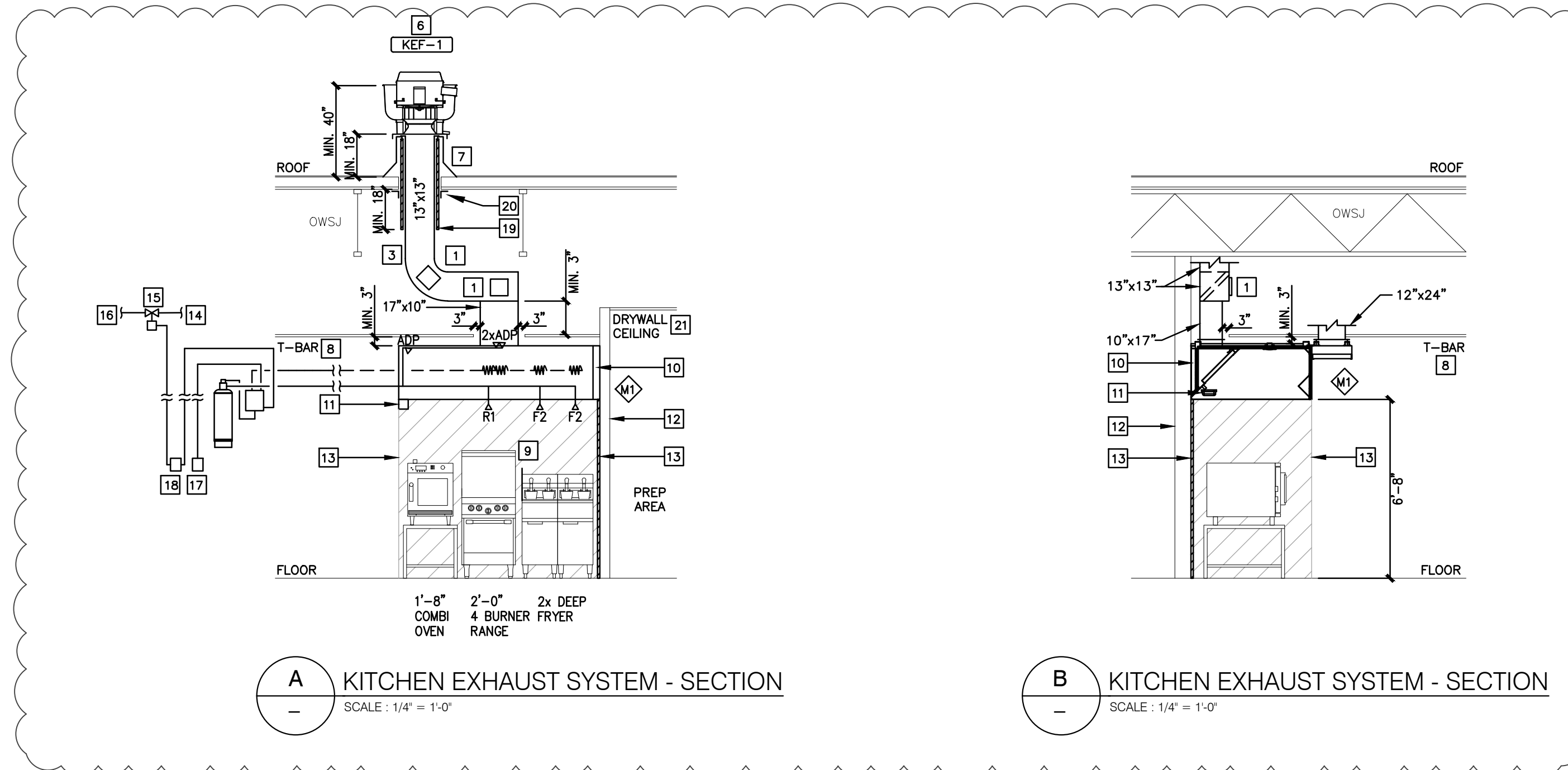



MECHANICAL PLAN - KITCHEN EXHAUST SYSTEM
SCALE : 1/4" = 1'-0"



