## AIR-COOLED ROOFTOP UNITS

RTU CONTROLLER SHALL COMMUNICATE DIRECTLY TO THE BAS VIA BACNET

		RTU ZONE	SETPOINTS			
		OCCUPIED			UNOCCUPIED	
	(2)	COOLING	HEATING	(2)	COOLING	MEATING
SPACE	SCHEDULE	SETPOINT	SETPOINT	SCHEDULE	SETPOINT	SETPOINT
GM SALES	24/7	76 +/-0.5	72 +/-0.5	N/A	78 +/-0.5	63 +/-0.5
GROCERY SALES	24/7	76 +/-0.5	72 +/-0.5	N/A	78 +/-0.5	63 +/-0.5
RECVG/STKRM	24/7	76 +/-0.5	67 +/-0.5	N/A	78 +/-0.5	63 +/-0.5
OFFICES	24/7	73 +/-0.5	67 +/-0.5	N/A	78 +/-0.5	63 +/-0.5
UPC ROOM	24/7	73 +/-0.5	67 +/-0.5	N/A	73 +/-0.5	63 +/-0.5
PHARMACY (1)	6 AM-10 PM	73 +/-0.5	67 +/-0.5	10 PM-6 AM	73 +/-0.5	63 +/-0.5
VESTIBULE (3)	24/7	85 +/- 0.5	45 +/-0.5	N/A	85 +/-0.5	40 +/-0.5
(1) SET PHARMACY RT	U SENSOR TO ALLOW	V+/-3 F USER	SPACE SETPO	INT ADJUSTME	NT.	•
(2) ADJUSTMENTS TO	SCHEDULE WILL NEE	D TO BE MADE	IF THE STORE	IS NOT OPEN 2	24/7.	

SUPPLY FAN OPERATION
FOR THIS DEPORT OF THE MECHANICAL SCHEDULE TO BE "CONT" FAN CONTROL, THE BAS SHALL EMERGIZE THE
SUPRLY FAN TO OPERATE CONTINUOUSLY IN OCCUPIED MODE ONLY. IN UNOCCUPIED MODE, THE OEM CONTROLLER
SHALL EMERGIZE THE SUPPLY FAN TO OPERATE ONLY ON A CALL FOR HEATMON OR COOLING

FOR RTUS (DENTIFIED IN THE MECHANICAL SCHEDULE TO BE "AUTO" FAN CONTROL. THE OEM CONTROLLER SHALL ENERGIZE THE SUPPLY FAN TO OPERATE ONLY ON A CALL FOR HEATING OR COOLING

FOR RTUS WITH VARIABLE SPEED FAN OPERATION, THE FAN SPEED SHALL BE CONTROLLED BY THE OEM CONTROLLER BASED ON ANOUNT OF OPERATING COMPRESSOR CAPACITY. VARIABLE SPEED FAN CONTROL SHALL RANGE LINEARLY OR IN DISCRETE STAGES FROM MINIMUM SETTING UP TO DESIGN ARTHON AS DETERMINED BY OBE BASED ON COMPRESSOR CAPACITY CONTROL. SUPPLY FAN SPEED DURING ECONOMIZER OPERATION SHALL BE CONTROLLED BY THE OEM CONTROLLER AND SHALL BE AT DESIGN AIRFLOW FROM MECHANICAL SCHEDULE.

OUTSIDE AIR DAMPER OPERATION. WHEN THE SUPPLY FAN IS OFF, THE OUTSIDE AIR DAMPER SHALL GO TO THE 6% OPEN POSITION.

UNLESS OPERATING IN ECONOMIZER MODE, WHEN THE SUPPLY FAN IS ON THE OUTSIDE AIR DAMPER SHALL GO TO THE MINIMUM POSITION SET BY TEST AND BALANCE PER THE OUTSIDE AIR QUANTITY ON THE MECHANICAL SOCHEDULE AND IS ADJUSTRABLE FROM TO TO IOS.

