SANTA ROSA COUNTY DISTRICT SCHOOLS

Gulf Breeze Midle School

BUILDINGS 2

EXISTING CONDITIONS AND CASTALDI STUDIES

MAY 2021

SAM MARSHALL ARCHITECTS

Over 50 years of Architectural Service | SAM MARSHALL ARCHITECTS

Gulf Breeze Middle School

BUILDING 2

EXISTING CONDITIONS AND CASTALDI STUDIES

APRIL 2021

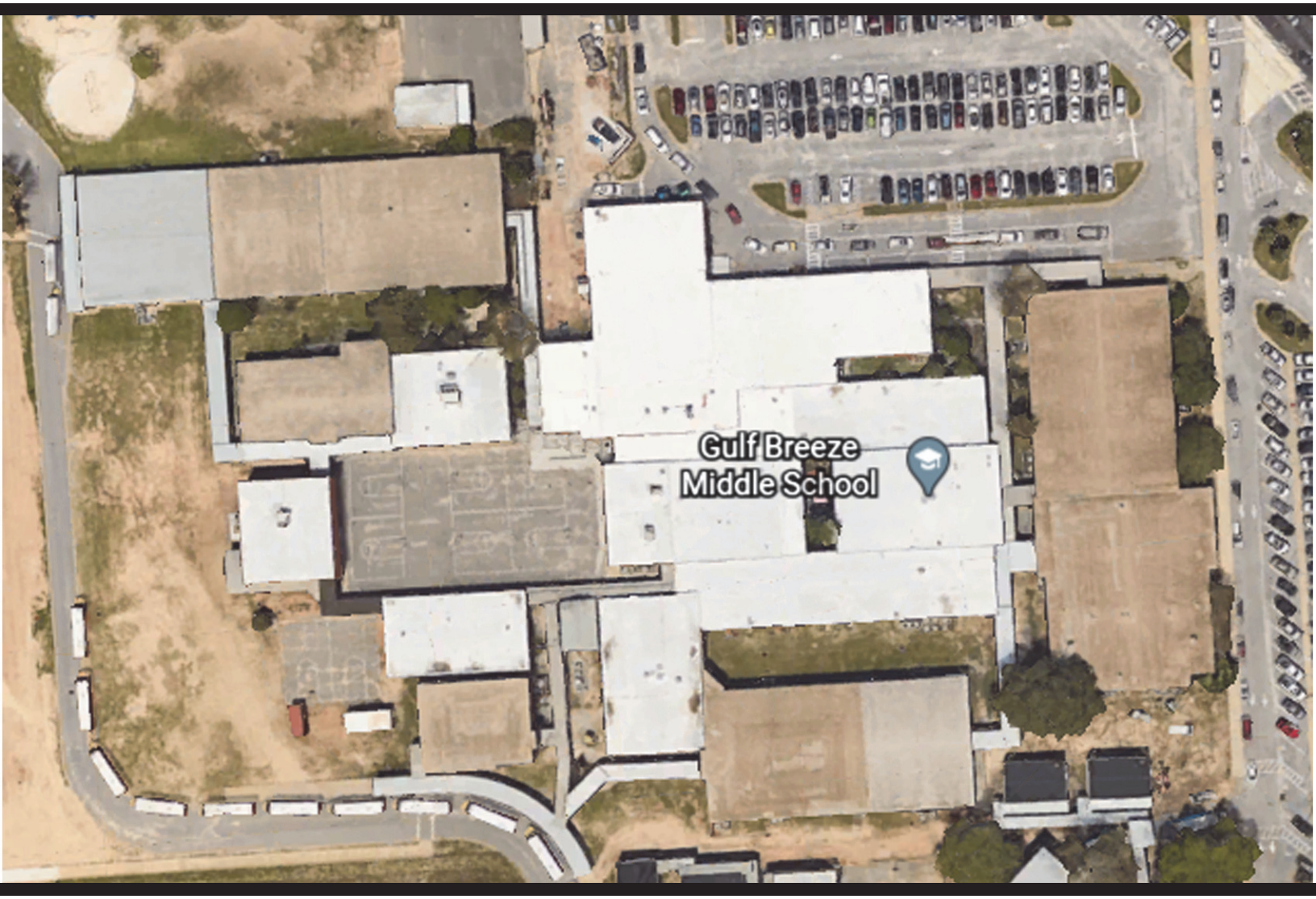
Table of Contents

Gulf Breeze Middle School - Campus Plan

Santa Rosa County District Schools

Gulf Breeze Midle School

CAMPUS PLAN



SAM MARSHALL ARCHITECTS

HISTORY:

Master Plan
The site is on the west side of the Gulf Breeze Middle School campus. This PE Locker Room building is bordered on its north by an outdoor basketball court and on its south by an adjacent building, and the covered bus drop off. To its west lies the school's multi-purpose Physical education building and an un-developed portion of the campus.

Original Construction
The 1966 building is a rectangular shaped, flat roofed structure. The building is a locker room for boys. When built it had a boy's and a girl's side. However, when Building 2 was built north of the outdoor court to provide a separate girl's locker room, the intermediate wall in Building 2 was removed and it became a boy's locker room.

Modifications
None

Activities
The building has locker rooms, showers, restrooms, and coach's offices.

PHYSICAL DESCRIPTION:

Site:
The site has good access from the open area on the west side. The north and east side is served by covered walks. The cover on this walk is corrugated metal deck over a steel frame. The walk appears to be in decent shape but needs some painting and other maintenance. Like exists at many other schools, the bottom of this canopy has been used as a path for electrical conduits.

Structures:
The roof structure is a concrete frame. Exterior walls are brick over concrete masonry units with a concrete frame. Interior walls are concrete masonry units and metal studs. The floor is a concrete slab on grade. The square footage of the building is approximately **3,522 square feet.**

