Martin County School District
Palm City Elementary
Castaldi Analysis

1951 SW 34th Street
Palm City, Florida 34990
April, 2018
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Martin County School Board

District 1          Christia Li Roberts, Chair
District 2          Marsha Powers
District 3          Rebecca Negron
District 4          Tina McSoley
District 5          Michael DiTerlizzi, Vice Chair
Student Representative Anna Ellis
Executive Summary

What follows is the Castaldi Analysis Report for the Martin County School District’s (MCSD) Palm City Elementary School (PCES).

The Castaldi analysis is based on information published by the Florida Department of Education (FLDOE) pertaining to school construction and project costs, data and a facilities assessment. The analysis presents the Castaldi Formula as accepted by FLDOE.

Palm City School (PCES) began construction in 1958. It is located on 13 acres at 1951 SW 34th Street, Palm City, Martin County, Florida. Modifications occurred in 1967, 1979, 1980, 1990 and 1991. All buildings are noted as satisfactory on FISH.

The buildings are:

Building 1, is one story and houses classrooms, offices, restrooms, storage and support spaces was built in 1979, some minor renovations have occurred that are not noted in the FISH Inventory and contains 22,359 sf.

Building 2, is one story and houses classrooms, restrooms, storage and support spaces was built in 1958, no modifications this building are noted in the FISH Inventory and contains 10,981 sf.

Building 3, is one story and houses kitchen, dining, teacher’s dining, multipurpose rooms, stage, dressing rooms, restrooms, storage and support spaces was built in 1958, no modifications this building are noted in the FISH Inventory and contains 11,257 sf.

Building 4, is one story and houses music, classrooms, offices, storage and support spaces was built in 1967, no modifications this building are noted in the FISH Inventory and contains 3,325 sf.

Building 6, Storage Equipment Storage is one story was built in 1958, no modifications this building are noted in the FISH Inventory and contains 99 sf. Because this building is less than 750 sf, it does not require FLDOE permission to be demolished.

Building 8, is one story and houses mechanical rooms, electrical room and support spaces was built in 1978, no modifications this building are noted in the FISH Inventory and contains 1,422 sf.

Building 9, is one story and houses classrooms, restrooms, storage and support spaces was built in 1979, no modifications this building are noted in the FISH Inventory and contains 7,573 sf.

Building 10, is one story and houses classrooms, restrooms, storage and support spaces was built in 1979, no modifications this building are noted in the FISH Inventory and contains 7,658 sf.

Building 11, is one story and houses classrooms, offices, restrooms, storage and support spaces was built in 1980, no modifications this building are noted in the FISH Inventory and contains 11,612 sf.

Building 12, is one story and houses administration, media center, TV lab, restrooms, storage and support spaces was built in 1980, no modifications this building are noted in the FISH Inventory and contains 10,074 sf.

Building 16, is one story and houses classrooms, covered outdoor play area, art lab, restrooms, storage and support spaces was built in 1990, no modifications this building are noted in the FISH Inventory and contains 15,305 sf.

Building 20, is one story and houses restrooms, storage and support spaces was built in 1991, no modifications this building are noted in the FISH Inventory and contains 873 sf.
Executive Summary

Building 99 are two modular classrooms that are one story. No modifications this building are noted in the FISH Inventory and contains 1,780 sf. We recommend they be relocated.

The current FLDOE established costs per square foot for renovation, remodeling and new construction are based on the maximum allowed cost per student station for January 2013, Section 1013.64(6)(b)1, Florida Statutes and are as follows for an high school:

- Cost of Renovation based on FDOE data is $45/GSF
- Cost of Remodeling based on FDOE data is $68/GSF
- Cost of Replacement based on FDOE data is $136/GSF

In the Castaldi analysis, if the left side of the equation, cost of remodeling or renovating, shows a larger amount, the replacement of the facility is warranted and will be more cost effective than the renovation/remodeling of the existing building(s).

It would be beneficial to the MCSD to provide their educational programs in the most compact and efficient facility designed to function according to current Florida Department of Education (FLDOE) and MCSD educational standards and design criteria, ADA requirements and the most current Florida Building Code Requirements. The buildings being considered for razing are beyond their useful life, are deficient with regard to current ADA and Florida Building Code requirements and are undersized for the programmatic needs and requirements. (See Castaldi Analysis). They both would require additional square footage to conform to the most current MCSD Educational Plant Survey Facilities List.

The review and analysis of the existing construction of the facility was tested against the Castaldi Formula and takes into consideration the educational, health, aesthetic, life safety and building improvements of educational facility design. Based on the information included in this report and the expressed needs of the Martin County School District, we recommend the following:

Buildings 1, 2, 3, 4, 6, 8, 9, 10 and 16 are recommended to be demolished and replaced with a new buildings that would serve the current student capacity and same demographics are is reported in the 01 10 18 FISH Inventory Report.

Buildings 11, 12, and 20 are recommended to be remodeled to meet the standards noted above. The Castaldi Analysis of the difference in cost do not justify razing the building for replacement. FLDOE would most likely require that they be remodeled.

Building 22 the modular classrooms are recommended to be relocated and replaced with classrooms in a new facility.

From our review and analysis the best course of action is to modernize the facility by replacement of these buildings to meet the requirements and standards noted above. Our recommendation is to replace Buildings 1, 2, 3, 4 6, 8 and 10 and remodel Buildings 11, 12 and 16 so that they become state of art new facilities. This path would be the most prudent and cost effective way to address the deficiencies with regard to Life Safety, Life Cycle Costs, Education Adequacy, and Health requirements. The recommended improvements would create a facility that provides the students, faculty, administration and staff with a state
Executive Summary

of the art modernized that would meet State Requirements for Educational Facilities (SREF), current FLDOE Guidelines, current Life Safety requirements, ADA requirements, Florida Building Code requirements and current Martin County School District Design Criteria and Standards.

Respectfully,

Mark Clary, Senior Project Manage
Song + Associates, Inc.
(561) 655-2423 Email: mclary@songandassociates.com
1.1 Campus Overview
Palm City Elementary School (PCES) begins construction in 1958. It is located on 13 acres at 1951 SW 34th Street, Palm City, Florida. The Center was a vocational technical school, but was taken out of service in 2001. Its primary use is as an elementary school serving Pre K through 5. As reported in the Facility Inventory Report (FISH), dated 01. 10. 18, its School Capacity is 714 students and its Year Round Capacity is 857 students. The Utilization Factor is 1.0% and all buildings are listed to be in satisfactory condition.

Community Significance
The Palm Beach Chamber of Commerce website provides the following brief history of Palm City.

“In 1912, Charles C. Chillingworth and his Palm Beach County Land Company (at the time the area was part of Palm Beach County) bought property from George Beckwith, who had acquired the land in 1889, and advertised the land throughout the United States, Canada and Europe. Pineapples, oranges and grapefruit were grown at a “Demonstration Farm” on present-day Martin Highway to show farmers what they could expect if they settled in the newly named Palm City. Chillingworth provided boats, mule-teams and covered wagons (later replaced by a Model T Ford) to take the prospective clients around the undeveloped countryside. An advertisement in the Palm Beach County newspaper boasted “Free dinner on New Year’s Day for progressive buyers. A 10 acre tract for $50 per acre (to be raised to $60 the next day) with a free town lot in Palm City to every purchaser and 85 cents for a round trip train ticket from West Palm Beach to Stuart.”

