



PJ4003-1  
**Fire Prevention**  
 In: 02/25/2020  
 Out: 03/01/2020

Partial  
 OK-Pending  
 submittal of Hood  
 suppression  
 system  
 plans/permits.

**R C R B D**  
**RECORD SET**  
**ELECTRICAL**

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# Mechanical-Electrical-Plumbing Drawings for **HYPNO - CHICK RESTAURANT**

## 255 ANGER'S DRIVE, SUITE 'A' STEAMBOAT SPRINGS, CO 80487

### GENERAL MECHANICAL-ELECTRICAL-PLUMBING SPECIFICATIONS

- ALL WORK SHALL BE DONE IN STRICT CONFORMANCE WITH THE LOCAL BUILDING CODES.
- ALL MATERIALS SHALL BE NEW, FIRST CLASS, AND INSTALLED TO MANUFACTURER'S WRITTEN SPECIFICATIONS.
- ALL SYSTEMS SHALL BE COMPLETE AND OPERABLE IN EVERY WAY.
- DO ALL EXCAVATION, BACK FILLING, CUTTING, PATCHING, OFFSETTING, ADJUSTING, AND BALANCING AS REQUIRED TO COMPLETE THE JOB.
- SPECIFIC MODELS ARE SPECIFIED TO ESTABLISH QUALITY ONLY. SUBSTITUTIONS MAY BE MADE WITH ENGINEER'S APPROVAL.
- GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR ONE YEAR FROM FINAL ACCEPTANCE. PROVIDE FIVE YEAR AIR CONDITIONING COMPRESSOR WARRANTY.
- INSPECT JOB SITE PRIOR TO BIDDING TO DETERMINE EXACT JOB REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS FOR CONSTRUCTION DETAILS.
- ARCHITECTURAL DRAWING DIMENSIONS SHALL GOVERN IN ALL CASES. COORDINATE ENGINEERING DRAWINGS WITH ARCHITECTURAL DRAWINGS FOR ALL EQUIPMENT LAYOUTS AND LOCATIONS.
- LAYOUTS AND ROUTINGS SHOWN ON THE PLANS ARE APPROXIMATE AND GENERAL IN NATURE. CONTRACTORS ARE REQUIRED TO INSPECT THE JOBSITE FOR INTERFERENCES, OBSTRUCTIONS, AND CONFLICTS AND NOTIFY THE ENGINEER OF THE SAME, AND INCLUDE IN THEIR BID AND WORK SCOPE ALL ASSOCIATED COSTS TO MODIFY THE LAYOUTS AND ROUTINGS AS NECESSARY TO ACCOMMODATE THE INSTALLATION OF THEIR WORK AROUND SUCH INTERFERENCES, OBSTRUCTIONS, AND CONFLICTS.
- CONTRACTOR IS TO INCLUDE COSTS FOR ALL PERMITS, INSPECTIONS, TAPS, METERS & FUEL ASSOCIATED WITH HIS WORK.
- CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND UNDERSTANDING ALL DRAWINGS AND ASPECTS OF THE PROJECT SCOPE, AND FOR INCLUDING IN HIS BID ALL WORK ASSOCIATED WITH HIS TRADE, REGARDLESS OF WHICH DRAWING OR SHEET IT IS SHOWN ON.

**RCRBD Record Set**  
**T.A.**  
  
**03/03/2020**

BASED ON THE FOLLOWING CODES	
2015	INTERNATIONAL MECHANICAL CODE
2015	INTERNATIONAL PLUMBING CODE
2015	INTERNATIONAL FUEL GAS CODE
2015	INTERNATIONAL ENERGY EFFICIENCY CODE
2015	INTERNATIONAL FIRE CODE
2017	NATIONAL ELECTRIC CODE

DRAWING LIST	
MEP1	MEP COVER SHEET
A101	ARCHITECTURAL SHEET
A102	CEILING PLAN AND DETAILS
KE100	KITCHEN EQUIPMENT LAYOUT PLAN
M100	HVAC PLAN
MD100	HVAC DETAILS AND SCHEDULES
EP100	ELECTRIC PLAN
EL100	ELECTRIC LIGHTING PLAN
P100	PLUMBING PLAN
H100	HOOD PLAN
H101	HOOD PLAN
H102	HOOD PLAN
H103	HOOD PLAN
H104	HOOD PLAN
H105	HOOD PLAN
H106	HOOD PLAN