REPORT OF CONDITIONS:

Structural:
The existing structure on this building appears to be in decent shape.

The building's roof is Tectum roof panels over concrete joists spaced at 2 feet on center. The exterior walls are brick over 2" CMU back up. It is unlikely whether these walls are reinforced. The main structural system is a series of cast in place concrete columns and perimeter beams. The foundations is a shallow turned down slab foundation.

While Building 2 is in good structural condition with no masonry cracks or other visible signs of deterioration, we feel the roof structure is inadequate to resist the current code calculation wind loads.

Recommendations for repair include augmenting the existing roof structure and reinforcing exterior bearing walls. Existing footings may need to be modified as well.

Estimated cost of structural repairs **$80,000**

Exteriors:
The building has a single ply PVC roof membrane. The existing roof slope is most likely created from either lightweight insulating concrete or tapered roof insulation. The perimeter of the roof has aluminum gutters and downspouts. The downspouts are tied into an underground collection system.

The exterior is brick over concrete masonry units. Metal wall panel clads the upper part of the walls in some areas. Hollow metal doors and frames are in place throughout Building 2. Fixed aluminum windows are located up high in the locker rooms, shower areas and offices. The window glass is insulated but is not impact rated.

Interiors:
Finishes are Tectum roof deck, painted concrete masonry interior walls, some gypsum board walls, and Terrazzo floors. Ceramic tile floors and walls area used in the showers.

The functional layout of the building fits its current use.

RECOMMENDATIONS:

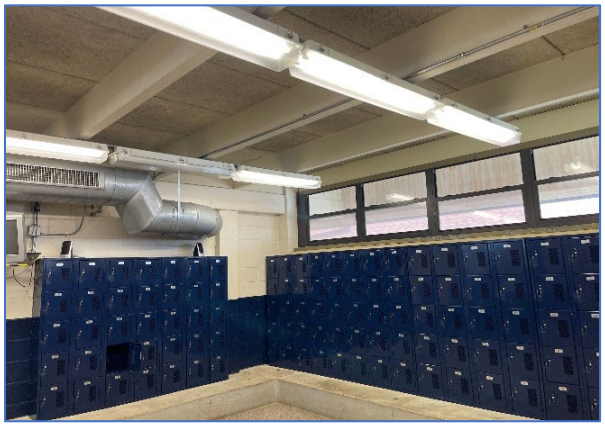
Facilities Summary - The building needs to be brought up to current Santa Rosa School District standards.