KITCHEN EXHAUST SYSTEM - SECTION
SCALE : 1/4" = 1'-0"

KITCHEN EXHAUST SYSTEM - SECTION
SCALE : 1/4" = 1'-0"

EQUIPMENT SCHEDULE				
CATEGORY	ITEM NO.	DESCRIPTION	QTY.	NOTES
KITCHEN EXHAUST AND MAKE-UP AIR		KITCHEN EXHAUST CANOPY	1	7'-6" x 4'-6" ETL-LISTED S.S. CANOPY INSTALLED AS PER NFPA 96, 2014 ED NO COMBUSTIBLE MATERIALS WITHIN 18" OF CANOPY AND DUCTS CAPTIVEAIRE MODEL 5424 ND-2-FSP-F EXHAUST CFM = 1,812 CFM TOTAL INTEGRATED MAKE-UP AIR CFM = 1,725 CFM
	KEF-1	KITCHEN EXHAUST FAN	1	ROOFTOP UPBLAST DISCHARGE KITCHEN EXHAUST FAN 1,812 CFM CAPACITY AT 1.2" S.P. CAPTIVEAIRE MODEL DU85HFA 115V, 1 PHASE, FLA = 8.9 0.75 HP MOTOR, WT ~ 94 LBS
	MUA-1	MAKE-UP AIR UNIT	1	DIRECT FIRED MAKE UP AIR UNIT 1,725 CFM (95.2% OF KITCHEN EXHAUST CFM) REQUIRED CAPTIVEAIRE MODEL A1-D-250-15D 1.5 HP, 208V, 3 PHASE, INPUT 110 MBH, WT ~ 500 LBS BOLTED TO WEATHERPROOF CURB

FIRE SUPPRESSION SYSTEM			
CATEGORY	DESCRIPTION	QTY.	NOTES
WET CHEMICAL SYSTEM	4 GALLON KIDDE WHDR 400 WET CHEMICAL SYSTEM CYLINDER (UL300 STANDARD)	1	8 PTS OF MAX 12 PTS INSTALLED AS PER UL 300 STANDARDS, ULC/ORD-C1254.6-1995, NFPA 96 2014 ED, AND NFPA 17A 2013 ED
	7'-6" KITCHEN EXHAUST CANOPY	1	
	R1 NOZZLE	1	
	F2 NOZZLE	2	
	PLENUM (ADP) NOZZLE	1	
	DUCT (ADP) NOZZLE	2	
	DETECTORS	4	ALL DETECTORS AT 360°F CW AUTO-GAS SHUT-OFF ELECTRIC GAS VALVE AND MICROSWITCHES FOR AUTO-ELECTRICAL POWER SHUT DOWN

MECHANICAL SPECIFICATIONS

A. General

1. Intent

It is the intention of these specifications and drawings to call for finished works, tested and ready for operation. Minor details not usually shown or specified but necessary for proper installation and operation shall be included in the works, the same as if herein specified or shown.

2. Responsibility

- Visit the site during the tendering period to verify all measurements and examine all local and existing conditions on which the words are dependant.
- No consideration will be granted for failure to visit the site, or for any misunderstanding of equipments and materials to be furnished or works to be done.
- The contractor shall advise the architect, should he believe any equipments or materials to be inadequate or unsuitable, in violation of laws, ordinances, rules, or regulations of authorities having jurisdiction, or should any necessary items or works being omitted.
- Check drawings of all trades to verify space and headroom limitations for works to be installed. Make changes to facilitate a more satisfactory installation. Deviations from drawings, altering the design intent or involving additional expense, shall not be made without the architect's approval.
- Where installed work interferes with or modifies architectural design, make necessary changes as directed by the architect.
- Place no unusual erection loads on the building structure without the architect's approval.
- Ensure that equipments do not transmit excess noise and/or vibration to other parts of the building. Any noise or vibration that, in the opinion of the architect, is objectionable shall be corrected in an approved manner.