PCES is located west of St. Lucie River and north of SW Martin Highway.

2.0 Architectural
1. **Campus Design**

In general, the site is well maintained, but, security is an issue. The campus can be accessed from several points around the perimeter. The campus security would be greatly improved if a single point of entry was designed for the facility.

The concept for the facility is a series of pods laid out in a grid with interior and exterior circulation interconnecting the various buildings

**Recommendations:**

1. Provide new perimeter fencing with a single point of entry and additional security systems to increase campus security.
2. New paving for parking and staging.
3. New LED light fixtures for parking and exterior of buildings
4. Landscaping for court yards to provide shaded areas for study.
5. Update all covered walkways so they are ADA Compliant.

2.2 **Buildings 1, 2, 3, 4, 8, 9, 10, 11, 12, 16 and 20**

Buildings 1, 2, 3, 4, 8, 10, 11, 12, 16 and 20 have essentially the same construction and will be accessed together.

Building 1, has program space for Classrooms, Restrooms, Storage and Supports Spaces. It was built in 1979. It one story and contains 22,359 sf.

Building 2, is one story and houses classrooms, restrooms, storage and support spaces was built in 1958, no modifications this building are noted in the FISH Inventory and contains 10,981 sf.

Building 3, is one story and houses kitchen, dining, teacher’s dining, multipurpose rooms, stage, dressing rooms, restrooms, storage and support spaces was built in 1967, no modifications this building are noted in the FISH Inventory and contains 11,257 sf.

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Building 20, is one story and houses restrooms, storage and support spaces was built in 1991, no modifications this building are noted in the FISH Inventory and contains 873 sf.

The existing structural system for these buildings is a 1 ½” 22 gauge metal roof deck mechanically fastened to steel joists bearing on a concrete tie beam and column frame. The frame has a concrete masonry infill. The bar joist throughout the facility would have to be reinforced to meet current codes. The CMU walls bear on concrete footings. The drawings do not show vertical rebar, therefore, they offer only limited resistant to lateral loads. Since the single ply roofing membrane is long past its life, and therefore likely laden with moisture (as evidenced by ceiling tile stains), stripping the roof to the deck will then require structural enhancement to meet current codes.

The buildings on campus are connected by covered walkways. The walkway’s structural system includes concrete roof deck mechanically bearing on concrete beams bearing on concrete columns.

The metal decks in the labs have various degrees of corrosion and signs of water infiltration. Where visible, the steel joists also had signs of corrosion along the top cord and where the joist seat is bearing on the tie beam. This indicates corrosion of the bearing seat.

The facility’s roofing system does not meet current Energy Code requirements nor current Florida Building Code requirements and needs replacement. The roof is original and was installed in 1979 and is 38 years old. The roof and roof structure are not designed to meet current code. The construction of the roof, including the roof over the covered walkways are a single ply roofing system over metal deck over steel bar joists. The covered walkways roof is also single ply bonded to a concrete deck. Some areas where the deck is exposed signs of corrosion due to water infiltration and the caustic nature of the South Florida environment. The roof and roof structure are not design to meet current wind load requirements.

Asbestos is probably present in the insulation and sealants, which is typical for roof construction at the time this campus was constructed and requires abatement. (Destructive testing on roofs to determine material content is not performed until the roof is removed for re-roofing or demolition.) Refer to Attachment 1 for Asbestos Report.

The roof is sloped ½” per foot and storm water drains to the perimeter to metal gutter and PVC downspouts. There is no underground drainage system, so the downspouts discharge to soil, sidewalks or paving. An underground storm sewer system is recommended.

Given the age and condition of the roof coping, flashing, wood blocking assembly also requires replacement.

Primary and secondary existing exterior wall construction types exist for Building 1. The primary wall type is unreinforced 8” concrete masonry units (CMU) with a 4” fluted concrete masonry veneer. No weeps or vents were observed on the exterior face of any of the buildings nor were they noted on an as built wall section. Without weeps and vents being provided in exterior walls moisture will be trapped within the airspace of the building envelope. As there is not vertical reinforcement in the exterior CMU wall, resistance to lateral wind loads or loads imparted by windows and doors is minimal.

The secondary wall type is wall type is 8” unreinforced concrete masonry units (CMU) with a stucco finish. Also no weeps or vents were observed on the exterior face of any of the buildings nor were they noted on an as built wall section. Without weeps and vents being provided in exterior walls moisture will be trapped within the airspace of the building envelope. As there is not vertical reinforcement in the exterior CMU wall, resistance to lateral wind loads or loads imparted by windows and doors is minimal.
Primary and Secondary Exterior Wall Types

Evidence of water infiltration and the resulting black mold was present on the exterior of this building and most of the buildings. Additional information confirming that water infiltration is occurring in this building’s exterior wall is that the steel angle supporting the ribbed CMU veneer located at the base of the wall was extremely corroded and requires replacement. Given the degree of decay of this structural support it is uncertain how long the veneer will remain intact and certainly does not meet the Florida Building Code wind load requirements. The Facility's Maintenance Service Manager showed the Castaldi team a video of an exterior wall being repaired that while filming failed completely and collapsed leaving the interior space of the wall exposed.

The exterior doors, door frames and windows show extreme wear and corrosion. They do not meet current Energy Code requirements nor do they meet the current wind pressure requirements from the 2014 Florida Building Code. Some of the windows have hardware that is inoperable.

Per the Facility’s Service Manage pests, such as insects and rodents have infiltrated many of the buildings due to openings created by corrosion and win too many of the doors and windows. The doors and windows should be replaced.
The fascia at the roof edge is failing and has numerous gaps allowing water infiltration.

None of the facility building envelope assemblies and or systems were constructed to current wind codes. Especially vulnerable are those parts of the buildings structure around fenestrations. The exterior CMU should be exposed at every opening, and sufficient reinforcing added along with infill of the CMU cells with concrete.
Building 8, Fluted CMU Showing
Mold, Corrosion Occurring to
Louvers and Door & Non-
Compliant ADA Hardware

Non-Compliant ADA Drinking
Fountain
The interior doors, door frames and interior view panels show wear and the finishes are worn and faded.

The door hardware for both exterior and interior doors is not ADA compliant and needs to be brought up to current requirements. This includes levers, hinges, strikes, closers, thresholds, panic hardware and weather proofing.

In general, the existing finishes are faded and decaying.

The interior wall construction includes 5/8" GWB on both sides of 3 5/8" steel framing and 8" CMU. All interior walls require painting.

The interior ceilings show water infiltration and are sagging. They need to be replaced with mold resistant non sag acoustical tile ceilings.

