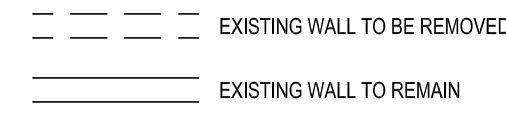
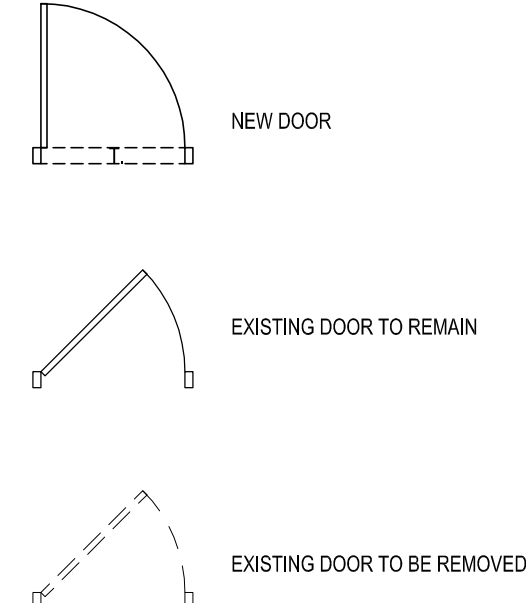


DEMO WALL LEGEND

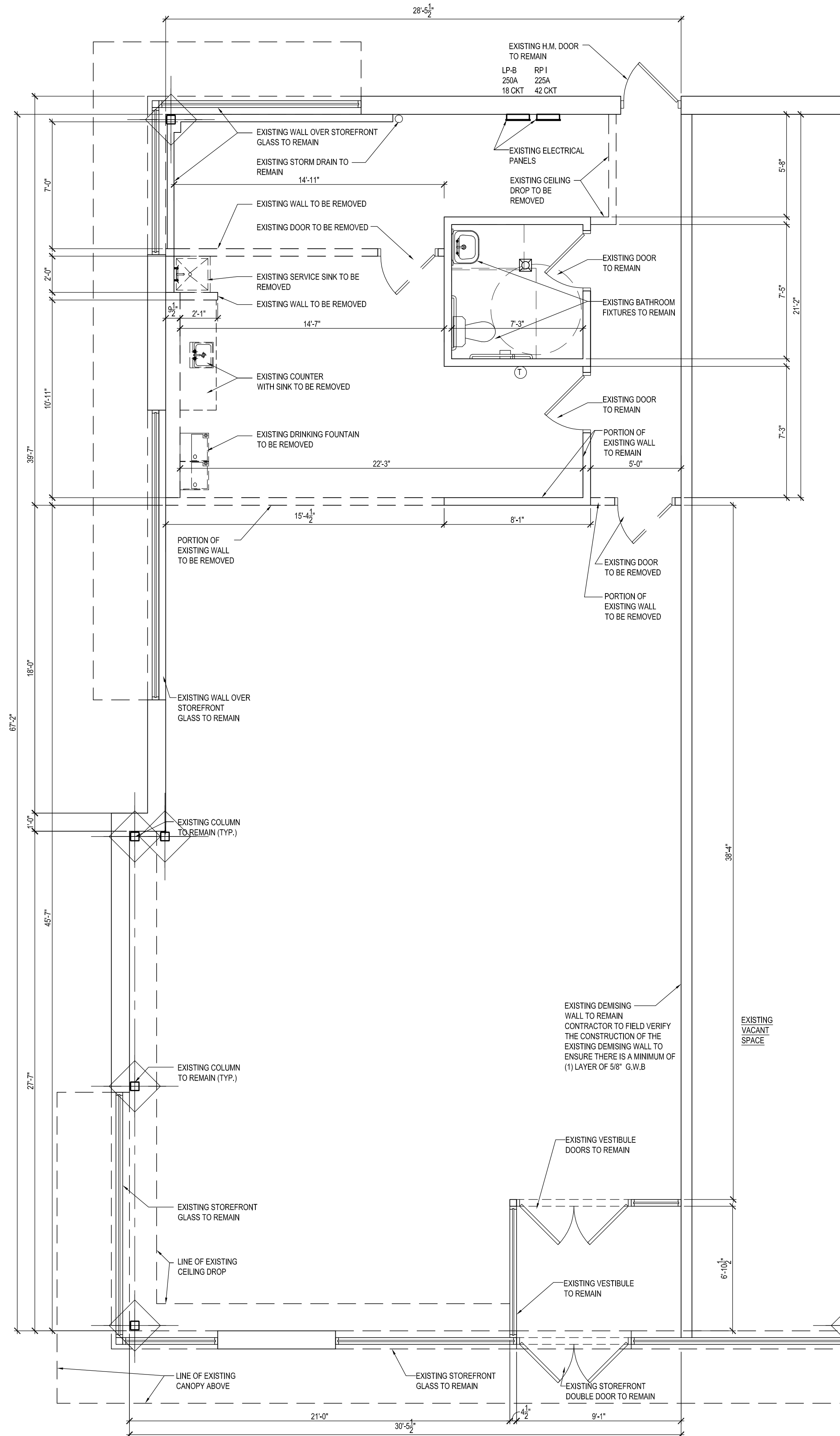


DEMO DOOR LEGEND

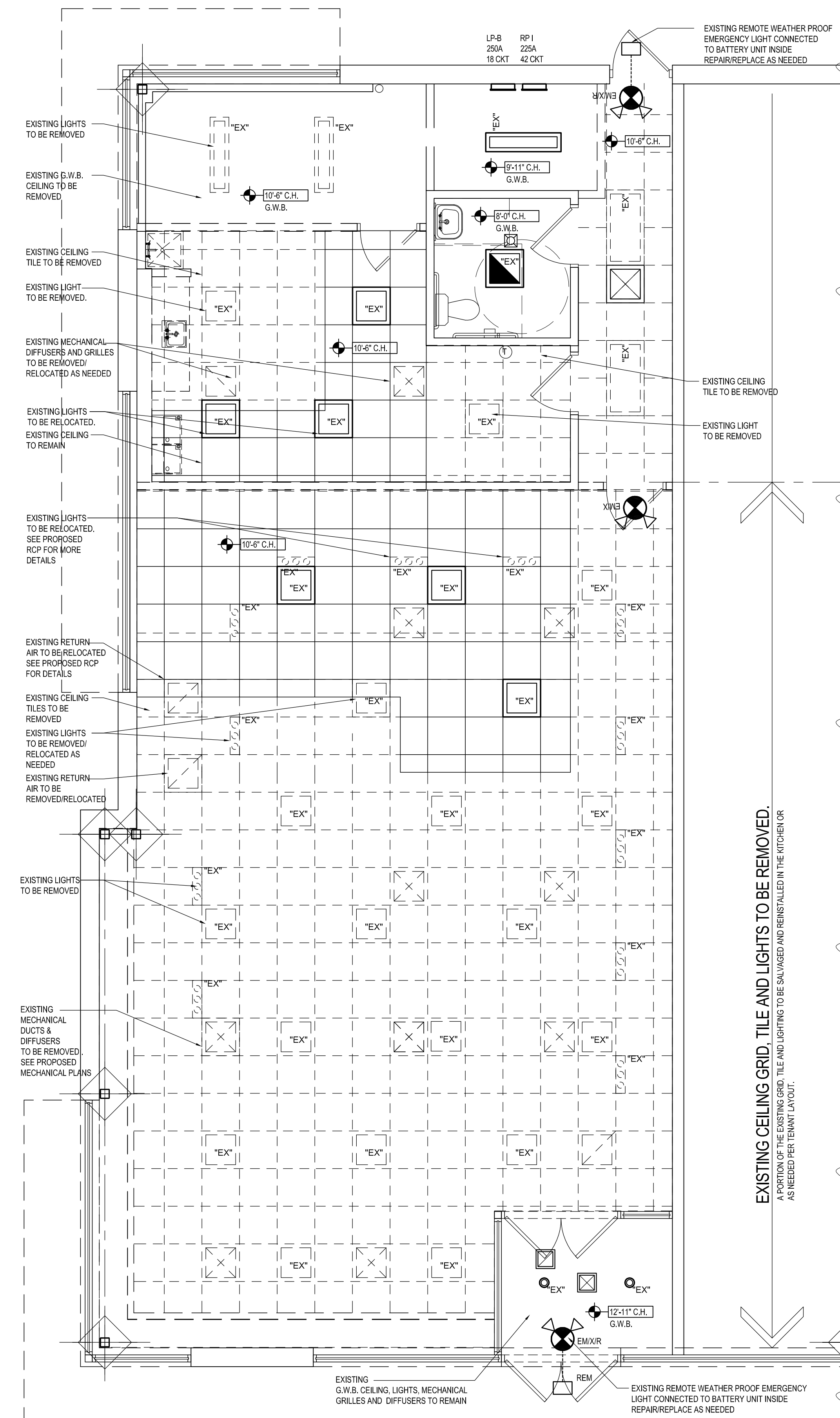


NOTES: GENERAL DEMOLITION

- 1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
2. PROVIDE APPROPRIATE BARRICADES, SIGNAGE, AND OTHER SAFETY PRECAUTIONS...
3. COMPLETELY REMOVE ALL WORK AND RELATED WORK IN AREAS DESIGNATED ON THE PLAN.
4. DISCONNECT, REMOVE, AND CAP ALL EXISTING UTILITIES...
5. RESTORE EXISTING AREAS WHICH ARE DAMAGED DURING CONSTRUCTION...
6. REMOVE ALL DEBRIS FROM THE SITE...
COORDINATE SALVAGEABLE ITEMS WITH THE OWNER.



1 A100 EXISTING / DEMO FLOOR PLAN SCALE: 1/4" = 1'-0"



2 A100 EXISTING / DEMO REFLECTED CEILING PLAN SCALE: 1/4" = 1'-0"

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PROJECT NAME: KOREAN BBQ

PERMIT SUBMISSION 06-28-22

435 E. BIG BEAVER TROY MI 48083



ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATION OF ALL DIMENSIONS.

Table with columns: JOB NO. (22-0987), D.B./C.B. (R.A./P.D), ISSUANCES, NO. DESCRIPTION, DATE. Row 1: 1 PERMIT SUBMISSION 06/28/22

SHEET TITLE EXISTING / DEMO FLOOR PLAN

DWG. NO. A1.0.0

EXISTING CEILING GRID, TILE AND LIGHTS TO BE REMOVED. A PORTION OF THE EXISTING GRID, TILE AND LIGHTS TO BE SALVAGED AND REINсталLED IN THE KITCHEN OR AS NEEDED PER TENANT WANT.

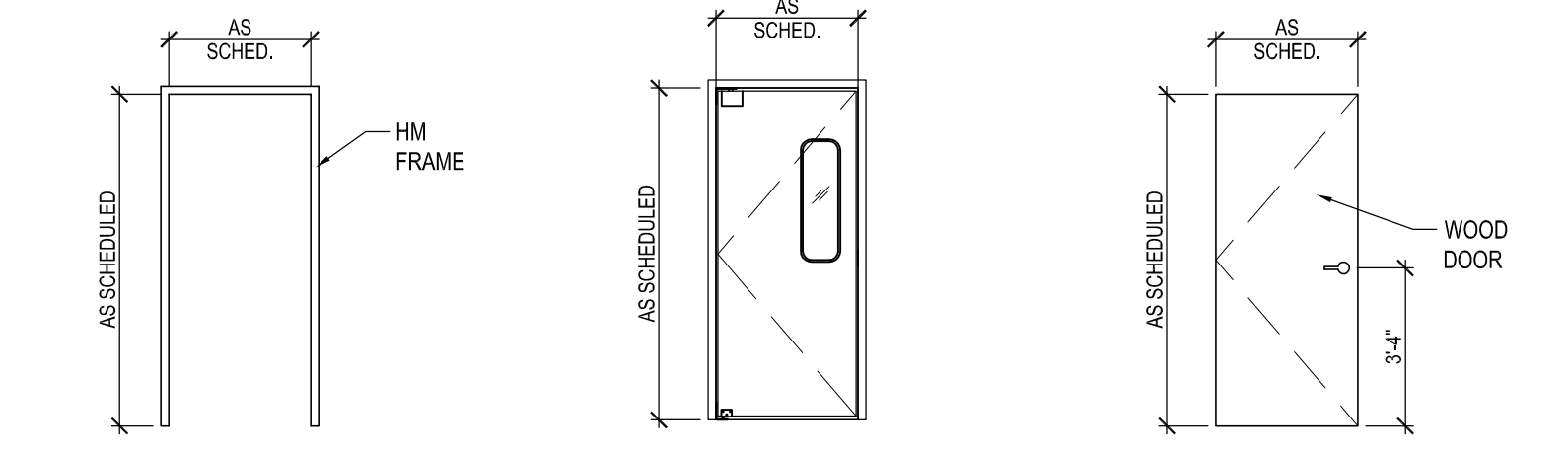
WALL LEGEND				
SYMBOL	DESCRIPTION	ASSEMBLY	DETAIL	REMARKS
P1	PROPOSED INTERIOR WALL	5/8" G.W.B. OVER 3-5/8" METAL STUDS @ 16" O.C. OVER 5/8" G.W.B.		
P2	PROPOSED INTERIOR WALL	5/8" G.W.B. OVER 3-5/8" 20 GA. METAL STUDS @ 16" O.C. W/ 3" SOUND INSULATION OVER 5/8" G.W.B.		
P3	PROPOSED WALL	WALK-IN COOLER / WALK-IN FREEZER WALL BY COOLER CONTRACTOR		

PARTITION CONDITION CODE	
PARTITION TYPE SYMBOL	
P1	PARTITION TYPE - SEE WALL LEGEND
A 1	FIRE RESISTANCE RATING (IN HOURS)
	PARTITION CONDITION CODE - SEE ABOVE

DOOR SCHEDULE									
NO.	SIZE	THICK	MATERIAL	TYPE	FRAME	TYPE	HARDWARE SET	REMARKS	
05	3'-0" x 7'-0"	1-3/4"	ALUMINUM	FLUSH	ELIASON	A	HARDWARE SUPPLIED AS PART OF DOOR PACKAGE		
06	3'-0" x 7'-0"		BY COOLER CONTRACTOR						
11	3'-0" x 7'-0"	1-3/4"	WOOD	FLUSH	H.M.	B	#1		

NOTE:
 1. DOORS & HARDWARE TO COMPLY WITH GENERAL NOTES ON SHEET A101.
 2. ALL DOORS AND HARDWARE TO BE SELECTED & VERIFIED BY THE TENANT & OWNER.
 3. DOOR HARDWARE BASED ON ALLEGION, P.L.C. OR EQUAL.

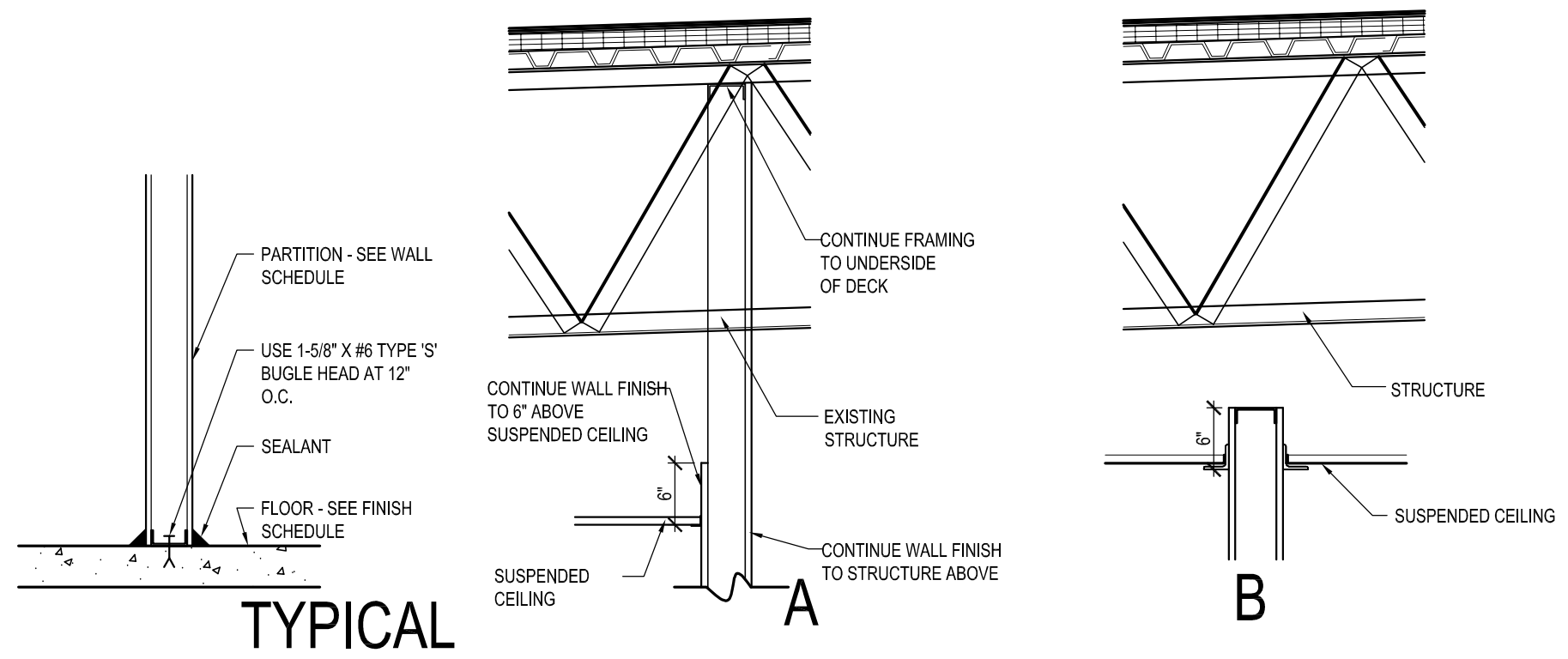
HARDWARE SETS			
HARDWARE SET #1			
3	EA	HINGE	5881 4.5 X 4.5
1	EA	STOREROOM LOCK	TSR1P DANE
1	EA	SURFACE CLOSURE	SC71 RW/PA
1	EA	WALL STOP	WS407CCV
			652 IVE
			626 FAL
			689 FAL
			626 IVE



3 DOOR FRAME ELEVATION TYPE A: ELIASON SCALE: 1/4" = 1'-0"
4 DOOR ELEV. TYPE B: WOOD SCALE: 1/4" = 1'-0"
5 DOOR ELEV. SCALE: 1/4" = 1'-0"

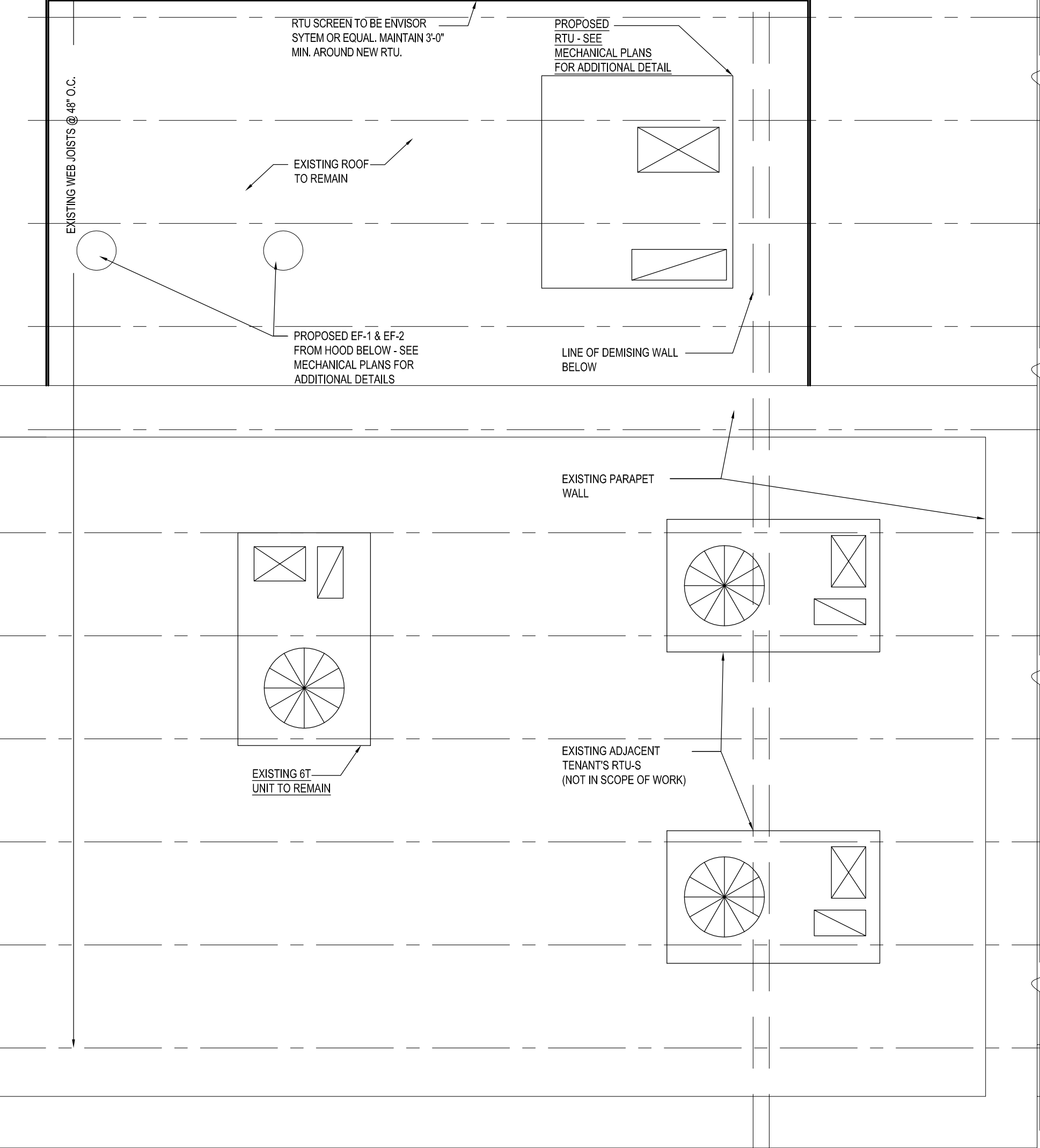
- TYPICAL NOTES:**
- HARDWARE SELECTED BY OWNER
 - ALL INTERIOR FINISH AND TRIM SHALL COMPLY WITH LOCAL ORDINANCES, CURRENT 2015 MICHIGAN BUILDING CODE SECTION, CHAPTER 8
 - CLASS C: FLAME SPREAD 75-200, SMOKE DEVELOPMENT 0-450. CONTRACTOR TO SUBMIT DOCS AS REQUIRED.
- PRIOR TO INSTALLATION OF ANY PROPOSED APPLICABLE INTERIOR WALL AND CEILING FINISHES, PROVIDE TO THE CITY'S FIELD INSPECTOR DOCUMENTATION SHOWING THEIR CLASS, FLAME SPREAD AND SMOKE DEVELOPED INDEXES.
- INSULATION FLAME SPREAD INDEX REQUIREMENTS SHALL BE IN ACCORDANCE WITH ASTM E 84.
 - CONCEALED OR EXPOSED INSTALLATION SHALL HAVE RATING OF NOT MORE THAN 25. INSULATION BETWEEN 2 LAYERS OF NONCOMBUSTIBLE MATERIALS W/O INTERVENING AIRSPACE SHALL BE ALLOWED TO HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 100.
 - SMOKE DEVELOPMENT INDEX RATING OF NOT MORE THAN 450.
 - ALL INSULATION TO BE PROPERLY LABELED
 - CONTRACTOR TO PROVIDE FIRE EXTINGUISHER ON JOB AS REQUIRED BY BUILDING INSPECTOR.
 - PROVIDE MIN. (2) 5# ABC EXTINGUISHERS IN ACCORDANCE WITH NFPA 10 IN EACH TENANT SPACE. LOCATION TO BE VERIFIED WITH BUILDING INSPECTOR.
 - PROVIDE INTERNATIONAL SYMBOL FOR HANDICAPPED SIGNS FOR DIRECTION ON RESTROOM ACCESSIBILITY.
 - ALL GLAZING IN HAZARDOUS AREA SHALL BE SAFETY GLASS AND COMPLY WITH CURRENT M.D.C. SEC 206.2 LABELS AND GLASS COMP. WITH CPSC 16CFR PART 1201.

- GENERAL NOTES:**
- DOOR HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATIONS TO BE AT 48" A.F.F. MAX. AND 34" A.F.F. MIN.
 - DOORS TO HAZARDOUS AREAS TO HAVE HARDWARE W/ ROUGH FINISH
 - ALL EXIT DOORS TO HAVE PANIC DEVICE CLOSERS AND SHALL NOT LOCK AGAINST EGRESS OR OTHER HARDWARE COMPLYING W/ SEC. 008.1.8.
 - LOCKING DEVICES TO BE ACTIVATED BY NO MORE THAN ONE-HALF TURN, ACTIVATED BY LEVER TYPE.
 - ALL DOOR HANDLES TO BE LEVER TYPE.
 - ALL VERTICAL CHANGES IN FLOOR ELEVATION, INCLUDING DOOR THRESHOLDS, SHALL BE LIMITED TO 1/4" UNLESS A 1 TO 2 RISE-TO-RUN RATIO PROVIDED IN THE TRANSITION BETWEEN ELEVATIONS IN WHICH A 1/2" MAX. DIFFERENCE IS ALLOWED. SAID CHANGES IN ELEVATION SHALL COMPLY WITH ICC/ANSI A117.1-2003.
 - ALL MILLWORK/CASEWORK COUNTERTOPS HAVE A MAXIMUM 3/4" HEIGHT A.F.F. UNLESS NOTED OTHERWISE.

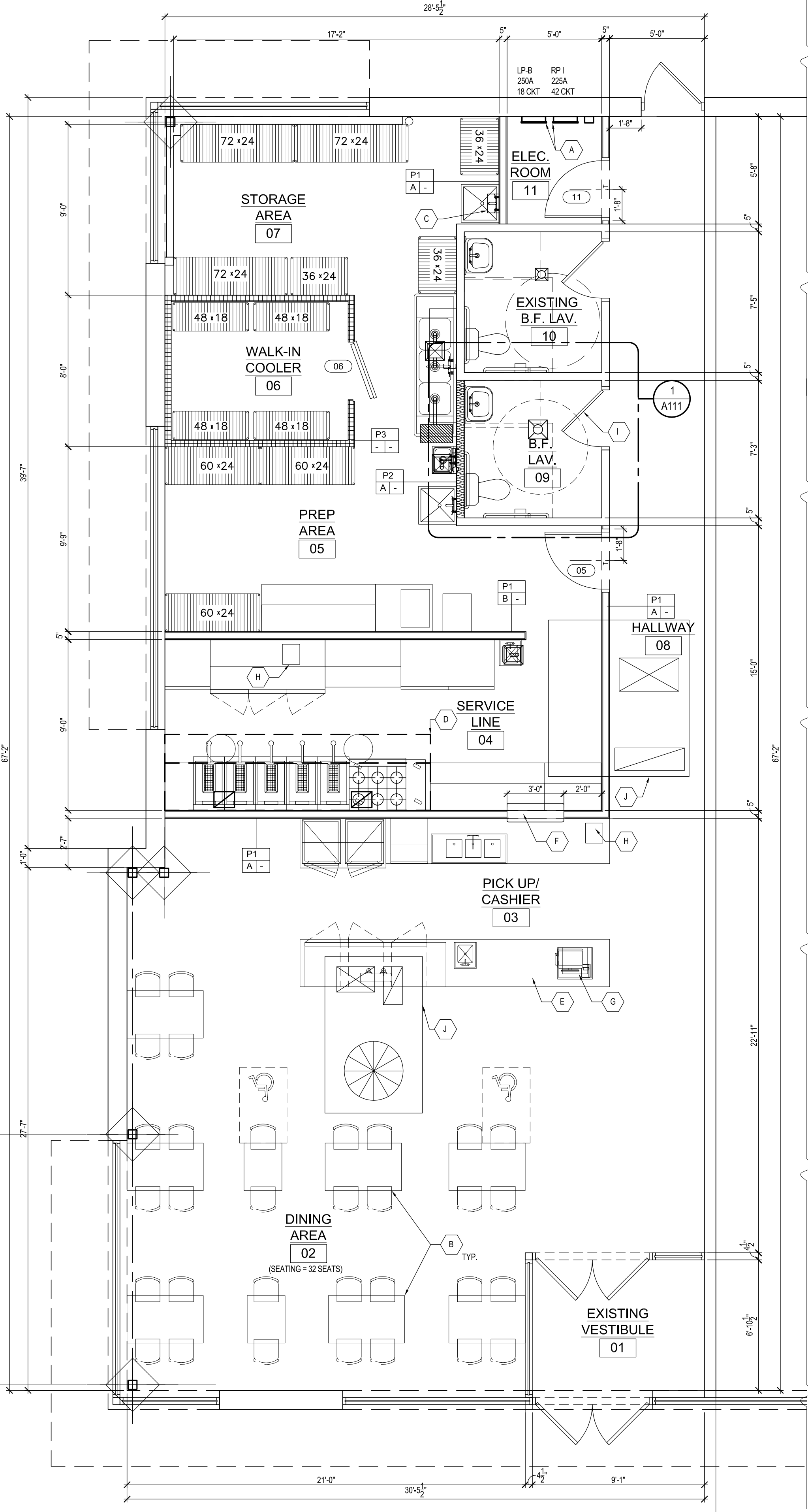


2 PARTITION CONDITION DETAILS SCALE: 3/4" = 1'-0"

- FLOOR PLAN KEYED NOTES:**
- A EXISTING ELECTRICAL PANELS. SEE ELECTRICAL DRAWING FOR DETAILS.
 - B DINING SEATING BY OWNER/TENANT.
 - C WATER HEATER ABOVE. SEE PLUMBING DRAWINGS.
 - D KITCHEN HOOD. SEE EQUIPMENT & VENTILATION DRAWINGS.
 - E MILLWORK BY OWNER/TENANT. PROVIDE A MIN. 3'-0" W X 12' D B.F. COUNTER @ 34" A.F.F.
 - F 36" W X 12" H PASS THROUGH OPENING.
 - G REGISTER BY OWNER/TENANT.
 - H PRINTER BY OWNER/TENANT.
 - I PROVIDE PRIVACY LOCK AND SELF-CLOSURE FOR EXISTING DOOR.
 - J EXISTING RTU TO REMAIN.
 - K PROPOSED RTU - SEE MECHANICAL PLANS FOR MORE INFORMATION.