3. Codes and Permits

All works to be performed in accordance with the latest B.C. Building Code, B.C. Plumbing Code, Gas Code and other provincial regulations and local by-laws. Submit plans and specifications for approval to authorities having jurisdictions. Obtain permits and pay all necessary fees.

4. C.S.A. and C.G.A. Approval

All electrical motors, equipments, and components shall bear a C.S.A. approval label. All gas fired equipments shall bear a C.G.A. approval label.

5. Tests

All piping shall be tested as required, including plumbing, soil, waste, vent, and drainage pipings.

6. Insulation

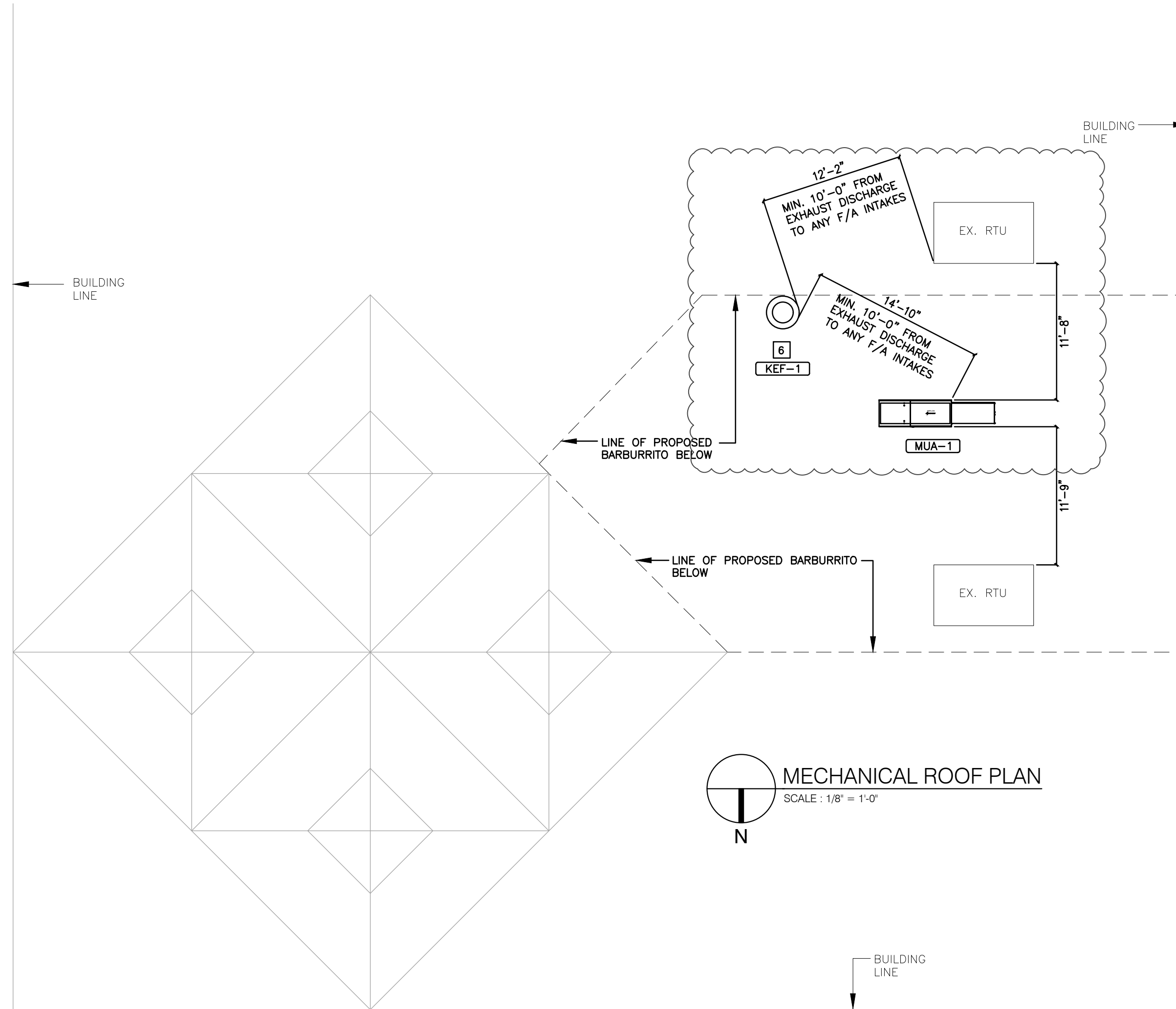
All domestic cold, hot, cast iron and copper rainwater leaders shall be insulated with 1" fibreglas pipe insulation.

