

**GENERAL:**

- LOCATE, CUT AND FRAME ROOF OPENINGS AS SHOWN FOR ALL HVAC EQUIPMENT AND EXHAUST FANS.
- IT IS VERY IMPORTANT THAT ACCURATE MEASUREMENTS ARE USED WHEN LOCATING EXHAUST FAN ROOF OPENINGS TO ENSURE THAT NO ADDITIONAL OFF-SETS ARE REQUIRED IN THE EXHAUST DUCTWORK. COORDINATE ROOF OPENINGS WITH KITCHEN EQUIPMENT.
- PROVIDE FRAMING REQUIRED FOR DIFFUSER INSTALLATION IN HARD CEILING.

**HVAC:**

- INSTALLATION SHALL CONFORM TO MECHANICAL AND ENERGY CODES FOR NEW NONRESIDENTIAL BUILDINGS.
- ALL WORK AND MATERIALS SHALL COMPLY WITH GOVERNING CODES, SAFETY ORDERS AND REGULATIONS.
- OBTAIN AND PAY FOR ALL NECESSARY PERMITS, FEES AND INSPECTIONS REQUIRED BY GOVERNING AUTHORITIES.
- E.C. SHALL PROVIDE CONDUIT FOR LINE AND LOW VOLTAGE WIRING, LINE VOLTAGE WIRING SWITCHES, AND FINAL CONNECTIONS. REFER TO SHEETS E3.0 - ELECTRICAL POWER PLAN, SHEET E3.2-ELECTRICAL POWER ROOF PLAN, E6.0 - ELECTRICAL DETAILS - TBCCB, E6.1 - ELECTRICAL DETAILS - TBCCB, E7.0 - ELECTRICAL DETAILS, E7.1 - ELECTRICAL DETAILS.
- PROVIDE 24V CONTROL WIRING AND FINAL CONNECTIONS. EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION, INCLUDING, BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS SHEETS E6.1 AND E7.1 FOR ADDITIONAL LOW VOLTAGE WIRING AND CONNECTIONS.
- PROVIDE ALL REFRIGERANT LINES FROM ICE MACHINE TO CONDENSER ON ROOF AND CHARGE LINES PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- HVAC UNITS SHALL BE MOUNTED LEVEL ON ROOF CURBS.
- SUPPLY / RETURN DUCTWORK SHALL BE EXTERNALLY INSULATED. ALL RETURN AND SUPPLY DUCT RISERS SHALL BE LINED (NOT WRAPPED).
- SUPPLY / RETURN DUCTS SHALL BE RIGID (EXCEPT AS NOTED/INDICATED AS RIGID ON THE DUCT PLAN), WITH THE EXCEPTION OF THE LAST 5'-0", WHICH MAY UTILIZE FLEXIBLE DUCT. ALL EXHAUST DUCT SHALL BE RIGID.
- ROOFTOP UNITS SHALL BE ORDERED WITH FACTORY SUPPLIED AND INSTALLED RETURN SMOKE DETECTORS. WHEN REQUIRED BY MANUFACTURER, SAMPLE TUBE SHALL BE LOCATED PER FIELD INSTALLATION INSTRUCTIONS. DETECTOR SHALL DEACTIVATE ROOFTOP UNIT UPON SENSING SMOKE. INCLUDE SUPPLY SMOKE DETECTOR ONLY IF REQUIRED BY LOCAL CODE.
- HOOD EXHAUST DUCTS SHALL BE RIGID 16 GA MINIMUM, WELDED DUCT. GRIND ALL WELDS SMOOTH. PROVIDE 3M FIRE BARRIER DUCT WRAP FOR ALL HOOD EXHAUST DUCTS. PROVIDE TRANSITION AT TERMINATION OF TYPE 1 EXHAUST DUCT TO TOP OF FAN BASE. TRANSITION SHALL BE CENTERED AND HAVE MINIMUM OF 1" PER FOOT SLOPE.
- BRANCH DUCTS FEEDING INDIVIDUAL DIFFUSERS SHALL HAVE DAMPERS AT BRANCH FEEDER. DAMPER SHALL BE MINIMUM 26 GAUGE LOCATED IN DEDICATED SLEEVE WITH AXLE AND LOCKING QUADRANT. DAMPERS SHALL NOT BE INSTALLED IN STARTER COLLARS. ALL DAMPER HANDLES SHALL HAVE A FLAG ON THE HANDLE FOR LOCATION PURPOSES.
- OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM EXHAUST FANS AND VENTS.
- SEE M1.0 AND SCOPE OF WORK FOR DESCRIPTION OF HVAC PACKAGE TO BE PURCHASED THROUGH YUMI BRANDS NATIONAL CONTRACT.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING HVAC TEST & BALANCE REQUIRED FOR LOCAL AUTHORITY HAVING JURISDICTION, CERTIFICATE OF OCCUPANCY, BUILDING FINAL, ETC.
- FINAL HVAC SYSTEM TESTING AND BALANCING, AND COMMISSIONING SHALL BE PERFORMED BY INDEPENDENT AGENT. INDEPENDENT AGENT CONTRACTED DIRECTLY BY THE OWNER IS SCHEDULED AND PAID FOR (FRANCHISEE STORES) BY GENERAL CONTRACTOR (CORPORATE STORES ARE DIRECT BILLED TO TACO BELL). CONTRACTOR SHALL CERTIFY COMPLETION OF INSTALLATION, START UP AND PRE-COMMISSIONING CHECKLIST SHOWN ON SHEET SW2.0 BEFORE SCHEDULING OWNER'S INDEPENDENT AGENT. A RE-TEST IS MANDATORY FOR A FALSE START (I.E. NO POWER UPON AGENT'S ARRIVAL, EQUIPMENT NOT WIRED, COMPLETED, STARTED, ETC.) AND SHALL BE A COST INCURRED BY THE G.C. IN THE EVENT A SYSTEM / STORE RECEIVES A GRADE OF 5 OR BELOW AS A RESULT OF THE HVAC SYSTEM PERFORMANCE OR OPERATIONAL DEFICIENCIES, OWNER WILL REQUEST A RE-TEST AND THE COST SHALL BE INCURRED BY THE GENERAL CONTRACTOR.

**INDEPENDENT AGENTS:**

Air Care Experts  
TAB@ACE-IAQ.COM  
949 770-2222

- WIRE ALL SMOKE DETECTORS IN RTU TO ITS RESPECTIVE REMOTE ANNUNCIATOR/RESET SWITCH. INSTALL "SYSTEM SENSOR" MODEL RTS2AOS. MOUNT NEXT TO THERMOSTATS @ 48" A.F.F. - INSTALL PER MANUFACTURER SPECIFICATIONS.
- REFERENCE RTU TO TBCCB CONNECTIONS PER E6.1.
- RTU MANUFACTURER FURNISHED THERMOSTATS SHALL BE CAPABLE OF RECEIVING AN EXTERNAL "OCCUPIED" SIGNAL.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR LOW VOLTAGE CONNECTIONS.
- REFERENCE RTU TO TBANS CONNECTIONS PER E7.1. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR LOW VOLTAGE CONNECTIONS.
- LOW VOLTAGE CONNECTIONS TO SMOKE DETECTORS, REMOTE ANNUNCIATORS AND RESETS, HUMIDISTATS, THERMOSTATS, REMOTE SENSORS, TBCCB AND TBANS REQUIRE VISUAL INSTALLATION VERIFICATION CERTIFICATE. CONTACT CERTIFY@ACE-BCX.COM OR 949 770 2222 FOR CERTIFICATE. SEE SHEET SW2.0 CERTIFICATE.

**REFER TO SCOPE OF WORK IN DIV 23 SPECIFICATION FOR HVAC FOR TEST & BALANCE & COMMISSIONING REQUIREMENTS WHICH WILL BE SUPPLIED BY THE OWNER AND COORDINATED BY THE GC.**

MARK	AREA SERVED	FAN DATA					COOLING CAPACITY			HEATING CAPACITY			ELECTRICAL DATA			WEIGHT (LBS.)	LENNOX MODEL	NOTES	
		SUPPLY CFM	MIN. OA CFM	ESP	HP	RPM	NOMINAL TONS	MIN CAP (MBH) TOT/SEN	MIN EER	INPUT (MBH)	OUTPUT (MBH)	HEATING STAGES	AFUE %	VOLTS/PH	MCA (A)				MOCP (A)
RTU-1	DINING	2890	660	0.8	2	872	8.5	96.6/66.1	12.2	240	192	2	80	208/3	41	50	1336	LGH102H4M	1-15
RTU-2	KITCHEN	6800	1050	1.0	5	1156	17.5	190.8/138.9	12.0	360	288	2	80	208/3	87	100	2560	LGH210H4B	1-15

**SCHEDULE NOTES:**

- LISTED CAPACITY IS UNIT NET COOLING CAPACITY AT THE FOLLOWING CONDITIONS: RTU-1 - 80.6°F DB / 67.1°F WB EAT AND 105°F AMBIENT / RTU-2 - 78.0°F DB / 66.3°F WB EAT AND 105°F AMBIENT. OUTDOOR DESIGN CONDITION, SUMMER 87°F & 74°F WB, WINTER -10°F. THERMOSTAT SHALL BE PROGRAMMED FOR 73°F IN SUMMER AND 68°F IN WINTER WITH 2°F ADJ. FUNCTION UP OR DOWN. UNOCCUPIED HEATING SET POINT SHALL BE SET TO THE STORE SCHEDULE AND 60°F MINIMUM. SPECIFIED UNITS INCLUDE MINIMUM 2 STAGE COOLING FOR RTU-1 AND 3 STAGE COOLING FOR RTU-2, LOW AMBIENT CONTROL TO 0 DEG. F AND THROUGH THE ROOF CURB GAS AND POWER CONNECTIONS.
- HINGED ACCESS DOORS (FACTORY PROVIDED).
- 2 INCH MERV 8 FILTERS (FACTORY PROVIDED).
- SINGLE ENTHALPY ECONOMIZER WITH WEATHER HOOD (FACTORY PROVIDED).
- LOW LEAKAGE ECONOMIZER WITH FAULT DETECTION (FACTORY PROVIDED).
- STANDARD STATIC DISCONNECT SWITCH (FACTORY PROVIDED).
- CIRCUIT BREAKER DISCONNECT SWITCH (FACTORY PROVIDED).
- RETURN AIR SMOKE DETECTOR (FACTORY PROVIDED).
- STANDARD CAP. (FACTORY PROVIDED).
- PHASE MONITOR (FACTORY PROVIDED).
- MULTI-STAGE AIR VOLUME (FACTORY PROVIDED).
- 18" ROOF CURB (FIELD INSTALLED).
- COMFORT SENSE CS850 THERMOSTAT AND REMOTE SENSOR (FIELD INSTALLED).
- GFCI SERVICE RECEPTACLE (FIELD WIRED, FACTORY INSTALLED).
- HOT GAS REHEAT DEHUMIDIFICATION OPTION, HUMIDITY SENSOR KIT. MOUNTED IN RETURN AIR IN UNIT.

Mark	FAN DATA					VOLTS/PH	DRIVE TYPE	MANUFACTURER	MODEL	NOTES
	CFM	ESP	RPM	HP						
EF-1	1050	0.9	1344	1/2	120/1	DIRECT	STRATOVENT	#SVDU50HFA	1,3,5,6,7,8,10	
EF-2	570	0.375	1025	1/4	120/1	DIRECT	STRATOVENT	#SVD30HFA	2,4,7,8,9,10,11	

**REMARKS:**

- UL 762 LISTED (GREASE)
- UL 705 LISTED (HEAT OR STEAM)
- FLAT ROOF CURB, 19.5" X 19.5" X 26"H, VENTED
- FLAT ROOF CURB, 19.5" X 19.5" X 14"H
- GREASE CUP WITH DRAIN
- FACTORY ATTACHED HINGES
- WEATHERPROOF PRE-WIRED DISCONNECT SWITCH
- PROVIDE PRE-WIRED SOLID STATE SPEED CONTROLLER
- GRAVITY BACKDRAFT DAMPER
- FURNISHED BY OWNER WITH HOOD PACKAGE
- FURNISHED WITH DAMPER TRAY

**MECHANICAL NOTES**

**6**

SYMBOL & ABBREV.	DESCRIPTION
	SA/SUP SUPPLY AIR (RISE/DROP)
	RA/RET RETURN AIR DUCT (RISE/DROP)
	EA/EXH EXHAUST AIR DUCT (RISE/DROP)
	CD/SR CEILING DIFFUSER/SUPPLY REGISTER (ARROWHEAD REPRESENTS NUMBER OF THROW)
	RR/RG RETURN REGISTER/GRILLE
	ER/EG EXHAUST REGISTER/GRILLE
	FLEX FLEXIBLE DUCT (14'-0" MAXIMUM)
	ROUND DUCT ELBOW
	ROUND DUCTWORK
	MCD MANUAL VOLUME DAMPER
	DUCT TRANSITION (RECTANGULAR TO ROUND)
	T-STAT PROGRAMMABLE THERMOSTAT, PROVIDED WITH HVAC PACKAGE
	THERMOSTAT SENSOR (REMOTE), PROVIDED WITH HVAC PACKAGE
	HUMIDITY SENSOR (REMOTE), PROVIDED WITH HVAC PACKAGE
	SMOKE DETECTOR, PROVIDED WITH HVAC PACKAGE, MOUNTED IN UNIT
	D CONDENSATE DRAIN
	Ø DIA. DIAMETER
	MECHANICAL EQUIPMENT DESIGNATION
	R RESET SMOKE DETECTOR RESET

SYMBOL & ABBREV.	DESCRIPTION
A/C, AC	AIR CONDITIONING
A.F.F.	ABOVE FINISHED FLOOR
BDD	BACK DRAFT DAMPER
CB	CIRCUIT BREAKER
CLG.	CEILING
CONN.	CONNECT/CONNECTION
CONT.	CONTINUATION
CFM	CUBIC FEET PER MINUTE
DISC.	DISCONNECT
EA	EXHAUST AIR
EF	EXHAUST FAN
(E)	EXISTING
GA	GAGE/GAUGE
GC	GENERAL CONTRACTOR
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
MFR.	MANUFACTURER
MECH.	MECHANICAL
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
RA	RETURN AIR
SA	SUPPLY AIR
S/S	STAINLESS STEEL
TYP.	TYPICAL

**MECHANICAL SYMBOLS**

**7**

**HVAC UNIT SCHEDULE**

**1**

**EXHAUST FAN SCHEDULE**

**2**

MARK	NECK SIZE	FACE SIZE OR GRID SIZE	(NO.) & AIR PATTERN	TYPE	MAX FLOW (CFM)	MOUNTING	MATERIAL	MANUFACTURER	MODEL NUMBER	REMARKS
E-1	8"X8"	12"x12"	-	EXHAUST	200	SURFACE	ALUMINUM	METAL-AIRE / TITUS	CCSS-1/ 50F	FRN SCR TO RND ADAPTER
E-2	8"DIA	24"x24"	-	EXHAUST	300	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	CCS-FB-TB/50F-NT	FRN SCR TO RND ADAPTER
R-1	22"X22"	24"x24"	-	RETURN	2000	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	RHE-6/50FF	HINGED/FULLY REMOVABLE FACE
S-1	15"X15"	24"x24"	4W	SUPPLY	600	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	5000-6 / TDC-AA-NT	FRN SCR TO RND ADAPTER
S-2	9"X9"	14"x14"	4W	SUPPLY	250	SURFACE	ALUMINUM	METAL-AIRE / TITUS	5000-1 / TDC-AA	FRN SCR TO RND ADAPTER
S-4	22"X22"	24"x24"	4W	SUPPLY	600	LAY-IN	MODULAR PLASTIC CORE	HART & COOLEY	RZMCDST	FRN SCR TO RND ADAPTER

**NOTES:**

- SURFACE MOUNTED DIFFUSERS IN HARD CEILINGS SHALL BE PROVIDED WITH OPPOSED BLADE DAMPERS. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES.

**AIR DEVICE SCHEDULE**

**3**

ITEM	OA	RA	SA	EA	PRESSURE
EF-1	--	--	--	-1050	-1050
EF-2	--	--	--	-570	-570
RTU-1	660	2140	2800	--	+660
RTU-2	1050	5750	6800	--	+1050
TOTAL	1710	7890	9600	-1620	+90

**NOTES:**

- OUTSIDE PERCENTAGE OF TOTAL SUPPLY AIR IS 23.6% FOR RTU-1 AND 15.4% FOR RTU-2. ADJUST OUTSIDE AIR INTAKES TO MAINTAIN VALUES AT ALL EVAPORATOR FAN SPEEDS.

TACO BELL HAS A NATIONAL HVAC AGREEMENT WITH LENNOX NATIONAL ACCOUNTS. FOR QUOTES & TECHNICAL SPECIFICATIONS CONTACT BY EMAIL AT YUMI@LENNOXIND.COM OR 800-367-6285 ACCOUNT MANAGER BRAD SMITH.

LENNOX HAS AGREED TO SUPPLY AN HVAC PACKAGE CONSISTING OF THE ROOF-TOP UNITS, CURBS, THERMOSTATS, TEMPERATURE SENSORS (REMOTE), AND HUMIDITY SENSORS (REMOTE). RTUS AS SPECIFIED INCLUDE AN UNPOWERED CONVENIENCE OUTLET (SEE ELECTRICAL) AND AN HACR CIRCUIT BREAKER WHICH SERVES AS UNIT DISCONNECT.

FOR HVAC TEST AND BALANCE, GC TO SCHEDULE WITH TACO BELL'S PREFERRED VENDOR PER SCOPE OF WORK WORKSHEETS. BE PREPARED AT TIME OF ORDER OR QUOTE REQUEST TO PROVIDE ALL PROJECT DETAILS REGARDING SPECIFICATIONS AND QUANTITIES AS SITE SPECIFIC DESIGN MAY NOT MATCH NATIONAL DESIGN.

SEE THE SCOPE OF WORK SHEETS FOR ADDITIONAL INFORMATION.

