

PROJECT TYPE	
DRAWINGS/SPECIFICATIONS BY:	
<input type="checkbox"/> WALGREENS' CONSULTANT	<input type="checkbox"/> NEW
<input checked="" type="checkbox"/> LANDLORD'S CONSULTANT	<input type="checkbox"/> EXISTING
<input type="checkbox"/> LANDLORD'S CONTRACTOR	<input type="checkbox"/> NEW SHELL ONLY
<input checked="" type="checkbox"/> LANDLORD'S CONTRACTOR (TURNKEY CONSTRUCTION)	

STORE	BUILDING
NEW.....	NEW.....
REMODELING.....	EXISTING.....
RELOCATION.....	NEW SHELL ONLY.....
OTHERS.....	

NO.	DATE	BY	DESCRIPTION	CONST
1	8-22-07	DOT	CODE COMMENTS	

REVISIONS				
1	8-22-07	DOT	CODE COMMENTS	

I HEREBY CERTIFY THAT THIS PLAN AND SPECIFICATIONS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A duly Licensed Professional Engineer of Illinois as certified by my hand and seal. THE PROFESSIONAL ENGINEER SIGNATURE AND PERSONAL SEAL APPEAR HEREON. ADDITIONAL INFORMATION FOR WHAT APPEARS ON THIS DRAWING, AND OTHERWISE RESPONSIBLE FOR ALL OTHERS ARE: SPECIALTY SHOP, ERWINER, REPORTS OR OTHER LOCAL AGENCIES OR NOTICES ARE NOT BEING PROVIDED. REFERENCED PROFESSIONAL SEALING IS, OR REFERRED TO BE USED FOR ANY PART OR PARTS OF THE PRO-JECT TO WHICH THIS DRAWING RELATES.

STORE #09983
PROJECT NAME
WALGREENS STORE
(S/WC) MAIN & EMERSON
BLOOMINGTON, ILLINOIS

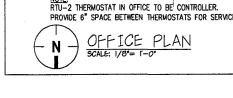
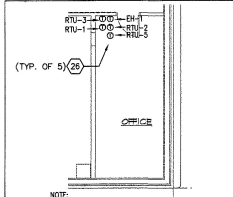
DRAWING TITLE
FLOOR PLAN-MECHANICAL

CADD PLOT: SCALE: AS SHOWN DRAWING NO.
VOID PLOT: DRAWN BY: ACD
DATE: 6-28-07

SUPERSEDES PLAN DATED: REVIEWED BY: DOT
M1.1
3 OF 29 DWGS

NOTES

- GENERAL:**
1.1 REFER TO ALL OTHER PROJECTS AND SPECIFICATIONS FOR ADDITIONAL WORK OR CLARIFICATIONS.
1.2 IN AREAS WITHOUT A FINISHED CEILING, MECHANICAL PIPING AND DUCT WORK SHALL NOT BE LOWER THAN 15 FT. COORDINATE LOCATION WITH STOCK ROOM SHELVING AND LIGHTING.
1.3 NON-HVAC COMPRESSORS AND CONDENSERS SHALL BE FURNISHED BY WALGREENS.
EQUIPMENT:
2.1 SEE ARCHITECTURAL DRAWINGS FOR HVAC ROOF CURB, ROOF COMPRESSOR CURB AND SUPPORT DETAILS.
2.2 INSTALL HVAC UNITS LEVEL ON ROOF CURBS.
2.3 OUTSIDE AIR INTAKE ON ROOF SHALL BE LOCATED A MINIMUM OF 15'-0" AWAY FROM ANY EXHAUST DUCT, BLOWER DISCHARGE, PLUMBING VENTS, ETC.
2.4 HVAC UNITS TO INCLUDE FLEXIBLE CONNECTIONS.
2.5 OUTSIDE AIR INTAKE TO BE SIZED FOR 100% OF OUTSIDE AIR WHEN AN ECONOMIZER SYSTEM IS PROVIDED.
2.6 ALL OUTSIDE AND RETURN AIR DAMPERS FOR ECONOMIZER AND NON-ECONOMIZER SYSTEMS SHALL BE MOTORIZED AND HAVE A LOW LEAK GASKET.
2.7 PROVIDE LAMINATED BAKELITE NAME PLATES ON EACH HVAC UNIT AND LOCATE NEXT TO UNIT NAME TAG (RTU-1, EP-1, ETC.).
CONDENSATE DRAIN SYSTEM:
REFER TO DRAWING M2.1.
AIR DISTRIBUTION:
4.1 DUCTWORK TO BE GALVANIZED SHEET METAL SPIRAL PER SMOACNA REFER TO SPECIFICATION 15880. LINED DUCTWORK IS NOT PERMITTED.
4.2 PROVIDE FIRE DAMPERS WITH ACCESS PANELS PER LOCAL CODE AND AS NOTED.
4.3 FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 7'-0". USE ONLY ON FINAL SUPPLY AIR OUTLETS, AND 3'-0" FROM THE RETURN AIR GRILLES TO THE METAL DUCTWORK. FOR BOTH CASES, 90° TURNS ARE NOT ALLOWED - OFFSET ANGLES SHALL BE KEPT TO A MINIMUM. SEE DETAILS 6/M2.1 & 6/M2.1.
4.4 DO NOT INSTALL SUPPLY AIR OUTLETS IN CEILING PANEL ADJACENT TO A ROW OF LIGHT FIXTURES. LOCATE DEFUSERS IN ACCORDANCE WITH THE RELATED CEILING PLAN SHOWN ON THE ARCHITECTURAL DRAWING.
4.5 PAINT THE INTERIOR SURFACE OF DUCTS (WHERE VISIBLE) THROUGH GRILLES, DEFUSERS ETC. USE FLAT TINT (DIRECT TO METAL, NON-SPECULAR BLACK PAINT).
4.6 SUPPLY AND/OR RETURN AIR CEILING PLENUMS ARE NOT PERMITTED.
4.7 AIR BALANCING - BALANCE AIR TO INDICATED QUANTITIES WITHIN A TOLERANCE OF PLUS OR MINUS 1%.
MISCELLANEOUS:
5.1 ELECTRIC WALL HEATERS (EWH) ARE PROVIDED UNDER THE ELECTRICAL CONTRACT. THEY ARE SHOWN HERE FOR INFORMATION ONLY.
5.2 DO NOT INSTALL EQUIPMENT, DUCTWORK, PIPE, CONDUIT IN PROXIMITY TO THE ROOF HATCH LADDER AREA.
HVAC CONTROLS:
REFER TO DRAWING M3.1.



DESIGN CRITERIA SHOWN
BASED ON 2001 ASHRAE FUNDAMENTALS
ASHRAE LOCATION BLOOMINGTON, IL
PROJECT ELEVATION 663 FT.

COOLING TABLE 1B	82 DEGREES F, DRY BULB
	78 DEGREES F, WET BULB
HEATING TABLE 1A	4 DEGREES F, DRY BULB

MECHANICAL BUILDING CODE 2006 INTERNATIONAL MECHANICAL CODE
OCCUPANCY CLASSIFICATION SPECIALTY SHOPS DRUGS
ECONOMIZERS NOT REQUIRED BY CRITERIA BUT REQUIRED BY MECHANICAL CODE.

