**Report By:**

**National TAB**
**1329 E. KEMPER ROAD**
**SUITE 4210**
**CINCINNATI, OH 45246**

NATIONAL TAB

Comfort. Under control.

**Report: FINAL TAB REPORT**
**Function: Test, Adjust, & Balance**
**Date: 7/14/2022**

# PROJECT

## 07-11 CULVERS - LECANTO,FL

1652 N LECANTO HWY

LECANTO, FL 34461

**Client**

Captive-Aire Region #60

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## Table Of Contents

## 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)
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.

Kitchen Exhaust Hood & Associated Fans
Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow.

General Exhaust Fans
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 recorded at +0.011" W.C. average. This pressure falls within the recommended tolerances by the International Mechanical Code of +0.02" W.C. to -0.02" W.C. The building is designed for a net positive pressure and this measurement coincides with that requirement.
The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat "off" and 100% capture was observed. Cooking equipment was not able to be turned on while the technician was on site.

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# 07-11 CULVERS - LECANTO,FL

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | REMARKS | **Status :** | NotSubmitted |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |

### CheckList Item Details

| PRIORITY (HIGH/LOW/INFO ONLY) | |
|---|---|
| INFO ONLY | |
| INFO ONLY | |
| INFO ONLY | |
| INFO ONLY | |

**Notes/Comments :**

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 | DINING ROOM | 6150 | 5785 | 4400 | 3945 | 1750 | 1840 | 28.5% | 31.8% | | | | | | |
| RTU-2 | KITCHEN | 6150 | 5554 | 4450 | 3837 | 1700 | 1717 | 27.6% | 30.9% | | | | | | |
| PRV-1 | RESTROOMS | | | | | | | | | | | 375 | 363 | | |
| PRV-2 | GRIDDLE HOOD | | | | | | | | | | | 1500 | 1448 | | |
| PRV-3 | FRYER HOOD | | | | | | | | | | | 1500 | 1497 | | |
| EF-1 | MOP ROOM | | | | | | | | | | | 75 | 87 | | |
| **TOTALS** | | 12300 | 11339 | 8850 | 7782 | 3450 | 3557 | | | 0 | 0 | 3450 | 3395 | 0 | 0 |

**NET BUILDING AIRFLOW CALCULATION**

| TOTALS | DESIGN | ACTUAL |
|---|---|---|
| TOTAL OA | 3450 | 3557 |
| TOTAL EXHAUST | 3450 | 3395 |
| **NET AIRFLOW** | 0 | 162 |

| DOOR TESTED | BUILDING PRESSURE MEASUREMENTS (IN. H20) |
|---|---|
| FRONT | 0.0042 |
| SIDE | 0.0054 |
| REAR | 0.007 |
| **AVERAGE** | **0.0055** |

**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:

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# 07-11 CULVERS - LECANTO,FL

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - SITE PICTURES | **Status :** | Submitted |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |

### CheckList Item Details

| | |
|---|---|
| STORE FRONT | YES |
| RTU-1 | YES |
| RTU-2 | YES |
| PRV-1 | YES |
| PRV-2 | YES |
| PRV-3 | YES |
| EF-1A | YES |
| HOOD 1 | YES |
| HOOD 2 | YES |
| PRODIGY BOARD WIRING | NA |

**Notes/Comments :**

CATIVEAIRE UNITS, NO PRODIGY BOARD

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# 07-11 CULVERS - LECANTO,FL

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 1: INITIAL WALKTHROUGH | **Status :** | Submitted |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |

### CheckList Item Details

**INITIAL SITE WALKTHROUGH**

| | |
|---|---|
| All diffusers and grilles are installed and match design? | YES |
| Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture) | YES |
| All hood filters installed and accounted for? | YES |
| Hoods are wired and have power? | YES |
| Thermostats have power? | YES |
| Have trades/general contractor been notified about any issues and are they created on FaciliBuild? | YES |
| On the cookline diffusers neck is there 18" (12" minimum) straight rigid duct run attached? | YES |