**HVAC NATIONAL ACCOUNT NOTES**

**5**

**AIR BALANCE SCHEDULE**

**4**



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PROJECT # 22004

DATE	REMARKS
1 05-19-22	Bids and Permits

**CONTRACT DATE:**

BUILDING TYPE: END. MED 40

PLAN VERSION: MARCH 2021

**BRAND DESIGNER:**

SITE NUMBER: 315875

**STORE NUMBER:**

PA/PM:

DRAWN BY.:

JOB NO.:

**GREAT LAKES TACO, L.L.C.**

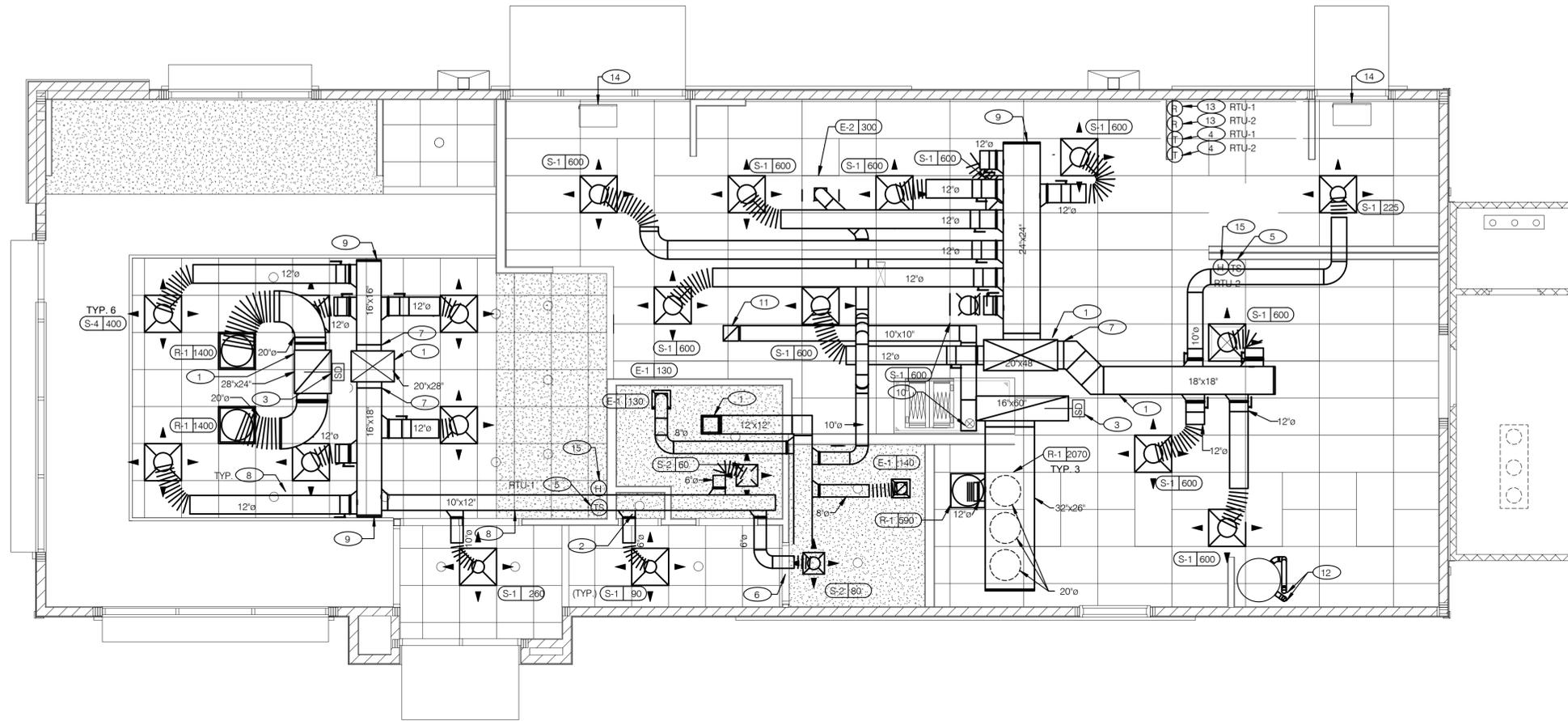
4047 Grange Hall Road  
Holly, Michigan 48442



**ENDEAVOR 2.0 MECHANICAL SCHEDULES AND NOTES**

**M1.0**

PLOT DATE: 4/18/2022



**COVER ALL HVAC DUCT SYSTEMS OPENINGS TO PROTECT FROM CONSTRUCTION DUST AND DEBRIS UNTIL CONSTRUCTION IS COMPLETE. IF HVAC SYSTEM IS OPERATED BEFORE CONSTRUCTION IS COMPLETE, PROVIDE MERV8 FILTERS AT ALL AIR INTAKES INSIDE THE BUILDING.**

**DUCT AND DIFFUSER PLAN** 1/4" = 1'-0" **A**

1. DINING ROOM LIGHT FIXTURE LOCATIONS ARE CRITICAL. COORDINATE DUCTWORK LOCATIONS WITH LIGHTING AND STRUCTURAL.
2. THERMOSTATS SHALL BE PROGRAMMABLE THERMOSTAT WITH SUBBASE AND REMOTE TEMPERATURE SENSOR (PROVIDED WITH RTU PACKAGE).
3. HUMIDITY SENSOR APPLICATION IS VARIABLE PER SITE SPECIFIC CONDITIONS. REFER TO HVAC UNIT SCHEDULE FOR APPLICATION CONDITIONS.

1. AIR DUCT UP TO UNIT.
2. SEE DETAIL 4 ON DRAWING M4.0 FOR SUPPLY AIR TAKE-OFF TO CEILING DIFFUSERS AND GRILLES.
3. FACTORY INSTALLED SMOKE DETECTOR MOUNTED IN ROOFTOP UNIT.
4. LOCATE THERMOSTAT CONTROLS ON WALL IN OFFICE AT 48" A.F.F. COORDINATE LOCATION WITH LIGHT SWITCHES AND OTHER WALL MOUNTED ACCESSORIES. RUN 24 VAC POWER AND SIGNAL CONDUCTORS IN TWO (2) SEPARATE TWO (2) CONDUCTOR CABLES, 18 AWG.
5. MOUNT THERMOSTAT REMOTE SENSOR AT 60" ABOVE FINISHED FLOOR. CONNECT TO THERMOSTAT WITH 18 AWG 2 CONDUCTOR CABLE PER MANUFACTURER INSTALLATION INSTRUCTIONS. ENSURE THAT TEMPERATURE SENSOR IN DINING AREA IS NOT LOCATED ON TILE WALL.
6. UNDERCUT RESTROOM DOORS MINIMUM 3/4" FOR MAKE-UP AIR.
7. PROVIDE SHOE TAP AT CONNECTION TO DUCT DROP FROM ROOFTOP UNIT.
8. RUN DUCT THROUGH OPEN WEBBING OF ROOF TRUSSES (WHERE POSSIBLE). COORDINATE WITH TRUSS DESIGN PRIOR TO DUCTWORK FABRICATION.
9. RUN DUCTWORK BETWEEN TRUSSES AS HIGH AS POSSIBLE UNDER ROOF JOISTS.
10. 10'X10' EXHAUST AIR DUCT DOWN AND TRANSITION TO FIELD CUT EXHAUST CONNECTION AT HOOD.
11. EXHAUST DUCT SHALL RUN BETWEEN ROOF JOISTS TO CONNECT TO ROOF EXHAUST FAN EF-1. SEE HOOD DETAILS ON DRAWING M3.0. SEE DETAIL 10 ON SHEET M4.0 FOR FIRE PROTECTION OF DUCT WORK. SEE DETAIL 11 ON SHEET M4.0 FOR EXHAUST DUCT TRANSITION.
12. PROVIDE 3" PVC WATER HEATER INTAKE AND FLUE VENT. TERMINATION ON ROOF. COORDINATE WORK WITH ALL TRADES.
13. PROVIDE SMOKE DETECTOR RESET SWITCH WITH KEY. RESET SWITCH SHALL BE 'SYSTEM SENSOR' MODEL # RT5151 KEY. MOUNT NEXT TO THERMOSTATS @ 48" A.F.F. - INSTALL PER MANUFACTURER'S REQUIREMENTS.
14. PROVIDE AIR CURTAIN IN LOCATION AS SHOWN ON PLAN. MOUNT AIR CURTAIN ON MULLION DIRECTLY ABOVE SERVICE OPENING DOORS AT DRIVE-THRU WINDOW. AIR CURTAIN SHALL BE BERNER MODEL DTU03-2026A. WITH 120V/1,60 POWER CONNECTION. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MORE DETAILS.
15. HUMIDITY SENSOR (REMOTE) WHEN REQUIRED FOR HOT GAS REHEAT RTU OPTION. HUMIDITY SENSOR SHALL BE PLACED IN RETURN AIR DUCTWORK. RUN 24 VAC POWER AND SIGNAL CONDUCTORS IN TWO (2) SEPARATE TWO (2) CONDUCTOR CABLES, 18 AWG. SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

**GENERAL NOTES - MECHANICAL** NTS **C**

**KEYNOTES - DUCT AND DIFFUSER** NTS **B**



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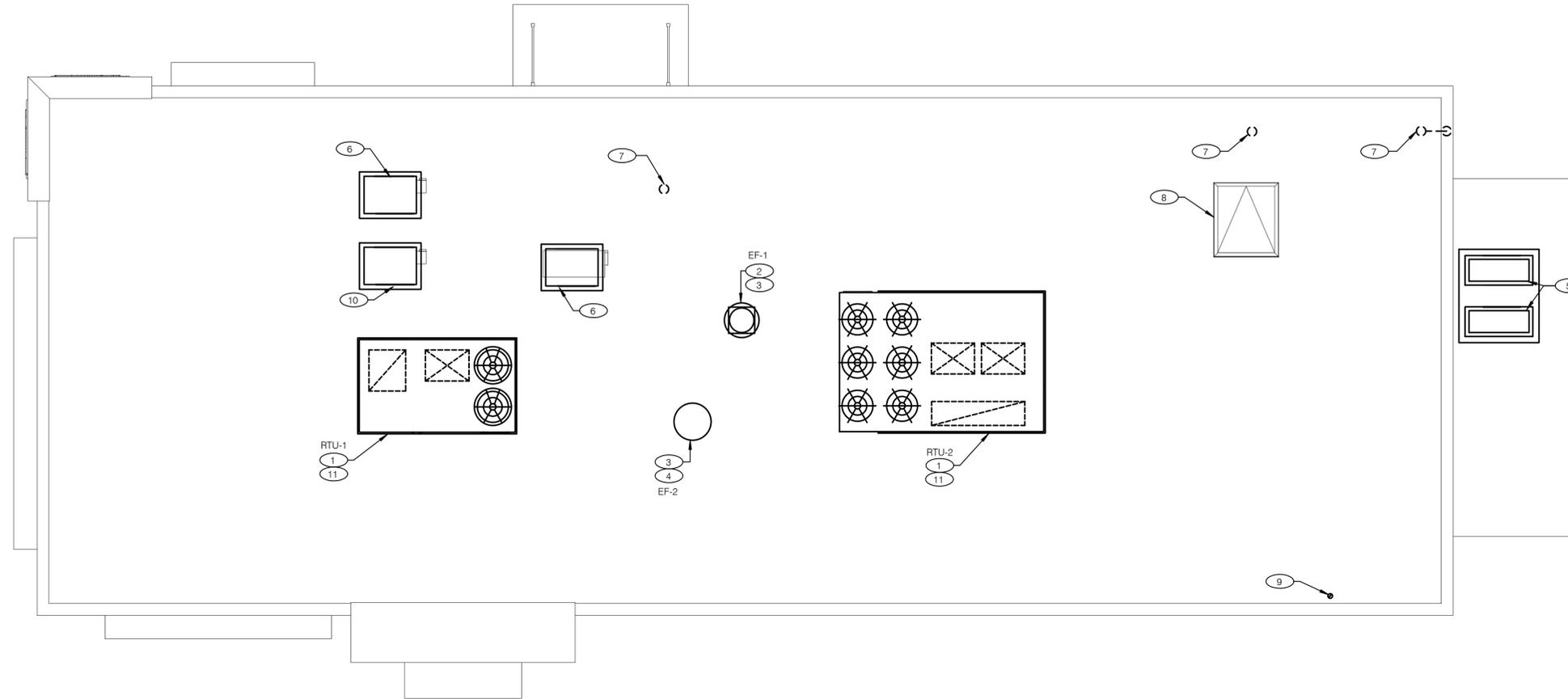
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 Holly, Michigan 48442



**ENDEAVOR 2.0**  
**DUCT AND**  
**DIFFUSER PLAN**

**M2.0**

PLOT DATE: 4/18/2022



**COVER ALL HVAC DUCT SYSTEMS OPENINGS TO PROTECT FROM CONSTRUCTION DUST AND DEBRIS UNTIL CONSTRUCTION IS COMPLETE. IF HVAC SYSTEM IS OPERATED BEFORE CONSTRUCTION IS COMPLETE, PROVIDE MERV8 FILTERS AT ALL AIR INTAKES INSIDE THE BUILDING.**

**MECHANICAL ROOF PLAN** 1/4" = 1'-0" **A**

- 1 PROVIDE RTU IN LOCATION AS SHOWN ON PLANS. COORDINATE EXACT RTU LOCATION AND DUCT DROPS WITH STRUCTURAL TRUSS LAYOUT. MAINTAIN MINIMUM 10'-0" CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND EXHAUST TERMINATIONS.
- 2 PROVIDE TYPE I EXHAUST FAN IN LOCATION AS SHOWN PLANS. CONNECT 10"x10" EXHAUST DUCT FROM EXHAUST HOOD UP TO EF-1 ON ROOF. COORDINATION EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
- 3 COORDINATE EXHAUST FAN LOCATION WITH ROOFTOP UNIT. MAINTAIN ROOFTOP UNIT MANUFACTURER'S REQUIRED CLEARANCE AND MINIMUM 10 FT TO ROOFTOP UNITS OUTSIDE AIR INTAKE.
- 4 PROVIDE EXHAUST FAN IN LOCATION AS SHOWN PLANS. CONNECT 10"x10" EXHAUST DUCT FROM RESTROOM EXHAUST GRILLES TO EF-2 ON ROOF. COORDINATION EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
- 5 CONDENSING UNIT SERVING WALK-IN COOLER/FREEZER. COORDINATE EXACT LOCATION WITH ROOF LAYOUT. CONTRACTOR TO FIELD VERIFY EXACT REFRIGERANT PIPING. PROVIDE ALL NECESSARY PIPING ACCESSORIES INCLUDING PIPING INSULATION AND INSTALL ON APPROPRIATE EQUIPMENT SUPPORTS.
- 6 CONDENSING UNIT SERVING ICE MAKER. COORDINATE EXACT LOCATION WITH ROOF LAYOUT. CONTRACTOR TO FIELD VERIFY EXACT REFRIGERANT PIPING. PROVIDE ALL NECESSARY PIPING ACCESSORIES INCLUDING PIPING INSULATION AND INSTALL ON APPROPRIATE EQUIPMENT SUPPORTS.
- 7 PLUMBING VENT. REFERENCE 1/P2.0.
- 8 ROOF HATCH. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
- 9 PROVIDE MANUFACTURER'S CONCENTRIC TERMINATION VENT KIT SERVING HOT WATER HEATER BELOW. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ENSURE AT LEAST 10'-0" DISTANCE BETWEEN OUTDOOR AIR INTAKES.
- 10 CONDENSING UNIT SERVING FROZEN BEVERAGE MACHINE. COORDINATE EXACT LOCATION WITH ROOF LAYOUT. FIELD VERIFY EXACT REFRIGERANT PIPING. PROVIDE ALL NECESSARY PIPING ACCESSORIES INCLUDING PIPING INSULATION AND INSTALL ON APPROPRIATE EQUIPMENT SUPPORTS.
- 11 ALL UTILITY PIPING FOR RTUS SHALL RUN UP THROUGH ROOF INSIDE EACH UNITS ROOF CURB.

**KEYNOTES - MECHANICAL ROOF PLAN** NTS **B**



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**ENDEAVOR 2.0 MECHANICAL ROOF PLAN**

**M2.1**

PLOT DATE: 4/18/2022

### STRATOVENT MODEL# SVDU50HFA

TAG	HOOD	STRATOVENT MODEL#	CFM	ESP	RPM	H.P.	SH.P.	QD	VOL.T.	FLA.	MCANCP	WEIGHT (LBS)	FINISH	CONES
EF-1	FRYER	SVDU50HFA	1050	0.9'	1429	0.50	0.33	1"	115	8.4	10.5/15	85/90	SS	14.6

**SELECTION OPTIONS:**  
 RESTAURANT MODEL  
 ULTRZ, GREASE RATED  
 DIRECT DRIVE  
 SPEED CONTROLLER  
 WEATHERPROOF ENDOCONNECT  
 FLAT CURB, VENTED  
 FACTORY ATTACHED HINGES

**ATTENTION:**  
 INSTALLER MUST READ LABEL NEAR DISCONNECT SWITCH MESSAGE ON LABEL.  
 INSTALLER SHOULD SUPPLY ENGLISH ELECTRICAL CORD TO ALLOW UNIT TO MAKE COMPLETE WIRING.

NOTE: ALL DIMENSIONS (INCHES)

REVISED: 10-10-2018

**HOOD EXHAUST FAN DETAIL** NTS **7**

### PROJECT: TACO BELL

System Size: ANSUL-3.0 Gallons Total, R102  
 Flow Points: 8 Design, 11 (max)

Hood #1: 6'-3" L x 36" W x 14" H  
 Exhaust Riser Size: 10" x 10"

**NOTES**  
 - FIELD PIPE DROPS AS SHOWN: SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY STRATOVENT FOR HOOD-BASED PIPING.  
 - RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED.  
 - MAXIMUM 9 ELBOWS IN SUPPLY LINE, MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE.  
 - ALL NOZZLE HEIGHT AND PLACEMENT TO BE DETERMINED BY INSTALLER AND AHJ PER ANSUL GUIDELINES.  
 - ALL PIPING TO BE 3/8" SCH 40 BLACK IRON.  
 - THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.  
 - SYSTEM INSTALLATION AND FINAL HOOKUP SOURCED BY GEN CONTRACTOR. SYSTEM PARTS OPTIONALLY PURCHASED FROM STRATOVENT BY OWNER OR G.C..