ECONOMIZER OPERATION
THE BAS SHALL SEND AN ECONOMIZER ENABLE SIGNAL TO THE OEM CONTROLLER WHEN BOTH OF THE FOLLOWING OUTSIDE AIR CONDITIONS ARE MET:

OUTSIDE DRY BULB TEMPERATURE > 0 DEG F AND < 68 DEG F OUTSIDE DEWPOINT TEMPERATURE < 48 DEG DP

ECONOMIZER COOLING OPERATION (ECONOMIZER ENABLED)

UPON AN ECONOMIZER ENABLE SIGNAL FROM THE BAS TO THE OEM CONTROLLER AND A CALL FOR COOLING OUTSIDE AIR TEMPERATURE FROM THE OEM OUTDOOR AIR SENSOR IS LESS THAN 45 DE

,		
	COOLING STAGES	
STAGE #	ON	OFF
ECONOMIZER	SP+.5	SP5
1	SP+1.0	SP
2	SP+1.5	SP+.5
384	SP+2.0	SP+1.0

(	COOLING STAGES	;
STAGE#	ON	OFF
1	SP+.5	SP5
2	SP+1.0	SP
3	SP+1.5	SP+.5
4	SD+2.0	SD41 0

1	REATING STAGES	
STAGE #	ON	OFF
1	SP5	SP+.5
2	SP-1.0	SP
3	SP-1.5	SP5
4	CD.20	90.40

DEMAND CONTROL VENTUATION

FOR UNITS SPECIFIED WITH ORM SPACE COS SENSORS, UPON EXCEEDING THE UPDER THRESHOLD LIMIT FOR CONTROL OF SHARP CONTR

DEMAND CONTROL VENTILATION		
DAMPER POSITION	CO2 LEVEL (PPM)	
OPEN (MAX POSITION)	> 1100	
CLOSED (MIN POSITION)	1000	

SMOKE DETECTORS
FOR UNITS EQUIPPED WITH SMOKE DETECTORS (DUCT MOUNTED OR SPACE MOUNTED) THE SMOKE DETECTOR SHALL SHUT-DOWN THE UNIT UPON SMOKE DETECTOR ACTIVATION. IF REQUIPED BY THE LOCAL MOUNTED ACTIVATION IN REQUIPED BY THE LOCAL MOUNTED ACTIVATION AND THE REQUIPED BY THE LOCAL MOUNTED ACTIVATION AND THE SMALL CHARD THE OWNER ALARM SYSTEM OF BAS TO THE GOME CONTROLLER. THE OWNER ALARM SYSTEM OF BAS TO THE GOME CONTROLLER. THE OWNER ALARM SYSTEM OF BAS TO THE GOME CONTROLLER. THE OWNER ALL CLOSE THE OUTSIDE AND MOMERTED THE GO'S OPEN POSITION, SHUT-DOWN ALL STAGES OF COOLING OR HEATING AND TURN OFF THE SUPPLY FAM. CENT CONTROLLER SHALL OVERFIDE ALL OTHER BACK CONDITION DEMANDS WHEN UNIT HAS RECEIVED A SMCKE DETECTOR ACTIVATION ALORM.

RILL PROTECTION
ALL EQUIPMENT SAFETY SEQUENCES, I.E. COMPRESSOR RESET, GAS BURNER RESET, ETC SHALL BE CONTROLLED BY THE OEM CONTROLLER

THE RTU CONTROLLER SHALL COMMUNICATE ALL RTU ERROR CODES TO THE BAS THE BAS SHALL GENERATE AND COMMUNICATE THE FOLLOWING ALARMS TO THE OWNER ALARM REPORTING PROGRAM INVARP).

RTU LOAD ALARM LIST					
		FROM BAS TO OWNER			
ERROR		ALARM REPORTING PROGRAM			
CODE	FROM DEM CONTROLLER TO BAS	(WARP)	BAS PRIORITY		
4	SMOKE ALARM	YES	DAILY		
5	AIR FLOW SWITCH	YES	DAILY		
20	INPUT ERROR, PHASE LOSS OR VFD FAIL	YES	DAILY		
74	ZONE SENSOR PROBLEM	YES	DAILY		

## THE BAS SHALL COMMUNICATE THE REQUIRED ALARM LIST TO THE OWNER

RTU MONITORING ALARM LIST					
	FROM BAS				
	TO OWNER				
	ALARM REPORTING	BAS			
DESCRIPTION	PROGRAM (WARP)	PRIORITY	ALARM LEVEL		
SPACE TEMP-SALES FLOOR	YES	DAILY	SPACE TEMP <60 DF OR >82 DF FOR 60 MIN		
SPACE TEMP-OFFICES	YES	DAILY	SPACE TEMP <60 DF OR >82 DF FOR 60 MIN		
SPACE TEMP-PHARMACY & UPC	YES	DAILY	SPACE TEMP <65 DF OR >78 DF FOR 80 MIN		
CO2 LEVEL	YES	DAILY	CO2 > 1400 PPM FOR 60 MIN		

