SCOPE OF WORK

PROVIDE NEW 3 TON AND 5 TON ROOFTOP UNIT WITH GAS HEAT. PROVIDE COMPLETE NEW DUCTWORK AND PROVIDE NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEMS.

PROVIDE 1 RESTROOM EXHAUST FANS. PROVIDE 1 KITCHEN EXHAUST HOOD & HOOD EXHAUST FANS. PROVIDE 1 MAKEUP AIR UNIT FOR HOOD.

COORDINATE WITH GC ANY ADDITIONAL REFRIGERATION WORK REQUIRED AND WORK REQUIRED ON KITCHEN EXHAUST SYSTEMS AND WITH GC AND PLUMBING CONTRACTOR PROVIDING CONDENSATE LINES FOR MECHANICAL EQUIPMENT AND GAS FLUE FOR WATER HEATERS.

FRISCO CITY BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF FRISCO CITY BUILDING CODE 2018 AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. THE CONTRACTOR SHALL ENGAGE THE THE SERVICES OF A PROFESSIONAL ENGINEER TO PROVIDE THE REQUIRED SPECIAL INSPECTIONS AND TESTS.
2. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.
3. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE INTERNATIONAL MECHANICAL CODE 2018:
   - A. VENTILATION SYSTEM SERVING COMMERCIAL COOKING APPLIANCES - MC 506.
   - B. REFRIGERATION SYSTEMS - MC SECTION 1108.
4. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   - A. DUCT CONSTRUCTION AND INSTALLATION- IMC 2018 SECTION 603
   - B. AIR INTAKES, EXHAUSTS AND RELIEFS - IMC 2018 SECTION 401.5
   - C. GAS FIRED EQUIPMENT - INTERNATIONAL FUEL GAS CODE
5. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
6. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY IMC 2018 SECTION 401.3.
7. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
8. MECHANICAL SYSTEMS SHALL BE COMMISSIONED PER INTERNATIONAL ENERGY CODE 2018 (IECC 2018) C408.2, C408.2.1, C408.2.5 FINAL COMMISSIONING REPORT SHALL BE DUE WITHIN 90 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.
9. A COMMISSIONING PLAN SHALL BE DEVELOPED BY A LICENSED DESIGN PROFESSIONAL, MECHANICAL ENGINEER OR APPROVED AGENCY.
10. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE LICENSED DESIGN PROFESSIONAL, ELECTRICAL ENGINEER, MECHANICAL ENGINEER OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT AS PER INTERNATIONAL ENERGY CODE 2018 (IECC 2018)
11. A FINAL REPORT OF TEST PROCEDURES AND RESULTS IDENTIFIED AS "FINAL COMMISSIONING REPORT" SHALL BE DELIVERED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL SYSTEM AND SERVICE HOT WATER SYSTEM FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW.
12. A WRITTEN REPORT DESCRIBING THE ACTIVITIES AND MEASUREMENTS COMPLETED IN ACCORDANCE WITH SECTION INTERNATIONAL ENERGY CODE 2018 (IECC 2018) C408.2.5.1.
13. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
14. SMOKE DETECTOR SHALL MEET UL268A.
15. ALL MECHANICAL VENTILATION SHALL BE PROVIDED IN ACCORDANCE WITH 2018 IMC CHAPTER. 4.

GENERAL NOTES

A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET. PAY SPECIAL ATTENTION TO THE RESPONSIBILITY SCHEDULE. WORK DESIGNATED ON SCHEDULE SHALL BE CONSIDERED INCLUDED IN YOUR SCOPE OF WORK AND CONTRACT AMOUNT.

B. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.

C. DRAWINGS/DETAILS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, AND CHECK/COORDINATE DRAWINGS OF ALL TRADES.

D. COORDINATE WITH THE WORK OF OTHERS SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DRIPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.

E. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

F. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.

G. USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.

H. VERIFY LOCATION OF PERMISSIBLE NEW STRUCTURAL ROOF PENETRATIONS AND ADAPT THE REQUIRED DUCTS ACCORDINGLY. THE OPENINGS MUST BE LOCATED USING A REBAR LOCATOR, TRYING TO LEAVE A TRANSVERSE BAR WITHIN 4" FROM THE OPENING. LOCATE OPENINGS AT MID-DISTANCE BETWEEN THE STEMS OF THE DOUBLE TEE AND LONGITUDINAL REINFORCEMENT SHALL NEVER BE CUT. CALL THE ARCHITECT'S OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.

I. G.C. SHALL CONTRACT LANDLORD-APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ALL ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.

J. IF APPLICABLE CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR KITCHEN VENTILATION SYSTEM INCLUDING TYPE 1 HOOD AND FOR THE WALK-IN COOLER & FREEZER.

K. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

L. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE AND PROVIDE COPY TO LL.

M. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.

THERMOSTATIC CONTROLS

C403.4.1 THERMOSTATIC CONTROLS (MANDATORY)
THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES, GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED THAT BOTH OF THE FOLLOWING CONDITIONS ARE MET:

THE PERIMETER SYSTEM INCLUDES NOT FEWER THAN ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN ± 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15 240 MM).
THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.

C403.4.1.2 DEADBAND (MANDATORY)
WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.
EXCEPTIONS:
THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.
OCCUPANCIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY THE CODE OFFICIAL.

C403.4.1.3 SETPOINT OVERLAP RESTRICTION (MANDATORY)
WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.4.1.2.

C403.4.2 OFF-HOUR CONTROLS (MANDATORY)
EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.
EXCEPTIONS:
ZONES THAT WILL BE OPERATED CONTINUOUSLY.
ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A MANUAL SHUTOFF SWITCH LOCATED WITH READY ACCESS.

C403.4.2.1 THERMOSTATIC SETBACK (MANDATORY)
THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN (MANDATORY)
AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

C403.4.2.3 AUTOMATIC START (MANDATORY)
AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.

ROOF TOP UNIT SCHEDULE

TAG	RTU-1(N)	RTU-2(N)
UNIT	GAS HEAT	GAS HEAT
MANUFACTURER	CARRIER	CARRIER
MODEL	48HCDA04 OR EQUIVALENT	48HCDA04 OR EQUIVALENT
STATUS	NEW	NEW
MOUNTING	ROOF	ROOF
NOMINAL CAPACITY	3 TONS	5 TONS
TOTAL COOLING BTUH'S	35,200	56,900
SENSIBLE COOLING BTUH'S	27,500	46,600
EER	12.5	12.45
SEER	15	15.2
HEATING BTUh's (IN)	50,000	50,000
HEATING BTUh's (OUT)	41,000	41,000
THERMAL EFF (%)	82%	82%
SUPPLY AIR (CFM)	1200	2000
OUTDOOR AIR (CFM)	140	220
MIN. GAS PRE (mm WG)	102	102
MAX. GAS PRE (mm WG)	331	331
VOLTAGE	208/3/60	208/3/60
MCA (A)	20	30
MCB (A)	25	45
WEIGHT (lbs)	595	831

INCLUDED SYSTEM OPTIONS FOR NEW RTU

A. PROVIDE FULL PERIMETER 14" HIGH ROOF CURB.
B. PROVIDE DUCT MOUNTED SMOKE DETECTOR IN RETURN SIDE FOR EQUIPMENT GREATER THAN 2000 CFM.
C. PROVIDE 2" MERV8 FILTERS.
D. PROVIDE HINGED PANELS FOR FILTER ACCESS, FAN MOTOR ACCESS, COMPRESSOR ACCESS AND CONTROL COMPARTMENT ACCESS.
E. CONTRACTOR TO PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT FOR RTU WITH HUMIDITY CONTROL.
F. HAIL GUARD - FLD.
G. PROVIDE NON FUSED DISCONNECT SWITCH.
H. PROVIDE WITH TUBE & FIN COIL SYSTEM.
I. PROVIDE WITH DRAIN PAN OVERFLOW SWITCH-FACTORY.
J. PROVIDE WITH STANDARD CAP AND PHASE MONITOR SYSTEM.
K. PROVIDE MULTISTAGE AIR VOLUME.
L. PROVIDE WITH GFCI FLD WIRED FACTORY
M. PROVIDE HIGH STATIC BELT DRIVE
N. UNIT TO BE PROVIDED WITH LOW AMBIENT OPERATION CAPABILITIES.
O. PROVIDE AIR SIDE LOW LEAK ENTHALPY REFERENCE ECONOMIZER WITH FDD AND BAROMETRIC RELIEF FOR RTU-2 (N).
P. PROVIDE HOT GAS BYPASS SYSTEM.

RTU NOTES-

1. INSTALL AS PER MANUFACTURERS SPECIFICATIONS AND MAINTAIN ALL SERVICE CLEARANCES.
2. PROVIDE CONDENSATE DRAIN 'P' TRAP MINIMUM 3" DEEP OR TWICE THE TOTAL STATIC PRESSURE WHICHEVER IS GREATER.
3. COMPRESSOR SHALL HAVE A MINIMUM 5 YEAR WARRANTY ALL OTHER EQUIPMENT SHALL HAVE , MINIMUM 1 YEAR WARRANTY.
4. RTUS ARE BASED ON AHRI STANDARD CONDITIONS OF 80°F DB, 67°F WB INDOOR ENTERING AIR TEMPERATURE AND 95°F DB ENTERING AIR FOR OUTDOOR UNIT.
5. MUST MEET THE EER'S MINIMUM EFFICIENCY CODE REQUIREMENTS.
6. CONTRACTOR SHALL VERIFY EXACT ELECTRICAL CONNECTIONS, WIRE SIZES, BREAKERS, DISCONNECT ETC. PRIOR TO ORDERING AND BID

VENTILATION REQUIREMENTS PER INTERNATIONAL MECHANICAL CODE-2018, TABLE 403.3

OUTSIDE AIR CALCULATIONS			
DINING ROOM	220 SQ. FT. X 0.18 CFM/SQ. FT. =	40	CFM
	10 PEOPLE. X 7.5 CFM/PEOPLE. =	75	CFM
KITCHEN	590 SQ. FT. X 0.18 CFM/SQ. FT. =	107	CFM
	14 PEOPLE. X 7.5 CFM/PEOPLE. =	105	CFM
HALL WAY	140 SQ. FT. X 0.06 CFM/SQ. FT. =	9	CFM
OUTSIDE AIR REQUIRED		336	CFM
OUTSIDE AIR PROVIDED		360	CFM
EXHAUST AIR CALCULATIONS			
KITCHEN	590 SQ. FT. X 0.7 CFM/SQ. FT. =	413	CFM
RESTROOM	70 CFM PER FIXTURE X NO. OF FIXTURE(#1) =	70	CFM
MOP SINK		70	CFM
EXHAUST AIR REQUIRED		553	CFM
AIR BALANCE			
RTU-1(N)-O/A PROVIDED		140	CFM
RTU-2(N)-O/A PROVIDED		220	CFM
MAU-1(N)-O/A PROVIDED		1400	CFM
POEF-1(N)		-1600	CFM
BEF-1(N)		-70	CFM
EF-1(N)		-70	CFM
BUILDING PRESSURE		+20	CFM

DIFFUSER SCHEDULE

MANUFACTURER	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A1	A2	B	C	D	R
USE	SUPPLY	SUPPLY	SUPPLY	SUPPLY	SUPPLY	RETURN
MODEL	TDC-AA	PAS	TDC-AA	300FS	TMR-AA	TDC-AA
MOUNTING	HARD CEILING	HARD CEILING	HARD CEILING	DUCT/SIDE WALL	OPEN CEILING	SAT/HARD CEILING
LOCATION	ANY	AS SHOWN	AS SHOWN	ANY.	AS SHOWN	ANY
FACE SIZE	24" X 24"	24" X 24"	12" X 12"	14" X 6"	Ø18"	24" X 24"
NECK SIZE	10" X 10"	10" X 6"	6" X 6"	6" X 6"	Ø10"	12" X 10"
FRAME TYPE	FLANGED	FLANGED	FLANGED	FLANGED	FLANGED	LAY IN/FLANGED
FINISH	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
NOISE CRITERIA	<30	<30	<30	<30	<30	<30
ACCESSORIES	OPPOSED BLADE DAMPER	OPPOSED BLADE DAMPER	OPPOSED BLADE DAMPER	VOLUME DAMPER	OPPOSED BLADE DAMPER	OPPOSED BLADE DAMPER

MAKEUP AIR UNIT SCHEDULE

TAG	MAU-1(N)
UNIT	GAS HEAT
MANUFACTURER	ACCUREX
MODEL	XDG-109-H10-5
STATUS	NEW
MOUNTING	ROOF
TOTAL COOLING BTUH'S	64,200
SENSIBLE COOLING BTUH'S	41,900
SEER	14
HEATING BTUh's (IN)	82,200
HEATING BTUh's (OUT)	75,600
THERMAL EFF (%)	92%
SUPPLY AIR (CFM)	1400
VOLTAGE	208/3/60
MCA (A)	25.3
MCB (A)	40
WEIGHT (lbs)	1093

INCLUDED SYSTEM OPTIONS FOR NEW MAU

1. AIR FLOW ARRANGEMENT:VARIABLE VOLUME
2. VFD CONTROL: EXTERNAL 0-10 VDC
3. HINGED ACCESS
4. ACCESS SIDE: RIGHT-HAND
5. CONTROL CENTER
6. FREEZE PROTECTION
7. HEAT INLET AIR SENSOR
8. COOL INTER AIR SENSOR
9. UNIT CONTROLS: TERMINAL STRIP
10. TEMPERATURE CONTROL: DISCHARGE
11. WEATHERHOOD ALUMINIUM MESH, 20X25X2-(1), 16X25X2- (1)
12. DAMPER: INLET
13. OUTDOOR AIR INTAKE POSITION: END
14. DISCHARGE POSITION: BOTTOM
15. COATING: GALVANIZED
16. COOLING COIL COATING: NONE
17. INSULATION:DOUBLE WALL COOL SOURCE ON
18. SUPPLY FAN CONTROL: VFD

DIRECT GAS OPTIONS/ACCESSORIES

1. APPROVALS:ETL
2. FM COMPLIANT
3. GAS PRESSURE : 352 mmWG
4. GAS PIPE SIZE: $\frac{3}{4}$"

FAN SCHEDULE

DESIGNATION	POEF-1(N)	BEF-1(N)	EF-1(N)
STATUS	NEW	NEW	NEW
QUANTITY	1	1	1
MANUFACTURER	ACCUREX	GREENHECK	GREENHECK
MODEL	XCUE-140-VG	SP-A90	SP-A90
CFM	1600@1" W.C ESP	70@0.25" W.C ESP	70@0.25" W.C ESP
HP	0.75	-	-
FLA(A)	-	0.17(AMPS)	0.17(AMPS)
WEIGHT (LBS)	94	21	21
VOLTAGE	115/1/60	115/1/60	115/1/60

NOTES:

1. EF-1 FANS SHALL BE INTERLOCKED WITH RTU -2(N)
2. COORDINATE ELECTRICAL POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

MECHANICAL SYMBOLS

- EXHAUST FAN
- SUPPLY OR OUTSIDE AIR DUCT
- RETURN OR EXHAUST AIR DUCT
- INSULATED RIGID DUCTWORK
- DUCT TRANSITION
- MANUAL VOLUME DAMPER
- FLEXIBLE DUCTWORK R-6.0
- ROOF MOUNTED EXHAUST FAN OUTLET
- ROOFTOP UNIT
- PEROPATED TYPE SUPPLY DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS
- EXHAUST FAN WITH LIGHT
- AIR HANDLE UNIT
- OPPOSED BLADE DAMPER
- SD DUCT SMOKE DETECTOR
- T PROGRAMMABLE THERMOSTAT
- RS REMOTE SENSOR
- Ø ROUND DUCT DIAMETER
- CFM CUBIC FEET/ MINUTE
- S/A SUPPLY AIR
- H_S HUMIDITY SENSOR
- CIRCULAR SUPPLY DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS
- R/A RETURN AIR
- SG SUPPLY GRILLE
- CD CONDENSATE PIPING
- (E) EXISTING
- (N) NEW
- SUPPLY DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS
- RETURN DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS

NOTE: THIS PROJECT MAY NOT USE EVERY SYMBOL OR DEVICE APPEARING ON THIS LEGEND.

MECHANICAL REQUIREMENTS

- DISTRIBUTE WEIGHT OF HVAC SYSTEMS UNIFORMLY, TO NOT OVERLOAD WOOD/STEEL JOISTS/TRUSSES.
- HVAC EQUIPMENT SHOULD NOT BE VISIBLE, SCREEN OR LOCATE ACCORDINGLY.
- REINFORCE ROOF OPENINGS WITH 4X4X1/4 STEEL ANGLE ON ALL SIDES MINIMALLY, OR PER AHJ.
- MAXIMUM FLEXIBLE DUCT LENGTH ALLOWED 6'-0".
- BALANCING DAMPENERS SHALL BE AT ALL BRANCH LINES.
- NO DUCT BOARD ALLOWED.
- PROVIDE ROOF WALK PADS ON ALL SIDES OF REGULARLY MAINTAINED ROOF TOP EQUIPMENT, INCLUDING RTUS.
- RETURN AIR TO BE FULLY DUCTED, OR TENANT TO REPLACE/ENSURE ALL MEP (EQUIPMENT, DUCTWORK, CONDUIT, PIPING, ETC.) IS PLENUM RATED. LL MAKES NO GUARANTY THAT EXISTING MEP IS PLENUM RATED.
- ALL HARD CEILINGS TO HAVE AN ACCESS HATCH DIRECTLY BELOW MEP EQUIPMENT (RTU'S, TRANSFORMERS, EXHAUST FANS, WATER METER/SUBMETER, ETC.) FOR SERVICING.
- NO EXPOSED ELECTRICAL CONDUIT FOR ROOF TOP EQUIPMENT. HOWEVER, IF UNAVOIDABLE, IT SHOULD BE ATTACHED TO UNIT(S) AND NOT ATTACHED TO CURB OR CURB FLASHING, NOR RUN FREELY ACROSS ROOF. MOUNT CONVENIENCE OUTLETS TO EQUIPMENT.
- REFRIGERANT LINES TO PENETRATE ROOF ADJACENT TO ROOF UNITS (RTUS, CONDENSERS, HEAT PUMPS, ETC.), THROUGH SEPARATE ROOF PENETRATION, USING LL'S REQUIRED ROOFER. THE LINES MAY SHARE A SINGLE PENETRATION, BUT HAVE MINIMAL RUN LENGTHS AND BE IN A NEAT AND ORGANIZED MANNER.
- ROUTE CONDENSATE LINES BELOW ROOF (WITHIN CURB OPENING OR PITCH PAN) IMMEDIATELY ADJACENT TO THE ROOF EQUIPMENT, HELD TIGHT TO DECK, INSULATE, AND TO DISCHARGE WITHIN DEMISED PREMISES. ANY PORTION OF THE CONDENSATE DRAIN CONNECTION ABOVE ROOF DECK TO BE COPPER (MAY TRANSITION TO PVC ONCE BELOW DECK). DO NOT PENETRATE SIDE OF CURB.
- INSULATE ALL CONDENSATE & REFRIGERANT LINES TO PREVENT SWEATING, DRIPPING ONTO CEILING.