**LEGEND - WALL MOUNTED ANSUL SYSTEM**

1B	3.0 GALLON TANK
2	AUTOMAN RELEASE
5	ANSULEX LIQUID AGENT (3.0 GAL.)
7	CARTRIDGE (101-20)
10	TEST LINK
11	DOUBLE MICROSWITCH
1W	NOZZLE ASSEMBLY (419336)
1N	NOZZLE ASSEMBLY (419335)
3N	NOZZLE ASSEMBLY (419338)
28	DETECTOR BRACKET
30	HIGH TEMP FUSIBLE LINK
MGV	MECHANICAL GAS VALVE
34	REMOTE MANUAL PULL STATION
S	SWIVEL ADAPTOR

DESIGN NOTE:  
 1) ABOVE DEPICTION SHOWS DUAL FRYERS ON RIGHT END OF THE HOOD. HOOD SUPPLIER WILL VERIFY EQUIP LAYOUT PER PLANS AND PLACE FRYER NOZZLES ON THE LEFT END WHEN APPROPRIATE TO SUIT SITE CONDITIONS

**TACO BELL HOOD FIRE SUPPRESSION SYSTEM PLAN** 12" = 1'-0" **6**

### INSTALLATION: DUCT TEMPERATURE SWITCH

OPTION #2: THROUGH ROOF OF HOOD INTO PLENUM AREA BEHIND FILTERS, LEFT OR RIGHT OF DUCT OPENING.

OPTION #1 (PREFERRED): FACTORY INSTALLED IN HOOD CAVITY

NOTE: IF SENSOR IS FIELD INSTALLED, THE KIT SHIPS WITH UL-LISTED QUICK SEALS MUST BE USED TO SEAL ANY HOOD OR DUCT PENETRATIONS (SEE EXPLODED PARTS VIEW).

### INSTALLATION: DUCT TEMPERATURE SENSOR

#### SENSOR DETAIL

(1) NORMALLY OPEN DRY CONTACT, CLOSES ON TEMPERATURE RISE ABOVE 85F. WIRED IN PARALLEL TO NORMAL CONTROL CIRCUIT. WHEN ORDERED, SENSOR IS FACTORY INSTALLED IN HOOD CAVITY WITH J-BOX ON TOP OF THE HOOD.

(2) DO NOT USE SENSOR AS THE PRIMARY MEANS OF FAN CONTROL. USED ONLY AS A SAFETY DEVICE PER INTERNATIONAL MECHANICAL CODE TO ENERGIZE HOOD EXHAUST FAN WHEN COOKING EQUIPMENT GENERATES HEAT.

(3) FAN CONTACTOR AND CONTROLS BY OTHERS, SEE ELECTRICAL SHEETS FOR DETAILS.

(4) SEE SPECS ABOVE FOR TEMP SET POINT ADJUSTMENT

NOTE: GENERIC WIRING DEPICTION. SEE PLANS FOR PROPER INTEGRATION.

### HEAT SENSOR ATTACHMENT

EXTERNAL SURFACE OF DUCT, OR ON TOP OF HOOD.

1.125" - 1.250" DIAM. HOLE

0.50" VULCAN CALSTAT

0.50" QUIK SEAL (ADAPTER BODY)

0.50" QUIK SEAL (WASHER)

0.50" QUIK SEAL (NUT)

EXTENSION RING, TACK WELD TO HOOD OR DUCT TO SECURE INSTALLATION.

**SPECIFICATIONS:**  
 \* VULCAN CALSTAT, 1E2B9-85, NORMALLY OPEN DRY CONTACT  
 \* SENSOR FACTORY SET AT 85F  
 \* FIELD ADJUSTED W/SET SCREW, CW INCREASE, CCW DECREASE, 90F PER REVOLUTION  
 \* RATED FOR 10 AMPS @ 120 VAC, 5 AMPS @ 240 VAC  
 \* SHIPPED FACTORY INSTALLED IN HOOD CAVITY

ADDITIONAL QUESTIONS?? CONTACT: STRATOVENT VENTILATION HOODS, 919-573-4250 - 251-490-6114 JEFF.JOHNSON@STRATOVENT.COM

MODIFIED: 04-11-2020

**HEAT SENSOR ATTACHMENT** NTS **5**

### HOOD NOTES AND SPECS (TYP.)

1. Hoods shall be constructed of minimum 20 gauge stainless steel with #3 finish. All unexposed surfaces shall be constructed of minimum 18 gauge aluminum steel.

2. UL listed aluminum or stainless steel traffic-type tires shall be easily removed for cleaning. Filter housing shall terminate in a splash-grease trough that drains into a removable stainless steel grease cup.

3. UL listed and NSF approved vapor proof incandescent light fixtures permitted to junction box at top of hood in accordance with NEC 70.

4. The piped fire suppression systems shall be located on the top of the hood and provided with the hood or by a certified technician. Final location of all nozzles and the suppression lines to be locally approved and permitted.

5. Hoods shall be fabricated in accordance with NFPA 96 and shall bear the NSF Seal of Approval. Hoods shall be listed under UL 710 EXHAUST HOODS FOR COMMERCIAL COOKING EQUIPMENT. Certified by ETL under FILE# 3054804-001.

THIS HOOD DESIGN IS BASED UPON STRATOVENT, MODEL SVND2. MANUFACTURED BY: STRATOVENT VENTILATION HOODS RALEIGH, NC 27616 CONTACT: JEFF JOHNSON, 251-490-6114

NSF LISTED NAPA INTERNATIONAL

**HOOD NOTES AND SPECS (TYP.)** NTS **4**

### STRATOVENT HOOD

ENCLOSURE WRAPPERS

HEAT SENSOR

HOOD LIGHTS

DUAL OUTLET FOR TIMER, REQUIRES DEDICATED BREAKER

36"

26"

61" TYP.

71" TYP.

1" THICK, INSULATED, END PANEL W/ ADJUSTABLE LEGS, SHIPS LOOSE, FIELD INSTALLED ON THE END OF THE HOOD CLOSEST TO RETHERMALIZER (VERIFY WITH EQUIP LAYOUT)

CHASE CUTOUT (GAS OR POWER LINES 19.5" X 4" TYPICAL)

STRATOVENT-BRAND HOODS ARE CERTIFIED BY ETL-INTERTEK TO NATIONALLY RECOGNIZED UL-710 AND NSF STANDARDS.

CONTACT US: WWW.STRATOVENT.COM 919-573-4250 FEEDBACK@STRATOVENT.COM

**HOOD ISOMETRIC** 12" = 1'-0" **3**

HOOD #	1 OF 1	MODEL #	STRATOVENT SVBD2
LENGTH (IN):	6'-3"	WIDTH (IN):	36"
HEIGHT (IN):	14"		
EXHAUST CFM:	1050	SUPPLY CFM:	BY RTU-SEE M1.0
EXHAUST SP:	0.9" (HOOD + DUCT)	SUPPLY SP:	NA
EXHAUST FPM:	1512	SUPPLY FPM:	NA
EXH. SIZE:	10"X10"	SUP SIZE:	NA
FILTERS: (4)	16" X 16"	HOOD WEIGHT:	300 LBS
FIRE SUPPRESSION:	ANSUL-R102	FILTER TYPE:	STAINLESS BAFFLE
LIGHT QTY: (3)	A19 CFL	CONTROL SWITCH:	BY OTHERS

**DESIGN NOTES:**  
 - STRATOVENT HOODS ARE ETL LISTED TO UL-710 STANDARDS, 3054804-001  
 - MODEL SVBD2 IS A NON-CANOPY HOOD, 'LISTED' VALUES ARE UTILIZED FOR AIRFLOW, OVERHANGS AND TEMPERATURE RATINGS.  
 - 18/20 GAUGE MINIMUM S/S ON EXPOSED SURFACES PER NFPA.  
 - HOOD IS PRE-PIPED FOR ANSUL R102, FIELD HOOKUP BY OTHERS  
 - INSTALLER TO REVIEW ELECTRICAL SHEETS FOR HOOD AND FAN WIRING. STRATOVENT DOES NOT PROVIDE A CONTROL BOX IN THE 'BASE' PACKAGE.

### TACO BELL HOOD DETAIL

3" INTEGRAL REAR STAND-OFF, FACTORY INSULATED, HOOD ASSEMBLY IS LISTED AND LABELED FOR ZERO CLEARANCE TO COMBUSTIBLE IN THE REAR. ARCHITECT MUST VERIFY COMPLIANCE WITH ALL LOCAL CODES CONCERNING CLEARANCES.

HOOD DETAIL 1: CORNER HANGING ANGLE (4) TYPICAL (HANGING ANGLE MUST BE SUPPORTED WITH 1/2" X 3/8" GRACE'S MINIMUM ALL THROUGH HANGING ANGLE AND CEILING ANCHOR POINTS WITH 1/2" GRACE'S MINIMUM STEEL SLAT HANGERS. NUTS AS SHOWN MUST USE DOUBLE HEX NUT CONSTRUCTION. HANGING ANGLES AND ABOVE CEILING ANCHORS, MINIMUM 1/2" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT THROUGH ALL HANGERS TO FIT.

HOOD DETAIL 2: TIMER MOUNTING CHANNEL - POWER OUTLET

25" TALL DUCT ENCLOSURE PANELS, FRONT, LEFT & RIGHT SIDES (PROVIDED WITH HOOD, GC INSTALLED).

TOP EDGE OF HOOD.

LOWER, LEADING EDGE OF HOOD, 71" ABOVE FINISHED FLOOR.

END PANELS, PROVIDED BY STRATOVENT, SEE SIDE VIEW DETAIL, FIELD INSTALLED BY GC.

106" H X 95" L, BACKSPASH, COVERING REAR WALL AND 18" BEYOND THE HOOD. ADJUST SIZE TO SUIT SITE CONDITIONS. MINIMUM 20 GA. STAINLESS STEEL PROVIDED BY HOOD VENDOR.

TOP OF S/S BACKSPASH, SLIGHTLY ABOVE DROP CEILING.

8'-10" HIGH, DROP CEILING (TYPICAL). HOOD PROVIDER MUST BE NOTIFIED IF CEILING HEIGHT VARIES TO ADJUST TRIM HEIGHT. VERIFY WITH ARCHITECTURAL SHEETS

HOOD DETAIL 2: 30" L X 3" H, FACTORY ATTACHED MOUNTING CHANNEL FOR CUSTOMER SUPPLIED TIMERS. DUAL 115V/1PH POWER OUTLET MOUNTED ABOVE CHANNEL WITH J-BOX ON TOP OF HOOD.

SEE ARCHITECTURAL PLAN FOR APPLIANCE LAYOUT

STRATOVENT  
 REDDING, CA - RALEIGH, NC  
 800-474-0037 - WWW.STRATOVENT.COM - 251-490-6114

UL/LULC-710 Standard (NSF ANSI Standard 2) NFPA 96 ETL-LISTED FILE #3054804-001 / TESTED TO UL-710

UPDATED: 6FT-3IN LONG VERSION, 04-11-2020

**TACO BELL HOOD DETAIL** NTS **2**

### LOW-PROFILE HOOD HOOD #1

STRATOVENT HOODS BUILT IN COMPLIANCE WITH NSF, UL, NFPA 96, UL STANDARD #2, ETL FILE NO. 3054804-001

NON-CANOPY HOOD DESIGN BASED ON:  
 MANUFACTURER: STRATOVENT, MODEL SVBD2  
 ETL LISTED UL/LULC-710, ULC-5646: # 3054804-001  
 MIN. 'LISTED' AIRFLOW: 150 CFM PER LINEAR  
 DESIGN AIRFLOW: 168 CFM PER LINEAR FT  
 MAX. DIST. ABOVE COOK SURFACE: 47"  
 MAX. COOK SURFACE FRONT UNDERHANG: -3"  
 MIN. SIDE COOK SURFACE OVERHANG: 0"  
 MAX. APPLIANCE COOKING TEMPERATURE: 450 F

NOTE: DEPICTED DUCT ROUTING IS GENERIC AND WILL VARY BASED ON SITE CONDITIONS. ADJUST FAN SIZING TO MATCH REQUIRED STATIC PRESSURE.

DUCT TERMINATION SHALL EXPAND TO MATCH FAN INLET SIZE. DO NOT OBSTRUCT FAN INLET.

40" MIN. (N.T.S.)

27"H, 3-SIDED DUCT ENCLOSURE PANELS, SHIPPED LOOSE BY HOOD SUPPLIER. DESIGN FOR UP TO 9FT DROP CEILING.

FIELD CUT OPENING BY INSTALLER, TRANSITION PER PLANS. IF SELECTED, A HOOD MOUNTED HEAT SENSOR WILL BE FACTORY INSTALLED IN ROOF OF HOOD FOR AUTOMATIC ACTIVATION.

16"H, UL-LISTED, S/S BAFFLE FILTERS.

3" INTEGRAL REAR STAND-OFF, FACTORY INSULATED. HOOD ASSEMBLY IS LISTED FOR ZERO CLEARANCE TO COMBUSTIBLE IN THE REAR. COMPLIANCE WITH ALL LOCAL CODES VERIFIED BY ARCHITECT.

GREASE CUP

26" X 26" END PANELS, SHIPPED LOOSE AND GC INSTALLED. PROVIDED BY HOOD VENDOR.

20 GA. MIN S/S WALL PANEL COVERING REAR WALL, EXTENDING 18" BEYOND THE HOOD. PROVIDED BY STRATOVENT.

FULL END PANEL ON END OF HOOD CLOSEST TO THE RETHERMALIZER. PROVIDED BY HOOD VENDOR.

30" L X 3" H X 1.25" W, TIMER MOUNTING CHANNEL, FACTORY ATTACHED. DUAL 115V/1PH POWER OUTLET FLUSH MOUNTED ON FACE OF HOOD WITH J-BOX ON TOP.

6'-10"

8'-10"

5'-11"

5'-11"

3'-0"

1'-2"

NOTIFY HOOD SUPPLIER IF DROP CEILING IS HIGHER OR LOWER THAN 8'-10" AFF.

STRATOVENT

CONTACT US: WWW.STRATOVENT.COM 919-573-4250 FEEDBACK@STRATOVENT.COM

UPDATED: 6FT-3IN LONG VERSION, 04-11-2020

**TACO BELL HOOD SECTION** 12" = 1'-0" **1**



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**L + A ARCHITECTS INC. A.I.A.**  
 441 S. LIVERNOIS ROAD SUITE 265 ROCHESTER HILLS, MI 48307  
 PHONE (248) 524-4700 FAX (248) 524-9746

PROJECT # 22004

DATE	REMARKS
05-19-22	Bids and Permits

CONTRACT DATE:  
 BUILDING TYPE: END. MED 40  
 PLAN VERSION: MARCH 2021  
 BRAND DESIGNER:  
 SITE NUMBER: 315875  
 STORE NUMBER:  
 PA/PM:  
 DRAWN BY: J  
 JOB NO.:

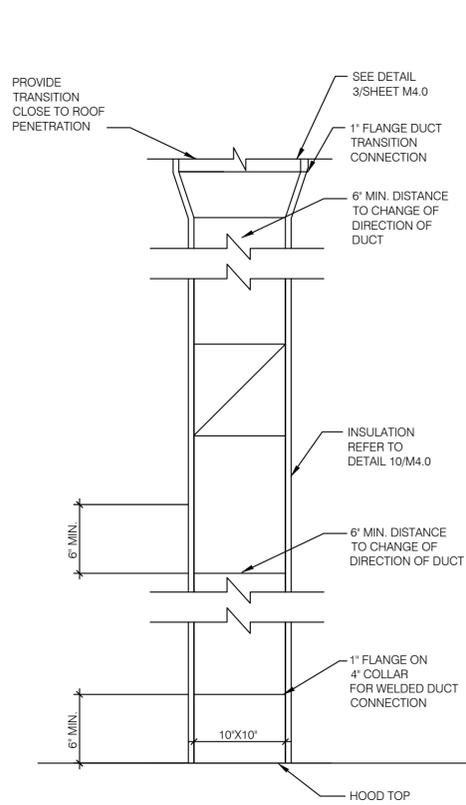
**GREAT LAKES TACO, L.L.C.**  
 4047 Grange Hall Road  
 Holly, Michigan 48442



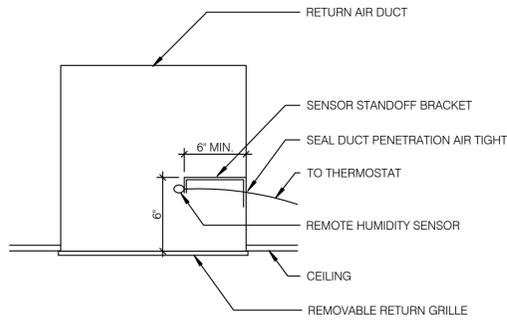
**ENDEAVOR 2.0 HOOD DETAILS AND SECTIONS**

