

| HEAT LOSS AND HEAT GAIN CALCULATIONS | | | | |
|--------------------------------------|-----------------|------------------------|-----------------|--------------|
| TIRE KINGDOM - NORTH PORT, FL | | | | |
| HEATING: | | COOLING: | | |
| IA: 70° F | | IA: 75° F / 50% RH | | |
| OA: 40° F | | OA: 86 / 74 (DB/WB)° F | | |
| RTU-1 - SALES | | | | |
| ITEM | HEAT LOSS | | HEAT GAIN | |
| | SENSIBLE (BTUH) | LATENT (BTUH) | SENSIBLE (BTUH) | TOTAL (BTUH) |
| LIGHTING | --- | 1945 | --- | 1945 |
| PEOPLE | --- | 6098 | 4878 | 10976 |
| VENTILATION | 11436 | 4095 | 10000 | 14095 |
| ROOF | 4940 | 9784 | --- | 9784 |
| WALL | 4452 | 2594 | --- | 2594 |
| GLASS | 10245 | 27070 | --- | 27070 |
| INFILTRATION | 8249 | 1672 | 3878 | 5550 |
| PARTITION/MISC | 25103 | --- | --- | --- |
| RTU-1 | 64425 | 53258 | 18756 | 72014 |

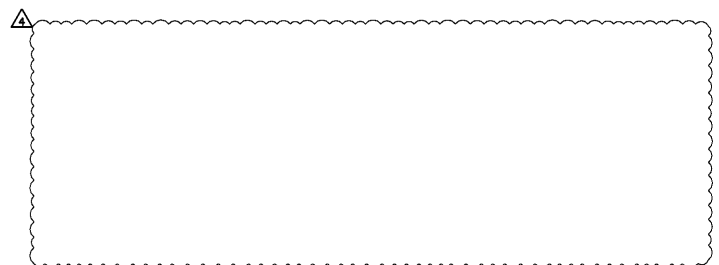
| ROOFTOP AIR CONDITIONING (HEAT PUMP) SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------|--------------|---------|--------------|-----------------|-------------------|-------------|-----------------|-------------|--------------|-------------|-------------|----------------------|------|--------------|----------------|-------------|----------------------|------------------------|--------|------|----|------------------------|-------|-----|
| UNIT | LOCATION SERVED | MANUFACTURER | MODEL | NOMINAL TONS | SUPPLY FAN DATA | | | | | COOLING DATA | | | | | HEATING DATA | | | | ELECTRICAL DATA | | | | OPERATING WEIGHT (LBS) | NOTES | |
| | | | | | AIRFLOW (CFM) | OUTSIDE AIR (CFM) | ESP (IN WG) | FAN SPEED (RPM) | POWER (BHP) | MOTOR (HP) | EAT DB (°F) | LAT DB (°F) | TOTAL CAPACITY (MBH) | EER | OUTPUT (MBH) | OUTPUT (HI/LO) | COP (HI/LO) | AUXILIARY INPUT (KW) | AUXILIARY OUTPUT (MBH) | STAGES | VOLT | PH | | | MCA |
| RTU-1 | SALES/WAITING | CARRIER | 50HC007 | 6 | 2,400 | 465 | 0.80 | 774 | 0.9 | 1 | 79/67 | 58/57 | 72.0 | 11.2 | 69/38 | 3.4/2.4 | 6.5 | 19.8 | 2 | 208 | 3 | 55 | 80 | 1,050 | ALL |

NOTES:
 1. FURNISHED AND INSTALLED BY MECH CONTRACTOR.
 2. SINGLE ENTHALPY LOW LEAK ECONOMIZER W/FDD CONTROLS.
 3. BAROMETRIC RELIEF DAMPER.
 4. UNIT DISCONNECT FACTORY INSTALLED (IF AVAILABLE FOR SIZE OF UNITS FLA)
 5. NON POWERED FACTORY INSTALLED GFCI.
 6. 2" PLEATED MERV 7 STD FILTER.
 7. HAIL GUARD
 8. FULLY INSULATED DOWNFLOW ROOF CURB WITH HURRICANE/HIGH WIND ACCESSORIES. FIELD VERIFY EXACT DIMENSIONS (SEE GENERAL NOTES ON M1.0).
 9. SUPPLY AIR SMOKE DETECTOR FACTORY INSTALLED, WIRED BY ELECTRICAL CONTRACTOR. REMOTE TEST KEYED SWITCH WITH AUDIBLE AND VISUAL INDICATORS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
 10. LABEL ROOFTOP UNIT WITH EQUIPMENT DESIGNATION, STORE NAME AND STORE NUMBER. REFER TO SPECIFICATIONS FOR DETAILS.
 11. SUPPLY FAN MOTOR TO BE CONTROLLED BY A VFD.
 12. SINGLE POINT CONNECTION KIT.
 13. PROVIDE HURRICANE RATED HOLD DOWN CLIPS WHERE REQUIRED BY AHJ.
 * MUST PROVIDE FACTORY INSTALLED 2 SPEED FAN MOTOR WITH V.F.D AND RTU OPEN CONTROLLER #OPNRTUM2 (NO EXCEPTIONS), WIRED TO CARRIER PROGRAMMABLE CONTROLLER #SYST1-4-CAR (NO EXCEPTIONS) FOR HUMIDITY CONTROL.*

