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### MEDICAL TECHNOLOGY PRODUCTS

HAVERHILL BUSINESS PARK, LOT #7
HAVERHILL ROAD
RIVIERA BEACH, FLORIDA
PROJECT NUMBER 926

### **ADDENDUM #3**

August 5, 2010

This Addendum is hereby made part of the Contract Documents.

### SHEET M2

 ROOF TOP AIR CONDTIONING SCHEDULE: Add the attached sketch <u>SKM2-1</u> TRANE TRACER SC SYSTEM CONTROLLER DIAGRAM AND SPECIFICATIONS.

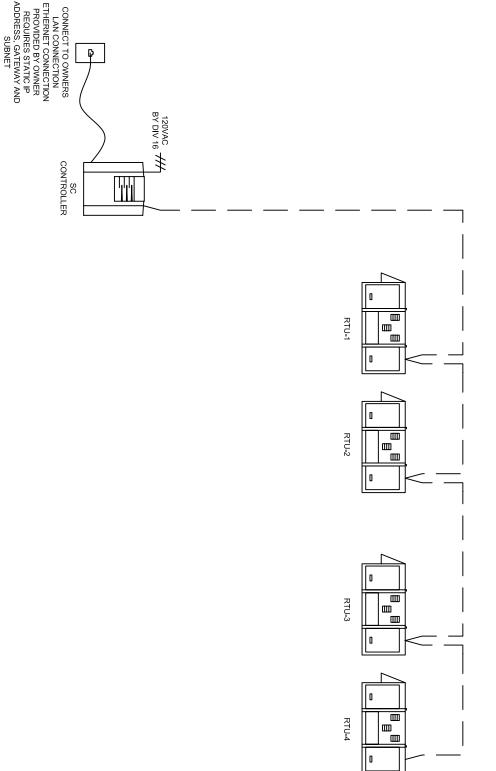
### SHEET E1

 OFFICE LIGHTING PLAN: Delete Fixture Type C designation added by Addendum 2 to the two exterior fixtures at the main entrance and substitute Fixture Type D designation.

### SHEET E2

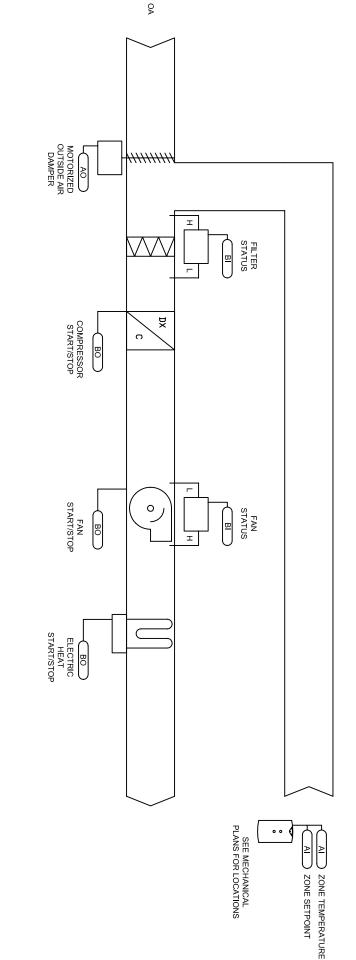
1. <u>ELECTRICAL RISER DIAGRAM</u>: Make the following change to the transfer switch note in the Riser Diagram issued in Addendum 2: Delete the words "185 ATS 2 pole, 120/240 185A2400F4C" and substitute "360 MTS 3 pole, 120/208".

This Addendum consists of one (1) page and one (1) attached sketch SKM2-1.



TYPICAL FOR 4 ROOF TOP UNITS (RTU)

ADDRESS,



ADDENDUM NUMBER 2	ALAN STRASSLER ARCHITECTS, INC. MEDICAL TECHNOLOGY PRODUCTS
8/05/10	SKM2.1

# TRANE TRACER SC SYSTEM CONTROLLER

building. The Tracer SC system controller (SC) is an intelligent field panel that communicates with multiple Unit Control Modules (UCM's) via Lontalk communication links. The SC scans all UCM's to update information and coordinate control of the

system requirements. These requirements are as follows: building operators to access their building automation system. Access is available from any personal computer that meets The Tracer SC system controller acts as the central coordinator for all individual equipment devices on a Tracer building automation system. The Web-based interface of the Tracer SC system controller provides an easy and convenient way for

- Internet Browser. Furnish with e
- Java 5.0 or higher must also be ither Internet Explorer 7.0 or higher, or Firefox 3.0 or higher. installed on the PC being used to access the Trane Tracer SC controller.

