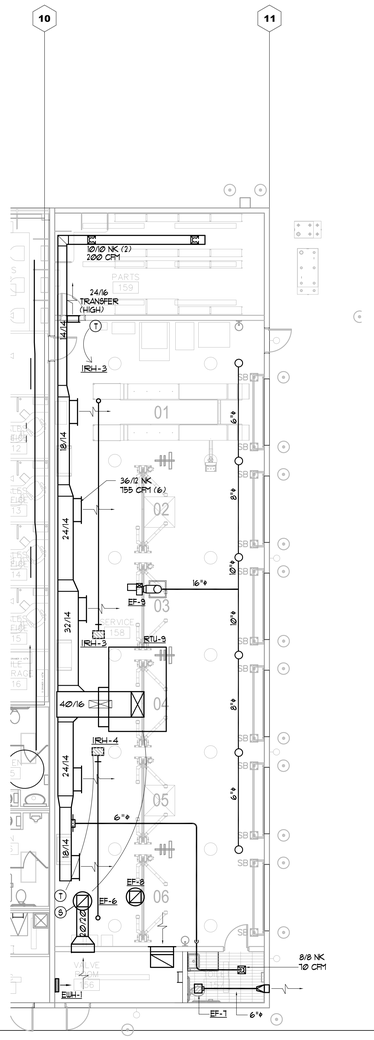


NOTE: SHOWN FOR TEST AND BALANCE PURPOSES ONLY.
SEE TEST AND BALANCE SCOPE ON M3.0
DUCT IS EXISTING TO REMAIN

N 2 M1.0 PART PLAN–HVAC
SCALE: 1/8" = 1'–0"

SERVICE AREA AIR BALANCE

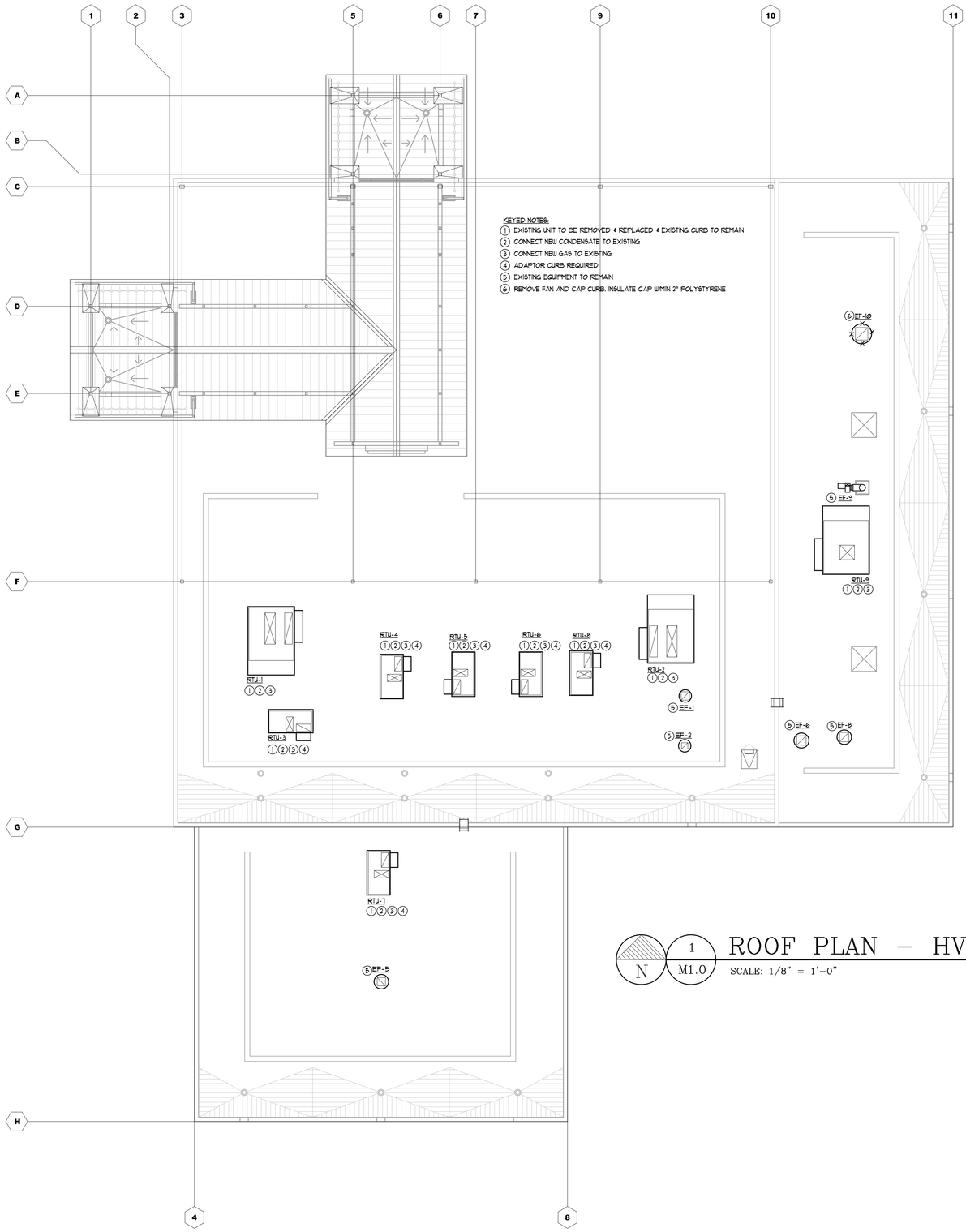
TAG	OUTSIDE AIR	EXHAUST
RTU-9	5,000 (1)	
EF-6		2000
EF-7		110
EF-8		800
EF-9		1800
TOTAL	5,000	4710

