

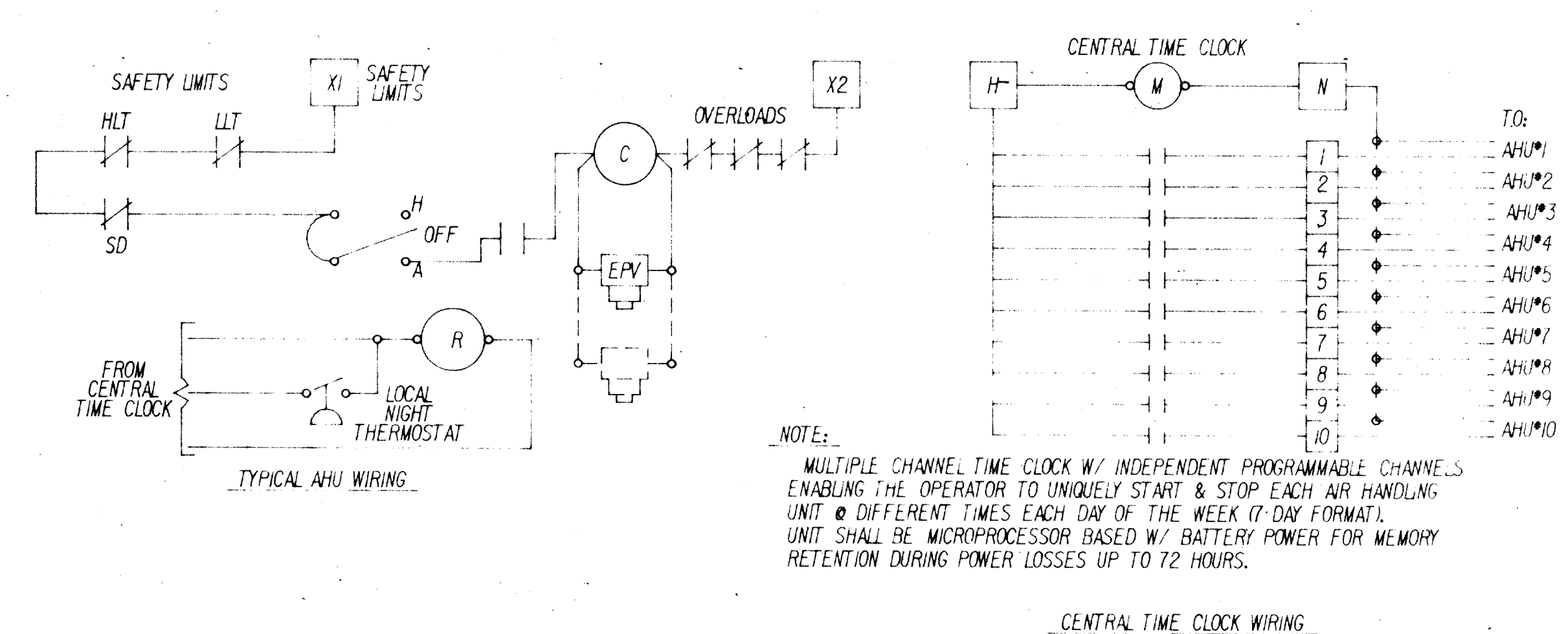
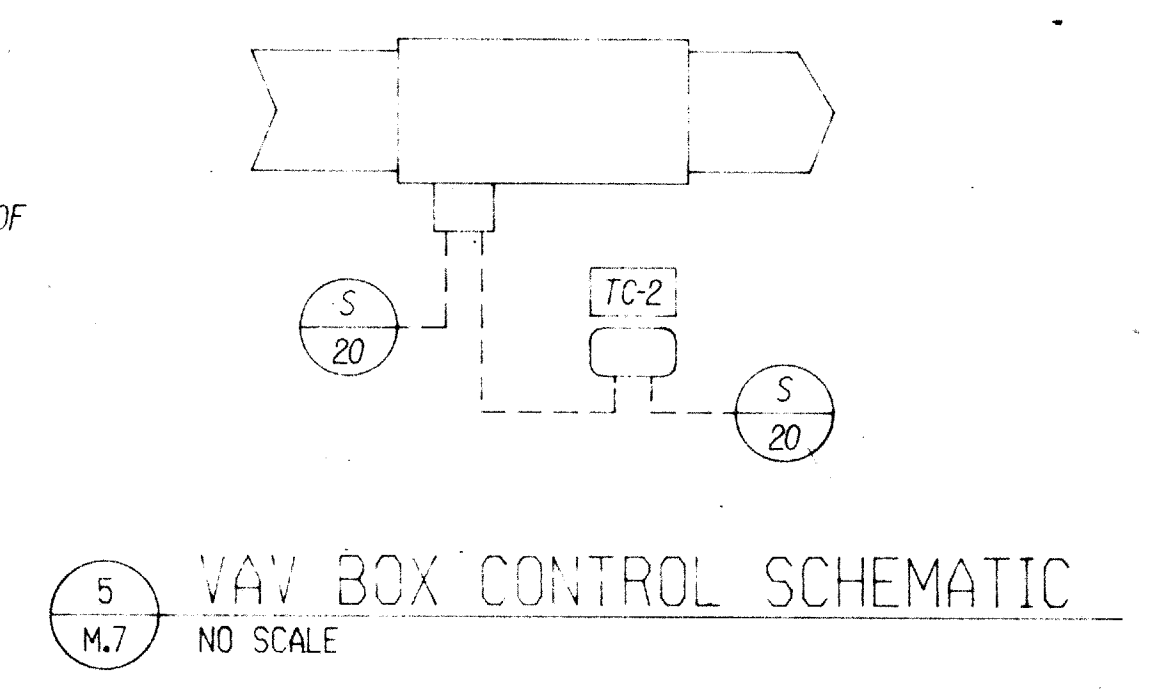
