





AIKEN COUNTY PUBLIC SCHOOLS SCHEMATIC DESIGN SUBMITTAL

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## OCTOBER 2015





## **DESIGN STATEMENT**

The New Leavelle McCampbell Middle School will be approximately 113,000 square feet, and is designed for 750 students. The core facilities will include a cafetorium, media center, administration area, 6th, 7th and 8th grade classroom areas, exploratory classrooms, and a gymnasium. Additionally, the building has been designed to accommodate future additions to the classroom areas. Aesthetically, the building is designed to look like a traditional, early 20th-century school building and to be similar to the original Leavelle McCampbell Middle School. It will also have some contemporary design elements and will incorporate the latest technology, enhancing the 21st century learning environment.







## SITE PLAN

The New Leavelle McCampbell Middle School will be located on a 31 acre site adjacent to Byrd Elementary on the corner of Bettis Academy Road and Weldon Way. The front entrance to the school is on the western side and will face Bettis Academy Road. The car drop off and pick up will be located on the north side of the school allowing students to enter directly into the Cafetorium. Also located on the North side of the school is the staff parking lot which can be used for event parking as well. The main entrances for the Cafetorium and the Gymnasium are also located on the north side of the building. School busses will have a designated road off of Weldon Way on the east side of the school. Food deliveries and trash pick up will be located on the south side of the school and will use the same drive as the school busses. A new football field will be located between The New Leavelle McCampbell Middle School and Byrd Elementary School.







Room Name	om Name Number of Spaces Net SF / Are		Total Area (SF)
ADMINISTRATION			
Lobby	1	1,482	1,482
РТО	1	56	56
Storage	1	24	24
Public Men's Toilet	1	56	56
Public Women's Toilet	1	56	56
Conference Room	1	260	260
Reception	1	518	518
Receptionist	1	121	121
Attendent	1	139	139
Bookeeper	1	130	130
Workroom/Mailroom	1	403	403
Staff Men's Toilet	1	73	73
Staff Women's Toilet	1	73	73
Conference Room	1	206	206
Principal	1	161	161
Assistant Principal	1	146	146
Workroom	1	167	167
Book Storage	1	340	340
In School Suspension	1	842	842
Assistant Principal	1	120	120
Subtotal Administration			5,373





Room Name	Number of Spaces	Net SF / Area	Total Area (SF)
GUIDANCE			
Guidance Waiting	1	272	272
Guidance Office	1	161	161
Career Office	1	152	152
Office	1	153	153
Testing Storage	1	146	146
Vault	1	177	177
Subtotal Guidance			1,061
HEALTH			
Nurse Waiting	1	209	209
Nurse Office	1	194	194
Toilet	1	99	99
Cots Area	1	197	197
Subtotal Health			699





Room Name	Number of Spaces	Net SF / Area	Total Area (SF)
FOOD SERVICE			
Cafetorium	1	4,396	4,396
Platform	1	529	529
Platform Storage	1	289	289
Chair Storage	1	255	255
Serving	1	663	663
Kitchen	1	998	998
Dish Washing	1	371	371
Dry Storage	1	357	357
Cooler	1	149	149
Freezer	1	269	269
Office	1	143	143
Locker Room	1	70	70
Toilet	1	65	65
Subtotal Food Service			8,554





Room Name	Number of Spaces	Net SF / Area	Total Area (SF)						
EXPLORATORY CLASSROOMS									
Synergistics Lab	1	1,592	1,592						
Keyboarding Lab	1	775	775						
Health Classroom	1	792	792						
Art Room	1	1,365	1,365						
Kiln Room	1	124	124						
Art Storage	1	234	234						
Chorus Room	1	1,153	1,153						
Practice Room	1	57	57						
Chorus Storage	1	172	172						
Band Room	1	1,538	1,538						
Ensemble	1	64	64						
Practice Room	1	64	64						
Band Storage	1	506	506						
Exploratory Teacher Workroom	1	183	183						
Staff Men's Toilet	1	51	51						
Staff Women's Toilet	1	51	51						
Subtotal Exploratory Classrooms 8,72									





