

LS3P



AIKEN COUNTY
PUBLIC SCHOOLS

**RIDGE SPRING - MONETTA
PHASE 3 - ELEMENTARY
SCHOOL ADDITION**

LS3P Commission No. 2201-183850



**DESIGN DEVELOPMENT SUBMITTAL
SEPTEMBER 2019**

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RIDGE SPRING - MONETTA: PHASE 3 ELEMENTARY SCHOOL ADDITION



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The Mission of Aiken County Public Schools, the emerging premier school district, is to cultivate future-ready students to serve our evolving community and world through an innovative, literacy-focused school system distinguished by

- *rigorous, personalized learning opportunities*
- *highly effective, service-driven professionals; and*
- *mutually beneficial partnerships.*

OUTDOOR DINING

DESIGN STATEMENT



Our project scope was to develop a campus Master Plan based on phasing to ultimately replace or renovate the existing academic and athletic facilities on the existing campus. Phasing plans were developed for renovations/additions to the campus, presented to the District Committee, and are being presented to the School Board by District Staff.

Phase 1 consisted of the existing Middle School classroom wing and a kitchen/dining room that is shared with the High School. Phases 2, 3, and 4 are the next steps, which seek to develop and provide the following:

Phase 2: New administration, High School general classrooms, elective classrooms, labs, media center, main gymnasium, and athletic fields.

Phase 3: New Elementary school classrooms, media center, dining, and physical education space.

Phase 4: New auditorium and renovations to the existing gymnasium to serve as an auxiliary gym.

The Phase 3 Design Development Submittal has resulted in a project that remains consistent with the project goals and the needs of the Ridge Spring and Monetta communities.

KINDERGARTEN PLAYGROUND

EXISTING SITE & PHASE 2 CONSTRUCTION

The site is the existing Ridge Spring-Monetta Middle/High School campus located at 10 JP Neese Dr. in Monetta, South Carolina. The new work will be phased in order to keep the existing portions of the school in operation as portions of the existing buildings are selectively demolished while new portions are constructed. The new wings will visually complement the existing Phase 1 Middle School wing, but will ultimately result in a new face for the school, and a cohesive design that is welcoming while providing security and a sense of pride for the Ridge Spring and Monetta communities.

Vehicular circulation will be largely re-configured with new car and bus drop-off loops incorporated into the design. New and expanded parking areas will maintain parking accommodations while providing safer pedestrian connections between the existing buildings to remain and the new wings.