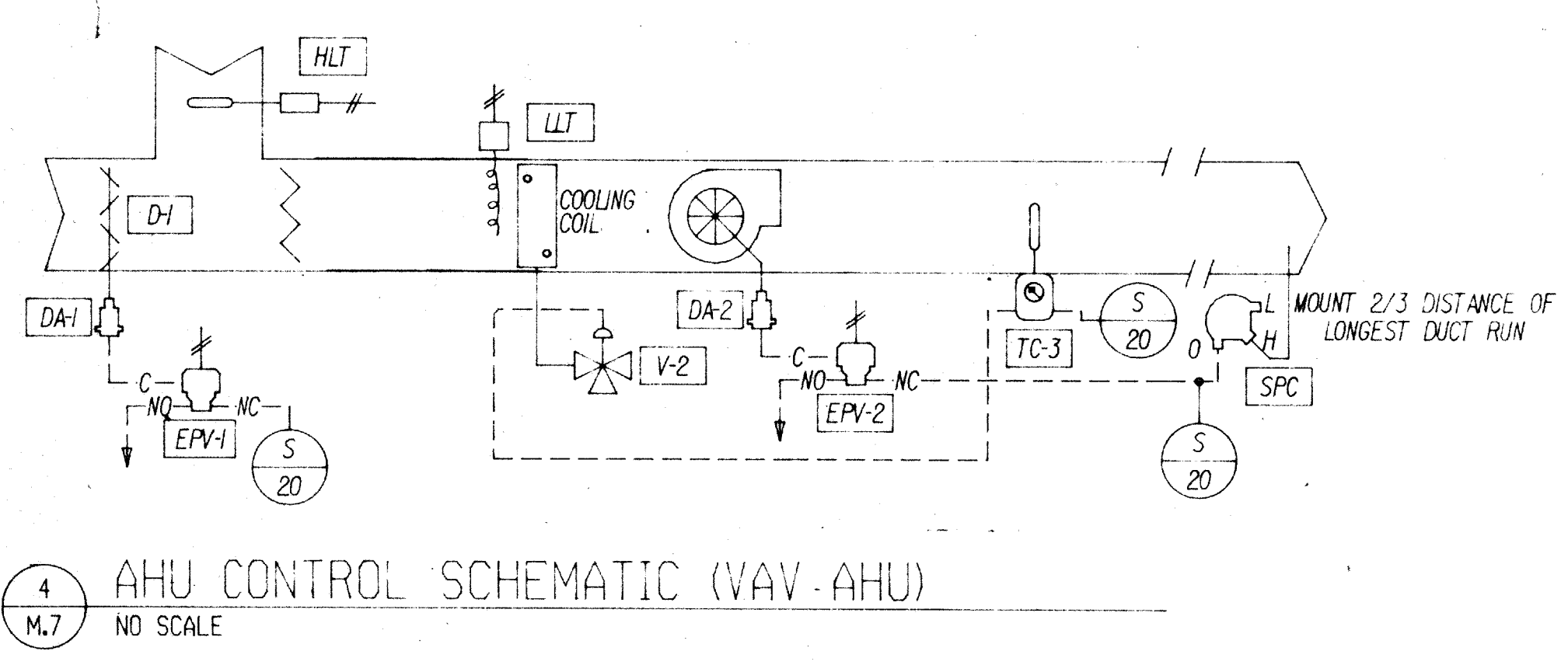
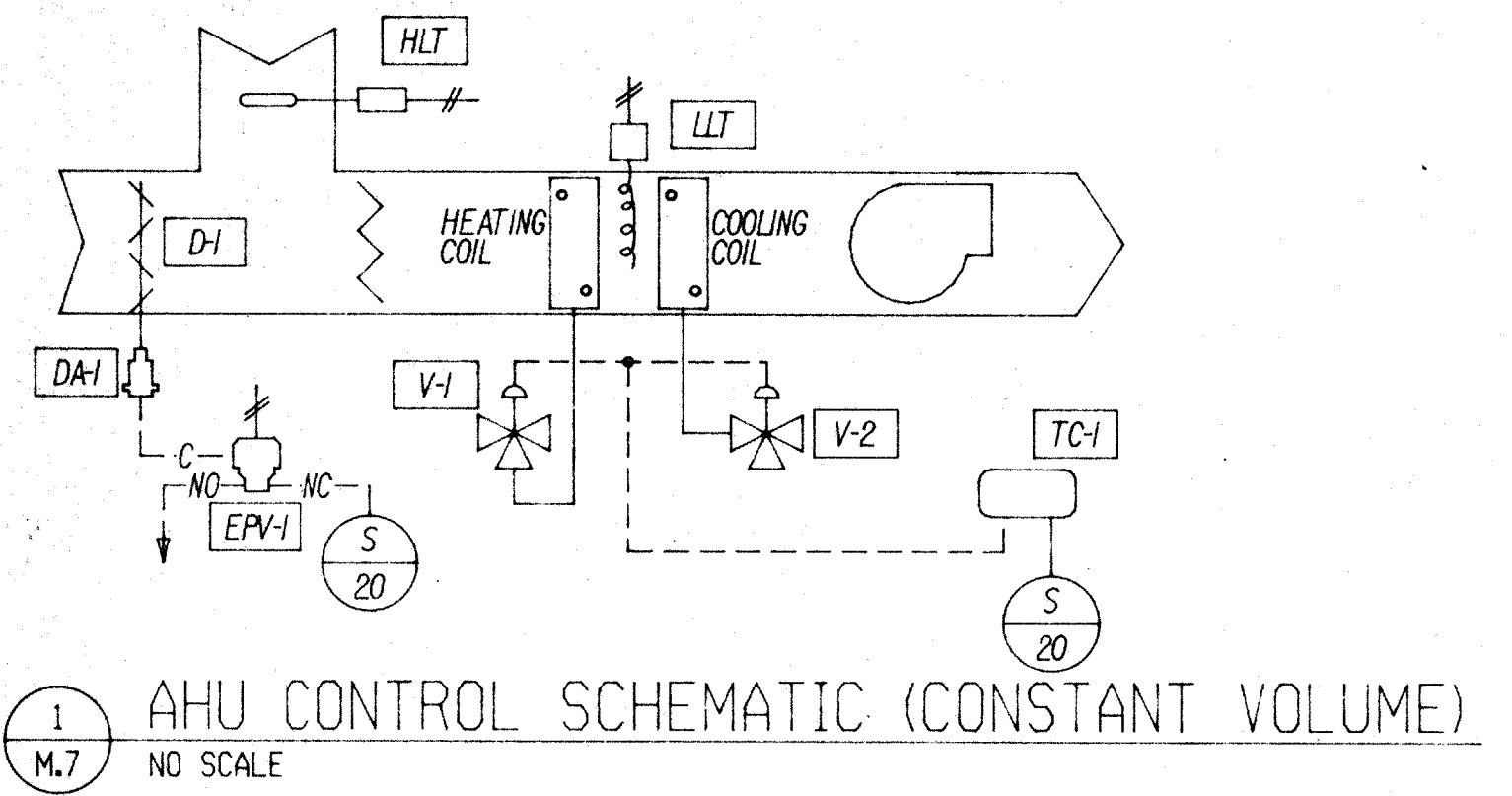
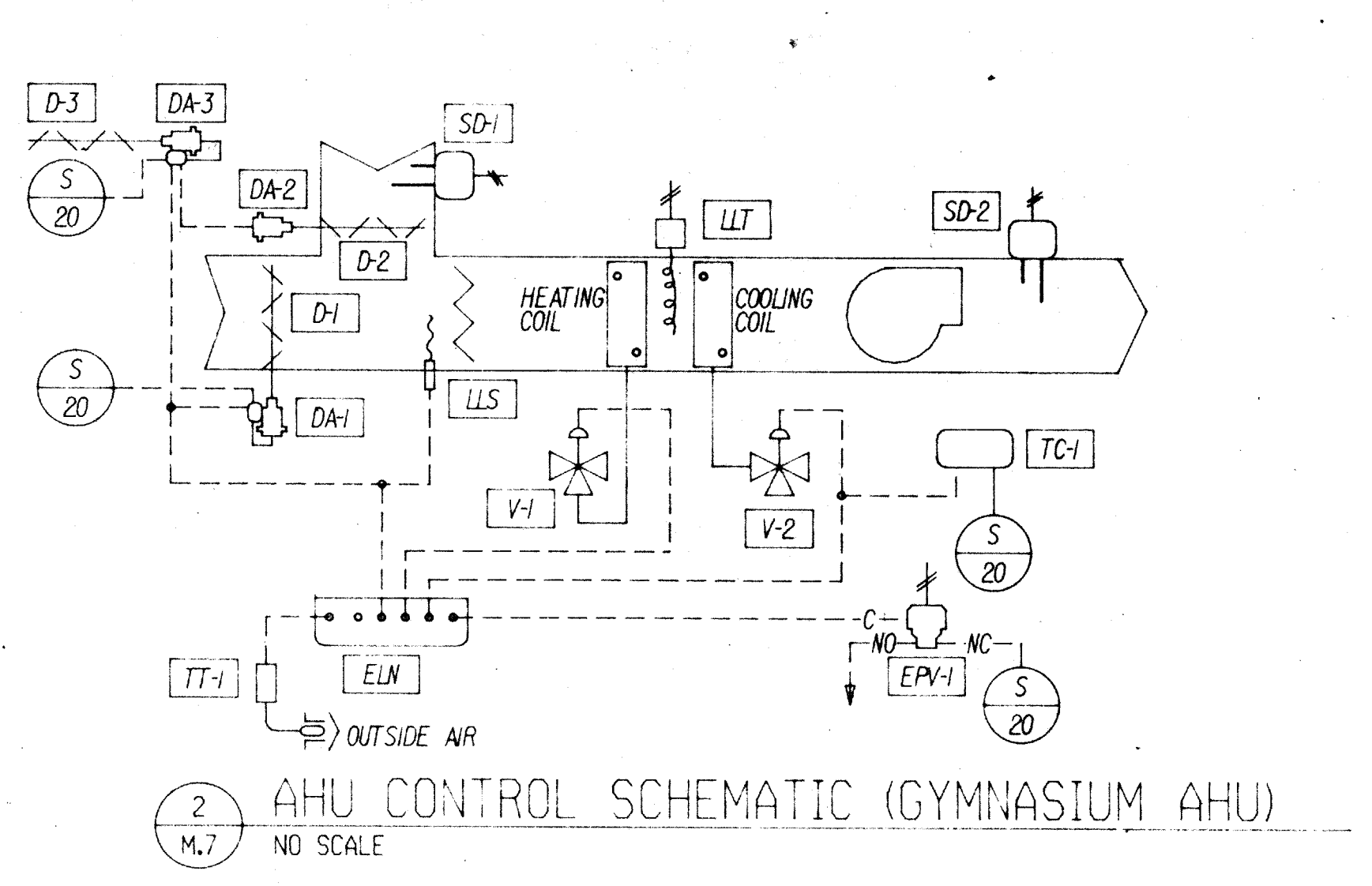