**Notes/Comments :**

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# 07-11 CULVERS - LECANTO,FL

## CheckList Information

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

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

**Requesting Organization :** 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 |
| Thermostat wire run from OCP on the RTU to the Ec terminal at the thermostat? If no, jumper can be installed from R to OCP temporarily. (The economizers will not open without OCP being energized.) | YES |
| Motors are all operating below the FLA rating? | YES |
| Are belts tight? | DD |
| If direct drive unit is the speed controller working. | YES |
| Is gas piping installed and valves turned on? | NO GAS PIPING |
| Unit free of noticeable noise and vibration | YES |
| **EF's** | |
| Rotation is correct? | YES |
| Belts are tight? | DD |
| Grease cup installed on hood fan? | YES |
| Hinge kit installed installed on hood fan? | YES |
| Lean grease rated fans back. Is grease duct installation adequate and is duct ran all the way to the base of the fan? | YES |

| | |
|---|---|
| Flex conduit is long enough so that fan can be completely tilted back? | YES |
| There is no major leakage around base of fan? | NO |
| Is the motor operating below the motor FLA rating? | YES |
| For restroom fan(s) is the back draft damper installed and can it fully open? | Yes |
| Unit free of noticeable noise and vibration? | YES |
| The hood exhaust fans are installed in correct positions and are not switched? | YES |
| **HOODS** | |
| Kitchen equipment installed in proper places? | YES |
| Can kitchen equipment be turned on for final smoke test? | Yes |
| Second stage Grease Grabber filters are installed on the griddle hood? | YES |
| **DOCUMENTATION** | |
| Have trades/general contractor been notified about any issues and are they created on FaciliBuild? | YES |

**Notes/Comments :**

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# 07-11 CULVERS - LECANTO,FL

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 3: TEST, ADJUST AND BALANCE | **Status :** | Submitted |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |

### CheckList Item Details

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

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

| | |
|---|---|
| Is space free of drafting? | YES |
| Is space comfortable in all areas? | YES |
| Is the space free of ventilation noise? | YES |
| If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA". | NA |

**Notes/Comments :**

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# 07-11 CULVERS - LECANTO,FL

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 4: FINAL TESTS | **Status :** | Submitted |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |

### CheckList Item Details

| | |
|---|---|
| **FINAL TESTS** | |
| **HOOD CAPTURE TEST** | |
| List equipment turned on for testing | NA |
| List smoke candle type used | INSPECT USA |
| Smoke test capture - Perimeter of hood | YES |
| Smoke test capture - Top of cooking surface | YES |
| **WITNESS** | |
| Date test was completed | 07/14/2022 |
| TAB tech name / Firm | IAN FULLER/NTAB |
| Site super name / Firm | CRAIG |
| Owner representative name / Firm (if Applicable) | NA |
| Building pressure at front & back doors (All Systems On) | YES |
| **ADDITIONAL** | |
| Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative) | YES |
| Thermostats are programmed? | YES |
| **PRODIGY SETTINGS FOR RTU'S** | |
| Parameter 65 set to 0 | NA |

| | |
|---|---|
| Parameter 78 set to 0 | NA |
| Parameter 105 set to 6 | NA |
| Parameter 156 set to 70 (Dining unit only) | NA |
| Parameter 156 set to 65 (Kitchen Unit Only) | NA |
| Parameter 170 set to 75 (Dining Unit Only) | NA |
| Parameter 170 set to 70 (Kitchen Unit Only) | NA |
| Parameter 131 set to the same % as OA minimum position? | NA |
| Parameter 117 set to the same % as OA minimum position? | NA |

**Notes/Comments :**

CAPTIVEAIRE RTU, NO PRODIGY BOARD EQUIPMENT DID NOT HAVE STARTUPS SO NOT TURNED ON

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: AHU/RTU

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**Asset: RTU1** AREA:DINING ROOM