STAGE MECHANICAL COOLING AND MAINTAIN THE OUTSIDE AIR DAMPER AT THE 100% OPEN POSITION.	COMMUNICATION DATA POINT, LIST.  THE RTU CONTROLLER AND BAS SHALL TRANSFER THE COMMUNICATION DATA POINTS BASED ON THE FOLLOWING SCHEDULE.	
IF THE SPACE TEMPERATURE CONTINUES TO INCREASE AFTER MECHANICAL COOLING IS ENERGIZED, THE OEM CONTROLLER SHALL CONTINUE TO ENERGIZE ADDITIONAL STAGES OF MECHANICAL COOLING IN 6.5 DEG F	LENNOX BACHET COMMUNICATION DATA POINT LIST	
INCREMENTS OF SPACE TEMPERATURE, IF AVAILABLE.	FROM BAS TO RTU CONTROLLER - ANALOG OUTPUTS OBJECT ID OBJECT NAME UNITS	
IF THE CUTOUT TEMPERATURE FOR ANY STAGE OF COOLING IS NOT REACHED WITHIN 15 MINUTES, THE NEXT STAGE OF COOLING SHALL BE ENERGIZED TO SATISFY THE CUTOUT TEMPERATURE.	101 APPLICATION MODE CONTROL NONE 102 OUTDOOR AIR MIN POS CONTROL PERCENT 104 OCCUPANCY SCHEDULER CONTROL NONE 105 OCCUPANCY SCHEDULER CONTROL NONE	
COOLING STAGES SHALL DE-ENERGIZE AS THE COMPRESSOR CUTCUT TEMPERATURES ARE SATISFIED IN 0.5 DEGREE INCREMENTS.	108 SPACE DERUMOPICATION SETPT PERCENT 114 EMERGENCY OVERRIDE CONTROL 129 SET ECONOMIZER OUTDOOR AIR SUITABLE NONE	
COOLING STAGES	130 HEATING OCCUPIED SETPOINT DEG F 131 COOLING OCCUPIED SETPOINT DEG F 132 HEATING UNOCCUPIED SETPOINT DEG F	
STAGE # ON OFF ECONOMIZER SP4.5 SP5	133 COOLING UNOCCUPIED SETPOINT DEG F	
1 SP+1.0 SP	FROM RTU CONTROLLER TO BAS - ANALOG INPUTS OBJECT ID OBJECT NAME UNITS	
2 SP+1.5 SP+.5 3 8 4 SP+2.0 SP+1.0	232         UNIT STATUS         NONE           239         SPACE TEMPERATURE         DEG F	
<u>Coduing operation (economizer disabled)</u> If there is no economizer enable signal from the BAS to the OEM Controller and upon a Call for	240 DISCHARGE AIR TEMPERATURE DEG F 241 EFFECTIVE OCCUPANICY NONE 243 LOCAL SPACE TEMPERATURE DEG F	
COOLING BASED ON THE SPACE TEMPERATURE SENSOR INPUT TO THE OBM CONTROLLER. THE OEM CONTROLLER SHALL ENERGIZE FIRST STAGE MECHANICAL COOLING AND MODULATE THE OUTSIDE AIR DAMPER TO THE MINIMUM POSITION.	244         OUTSIDE AIR DAMPER         PERCENT           245         HEAT PRIMARY         PERCENT           247         COOL PRIMARY         PERCENT           248         ECONOMIZER ENABLED         PERCENT	
IF THE SPACE TEMPERATURE CONTINUES TO INCREASE AFTER MECHANICAL COOLING IS ENERGIZED, THE OEM CONTROLLER SHALL CONTINUE TO ENERGIZE ADDITIONAL STAGES OF MECHANICAL COOLING IN 0.5 DEG INCREMENTS OF SPACE TEMPERATURE, IF AVAILABLE.	250         SUPPLY FAN STATUS         PERCENT           252         SPACE TEMPERATURE SETPT (EFF)         DEG F           255         MOST RECENT ERROR 1         NONE           256         MOST RECENT ERROR 2         NONE	
IF THE CUTOUT TEMPERATURE FOR ANY STAGE OF COOLING IS NOT REACHED WITHIN 15 MINUTES, THE NEXT STAGE OF COOLING SHALL BE ENERGIZED TO SATISFY THE CUTOUT TEMPERATURE.	257         MOST RECENT ERROR 3         NONE           268         MOST RÉCENT ERROR 4         ME           259         MOST RÉCENT ERROR 5         NONE           274         SPACE COZ SENSOR (EFF)         PPM	
COOLING STAGES SHALL DE-ENERGIZE AS THE COMPRESSOR CUTOUT TEMPERATURES ARE SATISFIED IN 0.5 DEGREE INCREMENTS.	276 SPACE HUMDITY (EFF) PERCENT 278 DEHUMDIFICATION SETPT (EFF) PERCENT 279 DEHUMDIFICATION STATUS NONE	
COOLING STAGES  STAGE # ON OFF	281 RETURN AIR TEMPERATURE DEG	
1 SP+.5 SP5 2 SP+1.0 SP		
3 SP+15 SP+.5 4 SP+2.0 SP+1.0		
HEATING OPERATION UPON A CALL FOR HEATING BASED ON THE SPACE YEMPERATURE SENSOR INPUT TO THE OBM CONTROLLER, THE OBM CONTROLLER SHALL ENERGIZE FIRST STAGE HEATING AND MODULATE THE OUTSIDE AIR DAMPER TO THE MINIMUM POSITION.		
IF THE SPACE TEMPERATURE CONTINUES TO DECREASE AFTER ENERGIZING HEATING, THE OEM CONTROLLER SHALL CONTINUE TO ENERGIZE ADDITIONAL STAGES HEATING IN 0.5 DEG INCREMENTS OF SPACE TEMPERATURE, IF AVAILABLE.		
IF THE CUTOUT TEMPERATURE FOR ANY STAGE OF MEATING IS NOT REACHED WITHIN 15 MINUTES, THE NE STAGE OF HEATING SHALL BE ENERGIZED TO SATISFY THE CUTOUT TEMPERATURE.  HEATING STAGES SHALL DE-ENERGIZE AS THE HEATER CUTOUT TEMPERATURES ARE A SHEET TO SERVE THE STAGE OF		
HEATING STAGES SHALL DE-ENERGIZE AS THE HEATER CUTOUT TEMPERATURES ARE SUPPRESSED DEGREES.  INCREMENTS.		
2 SP-10 SP- 3 SP-15 SP-5 4 SP-20 SP-10	,	