**M3.0**

PLOT DATE: 4/18/2022

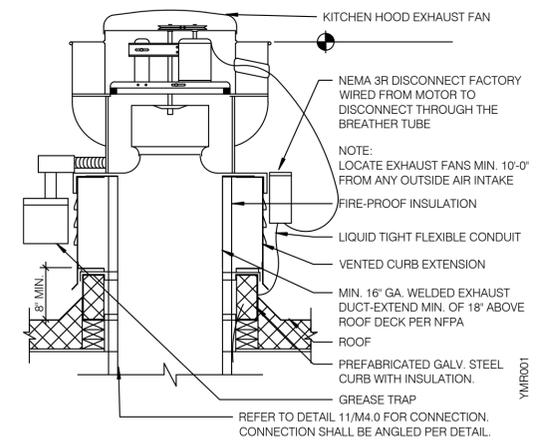


**TB HOOD DUCT TRANSITION** NTS **11**

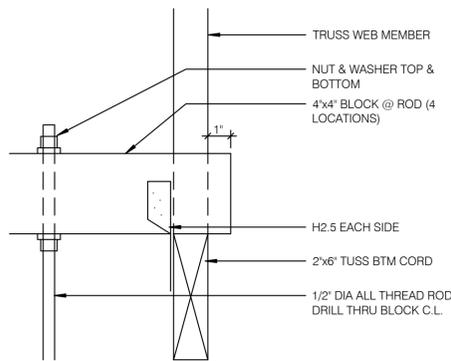


**REMOTE HUMIDITY SENSOR** NTS **8**

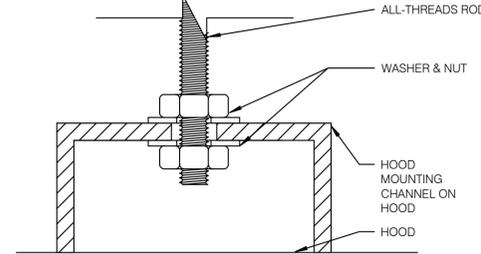
**NOT USED** NTS **6**



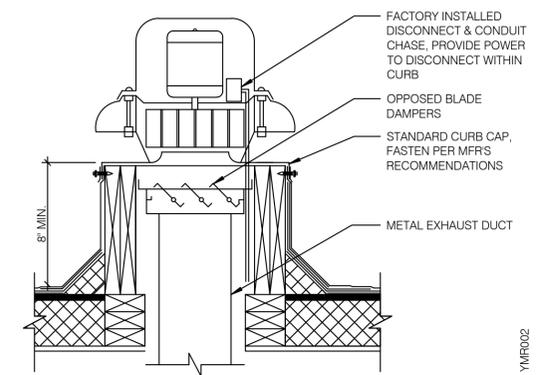
**EXHAUST FAN (EF-1)** NTS **3**



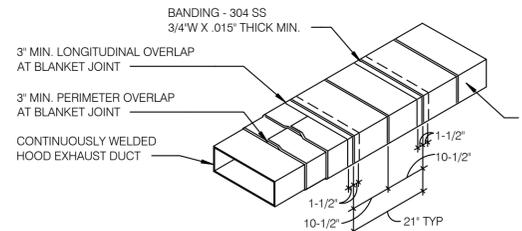
**ROD ATTACHMENT** NTS **7**



**BOLT CONNECTION TO HOOD** NTS **5**

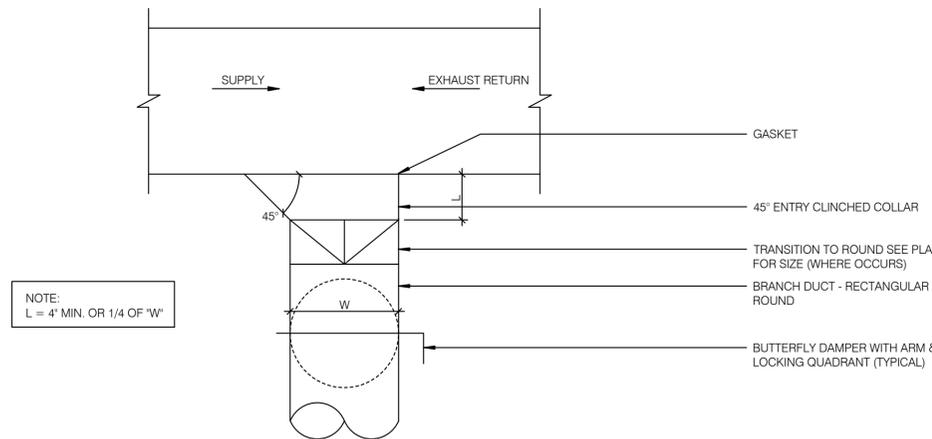


**RESTROOM FAN (EF-2)** NTS **2**



- NOTES:
1. WRAP GREASE DUCT CONTINUOUS AS SHOWN FROM CONNECTION AT FAN THROUGH CURB AND EXTEND 18" MIN. BELOW ROOF DECK.
  2. FOR HORIZONTAL RUNS OF EXHAUST DUCTS PROVIDE TYPICAL TRAPEZE SUPPORT SYSTEM WITH 1/2" HANGER RODS A MAXIMUM OF 6" FROM INSULATION EDGE. TRAPEZE SUPPORTS SHALL BE SPACED A MAXIMUM OF 60" ON CENTER FROM CENTERLINE OF VERTICAL EXHAUST DUCT.
  3. SLOPE HORIZONTAL EXHAUST DUCT RUNS A MINIMUM OF 1/4" PER FOOT (2% SLOPE) TOWARDS EXHAUST HOOD.
  4. PROVIDE INSULATED ACCESS DOOR OR PANEL NEAR MID POINT OF EXHAUST DUCT RUN FOR CLEANING AND INSPECTION OF DUCT. PROVIDE AN APPROVED SIGN ON ACCESS DOOR OR PANEL WHICH READS "ACCESS PANEL DO NOT OBSTRUCT."

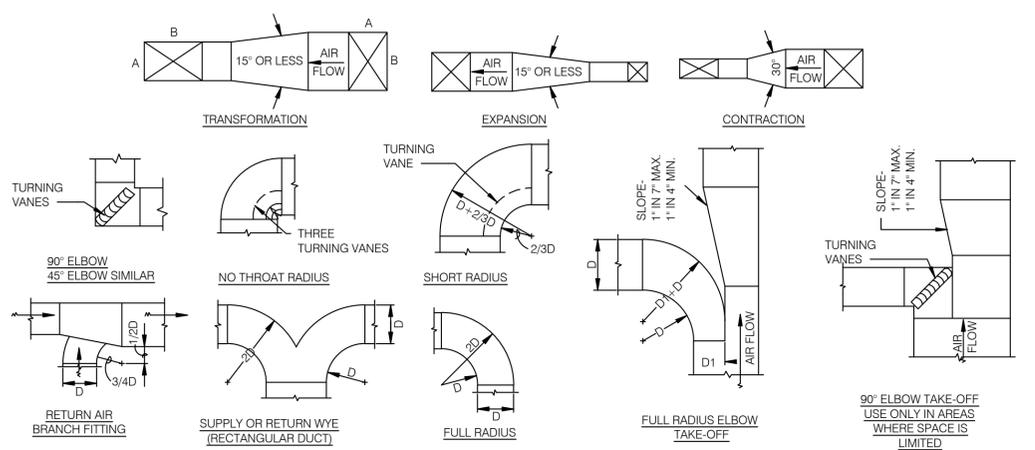
**TB HOOD DUCT TRANSITION** NTS **11**



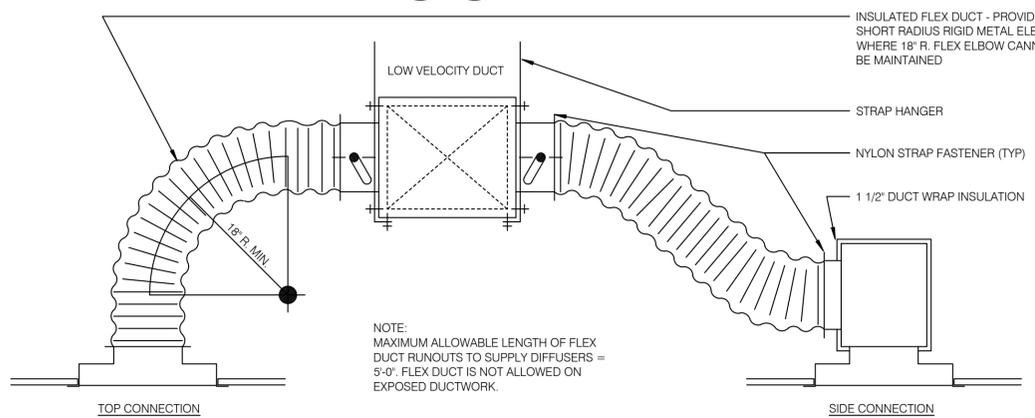
**CEILING DIFFUSER CONNECTIONS** NTS **4**

BANDING REQUIREMENTS: USE 304 STAINLESS STEEL BANDS A MAXIMUM 1-1/2" FROM BLANKET EDGE AND SPACED A MAXIMUM OF 10-1/2" ON CENTER.

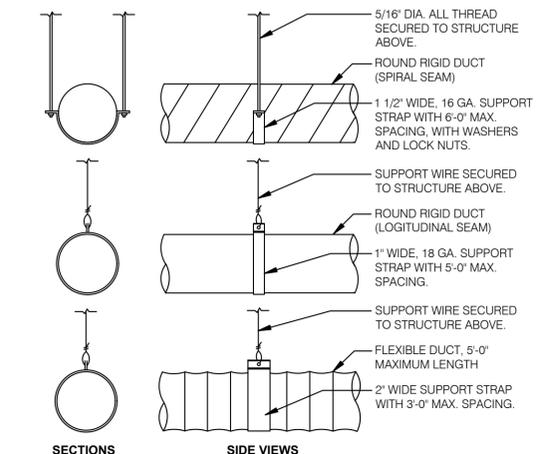
**KITCHEN HOOD EXHAUST DUCT SYSTEM DETAIL** NTS **10**



**TYPICAL DUCTWORK DETAILS** NTS **9**



**CEILING DIFFUSER CONNECTIONS** NTS **4**



**DUCT SUPPORT DETAIL** NTS **1**



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Job No.: 273-22043



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PHONE (248) 524-4700 FAX (248) 524-9748  
PROJECT # 22004

DATE	REMARKS
05-19-22	Bids and Permits

CONTRACT DATE:  
BUILDING TYPE: END. MED 40  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER:  
SITE NUMBER: 315875  
STORE NUMBER:  
PA/PM:  
DRAWN BY:  
JOB NO.:

**GREAT LAKES TACO, L.L.C.**  
4047 Grange Hall Road  
Holly, Michigan 48442

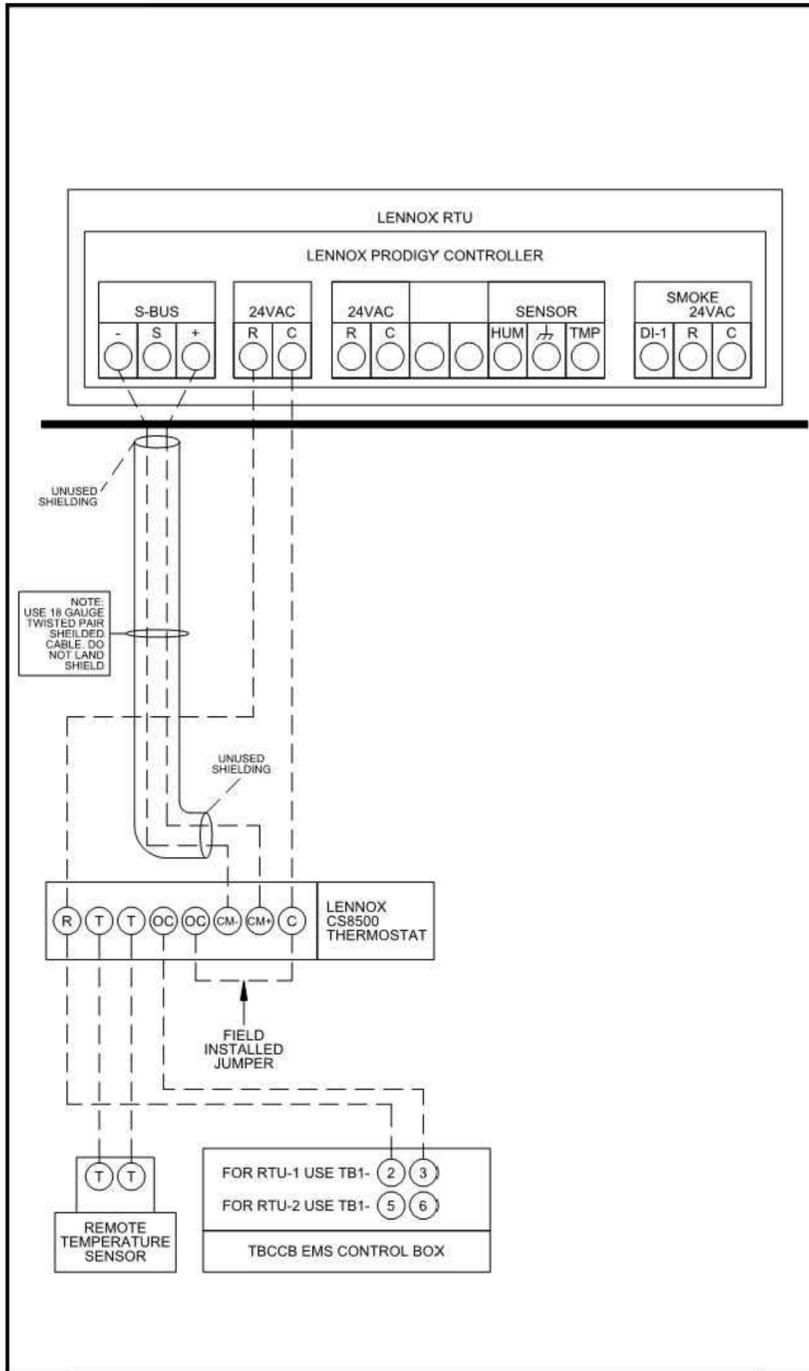


**ENDEAVOR 2.0 MECHANICAL DETAILS**

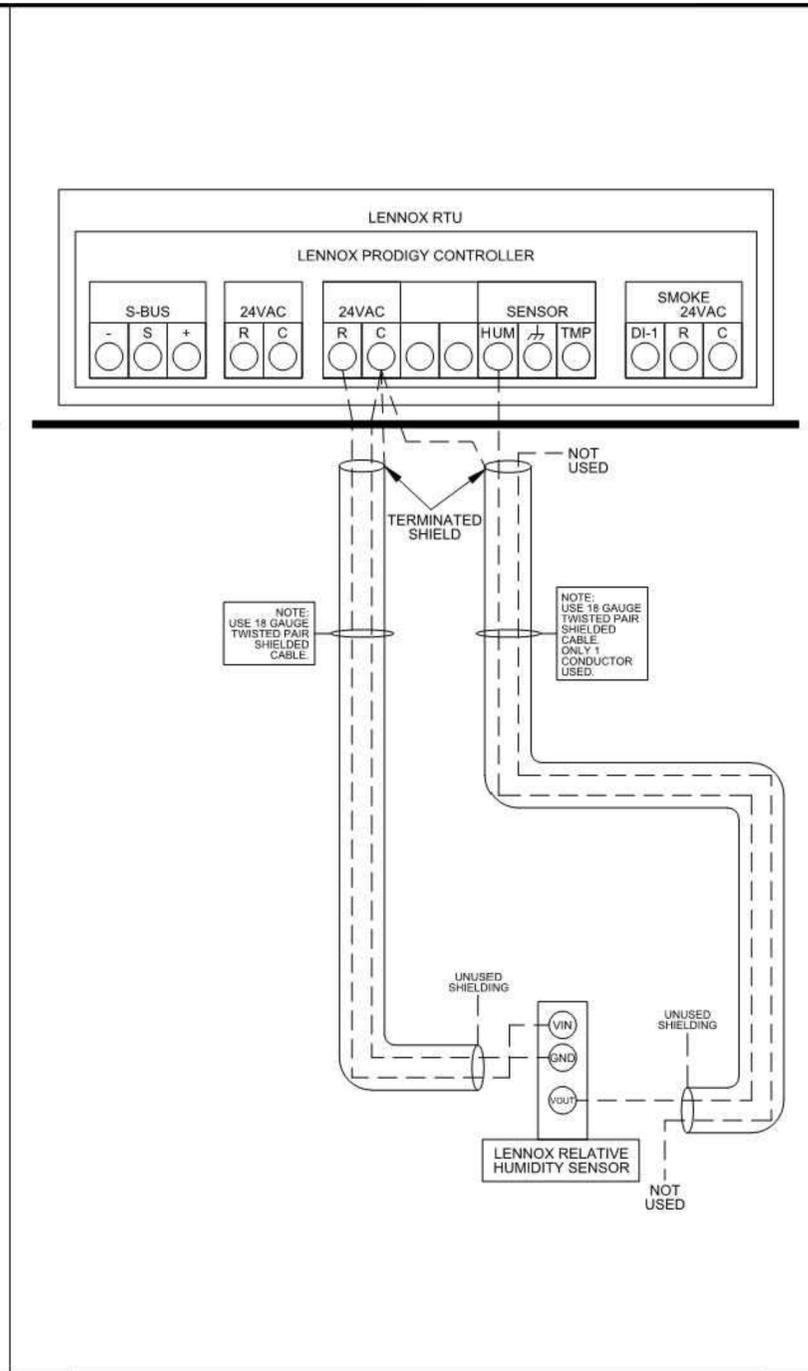
**M4.0**

PLOT DATE: 4/18/2022

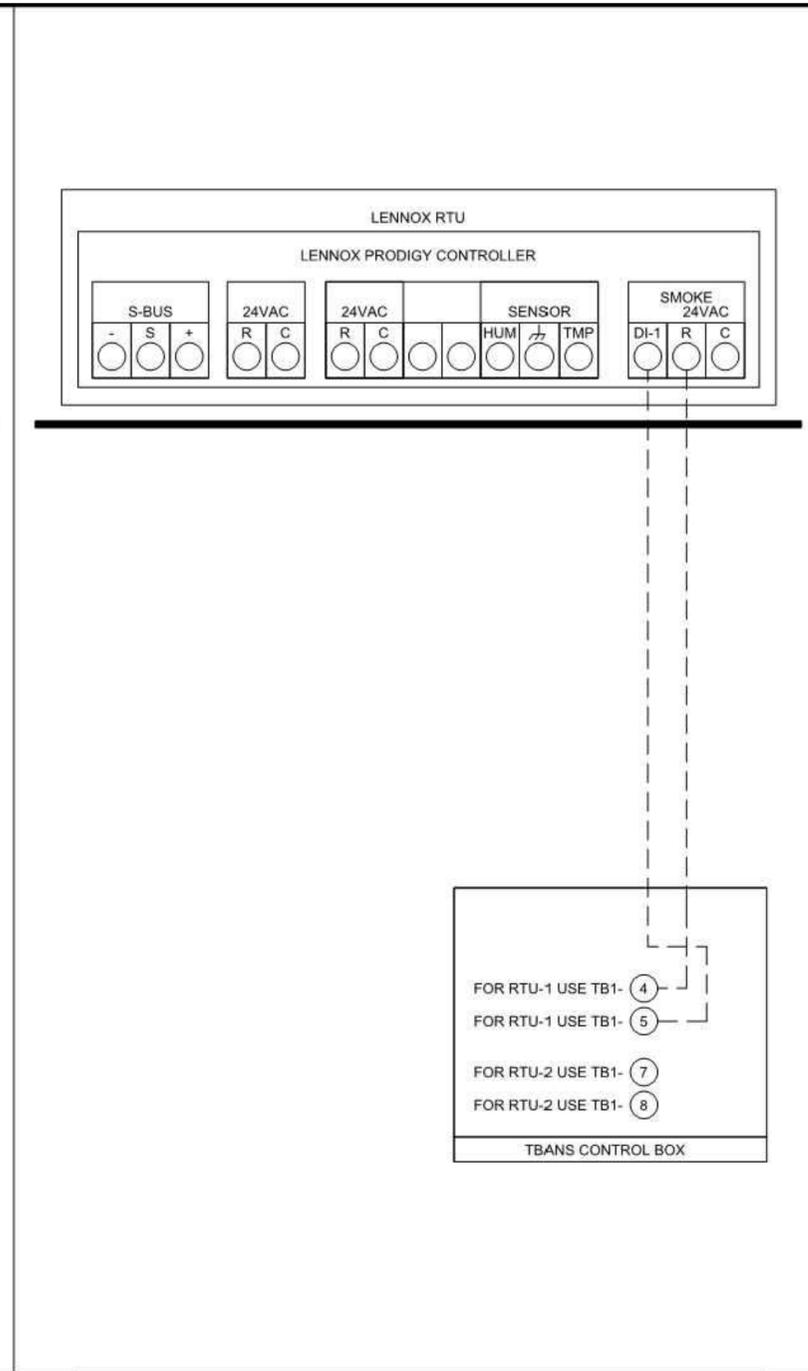
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1 LENNOX PRODIGY TO THERMOSTAT AND TO TBCCB CONNECTION NTS