MECHANICAL KEYED NOTES

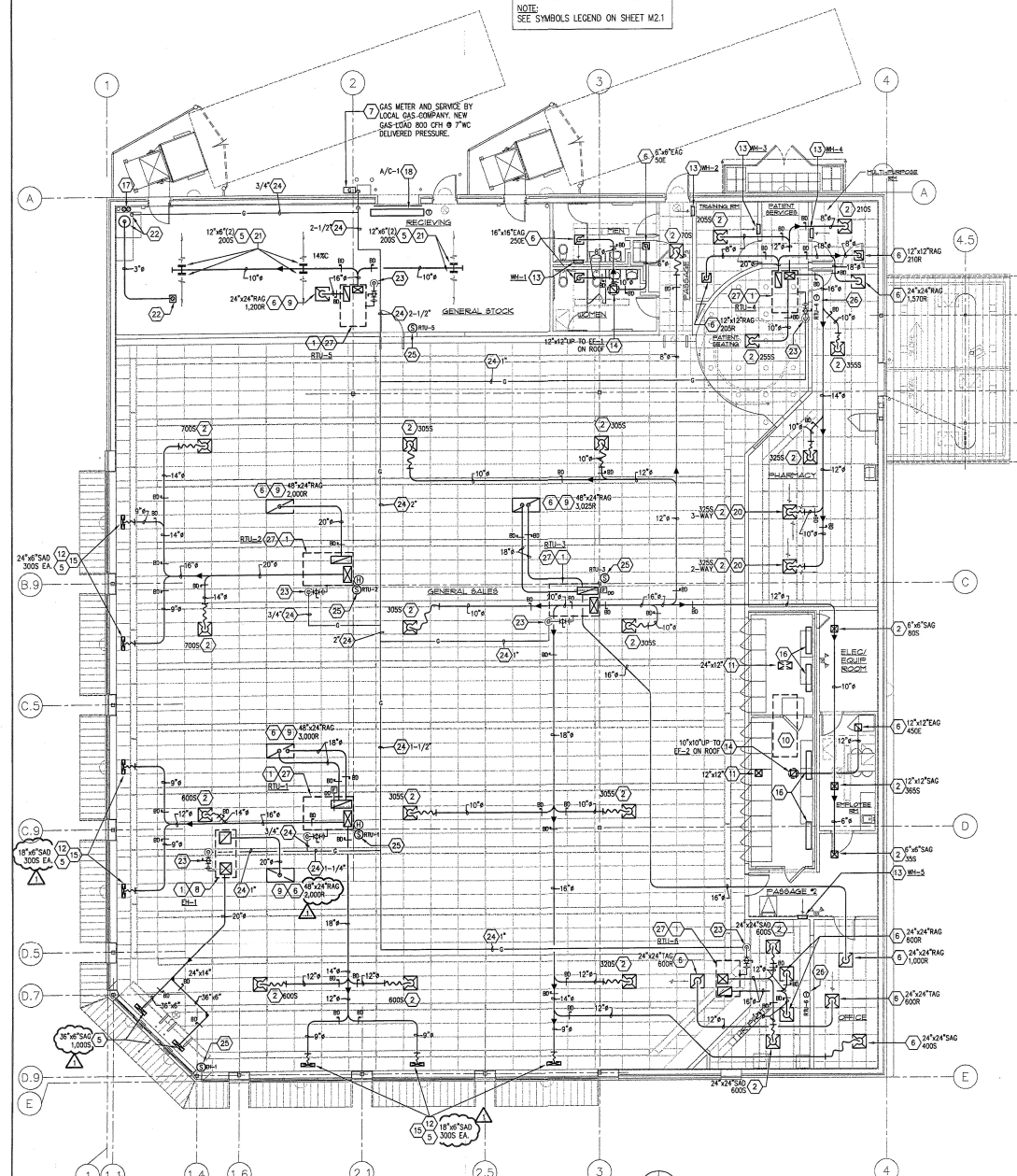
- HVAC ROOF-TOP UNIT. SEE GENERAL NOTES AND SCHEDULE ON DRAWING M2.2 FOR ADDITIONAL INFORMATION.
- S.A.G., CFM AND SIZE AS NOTED. FOUR WAY UNLESS OTHERWISE NOTED.
- S.A.G. SHALL HAVE A TOTAL STATIC PRESSURE DROP OF 0.20" OR LESS. SEE DETAIL 1/M2.1.
- NOT USED
- NOT USED
- S.A.G. CFM AND SIZE AS NOTED. S.A.G. SHALL HAVE A TOTAL STATIC PRESSURE DROP OF 0.20" OR LESS. SEE DETAIL 2/M2.1.
- E.A.G. & R.A.G., T.A.G., CFM AND SIZE AS NOTED. GRILLE SHALL HAVE A TOTAL STATIC PRESSURE DROP OF 0.20" OR LESS. SEE DETAILS 3 AND 4/M2.1.
- GAS SERVICE, METER, REGULATOR, AND VALVES. PHYSICAL PROTECTION OF EQUIPMENT BY GENERAL CONTRACTOR.
- ROOF-TOP ENCLOSED BLOWER/EXHAUST HEATER. INCLUDE FLEXIBLE CONNECTIONS, 100% RETURN AIR (NO OUTSIDE AIR) WITH SENSOR AT ENTRANCE AND THERMOSTAT IN OFFICE.
- RETURN GRILLES ARE SIZED FOR 100% RETURN AIR QUANTITY.
- ROOF-TOP CONDENSING UNIT FOR WALK-IN COOLER/FREEZER.
- PIPE PORTAL FOR WALK-IN COOLER/FREEZER CONDENSING UNIT REFRIGERANT AND ELECTRICAL LINES.
- ADJUST FRONT HORIZONTAL BARS TO AN ANGLE OF 45° SO THAT THE AIR FLOWS AWAY FROM THE WINDOW. THIS IS TO HELP PREVENT CONDENSATION ON THE GLASS IN HOT, HUMID CLIMATE CONDITIONS.
- ELECTRIC WALL HEATER (EWH) FURNISHED BY ELECTRICAL CONTRACTOR. SEE DRAWING E1.2 FOR MORE INFORMATION.
- ROOF MOUNTED EXHAUST FAN. SEE DETAIL 4/M2.1.
- INSTALL S.A.G. IN CENTER OF CEILING THE CLOSEST TO WINDOW CENTER.
- EVAPORATIVE UNIT (FAN COIL) PROVIDE DX PIPING CONNECTION WITH ROOF TOP CONDENSING UNIT.
- INSTALL TWO 5" DUCTS FROM ABOVE ROOF WITH COUPLER/TEE BRODSCREEN DOWN THROUGH ROOF TO GAS-FIRED WATER HEATER FOR COMBUSTION AND VENTILATION AIR REQUIREMENTS. TERMINATE ONE 5" DUCT 6" BELOW ROOF AND TERMINATE THE OTHER 5" DUCT AT 6" ABOVE BOTTOM OF WATER HEATER.
- OVERHEAD DOOR AIR CURTAIN, WALL MOUNTED AND SUPPORTED FROM BRACKET POSITION TO CLEAR THE DOOR AND INSTALLED PER MANUFACTURER'S DIRECTION. PROVIDE ELECTRIC HEAT, BASED ON WALGREENS DESIGN CRITERIA. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
- NOT USED.
- NOT USED.
- DIRECT SUPPLY AIR AWAY FROM WEIGHT SCALE.
- MOUNT REGISTERS ON SPIRAL DUCTWORK. REGISTERS SHALL HAVE DAMPER AND SHALL BE INSTALLED SO THAT THE AIR SUPPLY IS DIRECTED DOWNWARD AT AN ANGLE. SHOWN ON DETAIL 11/M2.1.
- PROVIDE 3" AIR EXHAUST FLEX THRU ROOF FOR GAS FIRED WATER HEATER. SEE SHEET P1.1, DETAILS 5/P2.1 PROVIDED BY PLUMBING CONTRACTOR TO ROUTE GAS LINE DOWN TO WATER HEATER. W.C. SHALL PROVIDE AND INSTALL GAS COOK, PRIV, UNION, AND DIRT LEG.
- GAS PIPING SHALL PASS THROUGH ROOF BY MEANS OF A PIPE PORTAL. SEE DETAIL 5/M2.1.
- GAS PIPING SHALL BE ROUTED BELOW THE ROOF AND SUPPORTED BY PIPE HANGERS. ALL GAS PIPING IN NON-ACCESSIBLE CEILING SPACES SHALL BE WELDED. SEE DETAIL ON SHEET M2.2.
- THERMOSTATIC REMOTE SENSOR 6'-0" UP FOR HEATING AND COOLING. SEE DETAILS ON SHEET M3.1.
- THERMOSTAT 6'-0" UP FOR HEATING AND COOLING. SEE DETAILS ON SHEET M3.1.
- CONDENSATE DRAIN FROM ROOF TOP UNITS SHALL BE EXTENDED TO THE SUPPERS AND DOWNSPOUTS IN SUCH A MANNER AS TO PROVIDE PROPER REMOVAL OF THE CONDENSATE WITHOUT CREATING A HAZARDOUS TO MAINTENANCE OR PROBLEMS WITH PROPER ROOF DRAINAGE.

