

SMCCCD CSM B34 Modernization

3401 CSM Drive
San Mateo, CA 94402

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Engineer: ACCO Engineered Systems

Contractor: ACCO Engineered Systems

IC0911025

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REVISIONS		
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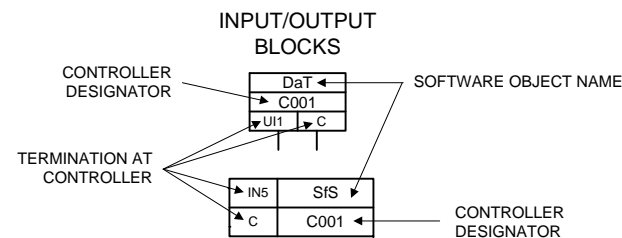
Software Standard Tags

Prefix	Description	Suffix	Description
Bldg	Building	A	Alarm
Blr	Boiler	Amp	Amps
Cba	Combustion Air	Avg	Average
Cd	Cold Deck	C	Command/Control
Cg	Cooling	Ccl	Command Close
Chlr	Chiller	CO	Carbon Monoxide
Cwr	Condenser Water Return	CO2	Carbon Dioxide
Cws	Condenser Water Supply	Cop	Command Open
Chwr	Chilled Water Return	Dew	Dewpoint
Chws	Chilled Water Supply	Dis	Disable
Ct	Cooling Tower	Dmp	Damper
Da	Discharge Air	Dp	Differential Pressure
Dhw	Domestic Hot Water	Drv	Drive
Dx	Direct Expansion	Dt	Differential Temp
Ef	Exhaust Fan	Ec	Energy Consumption
Fb	Face/Bypass	Ena	Enable
Fil	Filter	Enth	Enthalpy
Hd	Hot Deck	Es	End Switch
Ht	Heating	Fire	Fire
Hum	Humidifier	Flo	Flow
Hwr	Hot Water Return	Frq	Frequency
Hws	Hot Water Supply	Hi	High
Hx	Heat Exchanger	HL	High Limit
Lt	Lighting	HZ	Hertz
Ma	Mixed Air	LL	Low Limit
Oa	Outside Air	Lo	Low
P(x)	Pump (number)	Loc	Lockout
Pht	Preheat	P	Pressure
Plw	Pool Water	Rh	Relative Humidity
Pri	Primary	Rst	Reset
Ra	Return Air	S	Status
Rf	Return Fan	Sp	Static Pressure
Rht	Reheat	Spd	Speed
Rm(xxx)	Room	Spt	Setpoint
Sa	Supply Air	SS	Start/Stop
Sec	Secondary	Stg	Stage
Sf	Supply Fan	T	Temp
Sk	Smoke	Tp	Total Pressure
Stm	Steam	Vlv	Valve

Example: **ChwsT** Chilled Water Supply Temperature

↑ Suffix
↑ Prefix

SYMBOL LEGEND



Standard Wiring Practice

Function	Device Type	Prefered Color	Conductors	PLENUM Equivalent Reference Info.		NON-PLENUM Equivalent Reference Info.		Notes
				Windy City Part #	PS3 (Connect Air) Part #	Windy City Part #	PS3 (Connect Air) Part #	
Comm	Lon-Bus	Orange	22/2 Non-shielded Echelon	105540-B	WLON-3-221P-OR-RB	107540-B	WLON-1-221P-GY-RB (grey)	(1)
Comm	Modbus	Grn Stp	18/2 Shielded	002326-B	W4-182C-GRS-RB	014106-B	W2-182C-GY-BX (grey)	(1)
Comm	Ethernet	Blue	24/4P Non-shielded	555619-B	WCAT5-3-244P-BL-BX	8665619-B	WCAT5-1-244P-BL-BX	(2)
T-stat	S-Link	Blue	22/2 Non-shielded	004369-B	W3-222C-BL-BX	025100-B (gray)	W1-222C-GY-BX (grey)	(1)
Pow er	24 VAC Long Distance	White	16/2 Non-shielded	001360-B	W3-162C-WH-BX	028100-B (gray)	W1-162C-GY-BX (grey)	
Pow er	24 VDC/24VAC	White	18/2 Non-shielded	002360-B	W3-182C-WH-BX	027100-B (gray)	W1-182C-GY-BX (grey)	
I/O	2-w ire I/O Shielded	White	22/2 Shielded	004320-B	W4-222C-WH-BX	016100-B (gray)	W2-222C-GY-BX (grey)	(3)
I/O	3-w ire I/O Shielded	White	22/3 Shielded	004330-B	W4-223C-WH-BX	016200-B (gray)	W2-223C-GY-BX (grey)	(3)
I/O	4-w ire I/O Shielded	White	22/4 Shielded	004340-B	W4-224C-WH-BX	016300-B (gray)	W2-224C-GY-BX (grey)	(3) (4)
I/O	6-w ire I/O Shielded	White	22/6 Shielded	004351-B	W4-226C-WH-BX	016400-B (gray)	W2-226C-GY-BX (grey)	(3) (4)
I/O	8-w ire I/O Shielded	White	22/8 Shielded	004352-B	W4-228C-WH-BX	-	W2-228C-GY-BX (grey)	(3) (4)
I/O	2-w ire I/O Unshielded	White	22/2 Non-shielded	004360-B	W3-222C-WH-BX	025100-B (gray)	W1-222C-GY-BX (grey)	
I/O	3-w ire I/O Unshielded	White	22/3 Non-shielded	004370-B	W3-223C-WH-BX	-	W1-223C-GY-BX (grey)	
I/O	4-w ire I/O Unshielded	White	22/4 Non-shielded	004380-B	W3-224C-WH-BX	-	W1-224C-GY-BX (grey)	(4)
I/O	6-w ire I/O Unshielded	White	22/6 Non-shielded	004391-B	W3-226C-WH-BX	-	W1-226C-GY-BX (grey)	(4)
I/O	8-w ire I/O Unshielded	White	22/8 Non-shielded	004392-B	W3-228C-WH-BX	-	W1-228C-GY-BX (grey)	(4)

- (1) Unshielded twisted pair. **No substitutes.**
- (2) Category 5e
- (3) Shielded twisted pair
- (4) Multi-color pair can be used to for multi-output on similar systems.