Mark Timberlake, P.E. FEB. 10, 2020  
 PE-0049319



**MECHANICAL - ELECTRICAL - PLUMBING COVER SHEET**

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE:	01-12-2020	SHEET NO.
DRAWN BY:	MBT	
PROJECT NO.	19001	
SCALE:	1/4"=1'-0"	

**MEP1**

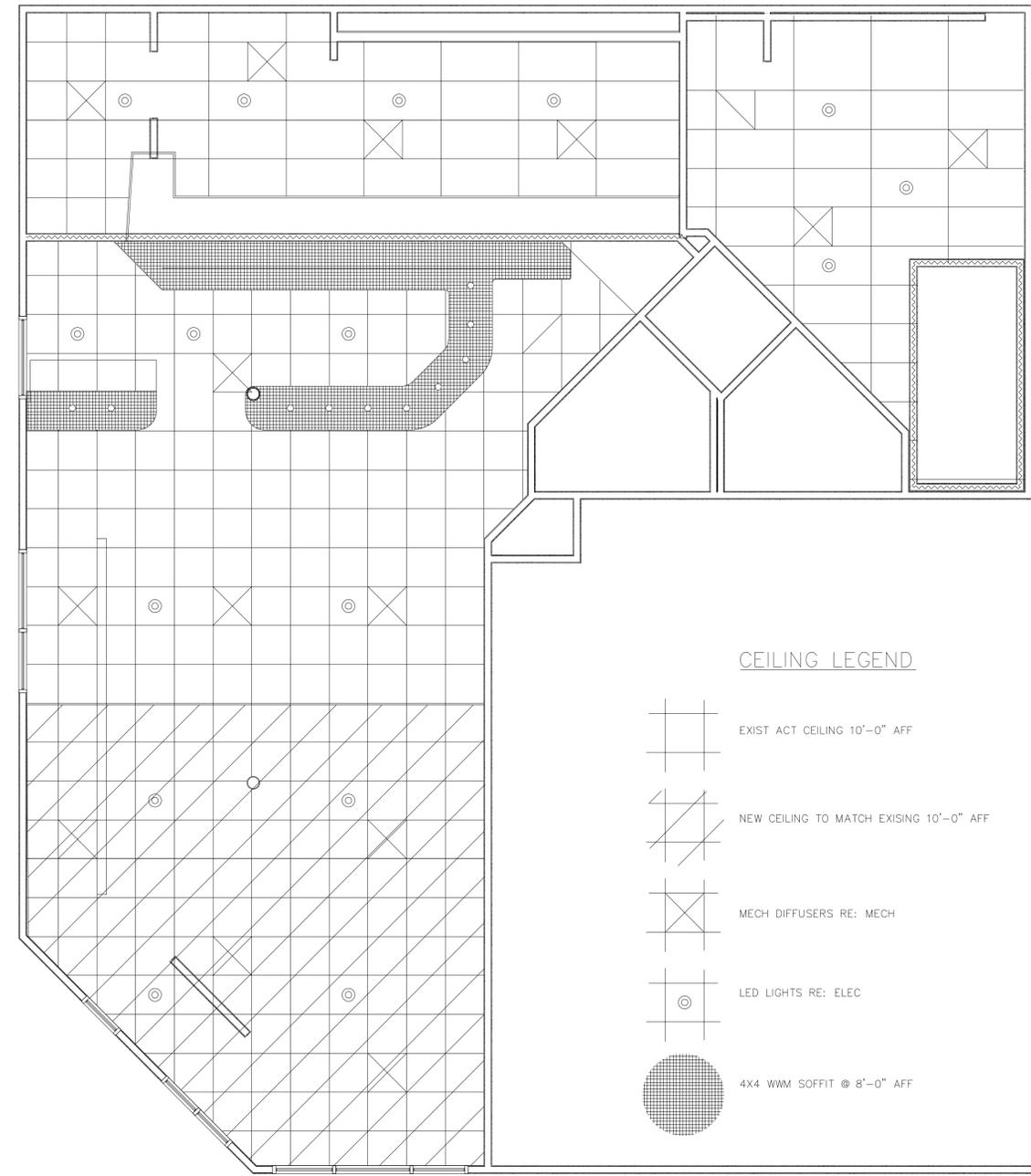


**RCRBD Record Set  
T.A.**

**03/03/2020**

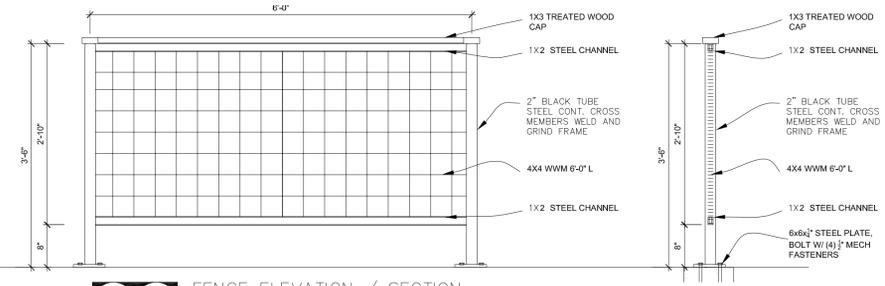
**GENERAL NOTES**

1. BY CONTRACTUAL ARRANGEMENT THESE DOCUMENTS ARE LIMITED IN DETAIL. THE OWNER HAS REQUESTED THE ARCHITECT TO PROVIDE PARTIAL ARCHITECTURAL SERVICES. IF ADDITIONAL DETAILS OR GUIDANCE IS NEEDED, THE ARCHITECT SHALL BE NOTIFIED.
2. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO EXECUTING ANY WORK. NOTIFY ARCHITECT OF ANY DIMENSIONS OR WORK DIFFERING FROM THAT SHOWN, FOR CLARIFICATION BY THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.
3. VERIFY ALL ROUGH OPENINGS FOR DOORS, WINDOWS, EQUIPMENT, & OTHER "BUILT-IN" ITEMS PRIOR TO EXECUTION OF ANY WORK AFFECTED BY SAME.