The restrooms are both painted CMU and ceramic tile on the floors and some walls. All require a refresh or replacement due to damage by water infiltration and the presence of mold.

4" rubber base is installed in most rooms and restrooms have ceramic base. Where the rubber base is installed the adhesive has begun to fail and base has become separated from the wall surface.

The exterior corridors and covered walkways do not meet current code requirements for light and need to be for safety reasons and vandalism.
Exterior Corridors and Covered Walkways Lighting Do Not Meet Current FBC Requirements.

2.3 HVAC

HVAC system operates primarily on a chilled water loop. Chilled water is generated by two 170-ton air-cooled chillers manufactured by Trane. Chillers use refrigerant R-134A, which is still in wide use today and faces no significant legal sanctions. Years of chiller manufacture: 2011 and 2014. Centrifugal chillers are generally regarded as having a 25 year service life, leaving these chillers with 18 and 21 years of life respectively.

Chilled water loop uses a primary / secondary pumping configuration. Exterior chilled water pumps show significant surface age and corrosion and do not meet modern efficiency standards. These likely still have five to ten years of service life remaining. Interior (secondary) pumps are in excellent condition and likely still have 10 to 15 years of service life remaining. Exterior chilled water insulation needs to be replaced at the pump volutes but is otherwise in good condition.

Building HVAC uses an antiquated pneumatic control system. System would need to be replaced with modern BACNet architecture as part of any upgrade. No PC-based energy management software installed. A dedicated central plant controller manages operation of air-cooled chillers and pumps. Controller provides ability to schedule operation, trend data and run reports.

Interior air conditioning is accomplished by modular chilled water air handling units in mechanical rooms. Air handling units appear to be in good condition and likely have 5+ years of useful service life remaining.

Air conditioning is supplemented in several areas by stand-alone direct-expansion equipment for areas such as the kitchen (both for occupants and commercial refrigeration) and portable classrooms. Systems are in good condition and serviceable but should be replaced with new (for commercial refrigeration) or chilled water (for occupant cooling) as part of any substantial facility renovation.

The air-cooled chillers and interior secondary pumps are in excellent shape and have substantial service life remaining. They could be saved and re-used as part of any potential facility HVAC upgrade. Other system components such as exterior primary pumps, chilled water insulation, control system (building-wide), chilled water AC and direct-expansion AC are either severely
degraded, at the end of their useful service lives, or otherwise would play no role in a modern, code-compliant AC system.

Items of note:

- Chillers appear to be running 24/7, likely elevating current energy consumption.
- Modular chilled water AHU’s appear to be well maintained, particularly with respect to filter change-outs.
- Maintenance staff experiences frequent problem with AHU variable frequency drives. The VFD’s shut themselves down and must be manually reset. Staff suspects the problem can be traced to low-quality incoming power.
- A portable spot-cooler has been placed in the kitchen in an attempt to improve thermal comfort. This arrangement is likely both poor-performing and expensive. HVAC in this area should be improved as quickly as possible. A wall-mounted PTAC (such as those used on the portable classrooms) would be a better solution.

2.4 Fire Suppression System

The campus does not have a fire suppression system except for the kitchen hood and one piece of cooking equipment located within the footprint.

- Per the Florida Building Code (2017) the campus falls under Educational Group E.

3. Group E - An automatic sprinkler system shall be provided for Group E occupancies as follows:

- Throughout all Group E fire areas greater than 12,000 square feet (1115 m²) in area.
- Throughout every portion of educational buildings below the lowest level of exit discharge serving that portion of the building.

Exception: An automatic sprinkler system is not required in existing educational buildings unless 50 percent of the aggregate area of the building is being remodeled.

- NFPA 13 (2013) categorizes Education as Light Hazard, defined as occupancies or portions of other occupancies where combustibility is low, quantity of combustibles is moderate, stockpiles of combustibles do not exceed 8 ft., and fires with moderate rates of heat release are expected.
5. Domestic Service Water Heating System:
The campus is served by series of electric water heaters located throughout the campus for service to the associated area. The Median Service Life of an electric water heater is approximately 13 years.
- The age of the water heater(s) varies, one made in 2005 (13 years old), one made in 2012 (6 years old), another about the same time. 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 heaters are not piped according to the current plumbing code requirements (see 2017 FPC, sections 502, 503, 504 and, section 607).
- Hot water recirculating system piping does not exist and therefore does not meet the plumbing code requirements, where applicable. (See 2017 FPC section 607.2).
2.6 Plumbing System
The visible plumbing systems reflect the age of the building and are in need of replacement or remodel. Areas that have been impacted are the sanitary system and the storm system.

- Plumbing fixtures are older and not up to current water efficiency standards, per FPC 604.4 “The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table 604.4.”

<table>
<thead>
<tr>
<th>PLUMBING FIXTURE OR FIXTURE FITTING</th>
<th>MAXIMUM FLOW RATE OR QUANTITY*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lavatory, private</td>
<td>2.2 gpm at 60 psi</td>
</tr>
<tr>
<td>Lavatory, public (metering)</td>
<td>0.25 gallon per metering cycle</td>
</tr>
<tr>
<td>Lavatory, public (other than metering)</td>
<td>0.5 gpm at 60 psi</td>
</tr>
<tr>
<td>Shower head*</td>
<td>2.5 gpm at 60 psi</td>
</tr>
<tr>
<td>Sink faucet</td>
<td>2.2 gpm at 60 psi</td>
</tr>
<tr>
<td>Urinal</td>
<td>1.0 gallon per flushing cycle</td>
</tr>
<tr>
<td>Water closet</td>
<td>1.6 gallons per flushing cycle</td>
</tr>
</tbody>
</table>

- Kitchen – Some of the sanitary connection points are not up to code standards. See State of Florida Department of Health Chapter 64E-11 Food Hygiene.
- Grease interceptor – The grease interceptor outside of the kitchen area needs to be regularly service. Staff has indicated that it backs up.
- Emergency generator fuel storage tank: The transfer piping was leaking and is currently being repaired.
Make up water to the mechanical system will have to be replaced.

2.7 Electrical

Interior lighting – 2’ by 4’ fluorescent lighting mainly. Look in good shape. Lighting will have to be brought up to current code. This would require daylight harvesting, 50% receptacle controls in all office, open office and Computer classrooms. This will require new light fixture that are capable of dimming. Exterior lighting – Few building mounted lights for site lighting, not controlled properly. No Parking lot lighting, comments were made that teachers do not feel safe at night walking to car. Lighting outdoor pathways need to be recruited to light only the enclosed area not open covered walkway. Broken pipes with exposed wire observed at portable building and from the roof. Recommend adding site lighting for safety to both front drop off and bus drop off. Recommend rewiring exterior lighting controls for better control and energy savings. Will require additional lighting in spaces to meet minimum foot candle levels.
Insufficient Exterior Corridor Lighting

Emergency generator – Onco 100KW Generator. Is currently being repaired. Recommend replacing generator.
Fire alarm – Fire Alarm Panel appears to have been replaced in last 2 years. Devices appear to be mixed with older and newer devices (mainly newer looking). Outdoor Strobes waterproof covers have yellowed. Recommend replacing exterior yellow devices.
Power Distribution – Panels are all Square D. Panels are in rough shape, with Rust, latches not latching. Panel on site in fenced in enclosure is missing Panel cover and open to elements. Kitchen area only place where Gould Panels and Disconnects was observed in use. These are at end of life recommend replacement. Outlet in kitchen observed within 6’ of water basin and not on GFI outlet/circuit. Outlet observed to have caught fire in on the mechanical rooms. Electrical rooms being used as storage space. Recommend replacing electrical in the kitchen area and update panels in this space to Square to match rest of campus for ease of maintenance. Recommend new storage spaces for school equipment as to avoid storage in electrical rooms.