AHU CONTROLLER SHALL COMMUNICATE DIRECTLY TO THE BAS VIA BACNET

SUPPLY FAN OPERATION
THE BAS SHALL SIND AN EMABLE SIGNAL TO THE AHU OEM CONTROLLER
FOR SUPPLY FAN OPERATION. UPON AN EMABLE SIGNAL FROM THE BAS, THE
OEM CONTROLLER SHALL EMERGIZE THE SUPPLY FAN TO RUN
CONTINGOUSLY.

COLING MODE OPERATION
WHEN SPACE TEMPERATURE EXCEEDS THE COOLING SETPOINT, FIRST
STAGE MECHANICAL COOLING SHALL BE ENERGIZED. IF THE COOLING
STAGE MECHANICAL COLING SHALL BE ENERGIZED. IF THE COOLING
CONTROL FOR SHALL BERNEY ON ADDITIONAL COMPRESSORS IN 10 MINUTE
CONTROL ER SHALL BERNEY ON ADDITIONAL COMPRESSORS IN 10 MINUTE
MITERIVALS. COMPRESSORS TRANSING FOR COOLING IS IN THE ORDER OF
COMPRESSOR TO, C, B, AND A. WHEN SPACE TEMPERATURE GROPS BELOW
COOLING SETPOINT MINUS INDOOR TEMPERATURE PEADEABAND. OFFI
CONCINCT SETPOINT MINUS INDOOR TEMPERATURE PEADEABAND. OFFI
ON THE CONCINCT B. C, AND D. IN 10 MINUTE INTERVAL.

	COOLING STAGES (SI	PACE)
STAGE #/COMP	ON	OFF
1/(D)	CLG SP	CLG SP-DB
2/(C)	CLG SP	CLG SP-DB
3/(B)	CLG SP	CLG SP-D8
4/(A)	CLG SP	CLG SP-DB

<u>DEHUMIDIFICATION MODE</u>
DEHUMIDIFICATION MODE SHALL BE ENERGIZED BY EITHER A CALL FOR DEHUMIDFICATION BASED ON OUTSIDE AIR DEWPOINT TEMPERATURE OR SPACE DEWPOINT TEMPERATURE.

