City of Dunwoody Georgia

4800 Ashford Dunwoody Road
Dunwoody, Georgia 30338
dunwoodyga.gov | 678.382.6700

To: Mayor and City Council

From: Rachel Waldron
Parks and Recreation Director

Re: Dunwoody Cultural Arts Center HVAC Roof Top Unit System Replacement

Date: July 14, 2025

Action

Approval of contract award to Addison Smith Mechanical Contractors for HVAC roof top unit (RTU) system replacement at the Dunwoody Cultural Arts Center.

Summary

Due to increased need for repairs, Staff commissioned Farnsworth Group to perform an assessment of the seven existing RTUs at the Dunwoody Cultural Arts Center. The assessment included a high-level investigation of the existing RTUs and the associated control system. Full replacement of all RTUs is recommended due to age and physical condition.

Details

RTUs 1 and 2 were installed in 2011. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. Control-related deficiencies were found during the assessment. Key control points—such as space temperature, return air temperature, and supply air temperature are missing, or unreliable, from the operator interface. These units also require building automation system (BAS) modifications for improved monitoring and control.

RTUs 3 through 7 were installed in the late 1990's or early 2000's. These units have exceeded their expected service life and show significant wear, with control and performance issues across most units. These observations align with recent RTU work orders.

Replacing all seven units simultaneously allows for cost savings in terms of crane rentals, freight, and labor.

City staff have identified three potential funding sources for this project:

- Option 1:
  - General Capital Project Fund – General Capital Repair & Improvement (23A) - $233,101

  (Note: Current budget available within the General Capital Repair & Improvement (project number 23A) is $892,659.)

- Option 2:
  - General Capital Project Fund – Unallocated Capital (Shallowford Road Proceeds) - $233,101

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(Note: Current budget available within Unallocated Capital (Shallowford Road Proceeds) is $836,401).

- Option 3:
  - General Fund – Unassigned Fund Balance - $233,101

  (Note: Unassigned fund balance within the General Fund as of 12/31/25 is currently projected to be $28,687,988.)

Staff is seeking the feedback of Council for the recommended funding source of this project.

Recommendation

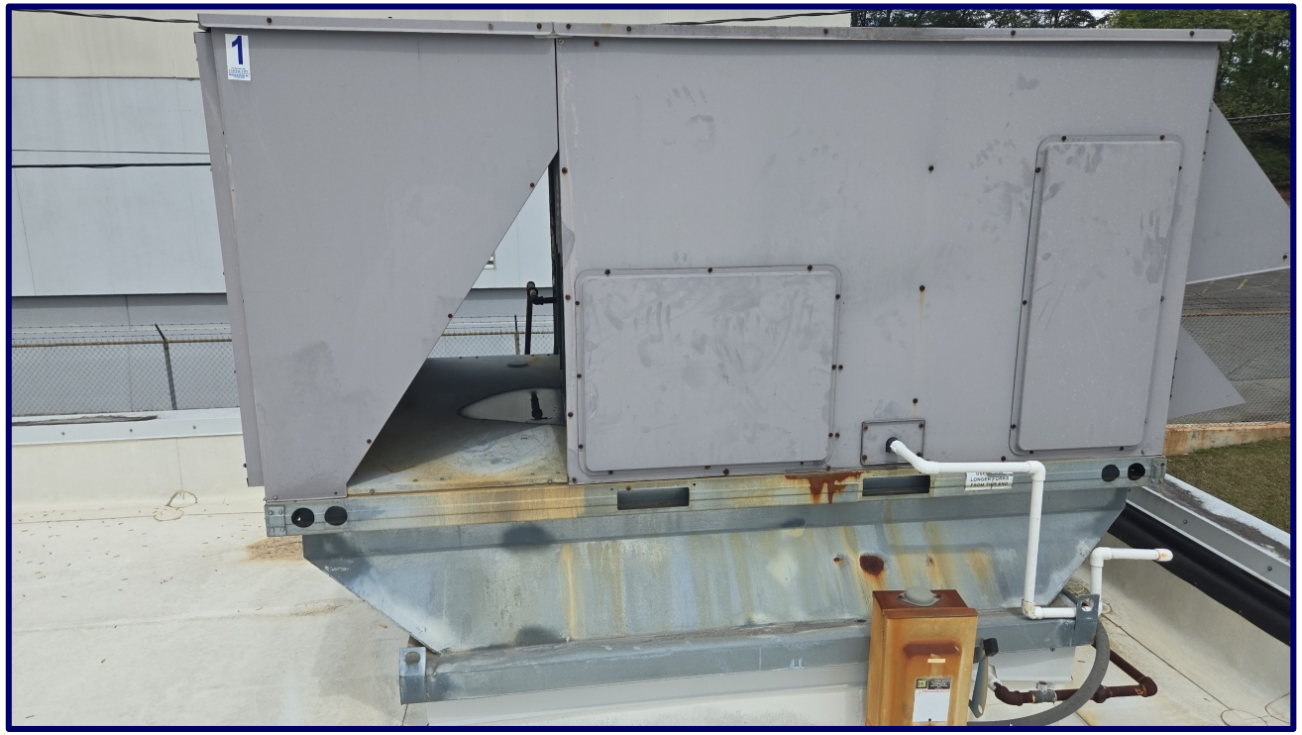
Staff respectfully requests that Council: (1) Award a contract to Addison Smith Mechanical Contractors for HVAC roof top unit (RTU) system replacement at the Dunwoody Cultural Arts Center, in the amount of $233,101 which includes a 10% contingency; (2) Authorize Staff to provide funding for the contract, selected by Council from funding options provided; (3) Authorize the City Manager to execute the necessary documents.

Dunwoody Cultural Arts Center HVAC RTU Replacement

July 14, 2025

Summary

- Due to increased need for repairs, Staff commissioned Farnsworth Group to perform an assessment of the seven existing RTUs at the Dunwoody Cultural Arts Center. The assessment included a high-level investigation of the existing RTUs and the associated control system. Full replacement of all RTUs is recommended due to age and physical condition.



Background/Timeline

- RTUs 1 and 2 were installed in 2011. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. Control-related deficiencies were found during the assessment. Key control points—such as space temperature, return air temperature, and supply air temperature are missing, or unreliable, from the operator interface. These units also require building automation system (BAS) modifications for improved monitoring and control.

- RTUs 3 through 7 were installed in the late 1990's or early 2000's. These units have exceeded their expected service life and show significant wear, with control and performance issues across most units. These observations align with recent RTU work orders.

Financial Impact

- Option 1: General Capital Project Fund – General Capital Repair & Improvement (23A) - $233,101
  (Note: Current budget available within the General Capital Repair & Improvement (project number 23A) is $892,659.)
- Option 2: General Capital Project Fund – Unallocated Capital (Shallowford Road Proceeds) - $233,101
  (Note: Current budget available within Unallocated Capital (Shallowford Road Proceeds) is $836,401).
- Option 3: General Fund – Unassigned Fund Balance - $233,101
  (Note: Unassigned fund balance within the General Fund as of 12/31/25 is currently projected to be $28,687,988.)

Staff Recommendation

Staff respectively requests that Council:

1. Award a contract to Addison Smith Mechanical Contractors for HVAC roof top unit (RTU) system replacement at the Dunwoody Cultural Arts Center, in the amount of $233,101 which includes a 10% contingency;
2. Authorize Staff to provide funding for the contract, selected by Council from funding options provided;
3. Authorize the City Manager to execute the necessary documents.


City of
Dunwoody
Georgia

ADDISON SMITH
Mechanical Contractor, Inc.

PROPOSAL

Attention: Chris Murphy
Company: City of Dunwoody
Project: Spruill Center for the Arts
Quotation: EST25-204
Date: 6/24/2024

Addison Smith Mechanical Contractors is pleased to submit this proposal for HVAC equipment replacement at the Spruill Center for the Arts, located at 5339 Chamblee Dunwoody Rd, Dunwoody, GA 30338. The scope and pricing herein are based on a site visit conducted on June 12, 2025, and subsequent project discussions.