No Safety Lighting Installed

Photovoltaic panels – Bracket holding the panels looks to be rusted through. Panels look to be in bad shape but still functional. Recommend replace the bracket holding the photovoltaic cell. Clean the cell themselves.
3.1 Lightning Protection

1. The campus currently does not have lightning protection.

Recommendations:

1. We recommend that the UL Master Label lightning protection system be provided and installed on the campus that is compliant with NFPA 780.

3.2 Proposed Use, Student Population and Scope of Replacement/Remodel

1. The proposed use or program would remain the same as is currently designated. The demographics indicate growth in several of the neighborhoods that the school serves.

3. ADA Compliance

ADA Compliance for All Buildings:

1. Provide ADA compliant restrooms and drinking fountains as required.
2. Provide ADA compliant accessible loading zones and routes with from parking.
3. Provide ADA compliant doors and hardware.

The design and construction of this project shall comply with the following codes and standards:

1. FBC (Florida Building Code), 2017 Edition 6, Including:
   a. FBC (Florida Existing Construction Building Code)
   b. FBC Energy Conservation
   c. FBC Mechanical
   d. FBC Plumbing
   e. FBC Fuel Gas
   f. NEC (National Electric Code) 2002; FBC Charter 27
   g. FBC Florida Accessibility Code for Building Construction
   h. FBC References, Chapter 35
   i. Florida Fire Prevention Code, FAC 69A-60, including:
      ii. NFPA 1-2004 with adopted revisions
      iii. NFPA 101-2004 with adopted revisions
      iv. NFPA Codes listed in FAC 69A-005
      v. NFPA 45-00: Instructional Laboratories
      vi. NFPA 88B-97: Repair Garages, (Auto Lab)
      vii. Fire Safety in Existing Educational Facilities, FAC 69A-58
   i. State Requirements for Educational Facilities (SREF)
   j. ASCE 7-98: American Society of Civil Engineers
   k. UL Fire Resistance Directory

Recommendations:

We recommend that Buildings 1, 2, 3, 4, 8, 9, 10 and 16 be demolished and replaced and that Buildings 11, 12 and 20 be remodeled. Application of the Castaldi Formula for Modernization supports this recommendation. The items below are the specifics that would define the scope that should would need to be included if the building was to be renovated or remodeled.

a. Remove and replace the exterior lighting installed in the covered walkway and the lighting on the exterior building to meet current Energy Code requirements
b. Perform an asbestos abatement.
   c. Remove lead paint.
   d. Upgrade the building so that it is in compliant with the Florida Building Code and Fire Prevention requirements. Installation of Fire Protection Sprinklers is recommended.
   e. Remove and replace all existing exterior and interior doors, door hardware and windows.
   f. Harden all fenestrations to receive the load from the wind resistant windows.
   g. Bring all required fixtures and Restrooms into compliance with ADA requirements.
h. All room finishes need to be refreshed.
i. Remove and Replace the air handling unit with equipment that meets current codes.
j. Remove and replace all plumbing fixtures.
k. Provide a fire protection system integrated with the fire alarm system that will be installed in the near future.
l. Provide and install an Energy Management System. It would improve efficiency and increase cost savings.
m. Provide and install new power systems, such as electric panels.
n. Provide and install new exterior LED lighting for the building and covered walkway.
o. Provide and install new interior LED lighting where required.
p. Upgrade the existing IT system. Upgrade the existing telephone system.
q. Provide and install a new public address system.

1. Funding
   1. To be Determined

2. Equipment Costs
   2. To be Determined
Office of Educational Facilities
Florida Department of Education

Room Condition Change
Building Replacement/Raze

District: Martin County School District  
Contact Person: Garrett Grabowski  
Phone: 772-223-3105 ext. 130

Facility/Campus Name: Palm City Elementary School  
Facility Number (school districts only): 16-A

Building Number(s): 1, 2, 3, 4, 8, 9, 10 and 16  
Parcel/Site Number(s): 5

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 Palm Beach County District School 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: Unknown
      b. If Replaced: To Be Determined

OEF Form RCC-BRR – March 2008
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:

__________________________________________  _______________________
Garrett Grabowski                          Date
Facilities Director

__________________________________________  _______________________
Laurie G. Gaylord                          Date
Superintendent

__________________________________________  _______________________
Christia Li Roberts                       Date
Board Chair

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
rooms in a permanent building.

3. Space that has been determined to be unsatisfactory should not be occupied.

4. Application of a facility replacement formula, such as the Castaldi generalized formula for modernization or other similar facilities study, does not necessarily mean that the condition of the identified spaces is unsatisfactory. The condition code cannot be changed simply due to the results of a planned replacement unless the integrity of the space meets the criteria identified to classify the space as unsatisfactory.

i. In order to change the space condition from unsatisfactory to satisfactory the district must certify that the space has been successfully reconditioned to meet all applicable regulations regarding occupancy requirements.

1. OEF Review:

i. Site visit by OEF staff, when necessary.

ii. Concur with district rationale, data, and analyses:
   1. Building(s) approved as unsatisfactory; OEF will make the room condition code changes in FISH.
   2. Building(s) approved as satisfactory; OEF will make the room condition code changes in FISH.

iii. Disagree with district rationale, data, and analyses:
   1. Building(s) not approved as unsatisfactory.
   2. Building(s) not approved as satisfactory.

1. OEF Notify District of Findings and Decision:
   i. OEF staff will analyze the district’s data along with all supporting documentation, coordinate any further reviews with the district, make a final decision regarding the proposed room condition changes, and provide a timely response either approving or disapproving the proposed room condition changes.

C. RAZE/REPLACE PERMANENT BUILDING(S)

1. RATIONALE (provide the following information, as appropriate, to justify razing/replacing permanent buildings):
   i. Detailed explanation of need for the proposed project and the expected benefit to the district/community college.
   ii. General scope of the proposed project.
   iii. Building age and year of construction.
   iv. Existing capacity of building(s), include the number of student stations, classrooms, and other instructional spaces.
   v. Current number of students housed and the projected number of students to be housed in the affected building(s).
   vi. Current educational plant survey recommendations and capacity.
   vii. What alternatives have been considered besides razing/replacement and why are the alternatives not feasible?
   viii. School board/community college board approval of the concept of razing/replacing permanent buildings.
   ix. Building condition/engineer study (optional).
   x. Impact if the proposed project is not approved.
xi. Other relevant data; identify any major systems (include date, if applicable) that have been replaced or upgraded, e.g., electrical, HVAC, fire alarm, roof, plumbing, drainage, etc. Provide a general scope of work for any previous remodeling, renovation, and addition, and year completed.

