (Parsons)
1/7/20	Duane Shore / Elizabeth Epstein	2020.01.07	DRAFT : general edits for format
1/28/2020	Duane Shore	2020.01.28	Updates per SCCPSS review meeting on 01/16/2020
2/14/2020	Teresa Jayne Phillips	2020.02.14	Edited documents with information provided by Duane Shore.
3/2/2020	Duane Shore	2020.03.02	Revisions per review meeting comments on 1/16/2020 and input collected from DP's on annual contract
8/27/2020	Duane Shore	2020.08.27	Updated per final DP comments; including internal requests from various departments

Comments and suggestions shall be directed to:

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General Standards for New Construction, Additions and Renovations

Unless otherwise informed by Savannah / Chatham County Public School System (SCCPSS) or its designated representative, all Design Professionals (DP's) and their engineers shall review and implement the most current Construction Design Guidelines in each phase of the design process.

The Construction Design Guidelines include information from internal departments within the SCCPSS. The Construction Design Guidelines (plus the Attachments), shall be considered as one document and used as a guide to provide the District with school facilities that comply with these guidelines, as well as all state and local codes and standards...please see the SCCPSS website for the latest version of these Guidelines and Attachments:

www.sccpss.com (District tab, Operations Department, Capital Projects).

Purpose

The following construction design guidelines are for incorporation into architectural and engineering standards at individual SCCPSS sites. The purpose of these design guidelines is to provide understanding of the District standards that will enhance the learning environment, reduce maintenance and utility costs, and provide for sustainable construction wherever practical.

Each project is unique and may require modification of the standards and the District reserves the right to alter or modify the standards as necessary to achieve project goals. All deviations by the design professional (DP) must be presented to the District in writing for approval *prior to implementation into the designs*.

Policies and Procedures

Design of all new public school buildings, additions and renovations to all existing school buildings shall be in accordance with all applicable provisions and requirements of the latest adopted editions of the State and local AHJ's (Authorities Having Jurisdiction); Codes shall include the Georgia Accessibility Code and amendments plus ANSI A117.1-2009 and all GADOE Policies and Procedures.

SCCPSS facilities are located within several different incorporated areas; the DP is responsible for compliance with the regulations of the AHJ for all disciplines.

Trade Names and Product Specifications

These guidelines are not intended to restrict the expertise of the DP, but rather to prescribe the "minimum" standards. The following is the Policy of the SCCPSS concerning Trade Names and Product Specifications:

No Restriction on Competition: When reference is made in the Contract Documents to trade names, brand names, or to the names of manufacturers, such references are made solely to indicate that products of that description may be furnished and is not intended to restrict competitive bidding. If it is desired to use products or trade or brand names or manufacturer's names that are different from those

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mentioned in the bidding documents, application for the approval of the use of such products must reach the hands of the DP at least ten (10) days prior to the date set for the opening of bids. (This provision applies only to the party making a submittal prior to bid.) If approved by the DP, the DP will notify the District, and issue an addendum to all bidders. This provision does not prevent the District from initiating the addition of trade names, brand names, or names of manufacturers by addendum prior to bid.

Request for Approval of Substitute Product: All requests for approval of substitution of a product that is not listed in the Bidding Documents must be made to the Design Professional in writing. For the Design Professional to prepare an addendum properly, an application for approval of a substitute product must be accompanied by a copy of the published recommendations of the manufacturer for the installation of the product together with a complete schedule of changes in the drawings and specifications, if any, that must be made in other work in order to permit the use and installation of the proposed product in accordance with the recommendations of the manufacturer of the product. The application to the DP for approval of a proposed substitute product must be accompanied by a schedule setting forth in which respects the materials or equipment submitted for consideration if different from the materials or equipment designated in the Bidding Documents and submitted to the Purchasing Department.

Proprietary Products: If the DP intends to specify a “Proprietary Product”; i.e., “Sole Source”, the Design professional must obtain written approval from the Director of Purchasing, utilizing the process described in the District’s Purchasing Manual.

Warranty Management and Reporting: DP’s shall require warranty log to be submitted indicating the end of all warranty periods.

Building Enrollment Capacity

New schools shall typically be designed within the following range for Full Time Equivalent (FTE) capacity in accordance with GaDOE Guideline for Square Footage Requirements for Educational Facilities Rule 160-5-4-.16(a) 4:

Elementary (K-5):	650 to 950 FTE
K-8:	800 to 1,200 FTE
Middle (6-8):	650 to 850 FTE
High (9-12):	1,200 to 1,600 FTE

Core Capacity

The “core” consists of ancillary spaces that support classroom instructional units. ***These include the Cafeteria, Kitchen, and Learning Commons areas.*** The Georgia Department of Education has issued rules setting forth minimum floor areas for such spaces based upon FTE (full-time equivalent). Thus, provision for expansion must begin with planning for a “core” large enough to support the largest practical FTE contemplated for a given site. New schools in SCCPSS should be designed with core capacity to accommodate future classroom additions to the facility where ever feasible. The District’s goal is for

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each core capacity to accommodate 1.25 times the new school’s planned FTE.

In addition, classroom areas should be configured to allow for expansion with a minimum amount of alteration of the original structure or site. The design of major infrastructure for the facility should be designed to easily accommodate this future expansion, i.e. HVAC, Electric, Data, Security, Plumbing.

During Schematic Design, the DP shall provide an estimate of maximum site potential by providing a Maximized Schematic Floor Plan and Maximized Schematic Site Plan.

CTAE Labs (when applicable)

Design Professionals shall refer to the GaDOE / CTAE page for current certification requirements for all CTAE Labs when included in the building program:

<http://www.GaDOE.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/default.aspx>

Classroom Square Footage Requirements

For new construction, SCCPSS has a goal of providing classrooms larger than the GA DOE’s minimum size guidelines. Reference GaDOE “Guideline for Square Footage Requirements for Educational Facilities, Rule 160-5-4-.16(a)4” .

	<u>GADOE Min. Square Footage</u>	<u>SCCPSS Preference</u>
K-3	750	850
4-8	660	760
9-12	600	700

Note: SCCPSS preferences exclude restroom areas within classroom suites.

Room Numbers and Signage

SCCPSS requires incorporation of a single room numbering system for all drawings, schedules and signage installed on the building. Plan room numbers on drawings shall match Room Signage numbers (Note: For large renovation projects, maintain existing room numbers within the facility).

During the Schematic Design phase, major corridors and core spaces shall be numbered per the GADOE submittal requirements.

All rooms shall be numbered appropriately by the time the Design Development package is submitted.

To achieve this, the Architect shall develop a logical building and room numbering system. The sequence of room numbers shall be assigned based on ease of locating rooms in the completed building.

In order to direct students, staff and visitors, the sequence shall start at the Main Entrance and progress in a logical (clockwise) sequence throughout the building. Random numbering of rooms is not acceptable.

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All room numbers shall be numeric and shall match the inventory provided to the GaDOE.

Major room numbers at multi-story buildings shall be 4 digits starting with the floor level, and progress around the building in sequence (1211 = 1st floor, 2nd wing or Corridor, 11th room). Small spaces within major rooms or suites shall be identified with the major room number plus numeric suffix (1211.1). Where possible use whole thousands for wings or corridors (1200) and use postal odd-even progressive numbers down corridors (odd on right (1211), even on left (1212)). All spaces must be numbered including corridors, stairs, elevators, and service rooms. Stairs, elevator and service rooms may be numbered as a suffix of the corridor leading to them.

One-story buildings shall be numbered in a similar fashion, but may use 3 digits when identification of the story is not needed.

Room numbers at additions shall extend existing Inventory Drawing numbers without repeats.

After room numbers are approved they shall not be casually altered without specific approval of SCCPSS Capital Projects Division.

Occupied spaces (classrooms, offices, nurses offices, etc...) shall have 'whole' numbers, not decimals (e.g., 300, 802, 1211), while room numbers with decimals shall be used for typically unoccupied areas opening off other spaces like storage rooms, closets (e.g., 300.1, 803.4). DP shall provide room number drawings to District IT Department.

DP shall include a Signage Schedule for all rooms, buildings, wings, CTAE labs, outdoor learning areas and site (directional) signage on the drawings; completed Schedules shall be required on SCCPSS Design Development review documents; include 'potable' and 'non-potable' signage (within CTAE greenhouses) where applicable.

Room signage shall be provided in compliance with all ADA requirements per ANSI A117.1-2009.

Obvious and non-changeable room names shall be on the sign with the room number (e.g.: Stair 101, Gymnasium 110, Mechanical Room 1215, etc.)

Standard classroom and office signs shall be provided with a changeable name-plate; numbers shall be non-changeable.

Exterior signage:

Provide high-contrasting (minimum) 8-inch high, 'raised' *exterior* signage / letters to identify each wing of the building (e.g. Rooms 1100-2100, Wing A, B, C...etc... as appropriate); coordinate locations with campus police.

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Provide campus (way-finding) signage where applicable to the site (e.g. Auditorium Entrance, ball fields, etc...).

Provide signage for exterior learning areas when applicable to the Program (outdoor classrooms, CTAE Ag-areas, etc...).

Safety: Building and Site Accessibility Measures for All Buildings

All major building entry points shall be located so they can be easily observed and monitored by school personnel; DP shall attempt to avoid creating areas within [and around] the building that restrict the ability of school personnel to provide visual and line-of-sight control [avoid nooks and blind-corners where possible]. All new construction shall incorporate a security vestibule at the main entrance for all buildings. Visitors shall be required to enter the main office area through an electronically released door, with a separate electronically released door to the corridor on the 'school' side of the vestibule wall; provide door operator release buttons at two locations for the admin staff.

Administration areas shall be adjacent to major entry points and shall provide clear viewing of entry doors, parking areas, lobby and adjoining hallways. Large schools that may require multiple access points shall be designed with similar features at each entrance. Provide infrastructure (outlets & data ports) at main entrances, outside all auditoriums, gyms and cafeterias for portable metal detection devices.

Incorporate single-lane traffic stacking pattern [whenever possible] for drop-off and pick-up of students; verify quantity of required cars per site with the design team; consider emergency vehicle access areas.

Cameras: Upon final approval of all floor plans, design professional shall confirm and coordinate desired locations (and types) of all surveillance cameras with Campus Police. Locate infrastructure for cameras that will provide full-perimeter views of the property and at all exists (minimize interior camera locations wherever possible) and all building core spaces (Cafeterias, including back-of-house (BOH) in kitchens, Learning Commons areas, admin waiting and the like).

Plans shall include infrastructure / conduit from buildings to grass areas (e.g. islands) for future installation of cameras. Confirm extent of pre-wired camera locations (for internal monitoring) required within the building; classrooms with exterior doors may require cameras...confirm with SCCPSS design team during review meetings.

Provide Monitoring Room (200-300 SF) in all administration areas; confirm extent of systems to be

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monitored during schematic design phase (e.g. cameras, duress alarm system, card reader locations, entry alarm systems, motion detectors and the like).

Bi-Directional Antennas (Radio Repeaters): (Consider adding this as an ADD Alternate to the project during project programming phase). The DP shall provide Performance Spec information (including all required roof-penetration details; e.g. antenna) on the drawings requiring the Contractor to provide a complete, Bi-Directional Antenna (BDA) System for Emergency Responder Radio Coverage (ERRC) for all new buildings based on the current International Fire Protection (IFP) Code.

System shall be designed and installed by an FCC certified technician with training on the system being installed; ***Whenever possible, the System shall be of the same manufacturer as the fire alarm system.***

BDA system design shall be submitted (along with the fire alarm systems' shop drawings) for engineers' review / approval. System shall comply with all applicable building and fire codes; GC to coordinate final location[s] of all related devices with DP.

Critical areas of the facility shall be provided with the following [minimal] coverage or as required by Code:

- a. Floor area radio coverage: 100% coverage
- b. General building areas: 95% coverage

Third-party testing shall be required by the GC after all walls, ceilings, roof and other major components have been installed. ***The price of the system shall be offered back to the District [only] if radio signals meet the coverage requirements listed without the BDA / ERCC System.***

Adequate Lighting: Shall be provided for all parking areas, bus loading zones, student pick-up and drop-off locations, bicycle parking areas, covered walkways, kitchen / delivery entrances, access paths to compactors, etc. at all schools; provide conduit below all paved areas to serve lighting and surveillance cameras in landscape medians; minimum Code requirements apply for all locations.

Fencing (See Attachment F): Confirm and coordinate all opening locations with Campus Police at schematic design review meeting.

1. Walk gates shall have a six (6) foot minimum width for lawn equipment access. Verify required gate sizes for all ball fields and other open practice areas with Design Team.
2. Drive gates shall have a fifteen (15) foot minimum width where playground equipment is located for delivery of equipment and other materials.

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School Types - Design Criteria

HIGH SCHOOL DESIGN CRITERIA

1. Exterior Athletics

High school athletic facilities shall be designed in accordance with competition standards of the GHSA (Georgia High School Association), the NFHS (National Federation of State High School Association) and the ADA (Americans with Disabilities Act with special attention to seating, railings and guards).

All exterior bleacher seating [for all school types] shall be *accessible* per the ADA (including proper rails and guards).

Note: All grass / landscaped areas shall be provided with underground irrigation systems; coordinate system boundaries w/ site amenities where necessary (e.g. playground areas).

a. Track and Field

- i. Include design and construction for each of the following:
- ii. Lighted practice field to accommodate football, soccer and lacrosse
- iii. Field surface material shall be as determined by the Design Team during the Programming Phase
- iv. Track
- v. Triple jump / long jump
- vi. High jump
- vii. Pole vault
- viii. Discus
- ix. Shot-put
- x. Track and field bleachers shall not be less than three sections of aluminum bleachers on concrete pads, each with ten rows and twenty-seven foot lengths; all exterior bleacher seating shall be *accessible* as required by Code.
- xi. Equipment storage building (200 SF).

b. Baseball Field

- i. Baseball field shall be lighted, and shall include covered dugouts and full perimeter fencing.
- ii. Seating shall be two aluminum bleachers on concrete pad five rows and twenty one foot length, one placed on each base line (Note: HS seating allowance for baseball / softball is less than Middle School – see Middle School Design Criteria).
- iii. All ball fields should have adequate and appropriate fencing around the full perimeter of the field (backstops, player access, mowers, etc.). Include protection

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pads along top of outfield fencing. Provide gate access for maintenance equipment as requested by the Design Team.

c. Softball Field

- i. Softball field shall be lighted.
- ii. Covered dugouts
- iii. Seating shall be two sets of aluminum bleachers on concrete pads, each set five rows high and twenty one foot long, one set placed on each base line
- iv. Full perimeter fencing

d. Tennis Courts

- i. A minimum of (2) lighted hardcourt (asphalt is the preferred surface) tennis courts will be required for each site; confirm total number of courts w/ SCCPSS during schematic design phase
- ii. Tennis courts require high fence enclosure with windbreaker material.
- iii. Orientation of all courts shall be as close to N/S as site allows.

e. PE Field

- i. Multipurpose grassed field to be a minimum of 75 yards by 120 yards

f. Fieldhouse

- i. Two team rooms (minimum 450 SF each) with 'cubby' type storage, restrooms and storage
 - ii. ADA accessible battery restroom for each gender
 - iii. Concession area with window(s)
 - iv. Electric water coolers (with water bottle filling features)
 - v. Changing room for referees
 - vi. Custodial closet
 - vii. Storage room with 300 sf minimum (with double doors) separate from custodial closet
 - viii. Where applicable to the approved Program: provide scorers booth w/ bleacher package for the home-field bleacher set.
 - ix. Infrastructure for camera[s]
 - x. Interior: refer to Division 09 of this document for all floor finish requirements.
- g. **Stadium:** Where included, design criteria shall be developed w/ DP at Schematic Design Phase

2. Freestanding Maintenance Building (600 SF) – Typical all school types

- a. 8 foot wide (manually operated) overhead door
- b. Personnel door (metal)
- c. Ventilation system (Fan + Heat source)
- d. Infrastructure for camera[s]

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3. Auditoriums (Typical at HS and MS facilities only)

Refer to **Division 12 – Furnishings** for seating specification preferences and Attachment B for Audio Visual system requirements. When incorporated into the building Program, DP shall provide services of an acoustical engineer to assist in the design parameters of auditoriums, cafeteria, multiple-seating and other 'large' spaces.