(1) RTU-9 FAN ON CONTINUOUSLY DURING OCCUPIED

PER TABLE 403.3.1.1 2018 IMC MINIMUM DIRECT EXHAUST .75 CFM/SF
REPAIR GARAGE

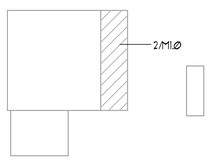
APPROX SERVICE NET AREA = 2241 SF
MIN EXH = (.75 CFM/SF)(2241 SF)
= 1680 CFM

SUM OF DIRECT EXHAUST FROM EF-8+9 =2600 CFM



KEYED NOTES:
1. EXISTING UNIT TO BE REMOVED & REPLACED & EXISTING CURB TO REMAIN
2. CONNECT NEW CONDENSATE TO EXISTING
3. CONNECT NEW GAS TO EXISTING
4. ADAPTOR CURB REQUIRED
5. EXISTING EQUIPMENT TO REMAIN
6. REMOVE FAN AND CAP CURB. INSULATE CAP W/MIN 2" POLYSTYRENE

N 1 M1.0 ROOF PLAN – HVAC
SCALE: 1/8" = 1'–0"



KEY PLAN

A.M. CERRA, JR. P.E.
1827 POWERS FERRY ROAD
BLDG # 18, SUITE # 100
ATLANTA, GEORGIA 30339
770-980-0581

22216.01

WISCONSIN A.M. CERRA, JR. PROFESSIONAL ENGINEER
3/15/22

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RELEASED FOR CONSTRUCTION

APPROVAL

CARMAX PE

REVISIONS

REV. NO	DATE	DESCRIPTION

CARMAX
THE AUTO SUPERSTORE
CARMAX THE AUTO SUPERSTORE, INC.
12500 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
(804) 747-0422
STORE NO. 7178
2441 KOSSOW ROAD
WAUKESHA, WISCONSIN 53186

PROJECT NO	22216.01
DATE	4 MAR 2022
SHEET TITLE	

ROOF PLAN &
PART PLAN–HVAC

SHEET NO M1.0

HVAC GENERAL NOTES

1. ALL CONTROL WIRING SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF N.F.P.A. 70. ALL WIRING SHALL BE CONCEALED.
2. CONTRACTOR SHALL INSTALL ALL ROOF CURBS FOR ROOFTOP UNITS LEVEL TO HORIZON AT (4) CORNERS.
3. AIR TEST AND BALANCE REQUIRED BY INDEPENDENT T&B CONTRACTOR AABC OR NEBB CERTIFIED. SEE TEST AND BALANCE SCOPE ON THIS SHEET
4. EXISTING SMOKE DETECTORS TO REMAIN AND BE REUSED.
5. LENNOX START UP TECH SHALL PROGRAM THE PRODIGY BOARDS IN ALL NEW RTU'S. PRODIGY BOARDS SHALL BE PROGRAMMED PRIOR TO CSUSA RECOMMISSIONING THE NOVAR SYSTEM.
6. CONTRACTOR SHALL PROVIDE CLEAN FILTERS IN ROOFTOP UNITS PRIOR TO AIR BALANCE AND AGAIN PRIOR TO OWNER ACCEPTANCE.
7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2015 INTERNATIONAL MECHANICAL CODE AND THE 2015 INTERNATIONAL FUEL GAS CODE WITH LOCAL AMENDMENTS. ALL EQUIPMENT AND MATERIALS CAPABLE OF BEING U.L. LABELED OR LISTED SHALL BEAR THE U.L. LABEL.
8. CONTRACTOR SHALL PROVIDE A GASKET BETWEEN BASE OF ROOF MOUNTED FANS AND ROOF CURBS TO PROVIDE AN AIRTIGHT JOINT.
9. PROVIDE MISCELLANEOUS STEEL AND/OR WOOD BLOCKING AND SUPPORT AT ROOF CURBS AND OPENINGS AS REQUIRED TO SUPPORT ROOF AND EQUIPMENT. SPECIFIC REQUIREMENTS SHALL BE VERIFIED WITH STRUCTURAL ENGINEER AND APPROVED EQUIPMENT DRAWINGS PRIOR TO PLACEMENT.
10. NEW SUPPY AND EXHAUST DUCT SHALL BE 2.0 IN PRESSURE CLASS.
11. NEW DUCT SHALL HAVE PAINT GRIP FINISH AND BE EITHER GALVANNEALED OR MILL PHOSPHATIZED.
12. ANY NEW SUPPLY DUCT SHALL BE INTERNALLY INSULATED WITH 1" DUCT LINER EQUAL TO OWENS CORNING ACOUSTITEX, 1.5 LB DENSITY, R=3.8.