Option #1: All Units Replacement

- All units below include the following:
  - R-454B Refrigerant
  - 208-230V/60/3
  - 0-100% outside air economizer
  - Condenser coil hail guards
- (4) Trane Foundation GDK180A3 15 Ton standard efficiency rooftop package units
  - Tags: RTU-4, RTU-5, RTU-6, RTU-7
  - No curb adaptor necessary (direct fit for existing Carrier footprint)
  - Medium gas heat
  - Two speed fan motor
- (2) Trane Foundation GDK150A3 12.5 Ton standard efficiency rooftop package units
  - Tags: RTU-1, RTU-2
  - Medium gas heat
  - Two speed fan motor
  - Curb adaptor from existing roof curb to Trane
- (1) Trane Foundation GDK060A3 5 Ton standard efficiency rooftop package unit
  - Tags: RTU-3
  - Low gas heat
  - New ductwork from unit side discharge to roof penetrations
- (7) 240VAC 3-pole fused outdoor disconnect switches with properly sized fuses for unit MOCP
- Low voltage, electrical, gas and condensate connections
- (7) Smoke detectors wired to shut down unit upon detection of smoke
- Crane rental, counterweights, freight in/out, rigging for **Saturday and Sunday replacement**
- Start-up and check out per Trane start-up procedures and checklists
- Haul-off and EPA compliant disposal of old systems, refrigerant, and oils
- Supervision, labor, and clean-up

Total Project Price: $211,910.^{00}

Phone: 770-832-9006 www.addisonsmith.net Fax: 770-832-6165
101 Parkwood Cir, Carrollton, GA 30117

ADDISON SMITH
Mechanical Contractor, Inc.

Option #2 (15 Ton): $44,414
Replace one (1) 15 ton unit (RTU-4, RTU-5, RTU-6 or RTU-7) per scope of work above ***(weekday price)***

Option #3 (12.5 Ton): $32,936
Replace one (1) 12.5 ton unit (RTU-1 or RTU-2) per scope of work above ***(weekday price)***

Option #4 (5 Ton): $22,755
Replace one (1) 5 ton unit (RTU-3) per scope of work above ***(weekday price)***

Exclusions

The following items are specifically excluded from this proposal:

- Scope beyond what is listed above
- Permits or permit fees
- Structural modifications
- Electrical service upgrades other than new disconnects and fuses
- Roof patching or penetrations outside duct curbs
- Temperature controls beyond factory unit controls
- Testing, adjusting, and balancing (TAB)
- Extended warranties beyond manufacturer standard
- Building automation system integration
- Fire alarm modifications
- Overtime labor except where noted

Warranty: Standard one-year parts and labor warranty from date of equipment start-up. Manufacturer's extended compressor warranties (if applicable) are included.

Proposal Validity

This proposal is valid for a period of 30 calendar days from the date listed above.

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ADDISON SMITH
Mechanical Contractor, Inc.

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Conditions of this proposal are as follows:

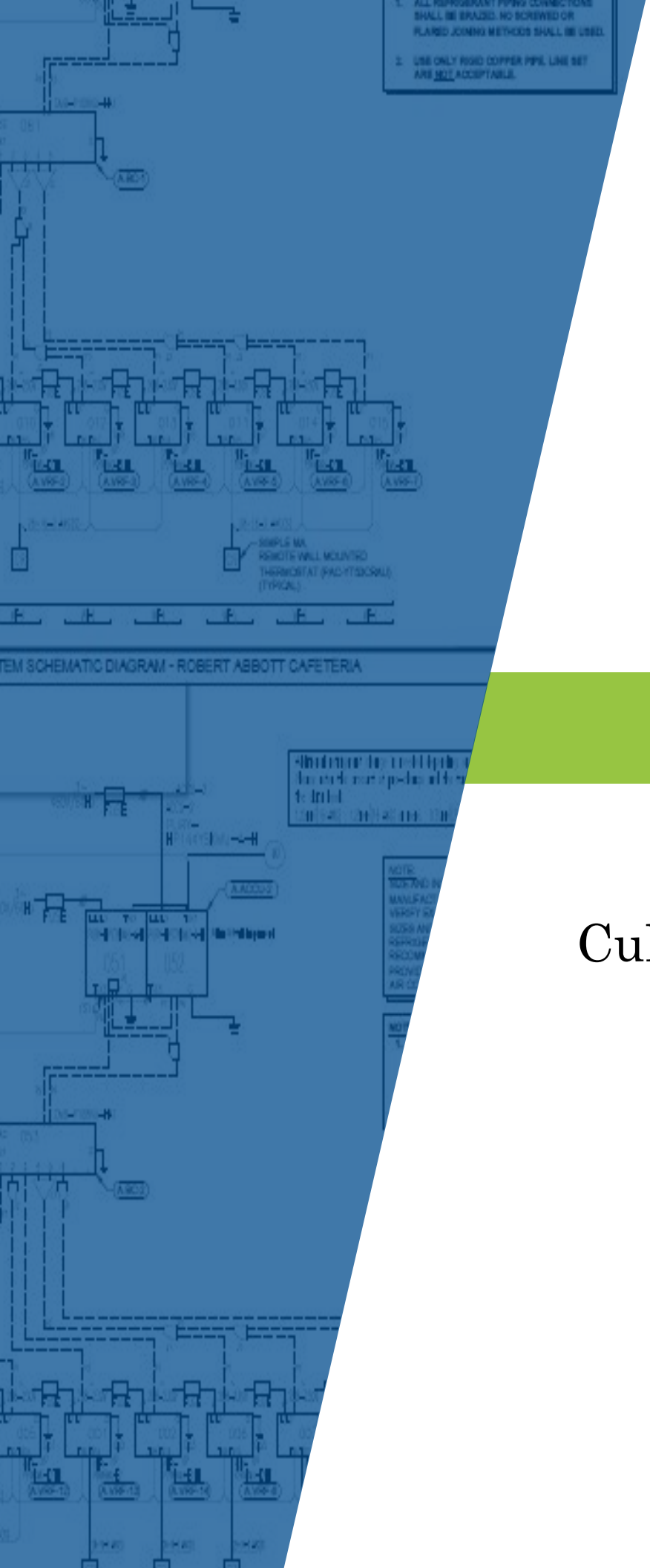
- This Mechanical Contractor's Proposal is based on the *Recommended Bid Conditions for Construction Projects in the State of Georgia* agreed to by the Georgia Branch, Associated General Contractors, Association of Mechanical Contractors of Atlanta and American Subcontractors Association of Georgia.
- Proposal based on continuity of project schedule. Postponement may lead to additional cost.
- ESCALATION CLAUSE: In the event of significant delay (defined as 30 days from the date of this Proposal) or price increase of material, equipment or energy occurring during the performance of the Contract through no fault of the Subcontractor, the contract sum, time of completion, or Contract requirements shall be equitably adjusted by Change Order in accordance with the procedures of the Contract Documents. A change in price of material, equipment, or energy will be considered significant when the price increases by ten percent (10%) between the date of the Contract and the date of installation.
- Change Orders must be approved in writing and Contract Modifications issued prior to commencement of work.
- Notice is hereby given of the requirements of O.C.G.A./13-11-7 of the "Georgia Prompt Pay Act" that interest shall be due at statutory rate of one percent (1%) per month on the principal amount due on payments requested under the Contract from the time such payment becomes due pursuant to the ACT.