- a. Auditorium seating quantity will be established by SCCPSS during programming phase, but in no case less than 500 seats; other multiple-seating areas as requested by the District design team during programming phase (provide tablet arms of opposite hands for 25% of the seats; randomly dispersed throughout the space, including ADA seating areas.
- b. Lobby sized per Code
- c. ADA accessible restrooms shall be located adjacent to the lobby with enough fixtures to support full capacity of the auditorium.
- d. Stage shall be a minimum of 2000 SF with painted [black-matte] plywood finish on wood-sleeper sub-floor.
- e. Provide rigging and electronic controls for stage curtains. DP to verify required fly type and height during SD phase.
- f. Scene shop shall be a minimum of 750 SF with roll-up door to stage area, and roll-up door to exterior for moving large scenery; provide a minimum width and height of 8 feet (10 foot high preferred if interior doors can accommodate all the way to the stage).
- g. Set-Storage room: minimum 200 SF with double doors; coordinate door openings with Scene Shop access as appropriate.
- h. Drama Room / Green Room (SCCPSS to confirm size requirements)
- i. Women's and Men's Dressing rooms with adjacent toilets for each.
- j. Control Room
- k. Ticket Booth (accessible from lobby)
- l. Concessions room / counter (accessible from lobby) with perimeter, metal (wire) shelving as space allows.

4. Music

	<i>DOE Min.Square Footage</i>	<i>SCCPSS Desired area</i>
Instrumental Music	1,800 SF	2,000 SF + Adjacent rooms
Office		
(2-4) Practice rooms		
(1) Instrument Storage		
(1) Uniform Storage		

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Choral Music	1,500 SF	1,700 SF + Adjacent rooms
Office		
Storage rooms		

5. Gymnasium (18,000 SF +/- total includes gym and all ancillary spaces)

- a. Provide motorized, retractable bleacher seating to accommodate the design FTE of the school. All bleacher sections shall be motorized (no mules).
- b. Provide adequate exterior glazing for natural diffused light. Careful planning of fenestration is required to avoid glare during daytime use.
- c. Gymnasium to have overlapping layouts of the following:
 - i. High school basketball court shall be laid out in accordance with competition standards of the Georgia High School Association and the National Federation of State High School Associations with operable back-boards
 - ii. Two perpendicular practice basketball courts with operable back-boards
 - iii. One high school volleyball court shall be arranged in accordance with competition standards of the Georgia High School Association and the National Federation of State High School Associations with floor hardware for removable posts
 - iv. Two perpendicular practice volleyball courts with floor hardware for removable posts
- d. Locate scoreboard[s] and controls to provide optimal viewing by coaches and players; controls shall be wireless.
- e. Full-height athletic lockers on concrete curbs (Provide replacement stock locker doors at the rate of 1 door per 25 lockers)
- f. Provide infrastructure for cameras at all locker room entrances.
- g. Provide the following spaces, at a minimum:
 - i. Boys' Varsity Locker room
 - ii. Boy's PE Locker room (Visiting team room)
 - iii. Girls' Varsity Locker room
 - iv. Girl's PE Locker room (Visiting team room)
 - v. Boys Football Locker room with exterior access to field.
 - vi. Strength and Conditioning Room (2750 SF minimum)
 - vii. Wrestling Room (2750 SF minimum)
 - viii. Training Room (include office and restroom)
 - ix. (4) Large office areas with 2 desks each, with shared locker area and restroom; provide clear sight-lines to locker room entrances (cameras) and windows with blinds.
 - x. Athletic Storage (sized to store (3) rolled wrestling mats + 200 SF)
 - xi. PE Storage (400 SF +/-)
 - xii. Laundry Room with (CFCI – Contractor Furnished- Contractor Installed) commercial-grade equipment

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6. Cafeteria

- a. Provide seating layout for 1/3 of the maximum FTE of the school +10%; Table & Chair type seating for a food-court environment is preferred (provide schematic layout using 6 & 8-person folding tables, plus 4-seat round and square tables at standard height and high-tops (100% storage capacity for t/c).
- b. Audio-Visual system- SCCPSS Technology Design Guidelines (Attachment B)
- c. 12 foot minimum projector screen; coordinate lighting design and window locations so as not to 'washout' screen for projector

7. Kitchen

- a. Receiving area with ½ light door to kitchen and doorbell; provide ramp[s] as necessary.
- b. Walk-in Cooler with digital thermometer (also include a non-digital thermometer at exterior of cooler with probe to center of cooler)
- c. Walk-in Freezer with digital thermometer (also include a non-digital thermometer at exterior of freezer with probe to center of freezer)
- d. Permanent crowd control for serving lines (anodized finish; no painted rails); confirm quantity of serving lines required with SCCPSS District Design Team during programming phase.
- e. Serving lines shall be designed so they can be closed-off from the cafeteria.
- f. Confirm quantity and location of TV monitors with District Design Team. GC shall provide monitors and accessories as necessary to provide a complete system for each desired location (includes power, data, digital signage box and TV).
- g. Grilling Station (requires confirmation & written approval from SCCPSS design team during Programming Phase)
- h. Dry Storage
- i. Office (provide windows / clear sight-lines to both the kitchen and delivery area)
- j. Staff Lockers/Restroom
- k. Laundry
- l. Dishwashing: Provide infrastructure for future utilities installation; DP to size the room per required lunch schedule demand
- m. Hose reel locations as requested by SNP Director (provide one w/ hot-water pressure washing capabilities); size water heater accordingly.
- n. Recycling: provide exterior concrete pad for six (6), 42-gallon containers.
- o. Trash compactor pad (6-inch thick) with concrete access from all sides.
- p. Food Prep area
- q. School Store: Locate near CTAE (Hospitality Lab) where applicable...otherwise at a remote distance from the kitchen / cafeteria to eliminate competition between sales. Provide dutch-door w/ shelf (roll-up windows will be considered in certain locations) for Middle and High Schools only.
- r. SNP (School Nutrition Program) Store in cafeteria area for Middle and High Schools only.

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8. Administration

- a. Lobby (Coordinate with SCCPSS and Campus Police security Attachments).
- b. Main Reception
- c. Secretary Office
- d. Information Specialist office
- e. Principal's Reception
- f. Principal's Office w/restroom
- g. Large Conference Room with casework, small sink with gooseneck faucet and on-demand water heater
- h. Small Conference Room
- i. Mail Room (back feed type)
- j. Book Storage
- k. School Records Room (appropriate fire rated construction; provide separate keying; coordinate during key review meeting at DD phase)
- l. Central Supply Storage
- m. Teacher-Staff Break Room - adjacent to cafeteria with windows to cafeteria. Provide minimum of 10 feet [upper and lower] casework with sink and goose-neck faucet
- n. Clinic Area
 - i. Nurse's Office with foot-activated sink with appropriate casework for storage. All casework shall be lockable. Include on-demand water heater.
 - ii. Infirmary: area for 3 cots
 - iii. Barrier-free restroom with roll-in ADA shower.
 - i. Include accessory health equipment at locations throughout the building. Equipment shall include AED devices, Bleeding Control Kits, signage and recessed cabinets as appropriate for the device[s]. See Attachment G for additional information.
- o. Bookkeeper's Office
- p. Receiving Office
- q. Two Resource Officers' Offices (one paired w/ AP). Locate near front entrance w/ window to corridor (Minimum of 1 office per floor)

9. Administration Suite (some areas may be duplicated as appropriate for size of school)

- a. Waiting Area
- b. (3) Assistant Principal Suites; include (3) office areas w/ waiting area and windows to corridor[s] for each suite. Confirm locations with design team during programming phase.
- c. (2) Guidance Counselor Office
- d. Flexible Office Space
- e. Conference Room
- f. Teacher Work Area / Break Area
- g. Faculty Male Toilet
- h. Faculty Female Toilet
- i. Janitors' Closet; include on-demand water heater for admin area.

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10. Custodial Closets

- a. One per wing (and floor) minimum
- b. One at cafeteria (not within kitchen area)
- c. One at gymnasium
- d. One at Learning Commons (no access from stack area)
- e. One near front office
- f. One area with lockers and changing areas for full custodial staff; area to include washer and dryer
- g. Storage Rooms
 - i. Provide mop sink (and room for cart), charging station for floor cleaners, hose bib above sink; include exterior access with double door. Minimum size: 200 SF).
 - ii. Perimeter heavy duty, open-grate metal shelving as room allows.

11. Technology Closets

- a. Design shall NOT incorporate any additional equipment within this space [e.g. Fire Alarm Panels]
- b. One per wing minimum; others as needed/approved
- c. No card readers; verify keying requirements w/ SCCPSS Maintenance Department

12. Classrooms

- a. Submit Program at Schematic Design Phase for approval
- b. Special Education classrooms: provide washer and dryer in each suite (all grade levels)

13. Mechanical Closets

- a. Provide as necessary per other sections of the Guide Spec
- b. No mechanical units shall be in an inaccessible area (e.g. above ceilings etc.)
- c. If in penthouse; provide adequate access from roof.

14. CTAE Labs (when applicable; verify quantity and types during Programming Phase)

- a. Design Professionals shall refer to the GaDOE / CTAE page for current certification requirements for all CTAE Labs when included in the building program.
<http://www.GaDOE.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/default.aspx>

MIDDLE SCHOOL DESIGN CRITERIA

1. Exterior

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- (1) Multi-purpose grassed field (100 yds. x 150 yds. (or larger). Provide fencing for (1) baseball / softball backstop and sideline fencing 20 feet beyond bases; include player, include player [maze] gate each side
- (2) Storage building (400 SF+/-) with double doors
- (3) Exterior drinking fountains on main school building near playfields
- (4) Restroom access from exterior of main building near playfields.
- (5) Bleachers shall not be less than two sections of aluminum bleachers on concrete pads, each with ten rows and twenty seven foot lengths.

1. Interior

2. Auditorium
3. Fixed seating: see Division 12 for more information.
4. Seating quantity shall be 50% of the design FTE
5. Slope seating down to stage.
6. Lobby with adjacent restrooms; size based on number of seats.
7. Stage to be raised (2,000 SF)
8. Curtains and fly-space at stage (verify fly height with District)
9. Back stage shall have the following:
10. Scene shop 750 sf (w/ roll-up door to stage area)
11. Women's and Men's Dressing rooms with adjacent toilets
12. Set storage 200 sf
13. Music & Choral Rooms
14. Audio Visual system: See Technology

15. Gymnasium

16. Motorized, retractable bleacher seating to accommodate the design FTE of the school.
17. Natural diffused light
18. Gymnasium to have overlapping layouts as follows:
19. One basketball court shall be designed in accordance with competition standards of the Georgia High School Association and the National Federation of State High School Associations with operable baskets
20. Two perpendicular practice basketball courts with operable baskets
21. One volleyball court shall be designed in accordance with competition standards of the Georgia High School Association and the National Federation of State High School Associations with floor hardware for removable nets
22. Two perpendicular practice volleyball courts with floor hardware for removable nets
23. Storage room with perimeter heavy-duty metal shelving (600 SF +/-)
24. When in program, locate scoreboards and controls to provide optimal viewing by coaches and players; controls shall be wireless.

25. Cafeteria

26. Provide seating layout for 1/3 of the maximum FTE of the school +10%; Table & Chair type seating

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for a food-court environment is preferred (provide schematic layout using 6 & 8-person folding tables, plus 4-seat round and square tables at standard height and high-tops (100% storage capacity for t/c).

- 27. Audio-Visual system- SCCPSS Technology Design Guidelines (Attachment B)
- 28. 12 foot minimum projector screen; coordinate lighting design and window locations so as not to 'washout' screen for projector

29. Kitchen

- 30. Receiving area with ½ light door (impact glass) to kitchen and doorbell; provide ramp[s] as necessary.
- 31. Walk-in Cooler with digital thermometer (also include a non-digital thermometer at exterior of cooler with probe to center of cooler)
- 32. Walk-in Freezer with digital thermometer (also include a non-digital thermometer at exterior of freezer with probe to center of freezer)
- 33. Permanent crowd control for serving lines (anodized finish; no painted rails); confirm quantity of serving lines required with SCCPSS District Design Team during programming phase.
- 34. Serving lines shall be designed so they can be closed-off from the cafeteria.
- 35. Dry Storage
- 36. Office (provide windows / clear sight-lines to both the kitchen and delivery area)
- 37. Staff Lockers/Restroom
- 38. Laundry
- 39. Dishwashing: Provide infrastructure for future utilities installation; DP to size the room per required lunch schedule demand
- 40. Hose reel locations as requested by SNP Director (provide one w/ hot-water pressure washing capabilities); size water heater accordingly.
- 41. Recycling: provide exterior concrete pad for six (6), 42-gallon containers.
- 42. Trash compactor pad (6-inch thick) with concrete access from all sides.
- 43. Food Prep area
- 44. School Store: Locate near CTAE (Hospitality Lab) where applicable...otherwise at a remote distance from the kitchen / cafeteria to eliminate competition between sales. Provide dutch-door w/ shelf (roll-up windows will be considered in certain locations) for Middle and High Schools only.
- 45. Provide SNP (School Nutrition Program) Store in cafeteria area for Middle and High Schools only.
- 46. Confirm quantity and location of TV monitors with District Design Team. GC shall provide monitors and accessories as necessary to provide a complete system for each desired location (includes power, data, digital signage box and TV).

47. Administration

- 48. Lobby (Coordinate with SCCPSS and Campus Police security vestibule design criteria)
- 49. Main Reception
- 50. Secretary Office
- 51. Information Specialist

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52. Principal's Reception
53. Principal's Office (with private ADA restroom)
54. Conference Room Large (provide casework w/ small sink and on-demand water heater)
55. Conference Room Small
56. Mail Room (back feed type)
57. Book Storage
58. School Records Room (appropriate fire rated construction; provide separate keying; coordinate during key review meeting at DD phase)
59. Central Supply Storage with metal shelving
60. Teacher-Staff Break Room - adjacent to cafeteria with windows to cafeteria (Minimum of 10 feet [upper and lower] casework w/ sink and goose-neck faucet)
61. Nurse's Office with sink (foot activated) and roll-in ADA shower (all casework shall be lockable). Include accessory equipment at locations throughout the building; equipment shall include AED devices, Bleeding Control Kits, signage and recessed cabinets as appropriate for the device[s]. See Attachment G for additional information.
62. Include on-demand water heater for nurses area.
63. Infirmary (area for 3 cots) w/ ADA restroom
64. Book Keeper Office
65. Receiving Office
66. One Resource Officers' Offices (one paired w/ AP). Locate near front entrance w/ window to corridor (Minimum of 1 office per floor)

67. Administration Suite (some areas may be duplicated as appropriate for size of school)

68. Waiting Area
69. Assistant Principal (Provide (1) suite similar to HS)
70. Guidance Counselor Office
71. Flexible Office Space
72. Conference Room
73. Teacher Work Area / Break Area
74. Guidance Counselor (academic)
75. Faculty Male Toilet
76. Faculty Female Toilet
77. Janitors' closet; include on-demand water heater for admin area

78. Custodial Closets

79. One per wing (and floor) minimum

80. One at cafeteria (not within kitchen area)
81. One at gymnasium
82. One at Learning Commons; no access from stock area.
83. One near front office
84. One area with lockers and changing areas for full custodial staff; area to include washer and dryer

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85. Technology Closets

- 86. IDF / MDF Closets
- 87. One per wing minimum
- 88. Others as needed/approved
- 89. No card readers; verify keying requirements w/ SCCPSS Maintenance Department

90. Mechanical Closets

- 91. Provide as necessary per other sections of the Guide Spec
- 92. No mechanical units shall be in an inaccessible area (e.g. above ceilings etc.)
- 93. If in penthouse; provide adequate access from roof.

94. Classrooms

- 95. Submit Program at Schematic Design Phase for approval

96. CTAE Labs (when applicable; verify types of labs during Programming Phase)

- 97. Design Professionals shall refer to the GaDOE / CTAE page for current certification requirements for all CTAE Labs when included in the building program. <http://www.GaDOE.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/default.aspx>

K - 8 SCHOOL DESIGN CRITERIA

K-8 schools to have similar design elements as Elementary and Middle Schools as well as playground areas [as identified in the next section] from the elementary school design criterion; where conflicts arise, design to the greater need of the two.

K-8 schools typically will have a standard cafetorium similar to elementary school.

Confirm that separate auditorium or cafetorium is not desired with District at Programming Phase.

ELEMENTARY SCHOOL DESIGN CRITERIA

Exterior

Multipurpose grassed field to be a minimum of 75 yard by 120 yards

Playgrounds: DP shall confirm to what extent this work shall be included in the construction documents (pads and fencing only, equipment, lighting, etc...) incorporate the following when applicable:

Refer to Division 11 – Equipment for playground equipment requirements. All equipment areas shall include poured-in-place rubber or rubber chips surface material to fully encompass designated play area (depth as applicable to the equipment fall-height); ADA accessible.

One playground structure for grades K through 1st ; equipment to be sized per FTE of the school.

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One playground structure for grades 2nd through 3rd ; equipment to be sized per FTE of the school

One playground structure for grades 4th through 5th ; equipment to be sized per FTE of the school

Provide restroom access from exterior of main building near playfields.