7. Cutting, Patching & Waterproofing

- Arrange with general contractor and be responsible for all cutting and patching required.
- Opening through structural members must be approved by the Architect.
- Counterflashing and caulking of openings and all flashing of pipes shall be furnished and installed by the individual trades.
- The area of any opening shall not be larger than is absolutely necessary.

GENERAL NOTES

- The installer of the fire suppression system shall certify to the city building inspector that the installation complies with UL 300 standards, ULC/ORD-C1254.6-1995 and the NFPA 96, 2014 Edition, NFPA 17A, 2013 Edition, the terms of the equipment listings and the manufacturer's instructions.
- Interlocking**
Air flow switch is installed at the make up air duct, to start the exhaust fan only after air flow is confirmed from the make up air unit. In normal operation, if and when the make up air flow stops, then the exhaust fan will also stop running.
In case of fire, the fire suppression system control shall discharge fire suppression agent, activate the fire alarm (the fire extinguishing system shall be electrically connected and annunciated as a separate zone at the fire alarm panel and the annunciator), shut off all sources of fuel, gas and electric power supply to the kitchen equipments under the canopy, shut off the lights inside the hood and disconnect power to all the electrical plugs under the canopy, shut down the make up air unit and the hood exhaust fan must be allowed to continue to run. The electrical connection from the fire suppression system to the fire alarm panel and the annunciator shall be verified by a qualified independent agency. If there is no existing building fire alarm system, upon activation of the fire suppression system, an audible alarm, electric bell, or a visual indicator, stroke light, shall be provided to show that the fire suppression system had been activated. Interlock to be provided to turn on any appliance only after exhaust fan is turned on at the kitchen canopy.
- Remote manual pull station installed at 48" above the finished floor to activate the fire suppression system shall be provided at a path of exit or egress from the kitchen area and clearly identify the hazard protected.
- Deep fat fryer (if applicable) shall be installed minimum 16 inch from adjacent open flame unless a minimum 8 inch high stainless steel baffle is installed between the fryer and the adjacent open flame equipment.
- Make up air unit to have air volume of minimum 90% of the exhaust air volume of the exhaust fan.
- Grease filters shall be ULC listed, the installation shall be tight fitting and firmly held in place with stainless steel brackets.
- All the lights inside hood shall be the explosion proof type, ULC listed and NFPA 96 approved.
- Contractor to provide means of returning kitchen cooking equipments under canopy to original positions if moved in order to comply with the fire suppression system requirements.
- For direct gas-fired make-up air units only.**
Air flow switch shall be installed at welded bracket on exhaust duct, such that the gas burner of make-up air unit will be able to fire up only after kitchen hood exhaust fan has started and air flow is confirmed.
- Deep fryers require high temperature limit control.



MECHANICAL ROOF PLAN
SCALE : 1/8" = 1'-0"