- FTT-10 — LON WIRING: CAT-4, 22AWG, 2 CONDUCTOR, NON-SHIELDED, TWISTED PAIR. DAISY CHAIN CONFIGURATION, NO TEES ALLOWED. LON TERMINATOR MUST BE USED AT EACH EOL. INSTALL ALONE IN DEDICATED CONDUIT, NO OTHER CONDUCTORS ALLOWED. NO SPLICING OF LON WIRING PERMITTED. MAX LENGTH 4600' OR 63 DEVICES WITHOUT REPEATER.
- ETHERNET — ETHERNET WIRING: CATEGORY 5, 24 AWG 4-PAIR UTP. INSTALLERS OF ETHERNET BUS WIRING ARE REQUIRED TO REFER TO INVENSYS TECHNICAL MANUAL F-25955 "ETHERNET NETWORKS" PRIOR TO INSTALLATION. MAXIMUM SEGMENT LENGTH 326'.
- S-LK — S-LINK WIRING: 22AWG, 2 CONDUCTOR, STRANDED, NON-SHIELDED CABLE. CAPACITANCE BETWEEN CONDUCTORS CAN NOT EXCEED 32pF PER FOOT. S-LINK IS NON-POLARITY SENSITIVE. S-LINK & LON MAY BE HOUSED IN SAME CONDUIT BUT SHOULD BE IN SEPARATE CABLES (TWO PAIR CABLE IS NOT RECOMMENDED). MAX LENGTH 200'.
- MODBUS — MODBUS WIRING: 18 AWG 2 CONDUCTOR STRANDED SHIELDED CABLE. TERMINATE SHIELD OR DRAIN WIRE AT CONTROLLER ONLY. MAX LENGTH 4000' FOR RS-485 OR 50' FOR RS-232.

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
A.F.F.	ABOVE FINISHED FLOOR
AHU	AIR HANDLER UNIT
COM	COMMON
DDC	DIRECT DIGITAL CONTROL
EA	EXHAUST AIR
(E)	EXISTING
EOL	END OF LINE
EF	EXHAUST FAN
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
GND	GROUND
HC	HEATING COIL
HHW	HEATING HOT WATER
HX	HEAT EXCHANGER
I/A	INTELLIGENT AUTOMATION
LAN	LOCAL AREA NETWORK
LON	LOCAL OPERATING NETWORK
M/S	MOTOR STARTER
MNL	MICRONET LON
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
PEM	PACKAGE EQUIPMENT MODULE
RA	RETURN AIR
SA	SUPPLY AIR
TCP	TEMPERATURE CONTROL PANEL
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE



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Revisions	
#	Date
1	06/30/2011
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SMCCCD CSM B34
 Modernization
 3401 CSM Drive
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JOB NUMBER: IC0911025
 FILE NAME: Legends SSF.vsd
 SHEET NO.: 1 OF 8

LEGEND

BILL OF MATERIALS

BILL OF MATERIAL LISTING

Installing Trade	Item #	Qty	Part Number	Description	Vendor	Manufacturer
Electrical						
Electrical	1	3	H300	SPLIT CORE CURRENT SWITCH; 0.5	SINGLE SOURCED SOLUTIONS	VERIS
Electrical	2	4	MN-S3	IA MICRONET S-LINK SENSOR W/OV	TAC (Invensys)	TAC (INVEN-AUT)
Electrical	3	3	P-PAM-1	APC ENCAPSULATED RELAY SPDT 10	TAC (PS3)	Air Products and Controls
Panel						
Panel	4	1	84N1568	10k resistor	NEWARK	NEWARK
Panel	5	1	A16-40-00-81	LITE CONTACTOR, 4P, 30A	KELE	ABB
Panel	6	1	A16P16	16"H x 16"W BACKPLATE	HOFFMAN	HOFFMAN
Panel	7	1	A16R166HCR	16"H x 16"W x 6"D NEMA 3R ENCL	HOFFMAN	HOFFMAN
Panel	8	1	A-8N84	8"H x 8"W x 8"D NEMA1 ENCLOSURE	HOFFMAN	HOFFMAN
Panel	9	1	A-8N8PP	8"H x 8"W PERFORATED BACKPLATE	HOFFMAN	HOFFMAN
Panel	10	1	FUN-RIBM2-4S	4" TRACK MNT RELAY 15AMP SPST	TAC (PS3)	Functional Devices
Panel	11	1	FUN-TR100-VA0-0-4	XFMR 100VA, 480/277/240/120-24	TAC (PS3)	Functional Devices
Panel	12	2	MNL-20RS3	MN 200 CONT. WITH LONMARK ROOF	TAC (Invensys)	TAC (INVEN-AUT)
Panel	13	2	T-208	TRANSFORMER 96 VA 120P-24VS U	TAC (PS3)	Core Components



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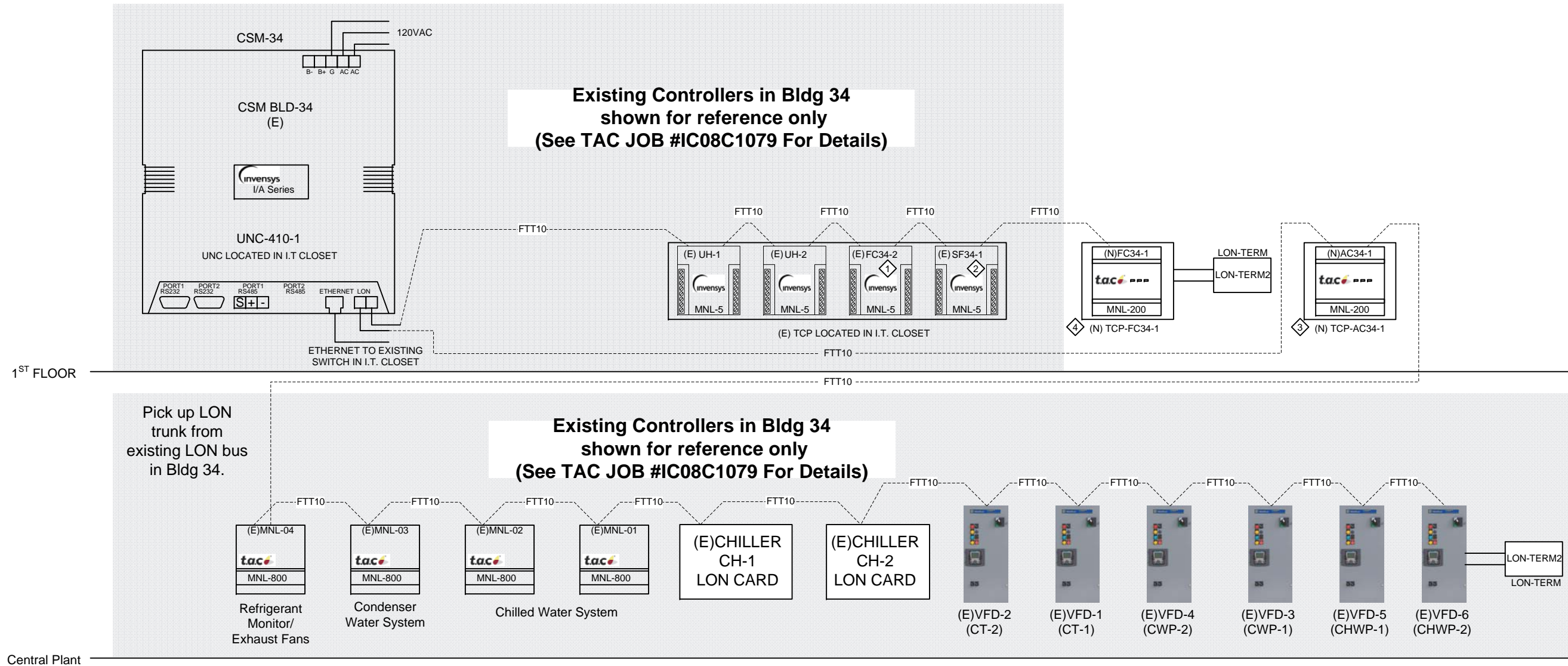
SMCCCD CSM B34
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 BILL OF MATERIALS