Proposed by: Daniel Byrd - Addison Smith Mechanical

Accepted By: _____ Date: _____

Printed Name: _____

Phone: 770-832-9006 www.addisonsmith.net Fax: 770-832-6165
101 Parkwood Cir, Carrollton, GA 30117



Farnsworth GROUP

Final Report

Cultural Arts Center – RTU Assessment

City of Dunwoody

Date: 4/18/2025

Version 1.0

Dunwoody, Georgia

Table of Contents

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Project Overview

Purpose

The City of Dunwoody (Owner), and Comprehensive Program Services (CPS), engaged Farnsworth Group Commissioning to perform assessment of seven (7) existing rooftop units (RTU) serving Spruill Center for the Arts. The assessment also includes a high-level investigation of the existing RTUs and the associated control system. This report includes the RTU Assessment Report and outlines the team's finding and recommendations for the future system. Although other, smaller, mechanical systems do serve Spruill Center, the scope of this effort is limited to the RTUs.

Current Operating Conditions

Spruill Center Rooftop Units (RTU)

Assessments for the seven (7) RTUs and associated controls are detailed below, followed by recommendations in the following section.

EQUIPMENT

RTU-1

Farnsworth Group | Dunwoody Spruill Center HVAC Assessment

NOT ON SITE

0 CHECKLISTS | 0 TESTS | 1 ISSUE

Space Auditorium/Theater
Discipline Mechanical

Areas Served 1

Spaces	Description	Floor	Building	Campus
Auditorium/ Theater				

Attributes 7

Cooling Capacity 150 □BTU/h
Filter Size 16□20□2
Model Number 48PGDC14-A-50-2U
Motor - Frame #: E11□200438
Motor - Model Number HD60FE655
Motor Brake HP 3.7
Serial Number 2511G30007

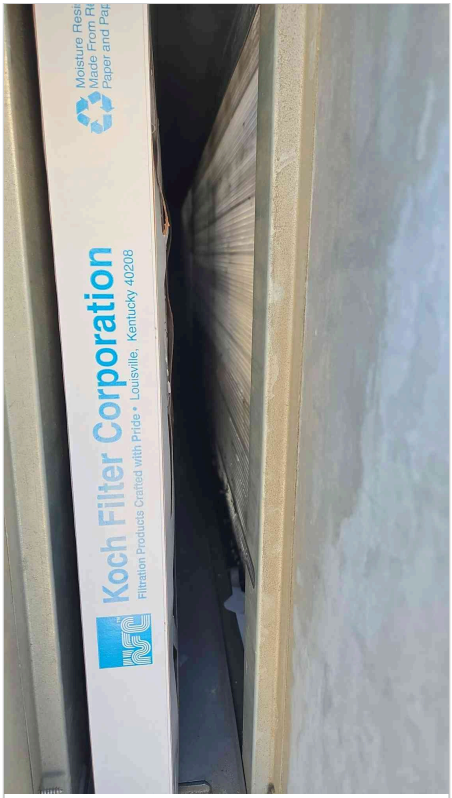
Issues 1

Number	Description	Status	Priority	Asset	Assigned	Due Date
FO-1-12	Controls Overview□ - Space temperature is not shown on graphics. Is space temperature integrated□ - RA temperature sensor shown as 0.0F on graphic. Is it installed and integrated□	OPEN		RTU-1		4/14/2025

Photos 11

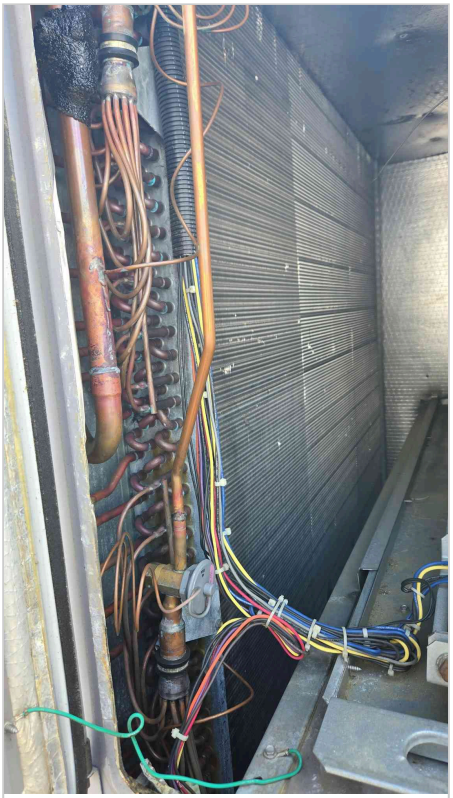
Barometric Section Blank-Off.jpeg

Condenser Section.jpg

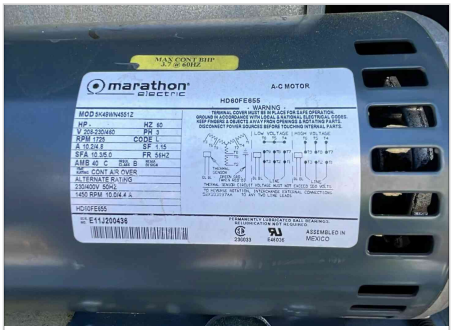


Filter.jpeg

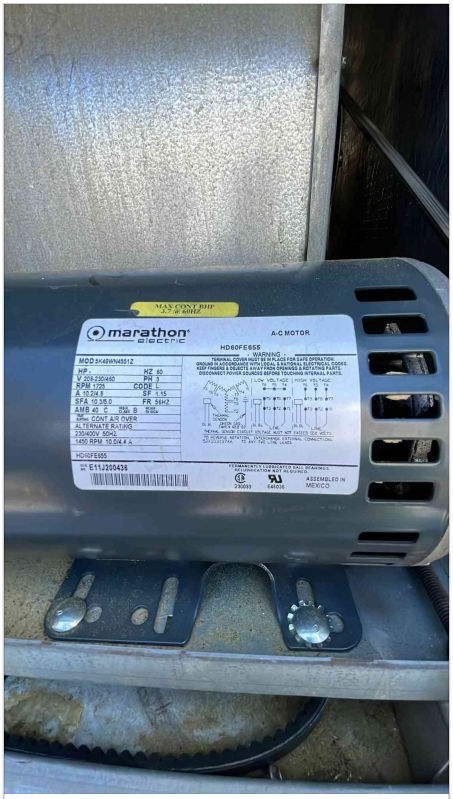
Compressors.jpeg



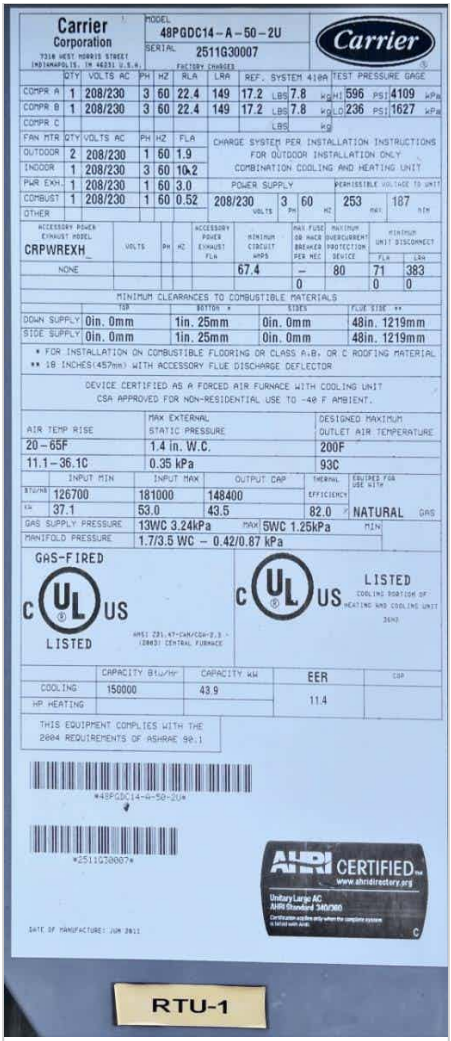
D□ Coil.jpeg



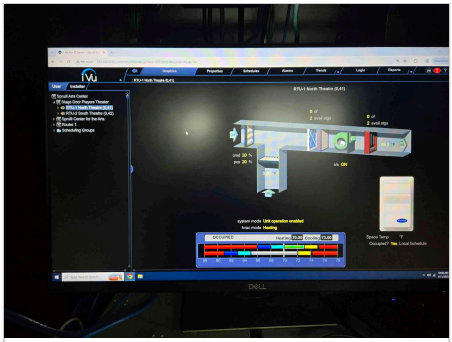
Motor NP 2.jpg



Motor NP.jpg



NP.jpg



Screenshot from BAS.jpg

Unit Overview 2.jpeg

Unit Overview.jpg

Comments 8

From preliminary testing, RTU-1 is able to move into heating and cooling modes and leaving air temperature changes to accommodate the various modes.