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



1 PROPOSED FLOOR PLAN SCALE: 1/4" = 1'-0"

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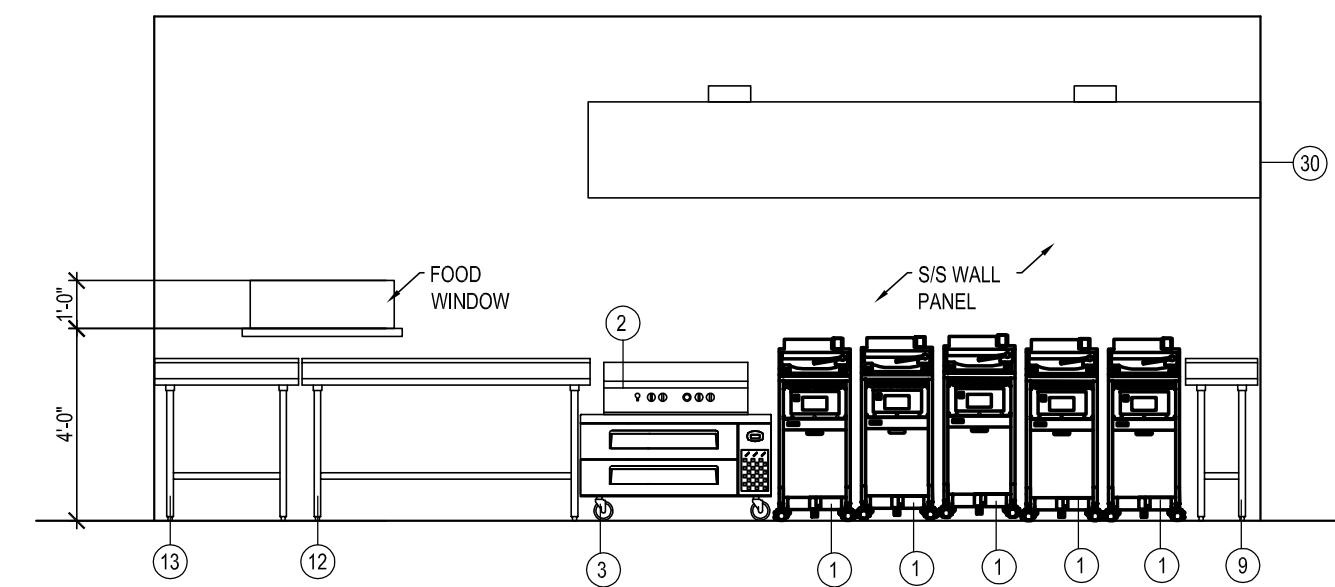
JOB NO.	22-0987
D.B./C.B.	R.A./P.D.
ISSUANCES	
NO DESCRIPTION	DATE
1 PERMIT SUBMISSION	06/28/22

SHEET TITLE
 PROPOSED
 FLOOR PLAN

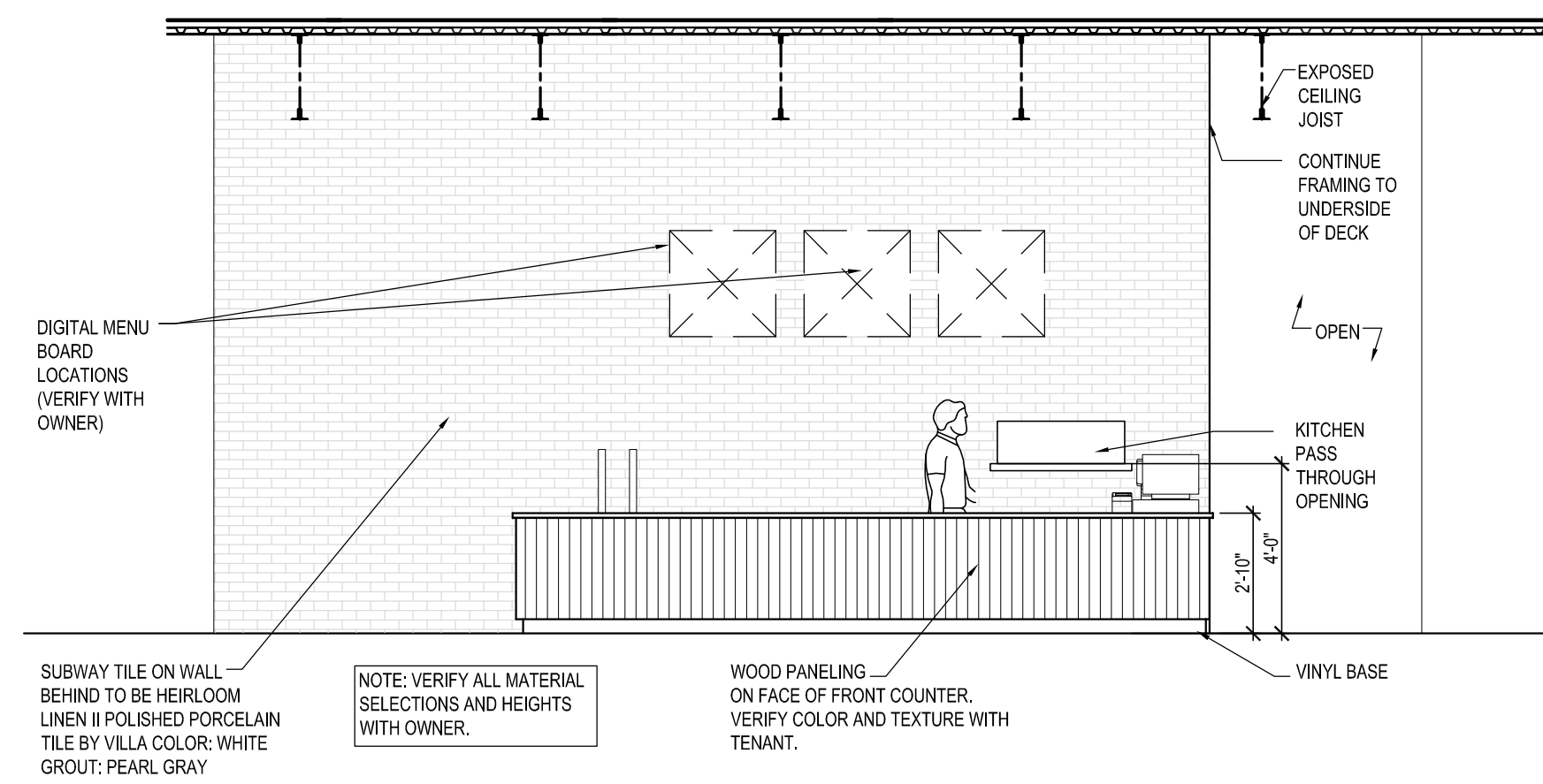
DWG. NO.
A1.0.1

NO	ITEM NAME	MODEL	SIZE (W x D x H)	MANUFACTURER	BTU	QT	VOLTAGE	LOAD	PLUG
1	75LB FRYER	SG-18s	19.7 x 34.5 x 46.2	PITCO	140,000	5			
2	6 BURNER	ATHP-36-6	36.0 x 27.6 x 13.1	ATOSA	150,000	1			
3	48" CHEFBASE	ECB48D2	48.375 x 32.125 x 20	EVEREST		1	115V/ 60 HZ/ 1-PH	3.5 AMP	NEMA 5-15P
4	72" MEGA TOP	EPBR3	71.125 x 35.25 x 38.5	EVEREST		1	115V/ 60 HZ/ 1-PH	3 AMP	NEMA 5-15P
5	1 DOOR REACH IN FREEZER	ESF1	29.25 x 31.625 x 74.25	EVEREST		1	115V/ 60 HZ/ 1-PH	5 AMP	NEMA 5-15P
6	2 DOOR REACH IN FREEZER (60")	ESWF2	59.0 x 31.625 x 74.25	EVEREST		1	115V/ 60 HZ/ 1-PH	7.5 AMP	NEMA 5-20P
7	90" KEG COOLER	EBD4	89.25 x 27.0 x 37.25	EVEREST		1			
8	2 DOOR BEER 53"	EMGR48B	53.125 x 30.75 x 80.125	EVEREST		1	115V/ 60 HZ/ 1-PH	6 AMP	NEMA 5-15P
9	18 X 30" S/S WORK TABLE		18 x 30 x 34			1			
10	36 X 30" S/S EQUIPMENT STAND		36 x 30 x 26			1			
11	48 X 30" S/S WORK TABLE		48 x 30 x 34			1			
12	72 X 30" S/S WORK TABLE		72 x 30 x 34			1			
13	36 X 30" S/S WORK TABLE		36 x 30 x 34			1			
14	3 COMBINE SINK	TSA-3-12-D1	90 x 24 x 44.5	Turbo Air		1			
15	HAND SINK	HS-1615S	15.75 x 15.25 x 13.375	GSW USA		2			
16	1 PREP SINK	TSB-1-N	24 x 24	Turbo Air		1			
17	MOP SINK	TSA-1	18 x 18	Turbo Air		1			
18	BAR 3 SINK		48 x 18.75	Regency		1			
19	BAR HAND SINK					1			
20	ICE MAKER-L	UC-280-FA	26 x 27 x 39	Avantco		1	115V/ 60 HZ/ 1-PH	8.6 AMP	NEMA 5-15P
21	24 X 60" EPOXY WIRE SHELVES					3			
22	24 X 72" EPOXY WIRE SHELVES					5			
23	18 X 48" EPOXY WIRE SHELVES					4			
24	72" DOUBLE OVER SHELVES					3			
25	48" DOUBLE OVER SHELVES					1			
26	36" DOUBLE OVER SHELVES					1			
27	72" Wire Wall Shelves					1			
28	Vacuum Tumbler	VTS 42		Biro		1	115V/ 60 HZ/ 1-PH	DRIVE 0.61 AMP PUMP 4.20 AMP	3-PRONG PLUG
29	Oil Filter	PF80		Frymaster		1	120V/ 60HZ/ 1-PH	6.2 AMP	
30	COOKLINE HOOD LIGHTING	SEE VENTILATION		CAPTIVEARE CUSTOM		1	120V/ 60HZ/ 1-PH/		
30A	EXHAUST	SEE VENTILATION		CAPTIVEARE CUSTOM		2	120V/ 60HZ/ 1-PH/	8.9 FLA	
30B	MUA	SEE VENTILATION		CAPTIVEARE CUSTOM		1	208V/ 3-PH/ 3-W/	63.4 MCA	(DIRECT CONN.)
31	WALK-IN COOLER	SEE MANUF. DWG.		AMERIKOOLER		1	208V 1-HP		

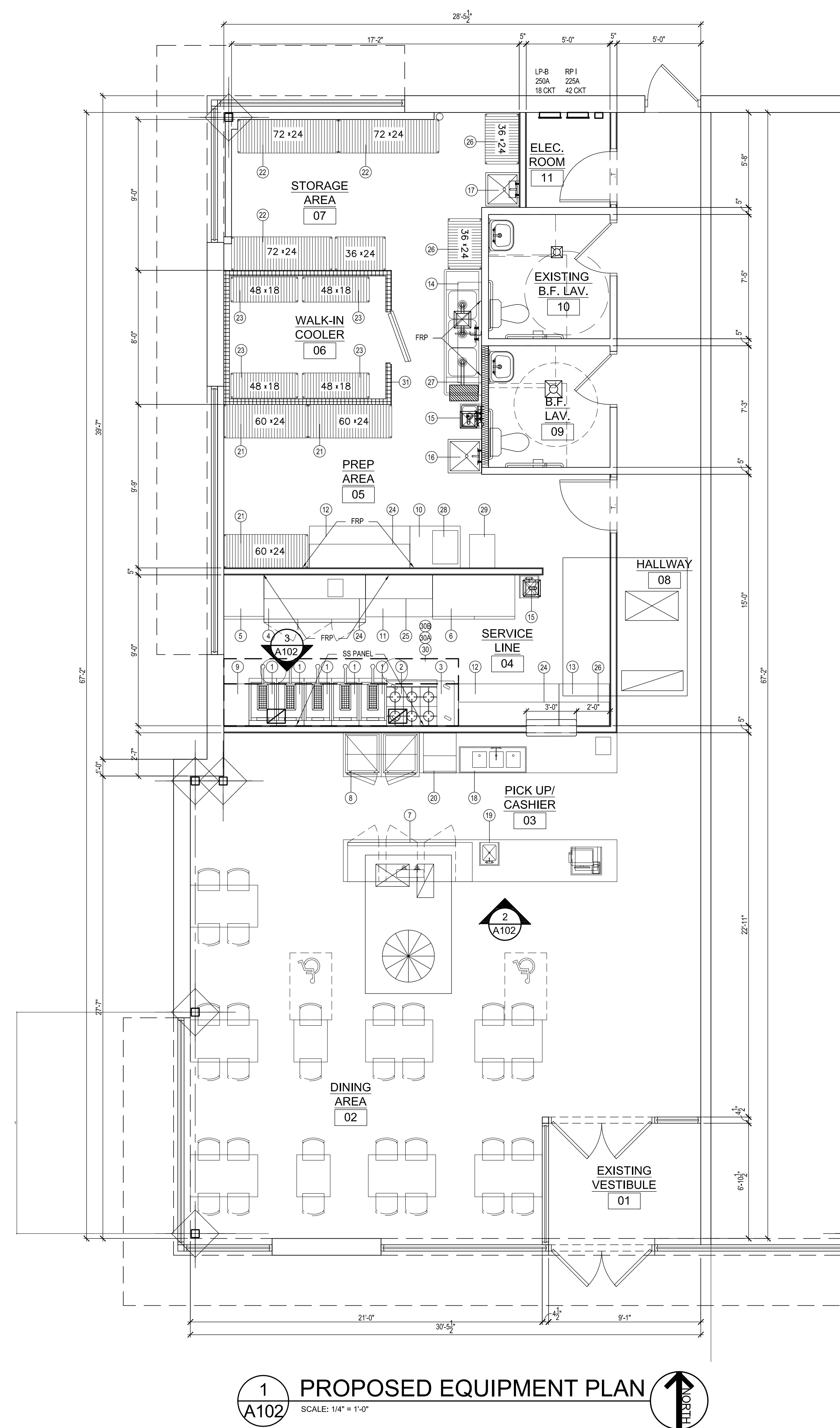
NOTE:
VERIFY ALL EQUIPMENT AND EQUIPMENT REQUIREMENTS WITH TENANT/OWNER. CONTRACTOR TO FIELD VERIFY ALL WORK AND NOTIFY THE OWNER, ARCHITECT AND FOOD SERVICE SUPPLIER OF ANY DISCREPANCIES IN THE DOCUMENTS, SPECIFICATION SHEETS AS WELL AS ANY UNSEEN OR CHANGED FIELD CONDITIONS. FOOD SERVICE EQUIPMENT SUPPLIER TO VERIFY THAT SIZES INDICATED ON THE DRAWING AND SITE CONDITIONS MEET THE CRITERIA OF ITEMS SPECIFIED.



3 EQUIPMENT ELEVATION
SCALE: 1/4" = 1'-0"



2 COUNTER ELEVATION
SCALE: 1/4" = 1'-0"



1 PROPOSED EQUIPMENT PLAN
SCALE: 1/4" = 1'-0"

PROJECT NAME:
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PERMIT SUBMISSION
06-28-22

435 E. BIG BEAVER
TROY MI 48083



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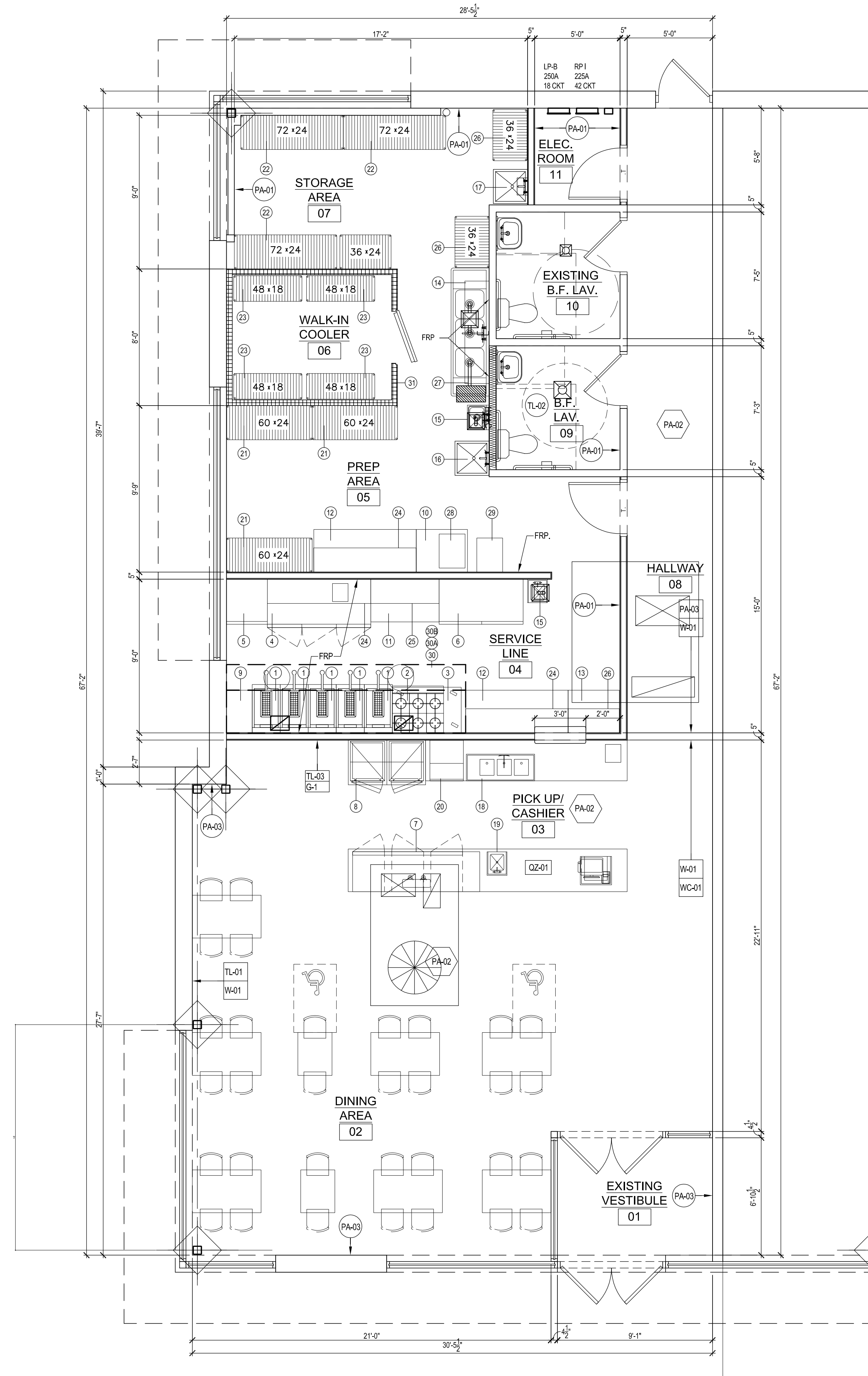
JOB NO.	22-0987
D.B./C.B.	R.A./P.D.
ISSUANCES	
NO DESCRIPTION	DATE
1 PERMIT SUBMISSION	06/28/22

SHEET TITLE
PROPOSED
EQUIPMENT PLAN

DWG. NO.
A1.0.2

FINISH SCHEDULE						
CODE	MATERIAL	MANUFACTURER	STYLE	NUMBER	COLOR	COMMENTS
PA-01	PAINT	BENJAMIN MOORE	SCRUBBABLE EGGSHELL	2143-70	SIMPLY WHITE	WALLS
PA-02	PAINT	BENJAMIN MOORE	SCRUBBABLE FLAT	1615	ROCK GRAY	CEILING
PA-03	PAINT	MEODED	GOLMEX PLASTER	-	CONCRETE LOOK	
TL-01	BRICK TILE	BRICK IT	NEW YORK USED	-	NEW YORK USED	2-1/4"H x 7-5/8"L x 3/4" THICK
TL-02	CERAMIC TILE	FLOOR & DECOR	CORTA GRAY CERAMIC TILE	-	GRAY	15" x 30", MATTE FINISH, GROUT & MORTAR INSTALLATION TYPE
TL-03	TILE	FLOOR & DECOR	HEIRLOOM LINEN II POLISHED PORCELAIN TILE	-	WHITE	3" x 9", HIGH GLOSS FINISH, GROUT & MORTAR INSTALLATION TYPE
G-1	GROUT	FLOOR & DECOR	19 PEARL GRAY KERACOLOR SANDED GROUT	-	PEARL GRAY	
QZ-01	QUARTZ	URBAN COUNTERTOP	METEOR SHOWER	-	BLACK	
W-01	WAINSCOT	CUSTOM	-	-	-	WAINSCOT UP TO 42" A.F.F.
WC-01	WALL COVERING	CUSTOM	WALL GRAPHIC	-	-	

NOTE: COORDINATE WITH INSTALLER AS REQUIRED. VERIFY ALL MATERIALS WITH THE OWNER.



1 PROPOSED FINISH FLOOR PLAN
 A103 SCALE: 1/4" = 1'-0" NORTH

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JOB NO.	22-0987
D.B./C.B.	R.A./P.D.
ISSUANCES	
NO DESCRIPTION	DATE
1 PERMIT SUBMISSION	06/28/22

SHEET TITLE
 PROPOSED
 FINISH FLOOR
 PLAN

DWG. NO.
A1.0.3



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JOB NO. 22-0987

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ISSUANCES

NO	DESCRIPTION	DATE
1	PERMIT SUBMISSION	06/28/22

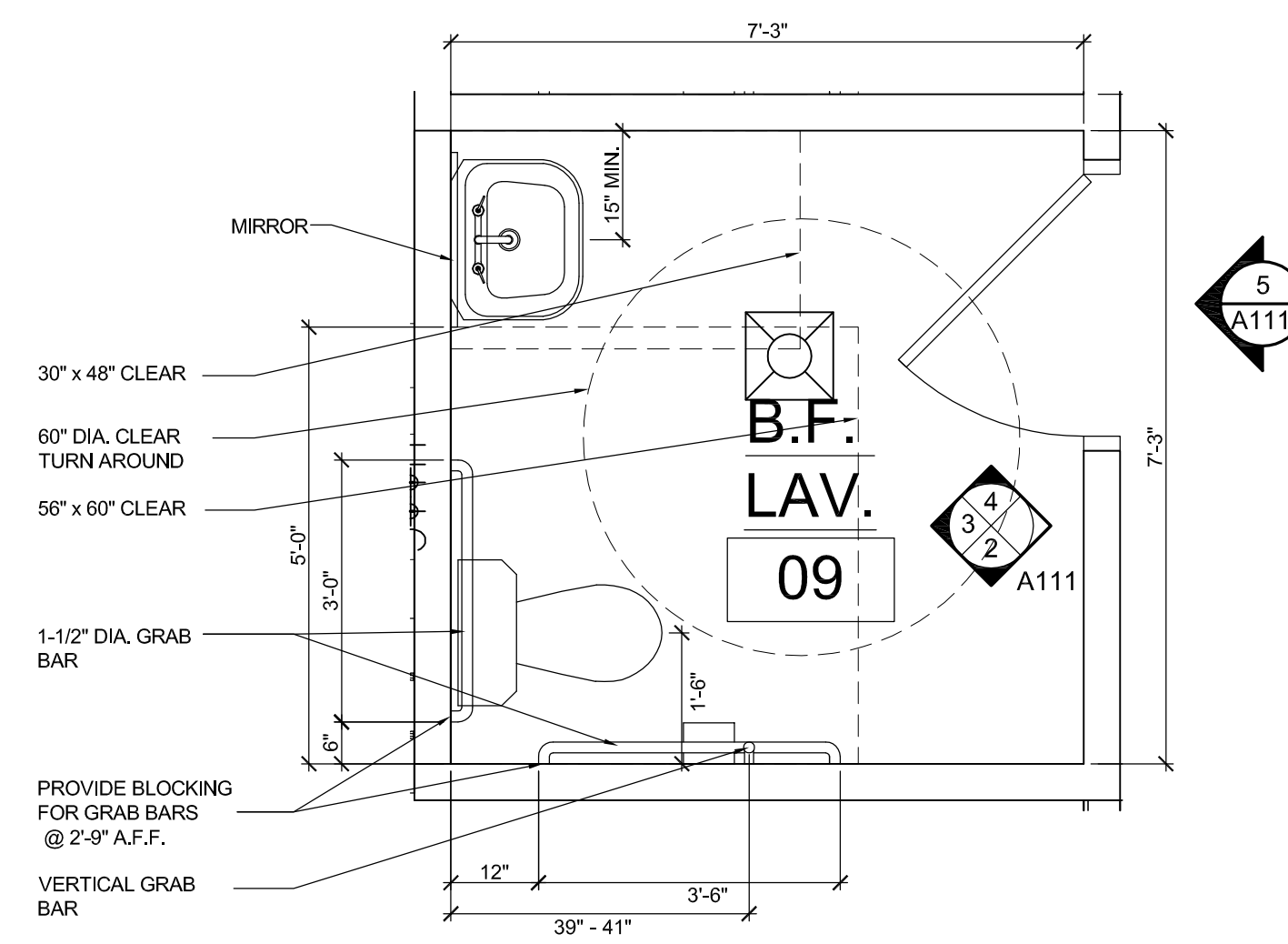
SHEET TITLE
BATHROOM
DETAILS

DWG. NO.

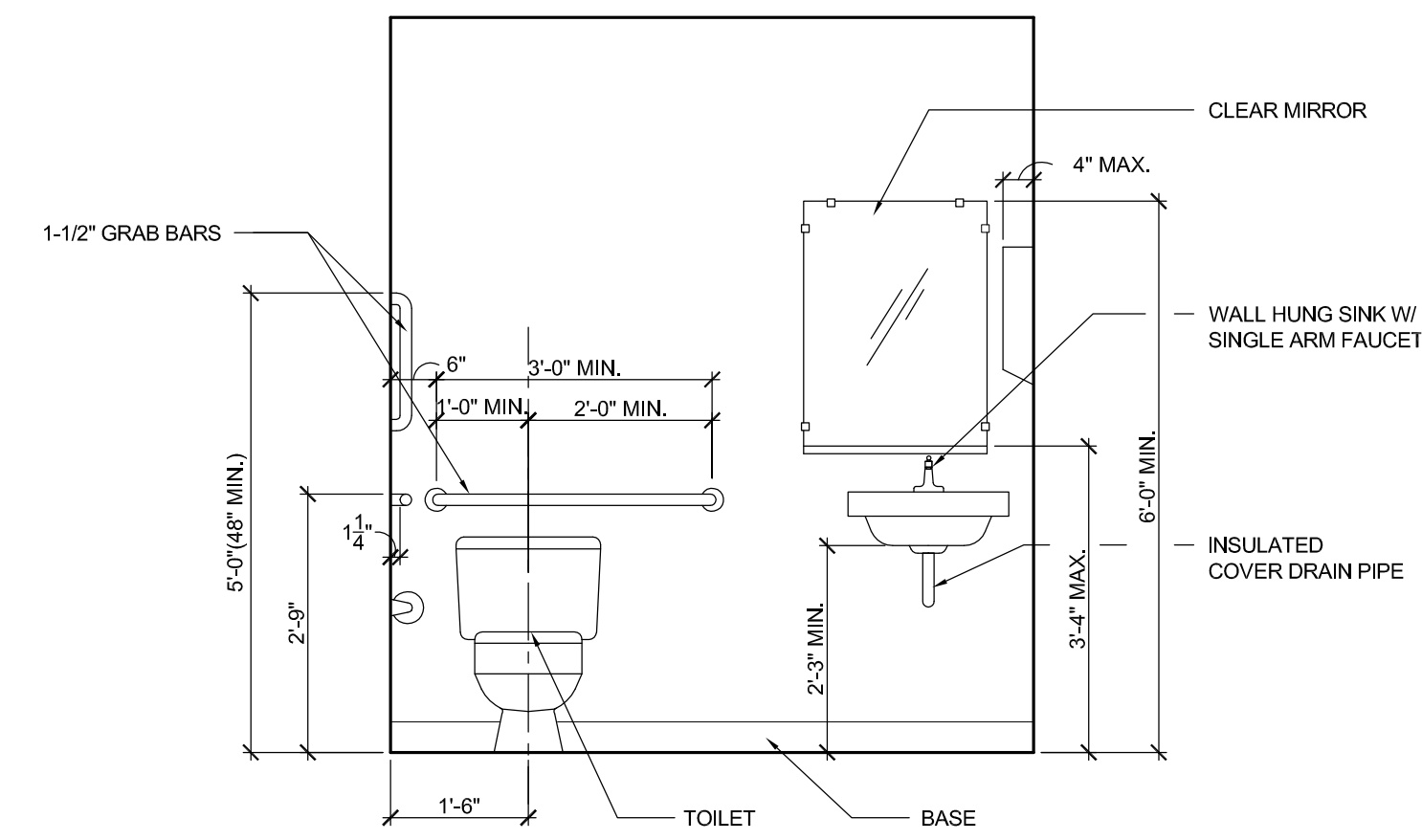
A1.1.1

BARRIER FREE DESIGN NOTES FOR LAVS:

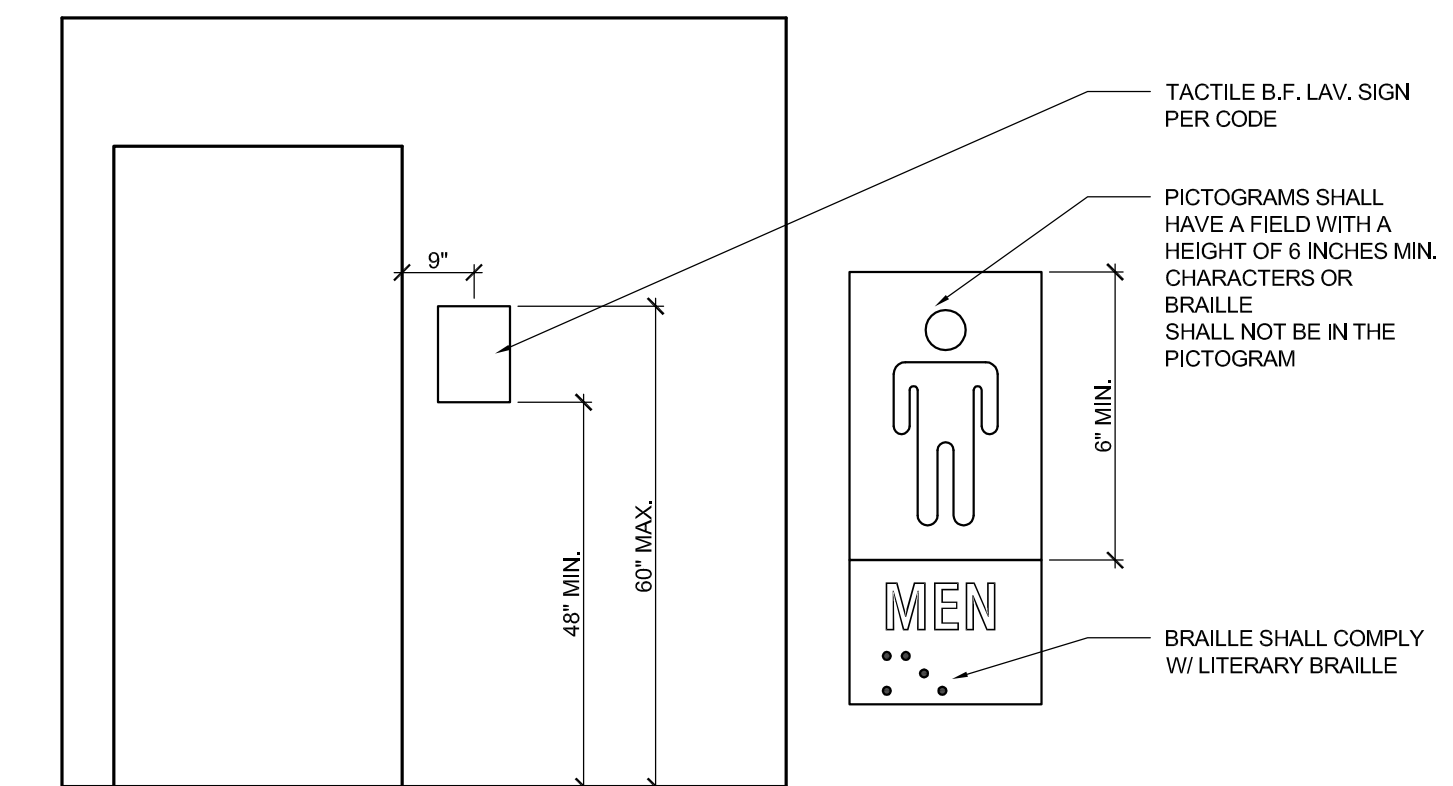
1. REQUIRED ACCESSIBLE TOILET FACILITIES SHALL COMPLY WITH THE CHAPTER 11 OF MICHIGAN BUILDING CODE - 2015, ICC / ANSI A117.1-2015 AND MICHIGAN PLUMBING CODE.
2. PROVIDE TOILET ROOM ACCESS FOR MEN AND WOMEN WOMEN BARRIER FREE WITH A 5' X 5' CLEAR FLOOR SPACE AND 32" MINIMUM CLEAR DOOR OPENING.
3. WATER CLOSET MUST BE LOCATED 18" TO THE CENTERLINE FROM THE ADJACENT WALL. THE SEAT MUST BE 17" ABOVE FINISH FLOOR AND FLUSH CONTROLS NOT HIGHER THAN 36" A.F.F.
4. LAVATORIES SHALL PROJECT A MINIMUM OF 17" FROM THE WALL WITH THE BOTTOM EDGE NOT LESS THAN 29" ABOVE THE FLOOR AND WITH A FRONT OPENING NOT LESS THAN 30" WIDE. MAXIMUM WATER TEMPERATURE OUTLETS NOT TO EXCEED 120 DEGREES FAHRENHEIT. FAUCETS SHALL BE LEVER OR PUSH-BUTTON TYPE. EXPOSED HOT WATER & DRAIN LINES TO BE INSULATED.
5. TOILET ROOM ACCESSORIES SHALL BE MOUNTED WITH THE CONTROLS NO MORE THAN 40" ABOVE THE FLOOR. MIRRORS SHALL BE INSTALLED NO MORE THAN 36" ABOVE THE FLOOR. ACCESSORIES SHALL NOT BE LOCATED WITHIN 24" OF A CORNER.
6. TOILET PAPER DISPENSER SHALL BE MOUNTED 18" - 48" A.F.F. IF MOUNTED ABOVE GRAB BARS. LOCATE 24"-36" FROM REAR WALL. IF MOUNTED BELOW GRAB BAR, LOCATE 24"-42" FROM REAR WALL.
7. PROVIDE SIGNS SHOWING INDICATION OF GENDER AND THE INTERNATIONAL SYMBOL FOR THE HANDICAPPED ON THE EXTERIOR OF THE DOORS; INSTALL ADJACENT TO THE LATCH SIDE OF THE DOOR.
8. HORIZONTAL GRAB BARS ARE TO BE POSITIONED 33" TO 36" MAXIMUM ABOVE THE FINISH FLOOR AND SHALL BE 42" LONG ON THE NEAREST SIDE WALL, 12" FROM THE REAR WALL AND A MINIMUM 36" GRAB BAR ON THE REAR WALL, 6" FROM THE SIDE WALL. VERTICAL GRAB BARS SHALL BE 18" MIN. IN LENGTH AND SHALL BE MOUNTED WITH THE BOTTOM OF THE BAR LOCATED BETWEEN 39" AND 41" ABOVE THE FLOOR AND WITH THE CENTERLINE OF THE BAR LOCATED BETWEEN 39"-41" FROM THE REAR WALL.