JOB NUMBER
 IC0911025
 FILE NAME
 BOM.vsd
 SHEET NO.
 2 OF 8

UPDATED CSM B34 RISER DIAGRAM

SHEET NOTES

- 1 OLD CONTROLLER'S NAME IS UH-3. REPROGRAM FC34-2.
- 2 OLD CONTROLLER'S NAME IS UH-4. REPROGRAM FOR SF34-1.
- 3 NEW TCP-AC34-1 PANEL IS MOUNTED OUTSIDE AT AC34-1 UNIT.
- 4 NEW TCP-FC34-1 PANEL IS MOUNTED IN IDF STORAGE 34-140, CLOSE TO FC34-1.



Revisions	
#	Change
1	Date: 07/12/11
2	Record Drawing
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4	Record Drawing

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 Engineer: ACCO Engineered Systems
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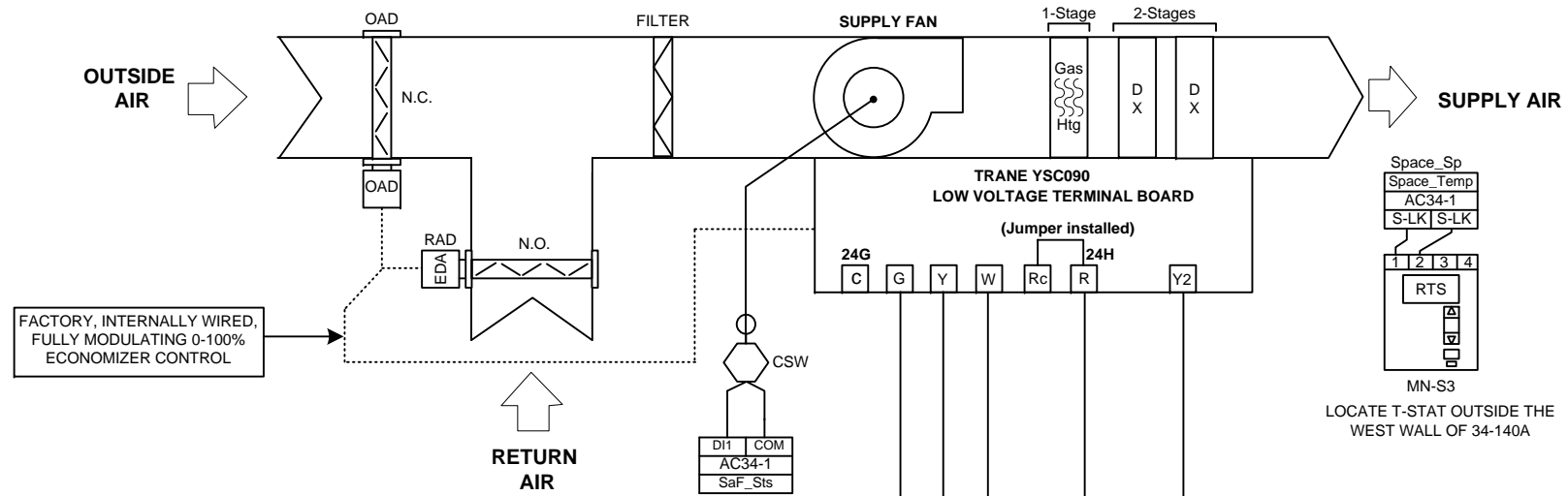
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UPDATED CSM B34 RISER
 DIAGRAM

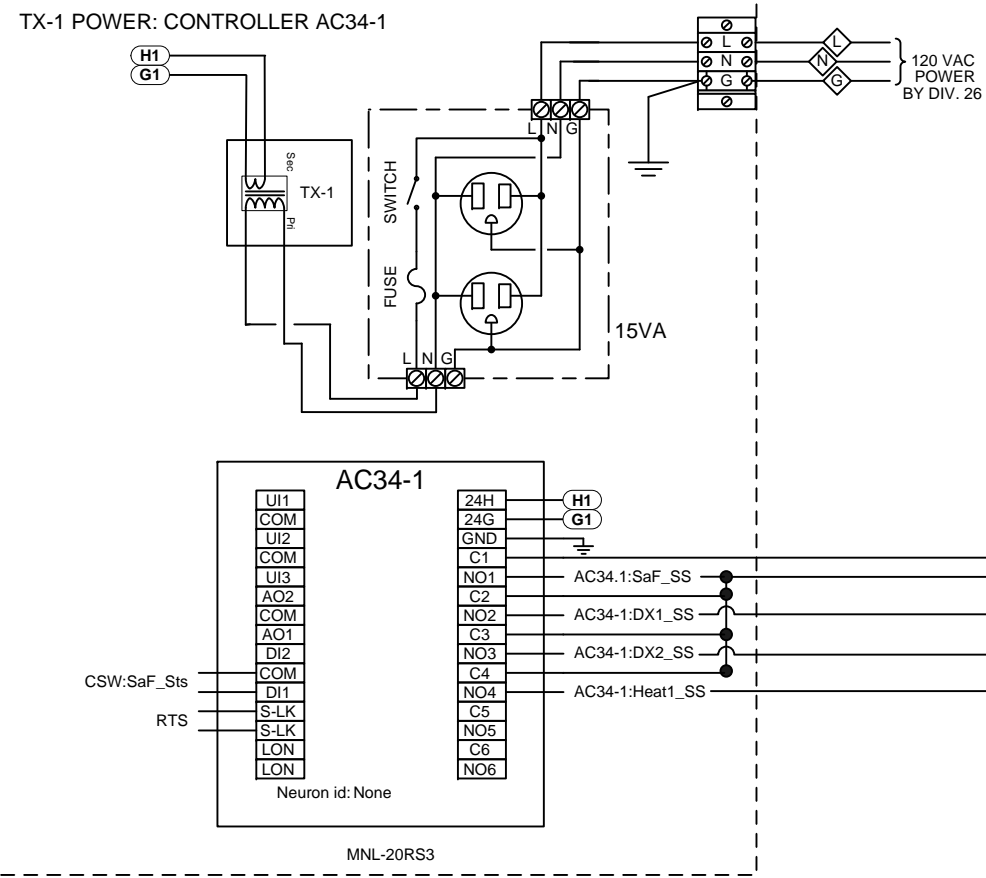
JOB NUMBER: IC0911025
 FILE NAME: CSM/B34_RISER.vsd
 SHEET NO.: 3 OF 8