Interior (Refer to Division 09 for finish requirements)

Gymnasium

Retractable bleacher seating for 200 – 300 occupants.

Natural diffused light

Storage room with perimeter heavy-duty metal shelving (600 SF +/-)

Gymnasium to have floor markings as required by each school:

Cafetorium + 800 SF platform

Provide seating layout for 1/3 of the maximum FTE of the school +10%; Table & Chair type seating for a food-court environment is preferred (provide schematic layout using 6 & 8-person folding tables, plus 4-seat round and square tables at standard height and high-tops (100% storage capacity for t/c).

Audio-Visual system- SCCPSS Technology Design Guidelines (Attachment B)

12 foot minimum projector screen; coordinate lighting design and window locations so as not to ‘washout’ screen for projector

Kitchen

Receiving area with ½ light door to kitchen and doorbell; provide ramp[s] as necessary.

Walk-in Cooler with digital thermometer (also include a non-digital thermometer at exterior of cooler with probe to center of cooler)

Walk-in Freezer with digital thermometer (also include a non-digital thermometer at exterior of freezer with probe to center of freezer)

Permanent crowd control for serving lines (anodized finish; no painted rails); confirm quantity of serving lines required with SCCPSS District Design Team during programming phase.

Serving lines shall be designed so they can be closed-off from the cafeteria.

Dry Storage

Office (provide windows / clear sight-lines to both the kitchen and delivery area)

Staff Lockers/Restroom

Laundry

Dishwashing: Provide infrastructure for future utilities installation; DP to size the room per required lunch schedule demand

Hose reel locations as requested by SNP Director (provide one w/ hot-water pressure washing capabilities); size water heater accordingly.

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Recycling: provide exterior concrete pad for six (6), 42-gallon containers.

Trash compactor pad (6-inch thick) with concrete access from all sides.

Food Prep area

School Store: Locate near CTAE (Hospitality Lab) where applicable...otherwise at a remote distance from the kitchen / cafeteria to eliminate competition between sales. Provide dutch-door w/ shelf (roll-up windows will be considered in certain locations) for Middle and High Schools only.

Provide SNP (School Nutrition Program) Store in cafeteria area for Middle and High Schools only.

Confirm quantity and location of TV monitors with District Design Team. GC shall provide monitors and accessories as necessary to provide a complete system for each desired location (includes power, data, digital signage box and TV).

Administration

Security lobby

Main Reception

Secretary Office

Information Specialist

Principal's Reception

Principal's Office

Conference Room Large

Conference Room Small

Mail Room

Book Storage

School Record

Central Supply Storage

Teacher-Staff Break Room

Nurse's Office with sink (foot activated) and roll-in ADA shower (all casework shall be lockable). Include accessory equipment at locations throughout the building; equipment shall include AED devices, Bleeding Control Kits, signage and recessed cabinets as appropriate for the device[s].

Include on-demand water heater for nurses suite

Infirmary

Receiving Office

Resource Officer Office

Administration Suite (some areas may be duplicated as appropriate for size of school)

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Waiting Area with security control
Assistant Principal
Guidance Counselor Office
Flexible Office Space
Conference Room
Teacher Work Area / Break Area
Faculty Male Toilet
Faculty Female Toilet
Janitors' closet; include on-demand water heater for admin suite

Custodial Closets

One per wing
One at Cafeteria (not within kitchen area)
One at Gymnasium
One at Learning Commons; no access from stock areas.
One near front office
One area with lockers and changing areas for full custodial staff; area to include washer and dryer

Technology Closets

One per wing minimum
Others as needed/approved
No card readers; verify keying requirements w/ SCCPSS Maintenance Department

Mechanical Closets

Provide as necessary per other sections of the Guide Spec
No mechanical units shall be in an inaccessible area (above ceilings etc.)
If in penthouse, provide adequate access from roof

Classrooms

Submit Program at Schematic Design Phase for approval

Mechanical Closets

Provide as necessary per other sections of the Guide Spec
No mechanical units shall be in an inaccessible area (e.g. above ceilings etc.)
If in penthouse; provide adequate access from roof.

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Construction Design Guidelines

**GADOE & LOCAL GOVERNMENT / SITE DESIGN
CRITERIA / INDUSTRY STANDARDS**

GEORGIA DEPARTMENT OF EDUCATION REQUIREMENTS

It is the DP's responsibility to adhere to all Georgia Department of Education requirements. Documents outlining their specific requirements can be found on their website:

<http://www.GaDOE.org/Finance-and-Business-Operations/Facilities-Services/Pages/Facilities-Services-Resources.aspx>

Design Professionals shall provide a separate (.pdf) set of Local Facility Plan (LFP) documents to SCCPSS for GaDOE inventory submissions.

GREEN CONSIDERATIONS

It is the District's policy to promote healthy and sustainable educational environments through the design, construction, operation, and maintenance of its facilities.

Architects, engineers, and contractors should review, discuss, and work with the District to establish goals for each project at the beginning of design and construction.

Facility design shall incorporate sustainable design features found in LEED, Sustainable Sites Initiatives, Alliance for Water Efficiency and other similar programs although certification & commissioning need-not be pursued.

All projects should meet the following sustainability prerequisites:

Construction Activity Pollution Prevention

Minimum Energy Performance

Fundamental Refrigerant Management

Storage and Collection of Recyclables

Minimum Indoor Air Quality Performance

Environmental Tobacco Smoke Control

SCCPSS recognizes the environmental impact of its buildings and the importance of green design and green building practices.

All DP's shall incorporate energy efficient design practices wherever possible to achieve high performance buildings that will lower overall operating and maintenance costs.

Savannah - Chatham County Public School System **Construction Design Guidelines**

SITE DESIGN AND ACCESS

Safe and convenient access shall be a priority for pedestrians and cyclists. In constructing a school or renovating an existing school, design and construction shall take into account the following:

Provide or tie-in to existing sidewalks and bikeways to provide access for pedestrians and cyclists. Bikeways shall not have curbs.

Pedestrian/bike paths should not cross driveways whenever possible. If crossings are necessary, pavement markings and signage shall be provided to clearly indicate pedestrian/bike crossings

Provide bicycle parking which shall be, to the extent possible: (a) centrally located, for student convenience and to provide visual protection from attack, theft, or vandalism, and (b) protected from the elements.

Avoid locating waiting zones for school buses, trucks, and cars, as well as garbage areas, near fresh air intake vents.

Parking lots shall be arranged to eliminate or reduce the number of children walking through parking lots. If this is not possible, clearly marked walkways through parking and speed calming treatments should be employed in the parking lots. Provide a minimum of 20 visitor parking spaces near the main entrance of the building; designate parking for Campus Police.

Provide adequate staff parking in separate, secured area. Confirm anticipated staff-count at schematic design review meeting with SCCPSS. Provide parking spaces to accommodate 110% staff count.

Provide adequate lighting for loading dock, parking areas and all exterior doors serving the kitchen.

Provide designated parking spaces for SNP staff (with 'School Nutrition' signage)

Provide empty conduit from building to grass areas for future camera connections.

Provide below grade, 2-inch diameter conduit from building (electrical panel) to monumental / digital sign location.

Provide campus (directional) signage where applicable to the site (e.g. Auditorium Entrance).

COORDINATION WITH LOCAL GOVERNMENT – SEE SECURITY ATTACHMENT

The District and general contractors will work with the appropriate local AHJ's (Authority Having Jurisdiction) to:

Improve safety and convenience of walking and bicycling routes to school.

In the vicinity of the school, minimize conflict and interaction between different modes of transportation, calm traffic, and ensure safe crossings.

Provide direct access to school grounds in new and existing neighborhoods and use trails, bike paths, and sidewalks to connect neighborhoods to schools.

Consider and uphold zoning, subdivision, and land development codes where practical to encourage connectivity and pedestrian- and bicycle- friendly design.

All site designs shall comply with AHJ's regulations regarding Flood Damage Prevention, including Designated Floodways, where applicable.

Savannah - Chatham County Public School System Construction Design Guidelines

ACOUSTIC STANDARDS

Architect / Engineer shall be responsible for incorporating appropriate acoustic design measures into construction assemblies for all facilities, with special emphasis on auditoriums, multi-purpose rooms, cafeterias, gymnasiums, band / music rooms, atriums and other 'large' spaces.

Design Standard: ANSI/ASA S12.60 is mandatory unless specifically waived due to the scope of the project or other considerations.

Voice Reinforcement

For classrooms and Learning Commons areas refer to the SCCPSS Technology Design Guidelines (Attachment B). Provide kitchens and SNP offices with similar intercom devices as the classrooms).

Audio enhancement system to be provide in the following locations: Gymnasiums, Cafeterias, Cafetoriums, Auditoriums. Kitchens and SNP offices shall be included in the PA system for the facility.

Audio system shall be integral to building design.

RESTROOMS

Restrooms shall meet all of the GADOE Guidelines including, but not limited to the following:

Elementary schools: Provide a single-user toilet rooms for boys and girls (1 of each) shared between two classrooms with access from a common corridor between the two rooms; commonly referred to as "Jack and Jill toilets".

Provide single occupant toilet room (accessible from the exterior) at Kindergarten and 1st grade playground areas.

Gymnasiums, cafeterias and entrance lobbies shall have multi-fixture restroom facilities that are available without allowing the general public to access other parts of the school (e.g. classroom wings); all multi-fixture restrooms shall have out-swinging doors with double cylinder dead-bolt lock (no latching strike).

Middle and High restrooms: Standard multi-fixture restroom facilities are acceptable; however, it is the Districts' preference to minimize large group toilet rooms in the classroom wings; where provided, all doors to multi-fixture restrooms shall swing out of the room to eliminate the possibility of students blocking the door from inside the space. Hardware shall consist of push-pull plates (without strikes) and double-cylinder lock. DP's are encouraged to provide alternative options, during schematic design review, for middle and high school designs.

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All mirrors within the district shall be laminated, safety-glass mirrors (no mylar) with stainless steel trim and concealed fasteners.

UTILITY SERVICES

Utility services, gas or electric for building equipment, shall be analyzed considering first-cost (equipment), maintenance servicing cost, and annual operating (consumption) costs with a recommendation presented by the Design Professional. The District has implemented a “Stewardship of Facilities” goal of controlling and reducing utility consumption each year which is recorded and reported by school site. The exception is that all kitchen services equipment shall be electric. Verify if CTAE labs require additional utilities (e.g. Culinary Lab-gas).

LIBRARY - LEARNING COMMONS DESIGN

Refer to SCCPSS Library - Learning Commons Design Guide (Attachment A)

Coordination design with Technology Systems. Refer to SCCPSS Technology Design Guidelines (Attachment B).

The CM or GC shall provide all prepared wall penetrations and sleeves to accommodate all cable runs provided by SCCPSS 3rd party contractors.

Refer to the Design Guide matrix (Attachment A) for procurement and installation responsibility.

EQUIPMENT LISTS

DP shall include requirements for Contractor[s] to provide equipment lists in .xls format (Manufacturer, make / model, tag number and serial numbers, etc...) for:

Water source heat pumps

Circulation pumps

Filter sizes

Kitchen equipment

Water heaters / boilers

Heat exchangers

Cooling towers

Other equipment as directed by the District

Savannah - Chatham County Public School System **Construction Design Guidelines**

WARRANTY LISTS

DP shall require Contractor to provide warranty management and reporting documentation (e.g. Warranty Log) to the District at the end of warranty period.

DIVISION 00

Procurement and Contracting

Coordinate with SCCPSS's designated representative to ensure the correct solicitation, contract and other related documents are included.

Design Professional shall be responsible for the inclusion of all items pertinent to the project. An editable version will be available upon request.

DIVISION 01

General Requirements

Coordinate with SCCPSS's designated representative to ensure the correct solicitation, contract and other related documents are included.

Design Professional shall be responsible for the inclusion of all items pertinent to the project. An editable version will be available upon request.

DIVISION 02 – EXISTING CONDITIONS

Site Surveys

All surveys shall be performed and sealed by a Georgia Registered Land Surveyor.

Unless otherwise agreed to by the District, Boundary, Topographic and Subsurface Utility location surveys shall meet the minimum requirements required to satisfy the GSFIC Site Memorandum, latest edition.

Unless otherwise specified, all surveys shall be performed on the NAD 83 Georgia State Plane Coordinate System and the NGVD 88 Vertical datum.

All surveys shall include at least two permanent benchmarks.

All surveys shall include field control points with coordinates.

Minimum deliverables shall include signed and sealed plats or drawings, electronic files in PDF and DWG formats and an ACCII points file of all topographic data will be made available if requested.

Wetland delineations

Savannah - Chatham County Public School System Construction Design Guidelines

Environmental Assessment

Environmental Site Assessments and Risk Hazard Assessments shall conform to the requirements of the Georgia Department of Education Facilities Services Unit criteria outlined in the Guideline for Risk Hazard Assessment of Educational Facility Sites, 160-5-4-.16 (a) 5.

Geotechnical Investigations

Geotechnical investigations shall conform to the requirements of the GSFIC Site Memorandum for Stage I and Stage II investigations unless otherwise specified by the District.

Consultants will coordinate all testing activity with the District Project Manager.

Demolition

Coordinate all proposed demo-work with the Georgia Environmental Protection Division (and AHERA). Hazardous material remains the property of SCCPSS (Owner) until it is properly disposed of at the landfill and receipts are in-place.

Stop work immediately and notify the DP or the District if hazardous materials are encountered.

All demolished and removed building materials shall be recycled to the greatest extent possible

Coordinate all demolition with the District's Maintenance Department prior to commencing work. The District retains the first right of refusal for reusable and serviceable equipment and items.

Ensure that all items to be salvaged by the District have been removed from the site prior to commencing demolition operations.

Do not burn or bury demolition debris on site.

Ensure that all utility services have been properly disconnected prior to commencing demolition operations.

Identify all demolition items that will be salvaged or recycled by the contractor and provide a summary to the District for information.

DIVISION 3 CONCRETE NOT ADDRESSED - DIVISION 04 - MASONRY

Exterior

Brick is the preferred exterior finish*

All brick and mortar joints to be tooled concave with no voids

Walls above lower roofs shall be metal wall panels; high visibility locations may be designed as brick or other masonry material typical to the design.

All exterior windows on the ground floor shall have a sill height of not less than 3'-4" above finished grade except at major building entrances or other locations where surrounded by hard-surfaces; design intent is to minimize / eliminate glass breakage due to maintenance practices (stones from mowers). Upper level sill heights may vary, coordinate with FF&E items where applicable (e.g. can a low bookshelf fit under the window?).

Savannah - Chatham County Public School System Construction Design Guidelines

*Other exterior finishes as approved by the Superintendent or designated representative. Long term cost of ownership, including life-cycle, maintenance, and replacement costs shall be the primary factor taken into consideration.

Interior

Concrete masonry units (CMU) are preferred at interior corridors, classroom walls, and major partitions*

All outside corners to be bull-nosed

All CMU mortar joints to be tooled concave with no voids; v-groove joints are acceptable in [limited] non-wet areas and for accent-wall designs if applicable.

* Other interior finishes as approved by the Superintendent or designated representative. Long term cost of ownership, including life-cycle, maintenance, and replacement costs shall be the primary factor taken into consideration.

DIVISION 05 - METALS

Ladders; Access to all levels of low-slope roofs shall be provided by either an interior ladder, roof scuttle with spring loaded door (accessible from the front), door[s] or permanent exterior ladder. All locations shall be equipped with appropriate fall protection requirements per Code.

Pitched roofs to have personnel permanent weatherproof tie-off points, spaced no more than 25 feet apart.

Railings; Exterior to be welded, stainless steel, aluminum or powder coated steel with appropriate weather resistant fasteners.

Expansion Joint Covers: Provide metal expansion joint covers.

DIVISION 06 WOOD, PLASTICS & COMPOSITES

Wood Blocking: Provide solid wood blocking for all furniture , furnishings, and equipment (FF&E) mounted to framed walls.

Coordinate with Technology Design Guidelines for SCCPSS furnished and installed equipment.

Countertops: Provide solid-surface countertops at all 'wet' counters.

DIVISION 07 THERMAL & MOISTURE PROTECTION

ROOFING

Architect shall work directly with roofing manufacturer to generate shop drawings that will meet aesthetic, code and warranty requirements of the project.

All roof coatings or membranes shall be Energy Star compliant to aid in acquiring rebates (e.g. Georgia Power).

All submittals, deviations from original specifications or value engineering changes shall be presented to SCCPSS Maintenance and Operations roofing team for approval prior to implementation.

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Roof shall be free of construction debris, clean and in a “new” condition as to achieve maximum reflectivity upon completion.

Roof shall be washed (at contractor’s expense) if deemed necessary by owner upon completion.

Design roof system ES-1, IBC (latest version), NRCA and SMACNA (latest versions) and per ASCE 7 (latest version)

All installations must conform to applicable federal, state, and local codes.