Room Name	Number of Spaces	Net SF / Area	Total Area (SF)
MEDIA CENTER			
Media Center	1	3,128	3,128
Office	1	136	136
Workroom	1	147	147
Conference Room	1	151	151
AV Storage	1	73	73
Computer Lab	1	796	796
Subtotal Media Center			4,431
SPECIAL EDUCATION			
Resource Classroom	5	397	1,985
Speech/ESOL Classroom	1	573	573
Self Contained Classroom	1	800	800
Toilet	1	64	64
Accomodations Lab	1	198	198
Subtotal Special Education			3,620





Room Name	Number of Spaces	Net SF / Area	Total Area (SF)
6th GRADE CLASSROOMS			
6th Grade Classrooms	5	793	3,965
Multi-Purpose Space	1	785	785
Computer Lab	1	1,142	1,142
Science Lab	1	1,155	1,155
6th Grade Teacher Workroom	1	313	313
Staff Men's Toilet	1	66	66
Staff Women's Toilet	1	66	66
Subtotal 6th Grade			7,492
7th GRADE CLASSROOMS			·
7th Grade Classrooms	5	793	3,965
Multi-Purpose Space	1	785	785
Computer Lab	1	1,142	1,142
Science Lab	1	1,155	1,155
7th & 8th Grade Teacher			
Workroom	1	310	310
Staff Men's Toilet	1	73	73
Staff Women's Toilet	1	73	73
Subtotal 7th Grade			7,503
8th GRADE CLASSROOMS			
8th Grade Classrooms	5	793	3,965
Multi-Purpose Space	1	785	785
Computer Lab	1	1,142	1,142
Science Lab	1	1,155	1,155
Subtotal 8th Grade			7,047





Room Name	Number of Spaces	Net SF / Area	Total Area (SF)
GYMNASIUM			
Gymnasium	1	10,244	10,244
PE Storage	1	77	77
Concessions	1	120	120
Coaches Office	1	157	157
Coaches Toilet/Shower	2	76	152
Boy's Locker Room	1	346	346
Toilets/Showers	1	263	263
Storage	1	109	109
Girl's Locker Room	1	346	346
Toilets/Showers	1	263	263
Storage	1	109	109
Laundry	1	296	296
Subtotal Gymnasium			12,482
CUSTODIAL			
Kitchen Chemical Storage	1	69	69
Kitchen Custodian	1	72	72
Kitchen Custodian Office	1	100	100
Kitchen Custodial Storage	1	102	102
General Custodial Closets	4	43	172
Gymnasium Custodial Closet	1	35	35
Subtotal Custodial			550





Room Name	Total Area (SF)
Administration	5,373
Guidance	1,061
Health	699
Food Service	8,554
Exploratory Classrooms	8,721
Media Center	4,431
Special Education	3,620
6th Grade Classrooms	7,492
7th Grade Classrooms	7,503
8th Grade Classrooms	7,047
Gymnasium	12,482
Custodial	550
Total Net Square Footage	67,533
Approximate Net to Gross Area	44,980
Total Approximate Gross Square Footage	112,513





## GROUND FLOOR PLAN

The ground floor is laid out in a traditional "T" shaped footprint and includes the administration area, 6th grade classrooms, cafetorium, kitchen, exploratory classrooms, gymnasium, and support spaces. The left side of the building contains the administrative offices including the guidance area. It also houses a synergistics lab, a keyboarding lab and in-school suspension. The right side of the building will be used for 6th grade classrooms. The 6th grade area will have a computer lab and a science lab as well as multi-purpose space that is intended for collaborative project based learning. The gymnasium and the cafetorium will have separate entrances and each can be closed off from the rest of the building during special events. Behind the cafetorium is the art, chorus, and

band classrooms. The art room has a separate kiln room adjacent to the classroom space, while chorus and band each have their own practice rooms as well as storage space.