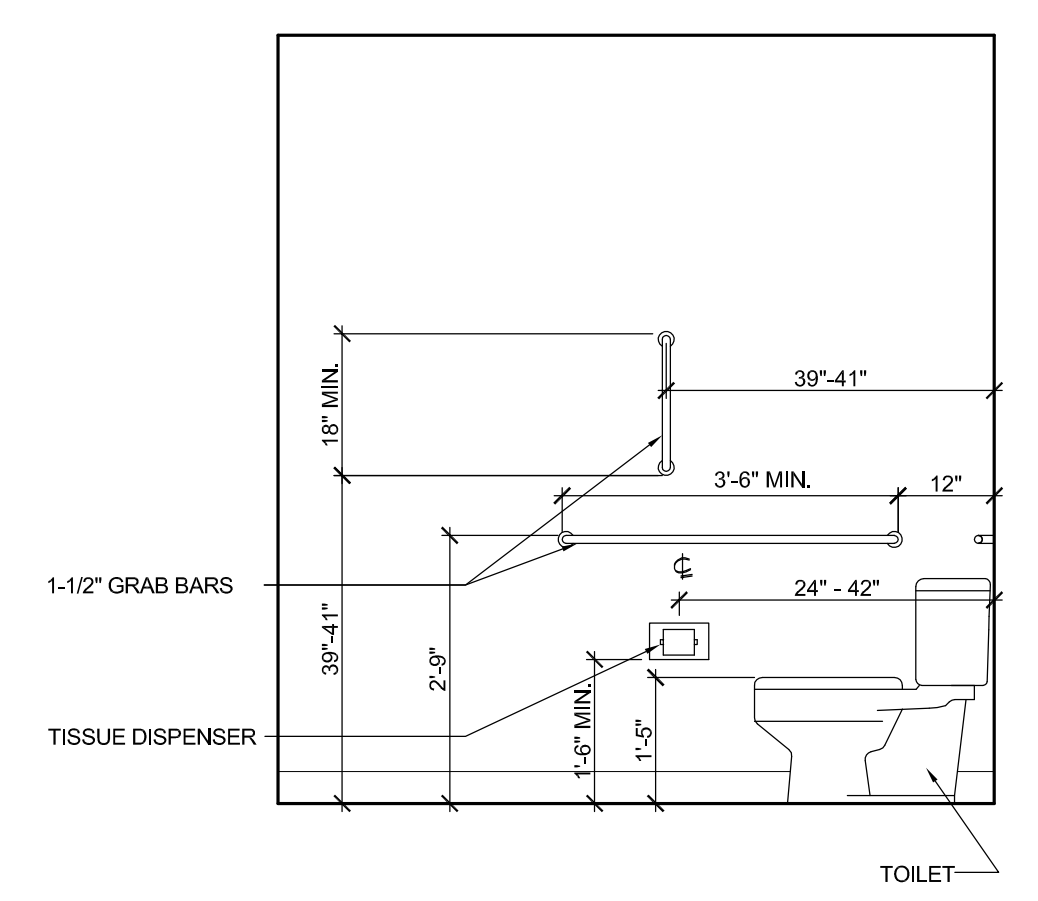
1 B.F. LAV. PLAN
SCALE: 1/2" = 1'-0"
NORTH



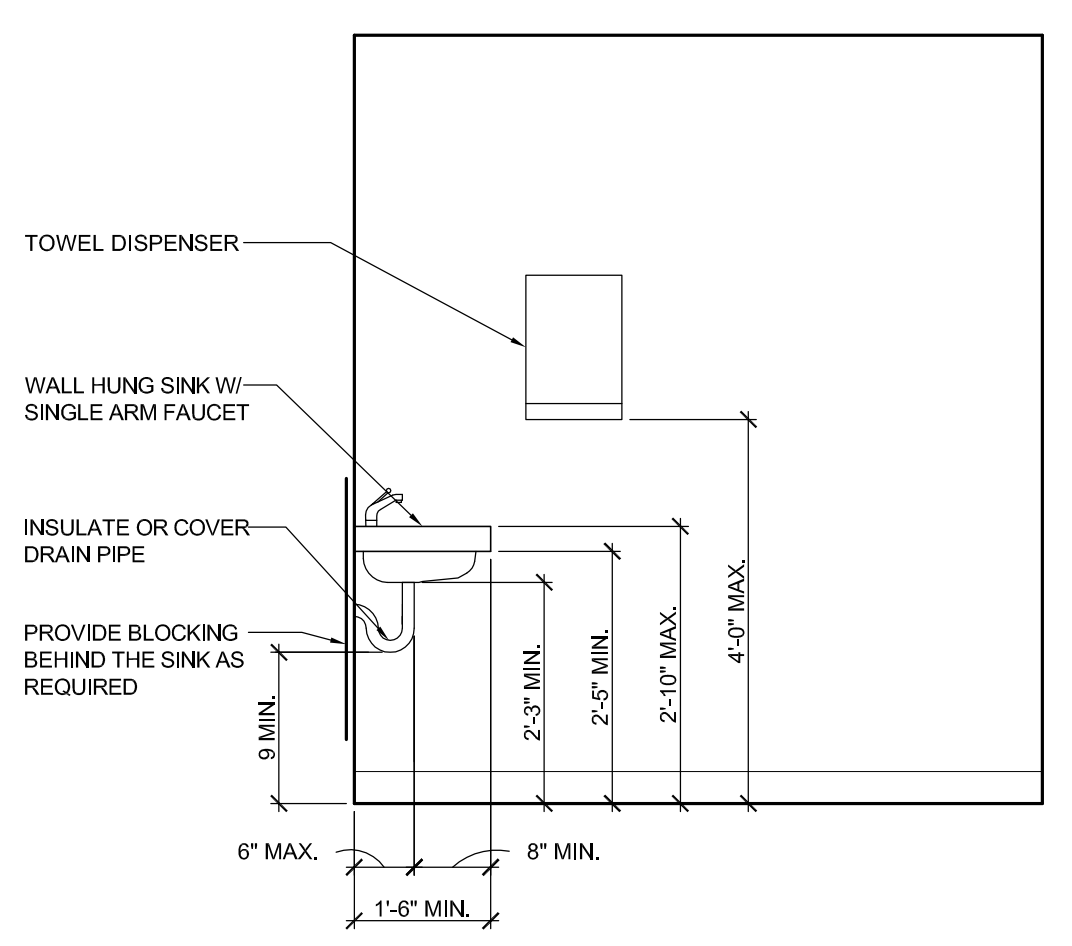
3 B.F. LAV. ELEVATION
SCALE: 1/2" = 1'-0"



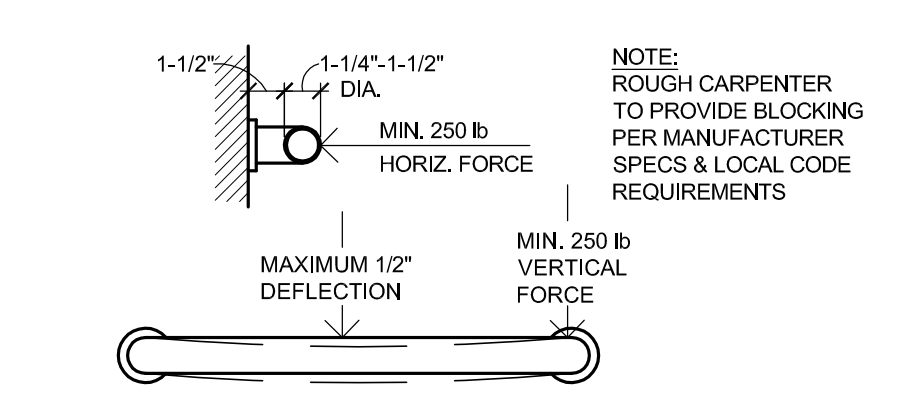
5 B.F. LAV. ELEVATION
SCALE: 1/2" = 1'-0"



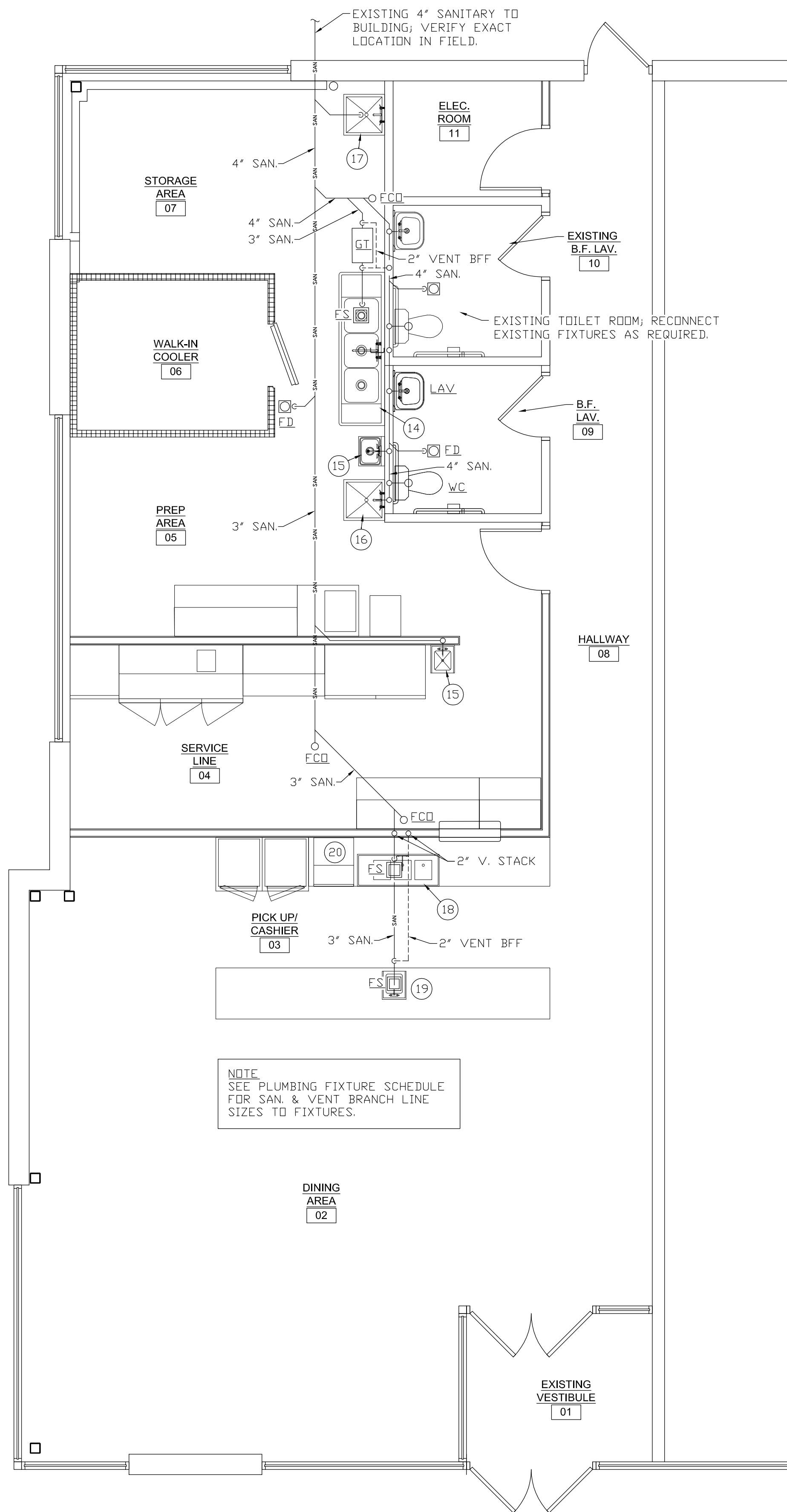
2 B.F. LAV. ELEVATION
SCALE: 1/2" = 1'-0"



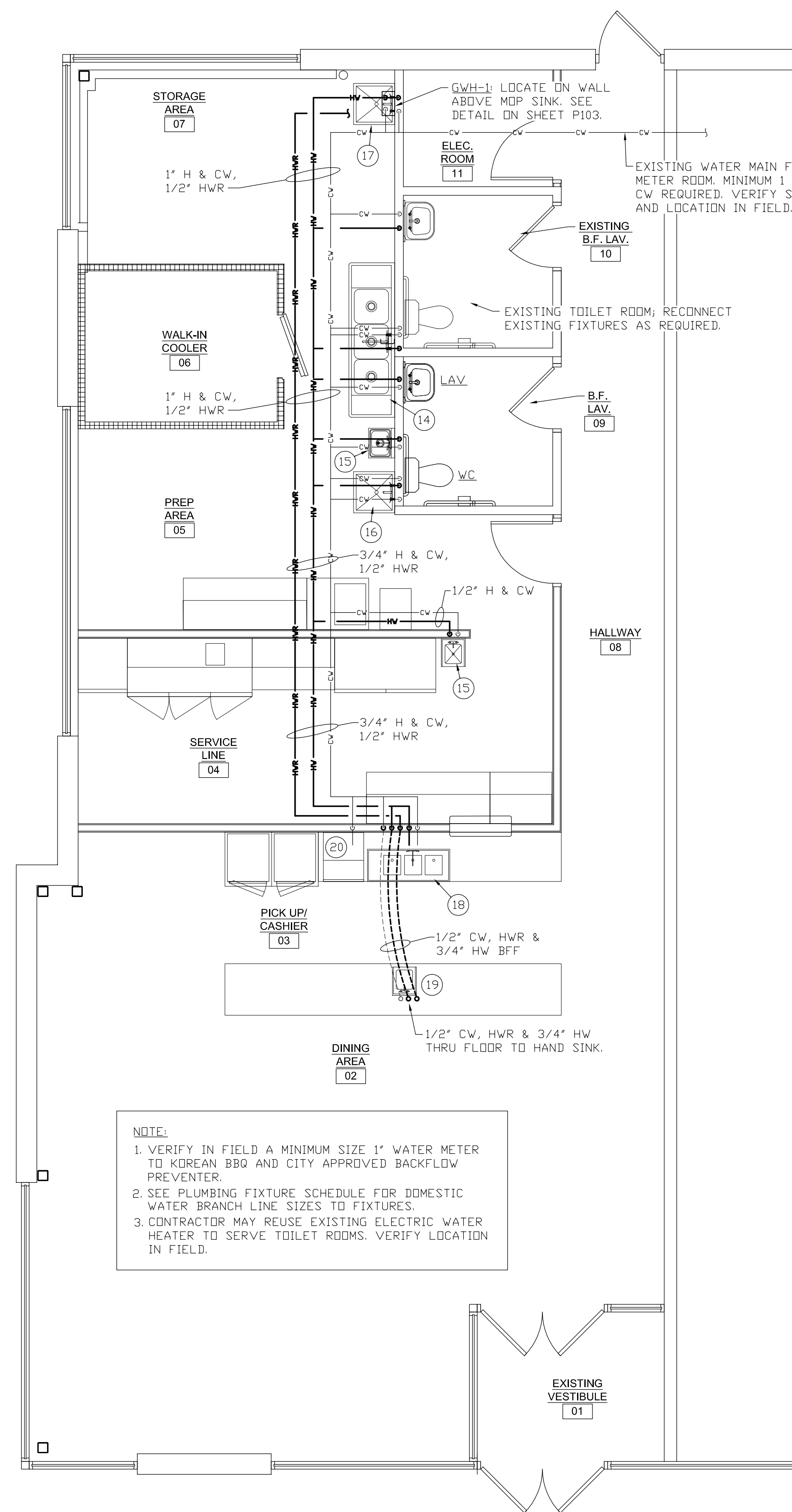
4 B.F. LAV. ELEVATION
SCALE: 1/2" = 1'-0"



6 GRAB BAR DETAILS
SCALE: 1 1/2" = 1'-0"



1
P101
SANITARY SEWER PLAN
SCALE: 1/4" = 1'-0"



2
P101
DOMESTIC WATER PLAN
SCALE: 1/4" = 1'-0"

PLUMBING ABBREVIATION LIST

AC UNIT	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AMPS	AMPERES
APPROX	APPROXIMATE
BFF	BELOW FINISHED FLOOR
BTU/HR	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CO	CLEAN OUT
CWV	COMBINATION WASTE & VENT
COMP	COMPRESSOR
COND	CONDENSATE
CONTR	CONTRACTOR
CW	DOMESTIC COLD WATER
DB	DRY BULB
DN	DOWN
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
F	FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FP	FIRE PROTECTION
FS	FLOOR SINK
FT	FEET
G	GAS
GW	GREASE WASTE
GD	GUTTER DRAIN
GPM	GALLONS PER MINUTE
GUH	GAS UNIT HEATER
HB	HOSE BIBB
HP	HORSEPOWER
HW	HOT WATER
HWR	HOT WATER RETURN
HZ	HERTZ
IE	INVERT ELEVATION
IN	INCHES
KW	KILOWATTS
MANUF	MANUFACTURER
MAX	MAXIMUM
LAV	LAVATORY
MEZZ	MEZZANINE
MIN	MINIMUM
PE	POWER EXHAUSTER
PNL	PANEL
PRV	PRESSURE RELIEF VALVE
PSIG	POUNDS PER SQUARE INCH - GAUGE
PVB	PRESSURE VACUUM BREAKER
RA	RETURN AIR
RF	RETURN AIR FAN
RLA	RATED LOAD AMPERES
SAN	SANITARY
TYP	TYPICAL
UR	URINAL
V	VOLTS
V	VENT
VTR	VENT THRU ROOF
W	WASTE
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
☉	CONNECT NEW TO EXISTING

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PROJECT NAME:
KOREAN BBQ

PERMIT SUBMISSION
06-28-22

435 E. BIG BEAVER
TROY MI 48083



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JOB NO. 22-0987

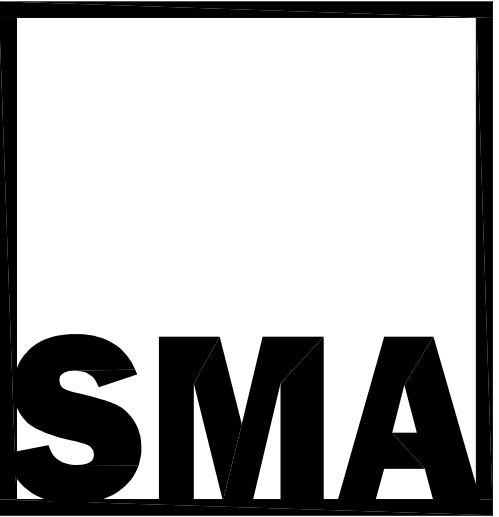
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ISSUANCES

NO	DESCRIPTION	DATE
1	PERMIT SUBMISSION	06/28/22

SHEET TITLE
PLUMBING FLOOR PLANS

DWG. NO.
P1.0.1



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NO	DESCRIPTION	DATE
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SHEET TITLE
PLUMBING SPEC'S AND SCHEDULES

DWG. NO.

P1.0.2

PLUMBING FIXTURE SCHEDULE

EQUIPMENT	WASTE	VENT	CW	HW	MANUFACTURER	MODEL	REMARKS
WC ADA WATER CLOSET (TANK TYPE)	4"	2"	1/2"	-	KOHLER	K-3493	INCLUDE TANK COVER LOCKS. PROVIDE BENEKE 523SS SEAT.
LAV. WALL HUNG LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD	2093.100	PROVIDE TANK COVER LOCKS, BENEKE 523SS SEAT AND ZURN FIXTURE HANGER.
ED FLOOR DRAIN	3"	1-1/2"	-	-	J.R. SMITH	2005-A-B-PB-U	PROVIDE INLINE TRAP SEAL AT FLOOR DRAIN (SEE NOTE BELOW).
ES FLOOR SINK	3"	-	-	-	J.R. SMITH	3100 SERIES	12" SQUARE TOP, 6" DEEP, DOME STRAINER AND 1/2" GRATE
WCO WALL CLEAN OUT	-	-	-	-	J.R. SMITH	---	WALL CLEAN OUT WITH ROUND ACCESS COVER.
FCD FLOOR CLEAN OUT	-	-	-	-	J.R. SMITH	4020 SERIES	WITH ROUND, POLISHED BRONZE TOP.
GI GREASE TRAP	3"	2"	-	-	ZURN	GT2700-50	50 GPM FLOW, 100 LBS. GREASE CAPACITY; FULLY RECESSED IN FLOOR.
14 3 COMPARTMENT SINK	-	1-1/2"	1/2"	1/2"	-	-	PROVIDED BY OWNER. INDIRECT WASTE
15 HAND SINK	2"	1-1/2"	1/2"	1/2"	-	-	PROVIDED BY OWNER.
16 1 COMP'T PREP SINK	-	1-1/2"	1/2"	1/2"	-	-	PROVIDED BY OWNER. INDIRECT WASTE
17 MDP SINK	3"	1-1/2"	1/2"	1/2"	-	-	PROVIDED BY OWNER.
18 3 COMP'T BAR SINK	-	-	1/2"	1/2"	-	-	PROVIDED BY OWNER. INDIRECT WASTE
19 BAR HAND SINK	-	-	1/2"	1/2"	-	-	PROVIDED BY OWNER. INDIRECT WASTE
20 ICE MAKER	-	-	1/2"	-	-	-	PROVIDED BY OWNER. INDIRECT WASTE

TEMPERING VALVE NOTE:
 PROVIDE A HOT WATER TEMPERING VALVE AT EACH HAND SINK FAUCET. TEMPERING VALVE SHALL LIMIT WATER TEMPERATURE TO 110 DEG F AND COMFORMS WITH ASSE 1070 AND 2012 MICHIGAN PLUMBING CODE.

FLOOR DRAIN TRAP SEAL NOTE:
 CONTRACTOR SHALL INSTALL SURESEAL INLINE TRAP SEAL MODEL SS3000 AT ALL FLOOR DRAINS.

PLUMBING SPECIFICATIONS:

GENERAL

- PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS.
- PLUMBING INSTALLATION SHALL COMPLY WITH ALL LOCAL CODES.
- INSTALL NEW PLUMBING LINES TO CONNECT NEW PLUMBING EQUIPMENT AND FIXTURES INDICATED ON PLANS. NEW FIXTURES SHALL BE INSTALLED PER ADA REQUIREMENTS, LOCAL CODES AND MANUFACTURERS REQUIREMENTS.
- INCLUDE ALL NECESSARY ANCHORS, BRACES, MISCELLANEOUS STEEL, WALL BRACKETS AND RISER CLAMPS REQUIRED FOR A PROPER INSTALLATION.
- VENT LINES THRU ROOF SHALL BE 3" MINIMUM AND SHALL TERMINATE 24" ABOVE ROOF.
- PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL SHOCK ABSORBERS OR AIR CHAMBERS AT EACH HOT AND COLD WATER FIXTURE CONNECTION. CHAMBERS SHALL BE 18" HIGH AND OF THE SAME DIAMETER AS THE FIXTURE CONNECTION BUT NOT LESS THAN 1/2".
- SUPPORT ALL RISERS AT BASE.
- MAKE FINISHED PIPING CLEAN, FREE FROM FOREIGN MATTER AND WITH NO BURRS, WELDING ICICLES OR OTHER OBSTRUCTIONS.
- INSTALL ALL PIPING TO PERMIT EASY DRAINING. ADJUST HANGERS AND SUPPORTS TO ELIMINATE SAG POCKETS. PROVIDE HOSE END DRAIN VALVES AT ALL LOW POINTS TO PERMIT DRAINING OF THE ENTIRE DOMESTIC WATER SYSTEM.
- INSTALL PIPING TO PERMIT EXPANSION AND CONTRACTION WITHOUT UNDUE STRESS, PARTICULARLY AT FLASHING AND EQUIPMENT.
- SUPPORT PIPING FROM ROOF BEAMS, TRUSSES OR JOIST. DO NOT HANG OR SUPPORT PIPING FROM ROOF DECK.
- NEW PIPING SHALL RUN CONCEALED IN FINISHED AREAS.
- WHERE PIPES PASS THRU FINISHED WALLS OR CEILING, INSTALL A STEEL OR BRASS ESCUTCHEON PLATE WITH SET SCREW.
- PERMANENTLY LABEL AND TAG ALL VALVES INDICATING THE PART OF THE SYSTEM CONTROLLED.
- WARRANTY ALL WORKMANSHIP, MATERIALS AND PERFORMANCE FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.
- INSTALL ALL PIPING PARALLEL OR AT RIGHT ANGLES WITH BEAMS, WALLS, OR OTHER BUILDING LINES. INSTALL ALL EXPOSED PIPING AS CLOSE AS PRACTICAL TO WALLS, COLUMNS, OR OVER HEAD CONSTRUCTION TO PROVIDE MAXIMUM HEAD ROOM AND MINIMUM INTERFERENCE WITH USABLE BUILDING SPACE.

WATER

- ABOVE GROUND DOMESTIC WATER LINES SHALL BE TYPE "L" HARD COPPER WITH SOLDERED COPPER JOINTS AND FITTINGS.
- BELOW GROUND DOMESTIC WATER LINES SHALL BE TYPE "K" SEAMLESS TUBE TYPE SOFT COPPER. NO FITTINGS ALLOWED BELOW GRADE.
- SHOCK ABSORBERS AND SHUT-OFF VALVES ARE TO BE PROVIDED AT EACH FIXTURE OR GROUP OF FIXTURES.
- PROVIDE 1/2" THICK, HEAVY DUTY FIBERGLAS PIPE INSULATION WITH VAPOR BARRIER JACKET ON NEW WATER LINES. COLD WATER LINES SHALL HAVE 1/2" THICK INSULATION. HOT WATER LINES SHALL HAVE 3/4" THICK INSULATION.
- DOMESTIC WATER LINES SHALL BE THOROUGHLY TREATED AND STERILIZED WITH A LIQUID CHLORINE GAS, WATER SOLUTION IN AMOUNTS OF 250PPM CHLORINE CALCULATED ON THE VOLUME OF WATER IN THE NEW PIPING SYSTEM OR AS DIRECTED BY THE LOCAL HEALTH DEPARTMENT.
- AFTER STERILIZING, FLUSH ALL LINES THOROUGHLY.

SANITARY & VENT

- PRIOR TO INSTALLATION OF NEW SANITARY LINES, CHECK AND CONFIRM INVERT ELEVATIONS REQUIRED FOR SEWER CONNECTIONS AND ENSURE THAT THESE CAN BE PROPERLY CONNECTED WITH SLOPE FOR DRAINAGE.
- NEW SANITARY AND VENT PIPING SHALL BE PVC SCHEDULE 40 ASTM 1488. SANITARY LINES BELOW FLOOR SHALL BE 3" MINIMUM.
- SANITARY AND WASTE LINES 2 1/2" AND SMALLER SHALL PITCH NOT LESS THAN 1/4" TO THE FOOT. LARGER PIPE SHALL PITCH NOT LESS THAN 1/8" TO THE FOOT.
- CONTRACTOR SHALL PROVIDE A CLEAN OUT FOR THE SANITARY LINE EVERY 90 FT AND EVERY CHANGE IN DIRECTION.

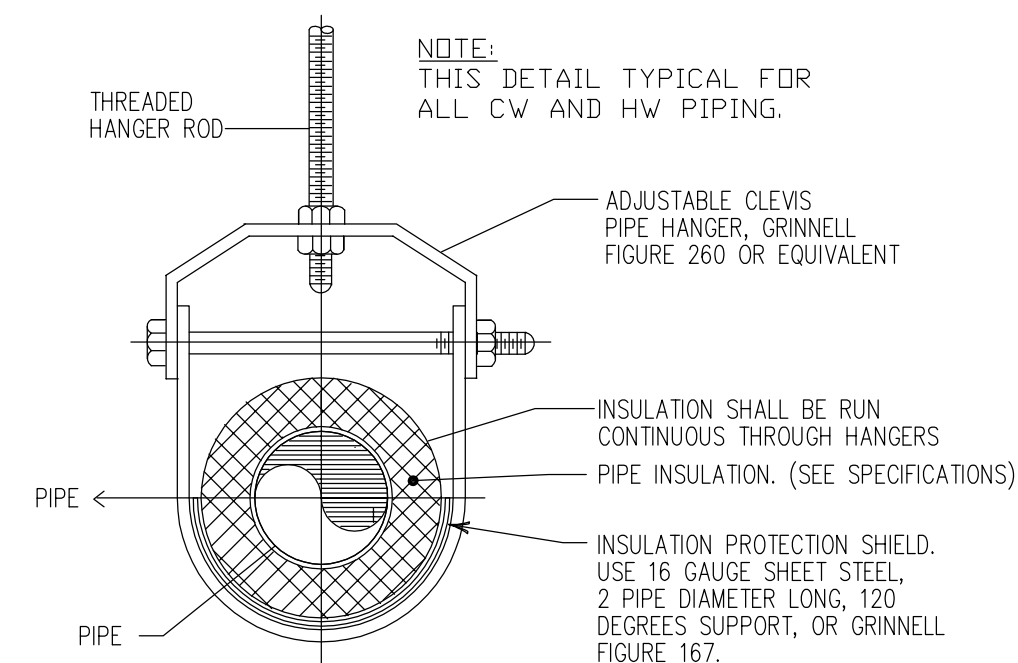
GAS

- GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL ASTM A-120-84 PIPE. PIPE SIZES LARGER THEN 2" SHALL HAVE BUTT WELDED JOINTS. PIPE SIZES 2" AND UNDER SHALL HAVE THREADED JOINTS.
- PROVIDE DRIP LEGS AND CAPS FOR MOISTURE REMOVAL AT ALL EQUIPMENT.
- PROVIDE AND INSTALL MAXITROL TYPE 325 GAS PRESSURE AT ALL GAS FIRED APPLIANCE. INSTALL REGULATORS SIZED PER EQUIPMENT PRESSURE REQUIREMENTS.

HOT WATER CALCULATION

EQUIPMENT	QUANTITY	USAGE GPH	TOTAL
THREE COMPARTMENT SINK	1	60	60
1 COMP'T PREP SINK	1	30	30
HAND SINK	3	5	15
LAVATORY	2	5	10
MDP SINK	1	10	10
TOTAL	---	---	125

NATURAL GAS REQUIRED FOR WATER HEATER = $125 \text{ GPH} \times 100 \text{ DEG F} \times 8.33 \times 0.96 \text{ (OPERATING EFF.)} = 108,460 \text{ BTUH}$



PIPING SUPPORT DETAIL

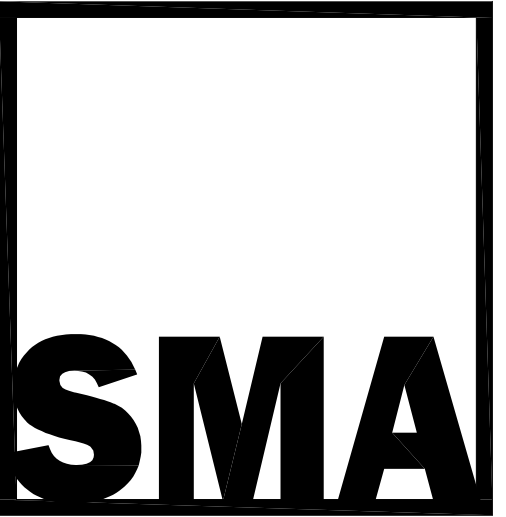
SCALE: NONE

WATER HEATER SCHEDULE

SYMBOL	SERVICE	MANUFACTURE R & MODEL	TYPE	INTAKE & VENT PIPE	ELECTRICAL			GAS INPUT (MBH)	WATER CONN.	MAXIMUM GPM
					V	PH	HZ			
GWH-1	RESTAURANT	STATE MODEL GTS-240X3-NIH	INSTANTANEOUS	3" PVC	120	1	60	160	3/4"	6.6

NOTES/ACCESSORIES

- VENT AND COMBUSTION AIR INTAKE PIPING MATERIALS SHALL BE SCHEDULE 40 PVC INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE 3" VENT AND AIR INTAKE LINES WITH JOINT SEALED IN ACCORDANCE WITH THE WATER HEATER MANUFACTURER'S INSTRUCTIONS.
- PROVIDE TEMP. & PRESSURE RELIEF TAPPING AND VALVE.



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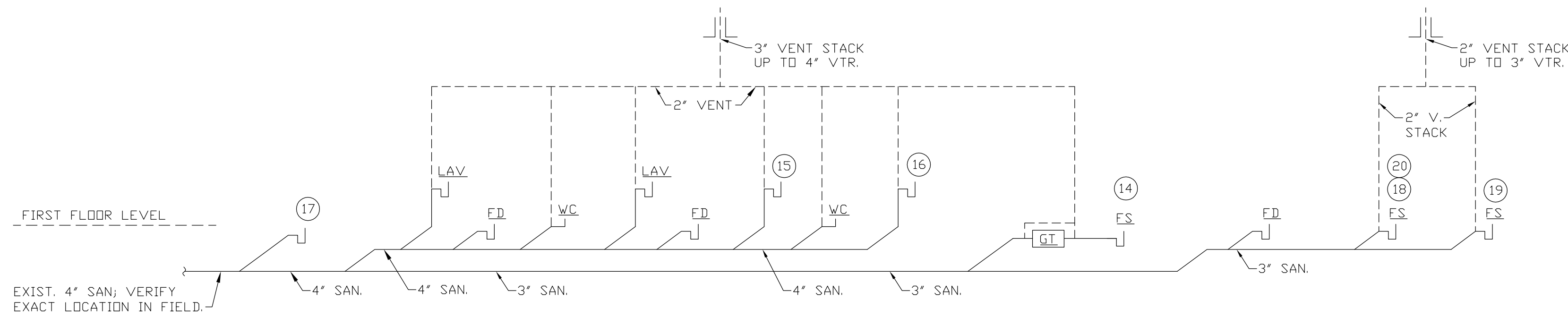
ISSUANCES

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SHEET TITLE
PLUMBING RISER DIAGRAMS AND DETAILS

DWG. NO.

P1.0.3



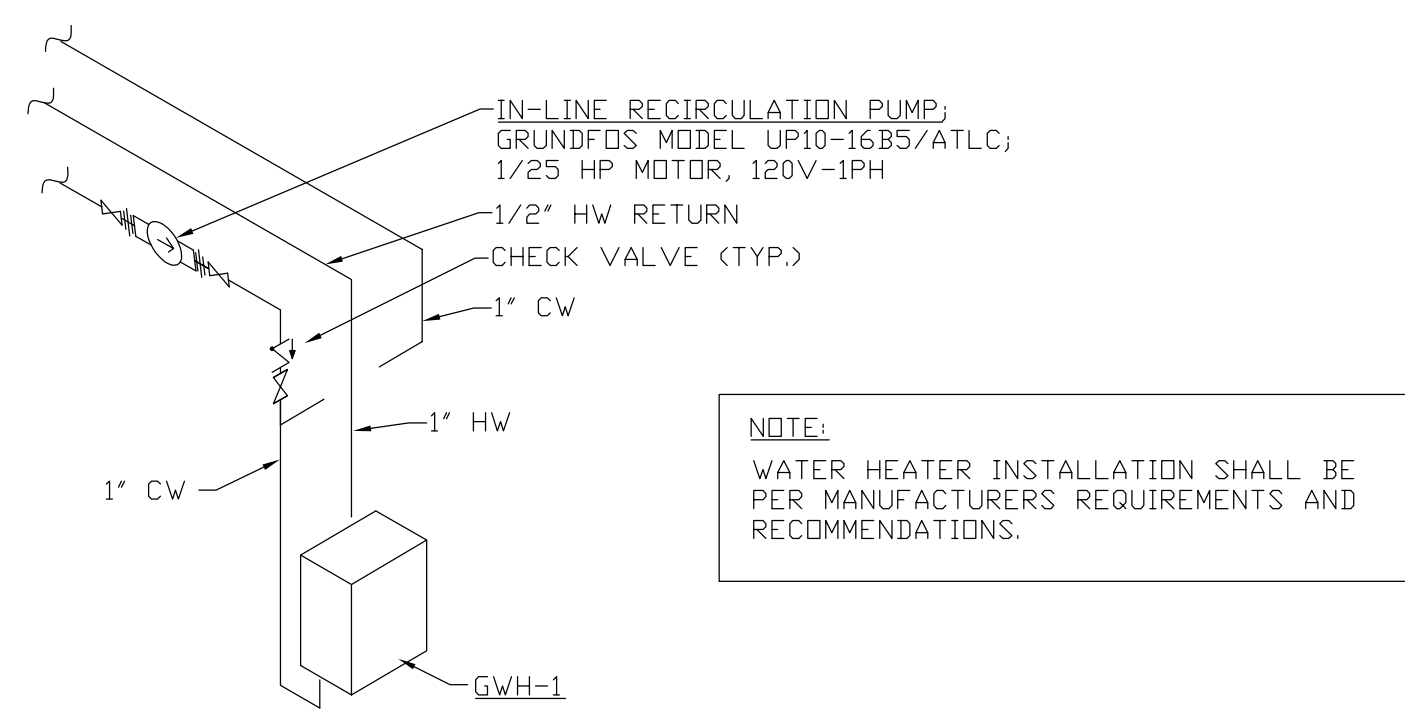
3 SANITARY & VENT RISER DIAGRAM
SCALE: NONE

NOTE:
SEE PLUMBING FIXTURE SCHEDULE FOR SAN. & VENT BRANCH LINE SIZES TO FIXTURES.

PLUMBING CROSS-CONNECTIONS (BACKFLOW PREVENTION)	
UNIT	BACKFLOW DEVICE
BEVERAGE DISPENSER	VDC
MOP SINK FAUCET	HB
ICE MAKER	VDC
3-COMPARTMENT SINK	AB
OVERHEAD SPRAY HOSE	AB
TOILET (WATER CLOSET)	ASV

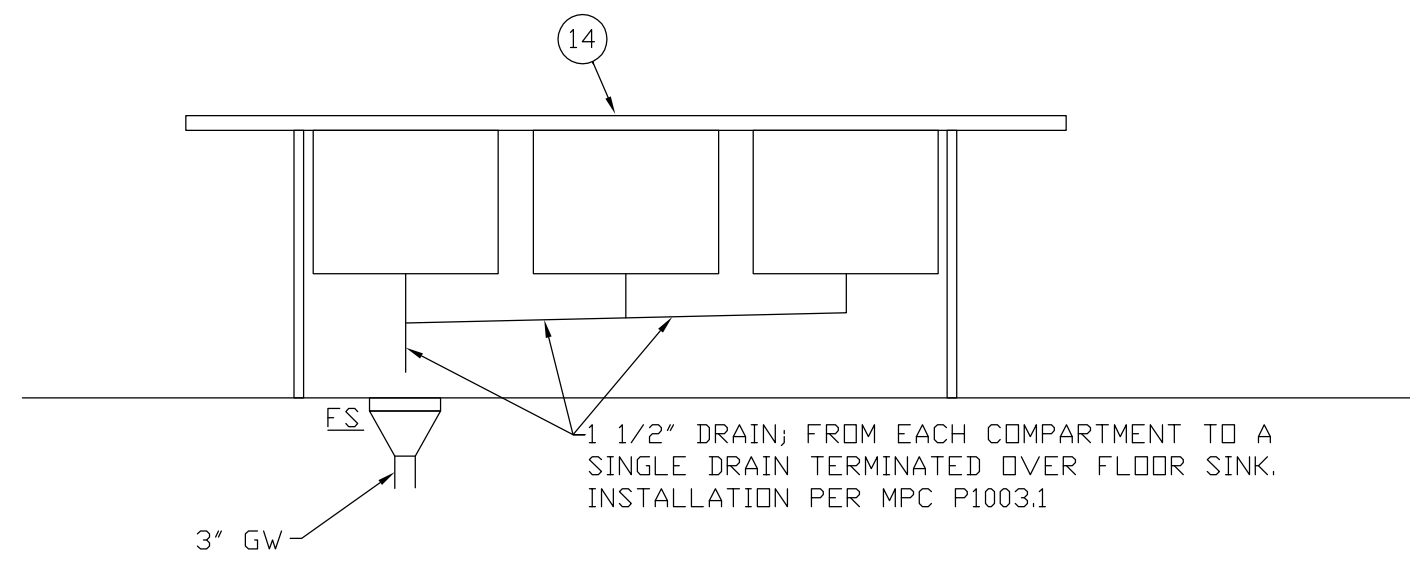
SYMBOLS:
 AVB: ATMOSPHERIC VACUUM BREAKER
 VDC: VENTED DOUBLE CHECK VALVE
 HB: HOSE BIB VACUUM BREAKER
 ASV: ANTI SIPHON VALVE
 AB: AIR BREAK

NOTE:
 PLUMBING CONTRACTOR SHALL SUBMIT A LIST OF ALL BACKFLOW PROTECTION DEVICES WITH MANUFACTURER, MODEL, SIZE AND EQUIPMENT SERVED TO THE CITY PLUMBING INSPECTOR PRIOR TO INSTALLATION.