# DEHUMIDIFICATION BASED ON OUTSIDE AIR DEWPOINT TEMPERATURE IF THE OUTDOOR DEWPOINT TEMPERATURE EXCEEDS THE OUTDOOR DEWPOINT SETPOINT, THE OEM CONTROLLER SHALL ENERGIZE DEMUMIDIFICATION MODE.

TAGE #/COMP	ON	OFF
1/(A)	AMB DH SP	AMB OH SP-DE

DEHAMBIFICATION BASES ON INDOOR DEMONIT TEMPERATURE WHEN THE BOXOC DEWNONT TEMPERATURE EXCEPTS THE SPACE DEWNONT SEMPERATURE EXCEPTS THE SPACE DEWNONT SETPOINT, THE COM CONTROLLER SHALL ENERGIZE DEHAMBIFICATION MODE. IF A FIFTE 19 MANUTES THE SPACE DEWNONT SETPOINT IS NOT MET WITH FIRST STAGE DEHAMBIFICATION, THE COM CONTROLLER SHALL BRING ON ADDITIONAL DEHAMBIFICATION STAGES IN 10 MINUTES INTERVALS. COMPRESSOR STAGING FOR DEHAMBIFICATION IS IN THE ORDER OF COMPRESSOR BY A CAND D. WHEN SPACE DEWNONT DEPONIT DROPS BELOW THE SPACE DEWNONT STOOM TOWN SPACE DEWNONT STAGE DEWNONT SPALL DEWNONT DEFINED STALL DESIGNATION OF THE PROPERTY OF THE SPACE DEWNONT SPALL DEWNONT S

	DEHUMID STAGES (SP)	ACE)	
STAGE#/COMP	ON	OFF	
1/(A)	SPACE DH SP	SPACE DH SP-DB	
2/(B)	SPACE DH SP	SPACE DH SP-DB	
3/(C)	SPACE DH SP	SPACE DH SP-DB	
4/(D)	SPACE DH SP	SPACE DH SP-DB	1

DEM CONTROLLER SHALL COMMUNICATE THE REQUIRED ARM LIST BAS. BAS SHALL COMMUNICATE ALARMS TO THE OVANIARM REP

PROGRAM (WARP).		***************************************	% "4//////// %
	AHU:	LARM LIST	
		BAS TO OWNER	
	ALARM	PORTING PROGRAMM	. 0 10
FROM CAREL TO BMS	<i>"</i>	(WARP)	AS PRIORITY *
AIRFLOW CONFIRMATION	7	YES	DAILY
A ************************************	<b>%</b>	Ø.	***************************************

# THE BAS SHALL MUNICATE THE PEED ALASM LIST TO THE OWNER

nnm ne	Controll Married And Control	//////////////////////////////////////		
		AHU MONITORIN	G ALARM LIST	
malli.	**************************************	FR S TO OWNER		
<b>%</b>	""""""""""""""""""""""""""""""""""""""	ALAM EPORTING	BAS	
	DESCRIPTION	PROGRAM (WARP)	PRIORITY	ALARM LEVEL
S	ACE TEMP-SALES FLOOR	YES	DAILY	SPACE TEMP <65 DF OR >80 DF FOR 60 MIN
SPACE	WPOINT TEMP-SALES FL	YES	DAILY	SPACE DP TEMP > 56 DP FOR 30 MIN
RITICAL	HU AMBIENT SENSOR ERROR	YES	DAILY	AHU CONTROLLER SENSOR FAIL FAULT
ME: AL	A SS SHALL BE IDENTIFIED BY U	JNIT.		