FOOTBALL/TRACK STADIUM UNDER CONSTRUCTION

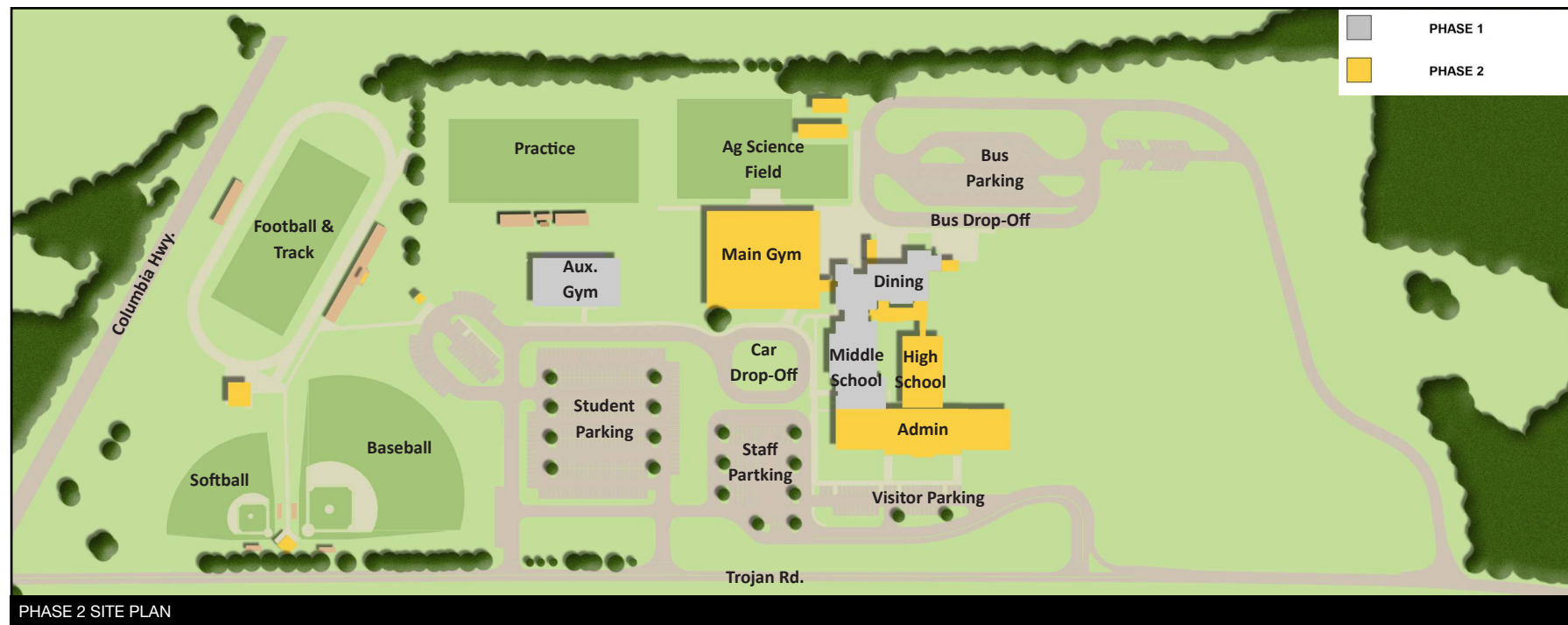
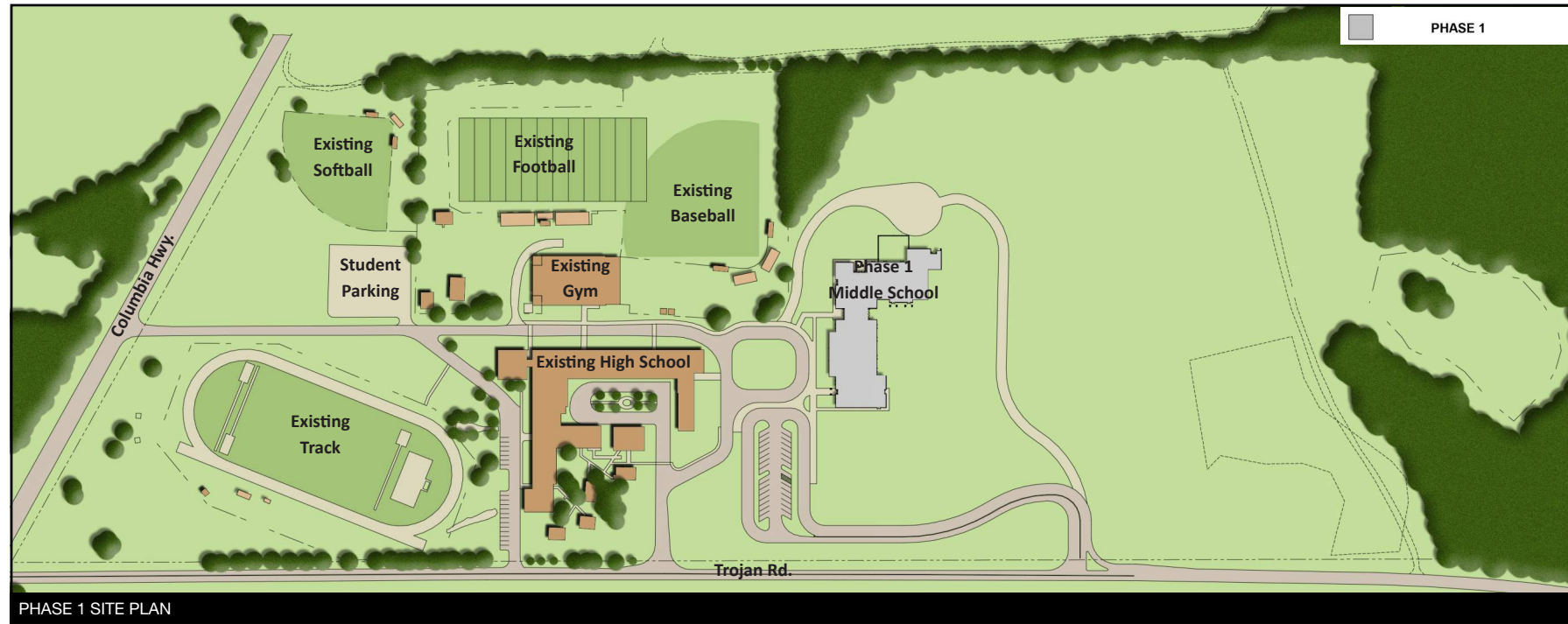