2. COST ANALYSIS (Building by Building):
   i. Castaldi Analysis (or other cost analysis formula to support the proposed project).
   ii. The following five questions must be addressed:
      1. How many years will modernization extend the useful life of the modernized building(s)?
      2. Does the existing building(s) lend itself to improvement, alteration, remodeling, and expansion? If no, explain why not.
      3. Explain how a modernized and a replacement building(s) fits into a well-conceived long-range plan of the district/community college?
      4. What is the percentage derived by dividing the cost for modernization by the cost for a replacement building?
      5. A committee of district officials and independent citizens from outside the school attendance zone has determined that the replacement of the building(s) is financially justified and no other alternative is feasible? (Not applicable to community colleges)
   i. Detailed scope of work for modernization of the existing building(s).
   ii. FISH building plan and/or schematic drawings of the existing building with FISH room numbers.

2. OEF Review:
   i. Site visit by OEF staff, when necessary.
   ii. Educational adequacy review.
   iii. Concur with district/community college rationale, data, and analyses:
      3. Recommend replacement of building(s).
      4. Recommend razing building(s).
   ii. Disagree with district/community college rationale, data, and analyses:
      4. Building(s) not approved to be replaced.
      5. Building(s) not approved to be razed.

4. OEF Notify District/Community College of Findings and Decision:
   i. OEF staff will analyze the district's/community college's data along with all supporting documentation, coordinate any further reviews with the district, make a final decision regarding the disposition of the proposed project, and provide a timely response either approving or disapproving the proposed request.
<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CE</strong> = Cost of Educational Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CH</strong> = Cost of Health and Aesthetic Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CS</strong> = Cost of Building and Safety Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IA</strong> = Estimated Index of Educational Adequacy</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td><strong>LM</strong> = Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
<td></td>
</tr>
<tr>
<td><strong>R</strong> = Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td><strong>LR</strong> = Estimated Life of New Bldg.</td>
<td>65 Years</td>
<td></td>
</tr>
</tbody>
</table>

**Building Information**
- Year Built: 1979
- Year of Modernization: 2020
- Building Age: 39 Years
- Useful Life: 24 Year
- Building Area: 22,359 SF
- Additional Area: 5,000
- Renovation Area: 22,359
- Remodeling Area: 22,359 SF
- Total Area: 27,359 SF

**Castaldi Formula**
- Remodel VS Replacement Cost
  - \((CE + CH + CS) \times 1.2\) VS \(R\)
  - \(LM \times IA\) VS \(LR\)

**Renovation Cost**
- 33.30% $45/sf (2013 DOE)

**Remodel Cost**
- 50% $68/sf

**Replacement Cost**
- 100% $136/sf

**Demolition Cost**
- 7% $8.50/sf

**Cost of Educational Improvements**
- 27,359 sf x $68 = $1,860,412

**Useful Life of Modernized Building**
- 18

**Educational Adequacy Index**
- 0.75

**Replacement Cost**
- 27,359 sf x $136/sf = $3,720,824 + Demolish 22,359 sf x $8.50 = $190,052 Total = $3,910,856

**Estimated Life of New Building**
- 65 Years

**Castaldi Formula**
- Remodel Cost VS Replacement Cost
  - $1,860,412 x 1.2 = $2,232,495 VS $3,910,856
  - 24 x .75 = 18

**Results**
- $93,021 $60,167

**Percentage of Modernization to Replacement**
- 64.68% 10351651780% 65%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
### Palm City Elementary School

#### Building 2

<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>Cost of Educational Improvements</td>
<td></td>
</tr>
<tr>
<td>CH</td>
<td>Cost of Health and Aesthetic Improvements</td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>Cost of Building and Safety Improvements</td>
<td></td>
</tr>
<tr>
<td>IA</td>
<td>Estimated Index of Educational Adequacy</td>
<td>0.75</td>
</tr>
<tr>
<td>LM</td>
<td>Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
</tr>
<tr>
<td>R</td>
<td>Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
</tr>
<tr>
<td>LR</td>
<td>Estimated Life of New Bldg.</td>
<td>65 Years</td>
</tr>
</tbody>
</table>

#### Building Information

- **Year Built**: 1958
- **Year of Modernization**: 2020
- **Building Age**: 60 Years
- **Useful Life**: 3 Year
- **Building Area**: 10,981 SF
- **Additional Area**: 0
- **Renovation Area**: 10,981
- **Remodeling Area**: 10,981 SF
- **Total Area**: 10,981 SF

#### Castaldi Formula

<table>
<thead>
<tr>
<th>Remodel Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CE+CH+CS) x 1.2</td>
<td>R x LM x IA</td>
</tr>
</tbody>
</table>

Based on Cost per square foot

- **Renovation Cost**: 33.30% $45/sf (2013 DOE)
- **Remodel Cost**: 50% $68/sf
- **Replacement Cost**: 100% $136/sf
- **Demolition Cost**: 7% $8.50/sf

- **Cost of Educational Improvements**: 10,981 sf x $68 = $746,708
- **Useful Life of Modernized Building**: 2
- **Educational Adequacy Index**: 0.75
- **Replacement Cost**: 10,981 sf x $136/sf = $1,493,416 + Demolish 10,981 sf x $8.50 = $93,338 Total = $1,586,755
- **Estimated Life of New Building**: 65 Years

#### Castaldi Formula

- **Remodel Cost**: $746,708 x 1.2 = 8996,050
- **Replacement Cost**: $1,586,755

#### Results

- **3 x .75 = 2.25**
- **65**

#### Percentage of Modernization to Replacement

- **8.17321374165922%**
- **8%**

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
## Palm City Elementary School

### Castaldi Analysis

<table>
<thead>
<tr>
<th></th>
<th>Castaldi Formula</th>
<th>Building 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE = Cost of Educational Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH = Cost of Health and Aesthetic Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS = Cost of Building and Safety Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA = Estimated Index of Educational Adequacy</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>LM = Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
<td></td>
</tr>
<tr>
<td>R = Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>LR = Estimated Life of New Bldg.</td>
<td>65 Years</td>
<td></td>
</tr>
</tbody>
</table>

### Building Information

- **Year Built**: 1958
- **Year of Modernization**: 2020
- **Building Age**: 60 Years
- **Useful Life**: 5 Year
- **Building Area**: 11,257 SF
- **Additional Area**: 0
- **Renovation Area**: 11,257
- **Remodeling Area**: 11,257 SF
- **Total Area**: 11,257 SF

### Castaldi Formula

<table>
<thead>
<tr>
<th>Remodel</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CE+CH+CS) x 1.2</td>
<td>VS</td>
<td>( R )</td>
</tr>
<tr>
<td>LM x IA</td>
<td></td>
<td>( LR )</td>
</tr>
</tbody>
</table>