KITCHEN EXHAUST KEYNOTES	
TAG	NOTE
1	CLEANOUT AT EVERY CHANGE OF DIRECTION AND EVERY 12'-0" AT HORIZONTAL DUCT WORKS AS PER NFPA 96 2014 ED 7-4.3. NO SCREWS ALLOWED. WELDED ON BOLTS AND WING NUTS C/W HIGH TEMP GASKET
2	SHEET METAL WORKS AS PER SMACNA STANDARD
3	16 GA CARBON STEEL, ALL WELDED LIQUID-TIGHT EXHAUST DUCT
4	13"x13" GREASE DUCT UP TO KITCHEN EXHAUST FAN (KEF-1) ON ROOF.
5	16"x16" MAKE UP AIR DUCT FROM MAKE UP AIR UNIT (MUA-1) ON ROOF.
6	ROOF EXHAUST FAN INSTALLED MINIMUM 10'-0" AWAY FROM P/L'S AND ANY F/A INTAKES. FAN TO BE HINGED WITH HOLD OPEN CABLE AND TO HAVE GREASE TROUGH AND RAINPROOF CONTAINER C/W GREASE FILTER & DRAIN.
7	METAL CURB
8	T-BAR CEILING, LIMITED-COMBUSTIBLE GYPROC TILES TO HAVE MINIMUM 3" CLEARANCE FROM CANOPY AND DUCTS
9	8" HIGH S.S. DEEP FRYER BAFFLE
10	3" AIR GAP
11	GREASE CAN MAX. 1 GAL.
12	DRYWALL ON STEEL STUDS CONTRACTOR TO CONFIRM ON SITE
13	1" S.S. PANEL C/W MINERAL WOOL INSULATIONS
14	GAS SUPPLY TO KITCHEN EQUIPMENT
15	ELECTRIC GAS VALVE
16	GAS SUPPLY FROM GAS METER
17	WET CHEMICAL FIRE SUPPRESSION REMOTE MANUAL RELEASE PULL STATION (4'-0" A.F.F.)
18	ELECTRIC GAS VALVE MANUAL RESET RELAY
19	COMBUSTIBLE PROTECTION (TYPICAL) 1" 22 GA METAL PANEL C/W REINFORCED (WIRE MESHED) MINERAL WOOL INSULATIONS ON 1" NON-COMBUSTIBLE SPACER
20	ROOF PENETRATION REINFORCED W/ WELDED ON 3x3 ANGLE IRON, TYPICAL
21	DRYWALL CEILING ON STEEL STUD FRAMING, TO HAVE MINIMUM 3" CLEARANCE FROM CANOPY AND DUCTS