MAIN ELEMENTARY SCHOOL ENTRY UNDER CONSTRUCTION



PHASE 2 CLASSROOM AND ACTIVITIES BUILDINGS UNDER CONSTRUCTION

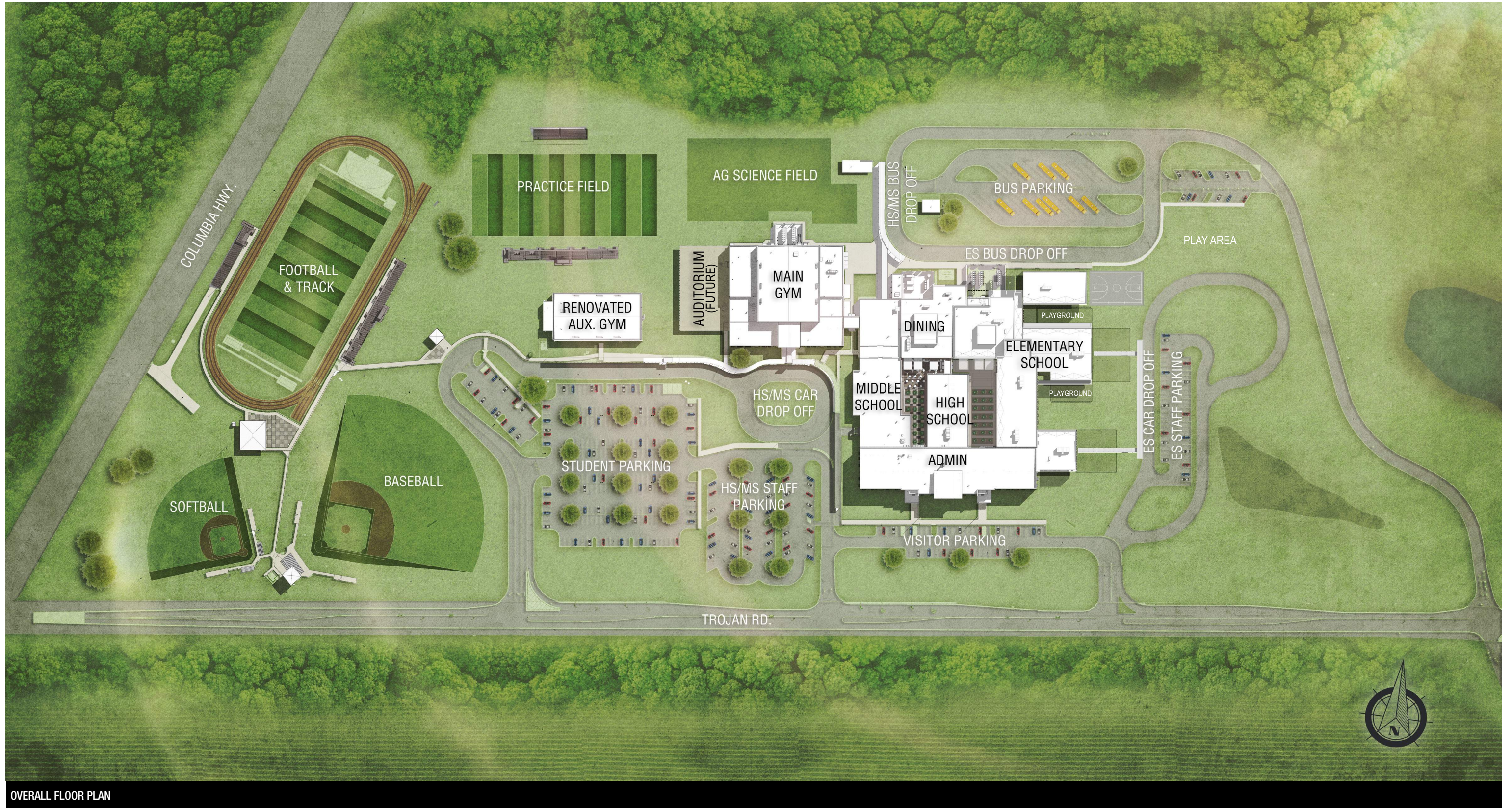
PHASING PLANS



PHASING PLANS

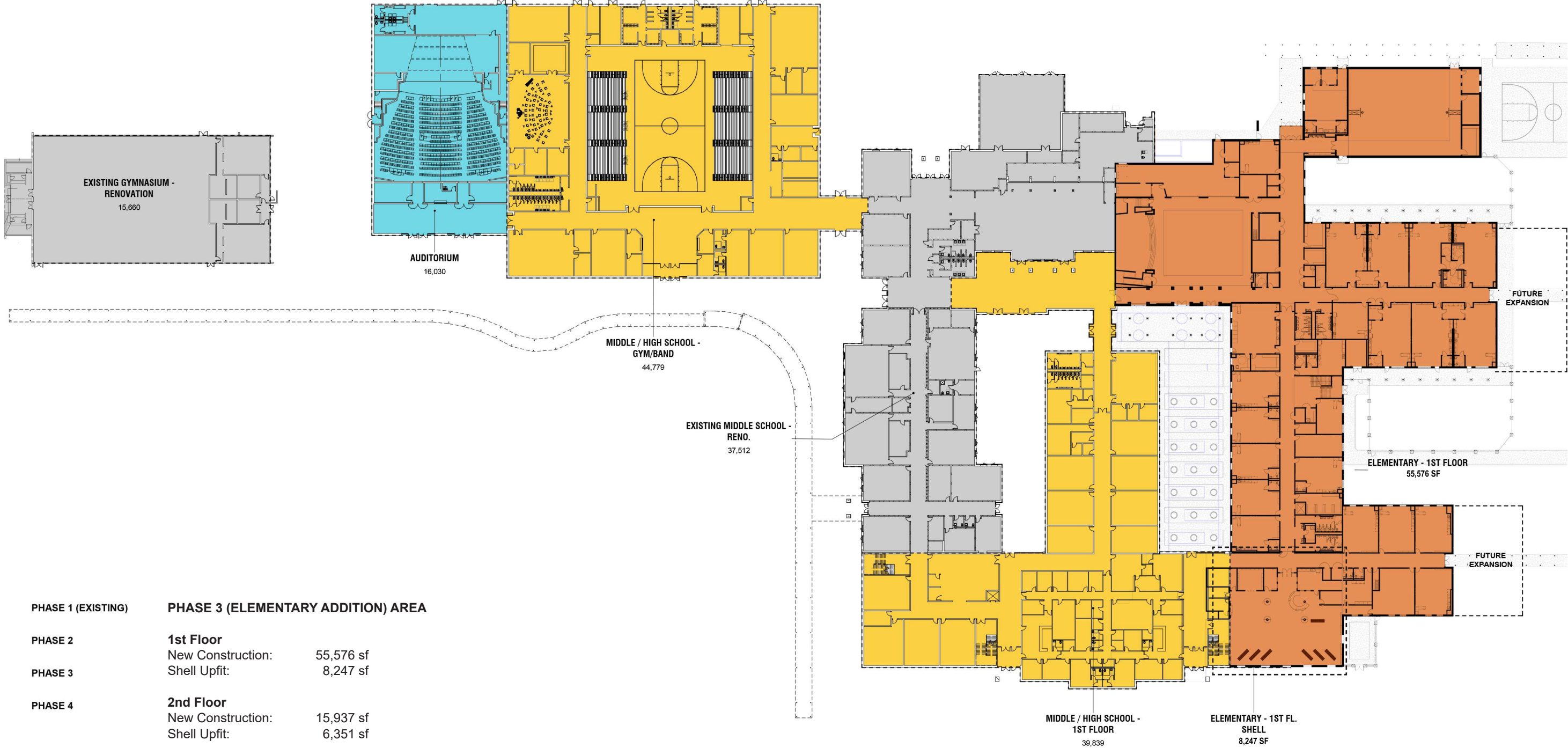


OVERALL SITE PLAN (PHASE 3)



OVERALL FLOOR PLAN

FLOOR PLANS - FULL BUILD OUT



<ul style="list-style-type: none"> PHASE 1 (EXISTING) PHASE 2 PHASE 3 PHASE 4 	<p>PHASE 3 (ELEMENTARY ADDITION) AREA</p> <p>1st Floor New Construction: 55,576 sf Shell Upfit: 8,247 sf</p> <p>2nd Floor New Construction: 15,937 sf Shell Upfit: 6,351 sf</p> <p>Total New Construction: 71,513 sf Shell Upfit: 14,598 sf</p>
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PHASE 3 FLOOR PLAN - 1ST FLOOR