TOTAL AIR BALANCE REQUIREMENTS

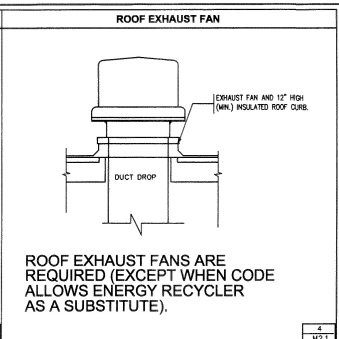
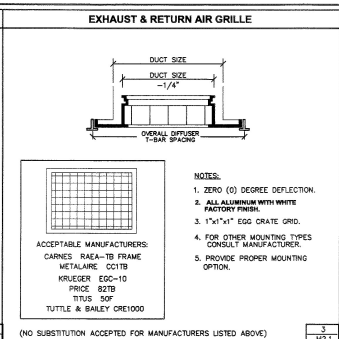
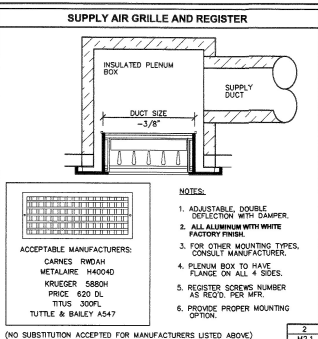
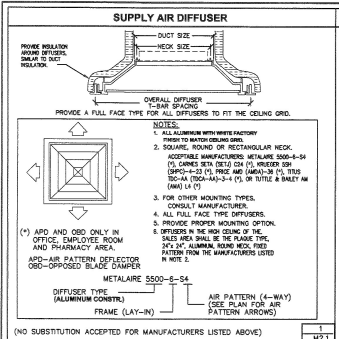
OUTSIDE AIR	EXHAUST AIR
RTU-1 300 CFM	ELEC. RM. 110 CFM
RTU-2 275 CFM	WCN 250 CFM
RTU-3 630 CFM	WOMEN 250 CFM
RTU-4 340 CFM	EMERGENCY 340 CFM
RTU-5 175 CFM	PORTER 50 CFM
RTU-6 45 CFM	STOCK ROOM 1,000 CFM
	1,784 CFM

DESIGN BASED ON 2006 INTERNATIONAL MECHANICAL CODE
Outdoor Air Ventilation (per ASHRAE 62.1 Requirements)
Specialty Shop, under the Hardware, Drugs, Fabric category.
Sales, Service, Pharmacy & Retail, Food Mart Areas = 13,375 Sq. Ft.
8 people per 1000 Sq. Ft. for occupant load = 107 People
15 CFM per occupant a total of 109 people = 1,605 CFM
Stock Room, Storage from the Storage category 1,193 Sq. Ft.
0.15 CFM /FT², 1,193 Sq. Ft. = 179 CFM
Combined total of Outdoor Air = 1,784 CFM
Our design incorporates

NOTE: SEE SYMBOLS LEGEND ON SHEET M2.1



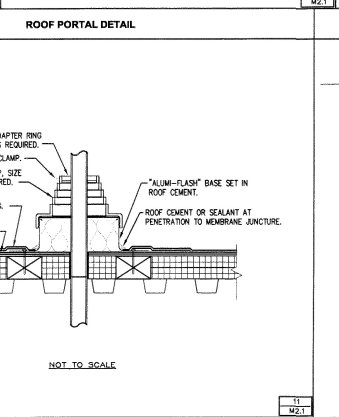
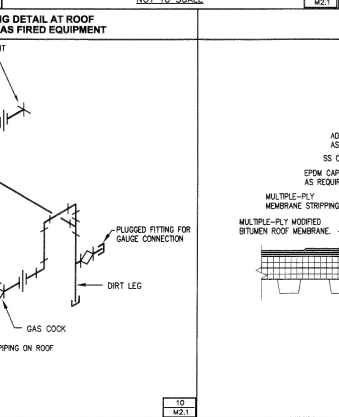
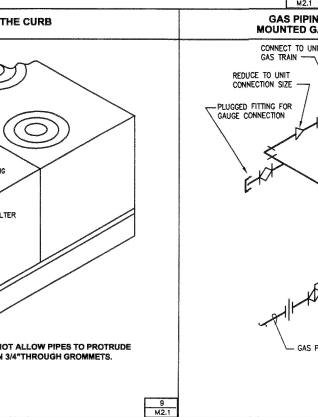
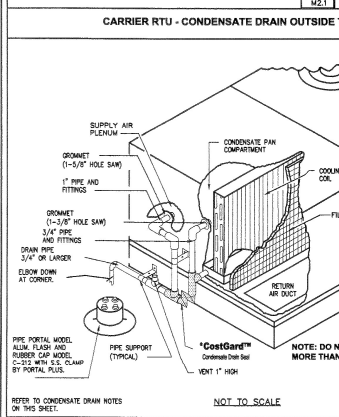
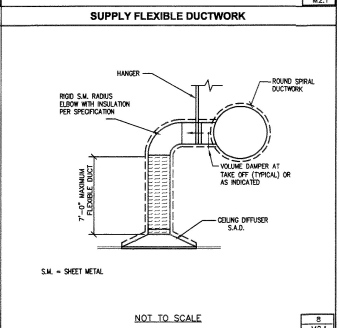
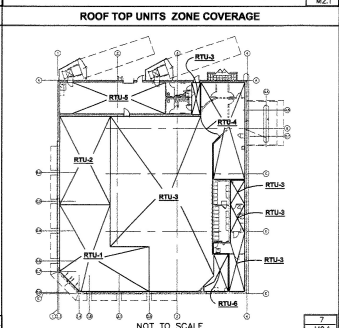
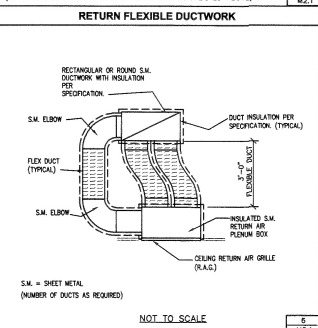
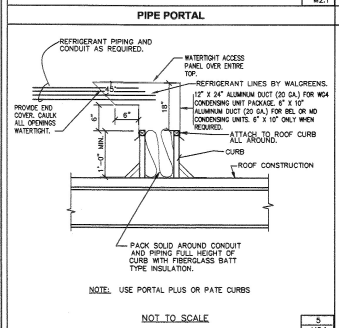
MECHANICAL FLOOR PLAN
SCALE 1/8" = 1'-0"



