ASSESSMENT REPORT

Investing in Alabama Counties

A program of the Association of County Commissions *of* Alabama

ACCA / IAC ARPA FUNDING APPLICATIONS

BALDWIN COUNTY PROBATE JUDGE'S OFFICE

BAY MINETTE, ALABAMA

JUNE 10, 2022

JMR+H Architecture, PC

WHORTON ENGINEERING, INC. Consulting Engineers

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PART 1 – ASSESSMENT REPORT

WHORTON ENGINEERING, INC.
Consulting Engineers

JMR+H
Architecture, PC

Baldwin County Probate Judge's Office

1.0 INTRODUCTION

1.1 Description

The building is a single story building located in Bay Minette, Alabama. The existing plans provided were still fairly representative of existing conditions. The primary HVAC system is packaged rooftop heat pumps.

The following equipment is located on and/or serves this building:

ROOFTOP DX COOLING HEAT PUMP UNITS							
UNIT	**ROOFTOP UNIT**	**TONS**	**REFRIG**	**APPROX. UNIT AGE**	**FILTER**	**MOTORIZED DAMPER**	**OSA**
RTU-01	Trane THC120A3RKAG1FB0A, Serial No. 435100283L	10	R-22	2004	2"	Yes, but disabled	Yes
RTU-02	Trane TFD151C300BA, Serial No. 43510322D	12.5	R-22	2004	2"	Yes, but disabled	Yes
RTU-03	Trane Model THC120A3EKA1FB0A, Serial No. 435100082L	10	R-22	2004	2"	Yes, but disabled	Yes
RTU-04	Trane THC120A3EKA1FB0A, Serial No. 435100014L	10	R-22	2004	2"	Yes, but disabled	Yes
RTU-05	Trane Model THC092A3RGA18B0A, Serial No. 435100080L	7.5	R-22	2004	2"	Yes, but disabled	Yes

RTU-01

RTU-02

RTU-03

RTU-04

RTU-05

1.2 Assessment Process Overview

The assessment phase is a quality assurance / quality control process for verifying and documenting the existing conditions and identifying recommended improvement areas in accordance with IAC Funding Guidelines.

The assessment process is a systematic and cost effective process for documenting the current system.

2.0 IAC TEAM: ROLES & RESPONSIBILITIES

Role	Name	Company	Phone/Email
Prime A/E	Kevin Baughn	JMR+H Architecture	kbaughn@jmrha.com
Mechanical Engineer	Randall Whorton	Whorton Engineering	randy@whortoneng.com
Mechanical Engineer	Heather Page	Whorton Engineering	heather@whortoneng.com
Mechanical Engineer	Zach Butterworth	Whorton Engineering	zach@whortoneng.com

3.0 SITE INVESTIGATION

3.1 Outside Air and Building Pressure

1. Most of the units have outside air; however, the units motorized outside air dampers were broken/ disconnected. Recommend upgrading to include motorized outside air dampers that close during unoccupied mode and open during occupied mode.
2. Existing building was positive at time of site visit.
3. Existing units do not have humidity control.

3.2 Filtration

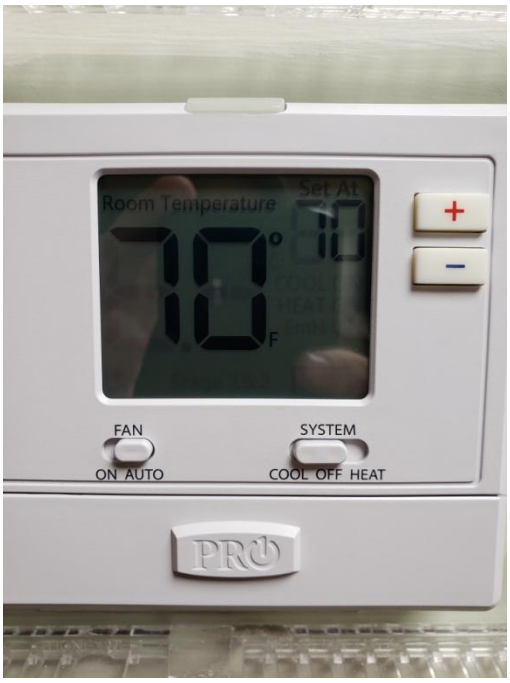
1. Currently disposable filters are installed. The rooftop units had 2” pleated filters at the time of site visit.

3.3 Air Cleaning

1. The existing facility had no air cleaning other than standard unit filtration.

3.4 Controls

1. The building had standard programmable thermostats.



3.5 Public Restrooms

1. The existing public restrooms have manual faucets and manual flush valves. The manual faucets and flush valves increase hand-surface contact.

4.0 RECOMMENDATIONS: The following recommendations are based on ASHRAE core recommendations, CDC core recommendations, the SLFRP - Fact Sheet - Final-508A.pdf, May 10, 2021, and the Frequently Asked Questions as of July 19, 2021 in relation to services and programs to contain and mitigate the spread of COVID-19, including: capital investments in public facilities to meet pandemic operations needs, ventilation improvements in key settings, and adaptations to public buildings to implement COVID-19 mitigation tactics.

4.1 Priority 1 - Outside Air and Building Pressure This recommendation is very dependent upon the capability of the existing HVAC equipment to not only bring the air through the equipment but to provide adequate cooling and moisture removal to prevent indoor mold and fungi.

1. Many of the existing systems are older and close to their end of life. These units will not handle current code required outside air and maintain temperature and humidity within the space. Recommend upgrading systems to include both temperature and humidity control. This would require upgrading approximately five (5) existing rooftop units.
2. Recommend adding motorized outside air dampers.
3. Recommend complete test and balance on the ventilation system to ensure recommended outside airflow and building positive pressure.
4. Recommend adding humidity control.