The District prefers that roof is not designed with parapet walls, internal drains or internal gutters.

Install permanent safety harness tie-off points on all steep slope roofs to provide safe access for regular maintenance work.

Install per OSHA standards.

All levels of roof shall be accessible by permanent ladder, door or scuttle.

Mechanical equipment or other equipment requiring a curb shall have minimum 36” clearance on all sides from other equipment or walls. All curbs and wall flashings shall be minimum 8” height from finished roof surface per NRCA. All flashings should be accessible for future repairs.

All mechanical equipment shall be weather-sealed to top of curb. If roofing membrane does not wrap over top of curb, “slip” or “skirt” flashing shall be installed against bottom of unit around curb.

Rooftop equipment wires, conduit, refrigerant lines, etc...shall be routed on the exterior of the unit, penetrating the roof in a method that is warrantable by the roofing manufacturer.

Ductless HVAC or refrigeration condensing units shall not be installed on curb caps. Units shall be installed on a galvanized steel, aluminum or stainless steel legged support frame, with legs penetrating the roof in a method that is warrantable by the roofing manufacturer. Support frame legs shall be round pipe or tubing.

Mechanical equipment shall not drain onto roof surface. HVAC drains shall be schedule 40 or thicker PVC pipe installed on factory-manufactured adjustable support blocks.

Ductwork penetrations through exterior walls shall be installed with SMACNA designed flashing and counter-flashing.

Rooftop exterior ductwork shall be aluminum clad; casing shall be water-tight.

All curbs shall be set level.

All roof penetrations and curb details must be approved by roof manufacturer to ensure that they are included in warranty.

Coordination of mechanical and roofing details and applications must occur to obtain proper seal of roof and ductwork.

Roof expansion joints shall be minimum 8” height from finished roof surface per NRCA.

All unfinished concrete exterior walls shall be coated and sealed.

No downspouts in front of control joints or expansion joints.

Gypsum products in roofing assembly are unacceptable.

Gutters: Gutters and downspouts shall be made of aluminum with expansion joints spaced properly in accordance with NRCA and/or SMACNA; revise materials as necessary to eliminate damage from galvanic action conditions; outer elevation of gutter shall be lower than inside.

Wall terminations should be designed to accommodate future re-roofs.

Parapet walls: Wrap interior and top of parapet wall with PVC membrane and terminate with an ES-1 certified compression

Savannah - Chatham County Public School System **Construction Design Guidelines**

cap edge metal system. (Basis of design –TerminEdge system or equivalent). Kynar coated trim cap. Cast stone coping caps are not preferred.

Exterior partitions or free standing walls; metal coping caps shall be designed and installed on continuous cleats with drive cleat or standing seam type joints.

Roofing contractor shall be of current status as a top tier installer of manufacturer. Proof of certification shall be provided by manufacturer to DP.

Roofing contractor's foreman or supervisor must be trained and certified by roofing manufacturer for the specific type of roofing used on the project and must remain on site during installation.

Downspouts are to be installed with cast iron or heavy gauge stainless steel boots when connected directly to storm drains. Boot and downspout shall be designed to match in shape and size. Boot shall connect to storm drainage system below grade so that no part of storm drain pipe or connector is exposed. Provide taller boots (as necessary) where downspouts may be subject to damage such as along a bus ramp, etc. All boots shall have cleanout access.

Roof, soffits, walls, storefronts, windows and flashing details must be free of voids that would allow the intrusion of bats, etc. All cracks and gaps shall be sealed.

CM or General Contractor shall be held liable for roof damage caused by roofers or other trades during construction phase or post construction during the correction of non-compliant work. Owner reserves the right to reject entire or sections of roof due to physical damage, spills, and metal filings from saw cutting or unprofessional workmanship at Owner's discretion. Owner reserves the right to reject poor workmanship or damage regardless of manufacturer's acceptance for weather-tightness warranty.

Inspections

DP shall inspect roof work a minimum of twice per week during installation, providing a written and photographic report to Owner documenting progress and / or problems.

Pre-construction, mid-term, and final inspection shall be conducted by Manufacturer's certified inspector and be pre-scheduled to include the roofing installer, DP and owner representative.

DP and Contractor shall inspect through-wall flashings during installation and provide photographic documentation to Owner. Owner may observe and document work in progress at any time and without notice.

Warranties

Provide 5-year roof and wall bond for all new buildings and / or additions.

All design and work must coincide with manufacturer's requirements to achieve warranties specified below.

Manufacturers Guarantee – Non Pro-rated Twenty (20) year "No Dollar Limit" weather-tightness, edge to edge material and labor warranty to cover all roof systems.

Installer's Guarantee – 5-year weather-tightness warranty to include all materials and labor for all roof and wall systems.

Savannah - Chatham County Public School System Construction Design Guidelines

STANDING SEAM METAL ROOFS

General

22 Ga. welded metal roof deck. (Division 5)

Rigid poly-isocyanurate insulation (per R-rating mandated by code)

Self-adhering polyethylene faced sheet, ASTM D 1970 40 mils thick minimum, applied to top side of rigid insulation. Must be approved for use directly underneath standing seam panels. (High Temperature)

Mechanically seamed standing seam panel: 16" wide, 2" vertical rib, (no trapezoidal) 360 seam lock (double locked) with factory applied sealant. 24 gauge, grade 50, 50 KSI Galvalume. Smooth surface with standard striations, Kynar 500 coated finish. Concealed fastening system with sliding clips. Panels shall be continuous from ridge to edge (no lap joints). Fastened at ridge and cleated at eaves.

Finish: Energy Star Qualified Kynar 500 paint coating

Field forming of roof panels is prohibited (Note: exceptions to this rule will be considered for approval on a case-by-case basis; DP to present the conditions to the design team during DD review meeting); All roof panels shall be formed in a controlled environment at manufacturer's facility and shipped to construction site.

Avoid use of exposed fasteners in system where possible. Utilize premium neoprene washer screws with one-piece cap where exposed fasteners are unavoidable. Avoid use of pop-rivets.

Butyl tape or caulk shall be applied up and over vertical rib at panel eaves.

Panels shall be panned at the ridge behind closures with a panning tool designed for this process.

Properly calibrated seamer tool provided by <or> approved by roof panel manufacturer shall be utilized for proper seaming. Panels seam/ribs mangled or distorted by seamer tool will be rejected for replacement by owner. Batten caps to repair mangled/distorted seams/ribs will not be accepted.

Do not use touch up paint to correct minor scratches on roof panels.

Saw or torch cutting of metal roof components is prohibited.

Prefer ridge cap sections be lapped and screwed with butyl tape sealant. Ridge shall be supported by stiffeners to prevent collapse. Prefer ridge to be cleated or crimped onto zee closures.

Silicone sealants are prohibited in roofing assemblies.

Rake trim wider than 8" shall be a 2-piece design. Use ES-1 fastening pattern and gauge.

Warranties

Manufacturers must warrant roof system directly to Owner; 3rd-party guarantees are prohibited.

Non Pro-Rated 20-Year "No Dollar Limit" material and labor weather tightness warranty to include: Metal roof panels, vertical seam joints, expansion joints, curbs, copings (if attached to roof system), valleys and ridge caps.

Minimum 20-year warranty on paint finish.

Savannah - Chatham County Public School System Construction Design Guidelines

Edge flashings shall remain secure and be included in manufacturer's 20-year warranty against blow-off up to designed wind speed of system.

Preferred Manufacturers

McElroy Metal Inc. (Maxima ADV Panel)

AMS (Loc-Seam 360 panel)

MBCI (Super-Lok panel with "sole source" warranty)

Construction Metal Products Inc. (CMP S-2500 panel – double locked)

LOW SLOPE ROOF

Deck

Vermiculite lightweight insulating concrete. Siplast vermiculite based lightweight system or approved equivalent.

Welded vented metal deck. Slope shall be designed into structure [wherever practical] to yield a uniform thickness of lightweight concrete for mechanical attachment to metal deck.

For roof decks in areas with exposed ceilings, the District prefers lightweight insulating concrete over cementitious wood fiber deck substrate.

Roofing screws or other fasteners shall not penetrate through exposed ceiling deck.

Single-Ply fully adhered fleece-backed PVC / KEE Roof System

Membrane shall be "Energy Star" rated. Most applications will utilize white color.

Minimum thickness 60 mils excluding fleece back.

Mechanically attached unless adhered is required for special circumstances.

Curbs flashed with PVC/KEE clad metal shall include a "slip or skirt" flashing to butt firmly against underside of mechanical unit and fasten into side of curb.

Curbs flashed with membrane: membrane shall be wrapped over top of curb and self-adhering foam weather stripping shall be installed between membrane and mechanical unit.

Warranty

For low slope systems: 20-Year "No Dollar Limit" material and labor weather tightness warranty to include all penetrations, curbs, drains and metal flashings identified as an "Edge to Edge" or "System" warranty.

Internal drain hubs shall be included in roofing manufacturer's warranty if available from manufacturer.

Manufacturer to provide stamped certification of ES-1 approved edge trim.

Edge flashings shall remain secure and be included in manufacturer's 20 yr. warranty against blow off up to designed wind speed of system.

Savannah - Chatham County Public School System Construction Design Guidelines

Walk pads (80 mil) shall be installed [from the nearest roof access point] on all sides of rooftop equipment requiring maintenance or at points of heavy traffic.

Preferred Manufacturers

Duro-Last or Duro-Tuff membrane 60 mil min (ASTM D-4434 Type III)

Sarnafil G or S membrane 60 mil min (ASTM D-4434 Type III)

Johns-Manville KEE membrane 60 mil min (ASTM D-4434 Type III)

Carlisle KEE membrane 60 mil min (ASTM D-4434 Type III)

Fiber-Tite 45 mil min (ASTM D 6754-02)

KEE - Ketone Ethylene Ester (ASTM D 6754-10,) (45 mil)

DIVISION 08 - OPENINGS

Substitutions or Alternates not permitted unless noted below.

Secure Key Safe

All schools shall be provided with three (3) key safes-“Knox-boxes”- per facility; KNOX-BOX® 3200 Series or approved equivalent to satisfy the following:

- a. Fire Department, locate one near front entrance and remote annunciator panel
- b. Local Police Department, locate one at front and one at rear of building.

Final locations shall be approved by Fire Marshal and SCCPSS

Electronic Asset Control System (by Key Systems' GFMS™ or approved equivalent) to contain and monitor *building-specific* keys for the facility...GC to coordinate purchase with local authorities as necessary. www.keystorage.com

DP to present proposed location to design team during SD review meeting...see Security attachment for additional information.

Exterior Openings

All exterior opening systems shall be impact rated per the IBC

Hollow Metal Door Frames

Typical at all exits other than ‘main’ entrances.

Preferred Manufacturers / Series

Curries M

Ceco SU

Steelcraft F

Savannah - Chatham County Public School System **Construction Design Guidelines**

Interior Frames

Profile: M / MK / DEM; wrap-around frames at all interior wall assemblies.

Gauge: 16 @ openings up to and including 4'-0" wide

14 ga. @ openings over 4'-0" wide and MK Profile

Steel: Cold-rolled steel

Welding: Continuous face welded, dressed and ground smooth, prime paint

Exterior Frames

Profile: M

Gauge: 14

Steel: A60 galvanized

Welding: Continuous face welded, dressed and ground smooth, primed frames shall include shipping bar at bottom to insure frame integrity during shipping. All shipping bars shall be removed prior to frame installation. Install frames per manufacturers and SDI (Steel Door Institute) standards and instructions.

Fire rated frames require metal applied label indicating rating designation.

Reinforce frames for surface mounted hardware and cut-out, drilled and tapped to receive mortised hardware.

Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

Metal framed doors installed in masonry walls will have jams and lintels completely grouted to the masonry to avoid hollow spaced between masonry and door frames.

Hollow Metal Door

Preferred Manufacturers / Series

Curries 707

Ceco Regent - Imperial

Steelcraft L – (Foam Core for Exterior)

Interior Doors

Series: 707

Gauge: 18

Steel: Cold-rolled

Edges: Seamless - tack weld, grind smooth, fill and touch-up paint

Exterior Doors (all exterior doors and all doors with card-readers shall be equipped with DPS [door position sensors])

Savannah - Chatham County Public School System **Construction Design Guidelines**

include both doors when the opening has two doors).

Series: 707

Gauge: 16 gauge

Steel: A60 galvanized

Edges: Seamless - Continuous weld, grind smooth, fill and touch-up paint

Completely seal and make flush door top.

Fire rated doors require metal applied label indicating rating designation.

Doors shall be internally reinforced for surface mounted hardware and cut-out, drilled and tapped to receive mortised hardware.

Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

Wood Doors (all solid core doors shall have 'engineered' cores; particleboard cores are un-acceptable)

Preferred Manufacturers / Series

Graham GPD

Marshfield DPC/DFM

Eggers

Product Notes and Applications

Construction: 5 or 7 ply

Core: Engineered core at non-rated and 20-minute rated openings

Face veneer: White Birch, Premium Grade, Rotary Cut,

Edges: Same as face veneer

Matching: Pairs within the same opening

Warranty: Lifetime of installation

Doors shall be factory pre-finished to match existing facility standard.

Finish shall be type TR-6 / UV cured catalyzed polyurethane.

Pre-fit for opening size and pre-machine for hardware as specified.

Fire rated doors require metal applied label indicating rating designation.

Doors shall be internally reinforced for attachment of hardware without the use of through bolts.

Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

Door Hardware

All *classrooms* and *core spaces (cafeterias and library-learning commons')* shall be equipped with locksets that allow door to

Savannah - Chatham County Public School System **Construction Design Guidelines**

be locked from both sides (key at corridor side and thumb-turn at classroom side with indicator); Sargent V01 8205 LNJ or approved equivalent. Lockset shall be specified with default feature that will keep the handle locked on the corridor side at all times classes are in session. Lockset shall have the ability to allow the handle to remain unlocked from the corridor side when applicable (e.g. special events, PTA meetings, conferences and the like).

Adult rest rooms should have a keyed lock on the outside with a thumb turn (with exterior occupancy indicator) on the inside. (Keys cut to 2nd cut / Keying submittal).

Group rest rooms shall have a double cylinder dead-bolt lock w/ push-pull hardware (no strikes or latches); coordinate keying with SCCPSS Maintenance Department; swing doors out to eliminate students from blocking the door closed from the corridor side.

Hinges

Preferred Manufacturer / Series

McKinney* TA2714, TA2314, T4A3786, T4A3386, TA2772

Bommer BB5000, BB5001, BB5004, BB5005, BB5300

Hager BB1279, BB1191, BB1168, BB1199, BB1173

Product Notes and Applications

Full mortise butt-hinges on all interior wood doors

Interior and exterior hollow metal doors shall have mortise hinges.

Out-swinging lockable doors shall have NRP hinges.

Exterior lockable doors shall have NRP and SSF hinges.

Width of hinges shall be sufficient to clear trim and wall conditions as shown on the drawings.

Size: 4 ½" x 4 ½" for doors up to 3' - 0" in width, 5" x 4 ½" for doors over 3' - 0" in width. Provide heavy weight hinges (.180) at high traffic doors.

Continuous hinges preferred on all aluminum storefront doors

*Electric Hinges: Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Locate electric hinge at center location. Provide McKinney MG-16 mortar guard for each electric hinge specified. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

All access control hardware to be installed by manufacturer certified personnel.

Continuous Hinges

Manufacturer / Series

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McKinney* MCK-12HD, MCK-25HD

Markar FM-2000, FM-2011

Roton 780-112HD, 780-224HD

Product notes and applications

Exterior Aluminum and FRP doors: Use continuous hinges.

When retrofitting new doors in existing frames and frame hinge preparations are compromised: Use continuous hinges.

Power Transfers

Manufacturer Series

Securitron EPT

Corbin/Ruswin EPTL

Von Duprin EPT

Product notes and applications

Use at heavy use electrical openings to transfer power from frame to door. Provide at all electrical applications using continuous hinges.

Flush Bolts

Manufacturer Series

McKinney* FB M / FB W Manual and Automatic Flush Bolts

DPS Dust Proof Strike

Rockwood 555/557 Manual Flush Bolts

1842/1942 Automatic Flush Bolts

570 Dust Proof Strike

3810/3815 Automatic Flush Bolts

3910 Dust Proof Strike

Product notes and applications:

Provide manual or automatic flush bolts as necessary for code compliance. Install with dust-proof strike.

Provide extended top rod for oversized doors when using manual flush bolts.

Cylinders and Keying

Door / Frame Schedule shall be completed for review during Design Development Presentation Phase). Owner shall at that

Savannah - Chatham County Public School System **Construction Design Guidelines**

time provide recommendations for access control locations and other door security criteria). Workroom doors shall be keyed to match classroom doors.