The renovation and repair for Architectural and Structural elements of the building will include the following:

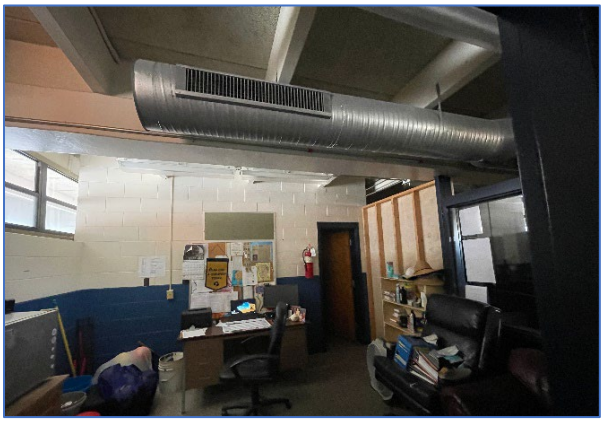
1. Replace existing windows with impact rated fixed and operable insulated windows. **$52,000.**
2. Replace the existing doors. **$12,000.**
3. Replace the existing roof to facilitate the upgrade to the roof structure. **$52,000.**
4. Total estimated Architectural repair and renovation cost: **$116,000.**

North side

South side

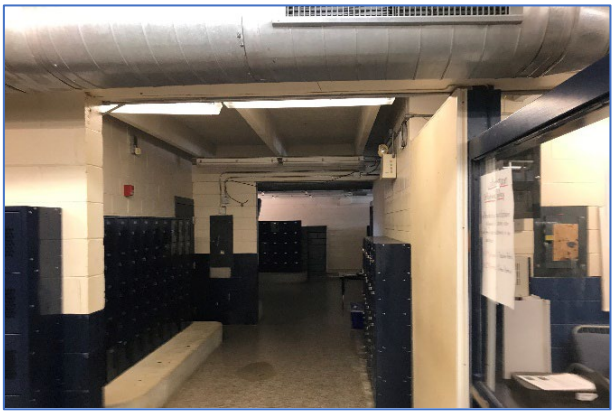


Locker room



Office

Shower



Hallway

HVAC
The items below are the specifics that would define the scope that will need to be included if the building were to be renovated or remodeled.

- Upgrade the building so that it is in compliant with the Florida Building Code and Fire Prevention requirements
- Replace all HVAC equipment with high efficiency commercial grade units with an active dehumidification control sequence
- Replace existing ductwork system and grilles
- Provide and install an Energy Management System to would improve efficiency and increase cost savings for enclosed areas
- Remove and replace all plumbing fixtures
- Bring all required fixtures and restrooms into compliance with ADA requirements
- Provide a fire protection system integrated with the fire alarm system that will be installed in the near future

HVAC General:
Building 2 is served entirely by split system direct expansion system – dedicated outside air unit and roof mounted exhaust fans. Each unit was designed to distribute the conditioned air via fully ducted and exposed supply air system sidewall grilles. The building was also designed to be 100% single pass thru system. There is no recirculation air in the building.