RESTAURANT REQUIREMENTS

- HOOD EXHAUST FAN(S) SHOULD BE AS FAR FROM LEASE LINE AS POSSIBLE AT ROOF (5' MIN. PREFERRED). ENSURE THAT THEY ARE NO LESS THAN 10' FROM ANY ADJACENT TENANT INTAKE OR RTU.
- INSTALL GREASE GUARD(S) AROUND UPBLAST EXHAUST FAN(S) FOR HOODS AT ROOF.
- PROVIDE WATERPROOFING MEMBRANE ALONG ALL KITCHEN WALLS THAT ABUT LEASE LINE/DEMISING WALLS, UP TO 8' A.F.F. AND 8' AWAY FROM WALL, BEHIND/UNDER FINISHES (MAPEI, RED GARD, OR SIMILAR), EVEN BEHIND WATER RESISTANT FINISHES. PROVIDE PHOTOGRAPHIC EVIDENCE OF INSTALLATION.
- SEAL AROUND ALL REAR DOORS, ESPECIALLY IN KITCHEN AREAS.
- COOLERS/FREEZERS TO BE 4" MINIMUM FROM DEMISING (LEASE LINE) AND EXTERIOR WALLS, AND 2' MINIMUM FROM TENANTS INTERIOR WALLS, WITH MOISTURE AND MOLD RESISTANT WALL BOARD AND WATERPROOFING MEMBRANE BEHIND.
- PROVIDE STRUCTURAL REINFORCEMENT FOR THE HOOD EXHAUST FAN (ROOF) OPENINGS.
- GREASE REFILL AND WASTE IS PREFERRED TO BE ON A CLOSED LOOP SYSTEM (SIMILAR TO RESTAURANT TECHNOLOGIES), REFILL AND REMOVAL BOX SHALL BE RECESSED WITHIN REAR WALL.

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

REVISIONS DATES:

01	BD COMMENTS	06.05.23
02	HD COMMENTS	07.28.23
03	PROJ. COORDN	05.15.24

ISSUE DATE: 02.22.23
PROJECT #: 318F.1304F
DRAWN BY: NYE
CHECKED BY: NYE

HVAC NOTES & SCHEDULES

M-1

MECHANICAL PLAN NOTES

A. USE NEW ROOF TOP UNITS WITH GAS HEAT. PROVIDE MODIFICATIONS TO DUCT SYSTEM AS SHOWN. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN AIR DUCT CONNECTIONS. INSTALL FIRE DAMPERS IN ANY FIRE WALLS AND BETWEEN FLOORS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. EXISTING DUCTWORK MAY BE REUSED WHERE POSSIBLE. REFER TO RTU SCHEDULE FOR ADDITIONAL REQUIREMENTS.

B. FOR SYSTEM OVER 2,000 CFM CHECK FOR DUCT MOUNTED AIR SMOKE DETECTORS AND THAT MEET THE REQUIREMENTS OF U.L. 268A, INTERLOCKED TO SHUTDOWN RTU UPON DETECTION OF SMOKE. IF NECESSARY PROVIDE SMOKE DETECTOR WITH AN ANNUNCIATOR, ALARM AND POWER L.E.D.'S FOR VISIBLE AND AUDIBLE ALARM SIGNAL, AND VISIBLE TROUBLE SIGNAL. MOUNT ANNUNCIATOR ON ROOM SIDE OF CEILING.

C. ALL DUCTS WILL MINIMUM 26 GAUGE SHEET METAL WITH EXTERNAL DUCT WRAP INSULATION. ALL DUCTS TO BE MANUFACTURED AND INSTALLED ACCORDING TO ASHRAE AND SMACNA METAL DUCT CONSTRUCTION STANDARD, LATEST EDITION. ALL MATERIALS WILL CONFORM TO NFPA 90A. NO DUCT BOARD ALLOWED.

D. THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. COORDINATE LOCATION OF THERMOSTAT.

E. ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-6 INSULATION ACCORDING TO INTERNATIONAL ENERGY CONSERVATION CODE - 2018. ALL SEAMS, JOINTS, ETC WILL BE SEALED TO MAKE AIR DUCT AIRTIGHT. PRESSURE SENSITIVE MATERIALS AND OTHERS APPROVED BY LATEST SMACNA. SEALING MATERIALS WILL BE USED.

F. ALL NEW A/C CONDENSATE DRAINS WILL BE COPPER FULL DIAMETER OF OUTLET AND WILL TERMINATE IN THE NEAREST ROOF DRAIN OR INDIRECT WASTE.

G. ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.

H. TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE INTERNATIONAL ENERGY CONSERVATION CODE - 2018, SECTION C408.2.2. BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (N.E.B.B.), THE ASSOCIATED AIR BALANCE COUNCIL (A.A.B.C) NATIONAL STANDARDS OR EQUIVALENT PROCEDURES.

I. HANGER ATTACHMENTS TO THE STEEL STRUCTURE WILL BE RATED POWDER ACTUATED FASTENERS, "C" CLAMPS, WELDED STUDS, CLAMP HANGERS, JOIST CLAMPS OR OTHER METHODS RECOMMENDED BY SMACNA'S "METAL AND FLEXIBLE STANDARDS", CHAPTER 4, AND WILL HAVE A MINIMUM SAFETY MARGIN OF 4:1. SUSPENDED FROM TOP CHORD OF JOISTS, NOTHING FROM DECK OR CROSS BRACING.

J. EXHAUST HOODS, DUCTS, CURBS, FANS AND CONTROLS TO BE SUPPLIED AND INSTALLED BY HOOD CONTRACTOR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, THE IBC, NEC AND NFPA 96.

K. ALL HVAC CONTROLS AND CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.

L. CONTRACTOR TO FIELD VERIFYTHAT THE LOCATION OF ANY EXHAUST SOURCE FROM ADJACENT TENANTS SHOULD BE AT LEAST 10' HORIZONTALLY OR 3' VERTICALLY FROM RTU-1(N) & RTU-2(N).

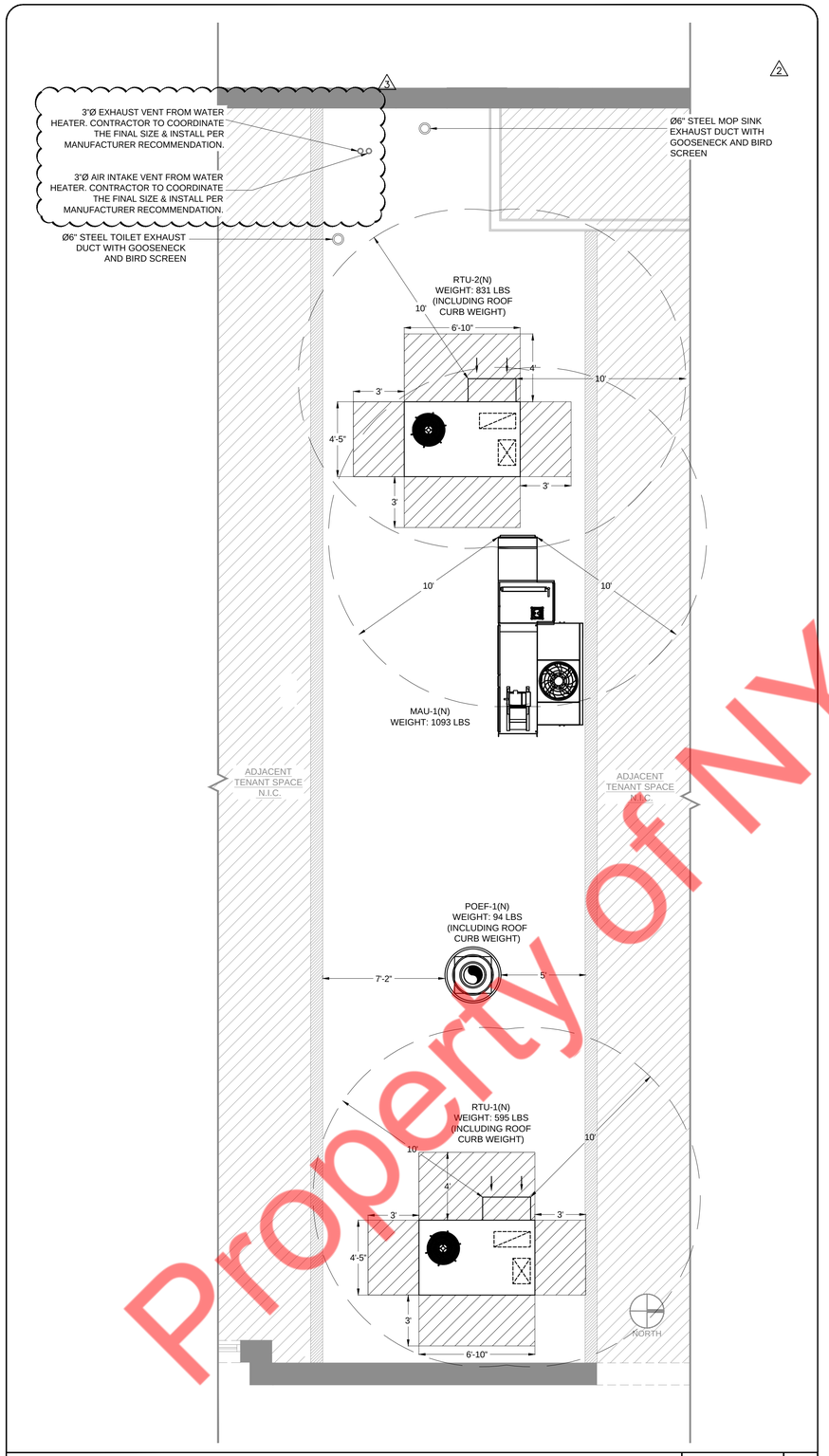
M. GUARDS SHALL BE PROVIDED WHERE VARIOUS COMPONENTS THAT REQUIRE SERVICE AND ROOF HATCH OPENINGS ARE LOCATED WITHIN 10 FEET OF A ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR, ROOF, OR GRADE BELOW. THE GUARD SHALL EXTEND NOT LESS THAN 30 INCHES BEYOND EACH END OF COMPONENTS THAT REQUIRE SERVICE. THE TOP OF THE GUARD SHALL BE LOCATED NOT LESS THAN 42 INCHES ABOVE THE ELEVATED SURFACE ADJACENT TO THE GUARD. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21-INCH-DIAMETER SPHERE AND SHALL COMPLY WITH THE LOADING REQUIREMENTS FOR GUARDS SPECIFIED IN THE INTERNATIONAL BUILDING CODE. ARCHITECT TO PROVIDE PERMANENT APPROVED MEANS OF ACCESS FOR THE EQUIPMENT AND APPLIANCES ON THE ROOF AS PER 2018 IMC SECTION 306.5.

N. INTERLOCK BATHROOM EXHAUST FANS WITH RTU-1(N).

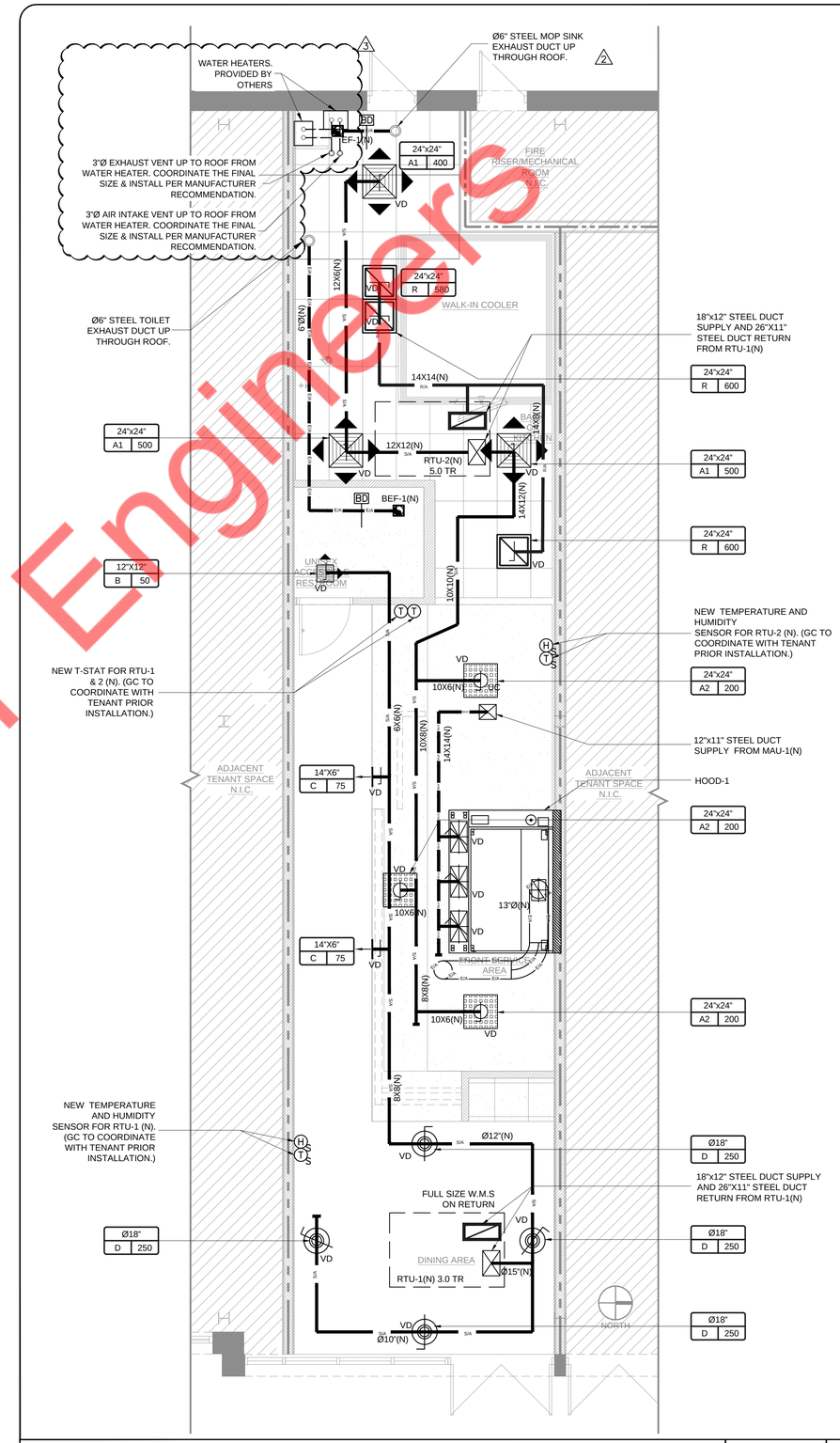
O. RTU-2 SHALL BE INTERLOCKED WITH HOODS/KITCHEN EXHAUST FANS.

GREASE DUCT SPECIFICATIONS

1. PROVIDE CLEAN OUT AT ALL ELBOWS AND BOTTOM OF RISER AND EVERY 20 FEET HORIZONTAL KITCHEN EXHAUST DUCT.
2. COMMERCIAL KITCHEN GREASE DUCTS SHALL BE DESIGNED FOR THE TYPE OF COOKING APPLIANCE AND HOOD SERVED. COMMERCIAL KITCHEN GREASE DUCTS SHALL BE OF 16 GAUGE MINIMUM BLACK IRON OR PREFABRICATED SINGLE WALL GREASE DUCT WITH UL 1978 AND UL 2221 LISTING.
3. JOINTS, SEAMS AND PENETRATIONS OF GREASE DUCTS SHALL BE MADE WITH A CONTINUOUS LIQUID TIGHT WELD OR BRAZE MADE IN THE EXTERNAL SURFACE IF THE DUCT SYSTEMS.
4. DUCT TO EXHAUST FAN CONNECTIONS SHALL BE FLANGED, GASKETED AND BOLTED TO THE INLET AND OUTLET OF THE FAN FOR INLINE FANS. APPROVED FLEXIBLE CONNECTIONS MAY BE PROVIDED.
5. A VIBRATION ISOLATION CONNECTOR FOR CONNECTING A DUCT TO A FAN SHALL CONSIST OF NON-COMBUSTIBLE PACKING IN A METAL SLEEVE JOINT OF APPROVED DESIGN OR SHALL BE A COATED-FABRIC FLEXIBLE DUCT CONNECTOR LISTED AND LABELED FOR THE APPLICATION. VIBRATION ISOLATION CONNECTORS SHALL BE INSTALLED ONLY AT THE CONNECTION OF A DUCT TO A FAN INLET OR OUTLET.
6. PRIOR TO THE USE OR CONCEALMENT OF ANY PORTION OF A GREASE DUCT SYSTEM, A LEAKAGE TEST SHALL BE PERFORMED AS PER IMC 2018 SECTION 506.3.2.5. DUCT SHALL BE CONSIDERED TO BE CONCEALED WHERE INSTALLED IN SHAFTS OR COVERED BY COATINGS OR WRAPS THAT PREVENT THE DUCTWORK FROM VISUALLY INSPECTED ON ALL SIDE. THE DUCT INSTALLER SHALL BE RESPONSIBLE FOR PROVIDING THE NECESSARY EQUIPMENT AND PERFORMING THE GREASE DUCT LEAKAGE TEST. THE DUCT LEAKAGE TEST SHALL BE PERFORMED FOR ALL THE DUCT SYSTEMS, INCLUDING THE DUCT-TO-DUCT CONNECTION. THE DUCTWORK SHALL BE PERMITTED TO BE TESTED IN SECTIONS, PROVIDED THAT EVERY JOINT IS TESTED (IF TEST IS FAILED, CONTRACTOR TO PROVIDE NEW KITCHEN EXHAUST DUCT).
7. PROVIDE SMOKE TEST TO PROOF TIGHTNESS OF THE GREASE DUCT.
8. GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NON-COMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY AND SEISMIC LADS WITHIN THE STREET LIMITATIONS OF THE NEW YORK CITY BUILDING CODE. BOLTS, SCREWS, RIVETS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.
9. A RESIDUE TRAP SHALL BE PROVIDED AT THE BASE OF EACH VERTICAL RISER WITH PROVISION FOR CLEANOUT IN ACCORDANCE WITH NFPA 96.
10. CLEANOUT OPENINGS SHALL BE PROVIDED AT EVERY CHANGE IN DIRECTION, WITHIN 3 FEET OF THE EXHAUST FAN.
11. CLEANOUT OPENINGS SHALL BE EQUIPPED WITH TIGHT-FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT. DOORS SHALL BE EQUIPPED WITH A SUBSTANTIAL METHOD OF LATCHING, SUFFICIENT TO HOLD THE DOOR TIGHTLY CLOSED. DOOR ASSEMBLIES SHALL HAVE A GASKET OR SEALANT THAT IS NONCOMBUSTIBLE AND LIQUID TIGHT AND SHALL NOT HAVE FASTENERS THAT PENETRATED THE DUCT
12. A GREASE DUCT SERVING THE TYPE-1 HOOD THAT PENETRATED A CEILING, WALL OR FLOOR SHALL BE ENCLOSED FROM THE FIRE POINT OF PENETRATION TO THE OUTLET TERMINAL. DUCT ENCLOSURES SHALL HAVE A FIRE-RESISTANCE RATING NOT LESS THAN THAT OF THE FIRE-RESISTANCE RATED ASSEMBLY PENETRATED BUT NEED NOT EXCEED 2 HOURS.
13. PROVIDE MINIMUM 2HR INSULATION COVERING OF 2 INCHES OF MAGNESIUM OR CALCIUM SILICATE BLOCK, WITH STAGGERED JOINTS.