PHASE 3 (ELEMENTARY ADDITION) AREA

1st Floor
 New Construction: 55,576 sf
 Shell Upfit: 8,247 sf

2nd Floor
 New Construction: 15,937 sf
 Shell Upfit: 6,351 sf

Total
 New Construction: 71,513 sf
 Shell Upfit: 14,598 sf

- GENERAL & RESOURCE CLASSROOMS
- PHYSICAL EDUCATION
- DINING / FOOD SERVICE / PERFORMANCE
- ADMIN.
- MEDIA CENTER
- SPECIAL EDUCATION
- VISUAL ARTS & CHORUS
- SUPPORT
- COMPUTER LABS
- TRANSPORT. OFFICE

PHASE 3 FLOOR PLAN - 2ND FLOOR

PHASE 3 (ELEMENTARY ADDITION) AREA

1st Floor	
New Construction:	55,576 sf
Shell Upfit:	8,247 sf
2nd Floor	
New Construction:	15,937 sf
Shell Upfit:	6,351 sf
Total	
New Construction:	71,513 sf
Shell Upfit:	14,598 sf



- GENERAL & RESOURCE CLASSROOMS
- PHYSICAL EDUCATION
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EXTERIOR PERSPECTIVES



MAIN ENTRY PERSPECTIVE



TROJAN ROAD PERSPECTIVE

EXTERIOR PERSPECTIVES



REAR BUS LOOP PERSPECTIVE



CAR DROP OFF PERSPECTIVE

INTERIOR PERSPECTIVES

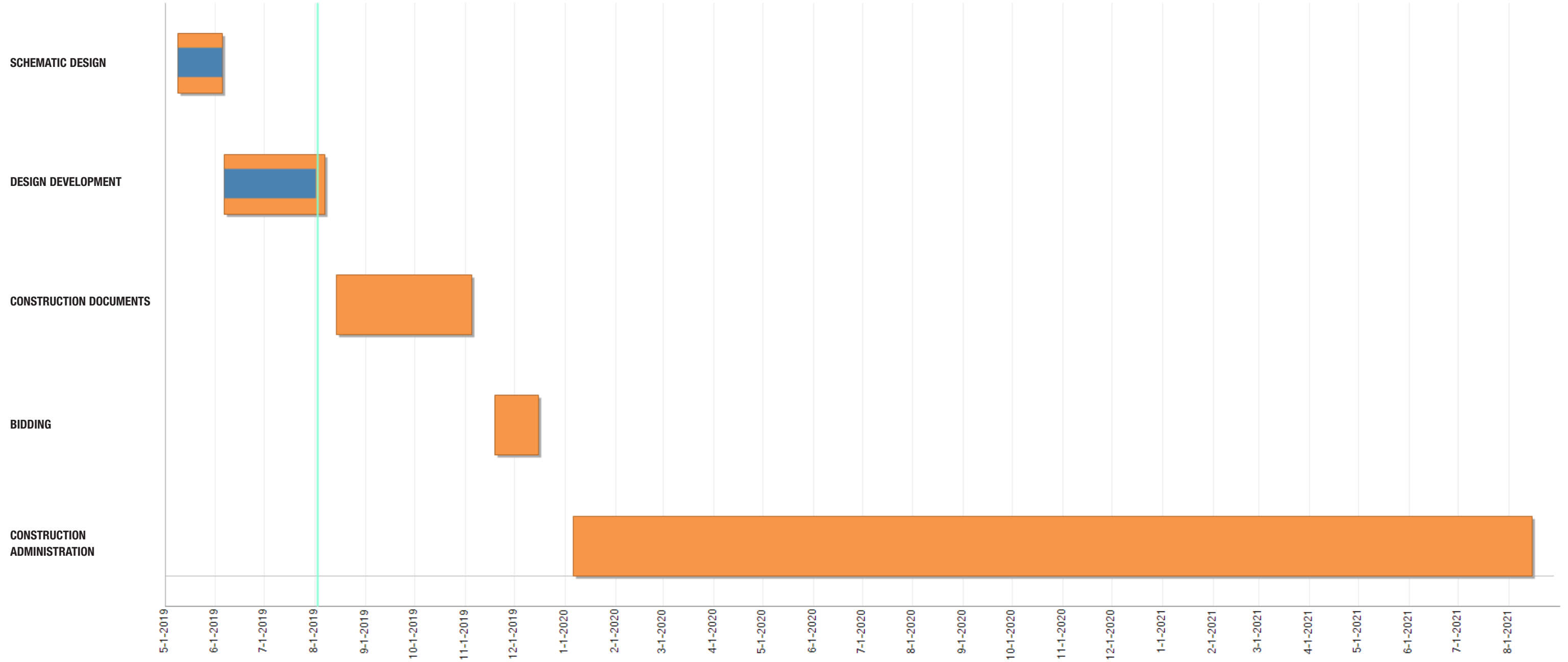


MEDIA CENTER CONCEPTUAL PERSPECTIVE



ELEMENTARY SCHOOL DINING CONCEPTUAL PERSPECTIVE

SCHEDULE



PROJECT BUDGET SUMMARY ESTIMATE

Ridge Spring-Monetta: Elementary School
Aiken County School District
 LS3P Commission No.: 2201-168720