2 LENNOX PRODIGY TO OPTIONAL HUMIDITY SENSOR CONNECTION NTS



3 LENNOX PRODIGY TO TBANS CONNECTION NTS

26227 Enterprise Ct.  
Lake Forest, CA 92650  
949-770-2222

**AirCare Experts**

**LENNOX RTU  
LOW VOLTAGE  
FIELD CONNECTIONS  
DETAIL**

**LENNOX LOW VOLTAGE CONNECTIONS**

Rev	Date	Change

Job #: **T7647**  
 Designed By: JL  
 Drawing By: EM  
 Approved By: EM  
 Date: 06-07-20  
 Sheet: 1 of 1



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DATE	REMARKS
05-19-22	Bids and Permits

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 SITE NUMBER: 315875  
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 JOB NO.:

**GREAT LAKES  
TACO, L.L.C.**  
 4047 Grange Hall Road  
 Holly, Michigan 48442



**ENDEAVOR 2.0  
CONTROLS  
DETAILS**

**M5.0**

- SOIL AND WASTE PIPE SHALL SLOPE 2% MINIMUM, UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.
- ALL DRAWN WATER & GAS LINES SHALL BE KEPT TIGHT TO UNDERSIDE OF EQUIPMENT & SECURED IN PLACE.
- VERIFY LOCATION OF SANITARY SEWER ON SITE PLAN AND REVISE SEWER SYSTEM AS REQUIRED.
- PROVIDE TRAP PRIMERS FOR FLOOR DRAINS IN RESTROOMS, WHERE REQUIRED BY CODE. PROVIDE DEEP SEAL TRAPS FOR FLOOR DRAINS WITHOUT TRAP PRIMERS.
- CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC. AND OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.
- VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS AND OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILING SHALL BE INSTALLED BEHIND AN ACCESS PANEL.
- PLUMBING FIXTURE VENTS SHALL TERMINATE MINIMUM OF 12 INCHES FROM VERTICAL SURFACES AND 10 FEET FROM OUTSIDE AIR INTAKES.
- PROVIDE GAS PIPING TO UNITS AND MAKE FINAL CONNECTIONS REQUIRED FOR OPERATION.
- PROVIDE SHUT-OFF VALVES ON HOT & COLD WATER LINES TO FIXTURES AND APPLIANCES. ALL EXPOSED WATER AND WASTE LINES SHALL BE CHROME PLATED.
- PROVIDE LEVER HANDLE GAS SHUT-OFF VALVE IN BRACH PIPING OF EACH APPLIANCE. INSTALL OWNER FURNISHED QUICK DISCONNECT, FLEXIBLE PIPE (IF ALLOWED BY CODE) AND RESTRAINING DEVICE. PROVIDE PRESSURE REDUCING VALVES AT EACH PIECE OF EQUIPMENT OR APPLIANCE IF GAS PRESSURE IS GREATER THAN 10" WC DOWSTREAM OF THE GAS METER.
- VALVES, UNIONS, ETC. SHALL BE SAME SIZE AS PIPE UNLESS OTHERWISE INDICATED.
- REFER TO KITCHEN EQUIPMENT DRAWINGS FOR PLUMBING ROUGH-IN REQUIREMENTS. MAKE ALL ROUGH-IN AND FINAL CONNECTIONS TO KITCHEN EQUIPMENT UNLESS OTHERWISE NOTED.
- REFER TO MECHANICAL DRAWINGS FOR HVAC AND HOOD PLUMBING REQUIREMENTS.
- GAS LINES SHALL BE SUPPORTED.
- FLOOR SINKS AND FLOOR DRAINS IN TRAFFIC AREAS SHALL BE INSTALLED FLUSH WITH FLOOR SURFACE.
- PROVIDE WATER HAMMER ARRESTOR FOR ALL HAND SINKS AND URINAL WATER LINES.
- PROVIDE AIR GAPS FOR INDIRECT DRAINS AS REQUIRED BY CODE. AIR SHALL BE MINIMUM 2 TIMES DIAMETER OF INDIRECT DRAIN.
- VERIFY DEPTH, SIZE, LOCATION, AND CONDITION OF ALL EXISTING UTILITIES IN THE FIELD PRIOR TO COMMENCING WORK ON PROJECT. NOTIFY OWNER IMMEDIATELY OF CONDITIONS THAT EXIST WHICH WOULD CAUSE THE DESIGN TO BE ALTERED..
- COORDINATE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES SO AS TO AVOID UNNECESSARY DELAY OR INTERFERENCES REVIEW ARCHITECTURAL AND EQUIPMENT SHEETS.
- PROVIDE BACKFLOW PROTECTION DEVICES REQUIRED BY AGENCIES HAVING JURISDICTION. BACKFLOW DEVICES REQUIRING TESTING SHALL BE INSTALLED NO HIGHER THAN 5'-0" A.F.F.
- PROVIDE CONDENSATE DRAIN FROM A/C UNITS TO APPROVED DRAIN. PROVIDE GAS PIPING TO UNITS. MAKE FINAL CONNECTIONS REQUIRED FOR OPERATION.
- THE OWNER OR KITCHEN EQUIPMENT SUPPLIER MAY SUBSTITUTE EQUIPMENT OR EQUIPMENT MAY VARY FROM WHAT IS SHOWN. THEREFORE, VERIFY ALL CRITICAL DIMENSIONS WITH OWNER PRIOR TO CONSTRUCTION. FAILURE OF CONTRACTOR TO VERIFY THESE DIMENSIONS SHALL PLACE RESPONSIBILITY FOR SUBSEQUENT RELOCATION DIRECTLY UPON CONTRACTOR.
- ALL WATER LINES SHALL BE RUN OVERHEAD UNLESS OTHERWISE NOTED.
- ALL WATER LINES SHALL BE FLUSHED PRIOR TO CONNECTING FIXTURES OR EQUIPMENT.
- PROVIDE ESCUTCHEON PLATES AND SILICONE SEALANT AT UTILITY PENETRATIONS INTO WALLS, CEILINGS, AND FLOORS. DO NOT USE CAULKS OR EXPANDING FOAMS FOR SEALANT.
- CPVC SCHEDULE 40 WASTE PIPE CAN BE SUBSTITUTED FOR BLACK IRON WASTE PIPE WHERE ALLOWED BY LOCAL MUNICIPALITIES.

### GENERAL NOTES - PLUMBING

NTS 4

SYMBOLS	ABBREV.	DESCRIPTION
	Y.B.	YARD BOX
	R.D.	ROOF DRAIN
	A.P.	ACCESS PANEL
	V.T.R.	VENT THRU ROOF
	V.B.F.	VENT BELOW FLOOR
	U.T.R.	UP THRU ROOF
	V.C.P.	VITRIFIED CLAY PIPE
	C.I.	CAST IRON
	(TYP.)	TYPICAL
	(N)	NEW
	(E)	EXISTING
	F.D.	FLOOR DRAIN
	H.D.	HUB DRAIN
	O.F.D.	OVERFLOW DRAIN
	F.S.	FLOOR SINK
	G.L.	GAS LINE
	A.F.F.	ABOVE FINISHED FLOOR
	X   00	PLUMBING EQUIPMENT DESIGNATION
	XXX	KITCHEN EQUIPMENT NUMBER: REFER TO KITCHEN EQUIPMENT DRAWINGS FOR DESCRIPTION.
	SS	SOIL OR WASTE (SANITARY)/WASTE STUB
	GW	SOIL OR WASTE (GREASE WASTE)/WASTE STUB
	G	GAS / GAS STUB
	CW	COLD WATER/ CW STUB
	HW	HOT WATER / HW STUB
	HWR	HOT WATER RETURN
	V	SANITARY VENT
	S.D.	STORM DRAIN
	C.D.	CONDENSATE DRAIN
	F.C.O.	FLOOR CLEANOUT
	W.C.O.	WALL CLEANOUT
	FW	FILTERED WATER
	TW	PREMIXED TEMPERATURE WATER
	H.B.	HOSE BIBB
	S.O.V.	SHUT-OFF GATE VALVE
	S.O.C.	SHUT-OFF GAS COCK
	C.V.	CHECK VALVE
	P.T.R.V.	PRESS-TEMPERATURE RELIEF VALVE
	B.V.	BALL VALVE
	C.W.	COLD WATER BELOW GRADE
	E.C.O.	EXTERIOR CLEAN OUT
	BFP	BACK FLOW PREVENTER
	FU	FIXTURE UNIT

### PLUMBING LEGEND

NTS 3

FIXTURE	NO.	DRAIN		COLD WATER		HOT WATER	
		D.F.U.	TOTAL D.F.U.	F.U. C.W.	TOTAL C.W.	F.U. H.W.	TOTAL H.W.
WATER CLOSET	2	4	8	5	10	--	--
URINAL	0	5	--	5	--	--	--
LAVATORY	2	1	2	1.5	3	1.5	3
HAND SINK	2	2	4	1.5	3	1.5	3
PREP SINK *	1	--	--	2	2	2	2
3 - COMPARTMENT SINK *	1	--	--	3	3	3	3
HOSE BIBB/WATER FILTRATION UNIT	2/1	--	--	5/0.5	12	--	--
FLOOR DRAIN	7	2	14	--	--	--	--
HUB DRAIN	2	2	4	--	--	--	--
FLOOR SINK	3	3	9	--	--	--	--
MOP SINK	1	3	3	2.25	2.25	2.25	2.25
REHEMALIZER *	1	--	--	--	--	1.0	1.0
TOTAL	--	--	44	--	35.25	--	14.25

PROBABLE DEMANDS/ AND PIPE SIZING REQUIREMENTS: COLD WATER: 35.25 FU = 25 GPM DRAIN: GW 22 DFU DRAIN: SAN 18 DFU HOT WATER: 14.25 FU = 17 GPM USE 1-1/2" CW SERVICE USE 4" SANITARY (MIN) USE 4" SANITARY (MIN) USE 1-1/4" HW SERVICE

BASED ON 2015 IPC (COMBINATION DRAIN & VENT). \*FIXTURE HAS INDIRECT WASTE TO FLOOR SINK

### PLUMBING FIXTURE COUNT

NTS 2

ITEM	FIXTURE	SOIL OR WASTE	VENT	COLD WATER	HOT WATER	TEMPD WATER	WASTE FU	WATER FU	DESCRIPTION	MANUFACTURER / MODEL NUMBER
ECO 1	EXTERIOR CLEANOUT	--	--	--	--	--	--	--	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.	JOSAM / MODEL: 56000 WADE / MODEL: 6000Z ZURN / MODEL: Z-1400
FS 1	FLOOR SINK	4"	2"	--	--	--	6	--	PVC 12" SQUARE FLOOR SINK, 8" DEEP, WITH ALUMINUM OR PVC DOME STRAINER AND LOOSE SET PVC SLOTTED TOP GRATE. SET FLOOR SINK LIP FLUSH WITH FLOOR TILE.	JOSAM / MODEL: JPF54-PVC ZURN / MODEL: FD-2370-PV4-DS-F
FS 2	FLOOR SINK	3"	2"	--	--	--	6	--	CAST IRON 12" SQUARE FLOOR SINK, 8" DEEP, WITH ALUMINUM DOME STRAINER AND NICKEL BRONZE HINGED TOP.	JOSAM / MODEL: 49034AS WADE / MODEL: 9144 ZURN / MODEL: Z-1900-32
FD 1	FLOOR DRAIN	3"	2"	--	--	--	2	--	PVC FLOOR DRAIN, 5" DIA. IF PVC OR ABS DRAINS ARE USED, SCHEDULE 80 PVC DRAIN PIPE SHALL BE USED FOR THE FIRST 10' 0" FROM THE DRAIN.	JOSAM / MODEL: FD-2210 WADE / MODEL: 30003-A
HD 1	HUB DRAIN	3"	2"	--	--	--	2	--	CAST IRON DEEP SEAL P-TRAP WITH FUNNEL, NO-HUB OUTLET AND BRASS GASKETED CLEANOUT PLUG.	JOSAM / MODEL: 88213 WADE / MODEL: 2453EF ZURN / MODEL: Z-1019
ECO 1	FLOOR CLEANOUT	--	--	--	--	--	--	--	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.	JOSAM / MODEL: 56000 WADE / MODEL: 6000Z ZURN / MODEL: Z-1400
WCO 1	WALL CLEANOUT	--	--	--	--	--	--	--	CAST IRON CLEANOUT TEE WITH INLET/OUTLET SPIGOT AND THREADED BRASS PLUG, WITH STAINLESS STEEL ACCESS COVER.	JOSAM / MODEL: 58510 WADE / MODEL: 8560E ZURN / MODEL: Z-1446-BP
HB 1	HOSE BIBB	--	--	3/4"	--	--	--	2.5/1	NON-FREEZE WALL HYDRANT WITH INTEGRAL VACUUM BREAKER, BRONZE CASING AND NICKEL BRONZE BOX.	JOSAM / MODEL: 71000 WADE / MODEL: 8600L ZURN / MODEL: Z-1300
WC 1	WATER CLOSET	4"	2"	1/2"	--	--	4	2	WHITE VITREOUS CHINA FLOOR MOUNTED FLUSHOMETER TANK (PRESSURE ASSISTED) TYPE, ELONGATED BOWL, ADA COMPLIANT, 1.1 GPF, WITH OPEN FRONT SEAT LESS COVER, OLSONITE #95 OR EQUIVALENT. FLUSHOMETER TANK: SLOAN FLUSHMATE OR EQUAL. PROVIDE TANK COVER LOCKS. FLUSH VALVES SHALL BE RIGHT HAND OR LEFT HAND AS REQUIRED TO CORRESPOND WITH ACCESS FROM WIDE SIDE OF STALL. VERIFY FLUSH SIDE REQUIREMENTS.	AM. STD. "CADET" / MODEL: 2467.100 KOHLER "HIGHLINE" / MODEL: K-3519 CRANE "ECONMISER" / MODEL: 31888
L 1	LAVATORY	1-1/4"	1-1/2"	1/2"	--	1/2"	1	1.5	WHITE VITREOUS CHINA, WALL HUNG, WITH CONCEALED ARMS SUPPORT, 4" CENTERS, WITH INTEGRAL BACKSPASH, ADA ACCESSIBLE. FLAT GRID STRAINER, BRAIDED WATER LINES. FAUCET: FURNISHED BY OWNER-INSTALLED BY G.C. ELECTRONIC SENSOR TYPE FAUCET. SLOAN SF-2300, ADA COMPLIANT. SEE 5/P6.0 FOR LAV SUPPORT DETAIL, 0.5 GPM AERATOR	A.S. COMRADE / MODEL: 0124.131 CRANE "HARWICH" / MODEL: 1412V
S 1	HAND SINK	1-1/2"	1-1/2"	1/2"	--	1/2"	2	1.5	S-1: STAINLESS STEEL HAND SINK, WALL HUNG, INCLUDES A 6" GOOSENECK STAINLESS FAUCET W/SINGLE KNEE PEDAL. BRAIDED WATER LINES, 0.5 GPM AERATOR.	--
S 2	MOP SINK	3"	2"	1/2"	1/2"	--	3	2.25	MOP SINK: AERO - 3MP-2121-6 W/ 48" HIGH S.S. LEFT SIDE AND BACK-SPLASH. FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.	--
S 3	3-COMP. SINK	INDIRECT	--	1/2"	1/2"	--	--	3	SINK, FAUCET & DRAIN, GEN IV POWER SOAK STANDARD, GEN III IS AN OPTION FOR FRANCHISES	--
S 4	PREP SINK	INDIRECT	--	1/2"	1/2"	--	--	3	SINK, FAUCET AND DRAIN	--
GI 1	GREASE INTERCEPTOR	4"	--	--	--	--	--	--	PRECAST 1,000 GALLON GREASE INTERCEPTOR WITH SAMPLING BOX. SEE SITE PLAN FOR EXTERIOR GREASE INTERCEPTOR LOCATION.	JENSEN / JP1000G --
MV 1	MIXING VALVE	--	--	1/2"	1/2"	--	--	--	THERMOSTATIC, 125 P516, 200VF BRONZE BODY, STAINLESS STEEL PISTON LINER, CHECK VALVES SIZE PER PIPE CONNECTIONS.	POWERS SERIES LFLM495 LAWLER SERIES 310 LEONARD SERIES 170
WH 1	WATER HEATER	--	--	1-1/4"	1-1/4"	--	--	--	GAS FIRED WATER HEATER, 95% THERMAL EFF., 120,000 BTUH INPUT, 60 GAL. STORAGE TANK, 138 GPH @ 100 DEG. RISE REC. RATE, 3" PVC FLUE & INTAKE, ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE, ELECTRONIC IGNITION SYSTEM AND ELECTRONIC CONTROLS. Call 800-477-1953 Option #1 for National Account Price & Service	AO SMITH / CYCLONE MXI BTH-120 STATE / SUF 100 120 NE --
ET 1	EXPANSION TANK	--	--	3/4"	--	--	--	--	EXPANSION TANK, STEEL, EXPANSION MEMBRANE 150 PSI, 160" F, 12 GALLON CAPACITY.	WATTS SERIES DETA AMTROL SERIES ST WILKINS SERIES WXTP
BFP 1	BACKFLOW PREVENTOR	--	--	VERIFY	--	--	--	1	REDUCED PRESSURE ZONE BACKFLOW PREVENTER, CAST BRONZE CONSTRUCTION WITH QUARTER TURN FULL-PORT BALL VALVES AND BRONZE STRAINER.	WATTS / MODEL: LF009M2QTS WILKINS / MODEL: 975XLS FEBCO / MODEL: 860
RO 1	REVERSE OSMOSIS	INDIRECT	--	1/2"	--	--	--	--	REVERSE OSMOSIS FILTER SYSTEM BY OWNER. SEE DETAIL 9/P6.0	--
WM 1	WATER METER	--	--	1-1/2"	--	--	--	--	COORDINATE REQUIREMENTS WITH MUNICIPAL WATER DEPARTMENT.	--
CP 1	HWR CIRC PUMP	--	--	--	3/4"	--	--	--	BRONZE BODY CONSTRUCTION SUITABLE FOR POTABLE WATER, NON FERROUS IMPELLER, MAINTENANCE FREE PERMANENTLY LUBRICATED BEARINGS.COMBINATION AQUASTAT/TIMECLOCK. SET TIMECLOCK FOR UNOCCUPIED HOURS.	B&G MODEL PL-30, 1 GPM, 22 FT.HD. 1/12 HP, 120V,1PH --