LEGEND

KEYED NOTE DESIGNATION

- SUPPLY AIR
- RETURN AIR
- ↔ BALANCE DAMPER
- GAS PIPING
- GAS PRESSURE REDUCING VALVE
- GAS SHUT OFF VALVE
- ⊙ MOTOR (SEE SCHEDULE ON DRAWING M2.1)
- ⊕ THERMOSTAT (MOUNT 5'-0" UP, UNLESS OTHERWISE NOTED) SEE CONTROL DIAGRAM, DRAWING M2.1.
- ⊖ SENSOR FOR THERMOSTAT; SEE CONTROL DIAGRAM, DRAWING M2.1. (MOUNT 6'-0" UP ON COLUMN OR UNLESS NOTED OTHERWISE.)
- ⊗ HUMIDISTAT; SEE CONTROL DIAGRAM, DRAWING M2.1. (MOUNT 6'-0" UP ON COLUMN OR UNLESS NOTED OTHERWISE.)
- ⊘ GAS METER
- ⊙ CFM SUPPLY AIR
- ⊙ CFM RETURN AIR
- ⊙ CFM EXHAUST AIR
- AHJ AIR HANDLING UNIT
- AC AIR CURTAIN
- CFM CUBIC FEET PER MINUTE
- CJ CONDENSING UNIT
- EF EXHAUST FAN
- EH ENTRANCE HEATER
- ER ENERGY RECYCLER
- FD FIRE DAMPER WITH ACCESS DOOR
- SAD SUPPLY AIR DIFFUSER
- SAR SUPPLY AIR REGISTER
- SF SUPPLY FAN
- RAO RETURN AIR GRILLE
- TAG TRANSFER AIR GRILLE
- EAG EXHAUST AIR GRILLE
- RTU ROOF TOP UNIT
- UH UNIT HEATER
- WH WALL HEATER (ELECTRIC)
- ⊙ DUCT MOUNTED SMOKE DETECTOR



TYPICAL CONDENSATE DRAIN NOTES

- 3.1 FOR ALL GEOGRAPHICAL LOCATIONS, PROVIDE COSTGARD DEVICE ON EACH RTU, MANUFACTURED BY TRENT TECHNOLOGIES, INC. TYLER TEXAS, TELEPHONE # (800) 508-0443.
- 3.2 FOR LOCATIONS WEST OF 99 DEG. LONGITUDE OR NORTH OF 33 DEG. LATITUDE, RUN CONDENSATE PIPING 3 INCHES BEYOND THE ROOF CURB AND DISCHARGE IN THE DIRECTION OF THE ROOF RICH LOCATE DISCHARGE SO THAT CONDENSATE RUNS AWAY FROM RTU. REFER TO ARCHITECTURAL DRAWING (A1.3) FOR THE REQUIRED "SPRINK BLOCK ON WALKWAY" PAID BELOW WATER DISCHARGE.
- 3.3 FOR LOCATIONS BOTH EAST OF 99 DEG. LONGITUDE AND SOUTH OF 33 DEG. LATITUDE, RUN CONDENSATE PIPING FROM RTU TO AN APPROVED RECEPTOR. THE PREFERRED METHOD IS TO RUN THE CONDENSATE DRAIN PIPING ABOVE THE ROOF SUPPORTED ON 6"x4" BLACK POLYCARBONATE PIPE SUPPORTS, MODEL NO. 1.5 BY MIRO INDUSTRIES, TELEPHONE (800) 788-6976. PROVIDE STAINLESS STEEL SPOCKS AND STRAP TO PERMIT PIPE MOVEMENT. POSITION THE SUPPORT PIPING NOT MORE THAN 6 FT. APART. SECURE THE PIPE SUPPORT TO ROOF MEMBRANE IN A MANNER APPROVED BY THE MEMBRANE MANUFACTURER.

- 3.4 RUN CONDENSATE PIPING BELOW THE ROOF IF CODE OR LOCAL AUTHORITIES PROHIBIT PIPING ABOVE THE ROOF OR IF DISCHARGING ONTO THE ROOF IS NOT ALLOWED. USE A PORTAL PLUS PIPE PORTAL TO PENETRATE THE ROOF. PROVIDE A HESHER THAN NORMAL ROOF CURB TO RAISE THE RTU HIGH ENOUGH TO MAKE THIS SCHEME WORK.
- 3.5 TRANE UNITS AND SOME CARRIER RTUs (13 TONS AND ABOVE) ARE NOT DELIVERED WITH DRAIN CONNECTIONS IN THE BOTTOM ON THE DRAIN PAN. DRAIN CONNECTIONS FOR THESE UNITS MUST BE MADE IN THE FIELD. DETAILED INSTALLATION INSTRUCTIONS ARE PROVIDED WITH EACH SHIPMENT OF COSTGARD DRAIN SEAL.
- 3.6 PROVIDE CONDENSATE PIPING, DRAINAGE FITTINGS AND CLEANOUTS WITH A MINIMUM SIZE OF 1/2 INCH. PROVIDE SCHEDULE 40 MIN. PVC OR ABS UNLESS CODE REQUIRES OTHERWISE. PIPING LOCATED OUTSIDE THE BUILDING SHALL BE WEATHER, SUNLIGHT, AND UV RESISTANT.
- 3.7 LOCATE CONDENSATE DRAIN PIPING SO IT WILL NOT INTERFERE WITH THE REQUIRED ACCESS TO THE RTU.
- 3.8 INSULATE ALL CONDENSATE DRAIN PIPING INSIDE THE BUILDING TO INCLUDE MAINS, BRANCHES, VENTS AND COSTGARD.