Based on Cost per square foot

- **Renovation Cost**: 33.30% $45/sf (2013 DOE)
- **Remodel Cost**: 50% $68/sf
- **Replacement Cost**: 100% $136/sf
- **Demolition Cost**: 7% $8.50/sf

**Cost of Educational Improvements**: 11,257 sf x $68 = $765,476

**Useful Life of Modernized Building**: 2

**Educational Adequacy Index**: 0.75

**Replacement Cost**: 11,257 sf x $136/sf = $1,530,952 + Demolish 11,257 sf x $8.50 = $95,685 Total = $1,626,637

**Estimated Life of New Building**: 65 Years

### Castaldi Formula

<table>
<thead>
<tr>
<th>Remodel Cost</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$765,476 x 1.2 = $918,571</td>
<td>VS</td>
<td>$1,626,637</td>
</tr>
</tbody>
</table>

**Results**: $408,254 $25,025

**Percentage of Modernization to Replacement**: 6.12976235382874% 6%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE = Cost of Educational Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH = Cost of Health and Aesthetic Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS = Cost of Building and Safety Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA = Estimated Index of Educational Adequacy</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>LM = Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
<td></td>
</tr>
<tr>
<td>R = Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>LR = Estimated Life of New Bldg.</td>
<td>65 Years</td>
<td></td>
</tr>
</tbody>
</table>

**Building Information**

- Year Built: 1967
- Year of Modernization: 2020
- Building Age: 51 Years
- Useful Life: 14 Year
- Building Area: 3,325 SF
- Additional Area: 0
- Renovation Area: 3,325
- Remodeling Area: 3,325 SF
- Total Area: 3,325 SF

**Castaldi Formula**

\[
\text{Remodel Cost} = \frac{\text{CE} + \text{CH} + \text{CS} \times 1.2}{\text{LM} \times \text{IA}} \times \text{LR}
\]

- Based on Cost per square foot
- Renovation Cost: 33.30\% \times $45/sf (2013 DOE)
- Remodel Cost: 50\% \times $68/sf
- Replacement Cost: 100\% \times $136/sf
- Demolition Cost: 7\% \times $8.50/sf

| Cost of Educational Improvements | 3,325 sf x $68 = $226,100 |
| Useful Life of Modernized Building | 2.25 |
| Educational Adequacy Index | 0.75 |
| Replacement Cost | 11,257 sf x $136/sf = $1,530,952 + Demolish 11,257 sf x $8.50 = $95,685 Total = $1,626,637 |
| Estimated Life of New Building | 65 Years |

**Castaldi Formula**

\[
\text{Remodel Cost} = \frac{\text{Remodel Cost}}{\text{Replacement Cost}} \times \text{LR}
\]

- Results: $17,505
- $7,392
- Percentage of Modernization to Replacement: 42.22\% / 4980\% = 42\%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
## Palm City Elementary School

### Castaldi Analysis

<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CE</strong></td>
<td>Cost of Educational Improvements</td>
<td></td>
</tr>
<tr>
<td><strong>CH</strong></td>
<td>Cost of Health and Aesthetic Improvements</td>
<td></td>
</tr>
<tr>
<td><strong>CS</strong></td>
<td>Cost of Building and Safety Improvements</td>
<td></td>
</tr>
<tr>
<td><strong>IA</strong></td>
<td>Estimated Index of Educational Adequacy</td>
<td>0.75</td>
</tr>
<tr>
<td><strong>LM</strong></td>
<td>Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
</tr>
<tr>
<td><strong>R</strong></td>
<td>Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
</tr>
<tr>
<td><strong>LR</strong></td>
<td>Estimated Life of New Bldg.</td>
<td>65 Years</td>
</tr>
</tbody>
</table>

### Building Information

- **Year Built**: 1979
- **Year of Modernization**: 2020
- **Building Age**: 39 Years
- **Useful Life**: 24 Year
- **Building Area**: 1,422 SF
- **Additional Area**: 0
- **Renovation Area**: 1,422
- **Remodeling Area**: 1,422 SF
- **Total Area**: 1,422 SF

### Castaldi Formula

- **Remodel**

- **Replacement Cost**

<table>
<thead>
<tr>
<th>(CE+CH+CS) x 1.2</th>
<th>VS</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM x IA</td>
<td>VS</td>
<td>LR</td>
</tr>
</tbody>
</table>

**Based on Cost per square foot**

- **Renovation Cost**: 33.30% $45/sf (2013 DOE)
- **Remodel Cost**: 50% $68/sf
- **Replacement Cost**: 100% $136/sf
- **Demolition Cost**: 7% $8.50/sf

| Cost of Educational Improvements | 1,422 sf x $68 = $96,696 |
| Useful Life of Modernized Building | 24 |
| Educational Adequacy Index | 0.75 |
| Replacement Cost | 1,422 sf x $136/sf = $193,392 + Demolish 1,422 sf x $8.50 = $64,371 Total = $205,479 |
| **Estimated Life of New Building** | 65 |

### Castaldi Formula

<table>
<thead>
<tr>
<th>Results</th>
<th>Remodel Cost</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$514,954 x 1.2 = $617,557</td>
<td>VS</td>
<td>$205,479</td>
<td></td>
</tr>
<tr>
<td>24 x .75 = 18</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>$10,274</td>
<td><strong>$3,161</strong></td>
<td></td>
</tr>
</tbody>
</table>

| Percentage of Modernization to Replacement | 30.76% | 30% |

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
### Palm City Elementary School

#### Building 9

<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE = Cost of Educational Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH = Cost of Health and Aesthetic Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS = Cost of Building and Safety Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA = Estimated Index of Educational Adequacy</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>LM = Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
<td></td>
</tr>
<tr>
<td>R = Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>LR = Estimated Life of New Bldg.</td>
<td>65 Years</td>
<td></td>
</tr>
</tbody>
</table>

#### Building Information

- Year Built: 1979
- Year of Modernization: 2020
- Building Age: 39 Years
- Useful Life: 24 Year
- Building Area: 7,573 SF
- Additional Area: 0
- Renovation Area: 7,573

#### Remodeling Area: 7,573 SF

| Total Area | 7,573 SF |

#### Castaldi Formula

<table>
<thead>
<tr>
<th>Remodel</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{CE}{LM} \times IA \times 1.2$</td>
<td>$45/sf$ (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>Remodel Cost</td>
<td>33.30%</td>
<td></td>
</tr>
<tr>
<td>Replacement Cost</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Demolition Cost</td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>

#### Cost of Educational Improvements

- $7,573 \times 68 = 514,964$

#### Useful Life of Modernized Building

- 24

#### Educational Adequacy Index

- 0.75

#### Replacement Cost

- $7,573 \times 136/sf = 1,029,928 + \text{Demolish } 7,573 \times 8.50$
- $= 64,371 \text{ Total } = 1,094,299$