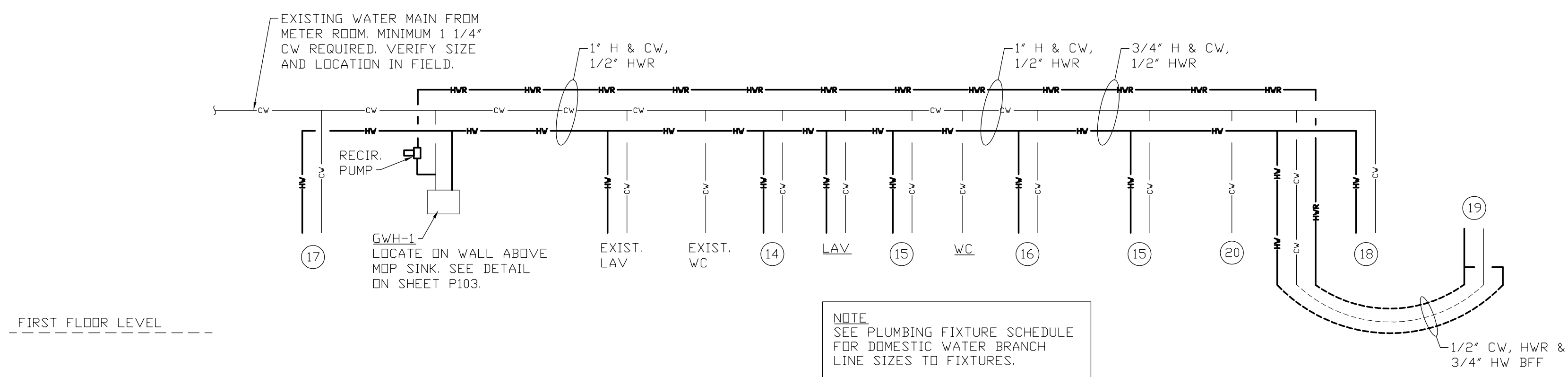


4 WATER HEATER DETAIL
SCALE: NONE

NOTE:
WATER HEATER INSTALLATION SHALL BE PER MANUFACTURERS REQUIREMENTS AND RECOMMENDATIONS.



2 3 COMPT SINK WASTE ELEVATION
SCALE: NONE



1 DOMESTIC WATER RISER DIAGRAM
SCALE: NONE

NOTE:
SEE PLUMBING FIXTURE SCHEDULE FOR DOMESTIC WATER BRANCH LINE SIZES TO FIXTURES.

WATER SUPPLY FIXTURE UNITS			
EQUIPMENT	WSFU	QUANTITY	TOTAL
WATER CLOSET (TANK TYPE)	5	2	10
LAVATORY	2	2	4
3 COMPARTMENT SINK	4	1	4
3 COMPARTMENT BAR SINK	4	1	4
1 COMPARTMENT PREP SINK	4	1	4
HAND SINK	2	3	6
MOP SINK	3	1	3
ICE MACHINE	1	1	1
		TOTAL WSFU	36

WATER SUPPLY LOAD SUMMARY:
 1 1/4" WATER MAIN TO KOREAN BBQ IS ADEQUATE FOR DESIGN LOAD OF 36 WSFU PER ILLINOIS PLUMBING CODE.



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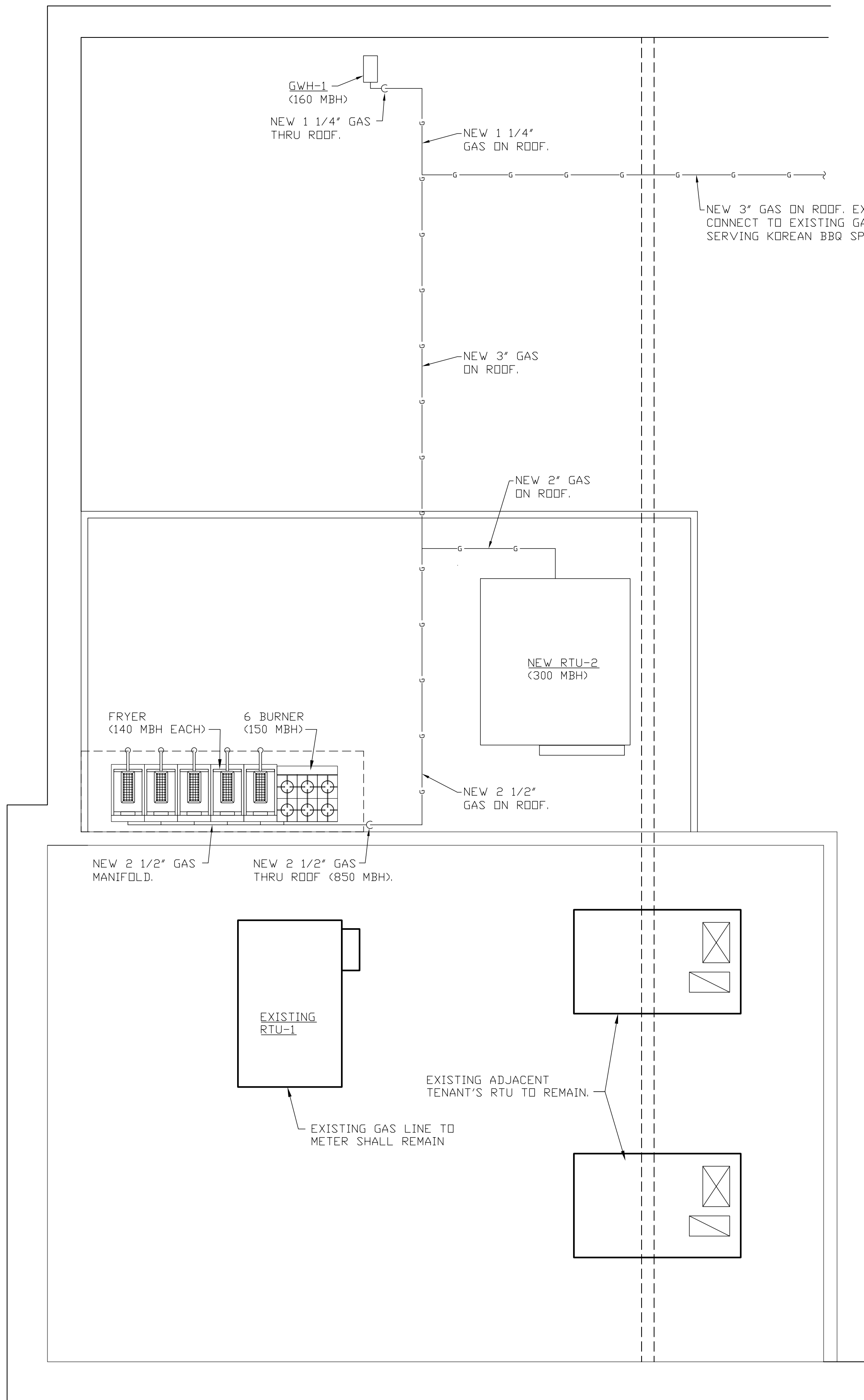
ISSUANCES

NO	DESCRIPTION	DATE
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SHEET TITLE
GAS PLAN AND DETAILS

DWG. NO.

P1.0.4

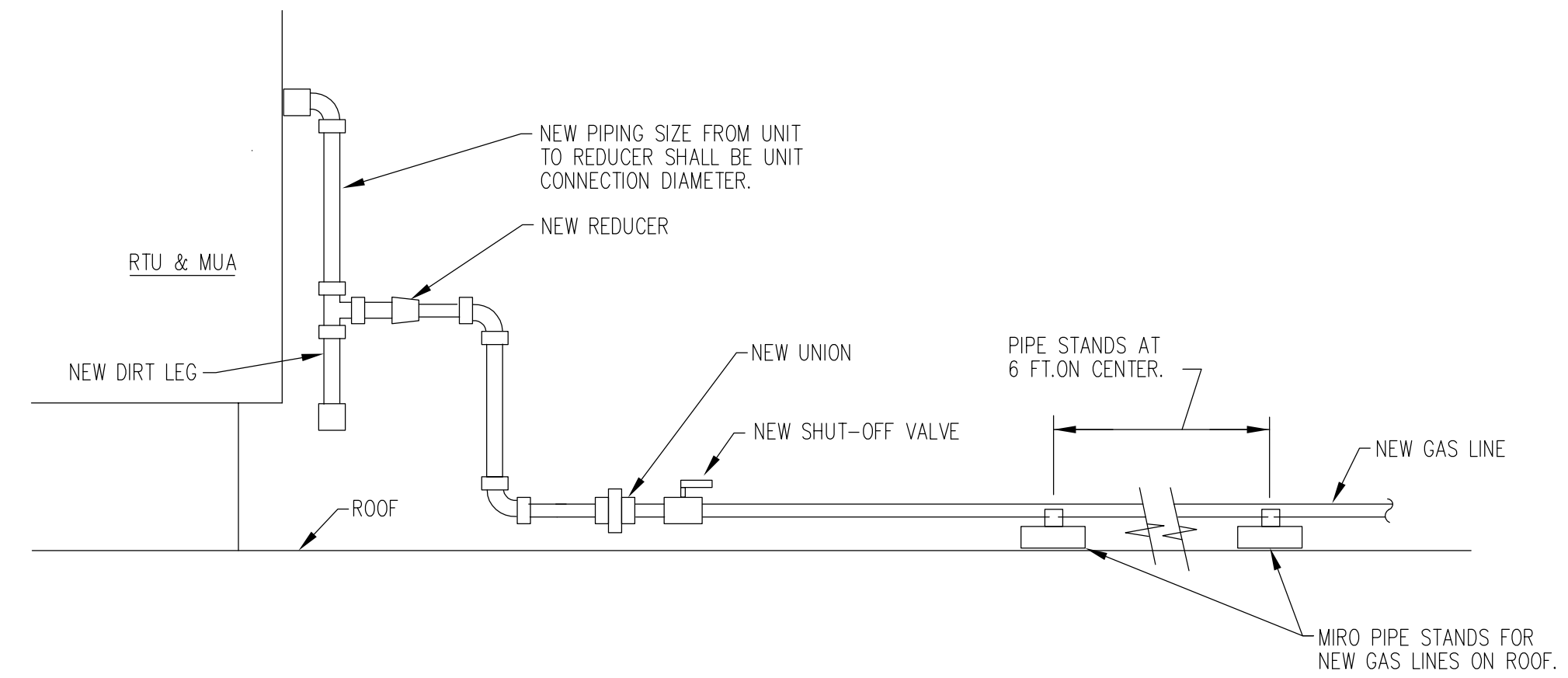


1
 P104

GAS PIPING ROOF PLAN

SCALE: 1/4" = 1'-0"

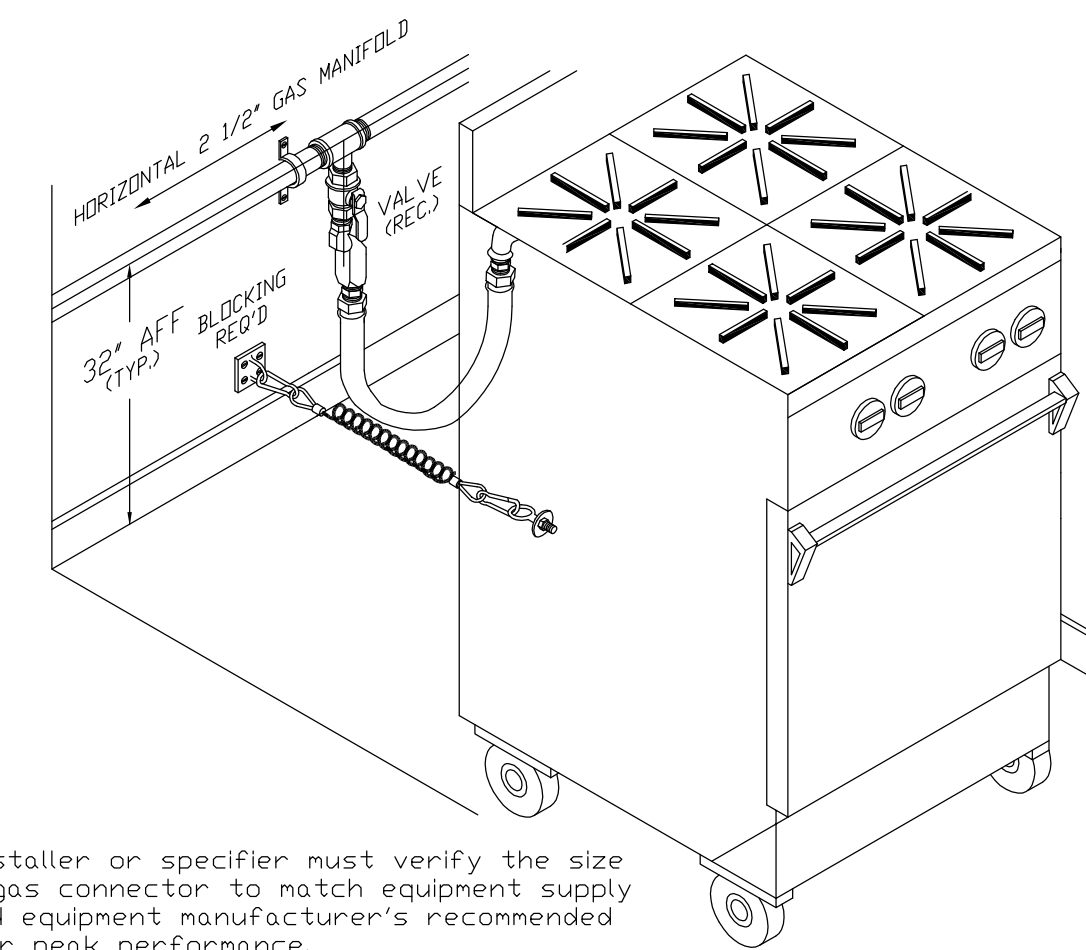
NOTE:
 BASED ON 1,310 MBH GAS
 LOAD, 1 PSI AT METER, 5'
 WC PRESSURE DROP AND
 500 FT. MAX. LENGTH.



3
 P104

GAS PIPING ON ROOF DETAIL

SCALE: NONE



NOTE: Installer or specifier must verify the size of the gas connector to match equipment supply inlet and equipment manufacturer's recommended BTU'S for peak performance.

2
 P104

GAS MANIFOLD CONNECTION DETAIL

SCALE: NONE



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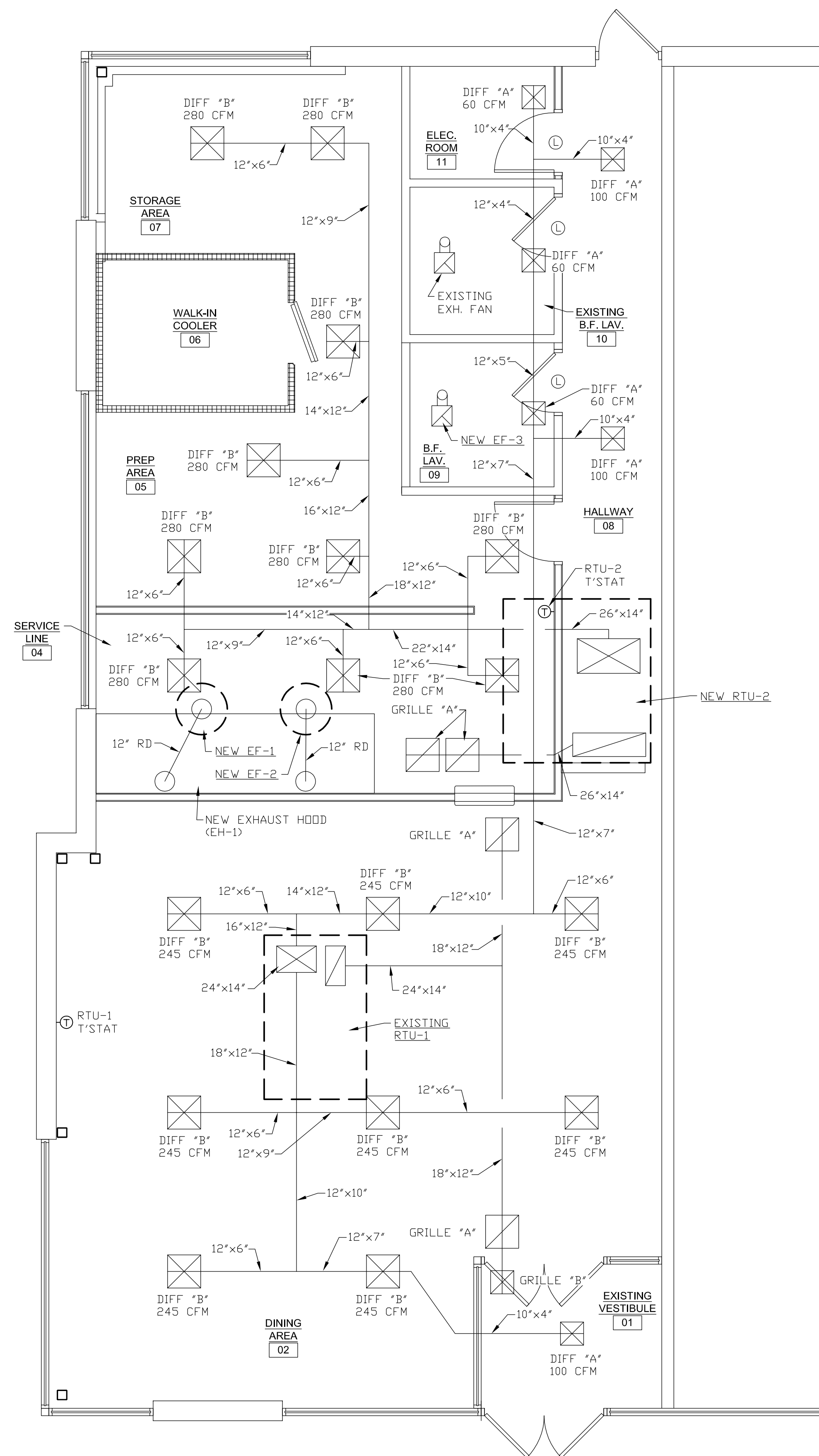
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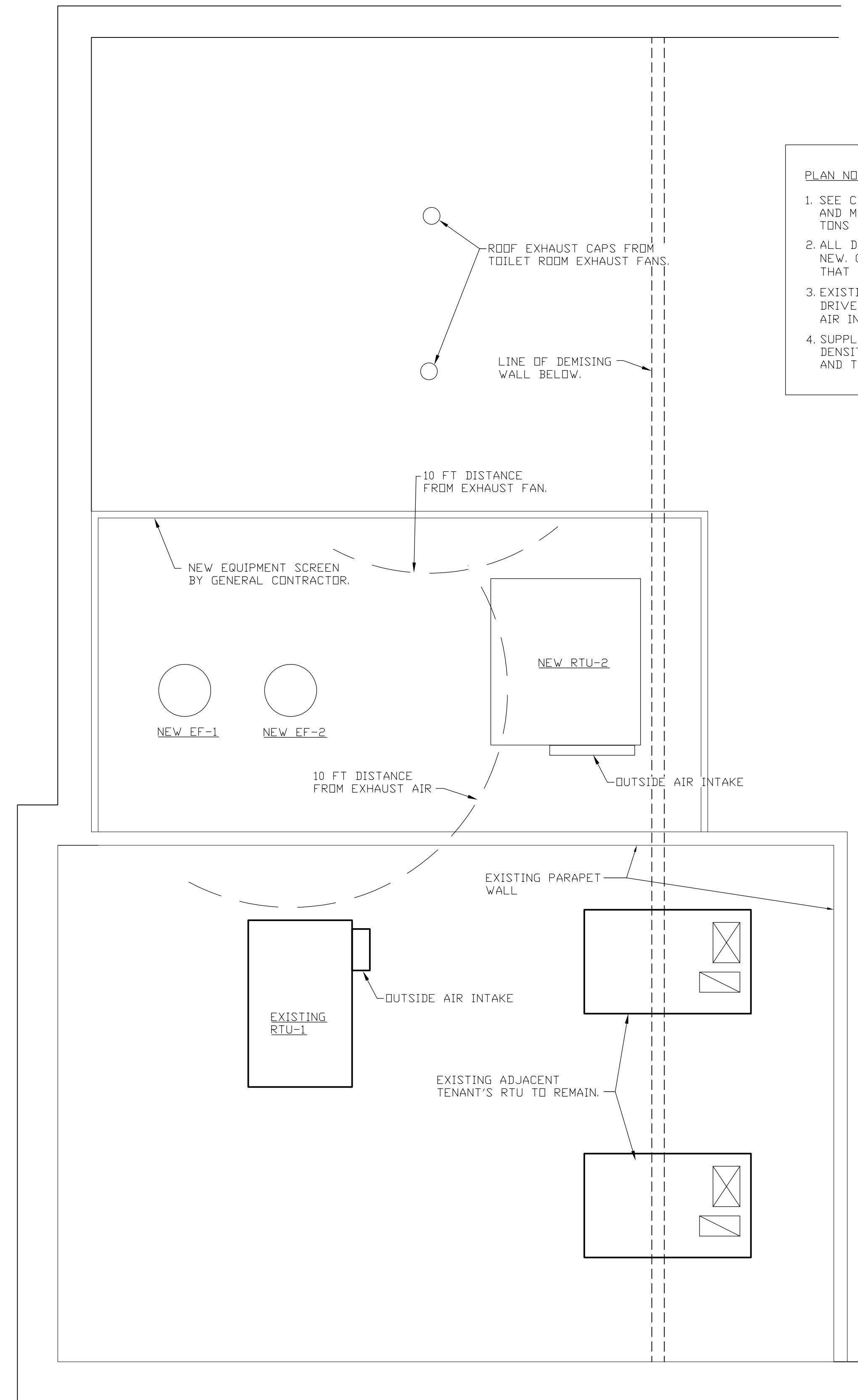
SHEET TITLE
MECHANICAL FLOOR PLANS

DWG. NO.

M1.0.1



1
 M101



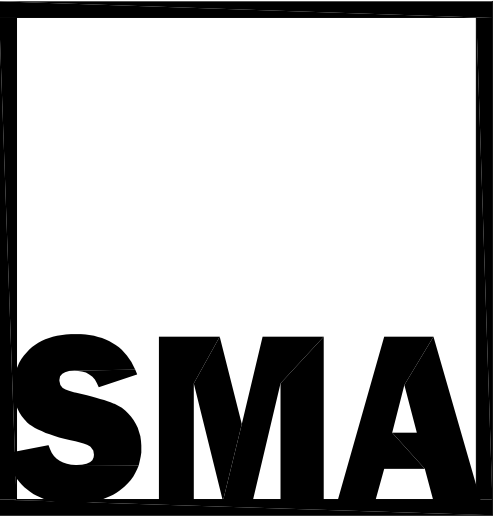
2
 M101

PLAN NOTES:

- SEE CAPTIVEAIRE DRAWING 1 THRU 19 FOR NEW HOOD, EXHAUST FANS AND MUA (RTU-2) FOR FOOD PREPARATION AREA. EXISTING RTU-1 IS 6 TONS CAPACITY AND SHALL SERVE DINING AREA.
- ALL DUCTWORK AND AIR OUTLETS INDICATED ON FLOOR PLAN ARE NEW. CONTRACTOR MAY REUSE EXISTING DUCTWORK AND AIR OUTLETS THAT MATCH DESIGN SIZES INDICATED ON PLAN.
- EXISTING RTU-1; SET SUPPLY AIR FOR 2,400 CFM. ADJUST FAN DRIVE AND INSTALL NEW EVAPORATOR FAN MOTOR IF REQUIRED. SET AIR INTAKE FOR 500 CFM OUTSIDE AIR.
- SUPPLY AND RETURN AIR DUCTWORK SHALL HAVE 1" THICK, 3/4 LB DENSITY, EXTERNAL FIBERGLAS DUCT INSULATION WITH VAPOR BARRIER AND TAPED JOINTS.

MECHANICAL ABBREVIATION LIST

AC UNIT	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AMPS	AMPERES
APPROX	APPROXIMATE
BFF	BELOW FINISHED FLOOR
BTU/HR	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
COMP	COMPRESSOR
COND	CONDENSATE
CONTR	CONTRACTOR
DB	DRY BULB
DN	DOWN
EF	EXHAUST AIR FAN
EH	EXHAUST HOOD
EVAP	EVAPORATOR
EXH	EXHAUST
EXIST	EXISTING
F	FAHRENHEIT
FCO	FLOOR CLEAN OUT
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FT	FEET
HP	HORSEPOWER
HZ	HERTZ
IE	INVERT ELEVATION
IN	INCHES
KW	KILOWATTS
MANUF	MANUFACTURER
MAX	MAXIMUM
MEZZ	MEZZANINE
MIN	MINIMUM
PE	POWER EXHAUSTER
PNL	PANEL
RA	RETURN AIR
RF	RETURN AIR FAN
RLA	RATED LOAD AMPERES
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
TA	TRANSFER AIR
TSTAT	THERMOSTAT
TYP	TYPICAL
V	VOLTS
Ⓞ	DOOR LOUVER



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SHEET TITLE
MECHANICAL SCHEDULES AND SPECIFICATIONS

DWG. NO.

M1.0.2

MECHANICAL SPECIFICATIONS:

GENERAL

1. ALL WORK SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
2. THE MECHANICAL PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY AND DETERMINE EXISTING CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE SUBMISSION OF A BID SHALL BE CONSIDERED AS INDICATING SUCH KNOWLEDGE THAT SUCH EXAMINATION HAS BEEN MADE AND VERIFIED.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE AND LOCAL BUILDING, MECHANICAL CODES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL NECESSARY PERMITS REQUIRED TO COMPLETE THE PROJECT.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
6. CONTRACTOR SHALL WARRANTY ALL WORKMANSHIP, MATERIALS AND PERFORMANCE FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.

HVAC EQUIPMENT

1. INSTALL NEW HVAC EQUIPMENT PER THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE EQUIPMENT START-UP PER THE MANUFACTURER'S INSTRUCTIONS. THE FOLLOWING ITEMS SHALL BE RECORDED AT THE TIME OF START-UP AND 30 DAYS AFTER START-UP:
 - EVAPORATOR FAN MOTOR AMP. DRAW
 - CONDENSER FAN MOTOR AMP. DRAW
 - REFRIGERANT CHARGE
 - EVAPORATOR FAN CONDITION
 - EVAPORATOR COIL CONDITION
 - CONDENSER COIL CONDITION
 - CONDENSER FAN CONDITION
 - GAS HEAT EXCHANGER CONDITION
 - OUTSIDE AIR INTAKE
3. CONTRACTOR SHALL PROVIDE ONE-YEAR LABOR WARRANTY FOR ALL WORK ASSOCIATED WITH THIS PROJECT. EQUIPMENT MANUFACTURER SHALL PROVIDE ONE YEAR PARTS WARRANTY.
4. NEW EQUIPMENT SHALL BE SECURED IN ACCORDANCE WITH STATE BUILDING AND ENERGY CODE.

AIR BALANCE

1. CONTRACTOR SHALL PROVIDE PROPER TESTING, ADJUSTING AND BALANCING OF THE SYSTEM TO ACHIEVE SPECIFIED PERFORMANCE.
2. AIR BALANCE REPORT SHALL INCLUDE ROOF TOP A/C UNIT (RTU) PERFORMANCE WITH A LIST OF SCHEDULED RTU ZONE AIR FLOW. REPORT SHALL INCLUDE THE FOLLOWING INFORMATION:
 - A) RTU MANUFACTURER, MODEL SERIAL NUMBER AND COMPLETE NAMEPLATE DATA.
 - B) RTU DESIGN SUPPLY AND OUTSIDE AIR CFM AND FINAL TEST SUPPLY AND OUTSIDE AIR CFM.
 - C) FAN MOTOR VOLTAGE, HORSEPOWER, COMPLETE NAMEPLATE DATA AND MOTOR SERVICE FACTOR.
 - D) DESIGN AIR FLOW AND FINAL TEST AIR FLOW AT EACH DIFFUSER, REGISTER AND GRILLE.
3. ALL TESTING PROCEDURES SHALL BE PER ASSOCIATED AIR BALANCING COUNCIL (AABC) PROCEDURAL STANDARDS FOR TESTING, ADJUSTING AND BALANCING OF ENVIRONMENTAL SYSTEMS THROUGH AN APPROVED CERTIFIED AGENCY AND TECHNICIAN COMPLETE WITH SUBMITTAL REPORT.

WARRANTY

1. CONTRACTOR SHALL WARRANTY ALL WORKMANSHIP, MATERIALS AND PERFORMANCE FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
2. NEW ROOFTOP A.C. UNIT SHALL HAVE A 5 YEAR COMPRESSOR WARRANTY BY THE MANUFACTURER.

IDENTIFICATION

1. PROVIDE PLASTIC ENGRAVED EQUIPMENT TAGS ON ALL NEW EQUIPMENT.
2. PROVIDE A PLASTIC NAMEPLATE ON ELECTRICAL PANEL NEAR FUSE SWITCH TO IDENTIFY EQUIPMENT SERVED.

SHEET METAL

1. ALL SHEET METAL WORK SHALL BE IN ACCORDANCE WITH INDUSTRY STANDARDS, PUBLISHED BY THE SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. AND THE LATEST ASHRAE GUIDE, APPLICABLE TO LOW PRESSURE SYSTEMS.
2. NEW DUCTWORK SHALL BE MINIMUM 26 GAUGE GALVANIZED SHEET METAL. DUCTWORK SHALL SECURELY BRACED TO PREVENT VIBRATION.
3. PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS AND AIR EXTRACTORS AT ALL BRANCH DUCT TAKE-OFFS.
4. SUPPLY AND RETURN AIR DUCTWORK IN CEILING SPACES SHALL HAVE 1" THICK, 3/4 LB DENSITY, EXTERNAL FIBERGLAS DUCT INSULATION WITH VAPOR BARRIER AND TAPED JOINTS.

TEMPERATURE CONTROL SYSTEM

1. ROOF TOP A/C UNITS SHALL BE CONTROLLED THROUGH HONEYWELL MODEL T7300 ROOM THERMOSTAT.
2. ROOM THERMOSTATS SHALL BE MOUNTED AT 48" AFF.
3. IN UNOCCUPIED MODE THE OUTSIDE AIR DAMPERS SHALL CLOSE AT RTU-1 & 2 AND UNITS SHALL RUN ON 100% RETURN AIR.

VENTILATION SCHEDULE (PER MMC 403.3)								
SERVICE	PEOPLE O.A. RATE	PEOPLE	PEOPLE O.A.	AREA O.A. RATE	AREA	AREA O.A.	AREA+PEOPLE CODE O.A.	DESIGN O.A. RATE
DINING AREA	7.5 CFM/PR	47	353 CFM	.18 CFM/SQ.FT.	672 SQ.FT.	121 CFM	474 CFM	500 CFM

POWER EXHAUSTER										
SYMBOL	SERVICE	TYPE	DRIVE	CFM	EXT. STAT. PRESSURE	ELECTRICAL				MANUFACTURER, MODEL AND REMARKS
						HP	VOLT	PH	HZ	
NEW EF-3	TOILET ROOM	CEILING MTD.	DIRECT	70	.25" WG	50 WATTS	120	1	60	COOK MODEL GC-146 INTERLOCK WITH LIGHTS.

NOTE:
 PROVIDE OPTIONAL ROOF CURB AND BACKDRAFT DAMPER FOR EF-3.

DIFFUSER, REGISTER AND GRILLE SCHEDULE				
SYMBOL	TYPE	MODEL	NECK SIZE	REMARKS
DIFF "A"	S.A. DIFFUSER	TMSA	6" RD.	TYPE 1 PATTERN A4; WITH DAMPER AND GRID
DIFF "B"	S.A. DIFFUSER	TMSA	8" RD.	TYPE 1 PATTERN A4; WITH DAMPER AND GRID
GRILLE "A"	R.A. GRILLE	TYPE 50F	24"x24"	
GRILLE "B"	R.A. GRILLE	TYPE 50F	10"x10"	

NOTE:
 SELECTION BASED ON "TITUS" MODELS. ALTERNATE MANUFACTURER SHALL BE KRUEGER OR METALAIR.

AIR BALANCE SCHEDULE			
SERVICE	OUTSIDE AIR	EXHAUST AIR	COMMENT
EXISTING RTU-1	500 CFM	---	6 TON CAPACITY SERVING DINING AREA.
NEW RTU-2 (MJA)	2,800 CFM	---	15 TON CAPACITY MAKE-UP AIR UNIT; SEE CAPTIVEAIRE PLANS.
NEW EXHAUST FAN #1	---	1,400 CFM	SEE CAPTIVEAIRE PLANS FOR FAN INFORMATION.
NEW EXHAUST FAN #2	---	1,400 CFM	SEE CAPTIVEAIRE PLANS FOR FAN INFORMATION.
TOILET ROOMS	---	140 CFM	
TOTAL	3,300 CFM	2,940 CFM	

NOTE:
 POSITIVE AIR PRESSURE IN BUILDING SHALL BE RELIEVED BY EXISTING RTU-1 RELIEF AIR HOOD.

