

HEAT LOSS AND HEAT GAIN CALCULATIONS				
TIRE KINGDOM - FORT MEYERS, FL				
HEATING: IA: 70° F OA: 47° F		COOLING: IA: 75° F / 50% RH OA: 91 / 77 (DB/WB)° F		
RTU-1 - SALES				
ITEM	HEAT LOSS		HEAT GAIN	
	SENSIBLE (BTUH)	LATENT (BTUH)	SENSIBLE (BTUH)	TOTAL (BTUH)
LIGHTING	---	---	1843	1843
PEOPLE	---	---	5853	10536
VENTILATION	12513	---	6624	16624
ROOF	4187	---	8620	8620
WALL	4063	---	2028	2028
GLASS	9068	---	16708	27070
INFILTRATION	8249	---	1650	5546
PARTITION/MISC	25771	---	4768	10052
RTU-1	63851	---	48084	71957

ROOFTOP 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) (HI/LOW)	COP (HI/LO)	AUXILIARY INPUT (KW)	AUXILIARY OUTPUT (MBH)	STAGES	VOLT	PH			MCA	MCOIP
RTU-1	SALES/WAITING	CARRIER	50HC0007	6	2,200	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	60	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 UNIT'S FLA)
 5. NON POWERED FACTORY INSTALLED GFCL
 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 NOTE I ON M1.0).
 9. SUPPLY AIR SMOKE DETECTOR FACTORY INSTALLED, WIRED BY ELECTRICAL CONTRACTOR. REMOTE TEST KEYPAD 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.
 * MOTOR DATA BASED ON NAMEPLATE RATING *
 * 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

SMOKE AND HEAT VENT SCHEDULE								
UNIT	LOCATION	MANUFACTURER	MODEL	SERVICE	OVERALL SIZE W x L (IN)	VENT AREA (SQFT)	CURB HEIGHT (IN)	NOTES
SV-1	ROOF	MILCOR	U-LP-5460	SMOKE VENT	54x60	22.5	12	ALL
SV-2	ROOF	MILCOR	U-LP-5460	SMOKE VENT	54x60	22.5	12	ALL

NOTES:
 1. INSTALL PER 2012 IFC SECTION 910.
 2. 12" INSULATED ROOF CURB.
 3. COORDINATE FINAL LOCATION WITH STRUCTURAL AND ARCHITECTURAL.
 4. INSTALL WITH MCCABE LINK. COORDINATE CONNECTION TO SMOKE DETECTOR.
 5. CONTRACTOR TO INSTALL BURGLAR BARS IN CURB. WELD 1/2" REBAR IN A 12"x12" GRID
 6. WEIGHT 345LBS

FAN SCHEDULE																
UNIT	LOCATION	MANUFACTURER	MODEL	SERVICES	FAN DATA			MOTOR DATA				ELECTRICAL DATA			NOTES	
					AIRFLOW (CFM)	ESP (IN WC)	SPEED (RPM)	DRIVE TYPE	BHP	HP	SONES	CONTROL	VOLT	PH		FLA
EF-1	SERVICE	GREENHECK	SFE-3H24	SERVICE	5,000	0.25	1,140	BELT	0.57	3/4	15.2	NOTE 7	208	3	3.5	1,46.7
EF-2	COMM	GREENHECK	SQ-70-VQ	COMM	150	0.25	1,437	DIRECT	0.02	1/10	3.2	NOTE 9	115	1	2.6	2,55,8.9
EF-3	TOILETS	GREENHECK	G-070-300	TOILETS	300	0.25	1,725	DIRECT	0.03	1/10	3.1	NOTE 8	115	1	2.6	3,5,8,10
EF-4	STORAGE	GREENHECK	SEL-2H24	STORAGE	1,100	0.25	1,070	BELT	0.55	1/2	14.5	NOTE 7	208	3	3.5	1,46.7

NOTES:
 1. WALL MOUNTED EXHAUST FAN. PROVIDE WALL HOUSING AND WEATHER HOOD. REFER TO MANUFACTURER'S INSTRUCTIONS.
 2. IN-LINE FAN MOUNTED FROM STRUCTURE WITH VIBRATION ISOLATORS.
 3. ROOF MOUNTED WITH CURB
 4. INTERLOCK WITH MOTORIZED DAMPER - REFER TO MANUFACTURER'S KEYED NOTE
 5. VARI-GREEN MOTOR WITH FACTORY INSTALLED MOTOR MOUNTED VARI-GREEN DIAL
 6. PROVIDE WITH BACKDRAFT DAMPER.
 7. INTERLOCKED WITH BMS RELAY.
 8. INTERLOCK WITH BUILDING TIMECLOCK.
 9. PROVIDE THERMOSTAT TO TRIGGER FAN ON TEMPERATURE RISE IN SPACE.
 10. PROVIDE WITH HIGH WIND ACCESSORIES

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	5,000	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 BRD 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	TMS	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	706	20	---	---	---	7.5/PERS + 0.12/SQFT	235	360
OFFICE	50	2	---	---	---	5/PERS + 0.06/SQFT	13	30
TOILET	60	---	---	70	100	---	0	15
EMPLOYEE TOILET	60	---	---	70	100	---	0	15
BREAK ROOM	87	2	---	---	---	7.5/PERS + 0.06/SQFT	23	45
EQ CLOSET	18	---	---	---	150	---	---	---
STORAGE	1,444	---	0.75	1,083	1,100	0.06/SQFT	102	1100
SERVICE	3,284	10	1.5	4,926	5,000	10/PERS + 0.06/SQFT	309	5000
TOTALS	5,711	34	---	6,150	6,450	---	682	6,365

Order Plans @

PROTOTYPE TEMPLATE:
NORTHLAKE
 v.2020.1.08.TKD
 PROJECT INFORMATION:

TIRE KINGDOM.
 STORE # 945
 10520 COLONIAL BLVD
 FT MEYERS, LEE COUNTY, FLORIDA

95% REVIEW SET
 18 AUGUST 2020
 DANIEL R. CASE P.E.

PROJECT NO.: 2020-0065
 DRAWN BY:
 CHECKED BY:
 ISSUE DATE
 PERMIT PLAN REVIEW 11-AUG-2020
 REVISION DATE

SHEET TITLE:
 MECHANICAL SCHEDULES
 SHEET NUMBER:
M-2

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