# OINT LIST AND SETPOINTS AND BAS SHALL TRANSFER THE COMMUNICATION DATA

8	***	n	MUNIERS AF	TO COMMUNICATION DATA POINT LIST			SEIPU
BACnet						snitias	Upp
Address	RW	Type	Otrection	Description	Units	Value	Lim
🏂 tpoints - Adju							
AV11	RW	ANL	input	Occupied Zone DH Setpoint	Temp F	52 F DP	52 F
AV12	W	ANL	input	Zone DH Deadband	delta DP F	2 F	2.5
AV13	RW	ANL	input	Amb DH Override Setpoint	DP F	48 F DP	52 F
AV15	RW	ANL	input	Occupied Zone Cool Setpoint	Temp F	76 F	76
AV16	W	ANL	input	Zone Temp Deadband	delta Temp F	2 F	21
AV21	RW	ANL	input	Amb Temp Std Heat Stage 1 Setpoint	Temp F	<55 F	58
AV22	RW	ANL	input	Anto Temp Std Heat Stage 2 Setpoint	Temp F	<30 F	33
AV23	RW	ANL	input	Amb Temp Std Heat Stage 3 Setpoint	Temp F	<10 F	13
AV24	RW	ANL.	input	Amb Temp Std Heat Stage 4 Setpoint	Temp F	<0 F	3 9
AV25	W	ANL	input	Occupied Zone Heat Setpoint	Temp F	87 F	68
AV1001	RW	INT	input	DH/Coot stage on detay	Minutes	10 Min	
AV1002	RW	INT	input	DH/Cool stage off delay	Minutes	10 Min	
Temperature V						i	
AV1	R	ANL	output	Amb Temperature from AHU to BMS	Temp F	i	
AV2	R	ANL	output	Amb Dewpoint from AHU to BMS	DPF		
AV3	R	ANL	output	Leaving Temperature from AHU to BMS	Temp F		
AV4	R	ANL	autput	Leaving Dewpoint from AHU to BMS	DP F		
AV7	R	ANL	output	Zone Temperature from AHU to BMS	Temp F		
AV8	R	ANL	output	Zone dewpoint from AHU to BMS	DPF	i	
inputs - Calls fo	or Unit F	unctions				i	
BV1	RW	DGT	input	Turn Unit On (Call for Supply Fan)	1=Active	i	
8V8	W	DGT	input	Fault Reset	I≃Reset		
AV1005	RW	INT	input	Supply Fan Speed	Percent		
Faults - Feedba	ack from	the Unit				i	
BV2	R	DGT	autput	Fault on: Supply Fan	1=Fault		
8V3	R	DGT	output	Fault on: Compressor Fait	1=Fault		
8V4	R	DGT	output	Fault on: Sensor Fail	1=Fault		
8V5	R	DGT	output	Fault on: Heater	1≈Fquit		
8V8	R	DGT	output	Fault on: Reactivation Fan	1=Fault	i	
8V7	R	DGT	output	Fault on: Desiccant Wheel	1=Fault		
Status - Feedba				k			
AV1003	R	INT	output	% Output of Reactivation Fan	Percent		
AV1004	R	INT	output	% Output of Supply Fen	Percent	i	
879	R	DGT	output	Air flow switch confirmation	1=Active		
BV10	R	DGT	output	Compressor A on	1=Active	i	
BV11	R	DGT	output	Compressor B on	1×Active		
BV12	R	DGT	output	Compressor C on	1=Active		
BV13	R	DGT	output	Compressor D on	1=Active	i	
BV15	Ř	DGT	output	Aux Heaf Stage 1 on	1=Active	i	
BV16	R	DGT	output	Aux Heat Stage 2 on	1=Active	i	
BV19	R	DGT	output	Desiccant Wheel on	1=Active		
BV20	R	DGT	output	Reactivation Fan on	1=Active		
AV30	R	ANL	output	Compressor A Discharge Pressure	PSIG	i	
AV31	R	ANL	output	Compressor B Discharge Pressure	PSIG	1	
AV32	R	ANL	output	Compressor C Discharge Pressure	PSIG	i	
AV33	R	ANL	output	Compressor D Discharge Pressure	PSIG		
AV34	<del></del>	ANL	output	Compressor A Suction Pressure	PSIG	i	
AV35	R	ANL	output	Compressor A Suction Pressure  Compressor B Suction Pressure	PSIG	ł	
AV36	R	ANL		Compressor C Suction Pressure	PSIG		
AV37	R	ANL	output		PSIG	i	
MV3/	IK	LANE	output	Compressor D Suction Pressure	rolu	i	

# HEATING RASED ON COURSIDE AIR TEMPERATURE WHEN OUTSIDE AIR TEMPERATURE DROPE BELOW THE HEAT STAGING SETPORTS IN THE TABLE BELOW, THE OEM CONTROLLER SHALL ENERGIZE THE CORRESPONDING HEAT STAGE, HEAT STAGNIS FOR GAS HEAT BURNERS IS IN THE ORDER OF BURNER 1 LOW FIRE, BURNER I HIGH FIRE, BURNER 2 LOW FIRE, AND BURNER 2 HIGH FIRE, HEAT STAGING FOR ELECTRIC HEAT IS IN FOUR EOUAL STEPS OF THE HEATER EACH HEAT STAGE SHALL RUN FOR AMININUM OF 10 MINUTES BEFORE DE-ENERGIZING, IF AT ANY THETH THE SPACE TEMPERATURE RISES ABOVE SPACE TEMPERATURE SETPOINT, THE LAST HEAT STAGE ON SHALL BE DE-ENERGIZED.