Luke Bumgardner on 04/15/2025 at 10:16 AM
Farnsworth Group, Inc.

Based on visual observation, the drive assembly for the fan is in good condition and the belt is not slipping substantially or noisy.

Luke Bumgardner on 04/15/2025 at 09:49 AM
Farnsworth Group, Inc.

The natural gas furnace for reheat appears to be operable. 44 k□ .

Luke Bumgardner on 04/15/2025 at 09:34 AM
Farnsworth Group, Inc.

The unit was manufactured, and likely installed, in 2011. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. Although the unit is approaching 15 years old, it is in good mechanical condition for its age.

Luke Bumgardner on 04/15/2025 at 09:31 AM
Farnsworth Group, Inc.

The unit appears to be regularly serviced and well-maintained.

Luke Bumgardner on 04/15/2025 at 09:22 AM
Farnsworth Group, Inc.

The coils are in a good condition. The unit is generally clean.

Mostafa Meimand on 04/14/2025 at 10:55 AM
Farnsworth Group, Inc.

The filters are clean.

Mostafa Meimand on 04/14/2025 at 10:55 AM
Farnsworth Group, Inc.

The condenser section is in a good condition.

Mostafa Meimand on 04/14/2025 at 10:36 AM
Farnsworth Group, Inc.

EQUIPMENT

RTU-2

Farnsworth Group | Dunwoody Spruill Center HVAC Assessment

NOT ON SITE

0 CHECKLISTS | 0 TESTS | 4 ISSUES

Space Auditorium/Theater
Discipline Mechanical

Areas Served 1

Spaces	Description	Floor	Building	Campus
Auditorium/ Theater				

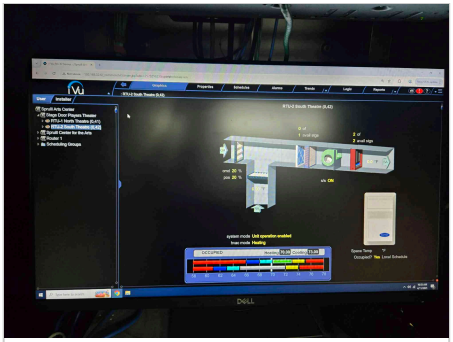
Attributes 4

Cooling Capacity 150 □BTU/h
Filter Size 16□20□2
Model Number 48PGDC14-A-50-2U
Serial Number 2511G300006

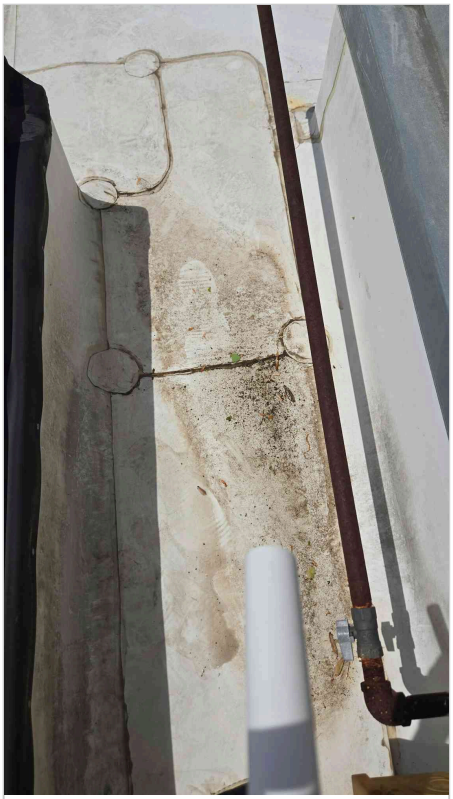
Issues 4

Number	Description	Status	Priority	Asset	Assigned	Due Date
FO-1-21	Consider piping condensate to a sloped portion of the roof to eliminate pooling of water.	OPEN		RTU-2		4/15/2025
FO-1-13	Controls Overview□ - Space temperature is not shown on graphics. - RA temperature displayed as 0.0F on graphics. Is this point integrated and installed□ - Supply Air Temperature sensor cycles its reporting and operation. Unreliable.	OPEN		RTU-2		4/14/2025
FO-1-2	The insulation on the interior of the unit needs to be replaced. This is common for units of this age.	OPEN		RTU-2		4/14/2025
FO-1-1	OA in take bird screen is broken.	OPEN		RTU-2		4/14/2025

Photos 10

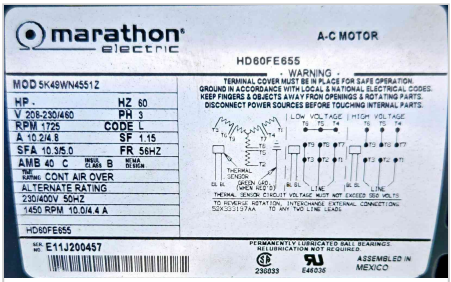


BAS.jpg



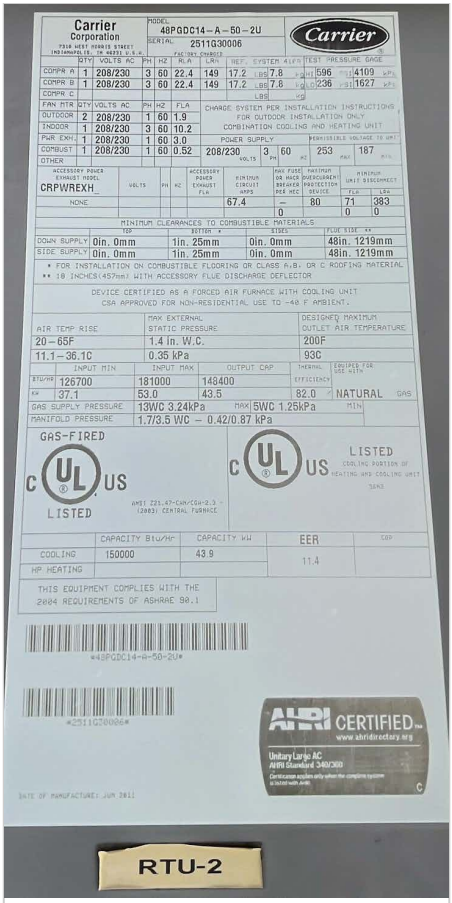
Condensate Pools on Roof.jpeg

Insulation.jpg

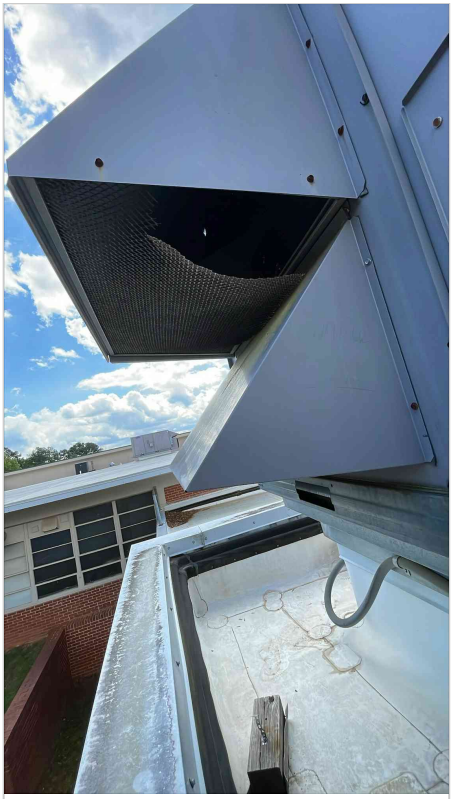


Motor NP.jpg

NP 2.jpeg



NP.jpg



OA Bird Screen (1).jpg

OA Bird Screen.jpg

OA Bird Screen (2).jpg

Unit Overview.jpeg

Comments 6

Equipped with natural gas furnace reheat, 44 k□ .
Luke Bumgardner on 04/15/2025 at 09:52 AM
Farnsworth Group, Inc.