Manufacturer / Series

Sargent* Signature exterior, "C" conventional interior

Product notes and applications:

Cylinders shall be keyed as approved during the keying conference meeting

Keying requirements to be coordinated and completed by the owner to protect the integrity of the system.

Furnish construction keying for use during the construction period. Keys will be furnished by the owner.

Contractor installs permanent cores and sets up key box with tagged keys and key schedule.

Keying coordination and distribution shall include casework.

Mortise Locksets

Manufacturer Series

Sargent* V01-8205 x LNJ trim design (default mode feature to ensure handle is locked from corridor side; typical all classrooms).

Schlage L9000 x 06A trim design

Corbin Russwin ML2000 x NSA trim design

Magnetic Locks

Manufacturer Series

1. Securitron Magnalock

Electric Strikes

Manufacturer Series

1. HES

2. Folger Adam

3. Von Duprin

Exit Devices

Manufacturer Series

1. Sargent* 80 Series

2. Corbin Russwin ED5000 Series

3. Von Duprin 98 Series

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Product notes and applications:

Single doors: Use rim exit device.

Pairs of doors: Use rim exit devices with keyed removable mullion (no wires within mullion)

Cross corridor doors / Interior: Use rim exit devices.

Exit device dogging: Hex key dogging in rail shall hold latch retracted to allow door to function as push-pull. Omit on fire rated doors and when width of door is too narrow.

Exterior doors: PTB Pull trim is to be used, lever handles are not to be used.

Exterior gates (provide exterior-grade panic hardware where required for egress per Life Safety Code); include reach-around guard protection plates for all fences that are not chain-link.

Keyed-Removable Mullions

Manufacturer

1. Sargent*
2. Von Duprin
3. Corbin/Russwin

Product notes and applications:

Types: Lockable, steel and key removable. Key is not required to reinstall the mullion.

Provide multi-wire connectors when electric or monitor strikes are used; no wires within removable mullion.

Preferred method of securing exterior pairs of doors when using rim exit devices.

Provide key removable mullions by same manufacturer as exit device. Provide fire rated key removable mullions at labeled openings.

Push/Pulls

Manufacturer Series

McKinney* :P053 Push Plates; OP4514 Door Pulls; PB812 Push/Pull Bars

Rockwood: 70C Push Plates; BF168 Door Pulls; BF15847 Push/Pull Bars

Trimco: 1001 Push Plates; 7191-3 Door Pulls; 1660 Push/Pull Bars

Product notes and applications:

Mounting method to be concealed type wherever possible.

Provide decorative thru bolts at free ends of push / pull bars and pulls when used with exit devices.

Push plate size: 4" x 16" minimum, except when limited by door stile.

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Coordinators

Manufacturer Series

1. McKinney* CSM
2. Rockwood 1600
3. Trimco 3094

Product notes and applications:

Provide filler bars for total opening width, closer mounting brackets, carry bars, and special preparation for top latches where applicable.

Door Closers

Manufacturer Series

1. Sargent* 351
2. LCN 4040
3. Corbin/Ruswin DC8000

Product notes and applications:

Closers shall have non-ferrous covers, heavy duty forged steel arms, and separate valves for adjusting back check, delayed action, closing and latching cycles and adjustable spring to provide sizes 1 through 6. Closer shall be adjustable to meet maximum opening force requirements of ADA.

Provide drop plates, brackets, or adapters for arms as required to suit application.

Mount closers on room side of corridor doors and inside of exterior doors. Where possible, install closers on door for optimum aesthetics.

Provide forged heavy duty parallel arms, non-hold open type (hold-open type allowed at interior vestibule openings)

Coordinate exterior gate closers on hardware and electrical schedules.

Low Energy Operators

Manufacturer Series

1. Sargent MP3000
2. Norton LEO
3. LCN Senior Swing

Product notes and applications:

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Provide wall-mounted actuator switches by the same manufacturer as the operator. Provide weather-resistant types at exterior applications. Locate in accordance with ANSI A117.1.

Conform to ANSI/BHMA standard A156.19 and meet UL requirements for fire rated openings.

Protection Plates

Manufacturer Series

McKinney* KP50

EG01 Edge Guards

2. Rockwood K1050

ge Guards

3. Trimco K0050

KE31-1 Edge Guards

Product notes and applications:

Size: Kick plates 8" high, Mop plates 6" high, Armor plates 36" high.

Width: 2" less door width (LDW) at single doors when mounted on push side. 1" LDW at pairs and when mounted on pull side.

Material:

Stainless steel 0.050" thick with countersunk holes, beveled four edges (B4E).

Overhead Stops / Holders

Manufacturer Series

1. Sargent* 590, 690, 1540

2. Rixon 9

3. Glynn Johnson 900, 100, 450

Product notes and applications:

Install overhead stops where conditions limit the use of wall stops and floor stops would be a tripping hazard.

Use special template closers to allow offset arms for surface applied stops..

Use at all exterior openings where closers are not used.

Wall and Floor Stops (avoid floor stops whenever possible)

Manufacturer Series

1. McKinney WS03 Wall Stop

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FS01 Floor Stop

ADH01 Door Stop/Holder

2. Rockwood 400 Wall Stop

441 Floor Stop

490 Door Stop/Holder

3. Trimco 1270 Wall Stop

1200 Floor Stop

1254 Door Stop/Holder

Product notes and applications:

All stops shall be cast metal. Wrought stops are not acceptable.

Magnetic Holders

Manufacturer Series

1. Sargent 1561

2. Rixson FM-998

Product notes and applications:

Wired to release upon activation of fire alarm. Verify required voltage.

Thresholds and Weather Stripping

Manufacturer Series

1. McKinney* MCK2005 Threshold

MCKS303 Gasket

MCK18062 Door Sweep

MCK346 Rain Drip

2. Pemko 2005_T Threshold

303 Gasket

18062CNB Door Sweep

346C Rain Drip

3. Reese S482APR Threshold

797B Gasket

964C Door Sweep

R201A Rain Drip

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Finishes and Base Materials:

Base Metals:

Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness.

Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes.

Finishes: Verify requirements for individual projects

Standard: Comply with BHMA A156.18.

BHMA Designations: Comply with base material and finish requirements indicated by the following:

BHMA 600 (USP): Primed for painting, over steel base metal.

BHMA 626 (US26D): Satin chromium plated over nickel, over brass or bronze base metal.

BHMA 628 (US28): Satin aluminum, clear anodized, over aluminum base metal.

BHMA 630 (US32D): Satin stainless steel, over stainless-steel base metal.

BHMA 652 (US26D): Satin chromium plated over nickel, over steel base metal.

BHMA 689 (ALUM): Aluminum painted, over any base metal.

Finish Schedule:

Exterior Butt Hinges: BHMA 626 (US26D)

Interior Full Mortise Hinges: BHMA 652 (US26D)

Continuous Gear Hinges: BHMA 628 (US28)

Pivot Sets: BHMA 626 (US26D)

Flush Bolts: BHMA 626 (US26D)

Locks and Latches: BHMA 626 (US26D)

Cylinders: BHMA 626 (US26D)

Exit Devices BHMA 630 (US32D)

Removable Mullions BHMA 600 (USP)

Push/Pulls: BHMA 630 (US32D)

Closers: BHMA 689 (ALUM)

Automatic Operators: BHMA 689 (ALUM)

Protection Plates: BHMA 630 (US32D)

Overhead Stops/holders: BHMA 626 (US26D)

Wall and Floor Stops: BHMA 626 (US26D)

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Magnetic Holders: BHMA 689 (US28)

Thresholds and Gasketing: BHMA 628 (US28)

Key Cabinet: BHMA 600 (USP)

Electric Strikes: BHMA 630 (US32D)

Magnetic Locks: BHMA 630 (US32D)

Access Control Devices and Hardware

General

Coordinate with SCCPSS Technology Design Guidelines (Attachment B)

All electrical drawings shall show placement of power supplies, cable pathway, and low voltage wiring for door access control.

All door details and schedule shall be coordinated with electrical and data drawings.

Protect all wiring from sharp edges and to use protective shielding when passing through openings.

Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

Electric Hinges: Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Locate electric hinge at center location. Provide McKinney MG-16 mortar guard for each electric hinge specified. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

Access Control: The CM or GC will provide and install door hardware and wiring to drop ceiling. Control systems (network nodes) are district provided and final wiring are handled by the district.

Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

Electric Hinges: Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Locate electric hinge at center location. Provide McKinney MG-16 mortar guard for each electric hinge specified.

Electric lock/latch power shall terminate at the power supply.

DPS, REX, and reader wiring shall terminate at the nearest network IDF and be labeled with the appropriate door number.

District wide management platform is S2 Netbox Enterprise

Control Modules: S2 Mercury hardware

Power Supplies:

Basis of Design is the Securitron AccuPower AQD5 with PDB-8C8R relay.

The power supply shall have an input matching that of the load it is powering. In addition, the power supply shall have eight

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(8) independently configured inputs with each input having its own individual input.

The power supply shall have filters, regulators, and a Fire Alarm trigger.

The terminal end of the cable that connects the load to the power supply shall not exceed 75 feet.

Door Hardware: Sargent Harmony or fully compatible devices that support HID 125 KHz proximity.

Entrances, Storefronts, and Curtain Walls:

Aluminum entrances shall include exterior doors and frames, including hardware and operators, as a part of the assembly.

All door systems to be 50M type (high traffic) or approved equal.

KAWNEER Company, Inc

TUBELITE DIV., INDAL. Inc.

YKK AP America

OLD CASTLE

All exterior entrances to be impact resistant glass; all other exterior locations shall meet minimum IBC code requirements per location and height of building.

All double doors to have center jamb with push-bar latch (no exposed vertical rods) and (keyed) removable mullions; paired openings without a center jamb shall not be accepted unless expressly approved by the District; wires are prohibited in removable mullions.

Concealed top and bottom locking bolts will not be accepted unless expressly approved by the District.

Air infiltration rate: provide doors with an air infiltration rate of not more than 0.50 cfm for single doors and 1.0 cfm for pairs of doors when tested in accordance with ASTM E 283 at an inward test pressure differential of 1.567 psf.

Condensation resistance: Entrance doors shall be tested for thermal performance in accordance with AAMA 1502 showing condensation resistance factor (crf) of not less than 48.

Thermal transmittance: Provide doors that have an overall u-value of not more than 0.51 btu/(hr. x sq. ft.x deg. F) at 15 mph exterior wind velocity when tested in accordance with AAMA 1503.

Single Source responsibility: Provide entrance assembly, , by a single source manufacturer capable of showing prior production of units similar to those specified. Manufacturer shall have not less than 5 years successful experience in the fabrication of assemblies of the type and quality specified. The installer shall have no less than 5 years' experience in the installation of similar systems specified.

Hardware: Provide manufacturer's heavy duty hardware required for operation of each door, including: Offset pivot seats, overhead closers, door stops, keyed cylinders, panic hardware, pull handles, and thresholds.

Installer shall be required to adjust and ensure operating functions for smooth operation and weather tightness after 90 days of

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acceptance and use by the school personnel. This requires a site visit after building acceptance.

Windows

Windows shall be impact resistant glass and meet the requirements of the IBC

Windows will be a storefront type unless approved specifically by the District or a replacement to a specific matching type.

KAWNEER Company, Inc

TUBELITE DIV., INDAL. Inc.

YKK AP America

OLD CASTLE

Windows shall only be operable in classrooms if needed for emergency egress.

Window sills shall not be less than 3'-4" inches above grade except at major building entrances. (Excludes entrances with hard-surfaces in front of glass...goal is to eliminate broken windows from stones and other debris from mowers; coordinate sill heights at all openings with FF&E casework where applicable; e.g. bookshelves).

Glazing

All exterior window and storefront glazing shall be double-paned insulated, low -e, impact rated glazing, and shall meet the requirements of the IBC.

All Interior glazing shall meet the requirements of the IBC with the following exception...

Interior glazing at security vestibule walls, and all interior glass openings facing admin areas (including doors) from vestibule shall be 9/16-inch security-glazing everywhere that is within 7 feet of the floor (e.g. vestibule transoms shall be open-air or 1/4" clear, tempered safety glass). Provide clear lines-of-site from vestibule to admin counter to aid in controlling access into the building; Polycarbonate glazing is not acceptable.

DIVISION 09 - FINISHES

DP shall submit actual samples of all proposed finishes to SCCPSS design team at DD Phase for approval.

DP shall provide fully detailed Schedule of Installed Finishes as part of Close-Out documents. Finishes shall include but are not limited to paints, ceiling, and flooring and other products typically replaced / stored by SCCPSS Maintenance Dept.

Interior Paint

All interior wall surfaces shall be semi-gloss finish. DP to coordinate Level of Finishes I-V as appropriate to the location; semi-gloss not recommended on gypsum board unless in wet-wall applications.

Paint on walls should be a 1-part epoxy (General: Corridors, office areas, core spaces, locker rooms, storage rooms and the like).

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No paint on handrails. Handrails shall be made of corrosion resistant metals not requiring paint.

DP shall provide final color and finish schedule as part of Close-Out documents.

Ceiling Tile

Typical interior finished ceilings shall be 2x2 acoustic tile ceiling.

- A. Provide panels complying with ASTM E 1264 for type, form, and pattern as follows:
 - 1. Type and Form: Type III, Mineral base with painted finish; Form 2, water felted; humidity resistant (humigard) or equivalent.
 - 2. Pattern: CE (perforated, small holes and lightly textured).
- B. Color: White.
- C. LR: Not less than 0.85.
- D. NRC: Not less than 0.55.
- E. CAC: Not less than 33.
- F. Edge/Joint Detail: Square.

- G. Thickness: 5/8 inch.
- H. Modular Size: 24 by 24 inches.

Panels to be square edged flush white with humidity resistance "Humigard" or equivalent in all locations unless otherwise approved by the District.

Kitchen tiles to be Food Service Grade and washable.

Flooring

Consider lower lifecycle cost flooring options in all locations.

Classrooms

Terrazzo (DP to verify finish levels; typical all terrazzo surfaces); include maintenance procedures as appropriate for the selected finishes in final O/M manuals

LVT or LVP Flooring

VCT Flooring

- 2. Learning Commons

Carpet Tile Flooring

LVT or LVP in high traffic areas

Administration

Carpet Tile Flooring

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Construction Design Guidelines

LVT or LVP

4. General or Common areas

Terrazzo (DP to verify finish levels; typical all terrazzo surfaces)

Polished / Stained Concrete

VCT

5. Corridors

Terrazzo (DP to verify finish levels; typical all terrazzo surfaces)

VCT

LVT or LVP

6. Bathrooms

Ceramic Tile (Provide minimum 6-ft high wainscot on all wet-walls; provide 4-ft return on adjacent walls where fixtures are present).

7. Specialty Floors

A. Laboratory

Elementary Schools – VCT, LVT or LVP flooring

K-8 Schools – VCT, LVT or LVP flooring

Middle Schools – VCT, LVT or LVP flooring

High School – VCT, LVT or LVP flooring

B. Gymnasium

Elementary Schools – Rubber Flooring or VCT Flooring

K-8 Schools – Hardwood Flooring

Middle Schools – Hardwood Flooring

High School – Hardwood Flooring (Confirm Grade of wood with District; a mix of #2 and #3 grades is preferred - #1 grade is too 'white' when on camera)

C. Stage

Elementary Schools – LVT or LVP flooring

K-8 Schools – LVT or LVP flooring

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Middle Schools – LVT Flooring

High School – matte-black painted ¾” exterior grade plywood on sleepers and shall be approved by the District during the DD Phase.

D. Stairs

Confirm if terrazzo is acceptable with design team during DD Phase.

E. Kitchen: Non- Slip quarry tile with Industrial-Grade Epoxy dark grout; Epoxy flooring will not be accepted

F. Serving Lines: Non-slip quarry tile with Industrial-Grade Epoxy dark grout

H. Weight Lifting: Rubber (Note: provide 6-inch thick concrete slab with reinforcing to help protect against dropping of free-weights and workout machines).

I.

H. Dance Room: LVT, (spring board wooden floor if budget allows)

I. Entrances, Lobbies, Corridors: Terrazzo

J. Cafeteria: Floors shall be terrazzo (Include spec info for stones in Color / Finish Schedule at completion of project...no attic stock required).

Tiling

Ceramic tile is the preferred floor treatment in lavatory.

A glazed tile wainscoting should be installed in all restrooms on all wet walls and side walls to a minimum height of 7'-4" a.f.f..

In remodels or renovations the ceramic floor tile in the restrooms should be installed on a diagonal to offset any walls that are not square.

Use cementitious backer board for all wall tile on framed walls.

Wood Flooring

Wood flooring shall be installed in the gym for K-8, middle and high schools

Wood spring board floors for dance rooms for schools with performance arts dance program, contingent upon budget and SCCPSS request.