EXHAUST SYSTEM SPECIFICATIONS:

1. DO NOT SCALE DRAWINGS, USE DIMENSIONS AS INDICATED. FIELD VERIFY ALL EXISTING CONDITIONS.
2. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS FROM ALL STATE AND LOCAL OFFICIALS PRIOR TO PROCEEDING WITH INSTALLATION. THESE DRAWINGS ARE TO SERVE AS BASIC DESIGN ONLY AND ANY STATE OR LOCAL ORDINANCE WHICH IS MORE RESTRICTIVE SHALL PREVAIL.
3. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO CHECK BUILDING ACCESS AND FIELD CONDITIONS TO ALLOW FOR ADEQUATE CLEARANCES FOR THE EQUIPMENT TO BE BROUGHT IN AND INSTALLED.
4. AIR INTAKES MUST BE NO CLOSER THAN 10 FEET FROM ANY EXHAUST OR VENT OUTLET.
5. EXHAUST DUCT MUST BE CONSTRUCTED FROM A MINIMUM OF 18 GAUGE LIQUID-TIGHT WELDED STEEL FITTED TIGHTLY INTO HOOD COLLAR AND CONTINUOUSLY WELDED TO HOOD. DUCT CLEAN OUTS SHALL BE PROVIDED AT EVERY CHANGE IN DIRECTION. INSTALLING CONTRACTOR SHALL VERIFY ANY REQUIREMENTS FOR INSULATION OF THE EXHAUST DUCT. EXHAUST FAN SHALL EXTEND A MINIMUM OF 40 INCHES ABOVE ROOF SURFACE AND BE PROPERLY FLASHED TO ADJOINING MATERIAL.
6. ALL NEW EXHAUST DUCTWORK SHALL IS COVERED WITH 3M FIRE BARRIER DUCT WRAP TYPE 615 TO SERVE AS A FIRE RATED ENCLOSURE. INSTALL DUCT WRAP PER 3M REQUIREMENTS + RECOMMENDATIONS.
7. EXHAUST FAN AND SOURCE OF MAKE-UP AIR SHALL BE ELECTRICALLY INTERLOCKED. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL NECESSARY STARTERS, RELAYS, SWITCHES, ETC., AS REQUIRED.
8. THESE DRAWINGS ARE TO SERVE AS A BASIC DESIGN ONLY AND ANY STATE OR LOCAL ORDINANCE WHICH IS MORE RESTRICTIVE SHALL PREVAIL.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE HOOD CLEARANCE FROM COMBUSTIBLES (AND NON OR LIMITED COMBUSTIBLES) IS IN COMPLIANCE WITH THE LATEST EDITION OF THE NATIONAL FIRE PROTECTION ASSOCIATION BULLETIN #96.
10. HOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH 2018 MMC, 2015 IMC, LOCAL CODE, STATE BUILDING CODE, NFPA AND NSF. CONSTRUCTION SHALL BE 18 GAUGE ALUMINIZED STL OR 18 GAUGE ST. STL. ALL EXTERIOR SEAMS TO BE WELDED LIQUID TIGHT.

NFPA #96 CLEARANCES FROM COMBUSTIBLES:

SURFACE	CLEARANCE
COMBUSTIBLE	3" INSULATED
LIMITED-COMBUSTIBLE	3" UN-INSULATED
NON-COMBUSTIBLE	0" REQUIRED

2009 INTERNATIONAL CODE FROM COMBUSTIBLES

COMBUSTIBLE SURFACE REDUCTION TO 7" AS FOLLOWS - 24 GA. MINIMUM UNPAINTED SHEET METAL (0.024) SPACED 1" OFF THE COMBUSTIBLE ASSEMBLY.



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PROJECT NAME:
KOREAN BBQ

PERMIT SUBMISSION
06-28-22

435 E. BIG BEAVER
TROY MI 48083



ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATION OF ALL DIMENSIONS.

JOB NO. 22-0987

D.B./C.B. R.A./P.D.

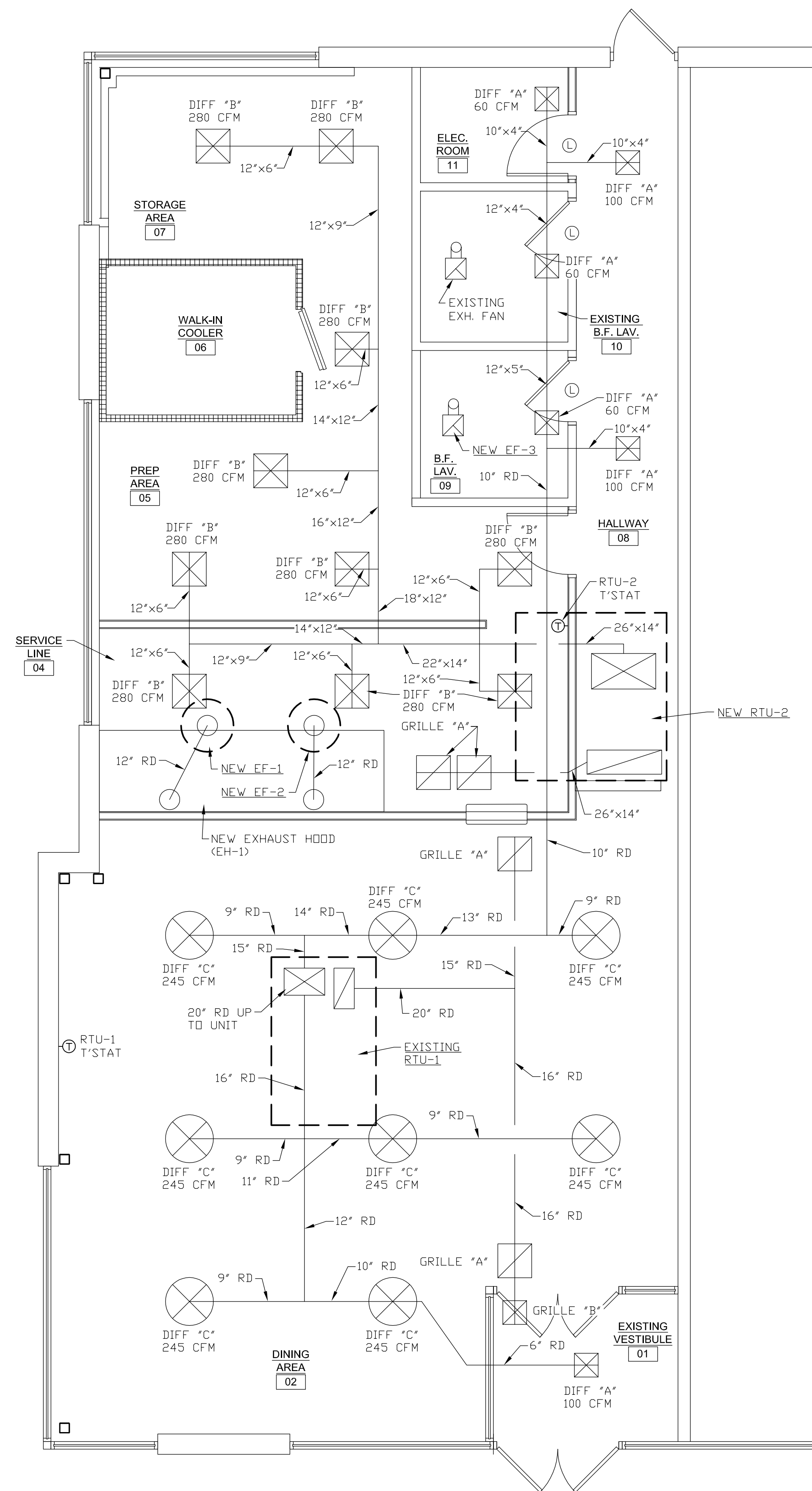
ISSUANCES

NO	DESCRIPTION	DATE
1	PERMIT SUBMISSION	06/28/22

SHEET TITLE
ALTERNATE
MECHANICAL PLAN

DWG. NO.

M1.0.3



DIFFUSER, REGISTER AND GRILLE SCHEDULE				
SYMBOL	TYPE	MODEL	NECK SIZE	REMARKS
DIFF 'A'	S.A. DIFFUSER	TMSA	6" RD.	TYPE 1 PATTERN A4; WITH DAMPER AND GRID
DIFF 'B'	S.A. DIFFUSER	TMSA	8" RD.	TYPE 1 PATTERN A4; WITH DAMPER AND GRID
DIFF 'C'	S.A. DIFFUSER	TMRA	8" RD.	TYPE 1 PATTERN A4; WITH DAMPER AND GRID
GRILLE 'A'	R.A. GRILLE	TYPE 50F	24"x24"	
GRILLE 'B'	R.A. GRILLE	TYPE 50F	10"x10"	

NOTE:
SELECTION BASED ON 'TITUS' MODELS. ALTERNATE MANUFACTURER SHALL BE KRUEGER OR METALAIR.

ALTERNATE PLAN:
CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR ROUND DUCT AND DIFFUSERS IN DINING AREA.

1
M103
ALTERNATE MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

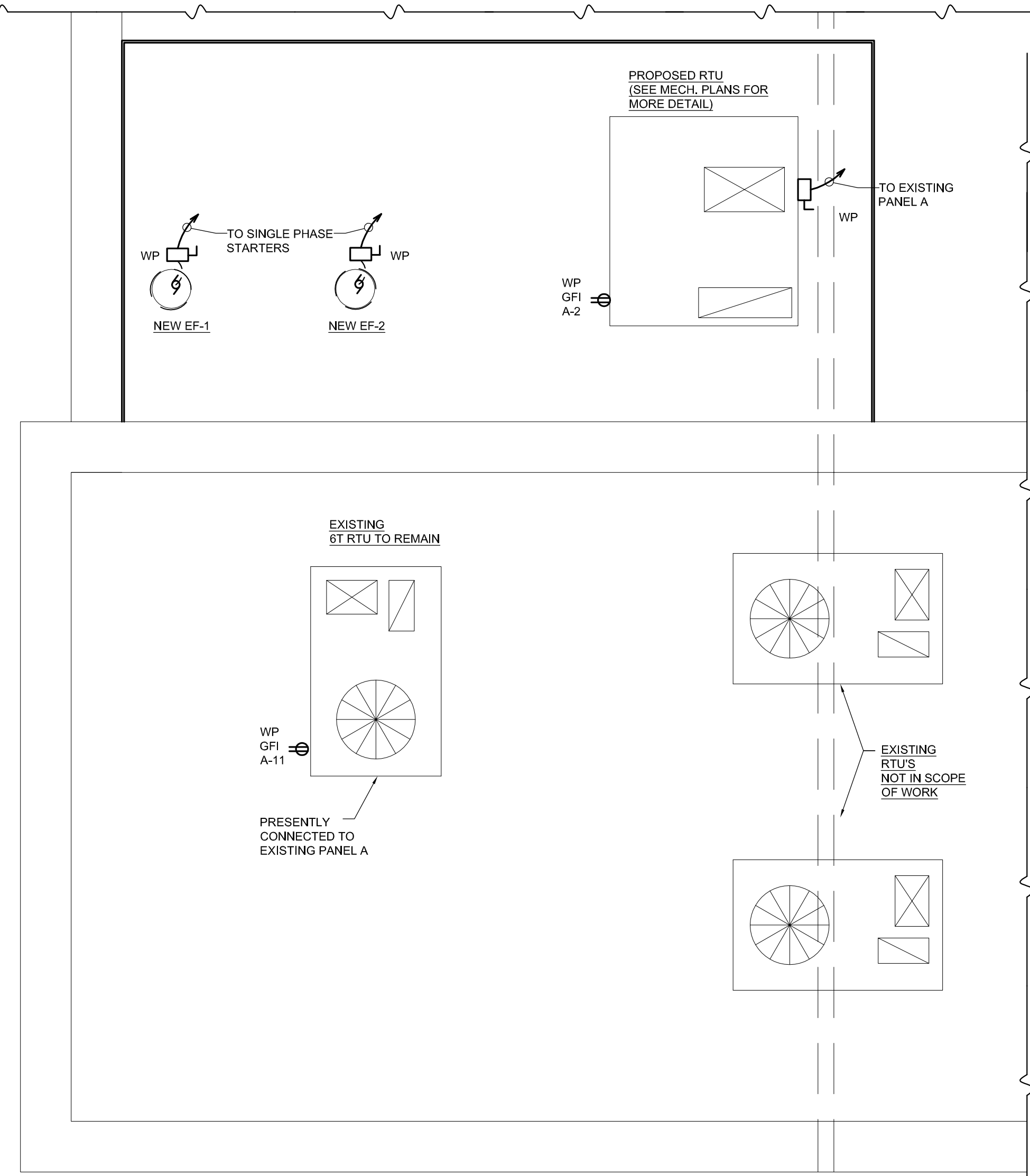
POWER	
	DUPLEX OUTLET VERIFY FINAL LOCATION W/ TENANT
	DUPLEX OUTLET W/ GROUND FAULT INTERRUPTER VERIFY FINAL LOCATION W/ TENANT
	QUADPLEX OUTLET VERIFY FINAL LOCATION W/ TENANT
	WINDOW RECEPTACLES, FOR WINDOW DISPLAY. VERIFY FINAL LOCATION W/ TENANT
	SPECIAL PURPOSE OUTLET. VERIFY CONFIGURATION PRIOR TO INSTALLATION
	LIGHT SWITCH
	DIMMER SWITCH
	3-WAY SWITCH
	OCCUPANCY SENSOR
	SWITCH WITH PILOT LITE
	TELEPHONE OR CABLE JACK - VERIFY FINAL LOCATION W/ TENANT.
	JUNCTION BOX
	WEATHERPROOF
	TYPICAL PANEL CIRCUIT NO. 1
	CEILING MOUNTED OCCUPANCY SENSOR

NOTES:
1. TELEPHONE SYSTEM TO BE PROVIDED BY TENANT.
2. VERIFY OUTLET LOCATION & HEIGHT W/ TENANT.

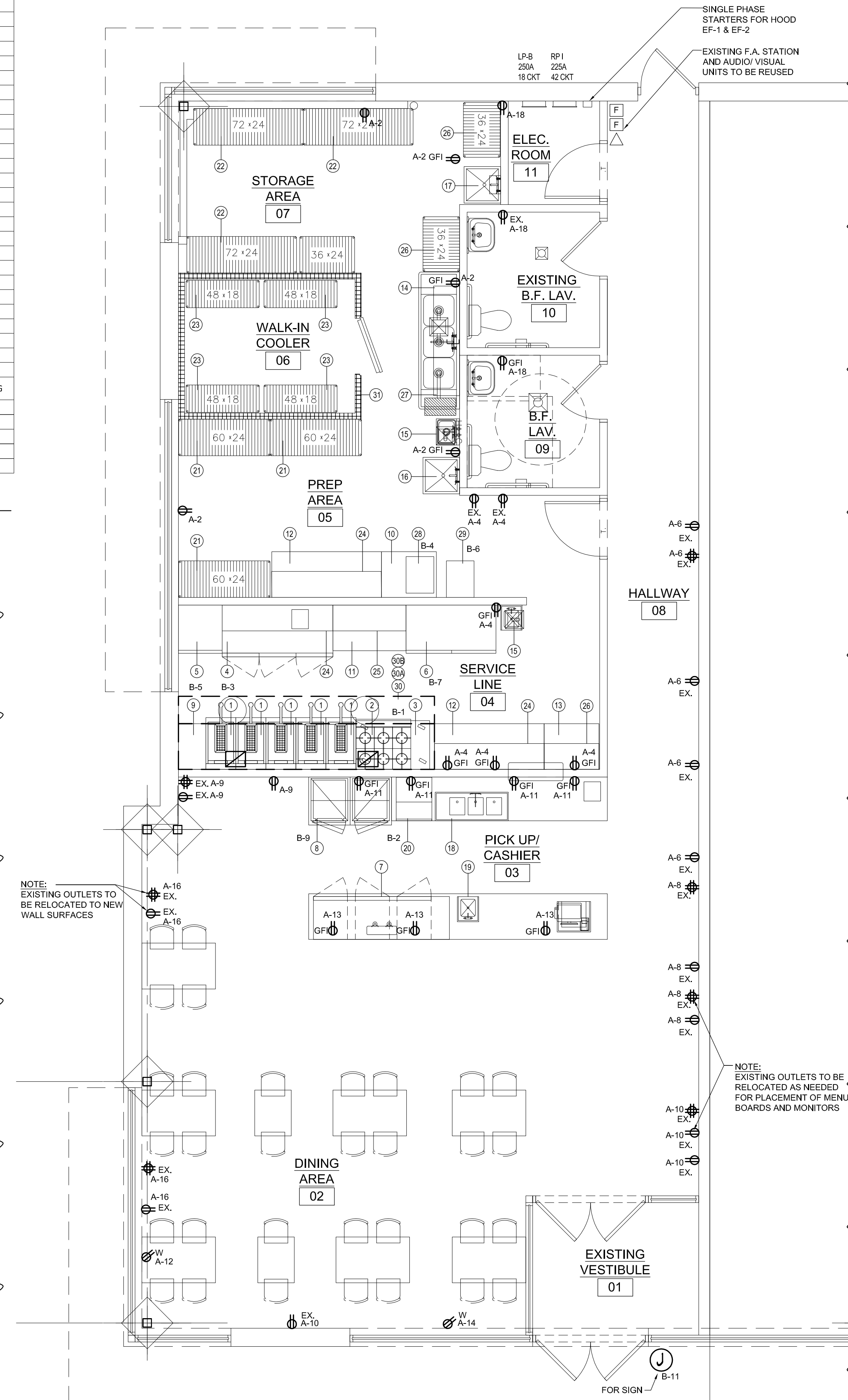
NOTES: ELECTRICAL

- ELECTRICAL SERVICE SHALL BE VERIFIED ON SITE.
- THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH AND ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, ORDINANCES REGULATIONS, AS WELL AS THE RULES AND STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, THE NATIONAL ELECTRICAL CODE, THE NATIONAL SAFETY CODE, A.I.E.E. AND OSHA.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND CERTIFICATES OF INSPECTION FOR ALL WORK.
- SHOULD ANY FIELD CONDITIONS PREVENT THE INSTALLATION OF UTILITIES SHOWN, THE CONTRACTOR IS REQUIRED TO MAKE ANY MINOR DEVIATIONS THEREFROM AS DETERMINED BY THE OWNER WITHOUT ANY ADDITIONAL COST.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND SHALL EXAMINE TO HIS SATISFACTION ALL OF THE PHYSICAL CONDITIONS.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE AGAINST MECHANICAL AND ELECTRICAL DEFECTS OF ANY OR ALL EQUIPMENT, MATERIALS AND WORKMANSHIP.
- ELECTRICAL CONTRACTOR TO PROVIDE LAYOUTS AS SHOWN.
- VERIFY ADDITIONAL UNITS REQUIRED BY OWNER/TENANT.
- ALL FLUORESCENT FIXTURES TO HAVE T8 LAMPS & ELECTRONIC BALLAST.
- PROVIDE OCCUPANCY SENSORS WHERE REQUIRED BY AHI.

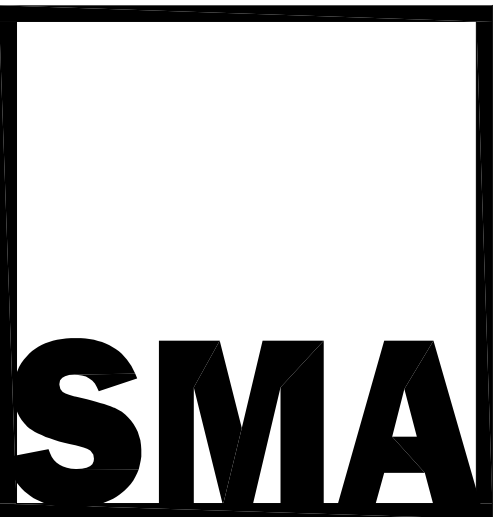
NO	ITEM NAME	MODEL	SIZE (W x D x H)	MANUFACTURER	BTU	QT	VOLTAGE	LOAD	PLUG
1	75LB FRYER	SG-18s	19.7 x 34.5 x 46.2	PITCO	140,000	5			
2	6 BURNER	ATHP-36-6	36.0 x 27.6 x 13.1	ATOSA	150,000	1			
3	48" CHEFBASE	ECB48D2	48.375 x 32.125 x 20	EVEREST		1	115V/ 60 HZ/ 1-PH	3.5 AMP	NEMA 5-15P
4	72" MEGA TOP	EPBR3	71.125 x 35.25 x 38.5	EVEREST		1	115V/ 60 HZ/ 1-PH	3 AMP	NEMA 5-15P
5	1 DOOR REACH IN FREEZER	ESF1	29.25 x 31.625 x 74.25	EVEREST		1	115V/ 60 HZ/ 1-PH	5 AMP	NEMA 5-15P
6	2 DOOR REACH IN FREEZER (60")	ESWF2	59.0 x 31.625 x 74.25	EVEREST		1	115V/ 60 HZ/ 1-PH	7.5 AMP	NEMA 5-20P
7	90" KEG COOLER	EBD4	89.25 x 27.0 x 37.25	EVEREST		1			
8	2 DOOR BEER 53"	EMGR48B	53.125 x 30.75 x 80.125	EVEREST		1	115V/ 60 HZ/ 1-PH	6 AMP	NEMA 5-15P
9	18 X 30" S/S WORK TABLE		18 x 30 x 34			1			
10	36 X 30" S/S EQUIPMENT STAND		36 x 30 x 26			1			
11	48 X 30" S/S WORK TABLE		48 x 30 x 34			1			
12	72 X 30" S/S WORK TABLE		72 x 30 x 34			1			
13	36 X 30" S/S WORK TABLE		36 x 30 x 34			1			
14	3 COMBINE SINK	TSA-3-12-D1	90 x 24 x 44.5	Turbo Air		1			
15	HAND SINK	HS-1615S	15.75 x 15.25 x 13.375	GSW USA		2			
16	1 PREP SINK	TSB-1-N	24 x 24	Turbo Air		1			
17	MOP SINK	TSA-1	18 x 18	Turbo Air		1			
18	BAR 3 SINK		48 x 18.75	Regency		1			
19	BAR HAND SINK					1			
20	ICE MAKER- L	UC-280-FA	26 x 27 x 39	Avantco		1	115V/ 60 HZ/ 1-PH	8.6 AMP	NEMA 5-15P
21	24 X 60" EPOXY WIRE SHELVES					3			
22	24 X 72" EPOXY WIRE SHELVES					5			
23	18 X 48" EPOXY WIRE SHELVES					4			
24	72" DOUBLE OVER SHELVES					3			
25	48" DOUBLE OVER SHELVES					1			
26	36" DOUBLE OVER SHELVES					1			
27	72" Wire Wall Shelves					1			
28	Vacuum Tumbler	VTS 42		Biro		1	115V/ 60 HZ/ 1-PH	DRIVE 0.61 AMP PUMP 4.20 AMP	3-PRONG PLUG
29	Oil Filter	PF80		Frymaster		1	120V/ 60HZ/ 1-PH	6.2 AMP	
30						1			
30A						2			
30B						1			
31						1			



2 PARTIAL ROOF POWER PLAN
SCALE: 1/4" = 1'-0"
NORTH



1 POWER PLAN
SCALE: 1/4" = 1'-0"
NORTH



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D.B./C.B.	R.A./P.D.
ISSUANCES	
NO DESCRIPTION	DATE
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SHEET TITLE
POWER PLAN

DWG. NO.

E1.0.1

ELECTRICAL LIGHTING SCHEDULE		
LIGHTING		LOCATION
	NEW 2'x2' SURFACE MOUNTED FIXTURE. SELECTED BY CONTRACTOR AND APPROVED BY OWNER.	B.F. LAV.
	WAREHOUSE PENDANT HANGING LED LIGHT LAMP 20W MAX LED.	DINING AREA
	TRACK LIGHTING WITH ADJUSTABLE HEADS. LAMP 20W MAX LED.	DINING AREA, PICK UP AREA
	WALK IN COOLER LIGHT FIXTURE BY COOLER CONTRACTOR.	WALK IN COOLER
	HOOD LIGHT FIXTURE BY HOOD CONTRACTOR.	HOOD
	EXISTING 2'x2' LAY IN GRID FIXTURE. LIGHTING TO BE SALVAGED AND REINSTALLED AS SHOWN / AS NEEDED PER TENANT LAYOUT	SERVICE LINE, PREP AREA.
	EXISTING 2'x2' LIGHT/EXHAUST COMBO FIXTURE.	B.F. LAV.
	EXISTING 1'x4' SURFACE MOUNTED FIXTURE.	STORAGE, ELECTRICAL ROOM
	EXISTING RECESSED LIGHTING FIXTURE	EXISTING VESTIBULE
	WALL OR CLG. MTD. SELF CONTAINED EXIT FIXTURE W/ ARROWS INDICATED. ISOLITE RS SERIES OR EQUAL.	
	EXIT LIGHT W/ EMERGENCY HEADS	
	COMBO EMERGENCY/EXIT LIGHT, 6 VOLTS WITH 22 WATT BATTERY CAPACITY FOR REMOTE HEAD. ISOLITE CMB SERIES OR EQUAL	
	REMOTE EMERGENCY HEAD - WEATHERPROOF ISOLITE SB12W OR EQUAL	
	WALL OR CLG. MTD. EMERGENCY BATTERY UNIT W/ 2 SIDE MTD. ADJUSTABLE HEADS W/ BATTERY BACK-UP ISOLITE EL2 SERIES OR EQUAL.	

NOTES:
 1. EMERGENCY POWER SHALL HAVE A MINIMUM OPERATION OF 90 MINUTES.
 2. EMERGENCY EXIT & BATTERY UNITS TO BE CONNECTED TO LOCAL LTG CIRCUIT AHEAD OF SWITCHING.

DISTRIBUTION	
	SUPPLY AIR GRILLE - SEE MECHANICAL PLAN
	SUPPLY AIR GRILLE - SEE MECHANICAL PLAN
	RETURN AIR GRILLE - SEE MECHANICAL PLAN
	EXHAUST FAN - SEE MECHANICAL PLAN

GENERAL NOTES

- SEE VENTILATION AND MECHANICAL EQUIPMENT DRAWINGS FOR ELECTRICAL WIRING OF HOOD, SUPPLY FANS, EXHAUST FANS AND ROOF TOP UNITS. PROVIDE ALL INTER-WING AND WIRING FOR HOOD FIRE PROTECTION SYSTEM AS NOTED. INTERCONNECT WITH BUILDING FIRE ALARM SYSTEM AS REQUIRED BY AHJ. COORDINATE WITH EQUIPMENT INSTALLER.
- PROVIDE ALL STARTERS REQUIRED FOR FANS. STARTERS TO INCLUDE. CONTROL TRANSFORMERS. SWITCHES WITH AUXILIARY CONTACTS FOR EQUIPMENT CONTROL AND PILOT LIGHT. COORDINATE WITH EQUIPMENT INSTALLER.
- MAINTAIN AND EXTEND EXISTING BUILDING FIRE ALARMS SYSTEM IN REMODELED AREAS AS REQUIRED BY AHJ. COORDINATE WITH SYSTEM REPRESENTATIVE.
- REMOVE ALL ELECTRICAL EQUIPMENT AND WIRING NOT REUSED IN REMODELED AREAS.
- CLEAN AND RELAMP EXISTING LIGHTING FIXTURES REUSED. RECONNECT TO EXISTING CIRCUITS IF SUITABLE.
- RECONNECT EXISTING RECEPTACLES, REUSED, TO EXISTING CIRCUITS IF STABLE. PROVIDE NEW DEVICES IF REQUIRED.
- CIRCUITS SHOWN ARE NOT NECESSARY. CIRCUITS TO BE USED, BUT METHOD OF CIRCUITING, REUSE EXISTING IF SUITABLE. VERIFY IN FIELD.
- ALL OUTLETS WITHIN 6" OF SINKS AND OUTLETS IN PREP, STORAGE AND SERVICE LINE AREAS TO BE GFI TYPE.
- EXTEND EXISTING OUTLETS, REUSED, TO NEW WALL SURFACES WHERE REQUIRED. SEE ARCHITECTURAL DRAWINGS.

EXISTING PANEL "LP-A"						
VOLTAGE: 120V/ 208V - 3- - 4W						
LOAD DESCRIPTION	KVA	C.B. SIZE	A	B	C	LOAD DESCRIPTION
GEN & COOLER LTG	1.1	1			2	1.0
GEN LTG	1.0	3			4	1.2
GEN LTG	2.4	5			6	1.2
GEN LTG	2.4	7			8	1.2
4	0.8	9			10	1.0
4	0.8	11			12	1.1
3	0.6	13			14	1.1
		15			16	1.2
		17			18	0.8
		19			20	
		21			22	
		23			24	
NEW RTU 3# 4 & 1# 8 (G)1-114°C	20.0	25	70		26	
		27			28	
		29			30	
		31			32	
		33			34	
		35			36	
		37			38	
EXISTING RTU-1	11.0	39	60		40	8.8
		41			42	
		40.1				18.6

ALL CIRCUIT BREAKERS SHALL BE 20A-1P BE 20A-1P UNLESS OTHERWISE NOTED

GRD BUS

MAINS: 200A-3P MLO

TOTAL CONNECTED LOAD: 58.7 KVA
163 AMP

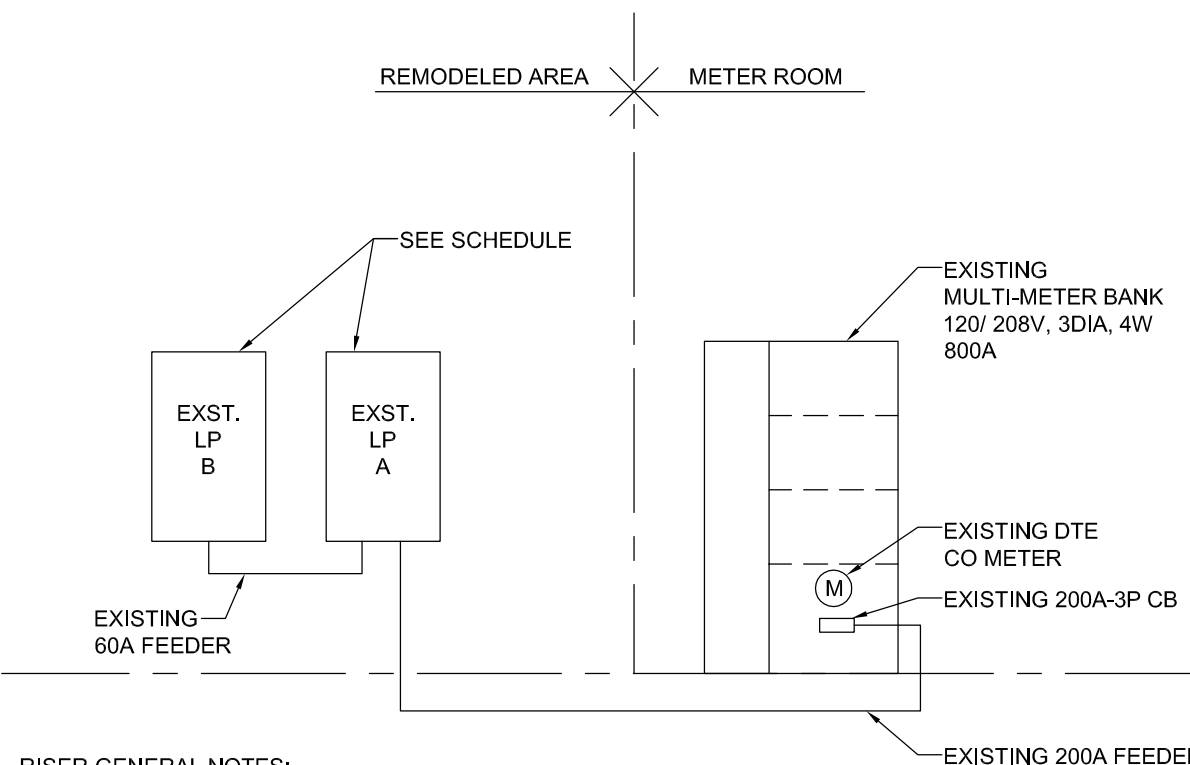
EXISTING PANEL "LP-B"						
VOLTAGE: 120V/ 208V - 3- - 4W						
LOAD DESCRIPTION	KVA	C.B. SIZE	A	B	C	LOAD DESCRIPTION
KIT ITEM #3	0.5	1			2	KIT ITEM #20
KIT ITEM #4	0.4	3			4	KIT ITEM #28
KIT ITEM #5	0.6	5			6	KIT ITEM #29
KIT ITEM #6	0.9	7			8	EF-1
KIT ITEM #8	0.7	9			10	EF-2
SIGN	1.2	11			12	SHUNT TRIP BRK HOOD FA PANEL
WALK-IN COOLER 3# 12 & 1# 12(G)-1/2°C	1.0	13			14	
		15			16	
VERIFY		17			18	
	5.3					5.6

ALL CIRCUIT BREAKERS SHALL BE 20A-1P BE 20A-1P UNLESS OTHERWISE NOTED

GRD BUS

MAINS: 200A MLO

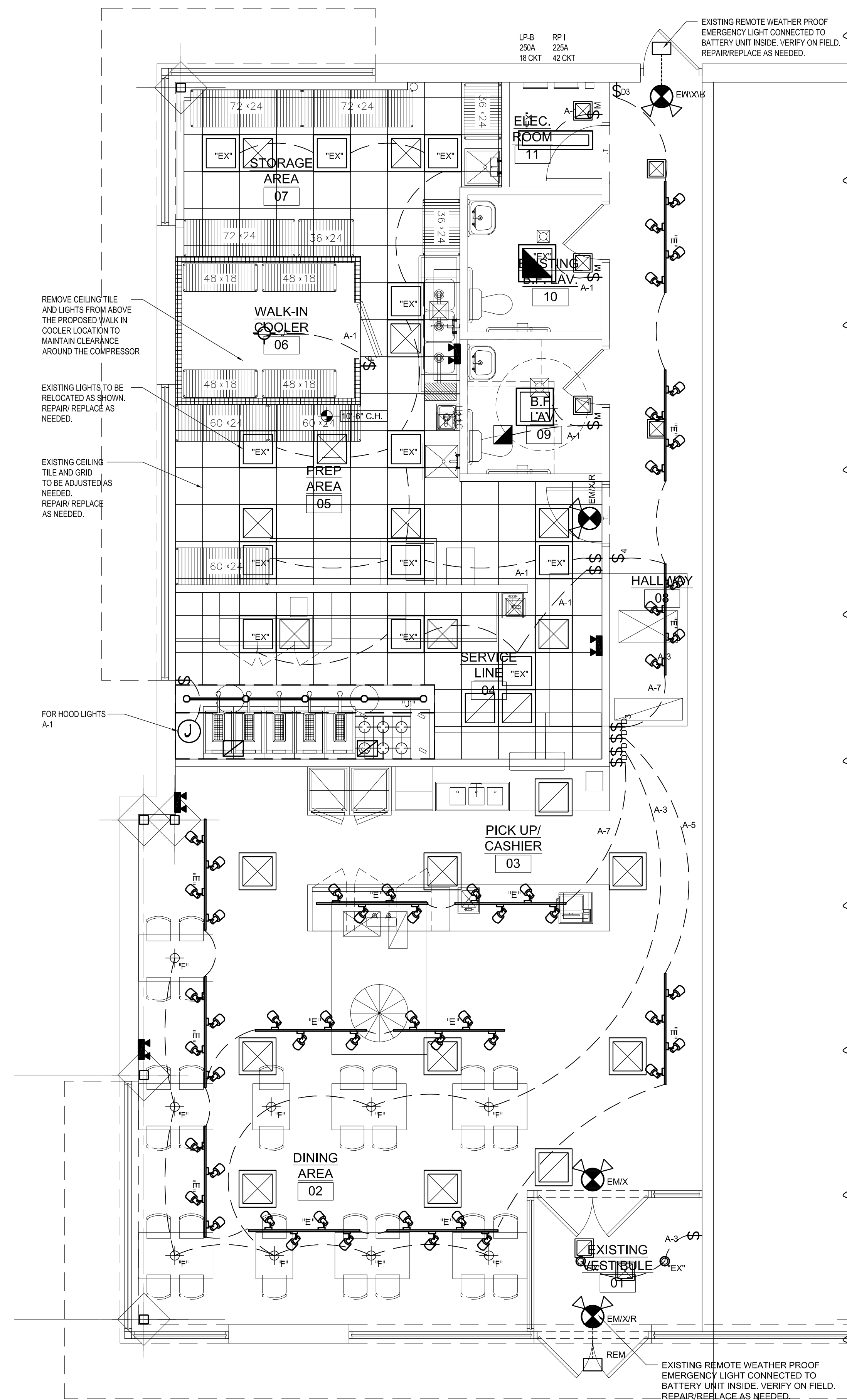
TOTAL CONNECTED LOAD: 10.9 KVA
TOTAL DEMAND LOAD: 8.8 KVA
25 AMP



RISER GENERAL NOTES:

- ALL ELECTRICAL EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED.
- TIGHTEN ALL EXISTING CONDUCTORS WHEN REQUIRED. REMOVE CONDUCTORS NOT USED.
- SEE PANEL SCHEDULES FOR BRANCH CIRCUIT AND PANEL LOAD INFORMATION.
- PROVIDE NEW TYPE WRITTEN DIRECTORIES FOR EACH PANEL BOARD.
- PROVIDE ENGRAVED NAMEPLATES FOR ALL EQUIPMENT INCLUDING LP'S AND MAIN CIRCUIT BREAKER. NAMEPLATES TO IDENTIFY EQUIPMENT AND VOLTAGE. CO-ORDINATE WITH OWNER.
- REMOVE ALL EXISTING MARKINGS ON EQUIPMENT.
- CONTRACTOR SHALL VISIT THE SITE AND SHALL EXAMINE TO HIS SATISFACTION ALL OF THE EXISTING PHYSICAL CONDITIONS.
- PROVIDE FULL MAINTENANCE OF ALL ELECTRICAL EQUIPMENT PER NETA STANDARDS.
- REPLACE ALL DEFECTIVE EQUIPMENT.
- VERIFY CONTINUITY OF ALL GROUNDING SYSTEMS. REPAIR OR REPLACE IF NEEDED.
- REPLACE FUSES IN FUSIBLE SWITCHES, FOR REMODELED AREAS, WHICH ARE TO BE REUSED.