10-Sep-19



Description	High School & Admin		Phase 2 GMP (2016-2019)		K-5 Classrooms and Admin.		Phase 3 (2019-2021)		Auditorium & Aux Gym Renov		Phase 4 (FUTURE)	
	GSF	\$/GSF	Totals	GSF	\$/GSF	Totals	GSF	\$/GSF	Totals	GSF	\$/GSF	Totals
Estimated Construction Costs												
GMP for Phase 2 high school			\$32,217,171									
Building												
Estimated Phase 3 Elementary School Shell Upfit/New Construction				86,111	\$212.61	\$18,307,817						
Site												
Estimated Phase 3 Elementary School Site & Offsite Infrastructure						\$2,025,622						
Projected Sub-Total Construction			\$32,217,171			\$20,333,439						
FUTURE												
MS/HS Auditorium									16,000	\$285	\$4,560,000	
Existing Gym Renovations									15,000	\$15	\$225,000	
<i>Sub-total</i>											\$4,785,000	
TOTAL CONSTRUCTION			\$32,217,171			\$20,333,439					\$4,785,000	
<i>Design/Estimate Contingency</i>											\$334,950	
Projected Total Construction / Phase			\$32,217,171			\$20,333,439					\$5,119,950	
Professional/Technical/Inspection Fees												
(Fees, surveys, inspections)												
TOTAL			\$2,733,130			\$1,376,080					\$619,590	
Advertising												
<i>Bid advertisements</i>						(included in CM@R)					(included in CM@R)	
Miscellaneous												
Hazardous Material Consultant / Abatement												
(in Phase 2 demo)												
Fixtures, Furnishings & Equipment; Technology												
10% of Projected Const.			\$3,221,717			\$2,033,344					\$511,995	
TOTAL			\$3,221,717			\$2,033,344					\$511,995	
Sub-Total			\$38,172,018			\$23,742,863					\$6,251,535	
Overall Project Contingency		(% of GMP)			4.00%							
			\$1,288,687			\$813,338					\$204,798	
ESTIMATED TOTAL			\$39,460,704			\$24,556,201					\$6,456,333	
<i>Running TOTAL</i>			\$39,460,704			\$64,016,905					\$70,473,238	
Alternates												
Add'l. Construction Admin (LS3P weekly)	17 mos.	\$7,000	\$112,000	14 mo	\$7,000	\$98,000	14 mo	\$7,000	\$98,000			
Add'l. Construction Admin (Consultants as req'd)	17 mos.	TBD		TBD			TBD					
			\$39,572,704			\$24,654,201					\$6,554,333	
Running TOTAL			\$39,572,704			\$64,226,905					\$70,781,238	
OVERALL PROJECT BUDGET			\$65,489,000								\$5,292,238	
						<i>Under/Over Budget</i>						

*Actual costs to be provided by District.



A. STRUCTURAL SYSTEM

General Structural Description

1. Applicable Building Code: 2015 IBC and ASCE 7-10 for wind, seismic and gravity loadings.
2. Structure: The building will be a two-story structure with exterior and interior load-bearing CMU walls.
3. Seismic Design Category: Site class C with a classification of Seismic Design Category C for the building in accordance with the 2015 International Building Code.

Foundations and Slabs-On-Grade

1. Floor Slab: Floor slab will be a 4" slab on grade reinforced with wire fabric over a vapor retarder and 4" granular base.
2. Foundations: the foundation system will consist of conventional wall footings for exterior walls and spread footings for columns. Tops of exterior footings will typically be at 2'-0" below finish floor and tops of interior footings will typically be at 1'-4" below finish floor.
3. Concrete: Concrete for foundations and floor slabs on grade will be 3000 psi normal weight concrete.