HVAC ROOF PLAN | SCALE 1/4" = 1'-0" | 2



HVAC FLOOR PLAN | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

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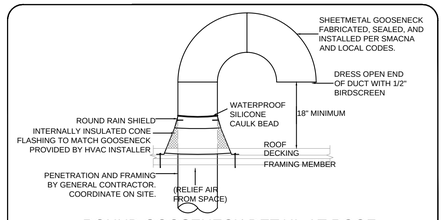
03	PROJ. COORDN 3	05.15.24

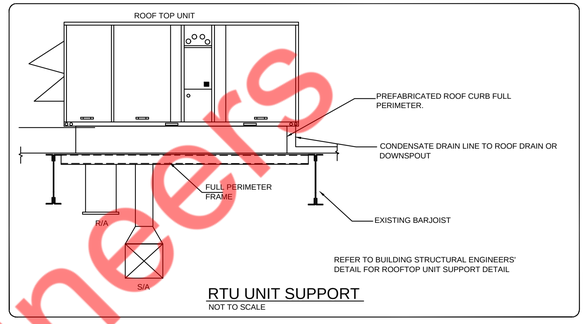
ISSUE DATE: 02.22.23
PROJECT #: 318F.1304F
DRAWN BY: NYE
CHECKED BY: NYE

HVAC FLOOR PLAN, ROOF PLAN & NOTES

M-2



ROUND GOOSENECK DETAIL AT ROOF
NOT TO SCALE



RTU UNIT SUPPORT
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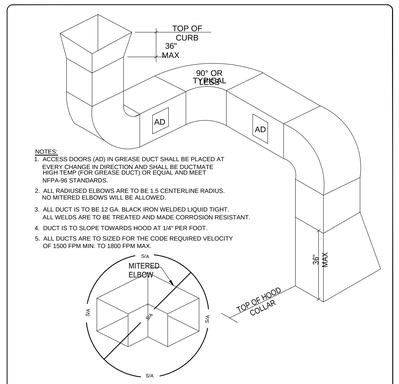

TYPICAL GREASE DUCT DETAIL
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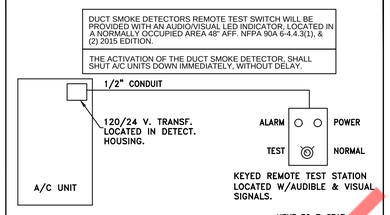

DUCT DETECTOR DETAIL
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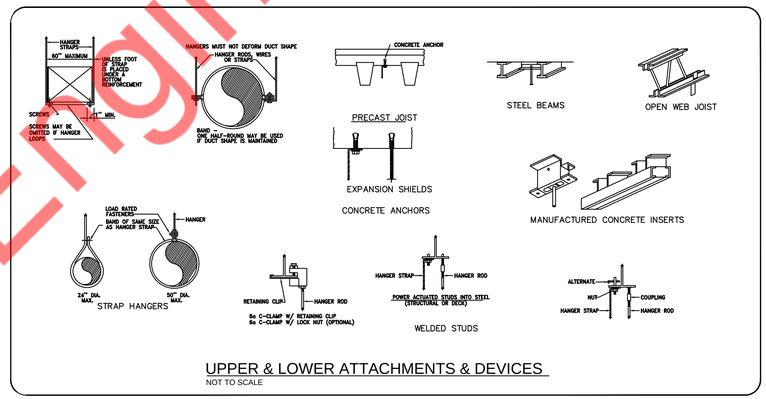
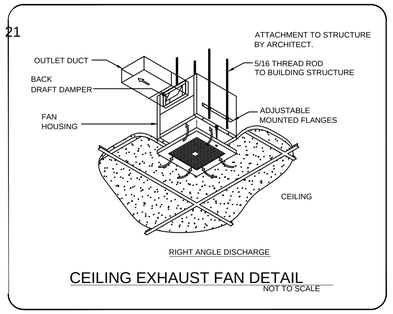
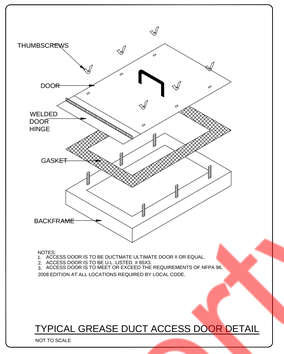


UPPER & LOWER ATTACHMENTS & DEVICES
NOT TO SCALE

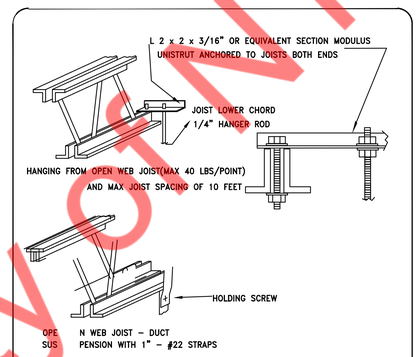
21



CEILING EXHAUST FAN DETAIL
NOT TO SCALE

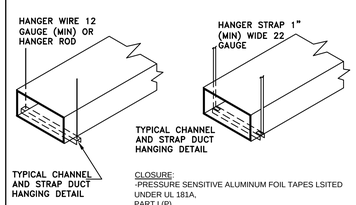


TYPICAL GREASE DUCT ACCESS DOOR DETAIL
NOT TO SCALE



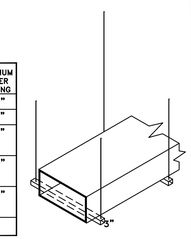
DUCT MOUNTING DETAIL
NOT TO SCALE

CHANNEL SELECTION		
DUCT WIDTH MIN.	CHANNEL GUAGE MIN.	CHANNEL PROFILE
LESS THAN 18"	22 3"x 2"	
LESS THAN 30"	18 3"x 2"	



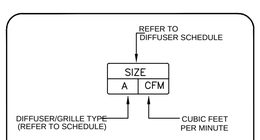
CLOSURE:
-PRESSURE SENSITIVE ALUMINUM FOIL TAPES LSITED UNDER UL 181A, PART I (P)
- HEAT ACTIVATED ALUMINUM FOIL/SCRIM TAPES LISTED UNDER UL 181A, PART II (H)
- MASTIC AND GLASS FABRIC TAPE CLOSURE SYSTEMS LISTED UNDER UL 181A, PART III (M)

DUCT SIZE,IN.	MAXIMUM HANGER SPACING
① WIDTH 48" OR GREATER	4'–0"
② LESS THEN 48"W X 12"H	6'–0"
③ WIDTH BETWEEN 24" & 48" & HEIGHT OVER 24"	6'–0"
④ WIDTH BETWEEN 24" & 48" & HEIGHT BETWEEN 12" & 24"	8'–0"
⑤ WIDTH LESS THAN 24" & HEIGHT GREATER THAN 12"	8'–0"
DUCT REINFORCING PER SMACNA REQUIRED	

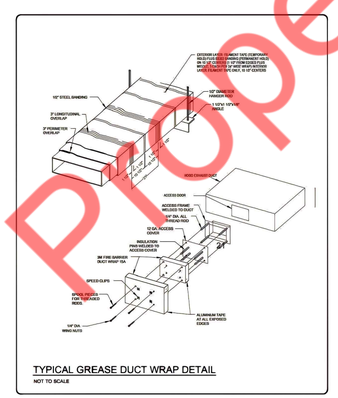


HANGER SPACING AND EXTENSION 3" WIDE CHANNELS

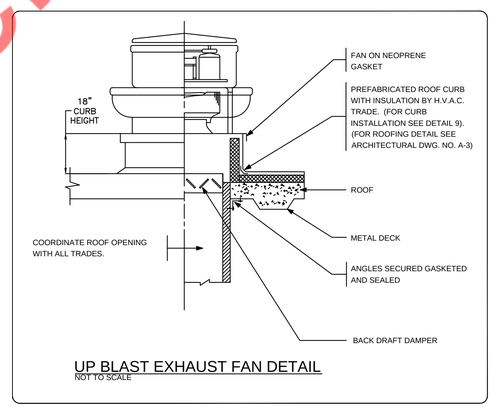
DUCT SUPPORTS
NOT TO SCALE



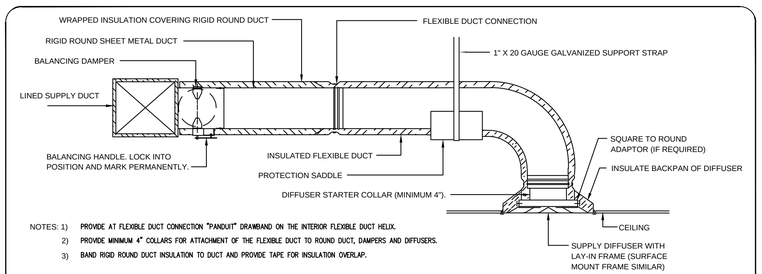
DIFFUSER/GRILLE TAG
NOT TO SCALE



TYPICAL GREASE DUCT WRAP DETAIL
NOT TO SCALE



UP BLAST EXHAUST FAN DETAIL
NOT TO SCALE



NOTES: 1) PROVIDE AT FLEXIBLE DUCT CONNECTION "PANDUIT" DRAWBAND ON THE INTERIOR FLEXIBLE DUCT HELIX.
2) PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF THE FLEXIBLE DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
3) BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE TAPE FOR INSULATION OVERLAP.

DIFFUSER CONNECTION DETAIL-FLEX DUCT
NOT TO SCALE

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

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01	BD COMMENTS	06.05.23
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03	PROJ. COORDN	05.15.24

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DRAWN BY: NYE
CHECKED BY: NYE

HVAC DETAILS

M-3

1

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	EXHAUST HOOD	XXEW-90-S	90	60	24	XXE SS WHERE EXPOSED	HEAVY	1600	10	15		1600	0.531	1400		264.892	SINGLE

HOOD INFORMATION

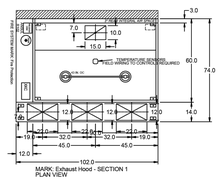
HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L	H	UTILITY CABINET(S) LOCATION	FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	EXHAUST HOOD	ROUND LED	2	66.11	X-TRACTOR STAINLESS STEEL	3 2	16 20	20	LEFT	ANSUL R102	3	XXC	

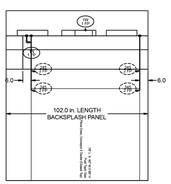
SUPPLY PLENUM INFORMATION

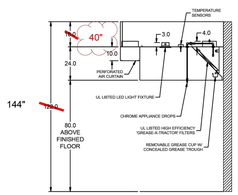
HOOD NO.	MARK	POS.	TYPE	SIZE (IN.) L	W	H	INSULATED	DAMPER(S)	LED LIGHT(S) SUPPLIED	QTY	TOTAL CFM	TYPE	COLLARS MOUNTING	QTY	W	L	DIA.	CFM	S.P.	VEL.
1	EXHAUST HOOD	FRONT	ASP	102	14	10	NO	NO	NO		1400	MUA	FACTORY	3	12	22		467	0.12	255

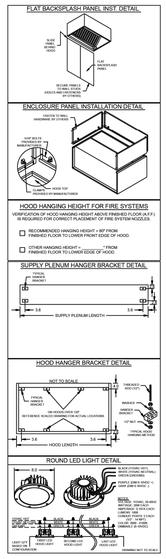
HOOD OPTIONS

UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
BACK INTEGRAL AIR SPACE - 3 IN WIDE
18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
FACTORY MOUNTED EXHAUST COLLAR(S)
BACKSPLASH 80.00 IN HIGH 102.00 IN LONG
PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH





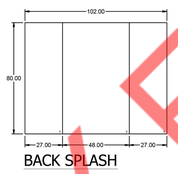




PROJECT 02/21/2022 RUSSO'S PIZZERIA
MARK:
EXHAUST HOOD

ACCUREX MN NO SD
WATTHEW YSTAD
MATTHEW.YSTAD@ACUREX.COM
(612)360-5373

ACCUREX



PROJECT 02/21/2022 Russo's Pizzeria
MARK:
Exhaust Hood - SPLASH PANEL LAYOUT

ACCUREX MN NO SD
Matt Elias Yystad
matthew.ystad@acurex.com
(612)360-5373

ACCUREX

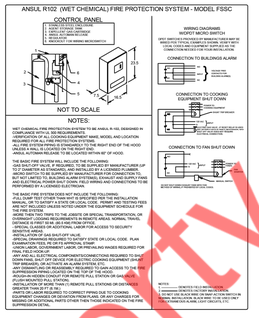
FIRE SYSTEM INFORMATION

MARK	MODEL	LOCATION	FLOW POINTS HOODS	PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
FIRE PROTECTION	ANSUL R-102 WET CHEMICAL	CABINET – LEFT END OF EXHAUST HOOD	10 UTILIZED 11 AVAILABLE		CONTINUOUS	FUSIBLE LINK	EXHAUST HOOD SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE - 3 - (ANSUL) - PART# ANSULMECHSHUTOFFVALVE200
HOOD SUPPRESSION TANK - INCLUDED - 3 GAL. - [11] - 6.0 TANK(S)
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

1-1/4"



PROJECT 02/21/2022 RUSSO'S PIZZERIA
MARK:
FIRE PROTECTION

ACCUREX MN NO SD
WATTHEW YSTAD
MATTHEW.YSTAD@ACUREX.COM
(612)360-5373

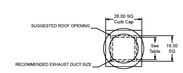
ACCUREX

Direct Drive Upblast Centrifugal Roof Exhaust Fan

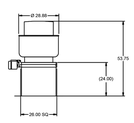
MARK INFORMATION QTY	MARK	FAN INFORMATION MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	MOTOR INFORMATION SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS
1	Exhaust Fan	XCUE-140-VG	1,600	1	1,381	0.49	86	0.75	115/60/1	OP	1050	1

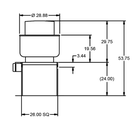
Exhaust Fan - SELECTED OPTIONS AND ACCESSORIES

One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 26 Square
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (P/N 475038)
Clean-out Port - Factory Installed



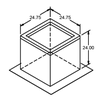
DUCT TYPE	SIZE
STANDARD	18 SQ.
PIRC (WRAPPED)	18 SQ.





DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB. CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.



PROJECT 02/21/2022 RUSSO'S PIZZERIA
MARK:
EXHAUST FAN

ACCUREX MN NO SD
WATTHEW YSTAD
MATTHEW.YSTAD@ACUREX.COM
(612)360-5373

ACCUREX

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

REVISIONS DATES:

01	BD COMMENTS 1	06.05.23
02	HD COMMENTS	07.28.23
03	PROJ. COORDN	05.15.24

ISSUE DATE: 02.22.23
PROJECT #: 318F.1304F
DRAWN BY: NYE
CHECKED BY: NYE

HOOD DETAILS

M-4

EQUIPMENT SCHEDULE

Tempered Make-Up Air Unit — **Mark: Make-up Air Unit**

Qty	Accurex Model	Volume	External SP	Total SP	FRPM	Operating Power	Weight
1	XDG-109-H10-5	1,400 CFM	0.35 in. wg	1.151 in. wg	1200	0.54 hp	1,093 lb

Motor Information

Size	V/C/P	Enclosure	Motor with Shaft Grounding	Motor RPM	Windings	MCA	MOP
3/4 hp	208/60/3	ODP	No	1725	1	25.3	40

Heating

Type	Gas Type	Temperature			Energy			Connection Gas	Building Gas Pressure	Control Access
		Winter DB	Max Δ	Max LAT	Input	Output	Efficiency			
Direct Gas	Natural	20.0 F	50.0 F	70.0 F	82.2 MBH	75.6 MBH	92%	3/4"	1/2 PSI	11a

Cooling

Cooling Type	Coil Model	Rows Deep	Fins Per Inch	Face Velocity	Total Energy	Sensible Energy	Leaving Dry Bulb	Leaving Wet Bulb
Packaged DX	DX38S02S10-30x30	2	10	224 ft/min	64.2 MBH	41.9 MBH	73.2 F	67.3 F

Coil SP	Refrigerant	Suction Temp	Liquid Temp	Super Heat	Code 18/19	Suction Conn Qty / Size	Liquid Conn Qty / Size
NA	R-410a	45.0 F	110 F	8 F	0	NA	NA

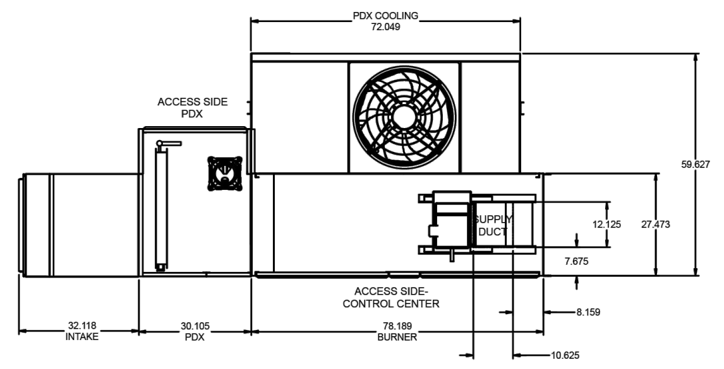
Outlet Sound Power By Octave Band

62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
88	87.9	72.2	65	62.2	60.4	56.6	50.2	74.3	63.3	11.6

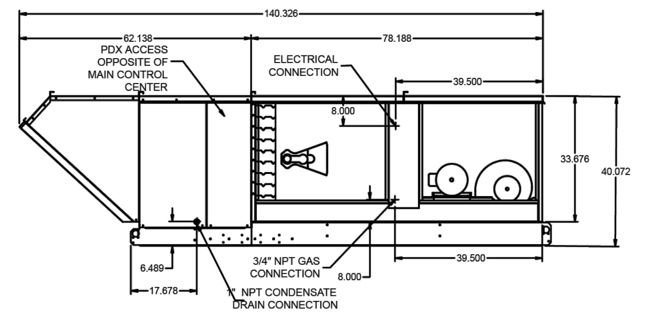
- LwA - A weighted sound power level based on ANSI S1.4
- dBA - A weighted sound pressure level base on 11.1 dB attenuation per octabe band at 5.0 ft.
- Noise Criteria (NC) based on an average attenuation of 11.5 dB per octabe band at 5.0 ft.