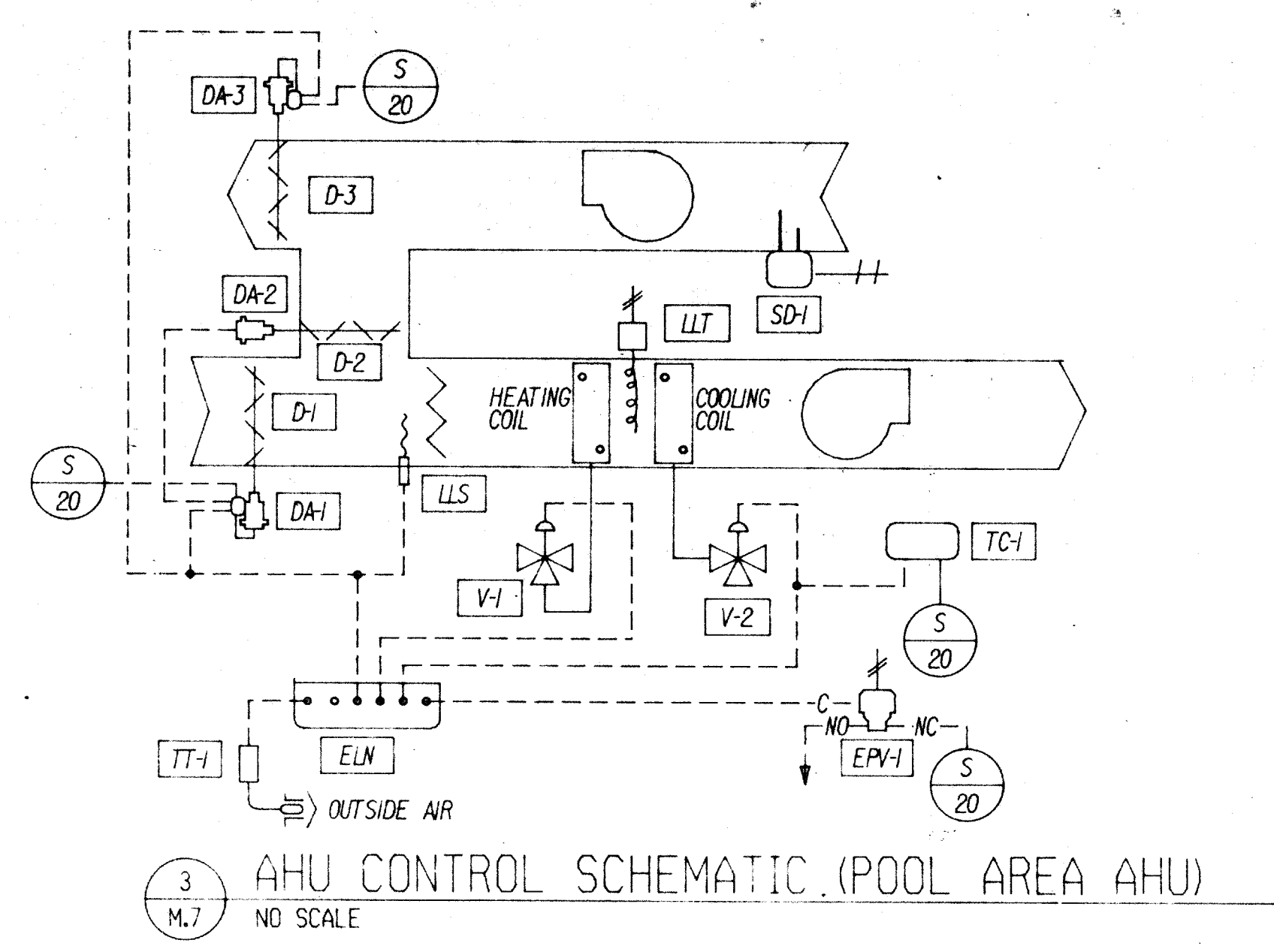
SINGLE ZONE CONSTANT VOLUME UNITS
 The unit shall be automatically started and stopped via the central time clock. Safety thermostats LLT and HLT shall stop the fan upon detection of temperatures beyond their limits. Safety thermostats shall require manual reset.