2 ELECTRICAL RISER DIAGRAM
SCALE: N.T.S.



1 LIGHTING/ REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



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SHEET TITLE
 LIGHTING/
 REFLECTED
 CEILING PLAN

DWG. NO.

E1.0.2

FOR QUESTIONS, CALL THE
Detroit Mechanical
REVENUE 327
PHONE: (313) 438-7009
EMAIL: CME@DETROITMECHANICAL.COM

PATENT NUMBERS	
EXHAUST HOODS NO-2/89D-2/SND-D (CANADA) - CA PATENT 250443-C	

HOOD INFORMATION - JOB#5506074	
HOOD NO.	6024
NO-2	
MODEL	CAPTIVEAIRE
LENGTH	12' 0"
TYPE	1
APPLIANCE	HEAVY
CONSTRUCTION	200
TOTAL DOW CFM	2000

HOOD INFORMATION	
HOOD NO.	1
TAG	CAPTIVATE SOLO FILTER
TYPE	10
HT	20"
EFFICIENCY #7	80% SEE FILTER SPEC
NOZZLES	4
ULC	ULC-3549
ULC	ULC-3549

HOOD OPTIONS	
HOOD NO.	1
TAG	
FIELD WRAPPER	180P HIGH FRONT LEFT
BACKSPLASH	600P HIGH X 360P LONG 430 SS VERTICAL
RIGHT SIDESPLASH	600P HIGH X 600P LONG 430 SS VERTICAL
RIGHT END STANDBY (FINISHED)	1" WIDE 60" LONG INSULATED
SEWER SENSING INSTALL.	60" PLUN
RIGHT WALL	AS END PANEL

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL 'DW' ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL 'DW' IS LISTED TO UL-1978 AND IS INSTALLED USING 'V' CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL 'DW' DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURER'S INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURER LISTING MODEL 'DW' HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL 'DW-2R', 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE
HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

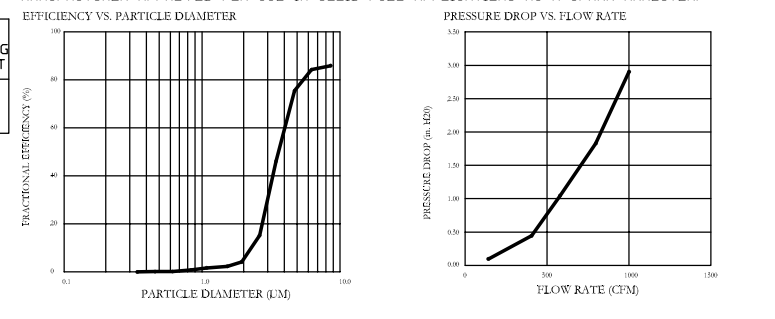
VERIFY CEILING HEIGHT
HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:
APPROVED AS NOTED
APPROVED WITH NO EXCEPTION TAKEN
REUSE AND RESUBMIT
SIGNATURE: _____ DATE: _____

SPECIFICATION CAPTRATE™ GREASE-STOP™ SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A LIQUID-SATURATED SECTION IN CONJUNCTION WITH A SLOTTED NEAR-BATTLE SECTION, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY. FILTER IS STAINLESS STEEL CONSTRUCTION, AND DESIGNED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNELS.

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 80% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1/4" W.G. WATER GAGE. THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2819-02. MANUFACTURER APPROVES FOR USE IN SOLID FATS, APPLICATING AS A GRAM ANNEITER.



CAPTIVATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96
NET STANDARD #26
UL STANDARD #3646
DOT MECH CODE (SPL)
ULC-3549

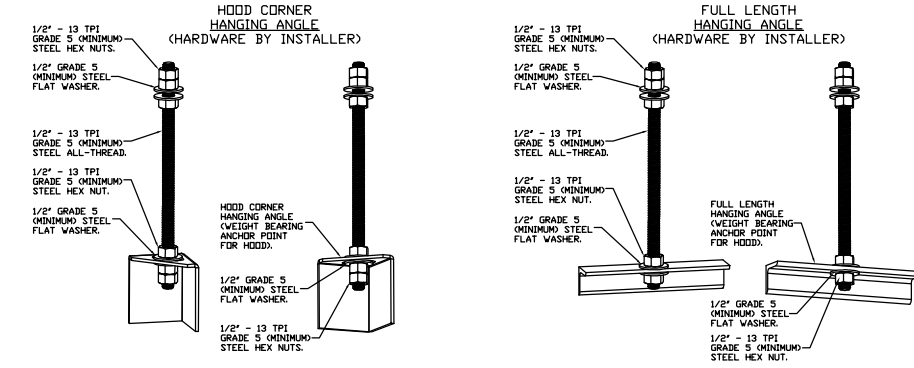
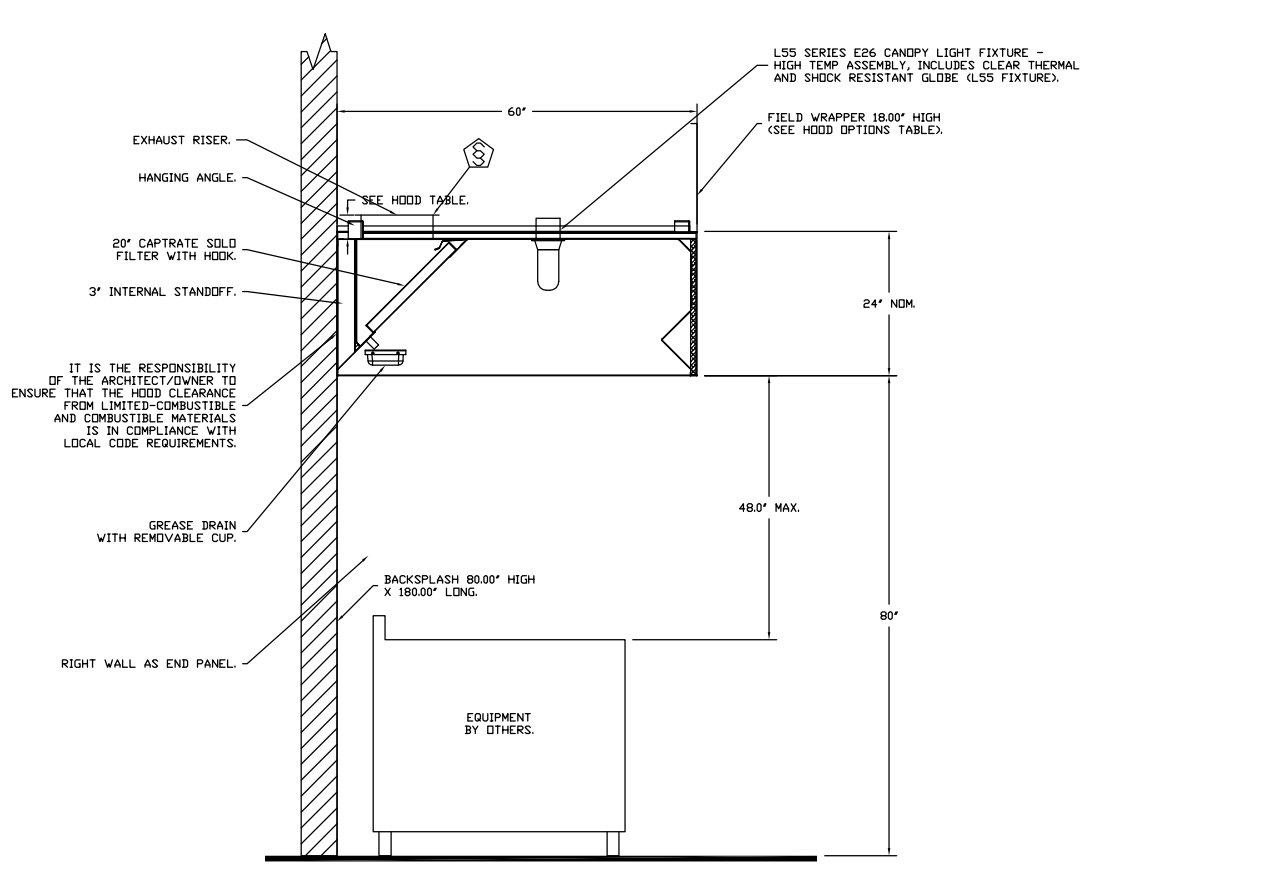
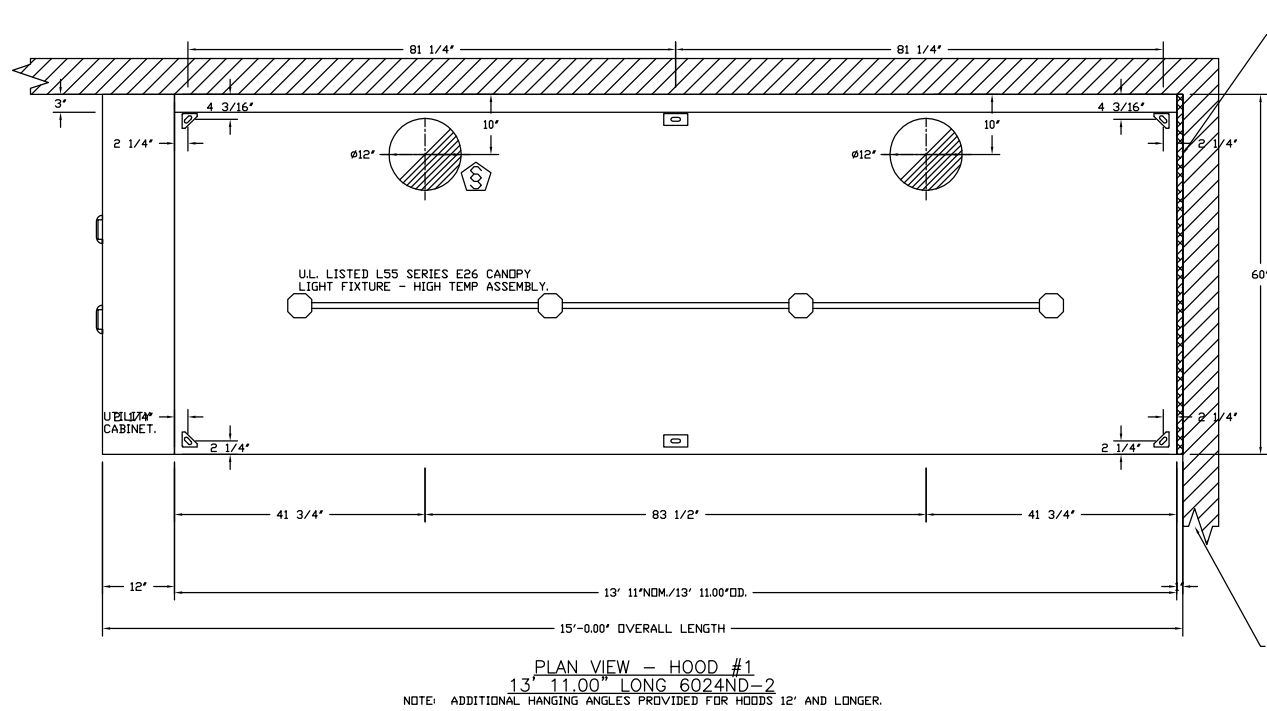
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NO.	DATE

CAPTIVEAIRE
DETROIT MECHANICAL
3250 West Park Road, Troy, MI 48068

Korean BBQ Tank RI
435 E. Big Beaver Rd,
Troy, MI, 48083

DATE: 6/8/2022
DWG#: 5506074
DRAWN BY: Josh.Hilen
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 1



ASSEMBLY INSTRUCTIONS
HANDING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 MINIMUM HEX NUTS AS SHOWN MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH CEILING ANGLE. SINGLE HEX NUT BENEATH HANDING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANDING ANGLE. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT TORQUE ALL HEX NUTS TO 57 FT-LBS.

SECTION 9042 COMMERCIAL COOKING SYSTEMS TAG CIRE Fire Protection

PART 1 - GENERAL
1.1 SUMMARY
A. The CIRE Fire Protection system is a pre-engineered wet chemical water-based (surfactant) fire suppression system for use in commercial kitchens.

2. SUBMITTALS
A. The manufacturer assumes no liability for the use or results of use of this document. This specification is to be reviewed by the engineer to confirm requirements of the project and building codes are met.
B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.
3. CIRE Fire Protection System shall be UL & ULC listed in accordance with UL300, and ULC/ORD-C12546.
4. Microprocessor-based control board shall be ETL Listed to UL Standard 864 and CAN/ULC-552713.
5. CIRE Fire Protection System is intended for installation and for use in accordance with the National Fire Protection Association Standards:
1. Wet Chemical Extinguishing Systems, NFPA 17A
2. National Electrical Code, NFPA 70
3. National Fire Alarm & Signaling Code, NFPA 72
4. Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment, NFPA 96
5. The CIRE Fire Protection System is approved for use in New York City per FDNY CDA 85B77.
6. WARRANTY
A. All units are provided with the following 5-year standard warranty from date of shipment. Warranty does not cover consumable products such as batteries, surfactant, and nozzle caps.
B. This warranty shall not apply if:
1. The equipment is not installed by a qualified installer per the manufacturer's installation instructions shipped with the product.
2. The equipment is not installed in accordance with Federal, State, and Local codes and regulations.
3. The equipment is misused, neglected, or not maintained per the manufacturer's maintenance instructions.
4. The equipment is not operated within its published capacity.
5. The invoice is not paid within the terms of the sales agreement.
C. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment should any part of the equipment prove to be defective in material or workmanship within the 5-year warranty period, upon examination by the manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer. Freight prepaid to a destination determined by the manufacturer.

7. GENERAL ASSEMBLY
A. A pre-engineered fixed pipe, automatic wet chemical (surfactant) fire suppression system for protection of all hazard areas associated with cooking operations, including exhaust hoods, plenums, ductwork, and cooling appliances.
B. The fire system shall be factory assembled, tested, and shipped as a complete unit.
C. The following specifications, delivering all capacities scheduled and conforming to the design indicated herein. Alternate layouts or dimensional changes will not be accepted.
8. COMPONENTS
A. Exhaust hood fire system components to be factory installed.
B. Distribution Nozzles
1. Nozzles shall be located to protect the exhaust ducts, plenums, and all cooking appliances requiring protection.
2. All nozzles shall be equipped with a metal blow off cap. The cap prevents contamination from entering the pipe returns and is designed to pop-off upon system discharge, allowing agent to flow to the protected hazard area.

REVISIONS	
NO.	DATE

CAPTIVEAIRE
DETROIT MECHANICAL
3250 West Park Road, Troy, MI 48068

Korean BBQ Tank RI
435 E. Big Beaver Rd,
Troy, MI, 48083

DATE: 6/8/2022
DWG#: 5506074
DRAWN BY: Josh.Hilen
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 2

SMA
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Architects
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s-m-associates.com
248.457.6903
info@s-m-associates.com

PROJECT NAME:
KOREAN BBQ

PERMIT SUBMISSION
06-28-22

435 E. BIG BEAVER
TROY MI 48083

STATE OF MICHIGAN
PIETRO D'ALEO
ARCHITECT
30105561

ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATION OF ALL DIMENSIONS.

JOB NO. 22-0987
D./B./C/B R./A./P.D

NO	DESCRIPTION	DATE
1	PERMIT SUBMISSION	06/28/22

SHEET TITLE
CAPTIVE AIR

DWG. NO.
1

SHEET NO. 4

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NO.	DATE

CAPTIVEAIRE
DETROIT MECHANICAL
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SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 3

SECTION 23 38 13.1

SPECIFICATIONS
TAG Commercial Kitchen Ventilation Hoods, Listed Commercial Kitchen Hood 1 - GENERAL

- 1.1 SUMMARY
A. The NBE series is a Type I wall canopy hood for use over 600°F cooking surface temperatures. The aerodynamic design includes a mechanical baffle and performance enhancing lip for exceptional capture and containment.
B. The hood shall have the size, shape, and performance specified on drawings.
- 1.2 SUBMITTALS
A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and local codes and regulations.
B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.
C. The manufacturer shall supply complete computer generated submittal drawings, including hood section views and hood plan views. These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.
- 1.3 QUALITY ASSURANCE
A. This hood is ETL-listed to standard UL710, ULC710, and ULC-3546 when installed in accordance with these installation instructions and National Fire Protection Association Standard NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.
B. Built-in compliance with NSF/ANSI Standard 2.
C. The hood shall be ETL listed as:
1. Exhaust Hood Without Exhaust Ductwork.
2. ETL Sanitation Listed and built in accordance with NFPA 96.
3. The ETL label shall list temperature ratings and minimum CFM/ft ratings.
- 1.4 WARRANTY
A. All units shall be provided with the following standard warranty:
1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.
2. Equipment shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer. Freight prepaid to a destination determined by the manufacturer.
C. Refer to Manufacturer's Operation, Installation, and Maintenance (CIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty claims.

- 2.1 GENERAL
A. Construction shall be dependent on the structural application to remove distortion and other defects. All seams, joints, and penetrations of the hood enclosure to the lower outermost plenum, which ducts and captures grease and other vapors and exhaust gases, shall have a liquid-tight continuous external weld in accordance with NFPA 96.

- 2.2 CONSTRUCTION
A. Construction shall be type 430 stainless steel.
B. Double wall insulated front to eliminate condensation and increase rigidity on wide sizes. The insulation shall have a flexural modulus of 475 EI, meet UL 188 requirements and be in accordance with NFPA 96A and 96B.
C. Hood shall be equipped with a minimum of four connections for hanger rods. Hood lengths greater than 12' will have added hangers.
D. Exhaust duct color to be 4" high with flange.
E. The grease drain system shall be an enclosed integral part of the hood body and have slopes with an exposed, removable 1/2" grease cup to facilitate cleaning.
F. An integral baffle to direct grease laden vapors toward the exhaust filter bank.
G. Hood shall be furnished with UL classified filters, supplied in size and quantity as required by ventilator.
H. All seams shall be welded and have stainless steel on exposed surfaces.

- 2.3 LIGHTING
A. L35 Series canopy light fixture, includes clear thermal and shock resistant globe.
- 2.4 FILTERS
A. Stainless Steel Captivate Solo Filter with hook, ETL Listed, Particulate capture efficiency: 80% efficient at 9 microns, 76% efficient at 5 microns.
- 2.5 OPTIONS
A. Fire Suppression System UL 300 Fire suppression system.
B. Hood Mounted Utility Cabinet - Cabinet can store listed fire suppression system, listed components, pre-wired electrical controls.

- 2.6 ACCESSORIES
A. End Panels to maximize hood performance and eliminate the effects of cross drafts in the kitchen units constructed of stainless steel and lined according to hood with and cooling equipment. Exposed edges beveled for safety and rigidity. Selected panels:
1. Wall as End Panel
2. Splash panels selected
3. Backsplash
4. Right Sidesplash
5. Right End Standoff
6. Wrappers selected
7. Wrapper
E. Miscellaneous options selected
1. Sensor Install - Sensor set-up for 6" plenum.

- 2.7 EXAMINATION
A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to installer.
- 2.8 INSTALLATION

- 2.9 DUCT SIZES, CFM, AND STATIC PRESSURE REQUIREMENTS shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within ±1% increments along the length of the ventilator.
3. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.

REVISIONS	
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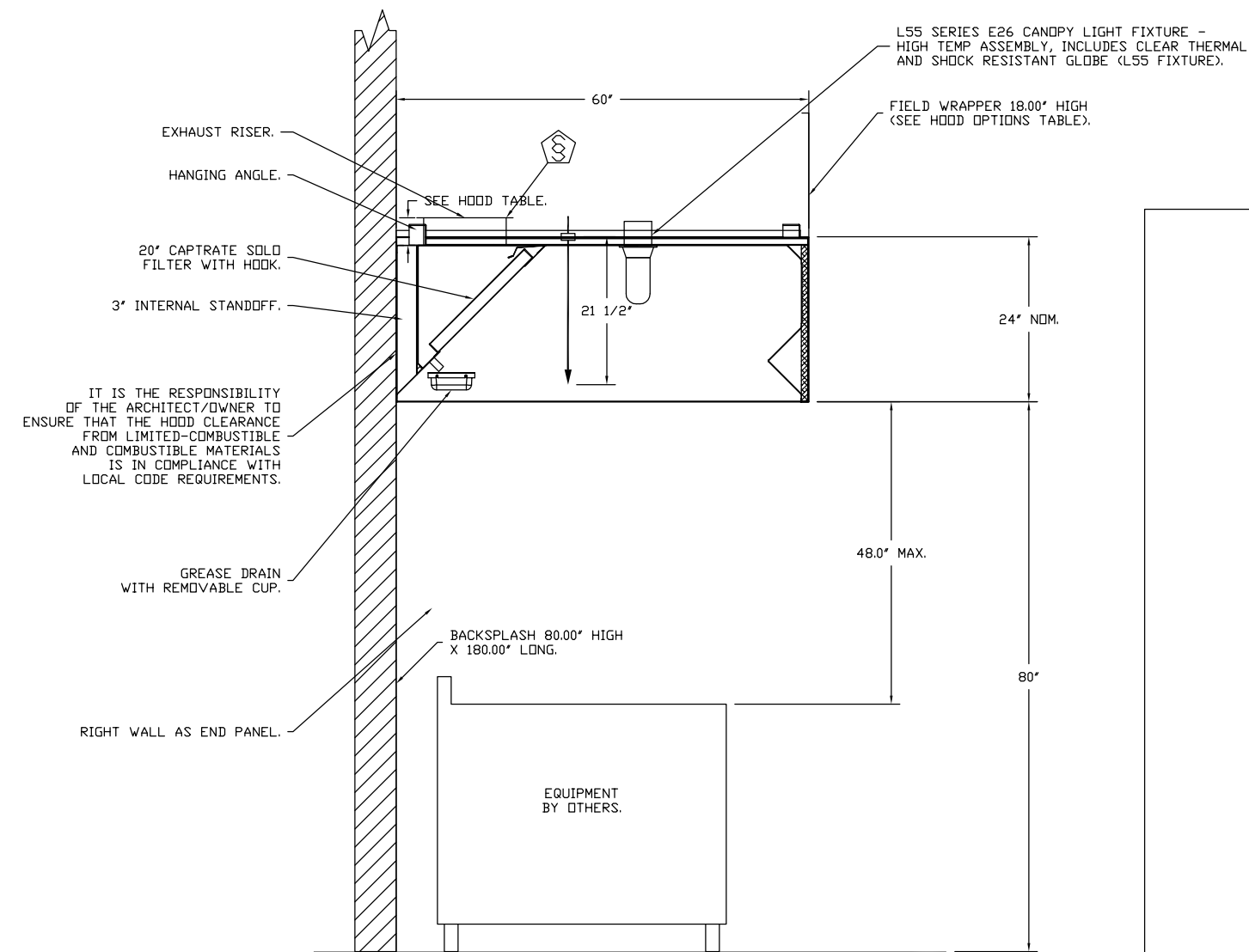
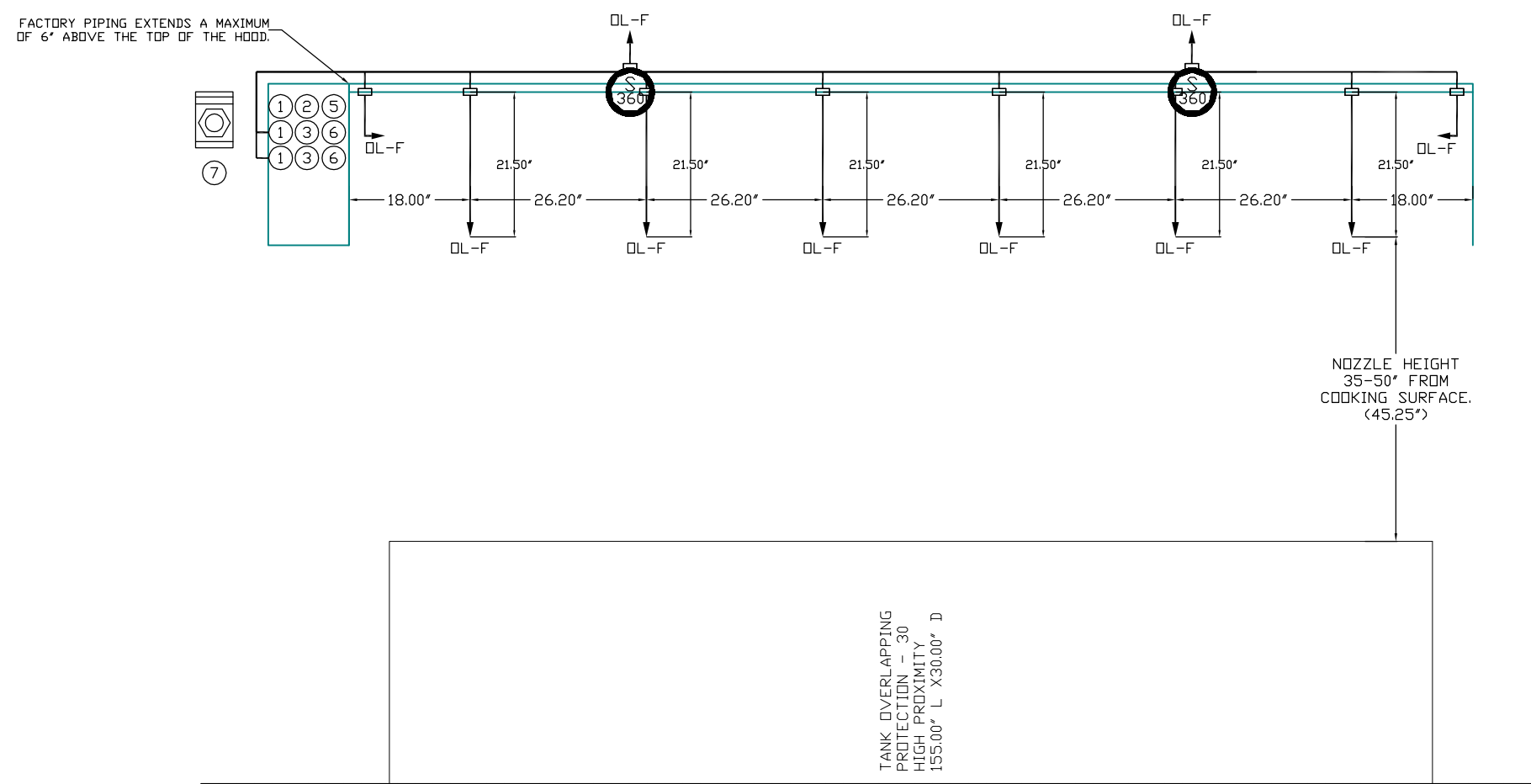
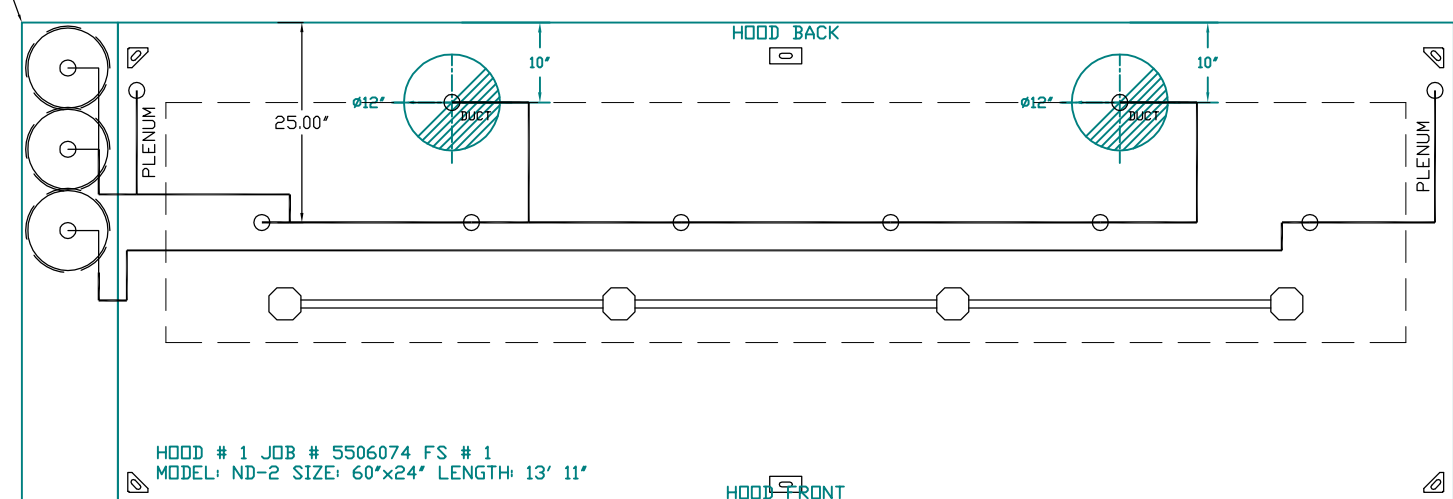
CAPTIVEAIRE
DETROIT MECHANICAL
3250 West Park Road, Troy, MI 48068

Korean BBQ Tank RI
435 E. Big Beaver Rd,
Troy, MI, 48083

DATE: 6/8/2022
DWG#: 5506074
DRAWN BY: Josh.Hilen
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 3

... SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES. EXAM 90 DEGREE ELBOW ADDS 13 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS.



SECTION VIEW - MODEL 6024ND-2 HOOD - #1

- NOTES
- FIELD PIPE DROPS AS SHOWN
 - PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS
 - RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
 - OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION
 - IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE
 - FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE
- THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS
- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 5506074
JOB NAME: KOREAN BBQ TANK
SYSTEM SIZE: TANK-SP-3 TOTAL FP REQUIRED: 46
HOOD # 1 13' 11.00" LONG x 60" WIDE x 24" HIGH
RISER # 1 SIZE: 12" DIA.
RISER # 2 SIZE: 12" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION

LEGEND - FIRE CABINET TANK SYSTEM

- 4 GALLON TANK
- PRIMARY ACTUATOR RELEASE
- SECONDARY ACTUATOR RELEASE
- PRESSURE SUPERVISION SWITCH
- PRIMARY HOSE ASSEMBLY
- SECONDARY HOSE ASSEMBLY
- REMOTE MANUAL ACTUATION DEVICE

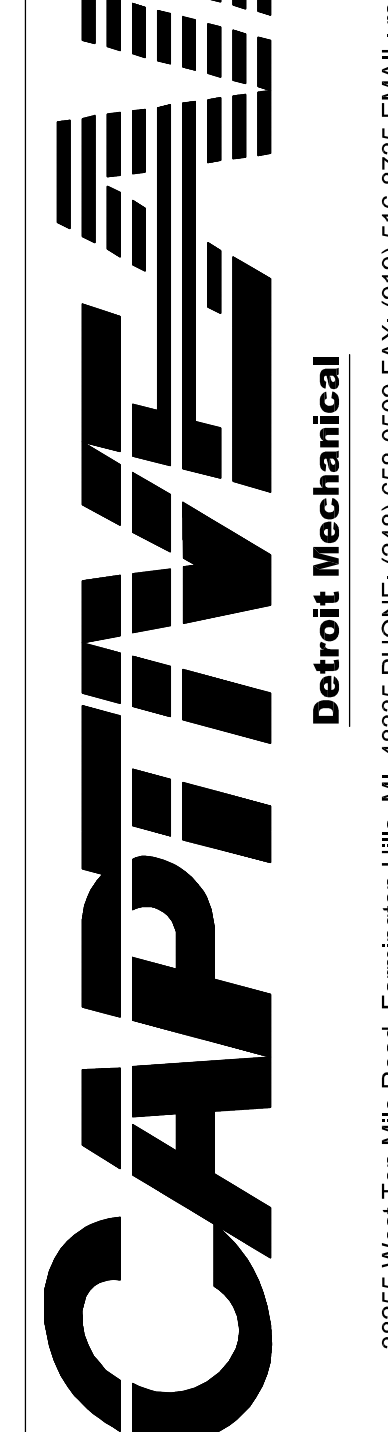
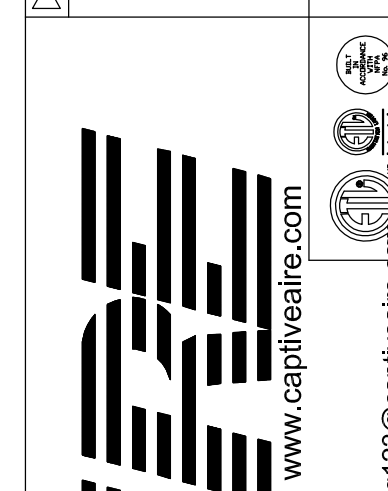
- NOTES
- FIELD PIPE DROPS AS SHOWN
 - SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS
 - FIELD INSTALLED DROP: FACTORY WILL PROVIDE DTY 1 60IN LONG PIECE OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED
 - SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED
 - RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
 - MAXIMUM 9 ELBOWS IN SUPPLY LINE
 - MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE COVERING A RANGE, FRYER, OR WOK TO REFLECT GENERAL PIPING REQUIREMENTS
 - IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE
 - FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD

JOB #: 5506074
JOB NAME: KOREAN BBQ TANK R1

SYSTEM SIZE: TANK-SP-3 TOTAL FP REQUIRED: 46
HOOD # 1 13' 11.00" LONG x 60" WIDE x 24" HIGH
RISER # 1 SIZE: 0" x 0"
RISER # 2 SIZE: 0" x 0"

REVISIONS

NO.	DESCRIPTION	DATE
1		
2		
3		
4		



PROJECT NAME:
KOREAN BBQ

PERMIT SUBMISSION
06-28-22

435 E. BIG BEAVER
TROY MI 48083



ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATION OF ALL DIMENSIONS.