CSM B34 AC34-1 PACKAGE UNIT CONTROL

AC34-1 CONTROL				
Device	Qty	Part Number	Description	Vendor
Electrical				
CSW	1	H300	SPLIT CORE CURRENT SWITCH: 0.5	SINGLE SOURCED SOLUTIONS
RTS	1	MN-S3	IA MICRONET S-LINK SENSOR W/OV	TAC (Invensys)
TCP-AC34-1				
Device	Qty	Part Number	Description	Vendor
Panel				
AC34-1	1	MNL-20RS3	MN 200 CONT. WITH LONMARK ROOF	TAC (Invensys)
TCP-AC34-1	1	A16R166HCR	16"H x 16"W x 6"D NEMA 3R ENCL	HOFFMAN
TCP-AC34-1_1	1	A16P16	16"H x 16"W BACKPLATE	HOFFMAN
TX-1	1	T-208	TRANSFORMER 96 VA 120P-24VS U	TAC (PS3)



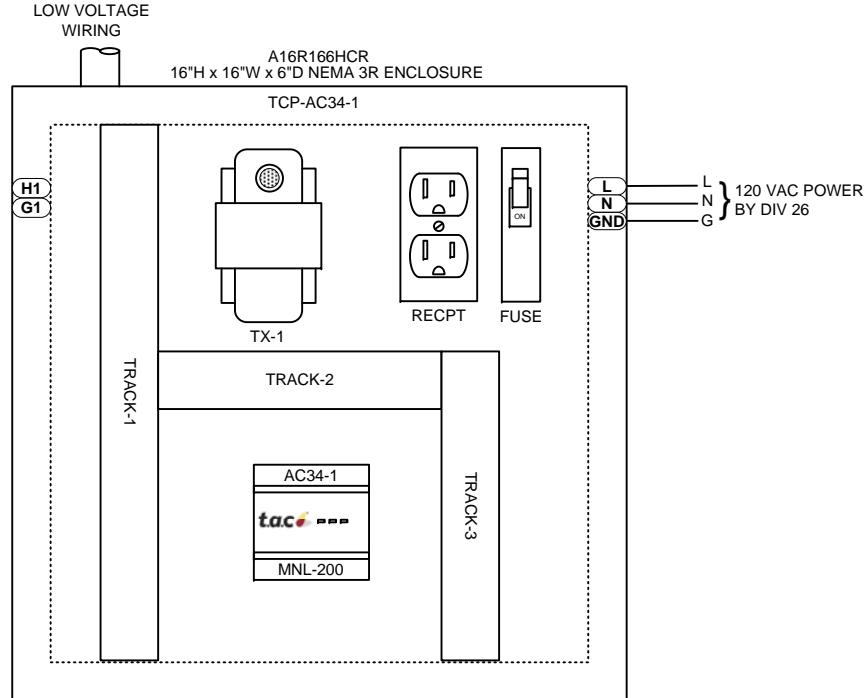
TCP-AC34-1: NEMA 3R ENCLOSURE 16"H x 16"W x 6"D.



PACKAGE UNIT SEQUENCE OF OPERATIONS

1. THE DDC SYSTEM SHALL CONTROL AND MONITOR THE ROOFTOP PACKAGE UNIT.
2. THE MN-S3 SENSOR SHALL ALLOW USER TO ADJUST TEMPERATURE +/- 2 DEG F. (SEE LOCAL ROOM SETPOINT ADJUSTMENT OPERATION BELOW).
3. WHEN ROOM TEMPERATURE IS 2 DEG F (ADJ.) BELOW ROOM TEMPERATURE SETPOINT, THE DDC SYSTEM SHALL ENABLE HEATING STAGE OF THE UNIT. WHEN ROOM TEMPERATURE RISES ABOVE ROOM TEMPERATURE SETPOINT, THE DDC SYSTEM SHALL DISABLE THE HEATING STAGE, THE SUPPLY FAN WILL CONTINUE TO RUN.
4. THE ROOFTOP PACKAGE UNIT TEMPERATURE ALARMS SHALL HAVE HIGH (CSM CLASS 3 AND 9) ALARM PRIORITY AND SHALL BE GENERATED AT THE FRONT END COMPUTER TO THE BMS OPERATOR WHEN THE ROOM TEMP IS ABOVE 75° F OR IF THE ROOM TEMP IS BELOW 65° F.
5. THE TIME SCHEDULE PROGRAM SHALL BE 7AM - 5PM / 7 DAYS PER WEEK/ 365 DAYS A YEAR.
6. THE UNIT SHALL NOT OPERATE IN COOLING WHILE SUPPLEMENTAL UNIT HEATERS ARE RUNNING. REFER TO SHEET 7 FOR UNIT HEATER CONTROLLERS.

Local Room Setpoint Adjustment Operation: The MN-S3 Room Sensor has a pushbutton & up / down arrows for setpoint adjustment locally at the room sensor. The local setpoint adjustment takes effect for 2 hours once the pushbutton is pushed to override the default setpoint from the front end computer. A red LED below the pushbutton will light up after the pushbutton has been pushed to indicate that the local setpoint override is active. By pushing the up or down arrow, the setpoint value will temporarily be displayed on the LCD display of the sensor and will adjust to a higher value when the up arrow is pushed & to a lower value when the down arrow is pushed. The LCD display will go blank once the setpoint adjustment is complete. The adjustment range of the setpoint value will be limited between 68 degrees & 72 degrees. The local setpoint will revert back to the original default setpoint from the front end computer after the 2 hour override period is complete.