Layered Vinyl Flooring

Savannah - Chatham County Public School System **Construction Design Guidelines**

Layered Vinyl Tile (LVT) or Layered Vinyl Planks (LVP): Locations, color and patterns shall be specified by the DP and approved by SCCPSS. Colors shall be standard manufacturer's colors. DP shall specify a minimum of 20 mil wear-layer with 10-year warranty for all locations; include Alternate pricing requirement for 32 mil wear-layer (w/ 20-year warranty).

At Elementary and Middle School Corridors, the floor pattern should incorporate a contrasting strip of tile set 24"-36" clear of each wall in order to define an emergency safety zone for students. Corridor patterns shall be submitted to SCCPSS for review and approval.

Base shall be 4" vinyl cove base with neutral color for ease of repair. Provide vinyl transition strips adjacent to other floor materials.

Installations

The LVT or LVP floors shall be properly protected before the building is released to the School System.

LVT or LVP shall be cleaned per manufacturer's recommendations by the Contractor before the floor is released to the School System.

Contractor shall ensure that SCCPSS Maintenance Department staff and local maintenance staff are trained to maintain floors in accordance with manufacturer's requirements.

Approved Manufacturers

Tarkett – Tandus Centiva

Armstrong

EF Contract

Patcraft

Mannington

Karndean

LG Hausys

Shaw

VCT Flooring

Color and patterns shall be specified by the Design Professional and approved by SCCPSS. Colors shall be standard manufacturer's colors.

At Elementary and Middle School Corridors, the floor pattern should incorporate a contrasting strip of tile set 24" clear of each wall in order to define an emergency safety zone for students. Corridor patterns shall be submitted to SCCPSS for review and approval.

Base shall be 4" vinyl cove base with neutral color for ease of repair. Provide vinyl transition strips adjacent to other floor materials. Coordinate the sequence for cleaning and waxing VCT floors with SCCPSS director of operations. Schedule cleaning and waxing of VCT floors at Corridors, Cafeteria and other designated areas after furniture is delivered.

Savannah - Chatham County Public School System Construction Design Guidelines

Installations

The VCT tile floors in the new schools shall be properly protected before the building is released to the School System.

A scrubbing machine should be used to scrub and clean the VCT tile before applying finish.

Provide five coats of high gloss 21% - 25% floor finish (coordinate with SCCPSS Maintenance Dept). Finish shall be applied to all new VCT tile floors by the Contractor before the floor is released to the School System.

Gypsum Board

High impact board shall be utilized in all areas to a height of 8 feet where CMU is not utilized. Coordinate drywall finish level requirements at accent walls (e.g. Administration and media centers)

Utilize moisture and mold resistant board for all humid or wet areas in which CMU is not utilized.

DIVISION 10 - SPECIALTIES

Signage (See Attachment D)

Contact SCCPSS for a digital copy of the security, weapons prohibition and dedication signs.

School signage must be in accordance with Georgia Law, zoning requirements, and local SCCPSS special standards. (See Signage Attachment)

In addition to ADA required signage, provide dedicated staff parking signage as directed by the Design Team. At a minimum, signage shall be designated for the following:

- A. Superintendent Parking Only
- B. School Nutrition Department Parking Only
- C. Principal Parking Only

DP to provide recommendations for additional 'neighborhood' signage as directed by the Design Team.

Monument sign with electronic message signage shall be provided at prominent location near main vehicular entrance.

To be constructed primarily of brick to compliment the building design. Sign shall incorporate Daktronics Galaxy Monochrome Outdoor LED matrix: 8 Lines by 48 columns, or approved equivalent/,coordinate location with local AHJ for color and operational limitations. Coordinate design w/ SCCPSS Building Supervisor and IT Departments.

Provide 2-inch underground conduit from building electrical room to all ground sign locations.

Provide access hatch on monument signs for all electronic equipment for IT Dept. access.

Visual Display Units

Visual Display boards and related accessories shall be included in the Construction Contract. Coordinate with Technology Design Guidelines (Attachment B) for classroom layouts...mount all boards so the top is at 7'-0" a.f.f.

Savannah - Chatham County Public School System **Construction Design Guidelines**

A total of 16' linear feet of white board is required in all IU's. Differing white board sizes based on room size to be reviewed and approved by SCCPSS Marker boards shall be factory laminated 3-ply construction with porcelain-enamel low-gloss face sheet, 3/8" particleboard core and aluminum sheet backing.

Provide aluminum frame with tray and map rail.

Provide appropriate special graphic at math and music rooms.

Provide manual sliding marker boards at science labs.

Tack boards shall be 1/4" thick, plastic-impregnated cork sheet factory laminated to 1/4" thick particleboard backing; verify quantities with design team during Design Development Phase.

Provide factory applied aluminum trim; mount with top of boards at 7'-0" a.f.f.

Restroom Partitions

Provide one-inch thick, high-density polyethylene (HDPE) partitions, securely fastened at wall and floor mounts with continuous wall brackets and overhead bracing.

Doors [other than ADA stalls] shall be 26-inches in width (where space allows) in lieu of standard 24-inch wide doors. Doors shall have continuous gravity close hinges; spring-loaded hinges are not allowed.

Headrails shall be aluminum, with stainless steel brackets.

Wall and pilaster mounting brackets shall be full-length aluminum (2-ear).

Floor brackets and pilaster shoes shall be stainless steel.

All fasteners, latches, strikes and partition accessories (i.e. coat hooks) shall be stainless steel. Do not use Zamak hardware.

Urinal screens shall be fully braced from floor to ceiling;

CMU partitions at locker rooms are preferred.

Wall and Corner Guards

Wall and corner guards (90 degree outside corners) shall be stainless steel, minimum 16 gauge in kitchen areas and color matched (or clear) in all other areas for exposed GWB corners to a maximum height of 48 inches above finished floor.

Toilet Accessories

The following products are supported by the District's standardized purchasing systems. Any alternate accessories must support the specified systems. Verify all equipment manufacturers are under current District contract and are compatible with all 'stock material supplies' thru the district Maintenance Department.

Tissue Dispenser, unless noted: vonDrehle 3253 Jumbo Roll Twin Jr. roll dispenser.

Provide 'residential' tissue paper holder in kitchen bathrooms; see Attachment – Miscellaneous.

Soap Dispenser: Spartan 975600 Lite'n Foamy, White

Savannah - Chatham County Public School System **Construction Design Guidelines**

Napkin Disposal: Bobrick B-270 Surface-Mounted (female restrooms: adult, high school, and middle school)

Paper Towel dispenser: Bay West OptiServ Roll Towel Dispenser Model # 86800 Black Translucent.

Provide single-roll paper towel dispensers in kitchen area.

Product notes and applications:

All accessories should be surface mounted.

Glass mirrors are prohibited within the district; all mirrors shall be unbreakable, with laminated safety glass, stainless steel trim and concealed fasteners; mount all boards so top is at 7'-0" a.f.f.

Electric hand dryers shall be installed in all group restrooms.

Electric Hand Dryers shall be X-lerator with noise reducer nozzle or approved equivalent; sensors only, no push-button start;

DP shall consider the use of a stainless splash-plate to be installed at all locations.

Student Metal Lockers

Inclusion of hall lockers shall be determined by the Design Team during the Programming Phase for all facilities. If included:

Student lockers (non-athletic) shall be provided in High Schools, Middle Schools, and K-8 (middle grades) schools in interior corridors.

Provide lockers equal to the "Design" FTE plus space to increase the number of lockers to the "core" capacity.

Each locker shall be approximately 12" wide x 12" deep x 36" high x double tier (72" total unit height) Provide (1) attic-stock door of each color for every 100 lockers.

Lockers shall be equipped with multi-point automatically locking spring bolt and pad-lock lug.

Lockers shall be equipped with separate master keyed combination locks.

Utilize welded construction with 16 gauge bodies, 14 gauge doors with stiffeners and 18 gauge backs.

Door shall have piano hinges, fastened with screws, not welded.

Doors and frame (body) of lockers shall be painted one color.

Paint shall be standard enamel finish 1 mil thickness min

Paint color shall be from manufacturer's standard colors, unless use of custom colors is requested and specifically approved by SCCPSS. Locker colors may alternate or be different in different parts of the building.

Utilize a painted metal "Z" base in lieu of raised concrete (or other material), eliminating the need for resilient base finish.

Extend floor finish below lockers to allow for their future removal if desired.

Enclose sides of lockers with wall piers and tops with wall furring...sloped top lockers are acceptable for athletic or custodial lockers only.

Physical Education / Athletic Lockers

Savannah - Chatham County Public School System Construction Design Guidelines

Physical education / athletic lockers shall be provided in middle, K8, and high schools. High schools shall also have lockers in sport team locker rooms.

Lockers in five tier units shall each be approximately 12” wide x 12” deep x 12” high (60” total unit height).

Lockers in double tier units shall each be 12” wide x 12” deep x 30” high (60” total unit height).

Sides and intermediate partitions shall be expanded metal for ventilation.

Other specifications similar to hall lockers

Provide continuous built-in poured concrete combination bench and base for lockers, 18” AFF and extending 12 to 14” from face of lockers. At least one ADA-compliant bench seating area shall be provided in each locker room.

Provide (1) attic-stock door of each color for every 25 lockers

Approved Manufacturers:

1. GSS / Excalibur
2. Lundia
3. Palmetto Shelving System Inc., White Rock, SC.

Extruded Aluminum Walkway Cover Systems

Appropriate aluminum canopies shall be provided for at bus and auto drop-off areas, and loading areas as needed. Custom features like cantilevered trusses or excessive coverage distance should be avoided.

All buildings must be connected by covered walkways

Drainage needs to be controlled and piped so as not to flow across sidewalks.

Curb/bus set-back for posts to insure bus “tail swing” clearances.

Provide lighting at canopies and provide conduit for surveillance camera wiring. Coordinate camera locations with Campus Police Chief and Technology Department. Coordinate lighting installation with Program Manager, GC, SCCPSS Roofing Department and Electrical Contractor.

Prefer brick veneer around posts with lighting/cameras installed on brick to eliminate attachment of cameras and lights to aluminum posts and panels. Lights should shine upward to reflect on white underside of canopy.

Height requirements for bus and truck clearances shall be reviewed and approved by SCCPSS Executive Director of Transportation.

Individual door canopies: Install lighting on wall in lieu of attaching to canopy.

Electrical connections through panels shall utilize neoprene washered stainless bolts and Decktite conduit fittings. Sealants utilized shall be 795 Dow silicone or equivalent.

If conduit is used, screws or bolts to attach conduit or lights shall be stainless steel with neoprene washered heads.

No penetrations in bottom pan of panels.

Two-coat Kynar finish

Savannah - Chatham County Public School System Construction Design Guidelines

Utilize roll locked panel assembly. No crimped panel assembly.

.060 minimum gauge panels.

Provide 5-year warranty against leaks.

Provide maximum manufacturer's warranty available on finish and materials.

Approved Manufacturers:

Mitchell Metals

Perfections

Tennessee Valley Metals

Flag Pole

Flag poles shall be 30 feet tall, tapered aluminum poles (no ground lights)

Pole and foundations to meet IBC wind speed and design

DIVISION 11 - EQUIPMENT

Food Service Equipment (see Attachments)

In addition, at each new kitchen provide (2) two (hot/cold bulk food cabinets; tall profile, dutch doors, single cavity with external thermometers (F and C). Basis of design is by 'Cambro Manufacturing Co.'

Refrigerated Food Storage Cases, Walk-In Coolers and Freezers

Walk-In Coolers shall be connected to the Intrusion Alarm. Cooler functions shall be monitored by the building control system; program the system to send email notification to the Maintenance and School Nutrition Departments. No other controls system is acceptable.

Walk-In Freezers shall be connected to the Intrusion Alarm. Cooler functions shall be monitored by the building control system; program the system to send email notification to the Maintenance and School Nutrition Departments. No other controls system is acceptable.

Contractor must hold a Cooler/Freezer Pre-Installation Conference with Owner, Design Profession, Food Service Consultant, Cooler/Freezer installer, and MEP Subcontractors. Agenda is discussion of installation schedule, site preparation, installation method, sealing all penetrations, inspection dates, coordination between trades, and the warranty period.

Contractors must perform on-site quality control (QC) inspections during and immediately after installation of cooler/freezer and provide Owner with report. Contractor is responsible to identify all areas of potential leaks; identify all penetrations and ensure that penetrations are properly sealed; ensure controls work properly; ensure doors and air curtains function properly, provide QC inspection to the Owner and DP of penetration inspection report and results of a thermal scan of the interior of the cooler and freezer.

Savannah - Chatham County Public School System Construction Design Guidelines

Installation methods to include minimum penetrations and providing plywood on top of coolers and freezers boxes for a walk platform when installation or service is needed to distribute load.

Installer to provide a 2 year warranty and inspect cooler and freezer quarterly during the warranty period.

Training and on-going maintenance includes:

Train kitchen staff to not prop the door open or store items directly in front of condensing fans.

Train kitchen staff on how to properly report issues with coolers and freezers.

Seal panel gaps that move over time, adjust defrost schedules and superheat settings, adjust temperature settings, adjust door closers, and seal all penetrations and electrical boxes.

Approved Manufacturers

Bally Refrigeration

Thermo-Kool

American Panel Corp.

Playground Equipment

Playground equipment for the Pre-Kindergarten students may be installed by the District; Design professional shall verify to what extent this section applies to the construction documents. If installed by the District, site preparations for the Pre-K playground area shall be the responsibility of the design firm. DP shall incorporate a level, graded pad to accommodate each play-set. Coordinate play-set locations, designs and appropriate clearance from all utilities (including irrigation lines) in-and-around the play area with District.

Verify responsibility for purchase and installation of playground equipment with District.

Provide age appropriate playground equipment for all other grades as part of the project coordinated and approved by the District.

Utilize commercial grade, poured-in-place, 2-layer rubber fall protection system at all playground areas; provide weed barrier fabric and perimeter containment border (consider water drainage) at all playground areas. Thickness is dependent on design fall height.

Base layer: Bonded rubber

Top [wear] layer: ½-inch thick EPDM rubber

Trash Compactors / Recycling Containers

District's standard compactor: Stribling Systems Inc, 'Nomad' series

Provide fenced concrete pad of adequate size for compactor and dumpsters; locate all trash areas away from all air-intake vents.

Provide adequate clear space and fully lighted path[s] to access dumpsters from all sides; enclosure shall be of masonry construction with protective bollards as necessary.

Provide adequate back-up and maneuvering space at trash area for waste pick up.

Savannah - Chatham County Public School System **Construction Design Guidelines**

Provide AC Power 120 volt and dedicated circuit for compactor:

Provide fenced concrete pad of adequate size for (6) residential size recycling containers.

Storage Specialties

Music Storage to be casework type

Music Instrument Storage shall be metal shelving, 72" max. height, attached to walls

Athletic Storage shall be metal shelving, 72" max. height, attached to walls

Telephone Specialties

Refer to SCCPSS Technology Design Guidelines (Attachment B)

Health and Safety Devices

See Attachment G.

Design team (Nurse) to verify locations during Schematic Design Phase for AED units, Bleeding Control Kits and 'projecting' signage for all devices. Provide (1) one AED device in recessed cabinet for every (2) two fire extinguishers; for facilities larger than 300K SF, provide (1) one AED device in recessed cabinet for every (3) three fire extinguishers; School Nurses to confirm final locations prior to installation; include one for each publicly occupied field-building.

Designed to provide essential equipment that empowers the general public to take action as immediate responders in stopping life threatening bleeding.

Provides intuitive and easy-to-use tools that are proven to help save lives.

DIVISION 12 - FURNISHINGS

Manufactured Casework includes but is not limited to:

Typical classroom teacher wardrobe / storage cabinet (36" wide x 24" deep x 80" high)

Classroom and office vertical storage cabinets, base cabinets with counter tops and wall cabinets.

Miscellaneous specialty cabinets and shelving.

Construction: Cabinet bodies shall be Standard high pressure plastic laminate finish over industrial grade particleboard with no exposed edges. If budget allows, consider using custom-built wood cabinets for high-use areas and where sinks are present.

Cabinet backs shall be minimum ¼" commercial standard CS-251 tempered hardboard or minimum 3/8" high performance 47 lb. density particleboard.

Cabinet sub-base shall be of a separate and continuous ladder-type platform design, leveled and floor mounted prior to cabinet body placement. Material shall be exterior grade plywood.. Base front / toe-kick shall be finished with 4" high black extruded rubber cove base with pre-molded corners to match room base.

Savannah - Chatham County Public School System **Construction Design Guidelines**

Cabinets in Nurses area should have individual locks on all cabinets.