 The minimum outside air damper shall be normally closed and open only during normal fan operation.
 Room thermostat TC-1 shall sequence valves V-1 and V-2 to maintain room temperature.

VARIABLE AIR VOLUME UNITS
 The unit shall be automatically started and stopped via the central time clock. Safety thermostats LLT and HLT shall stop the fan upon detection of temperatures beyond their limits. Safety thermostats shall require manual reset.
 The minimum outside air damper shall be normally closed and open only during normal fan operation.
 Discharge air thermostat TC-3 shall sequence valve V-2 to maintain discharge air temperature.
 Static pressure shall be maintained via static pressure controller SPC modulating the fan inlet guide vanes via damper actuator DA-2. The inlet guide vanes shall be normally closed and shall be held closed during times the fan is off via electro-solenoid valve EPV-2, enabling the fan to start in an unloaded condition.

Local VAV Box Controls
 Each box shall have factory installed controls including a damper actuator and a velocity pressure controller. Room thermostat TC-2 shall modulate the air volume via the factory mounted controls. The velocity pressure controller requires a pneumatic air supply connection of 20psig.
 Note: The room thermostats in the racquetball area must be diffuser type aspirating thermostats (4 total) Johnson Controls model T-410 or approved equal.

GYMNASIUM AIR HANDLING UNIT
 The unit shall be automatically started and stopped via the central time clock. Safety thermostat LLT and duct smoke detectors SD-1 and SD-2 shall stop the fan upon exceeding the preset limits. Each shall require manual reset.
 Normally closed outside air damper D-1 shall be set to maintain approximately 10% outside air during normal fan operation. The normally closed relief air damper D-3 and the normally open return air damper D-2 shall remain in their normal positions until the economizer is in operation and outside air is available for cooling. At this time all three dampers shall track together on a 1:1 ratio.
 Room thermostat TC-1 shall maintain space temperature by modulating valves V-1 and V-2 in sequence. Also, economizer dampers shall be used for cooling whenever the outside air temperature is below the switch point (adjustable). At times whenever outside air is available for cooling, the chilled water valve V-2 will remain closed to the coil. Low limit sensor LLS will prevent mixed air temperatures of less than 57 Deg. F. (adjustable) by modulating the economizer dampers.
 Room thermostat TC-1 shall be equipped with a heavy cast metal cover to protect it from normal activity.

POOL AIR HANDLING UNIT/RELIEF FAN
 The unit fans shall be automatically started and stopped via the central time clock. Safety thermostat LLT and duct smoke detector SD-1 shall stop the fans upon exceeding the preset limits. Each shall require manual reset.
 During normal fan operation the normally closed relief air damper D-3 shall be sequenced to provide negative building pressure by opening before the normally closed outside air damper. The normally closed outside air damper shall be set to maintain a minimum of 20% outside air. The normally open return air damper shall remain in its normal position unless the economizer is in operation. At this time the return air damper shall track the other two dampers on a 1:1 ratio.
 Room thermostat TC-1 shall maintain space temperature by modulating valves V-1 and V-2 in sequence. Also, economizer dampers shall be used for cooling whenever the outside air temperature is below the switch point (adjustable). At times whenever outside air is available for cooling, the chilled water valve V-2 will remain closed to the coil. Low limit sensor LLS will prevent mixed air temperatures of less than 57 Deg. F. (adjustable) by modulating the economizer dampers.
 Room thermostat TC-1 shall be equipped with a heavy cast metal cover to protect it from normal activity.



NOTE: MULTIPLE CHANNEL TIME CLOCK W/ INDEPENDENT PROGRAMMABLE CHANNELS ENABLING THE OPERATOR TO UNIQUELY START & STOP EACH AIR HANDLING UNIT AT DIFFERENT TIMES EACH DAY OF THE WEEK (7 DAY FORMAT). UNIT SHALL BE MICROPROCESSOR BASED W/ BATTERY POWER FOR MEMORY RETENTION DURING POWER LOSSES UP TO 72 HOURS.