4.2 Priority 2 - Filtration Adding additional air cleaning by improving filter efficiency improves the indoor air quality within the space. There are several ways to accomplish this. Recommendations include HEPA filters (best), MERV 13, or as high efficiency as can be accomplished within the existing HVAC equipment.

1. Recommend upgrading to MERV 13 filters. The existing older units would not accommodate this upgrade. Upgrading these units is included within Priority 1 costs noted above.
2. Recommend placing unit fans to "on" to increase space air change filtration.

4.3 Priority 3 - Air Cleaning The ASHRAE / CDC Core recommendations both reference UV-C light technology for COVID-19 air cleaning improvements. UV-C lights kill airborne mold, bacteria, and many viruses resulting in improved indoor air quality. Additionally, consideration should be given to bi-polar ionization.

1. Recommend installing UV-C lights at the units to provide air cleaning in accordance with CDC and ASHRAE recommendations.

4.4 Priority 4- Controls Building control systems can assist in achieving higher indoor air quality by monitoring outside air, environmental controls, etc.

1. Recommend upgrading controls to allow for temperature and humidity control with remote access using communicating thermostats.

4.5 Priority 5 - Public Restrooms

1. Recommend installation of touch-free faucets and touch-free flush valves in public restroom areas. Hand hygiene along with physical distancing, face masks, and vaccination are specifically recommended as a layered approach to reduce exposure to SARS-COV-2. Final quantity would need to be determined during design.

5.0 COST ESTIMATES:

BALDWIN COUNTY PROBATE JUDGE'S OFFICE			
ITEM DESCRIPTION	**MULTIPLIER**	**COST PER MULTIPLIER**	**ITEM TOTAL**
Priority 1 – Upgrade older HVAC units and upgrade outside air dampers	50.0	$10,000	$500,000
Priority 1 - Test and Balance of Ventilation (OSA and Exhaust)	1.0	$15,000	$15,000
Priority 1 - Add dehumidifiers for humidity control	5.0	$8,000	$40,000
Priority 2 - Filtration (Included in Priority 1 above)	-	-	-
Priority 3 - Air Cleaning	5.0	$5,000	$25,000
Priority 4 - Controls	5.0	$3,000	$15,000
Priority 5 &6 - Water Closet / Urinals / Lav Sensor Flush Valves	2.0	$2,000	$2,000
Architectural Finishes Repair	1.0	$70,000	$70,000
TOTAL COST			**$ 667,000.00**

PART 2 – SITE VISIT REPORT

WHORTON
ENGINEERING, INC.
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Architecture, PC

IAQ SURVEY - *INVESTING* IN ALABAMA COUNTIES, *a program of the Association of County Commissions of Alabama*

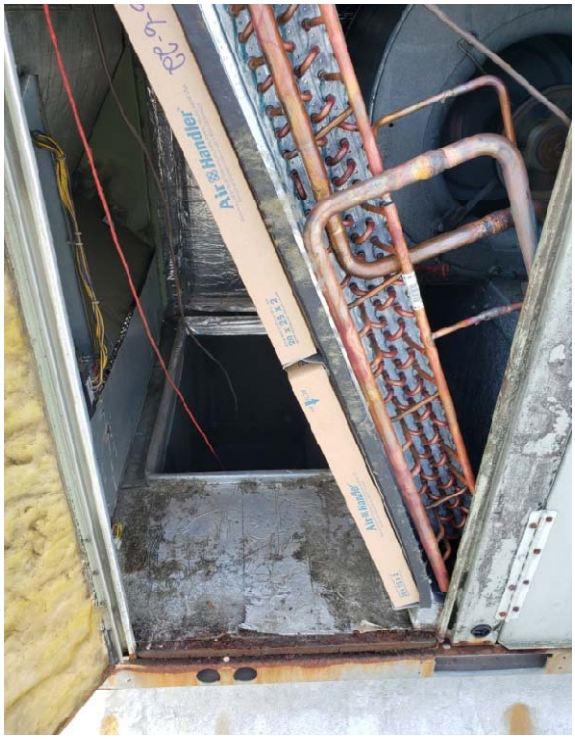
PROJECT INFORMATION:

Site Visit Location	Bay Minette, Alabama
Building	Baldwin County Probate Judge's Office
Building Type	EIFS Panel Front and Rear, Brick Walls on Adjoining Offices
Site Visit Date	June 10, 2022
Site Visit Performed By	Zach Butterworth, P.E.; Kevin Baughn

EXISTING CONDITIONS:

Existing Mechanical Units	Packaged Heat Pumps
Existing Age of Mechanical Systems	Approximately 2004
System Controls	Programmable Thermostats
Do controls have remote access	No
Are unit fans set to "on" in lieu of "auto"	No
Do units control by temperature and humidity	Temperature Only
Existing Filtration	2" Pleated Filter
Are existing HVAC units capable of higher filtration	No
Is there room in existing HVAC units for coil mounted UV-C	Yes
Code Required Outside Air	No, Motorized Dampers are Disabled
Does outside air to units have motorized dampers and/or manual dampers	Motorized, but broken/ disconnected
Evaluate building pressure	Positive
Public Restrooms Faucets (Manual / Touchless)	Manual
Public Restrooms Flush Valves (Manual /Touchless)	Manual
Pictures	See Below

PHOTOS:


Air Handler


Room Temperature
Set At
70°
F
+
−
FAN
ON AUTO
SYSTEM
COOL OFF HEAT
PRO


Honeywell Home
69
Mode
Menu
Fan
ProSeries