## FIRST FLOOR PLAN

The first floor is arranged as a traditional double loaded corridor with the right side of the building containing the 7th grade classrooms and the left side of the building containing the 8th grade classrooms. Both grade levels will have a computer lab and science lab as well as a multi-purpose space that is intended for collaborative project based learning. The Media Center is located in the center of the building, between the 7th and 8th grade areas and just above the front entrance lobby, giving it easy access to all students. Having ample room for 60 students to be seated at tables for a group activity, the Media Center also has space for individual reading and study. The Media Center contains storage space for 7,650 volumes of books, a computer lab, office, conference room, and AV storage.

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## **ELEVATIONS**

The New Leavelle McCampbell Middle School will be reminiscent of the existing Leavelle McCampbell Middle School building while at the same time introducing newer, contemporary design elements. The exterior of the building will be brick with aluminum clad wood windows and architectural features that will give the building an early 20th-century look. Each classroom will have natural daylight filter into the space through windows that extend to the ceiling. Each multipurpose area will have floor to ceiling windows on the front of the building to open the space up and allow more natural daylight in. The cafetorium and gymnasium lobby will have north facing clerestory windows which will help bring natural light into those areas as well.







## **ELEVATIONS**



Overall West Elevation



Overall North Elevation



Overall South Elevation



Overall East Elevation





## THREE DIMENSIONAL IMAGES



Front Entry



View Looking South





## THREE DIMENSIONAL IMAGES



Cafetorium Entry



Classroom Wing





## MATERIALS AND SYSTEMS

#### Walls

Exterior walls will be brick with traditional brick details. Interior walls will be a combination of concrete masonry units and metal studs with gypsum board in the adminstration area.

#### Wall Finishes

Interior walls will be painted concrete masonry units and painted gypsum board in the administrative areas.

#### Floor Finishes

All classrooms will be vinyl composition tile. The administration area and media center will be primarily carpeted with some vinyl composition tile. All circulation areas will be vinyl composition tile with terrazzo in the main lobby.

#### Ceiling Finishes

Acoustical tile ceilings will be installed throughout the building along with some gypsum board ceilings in accented areas. The multi-purpose areas will have ceilings with exposed structure and systems.





## MATERIALS AND SYSTEMS

#### Accessories and Specialties

Markerboards and bulletin boards will be installed throughout the building as appropriate. ADA compliant signage will also be included.

#### Casework

High impact plastic laminate casework and cabinets will be installed throughout the building except in the science labs, the media center and the receptionist's area. These areas will receive stained wooden casework. A typical classroom will have built-in teacher desks with a teacher wardrobe attached. The classrooms will also include two bookcases, a tall storage cabinet, along with base and wall cabinets.

#### Doors and Windows

Exterior doors will be painted hollow metal with insulating tempered glazing and painted hollow metal frames. Interior doors will be stained solid core wood doors. All hardware will be ADA compliant.

The classroom windows will be pre-finished aluminum clad single hung wood windows with insulating tempered glass. The window color will be complimentary to the other exterior colors. The large windows in the multi-purpose areas will be aluminum storefront with insulating tempered glass.





## MATERIALS AND SYSTEMS

### Roofing

The insulation system within the new roof system assemblies will consist of polyisocyanurate roof insulation and perlite roof insulation with a minimum R-value of 30. The roofing membrane on the low sloped roof areas will consist of three plies of fiberglass felts adhered to hot asphalt and an Energy Star granule surfaced modified bitumen cap sheet adhered in cold adhesive. A three year Contractor's Warranty and a twenty year Manufacturer's Warranty will be provided for the low sloped roofing system. All sheet metal components for both roofing systems will consist of pre-finished, minimum 24 gage Galvalume. Other specific flashing details will require other appropriate metal types. The roofing systems will comply with the 2012 IBC and ACPS requirements.