HVAC Recommendation:
The existing systems are functioning but are well beyond their useful service life. Typical median life of DX packaged equipment is about 15 years. It appears that these existing units are up to current codes for ventilation, service, and safety standards however there is no means to condition the building when the outside air unit is OFF. Therefore, the building uses lots of energy during unoccupied mode. In order to bring the HVAC system up to current codes and standards, the following needs to be performed:

1. Replace HVAC system serving this building completely with high-efficiency units that incorporates energy recovery unit and ductless split system. The ductless split units will condition the building during unoccupied times. The energy recovery unit will use the exhausted conditioned air to pre-condition the outside air. This will save some energy cost.
2. Provide building DDC (Direct Digital Controls) system with new code compliant system(s). System would need to be provided with modern BACNet architecture as part of any upgrade. Web based energy management software permits oversight of component status but provides limited to no ability to change set point or schedule operation.
3. The new system(s) will supply all spaces with the proper dehumidified outside air. Provide outside air per ASHRAE 62.1 standard. Provide bi-polar ionization and/or UV lights to reduce odor and airborne transmission virus.
4. A comprehensive review of the new systems would be performed in order to verify compliance with the 2020 FBC Energy Conservation Code.
5. Estimated repair cost = **$85,000**

Plumbing General:
Plumbing fixtures are old and need to be replaced. Most of the remaining fixtures should be replaced based on their useful life. There is plumbing infrastructure within the building that appears original to the construction of the building. The building is served by a gas fired water heater located inside the mechanical room. The Median Service Life of a gas fired water heater is approximately 13 years. As water heaters age, their efficiency decreases. The majority of the visible hot water piping was not insulated, which is a loss of energy and does not meet the current Florida Energy requirements. The water heater is not piped properly since there is no mixing valve.

Plumbing Recommendation:
In order to bring the plumbing system up to current codes and standards, the following needs to be performed:

1. Replace all the plumbing fixtures and infrastructure piping. Provide new accessories, toilets, sinks, urinals, showers, faucets and for the new fixtures.
2. Provide existing water heater with new mixing valve to prevent legionella growth inside the tank.
3. Coordinate and review the Florida Building Code for the addition of more fixtures to meet the occupant count.
4. Estimated repair cost = **$18,000**

Fire Protection: Building 2 has NO existing fire protection system.

Building 2 – Exterior view with backflow preventer (to remain) and HVAC unit equipment

Building 2 – Exposed supply ductwork inside coach's office.

Building 2 – Typical exhaust duct and grille inlet with roof mounted fan.

Building 2 – Typical exposed supply ductwork and grille serving the locker rooms

Building 2 – Split system condensing unit well past useful life.

Building 2 – Split system DX outside air unit well past useful life.

Building 3 – Non-ADA compliant water closet stall

Building 2 – Existing gas fired water heater without mixing valve and insulation.

Electrical

Building 2 has two electrical services. Service one is 208Y/120 volt, 100-amp panel BLX – formerly panel LP-PE – fed from the campus main panel MPA. Service two is 208Y/120 volt, 400-amp panel NBP. The source of panel NBP was not evident during the survey. Panel BLX is at the end of its usable life and should be demolished in any future renovation. Panel NBP is in fair condition and would not require replacement in any immediate renovation. It is recommended to convert this building from two services to one. Existing loads, demolished loads, and added loads should be considered to determine the proper size for a single service to the building.

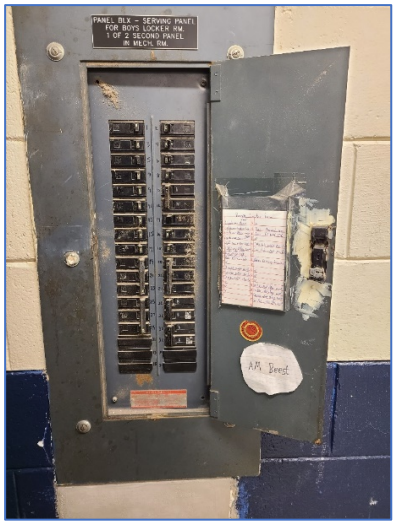
The existing light fixtures are inefficient, fluorescent type. The light fixtures show signs of age with rust, moisture damage, and physical damage. It is recommended to upgrade all light fixtures in any future renovations. Lighting controls are not code compliant with proper occupancy and vacancy detection. Lighting controls will be required to be upgraded in any future renovation.