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | LENNOX | CAPTIVEAIRE |
| **Serial Num** | - | 5212625 |
| **Model Num** | LCH-240-H4 | CASRTU3-E.302-24-20T-DOAS |
| **Type** | RTU | RTU |
| **Configuration** | VERTICAL | VERTICAL |
| **Num OA Filters 1** | - | 1 |
| **OA Filter Size 1** | - | 45.75X34" |
| **Num Final Filter 1** | - | 8 |
| **Final Filter Size 1** | - | 20X25X2 |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | NEMA |
| **Frame** | - | 215T |
| **Horsepower** | - | 10 |
| **Motor Rpm** | - | 1755 |
| **Phase** | 3 | 3 |
| **Rated Voltage** | 208/230 | 230/460 |
| **Rated Amperage** | - | 24.3/12.2 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | DD |
| **Motor Bore Size** | - | DD |
| **Motor Sheave SetPt** | - | DD |
| **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** | 6150 | 5785 |
| **SF RPM** | - | 1813 |
| **RA CFM** | 4400 | 3945 |
| **OA CFM** | 1750 | 1840 |
| **RL Voltage** | - | 208 |
| **RL Amperage** | - | 25.1 |
| **SF Rotation** | - | CCW |
| **RA Damper Position** | - | 3.9V |
| **Min OA Damper Position** | - | 7.1V |
| **Min OA Damper Type** | - | ECONOMIZER |
| **OA Enthalpy Setpt** | - | NA |
| **Brake Horse Power** | - | NA |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MA Plenum SP** | - | -0.48” |
| **Fan Suction SP** | - | -1.54” |
| **Fan Discharge SP** | - | 0.99” |
| **Total ESP** | - | 1.47" |
| **Fan Total SP** | - | 2.53" |

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

Completed By: Ian Fuller

Notes:

# National TAB

**Project:07-11 CULVERS - LECANTO,FL**

## AHU/RTU

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### Diffuser Supply (GRD)

**RTU1/DINING ROOM**

| Asset | | | | | | | |
|---|---|---|---|---|---|---|---|
| SGRD1 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | ENTRY | SD3 | 8" | 150 | | 198 | 136 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 152 | 101.3 | | | | | |
| SGRD2 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | MENS RR | SD4 | 8" | 150 | | 143 | 136 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 138 | 92.0 | | | | | |
| SGRD3 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | WOMENS RR | SD4 | 8" | 150 | | 226 | 147 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 138 | 92.0 | | | | | |
| SGRD4 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | HALL | SD1 | 12" | 450 | | 292 | 368 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 425 | 94.4 | | | | | |
| SGRD5 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 185 | 145 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 142 | 94.7 | | | | | |
| SGRD6 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 150 | 129 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 135 | 90.0 | | | | | |
| SGRD7 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 133 | 137 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 136 | 90.7 | | | | | |
| SGRD8 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 159 | 136 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 136 | 90.7 | | | | | |
| SGRD9 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 176 | 174 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 135 | 90.0 | | | | | |
| SGRD10 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 187 | 145 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 136 | 90.7 | | | | | |
| SGRD11 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 135 | 124 |
| | **FINAL CFM** | **% to design** | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 161 | 107.3 | | | | | |
| SGRD12 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 165 | 137 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 148 | 98.7 | | | | | |
| SGRD13 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 221 | 280 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 147 | 98.0 | | | | | |
| SGRD14 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 115 | 147 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 147 | 98.0 | | | | | |
| SGRD15 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 135 | 148 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 147 | 98.0 | | | | | |
| SGRD16 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 116 | 144 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 138 | 92.0 | | | | | |
| SGRD17 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 152 | 160 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 138 | 92.0 | | | | | |
| SGRD18 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 126 | 147 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 151 | 100.7 | | | | | |
| SGRD19 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DINING | SD1 | 8" | 150 | | 119 | 142 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 156 | 104.0 | | | | | |
| SGRD20 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DRINKS & CONDIMENTS | SD1 | 10" | 300 | | 265 | 299 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 280 | 93.3 | | | | | |
| SGRD21 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | ENTRY | SD1 | 8" | 150 | | 126 | 150 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 138 | 92.0 | | | | | |
| SGRD22 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | CUSTOMER ORDER AREA | SD1 | 12" | 450 | | 281 | 317 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 410 | 91.1 | | | | | |
| SGRD23 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | CUSTOMER SERVICE | SD1 | 10" | 350 | | 298 | 373 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 339 | 96.9 | | | | | |
| SGRD24 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | CUSTOMER SERVICE | SD1 | 10" | 350 | | 270 | 301 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 334 | 95.4 | | | | | |
| SGRD25 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | CUSTOMER SERVICE | SD1 | 10" | 350 | | 238 | 267 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 323 | 92.3 | | | | | |
| | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| SGRD26 | CUSTOMER SERVICE | SD1 | 10" | 350 | | 197 | 219 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 320 | 91.4 | | | | | |
| | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| SGRD27 | DRIVE THRU | SD1 | 12" | 500 | | 255 | 332 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 452 | 90.4 | | | | | |
| | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| SGRD28 | OFFICE | SD1 | 10" | 200 | | 265 | 163 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 183 | 91.5 | | | | | |