PIPING GENERAL NOTES

1. ANY NEW GAS PIPING SHALL BE ASTM A-120, SCHEDULE 40, BLACK STEEL WITH 150 LB. MALLEABLE IRON SCREWED FITTINGS.
2. ANY NEW EXTERIOR GAS PIPE SHALL BE PAINTED WITH RUST PROHIBITIVE PAINT.

HVAC LEGEND

A.F.F.	ABOVE FINISHED FLOOR
VD	VOLUME DAMPER
B.O.S.	BOTTOM OF STEEL
B.O.D.	BOTTOM OF DUCT
U.N.O.	UNLESS NOTED OTHERWISE
VD	VOLUME DAMPER
	SUPPLY GRILLE WITH FLEX DUCT DROP
	RETURN/EXHAUST GRILLE
R, D	R = RISE, D = DROP
T	THERMOSTAT
S	LENNOX ROOM TEMPERATURE/HUMIDITY SENSOR 72" AFF
	SPIN-IN FITTING
	EXISTING DUCT
	EXISTING DUCT TO BE REMOVED
OG	ORIGINAL GAS
AG	ADDITION GAS
EG	ESTIMATED EXISTING GAS
G	NEW GAS

ROOFTOP UNIT NOTES

1. CARMAX AUTO SUPERSTORE, LLC HAS A NATIONAL ACCOUNT WITH LENNOX INDUSTRIES, INC., FOR PRICING AND DELIVERY OF PACKAGED ROOFTOP UNITS IN ACCORDANCE WITH THE FOLLOWING. NO SUBSTITUTIONS WILL BE ALLOWED.

   A. ROOFTOP UNITS SHALL BE AS SCHEDULED.

   THE ELECTRICAL PACKAGE SHALL INCLUDE:
   - -UNIT DISCONNECT (INSTALLED AND WIRED)
   - -BOTTOM GAS/POWER ENTRY
   - -STANDARD LOW AMBIENT CONTROL
   - -DUAL 120V GFCI TYPE OUTLETS (TO BE FIELD WIRED)
   - -GLOBAL DRY BULD ECONOMIZERS W/FAN POWERED EXHAUST (7.5T AND LARGER UNLESS OTHERWISE NOTED)
   - -GLOBAL DRY BULD ECONOMIZERS W/BAROMETRIC RELIEF (6T AND SMALLER)
   - -STAINLESS STEEL HEAT EXCHANGER AND FRESH AIR TEMPERING FOR RTU-11&12

2. THE LENNOX NATIONAL ACCOUNT CONTACT IS:

   RON JOHNSON
   704-621-2606

3. HVAC EQUIPMENT PERFORMANCE CHECK (EPC)

   UPON COMPLETION OF THE HVAC INSTALLATION AND STARTUP, THE OWNER'S SERVICE CONSULTANT, AT THE OWNER'S EXPENSE, IS TO INSPECT THE JOB AND PERFORM AN (EPC). THIS EPC WILL AID THE CONTRACTOR IN CHECKING EACH MACHINE FOR PROPER OPERATION, CHECKING THE CONTROL PANEL AND ADJUSTING CONTROLS AS NECESSARY.

   THE OWNER'S SERVICE CONSULTANT:
   COMFORT SYSTEMS
   ATTN: VALERIE BEDEL
   P: 317-246-5181
   valerie.bedel@comfortsystemsusa.com

   ALL PROBLEMS DISCOVERED WITH THE EQUIPMENT OR ITS INSTALLATION (EXCLUDING NOVAR INSTALLATION) SHALL BE CORRECTED BY THE HVAC SUBCONTRACTOR IN ACCORDANCE WITH THE OWNER'S SERVICE CONSULTANT.

   AFTER ALL PROBLEMS HAVE BEEN CORRECTED, CARMAX AUTO SUPERSTORE, LLC SHALL VERIFY ALL EQUIPMENT IS OPERATING PROPERLY THROUGH THE NOVAR CONTROLLERS.

   PRIOR TO PERFORMANCE OF THE EPC, THE CONTRACTOR SHALL HAVE SET AND CONNECTED ALL COMPONENTS, COMPLETED THE POWER WIRING, CONNECTED ALL PIPING, REMOVED ALL SHIPPING BLOCKS, COMPLETED THE STARTUP OF ALL UNITS AND FURNISHED THE PRE-EPC CHECKLIST TO THE OWNER'S SERVICE CONSULTANT.