The electrical systems throughout the facility utilize surface raceways. It is recommended that all raceways be concealed during any future renovations.

The fire alarm systems do not have proper heat detection throughout the facility. fire alarm heat detection must be added throughout the facility during any future renovation.

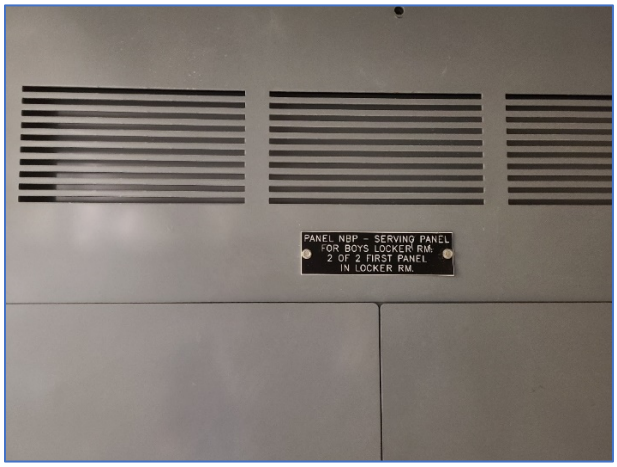
Estimated Electrical Repair costs:

Electric Gear Replacement	**$24,000**
Lighting and Controls	**$19,200**
Fire Alarm	**$ 9,000**
Raceway Repairs	**$ 7,200**
Total electrical	**$59,400**