4. LOCATE DOOR OPENINGS WHICH ARE NOT DIMENSIONED OTHERWISE, CENTERED IN WALL AND 6" FROM FINISH WALL TO FINISH JAMB.
5. COORDINATE ALL FLOOR DRAINS AND OTHER REFERENCED MECHANICAL, ELECTRICAL, OR PLUMBING ITEMS W/ M.E.P.
6. COORDINATE ALL REQUIRED UTILITIES WITH EQUIPMENT MANUFACTURER.
7. ALL DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.



**CEILING LEGEND**

-  EXIST ACT CEILING 10'-0" AFF
-  NEW CEILING TO MATCH EXISING 10'-0" AFF
-  MECH DIFFUSERS RE: MECH
-  LED LIGHTS RE: ELEC
-  4X4 WWM SOFFIT @ 8'-0" AFF



**J12 FENCE ELEVATION / SECTION**  
SCALE: 3/16" = 1'-0"

**C3 REFLECTED CEILING PLAN**  
SCALE: 1/4" = 1'-0"

HYPNOTIC CHICKEN  
STEAMBOAT SPRINGS, CO

SKULL CREEK GREEK LLC  
stephen m. bourgeois  
architect  
970-819-7950  
smbarchitect@gmail.com

Drawn: SB	Project Number: 200622	
Checked: SB	CAD File Name (Number): SRM0103020-SECTION-NORTHSECTION.DWG	
Drawing Title: CEILING PLAN , DETAILS		
No.	Revisions:	Date:
Submission Date: 12/03/2016	Drawing Number: A102	Plot Date: 12/03/2016