CENTRAL TIME CLOCK WIRING

CHILLER SCHEDULE	
GENERAL SPECIFICATIONS	
MARK	CHILLER #
MANUFACTURER	TRANE
MODEL NUMBER	CGW8054E
REFRIGERANT	R-22
COMPRESSOR POWER INPUT (KW)	128.4
UNIT EFF	137
MINIMUM CIRCUIT AMPACITY	263
CAPACITY - TONS	147.2
VIBRATION ISOLATOR SPECIFICATION	1"
EVAPORATOR SPECIFICATIONS	
GPM	354
EWI (°F)	55
LWT (°F)	45
PRESSURE DROP (FT OF WATER)	19.8
FOULING FACTOR $\frac{HR \times FT^2 \times \Delta T}{BTU}$.0005
COMPRESSOR SPECIFICATIONS	
STEPS OF UNLOADING	6
VOLT/FREQUENCY/PHASE	460/60/3
TYPE OF START	XL
COMPRESSOR RPM	1750

AIR DEVICE SCHEDULE					
MARK	MANUFACTURER MODEL NO.	DESCRIPTION	MATERIAL	FINISH	REMARKS
CD-1	ANEMOSTAT AR-3	CIRCULAR SUPPLY AIR DIFFUSER	ALUMINUM	(ALUMINUM) LACQUER	W/ COB-OPOSED BLADE DAMPER
DD-1	TITUS 1735	DUCT SUPPLY AIR REGISTER W/ REMOVABLE CORE	ALUMINUM	ALUMINUM	W/ OPPOSED BLADE DAMPER
CD-2	ANEMOSTAT DF-13	DIRECTIONAL SUPPLY AIR DIFFUSER	ALUMINUM	*25 OFF-WHITE	W/ DOB DAMPER
RRA	TITUS 1735	WALL RETURN AIR REGISTER W/ REMOVABLE CORE	ALUMINUM	ALUMINUM	W/ OPPOSED BLADE DAMPER
SHA	TITUS 1707-35	WALL SUPPLY AIR REGISTER W/ REMOVABLE CORE	ALUMINUM	ALUMINUM	TYPE 1" BORDER W/ OPPOSED BLADE DAMPER
CD-3	TITUS TDC-AA-3	CEILING SUPPLY AIR DIFFUSER	STEEL	*25 OFF-WHITE	INVERTED T-BAR
CRAR-1	TITUS 52-F5	CEILING RETURN AIR REGISTER	STEEL	*25 OFF-WHITE	INVERTED T-BAR
LD	TITUS ML-39 (4-SLOT)	MODULAR SUPPLY AIR CEILING DIFFUSER	EXTRUDED ALUMINUM	*25 OFF-WHITE	W/ CLOSED END CONSTRUCTION
WL	ANY LF-51	WALL LOUVER	STEEL	MILL	SIZE AS SHOWN ON DRAWINGS
DG	TITUS CT-700-BF	DOOR GRILLE	STEEL	*25 OFF-WHITE	FLANGED MAIN & AUXILIARY FRAMES
CRAR-2	TITUS 8-MFR-5	CEILING RETURN AIR REGISTER	ALUMINUM	*25 OFF-WHITE	INVERTED T-BAR
CD-4	TITUS TDC-AA-3	CEILING SUPPLY AIR DIFFUSER	STEEL	*25 OFF-WHITE	SURFACE FLANGE FRAME FOR GYPD CLG

COOLING TOWER SCHEDULE							
MARK	MANUFACTURER MODEL NUMBER	OUTPUT CAP. (TON)	AMBIENT W.B. F	WATER TEMP. IN	CONDENSER WATER GPM	FAN HP	REMARKS
CT-1	BALTIMORE AIR COIL FKT-116	131	79	95	85	393	5 W/ BASIN HTR & COVERS, DISCHTURNING VANES & SCREENS

BOILER SCHEDULE							
MARK	MANUFACTURER MODEL NUMBER	INPUT BTUH	OUTPUT BTUH	FUEL	RELIEF BLOWER VALVE	MOTOR CONTROL HP	REMARKS
BL-1	CLEAVER BROOKS MW-2000	2,000,000	1,600,000	NATURAL GAS	125 PSIG	1	460/3 115