CONTRACTOR TO FURNISH AND INSTALL NEW CARRIER TOUCH-SCREEN PROGRAMMABLE THERMOSTAT #SYST1-4-CAR (INTEGRATED WITH FACTORY INSTALLED ROOFTOP OPEN CONTROLLER #OPNRTUM2 AND 2-SPEED FAN MOTOR WITH V.F.D. FOR HUMIDITY CONTROL)

NO EXCEPTIONS TO THESE CONTROLLERS WILL BE ALLOWED

HEAT PUMP AND HEAT PUMP SPECIFIC CONTROLS NOTED HERE ARE TO BE UTILIZED FOR SOUTHERN CLIMATES AND/OR LOCATIONS WHERE GAS SERVICE IS NOT AVAILABLE.
 VERIFY LOCATION SPECIFIC CONDITIONS AND REQUIREMENTS WITH OWNER AND ARCHITECT.



| FAN SCHEDULE | | | | | | | | | | | | | | | | |
|--------------|----------|--------------|-------------|---------|---------------|-------------|-------------|------------|------|------|-------|---------|-----------------|----|-----|--------------|
| UNIT | LOCATION | MANUFACTURER | MODEL | SERVES | FAN DATA | | | MOTOR DATA | | | SONES | CONTROL | ELECTRICAL DATA | | | NOTES |
| | | | | | AIRFLOW (CFM) | ESP (IN WC) | SPEED (RPM) | DRIVE TYPE | BHP | HP | | | VOLT | PH | FLA | |
| EF-1 | SERVICE | GREENHECK | SRE-3H24 | SERVICE | 5,200 | 0.25 | 1,140 | BELT | 0.57 | 3/4 | 15.2 | NOTE 7 | 208 | 3 | 3.5 | 1,4,6,7 |
| EF-2 | TOILET | GREENHECK | SQ-70-VG | COMM | 150 | 0.25 | 1,437 | DIRECT | 0.02 | 1/10 | 3.2 | NOTE 9 | 115 | 1 | 2.8 | 2,5,6,8,9 |
| EF-3 | TOILET | GREENHECK | G-070-HP-VG | TOILET | 200 | 0.25 | 1,725 | DIRECT | 0.03 | 1/10 | 3.1 | NOTE 8 | 115 | 1 | 2.8 | 3,5,6,8,10 |
| EF-4 | STORAGE | GREENHECK | G-123-VG | STORAGE | 1,100 | 0.25 | 1,060 | DIRECT | 0.11 | 1/4 | 10.5 | NOTE 7 | 115 | 1 | 3.7 | 3,4,5,6,7,10 |

NOTES:
 1. WALL MOUNTED EXHAUST FAN. PROVIDE WALL HOUSING AND WEATHER HOOD. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
 2. IN-LINE FAN MOUNTED FROM STRUCTURE WITH SPRING VIBRATION ISOLATORS.
 3. ROOF MOUNTED WITH CURB
 4. INTERLOCK WITH MOTORIZED DAMPER ON IH - REFER TO PLAN HVAC KEYED NOTE
 5. VARI-GREEN MOTOR WITH FACTORY INSTALLED MOTOR-MOUNTED VARI-GREEN DIAL
 6. PROVIDE WITH BACKDRAFT DAMPER.
 7. INTERLOCK WITH EMS RELAY.
 8. INTERLOCK WITH BUILDING TIMECLOCK.
 9. PROVIDE THERMOSTAT TO ENERGIZE FAN ON TEMPERATURE RISE IN SPACE.
 10. PROVIDE WITH HIGH WIND ACCESSORIES.
 * MOTOR DATA BASED ON NAMEPLATE RATING *

| GRAVITY VENTILATOR SCHEDULE | | | | | | | | | | | | | |
|-----------------------------|----------|--------------|-------|---------|---------|---------------|----------------|------------------------|-----------------------------|------------------|------------------|-------------------|-------|
| UNIT | LOCATION | MANUFACTURER | MODEL | SERVICE | TYPE | AIRFLOW (CFM) | VELOCITY (FPM) | MAX PRESS DROP (IN WG) | OVERALL SIZE W x L x H (IN) | THROAT SIZE (IN) | CURB HEIGHT (IN) | WEIGHT/W CURB LBS | NOTES |
| IH-1 | ROOF | GREENHECK | FGI | INTAKE | GRAVITY | 5,200 | 475 | 0.053 | 74x75x32 | 40x42 | 12 | 195 | ALL |
| IH-2 | ROOF | GREENHECK | FGI | INTAKE | GRAVITY | 1,100 | 475 | 0.053 | 30x51x16 | 16x30 | 12 | 96 | ALL |