COOLING SET POINTS

OCCUPIED (8 A.M. - 10 P.M.)	UNOCCUPIED (10 P.M. - 8 A.M.)
SALES HUMIDITY @ 50% RH	SALES HUMIDITY @ 50% RH
SALES DRY BULB 78F	SALES DRY BULB 78F
PHARMACY & PATENT SEATING AREA 72F	PHARMACY & PATENT SEATING AREA 75F
GENERAL STOCK 78F	GENERAL STOCK 80F
1 HOUR PHOTO 78F	1 HOUR PHOTO 78F

HEATING SET POINTS

OCCUPIED (8 A.M. - 10 P.M.)	UNOCCUPIED (10 P.M. - 8 A.M.)
SALES 70F	SALES 60F
PHARMACY & PATENT SEATING AREA 70F	PHARMACY & PATENT SEATING AREA 60F
GENERAL STOCK 70F	GENERAL STOCK 60F
1 HOUR PHOTO 70F	1 HOUR PHOTO 60F

Fennell & Associates, Inc.
 CONSULTING ENGINEERS
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 Chesterfield, Missouri 63005
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PROJECT TYPE
 DRAWINGS/SPECIFICATIONS BY:
 □ WALGREENS' CONSULTANT
 □ LANDLORD'S CONSULTANT

ALL CONSTRUCTION WORK UNLESS NOTED OTHERWISE BY:
 □ WALGREENS' CONTRACTOR
 □ LANDLORD'S CONTRACTOR (TURNKEY CONSTRUCTION)

STORE	BUILDING
NEW.....	NEW.....
REMODELING.....	EXISTING.....
RELOCATION.....	NEW SHELL ONLY.....
OTHERS.....	

FACILITIES
 JUL - 8 2007
 PLANNING

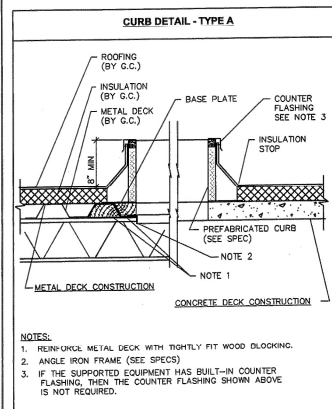
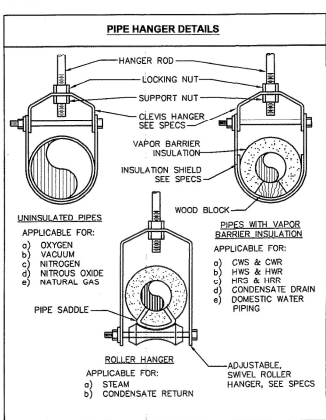
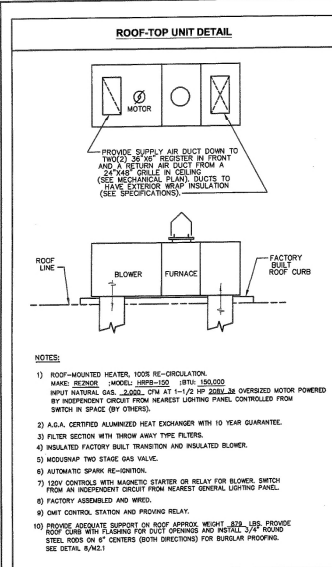
NO.	DATE	BY	DESCRIPTION	CONST

CERTIFICATION AND SEAL

STORY #09983
 PROJECT NAME
WALGREENS STORE
 (SVC) MAIN & EMERSON
 BLOOMINGTON, ILLINOIS

DRAWING TITLE
MECHANICAL DETAILS

CADD PLOT: SCALE: AS SHOWN DRAWING NO.
 VOID PLOT: DRAWN BY: ACB
 DATE: 6-29-07 **M2.1**
 SUPERSEDES: REVIEWED BY: DCJ
 PLAN DATED: 4 OF 29 DWGS.



HVAC CONTROLS

BILL OF MATERIAL

THE FOLLOWING CONTROLS TO BE FURNISHED BY CARRIER

QUANTITY	PART NUMBER	DESCRIPTION
1 (PER UNIT) EXCEPT PHARM AND 1 HOUR PHOTO UNIT	AC1/10K-2CP-RSD-CA	SPACE SENSOR W/SET POINT ADJ. MOUNTED IN THE MANAGER'S OFFICE
1 (PER UNIT) PHARM AND 1 HOUR PHOTO UNIT	AC1/1K-CP-RSD-CA	SPACE SENSOR W/SET POINT ADJ. MOUNTED IN PHARMACY AREA
1 (PER UNIT) EXCEPT PHARM AND 1 HOUR PHOTO UNIT	AC1/10K-2CP-R-CA	SPACE SENSOR MOUNTED IN THE SALES AREA
1/UNIT WHEN ENERGY RECYCLER OR HUMIDIFIER USED	HL--3BMG-029	HUMIDISTAT UTILIZED ON ENERGY RECYCLER AND HUMIDIFIER UNITS ONLY

NOTE: SPACE SENSOR (AC1/10K-2CP-R-CA) IS TO BE MOUNTED ON COLUMN (OR WALL), 6'-0" UP, AND THE SPACE SENSOR W/SET POINT ADJ. LOCATED IN MANAGER'S OFFICE. USE CARRIER PROVIDED WIRE. SEE CONTROL WIRING DIAGRAM FOR CONNECTIONS. PHARMACY UNIT WALL UTILIZE SPACE SENSOR W/SET POINT ADJ. MOUNTED IN THE PHARMACY AREA (AC1/10K-CP-RSD-CA).

HUMIDISTAT (HL--3BMG-029) USED ON ENERGY RECYCLER AND HUMIDIFIER UNITS ONLY. SEE CONTROL WIRING DIAGRAM FOR CONNECTIONS.

MECHANICAL CONTRACTOR SHALL LABEL SPACE SENSORS (USING P-TOUCH LABELING MACHINE) TO IDENTIFY WHICH UNIT IS BEING CONTROLLED, SUCH AS RTU-1, ETC.

REFER TO DRAWING M3.1 FOR 500°C AND INSTALLATION OF THE CARRIER EMS SYSTEM.

NATIONAL ACCOUNT FOR CARRIER ROOF TOP UNIT

I. HVAC UNITS

WALGREEN CO. SHALL HAVE CARRIER EQUIPMENT INSTALLED FOR STORES LOCATED IN ALABAMA, DELAWARE, GEORGIA, ILLINOIS, INDIANA, KENTUCKY, MARYLAND, MICHIGAN, MISSISSIPPI, NEW JERSEY, NEW YORK, PENNSYLVANIA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, WASHINGTON D.C. AND WEST VIRGINIA.

FOR CARRIER EQUIPMENT, CALL CARRIER NATIONAL ACCOUNT TEAM @ (800)990-1003 TO COORDINATE THE PURCHASE ORDER AGREEMENT AND EQUIPMENT DELIVERY.