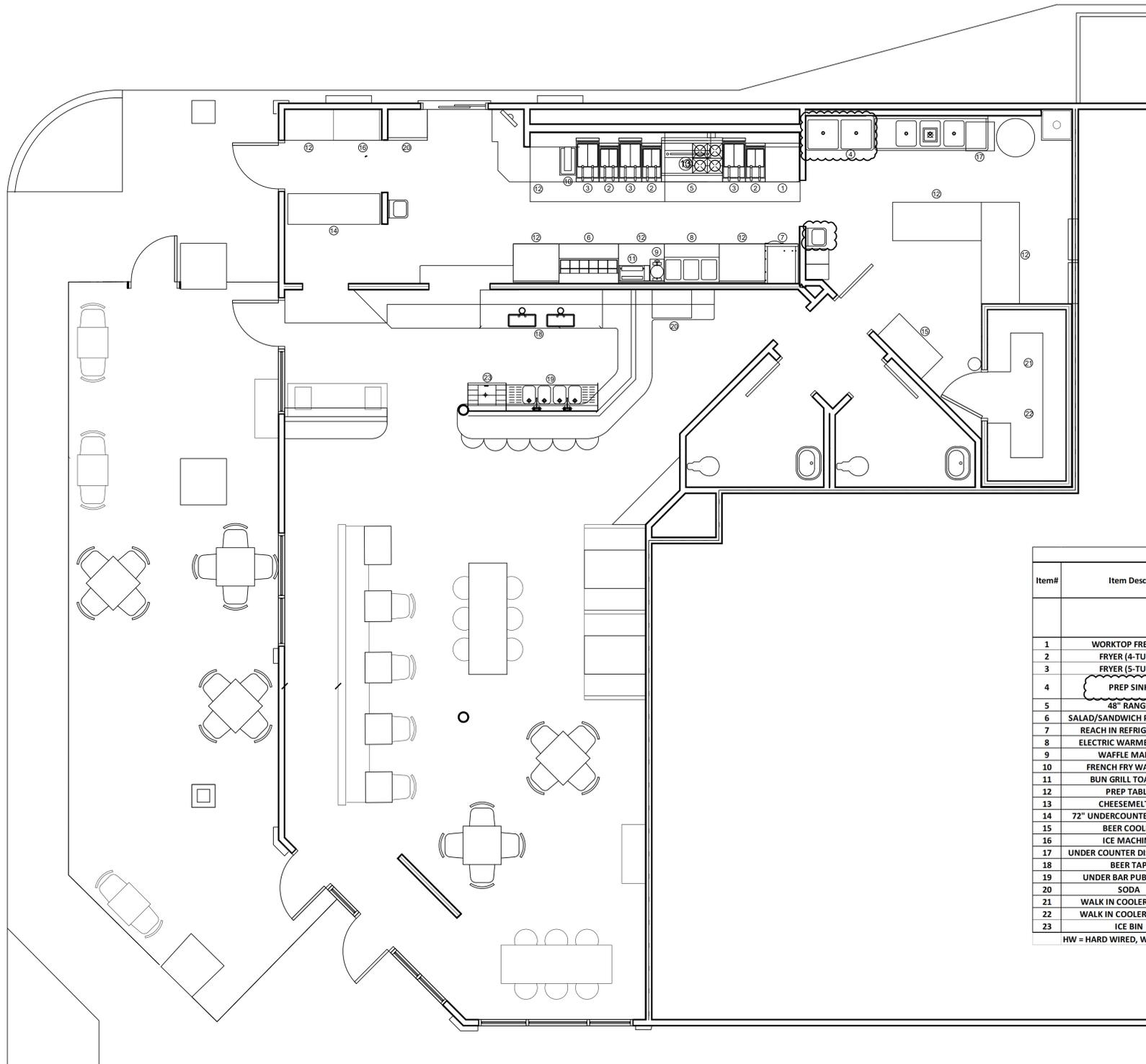
**RCRBD  
RECORD SET  
3.20.2020**

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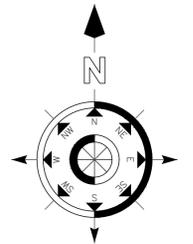
REVISIONS:	DATE:
ADDED PREP SINK, RELOCATED HAND SINK	3/25/2020