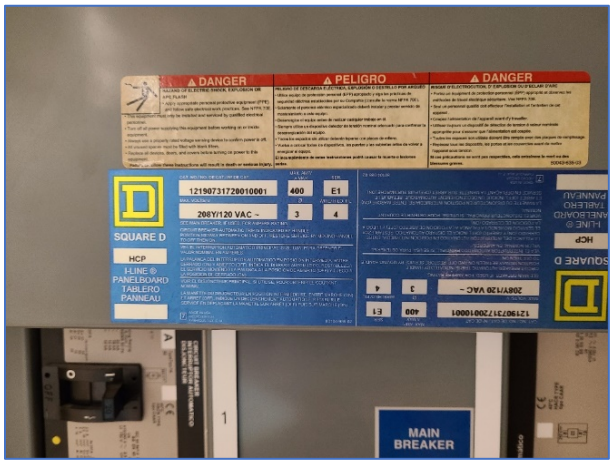


Panel BLX

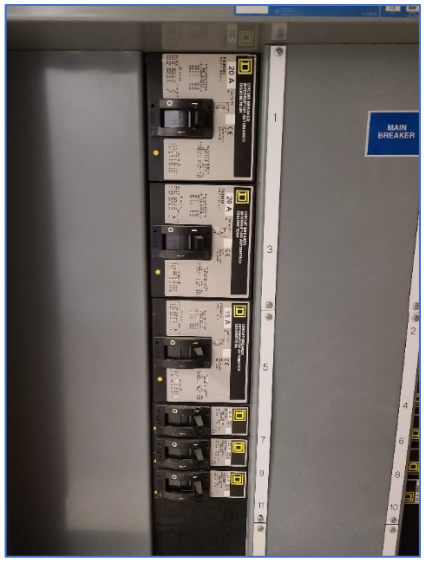
Surface raceway



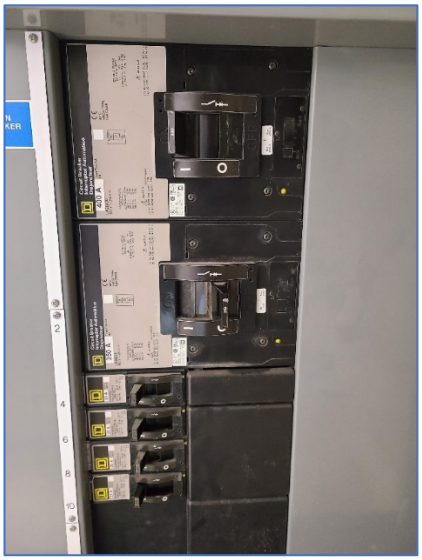
Panel NBP label



Panel NBP data



Panel NBP left side



Panel NBP right side

Lighting Fixtures

Building 2
Cost Estimate Synopsis

(Ce) Educational Improvements	Remodeling, educational technology		$0
(Ch) Healthfulness Improvements	HVAC	$85,000	
	Plumbing	$18,000	
	Lighting	$19,200	
	Windows	$52,000	
	Doors	$12,000	
			$186,200
(Cs) Safety Improvements	Structural	$ 80,000	
	Re roofing	$ 52,000	
	Fire Alarm	$ 9,000	
	Electrical	$ 31,200	
			$172,200
Total			**$358,400**

GULF BREEZE MIDDLE SCHOOL BUILDING 2 - CASTALDI ANALYSIS

Year Built 1966	Abbrev.	Cost/SF	Total
Age of Building - 55yrs			
Replacement Cost	(R)	$250	$880,500
Educational Improvements	(Ce)	$0.00	$0
Healthfulness Improvements	(Ch)	$52.87	$186,200
Safety Improvements	(Cs)	$48.89	$172,200
Life of New Building	(Lr)	65	
Life of Modernized Building	(Lm)	15	
Index of Educational Adequacy	(Ia)	0.75	