JOB NO. 22-0987

D.B/C/B R.A./P.D

ISSUANCES

NO	DESCRIPTION	DATE
1	PERMIT SUBMISSION	06/28/22

SHEET TITLE
CAPTIVE AIR

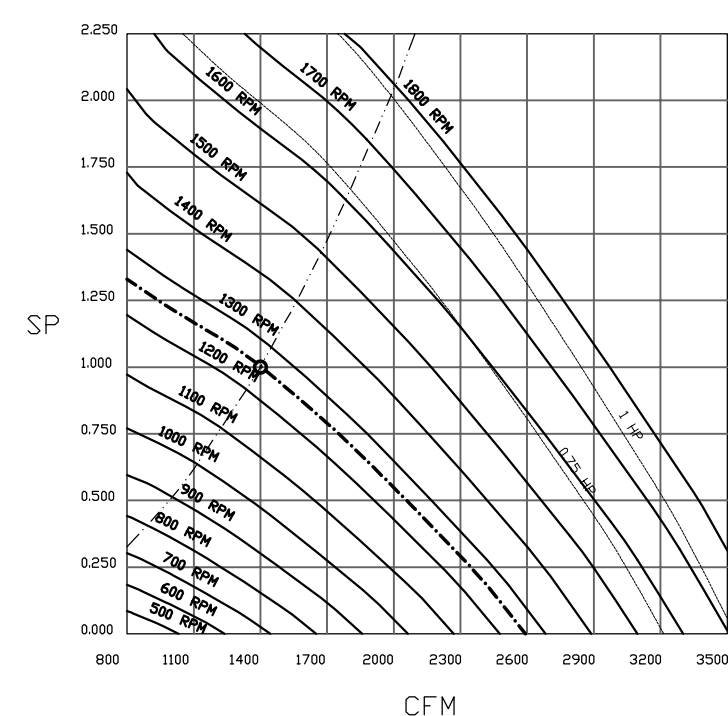
DWG. NO.

2

FANS #1 #2 - EXHAUST PERFORMANCE CURVES.

1400 CFM, 1 SP @ 1256 RPM AND 0.25 BHP AT 646 FEET AND 120 DEG F.

* PLEASE NOTE THAT THESE CURVES WERE ADJUSTED FOR JOB SPECIFIC TEMPERATURE AND ALTITUDE.



REVISIONS

NO.	DESCRIPTION	DATE
1		



Korean BBQ Tank R1
435 E Big Beaver Rd,
Troy, MI, 48083

DATE: 6/8/2022
DWG.#: 5506074
DRAWN BY: josh.hilem
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 10

FIRE SYSTEM INFORMATION - JOB#5506074

FIRE SYSTEM TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
				SYSTEM	LOCATION ON HOOD
1	TANK FS	4.0/4.0/4.0	46	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVES

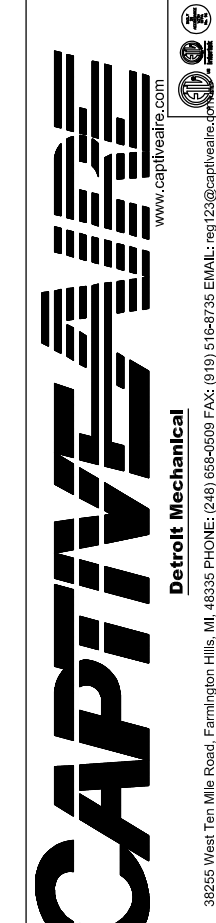
FIRE SYSTEM TAG	TYPE	SIZE	SUPPLIED BY
1	SC ELECTRICAL	R800	CAPTIVEAIR SYSTEMS

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY SITE
1	1 - 0 - 12-FB001-3044-01-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO. 1200 ON TANK RISE AT 300'	2	0
	1 - 0 - 87-10042-200 SECONDARY ACTUATOR VALVE (CSVA) - SINGLE ACTUATOR, REQUIRES MANUAL RELEASE ACTUATOR. TANK FIRE SUPPRESSION	2	0
	1 - 0 - 87-10045-200 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL. TANK FIRE SUPPRESSION	2	0
	1 - 0 - 87-30001-000 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION	3	0
	1 - 0 - 87-20003-000 PRIMARY ACTUATOR SET (PAA) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY. ONE NEEDED PER FIRE SYSTEM SUPERVISED. TANK FIRE SUPPRESSION	1	0
	1 - 0 - 87-30020-000 HARDWARE, SVA BOLTS. TANK FIRE SUPPRESSION	12	0
	1 - 0 - 8900410 HARDWARE, SPANLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC. TANK FIRE SUPPRESSION	6	0
	1 - 0 - 8900430 JUNCTION BOX FOR MANUAL PULL STATION 1.5" DEEP BACK BOX, RED COLOR. TANK FIRE SUPPRESSION	1	0
	1 - 0 - 1-DATAMATE DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS. TANK FIRE SUPPRESSION	3	0
	1 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION	9	0
	1 - 0 - 12-12174-HARDBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS. TANK FIRE SUPPRESSION	3	0
	1 - 0 - WC-20000-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION	3	0
	1 - 0 - 18-18000-000 PAVIC SINGLE ACTION MANUAL ACTUATION DEVICE PUSH/PULL STATION WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT, RED COLOR	1	0

REVISIONS

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1		



Korean BBQ Tank R1
435 E Big Beaver Rd,
Troy, MI, 48083

DATE: 6/8/2022
DWG.#: 5506074
DRAWN BY: josh.hilem
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO. 5

Korean BBQ Tank R1
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DATE: 6/8/2022

DWG.#: 5506074

DRAWN BY: josh.hilem

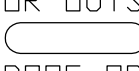
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MASTER DRAWING

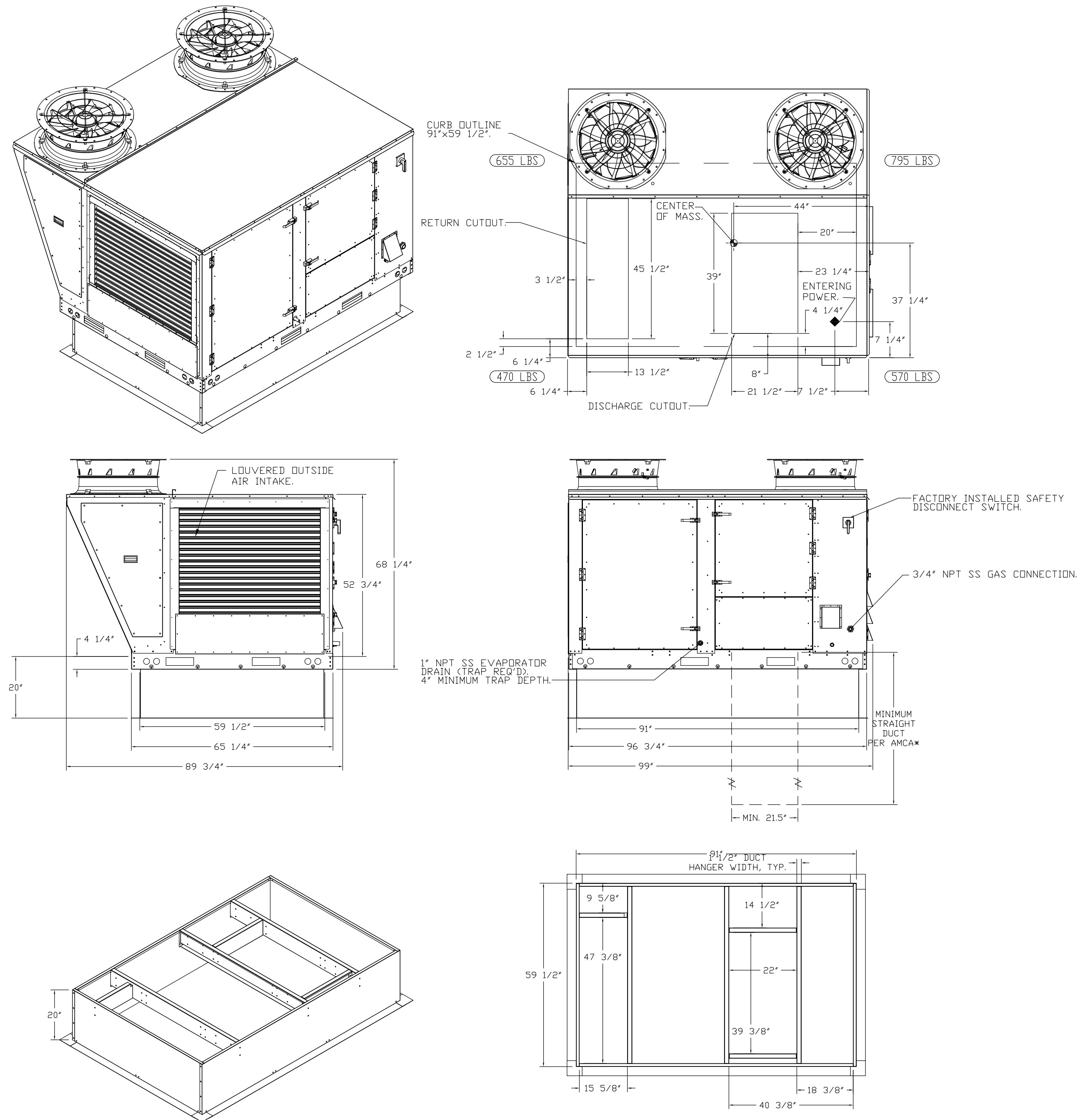
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FAN #3 CASRTU3-1300-18-15T-DDAS - HEATER

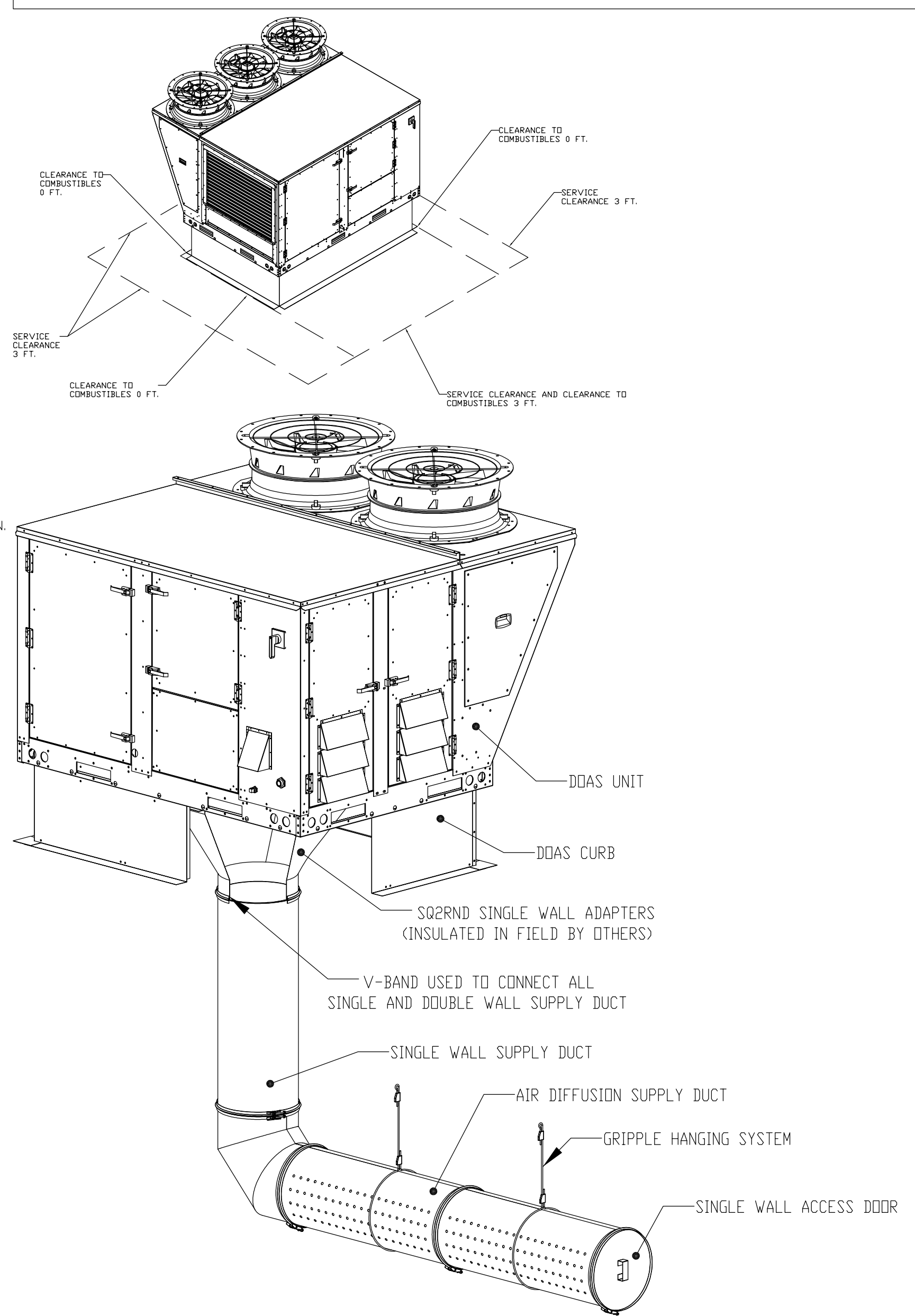
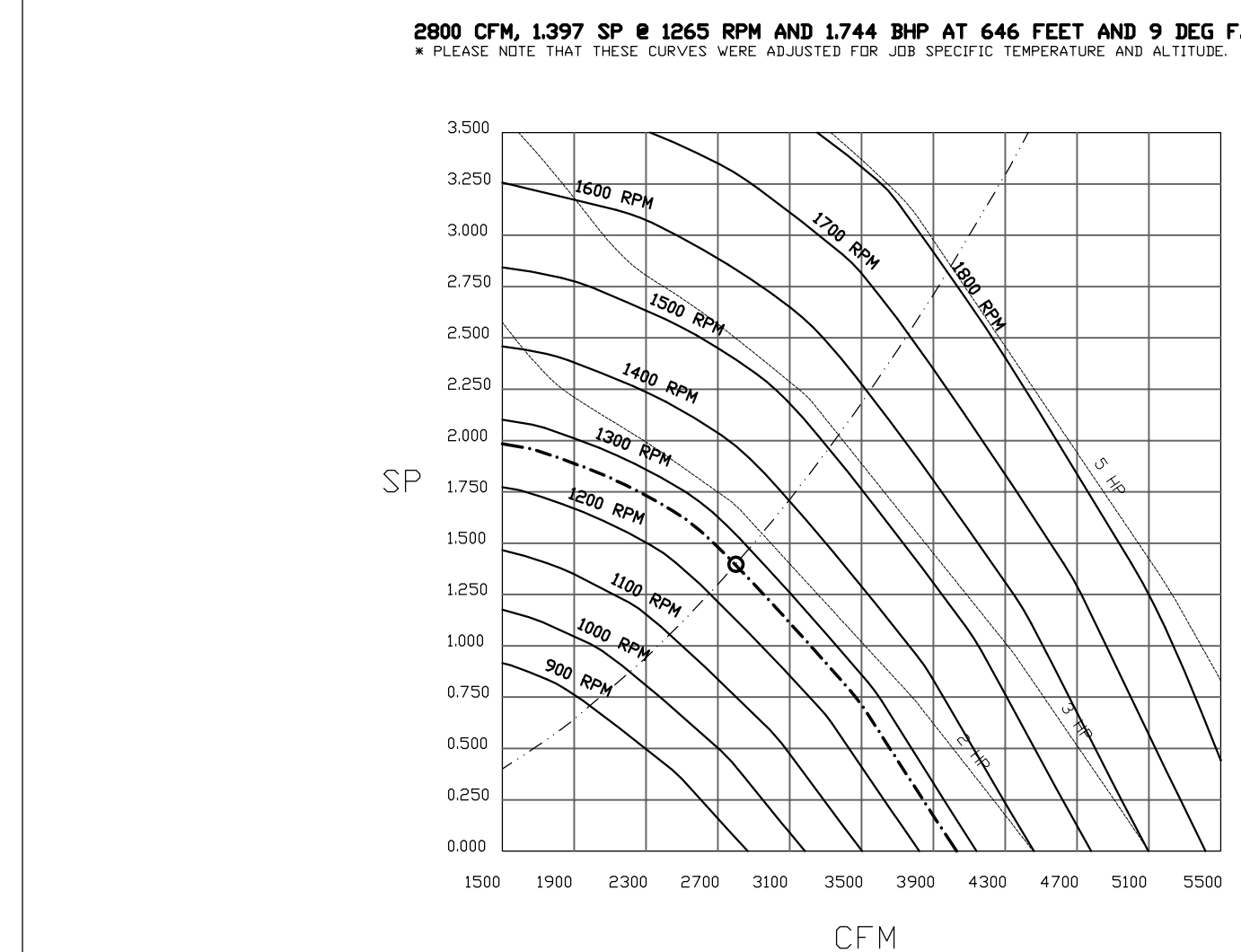
NOTES:

- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
-  DENOTES CORNER WEIGHT.
- ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 21.5" x 39".



FAN#3 - HEATER PERFORMANCE CURVES.



REVISIONS

DESCRIPTION	DATE

CAPTIVE

Detroit Mechanical

www.captiveaire.com

38255 West Ten Mile Road, Farmington Hills, MI, 48335 PHONE: (248) 669-0509 FAX: (919) 516-9735 EMAIL: reg.122@captiveaire.com

Korean BBQ Tank R1
435 E Big Beaver Rd,
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DATE: 6/8/2022
DWG.#: 5506074
DRAWN BY: Josh.Hitem
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO. 11

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PROJECT NAME:
KOREAN BBQ

PERMIT SUBMISSION
06-28-22

435 E. BIG BEAVER
TROY MI 48083

STATE OF MICHIGAN
PIETRO D'ALEO
ARCHITECT
30105591

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JOB NO.	22-0987
D.B./C.B.	R.A./P.D.
ISSUANCES	
NO DESCRIPTION	DATE
1 PERMIT SUBMISSION	06/28/22

SHEET TITLE
CAPTIVE AIR

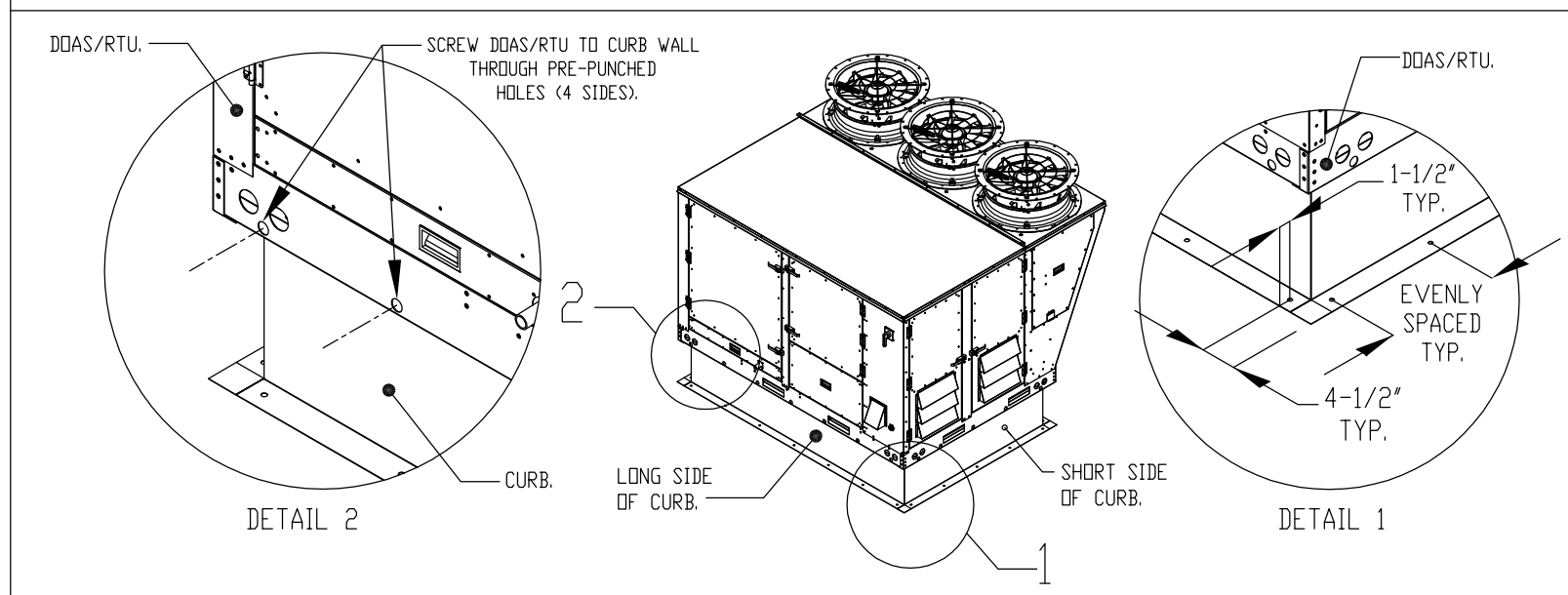
AIR DIFFUSION SUPPLY DUCT SPECIFICATIONS:
 PROVIDE AIR DIFFUSION SUPPLY DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL DW-S06HC, DW-S90HC, & DW-S180HC).
 THREE DISTINCT HOLE PATTERN OPTIONS TO COVER A VARIETY OF CEILING HEIGHTS.
 NO ADDITIONAL DIFFUSERS REQUIRED, AS THE DUCT ITSELF PROVIDES AIR DIFFUSION.
 MADE OF HIGH QUALITY STAINLESS STEEL DESIGNED TO LAST 20+ YEARS.
 HIGH INDOOR SUPPLY DUCT IS CONSTRUCTED USING 24 GAUGE, 430 SS - 5' THRU 24'.
 HIGH INDOOR SUPPLY DUCT IS CONSTRUCTED USING 20 GAUGE, 430 SS - 26" THRU 36".
 QUICK ONSITE ASSEMBLY USING EPDM GASKETS & UNIVERSAL V-BANDS.
 DOUBLE WALL SUPPLY DUCT AVAILABLE FOR INTERIOR AND EXTERIOR SPACES, EITHER CONDITIONED OR UNCONDITIONED.
 DOUBLE WALL SUPPLY DUCT AVAILABLE IN DW-1S, DW-2S, & DW-3S TO MEET SPECIFIC REGIONAL "R" VALUE REQUIREMENTS.

Supply Duct Type	Minimum R-value	Space Type
Single Wall - S & -HC	N/A	Conditioned Space Only
Double Wall - 1S	R-4	Unconditioned Interior Space Only
Double Wall - 2S	R-8	Unconditioned Space Climate Zones 1-4
Double Wall - 3S	R-12	Unconditioned Space Climate Zones 5-8

DOUBLE WALL SUPPLY DUCT IS INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.
 AIR DIFFUSION SUPPLY DUCT COMPLIES WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS) BEST PRACTICES.
 POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION TO DISCHARGE, SEE NFPA 13, TABLE 8.12.5.1.1.

TYPICAL DDAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 3/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (3) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.
2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4" X 1-1/2" X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SIDE WALL.



REVISIONS

NO.	DESCRIPTION	DATE
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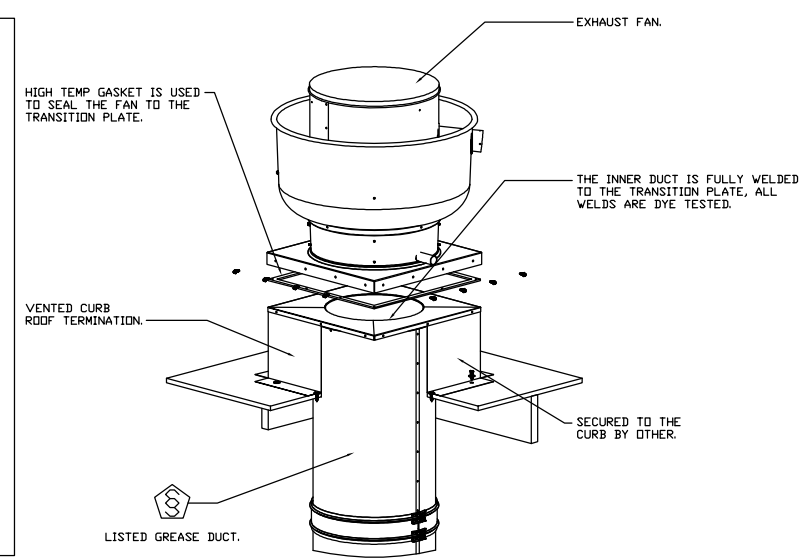
DETROIT MECHANICAL
 CAPTIVEAIRE

Korean BBQ Tank RI
 435 E. Big Beaver Rd,
 Troy, MI, 48063

DATE: 6/8/2022
 DWG.#: 556674
 DRAWN BY: JoshHilen
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

SHEET NO. 12

GREASE DUCT & CHIMNEY SPECIFICATIONS:
 PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW"
 ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW"
 IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING
 CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW"
 DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER
 THE MANUFACTURER'S INSTALLATION GUIDE.
 PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER.
 PER MANUFACTURER'S LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE
 SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
 DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE
 ACCUMULATION IN HORIZONTAL RUNS.



CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED
 APPROVED WITH NO EXCEPTION TAKEN
 REUSE AND RESUBMIT
 SIGNATURE _____
 YOUR TITLE _____ DATE _____

REVISIONS

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SHEET NO. 13

REVISIONS

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DETROIT MECHANICAL
 CAPTIVEAIRE

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 Troy, MI, 48063

DATE: 6/8/2022
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SHEET NO. 18

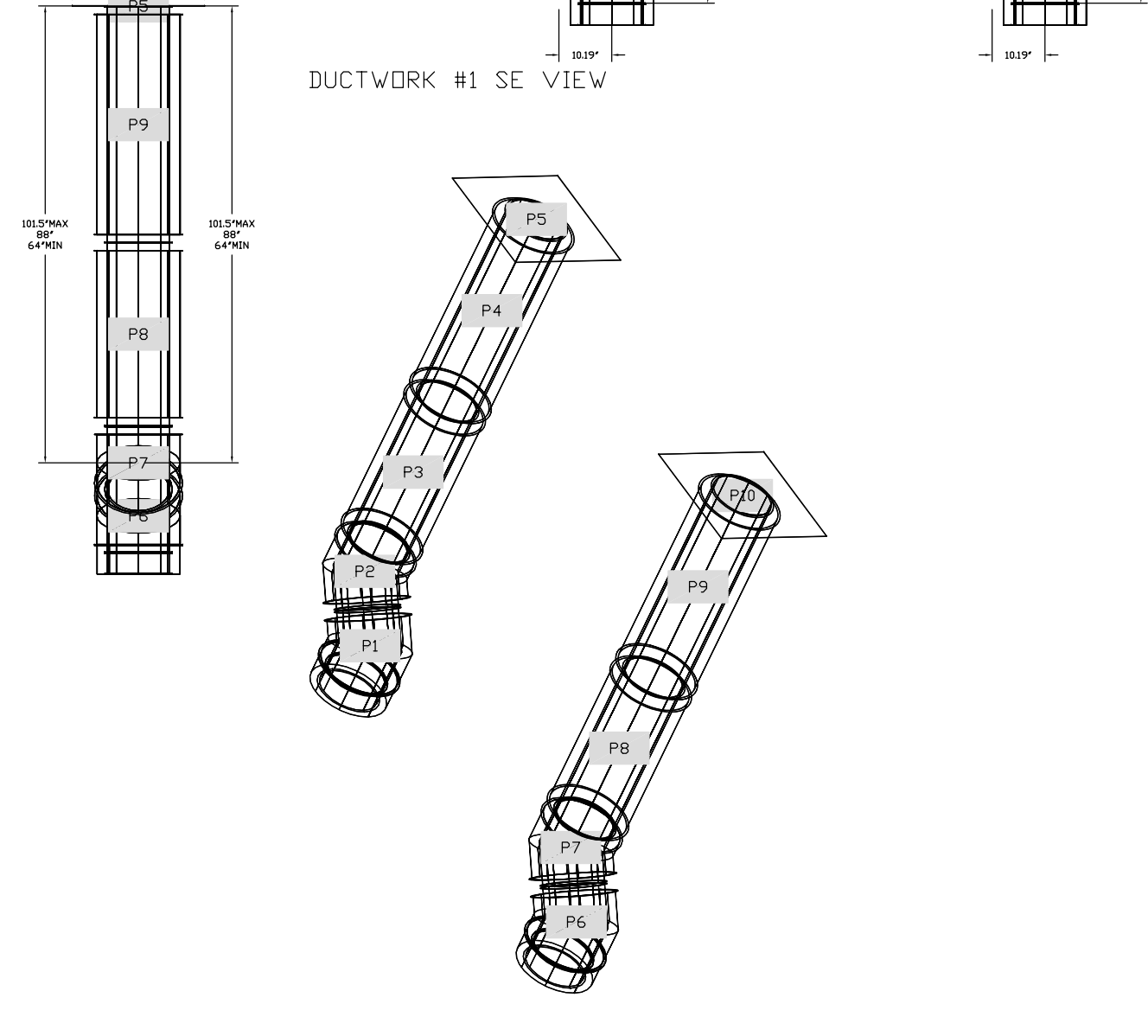
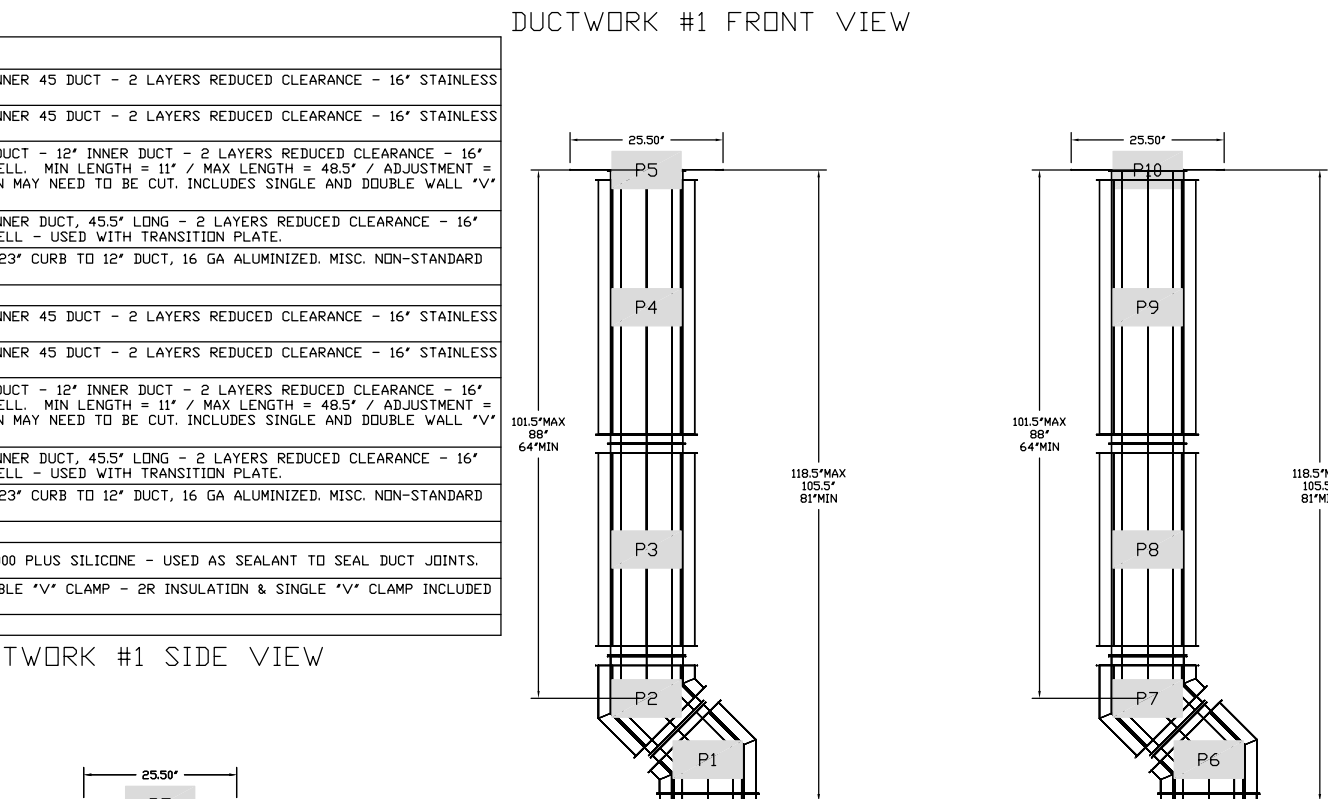
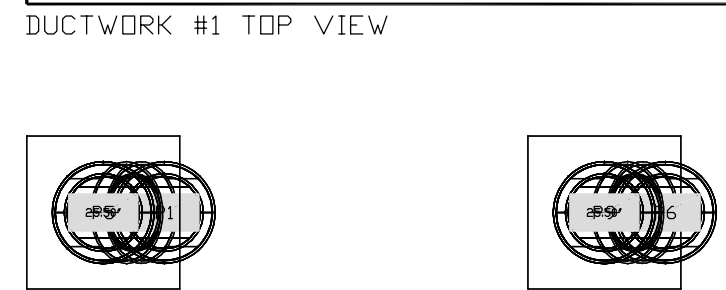
DUCTWORK #1 PARTS - JOB#SS00074 DOUBLE WALL

TAG	PART #	QTY	SPM	WGT (LBS)	WGT (KGS)	SP	VELOCITY (FT)	DESCRIPTION
P1	DW124SDWASY-DR-S	1391		16.53	1774.06	1		DOUBLE WALL DUCT - 12" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P2	DW124SDWASY-DR-S	1391		16.53	1774.06	1		DOUBLE WALL DUCT - 12" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P3	DW124SDWADJ-DR-S	1391		16.53	1774.06	1		DOUBLE WALL ADJUSTABLE DUCT - 12" INNER DUCT, 45° LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MAX LENGTH = 15'. MAX LENGTH = 483" / ADJUSTMENT = 303" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P4	DW124SDWV1TP-DR-S	1391		16.53	1774.06	1		DUCT TO CURB TRANSITION, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED MISC NON-STANDARD TRANSITION PLATE.
P5	DW124SDWV2TP	1391		16.53	1774.06	1		DUCT TO CURB TRANSITION, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED MISC NON-STANDARD TRANSITION PLATE.
P6	DW124SDWASY-DR-S	1391		16.53	1774.06	1		DOUBLE WALL ADJUSTABLE DUCT - 12" INNER DUCT, 45° LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MAX LENGTH = 15'. MAX LENGTH = 483" / ADJUSTMENT = 303" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P7	DW124SDWASY-DR-S	1391		16.53	1774.06	1		DOUBLE WALL ADJUSTABLE DUCT - 12" INNER DUCT, 45° LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MAX LENGTH = 15'. MAX LENGTH = 483" / ADJUSTMENT = 303" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P8	DW124SDWADJ-DR-S	1391		16.53	1774.06	1		DOUBLE WALL ADJUSTABLE DUCT - 12" INNER DUCT, 45° LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MAX LENGTH = 15'. MAX LENGTH = 483" / ADJUSTMENT = 303" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P9	DW124SDWADJ-DR-S	1391		16.53	1774.06	1		DOUBLE WALL ADJUSTABLE DUCT - 12" INNER DUCT, 45° LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MAX LENGTH = 15'. MAX LENGTH = 483" / ADJUSTMENT = 303" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P10	DW124SDWV1TP-DR-S	1391		16.53	1774.06	1		DUCT TO CURB TRANSITION, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED MISC NON-STANDARD TRANSITION PLATE.
P11	DW124SDWV2TP	1391		16.53	1774.06	1		DUCT TO CURB TRANSITION, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED MISC NON-STANDARD TRANSITION PLATE.
P12	3M-20SP1US			1.44		2		DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USES AS SEALANT TO SEAL DUCT JOINTS.
P13	DW124SDWASY-DR-S			1.44		2		DUCT - 12" DUCT - 16" DOUBLE "V" CLAMP - DR INSULATION & SINGLE "V" CLAMP INCLUDES REDUCED CLEARANCE.
TOTAL WEIGHT	DW124SDWASY-DR-S			375.86				

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HEAD ON AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 10 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL		VERTICAL			
DUCT DIAMETER	SUPPORT SPACING (FT)	TYPE	WALL SUPPORT (FT)	FLOOR SUPPORT (FT)	
5"	7'	2R & DR HT (5"-16")	20'	24'	24'
6"	7'	DR (8")	18'	24'	24'
7"	7'	DR (8")	18'	24'	24'
8"	7'	32 (26"-36")	10'	20'	20'
10"	7'				
12"	7'				
14"	7'				
16"	7'				
18"	7'				
20"	7'				
22"	7'				
24"	7'				
26"	7'				
28"	7'				
30"	7'				
32"	7'				
34"	7'				
36"	7'				

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.