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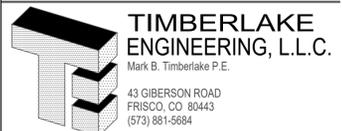
Item#	Item Desc.	Electrical						Plumbing							
		Voltage	Amps	Watts	Breaker	Plug	Water	Sewer	GAS			REGULATOR SUPPLIED WITH EQ?			
									CONN	KBTU'S	PRESSURE				
1	WORKTOP FREEZER	120/1	2.1		20	5-15P									
2	FRYER (4-TUBE)								3/4"	120					
3	FRYER (5-TUBE)								3/4"	150					
4	PREP SINK						1/2" HW, CW	1-1/4"							
5	48" RANGE	120/1	3.4		20	5-15P			1"	200	5"		N		
6	SALAD/SANDWICH PREP TABLE	120/1	7.8		20	5-15P									
7	REACH IN REFRIGERATOR	120/1	2.7		20	5-15P									
8	ELECTRIC WARMER TABLE	120/1	12.5	1500	20	5-15P									
9	WAFFLE MAKER	120/1	11.7	1400	20										
10	FRENCH FRY WARMER	120/1	8.3	1000	20	5-15P									
11	BUN GRILL TOASTER	208/1	7.7	1600	20	6-20P									
12	PREP TABLE														
13	CHEESEMELTER	120/1	3.4		20				3/4"	40	5"		Y		
14	72" UNDERCOUNTER COOLER	120/1	6.0		20	5-15P									
15	BEER COOLER	120/1	6.0		20	5-15P									
16	ICE MACHINE	120/1	12.0		20	5-15P		FD							
17	UNDER COUNTER DISHWASHER	208/1	37.2		50	HW	3/4" HW	1-1/2"							
18	BEER TAP	120/1	5.5		20	5-15P		FD							
19	UNDER BAR PUB SCRUB	120/1	3.0		20	5-15P									
20	SODA	120/1	3.0		20	5-15P		FD							
21	WALK IN COOLER (EVAP)	120/1	5.0		20	HW		FD							
22	WALK IN COOLER (COND)	208/1	10.0		20	HW									
23	ICE BIN							FD							

HW = HARD WIRED, WITH LOCAL DISCONNECT IF NOT WITHIN SIGHT OF DISCONNECTING MEANS



Mark Timberlake, P.E.  
PE-0049319

MARCH 25, 2020



KITCHEN EQUIPMENT LAYOUT

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE: 01-12-2020 SHEET NO.