The condenser section is in a good condition.
Luke Bumgardner on 04/15/2025 at 09:51 AM
Farnsworth Group, Inc.

The coils are in a good condition. The unit is generally clean.
Luke Bumgardner on 04/15/2025 at 09:51 AM
Farnsworth Group, Inc.

The unit appears to be regularly serviced and well-maintained.
Luke Bumgardner on 04/15/2025 at 09:51 AM
Farnsworth Group, Inc.

The unit was manufactured, and likely installed, in 2011. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. Although the unit is approaching 15 years old, it is in good mechanical condition for its age.
Luke Bumgardner on 04/15/2025 at 09:51 AM
Farnsworth Group, Inc.

Filters were clean.
Mostafa Meimand on 04/14/2025 at 12:06 PM
Farnsworth Group, Inc.

EQUIPMENT

RTU-3

Farnsworth Group | Dunwoody Spruill Center HVAC Assessment

NOT ON SITE

0 CHECKLISTS | 0 TESTS | 3 ISSUES

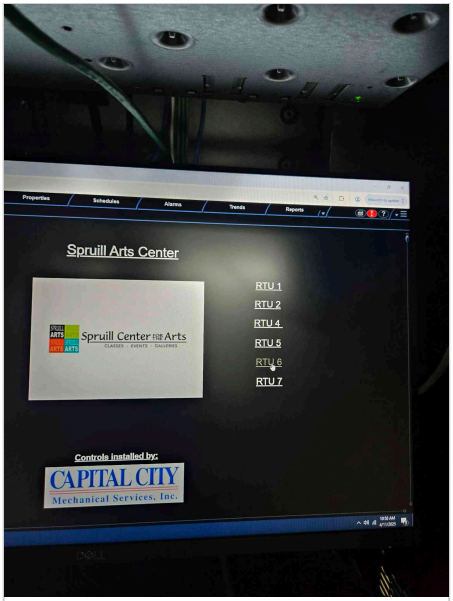
Attributes 3

Cooling Capacity 74 □BTU/h
Model Number 48TFD006---501GA
Serial Number 2401G22398

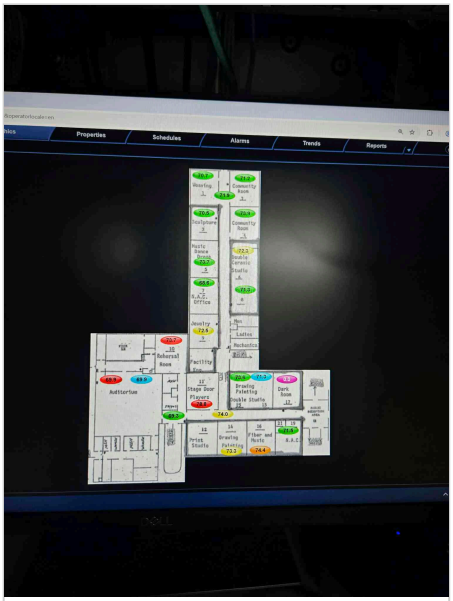
Issues 3

Number	Description	Status	Priority	Asset	Assigned	Due Date
FO-1-22	Design e□ternal static pressure is 1□w.c. Measured at 0.8□w.c. This indicates the unit is likely not meeting original design airflow. This is e□pected for a unit of this age.	OPEN		RTU-3		4/15/2025
FO-1-17	It seems that RTU-3 is not connected with the BAS system. Unable to determine if unit is able to enter into heating and cooling. At the time of testing, the unit was running and recirculating air (not heating or cooling).	OPEN		RTU-3		4/14/2025
FO-1-3	OA intake is clogged. There is no way to set OA flow.	OPEN		RTU-3		4/14/2025

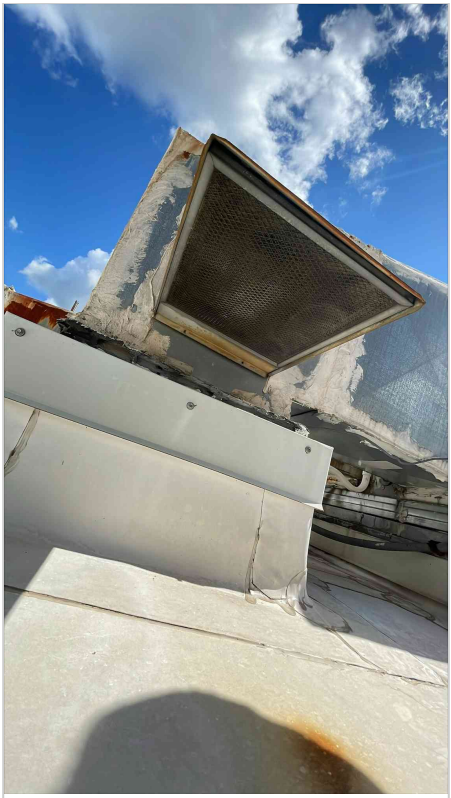
Photos 8



Controls Overview.jpg

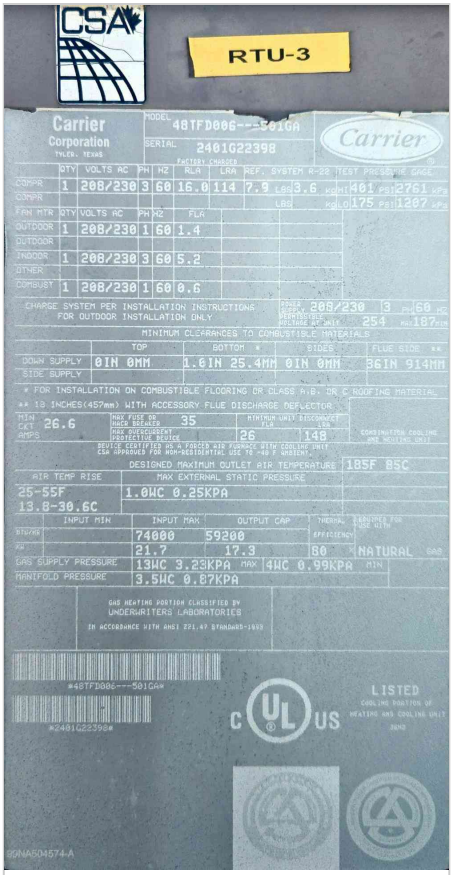


Floorplan.jpg



OA Intake.jpg

RTU3 NG Connection.jpeg



RTU3 NP.jpg

RTU3 OA Intake.jpeg

RTU3 Overview.jpeg

RTU3 SA and RA.jpeg

Comments 4

Equipped with natural gas furnace reheat.
Luke Bumgardner on 04/15/2025 at 10:31 AM
Farnsworth Group, Inc.

The unit was manufactured, and likely installed, in the late 90's ort early 00's. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. The unit is likely over 25 years old and is at the end of its useful life.
Luke Bumgardner on 04/15/2025 at 10:29 AM
Farnsworth Group, Inc.

Filters are clean.
Mostafa Meimand on 04/14/2025 at 12:20 PM
Farnsworth Group, Inc.

Condenser is in a good condition.
Mostafa Meimand on 04/14/2025 at 12:19 PM
Farnsworth Group, Inc.