#### Structural System

The structural design will consist of primarily masonry load bearing walls with steel roof trusses and bar joists. The floors will be reinforced concrete slabs with a combination of strip footings at exterior locations and turned down footings at interior locations.





## MATERIALS AND SYSTEMS

#### Mechanical Systems

The HVAC system will include an air cooled chiller plant with multiple chillers, sized at approximately 60% to 75% of the building's cooling load, constant speed chiller pumps, and variable speed building chilled water pumps with each pump sized for 100% of the chilled water load.

The classroom, administrative areas, media center and other teaching spaces will be served with indoor, variable air volume (VAV) air handlers and terminal units with electric heat. The kitchen and cafeteria will be served with rooftop units. The gym will be served with indoor, constant volume units. Outside air will be provided by a dedicated outside air dehumidification unit. The locker rooms will be served by indoor constant volume air handlers utilizing transfer air from the gym. All air handlers will be dual wall with chilled water coils and SCR electric heaters.

Ducts will be rectangular or spiral galvanized sheetmetal with fiberglass insulation and FRP jackets. Piping will be schedule 40 black steel or Type L copper with polyiso insulation outdoors and in mechanical rooms and fiberglass insulation with ASJ jacket in other locations. Outdoor piping will have an aluminum jacket. Underground chilled water piping shall have polyurethane insulation with a PVC or FRP jacket.

The control system will be a web based control system by Automated Logic Controls. All components of the HVAC system will be controlled along with water heaters and common lighting zones (primarily corridors and exterior lighting).





## MATERIALS AND SYSTEMS

#### Plumbing System

#### Domestic Water

Wall hydrants will be surface mounted, loose key, anti-freeze with a backflow preventer. Hydrants shall be located at approximately 100-ft. intervals around perimeter of the building. Roof hydrants will be provided at rooftop equipment for wash down and maintenance purposes. Hose bibbs with loose key and vacuum breakers will be located in all toilets with floor drains and in mechanical room.

#### Water Heating

Large demand usage areas (i.e., kitchen, showers, etc.) will be provided with natural gas fired water heaters. Water heaters for lesser usage areas shall be electric storage tank type water heaters. A hot water recirculation system shall be provided with the water heaters when the hot water system piping exceeds 100 feet from water heater to the last fixture.

#### Piping

#### Domestic Water Lines:

- a. Type "L" copper above floor.
- b. Type "K" copper below floor.

#### Sanitary Sewer and Storm Drain:

- a. No-hub cast iron with heavy duty stainless steel couplings for piping located above the floor.
- b. Below grade sanitary sewer and storm drain piping shall be schedule 40 PVC.
- c. Below grade grease waste piping shall be hub and spigot cast iron piping with gasketed joints.





## MATERIALS AND SYSTEMS

#### Natural Gas Line:

- a. Above floor: Black Steel Schedule 40 or Corrugated Stainless Steel piping by Tracpipe.
- b. Below floor: Black Steel Schedule 40 or Corrugated Stainless Steel piping by Tracpipe with Schedule 40 PVC casing.

#### Plumbing Fixtures

Water Closets: Floor mounted flush valve type. Water closets installed in group restrooms shall have sensor operated flush valves. Sensor flush valves shall be self generating Eco power system.

Urinals: Wall hung flush valve type. Urinals installed in group restrooms shall have sensor operated flush valves. Sensor flush valves shall be self generating Eco power system.

Lavatories: Lavatories shall be wall hung enameled cast iron with hot and cold water faucets. Group restrooms shall have sensor flush valves. Flush valves shall be self-generating Eco power type. Single adult restrooms shall have manual faucets with goose neck and 4" wrist blades.

Art Room sinks shall be stainless steel 18 gauge type 302 with hot water and cold water. Art Room sinks will be provided with above floor sediment traps.

Class Room sinks shall be stainless steel 18 gauge type 302 with hot and cold water.

Water coolers shall be stainless steel wall hung vandal resistant type. There shall be one water cooler with bottle filling station on each floor.