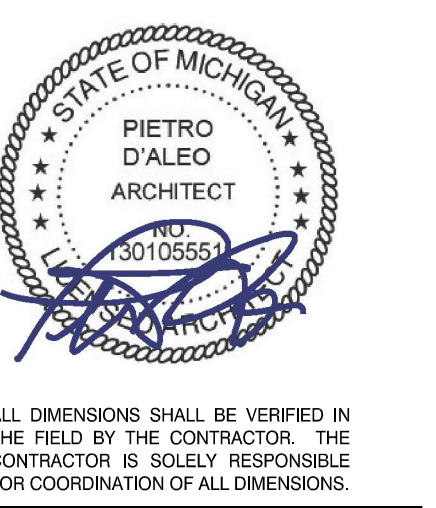
SYSTEM DESIGN VERIFICATION (SDV)
 IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.
 ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.
 DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

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 Troy, MI 48063
 s-m-associates.com
 248.457.6903
 info@s-m-associates.com

PROJECT NAME:
 KOREAN BBQ

PERMIT SUBMISSION
 06-28-22

435 E. BIG BEAVER
 TROY MI 48083

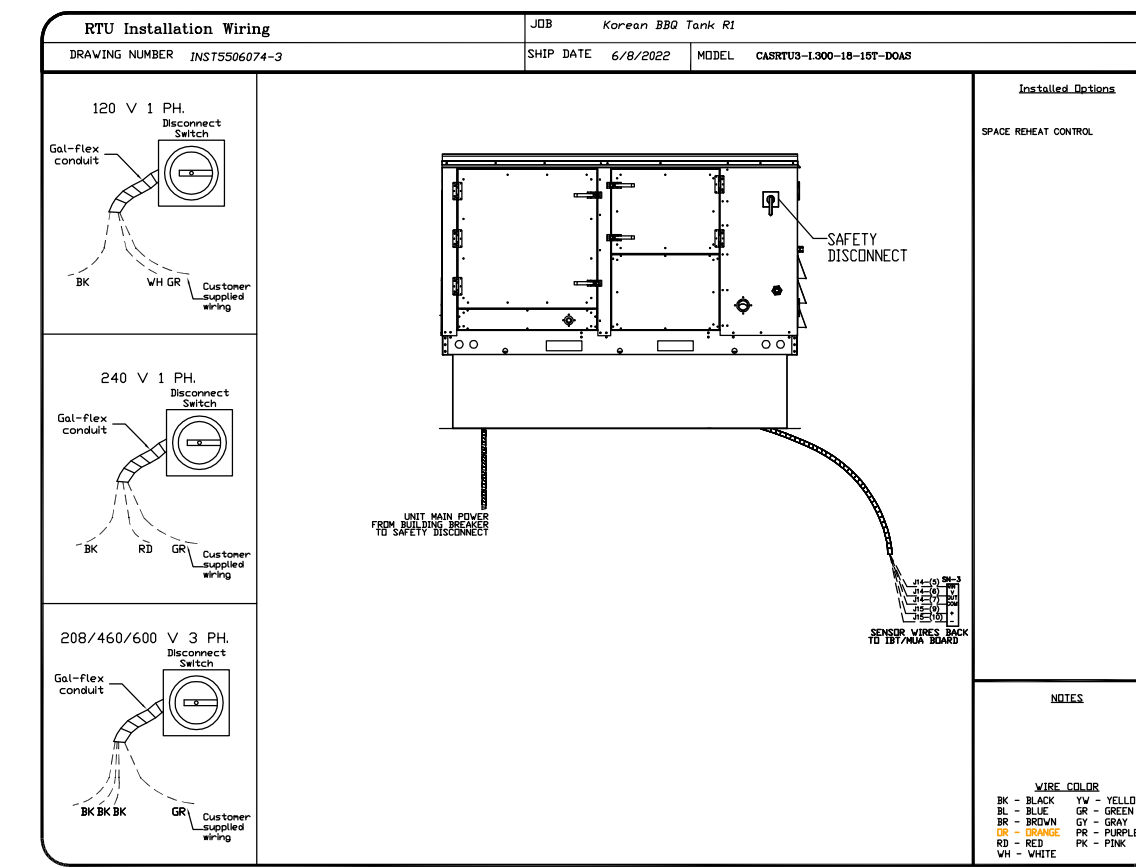
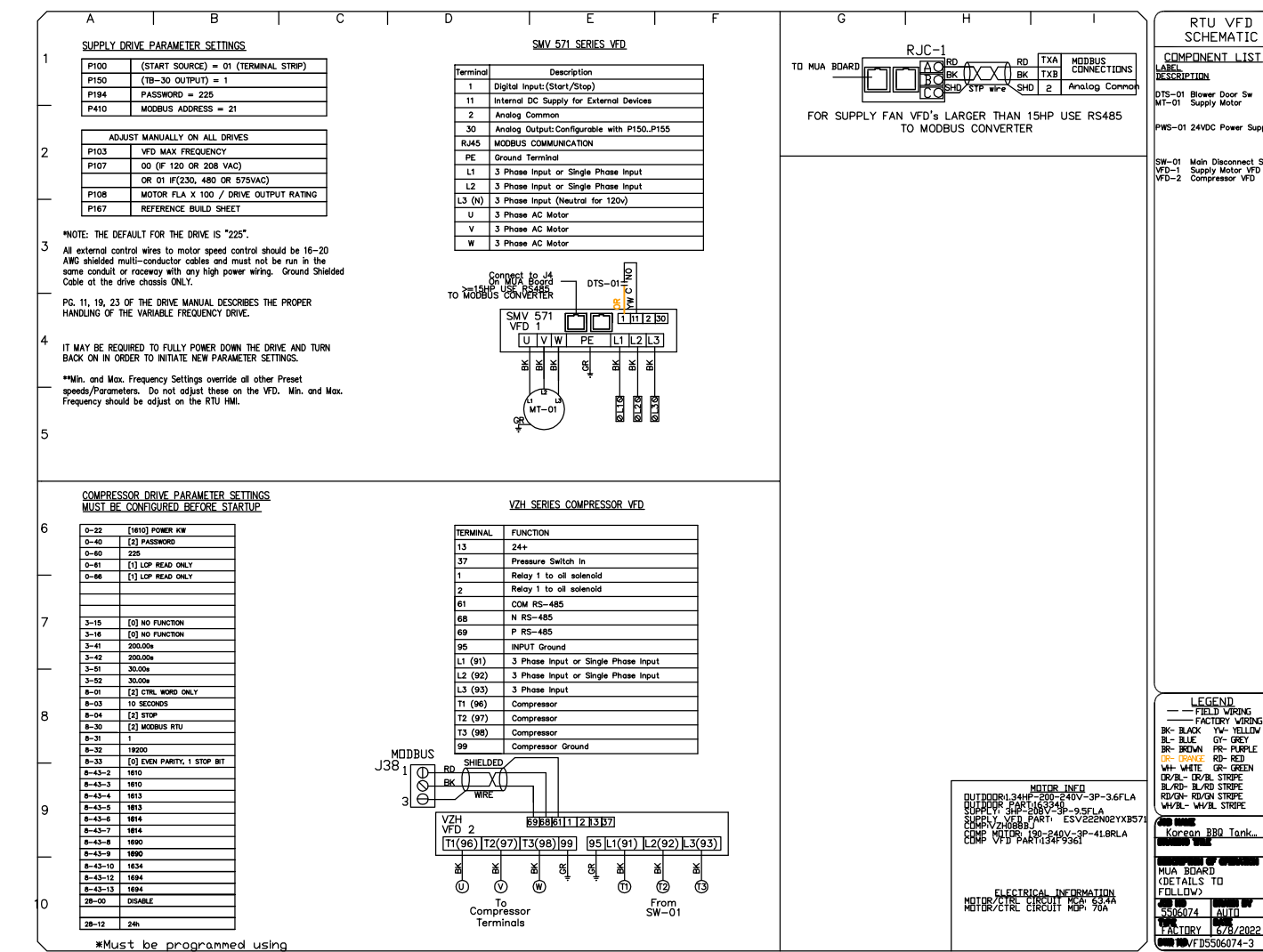
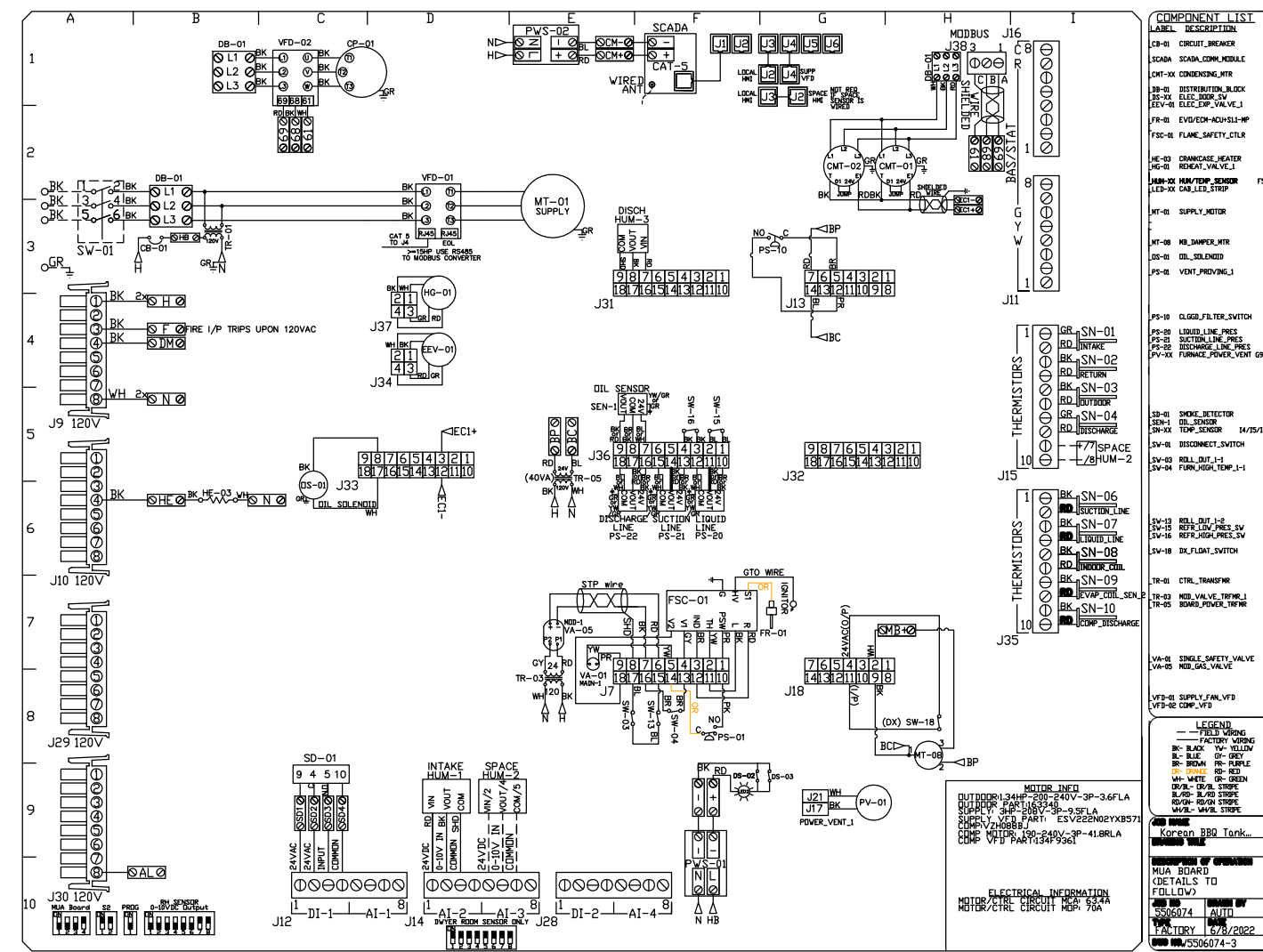


JOB NO. 22-0987
 D.B./C.B. R.A./P.D.
 ISSUANCES

NO	DESCRIPTION	DATE
1	PERMIT SUBMISSION	06/28/22

SHEET TITLE
CAPTIVE AIR

DWG. NO.
 5



REVISIONS

NO.	DESCRIPTION	DATE:

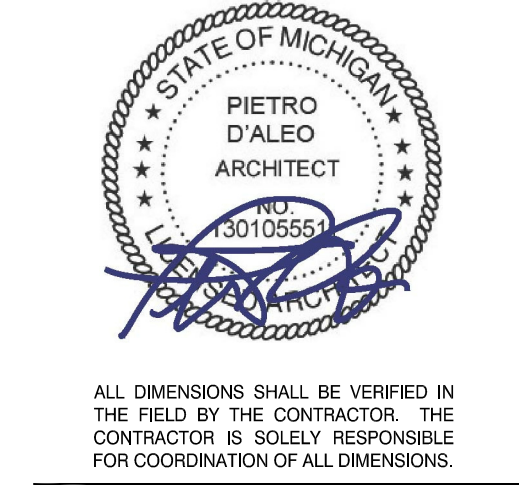
www.capitive.com
Detroit Mechanical
 38255 West Ten Mile Road, Farmington Hills, MI, 48335 PHONE: (248) 658-0509 FAX: (919) 516-8735 EMAIL: reg.23@capitive.com

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JOB NO. 22-0987
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 ISSUANCES
 NO DESCRIPTION DATE
 1 PERMIT SUBMISSION 06/28/22

Korean BBQ Tank R1
 435 E Big Beaver Rd,
 Troy, MI, 48083

DATE: 6/8/2022
 DWG.#: 5506074
 DRAWN BY: josh.hitem
 SCALE: 1/2" = 1'-0"
MASTER DRAWING

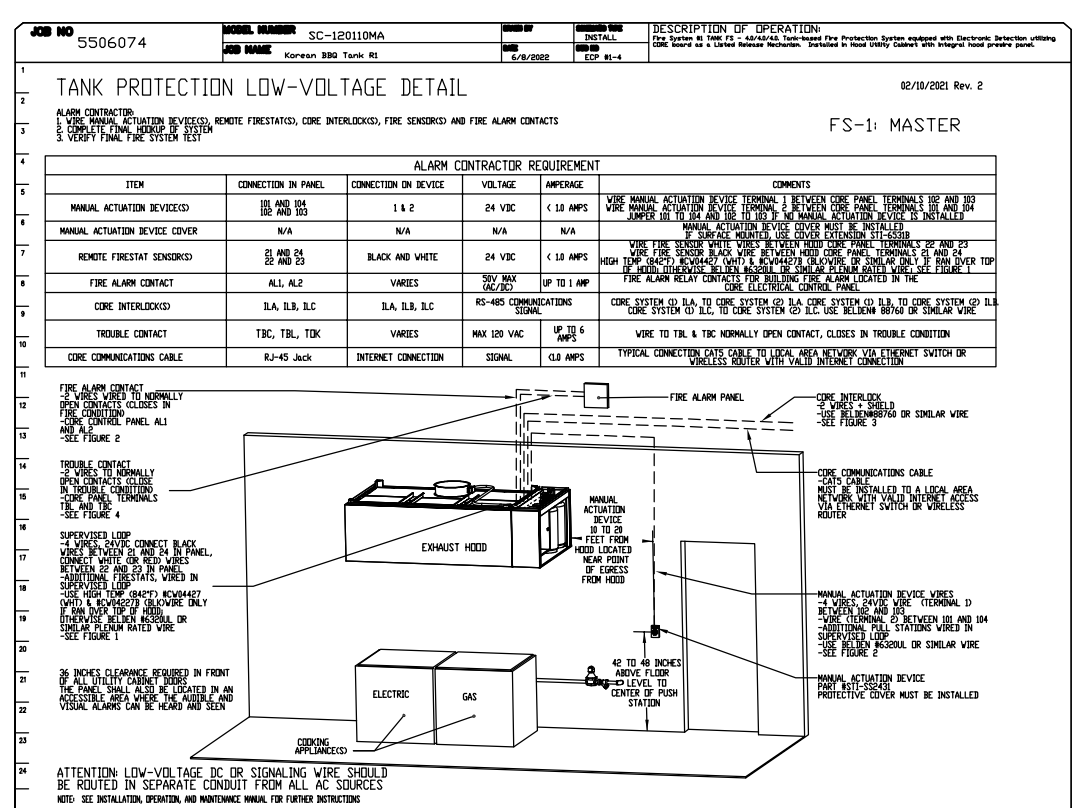
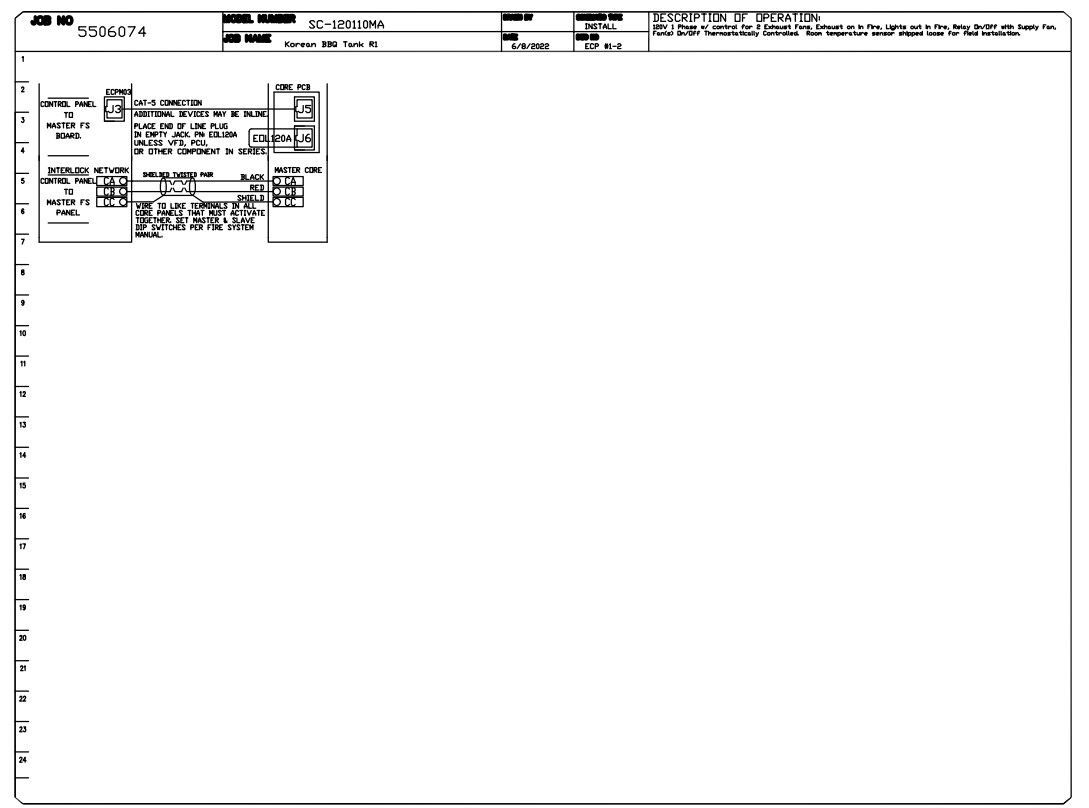
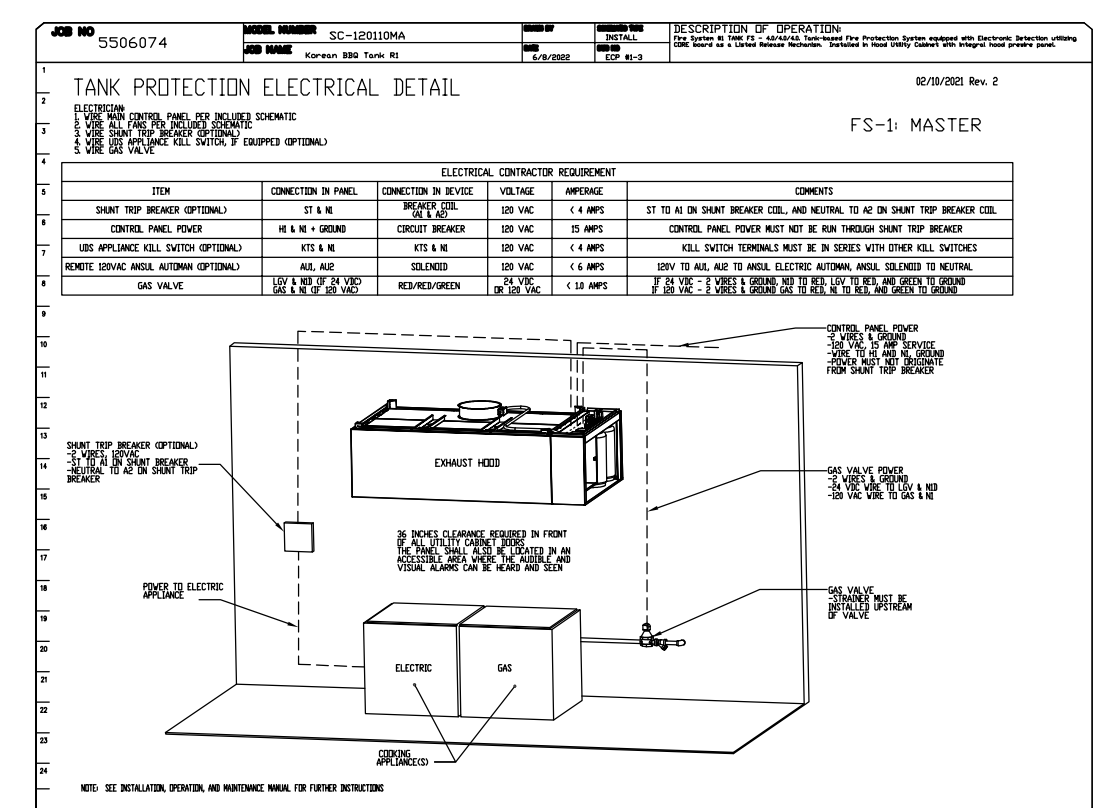
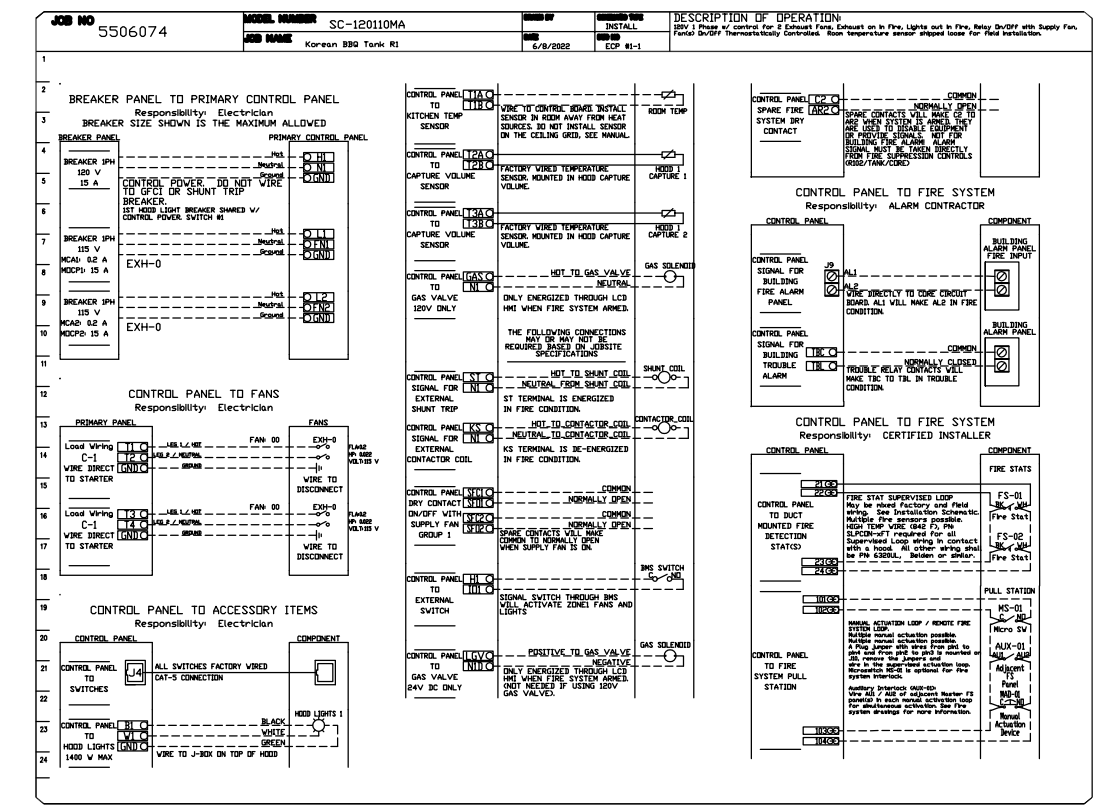
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 15

SHEET TITLE
CAPTIVE AIR

DWG. NO.
6

ELECTRICAL PACKAGE - JOB#660674

NO	TAG	PACKAGE #	LOCATION	DEVIATION	QUALITY	DATE	BY	CHKD	APP'D
1	SC-050304	UTILITY CABINET LEFT	SC-050304	1 LIGHT	1 FAN	06/28/22	JH	JH	JH



REVISIONS

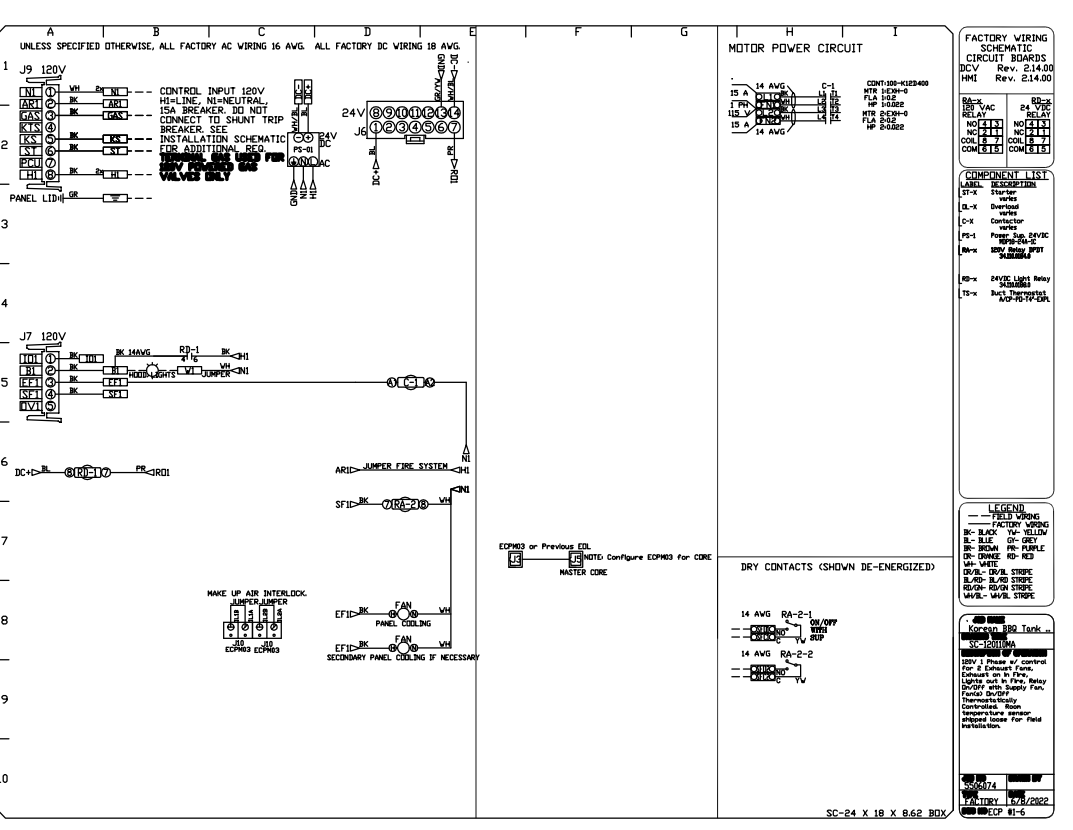
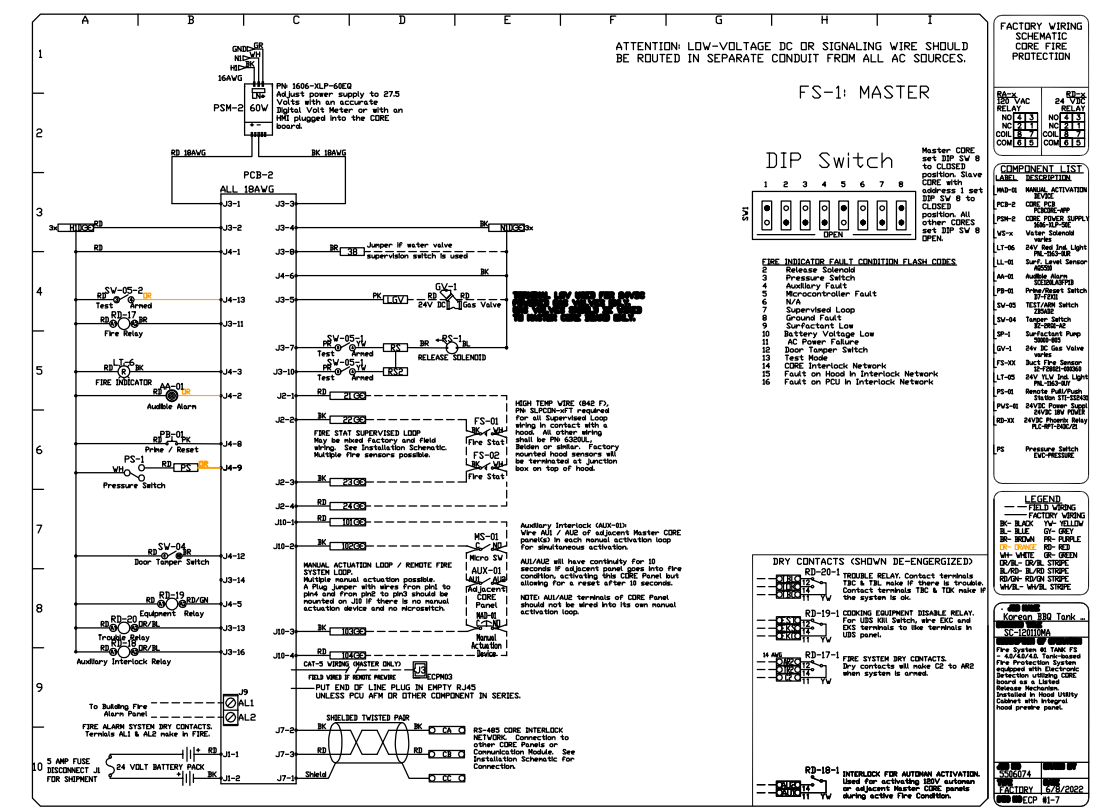
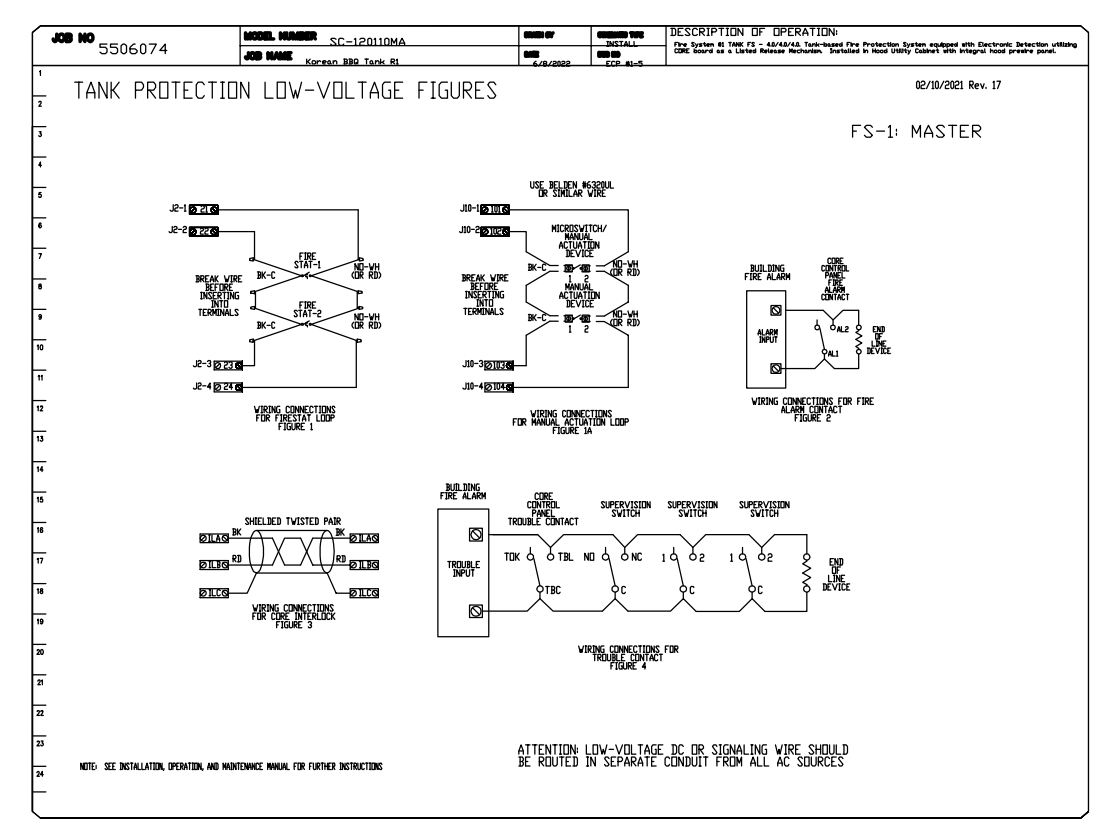
NO.	DESCRIPTION	DATE:

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Detroit Mechanical
 38255 West Ten Mile Road, Farmington Hills, MI, 48335 PHONE: (248) 658-0509 FAX: (919) 516-8735 EMAIL: reg.23@capitive.com

Korean BBQ Tank R1
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DATE: 6/8/2022
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 SCALE: 3/4" = 1'-0"
MASTER DRAWING

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