   THE EPC INCLUDES A FULL WRITTEN REPORT. COPIES WILL BE SENT TO THE GENERAL CONTRACTOR, AND CARMAX AUTO SUPERSTORE, LLC. COPIES OF THE EPC SHALL BE INCORPORATED IN TO THE O & M MANUALS BY THE GENERAL CONTRACTOR.

   A. RTU AIR FILTERS SHALL BE CAMFIL FARR AEROPLEAT III PLEATED, 2" THICK MERV 13, OR EQUAL. MARK FILTERS WITH INSTALLATION DATE

   B. THE PACKAGE COMPONENTS WILL BE CLEARLY LABELLED (IN LEGIBLE FORM) ON THE EXTERIOR OF ALL BOXES OR CRATES.

   C. SUBMIT RTU SUBMITTALS IN PDF FORMAT TO THE ENGINEER FOR APPROVAL.

CONTROLS SCOPE OF WORK:

EXISTING RTU'S ARE ON LOGIC ONE BUSS. SAVVY COMMUNICATIONS TO IOM ALL RTUS WITH ETM 2051'S I/O IS BY THE INTEGRATED IOM IN THE SAVVY.

1. ALL NEW RTU'S WILL BE BACNET.
2. THE GENERAL CONTRACTOR SHALL RETAIN COMFORT STSTEMS USA (CSUSA) TO FURNISH AND INSTALL CONTROLS AS INDICATED BELOW. THE CONTACT AT CSUSA IS:
   VALERIE BEDEL 317-246-5181
3. PROVIDE PRE-CONSTRUCTION SCREEN SHOTS FROM NOVAR EMS MONITORING TO INCLUDE UNIT STATUS, MODULE COMMUNICATIONS STATUS AND ACTIVE ALARMS.
4. NOT USED
5. CONNECT NEW RTU'S W/PRODIGY BOARDS TO BACNET COMMUNICATION.
6. FOR NEW RTU'S REPLACE RTU NOVAR TEMPERATURE SENSORS WITH LENNOX SENSORS.
7. REPLACE/UPGRADE SAVVY 31 WITH OPUS XCM10S PANEL. SAME BASE PLATE, MINIMAL RE-WIRING REQUIRED.
8. CONNECT BACNET NETWORK AS REQUIRED.
9. TURN OVER SAVVY 31 PANEL AND ETM'S TO CARMAX FOR FUTURE SERVICE CALL INVENTORY SHIP TO COMFORT SYSTEMS USA, ATTN VALERIE BEDEL, CARMAX EMS ACCOUNT CO-ORDINATOR.
10. UPDATE SOFTWARE PER NEW CARMAX TEMPLATE
11. COMMISSION EMS SYSTEM
12. PROVIDE POST CONSTRUCTION SCREEN SHOTS FROM NOVAR EMS MONITORING TO INCLUDE UNIT STATUS, MODULE COMMUNICATIONS STATUS AND ACTIVE ALARMS.
13. LENNOX/CARMAX RTU SET UP SHEET IS TO BE COMPLETED UPON UNIT STARTUP. A COMPLETED SHEET IS TO BE LEFT IN EACH NEW RTU AND A COPY SUBMITTED WITH CLOSE OUT DOCUMENTATION FOR EACH NEW RTU.
14. FURNISH AND INSTALL ADDITIONAL CONTROL WIRE FOR CO_2 SENSORS AND UNITS WITH HUMIDITROL.
15. ALL CONTROL, COMMUNICATIONS BUS AND SENSOR WIRING, NEW AND EXISTING, IS PART OF THE CONTROLS CONTRACTOR SCOPE OF WORK. REPLACE ANY DAMAGED WIRE.

ROOFTOP UNIT SCHEDULE

(SHOWN FOR REFERENCE ONLY)

MARK	ZONE	EER	THERM EFF	VOLT/PH	FAN DATA CFM	TSP IN WC	ESP IN WC	HP	COOLING DATA EAT DB/WB	TOTAL MBH	SENSIBLE MBH	GAS DATA INPUT MBH	OUTPUT MBH	MIN. O/A CFM	MODEL	WEIGHT (3)	(1) REMARKS
RTU-1	SHOWROOM	11.8	80%	480/3	5750	.69	.6	3.0	76.4/63.9	179	133	260	208	650	LENNOX LGC180H	2900	
RTU-2	SHOWROOM	11.8	80%	480/3	5750	.69	.6	3.0	76.4/63.9	179	133	260	208	650	LENNOX LGC180H	2900	
RTU-3	CUSTOMER	11.2	80%	480/3	1100	.62	.6	1.5	79.5/65.1	36.1	27.8	78	62.4	140	LENNOX LGA036H	900	
RTU-4	BUSINESS	11.0	80%	480/3	1600	.70	.6	1.5	80.2/66.2	61.2	44.1	78	62.4	300	LENNOX LGA060H	900	
RTU-5	BUYERS	11.2	80%	480/3	1100	.62	.6	1.5	79.5/65.7	36.4	27.1	78	62.4	180	LENNOX LGA036H	900	
RTU-6	DATA/PBX	10.7	80%	480/3	960	.65	.6	1.5	75/67	34	23.8	-	-	-	LENNOX LCA036H	900	
RTU-7	SERVICE WRITER	11.2	80%	480/3	1051	.62	.6	1.5	77.1/64.8	35.6	25.1	78	62.4	160	LENNOX LGA036H	900	
RTU-8	BREAK/TRAIN	11.3	80%	480/3	1400	.64	.6	1.5	76.7/64.6	42.4	31.5	78	62.4	150	LENNOX LGA042H	900	
RTU-9	SERVICE AREA	11.0	80%	480/3	5600	1.04	.8	5.0	85.6/72.4	268.3	133.5	470	376	5000	LENNOX LGA240H	4900	(2)