PACKAGE ROOFTOP AIR CONDITIONING UNIT (RTU) SCHEDULE

ID MARK	AREAS SERVED	EVAPORATOR FAN DATA						COOLING DATA						HEATING DATA			ELECT.	NOTES	MANUFACTURER		
		DESIGN CAP. (T) CFM	EVAP. CAP. (T) GPM	UNIT IN. W.C.	EVAP. FAN BHP	FAN MOTOR HP	NO. OF COMP.	CAPACITY LEAKING RTU (T) TONS	REFRIG. (T) TONS	DISCHARGE AIR (T) DB/F	COND. (T) DB/F	EVAP. (T) DB/F	COND. (T) DB/F	HEAT LOSS (T) MBT	HEAT GAIN (T) MBT	208-3-40 (T) MCA			UNIT WOSP	MAKE	MODEL.
RTU-1	SALES - ENTRANCE	300	3,000	0.75	2.35	4.2	2	7.5	90.06	66.51	56.0	53.7	11.6	-	125	102.5	41.3	45	1,3,5,8,11,15	CARRIER	484E008
RTU-2	SALES - OFFICE	375	2,000	0.75	1.81	2.9	1	5	63.16	46.21	56.0	54.3	13.0	-	72	59	30.6	35	1,4,5,8,11,15	CARRIER	484E006
RTU-3	SALES - INTERIOR	300	3,400	0.75	1.81	2.9	2	8.5	106.18	79.38	56.3	54.5	11.6	-	125	102.5	40.2	45	1,5,8,9	CARRIER	484E009
RTU-4	PHARMACY	255	2,000	0.75	1.42	2.4	1	5	60.68	40.80	54.9	53.3	13.0	-	72	59	30.6	35	1,5,8,14	CARRIER	484E006
RTU-5	STOCK ROOM	179	1,200	0.6	0.44	1.2	1	3	37.23	28.71	56.8	54.4	13.0	-	72	59	18.5	25	1,5,8,14	CARRIER	484E004
RTU-6	1-HR PHOTO	45	1,200	0.5	0.44	1.2	1	3	36.19	27.40	54.8	52.5	13.0	-	72	59	18.5	25	1,5,8,14	CARRIER	484E004
TOTALS		1,284						32													

NOTES:

NOTE NO.1 COOLING DESIGN CONDITIONS: CONDENSER AIR & OUTSIDE AIR 89 DB & 76 WB. HEATING DESIGN CONDITION: OUTSIDE AIR -4 DB.

NOTE NO.2 NOT USED.

NOTE NO.3 HUMIDIFIER OPTION BY CARRIER USING COMPRESSOR REHEAT CONTROLLED BY A HUMIDISTAT.

NOTE NO.4 HUMIDIFIER OPTION BY CARRIER USING COMPRESSOR REHEAT CONTROLLED BY A HUMIDISTAT.

NOTE NO.5 ECONOMIZER WITH DRY BULB CONTROLS

NOTE NO.6 NOT USED.

NOTE NO.7 NOT USED.

NOTE NO.8 PREMIER LINK CONTROLLER (REQUIRED WHEN THE "EMS" SYSTEM IS SPECIFIED)

NOTE NO.9 DUCT SMOKE DETECTOR FACTORY INSTALLED, WIRED BUT NOT POWERED FROM THE RTU - DETECTOR(S) SHALL BE MOUNTED ON RETURN.

NOTE NO.10 NOT USED.

NOTE NO.11 NOT USED.

NOTE NO.12 NOT USED.

NOTE NO.13 NOT USED.

NOTE NO.14 FOR HEATING OPTIONS AND FOR ADDITIONAL REQUIREMENTS COMMON TO ALL UNITS, REFER TO THE HVAC SPECIFICATION (SECTION 15500).

NOTE NO.15 HIGH STATIC FAN MOTORS FOR HUMIDIFIER.

FAN SCHEDULE

UNIT	AREA SERVED	CFM	SP. IN. WG.	MOTOR HP	PHASE	MAKE AND MODEL	REMARKS
EF-1	TOILETS	550	.375	1/15	120	GREENHECK G-90-DGX-QD-D	CONTROLLED BY LIGHTING CIRCUIT. PROVIDE BACKDRAFT DAMPER, INT. DISC. SWITCH, SPEED CONTROL & ROOF CURB.
EF-2	EMPLOYEE ROOM	450	.375	1/15	120	GREENHECK G-90-DGX-QD-D	CONTROLLED BY LIGHTING CIRCUIT. PROVIDE BACKDRAFT DAMPER, INT. DISC. SWITCH, SPEED CONTROL & ROOF CURB.

INSTALL THE SPEED CONTROL INSIDE THE EXHAUST FAN DOME NEAR THE MOTOR.

ACCEPTABLE MANUFACTURERS FOR EXHAUST FANS: (SEE FAN SCHEDULE REMARKS)
E2=L,2 - ACME - PRNDDU; CARNES - VEDK 08; COOK - ACE-D-80C30H; ILG - CRDA08; JENN - REDBIO-ST AND PENN - DX11R.

AIR CURTAIN & ENTRANCE HEATER SCHEDULE

UNIT	AREA SERVED	BTU/AIR OUPUT OR KILOWATT	CFM	MOTOR HP	PHASE	TYPE	MAKE AND MODEL
AC-1	OVERHEAD RECEIVING DOOR	20 KW 209/3 PH	2,072	1/5	208/1 PH	AIR CURTAIN WITH ELECTRIC HEAT AND THERMOSTAT.	BERNER MODEL MAXAR MAINTENED-MAG
EH-1	ENTRANCE	120,000	2,000	3/4	208/3 PH	OUTDOOR, POWER VENTED, GAS FIRED, PACKED DUCT FURNACE/ BLOWER UNIT W/1/2" INCH SECTION.	REZOR HRPB-150

** PROVIDE WITH HEAT EXCHANGER, TWO STAGE BURNER, WALL THERMOSTAT, WALL SENSOR AND 10 YEAR HEAT EXCHANGER WARRANTY. ALTERNATE MANUFACTURERS FOR ENTRANCE HEATER: TRANS-GRA 15 AND MOORE-HOPKIN, GREENHECK - 10X-110 - ESP= 0.5 IN.

** PROVIDE AIR CURTAIN WITH DOOR CONTROL, FAN AND HEAT CONTROL, SUMMER FAN CONTROL, TIME DELAY, 8'-0" CAPILLARY TEMP. SENSOR (PACKAGE CONTROL SYSTEM), MOUNTING BRACKET, 120V, 1F FOR AIR CURTAIN W/O ELECTRIC HEAT. (CONTACT WILLIAMSON & COMPANY @ 947-674-0000 FOR BERNER UNIT). ALTERNATE - TM INC.

MECHANICAL CONTRACTOR SHALL FURNISH AIR CURTAIN. ELECTRICAL CONTRACTOR SHALL INSTALL AIR CURTAIN.

Tennill & Associates, Inc.
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Chesterfield, Missouri 63005
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PROJECT TYPE
DRAWINGS/SPECIFICATIONS BY:
 WALGREEN'S CONSULTANT
 LANDLORD'S CONSULTANT
ALL CONSTRUCTION WORK UNLESS NOTED OTHERWISE BY:
 WALGREEN'S CONTRACTOR
 LANDLORD'S CONTRACTOR (TURNKEY CONSTRUCTION)

STORE BUILDING

NEW.....
REMODELING.....
RELOCATION.....
OTHER.....

NEW.....
EXISTING.....
NEW SHELL ONLY.....

NO.	DATE	BY	DESCRIPTION	CONST.
1	8-02-07	DOT	CODE COMMENTS	

REVISIONS

I hereby certify that this plan and specification were prepared by me or that I am a duly registered architect or engineer under the laws of the state of Illinois as signified by my hand and seal. THE PROFESSIONAL SEALS, SIGNATURE AND PERSONAL SEAL APPEAR HEREON. ASSUMES RESPONSIBILITY ONLY FOR WORK APPEARING ON THIS DRAWING, AND DISCLAIMS ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT BEARING THE REFERENCED PROFESSIONAL RELATIVES TO, OR PARTS OF THE PROJECT TO WHICH THIS DRAWING REFERS.