OPTIONS AND ACCESSORIES

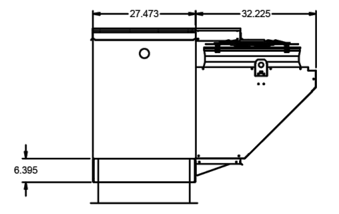
Air Flow Arrangement: Outdoor Air Only
Weatherhood: Aluminum Mesh, 20x25x2 - (1), 16x25x2 - (1)
Damper: Inlet
Outdoor Air Intake Position: End
Discharge Position: Bottom
Coating: Galvanized
Cooling Coil Coating - None
Insulation: Double Wall - Tempering On
Access Side: Right-Hand
Control Center
Heat Inlet Air Sensor
Cool Inlet Air Sensor
Unit Controls: Terminal Strip
Temperature Control: Discharge
Direct Gas Options/Accessories
Approvals: ETL
FM Compliant
Flame Sensing: Flame Rod
Ignition Control: Pilot
Unit Rated Gas Pressure: 1/2 PSI
Unit Warranty: 1 Yr (Standard)



PLAN VIEW



ELEVATION VIEW



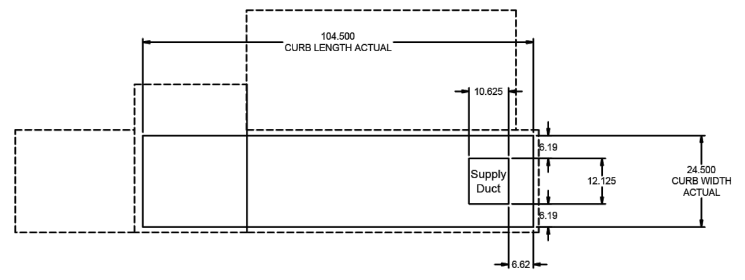
END VIEW

NOTE: Roof Opening Requirements:

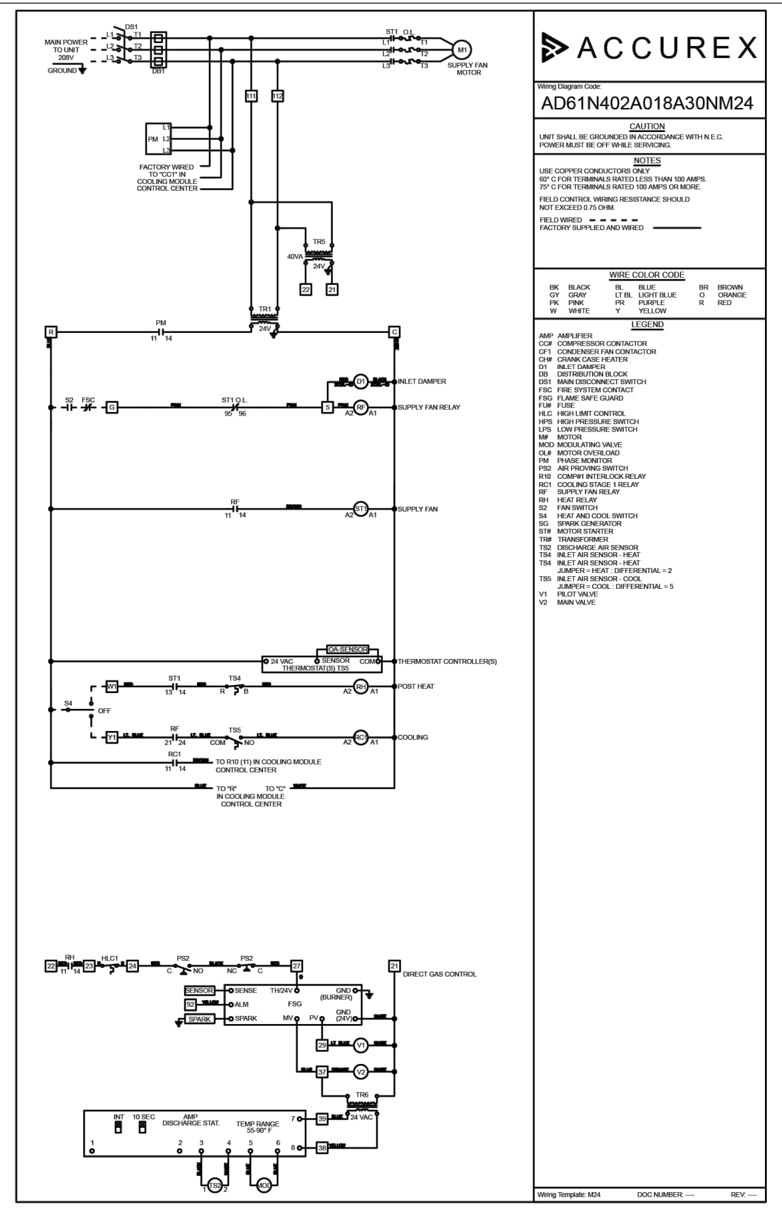
Minimum Roof Opening: The minimum roof opening size is the illustrated duct diameter plus 0.25 in. on all sides.
For example: If the duct size is 14 x 14 in. square, the minimum roof opening size is 14.5 x 14.5 in. square.

Maximum Roof Opening: There must be a minimum perimeter of 1.75 in. between the roof opening and the roof curb.
For example: If the roof curb is 75 x 30 in. square, the maximum roof opening is 71.5 x 26.5 in. inches square.

NOTE: The weatherhood and filter sections of the make-up air unit are not supported by the curb.
This is by design, in order to help alleviate water infiltration issues. MUA Unit supports are shipped loose with unit.



FOOTPRINT



RUSSO'S PIZZERIA
MAKE-UP AIR UNIT
PROJECT
6/21/2022
MARK

ACCUREX MN ND SD
MATTHEW YSTAD
MATTHEW.YSTAD@ACCUREX.COM
(612)360-8373

ACCUREX

△1

CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED											
	MODEL	LOCATION	TYPE	LOCATION	FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
XKC-CV CONTROLS	XKC-CV-S-11-1-1-0	LEFT CABINET ON EXHAUST HOOD	FULL COLOR TOUCHSCREEN	SHIP LOOSE	1	EXHAUST	E1	EXHAUST FAN	1	1600	0.75	115	60	1	NO	NO
					2	SUPPLY	S1	MAKE-UP AIR UNIT	1	1400	0.75	208	60	3	NO	NO

CONTROL FEATURES
- HOOD LIGHT CONTROL
- TEMP SENSORS (FACTORY INSTALLED) - QTY. 1
- DRY FIRE CONTACTS - QTY. 1
- LIGHTS OFF DURING FIRE
- EXHAUST MAX DURING FIRE
- SUPPLY OFF DURING FIRE

ACCUREX

DOC NUMBER: ---- REV: ----

CAUTION
UNIT MUST BE GROUNDED IN ACCORDANCE WITH N.E.C. POWER MUST BE OFF WHILE SERVICING.

ATTENTION
L'APPAREIL DOIT ÊTRE MIS À LA TERRE CONFORMÉMENT AU CODE C.E. L'ALIMENTATION DOIT ÊTRE COUPÉE DURANT L'ENTRETIEN.

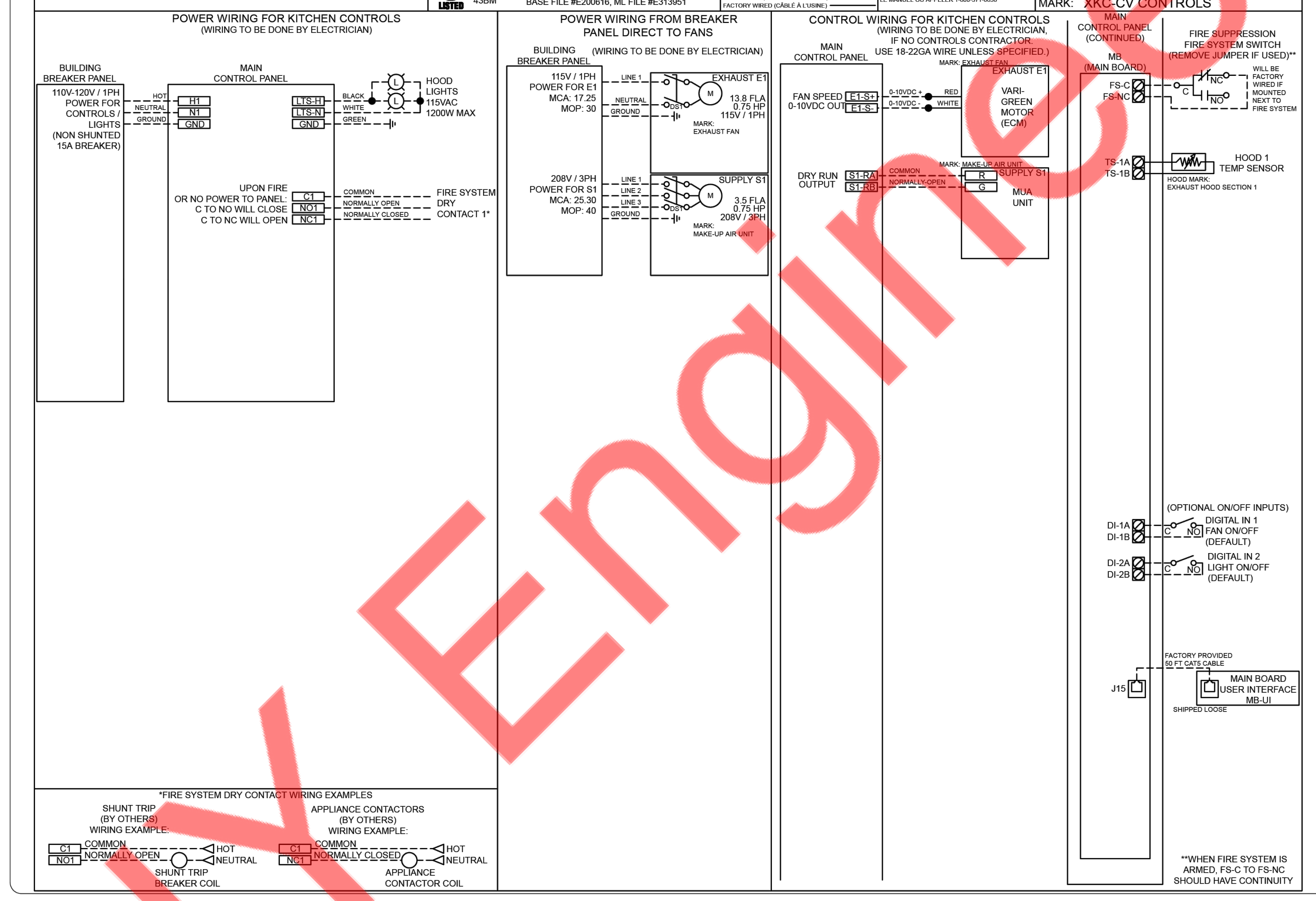
COMMERCIAL APPLIANCE OUTLET CENTER
43BM ELECTRICAL RATINGS: 110-240V,1PHASE, 50 -60HZ,15A
BASE FILE #E200616, ML FILE #E313951

THESE DRAWINGS SHALL NOT BE REMOVED FROM THIS EQUIPMENT. USE COPPER CONDUCTORS RATED TO 90°C UNLESS SPECIFIED. TORQUE CONTROL & GROUND BLOCKS TO 8 LBS. IN. TORQUE POWER LUGS/SCREWS TO COMPONENT RATINGS LISTED. TORQUE CONTROL BOARD SCREW TERMINALS TO 3.5 LBS. IN. FIELD CONTROL WIRING RESISTANCE SHOULD NOT EXCEED 0.75 OHM. SEE IOM FOR ADDITIONAL INFORMATION, OR CALL FACTORY AT 1-800-371-6858.

NE PAS RETIRER CES DESSINS DE CET ÉQUIPEMENT. SAUF INDICATION CONTRAIRE, UTILISER DES CONDUCTEURS EN CUIVRE CLASSÉS 90 °C. SERRER LES BORNES DE COMMANDE ET DE MISE À LA TERRE À 8 LB-PO. SERRER LES COSSES/VIS D'ALIMENTATION AUX COUPLES INDIQUÉS POUR LE COMPOSANT. SERRER LES BORNES À VIS DE LA CARTE DE COMMANDE À 3,5 LB-PO. LA RÉSISTANCE DU CÂBLAGE DE COMMANDE LOCAL NE DOIT PAS DÉPASSER 0,75 OHM. POUR PLUS D'INFORMATION, CONSULTER LE MANUEL OU APPELER 1-800-371-6858

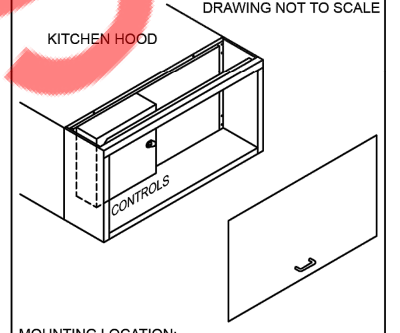
PRG VERSION: V4
FIELD WIRED (CÂBLÉ LOCALEMENT)
FACTORY WIRED (CÂBLÉ À L'USINE)

WIRING DIAGRAM CODE: WDC#
JOB NAME: RUSSO'S PIZZERIA - FRISCO, TX
MODEL: XKC-CV-S-11-1-1-0
SERIAL NUMBER: WDSN#
MARK: XKC-CV CONTROLS



CABINET DETAILS

DRAWING NOT TO SCALE



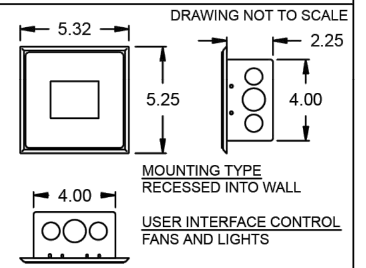
MOUNTING LOCATION:
UTILITY CABINET ON HOOD
(INNER CONTROL BOX: 12 X 20 X 6)

NOTES:
1) WHEN CONTROLS ARE MOUNTED IN HOOD-MOUNTED OR WALL-MOUNTED UTILITY CABINET, FOR HOOD OR WALL CABINET DIMENSIONS SEE HOOD SUBMITTAL.

2) MINIMUM OF 36" OF CLEARANCE RECOMMENDED IN FRONT OF CONTROL CABINET

USER INTERFACE DETAILS

DRAWING NOT TO SCALE



MOUNTING TYPE
RECESSED INTO WALL

USER INTERFACE CONTROL
FANS AND LIGHTS

INTERFACE CABLE LENGTH
50FT (FACTORY PROVIDED)

ZONE CONFIGURATION

ZONE #	ZONE	ROOM TEMP
1	Z1	PRESET

HOOD CONFIGURATION

HOOD #	HOOD	HOOD MARK	ZONE	EXHAUST	SUPPLY	MB-TEMP SENSORS	HCB
1	H1	EXHAUST HOOD SECTION 1	Z1	E1	S1	TS1	NO

WIRING DIAGRAM CODE: WDC#
JOB NAME: RUSSO'S PIZZERIA - FRISCO, TX
MODEL: XKC-CV-S-11-1-1-0
SERIAL NUMBER: WDSN#
MARK: XKC-CV CONTROLS
DOC NUMBER: ---- REV: ----

DEFAULT SETTINGS /
PARAMÈTRES PAR DÉFAUT

FACTORY SETTINGS
TYPE: CV
CONFIGURATION: STANDARD
ZONES: 1
HOODS: 1
SUMPS: 0
EXHAUST FANS: 1
SUPPLY FANS: 1
MB ROOM SENSOR: NO
MB TEMP SENSORS: 1
HIGH TEMP FAULT: NO
FREEZE PROTECTION: YES
GAS RESET: NO
FAN PROVING: NO
BMS: NONE

ZONE SETTINGS
SEE ZONE CONFIGURATION IN TABLE ON LEFT

HOOD SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT

EXHAUST FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SUPPLY FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SENSOR SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT

USER INTERFACE SETTINGS (MB)
FAN & LIGHT BUTTONS: SHOW BOTH (SEPERATE)

USER INTERFACE SETTINGS (HCB)
NA

GENERAL SETTINGS
TIME ZONE: CENTRAL DAYLIGHT (DEFAULT)

FIRE/FAULT SETTINGS
EXHAUST DURING FIRE: MAX
SUPPLY DURING FIRE: OFF
LIGHTS DURING FIRE: OFF

BMS SETTINGS
NA

PRG VERSION: V4

FAN CONFIGURATION

FAN #	TYPE	FAN	FAN MARK	ZONE	MIN CFM	MAX CFM	MODBUS VFD	VFD ADDRESS	MIN FREQ.	MAX FREQ.	MIN VDC	MAX VDC
1	EXHAUST	E1	EXHAUST FAN	Z1	-	1600	NO	-	-	-	-	10.0
2	SUPPLY	S1	MAKE-UP AIR UNIT	Z1	-	1400	NO	-	-	-	-	10.0

RUSSO'S PIZZERIA
XKC-CV CONTROLS
PROJECT
6/21/2022
MARK

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HOOD DETAILS

M-5

SCOPE OF WORK

NEW 200A, 120/208V, 3-ϕ ELECTRICAL SERVICE VIA NEW ELECTRICAL METER & NEW DISCONNECT SWITCH FROM EXISTING BASE BUILDING ELECTRICAL DISTRIBUTION TO THE TENANT SPACE. PROVIDE NEW (1) 200A, 120/208V, 3-ϕ ELECTRICAL PANEL"A", NEW 125A(MLO), 120/208V, 3ϕ ELECTRICAL PANEL "B ". ALL NECESSARY EQUIPMENT, WIRING AND LIGHTING FOR THE TENANT SPACE INCLUDING WIRING FOR VENTILATION EQUIPMENT. COORDINATE WITH GC FOR LOW VOLTAGE WIRING.