EQUIPMENT

RTU-4

Farnsworth Group | Dunwoody Spruill Center HVAC Assessment

NOT ON SITE

0 CHECKLISTS | 0 TESTS | 6 ISSUES

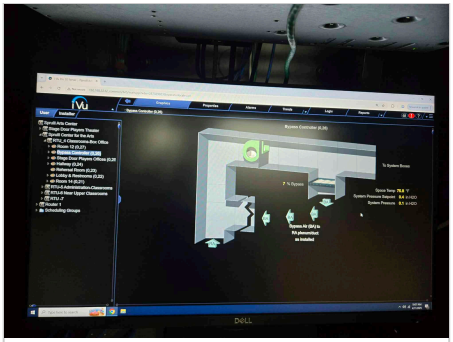
Attributes 3

Model Number 48T□D016---581□A
Motor - Model Number 5□49□ N4283□
Serial Number 3402F74970

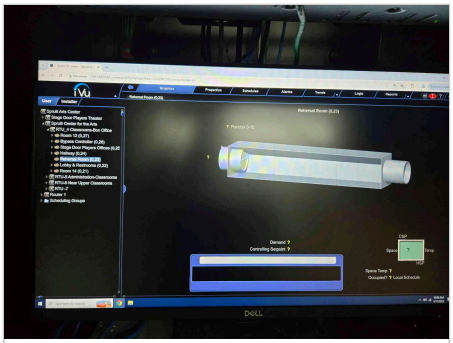
Issues 6

Number	Description	Status	Priority	Asset	Assigned	Due Date
FO-1-16	Some sensor values for the rooms associated with RTU-4 are not shown on graphics.	OPEN		RTU-4		
FO-1-15	The system is not cooling even when the thermostat cooling setpoint is changed to cooler values. A number of RTU-4 associated terminal devices appear to be inoperable based on the BAS.	OPEN		RTU-4		4/14/2025
FO-1-14	The unit cannot keep the space temperature within the range defined by thermostat. The current space temperature is 77.2 while the cooling setpoint is 70 (for an associated bo□). RTU-4 graphic is unclear.	OPEN		RTU-4		4/14/2025
FO-1-6	The condenser coil is damaged and much of the e□terior of the unit is rusted.	OPEN		RTU-4		4/14/2025
FO-1-5	The drain pipe from the cooling coil is broken.	OPEN		RTU-4		4/14/2025
FO-1-4	Drain pan is rusted.	OPEN		RTU-4		4/14/2025

Photos 14

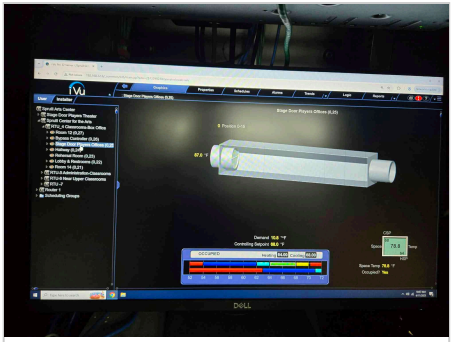


BAS Screen Shot - Bypass controller.jpg



BAS screen shot - Rehersal room.jpg

BAS Screen shot - Room 12.jpg

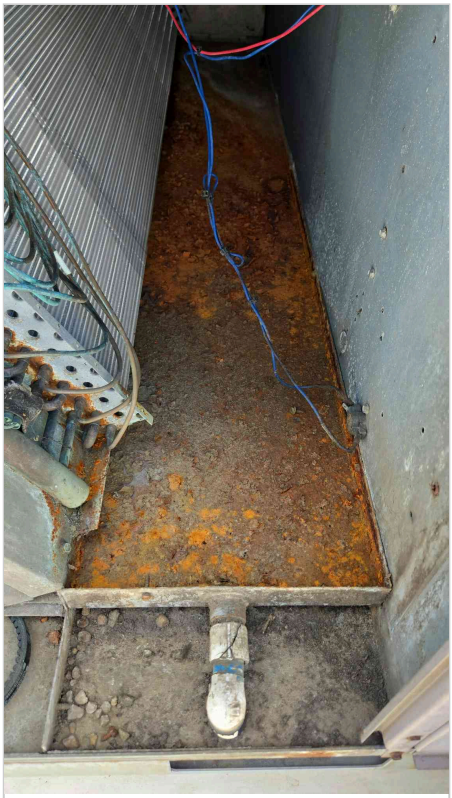


BAS screen shot - Stage Door Players.jpg

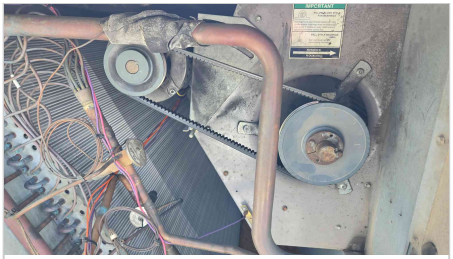
COND. FANS.jpeg

Condenser coil.jpg

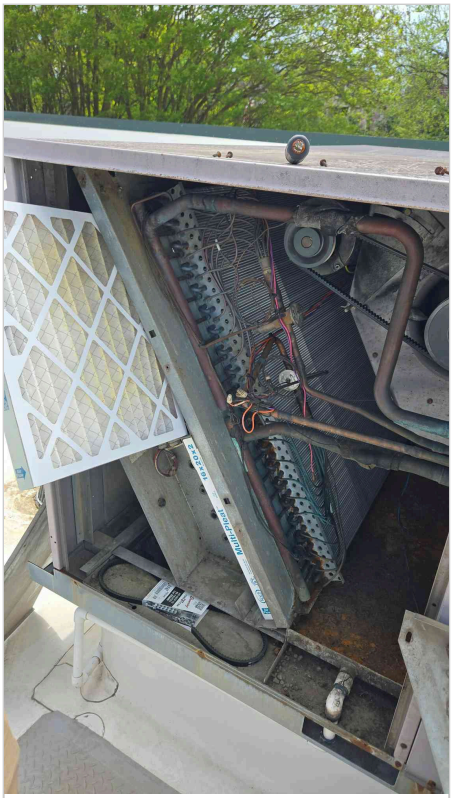
DP - pipe.jpg



DP.jpg



DRIVE.jpeg



FI□TER.jpeg

NP.jpg

OA INTA□E.jpeg

OA.jpeg

RTU4 NP.jpg

Comments 5

Based on visual observation, the drive assembly for the fan is in good condition and the belt is well tensioned however the unit is off.

Luke Bumgardner on 04/15/2025 at 10:55 AM
Farnsworth Group, Inc.

Filters are partially loaded. Cooling coil in clean condition.

Luke Bumgardner on 04/15/2025 at 10:55 AM
Farnsworth Group, Inc.

Equipped with natural gas furnace reheat, 54.5 k□ .

Luke Bumgardner on 04/15/2025 at 10:40 AM
Farnsworth Group, Inc.

The unit was likely manufactured and installed in the early 00's. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. The unit is likely almost/over 25 years old and is at the end of its useful life.

Luke Bumgardner on 04/15/2025 at 10:40 AM
Farnsworth Group, Inc.

The unit was off when assessment was conducted. Unable to confirm if unit can properly heat and cool.

Mostafa Meimand on 04/14/2025 at 12:25 PM
Farnsworth Group, Inc.