Roof System

1. Typical Areas: Roof structural system for the majority of the building will be galvanized steel deck on open web steel joists.
2. Physical Education: Roof structural system at the gymnasium will be longspan steel joists with acoustical galvanized and prime painted steel deck.
3. Mechanical Units: Concrete slabs will not be provided for rooftop mechanical units. Units will be supported on the typical bar joist and metal deck system, with steel beams added where required.

Wall System

1. Masonry Walls: walls, and interior load-bearing walls, and interior partition walls will be lightweight CMU. Exterior walls will have brick veneer in some locations. All CMU walls will be reinforced and grouted at reinforced cells. CMU walls will function both as load-bearing elements to support the roofs and as shear walls to laterally brace the buildings to resist wind and seismic loads. CMU wall thickness will be 8" at typical conditions and 12" at two-story high spaces such as the physical education space. Three-hour walls will be 12" CMU walls grouted solid.

Steel Framing

1. Steel Frame: A steel frame will be provided in some areas which have extensive glass areas in exterior walls as required to support the roof and floor. Steel tube girts and wind columns may also be required for backup of large curtain wall areas. Resistance to wind and seismic lateral loads in these areas will be provided either by moment frames, braced frames or concrete block shear walls, or a combination of these elements.
2. Steel Materials: steel wide flange shapes will be ASTM A992, 50 ksi. Steel tubes will be ASTM A500, Grade B. Steel pipe will be ASTM A53, Grade B. All other structural steel will be ASTM A36. Lintels in exterior walls will be hot-dipped galvanized.

B. 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 (3) plies of fiberglass felts adhered in hot asphalt and an Energy Star granule surfaced modified bitumen cap sheet adhered in cold adhesive. A three (3) year Contractor's Warranty and a twenty (20) 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 2015 IBC and ACPS requirements.

C. EXTERIOR AND INTERIOR WALLS

The exterior facade of the new wings will consist of masonry and metal panels with aluminum windows. The majority of the interior wall surfaces will be painted concrete block.

D. DOORS AND WINDOWS

Exterior doors will be painted hollow metal (steel) while interior doors will typically be stained solid core wood. All door frames will be hollow metal (steel). Classroom windows will typically be aluminum, triple-glazed, with integral blinds. Aluminum storefront windows will be used at selected locations.

MATERIALS AND SYSTEMS

E. WALL FINISHES

All interior walls will be primed and will have a minimum of two finish coats of paint applied. Waterborne epoxy paint will be used on all concrete block walls.

F. FLOOR FINISHES

Vinyl composition tile will be used at the classrooms and corridors. The toilets will feature resilient flooring. The elementary school physical education room will have resilient sports flooring. Resilient epoxy flooring will be used in the kitchen expansion and serving area. Floors will be painted with waterborn epoxy floor paint in janitor, electrical, data, mechanical, and fire riser rooms.

G. CEILINGS

Acoustical ceiling tile (2'x2') will typically be provided throughout corridor and classroom spaces. Hard ceilings will be used in toilet rooms. No ceilings will typically be installed in janitor, electrical, data, mechanical, or fire riser rooms.

H. ACCESSORIES AND SPECIALTIES

Marker and tack boards will be provided in all classroom and teaching areas. Signage will be provided to identify each space. Rough-ins will be provided for District-installed flat display panels.

I. CASEWORK AND MILLWORK

Durable grade plastic laminate cabinets will be typically provided throughout. Display cabinets, a media circulation desk, and media book shelving will be provided.

J. FIRE PROTECTION

All of the additions will be protected throughout with an automatic fire sprinkler system.

The new additions will be served from existing fire lines which have been stubbed out for connection to these spaces as part of the Phase 2 project.

The existing system and the new additions will be served by the existing risers and existing Fire Pump installed as part of the Phase 2 project.

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

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 space without ceilings.



MATERIALS AND SYSTEMS

K. PLUMBING

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

Sanitary sewer shall be collected inside the building and extend 5'-0" outside the building for connection to the site sanitary sewer system.

Water closets shall be floor mounted with flush valves. Urinals shall be wall hung with flush valves. Flush valves installed in group restrooms shall be self-powered, sensor type.

Except for lavatories in adult restrooms, lavatories shall be wall hung, enameled cast iron fixtures with sensor type hot and cold water faucets. Group restroom lavatories shall have sensor type cold water faucets only. Faucets shall be self-powered type. Lavatories in single adult restrooms shall have manual faucet with gooseneck and 4" wrist blades.

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

Wall hydrants will be surface mounted, loose key, anti-freeze with 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 bibb with loose key and vacuum breaker will be located in all toilets with floor drains and in mechanical rooms.