(1) PROVIDE WITH FACTORY INSTALLED NOVAR CONTROL MODULE: LGA UNIT SERIES (MODEL 2051)

(2) BY-PASS CURB AND MIXING BOX

(3) INCLUDES WEIGH OF UNIT AND CURB

ROOFTOP UNIT SCHEDULE

MARK	ZONE	EER (SEER)	VOLT/PH	FAN DATA CFM	TOT IN WC	ESP IN WC	HP	COOLING DATA (9) EAT DB/WB	TOTAL MBH	SENSIBLE MBH	GAS DATA INPUT MBH	OUTPUT MBH	MIN. O/A CFM	MODEL (1)		WEIGHT (5)	REMARKS (2)(4)(12)	
RTU-1	SHOWROOM	12.0	480/3	5750	1.1	.8	3.0	80/67	--	--	260	208	650	LENNOX	LGH180H4M	2600	(13)(14)	
RTU-2	SHOWROOM	12.0	480/3	5750	1.1	.8	3.0	80/67	--	--	260	208	650	LENNOX	LGH180H4M	2600	(13)(14)	
RTU-3	CUSTOMER	(17.0)	480/3	1100	.80	.6	1/2	80/67	--	--	65	52	140	LENNOX	LGH036H4E	1000	(6)	(11)
RTU-4	BUSINESS	(17.0)	480/3	1600	.80	.6	1.0	80/67	--	--	65	52	300	LENNOX	LGH060H4E	1000	(6)	(11)
RTU-5	BUYERS	(17.0)	480/3	1100	.80	.6	1/2	80/67	--	--	65	52	180	LENNOX	LGH036H4E	1000	(6)	(11)
RTU-6	PBX	(17.0)	480/3	975	.90	.8	1/2	75/63	--	--	--	--	--	LENNOX	LCH036H4E	800		(11)
RTU-7	SERVICE WRITER	(17.0)	480/3	1100	.80	.6	1/2	80/67	--	--	65	52	160	LENNOX	LGH036H4E	1000	(6)	(11)
RTU-8	BREAK/TRAIN	(17.0)	480/3	1400	.80	.6	3/4	80/67	--	--	65	52	150	LENNOX	LGH048H4E	1000	(6)	(11)
RTU-9	SERVICE AREA	12.0	480/3	5000	1.3	1.0	5.0	88/74	252	150	480	384	5000	LENNOX	LGH240H4B	3500	(3)(7)(8)(10)(14)(15)	

(1) ONLY ACCEPTABLE MANUFACTURER IS LENNOX. SEE "ROOFTOP UNIT NOTES"

(2) FIELD ADJUST SUPPLY FAN R.P.M. TO PROVIDE AIR QUANTITIES AS SCHEDULED ABOVE. INSTALL FIELD-SUPPLIED MOTOR AND/OR DRIVE AS REQ'D

(3) INSTALL F.A.T. DISCHARGE AIR TEMPERATURE SENSOR. SHIPPED LOOSE IN RTU CABINET, INSTALL SENSOR IN SUPPLY IN SUPPLY DUCT APPROX 3FT BELOW ROOF DECK. SEE DETAIL 4/M4.0

(4) BACNET CONTROL, NEW TEMP SENSOR OR COMBO TEMP/HUMIDITY SENSOR

(5) INCLUDES WEIGHT OF EXISTING CURB AND ADAPTER CURB WHERE APPPLICABLE

(6) GLOBAL ECONOMIZER WITH BAROMETRIC RELIEF

(7) STAINLESS STEEL HEAT EXCHANGER

(8) FRESH AIR TEMPERING, 100% OUTSIDE AIR

(9) 95°F CONDENSER AIR

(10) MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION OF WIRING HARNESS SHIPPED LOOSE W/ RTU THAT ARE ASSOCIATED WITH OUTSIDE AIR DAMPER.