A Food Grease Waste Interceptor shall be provided for the Kitchen waste system.





## MATERIALS AND SYSTEMS

#### Fire Protection System

The building will be protected throughout by a wet pipe sprinkler system. The Ground Floor shall be divided into three sprinkler zones. The First Floor shall be one sprinkler zone. The sprinkler system shall be designed to accommodate the future additions.

A recent water flow test is not yet available. However based upon experience in the area there should be sufficient water flow and pressure to support the fire sprinkler system without the need of a fire pump.

The mechanical rooms, electrical rooms, storage areas, water heater rooms, janitor rooms, Data rooms, Kitchen, Science Labs, and Computer Labs shall be designed for Ordinary Hazard Group I occupancy. The remainder of the building shall be designed for Light Hazard Occupancy.

The fire protection system shall be seismically braced and restrained as required for a Seismic Design Category 'C' facility.

The Fire Riser room shall be accessible from the exterior. The incoming fire line into this room shall be provided with an exterior freestanding Post Indicator Valve (PIV), freestanding Fire Department Connection. A double check backflow preventer and wet sprinkler valve assemblies (i.e., riser check valve and floor control assembly) shall be located inside this room. An exterior horn/strobe shall be provided to indicate activation of sprinkler system.

Flat plate concealed sprinklers will be provided in all areas with finished ceilings. Upright sprinklers will be installed in mechanical rooms, electrical rooms, storage rooms, and similar rooms and any other spaces without ceilings.





## MATERIALS AND SYSTEMS

#### Electrical and Special Systems

#### Electrical Distribution System

A new underground service lateral will be obtained from a new utility company pad-mount (SCE&G) transformer.

Service voltage will be 480Y/277 3 phase 4 wire. Nominal service size will be 4000A at 480Y/277 3 phase 4 wire.

Lighting will be served at 277V single phase where applicable. Mechanical loads will be served at 480V 3 phase.

Receptacle and miscellaneous loads will be fed at 120V single phase.

Surge Protective Devices (SPD) will be provided for the main service to the building and at stepdown transformer locations.

Spare capacity will be designed into the distribution system for future growth.

Emergency power will be derived from an outdoor diesel generator set in a sound attenuated weatherproof enclosure. Nominal size is estimated to be 125 kW at 480Y/277 3 phase 4 wire.

Emergency power will be provided for exit signs, egress lighting, fire alarm system, telephone, communications equipment, security systems, and technology/IT closets. In addition, emergency power will be provided for coolers/freezers and elevator.





## MATERIALS AND SYSTEMS

#### Lighting

In most areas, lighting will consist of specification grade lay-in LED fixtures, products by H.E. Williams as the basis of design. Lighting levels will be controlled via simple 0-10V dimming, inherent in contemporary LED driver design, and will provide separate controls for the teaching wall. Fluorescent and LED Architectural fixtures will be used for accent lighting where design dictates. Lighting levels to be in accordance with IES recommendations for the intended space utilization.

Emergency lighting will be provided by building fixtures connected to the emergency generator system.

Exit signs shall be of the LED. type, with thermo-plastic housings.

Automatic lighting control will be provided in accordance with the requirements of ASHRAE 90.1. Automatic occupancy sensors will be provided for administrative and instructional spaces with products of Watt Stopper as the basis of design. Commons areas (cafeteria, corridors, gymnasium, etc.), site lighting and building mounted security lighting will be controlled by the building automation system via contactors. Local override switches will be provided as a part of the mechanical design.

Building mounted security lighting shall consist of architectural wall packs and recessed can down lights with LED lamp sources.

Parking lot lighting will utilize LED lamp sources.





## MATERIALS AND SYSTEMS

#### Fire Alarm System

An addressable fire alarm system will be provided. The system will be a voice evacuation type utilizing strobes, speakers, and pre-recorded voice messages to notify occupants.

The fire alarm system will report automatically to a Central Receiving Station.