TEMP CONTROL PANEL (TCP-AC34-1) LAYOUT
MOUNT PANEL OUTSIDE AT AC34-1 UNIT
(EXACT LOCATION TO BE FIELD VERIFIED)



Revisions	
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1	06/30/2011
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3	11/17/2011
4	01/30/2012

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SMCCCD CSM B34
 Modernization
 3401 CSM Drive
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 CSM B34 AC-34-1 PACKAGE
 UNIT CONTROL

JOB NUMBER: IC0911025
 FILE NAME: CSM B34 AC-34-1.vsd
 SHEET NO.: 4 OF 8

SHEET NOTES

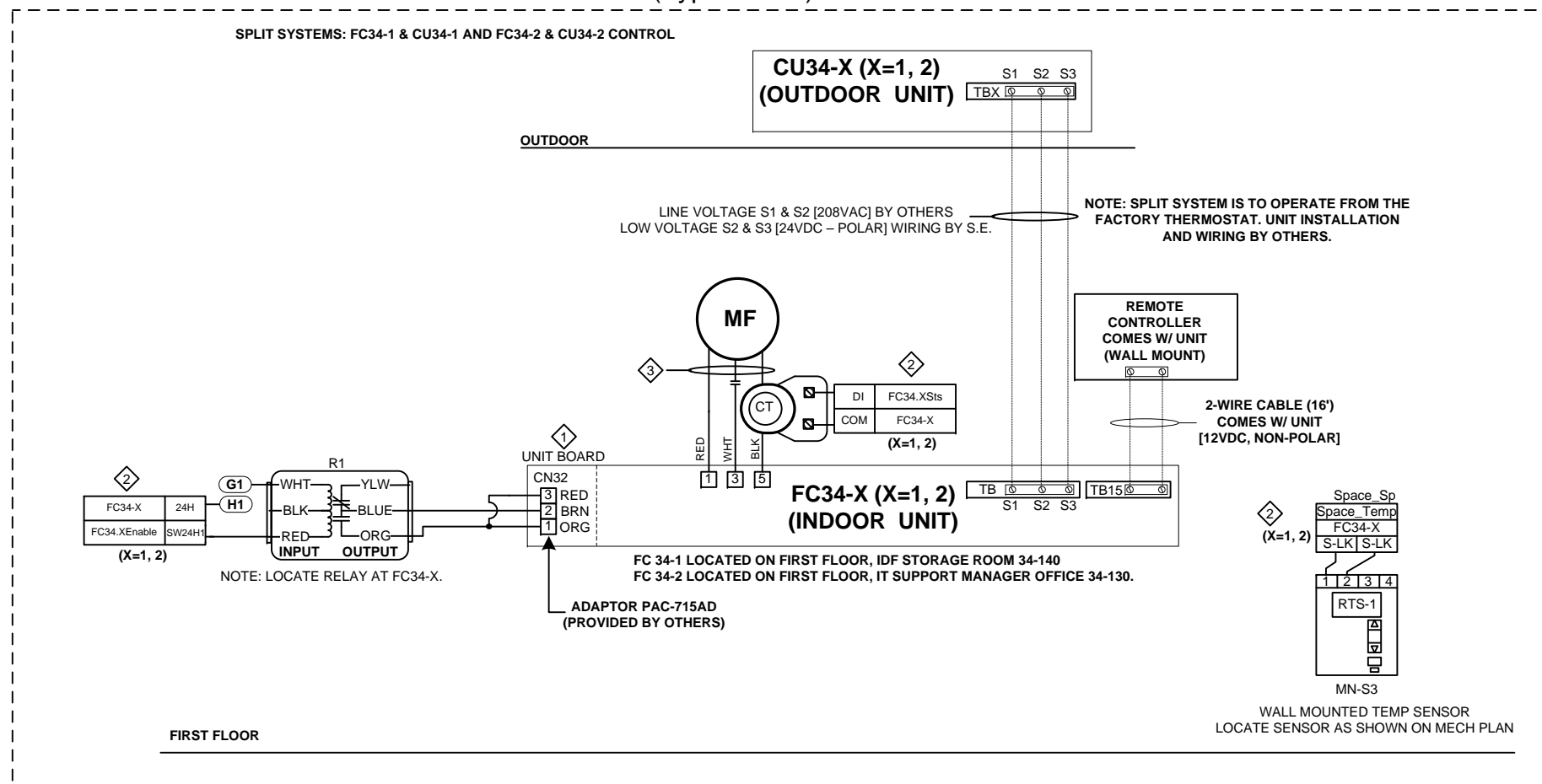
- 1 CLOSE PINS 1 & 2 TO ENABLE UNIT REMOTE START/STOP CONTROL, PIN 1 (ORG) & PIN 3 (RED) WIRES TIED UP TOGETHER.
- 2 SEE (E)TCP-BLDG-34 AND (N)TCP-FC34-1 PAGE CONTROLLERS WIRING DETAIL.
- 3 LINE VOLTAGE WIRING BY OTHERS.

CSM B34 SPLIT SYSTEMS COOLING: FC34-1&CU34-1 AND FC34-2&CU34-2

CSM B-34 SPLIT SYSTEM				
Device	Qty	Part Number	Description	Vendor
Electrical				
CT	2	H300	SPLIT CORE CURRENT SWITCH; 0.5	SINGLE SOURCED SOLUTIONS
R1	2	P-PAM-1	APC ENCAPSULATED RELAY SPDT 10	TAC (PS3)
RTS-1	2	MN-S3	1A MICRONET S-LINK SENSOR W/OV	TAC (Invensys)

- SPLIT SYSTEM SEQUENCE OF OPERATIONS**
1. THE BMS SYSTEM SHALL ENABLE/DISABLE THE UNIT BASED ON THE SCHEDULE. THE BMS SYSTEM SHALL MONITOR THE SPLIT SYSTEM UNIT STATUS.
 2. THE MN-S3 SENSOR SHALL BE USED TO MONITOR THE SPACE TEMPERATURE.
 3. THE SPLIT SYSTEM ALARMS SHALL BE GENERATED AT THE FRONT END COMPUTER.
 - TEMPERATURE ALARMS SHALL BE GENERATED WHEN THE ROOM TEMP IS ABOVE 85° F OR BELOW 65° F.
 - ALARM NOTIFICATIONS SHALL BE AT CLASSES 3, 6, 9 AND 11.
 4. THE TIME SCHEDULE PROGRAM SHALL BE 24 HOURS / 7 DAYS A WEEK / 365 DAYS A YEAR FOR FC34-1 AND 7AM-5PM / 7 DAYS A WEEK / 365 DAYS A YEAR FOR FC34-2.

**CSM B-34 SPLIT SYSTEM
(Typical Of 2)**



Revisions	
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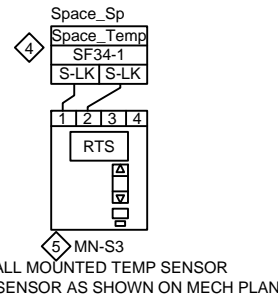
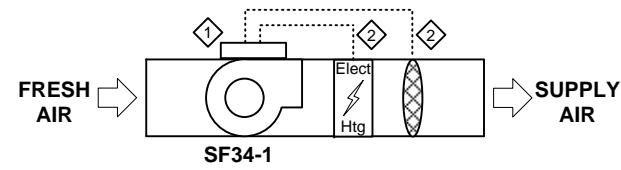
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 CSM B34 SPLIT SYSTEM