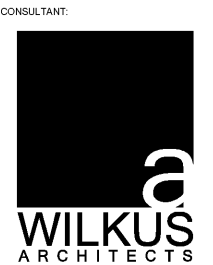
NOTES:
 1. INTEGRAL BIRD SCREEN.
 2. 12" INSULATED ROOF CURB
 3. PROVIDE WITH HIGH WIND ACCESSORIES.

| DIFFUSER, REGISTER & GRILLE SCHEDULE | | | | | | | | | | |
|--------------------------------------|--------------|-------|---------|-----------|---------------------------|----------|--------|----------|--------|-------|
| MARK | MANUFACTURER | MODEL | SERVICE | TYPE | DESCRIPTION | LOCATION | DAMPER | MATERIAL | FINISH | NOTES |
| A | TITUS | TWS | SUPPLY | DIFFUSER | 24"x24" NECK SIZE ON PLAN | CEILING | YES | STEEL | NOTE 4 | ALL |
| B | TITUS | SOF | RETURN | EGG CRATE | SIZE ON PLAN | CEILING | NO | ALUM | NOTE 4 | 1,2 |
| C | TITUS | SOF | EXHAUST | EGG CRATE | SIZE ON PLAN | CEILING | NO | ALUM | NOTE 4 | 1,2 |

NOTES:
 1. CONTRACTOR IS RESPONSIBLE TO VERIFY LOCATIONS, INSTALLATION METHODS, AND QUANTITIES PRIOR TO ORDERING MATERIALS.
 2. VERIFY FRAME TYPE: PLASTER OR LAY-IN FRAME.
 3. PROVIDE WITH OPPOSED BLADE DAMPERS
 4. COORDINATE PAINT COLOR WITH ARCHITECTURAL TO MATCH CEILING COLOR.

| VENTILATION - OUTDOOR AIR | | | | | | | | |
|---------------------------|---------------|--------|---------------------------|------------------|-------------------|------------------------|-----------------|----------------------|
| NAME | AREA (SQ. FT) | PEOPLE | EXHAUST RATE (CFM/SQ. FT) | EXHAUST REQUIRED | EXHAUST INSTALLED | AREA RATE (CFM/SQ. FT) | O.A. CODE (CFM) | O.A. INSTALLED (CFM) |
| SALES/WAITING | 725 | 20 | --- | --- | --- | 7.5/PERS + 0.12/SQFT | 235 | 360 |
| OFFICE | 50 | 2 | --- | --- | --- | 5/PERS + 0.06/SQFT | 13 | 30 |
| TOILET | 72 | --- | --- | 70 | 100 | --- | 0 | 15 |
| EMPLOYEE TOILET | 63 | --- | --- | 70 | 100 | --- | 0 | 15 |
| BREAK ROOM | 87 | 2 | --- | --- | --- | 7.5/PERS + 0.06/SQFT | 23 | 45 |
| EO CLOSET | 35 | --- | --- | --- | 150 | --- | --- | --- |
| STORAGE | 1,454 | --- | 0.75 | 1,091 | 1,100 | 0.06/SQFT | 102 | 1,100 |
| SERVICE | 3,450 | 10 | 1.5 | 5,175 | 5,200 | 10/PERS + 0.06/SQFT | 309 | 5,200 |
| TOTALS | 5,936 | 34 | --- | 6,406 | 6,850 | --- | 682 | 6,365 |

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PROTOTYPE TEMPLATE
"NORTHLAKE"
 v.2019.1.08
 MODIFIED EXTERIOR

PROJECT INFORMATION:

TIRE KINGDOM
 STORE 937
 SEC 7 MIAMI TRAIL & SUMTER CROSSING DR
 NORTH PORT, SARASOTA COUNTY, FLORIDA



PROJECT NO.: 2018-1035
 DRAWN BY: IF
 CHECKED BY: MI

ISSUE DATE
 PERMIT PLAN REVIEW 22-JUL-2019
 BID SET 09-DEC-2019

REVISION DATE
 01 DESIGN UPDATES 15-AUG-2019
 04 DESIGN UPDATES 20-DEC-2019

SHEET TITLE:
 MECHANICAL SCHEDULES

SHEET NUMBER:
M-2