Gross SF - 3,522

Castaldi Analysis

If… $\frac{(Ce + Ch + Cs)}{(Lm)(Ia)} < \frac{(R)}{(Lr)}$

Then modernization is not justified

However…

$\frac{\$358,400}{(15)(0.75)} > \frac{\$880,500}{65}$

Which equals

$31,858 > $13,546

Therefore a new building is justified

Educational Improvements

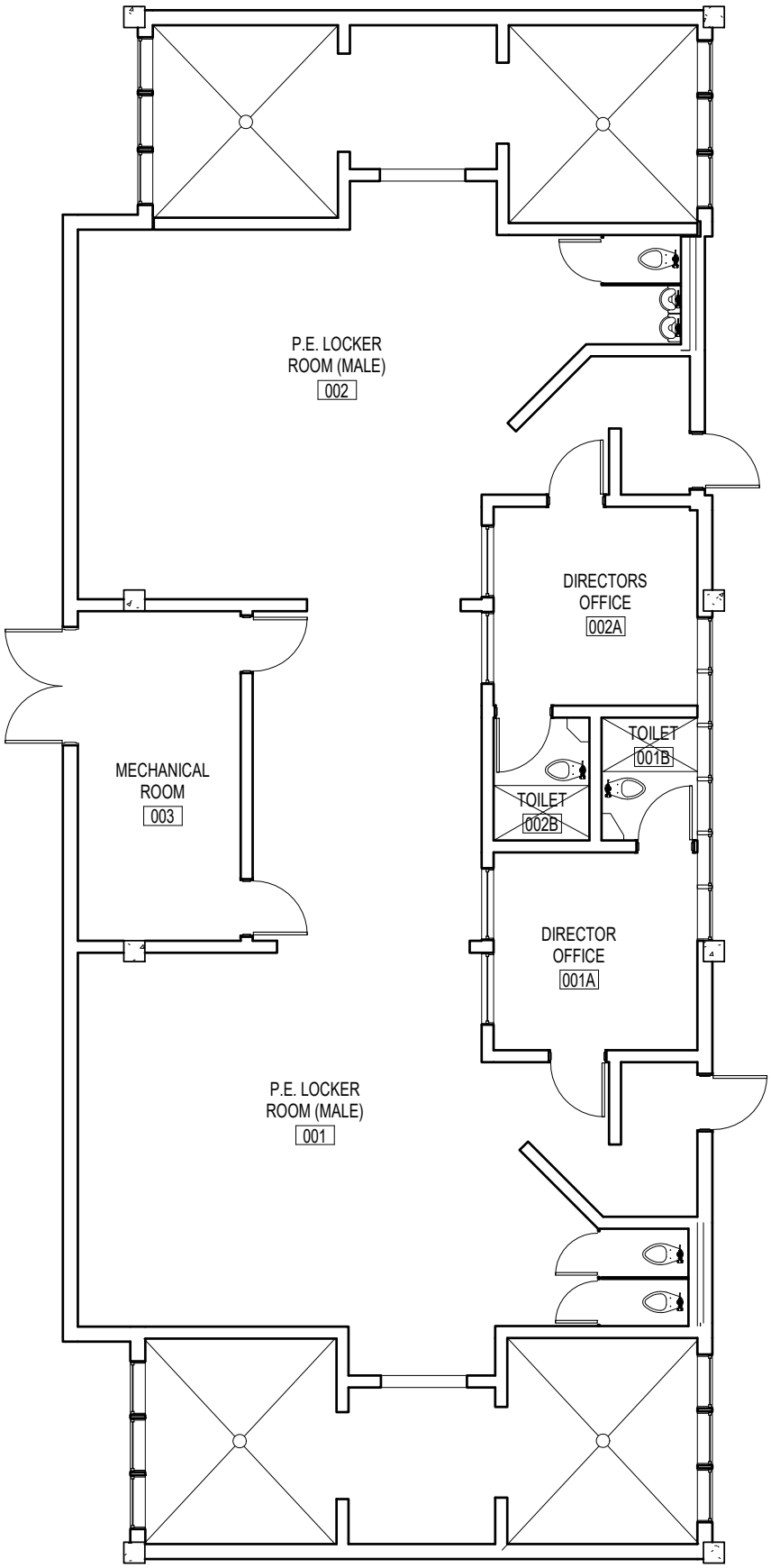
May include improvements such as remodeling, updating and accommodating new teaching practices.

Healthfulness Improvements

May involve improved HVAC systems, improved lighting, re-fenestration, re-surfacing floors or ceilings.

Safety Improvements

May include structural repairs, fireproofing, fire alarm, fire rating corridors, meeting ADA compliance.



BLDG. 2 FLOOR PLAN

NOT TO SCALE

Office of Educational Facilities
Florida Department of Education

Room Condition Change
Building Replacement/Raze

District/Community College_____ Contact Person _____

_____ Phone _____

Facility/Campus Name _____ Facility Number (school districts only)_____

Building Number(s) _____ Parcel/Site Number(s) _____

This Proposed Project will:

- ☐ Change the condition of permanent rooms from satisfactory to unsatisfactory (if yes, go to Section I and complete certification in Section III). (Not applicable to community colleges)
- ☐ Change the condition of permanent rooms from unsatisfactory to satisfactory (if yes, go to Section I and complete certification in Section III). (Not applicable to community colleges)
- ☐ Raze permanent building(s) (if yes, go to Section II and complete certification in Section III).
- ☐ Replace permanent building(s) (if yes, go to Section II and complete certification in Section III).
  Major Capital Outlay Funding Source(s) – Original Building _____
  Major Capital Outlay Funding Source(s) – Replacement Building _____

This form is not required for razing a single, freestanding structure that is less than 750 NSF and is debt free, or multiple small structures on a single campus whose total area is less than 750 NSF and are debt free. This form must be completed for any structure 750 NSF or greater and any structure, regardless of size, that is not debt free.

A. DISTRICT/COMMUNITY COLLEGE CERTIFICATION

The district/community college must submit this certification document, completed and signed by the appropriate school officials, along with all required or necessary supporting documentation pertaining to the proposed project.