ELECTRICAL PLAN NOTES

1. ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.
2. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT, NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
3. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL OWNER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
4. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2017 EDITION OF THE NATIONAL ELECTRIC CODE AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.
6. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
7. ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.
8. ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.
9. CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE.
10. ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.
11. ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146.
12. SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.
13. ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.
14. SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS ETC.
15. SEPARATE PERMIT REQUIRED FOR SIGNAGE.
16. PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.
17. ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.
18. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER AND UNLESS OTHERWISE NOTED THHN INSULATION.
19. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, PLASTIC AND CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
20. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
21. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE N.E.C. OR LOCAL CODES.
22. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
23. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
24. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
25. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE THAT CERTIFICATE OF OCCUPANCY IS ISSUED. WARRANTY SHALL BE PROVIDED IN WRITING. PROVIDE COPY TO LL.
26. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
27. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
28. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
29. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
30. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
31. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
32. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.
33. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C. NEMA, AND IECE.
34. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
35. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CAULKING REQUIRED OF HIS WORK.
36. ELECTRICAL CONTROL PANEL ROOMS SHALL BE MARKED WITH A PLAINLY VISIBLE AND LEGIBLE SIGN STATING ELECTRIC ROOM IF APPLICABLE. ALL CIRCUIT BREAKERS WITHIN THE ELECTRIC PANEL SHALL BE LABELED FOR THEIR INTENDED USE. CIRCUIT BREAKERS THAT POWER EXIT SIGNS, EMERGENCY LIGHTING SHALL BE LABELED.
37. ALL ELECTRICAL AND COMMUNICATIONS OUTLETS TO BE AT 24" A.F.F. UNLESS NOTED OTHERWISE, AND VERTICALLY MOUNTED.
38. ALL LIGHT SWITCHES TO BE AT 42" A.F.F.
39. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WIRING FOR HVAC SYSTEM INCLUDING CONTROLS, THERMOSTATS, POWER, ETC. SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
40. BREAKER AND PANELS – ALL CURRENT CARRYING BUSSES SHALL BE COPPER. ALL GROUND BUS BARS SHALL BE COPPER. PANEL BOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC HOLES. A.I.C. RATINGS SHALL BE AS INDICATED ON PANEL BOARD SCHEDULES.
41. DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
42. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
43. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.
44. CONTRACTOR SHALL CONFIRM WITH ANY AND ALL REQUIREMENTS SUCH AS: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, TRANSFORMER SIZE, SCHEDULED DOWN TIME FOR OWNERS CONFIRMATION, ETC. ANY CONFLICTS SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.
45. VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3%. WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.
46. CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION – FOR THE WHOLE CIRCUIT.
47. GAS PIPING SHALL BE BONDED.
48. ELECTRICAL CONTRACTOR SHALL COORDINATE SERVICE ENTRY WITH SERVICE PROVIDER PRIOR TO DETERMINING EXACT LOCATION OF THE METER BOX IN ORDER TO AVOID DISCREPANCIES BETWEEN DRAWINGS AND JOB CONDITIONS.
49. ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
50. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
51. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
52. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRE CAULKING REQUIRED OF HIS WORK.
53. ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS) ACCORDING TO SECTION 348.20.
54. EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUIDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
55. CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
56. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
57. ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS.
58. 7-DAY 24-HOUR TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTRY LIGHTS, SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN LIT DURING ALL MALL BUSINESS HOURS.
59. TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRIC SERVICE. ANY/ALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL AND WILL BE COMPLETED BY TENANT/TENANT'S GC AT TENANT'S SOLE EXPENSE.
60. ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
61. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.
62. ALL CONDUITS RUNNING INSIDE THE SPACE SHALL BE ELECTRIC METALLIC TUBING (E.M.T.) AS PER NEW LENOX LOCAL AMENDMENTS.

RESTAURANT REQUIREMENTS

- HOOD EXHAUST FAN(S) SHOULD BE AS FAR FROM LEASE LINE AS POSSIBLE AT ROOF (5' MIN. PREFERRED). ENSURE THAT THEY ARE NO LESS THAN 10' FROM ANY ADJACENT TENANT INTAKE OR RTU.
- INSTALL GREASE GUARD(S) AROUND UPBLAST EXHAUST FAN(S) FOR HOODS AT ROOF.
- PROVIDE WATERPROOFING MEMBRANE ALONG ALL KITCHEN WALLS THAT ABUT LEASE LINE/DEMISING WALLS, UP TO 8' A.F.F. AND 8' AWAY FROM WALL, BEHIND/UNDER FINISHES (MAPEI, RED GARD, OR SIMILAR), EVEN BEHIND WATER RESISTANT FINISHES. PROVIDE PHOTOGRAPHIC EVIDENCE OF INSTALLATION.
- SEAL AROUND ALL REAR DOORS, ESPECIALLY IN KITCHEN AREAS.
- COOLERS/FREEZERS TO BE 4" MINIMUM FROM DEMISING (LEASE LINE) AND EXTERIOR WALLS, AND 2' MINIMUM FROM TENANTS INTERIOR WALLS, WITH MOISTURE AND MOLD RESISTANT WALL BOARD AND WATERPROOFING MEMBRANE BEHIND.
- PROVIDE STRUCTURAL REINFORCEMENT FOR THE HOOD EXHAUST FAN (ROOF) OPENINGS.
- GREASE REFILL AND WASTE IS PREFERRED TO BE ON A CLOSED LOOP SYSTEM (SIMILAR TO RESTAURANT TECHNOLOGIES), REFILL AND REMOVAL BOX SHALL BE RECESSED WITHIN REAR WALL.

GENERAL LIGHTING NOTES

A. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXHAUST FAN
J	JUNCTION BOX
	BATTERY BACK UP EXIT LIGHT
	BATTERY BACK UP EMERGENCY LIGHT
$	WALL SWITCH (SINGLE, DOUBLE,)
$3	WALL SWITCH (3 WAY, 4 WAY)
$OV	OVERRIDE SWITCH
$D	DIMMER WALL SWITCH
$OS	OCCUPANCY SENSOR WALL SWITCH
$VS	VARIABLE SPEED SWITCH
OS	CEILING MOUNTED OCCUPANCY SENSOR
A	SIMPLEX RECEPTACLE, +18" AFF OR AS NOTED. SUFFIX DENOTES FOLLOWING: A - NEMA 5-15R B - NEMA 6-15R C - NEMA 14-30R D - NEMA 14-50R E - NEMA 10-30R
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, 46" TO AFF AT KITCHEN, BATHS AND TOPS
	HALF SWITCHED DUPLEX RECEPTACLE
	230 VOLT RECEPTACLE
	QUADRUPLEX RECEPTACLE
	FLOOR MOUNTED. FLUSH DUPLEX RECEPTACLE
	FLOOR MOUNTED. FLUSH QUAD. RECEPTACLE
	FLOOR MOUNTED. FLUSH 230 VOLT RECEPTACLE
CL	CEILING MOUNTED DUPLEX RECEPTACLE
	ELECTRICAL PANEL
	DISCONNECT SWITCH
	USB CHARGER RECEPTACLE
TV	TELEVISION OUTLET
T	TELEPHONE OUTLET
T	TELEPHONE/DATA OUTLET
D	DATA OUTLET
T	FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET
	NON FUSED DISCONNECT SWITCH AMPERAGE A ND NUMBER OF POLES AS NOTED
A	30A/240V NON FUSED DISCONNECT SWITCH
B	60A/240V NON FUSED DISCONNECT SWITCH
M	MOTOR/PUMP

ABBREVIATIONS:

ABOVE FINISH FLOOR= A.F.F.
COUNTER TOP LEVEL= CTL
GROUND FAULT INTERRUPTER= GFCI
VERIFY PRIOR TO INSTALL= VH
WEATHER PROOF= WP
BELOW COUNTER= BC
PUSH BUTTON= PB
UNDER CABINET= UC
VAPOR PROOF= VP
SALVAGED = S

LIGHTING FIXTURE SCHEDULE

	TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP TYPE	WATTS	MOUNTING
	A	RECESSED	JONATHAN Y	#JYL6400B	120	LED LAMP	9	RECESSED
	B	LED PENDANT	NORDIC LOFT LED IRON PENDANT	1125	120	LED LAMP	20	CEILING MOUNTED
	C	LED TRACK HEAD	JUNO	TRAC-MASTER AVANT	120	LED LAMP	19	CEILING MOUNTED
	D	6" DIMMABLE LED	JUNO	6" DIMMABLE LED RETROFIT KIT	120	LED LAMP	10	RECESSED
	E	2x4 RECESSED LED FLAT PANEL	COLUMBIA LIGHTING	LLT-24	120	LED LAMP	38	RECESSED
	F	2x2 RECESSED LED FLAT PANEL	COLUMBIA LIGHTING	LLT-22	120	LED LAMP	27	RECESSED
	G	WALL SCONE	HINLEY SEEDED	BS18309 KN	120	INCANDESCENT	75	WALL
	X4	EXIT/EMERGENCY COMBO SIGNS	BEST LIGHTING PRODUCT	CALEDCXTEU-1-R-W/R-RC-ARROWS	120	LED	5.3	WALL
	Y1	EMERGENCY LIGHTS	BEST LIGHTING PRODUCT	CAXTEU-2-R-W/B-EM	120	LED	5	WALL
	UC	EXIT/EMERGENCY SIGNS	BEST LIGHTING PRODUCT	TBD	120	LED	5	CEILING
OS	OS	OCCUPANCY WALL SWITCH	LEVITON	ODS10	120			WALL
D	D	DIMMER WALL SWITCH	LEVITON	R01-DWVAA-1RW	120			WALL
OV	OV	OVERRIDE SWITCH	LEVITON	TBD	120			WALL
OS	OS	CEILING OCCUPANCY SENSOR	LEVITON	OSC10-UDW	120			CEILING
LCP		LIGHTING CONTROL PANEL	EATON	LITEKEEPER 16	120			WALL
PC	PC	DAY LIGHT SENSOR	LUTRON	LRF2-DCRB-WH	120			CEILING

GENERAL NOTES

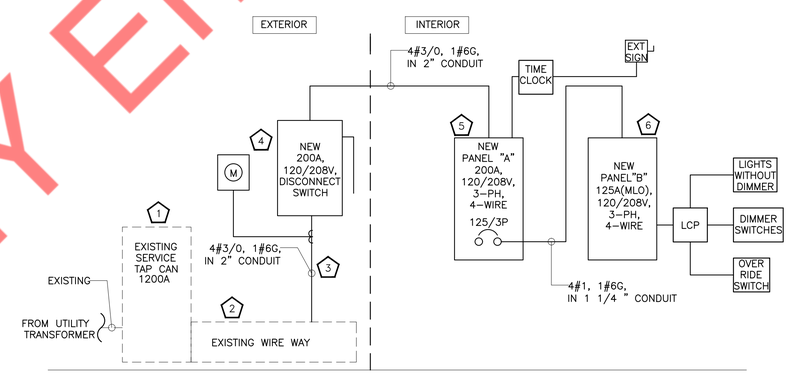
ARCHITECT SHALL SELECT THE LIGHT FIXTURES "C & D" WITH DIMMING COMPATIBILITY. E.C. SHALL COORDINATE WITH ARCHITECT BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.

REFER TO SHEET A-2 - REFLECTED CEILING PLAN IN ARCHITECTURAL DRAWINGS FOR MORE INFORMATION ON COLORS AND TRIMS REQUIRED

REFER TO CS-5 FOR VENDORS INFORMATION

(*) EXISTING FIXTURES ARE ACCEPTABLE. IF THEY NEED TO BE REPLACED, REPLACE W/ EXACT MATCH OR MATCH SCHEDULE

SUBSTITUTIONS TO THE ABOVE FIXTURE SCHEDULE MUST BE SUBMITTED 14 DAYS PRIOR TO BID & REVIEWED BY THE ARCHITECT, ENGINEER & OWNER. SUBSTITUTIONS WILL NOT BE REVIEWED AFTER THIS TIME. SUBMITTAL PACKAGES MUST INCLUDE COLOR, CUT SHEETS, ALL PHOTOMETRICS & FIXTURE SAMPLES FOR ALL DECORATIVE FIXTURES, LANDSCAPE FIXTURES & OUTDOOR FIXTURES. WITHOUT THIS INFORMATION NO REVIEW WILL BE PROVIDED.



ELECTRICAL RISER KEYED WORK NOTES:

1. EXISTING 120/208V, 3-PHASE, 1200A SERVICE TAP CAN TO REMAIN. E.C. SHALL VERIFY WITH OWNER/BASE BUILDING FOR EXACT POWER DISTRIBUTION.
2. EXISTING 120/208V, 3-PHASE, 4-WIRE ELECTRICAL WIRE WAY SHALL REMAIN. E.C. SHALL COORDINATE WITH OWNER/BASE BUILDING FOR EXACT POWER DISTRIBUTION. REPORT TO ENGINEER ON RECORD IF ANY DISCREPANCIES OBSERVED.
3. NEW ELECTRICAL SERVICE OF 200A, 120/208V, 3-PHASE, 4-WIRE FOR PROPOSED AREA. E.C. SHALL COORDINATE WITH OWNER/BASE BUILDING FOR EXACT POWER DISTRIBUTION.
4. NEW 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL METER & THE DISCONNECT SWITCH SERVING OUR SPACE. E.C. SHALL COORDINATE WITH OWNER/BASE BUILDING FOR LOCATION. BASE BID ACCORDINGLY.
5. NEW 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL"A". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
6. NEW 125A(MLO), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL"B". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

ELECTRICAL RISER SYMBOLS

- NEW
- EXISTING ITEM/FEEDER TO REMAIN
- EXISTING ITEM/FEEDER TO BE DISCONNECTED & REMOVED

NOTE:

1. ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (Isc) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO BASE BID.
2. RISER DIAGRAM SHOWN IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY EXACT POWER DISTRIBUTION IN FIELD. REPORT TO ENGINEER ON RECORD IF ANY DISCREPANCIES OBSERVED.

ELECTRICAL RISER | SCALE N.T.S. | 1

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

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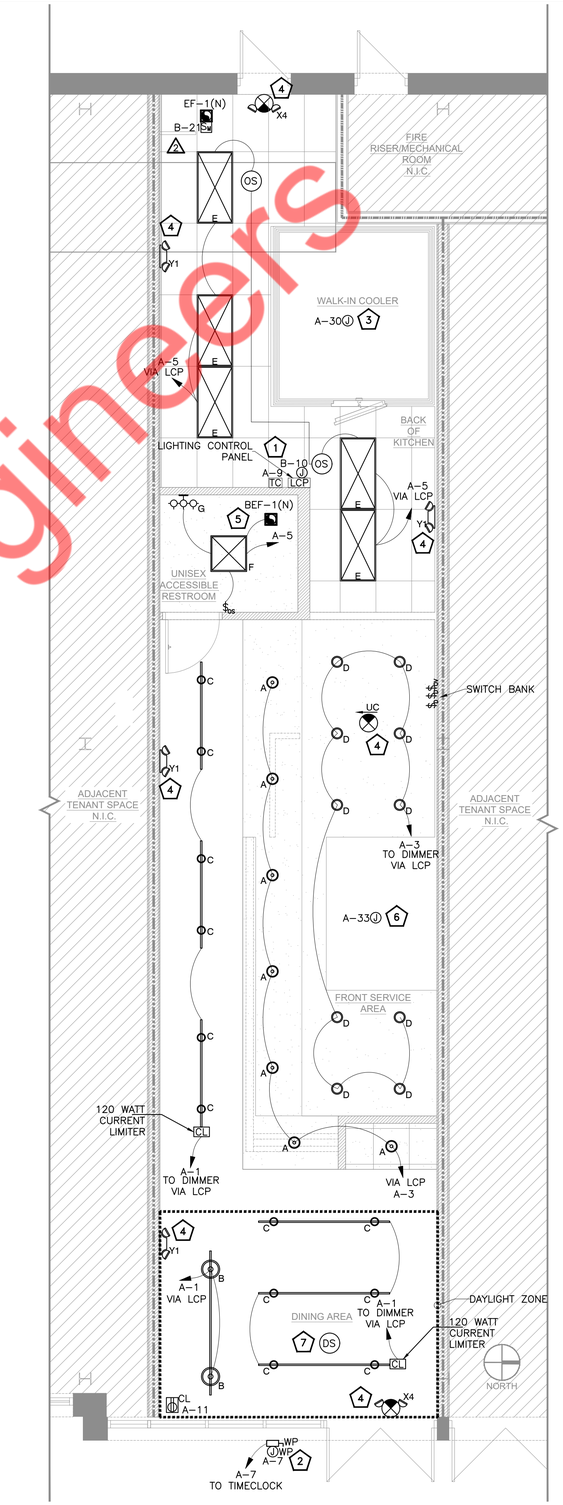
ELECTRICAL RISER & GENERAL NOTES

E-1

ELECTRICAL LIGHTING PLAN KEYED WORK NOTES:

1. E.C. TO COORDINATE EXACT LOCATION OF THE LCP WITH ARCHITECT/OWNER.
2. EXTERIOR SIGNAGE. E.C SHALL COORDINATE EXACT POWER REQUIREMENT, EXACT LOCATION & MOUNTING DETAILS WITH OWNER/LANDLORD & SIGN VENDOR.
3. WALK IN BOX COOLER LIGHTING TO BE PROVIDED BY WALK IN BOX MANUFACTURER. E.C TO COORDINATE LIGHTING CONNECTION WITH WALK IN BOX MANUFACTURER IN FIELD.
4. CONNECT ALL EMERGENCY EGRESS LIGHTING FIXTURES TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES.
5. EXHAUST FANS SHALL BE CIRCUITED AND CONTROLLED ALONG WITH THE LIGHT FIXTURES IN THE SAME ROOM.
6. KITCHEN HOOD LIGHTING TO BE PROVIDED BY MANUFACTURER. E.C TO COORDINATE THE HOOD LIGHTING CONNECTION WITH HOOD MANUFACTURER IN FIELD.
7. LIGHT FIXTURES IN THIS AREA SHALL BE CONTROLLED BY PHOTOCELL FOR DAYLIGHT HARVESTING.