EQUIPMENT

RTU-5

Farnsworth Group | Dunwoody Spruill Center HVAC Assessment

NOT ON SITE

0 CHECKLISTS | 0 TESTS | 4 ISSUES

Attributes 2

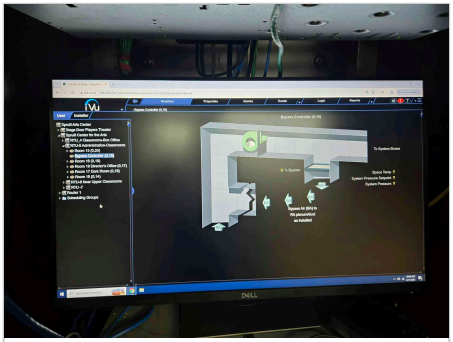
Model Number 48T□D016---581□A

Serial Number 3802F80516

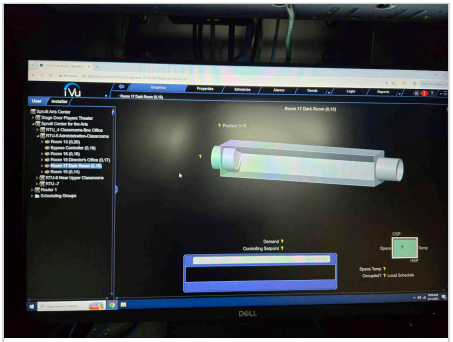
Issues 4

Number	Description	Status	Priority	Asset	Assigned	Due Date
FO-1-18	The BAS system does not show a lot of values for the controller. A number of RTU-5 associated terminal devices appear to be inoperable based on the BAS.	OPEN		RTU-5		4/14/2025
FO-1-9	Condenser coil is damaged.	OPEN		RTU-5		4/14/2025
FO-1-8	The bird screen is damaged.	OPEN		RTU-5		
FO-1-7	Outdoor Air Damper was closed while the unit was operating.	OPEN		RTU-5		4/14/2025

Photos 5

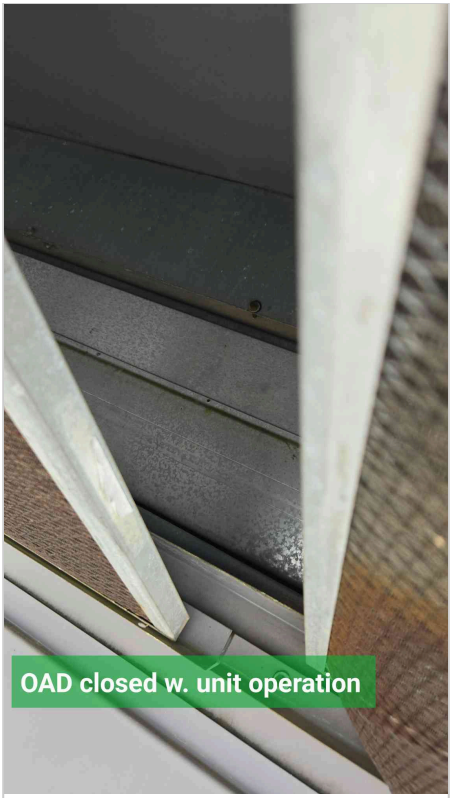


BAS Screen Shot - Bypass Controller.jpg

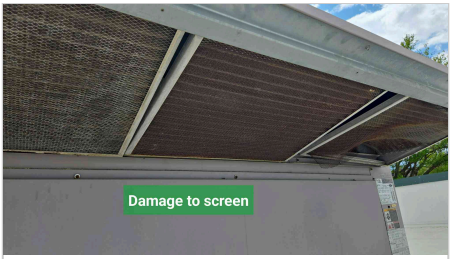


BAS Screen Shot - Dark Room.jpg

COI□.jpg



OA.jpg



Scan - 2025-04-11 14_12_48.jpg

Comments 3

Equipped with natural gas furnace reheat.
Luke Bumgardner on 04/15/2025 at 11:02 AM
Farnsworth Group, Inc.

The unit was on when assessment was conducted. However, unable to confirm if unit can properly heat and cool.
Luke Bumgardner on 04/15/2025 at 11:00 AM
Farnsworth Group, Inc.

The unit was likely manufactured and installed in the early 00's. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. The unit is likely almost/over 25 years old and is at the end of its useful life.
Luke Bumgardner on 04/15/2025 at 11:00 AM
Farnsworth Group, Inc.

EQUIPMENT

RTU-6

Farnsworth Group | Dunwoody Spruill Center HVAC Assessment

NOT ON SITE

0 CHECKLISTS | 0 TESTS | 2 ISSUES

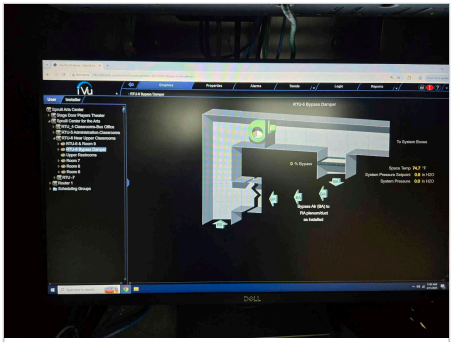
Attributes 3

Capacity 15 tons
Model Number 48T□D016---581□A
Serial Number 2302F58697

Issues 2

Number	Description	Status	Priority	Asset	Assigned	Due Date
FO-1-19	The BAS system does not show a lot of values such as system air temp and pressure.	OPEN		RTU-6		4/14/2025
FO-1-10	Condensing coil is damaged.	OPEN		RTU-6		4/14/2025

Photos 6



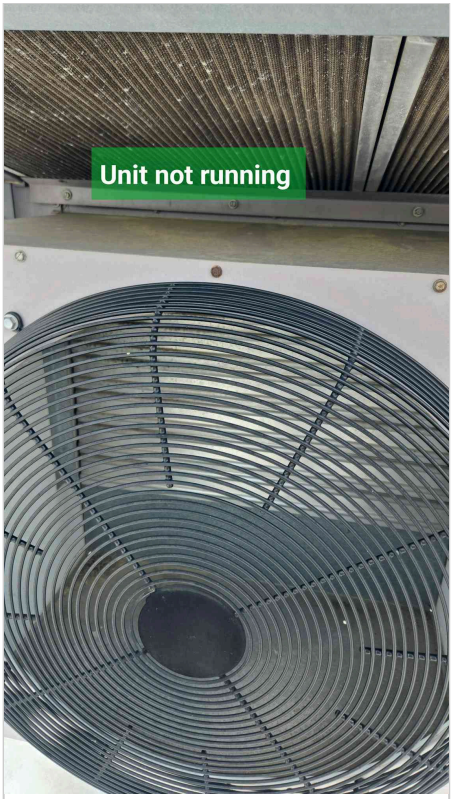
BAS Screen Shot.jpg

Cond. Coil.jpg

cond.jpeg

np.jpg

CxAlloy



Scan - 2025-04-11 13_13_24.jpeg


Scan - 2025-04-11 13_32_11.jpeg

Comments 3

The unit was likely manufactured and installed in the early 00's. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. The unit is likely almost/over 25 years old and is at the end of its useful life.
Luke Bumgardner on 04/15/2025 at 11:05 AM
Farnsworth Group, Inc.

The ductwork interior is not damaged but needs to be cleaned.
Mostafa Meimand on 04/14/2025 at 12:55 PM
Farnsworth Group, Inc.

Unit was not running at time of assessment and operator indicated the unit was off due to a needed controls repair. Unable to confirm if unit can properly heat and cool.
Mostafa Meimand on 04/14/2025 at 12:54 PM
Farnsworth Group, Inc.