(11) ADAPTER CURB

(12) DRAIN PAN OVERFLOW SWITCH MODEL ZISNSR90A1

(13) GLOBAL ECONOMIZER WITH POWERED EXHAUST

(14) 2 STAGE HEAT

(15) WILL REUSE EXISTING BY-PASS CURB, BUT NEW UNIT WILL HAVE ECONOMIZER W/BAROMETRIC RELIEF OUTSIDE AIR DAMPER 100% OPEN WHEN FAN ON, CLOSED WHEN FAN OFF ECONOMIZER OPRATION NOT DETERMINED BY GLOBAL EMS CONTROL

TEST & BALANCE SCOPE

MARK	TOTAL AIR ACROSS COIL	OUTSIDE AIR	BYPASS AIR	SUPPLY AIR TO REGISTERS	OTHER
RTU-1 THRU 8	AS SCHEDULED	AS SCHEDULED	--	--	
RTU-9	5000	5000	0	5000	SUPPLY REGISTER AIR QTY AS SHOWN ON 2/M1.0
EF-8	--	--	--	--	EXHAUST AT FAN AS SCHEDULED

A.M. CERRA, JR. P.E.
1827 POWERS FERRY ROAD
BLDG # 18, SUITE # 100
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3/15/22

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RELEASED FOR CONSTRUCTION

APPROVAL

CARMAX PE

REVISIONS

REV. NO	DATE	DESCRIPTION

CARMAX THE AUTO SUPERSTORE

CARMAX THE AUTO SUPERSTORE, INC.
12800 TUCKAHOE CREEK PKWY RICHMOND, VA 23238
(804) 747-0422

STORE NO. 7178
2441 KOSSOW ROAD
WAUKESHA, WISCONSIN 53186

PROJECT NO	22216.01
DATE	4 MAR 2022
SHEET TITLE	SCHEDULES – HVAC
SHEET NO	M3.0

EXISTING PANELBOARD PP SCHEDULE

VOLTAGE: 480/277V, 3 PH, 4 W | MAINS: MAIN LUGS ONLY | MOUNTING: SURFACE | REMARKS:

BUS SIZE: 400A | TOTAL LOAD: 161.0 KVA (DIVERSIFIED LOAD) | FAULT DUTY: 42,000 A

NO	SERVES	NOTE	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	ERROR TRIP	P	PHASE A	B	C	P	ERROR TRIP	MISC	LOAD (KVA) HTG	A/C	MTR	RCPT	LTG	NOTE	SERVES	NO
1	RTU-1					26.1			35	3				3	15			6.9					RTU-3	2
3	RTU-1					--			--	-				-	--			--					RTU-3	4
5	RTU-1					--			--	-				-	--			--					RTU-3	6
7	RTU-2					26.1			35	3				3	20			10.2					RTU-4	8
9	RTU-2					--			--	-				-	--			--					RTU-4	10
11	RTU-2					--			--	-				-	--			--					RTU-4	12
13	SPACE													3	15			6.9					RTU-5	14
15	SPACE													-	--			--					RTU-5	16
17	SPACE													-	--			--					RTU-5	18
19	SPACE													3	15			6.9					RTU-6	20
21	SPACE													-	--			--					RTU-6	22
23	SPACE													-	--			--					RTU-6	24
25	SPACE													3	15			6.9					RTU-7	26
27	SPACE													-	--			--					RTU-7	28
29	SPACE													-	--			--					RTU-7	30
31	SPACE													3	15			9.0					RTU-8	32
33	SPACE													-	--			--					RTU-8	34
35	SPACE													-	--			--					RTU-8	36
37	AIR COMPRESSOR					28.3			60	3				3	50			33.7					RTU-9	38
39	AIR COMPRESSOR					--			--	-				-	--			--					RTU-9	40
41	AIR COMPRESSOR					--			--	-				-	--			--					RTU-9	42

LOAD SUMMARY
CURRENT: 193.7 AMPS

LIGHTING: 0.0 KVA | RECEPTACLE: 0.0 KVA | MOTOR: 28.3 KVA | A/C: 132.7 KVA | HEATING: 0.0 KVA | MISC: 0.0 KVA

LOAD ON EXISTING PANEL "PP" HAS DECREASED BY 35.0 KVA/ 42.1 AMPS DUE TO THE REPLACEMENT OF (5) ROOF TOP UNITS. THIS PANEL HAS A TOTAL AMPERAGE OF 193.7 AMPS.

NOTE: PANEL PP IS SERVED FROM A 400A/3P BREAKER IN PANEL BOARD MDP.

KEYED ELECTRICAL NOTES PANELBOARD:

(A) REMOVE EXISTING 50A/3P CIRCUIT BREAKER, INSTALL NEW 35A/3P CIRCUIT BREAKER.

(B) EXISTING 15A/3P CIRCUIT BREAKER,TO REMAIN AND BE REUSED.

