

Report By:

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**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 09/19/2024**

**PROJECT**

**09-16-24 DOLLAR TREE- SPRINGFIELD, IL**

1713 W JEFFERSON ST

SPRINGFIELD, IL 62702

Client

Cole & Connie Oliphant

# National TAB

Project: 09-16-24 DOLLAR TREE- SPRINGFIELD, IL

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## Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

### RTU's (Roof Top Units) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

### General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

### Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

## Issue List

- All RTU final filters
- EF-1 low on flow
- EF-2 low on flow
- RTU-4 economizer not functional
- Supply Diffuser 1-8 high on flow



**09-16-24 DOLLAR TREE- SPRINGFIELD, IL**

**Project Issue Information**

**Issue Name :** All RTU final filters  
**Description :** All RTUs final filters are construction filters. Recommend replacing with correct size merv 8 rated Pleated filters.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** InfoOnly                                      **Asset Tag :**  
**Originated Date :** 09/17/2024 - Dylan Crisman - National TAB



**09-16-24 DOLLAR TREE- SPRINGFIELD, IL**

**Project Issue Information**

**Issue Name :** EF-1 low on flow  
**Description :** EF-1 is low on flow at 40/75 CFM. Unit is single speed wired for 80CFM. Unable to increase airflow. Recommend mechanical inspect unit for possible blockage in ductwork.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** High                                      **Asset Tag :**  
**Originated Date :** 09/17/2024 - Dylan Crisman - National TAB



**09-16-24 DOLLAR TREE- SPRINGFIELD, IL**

**Project Issue Information**

**Issue Name :** EF-2 low on flow  
**Description :** EF-2 is low on flow at 39/75 CFM. Unit is single speed wired for 80CFM. Unable to increase airflow. Recommend mechanical inspect unit for possible blockage in ductwork.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** High                                      **Asset Tag :**  
**Originated Date :** 09/17/2024 - Dylan Crisman - National TAB



**09-16-24 DOLLAR TREE- SPRINGFIELD, IL**

**Project Issue Information**

**Issue Name :** RTU-4 economizer not functional  
**Description :** RTU-4 economizer was not functional via controller setpoints. Manually set OA damper to 1/2" open to achieve design airflow. Recommend mechanical service economizer.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** High                                      **Asset Tag :**  
**Originated Date :** 09/18/2024 - Dylan Crisman - National TAB



**09-16-24 DOLLAR TREE- SPRINGFIELD, IL**

**Project Issue Information**

**Issue Name :** Supply Diffuser 1-8 high on flow  
**Description :** Diffuser 1-8 high on flow in first restroom after entering hallway from sales flow 68/50CFM. Face damper is fully closed, branch damper is broken/loose and free spinning unable to decrease airflow to design.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dylan Crisman  
**Status :** Open  
**Priority :** High                                      **Asset Tag :**  
**Originated Date :** 09/17/2024 - Dylan Crisman - National TAB

### AIR BALANCE SCHEDULE

| UNIT          | AREA SERVED | HVAC SUPPLY |        | HVAC RETURN |        | HVAC OUTDOOR |        | OA %   |        | HOOD MAKE-UP |        | HOOD EXHAUST |        | GENERAL EXH. |        |
|---------------|-------------|-------------|--------|-------------|--------|--------------|--------|--------|--------|--------------|--------|--------------|--------|--------------|--------|
|               |             | DESIGN      | ACTUAL | DESIGN      | ACTUAL | DESIGN       | ACTUAL | DESIGN | ACTUAL | DESIGN       | ACTUAL | DESIGN       | ACTUAL | DESIGN       | ACTUAL |
| RTU-1         | STORAGE     | 1750        | 1796   | 1600        | 1649   | 150          | 147    | 8.6%   | 8.2%   |              |        |              |        |              |        |
| RTU-2         | WEST SALES  | 2800        | 2931   | 2450        | 2561   | 350          | 370    | 12.5%  | 12.6%  |              |        |              |        |              |        |
| RTU-3         | EAST SALES  | 2800        | 2777   | 2450        | 2417   | 350          | 360    | 12.5%  | 13.0%  |              |        |              |        |              |        |
| RTU-4         | SOUTH SALES | 3500        | 3624   | 3100        | 3207   | 400          | 417    | 11.4%  | 11.5%  |              |        |              |        |              |        |
| EF-1          | RESTROOM    |             |        |             |        |              |        |        |        |              |        |              |        | 75           | 40     |
| EF-2          | RESTROOM    |             |        |             |        |              |        |        |        |              |        |              |        | 75           | 39     |
| <b>TOTALS</b> |             | 10850       | 11128  | 9600        | 9834   | 1250         | 1294   |        |        | 0            | 0      | 0            | 0      | 150          | 79     |