JOB NUMBER: IC0911025
 FILE NAME: SPLIT_SYSTEM.vsd
 SHEET NO.: 5 OF 8

CSM B34 FRESH AIR MAKE UP UNIT WITH ELECTRIC HEATER CONTROL

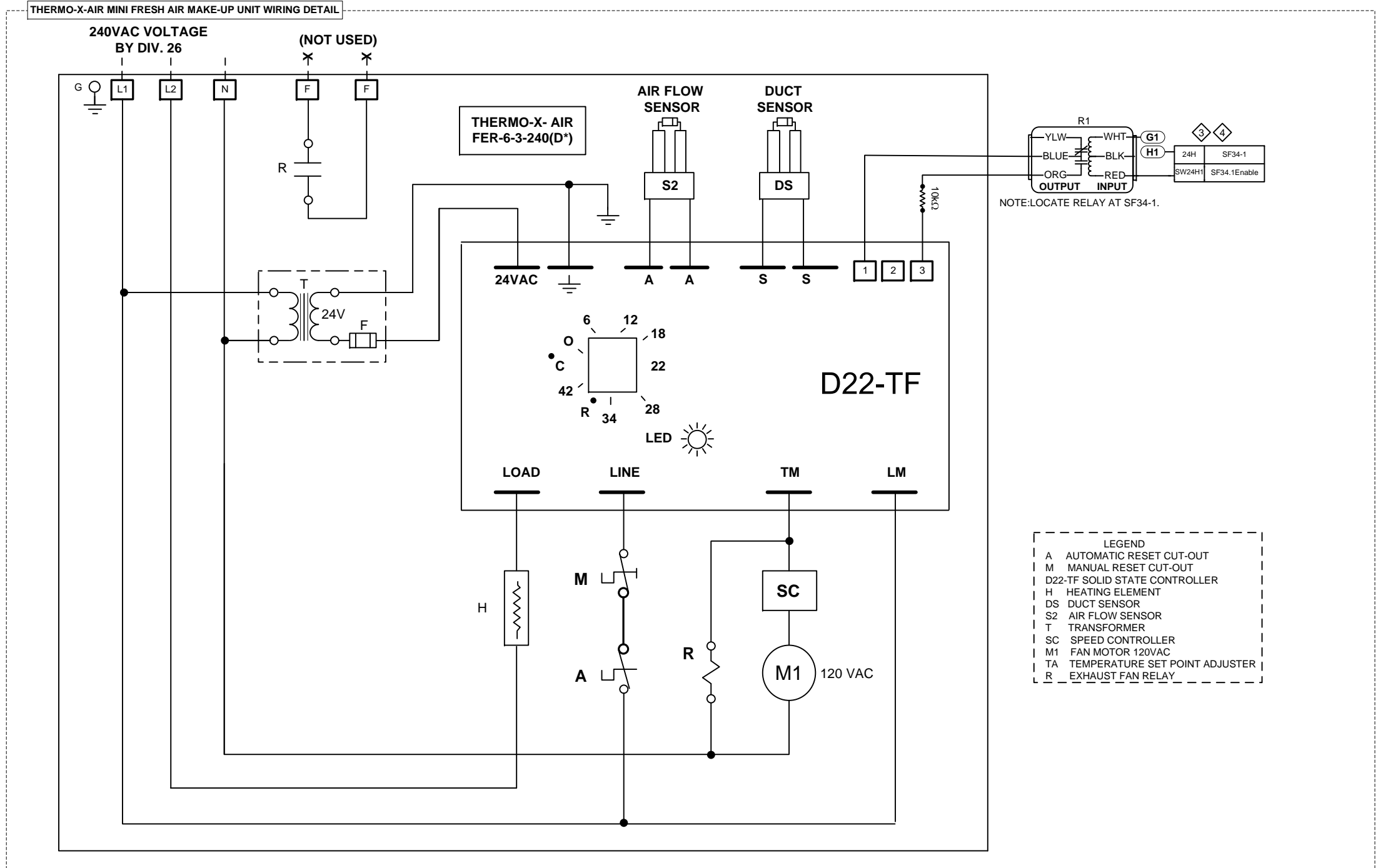
SHEET NOTES

- 1 UNIT CONTROL PANEL: SEE THERMO-X-AIR MINI FRESH AIR MAKE-UP WIRING DETAIL BELOW.
- 2 FACTORY WIRED CONTROL.
- 3 UNIT START/STOP BY BMS.
- 4 SEE (E)TCP-BLDG-34 PAGE FOR CONTROLLER WIRING DETAIL.
- 5 SEE CSM B34 AC34-1 ROOFTOP PACKAGE UNIT CONTROL PAGE FOR MN-S3 LOCAL ROOM SETPOINT ADJUSTMENT OPERATION.



SF34-1 CONTROL				
Device	Qty	Part Number	Description	Vendor
Electrical				
R1	1	P-PAM-1	APC ENCAPSULATED RELAY SPDT 10	TAC (PS3)
RTS	1	MN-S3	IA MICRONET S-LINK SENSOR W/OV	TAC (Invensys)
Panel				
10K	1	84N1568	10k resistor	NEWARK

SEQUENCE OF OPERATIONS
 The BMS enables or disables the unit based on schedule (user adjustable) and the space temperature is below setpoint (user adjustable).
 The MN-S3 sensor will allow the occupants to enable the unit for 2 hours during off-hours by pressing on the override pushbutton of the sensor.



LEGEND

- A AUTOMATIC RESET CUT-OUT
- M MANUAL RESET CUT-OUT
- D22-TF SOLID STATE CONTROLLER
- H HEATING ELEMENT
- DS DUCT SENSOR
- S2 AIR FLOW SENSOR
- T TRANSFORMER
- SC SPEED CONTROLLER
- M1 FAN MOTOR 120VAC
- TA TEMPERATURE SET POINT ADJUSTER
- R EXHAUST FAN RELAY