**Completed By:Jack Bain on**

| Asset | Notes |
|---|---|

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: AHU/RTU

Comfort. Under control.

**Asset: RTU2** AREA:KITCHEN

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | LENNOX | CAPTIVEAIRE |
| **Serial Num** | - | 5212625 |
| **Model Num** | LCH-240-H4 | CASRTU3-E.302-24-20T-DOAS |
| **Type** | RTU | RTU |
| **Configuration** | VERTICAL | VERTICAL |
| **Num OA Filters 1** | - | 1 |
| **OA Filter Size 1** | - | 45.75x34" |
| **Num Final Filter 1** | - | 8 |
| **Final Filter Size 1** | - | 20X25X2 |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | NEMA |
| **Frame** | - | 215T |
| **Horsepower** | - | 10 |
| **Motor Rpm** | - | 1755 |
| **Phase** | 3 | 3 |
| **Rated Voltage** | 208/230 | 230/460 |
| **Rated Amperage** | - | 24.3/12.2 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | DD |
| **Motor Bore Size** | - | DD |
| **Motor Sheave SetPt** | - | DD |
| **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** | 6150 | 5554 |
| **SF RPM** | - | 1813 |
| **RA CFM** | 4450 | 3837 |
| **OA CFM** | 1700 | 1717 |
| **RL Voltage** | - | 208 |
| **RL Amperage** | - | 26.1 |
| **SF Rotation** | - | CCW |
| **RA Damper Position** | - | 3.9V |
| **Min OA Damper Position** | - | 7.1V |
| **Min OA Damper Type** | - | ECONOMIZER |
| **OA Enthalpy Setpt** | - | NA |
| **Brake Horse Power** | - | NA |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MA Plenum SP** | - | -1.0" |
| **Fan Suction SP** | - | -2.65" |
| **Fan Discharge SP** | - | 0.55" |
| **Total ESP** | - | 1.55" |
| **Fan Total SP** | - | 3.2" |

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

Completed By: Ian Fuller

Notes:

# National TAB

**Project:07-11 CULVERS - LECANTO,FL**

## AHU/RTU

Comfort. Under control.