Water piping located above ground shall be type "L" copper and water piping located below grade shall be type "K" copper. All waste and storm drain piping located below grade shall be schedule 40 PVC piping. All waste, vent and storm drain piping located above ground shall be No-hub type cast iron piping with heavy duty stainless steel coupling. All gas piping located above ground shall be either corrugated stainless steel piping by Tracpipe or schedule 40 black steel. All gas piping located below grade shall be corrugated stainless steel piping by Tracpipe. If sufficient water pressure is not available on the site, a duplex booster pump shall boost the water pressure of the entire campus. The water service to the building shall be protected with a backflow preventer.

L. MECHANICAL SYSTEM

The classrooms and Media Center will be served with rooftop, chilled water, variable air volume (VAV) air handlers and terminal units with electric heat. The Serving Area will be served with a rooftop, chilled water, constant volume air handler. The Dining Room and Physical Education Room will be served with rooftop, chilled water, single zone VAV air handlers. All air handlers will be dual wall with chilled water coils and SCR electric preheat or reheat coils.

The terminal units are shutoff and fan-powered type with SCR electric reheat. Electric ceiling unit heaters serve entry vestibules and electric unit heaters serve utility spaces. Toilets, janitor's closets, fire protection riser rooms, and electrical rooms are exhausted. Transfer fans with filtered grilles are used to ventilate data closets.

One new variable flow primary chiller will be added to the existing chiller plant in this project. All above ground chiller yard piping is heat traced.

Chilled water piping will be Schedule 40 black steel. Refrigerant piping will be ACR copper. Condensate drain piping will be Type L copper.

All ducts will be either rectangular or spiral galvanized sheet metal unless specified otherwise. Exposed ductwork will be dual wall spiral with liner protecting the airstream and shall have a paint grip coating to allow finish painting of the duct. Ceiling diffusers will be louvered face grilles. Ceiling diffusers in classrooms will be high induction louvered face grilles. Ducts will be Seal Class A.

Insulation for concealed supply and return duct will be 2" FSK fiberglass insulation with FRP jackets. Indoor pipe insulation will be fiberglass with ASJ jacket. Outdoor pipe insulation aboveground will be polyisocyanurate with an aluminum jacket. Underground chilled water piping will have polyurethane insulation with a PVC or FRP jacket.

HVAC systems will be controlled by the existing and renovated web-based Automated Logic Control System. The system will be upgraded as necessary to support the new HVAC systems. Most exhaust fans will be controlled by occupancy schedules; some will be controlled by wall switches. Common lighting zones (primarily corridors and exterior lighting) will be controlled by the building control system. Space humidity sensors will be provided at various locations to monitor space humidity levels.



MATERIALS AND SYSTEMS

M. ELECTRICAL

Normal and emergency power service for the new addition will be obtained from service equipment installed for the addition under phase 2. Service voltage is 277Y480V 3-phase 4 wire. Step-down dry-type transformers will be provided for 120Y208V service. HVAC equipment and lighting will typically be fed at 277Y480V. Kitchen equipment will typically be fed at 120Y208V where available by the equipment manufacturer.

Interior lighting will generally consist of specification grade LED lay-in lighting fixtures. Lighting levels in classrooms will be controlled via simple 0-10V dimming, inherent in contemporary LED driver design, and shall provide separate control for teaching wall. Exterior lighting will consist of building mounted LED architectural cut-off security fixtures. Occupancy sensors for lighting control and energy savings will be used as much as possible. Commons areas such as corridors and exterior lighting will be controlled by the building automation 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. Basis of design will be systems manufactured by Silent Knight to match equipment installed under phase 2.

A 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 system will be installed for the sole use of IT, security, CCTV, and other IT/AV system installed outside the construction contract. Cable tray utilized will be aluminum ladder type tray. Nominal outlet locations in instructional spaces shall be for nine (9) drops per classroom: one for teacher station, two for wireless access point, and six for student stations.

Instructional spaces will be equipped with FrontRow integrated audio-video networked control system to support multi-media applications between the instructor's station and display equipment.

A two-way school intercom system shall be provided for calls to instructional areas and for general paging through the building. System will be a FrontRow Conductor IP based intercom system with dedicated server. Call-back capabilities will be provided in education spaces, offices, and other selected locations. A graphical administration station will be provided at the main reception desk. Principal and staff access to the system will be via telephone interface.

Sound reinforcement systems with additional rough-ins for future A/V presentation systems will be provided in the cafeteria.