LIGHTING PLAN | SCALE 1/4" = 1'-0" | 1

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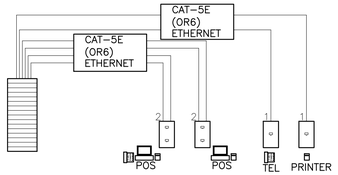
ELECTRICAL LIGHTING PLAN

E-2

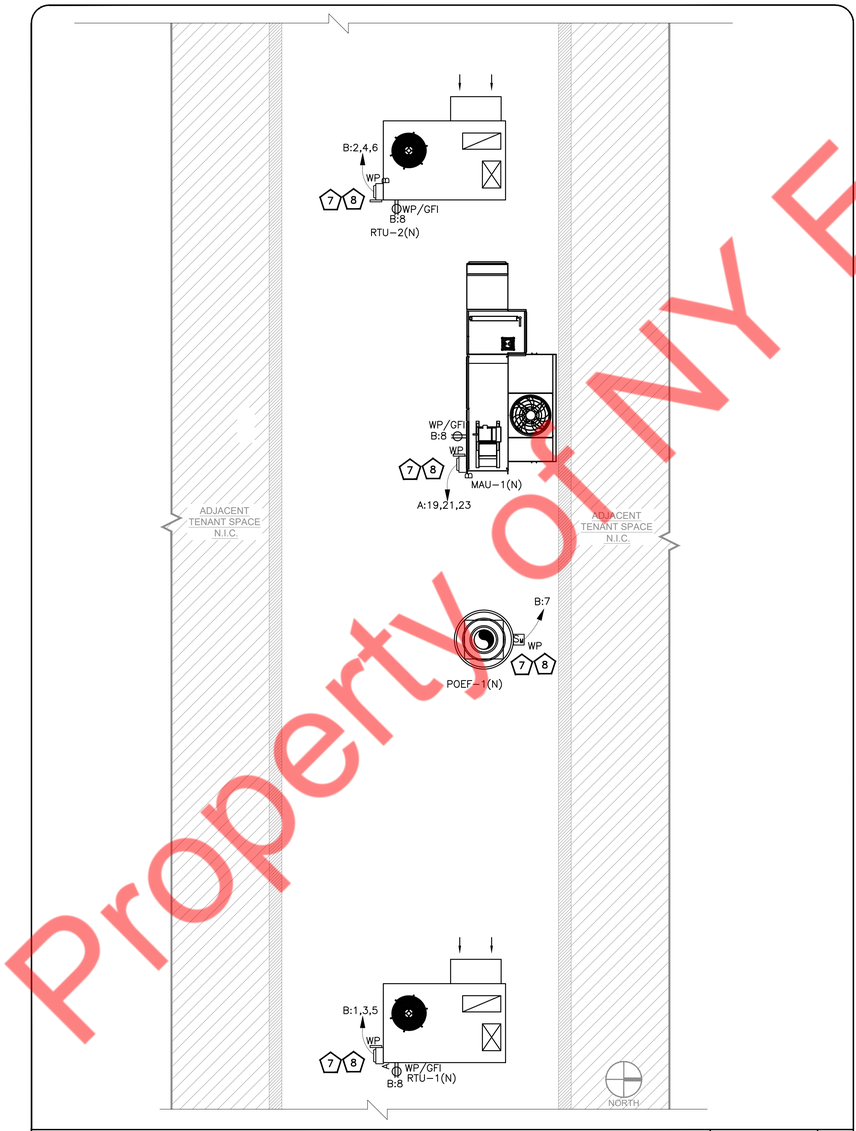


ALL CAT-5E OR CAT-6 CABLE SHALL BE IN CONDUIT PUNCHED DOWN WITH RJ45'S USING (B) CONFIGURATION. TERMINATIONS BY TELECOM CONTRACTOR

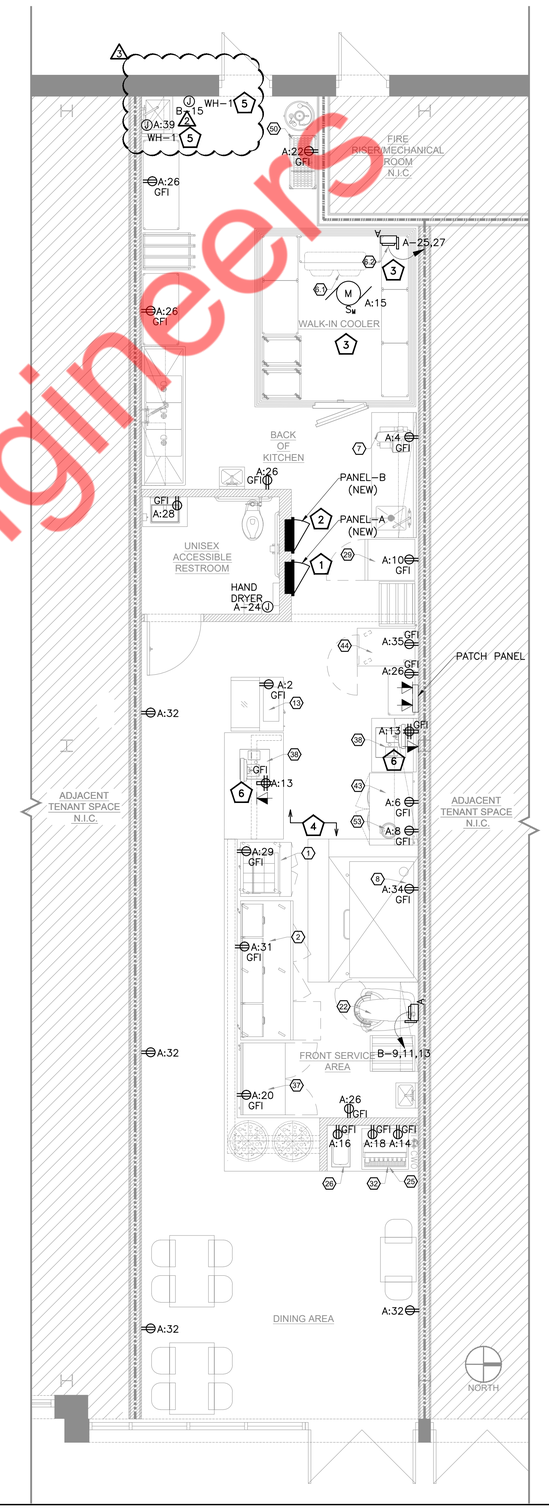
- (1) CAT5/6 OUTLET TO PRINTER IF IT'S BY ITSELF. I.E. AT PIZZA LINE BY DOUGH ROLLER.
- (2) CAT5/6 WHERE THERE IS A POINT OF SALES STATION BECAUSE IT HAS A PHONE NEXT TO IT TYPICALLY OR THE PRINTER MAY HAVE TO BE RUN AS A HOMERUN
- (1) CAT5/6 WHERE THERE IS A PHONE BY ITSELF I.E. HOSTESS STATION

ELECTRICAL POWER PLAN KEYED WORK NOTES:

1. NEW 200A, 120/208V, 3-PHASE ELECTRICAL PANEL "A". E.C SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
2. NEW 125A(MLO), 120/208V, 3-PHASE ELECTRICAL PANEL "B". E.C SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
3. ELECTRICAL CONTRACTOR TO COORDINATE EXACT POWER REQUIREMENT WITH WALK IN BOX MANUFACTURER AND MAKE POWER PROVISION ACCORDINGLY.
4. ALL RECEPTACLES IN THE KITCHEN COOKING AREA AND FOOD PREPARATION AREA SHALL BE "GFCI" IN ACCORDANCE WITH NEC ARTICLE 210.8(B). PROVIDE GFI RATED BREAKER AT PANEL FOR KITCHEN EQUIPMENT.
5. ELECTRICAL CONTRACTOR TO COORDINATE EXACT POWER REQUIREMENT WITH WATER HEATER MANUFACTURER AND MAKE POWER PROVISION ACCORDINGLY.
6. PROVIDE TWO (2) CAT 6 HOME RUN TO EACH POS STATION AND ONE (1) QUAD 20 AMPS RECEPTACLE FOR POS COORDINATE WITH OWNER PRIOR TO ROUGH-IN FOR EXACT HEIGHT.
7. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL EQUIPMENTS WITH MECHANICAL DRAWINGS.
8. ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.



ROOF PLAN | SCALE 1/4" = 1'-0" | 2



POWER PLAN | SCALE 1/4" = 1'-0" | 1

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ELECTRICAL
POWER PLAN

E-3

PANEL:	A (N)															MOUNTING:	RECESSED
208Y/120	VOLTS,	3	PHASE,			4	WIRE									PANEL LOCATION:	BOH AREA
MAIN CB:	200A	MLO:	NA			BUS:	225A	MIN,								FED FROM:	MAIN SERVICE DISCONNECT
NOTE:																	
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD		LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD		TRIP AMPS	CKT NO.
							A	B	C							
1	20	LIGHTING -DINING		L	0.28	2#12, #12G, 3/4"C	1.66			2#12, #12G, 3/4"C	1.38	E	DISPLAY CASE, REFRIGERATED DELI(13)		20	2
3	20	LIGHTING -HALLWAY, KITCHEN		L	0.16	2#12, #12G, 3/4"C		0.51		2#12, #12G, 3/4"C	0.35	E	FOOD SLICER(7)		20	4
5	20	LIGHTING -RR, BOK		L	0.33	2#12, #12G, 3/4"C			0.57	2#12, #12G, 3/4"C	0.24	E	BACK BAR CABINET, REFRIGERATED(43)		20	6
7	20	SIGNAGE		L	1.20	2#12, #12G, 3/4"C	1.97			2#12, #12G, 3/4"C	0.77	E	FOOD WARMER(53)		20	8
9	20	TIME CLOCK		L	0.10	2#12, #12G, 3/4"C		0.62		2#12, #12G, 3/4"C	0.52	E	REACH-IN FREEZER(29)		20	10
11	20	SHOW WINDOW(RECEP)		R	1.80	2#12, #12G, 3/4"C			1.80				SPARE		20	12
13	20	POS		R	0.72	2#12, #12G, 3/4"C	1.07			2#12, #12G, 3/4"C	0.35	E	SODA FOUNTAIN(25)		20	14
15	20	WALK IN COOLER EVAPORATOR UNIT (6.1)		O	0.18	2#12, #12G, 3/4"C		0.93		2#12, #12G, 3/4"C	0.75	E	ICE DISPENSER(26)		20	16
17	20	SPARE							1.73	2#12, #12G, 3/4"C	1.73	E	ICE MAKER CUBE(32)		20	18
19	40/3P	MAU-1(N)		H	3.03	3#8, #10G, 13/4"C.	3.63			2#12, #12G, 3/4"C	0.60	E	WORK TOP FREEZER(20)		20	20
21				H	3.03			3.80		2#12, #12G, 3/4"C	0.77	E	SODA BIB RACK (50)		20	22
23				H	3.03				4.23	2#12, #12G, 3/4"C	1.20	E	HAND DRYER RESTROOM		20	24
25	30/2P	WALK IN COOLER COMPRESSOR UNIT(6)		E	1.18	2#10, #10G, 3/4"C	2.08			2#12, #12G, 3/4"C	0.90	R	RECPTACLE - GENERAL BOH AREA		20	26
27				E	1.18			1.36		2#12, #12G, 3/4"C	0.18	R	RECEPTACLE -RESTROOM		20	28
29	20	REFRIGRATOR,SANDWICH/SALAD PREP(1)		E	0.67	2#12, #12G, 3/4"C			0.87	2#12, #12G, 3/4"C	0.20	E	WALKIN FREEZER LIGHT/DOOR HEATER		20	30
31	20	PIZZA PREPARATION REFRIGERATOR (2)		E	0.82	2#12, #12G, 3/4"C	1.54			2#12, #12G, 3/4"C	0.72	R	RECPTACLE - GENERAL DINING AREA		20	32
33	20	KITCHEN HOOD LIGHTING		E	0.20	2#12, #12G, 3/4"C		0.38		2#12, #12G, 3/4"C	0.18	R	RECPTACLE - IGNITION		20	34
35	20	PIZZA HEATED HOLDING CABINET(44)		E	1.48	2#12, #12G, 3/4"C			15.32	4#1, #6G, 1 1/4"C.	13.84	O	PANEL-B(N)	125/3P		36
37	20	SPARE					13.84				13.84	O				38
39	20	WH-1(N)		O	0.48	2#12, #12G, 3/4"C		14.32			13.84	O				40
41	20	SPARE							0.00				SPARE		20	42
						TOTAL CONNECTED LOAD (KVA)	25.78	21.92	24.52							

PANEL:	B (N)															MOUNTING:	RECESSED
208Y/120	VOLTS,	3	PHASE,			4	WIRE									PANEL LOCATION:	BOH AREA
MAIN CB:	NA	MLO:	125A			BUS:	125A	MIN,								FED FROM:	PANEL-A
NOTE:																	
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD		LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD		TRIP AMPS	CKT NO.
							A	B	C							
1	25/3P	RTU-1(N)		H	2.40	3#10, #10G, 3/4"C	6.00			3#8, #10G, 3/4"C.	3.60	H	RTU-2(N)		45/3P	2
3				H	2.40			6.00			3.60	H				4
5				H	2.40				6.00		3.60	H				6
7	20	POEF-1(N)		H	0.60	2#12, #12G, 3/4"C	1.14			2#12, #12G, 3/4"C	0.54	R	RECEPTACLE-ROOF		20	8
9	30/3P	PLANETARY MIXER(22)		E	2.16	3#10, #10G, 3/4"C		2.26		2#12, #12G, 3/4"C	0.10	L	LCP		20	10
11				E	2.16				2.16				SPARE		20	12
13				E	2.16		2.16						SPARE		20	14
15	20	WH-1(N)		O	0.48	2#12, #12G, 3/4"C		0.48					SPARE		20	16
17	20	SPARE							0.00				SPARE		20	18
19	20	SPARE					0.00						SPARE		20	20
21	20	EF-1(N)		L	0.03	2#12, #12G, 3/4"C		0.03					SPARE		20	22
23	20	SPARE							0.00				SPARE		20	24
25	20	SPARE					0.00						SPARE		20	26
27	20	SPARE						0.00					SPARE		20	28
29	20	SPARE							0.00				SPARE		20	30
						TOTAL CONNECTED LOAD (KVA)	9.30	8.77	8.16							

PANEL SCHEDULE | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

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ELECTRICAL PANEL SCHEDULE

E-4

PLUMBING NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
2. PLUMBING CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING OR PRECEDING WITH WORK.
3. ALL EQUIPMENT WHICH IS TO REMAIN MUST BE REFURBISHED TO A LIKE NEW CONDITION.
4. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
5. ALL MATERIALS SHALL BE NEW.
6. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
7. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
8. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
9. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
10. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
11. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
12. EXPOSED WATER PIPING SHALL BE TYPE "L" COPPER FOR 2" AND UNDER. WATER PIPING IN WALLS AND UNDERGROUND MAY BE "PEX" TYPE PIPING THAT MEETS ANSI/NSF STANDARD 61.
13. SOIL, WASTE, VENT AND RAINWATER PIPING SHALL BE PVC BUT MAY NOT RUN THRU RATED ASSEMBLIES OR IN PLENUMS.
14. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
15. FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AS PER CODE AND WITH GOOD ENGINEERING PRACTICE.
16. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS; EXCEPT AT WATER HEATER AS PER CODE.
17. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
18. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS AS PART OF THE PLUMBER'S WORK.
19. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE WITHIN 72 HOURS OF NOTIFICATION AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED. PROVIDE COPY TO LL.
20. STUDOR MINI/MAXI AIR ADMITTANCE VALVES MAY NOT BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF.
21. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL CLEANOUTS.
22. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
23. NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
24. WATER PIPING INSULATION SHALL BE 1" THICK ARMAFLEX INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR ALL HOT WATER PIPING. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION.
25. CONDENSATE DRAIN LINES TO BE RUN UNDER SLAB IN PVC SCH40 PIPE AND STUBBED OUT OF WALL TO UNIT. TIE-IN OF A/C TO BE BY OTHERS. PVC PIPING WITH 1/2" THICK ARMAFLEX INSULATION MAY BE USED IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. SEE PLUMBING DRAWINGS FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40 FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40.
26. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
27. NO JOINTS UNDERGROUND FOR COPPER.
28. PLUMBING FIXTURES SHALL COMPLY WITH IPC 2018.
29. WATER HAMMER ARRESTORS AS PER IPC 2018.
30. PLUMBING CONTRACTOR TO PROVIDE ANTI-SCALDING VALVE FOR TUBS AND SHOWERS.
31. PLUMBING CONTRACTOR SHALL REVIEW ALL BID DOCUMENTATION.
32. PLUMBING CONTRACTOR SHALL REVIEW WALL FINISHES @ LOCATION REQUIRING BARRIER-FREE COMPLIANCE (EXAMPLE: CENTER LINE TO TOILET).
33. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
34. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER. PROVIDE A COPY TO LL.

PLUMBING LEGEND

SAN	SANITARY SEWER PIPING
GSAN	GREASE WASTE PIPING
V	VENT PIPING
	DOMESTIC COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER PIPING
	FILTERED WATER
G	GAS PIPING
EX.CW	EX. DOMESTIC COLD WATER PIPING
EX.SAN	EX. SANITARY SEWER PIPING
	PIPE RISE
	PIPE RISER UP
	BALANCING VALVE
	CAPPED END OF PIPE
CO	CLEAN OUT
	P-TRAP
S.O.V.	SHUT-OFF VALVE
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
VTR	VENT THRU ROOF
	GATE VALVE
	CHECK VALVE
	BALANCING VALVE
	GAS COCK
	WATER HAMMER ARRESTER
FD	FLOOR DRAIN
B.P.	BACKFLOW PREVENTOR
I.W.	INDIRECT WASTE
	FLOOR SINK
	POINT OF CONNECTION
	THERMOSTATIC MIXING VALVE

FIXTURE BRANCH SCHEDULES

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (VALVE)	1"	--	4"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"
MOP SINK	1/2"	1/2"	3"	2"
FLOOR DRAIN / SINK	--	--	3"	2"
HAND SINK	1/2"	1/2"	2"	1 1/2"
PREP SINK	1/2"	1/2"	2"	1 1/2"

SCOPE OF WORK

3

2 PROVIDE ALL PLUMBING FOR NEW PIZZERIA RESTAURANT INCLUDING ALL WATER, GAS, GREASE & SANITARY LINES AND CONNECT TO EXISTING UTILITIES. PROVIDE TWO NEW TANKLESS WATER HEATER AND GREASE INTERCEPTOR.