#### NET BUILDING AIRFLOW CALCULATION

| TOTALS             | DESIGN      | ACTUAL      |
|--------------------|-------------|-------------|
| TOTAL OA           | 1250        | 1294        |
| TOTAL EXHAUST      | 150         | 79          |
| <b>NET AIRFLOW</b> | <b>1100</b> | <b>1215</b> |

| DOOR TESTED    | BUILDING PRESSURE MEASUREMENTS (IN. H2O) |
|----------------|--|
| FRONT          | 0.0165                                   |
| SIDE           |  |
| REAR           | 0.0102                                   |
| <b>AVERAGE</b> | <b>0.0134</b>                            |

#### FINAL CHECKS

- ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

---

- MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

---

- PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

## CheckList List

- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS



09-16-24 DOLLAR TREE- SPRINGFIELD, IL

CheckList Information

**Name :** TECH - STEP 1: INITIAL WALKTHROUGH      **Status :** Completed

**Assigned Organization :** National TAB      **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/16/2024 - Laura Robinson - National TAB

**Completed Date :** 09/16/2024 - Dylan Crisman - National TAB

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?      Yes

Comment:

All hood filters installed and accounted for?      N/A

Comment:

Hoods are wired and have power?      N/A

Comment:

Hood is free of alarms?      N/A

Comment:

Thermostats have power?      Yes

Comment:

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

Yes





09-16-24 DOLLAR TREE- SPRINGFIELD, IL

CheckList Information

**Name :** TECH - STEP 2: UNIT DATA AND EVAL **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/16/2024 - Laura Robinson - National TAB

**Completed Date :** 09/18/2024 - Dylan Crisman - National TAB

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional? Yes

Comment:

Excluding RTU-4. Issue created.

DCV Max damper opening position is set to minimum? Yes

Comment:

Free cooling enthalpy set point set for lowest setting (Typically "D") Yes

Comment:

Motors are all operating below the FLA rating? Yes

Comment:

Are belts tight?

Comment:

NA/DD

If direct drive unit is the speed controller working.

**Comment:**

Yes

---

**Is gas piping installed and valves turned on?**

Yes

---

**Comment:**

---

**Unit free of noticeable noise and vibration**

Yes

---

**Comment:**

---

**EF's**

---

**Rotation is correct?**

Yes

---

**Comment:**

---

**Belts are tight?**

---

**Comment:**

---

**Grease cup installed on hood fan?**

N/A

---

**Comment:**

---

**Hinge kit installed installed on hood fan?**

N/A

---

**Comment:**

---

**Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?**

N/A

---

**Comment:**

---

**Flex conduit is long enough so that fan can be completely tilted back?**

N/A

---

**Comment:**

---

**There is no major leakage around base of fan?**

Yes

---

**Comment:**

---

**Is the motor operating below the motor FLA rating?**

Yes

Comment:

For restroom fan(s) is the back draft damper installed and can it fully open?

Yes

Comment:

Unit free of noticeable noise and vibration?

Yes

Comment:

#### MUA

Rotation is correct?

N/A

Comment:

Gas piping is installed and valves are in on position?

N/A

Comment:

Heater tested and is functional?

N/A

Comment:

Internal motorized damper is fully opening?

N/A

Comment:

Motor is operating below the FLA rating?

N/A

Comment:

Unit free of noticeable noise and vibration?

N/A

Comment:

#### HOODS

Kitchen equipment installed in proper places?

N/A

Comment:

Can kitchen equipment be turned on for final smoke test?

N/A

Comment:

---

**DOCUMENTATION**

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Have trades/general contractor been notified about any issues and are they created on FaciliBuild? Yes

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Comment:

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**09-16-24 DOLLAR TREE- SPRINGFIELD, IL**

**CheckList Information**

**Name :** TECH - STEP 3: TEST, ADJUST AND BALANCE      **Status :** Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/16/2024 - Laura Robinson - National TAB  
**Completed Date :** 09/18/2024 - Dylan Crisman - National TAB

**CheckList Item Details**

**TEST, ADJUST, AND BALANCE ALL EQUIPMENT:**

**DURING TESTING MAKE NOTE OF THE FOLLOWING:**

**Is space free of drafting?** Yes

**Comment:**

**Is space comfortable in all areas?** Yes

**Comment:**

**Is the space free of ventilation noise?** Yes

**Comment:**

**If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".**

**Comment:**

NA



09-16-24 DOLLAR TREE- SPRINGFIELD, IL

CheckList Information

**Name :** TECH - STEP 4: FINAL TESTS **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/16/2024 - Laura Robinson - National TAB