The _____ County District School Board/Community College Board hereby certifies that:

I. CONDITION CHANGE: (Not applicable to community colleges)

1. All room condition changes are consistent with State Requirements for Educational Facilities (SREF) standards and the Florida Fire Prevention Code (FFPC) requirements for the condition of space.

II. RAZE/REPLACE PERMANENT BUILDING(S):

1. All fund sources have been researched and no current indebtedness or outstanding debt exists for the building(s) that will be razed and/or replaced.
2. Funding Source(s):
   a. Original Building: _____

b. If Replaced: _____

3. Voters of the district have approved local bonding for the project: Yes/No
   a. Date of voter approval: _____
4. Imminent danger exists for the building(s) that will be razed and/or replaced.

III. CERTIFICATION SIGNATURES:

_____ _____
Director of Facilities Planning Date

_____ _____
Superintendent/President Date

_____ _____
Board Chair Date

NOTE: Certification is required by the Superintendent and Director of Facilities Planning for room condition changes. Certification is required by the Superintendent/President and Board Chair to raze or replace permanent buildings.

Submit signed form and supporting documents to:
Office of Educational Facilities, Room 1054
Florida Department of Education
325 West Gaines Street
Tallahassee, Florida 32399-0400

FLORIDA INVENTORY OF SCHOOL HOUSES (FISH)

FACILITY INVENTORY REPORT

DISTRICT: 57 SANTA ROSA COUNTY SCHOOL DISTRICT

FACILITY: 8-A GULF BREEZE MIDDLE

BUILDING: 2 - Building Number 00002

Owner: SCHOOL BOARD	Light: ADEQUATE	Cooling: CENTRAL
Use: MIDDLE	Mech Vent: ADEQUATE	Heat Source: GAS
Year Constructed: 1966	Artificial Lighting: SHIELDED FLORESCENT	Heat Distribution: CENTRAL HOT AIR
Year Modified:	Educational TV: NONE	Heat Capacity: ADEQUATE
Average Age NSF: 1966	Intercom: ONE WAY COMPLETE	Walls: BRICK
Relocatable Units: 0	Telephone: NONE	Struct Comp: CONCRETE
Stories: 1		Corridor: SINGLE OUTSIDE

ROOM	NET SQ FT	DESIGN CODE	DESCRIPTION	STU STA	FLR LOC	FLOOR COVER	YEAR CONST	CONDITION	BLDG	PAR	FAC
001	1102	92	P E LOCKER ROOM (MALE)	0	01	TERRAZZO	1966	SATISFACTORY	2	8	8
001A	156	300	PRINCIPAL/DIRECTOR OFFICE	0	01	CARPET	1966	SATISFACTORY	2	8	8
001B	39	822	PUBLIC USE RESTROOM (MALE)	0	01	TERRAZZO	1966	SATISFACTORY	2	8	8
002	1102	92	P E LOCKER ROOM (MALE)	0	01	TERRAZZO	1966	SATISFACTORY	2	8	8
002A	156	300	PRINCIPAL/DIRECTOR OFFICE	0	01	TERRAZZO	1966	SATISFACTORY	2	8	8
002B	45	822	PUBLIC USE RESTROOM (MALE)	0	01	TERRAZZO	1966	SATISFACTORY	2	8	8
003	162	702	MECHANICAL ROOM	0	01	CONCRETE	1966	SATISFACTORY	2	8	8
004	760	701	COVERED WALKWAY	0	01	CONCRETE	1966	SATISFACTORY	2	8	8

	Satisfactory		Unsatisfactory		Failed Standards		Scheduled For Replacement	
	Square Feet	Student Stations	Square Feet	Student Stations	Square Feet	Student Stations	Square Feet	Student Stations
Permanent	3,522	0	0	0				
TOTAL	3,522	0	0	0	0	0	0	0

SANTA ROSA COUNTY DISTRICT SCHOOLS

Gulf Breeze Midle School

CAMPUS PHASING PLAN

SAM MARSHALL ARCHITECTS