EQUIPMENT

RTU-7

Farnsworth Group | Dunwoody Spruill Center HVAC Assessment

NOT ON SITE

0 CHECKLISTS | 0 TESTS | 2 ISSUES

Discipline Mechanical

Attributes 2

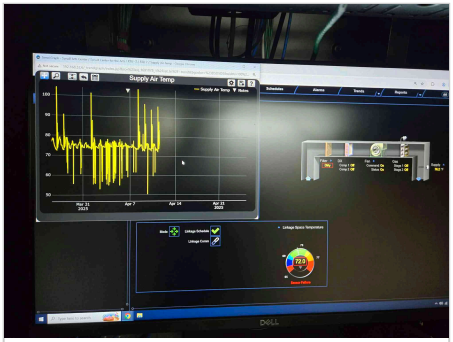
Model Number 48TMD016---511YA

Serial Number 3804F59339

Issues 2

Number	Description	Status	Priority	Asset	Assigned	Due Date
FO-1-20	The room temperature sensor is failed. However, space temp trends (from an unknown source) appear to show the space satisfied.	OPEN		RTU-7		4/14/2025
FO-1-11	The condensing coil is damaged.	OPEN		RTU-7		4/14/2025

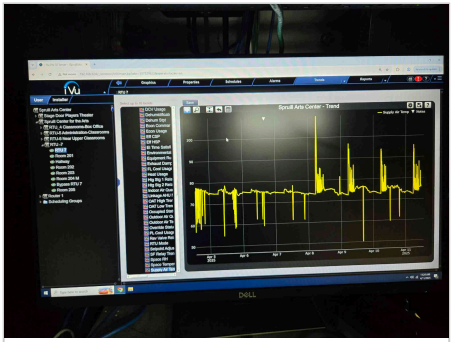
Photos 7



20250411_111457.jpg

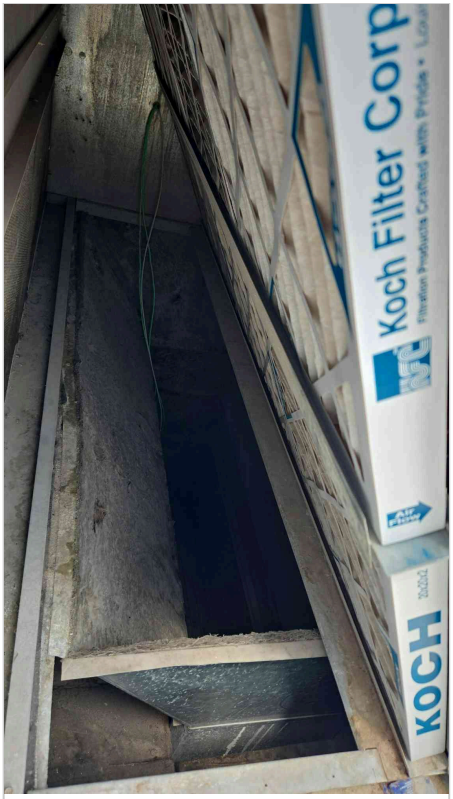
Barnes PTO 2025-04-11 13_40_27.jpeg

Cond. Coil.jpg

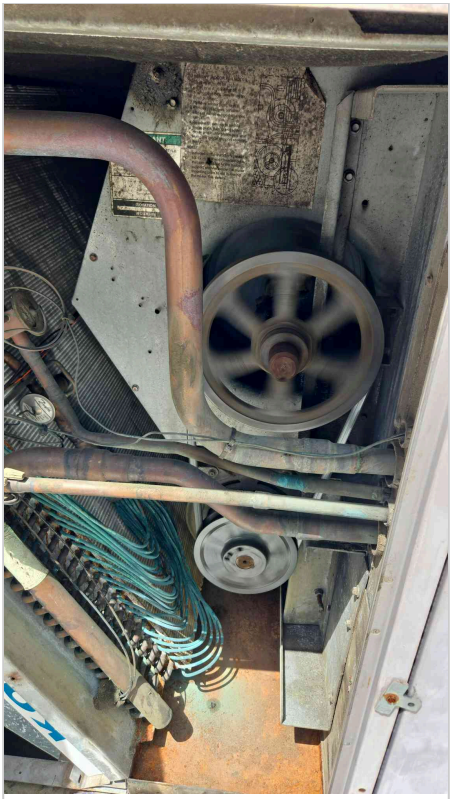


20250411_113514.jpg

BAS Screen Shot.jpg



Scan - 2025-04-11 13_45_09.jpeg


Scan - 2025-04-11 13_46_36.jpeg

Comments 6

The unit is not equipped with OA which is unusual.
Luke Bumgardner on 04/15/2025 at 11:14 AM
Farnsworth Group, Inc.

Based on visual observation, the drive assembly for the fan is in good condition and the belt is not slipping substantially or noisy.
Luke Bumgardner on 04/15/2025 at 11:13 AM
Farnsworth Group, Inc.

The unit was likely manufactured and installed in the early 00's. A typical lifecycle for well-maintained packaged RTU equipment is 15-20 years. The unit is likely almost/over 25 years old and is at the end of its useful life.

The controls update appears to have addressed some temp control issues in the short-term; however, replacement of the unit is recommended due to age and physical condition.
Luke Bumgardner on 04/15/2025 at 11:12 AM
Farnsworth Group, Inc.

The controls for RTU-7 were recently replaced. The graphics are clean and generally well-organized; however, the space sensor appears failed or not linked properly.
Luke Bumgardner on 04/15/2025 at 11:11 AM
Farnsworth Group, Inc.

Based on the trend of supply air temperature, we infer that the unit is modulating control temperature properly.
Mostafa Meimand on 04/14/2025 at 01:58 PM
Farnsworth Group, Inc.

The ductwork is not damaged but cleaning could help to improve longevity.
Mostafa Meimand on 04/14/2025 at 12:58 PM
Farnsworth Group, Inc.

Corrective Actions & Future Considerations

Spruill Center Rooftop Units (RTU) - Assessment Summary & Recommendations:

In the following, RTUs with similar conditions are grouped together, and the assessment summaries and recommendations are discussed accordingly.

RTU 1 & 2:

RTUs 1 and 2 are in good mechanical condition, particularly for their age. Both the condenser and evaporator coils appear well-maintained, and the units show signs of regular service. These units were manufactured—and likely installed—in 2011. Given that the typical lifecycle of well-maintained packaged RTUs is 15–20 years, the equipment is approaching the lower end of its expected service life but, mechanically, appears to be performing well relative to its age.

However, there are some control-related deficiencies. Key control points—such as space temperature, return air temperature, and supply air temperature are missing, or unreliable, from the operator interface.

Recommendation: Continue with regular mechanical maintenance to extend the useful life of the units but consider upgrading or repairing the BAS system to improve proper monitoring and control functionality. Enhancing the control interface will improve operational oversight and may contribute to reduced comfort complaints.

RTU 3 - 7:

RTUs 3 through 7 were manufactured—and likely installed—in the late 1990s or early 2000s. Given that the typical lifecycle for well-maintained packaged RTUs is 15–20 years, these units have exceeded their expected service life and are likely over 25 years old. Overall, they are at the end of their useful life and show signs of significant mechanical wear. These observations also align with recent RTU work orders and frequent repairs.

Common issues observed across these units include damaged condenser coils, rusted drain pans, and deteriorated outside air bird screens. According to the building automation system (BAS), most of the units are unable to maintain space temperatures within the desired thermostat range, indicating reduced performance. While the associated ductwork appears intact, duct cleaning is recommended to support system longevity and improve indoor air quality.

From a controls perspective, RTU 3 is not connected to the BAS system. The other units that are connected either do not perform adequately or have poor-quality graphics, limiting effective monitoring and control.

RTU 7 is an exception in terms of controls; its controls were recently replaced, and the graphics are clean and generally well-organized. However, the space sensor for RTU 7 appears to be either faulty or not properly linked. Despite this, the trend data for supply air temperature suggests that the unit is modulating to control temperature as intended.

Recommendation:

- **Full replacement** of RTUs 3, 4, 5, 6, and 7 is recommended due to age and physical condition.

- For all applicable units, **controls and BAS graphics should be reviewed and updated**, ensuring all sensors are functional and that the system allows proper monitoring and adjustment.

Safety Considerations:

The roof hatch, as currently installed, is in an unsafe condition. Ahead of any RTU mechanical or controls work, replacement of the roof hatch should be performed. Not only will this improve the safety of staff members and service providers when accessing the roof, it will also improve maintainability of the roof, or any roof-mounted equipment.

Conclusion

In conclusion, the Spruill Center for the Arts RTU assessment has identified building system performance issues and outlined recommended corrective actions to improve system functionality. RTUs 1 and 2 are in good mechanical condition but require BAS modifications for improved monitoring and control. RTUs 3 through 7 have exceeded their expected service life and show significant wear, with control and performance issues across most units. Replacement of RTUs 3 through 7 is recommended, while continued maintenance and BAS improvements are advised for RTUs 1 and 2 to ensure reliable performance and to extend their useful life.