**Completed Date :** 09/18/2024 - Dylan Crisman - National TAB

CheckList Item Details

**FINAL TESTS**

**HOOD CAPTURE TEST**

List equipment turned on for testing

**Comment:**

N/A

List smoke candle type used

**Comment:**

N/A

Smoke test capture - Perimeter of hood

**Comment:**

N/A

Smoke test capture - Top of cooking surface

**Comment:**

N/A

**WITNESS**

Date test was completed

N/A

**Comment:**

---

**TAB tech name / Firm**

**Comment:**

Dylan Crisman / NTi

---

**Site super name / Firm**

**Comment:**

---

**Owner representative name / Firm (if Applicable)**

**Comment:**

---

**Building pressure at front & back doors (All Systems On)**

**Comment:**

Front door 0.00165" Back door 0.0102"

---

**ADDITIONAL**

---

**Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)**

**Comment:**

Yes

---

**Thermostats are programmed?**

Yes

**Comment:**

---

# National TAB

Project: 09-16-24 DOLLAR TREE- SPRINGFIELD, IL

System/Unit: AHU/RTU



Asset: RTU 1

AREA:

| Unit Data           |          |                    |
|---------------------|----------|--------------------|
|                     | Design   | Actual             |
| MFG                 | CARRIER  | CARRIER            |
| Serial Num          | -        | 3823C10455         |
| Model Num           | 48GCE    | 48GCEM05A2M5A6W1F0 |
| Type                | RTU      | RTU                |
| Configuration       | VERTICAL | VERTICAL           |
| Num OA Filters 1    | -        | 1                  |
| OA Filter Size 1    | -        | 28X14              |
| Num Final Filter 1  | -        | 2                  |
| Final Filter Size 1 | -        | 16X25X2            |

| Motor Data     |        |        |
|----------------|--------|--------|
|                | Design | Actual |
| Motor MFG      | -      | NA     |
| Frame          | -      | NA     |
| Horsepower     | 1.4    | NA     |
| Motor Rpm      | -      | NA     |
| Phase          | 3      | 3      |
| Rated Voltage  | 208    | 208    |
| Rated Amperage | -      | 7.1    |

| Drive Data         |        |
|--------------------|--------|
|                    | Actual |
| Motor Sheave Size  | DD     |
| Motor Bore Size    | DD     |
| Motor Sheave SetPt | 7.6VDC |
| Fan Sheave Size    | DD     |
| Fan Sheave Bore    | DD     |
| Belt CL Distance   | DD     |
| Num of Belts       | DD     |
| Belt Size          | DD     |
| Belt Alignment     | DD     |

| Test Data              |        |                   |
|------------------------|--------|-------------------|
|                        | Design | Actual            |
| SF CFM                 | 1750   | 1796              |
| SF RPM                 | -      | 1581              |
| RA CFM                 | 1600   | 1649              |
| OA CFM                 | 150    | 147               |
| RL Voltage             | -      | 211.5/211.3/211.5 |
| RL Amperage            | -      | 3.0/3.1/3.0       |
| SF Rotation            | -      | CW                |
| SF System SetPt        | -      | 7.6VDC            |
| RA Damper Position     | -      | 7.40V             |
| Min OA Damper Position | -      | 2.60V             |
| Min OA Damper Type     | -      | ECONOMIZER        |
| OA Enthalpy Setpt      | -      | ES5               |

| Performance Data |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| MA Plenum SP     | -      | -0.51" |
| Fan Suction SP   | -      | -0.71" |
| Fan Discharge SP | -      | 0.11"  |
| Total ESP        | 1.0    | 0.62"  |
| Fan Total SP     | -      | 0.82"  |

| General                    |        |
|----------------------------|--------|
|                            | Actual |
| Fan Rotation Correct       | YES    |
| Unit Filters Clean         | YES    |
| Condensate Drain Installed | YES    |

## Unit Data - PHOTO LOG



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Completed By: Dylan Crisman on 09/17/2024

### Notes:

[1] Diffuser 1-8 high on flow, face damper is fully closed, branch damper is broken loose and free spinning. unable to decrease flow.