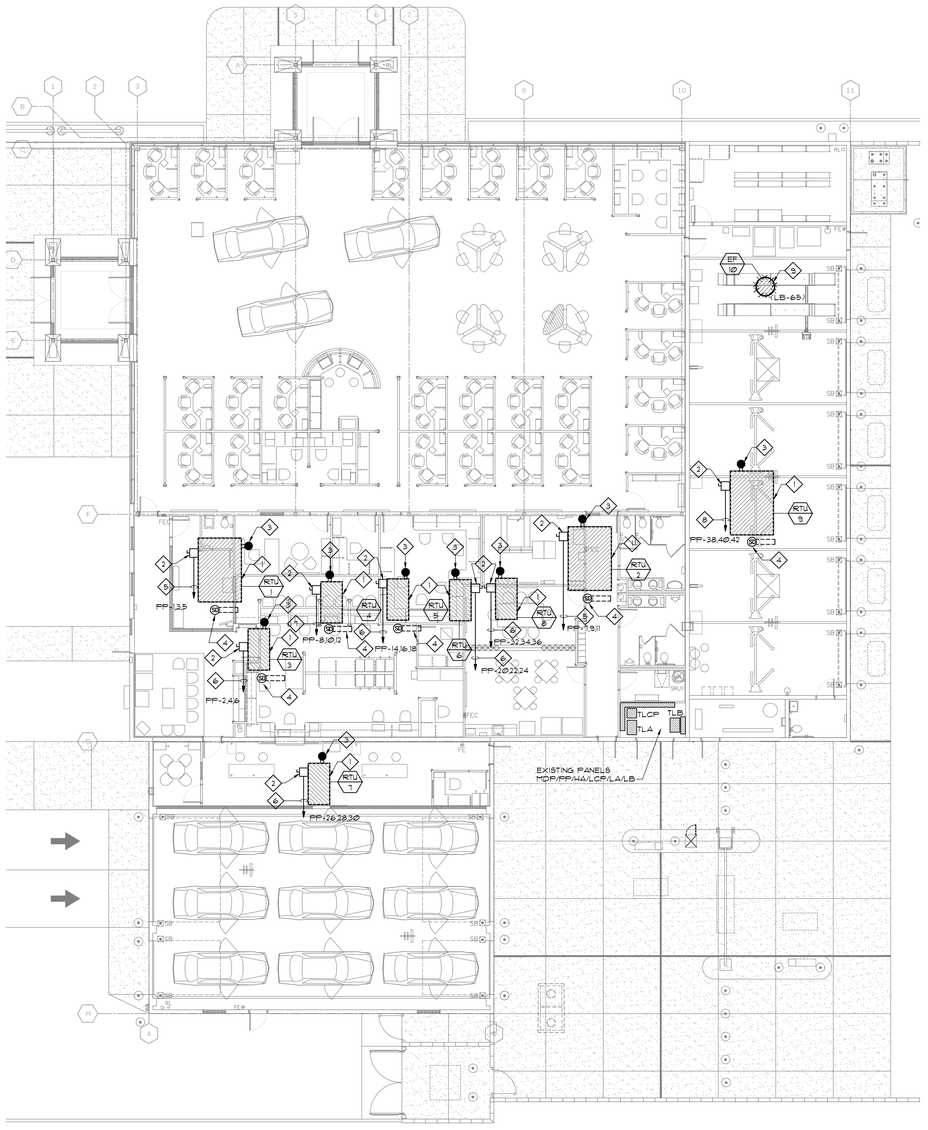
(C) EXISTING 20A/3P CIRCUIT BREAKER,TO REMAIN AND BE REUSED.

(D) REMOVE EXISTING 60A/3P CIRCUIT BREAKER, INSTALL NEW 50A/3P CIRCUIT BREAKER.

(E) EXISTING AIR COMPRESSOR TO REMAIN

CIRCUIT BREAKER NOTE:

ALL NEW AND REPLACED CIRCUIT BREAKERS SHALL BE HACR TYPE AND SHALL MATCH THE MANUFACTURER OF EACH EXISTING PANEL AND MATCH THE AIC RATING OF EXISTING CIRCUIT BREAKERS IN EACH PANEL.



1 / E1.0 MECHANICAL/PLUMBING EQUIPMENT CONNECTION PLAN

SCALE: 3/32" = 1'-0"

GENERAL NOTES:

1. ALL LINE VOLTAGE WIRING & CONDUIT IS FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR.
2. ROUTE ALL CONDUITS INSIDE ROOF CURBS. NO CONDUITS SHALL PENETRATE THROUGH ROOF DECK.
3. WHERE NEW CIRCUIT BREAKERS ARE INSTALLED IN EXISTING PANELBOARDS, NEW CIRCUIT BREAKER SHALL MATCH MANUFACTURER & A.I.C. RATING OF EXISTING CIRCUIT BREAKERS CURRENTLY IN PANELBOARD.
4. FIELD VERIFY ALL EXISTING CIRCUIT NUMBERS CURRENTLY SERVING EQUIPMENT BEING REPLACED.
5. RE-CONNECT ALL TEMPERTURE SENSORS TO EACH NEW ROOF TOP UNIT WITH EXISTING LOW VOLTAGE CABLE. PROVIDE NEW LOW VOLTAGE CABLE TO MATCH EXISTING CABLE IF DEFECTIVE.
6. RE-CONNECT EXISTING REMOTE TEST SWITCH CABLING TO EACH ROOF TOP UNIT WHERE EXISTING TEST SWITCHES ARE CURRENTLY INSTALLED.
7. IF CONDUCTOR LENGTH TO NEW R.T.U.'s NEED TO BE EXTENDED, CONTRACTOR SHALL SPLICE EXISTING CONDUCTORS TO NEW CONDUCTOR OF SAME SIZE. SPLICE SHALL OCCUR IN A J-BOX LOCATED DIRECTLY BELOW ROOF DECK NEAR AFFECTED R.T.U..
8. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDUCTOR SIZES SPECIFIED IN LEGEND NOTES AND RECONNECT EXACT SIZE CONDUCTORS SPECIFIED. IN THE EVENT CONDUCTORS SPECIFIED ARE SMALLER THAN INDICATED IN LEGEND NOTES, CONTRACTOR SHALL INSTALL NEW CONDUCTORS TO MATCH SPECIFIED CONDUCTORS STATED IN LEGEND NOTES.
9. TEST ENTIRE FIRE ALARM SYSTEM AT COMPLETION OF FIRE ALARM WORK AND MAKE ALL REQUIRED REPAIRS TO MAKE THE FIRE ALARM SYSTEM FULLY OPERATIONAL. PROVIDE A FIRE ALARM LOW VOLTAGE CONTRACTOR TO PERFORM TESTING OR THE FIRE ALARM MANUFACTURERS REPRESENTATIVE.

LEGEND NOTES:

1. NEW ROOF TOP UNIT BEING INSTALLED AT SAME LOCATION AS EXISTING ROOF TOP UNIT BEING REMOVED.
2. FACTORY INSTALLED DISCONNECT SWITCH INTEGRAL TO ROOF TOP UNIT. MAKE CONDUCTOR CONNECTIONS TO DISCONNECT SWITCH. VERIFY DISCONNECT SWITCH LOCATION AT EACH R.T.U.
3. FACTORY INSTALLED G.F.C.I. WEATHERPROOF RECEPTACLE INTEGRAL TO ROOF TOP UNIT. CONNECT RECEPTACLE TO EXISTING ROOF TOP UNIT RECEPTACLE CIRCUIT.
4. EXISTING DUCT MOUNTED SMOKE DETECTOR INSTALLED IN DUCTWORK (VERIFY DUCT DETECTOR IS FULLY OPERATIONAL). DUCT DETECTOR MAY BE REUSED IF FULLY OPERATIONAL. IF EXISTING DUCT DETECTOR IS NOT FULLY OPERATIONAL, FURNISH AND INSTALL NEW DUCT MOUNTED SMOKE DETECTOR IN DUCTWORK AND CONNECT TO FIRE ALARM PANEL AND RTU. NEW DUCT MOUNTED SMOKE DETECTOR TO MATCH MANUFACTURER OF EXISTING FIRE ALARM SYSTEM.
5. RECONNECT EXISTING 3 #6 & 1 #10G TO NEW R.T.U., REPLACE EXISTING 50A/3P CIRCUIT BREAKER IN PANEL "PP" WITH NEW 35A/3P CIRCUIT BREAKER AND MAKE FINAL CONNECTION AT NEW CIRCUIT BREAKER. EXTEND/SPLICE CONDUCTOR LENGTH TO REACH NEW R.T.U. IF REQUIRED.
6. RECONNECT EXISTING 3 #12 & 1 #12G TO NEW R.T.U., REUSE EXISTING 15A/3P CIRCUIT BREAKER IN PANEL "PP"AND MAKE FINAL CONNECTION AT EXISTING CIRCUIT BREAKER. EXTEND/SPLICE CONDUCTOR LENGTH TO REACH NEW R.T.U. IF REQUIRED.
7. RECONNECT EXISTING 3 #12 & 1 #12G TO NEW R.T.U., REUSE EXISTING 20A/3P CIRCUIT BREAKER IN PANEL "PP"AND MAKE FINAL CONNECTION AT EXISTING CIRCUIT BREAKER. EXTEND/SPLICE CONDUCTOR LENGTH TO REACH NEW R.T.U. IF REQUIRED.
8. RECONNECT EXISTING 3 #4 & 1 #8G TO NEW R.T.U., REPLACE EXISTING 60A/3P CIRCUIT BREAKER IN PANEL "PP" WITH NEW 50A/3P CIRCUIT BREAKER AND MAKE FINAL CONNECTION AT NEW CIRCUIT BREAKER. EXTEND/SPLICE CONDUCTOR LENGTH TO REACH NEW R.T.U. IF REQUIRED.
9. EXHAUST FAN IS BEING REMOVED/DELETED. REMOVE BRANCH CIRCUIT CONDUCTORS BACK TO CIRCUIT BREAKER IN PANEL LB. CIRCUIT SHOWN IN PARENTHESES. UPDATE PANELBOARD DIRECTORY AND MARK AS SPARE.

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SUBMISSION

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APPROVAL

CARMAX PE

REVISIONS

REV. NO	DATE	DESCRIPTION

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SHEET NO	E1.0