### PLUMBING FIXTURE SCHEDULE

NTS 1



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Job No.: 273-22043



### L + A ARCHITECTS INC. A.I.A.

441 S. LIVERNOIS ROAD  
SUITE 265  
ROCHESTER HILLS, MI 48307  
PHONE (248) 524-4700 FAX (248) 524-9746

PROJECT # 22004

DATE	REMARKS
05-19-22	Bids and Permits

CONTRACT DATE:  
BUILDING TYPE: END. MED 40  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER:  
SITE NUMBER: 315875  
STORE NUMBER:  
PA/PM:  
DRAWN BY.:  
JOB NO.:

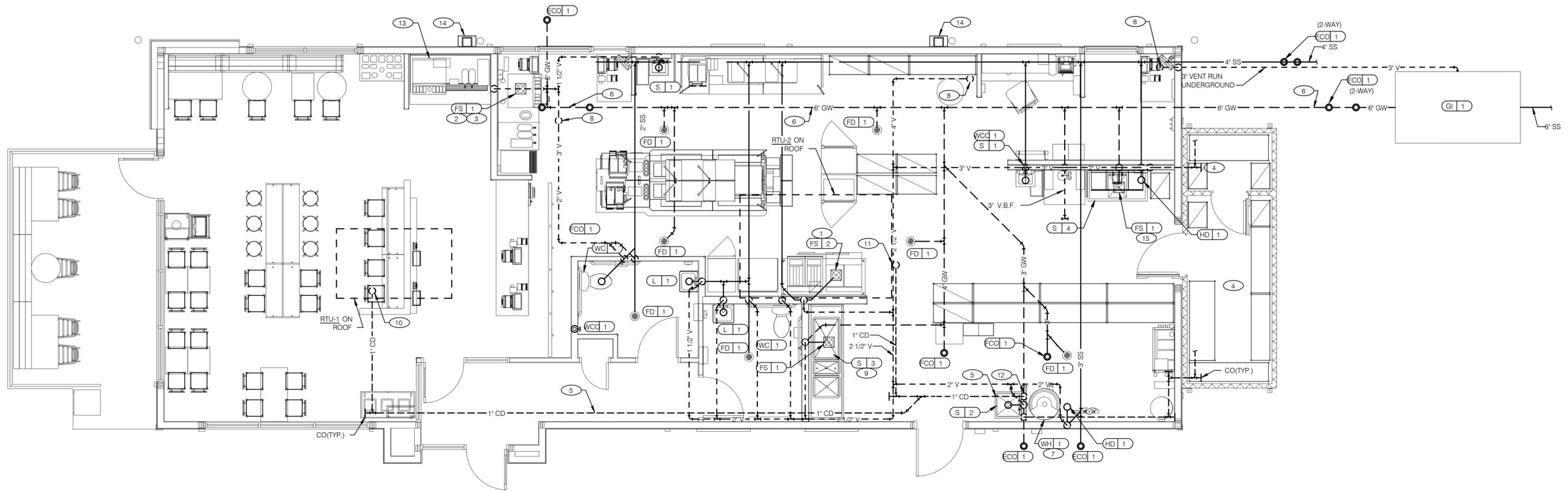
GREAT LAKES  
TACO, L.L.C.  
4047 Grange Hall Road  
Holly, Michigan 48442



### ENDEAVOR 2.0 PLUMBING SCHEDULES AND NOTES

# P1.0

PLOT DATE: 4/18/2022



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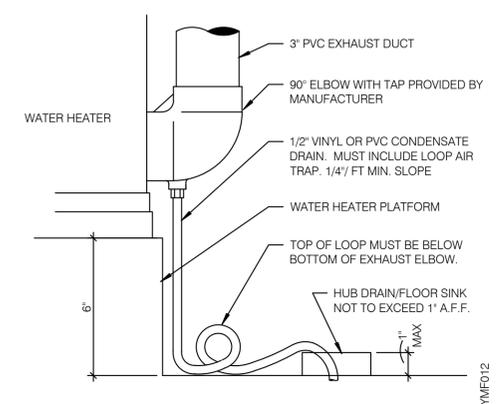
**ENDEAVOR 2.0 WASTE AND VENT PLAN**

**P2.0**

PLOT DATE: 4/18/2022

**WASTE & VENT PIPING PLAN** 1/4" = 1'-0" **1**

- 1 UNDERGROUND SANITARY PIPE SHALL BE NO HUB CAST IRON PIPE FOR THE FIRST 10 FEET FROM CONNECTION TO FLOOR SINK FS-2, OUTWARD.
- 2 PROVIDE CONDENSATE LINE AND DRAIN LINE FROM ICE MACHINE TO HD / FS, PROVIDE AIR GAP PER LOCAL CODE.
- 3 PROVIDE WASTE LINES FROM BEVERAGE UNIT TO HD / FS, PROVIDE AIR GAP PER LOCAL CODE.
- 4 PROVIDE 3/4" COPPER CONDENSATE FROM DRAIN PROVIDED BY VENDOR TO OUTFALL AT HUB DRAIN/MOP SINK (HEAT ROPE IS SUPPLIED WITH FREEZER CONDENSATE). CONCEAL CONDENSATE PIPE IN WALL.
- 5 IF REQUIRED BY AUTHORITY HAVING JURISDICTION INSTALL PVC OR COPPER CONDENSATE DRAIN FROM HVAC UNITS ON ROOF. RUN TO MOP SINK. PIPING SHALL SLOPE 1/4" PER FOOT AND SHALL BE INSULATED WITH 1" CLOSED CELLULAR INSULATION. REFER TO RISER DIAGRAM ON SHEET P5.0 FOR PIPE SIZES.
- 6 ENTIRE RUN OF DRAIN LINES TO INLET OF EXTERIOR GREASE INTERCEPTOR AND OUTBOUND FROM INTERCEPTOR TO CONNECTION AT SANITARY MAIN SHALL BE SCHEDULE 40 PVC DWV OR AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
- 7 ROUTE INDIRECT WASTE FROM WH-1 TO HD-1. REFERENCE DETAIL 2/P6.1 AND DETAIL 4/P2.0.
- 8 4" VENT UP THROUGH ROOF.
- 9 PIPE 3-COMPARTMENT SINK TO FLOOR SINK WITH AIR GAP PER CODE.
- 10 1" CONDENSATE DRAIN DOWN FROM RTU-1. SEE DETAIL 10/P6.0.
- 11 1" CONDENSATE DRAIN DOWN FROM RTU-2. SEE DETAIL 10/P6.0.
- 12 CONDENSATE DRAIN PIPE DOWN TO MOP SINK. PROVIDE AIR GAP AS REQUIRED BY CODE. IF REQUIRED RUN CONDENSATE PIPING TO EXTERIOR DRYWELL, RETENTION AREA OR STORM SEWER AS DIRECTED BY AUTHORITY HAVING JURISDICTION.
- 13 RUN DRAIN LINE FROM S/S DRINK MACHINE THROUGH WALL OPENING. TO OUTFALL AT FS BENEATH D/T DRINK MACHINE.
- 14 DOWN SPOUT. SEE CIVIL PLANS FOR CONTINUATION.
- 15 ROUTE DRAIN FOR REVERSE OSMOSIS DISCHARGE TO FLOOR SINK. ENSURE PROPER AIR GAP.



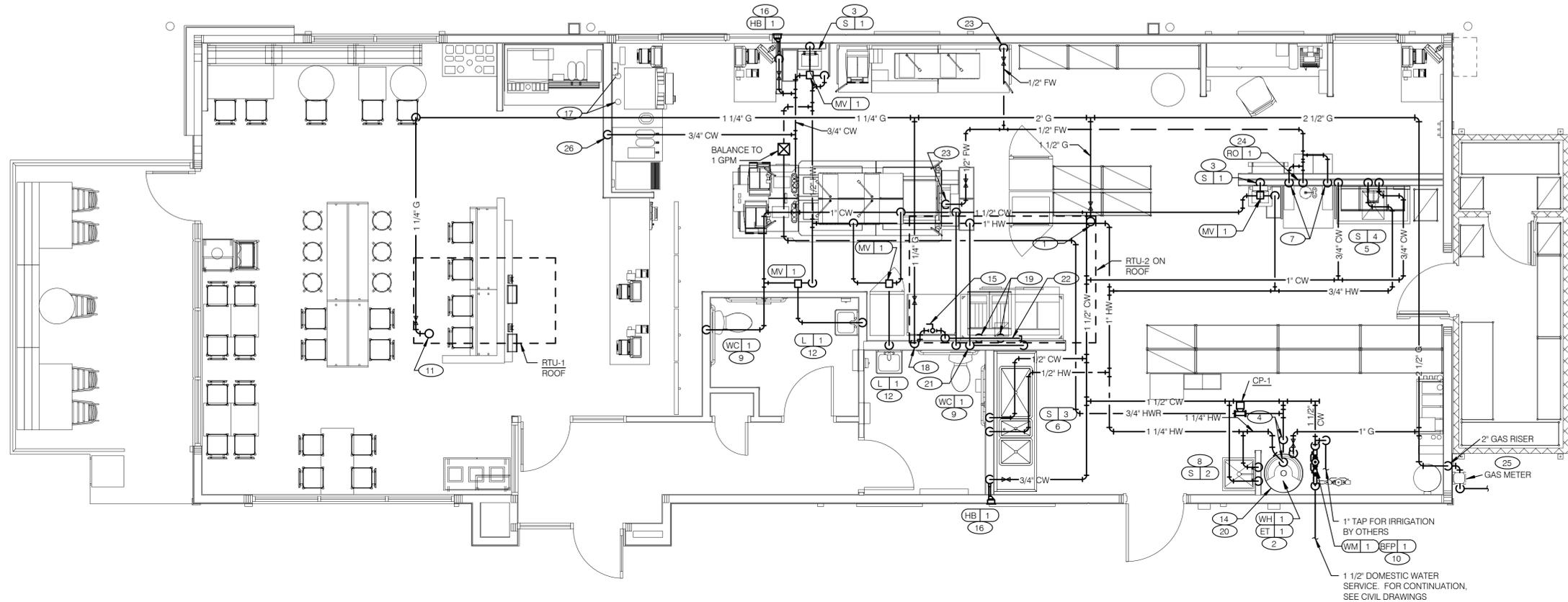
**WATER HEATER CONDENSATE DETAIL** NTS **4**

- A. NO ROOF PENETRATIONS PERMITTED WITHIN ROOF WATER PLY. REFER TO ROOF PLAN FOR LOCATIONS.
- B. REFER TO RISER DIAGRAM ON SHEET P5.0 FOR ALL WASTE AND VENT SIZES.
- C. SEE ARCHITECTURAL PLANS FOR DOWNSPOUT LOCATIONS
- D. VERIFY WITH THE LOCAL BUILDING AUTHORITY THAT CONDENSATE DRAINAGE CAN BE ROUTED TO THE MOP SINK.

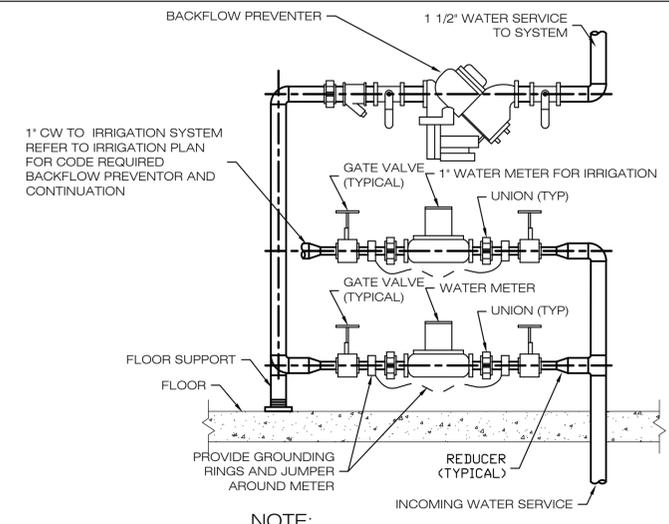
**WASTE & VENT PLAN NOTES** NTS **3**

**KEYNOTES - WASTE AND VENT** NTS **2**

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**WATER & GAS PLAN** 1/4" = 1'-0" **1**



**WATER METER DETAIL**  
NO SCALE

- A. NO ROOF PENETRATIONS PERMITTED WITHIN ROOF "WATER VALLEYS". REFER TO ROOF PLAN FOR LOCATIONS.
- B. REFER TO SHEET P4.0 FOR ROUGH-IN LOCATIONS.
- C. REFER TO SHEET P5.0 FOR WATER AND GAS ISOMETRIC DRAWINGS.
- D. FLUSH ALL WATER SUPPLY LINES OF ALL DEBRIS AND IMPURITIES PRIOR TO CONNECTING TO WATER FILTERS.
- E. PROVIDE REDUCED PRESSURE BACKFLOW PREVENTER TO SERVE CARBONATOR. DRAIN RELIEF TO FLOOR SINK WITH AIR GAP

**WATER & GAS PLAN NOTES** NTS **3**

- 1 1-1/4" (360 CFH) GAS UP TO RTU-2 WITH DIRT LEG, GAS COCK AND UNION.
- 2 1" (120 CFH) GAS DOWN TO WATER HEATER WITH GAS COCK, DIRT LEG AND UNION.
- 3 1/2" TEMPERED WATER DOWN IN WALL TO HAND SINK.
- 4 1-1/4" HOT AND 1-1/4" COLD WATER LINES DOWN TO WATER HEATER.
- 5 1/2" HOT AND COLD WATER LINES DOWN IN WALL TO PREP SINK.
- 6 1/2" COLD AND HOT WATER LINES DOWN IN WALL TO THREE COMPARTMENT SINK.
- 7 1/2" COLD WATER 2'-0" A.F.F. . CONNECT TO WATER FILTER FOR HOT WATER SYSTEM P-452. PROVIDE SHUT-OFF VALVE PRIOR TO CONNECTION TO WATER FILTER.
- 8 1/2" COLD AND HOT WATER DOWN IN WALL TO MOP SINK.
- 9 3/4" CW DOWN IN WALL TO FLUSH TANK WATER CLOSET .
- 10 REDUCED PRESSURE BACKFLOW PREVENTER LOCATED PER LOCAL UTILITY REQUIREMENTS. PIPE RELIEF TO HUB SINK.
- 11 1-1/4" (240 CFH) GAS UP TO RTU-1 WITH DIRT LEG, GAS COCK AND UNION.
- 12 1/2" TEMPERED WATER LINES DOWN IN WALL TO LAVATORY.
- 13 3/4" CW DOWN ALONG WALL TO WATER FILTER S-540.
- 14 WATER HEATER (WH-1). PIPE CONDENSATE LINE, T&P DISCHARGE AND DRAIN PAN TO HUB DRAIN. SEE WATER HEATER DETAIL 2/P6.1.
- 15 EMERGENCY GAS SHUT OFF VALVE LOCATED BELOW CEILING.
- 16 3/4" CW DOWN IN WALL TO EXTERIOR HOSE BIBB.
- 17 BUNDLED SYRUP LINES TO BEVERAGE DISPENSERS S-284 & S-285 AND FILTERED WATER LINES TO ICE MAKERS S-513 AND FROZEN BEVERAGE DISPENSER S-546. SEE DRAWINGS A2.0 AND P5.0.
- 18 1-1/4" GAS DOWN IN WALL TO COOKING EQUIPMENT. VERTICAL GAS PIPING IN WALL SHALL NOT BE RIGIDLY SECURED AND ADEQUATE PIPE PROTECTION SHALL BE PROVIDED.
- 19 3/4" GAS DIRT LEG W/ GAS COCK TO COOKING EQUIPMENT. PROVIDE FLEXIBLE GAS HOSE KIT FOR CONNECTION TO COOKING EQUIPMENT.
- 20 3" PVC EXHAUST AND INTAKE FLUES FROM WATER HEATER. PIPE THROUGH ROOF AS RECOMMENDED BY MANUFACTURER TO LOCATIONS SHOWN ON SHEET M2.0. SEE DETAIL 1/P6.1.
- 21 1/2" HOT WATER DOWN IN WALL TO RETHERMALIZER C-107. PROVIDE SHUT-OFF VALVE OUTSIDE OF WALL FOR CONNECTION TO RETHERMALIZER.
- 22 RUN GAS PIPE 18" A.F.F. WITH DIRT LEGS FOR GAS HOSE KITS TO COOKING EQUIPMENT C-079 AND C-107.
- 23 1/2" RO WATER PIPE DOWN IN WALL AND ROUTED IN LOW WALL OF DRY PRODUCTION LINE. PROVIDE SHUT-OFF VALVE ON RO PIPING IN CEILING NEAR CHASE.
- 24 1/2" COLD WATER TO REVERSE OSMOSIS FILTER P-315 AND 1/2" FILTER WATER FROM REVERSE OSMOSIS FILTER. PROVIDE SHUT-OFF VALVE ON CW PIPE PRIOR TO CONNECTION TO FILTER. SEE DETAIL 9/P6.0.
- 25 GAS METER, REGULATOR VALVES, BRACKETS, ETC. AS REQUIRED BY LOCAL GAS COMPANY. SEE CIVIL DRAWINGS FOR CONTINUATION.
- 26 1/2" COLD WATER. CONNECT TO WATER FILTER FOR BUNN POD BREWER S-547. PROVIDE SHUT-OFF VALVE PRIOR TO CONNECTION TO WATER FILTER.