#### Estimated Life of New Building

- 65

#### Castaldi Formula

<table>
<thead>
<tr>
<th>Remodel Cost</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$514,964 \times 1.2 = 617,557$</td>
<td>$1,094,299$</td>
<td></td>
</tr>
<tr>
<td>24 x .75 = 18</td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>

#### Results

| $34,331$ | $16,835$ |

#### Percentage of Modernization to Replacement

- 49.03731321546120% = 49%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE =</td>
<td>Cost of Educational Improvements</td>
<td>(CE+CH+CS) x 1.2</td>
</tr>
<tr>
<td>CH =</td>
<td>Cost of Health and Aesthetic Improvements</td>
<td>LM x IA</td>
</tr>
<tr>
<td>CS =</td>
<td>Cost of Building and Safety Improvements</td>
<td>LR</td>
</tr>
<tr>
<td>IA = Estimated Index of Educational Adequacy</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>LM = Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
<td></td>
</tr>
<tr>
<td>R = Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>LR = Estimated Life of New Bldg.</td>
<td>65 Years</td>
<td></td>
</tr>
</tbody>
</table>

### Building Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Year Built</td>
<td>1979</td>
</tr>
<tr>
<td>Year of Modernization</td>
<td>2020</td>
</tr>
<tr>
<td>Building Age</td>
<td>39 Years</td>
</tr>
<tr>
<td>Useful Life</td>
<td>24 Year</td>
</tr>
<tr>
<td>Building Area</td>
<td>7,658 SF</td>
</tr>
<tr>
<td>Additional Area</td>
<td>0</td>
</tr>
<tr>
<td>Renovation Area</td>
<td>7,658</td>
</tr>
<tr>
<td>Remodeling Area</td>
<td>7,658 SF</td>
</tr>
<tr>
<td>Total Area</td>
<td>7,658 SF</td>
</tr>
</tbody>
</table>

### Castaldi Formula

<table>
<thead>
<tr>
<th>Remodel vs Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CE+CH+CS) x 1.2</td>
</tr>
<tr>
<td>LM x IA</td>
</tr>
<tr>
<td>LR</td>
</tr>
</tbody>
</table>

### Based on Cost per square foot

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Renovation Cost</td>
<td>33.30% $45/sf</td>
</tr>
<tr>
<td>(2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>Remodel Cost</td>
<td>50% $68/sf</td>
</tr>
<tr>
<td>Replacement Cost</td>
<td>100% $136/sf</td>
</tr>
<tr>
<td>Demolition Cost</td>
<td>7% $8.50/sf</td>
</tr>
</tbody>
</table>

### Cost of Educational Improvements

7,658 sf x $68 = $520,744

### Useful Life of Modernized Building

24

### Educational Adequacy Index

0.75

### Replacement Cost

7,573 sf x $136/sf = $1,041,488 + Demolish 7,658 sf x $8.50 = $65,093 Total = $1,106,581

### Estimated Life of New Building

65

### Castaldi Formula

$520,744 x 1.2 = $624,893 vs $1,106,581

24 x .75 = 18 vs 65

Results

$26,037 vs $17,024

### Percentage of Modernization to Replacement

65.38387679072090% vs 65%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replacement over the anticipated life of the building.
<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE = Cost of Educational Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH = Cost of Health and Aesthetic Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS = Cost of Building and Safety Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA = Estimated Index of Educational Adequacy</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>LM = Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
<td></td>
</tr>
<tr>
<td>R = Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>LR = Estimated Life of New Bldg.</td>
<td>65 Years</td>
<td></td>
</tr>
</tbody>
</table>

**Building Information**

<table>
<thead>
<tr>
<th>Year Built</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of Modernization</td>
<td>2020</td>
</tr>
<tr>
<td>Building Age</td>
<td>40 Years</td>
</tr>
<tr>
<td>Useful Life</td>
<td>25 Year</td>
</tr>
<tr>
<td>Building Area</td>
<td>11,612 SF</td>
</tr>
<tr>
<td>Additional Area</td>
<td>0</td>
</tr>
<tr>
<td>Renovation Area</td>
<td>11,612</td>
</tr>
<tr>
<td>Remodeling Area</td>
<td>11,612 SF</td>
</tr>
<tr>
<td>Total Area</td>
<td>11,612 SF</td>
</tr>
</tbody>
</table>

**Castaldi Formula**

<table>
<thead>
<tr>
<th>Remodel VS Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CE+CH+CS) x 1.2</td>
</tr>
<tr>
<td>LM x IA</td>
</tr>
</tbody>
</table>

**Based on Cost per square foot**

| Renovation Cost | 33.30% | $45/sf | (2013 DOE) |
| Remodel Cost | 50% | $68/sf |
| Replacement Cost | 100% | $136/sf |
| Demolition Cost | 7% | $8.50/sf |

**Cost of Educational Improvements**

11,612 sf x $68 = $789,616

**Useful Life of Modernized Building**

25

**Educational Adequacy Index**

0.75

**Replacement Cost**

11,612 sf x $136/sf = $1,579,232 + Demolish 11,612 sf x $8.50 = $98,702 Total = $1,677,934

**Estimated Life of New Building**

65

**Castaldi Formula**

<table>
<thead>
<tr>
<th>Remodel Cost VS Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$789,616 x 1.2 = $947,540</td>
</tr>
<tr>
<td>25 x .75 = 19</td>
</tr>
<tr>
<td>Results</td>
</tr>
</tbody>
</table>

**Percentage of Modernization to Replacement**

76.00160417084420% | 76%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
Palm City Elementary School  
Castaldi Analysis  

<table>
<thead>
<tr>
<th></th>
<th>Castaldi Formula</th>
<th>Building 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>Cost of Educational Improvements</td>
<td></td>
</tr>
<tr>
<td>CH</td>
<td>Cost of Health and Aesthetic Improvements</td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>Cost of Building and Safety Improvements</td>
<td></td>
</tr>
<tr>
<td>IA</td>
<td>Estimated Index of Educational Adequacy</td>
<td>0.75</td>
</tr>
<tr>
<td>LM</td>
<td>Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
</tr>
<tr>
<td>R</td>
<td>Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
</tr>
<tr>
<td>LR</td>
<td>Estimated Life of New Bldg.</td>
<td>65 Years</td>
</tr>
</tbody>
</table>

**Building Information**

- Year Built: 1980
- Year of Modernization: 2020
- Building Age: 40 Years
- Useful Life: 25 Year
- Building Area: 10,074 SF
- Additional Area: 0
- Renovation Area: 10,074
- Remodeling Area: 10,074 SF
- Total Area: 10,074 SF

<table>
<thead>
<tr>
<th>Castaldi Formula</th>
<th>Remodel</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{(CE+CH+CS) \times 1.2}{LM \times IA} )</td>
<td>B</td>
<td>LR</td>
<td></td>
</tr>
</tbody>
</table>

Based on Cost per square foot

- Renovation Cost: 33.30% $45/sf (2013 DOE)
- Remodel Cost: 50% $68/sf
- Replacement Cost: 100% $136/sf
- Demolition Cost: 7% $8.50/sf