### Diffuser Supply (GRD)

**RTU2/KITCHEN**

| Asset | | | | | | | |
|---|---|---|---|---|---|---|---|
| SGRD1 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | SUNDAE SERVICE | SD1 | 12" | 600 | | 360 | 402 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 474 | 79.0 | | | | | |
| SGRD2 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | SUNDAE SERVICE | SD1 | 12" | 600 | | 457 | 480 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 561 | 93.5 | | | | | |
| SGRD3 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | COOKLINE | SD5 | 10" | 200 | | 245 | 164 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 196 | 98.0 | | | | | |
| SGRD4 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | COOKLINE | SD5 | 12" | 375 | | 228 | 278 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 320 | 85.3 | | | | | |
| SGRD5 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | FOOD PREP | SD5 | 12" | 400 | | 220 | 326 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 407 | 101.8 | | | | | |
| SGRD6 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | FOOD PREP | SD5 | 12" | 400 | | 355 | 320 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 396 | 99.0 | | | | | |
| SGRD7 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | COOKLINE | SD5 | 10" | 250 | | 295 | 242 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 243 | 97.2 | | | | | |
| SGRD8 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | COOKLINE | SD5 | 10" | 275 | | 276 | 181 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 250 | 90.9 | | | | | |
| SGRD9 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | TOILET | SD1 | 8" | 75 | | 119 | 89 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 82 | 109.3 | | | | | |
| SGRD10 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | ALCOVE | SD5 | 8" | 125 | | 155 | 121 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 129 | 103.2 | | | | | |
| SGRD11 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | FOOD PREP | SD5 | 12" | 350 | | 440 | 302 |
| | **FINAL CFM** | **% to design** | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 367 | 104.9 | | | | | |
| SGRD12 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DISHWASHING | SD5 | 12" | 350 | | 374 | 293 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 357 | 102.0 | | | | | |
| SGRD13 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DISHWASHING | SD5 | 12" | 350 | | 202 | 267 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 332 | 94.9 | | | | | |
| SGRD14 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | UTILITY ROOM | SD1 | 12" | 600 | | 451 | 572 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 518 | 86.3 | | | | | |
| SGRD15 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DRY GOODS | SD1 | 12" | 600 | | 350 | 409 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 476 | 79.3 | | | | | |
| SGRD16 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | DRY GOODS | SD1 | 12" | 600 | | 327 | 391 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 446 | 74.3 | | | | | |

**Completed By:Jack Bain on**

| Asset | Notes |
|---|---|

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: EF-A1** AREA:MOP ROOM

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | CAPTIVEAIRE |
| **Model Num** | XCR-B80 | CFA 100CA |
| **Serial Num** | - | 5212625 |
| **Type** | CEILING | CEILING |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | UL |
| **Frame** | - | NA |
| **Horsepower** | - | 0.116 |
| **Motor Rpm** | 900 | 640 |
| **Phase** | 1 | 1 |
| **Voltage (rated)** | 115 | 115 |
| **Amperage (rated)** | - | 1.1 |
| **Service Factor** | - | NA |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | DD |
| **Motor Bore Size** | - | DD |
| **Motor Sheave SetPt** | - | DD |
| **Fan Sheave Size** | - | DD |
| **Fan Sheave Bore** | - | DD |
| **Belt CL Distance** | - | DD |
| **Num of Belts** | - | DD |
| **Belt Size** | - | DD |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 75 | 87 |
| **Fan RPM** | 885 | DD |
| **Fan Rotation** | - | CCW |
| **Motor RPM** | - | DD |
| **RL Voltage** | - | 113 |
| **RL Amperage** | - | 1.0 |
| **Suction ESP** | - | -0.02" |
| **Discharge ESP** | - | NA |
| **Total ESP** | 0.125" | |

Completed By: Ian Fuller

Notes:

| Asset | Notes |
|---|---|

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: PRV1** AREA:RESTROOM

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | CAPTIVEAIRE |
| **Model Num** | XRED-090-D | DR12HFA |
| **Serial Num** | - | 5212625 |
| **Type** | DOWNBLAST | DOWNBLAST |
| **Configuration** | HORIZONTAL | HORIZONTAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | TELCO |
| **Frame** | - | NA |
| **Horsepower** | 0.0667 | 0.25 |
| **Motor Rpm** | 1550 | 1800 |
| **Phase** | 1 | 1 |
| **Voltage (rated)** | 115 | 115 |
| **Amperage (rated)** | - | 2.9 |
| **Service Factor** | - | NA |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 375 | 363 |
| **Fan RPM** | 1479 | DD |
| **Fan Rotation** | - | CCW |
| **Motor RPM** | - | DD |
| **System SetPt** | - | 68% |
| **RL Voltage** | - | 118 |
| **RL Amperage** | - | 2.0 |
| **Total ESP** | 0.5" | |
| **Fan Inlet SP** | - | -0.17" |
| **Fan Discharge SP** | - | |

Completed By: Ian Fuller

Notes:

# National TAB

**Project:07-11 CULVERS - LECANTO,FL**

## FAN - Exhaust

Comfort. Under control.