Written By: Dylan Crisman on 09/17/2024

# National TAB

Project:09-16-24 DOLLAR TREE- SPRINGFIELD, IL

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU 1/**

| Asset       |           |      |      |            |      |        |        |           |             |
|-------------|-----------|------|------|------------|------|--------|--------|-----------|-------------|
| Asset Name  | Location  | Type | Size | DESIGN CFM | AK   | CFM(1) | CFM(2) | FINAL CFM | % to design |
| AHU1-SGRD1  | STOCKROOM | D    | 14X6 | 300        | 0.58 | 270    | 288    | 288       | 96.0        |
| AHU1-SGRD2  | STOCKROOM | D    | 14X6 | 300        | 0.58 | 284    | 310    | 310       | 103.3       |
| AHU1-SGRD3  | STOCKROOM | D    | 14X6 | 300        | 0.58 | 181    | 304    | 304       | 101.3       |
| AHU1-SGRD4  | STOCKROOM | D    | 14X6 | 300        | 0.58 | 297    | 300    | 300       | 100.0       |
| AHU1-SGRD5  | STOCKROOM | D    | 14X6 | 300        | 0.58 | 271    | 316    | 316       | 105.3       |
| AHU1-SGRD6  | STOCKROOM | C    | 8    | 50         | 1.0  | 196    | 53     | 53        | 106.0       |
| AHU1-SGRD7  | STOCKROOM | A    | 8    | 50         | 1.0  | 113    | 51     | 51        | 102.0       |
| AHU1-SGRD8  | STOCKROOM | C    | 8    | 50         | 1.0  | 93     | 68[1]  | 68        | 136.0       |
| RTU 1-SGRD9 | OFFICE    | C    | 8    | 100        | 1.0  | 110    | 106    | 106       | 106.0       |
| Total       |           |      |      | 1750       |      | 1815   | 1728   | 1796      | 102.63%     |

Completed By: Dylan Crisman on 09/17/2024

# National TAB

Project: 09-16-24 DOLLAR TREE- SPRINGFIELD, IL

System/Unit: AHU/RTU



Asset: RTU 2

AREA:

| Unit Data           |          |                    |
|---------------------|----------|--------------------|
|                     | Design   | Actual             |
| MFG                 | CARRIER  | CARRIER            |
| Serial Num          | -        | 3323P67904         |
| Model Num           | 48FCE    | 48FCEM08A2M5A6W1F0 |
| Type                | RTU      | RTU                |
| Configuration       | VERTICAL | VERTICAL           |
| Num OA Filters 1    | -        | 1                  |
| OA Filter Size 1    | -        | 35X19.5            |
| Num Final Filter 1  | -        | 4                  |
| Final Filter Size 1 | -        | 16X20X2            |

| Motor Data     |        |        |
|----------------|--------|--------|
|                | Design | Actual |
| Motor MFG      | -      | NA     |
| Frame          | -      | NA     |
| Horsepower     | 2.4    | NA     |
| Motor Rpm      | -      | NA     |
| Phase          | 3      | 3      |
| Rated Voltage  | 208    | 208    |
| Rated Amperage | -      | 6.4    |

| Drive Data         |        |
|--------------------|--------|
|                    | Actual |
| Motor Sheave Size  | DD     |
| Motor Bore Size    | DD     |
| Motor Sheave SetPt | 6.4VDC |
| Fan Sheave Size    | DD     |
| Fan Sheave Bore    | DD     |
| Belt CL Distance   | DD     |
| Num of Belts       | DD     |
| Belt Size          | DD     |
| Belt Alignment     | DD     |

| Test Data              |        |                   |
|------------------------|--------|-------------------|
|                        | Design | Actual            |
| SF CFM                 | 2800   | 2931              |
| SF RPM                 | -      | 1426              |
| RA CFM                 | 2450   | 2561              |
| OA CFM                 | 350    | 370               |
| RL Voltage             | -      | 210.9/211.9/211.3 |
| RL Amperage            | -      | 2.2/3.1/2.6       |
| SF Rotation            | -      | CW                |
| SF System SetPt        | -      | 6.4VDC            |
| RA Damper Position     | -      | 7.10V             |
| Min OA Damper Position | -      | 2.90V             |
| Min OA Damper Type     | -      | ECONOMIZER        |
| OA Enthalpy Setpt      | -      | ES5               |

| Performance Data |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| MA Plenum SP     | -      | -0.43" |
| Fan Suction SP   | -      | -0.64" |
| Fan Discharge SP | -      | 0.26"  |
| Total ESP        | 1.0    | 0.69"  |
| Fan Total SP     | -      | 0.9"   |

| General                    |        |
|----------------------------|--------|
|                            | Actual |
| Fan Rotation Correct       | YES    |
| Unit Filters Clean         | YES    |
| Condensate Drain Installed | YES    |

## Unit Data - PHOTO LOG



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Completed By: Dylan Crisman on 09/17/2024