The basis of design will be systems manufactured by Silent Knight.

#### Instructional Technology Systems

A complete premises wiring system, including fiber optic backbone with CAT 6 copper drops will be provided. This will include a complete conduit and/or cable tray system for support of IT/technology wiring and equipment racks for installation of jack panels and Owner installed electronics. Cable tray will be aluminum ladder type tray. Cable tray system shall be for the sole use of IT, security, CCTV, and other systems installed outside the construction contract. HVAC controls shall not be installed in the cable tray system.

Nominal outlet locations in instructional spaces shall be for two (2) drops per classroom, one for teacher station and one for wireless access point.

Conduit pathways will be provided within instructional spaces to support multi-media applications between the instructor's station and the display equipment.





## MATERIALS AND SYSTEMS

#### Security Systems

Empty conduit will be provided for an intrusion detection system (IDS), building access control, and CCTV systems. System electronics and installation will be included in the construction contract through the Owner's security vendor. Device locations to be provided by the Owner's security systems vendor for incorporation into the contract documents.

#### School Intercom System

A two-way school intercom system will be provided for calls to instructional areas and for general paging throughout the building. The basis of design will be Rauland Borg, # TC-21.

Call-back buttons will be provided in classrooms and in other selected locations.

Administration phone handsets will be provided at the main reception desk, principal's office, and the guidance reception desk for making announcements.

School intercom system wiring shall be installed in conduit and/or the cable tray system.

#### Sound Reinforcement Systems

Sound reinforcement systems and AV presentation systems will be provided in the cafeteria and gymnasium.





## PROJECT BUDGET SUMMARY

	LEAVELLE McCAMPBELL MIDDLE SCHOOL								H.G.REYNO	LDS COMPANY
	PRELIMINARY BUDGET ESTIMATE								PRECONSTRUC	TION SERVICES
Project :	LEAVELLE MCCAMPBELL MIDDLE SCHOOL	Total f	116,600							
Location :	GRANITEVILLE, S.C.		Project #: Date :		-	22-9	Sep-15	Totali	Juliuling USI .	110,000
Owner :	AIKEN COUNTY PUBLIC SCHOOL DISTRICT		Budget #:		1		.cp 13	Total Pr	\$ 254.37	
DIV#	WORK DESCRIPTION	UNIT	QUANTITY	UN	IIT RATE		AMOUNT\$	\$/GSF	% BUDGET	REMARKS
	EARLY SITEWORK PACKAGE	SF	116,600	\$	27.00	\$	3,148,200.00			
	BUILDING PACKAGE	SF	116,600	\$	169.00	\$	19,705,400.00			
	Projected Subtotal Construction	ls				\$	22,853,600	\$ 196.00		
	SCHEMATIC DESIGN / ESTIMATE CONTENGENCY	%				\$	1,142,680		5.00%	
	Projected Total Construction	ls				\$	23,996,280			
	Professional/Technical/Inspection FEES	%				\$	2,879,554		12.00%	
	Fixtures, Furnishings & Equipment; Technology	%					1,919,702		8.00%	
	COST OF WORK	ls				\$	28,795,536			
	OVERALL PROJECT CONTINGENCY	%				\$	863,866		3%	
	BUDGET TOTAL	ls				\$	29,659,402		100.00%	





## PROJECT SCHEDULE



#### Leavelle McCampbell Middle School Preliminary Design and Construction Schedule

	Early	Early	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	2016	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17
Building Construction	Start	Finish																		
Schematic Design	4.1.15	4.7.15																		
Design Development	4.8.15	6.30.15																		
Construction Documents	7.1.15	10.15.15																		
Early Sitework	8.31.15	10.6.15																		
OSF/Owner Review	10.16.15	11.30.15																		
Sitework/ Building Pad	10.7.15	12.30.15																		
Building Package/ Bidding	12.1.15	12.31.15																		
New Construction	1.1.16	5.19.17																		
District Move-In	5.20.17	6.30.17																		