NO.	DATE	NOTES	INI
1	11/16/2023	ISSUED FOR CLIENT REVIEW	LC
2	02/02/2024	REVISION	LC
3	02/07/2024	BACKGROUND CHANGE	LC

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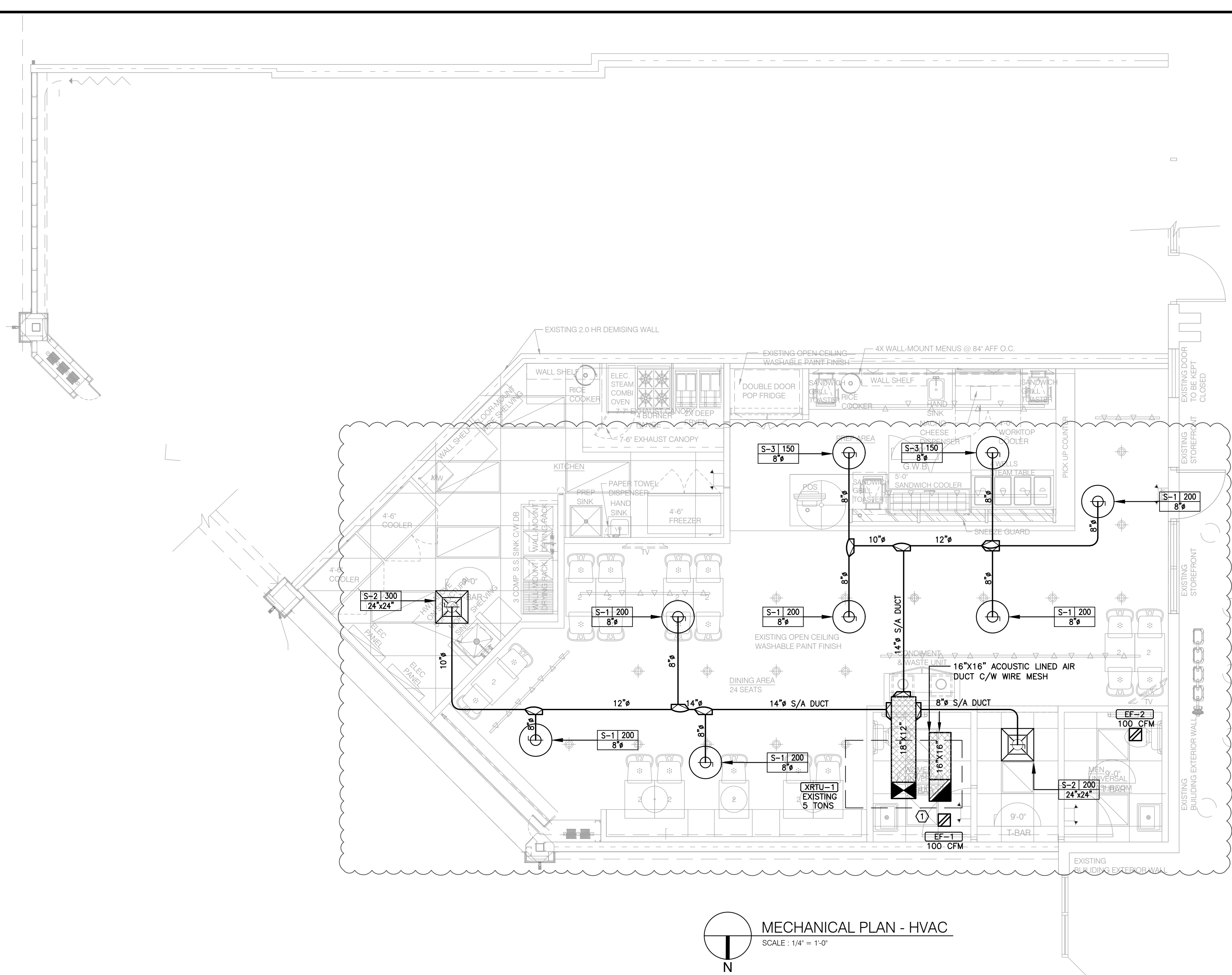
PROJECT:

BARBURRITO

UNIT 35, 7100 ALBERNI STREET
POWELL RIVER, B.C.

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Vancouver, B.C. V6P 6Z7
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DRAWING TITLE: MECHANICAL PLAN - KITCHEN EXHAUST SYSTEM	
PTP #1001211	M-1
DATE: NOV 15, 2023	
DRAWN BY: LC	
CHECKED BY: AL	
SCALE: AS NOTED	



EQUIPMENT SCHEDULE				
CATEGORY	ITEM NO.	DESCRIPTION	QTY.	NOTES
HVAC	XRTU-1	EXISTING ROOF TOP UNIT	1	EXISTING 5 TON ROOF TOP UNIT CONTRACTOR TO CONFIRM LOCATION AND CAPACITY ON SITE
	S-1 200 8"	S-1 DIFFUSER	6	EH PRICE RCD ROUND DIFFUSER, DUCT MOUNT
	S-2 300 24"x24"	S-2 DIFFUSER	2	EH PRICE SCD SQUARE DIFFUSER, T-BAR LAY-IN
	S-3 150 8"	S-2 DIFFUSER	2	EH PRICE ROUND DIFFUSER, SURFACE MOUNT
	EF-1	CEILING WASHROOM EXHAUST FAN	2	6"Ø ROOM EXHAUST DUCT TO CONNECT TO WALL CAP OR ROOF CAP C/W SCREEN VOLUME AS SHOWN ON PLAN
	EF-2			

- 1) EXACT LOCATION OF ALL EXISTING SERVICES SHALL BE VERIFIED ON SITE BEFORE WORK STARTS.
- 2) WHERE DRYWALL CEILINGS ARE BEING INSTALLED, CEILING ACCESS HATCHES ARE REQUIRED TO BALANCE DAMPERS AND FOR ALL EXISTING EQUIPMENTS AND NEEDING REGULAR SERVICE ACCESS. TYPICAL