**Diffuser Ret/Exh (GRD)**

**PRV1/RESTROOM**

| Asset | | | | | | | |
|---|---|---|---|---|---|---|---|
| EGRD1 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | MENS RR | EG1 | 8X8 | 150 | | 215 | 208 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 145 | 96.7 | | | | | |
| EGRD2 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | WOMENS RR | EG1 | 8X8 | 150 | | 115 | 204 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 137 | 91.3 | | | | | |
| EGRD3 | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** |
| | TOILET | EF1 | 8X8 | 75 | | 267 | 139 |
| | **FINAL CFM** | **% to design** | | | | | |
| | 81 | 108.0 | | | | | |

**Completed By:Brianna Biggs on**

| Asset | Notes |
|---|---|

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: PRV2** AREA:HD1 GRIDDLE

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | CAPTIVEAIRE |
| **Model Num** | XRUB-161XP-15 | DU85HFA |
| **Serial Num** | - | 5212625 |
| **Type** | UPBLAST | UPBLAST |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | HSSA |
| **Frame** | - | NA |
| **Horsepower** | 1.29 | 0.75 |
| **Motor Rpm** | 1725 | 1725/1425 |
| **Phase** | 3 | 3 |
| **Voltage (rated)** | 208 | 208-230/460//190/380 |
| **Amperage (rated)** | - | 2.6-2.5/1.3//2.8/1.48 |
| **Service Factor** | - | 1.15/1.0 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | DD |
| **Motor Bore Size** | - | DD |
| **Motor Sheave SetPt** | - | DD |
| **Fan Sheave Size** | - | DD |
| **Fan Sheave Bore** | - | DD |
| **Belt CL Distance** | - | DD |
| **Num of Belts** | - | DD |
| **Belt Size** | - | DD |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 1500 | 1448 |
| **Fan RPM** | 1411 | DD |
| **Fan Rotation** | - | CCW |
| **Motor RPM** | - | DD |
| **RL Voltage** | - | 208 |
| **RL Amperage** | - | 2.5 |
| **Suction ESP** | - | -0.68" |
| **Discharge ESP** | - | NA |
| **Total ESP** | 2.337" | |

Completed By: Ian Fuller

Notes:

| Asset | Notes |
|---|---|

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: PRV3** AREA:HD2 FRYER

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | CAPTIVEAIRE |
| **Model Num** | XRUB-141-7 | DU85HFA |
| **Serial Num** | - | 5212625 |
| **Type** | UPBLAST | UPBLAST |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | HSSA |
| **Frame** | - | NA |
| **Horsepower** | 0.5 | 0.75 |
| **Motor Rpm** | 1725 | 1725//1425 |
| **Phase** | 3 | 3 |
| **Voltage (rated)** | 208 | 208-230/460//190/380 |
| **Amperage (rated)** | - | 2.6-2.5/1.3//2.8/1.48 |
| **Service Factor** | - | 1.15//1.0 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | DD |
| **Motor Bore Size** | - | DD |
| **Motor Sheave SetPt** | - | DD |
| **Fan Sheave Size** | - | DD |
| **Fan Sheave Bore** | - | DD |
| **Belt CL Distance** | - | DD |
| **Num of Belts** | - | DD |
| **Belt Size** | - | DD |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 1500 | 1497 |
| **Fan RPM** | 1377 | DD |
| **Fan Rotation** | - | CCW |
| **Motor RPM** | - | DD |
| **RL Voltage** | - | 207 |
| **RL Amperage** | - | 2.6 |
| **Suction ESP** | - | -0.58” |
| **Discharge ESP** | - | NA |
| **Total ESP** | 1.0" | |

Completed By: Ian Fuller

Notes:

| Asset | Notes |
|---|---|

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: Kitchen Hood Type I

Comfort. Under control.