DRAWN BY: MBT

PROJECT NO: 19001

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

**KE100**

# HVAC SPECIFICATIONS

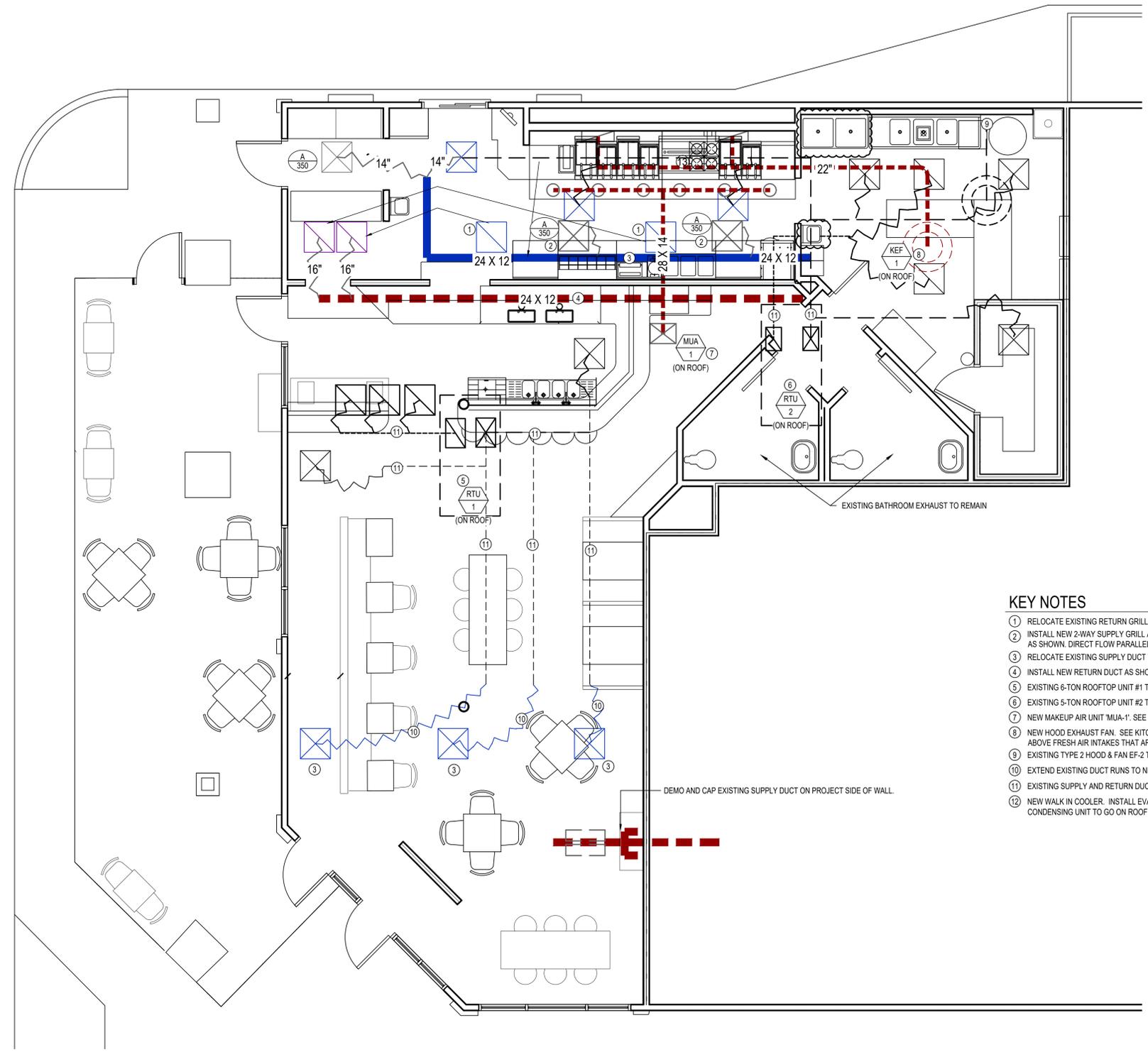
1. INSULATION:
  - 1.1. ALL INTERNAL DUCT LINER TO BE 1" AND EQUAL TO "CERTAINTED TOUGHGUARD T" UNLESS NOTED OTHERWISE.
  - 1.2. ALL DUCT WRAP SHALL BE 2" WITH VAPOR BARRIER EQUAL TO "CERTAINTED SOFTTOUCH DUCT WRAP" WITH FSK JACKET UNLESS NOTED OTHERWISE.
  - 1.3. EXHAUST AIR DUCTS IN UNCONDITIONED SPACES SHALL HAVE DUCT WRAP.
  - 1.4. OUTDOOR AIR DUCTS IN CONDITIONED SPACES SHALL HAVE DUCT WRAP.
  - 1.5. ALL EXTERIOR DUCTS SHALL HAVE 2" THICK CLOSED CELL FLEXIBLE ELASTOMERIC DUCT WRAP AND 26 GA ALUMINUM JACKET WITH OVERLAPPED SEAMS SEALED WATERTIGHT AND SLOPED TO AID DRAINAGE.
- 1.6. REFRIGERANT PIPING:
  - 1.6.1. SPLIT SYSTEMS - SUCTION LINE ONLY TO BE 1/2" ARMAFLEX.
  - 1.6.2. VRV / VRF SPLIT SYSTEMS - BOTH SUCTION AND LIQUID LINES TO BE AS FOLLOWS:
    - 3/4" ARMAFLEX FOR 3/8" THRU 7/8" PIPES
    - 1" ARMAFLEX FOR 1 1/8" THRU 1 5/8" PIPES
- 1.7. CONDENSATE PIPING: 1/2" ARMAFLEX IN UNCONDITIONED SPACES ONLY.
2. ALL DUCTWORK SHALL BE MIN. 26 GA. UP TO 16", 24 GA. UP TO 20", 22 GA. UP TO 24", 20 GA. UP TO 26", AND 18 GA. UP TO 36" OF GALVANIZED STEEL, SEALING CLASS "B", FABRICATED AND INSTALLED IN STRICT CONFORMANCE TO SMACNA SPECIFICATIONS. ALL TEES, ELBOWS, OR CHANGES IN DIRECTIONS SHALL HAVE TURNING VANES.
3. AIR CONDITIONING EQUIPMENT SHALL BE AS SPECIFIED ON DRAWINGS, UNLESS APPROVED OTHERWISE BY THE ENGINEER. EQUIPMENT SHALL BE "COMMERCIAL" RATED IN ALL CASES EXCEPT RESIDENTIAL APPLICATIONS.
4. GRILLES AND REGISTERS SHALL BE PRICE, OR APPROVED EQUAL.
5. ALL TEMPERATURE CONTROLS SHALL BE MIN. 18 GA. COPPER, PLENUM RATED CABLE.
6. DUCTWORK DIMENSIONS ARE INSIDE DIMENSIONS.
7. ALL HORIZONTAL FURNACES MUST BE EQUIPPED WITH GALVANIZED STEEL DRAIN PAN, WITH DRAIN PIPED TO FLOOR DRAIN OR INDIRECT WASTE, IN AN OBVIOUS, VISIBLE LOCATION, PER IPC.