- KEYNOTES
- 1) ACOUSTIC LINED 18"x12" SUPPLY AND ACOUSTIC LINED 16"x16" RETURN DUCT FROM EXISTING ROOF TOP UNIT (XRTU-1)

MECHANICAL SPECIFICATIONS

A. General

- Intent.**
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- Responsibility.**
 - Visit the site during the tendering period to verify all measurements and examine all local and existing conditions on which the words are dependant.
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 - The contractor shall advise the architect, should he believe any equipments or materials to be inadequate or unsuitable, in violation of laws, ordinances, rules, or regulations of authorities having jurisdiction, or should any necessary items or works being omitted.
 - Check drawings of all trades to verify space and headroom limitations for works to be installed. Make changes to facilitate a more satisfactory installation. Deviations from drawings, altering the design intent or involving additional expense, shall not be made without the architect's approval.
 - Where installed work interferes with or modifies architectural design, make necessary changes as directed by the architect, at no extra cost to the owner.
 - Place no unusual erection loads on the building structure without the architect's approval.
 - Ensure that equipments do not transmit excess noise and/or vibration to other parts of the building. Any noise or vibration that, in the opinion of the architect, is objectionable shall be corrected in an approved manner at no additional expense to the owner.
- Codes and Permits.**
All works to be performed in accordance with the latest B.C. Building Code, B.C. Plumbing Code, Gas Code and other provincial regulations and local by-laws. Submit plans and specifications for approval to authorities having jurisdictions. Obtain permits and pay all necessary fees.
- C.S.A. and C.G.A. Approval.**
All electrical motors, equipments, and components shall bear a C.S.A. approval label. All gas fired equipments shall bear a C.G.A. approval label.
- Tests.**
All piping shall be tested as required, including plumbing, soil, waste, vent, and drainage pipings.
- Insulation.**
All domestic cold, hot, cast iron and copper rainwater leaders shall be insulated with 1" fibreglas pipe insulation.
- Cutting, Patching & Waterproofing.**
 - Arrange with general contractor and be responsible for all cutting and patching required.
 - Opening through structural members must be approved by the Architect.
 - Counterflashing and caulking of openings and all flashing of pipes shall be furnished and installed by the individual trade.
 - The area of any opening shall not be larger than is absolutely necessary.

B. Heating, Ventilating, & Air Conditioning Notes

- Building Heating and Air Conditioning.**
The commercial unit shall be heated by existing roof top unit.
- Ventilation.**
Exhaust fans provided for all the washrooms where required, if applicable.
- Controls.**
All line voltage control wirings by electrical contractor, and low voltage control wirings, relays, contactors, flow switches, etc. by mechanical contractor.
- Ductworks.**
 - Ductworks shall be constructed of galvanized sheet metal in accordance with SMACNA standards for low pressure ductworks.
 - Round ductworks shall be galvanized spiral duct with back seam.
 - Flexible ductworks shall be Flexmaster type consisting of 3 layers of fibreglas cloth, each coated with neoprene supported by a spring steel wire helix.
 - Install and make all necessary connections required for the complete supply, return, and exhaust air system indicated on the drawings, including all ductworks, grille collars, connections, fasteners, hangers, and other items required. Seal all joints to provide an air tight system.
- Balancing Dampers.**
Single blade with quadrant operator for ducts 10" deep or less. Squeeze type dampers with quadrant operators for ducts over 10" in depth.
- Fire Dampers.**
Fire dampers shall be installed where ducts penetrate fire rated walls and ceilings. Dampers shall have minimum 1½ hr. rating.
- Flexible Connection.**
Flexible connections shall be Duralon as manufactured by Duro Dyne.
- Balancing.**
 - Balance air system to within 10% of design CFM noted.
 - Balancing shall be performed by an independent agency specializing in this type of work.
- Grilles, Registers, and Diffusers.**
Provide all grilles, registers, and diffusers as indicated on drawings.

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DRAWING TITLE:
MECHANICAL PLAN
- HVAC

PTP #1001211
DATE: NOV 16, 2023
DRAWN BY: ET
CHECKED BY: AL
SCALE: AS NOTED

M-2