**Asset: HD1** AREA:GRIDDLE

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | CAPTIVEAIRE |
| **Model Num** | XGEP-64-S | 3347 BD-2 |
| **Job / Serial Num** | - | 5212625 |
| **Type** | TYPE I LOW PROXIMITY | TYPE 1 LOW PROXIMITY |
| **Hood length** | 64" | 66" |
| **Hood Width** | 23" | 33" |

| Test Data Exhaust | | |
|---|---|---|
| | **Design** | **Actual** |
| **Filter Type** | GREASE GRABBER | GREASE GRABBER |
| **Filter Size 1** | 16X16 | 16X16 |
| **Filter Qty 1** | 4 | 4 |
| **Filter AK factor size 1** | 1.53 | 1.53 |
| **Filter Total AK Area** | 6.12 | 6.12 |
| **Filter1 FPM** | - | -261.8 |
| **Filter2 FPM** | - | -261.8 |
| **Filter3 FPM** | - | -258.2 |
| **Filter4 FPM** | - | -260.8 |
| **Filter Ave FPM(corr)** | - | -236.6 |
| **CFM** | - | 1448 |

| Cooking Equipment | | |
|---|---|---|
| | **Design** | **Actual** |
| **Item 1** | - | GRILL |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Smoke Generation Type** | - | SMOKE BOMB |
| **Hood Capture %** | - | 100 |
| **End Panels Installed (Y/N)** | - | Y |

| General | | |
|---|---|---|
| | **Design** | **Actual** |
| **Third Party Witness** | - | VIDEO TAKEN |
| **Third Party Company** | - | - |
| **Tech Witness** | - | - |

Completed By: Ian Fuller

Notes:

| Asset | Notes |
|---|---|

# National TAB

**Project: 07-11 CULVERS - LECANTO,FL**

## System/Unit: Kitchen Hood Type I

Comfort. Under control.

**Asset: HD2** AREA:FRYER

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | CAPTIVEAIRE |
| **Model Num** | XXEP-83-S | 3347 BD-2 |
| **Job / Serial Num** | - | 5212625 |
| **Type** | TYPE I LOW PROXIMITY | TYPE 1 LOW PROXIMITY |
| **Hood length** | 83" | 84" |
| **Hood Width** | 23" | 33" |

| Test Data Exhaust | | |
|---|---|---|
| | **Design** | **Actual** |
| **Filter Type** | X-TRACTOR | GREASE GRABBER |
| **Filter Size 1** | 16X16 | 16X16 |
| **Filter Qty 1** | 5 | 5 |
| **Filter AK factor size 1** | 1.53 | 1.53 |
| **Filter Total AK Area** | 7.65 | 7.65 |
| **Filter1 FPM** | - | -212.7 |
| **Filter2 FPM** | - | -216.7 |
| **Filter3 FPM** | - | -220.3 |
| **Filter4 FPM** | - | -213.9 |
| **Filter5 FPM** | - | -211.5 |
| **Filter Ave FPM(corr)** | - | -195.65 |
| **CFM** | - | 1497 |

| Cooking Equipment | | |
|---|---|---|
| | **Design** | **Actual** |
| **Item 1** | - | FRYER |