# National TAB

Project:09-16-24 DOLLAR TREE- SPRINGFIELD, IL

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU 2/**

| Asset      |            |      |      |            |     |        |        |           |             |
|------------|------------|------|------|------------|-----|--------|--------|-----------|-------------|
| Asset Name | Location   | Type | Size | DESIGN CFM | AK  | CFM(1) | CFM(2) | FINAL CFM | % to design |
| AHU2-SGRD1 | WEST SALES | B    | 12   | 350        | 1.0 | 487    | 374    | 370       | 105.7       |
| AHU2-SGRD2 | WEST SALES | B    | 12   | 350        | 1.0 | 602    | 454    | 374       | 106.9       |
| AHU2-SGRD3 | WEST SALES | B    | 12   | 350        | 1.0 | 598    | 454    | 368       | 105.1       |
| AHU2-SGRD4 | WEST SALES | B    | 12   | 350        | 1.0 | 402    | 303    | 359       | 102.6       |
| AHU2-SGRD5 | WEST SALES | B    | 12   | 350        | 1.0 | 437    | 326    | 357       | 102.0       |
| AHU2-SGRD6 | WEST SALES | B    | 12   | 350        | 1.0 | 546    | 412    | 370       | 105.7       |
| AHU2-SGRD7 | WEST SALES | B    | 12   | 350        | 1.0 | 570    | 427    | 361       | 103.1       |
| AHU2-SGRD8 | WEST SALES | B    | 12   | 350        | 1.0 | 480    | 345    | 372       | 106.3       |
| Total      |            |      |      | 2800       |     | 4122   | 3095   | 2931      | 104.68%     |

Completed By: Dylan Crisman on 09/16/2024

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Project: 09-16-24 DOLLAR TREE- SPRINGFIELD, IL

## System/Unit: AHU/RTU



Asset: RTU 3

AREA:

| Unit Data           |          |                    |
|---------------------|----------|--------------------|
|                     | Design   | Actual             |
| MFG                 | CARRIER  | CARRIER            |
| Serial Num          | -        | 3223P67835         |
| Model Num           | 48FCE    | 48FCEM08A2M5AYW1F0 |
| Type                | RTU      | RTU                |
| Configuration       | VERTICAL | VERTICAL           |
| Num OA Filters 1    | -        | 1                  |
| OA Filter Size 1    | -        | 35X19.5            |
| Num Final Filter 1  | -        | 4                  |
| Final Filter Size 1 | -        | 16X20X2            |

| Motor Data     |        |        |
|----------------|--------|--------|
|                | Design | Actual |
| Motor MFG      | -      | NA     |
| Frame          | -      | NA     |
| Horsepower     | 2.4    | NA     |
| Motor Rpm      | -      | NA     |
| Phase          | 3      | 3      |
| Rated Voltage  | 208    | 208    |
| Rated Amperage | -      | 6.4    |

| Drive Data         |        |
|--------------------|--------|
|                    | Actual |
| Motor Sheave Size  | DD     |
| Motor Bore Size    | DD     |
| Motor Sheave SetPt | 6.7VDC |
| Fan Sheave Size    | DD     |
| Fan Sheave Bore    | DD     |
| Belt CL Distance   | DD     |
| Num of Belts       | DD     |
| Belt Size          | DD     |
| Belt Alignment     | DD     |

| Test Data              |        |                   |
|------------------------|--------|-------------------|
|                        | Design | Actual            |
| SF CFM                 | 2800   | 2777              |
| SF RPM                 | -      | 1325              |
| RA CFM                 | 2450   | 2417              |
| OA CFM                 | 350    | 360               |
| RL Voltage             | -      | 210.6/210.6/210.8 |
| RL Amperage            | -      | 2.6/2.7/2.3       |
| SF Rotation            | -      | CW                |
| SF System SetPt        | -      | 6.7VDC            |
| RA Damper Position     | -      | 7.10V             |
| Min OA Damper Position | -      | 2.90V             |
| Min OA Damper Type     | -      | ECONOMIZER        |
| OA Enthalpy Setpt      | -      | ES5               |

| Performance Data |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| MA Plenum SP     | -      | -0.47" |
| Fan Suction SP   | -      | -0.74" |
| Fan Discharge SP | -      | 0.30"  |
| Total ESP        | -      | 0.77"  |
| Fan Total SP     | -      | 1.04"  |

| General                    |        |
|----------------------------|--------|
|                            | Actual |
| Fan Rotation Correct       | YES    |
| Unit Filters Clean         | YES    |
| Condensate Drain Installed | YES    |

## Unit Data - PHOTO LOG



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Completed By: Dylan Crisman on 09/17/2024