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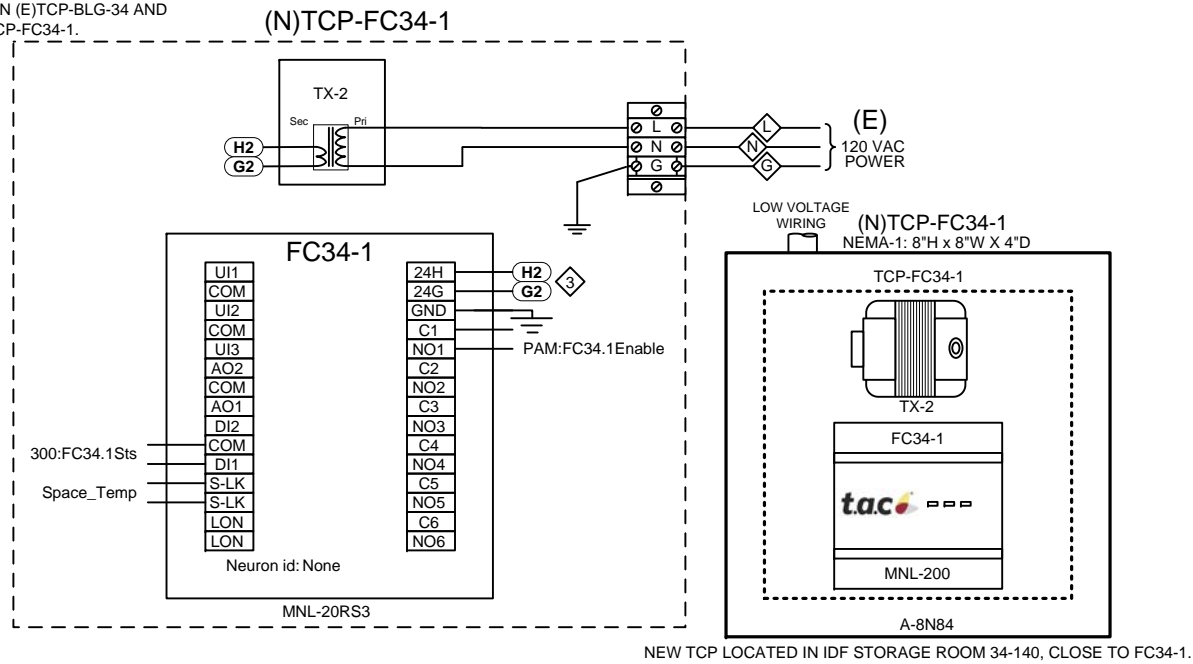
SMCCCD CSM B34
 Modernization
 3401 CSM Drive
 San Mateo, CA 94402
 CSM B34 FRESH AIR MAKE UP
 AIR UNIT W/ HEATER

JOB NUMBER
 IC0911025
 FILE NAME
 CSM B34 SF-HTR.vsd
 SHEET NO.
 6 OF 8

SHEET NOTES

- 1 OLD CONTROLLER'S NAME IS UH-3. REPROGRAM FC34-2.
- 2 OLD CONTROLLER'S NAME IS UH-4. REPROGRAM FOR SF34-1.
- 3 TX-1 POWERS ALL FOUR (E) CONTROLLERS IN (E)TCP-BLG-34 AND NEW FC34-1 (MNL-200) CONTROLLER IN (N)TCP-FC34-1.

(E)TCP-BLDG-34 AND (N)TCP-FC34-1



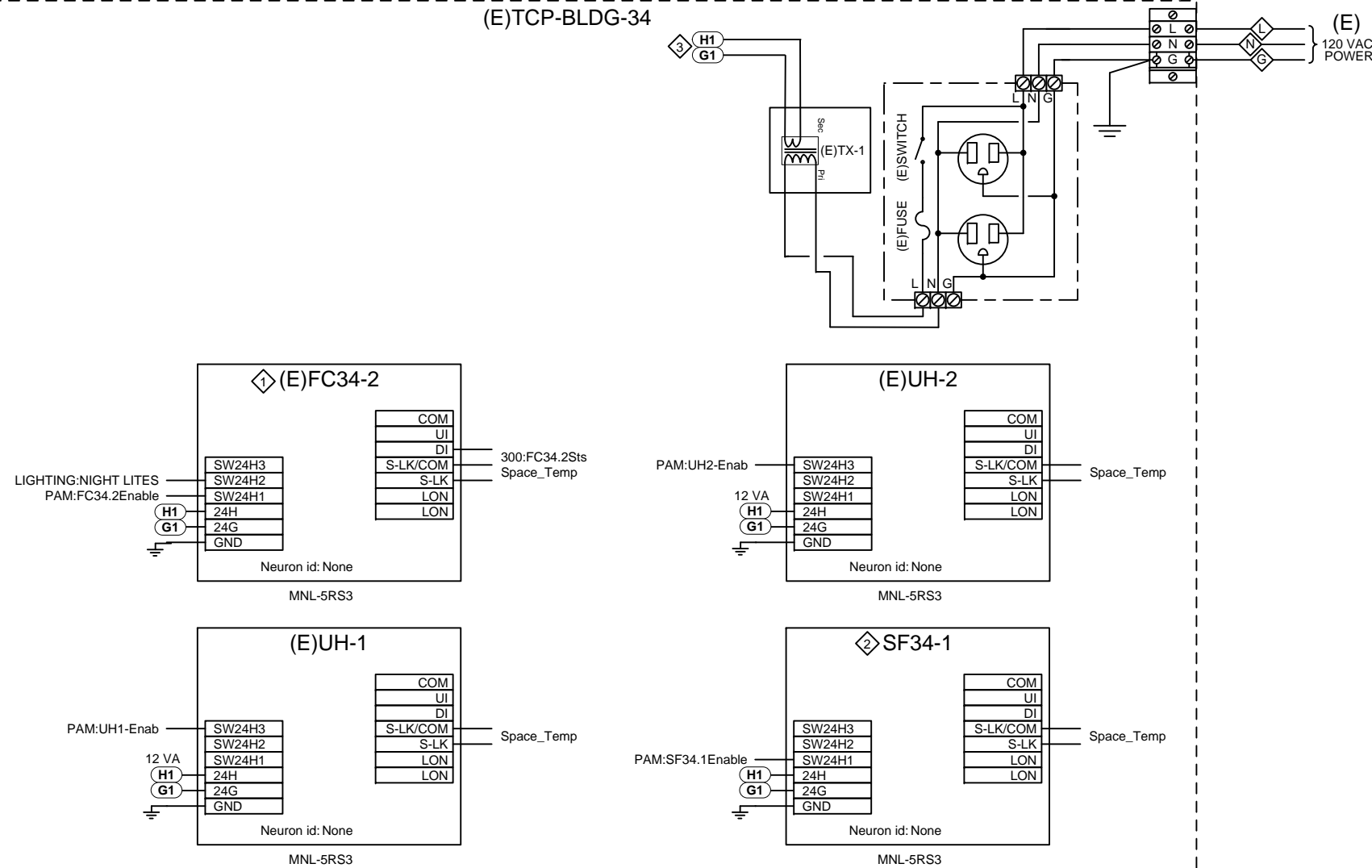
TCP-FC34-1 Device	Qty	Part Number	Description	Vendor
Panel FC34-1	1	MNL-20RS3	MN 200 CONT. WITH LONMARK ROOF	TAC (Invensys)
TCP-FC34-1	1	A-8N84	8"H x 8"W x 8"D NEMA1 ENCLOSURE	HOFFMAN
TCP-FC34-1_1	1	A-8N8PP	8"H x 8"W PERFORATED BACKPLATE	HOFFMAN
TX-2	1	T-208	TRANSFORMER 96 VA 120P-24VS U	TAC (PS3)

(E)UNIT HEATER SEQUENCE OF OPERATIONS

Unit Heater shall control temperature setpoints for the space via programmable occupancy schedule.