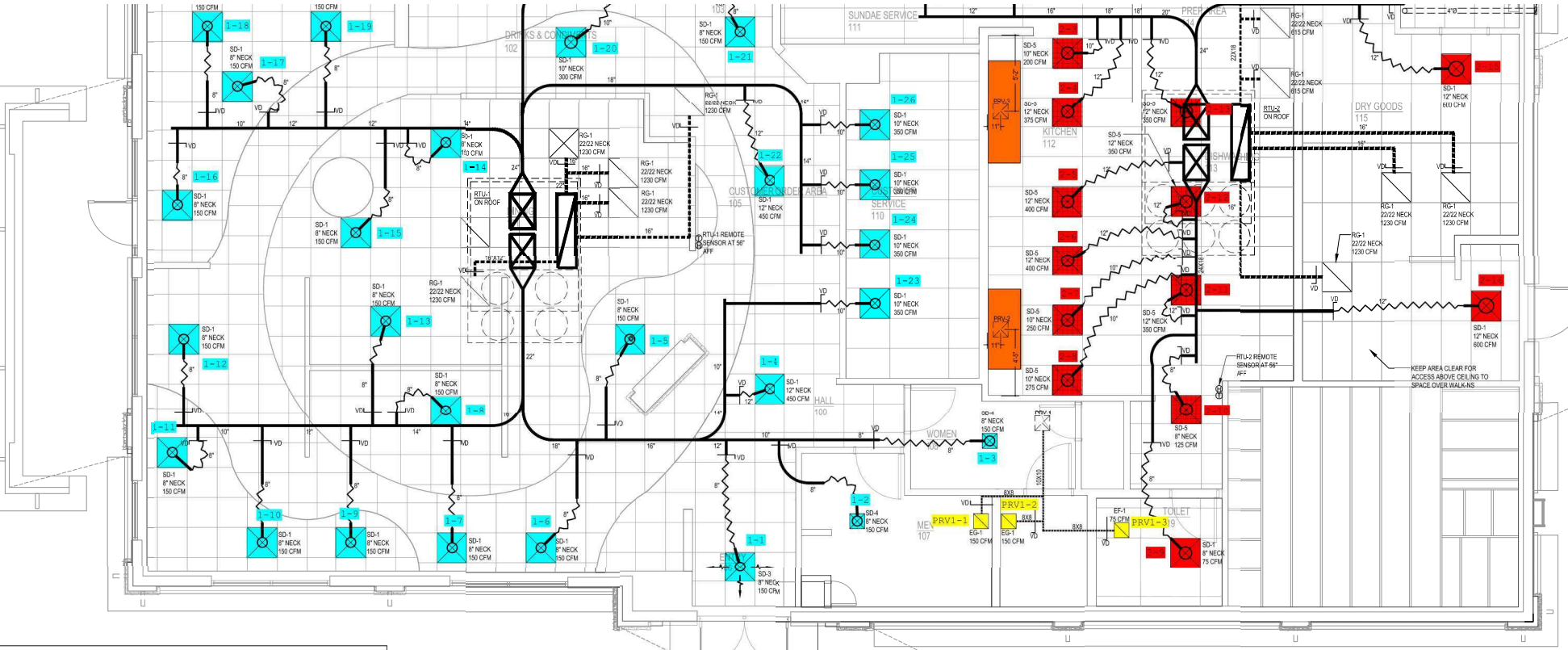
| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Smoke Generation Type** | - | SMOKE BOMB |
| **Hood Capture %** | - | 95% |
| **End Panels Installed (Y/N)** | - | Y |

| General | | |
|---|---|---|
| | **Design** | **Actual** |
| **Third Party Witness** | - | VIDEO TAKEN |
| **Third Party Company** | - | NA |
| **Tech Witness** | - | NA |

Completed By: Ian Fuller

Notes:

| Asset | Notes |
|---|---|




| SUPPLY DUCTWORK SIZING TABLE* | | | |
|---|---|---|---|
| ROUND | | RECTANGULAR | |
| ZE | CFM RANGE | SIZE | CFM RANGE |
| " | 115 - 235 | 8"x8" | 205 - 300 |
| 0" | 240 - 435 | 10"x8" | 305 - 400 |

NOTE ALL DUCTWORK TO BE LOCATED IN TRUSS SPACE WHERE POSSIBLE, SEE FRAMING PLAN.

HVAC SETPOINTS RECOMMENDED BY CORPORATE OPERATIONAL GUIDELINES:

E5 HVAC PLAN
SCALE : 1/4" = 1'-0"



Date: 7/14/2022