# National TAB

Project:09-16-24 DOLLAR TREE- SPRINGFIELD, IL

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU 3/**

| Asset      |            |      |      |            |     |        |        |           |             |
|------------|------------|------|------|------------|-----|--------|--------|-----------|-------------|
| Asset Name | Location   | Type | Size | DESIGN CFM | AK  | CFM(1) | CFM(2) | FINAL CFM | % to design |
| AHU3-SGRD1 | EAST SALES | B    | 12   | 350        | 1.0 | 396    | 311    | 341       | 97.4        |
| AHU3-SGRD2 | EAST SALES | B    | 12   | 350        | 1.0 | 475    | 348    | 339       | 96.9        |
| AHU3-SGRD3 | EAST SALES | B    | 12   | 350        | 1.0 | 538    | 381    | 355       | 101.4       |
| AHU3-SGRD4 | EAST SALES | B    | 12   | 350        | 1.0 | 473    | 346    | 368       | 105.1       |
| AHU3-SGRD5 | EAST SALES | B    | 12   | 350        | 1.0 | 505    | 341    | 356       | 101.7       |
| AHU3-SGRD6 | EAST SALES | B    | 12   | 350        | 1.0 | 566    | 401    | 345       | 98.6        |
| AHU3-SGRD7 | EAST SALES | B    | 12   | 350        | 1.0 | 589    | 404    | 351       | 100.3       |
| AHU3-SGRD8 | EAST SALES | B    | 12   | 350        | 1.0 | 404    | 283    | 322       | 92.0        |
| Total      |            |      |      | 2800       |     | 3946   | 2815   | 2777      | 99.18%      |

Completed By: Dylan Crisman on 09/16/2024

# National TAB

Project: 09-16-24 DOLLAR TREE- SPRINGFIELD, IL

## System/Unit: AHU/RTU



Asset: RTU 4

AREA:

| Unit Data           |          |                    |
|---------------------|----------|--------------------|
|                     | Design   | Actual             |
| MFG                 | CARRIER  | CARRIER            |
| Serial Num          | -        | 3523P69287         |
| Model Num           | 48FCE    | 48FCEM12A2M5A6W1F0 |
| Type                | RTU      | RTU                |
| Configuration       | VERTICAL | VERTICAL           |
| Num OA Filters 1    | -        | 1                  |
| OA Filter Size 1    | -        | 35X19.5            |
| Num Final Filter 1  | -        | 4                  |
| Final Filter Size 1 | -        | 20X20X2            |

| Motor Data     |        |        |
|----------------|--------|--------|
|                | Design | Actual |
| Motor MFG      | -      | NA     |
| Frame          | -      | NA     |
| Horsepower     | 3.0    | NA     |
| Motor Rpm      | -      | NA     |
| Phase          | 3      | 3      |
| Rated Voltage  | 208    | 208    |
| Rated Amperage | -      | 6.4    |

| Drive Data         |        |
|--------------------|--------|
|                    | Actual |
| Motor Sheave Size  | DD     |
| Motor Bore Size    | DD     |
| Motor Sheave SetPt | 7.9VDC |
| Fan Sheave Size    | DD     |
| Fan Sheave Bore    | DD     |
| Belt CL Distance   | DD     |
| Num of Belts       | DD     |
| Belt Size          | DD     |
| Belt Alignment     | DD     |

| Test Data              |        |                           |
|------------------------|--------|---------------------------|
|                        | Design | Actual                    |
| SF CFM                 | 3500   | 3624                      |
| SF RPM                 | -      | 1669                      |
| RA CFM                 | 3100   | 3207                      |
| OA CFM                 | 400    | 417                       |
| RL Voltage             | -      | 207.9/207.8/208.2         |
| RL Amperage            | -      | 4.3/4.4/4.1               |
| SF Rotation            | -      | CW                        |
| SF System SetPt        | -      | 7.9VDC                    |
| RA Damper Position     | -      | NA                        |
| Min OA Damper Position | -      | MANUALLY SET<br>1/2" OPEN |
| Min OA Damper Type     | -      | ECONOMIZER                |
| OA Enthalpy Setpt      | -      | ES5                       |

| Performance Data |        |        |
|------------------|--------|--------|
|                  | Design | Actual |
| MA Plenum SP     | -      | -0.59" |
| Fan Suction SP   | -      | -0.90" |
| Fan Discharge SP | -      | 0.47"  |
| Total ESP        | 1.0    | 1.06"  |
| Fan Total SP     | -      | 1.37"  |

| General                    |        |
|----------------------------|--------|
|                            | Actual |
| Fan Rotation Correct       | YES    |
| Unit Filters Clean         | YES    |
| Condensate Drain Installed | YES    |