**KEYNOTES - WATER AND GAS** NTS **2**



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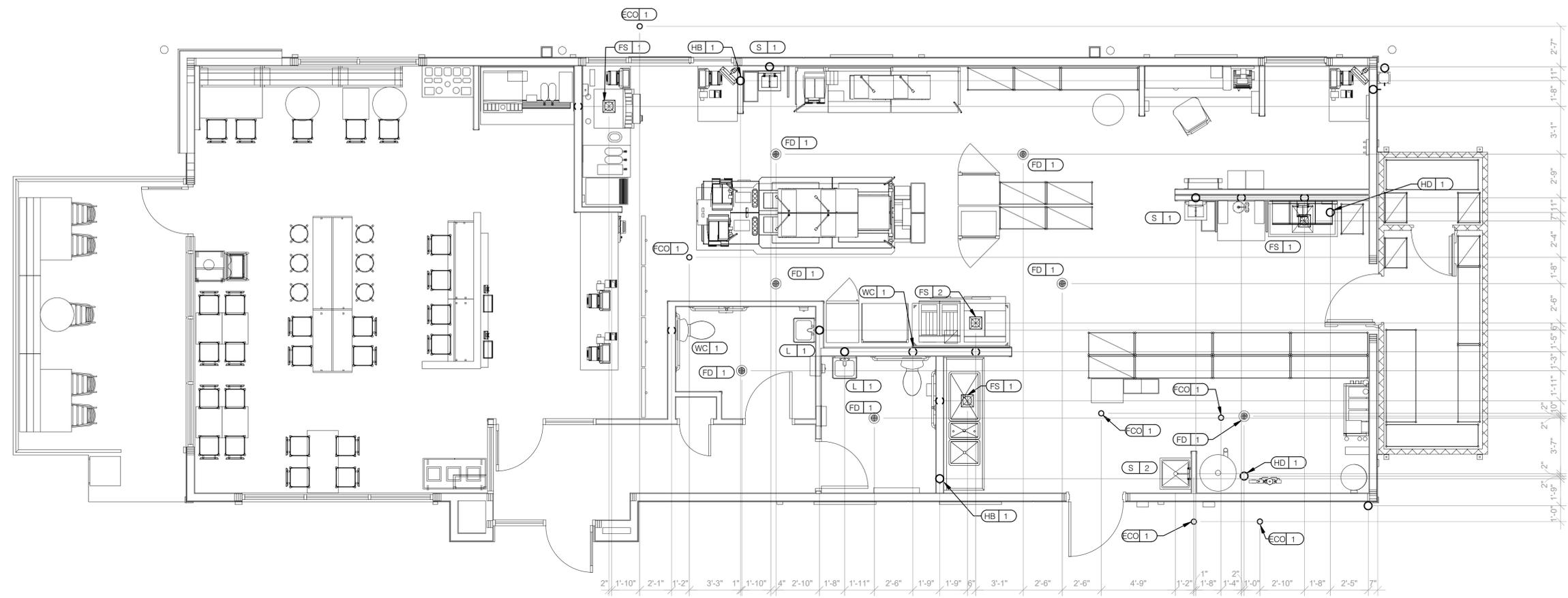
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**ENDEAVOR 2.0 WATER AND GAS PLAN**

**P3.0**

PLOT DATE: 4/18/2022



**PLUMBING ROUGH-IN PLAN** 1/4" = 1'-0" **1**

EQUIP #	EQUIPMENT ITEM	TYPE	ELEVATION	REMARKS	EQUIP #	EQUIPMENT ITEM	TYPE	ELEVATION	REMARKS
FS 1	FLOOR SINK			--	S 3	3-COMPARTMENT SINK FAUCET	CW/HW	+38" A.F.F.	--
FS 2	FLOOR SINK			EPOXY COATED CAST IRON	S 4	PREP SINK	W	+19" A.F.F.	--
HD 1	HUB DRAIN			--	S 4	PREP SINK FAUCET	CW/HW	+38" A.F.F.	--
WH 1	WATER HEATER	CW		--	WCO 1	WALL CLEAN OUT			--
WH 1	WATER HEATER	G	+15" A.F.F.	--	ECO 1	FLOOR CLEAN OUT			--
WC 1	WATER CLOSET	CW	+29" A.F.F.	BOTH HANDICAP AND REGULAR	HB 1	HOSE BIB			--
UR 1	URINAL FLUSH VALVE	CW	+47" A.F.F.	WALL MOUNTED					
UR 1	URINAL WASTE STUB	W	+16-1/2" A.F.F.	WALL MOUNTED					
L 1	LAVATORY	TW	+20" A.F.F.	--	C-107	REHEMALIZER	HW	+8" A.F.F.	
L 1	LAVATORY WASTE LINE	W	+16-1/2" A.F.F.	--	C-107	REHEMALIZER	G	+12" A.F.F.	
RO 1	REVERSE OSMOSIS	CW	+84" A.F.F.	--	C-079	DUAL VAT FRYER	G	+12" A.F.F.	
S 1	HAND SINK	TW	+18" A.F.F.	RIM OF LAV @ +2-8" A.F.F.					
S 2	MOP SINK	W	-6" A.F.F.	RECESSED IN FLOOR					
S 2	MOP SINK FAUCET	CW/HW	+36" A.F.F.	--	S-286	WATER FILTER SYSTEM	CW	+94" A.F.F.	INLET TO & OUTLET FROM FILTER
S 2	MOP SINK FAUCET	CW/HW	+42" A.F.F.	CLOSET MOP SINK ONLY					
S 3	3-COMPARTMENT SINK	W	+19" A.F.F.	--	E-452	HOT WATER SYSTEM	CW	+24" A.F.F.	

**PLUMBING ROUGH-IN SCHEDULE** NTS **3**

- ALL DIMENSIONS TO FLOOR SINKS, FLOOR DRAINS AND HUB DRAINS ARE TO CENTER OF FIXTURE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THIS DATA ON LOCATION OF ALL PLUMBING ROUGH-INS WITH INFORMATION PROVIDED ON ARCHITECTURAL AND STRUCTURAL DRAWINGS AND EQUIPMENT ACTUALLY SUPPLIED AND TO CONFIRM CORRECTNESS OF DIMENSIONS INDICATED HEREIN.

**PLUMBING ROUGH-IN NOTES** NTS **2**



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 Job No.: 273-22043



**L + A ARCHITECTS INC. A.I.A.**  
 441 S. LIVERNOIS ROAD SUITE 265  
 ROCHESTER HILLS, MI 48307  
 PHONE (248) 524-4700 FAX (248) 524-9746  
 PROJECT # 22004

DATE	REMARKS
05-19-22	Bids and Permits

CONTRACT DATE:  
 BUILDING TYPE: END. MED 40  
 PLAN VERSION: MARCH 2021  
 BRAND DESIGNER:  
 SITE NUMBER: 315875  
 STORE NUMBER:

PA/PM:  
 DRAWN BY:  
 JOB NO.:

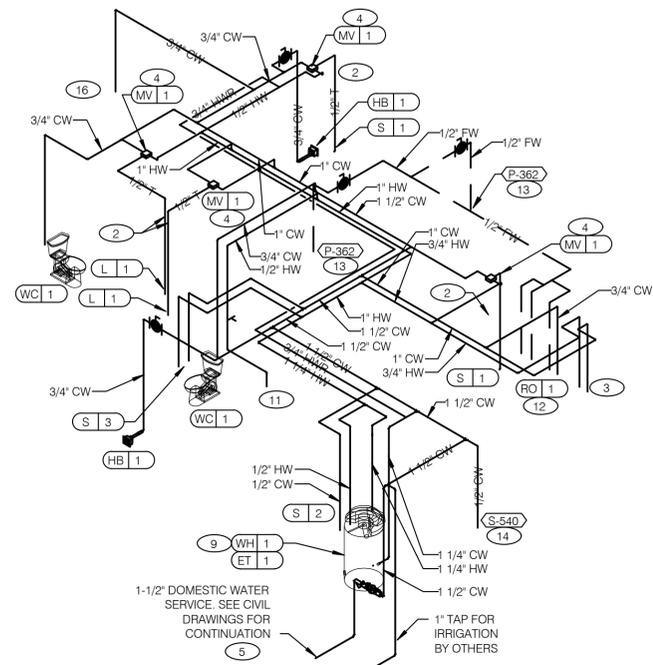
**GREAT LAKES TACO, L.L.C.**  
 4047 Grange Hall Road  
 Holly, Michigan 48442



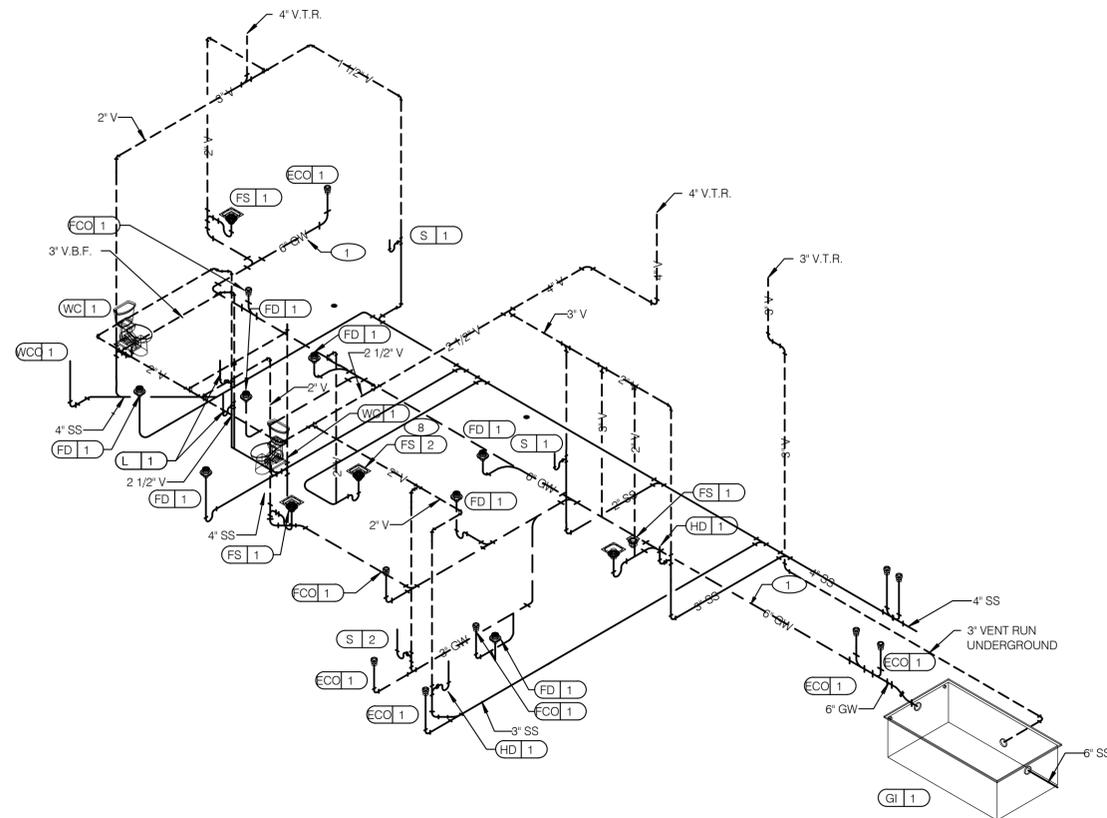
**ENDEAVOR 2.0 PLUMBING ROUGH-IN PLAN**

**P4.0**

PLOT DATE: 4/18/2022



**WATER ISOMETRIC** NTS **4**

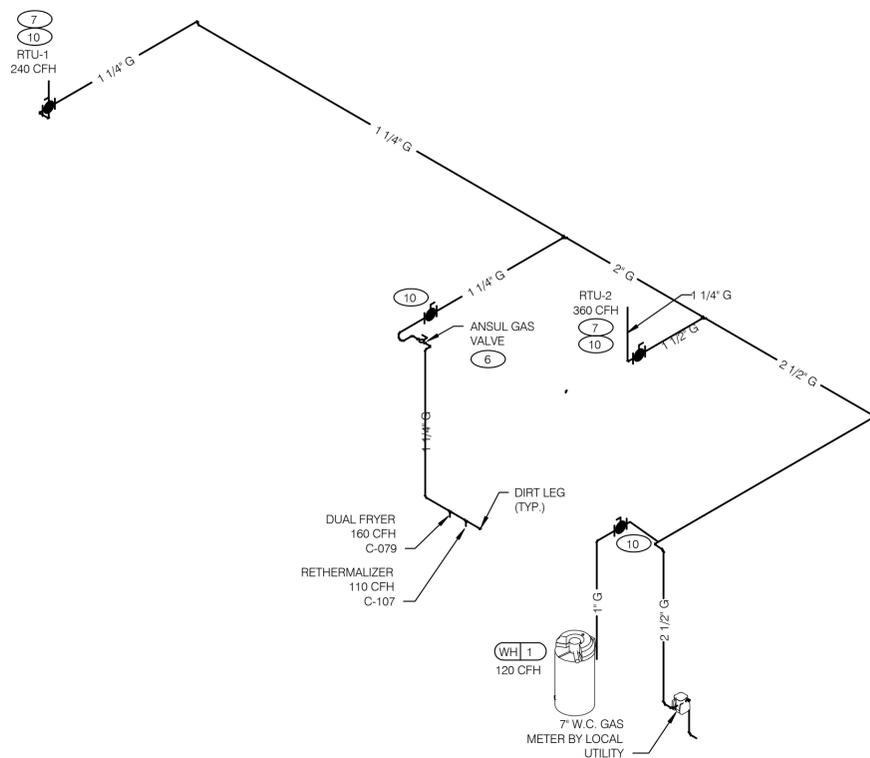


**WASTE AND VENT ISOMETRIC** NTS **1**

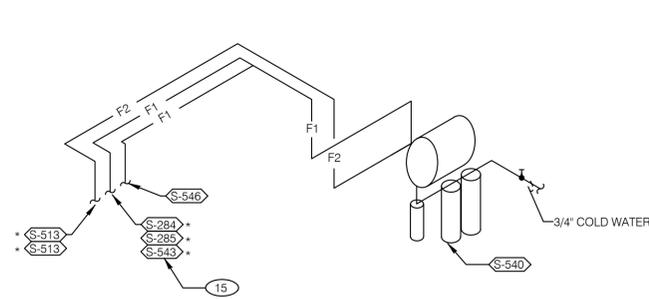
GAS DEMAND SCHEDULE	
RTU-1	240 CFH
RTU-2	360 CFH
WH-1	120 CFH
DUAL FRYER	160 CFH
REHERMALIZER	110 CFH
<b>TOTAL DEMAND</b>	<b>990.0 CFH = 990,000 BTUH</b>

NOTE:  
COORDINATE GAS DEMAND REQUIREMENTS WITH SITE-SPECIFIC RTU DESIGN.

PIPE SIZE BASED ON 120' OF PIPE AND 7" W.C. OPERATING PRESSURE



**GAS ISOMETRIC** NTS **5**



FILTERED EQUIPMENT AND LINES:  
S-540 - WATER FILTER

FILTERED LINE (COLD WATER)  
S-513 - ICE MAKER - ABOVE SELF-SERVE BEVERAGE DISPENSER \*  
S-513 - ICE MAKER - ABOVE DRIVE-THRU BEVERAGE DISPENSER \*  
S-285 - DRIVE-THRU BEVERAGE DISPENSER \*  
S-284 - SELF-SERVE BEVERAGE DISPENSER \*  
S-546 - ICED TEA BREWER  
S-543 - FROZEN BEVERAGE DISPENSER

\* FILTERED WATER SUPPLIED VIA SYRUP BUNDLE. REFER TO 11/P6.0. SEE SCOPE OF WORK FOR RESPONSIBILITIES.

**FILTERED WATER ISOMETRIC** NTS **2**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1 ENTIRE RUN OF DRAIN LINES ON INLET TO GREASE TRAP SHALL BE SCHEDULE 40 PVC OR NO HUB CAST IRON AS REQUIRED BY CODE.</li> <li>2 1/2" TEMPERED WATER DOWN IN WALL TO HAND SINK / LAVATORY.</li> <li>3 1/2" HOT AND COLD WATER LINES DOWN IN WALL TO PREP SINK.</li> <li>4 THERMOSTATIC MIXING VALVE.</li> <li>5 REDUCED PRESSURE BACK-FLOW PREVENTER PER LOCAL UTILITY REQUIREMENTS. PROVIDE SHUT-OFF VALVES AT BOTH SIDES OF BACKFLOW PREVENTER. VERIFY LOCATIONS WITH CIVIL DRAWINGS.</li> <li>6 EMERGENCY GAS SHUT-OFF VALVE (NORMALLY CLOSED) SHALL BE ELECTRIC SOLENOID TYPE WITH SPRING RETURN AND 24 VOLT ACTUATOR, SUITABLE FOR USE ON GAS PIPING SYSTEMS. VALVE SHALL BE ACTIVATED BY ANY OF THE EXHAUST HOOD FIRE SUPPRESSION SYSTEM. PROVIDE RELAYS AS REQUIRED TO ACTIVATE SHUT-OFF VALVE.</li> <li>7 GAS PIPING AT ROOF TOP UNIT FOR THROUGH THE BASE PIPE CONNECTION. SHUT-OFF VALVE SHALL BE LOCATED OUTSIDE OF THE UNIT.</li> <li>8 PROVIDE NO HUB CAST IRON PIPE FOR FIRST 10 FEET OF PIPE FROM CONNECTION TO FLOOR SINK FS-2</li> <li>9 PIPE T&amp;P RELIEF VALVE TO OUTSIDE OF BUILDING OR TO HUB DRAIN. RUN FULL SIZE PIPE FROM VALVE WITH TYPE 'K' COPPER TUBING.</li> </ul> | <ul style="list-style-type: none"> <li>10 PROVIDE GAS SHUT-OFF VALVE IN CEILING SPACE.</li> <li>11 1/2" HOT WATER PIPE DOWN IN WALL. PROVIDE SHUT-OFF VALVE OUTSIDE OF WALL FOR CONNECTION TO RETHERMALIZER.</li> <li>12 1/2" COLD WATER CONNECT TO REVERSE OSMOSIS FILTER AND 1/2" FILTERED WATER FROM REVERSE OSMOSIS FILTER. PROVIDE SHUT-OFF ON CW PIPE PRIOR TO CONNECTION TO FILTER.</li> <li>13 1/2" RO WATER FROM REVERSE OSMOSIS FILTER DOWN IN UTILITY CHASE OF M.A.P.S. LINE. PROVIDE SHUT-OFF VALVE ON FW PIPE IN CEILING NEAR UTILITY CHASE.</li> <li>14 1/2" COLD WATER TO HOT WATER SYSTEM FILTER.</li> <li>15 TEE OFF 3/8" LINE FROM DRIVE THRU BEVERAGE DISPENSER FILTERED WATER SUPPLY. SEE DETAIL 8/P6.0.</li> <li>16 1/2" COLD WATER. CONNECT TO WATER FILTER FOR BUNN POD BREWER S-547. PROVIDE SHUT-OFF VALVE PRIOR TO CONNECTION TO THE WATER FILTER.</li> </ul> |
|--|---|