COORDINATE WITH GC AND MECH CONTRACTOR FOR ANY REQUIRED CONDENSATE LINES FOR WATER HEATERS.

PLUMBING REQUIREMENTS

•ANY BELOW GRADE WATER LINES TO BE PEX (NO JOINTS BELOW GRADE) AND SLEEVED, OR AS PER AHJ.
•ALL FLOOR DRAINS/SINKS TO HAVE A TRAP PRIMER OR TRAP GUARD.
•PROVIDE FCO'S AT ANY SANITARY SEWER AND GREASE LINE CONNECTIONS TO THE MAIN LINE (OR EXISTING RISERS).
•EXTEND VTRS (NEW & EXISTING) TO ALIGN WITH NEAREST PARAPET HEIGHT OR 60" ABOVE ROOF SURFACE, WHICHEVER IS LOWER.
•CONSOLIDATE SEWER LINES (SAN. & GREASE) AND OTHER BELOW GRADE UTILITIES/INFRASTRUCTURE INTO AS FEW TRENCHES (12" MIN.) AND BRANCH LINES AS POSSIBLE, OR AS PER AHJ, AND REINFORCE, AS PER LL'S COMMENTS.
•WATER LINES WITHIN DEMISING WALLS TO BE COPPER, PEX, OR PER AHJ, WHICHEVER IS MORE STRINGENT.
•ENSURE WATER SUBMETER IS IN WORKING ORDER AND REPAIR/REPLACE AS NECESSARY. IF ONE IS NOT ALREADY IN PLACE, PROVIDE AND INSTALL WATER SUBMETER, AS PER PROPERTY MANAGEMENT'S REQUIREMENTS; PLACE IMMEDIATELY WHERE WATER LINE ENTERS THE PREMISES, WITH SHUTOFF VALVE TO IMMEDIATELY FOLLOW; MUST HAVE A NON-RESETTABLE, REMOTE READER, PLACED AT A LEVEL THAT CAN BE READ WITHOUT USE OF A LADDER OR STEPSTOOL, AND HAVE A MULTIPLIER OF 1

GAS & MISC. REQUIREMENTS

•COORDINATE ANY GAS LINE ROUTING FROM METER WITH LANDLORD REP. GAS LINES MUST PASS THROUGH PROVIDED OPENINGS IN PARAPET WALL, AND NOT OVER TOP (UNLESS OTHERWISE NOTED BY PROP. MGR.). RUN GAS LINE OVER HALLWAYS OR SHARED SPACES WHEN AVAILABLE, OR AT VERY FRONT/REAR OF BUILDING WHEN NOT.
•GAS LINE SUPPORTS MUST HAVE SLIP SHEETS (NEOPRENE OR TPO MATERIAL) UNDER EACH FOR ROOF PROTECTION.
•EXTERIOR GAS LINE(S) MUST BE PAINTED TO MATCH EXISTING WALL FINISH OF BUILDING AND PAINTED PER CODES ON ROOFTOP.
•GAS LINES WHICH EXTEND VERTICALLY BELOW DECK (THROUGH ATTIC SPACE) SHALL NOT HAVE JOINTS WITHIN ATTIC SPACE OR WALL CAVITIES. WALL CAVITIES WITH GAS LINES WITHIN SHALL BE VENTED TO AN OCCUPIABLE SPACE (NOT VENTED TO OUTSIDE).
•GAS LINE DIRT LEGS AND CONDENSATION P-TRAPS TO BE 2-1/2" MIN. CLEAR OF ANY SURFACE, INCLUDING ROOF MEMBRANE. 3

ENERGY CONSERVATION NOTES

1. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE OF MINIMUM PIPE INSULATION THICKNESS.

2. HOT WATER SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.5. THE HOT WATER VOLUME FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER MAXIMUM PIPING LENGTH TABLE.

3. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.6, AUTOMATIC CONTROLS SHALL BE INSTALLED THAT LIMITS THE OPERATION OF A RECIRCULATING PUMP AND THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE.

4. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.7, PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:
A. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
B. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).

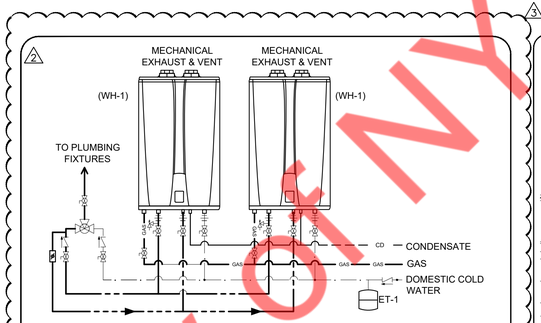
RESTROOM FIXTURE SCHEDULE

Item No.	Qty.	Description	Manufacturer	Model	WATER Hot	WATER Cold	WASTE Waste	Usage	Spec
C	1	SINK VESSEL	AMERICAN STANDARD	0552.001.020	1/2"	1/2"	1-1/2"		
C2	1	LAVATORY FAUCET	AMERICAN STANDARD	7025115.002	1/2"	1/2"		0.5	GPM
	1	THERMAL MIXING VALVES	WATTS	LFMMV	1/2"	1/2"			
	1	INSULATED PLUMBING COVERS	PLUMBEREX	HANOI SHIELD					
I	1	TOILET	TOTO USA	MFR# CT705ELN(G)			4"	1.28	GPF
1.1	1	FLUSHOMETER	PROFLO	MFR# PF1721WH		1"			

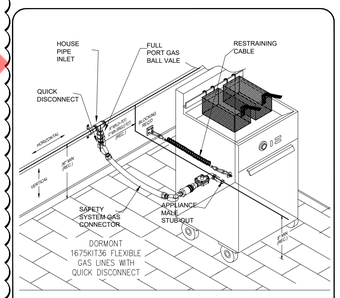
KITCHEN EQUIPMENT PLUMBING SCHEDULE

Item No.	Qty.	Description	MANUFACTURER	MODEL	WATER Hot	WATER Cold	WASTE Direct	WASTE Indirect
8	1	PIZZA BAKE OVEN, GAS	BAKER'S PRIDE	Y-602				
15	1	3-SINK COMPARTMENT	JOHN BOOS	3PB19244-2D18				3"
15.1	1	PRE-RINSE FAUCETS	JOHN BOOS	PB-PRW-1LF	1/2"	1/2"		
19	1	MOP SINK	JOHN BOOS	PBMS2016-12-X	1/2"	1/2"	3"	
21	2	HAND SINK	JOHN BOOS	PBHS-W-1410-P-SSLR-X	1/2"	1/2"	2"	
22	1	PLANATARY MIXER	HOBART	HL662-1				
22.1	1	FAUCET, KETTLE/POT FILLER	T&S BRASS	B-0600		1/2"		
25	1	SODA FOUNTAIN	-	-				
26	1	ICE TEA DISPENSER	-	-		1/2"		
41	1	PREP SINK			1/2"	1/2"		3"
WH-1	2	WATER HEATER	SEE SCHEDULE	SEE SCHEDULE				

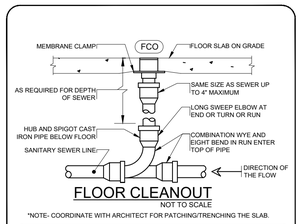
3 + HOT WATER 140 DEG. ..PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS



HIGH TEMP DOMESTIC WATER HEATERS
NOT TO SCALE

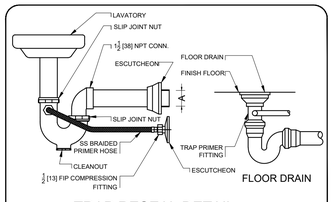


EQUIPMENT GAS PIPING DETAIL
NOT TO SCALE

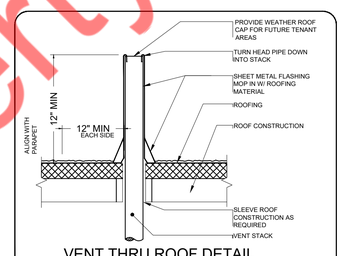


FLOOR CLEANOUT
NOT TO SCALE
*NOTE- COORDINATE WITH ARCHITECT FOR PATCHING/TRENCHING THE SLAB.

FLOOR CLEANOUT DETAIL NOTES
1) LOCATE CLEANOUT AT THIS LOCATIONS:
A) BUILDING EXIT
B) AT TURNS OF PIPES GREATER THAN 45 DEGREES
C) AT 50' INTERVALS ON STRAIGHT RUNS
D) WHERE IS SHOWN ON PLANS
E) WHERE IS 18" CLEAR AROUND

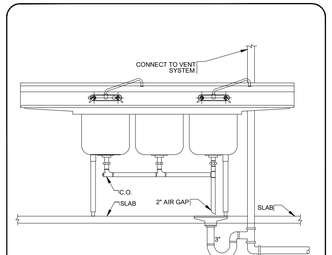


TRAP RESEAL DETAIL
NOT TO SCALE

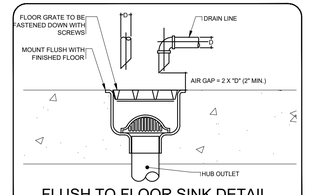


VENT THRU ROOF DETAIL
NOT TO SCALE
*NOTE- COORDINATE WITH ARCHITECT FOR PATCHING THE ROOF.

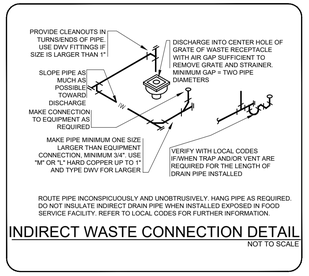
VENT THRU ROOF DETAIL NOTE
ANY VENT FIRE WITHIN 10'-0" OF ANY DOOR, WINDOW, OR EXHAUST OPENING SHALL EXTEND NOT LESS THAN 3'-0" ABOVE SUCH OPENINGS



RECESSED FLUSH WITH FLOOR SINK
NOT TO SCALE

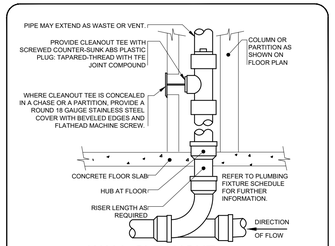


FLUSH TO FLOOR SINK DETAIL
NOT TO SCALE
*NOTE- COORDINATE WITH ARCHITECT FOR PATCHING/TRENCHING THE SLAB.



ROUTE PIPE INCONSPICUOUSLY AND UNOBTRUSIVELY. HANG PIPE AS REQUIRED. DO NOT INSULATE INDIRECT DRAIN PIPE WHEN INSTALLED EXPOSED IN FOOD SERVICE FACILITY. REFER TO LOCAL CODES FOR FURTHER INFORMATION.

INDIRECT WASTE CONNECTION DETAIL
NOT TO SCALE



WALL CLEANOUT
NOT TO SCALE

WALL CLEANOUT DETAIL NOTES
1) PROVIDE WCO WHERE SHOWN ON PLANE, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT
2) LOCATE ABOVE FIXTURE FLOOR RIM WITHIN 4' OF FLOOR.
3) CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.
4) LONG SWEEP AT END OF LINE OR COMBINATION WYE AND EIGHT BEND IN RUN OF LINE
5) CLEAN OUT FACE SHALL BE WITHIN 4" OF WALL SURFACE. PROVIDE A PIPE EXTENSION IF REQUIRED

PROJECT

RUSSO'S NY PIZZERIA

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01	BD COMMENTS		06.05.23
02	HD COMMENTS	2	07.28.23
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DRAWN BY: NYE
CHECKED BY: NYE

GENERAL NOTES, DETAILS & SCHEDULES

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GREASE TRAP SIZING CALCULATION										
FIXTURE	QUANTITY	DIMENSIONS			VOLUME		PERCENTAGE USAGE(%)	ACTUAL USAGE (GALLONS)	FLOW RATE(GPM)	
		LENGTH(IN)	WIDTH(IN)	DEPTH(IN)	CUBIC INCHES	GALLONS			1 MIN.	2 MIN.
3 COMP. SINK	1	18	24	14	18144	78.55	0.75	58.92	58.92	29.46
MOP SINK	1	20	16	12	2840	16.63	0.75	12.48	12.48	6.24
HAND SINK	2	14	10	5	1400	6.07	0.75	4.56	4.56	2.28
PREP SINK	1	21	21	14	6174	26.73	0.75	20.05	20.05	10.03
FLOOR DRAIN (EMERGENCY)	1	-	-	-	-	-	-	-	-	-
FLOOR SINK	1	-	-	-	-	-	-	3	3	1.5
								TOTAL	99.01	49.51
								PROPOSED MODEL	SCHIER GB-50	

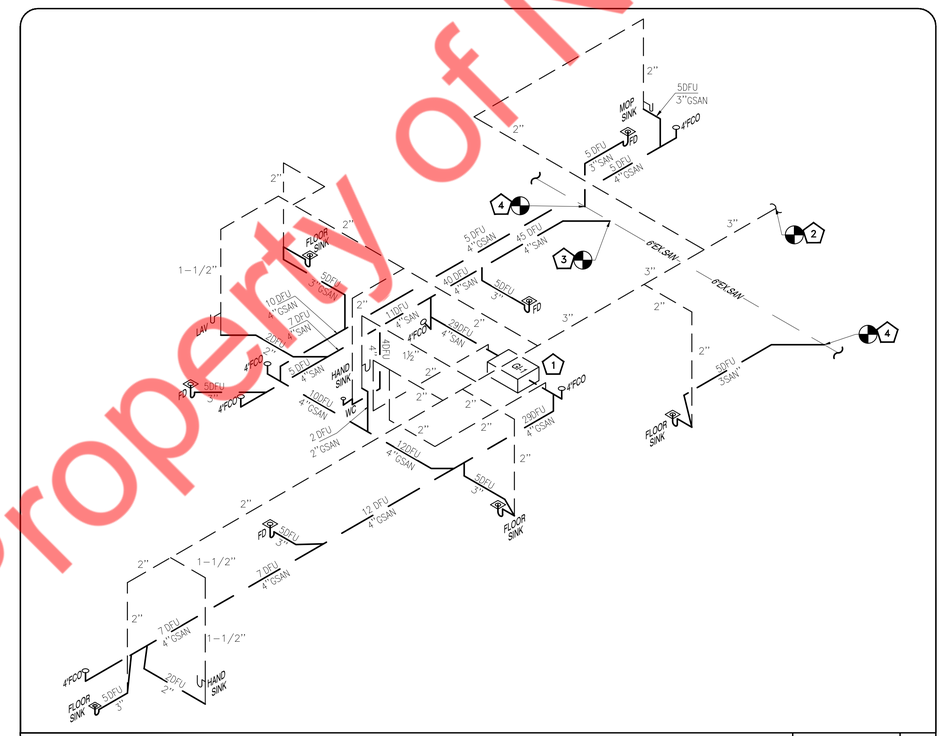
GREASE INTERCEPTOR SCHEDULE

ITEM	SERVICE	FLOW RATE (GPM)	WATER CAPACITY (GALLON)	GREASE CAPACITY (LBS)	MANUFACTURER AND MODEL	REMARKS
GI-1	KITCHEN WASTE	50	65	439.5	SCHIER GB-50	DIMENSION: 37"(L)X32.25"(W)

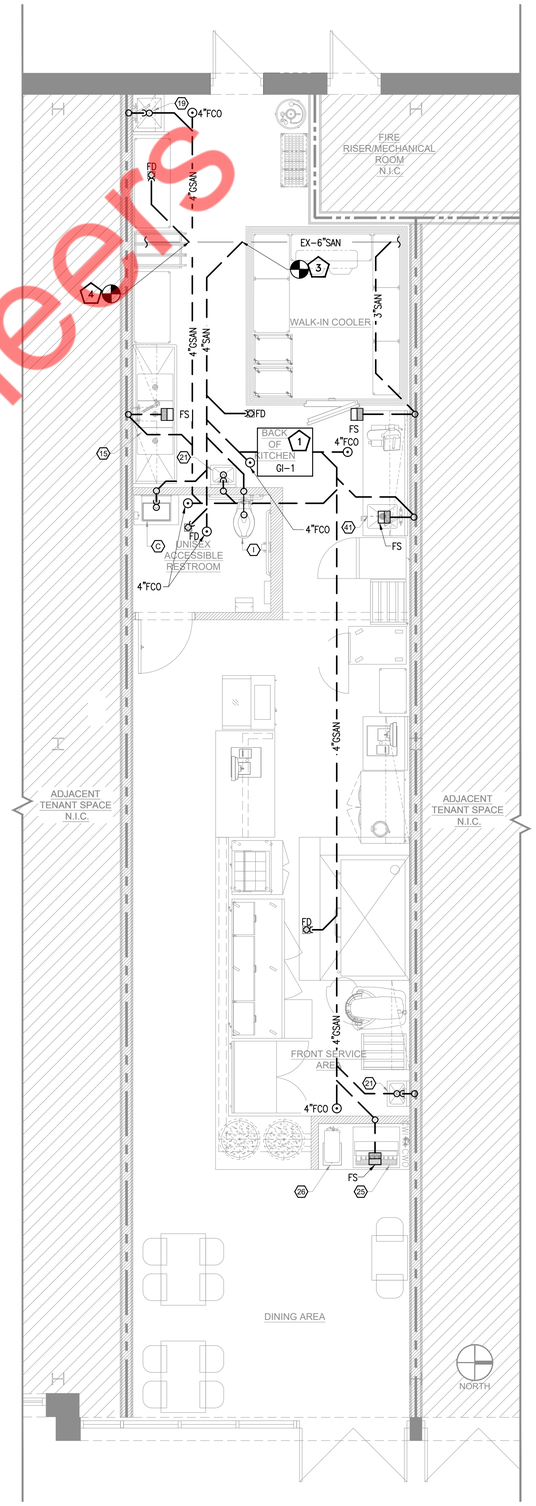
NOTE - CONTRACTOR TO PROVIDE ALL REQUIRED ACCESSORIES FOR SATISFACTORY WORKING OF GREASE TRAP AS PER SITE CONDITIONS, LOCAL CODES AND MANUFACTURER RECOMENDATIONS.

SANITARY PLAN KEY NOTE

1. PROVIDE NEW GREASE INTERCEPTOR AS PER MANUFACTURER RECOMMENDATIONS. COORDINATE WITH ARCHITECT FOR FINAL LOCATION.
2. CONNECT NEW 3" VENT LINE TO EXISTING 3" VENT TAP. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION AND ROUTING SITE.
3. CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING 6" SANITARY WASTE LINE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION, ROUTING AND INVERT ON SITE.
4. CONNECT NEW 3" SANITARY WASTE PIPING TO EXISTING 6" SANITARY WASTE LINE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION, ROUTING AND INVERT ON SITE.