## Unit Data - PHOTO LOG



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Completed By: Dylan Crisman on 09/17/2024

# National TAB

Project:09-16-24 DOLLAR TREE- SPRINGFIELD, IL

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU 4/**

| Asset      |             |      |      |            |     |        |        |           |             |
|------------|-------------|------|------|------------|-----|--------|--------|-----------|-------------|
| Asset Name | Location    | Type | Size | DESIGN CFM | AK  | CFM(1) | CFM(2) | FINAL CFM | % to design |
| AHU4-SGRD1 | SOUTH SALES | B    | 12   | 440        | 1.0 | 453    | 405    | 457       | 103.9       |
| AHU4-SGRD2 | SOUTH SALES | B    | 12   | 435        | 1.0 | 490    | 453    | 442       | 101.6       |
| AHU4-SGRD3 | SOUTH SALES | B    | 12   | 435        | 1.0 | 453    | 413    | 460       | 105.7       |
| AHU4-SGRD4 | SOUTH SALES | B    | 12   | 440        | 1.0 | 538    | 489    | 453       | 103.0       |
| AHU4-SGRD5 | SOUTH SALES | B    | 12   | 440        | 1.0 | 553    | 504    | 448       | 101.8       |
| AHU4-SGRD6 | SOUTH SALES | B    | 12   | 435        | 1.0 | 497    | 456    | 462       | 106.2       |
| AHU4-SGRD7 | SOUTH SALES | B    | 12   | 435        | 1.0 | 618    | 586    | 448       | 103.0       |
| AHU4-SGRD8 | SOUTH SALES | B    | 12   | 440        | 1.0 | 470    | 405    | 454       | 103.2       |
| Total      |             |      |      | 3500       |     | 4072   | 3711   | 3624      | 103.54%     |

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# National TAB

Project: 09-16-24 DOLLAR TREE- SPRINGFIELD, IL

System/Unit: FAN - Exhaust



Asset: EF1

AREA:

| Unit Data     |           |          |
|---------------|-----------|----------|
|               | Design    | Actual   |
| MFG           | GREENHECK | BROAN    |
| Model Num     | SP-B110   | AE80B-B  |
| Serial Num    | -         | 42D03T   |
| Type          | CEILING   | CEILING  |
| Configuration | VERTICAL  | VERTICAL |

| Test Data        |        |            |
|------------------|--------|------------|
|                  | Design | Actual     |
| CFM              | 75     | 40         |
| Fan RPM          | -      | 900        |
| Fan Rotation     | -      | CCW        |
| Motor RPM        | -      | 900        |
| System SetPt     | -      | HIGH SPEED |
| RL Voltage       | -      | NA         |
| RL Amperage      | -      | NA         |
| Total ESP        | 0.25   | NA         |
| Fan Inlet SP     | -      | NA         |
| Fan Discharge SP | -      | ATM        |

| Motor Data       |        |             |
|------------------|--------|-------------|
|                  | Design | Actual      |
| Motor MFG        | -      | OCEAN MOTOR |
| Frame            | -      | NL          |
| Horsepower       | 80     | NL          |
| Motor Rpm        | -      | 900         |
| Phase            | 1      | 1           |
| Voltage (rated)  | 120    | 120         |
| Amperage (rated) | -      | 0.3         |
| Service Factor   | -      | NL          |

## Unit Data - PHOTO LOG



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Completed By: Dylan Crisman on 09/17/2024

# National TAB

Project: 09-16-24 DOLLAR TREE- SPRINGFIELD, IL

System/Unit: FAN - Exhaust



Asset: EF2

AREA:

| Unit Data     |           |          |
|---------------|-----------|----------|
|               | Design    | Actual   |
| MFG           | GREENHECK | BROAN    |
| Model Num     | SP-B110   | AE80B-B  |
| Serial Num    | -         | 42D03T   |
| Type          | CEILING   | CEILING  |
| Configuration | VERTICAL  | VERTICAL |

| Test Data        |        |            |
|------------------|--------|------------|
|                  | Design | Actual     |
| CFM              | 75     | 39         |
| Fan RPM          | -      | 900        |
| Fan Rotation     | -      | CCW        |
| Motor RPM        | -      | 900        |
| System SetPt     | -      | HIGH SPEED |
| RL Voltage       | -      | NA         |
| RL Amperage      | -      | NA         |
| Total ESP        | 0.25   | NA         |
| Fan Inlet SP     | -      | NA         |
| Fan Discharge SP | -      | ATM        |