Cabinets in all special needs classrooms should have individual locks on all cabinets. Each class room all keys should match.
(Keying submittal)

Locks shall be half mortise design with only round cylinder exposed, five tumbler cylinder, keyed separately with master key:
Coordinate during key review meeting.

Counter tops shall be 1-inch deeper than base cabinet with solid surface material.

Counter tops for computers shall be 30" deep and be equipped w/ grommets and wire management below. Provide plastic laminate finish in areas approved by the District.

Counter backsplash shall match countertop construction.

Drawer fronts and hinged doors shall be overlay style with high pressure laminate on all exposed surfaces with matching 3mm PVC edging.

Shelving behind doors shall be high pressure plastic laminate on particle board core with matching 3mm PVC edging. Shelves behind doors up to 27" wide shall be ¾" thick and 1" thick if over 27" wide up to 36" wide. Open shelving shall be 1" thick. No shelving shall exceed 36" unsupported width.

Shelving shall be adjustable and supported by side panels with concealed fasteners capable of supporting the specified content.

Hardware: Hinges shall be stainless steel, adjustable 5-knuckle, institutional grade, 2-3/4" overlay type with hospital tip with minimum load capacity of 310 lbs./pair. Anchor hinges with engineered screws (no wood screws)

Pulls for drawers and swing doors shall be ADA compliant, one piece semi-recessed molded contour finger pulls.

Catches shall be nylon roller or friction type.

Drawer slides shall be heavy duty, side mounted type, equipped with heavy duty ball bearing nylon wheels and automatic positive stops.

Shelf clips shall be heavy-duty design to hold shelf in place. Submit sample which includes every typical component including hardware and shelf retaining clips.

Accessories: Provide accessories appropriate to the cabinet's function.

Warranty: Provide manufacturer's standard 5-year warranty against defects in material and workmanship.

Basis of Design: Mott Manufacturing Ltd. Submit other manufacturers for approval..

Window Blinds

Interior blinds shall be 1" aluminum horizontal slats (provide fabric roller shades where budget allows).

Basis of design: Levelor Metal Blinds. Submit other manufacturers for approval.

Provide blinds at typical classroom, Lab exterior windows and kitchen managers offices that have exterior windows.

Use of tinted glass for sun control in lieu of blinds at large and inaccessible windows at Lobbies, Corridors, Media Centers, Kitchens, Cafeterias, Gymnasiums and similar spaces shall be approved in writing by the District. DP to confirm that the addition of window tint material (in lieu of tinted glass) will not void any warranty for all exterior windows it's being considered

Savannah - Chatham County Public School System **Construction Design Guidelines**

for prior to submitting for approval from the District.

Interior windows provided for supervision purposes in certain areas and shall not have blinds except where specifically approved by SCCPSS.

All window treatments with a window sill height over six feet (or as appropriate for the location) shall have motorized mechanism to open and close the blinds, shades, or curtains.

Auditoriums & Multiple-seating areas (typical for HS and MS types only)

All seats shall be a minimum of 21-inches wide (measured from center to center of the support legs) and placed 36 inches between row-seating backs.

Outer backs and armrests shall be plastic or laminate; outer covers plastic (no wood arms unless specifically requested by the District).

Backs on Chairs should be full height (33-inches), soft-squared to help prevent an occupant from putting their feet on the seat in front of them; maximize toe-kick space.

Backs and chairs shall have 3-inch thick polyurethane foam; serpentine springs are NOT ACCEPTABLE on seats

Fabric on upholstered chairs should include standard grade fabrics; 'graded-in' fabrics shall be considered if budget allows.

Verify quantity, type and distribution of tablet-arms (recommend 25%, right and left handed, evenly distributed throughout seating area plus at 50% of the ADA seats).

Auditorium and multiple-seating materials and installation shall be covered by a 5-year minimum warranty.

All seating and components shall be provided by a single manufacturer.

Seating layout shall be designed with steel support-standards spaced laterally in rows so that end standards are in alignment from first to last row, regardless of whether aisles converge or are of constant width, and so that sightlines are optimized.

Provide flush-bolts or covers for all floor bolt locations to help eliminate trip-hazard conditions and facilitate cleaning.

Automatic Seat Return should include a gravity counterweight system that causes the unoccupied seat to rise automatically and quietly to the upright position.

End Panels are on chairs on the aisles. Standard end panels are laminate or plastic and are available in different sizes

Provide aisle lights at end-panel of every other row; alternate lights across aisles.

Submit numbering strategy with schematic design layout.

Preferred manufacturers:

- a. Inorca
- b. Ducharme
- c. Irwin,
- d. Hussey
- e. KI

Savannah - Chatham County Public School System Construction Design Guidelines

DIVISION 14 – CONVEYING EQUIPMENT

Hydraulic Elevators

Shall be provided with a 5-year warranty from the date of Material Completion.

3500 lb. Capacity

Required to fit a 24” x 84” stretcher (Star of Life certification required)

Control access to elevator shall be key only, per IT.

DP shall include interior elevator finishes on Finish Schedule. Finishes shall be of durable quality.

Provide hooks at interior of cab (include protective pads set for moving FF&E)

Maintenance subcontractor shall be required to provide a 12-month, full maintenance period package and shall include 24/7 emergency call back & respond within 2 hours. Service provider shall be located within 20 miles from the project site.

Include battery-powered lowering and key-switch operation and emergency communication system (static line) auxiliary functions.

Manufacturers:

Otis (verify access criteria with District prior to finalizing the design)

Oracle

Thyssen-Krupp

Schindler

DIVISION 15-21 NOT USED

Divisions 15 thru 21 not used

DIVISION 22 - PLUMBING

Piping and Fittings

Vent stacks shall be located sufficiently far away from air intakes of HVAC equipment to prevent drawing odors back into the building.

Domestic Hot Water to be provided to the following sink locations: Nurses Station, Staff Restrooms, Break Rooms, Kitchen, Kitchen Restrooms, Janitor Closet, Laundry, Locker Rooms, Special Needs Classrooms, teacher workrooms and CTAE Labs as approved by the District.

DP to provide electric on-demand (tank-less) units where appropriate for the demand and location. Tank-less gas units for large demand locations are acceptable with District approval.

Savannah - Chatham County Public School System **Construction Design Guidelines**

Domestic water pipe shall be CPVC or Type L copper with lead-free joints.

Domestic water supply lines from meter to the building shall be Schedule 80 PVC with tracer wire.

Electric water coolers shall include bottle fillers

Saddle-tees are not permitted.

Floor drain required in all mechanical room/closet and mezzanines. Floor drains in mezzanines on second floor or higher shall be sealed. Waterproof floor to a 12" radius from center of drain with a high solids urethane coating to seal floor to drain.

Tremco Alphaguard or equivalent.

Include trap primers in lieu of trap guards.

Provide acid resistant materials in labs.

Provide barrier to prevent rodent infiltration where pipes penetrate the exterior building envelope.

VTR soil stacks on roof shall have vented covers or goosenecks to prevent rain-water from entering drainage system.

Provide shut-off valve[s] as necessary to isolate individual group-toilet rooms; include 'heat controllers' tags where applicable.

Clean outs at all group bathrooms at highest end of the run placed in wall with lockable access door.

All bathrooms receive floor drains. Note: Mechanical room floor drains shall (when exposed) be insulated to eliminate condensation.

Ceiling grid to be marked to show valves, WSHP units, filters, etc. Ideally use riveted plate on ceiling grid to describe what is up above.

Prefer wall hung bathroom lavatories which are supported by carriers with arms.

Multi-Fixture Bathrooms need hose bibs recessed into wall with locking door cabinet (do not locate hose bibs behind pipe guards at lavs).

Unless walls are block contractor will tile up no lower than 6' from finished floor.

Utilize [vertical] spring-loaded self-metering faucets; no infrared.

Foot actuated on/off valves at Nurse's sink, kitchens and other 'group' type wash-fountains as approved by the District.

Provide rooftop hose bibs (freeze-proof) within 100 feet of EVERY rooftop mechanical unit. Hose bibs shall also be installed about perimeter of building (24" above grade) with a maximum separation distance of 125 ft.. All hose-bibs shall be fully recessed with (cam) locking door cabinet.

Backflow preventers need to be housed in approved enclosures and protected from freezing. Wrapping exposed devices is not acceptable. Provide underground (in box) wherever possible.

Water and Sewer Mains shall be installed in easements or Rights of Way to allow for maintenance by the utility provider whenever possible.

Fire Hydrants shall be installed in easements or right of ways to allow for maintenance by the utility provider whenever possible.

Two way cleanout where waste lines exit each wing. Make sure cleanouts are not in door swing and have sufficient distance from door to not be a hazard when exiting building.

Downspout boots shall be provided w/ clean-out access covers.

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110v outlet within 50' of all cleanouts, both interior and exterior.

Contractor to video camera all lines 3" or larger to a distance of 10-ft. beyond exterior of building. Record and turn over to District in DVD form with labels as appropriate for the facility and location.

Plate and frame heat exchangers must have isolation and by-pass valve with taps to allow chemical flushing without removal of the unit, they must also have a spare pack for quick change out for cleaning.

Low flow, wall mounted, manual flush urinals shall be installed in male restrooms.

Low flow, floor mounted, manual flush toilets in all restrooms; flush valves shall match capacity of fixture.

Flush valves shall be Sloan or approved equivalent and shall be compatible with flow-capacities of all effected fixtures

Zurn stop-valves are not allowed. Provide products by Brass Craft or approved equivalent devices for potable water distribution systems.

Provide 'tall' gooseneck faucets in workrooms and breakrooms to reduce splashing when filling containers.

DIVISION 23 – HEATING VENTILATION & AIR CONDITIONING

Contractor to provide a two-year warranty to start at material completion date on all parts and labor.

Five year minimum manufacturer's warranty on all compressors.

The VRF - Variable Refrigerant Flow system shall come with a full 10-year warranty on all parts.

Manufacturer's Warranty period to begin at material completion.

Contractor shall clean all HVAC cabinets, coils, return grills and ductwork upon turnover to owner to remove any construction dust and debris. Contractor shall provide and change filters minimum of every 60 days while units are running during the construction period. Filters shall be minimum MERV 7 pleated filters.

It is the District's request that all equipment be easily accessible and that all equipment be located in areas of accessibility that will not disturb the education of students during maintenance and repair.

All equipment must be able to be replaced or maintained without altering building structure. Locate all equipment for ease in access.

Equipment should be located in closets or mezzanine. Ceiling mounted equipment may be acceptable for certain applications (e.g. CTAE labs). Minimize rooftop installation.

The mechanical room must be adequately sized for maintenance and replacement of all equipment; including sizing of door.

All equipment must be able to be replaced or maintained without altering building structure. Locate all equipment so that controls are readily accessible.

For any systems requiring software for access, require copy of software and any required hardware or firmware to access the system through the program and provide sufficient training for District technicians to be able to access.

All HVAC WSHP units shall have either Automated Logic Control (ALC) or Siemens Desigo controllers field installed in the

Savannah - Chatham County Public School System **Construction Design Guidelines**

units – all unit will be installed with no BACnet on any unit for either ALC or Siemens Desigo Energy Management Systems. Prefer collapsible duct for exposed overhead duct in gyms and other suitable areas. Consider using interior rings and controlled inflation rates to reduce ‘pop’ created when unit is activated.

Provide a factory manufactured filter box with filter track, hinged door and magnetic catch for filter access where filter is installed in ductwork. Door and filter access shall not be obstructed.

Filter sizes shall be common “standard” whole number increments (i.e. 20x25x2); provide same sized filters whenever possible for all units.

Coils shall be fully accessible for cleaning (minimum 18” access). Provide additional access panels in ductwork if necessary.

Provide engraved unit tag number plates on all units; unit tag number shall incorporate classroom number. (i.e. heat pump serving room 2303 should be tagged HP2303 etc.) tag shall also include electrical panel data for unit.

Provide to Owner, spread sheet with manufacturer, model number, serial number class room number unit serves, physical location of unit (i.e. mezzanine, rooftop or mechanical room#), unit type,(i.e WSHP or AHU) and filter size and quantity.

Cooling tower fans to be variable speed type. Direct-drive pumps (with coupling) are preferred.

Mechanical systems components such as cooling towers shall be 150% redundant and pumps shall be fully redundant.

Analogue temperature gauges required on loop at heat exchangers, pressure gauges required at loop pumps.

Provide traditional water treatment loop (no sonic wave)

Chiller, tower and boiler loops (hot and cold) shall be flushed, construction strainers removed, and permanent strainers cleaned prior to turning building over to Owner at final completion.

Water Source Heat Pump Alternative

Preferred mechanical system is the Water Source Heat Pump with individual self-contained units per class room.

The administration area, auditorium, cafeteria, gym and media center systems should be independent of the water source loop.

Provide separate and adjustable humidity control in Learning Commons and Media Storage.

Prefer individual mini splits in administration area.

One hundred percent redundancy on all critical components to avoid loss of heating and cooling capability in classrooms and administrative areas.

Supply one set of spare heat exchanger plates.

Require hinged, unobstructed filter door and filter track provided by manufacturer.

Approved Manufacturers for Water Source Heat Pumps:

Daikin

Climate Master

Trane

Carrier

Energy Recovery Ventilation Units

Ionization units are preferred.

Underground duct is not acceptable.

See roof penetration concerns in Division 07

Savannah - Chatham County Public School System
Construction Design Guidelines

Approved Manufacturers:

Aaon

Valent

Greenheck

Mitsubishi

Munters

The ERU shall match the VRF System, per the manufacture's specifications.

VRF – Variable Refrigerant Flow System:

The VRF Systems MUST allow the SCCPSS to use Siemens Desigo or ALC EMS without the use of any BACnet.

The VRF manufacturers shall provide a full ten (10) year warranty on all parts.

The Contractor shall provide 24 hours of Field Supervised Training and 3 days of off-site Factory Training for 5 SCCPSS Staff members.

The VRF System will be a Two-Pipe VRF system.

The compressor shall have a 7-year limited warranty from date of start-up.

Approved Manufacturers:

Trane

Carrier

Mitsubishi

Boilers

Take necessary precautions to prevent pipe sweat when boilers are not operating.

Approved Manufacturers:

Lochinvar, LLC

Rinnai

Raypak

Laars (Teledyne)

DIVISION 24 NOT USED

Savannah - Chatham County Public School System
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DIVISION 25 – INTEGRATED AUTOMATION

All controls shall be ALC or Siemens Desigo controls (no JAVA or CCI).

The following apply to both systems:

Specifications shall require system installer to provide on-site response within 24 hours during start-up and warranty period.

If more than one area is served by a specific HVAC unit, use one RS pro temperature sensor for control, and put an RS temperature sensor in each remaining area served for monitoring only.

All Space Temperature Sensors to have slide-bar control only indicating warm/cool or blue/red; no numerical readout

Individual unit controllers to be ALC or Siemens Desigo on all VRF systems, heat pumps, package units, walk-in cooler and freezer and other mechanical equipment to the greatest extent practicable. Units that are only available with factory controllers shall be monitored and controlled by the building control system.

Each Main Panel is to have laminated “As Built” placed in panel to identify equipment and points and Input/Outputs location identified on Module; mark all wires in panel; place phenolic tags on each panel

The following points of control are for the identified equipment:

Wall Hung Heat Pumps:

Fan Start/Stop	Digital Output (DO)
Fan Status (CT)	Digital Input (DI)
Reversing Valve	DO
Compressor	DO
Emergency Heat	DO
Reheat or Hot Gas Bypass (option)	DO
Supply Air Temp.	Analog Input (AI)
Space Temp W/reset and override	AI and DI
Space Humidity (if required)	AI

Water Source Heat Pumps:

Fan Start/Stop	DO
Fan Status (CT)	DI
Reversing Valve	DO
Compressor	DO
Reheat or Hot Gas Bypass (option)	DO
Water Flow Solenoid Valves	DO
Supply Air Temp.	AI

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Space Temp W/reset and override AI and DI

Space Humidity (if required) AI

Note: Mount Module just above ceiling grid in Hallway with tag to identify location on ceiling grid.

Roof Top Units:

Fan Start/Stop	DO	
Fan Status (CT)		DI
Cooling Stages 1 or 2		DO(s)
Heat Stages 1 or 2		DO(s)
Economizer Enable		DO
Dehumidification (if available)		DO
Supply Air Temp.		AI
Space Temp W/reset and override	AI and DI	
Space Humidity (If Needed)	AI	

Note: Use SE Controller and Mount on unit.