### User Interface

- Internet Browser. Furnish with either Internet Explorer 7.0 or higher, or Firefox 3.0 or higher. Java 5.0 or higher must also be installed on the PC
- operator to easily move between web pages. static text, and animation files. Graphics shall User interface. The system user interface shall be web based graphically orientated. damper positions. Graphics shall be capable of launching other web pages. shall include the ability to show a sequence of images reflecting the position of analog outputs, such as valve or n web pages. Dynamic points shall include analog and binary values, dynamic text, Graphics shall have the ability to show animation of equipment. Animation capabilities Provide a method for the
- Custom background images. Custom background images shall be created with the use of commonly available graphics packages such as Adobe Photoshop. The graphics generation package shall create and modify graphics that are saved in industry standard formats such as BMP, GIF and JPEG.

### Communication

This project shall comprise of a network utilizing high-speed LonTalk for communications between roof top units (RTU's).

inter-network. An active Ethernet jack will be provided adjacent to each Building Control Panel (SC). The Owner will provide all communication media, connectors, repeaters, network switches, and routers necessary for the

## Sequence of Operations

Package System with Electric Heating/DX Cooling

setpoint. If communication is lost with the BAS, the controller will operate using its local schedule and setpoints. **Building Automation System Interface:**The Building Automation System (BAS) will send the controller Occupied, Unoccupied, Optimal Start, Night Heat/Cool, and Timed Override commands. The BAS may also send a Heat/Cool mode, space temperature and/or space temperature

## Unoccupied (Night Setback):

ZONE SETPOINT

damper will remain closed and the electric heating will be enabled. When the space temperature rises above the unoccupied heating setpoint (60°F adj) plus the unoccupied differential (2°F adj) the supply fan will stop and the electric When the space temperature is below the unoccupied heating setpoint (60°F adj) the supply fan will start, the outside air damper will remain closed and the electric heating will be enabled. When the space temperature rises above the heating will be disabled.

When the space temperature is above the unoccupied cooling setpoint (85°F adj) the supply fan will start and the DX cooling will be enabled. The outside air damper remains closed. When the space temperature falls below the unocc cooling setpoint (85°F adj) minus the unoccupied differential (2°F adj) the supply fan will stop, the DX cooling will be disabled. ve the unoccupied cooling setpoint (85°F adj) the supply fan will start and the DX ∍ air damper remains closed. When the space temperature falls below the unoccupied

Occupied:

During occupied periods the supply fan will run continuously and the outside air damper will open to maintain minimum ventilation requirements. The electric heating and DX cooling will be enabled to maintain the active space temperature setpoint

## Space Temperature Control:

The space temperature shall be maintained between the occupied cooling setpoint (74°F adj) and the occupied heating setpoint (71°F adj). The unit will transition to the cooling mode when the space temperature rises one degree above the occupied cooling setpoint (74°F adj). The unit will transition to the heating mode when the space temperature drops one

During optimal start, if the space temperature is 3°F or more below the occupied heating setpoint, a morning warm-up sequence will be activated. The supply fan will start, the outside air damper will remain closed, and the electric heating will be enabled to raise the space temperature to the occupied heating setpoint. Mode will terminate when the space Morning Warm-up: degree below the occupied heating setpoint (71°F adj).

### Morning Cool-down:

temperature reaches the occupied heating setpoint.

During optimal start, if the space temperature is 3°F or more above the occupied cooling setpoint, a morning cool-down sequence will be activated. The supply fan will start and the DX cooling will be enabled to lower the space temperature to the occupied cooling setpoint. The outside air damper remains closed. Mode will terminate when the space temperature reaches the occupied cooling setpoint.

### Supply Fan Operation:

The fan will be off in the unoccupied mode. When the controller is in the occupied mode, the supply fan will operate continuously at rated speed. If the supply fan falls the fan will be commanded off and an alarm will be annunciated. A manual reset is required to restart the fan.