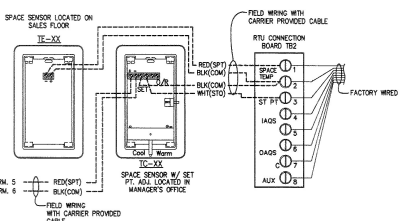
STOR #09883
PROJECT NAME
WALGREENS STORE (SWC) MAIN & EMERSON BLOOMINGTON, ILLINOIS

DRAWING TITLE
MECHANICAL EQUIPMENT SCHEDULE AND HVAC CONTROL WIRING DIAGRAM

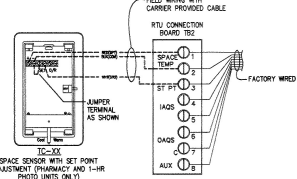
CADD PLOT: SCALE: AS SHOWN DRAWING NO.
VOID PLOT: DRAWN BY: ACB
DATE: 8-29-07
SUPERSEDES PLAN DATED: REVIEWED BY: DOT

M2.2

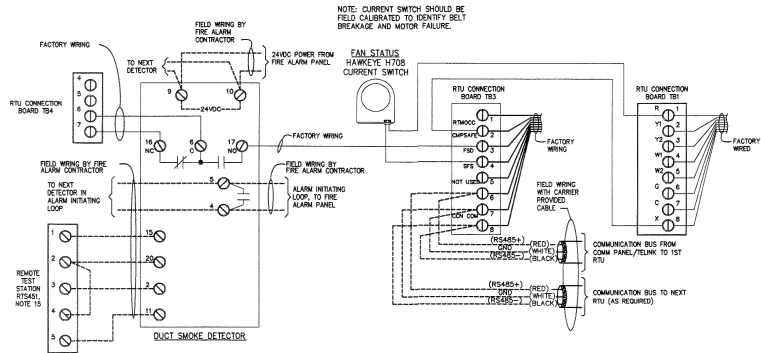
5 OF 29 DWGS.



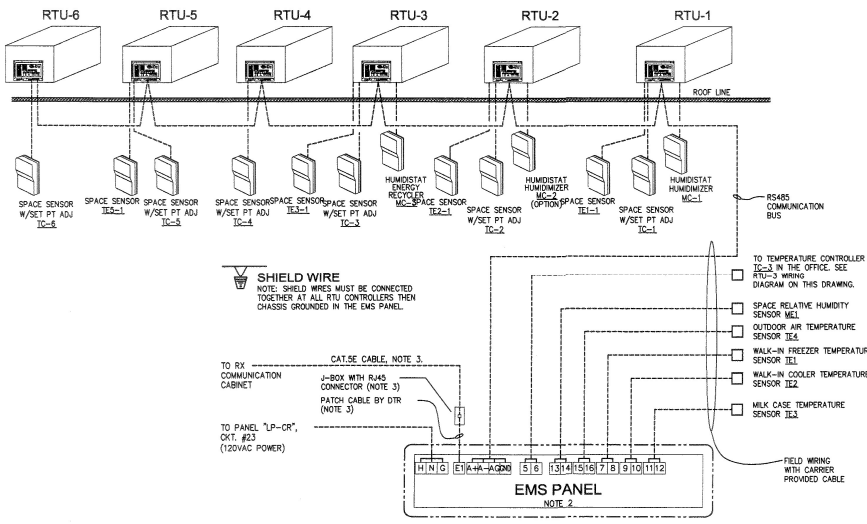
RTU-1, RTU-2, RTU-3 AND RTU-5 TEMPERATURE SENSOR WIRING



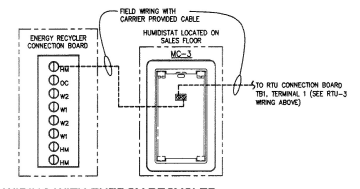
RTU-4 AND RTU-6 TEMPERATURE SENSOR WIRING



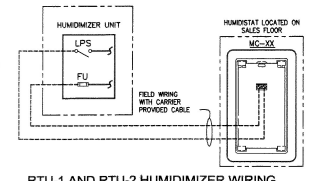
FAN STATUS SWITCH AND FACTORY INSTALLED DUCT SMOKE DETECTOR WIRING DIAGRAM (NOTE 13)



EMS PANEL WIRING BLOCK DIAGRAM



RTU-3 WIRING WITH ENERGY RECYCLER



RTU-1 AND RTU-2 HUMIDIZER WIRING

NOTES:

- FOR ALL NEW STORES WITH CARRIER UNITS, THE MECHANICAL CONTRACTOR SHALL PROVIDE AN ENERGY MANAGEMENT SYSTEM (EMS) DESIGNED AND SUPPLIED BY CARRIER IN ACCORDANCE WITH SECTION 1505 OF THE SPECIFICATIONS. CARRIER SHALL FURNISH SHIELDED STRANDED PLENUM RATED CABLE. THE PROJECT MECHANICAL CONTRACTOR SHALL PROVIDE CONDUITS, ADDITIONAL WIRING, INSTALL THE CARRIER CABLE AND DEVICES, THEN TAG EACH CONDUCTOR FOLLOW THE APPLICABLE PORTIONS OF ELECTRICAL SPECIFICATIONS. THE MECHANICAL CONTRACTOR SHALL TRY TO USE THE PROJECT ELECTRICAL CONTRACTOR TO PERFORM THOSE SERVICES. CARRIER SHALL PROVIDE PANEL TERMINATION AND COMMISSIONING.
- EMS PANEL (24" L X 24" W X 10") FURNISHED BY CARRIER. EMS PANEL SHALL BE INSTALLED IN ELECTRICAL ROOM NEAR PANEL "LP-CR". TOP OF PANEL SHALL BE AT 5'-0" AFF.
- CARRIER CABLE SHALL BE FURNISHED AND INSTALLED BY WALGREENS. CAT5E CABLE SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL TRY TO USE THE PROJECT ELECTRICAL CONTRACTOR TO PERFORM THOSE SERVICES. CARRIER SHALL PROVIDE PANEL TERMINATION AND COMMISSIONING.
- FOR SENSOR LOCATIONS, REFER TO DRAWING M1.1 (ACTUAL STORE LAYOUT AND NUMBER OF SENSORS MAY DIFFER FROM THAT SHOWN IN OTHERS).
- TEMPERATURE SENSORS TE1 AND TE2 (WALK-IN COOLER AND FREEZER) SHALL BE INSTALLED ON THE BACK WALL PANEL BETWEEN EVAPORATOR FAN ASSEMBLIES, APPROXIMATELY 6" BELOW THE CEILING. PLASTIC TYPE "P" BRACKET SHALL BE UTILIZED FOR SENSING SENSOR ON BACK WALL WITH SHEET METAL SCREW. SCREW SHALL BE ANGLE UPWARD, TO AVOID CONTACT WITH THE PANEL.
- MILK CASE TEMPERATURE SENSOR TES3 INSTALLATION:
 - OPEN-FRONT CASE SENSOR LEAD WIRES SHALL BE SECURED TO THE CENTER PARTITION BETWEEN TE1 AND TE2 POINT CASES IN THE "U" OF THE SCREW BRACKET. THE WIRING FOR COLUMN MOUNTED DEVICES SHALL BE RUN CONCEALED INSIDE THE PIPE COLUMN.
 - GLASS DOORS SENSOR SHALL BE INSTALLED ON HEADER PANEL APPROXIMATELY 6" BELOW THE CEILING, SIMILAR TO SENSOR TE-1 AND TE-2 INSTALLATION ABOVE.
- OUTDOOR AIR TEMPERATURE SENSOR TE4 SHALL BE INSTALLED ON NORTH WALL OF THE BUILDING, 6'-0" ABOVE THE GROUND (MINIMUM). SENSOR PROBE SHALL BE FACING DOWNWARD.
- TEMPERATURE CONTROL DEVICES IN THE OFFICE:
 - TEMPERATURE SET POINT ADJUSTMENT SENSORS IN THE OFFICE SHALL BE MOUNTED VERTICALLY IN A 4 X 4 PATTERN WITH 6 INCHES BETWEEN SENSORS, APPROXIMATELY 5.0 FT ABOVE FLOOR.
- LOCATE THERMOSTATS, HUMIDISTATS AND SENSORS AS SHOWN ON THE MECHANICAL PLAN FOR THE PROJECT, AND MOUNTED AS FOLLOWS:
 - RTU-1, RTU-2 AND RTU-3 DEVICES SHALL BE COLUMN MOUNTED. THE WIRING FOR COLUMN MOUNTED DEVICES SHALL BE RUN CONCEALED INSIDE THE PIPE COLUMN.
 - THERMOSTAT SHALL BE VERTICAL. TEMPERATURE SENSOR SHALL BE HORIZONTAL, BOTH 6.0 FT ABOVE FLOOR, WITH HOLES SCALES AND AN INSULATION BLOCK BETWEEN DEVICE AND STEEL COLUMN.
 - RELATIVE HUMIDITY SENSOR OR HUMIDISTAT SHALL BE 6.0 FEET ABOVE FLOOR AT THE SAME LOCATION AS THE RESPECTIVE TEMPERATURE SENSOR.
 - CO2 SENSOR SHALL BE HORIZONTAL 7.0 FEET ABOVE FLOOR AT THE SAME LOCATION AS THE RESPECTIVE TEMPERATURE SENSOR.
 - THE RTU-4 THERMOSTAT OR TEMPERATURE SENSOR SHALL BE VERTICALLY WALL MOUNTED 8.0 FEET ABOVE FLOOR, NOT IN THE DISCHARGE AIR PATH OF SUPPLY AIR DIFFUSERS.
 - THE RTU-6 THERMOSTAT OR TEMPERATURE SENSOR SHALL BE VERTICALLY WALL MOUNTED 8.0 FEET ABOVE FLOOR, NOT IN THE DISCHARGE AIR PATH OF SUPPLY AIR DIFFUSERS, GENERALLY CENTERED HORIZONTALLY ON THE REAR WALL IN PROXIMITY TO THE RETURN AIR GRILLE.
 - THE RTU-5 THERMOSTAT OR TEMPERATURE SENSOR SHALL BE VERTICALLY WALL MOUNTED 6.0 FEET ABOVE FLOOR.
 - THERMOSTAT AND SENSOR WIRING SHALL BE RUN INSIDE THE CONDUIT, VERTICALLY UP TO CEILING, WHERE SUBJECT TO VIEW IN UNFINISHED SPACES.
 - CONTROL OF ENTRANCE HEATER (EH-1): THE TWO STAGE GAS BURNER SHALL BE CONTROLLED BY A TWO STAGE TEMPERATURE SENSOR WALL MOUNTED OUTSIDE THE VESTIBULE, INSIDE THE SALES AREA. THE SET POINT FOR THIS SENSOR SHALL HAVE AN OPERATIONAL RANGE OF 34-38 DEGREES. WHEN A VESTIBULE IS PRESENT, A FREEZE PROTECTION THERMOSTAT SHALL BE PROVIDED TO SENSE AIR TEMPERATURE INSIDE THE RETURN AIR DUCT RIGHT ABOVE THE CEILING GRILLE. THIS THERMOSTAT SET TO 50 DEGREES F SHALL CALL FOR HEAT EVEN IF THE TEMPERATURE SENSOR INSIDE THE STORE IS SATISFIED.
- ALL SENSORS AND THERMOSTATS SHALL BE LABELED.
- REMOVE DUCT SMOKE DETECTOR TEST TESTATIONS SHALL BE INSTALLED ADJACENT TO FIRE ALARM PANEL AND LABELED WITH CORRESPONDING RTU NUMBER.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND PROVIDE A FULLY OPERATIONAL AND FUNCTIONAL BAS SYSTEM.
- MECHANICAL CONTRACTOR SHALL BE PRESENT AT START UP.

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PROJECT TYPE
DRAWINGS/SPECIFICATIONS BY:
 WALGREENS' CONSULTANT
 LANDLORD'S CONSULTANT
ALL CONSTRUCTION WORK/LESS NOTED OTHERWISE BY:
 WALGREENS' CONTRACTOR
 LANDLORD'S CONTRACTOR (TURNKEY CONSTRUCTION)

STORE	BUILDING
NEW..... <input type="checkbox"/>	NEW..... <input type="checkbox"/>
REMODELING..... <input type="checkbox"/>	EXISTING..... <input type="checkbox"/>
RELOCATION..... <input type="checkbox"/>	NEW SHELL ONLY..... <input type="checkbox"/>
OTHERS..... <input type="checkbox"/>	

FACILITIES
JUN - 9 2007
PLANNING

NO.	DATE	BY	DESCRIPTION	CONST

REVISIONS
CERTIFICATION AND SEAL
I HEREBY CERTIFY THAT THIS PLAN AND SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED ARCHITECT OR ENGINEER UNDER THE LAWS OF THE STATE OF ILLINOIS AS EVIDENCED BY MY HAND AND SEAL. THE PROFESSIONAL SEAL OF THE ARCHITECT OR ENGINEER IS A NECESSARY PART OF THIS INSTRUMENT. I AGREE TO ACCEPT RESPONSIBILITY FOR ALL CORRECTIONS AND REVISIONS TO THIS DRAWING AND SPECIFICATION. I AGREE TO HOLD THE ARCHITECT OR ENGINEER RESPONSIBLE FOR ALL CORRECTIONS AND REVISIONS TO THIS DRAWING AND SPECIFICATION. I AGREE TO HOLD THE ARCHITECT OR ENGINEER RESPONSIBLE FOR ALL CORRECTIONS AND REVISIONS TO THIS DRAWING AND SPECIFICATION. I AGREE TO HOLD THE ARCHITECT OR ENGINEER RESPONSIBLE FOR ALL CORRECTIONS AND REVISIONS TO THIS DRAWING AND SPECIFICATION.

STORE #09983
PROJECT NAME
WALGREENS STORE
(SW) MAIN & EMERSON
BLOOMINGTON, ILLINOIS
DRAWING TITLE
CARRIER-EMS WIRING BLOCK DIAGRAM
CADD PLOT: SCALE: AS SHOWN DRAWING NO.
VOID PLOT: DRAWN BY: ACB
DATE: 6-28-07
SUPERSEDES PLAN DATED: REVIEWED BY: DDT
6 OF 29 DWGS.