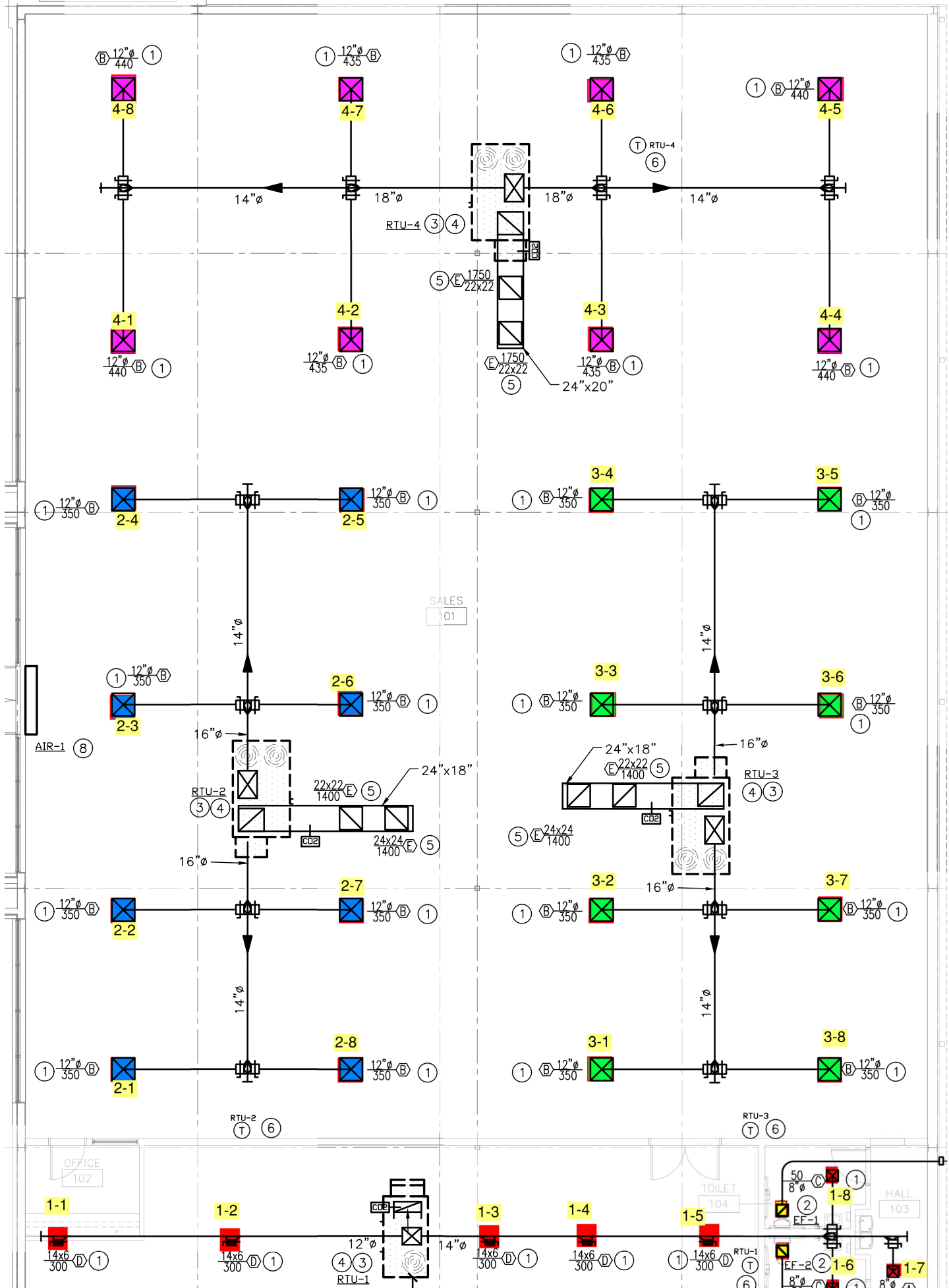
| Motor Data       |        |             |
|------------------|--------|-------------|
|                  | Design | Actual      |
| Motor MFG        | -      | OCEAN MOTOR |
| Frame            | -      | NL          |
| Horsepower       | 80     | NL          |
| Motor Rpm        | -      | 900         |
| Phase            | 1      | 1           |
| Voltage (rated)  | 120    | 120         |
| Amperage (rated) | -      | 0.3         |
| Service Factor   | -      | NL          |

## Unit Data - PHOTO LOG



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Completed By: Dylan Crisman on 09/17/2024



Date: 9/25/2024

COORDINATE SA & RA DROPS FROM RTU WITH STORAGE AREA WALLS. LOCATE RTU DROPS INSIDE STORAGE AREA.