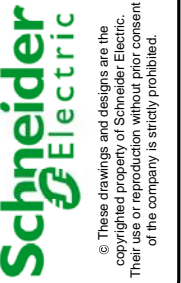
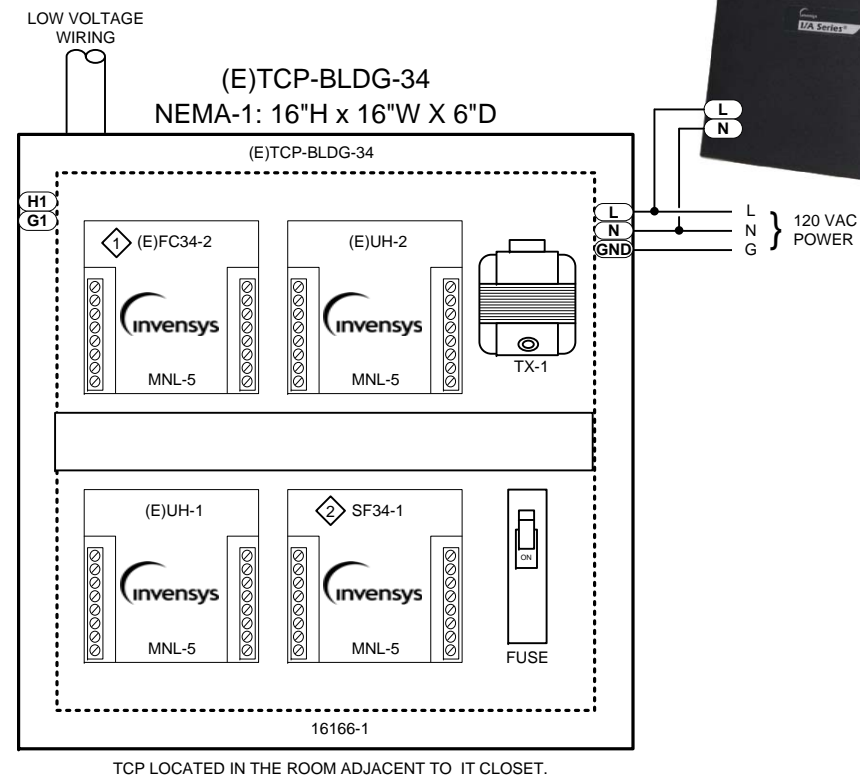
Local Room Setpoint Adjustment Operation: The MN-S3 Room Sensor has a pushbutton & up / down arrows for setpoint adjustment locally at the room sensor. The local setpoint adjustment takes effect for 2 hours once the pushbutton is pushed to override the default setpoint from the front end computer. A red LED below the pushbutton will light up after the pushbutton has been pushed to indicate that the local setpoint override is active. By pushing the up or down arrow, the setpoint value will temporarily be displayed on the LCD display of the sensor and will adjust to a higher value when the up arrow is pushed & to a lower value when the down arrow is pushed. The LCD display will go blank once the setpoint adjustment is complete. The adjustment range of the setpoint value will be limited between 68 degrees & 72 degrees. The local setpoint will revert back to the original default setpoint from the front end computer after the 2 hour override period is complete.

(E)TCP-BLDG-34



(E)BLDG 34 UNC

(14"H x 11"W x 2.5"D)
UNC LOCATED IN I.T. CLOSET



Revisions	
#	Date:
1	06/21/2011
2	06/30/2011
3	09/13/2011
4	01/30/2012

Architect: Noll & Tam
 Engineer: ACCO Engineered Systems
 Contractor: ACCO Engineered Systems
 Designed by: EA Date: 03/30/2011
 Software by: Date:
 Checked by: Date:

SMCCCD CSM B34
 Modernization
 3401 CSM Drive
 San Mateo, CA 94402
 (E)TCP-BLDG-34 AND
 (N)TCP-FC34-1

JOB NUMBER: IC0911025
 FILE NAME: BLDG-34 TCPFS.vsd
 SHEET NO.: 7 OF 8

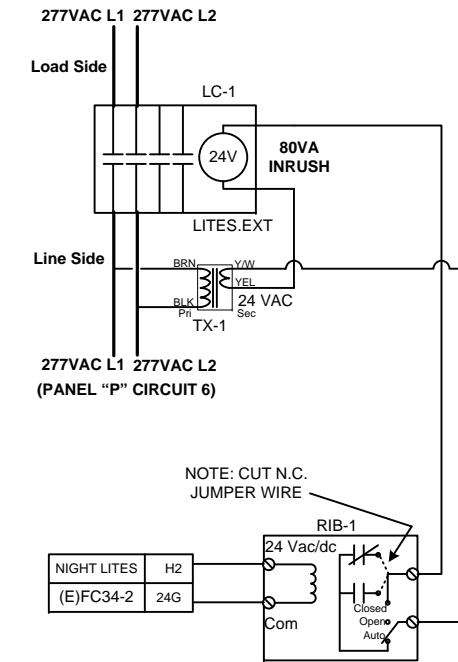
EXTERIOR NIGHT LIGHTS CONTROL

CSM B34 EXTERIOR NIGHT LIGHTS				
Device	Qty	Part Number	Description	Vendor
Panel				
LC-1	1	A16-40-00-81	LITE CONTACTOR, 4P, 30A	KELE
RIB-1	1	FUN-RIBM2-4S	4" TRACK MNT RELAY 15AMP SPST	TAC (PS3)
TX-1	1	FUN-TR100-VA0-0-4	XFMR 100VA, 480/277/240/120-24	TAC (PS3)

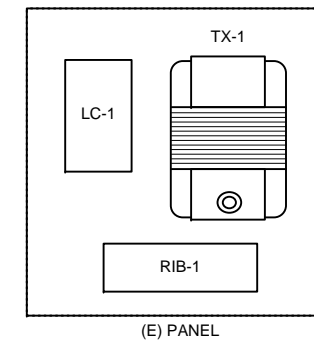
CSM BUILDING 34 NIGHT LIGHTING CONTROL SEQUENCE OF OPERATIONS

Exterior lights on West, South and East elevations shall be BMS controlled. Lights shall be programmed to operate on CSM campus' "night light" circuit. Exterior lights on North elevation are enabled by BMS night light circuit and activated by timer switch in Room 34-110.

EXTERIOR NIGHT LITES



Use the old existing lighting control panel as a junction box to tie in the exterior night lights.



Revisions	
#	Date
1	06/21/2011
2	06/30/2011
3	09/13/2011
4	10/31/2011
5	01/30/2012

Architect: Noll & Tam
Engineer: ACCO Engineered Systems
Contractor: ACCO Engineered Systems
Designed by: EA
Software by: EA
Checked by: EA

SMCCCD CSM B34
 Modernization
 3401 CSM Drive
 San Mateo, CA 94402
EXTERIOR NIGHT LIGHTS CONTROL

JOB NUMBER: IC0911025
FILE NAME: CSM_B34_lighting_vsd
SHEET NO.: 8 OF 8