HEATING BASED ON SPACE TEMPERATURE

HEATING STAGES (SPACE)
STAGE # ON

SMOKE DETECTOR
FOR UNITS FOLUPPED

HEATING STAGES SHALL BE DE-ENERGIZED IN REVERSE ORDER ON OUTSIDE AIR TEMPERATURE BASED ON THE ABOVE SCHEDULE.

HEATING BASEDON SPACE TEMPERATURE
WHEN SPACE TEMPERATURE DRIVING SETFONY, RIRES
STAGE HEATING SETFONY, RIRES
STAGE HEATING SHALL BE ENERGIZED. IF HEATING SETFONY IS NOT MET WITH
FIRST STAGE HEAT THE COEM CONTROLLER SHALL BRING ON ADDITIONAL HEAT
STAGES IN 10 MINUTE INTERVALS. HEAT STAGING FOR GAS HEAT BURNERS IS IN
HER ORDER OF SURRIERT IL OWE FIRE, BURNERS IS LOW FIRE,
AND BURNERS IS HIGH FIRE, BURNERS IS LOW FIRE,
AND BURNERS OF THE HEATE STAGING FOR ELECTRIC HEAT IS IN FOUR
EQUILA, STEPS OF THE HEATER WHEN SPACE TEMPERATURE INCRESSES ABOVE
HEATING SETFONY FILLS INDICOR TEMPERATURE DEADBAID. THE ORD
MINUTE STAGE SETFONY FILES AND SETFONY FILES THE STAGE STAGE THE STAGE FOR THE STAGE
MORE SETFONY FILES INDICOR TEMPERATURE DEADBAID. THE ORD
MINUTE STAGE SETFONY FILES SHOW THE STAGE STAGE ORDER IN 10 MINUTE
CHARGE SETFONY FILES MODOR TEMPERATURE DREADBAID. THE ORD
MINUTE STAGE SETFONY FILES MODOR TEMPERATURE DREADBAID THE DRIVEN FOR THE STAGE STAGE STAGE ORDER IN 10 MINUTE
ENERGIZE WHEN AHU IS IN DEHUMBIFICATION MODE

ON OFF
HTG SP HTG SP+DB

SMOKE DETECTOR
FOR UNITS EQUIPPED WITH SMOKE DETECTORS (DUCT MOUNTED OR SPACE
MOUNTED) THE SMOKE DETECTOR SHALL, SHUT-DOWN THE UNIT UPON SMOK
DETECTOR ACTIVATION. IF REQUIPED BY THE LOCAL AUTHORITY HOWING
JURISDICTION UPON SMOKE DETECTOR ACTIVATION ADDITIONAL UNITS SHA

SONISON OF SINCE E ELECTOR NOTIFICATION PUBLICATION PUBLICATION ASSISTANCE SINCE ALARM S TO THE OEM CONTROLLER THE OEM CONTROLLER SHALL TURN SUPPLY FAIN. OEM CONTROLLER SHALL OVERRIDE ALL OUT CONDITION DEMANDS WHEN UNIT HAS RECEIVED A STATE OF THE SINCE SINC

BAS DIMMING SCHEDULES AND SETPOINTS							
PROGRAM NAME	SALES FLOOR, PERIMETER LIGHTING,	BEGIN	END	SETPOINT			
SALES FLOOR	PRODUCE SPECIALTY LIGHTING	10:00 PM	6:00 AM	7 VOLT			
		6:00 AM	10:00 PM	9 VOLT			
PRODUCE	PRODUCE AMBIENT LIGHTING	24	HOUR	5 VOLT			
VESTIBULE	VESTIBULE UPLIGHTING	10:00 PM 6:00 AM	6:00 AM 10:00 PM	7 VOLT 9 VOLT			

DIMMING RAMP RATES		
	DESCRIPTION DESCRIPTION	TES RATE

## INTERIOR SCHEDULED LIGHTING ALL INTERIOR LIGHTING SCHEDULES FROM THE BAS ARE A

SALES FLOOR SA	REA SERVED ALES FLOOR, PERIMETER LIGHTS	X		OFF W
			URS :	
PHARMACY PH	HARMACY LIGHTS	6:00	AM	10:00 PM
PRODUCE PR	RODUCE SPECIALTY, PRODUCE AMBIENT LIGHTS	*24	RS	8
FRZ-CLR CASE RE	EFRIGERATED CASE LIGHTS	24 H	Mar.	
SERVICE DELI SE	ERVICE DELI LIGHTS ATTIMU.	6:00	941111	uridlika**