**KEYNOTES - ISOMETRICS** NTS **3**



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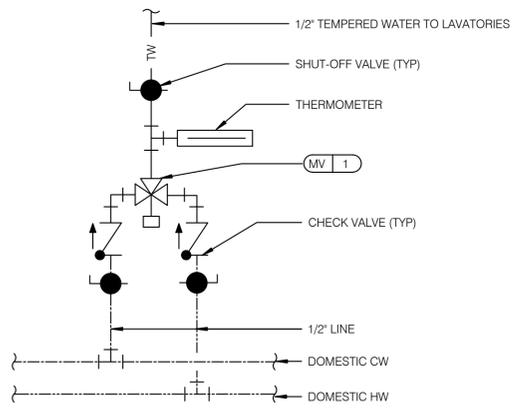
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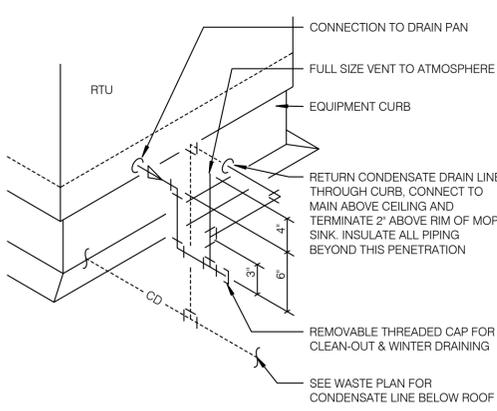
**ENDEAVOR 2.0 RISER DIAGRAMS**

**P5.0**

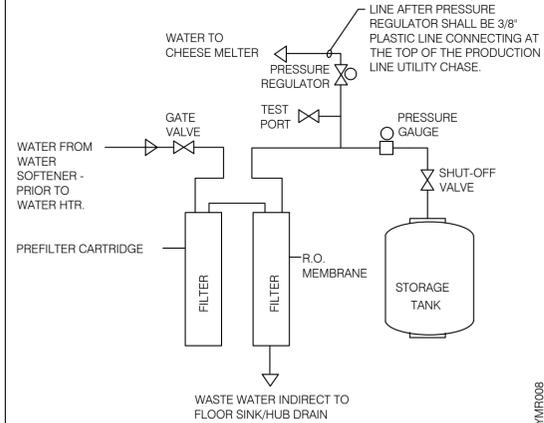
PLOT DATE: 4/18/2022



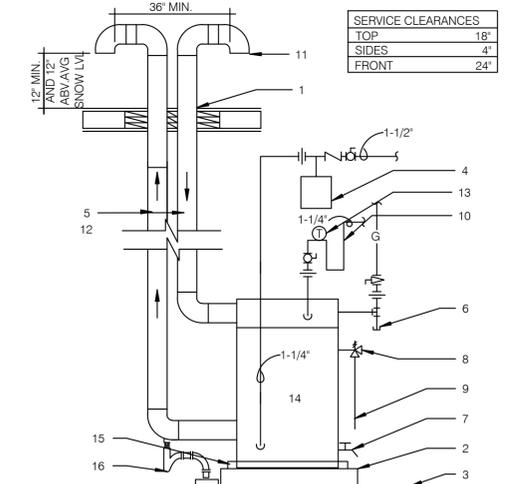
**TEMPERING VALVE** NTS **11**



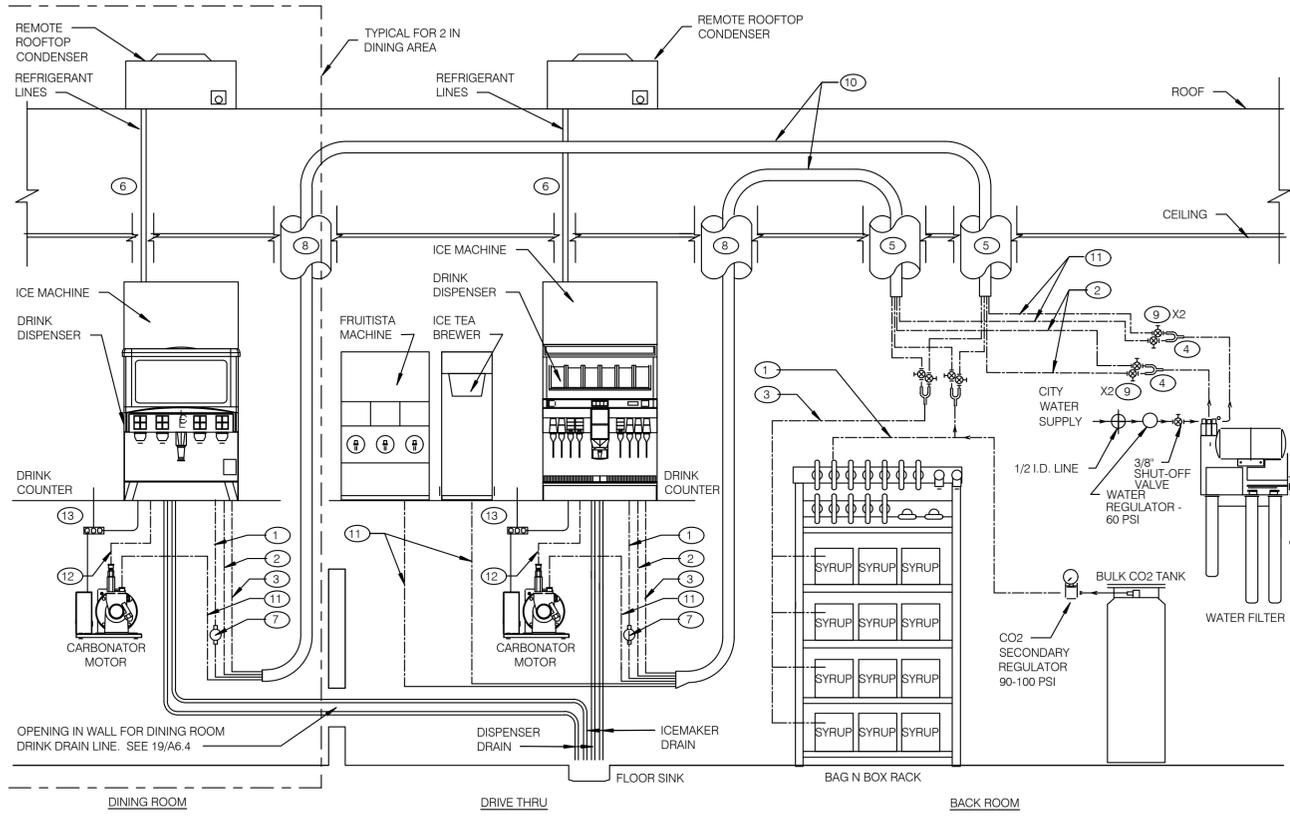
**RTU CONDENSATE** NTS **10**



**REVERSE OSMOSIS SYSTEM** NTS **9**



**WATER HEATER** NTS **2**



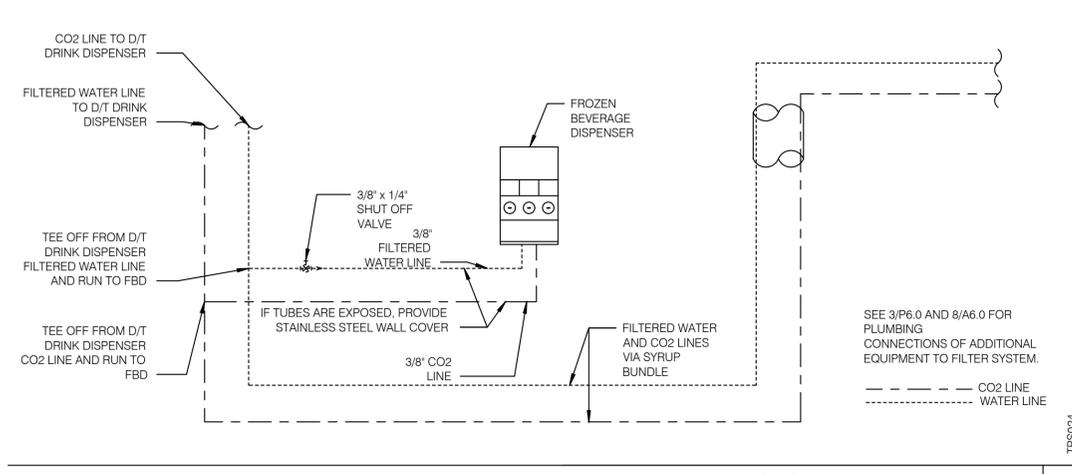
- GENERAL NOTES:**
- OVERALL FILTER DIMENSIONS: 21" WIDE x 12" DEEP x 48 1/2" HIGH
  - SEE DETAIL SCOPE OF WORK FOR SCOPE DEFINITIONS.
  - ROUGH-INS SHALL BE PROVIDED BY CONTRACTOR.
  - INSTALLATION SHALL COMPLY WITH STATE AND LOCAL PLUMBING CODES.
  - FILTER SHALL BE PROTECTED AGAINST FREEZING.
  - USE ONLY TEFLON (HIGH-LOW TEMPERATURE) TAPE TO SEAL THREADED PARTS; NO PIPE DOPE.
  - DO NOT INSTALL WHERE LINE PRESSURE EXCEEDS 125 PSI OR WHERE TEMPERATURE EXCEEDS 100 F.
  - SEE EQUIPMENT PLAN FOR LOCATION.
  - SEE DETAIL 3 THIS SHEET FOR BUNDLE DETAILS.
  - \*\* FOR ICE MACHINES SUPPLY LINES SHALL BE INSTALLED @ FILTER OUTLET.
  - BACKFLOW PREVENTERS FOR FILTER ASSEMBLY ARE PROVIDED.

THERE ARE TWO SELF-SERVE DRINK/ICE SYSTEMS WHICH SHARE A COMMON FLOOR SINK WITH THE D/T DRINK/ICE SYSTEM.

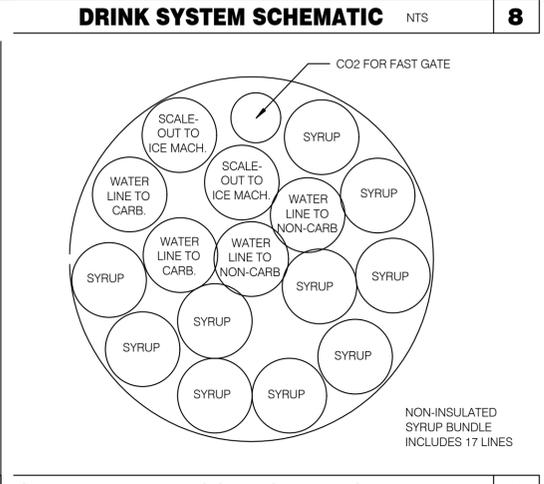
INSTALL ELECTRICAL, WATER, AND DRAIN IN ACCORDANCE WITH ALL LOCAL, STATE & FEDERAL CODES.

EQUIPMENT RATING:  
 ED250 DISPENSER - 115V, 3.5 AMPS  
 ED300 DISPENSER - 115V, 4.0 AMPS  
 CARBONATOR - 115V, 60 HZ, 7.0 AMPS  
 BOOSTER ASSEMBLY - 115V, 60 HZ, 6.5 AMPS

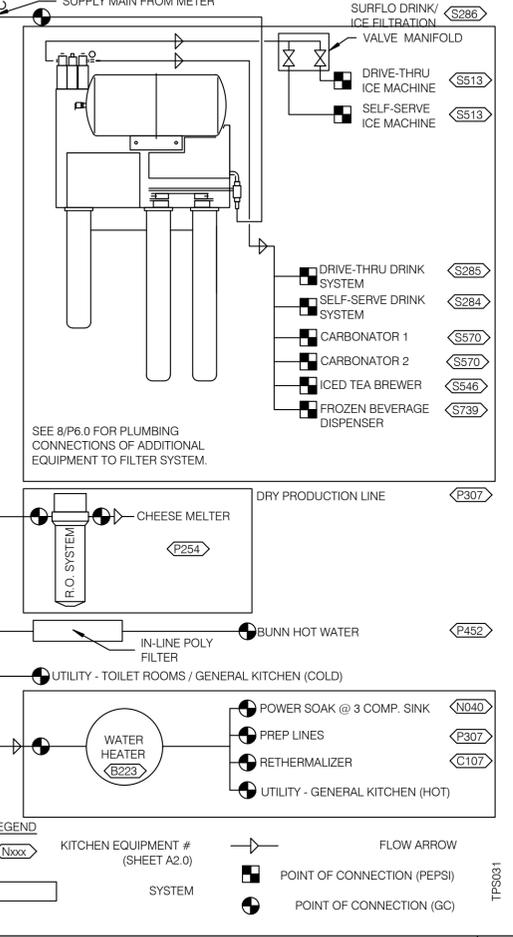
- KEY NOTES:**
- 1 3/8" CO<sub>2</sub> LINE
  - 2 3/8" FILTERED WATER LINE - ICE MACHINES
  - 3 3/8" SYRUP LINES
  - 4 1/2" X 3/8" X 3/8" Y
  - 5 BUNDLED TUBING CEILING PENETRATION.
  - 6 STAINLESS CHASE SURFACE MOUNTED FROM CEILING TO TOP OF ICE MACHINE
  - 7 PRE-SET CO<sub>2</sub> REGULATOR
  - 8 RECESSED 4" DIA. PVC VERTICAL CHASE FOR DRINK SYSTEM BUNDLED TUBING SYSTEM.
  - 9 3/8" SHUT OFF VALVES BARB FITTINGS
  - 10 DRINK SYSTEM BUNDLED TUBING. SEE DETAIL 6/P6.0
  - 11 3/8" FILTERED WATERLINE - ICE TEA, FRUITISTA & DRINK MACHINES
  - 12 3/8" LINE FOR PRESSURIZED FILTERED WATER
  - 13 ELECTRICAL FOR DRINK SYSTEM. SEE SHEET E3.0



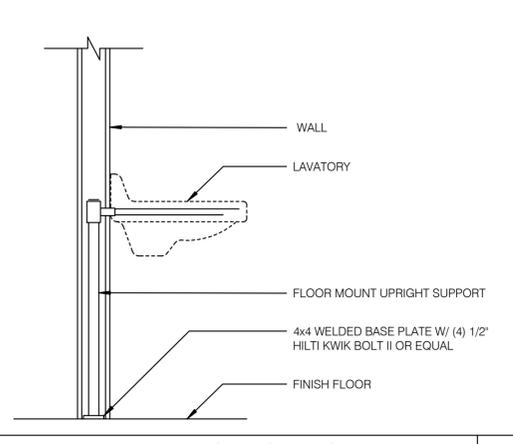
**FBD DRINK SYSTEM DETAIL** NTS **7**



**SYRUP BUNDLE CONFIGURATION** NTS **6**



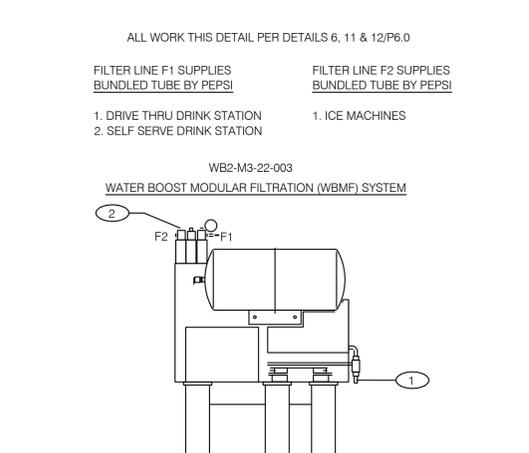
**WATER FILTRATION SCHEMATIC** NTS **3**



**LAVATORY SUPPORT** NTS **5**

- FLUE THRU ROOF
- 4" CONCRETE PAD
- FINISHED FLOOR
- THERMAL EXPANSION TANK BY WATTS - SEE PLUMBING SCHEDULE - STRAP AND SUPPORT TO WALL
- SCHEDULE 40 PVC, MINIMIZE TURNS AND TRANSITIONS.
- GAS COCK VALVE WITH FULL SIZE DIRT LEG
- 3/4" DRAIN WITH VALVE & CAP
- COMBINATION TEMPERATURE AND PRESSURE RELIEF PER LOCAL CODE
- RUN T&P DISCHARGE FULL SIZE TO HUB DRAIN
- 22" DEEP HEAT TRAP
- AIR INTAKE W/ INTERNAL INSECT SCREEN PROVIDED BY MFR.
- SUPPORT VENT PIPE RUNS EVERY 5'-0" VERTICALLY AND EVERY 3'-0" HORIZONTALLY.
- OUTLET THERMOMETER PROVIDED BY MFR. LOCATE WITHIN 12" OF W.H. OUTLET.
- SEE DETAIL 2/P6.1 FOR SCHEDULE OF ITEMS PROVIDED BY W.H. MFR.
- DRAIN PAN TO HUB DRAIN.
- P-TRAP AND LINE TO DRAIN PROVIDED BY MANUFACTURER. LEAVE AIR GAP BETWEEN BOTTOM OF TRAP AND DRAIN. SEE DETAIL 4/P2.0

**WATER HEATER** NTS **2**



**WATER FILTER SYSTEM** NTS **1**

- KEY NOTES:**
- 3/4" COLD WATER INLET TO 1/2" COPPER LINE AND FITTINGS AT FILTER.
  - 3/4" OUTLET W/ INTEGRAL BACKFLOW PREVENTER, EQUAL TO WATTS REGULATOR CO. SERIES 007 AND SERVICE BALL VALVE.
- GENERAL NOTES:**
- OVERALL DIMENSIONS 21" WIDE x 12" DEEP x 48 1/2" HIGH
  - SEE SCOPE OF WORK FOR ADDITIONAL INFORMATION.
  - INSTALLATION SHALL COMPLY WITH STATE AND LOCAL PLUMBING CODES.
  - THE UNIT SHALL BE PROTECTED AGAINST FREEZING.
  - USE ONLY TEFLON (HIGH-LOW TEMPERATURE) TAPE TO SEAL THREADED PARTS; NO PIPE DOPE.
  - DO NOT INSTALL WHERE LINE PRESSURE EXCEEDS 125 PSI OR WHERE TEMPERATURE EXCEEDS 100 F.
  - SEE SHT. A2.0 FOR LOCATION.



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**ENDEAVOR 2.0 PLUMBING DETAILS**

**P6.0**

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