Energy Recovery Units:

Supply Fan Start/Stop	DO	
Exhaust Fan Start/Stop	DO	
Fan Status (CT)		2 DI
Exhaust Temperature		AI
Exhaust Humidity		AI
Supply Air Temperature		AI
Exhaust Air CO2		AI

Chillers:

Start/Stop	DO	
Chilled Water Reset	Analog Output (AO)	
Chiller Status	DI	
Chilled Water Supply Temp.	AI	
Chilled Water Return Temp.	AI	
Chilled Water Pumps	DO	
Variable Speed Drives (Option)	AO	
VSD Status	DI	

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Chilled Water Pump Status (CT) DI
By Pass Valve DO

Boilers; (points for each Boiler if more than one)

Start/Stop DO
Alarm Status (from Boiler) DI
Hot Water Supply Temp. AI
Hot Water Return Temp. AI
Hot Water Mixing Valve AO
Hot Water By-pass Valve DO

Cooling Towers (Points for Each C.T. if more than one)

Fan Start/Stop (per fan) DO
Fan Status (per fan) DI
C.T. Water Supply Temp. AI
C.T. Water Return Temp. AI
Variable Speed Drive (option) AO
Variable Speed Drive Status DI
CW Mixing Valve AO
C.T. By-pass Valve DO

Loop Water Supply Temp. AI
Loop Water Return Temp. AI
Condenser Water Pumps Start/Stop DO
CW Pump Variable Speed Drive AO
CW Pump Status (CT) DI
Loop Water Pumps Start/Stop DO
LW Pump Variable Speed Drive AO
Variable Speed Drive Status DI
Water Differential Pressure AI
Heat Exchanger Supply Temp AI
Heat Exchanger Return Temp AI

Unit Heaters Gas or Electric

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Fan Start/Stop	DO
Space Temp.	AI
Exhaust Fans Controlled by Temp>	
Fan Start/Stop	DO
Space Temp.	AI
Interlocks as Necessary	
Small Exhaust Fans and Toilet Exhaust	
Group together on Start/Stop	DO
Small Wall Heaters with Internal Thermostat	
Group Together on Start/Stop	DO
Domestic Water Heaters: Large (Café and Gym)	
DWH Start/Stop	DO
Pump	DO
DWH Temp.	AI
Freezer/Coolers	
Disconnect CT (Each)	DI
Temperature (Each)	AI
Ductless Split Systems (Mitsubishi Type)	
Unit Start/Stop	DO
Space Temperature	AI
Supply Air Temperature	AT
Global Items:	
C/O Sensor on Outside Air	AI
Outside Air Temperature	AI
Outside Air Humidity	AI
Emergency Generator	
Run and Over-crank Status	2 DI

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DIVISION 26 - ELECTRICAL

General

All electrical rooms with transformers shall have ductless mini split HVAC unit sized to handle heat load.

Transformers shall be floor mounted on pad, not hung from the ceiling.

All emergency lights in classrooms shall be LED wall packs

All lighting shall be accessible via a ladder or lift; or be installed with remote control drop mechanism.

No computerized lighting system.

Provide time-clock in kitchen area (provide adequate clearances)

Power stations shall be provided in common areas such as the Learning Commons area and Cafeteria, consisting of quad outlets, for student access for charging portable devices.

Generators and Emergency Lighting

For new schools, major renovations and additions, provide natural-gas powered generator and automatic transfer switch to power the following:

- a. All lighting with the exception of the site & parking lights
- b. W.I. Freezers, W.I. Coolers
- c. MDF / IDF equipment (including access control devices e.g. card readers)
- d. All receptacles in the gymnasium, cafeteria, and admin suite (include SRO's if at other locations)
- e. Exit lights
- f. Elevator
- g. Other items as directed by the District during design phase (DP / EE to verify final demand and provide appropriate sized equipment)

Approved Manufacturers

Onan

Kohler

Generac

If a permanent generator is not installed, LED emergency fixtures shall be installed per Life-Safety code.

Emergency fixtures installed 10' or lower shall have a lighted test button that is not concealed by light lens.

Emergency fixtures installed above 10' shall have laser pointer test capability.

Emergency fixtures shall not have audible alerts.

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Emergency lights in stairwells shall be wall mounted at landings and not over stair flights themselves.

Solar Photovoltaic Systems

Provide and install a 50 kilowatt (kw) ground mounted photovoltaic (PV) system at all school type facilities for all new facilities. Designers shall provide reasons why, at the programming phase, a 50 kW system is not feasible. If reasons are acceptable, Designers shall provide at a minimum a 30 kW system.

The photovoltaic system will be tied to the building's normal electrical distribution system for power to be used by the facility.

The system will include approximately (148) 340 Watt monocrystalline solar modules for a 50 kW system or (96) 340 Watt monocrystalline solar modules for a 30 kW system, with associated inverters to convert solar energy from DC to AC power. The inverter will be web-enabled and connected to the school's network for viewing system information online.

Provide a wall mounted video monitor and mini-PC in the cafeteria for real-time monitoring of the photovoltaic system's performance; provide adequate training for staff regarding operation of the devices

Solid Front Electrical Panels

Electrical panels and other devices shall be located in designated locked electrical rooms rooms if possible.

Electrical panels and other devices locate at corridors or other areas normally accessible to students shall be lockable and shall have solid front panels without louvers.

If ventilation is required by the code, it shall be provided in such a manner as to prevent students from inserting small objects into the electrical panel or device. (e.g. heavy gauge wire mesh inside cover).

DP shall incorporate these requirements into their submittal review process.

Conductors, Wiring, and Grounding

Aluminum wiring shall not be used on the building side of the meter.

MC Cable shall be allowed above removable ceilings and in accessible areas, if approved by the DP.

Plenum-rated low-voltage cabling may be used in lieu of conduit, if cost effective.

Provide cable tray or hooks at hallways for low voltage cabling.

Low voltage cable shall not be installed resting on ceiling tile and grid.

Conduit shall be run in a manner that preserves service access to all adjacent equipment.

No BX cable allowed in inaccessible areas such as wall cavity.

Label all junction boxes back to the original panel.

Provide surge protection on all service entrance power.

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All three phase power coming into the building shall be phase protected, with phase monitoring.

Power Outlets

All power outlets to be tamper resistant “child- proof” for safety.

Provide a minimum of one, 110 volt duplex outlet on each wall greater than 4 feet in length with a minimum of one per twelve feet of wall. Provide one at every data drop.

Provide one 110 volt GFI duplex outlet adjacent to each sink counter.

Provide (1) one 110 volt (exterior grade) duplex outlet on each rooftop HVAC mechanical unit.

Provide one 110 volt (exterior grade) duplex outlet about exterior perimeter of all buildings (minimum of 1 per side of building but shall not exceed 125 feet maximum spacing).

Provide master power switch at Science, Computer, Business and Career Technology Education Labs.

All mechanical rooms and closets must have duplex convenience outlet. Coordinate additional requirements with charging requirements for floor finish machines.

No floor outlets where floor requires waxing; other floor locations shall be discussed on a case-by-case basis. (Coordinate w/ Learning Commons Attachment)

Lighting

Light fixtures for ancillary spaces, corridors, classrooms, learning commons, cafeterias and gymnasiums shall be LED type fixtures furnished by SCCPSS and contractor installed. DP to contact SCCPSS’s project manager for fixture cut sheets.

Classroom lighting to be switched with occupancy sensors with manual override in classrooms; no electronic switches shall be provided; all fixtures shall be of the ‘dimnable’ type.. Lighting shall be controlled by standard switches . “Banks” of lights e.g. rows of lights in front of teaching walls shall be oriented with the long axis of the fixture perpendicular to the teaching wall and on a different switch than the remainder of the room to help eliminate glare. DP shall review strategy for typical classrooms and all core spaces with the District during the Design Development (DD) phase.

The interior lighting design shall minimize fixture types and incorporate standardized lamp inventory to the extent practicable.

Light levels shall comply with Georgia Department of Education standards.

General interior lighting shall be provided by recessed 2’ x 4’ fixtures with LED lamps.

Polycarbonate lens are recommended for low ceilings in corridors, stairs and locker rooms.

Storage areas, mechanical and electrical rooms should have metal cage protection.

Mechanical rooms, with emphasis on all roof access hatch locations, shall be on toggle switches; no motion sensors in these spaces.

The use of incandescent fixtures or dimming electronic ballasted fixtures shall be limited to special uses, such as theatrical lighting.

Lighting in labs, media centers, and other instructional spaces shall be controlled by switches only.

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Install any photo-cells on the roof or on the building no higher than ten feet off the ground.

Gym Lighting

Provide multi-level lighting in all gyms by means of dimming.

Competition Gyms shall have multilevel lighting for recreational use and competition use at light levels per state athletic association requirements.

Gym lighting fixtures shall be Owner Furnished / Contractor Installed (OFICI)

Gym lighting fixtures shall be standardized for cost efficiency to the extent possible.

Gym lighting fixtures shall have fixture, lens, guards and safety chains to prevent these components from falling when damaged by impact.

All light switch devices in gyms shall be of the keyed type (no toggle switches).

Theatrical Lighting Systems

Architects shall be responsible for employing a qualified professional Lighting Designer to develop appropriate Design and Construction Documents for new auditorium projects.

Drawings and Specifications shall be submitted to SCCPSS Drama Coordinator and Facilities Services for review and approval at the Schematic Design Phase.

Scope of work shall include overhead pipe grid, dimmable theatrical light fixtures, wiring and control system.

Provide separate LED work light system.

High School Auditorium front overhead stage lighting shall be drop light mounted, and easily accessible.

DIVISION 27

Technology Design

Refer to Technology Design Guidelines (Attachment B) for additional information.

Intercom

The Intercom system shall provide two way communications between the administrative front desk, all other instructional rooms, common areas, kitchens and SNP offices and shall include all equipment, devices and wiring as required to form a complete code compliant intercom communication system; DP to confirm that new systems will be compatible with current District standards.

The system will be network based but separate from the data network and can be activated by a hands-free call switch located in the instructional room and a handset located in the administrative front desk to communicate via ceiling mounted speaker/microphone. Communication may be initiated by either party. The system shall be fully networked, addressable, and

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have the capacity of distributing public address, class change tones and audio programs. A programmable pre-announce tone shall sound immediately before the intercom path is opened and a supervisory tone shall continue to sound at regular intervals when speaker monitoring is active, complying fully with all privacy legislation.

The intercom system shall utilize global switching and shall annunciate all instructional room emergency calls at the top of the call queue. The system shall provide for an emergency all-call feature. The intercom system shall be compliant with Georgia State and local code requirements, NFPA-70, EIA, NEC, UL, NEMA, ADA and be within the guidelines of IBC.

Major system elements are: cabling, speakers, surge suppression, microphones, handset, hands-free call switches, master clock. The Intercom system shall be grounded by direct attachment to the closest point in the buildings electric service grounding electrode using #6 copper. Final training shall be scheduled with Owner prior to Material Completion.

Approved Manufacturers:

Rauland

Bogan

Johnson Controls / Simplex

DIVISION 28

Electronic Safety and Security

Emergency Responder Communications (ERC)

New buildings and additions shall comply with all Codes related to ERC

DP to provide confirmation of signal strength and coverage as part of Close-Out documents.

Camera and Access Control

DP to coordinate device locations and verify compatibility of all equipment and systems with District staff.

Installation of pathways (e.g. conduit, door frames, etc...) for surveillance and access-control to be included in contract documents; typical installation is by District's contractor

Fire Detection and Alarm

The fire alarm system shall provide fire protection and warning to the entire facility and include all equipment, devices and wiring required to form a complete code-compliant fire alarm system. The system shall signal all system alarm, trouble and supervisory conditions to the Owner's designated remote monitoring station and shall be compatible with all District equipment and systems.

Fire alarm system shall be compliant with Georgia State and local code requirements, NFPA-96 (Ventilation Control and Fire

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Protection of Commercial Cooking Operations), NFPA 70 (NEC), NFPA 72 (National Fire Alarm Code), NFPA 90A (Installation of Air Conditioning and Ventilating Systems), NFPA 101 (Code for Safety to Life from Fire in Buildings and Structures), UL, NEMA, ADA and be within the guidelines of IBC.

The system shall be fully networked, addressable, and programmable and have the capacity of devices being disabled or enabled individually. Addressable devices are to be uniquely identified.

Major system elements are: [dedicated] system control panels with back-up power, power supplies, fire detection and control modules, input and output devices, indicators with bypass capabilities, audible and visual alarm circuit zone control, equipment enclosures and evacuation signals.

All fire alarm systems shall be configured to delay the signaling of building trouble conditions signaling for 180 seconds from the moment any trouble condition is detected (to avoid nuisance signaling during short term power failures, short term brown-out conditions, etc.).

All fire alarm system trouble conditions of duration of less than 180 seconds shall be considered as transient and shall not signal the Owner's designated remote monitoring station.

All supervisory conditions detected by the fire alarm system shall signal Owner's designated District Command Center (DCC) immediately.

All alarm conditions detected by the fire alarm system shall signal the Owner's designated remote monitoring station immediately.

Final training shall be scheduled with Owner prior to Material Completion.

Approved Manufacturers:

Notifier

EDS/Edwards

Simplex

DIVISION 29 AND 30 - NOT USED

DIVISION 31 - EARTHWORK

Earthwork operations shall be performed in accordance with the applicable portions of City of Savannah Specifications Section 2200 and GDOT Standard Specifications in addition to the project specifications.

All areas to be paved shall be tested for adequate compaction and proof rolled prior to placement of base or asphalt pavement. Areas where unsuitable material is expected based on subsurface investigations shall be identified on the plans and quantified. Identify acceptable alternatives to improve subgrade conditions and provide cost considerations to the District prior to preparation of Final Construction Documents.

Grade the site such that earthwork will balance to the greatest extent practicable.

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Identify onsite borrow areas and evaluate detention ponds for borrow opportunities as a cost savings measure.

Avoid placing fill in flood plain and wetland areas. If unavoidable, obtain the appropriate permits with the AHJ, allowing adequate time in the schedule for the permitting process.

Slopes should not be set steeper than 4:1 under normal circumstances. Where space is limited, 3:1 slopes may be used sparingly. Slopes steeper than 2:1 require District approval.

Longitudinal grades of swales and ditches should be 1% or greater. In special situations flatter slopes may be approved on a case by case basis.

Topsoil should be excavated and stockpiled on site for placement in landscape areas. Organic materials and stripping should be removed from the site.

Soil in grassed areas to be amended as necessary to grow permanent stand of grass meeting AHJ standards.

All silt and erosion must be controlled in accordance with the Georgia Erosion Sediment and Erosion Control Act and the NPDES General Storm Water Permit and NRCS approvals.

Grading plans shall include 1-foot contours for existing and proposed conditions.

Grading plans shall include spot elevations on all pavements, walks radius points, grade breaks at a minimum. List the proposed finished floor elevation of each building and the finished grade at the face of the building and within 10' of the building, at a minimum.

DIVISION 32

Exterior Improvements

City of Savannah Water and Sewer Specs/Details latest edition; refer to City of Savannah Water and Sewer Resources website. Provide all details as it relates to conditions of the design.

Fencing (See Attachment F)

Bases, Ballasts, and Paving

Base and paving shall conform to the applicable portions of the City of Savannah Standard Specifications Section 2600 and GDOT Standard Specifications Sections 310 and 400.

All pavement systems shall be designed by a geotechnical engineer based on soil conditions and anticipated traffic loadings.

All pavements in bus loops, driveways and high traffic areas shall consist of a graded aggregate base course, asphaltic concrete binder course and wearing surface at a minimum.

All pavements in car parking areas shall consist of a graded aggregate base course and an asphaltic concrete wearing surface

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at a minimum.

Pavement in loading docks, dumpster pads and trash compactors shall be minimum 6" concrete.

Include joint layout plans and details with all concrete paving plans.

All pavement subbases shall consist of 24" of suitable soil material compacted to 100% Standard Proctor Density in accordance with ASTM Test D-698 in the upper 12".

Minimum slopes on asphalt pavement shall be 1% unless approved otherwise by the District.

Minimum Slopes on Concrete pavement shall be 0.5% unless approved otherwise by the District.

Avoid the use of inverted crowns in roadways.

Pavements should generally slope away from building

Irrigation

Xeriscape landscaping and indigenous vegetation is encouraged in all areas; provide supplemental irrigation system (with dedicated meter) where required to maintain the following areas:

- a. Regulation Sports and multi-purpose fields for all grade levels.
- b. Front entrances and featured design elements
- c. All sodded areas
- d. Exterior CTAE Ag-Lab areas (including greenhouse connections where appropriate to the program); when included, provide dedicated shut-off valve for the greenhouse.

Domestic water supply lines from meter to the building shall be Schedule 80 PVC with tracer wire; saddle-tees are not permitted.

Backflow preventers need to be included in approved underground enclosures / vaults and shall be protected from freezing; wrapping exposed devices is not acceptable.

Water and sewer mains shall be installed in easements or rights-of-way to allow for maintenance by the utility provider.

Fire Hydrants shall be installed in easements or rights-of-way to allow for maintenance by the utility provider.

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