SANITARY RISER | SCALE N.T.S. | 2



SANITARY PLAN | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

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SANITARY PLAN & RISER

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WATER HEATER SCHEDULE

MANUFACTURER	NAVIEN
MODEL	NPE-240A2
EQUIPMENT TAG	WH-1
STATUS	NEW
CAPACITY	TANKLESS
QTY.	2
FUEL	GAS
BTU/HR	199,900
FLOW RATE	4.4 GPM*
ENERGY FACTOR	0.95
VENT	3"Ø
VOLTAGE	120/1/60
AMPERAGE	4
WEIGHT (EMPTY)	77 LBS.

NOTES:

1. * @ 90° F TEMPERATURE RISE.
2. WATER HEATER COMES WITH BUILT-IN RECIRCULATION PUMP.
3. INSTALL NEW EXPANSION TANK (ET-1) AMTROL MODEL THERM-X-TROL ST-5, 2.0 GAL PER LOCAL CODE REQUIREMENTS.

PLUMBING KEY NOTE

1. CONNECT NEW 1-1/2" CW LINE TO EXISTING 2" WATER MAIN LINE. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION. CONTRACTOR TO TO VERIFY WATER-SUBMETER AND BACKFLOW REQUIREMENT WITH LANDLORD PRIOR TO BID.
2. CONNECT NEW 2-1/2" GAS LINE TO GAS METER. CONTRACTOR TO FIELD VERIFY SIZE, PRESSURE AND LOCATION OF GAS METER AND LINE AND UPGRADE IF REQUIRED.

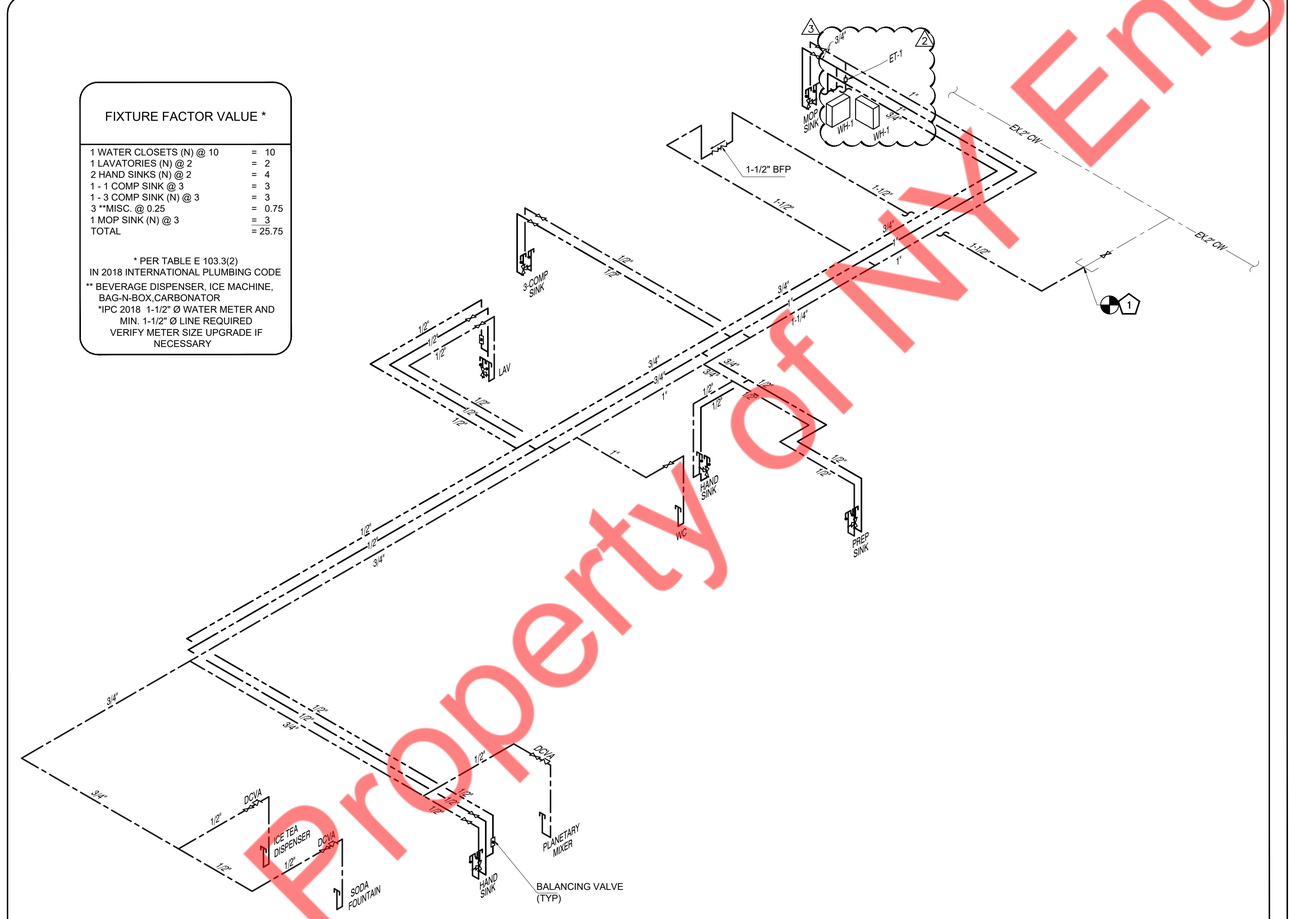
FIXTURE FACTOR VALUE *

1 WATER CLOSETS (N) @ 10	=	10
1 LAVATORIES (N) @ 2	=	2
2 HAND SINKS (N) @ 2	=	4
1 - 1 COMP SINK @ 3	=	3
1 - 3 COMP SINK (N) @ 3	=	3
3 **MISC. @ 0.25	=	0.75
1 MOP SINK (N) @ 3	=	3
TOTAL	=	25.75

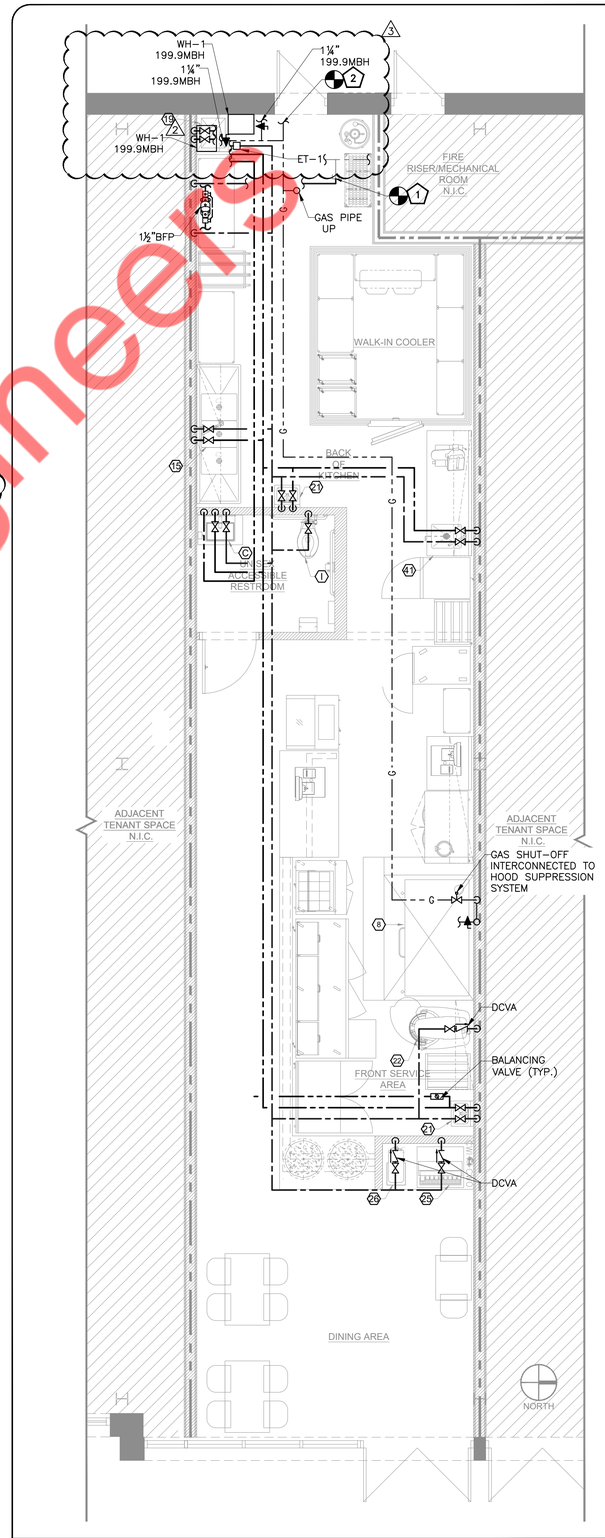
* PER TABLE E 103.3(2)
IN 2018 INTERNATIONAL PLUMBING CODE

** BEVERAGE DISPENSER, ICE MACHINE, BAG-N-BOX,CARBONATOR

*IPC 2018 1-1/2" Ø WATER METER AND MIN. 1-1/2" Ø LINE REQUIRED VERIFY METER SIZE UPGRADE IF NECESSARY



WATER RISER | SCALE N.T.S. | 2



WATER/GAS PLAN | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

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WATER PLAN & RISERS

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GAS KEY NOTE

1. CONNECT NEW 2-1/2" GAS LINE TO GAS METER. CONTRACTOR TO FIELD VERIFY SIZE, PRESSURE AND LOCATION IN FIELD AND UPGRADE IF REQUIRED
2. CONTRACTOR TO VERIFY REQUIREMENT OF GAS METER WITH OWNER/LANDLORD AND BASE BID ACCORDINGLY.

GAS SCHEDULE

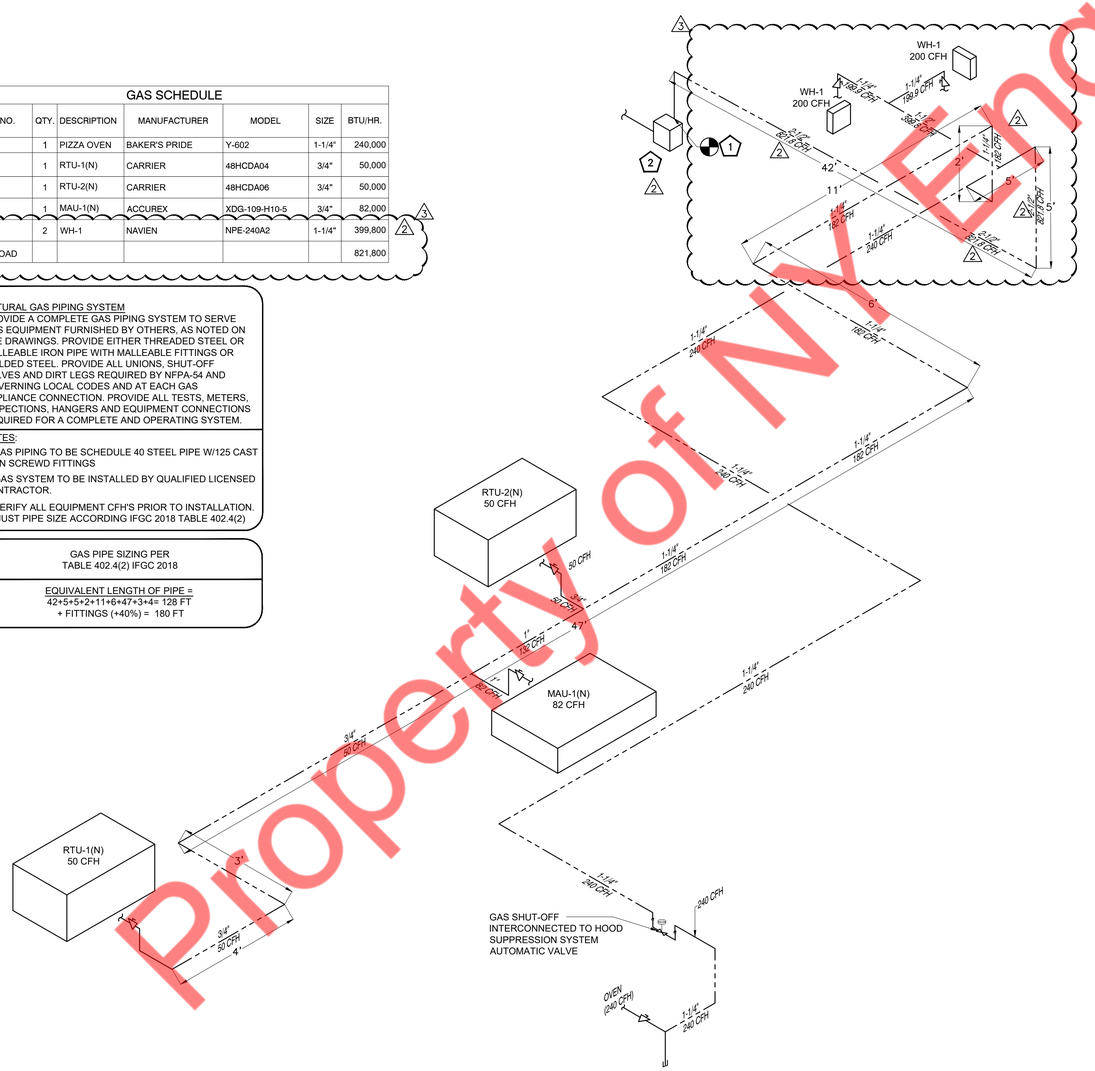
ITEM NO.	QTY.	DESCRIPTION	MANUFACTURER	MODEL	SIZE	BTU/HR.
8	1	PIZZA OVEN	BAKER'S PRIDE	Y-602	1-1/4"	240,000
-	1	RTU-1(N)	CARRIER	48HCDA04	3/4"	50,000
-	1	RTU-2(N)	CARRIER	48HCDA06	3/4"	50,000
-	1	MAU-1(N)	ACCUREX	XDG-109-H10-5	3/4"	82,000
-	2	WH-1	NAVIEN	NPE-240A2	1-1/4"	399,800
TOTAL LOAD						821,800

NATURAL GAS PIPING SYSTEM
PROVIDE A COMPLETE GAS PIPING SYSTEM TO SERVE GAS EQUIPMENT FURNISHED BY OTHERS, AS NOTED ON THE DRAWINGS. PROVIDE EITHER THREADED STEEL OR MALLEABLE IRON PIPE WITH MALLEABLE FITTINGS OR WELDED STEEL. PROVIDE ALL UNIONS, SHUT-OFF VALVES AND DIRT LEGS REQUIRED BY NFPA-54 AND GOVERNING LOCAL CODES AND AT EACH GAS APPLIANCE CONNECTION. PROVIDE ALL TESTS, METERS, INSPECTIONS, HANGERS AND EQUIPMENT CONNECTIONS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

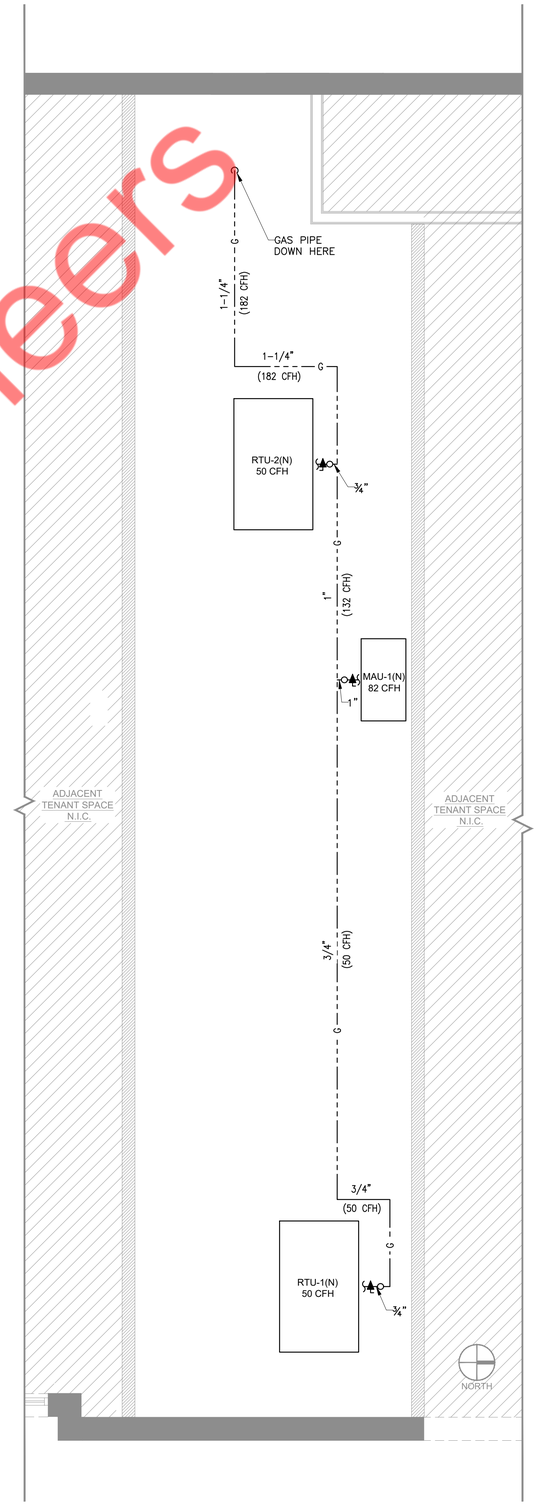
NOTES:
1. GAS PIPING TO BE SCHEDULE 40 STEEL PIPE W/125 CAST IRON SCREWD FITTINGS
2. GAS SYSTEM TO BE INSTALLED BY QUALIFIED LICENSED CONTRACTOR.
3. VERIFY ALL EQUIPMENT CFH'S PRIOR TO INSTALLATION. ADJUST PIPE SIZE ACCORDING IFGC 2018 TABLE 402.4(2)

GAS PIPE SIZING PER TABLE 402.4(2) IFGC 2018

EQUIVALENT LENGTH OF PIPE =
42+5+5+2+11+6+47+3+4= 128 FT
+ FITTINGS (+40%) = 180 FT



GAS RISER | SCALE N.T.S. | 2



ROOF GAS PLAN | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

PROJECT

RUSSO'S NY PIZZERIA

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ROOF GAS PLAN & RISER

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