# EXTERIOR LIGHTING ALL EXTERIOR LIGHT

	40			
1		RIOR LIGHT ENABLES		
1	PROGRAM NAME	ARMA SERVED MA	ON	OFF
1	BUILDING FAÇADE	POLE AND RMACY DRAW HPU CANOPY LIGHTING	3 4:00 PM	8:00 AM
Ì	BUILDING SECURITY	BUNG SECURING SHTING	4:00 PM	8:00 AM
		- BUNG BACK AND DE SEGURITY LIGHTING		1
	<b>%</b>	- TRUCKING LL LIGHT MANUELL		1
	<i>(</i> )).	- BUILDING RONT CANDRY LIGHTING		<u> </u>
٦	PARKING LOT	PARKING WILLIGHTING	4:00 PM	8:00 AM
1	DING SIGNAGE	BUILDING SAAGE LIGHTING	4:00 PM	8:00 AM
1	RE SIGNAGE	M NUMER PYLON SIGNAGE LIGHTING	4:00 PM	8:00 AM

### NTROL COMMUNICATION LOSS OPERATION:

THE G3 POWER SWITCHING PANEL LICHTING CONTROLLER RECOGNIZES BAS COMM LOSS, THE G3 SHALL NERGIZE CONTROLLED LICHTING AFTER A 5 NINUTE TIME DELAY (ADJ.) WHEN COMMUNICATION IS RESTORED (GITTING SHALL REVERT TO SCHEDULED BAS CONTROL.

IN CASE OF COMMUNICATION FAILURE TO THE INTERFACE RELAYS CONTROLLING LIGHTING CONTACTORS, THE SYSTEM SHALL REVERT TO THE SCHEDULED BAS CONTROL WHEN COMMUNICATION IS RESOTRED.

ALARMS
THE BAS SHALL COMMUNICATE THE REQUIRED ALARM LIST TO THE OWNER ALARM REPORTING PROGRAM (WARP).

LIGHTING MONITORING ALARM LIST						
	FROM BAS TO OWNER	i				
	ALARM REPORTING	BAS	ALARM			
ALARM NAME	PROGRAM (WARP)	PRIORITY	LEVEL			
BREAKER CONFIRMATION			LIGHT BREAKER OUTPUT			
STATUS FAULT OFF	YES	DAILY	ON BUT FEEDBACK IS OF			
BREAKER CONFIRMATION			LIGHT BREAKER OUTPUT			
STATUS FAULT ON	YES	DAILY	OFF BUT FEEDBACK IS O			
SPD ALARM (H1P)	YES	DAILY	SPD INPUT IS ON			
DIMMER DISCONNECT FAULT	YES	DAILY	DIMMER OUTPUT FEEDBA IS < 1% OR > 95%			

# ZONE INPORMATION THE BAS SHALL RECORD THE ZONE INFORMATION FOR ALL AREAS, LED IS SHOWN BELOW. THE BAS SHALL ACCUMULATE ACTUAL OPERATING TIME AND PRODUCE AN ALARM WHEN THE LED OPERATING TIME IS GREATER THAN SHO

	ZONE INFORMATION TAX	61.t:		
PROGRAM NAME	MANUFACTURER	MODEL	TYPE	ANTICIPATED USEFUL LIFE
SALES FLOOR	ACUITY	TMSL	LED	75,000 HRS
PRODUCE	CREE	CS18	LED	65,000 HRS
BUILDING SEC LTS	ACUITY	WST	LED	50,000 HRS
PARKING LTS	GE.	EVOLVE	t.ED	50,000 HRS
CANOPY LTS	LSI	XSL2	LED	60,000 HRS
VESTIBULE LTS	ACUITY	802L	LED	60,000 HRS
FLAGPOLE LTS	ACUITY	M9720	LED	100,000 HRS











 ISSUE B	LOCK
	L

CHECKED BY:	MMM
DRAWN BY:	TOT
FILE NAME:	EM2
PROTO CYCLE:	10/28/16
DOCUMENT DATE:	01/09/17

BID SET NOT FOR CONSTRUCTION

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SEQUENCES **OPERATION** CPC



EM2