- Cost of Educational Improvements: 10,074 sf x $68 = $685,032
- Useful Life of Modernized Building: 25
- Educational Adequacy Index: 0.75
- Replacement Cost: 10,074 sf x $136/sf = $1,370,064 + Demolish 10,074 sf x $8.50 = $85,629 Total = $1,455,693

- Estimated Life of New Building: 65

<table>
<thead>
<tr>
<th>Castaldi Formula</th>
<th>Remodel Cost</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$685,032 \times 1.2 = 822,038</td>
<td>B</td>
<td>$11,455,693</td>
<td></td>
</tr>
<tr>
<td>25 x .75 = 19</td>
<td>65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results: $43,265

Percentage of Modernization to Replacement: 87.60429908702180% 87%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
<table>
<thead>
<tr>
<th>Palmer City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE = Cost of Educational Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH = Cost of Health and Aesthetic Improvements</td>
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<td>CS = Cost of Building and Safety Improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IA = Estimated Index of Educational Adequacy</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>LM = Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
<td></td>
</tr>
<tr>
<td>R = Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
<td></td>
</tr>
<tr>
<td>LR = Estimated Life of New Bldg.</td>
<td>65 Years</td>
<td></td>
</tr>
</tbody>
</table>

**Building Information**

- Year Built: 1990
- Year of Modernization: 2020
- Building Age: 30 Years
- Useful Life: 35 Year
- Building Area: 15,305 SF
- Additional Area: 0
- Renovation Area: 15,305
- Remodeling Area: 15,305 SF
- Total Area: 15,305 SF

**Castaldi Formula**

<table>
<thead>
<tr>
<th>Remodel</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CE+CH+CS) x 1.2</td>
<td>VS</td>
<td>R</td>
</tr>
<tr>
<td>LM x IA</td>
<td>LR</td>
<td></td>
</tr>
</tbody>
</table>

Based on Cost per square foot

- Renovation Cost: 33.30% $45/sf (2013 DOE)
- Remodel Cost: 50% $68/sf
- Replacement Cost: 100% $136/sf
- Demolition Cost: 7% $8.50/sf

| Cost of Educational Improvements | 15,305 sf x $68 = $1,040,740 |
| Useful Life of Modernized Building | 65 |
| Educational Adequacy Index | 0.75 |
| Replacement Cost | 15,305 sf x $136/sf = $2,081,480 + Demolish 15,305 sf x $8.50 = $130,093 Total = $2,211,573 |
| Estimated Life of New Building | 25 |

**Castaldi Formula**

<table>
<thead>
<tr>
<th>Remodel Cost</th>
<th>VS</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,040,740 x 1.2 = $1,248,888</td>
<td>VS</td>
<td>$2,211,573</td>
</tr>
<tr>
<td>35 x .75 = 26.25</td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>

**Results**

- $48,034
- $34,024

**Percentage of Modernization to Replacement**

- 70.8331584510970% 70%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replace over the anticipated life of the building.
## Palm City Elementary School

### Castaldi Analysis

<table>
<thead>
<tr>
<th>Palm City Elementary School</th>
<th>Castaldi Formula</th>
<th>Building 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>Cost of Educational Improvements</td>
<td></td>
</tr>
<tr>
<td>CH</td>
<td>Cost of Health and Aesthetic Improvements</td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>Cost of Building and Safety Improvements</td>
<td></td>
</tr>
<tr>
<td>IA</td>
<td>Estimated Index of Educational Adequacy</td>
<td>0.75</td>
</tr>
<tr>
<td>LM</td>
<td>Estimated Useful Life of Modernized Bldg.</td>
<td>(65 years - current age)</td>
</tr>
<tr>
<td>R</td>
<td>Cost of Replacement Bldg.</td>
<td>$136/sf (2013 DOE)</td>
</tr>
<tr>
<td>LR</td>
<td>Estimated Life of New Bldg.</td>
<td>65 Years</td>
</tr>
</tbody>
</table>

### Building Information

- **Year Built**: 1991
- **Year of Modernization**: 2020
- **Building Age**: 27 Years
- **Useful Life**: 36 Year
- **Building Area**: 873 SF
- **Additional Area**: 0
- **Renovation Area**: 873
- **Remodeling Area**: 873 SF
- **Total Area**: 873 SF

### Castaldi Formula

<table>
<thead>
<tr>
<th>Formula</th>
<th>Remodel Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(CE+CH+CS) x 1.2</td>
<td>VS</td>
<td>R</td>
</tr>
<tr>
<td>LM x IA</td>
<td>VS</td>
<td>LR</td>
</tr>
</tbody>
</table>

Based on Cost per square foot

- **Renovation Cost**: 33.30% $45/sf (2013 DOE)
- **Remodel Cost**: 50% $68/sf
- **Replacement Cost**: 100% $136/sf
- **Demolition Cost**: 7% $8.50/sf

### Cost of Educational Improvements

873 sf x $68 = $59,364

### Useful Life of Modernized Building

25

### Educational Adequacy Index

0.75

### Replacement Cost

873 sf x $136/sf = $118,728 + Demolish 873 sf x $8.50 = $7,421

Total = $126,149

### Estimated Life of New Building

65

### Castaldi Formula

<table>
<thead>
<tr>
<th>Results</th>
<th>Remodel Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$59,364 x 1.2 = $71,237</td>
<td>VS</td>
<td>$126,149</td>
</tr>
<tr>
<td>35 x .75 = 27</td>
<td>VS</td>
<td>65</td>
</tr>
</tbody>
</table>

### Results

- **Percentage of Modernization to Replacement**: 98.07%

Preliminary results indicate the costs to renovate the facility appear to be higher than the valued cost for replacement over the anticipated life of the building.
Palm City Elementary School
Facility Location

1951 SW 34thy Street
Palm City, Florida 34990
FISH Site Plan, See EFIS for Inventory
Refer to Attachment 2 for Palm City Elementary School FISH Inventory Reports
### Florida DOE 2014 Report of Cost of Construction

#### School Districts

<table>
<thead>
<tr>
<th>School District</th>
<th>Total Cost of Construction (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palm Beach County</td>
<td>$3,400,654,428</td>
</tr>
<tr>
<td>Broward County</td>
<td>$2,876,000,000</td>
</tr>
<tr>
<td>Miami-Dade County</td>
<td>$2,900,000,000</td>
</tr>
</tbody>
</table>

#### Individual Schools

<table>
<thead>
<tr>
<th>School Name</th>
<th>Total Cost of Construction (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Park High School</td>
<td>$2,876,000,000</td>
</tr>
<tr>
<td>Coral Ridge High School</td>
<td>$2,900,000,000</td>
</tr>
<tr>
<td>North Broward Preparatory</td>
<td>$3,400,654,428</td>
</tr>
</tbody>
</table>

#### Tables

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Appendix

- **Construction Costs**: Detailed breakdown of costs per project.
- **Cost Analysis**: Comprehensive analysis of cost factors.
- **Planning Documents**: All relevant planning materials and reports.