8. ALL SUPPLY BRANCHES TO INDIVIDUAL DIFFUSERS MUST BE SUPPLIED WITH BALANCING DAMPERS; WHERE BRANCH TAKEOFFS ARE INACCESSIBLE (ATTICS, SOFFITS, ETC) BALANCE DAMPER SHALL BE PROVIDED AT FACE OF DIFFUSER, WHERE BRANCH TAKEOFFS ARE ACCESSIBLE (ABOVE DROP CEILING, EXPOSED DUCTS, ETC) BALANCE DAMPER SHALL BE LOCATED AT BRANCH TAKEOFF.
9. ALL SYSTEMS MUST BE FIELD BALANCED TO WITHIN 10% OF THE DESIGN FLOWS INDICATED ON THE DRAWINGS. CERTIFIED AIR BALANCING IS NOT REQUIRED. CONTRACTOR MUST SUBMIT BALANCING REPORT PRIOR TO RECEIVING FINAL PAYMENT.
10. FLEX DUCT (THERMAFLEX M-KE OR EQUAL) IS ALLOWED FOR FINAL CONNECTION FROM STEEL DUCTWORK TO AIR TERMINAL DEVICES ONLY, LENGTHS NOT TO EXCEED 8'-0", AND SUPPORTED AS SHOWN ON HVAC DETAILS SHEET.
11. MINIMUM SPLIT SYSTEM EFFICIENCIES FOR HEATING AND COOLING SHALL BE:
  - 11.6. HEATING AFUE = 90%
  - 11.7. COOLING SEER = PER LATEST EDITION OF ASHRAE 90.1
12. MINIMUM ROOFTOP UNIT EFFICIENCIES SHALL MEET STANDARDS PER LATEST EDITION OF ASHRAE 90.1.
13. FINAL CONNECTIONS TO AIR HANDLING EQUIPMENT ARE NOT SHOWN. CONTRACTOR TO INCLUDE TRANSITIONS AND FITTINGS AS REQUIRED TO TRANSITION FROM EQUIPMENT DUCT CONNECTION SIZES TO TRUNK LINE SIZES SHOWN ON PLANS.
14. DUCTWORK SHALL NOT BE INSTALLED SUCH THAT IT RESTRICTS ACCESS TO ELECTRICAL JUNCTION BOXES OR DIRECTLY OVER ELECTRICAL PANELS.
15. REFRIGERANT PIPING MUST BE COPPER TYPE ACR OR TYPE L.
16. AIR CONDITIONING EQUIPMENT TO BE INSTALLED LEVEL AND PLUMB. ROOFTOP UNITS AND FANS SHALL BE ON FACTORY ROOF CURBS. ROOFTOP MOUNTED CONDENSING UNITS SHALL BE MOUNTED ON TREATED 4X4S WHICH ARE PLACED ON A WALK MAT COMPATIBLE WITH THE ROOFING SYSTEM, TO BE PURCHASED FROM THE ROOFING CONTRACTOR. ROOFTOP MOUNTED PIPING AND VRV/VRF EQUIPMENT SHALL BE ON A SUPPORT FRAME MOUNTED TO "ROOFTOP BLOC". GROUND MOUNTED EQUIPMENT TO BE ON 4-INCH THICK, REINFORCED CONCRETE BASE THAT IS 4 INCHES LARGER, ON EACH SIDE, THAN UNIT.
17. ALL EQUIPMENT LOCATED OUTDOORS SHALL BE EQUIPPED WITH FACTORY HAIL GUARDS TO PROTECT EXPOSED COILS.
18. EQUIPMENT LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. CONTRACTOR TO CONFIRM THAT EQUIPMENT MOUNTED GREATER THAN 30" ABOVE ADJACENT GRADE, SHALL BE LOCATED MINIMUM 10'-0" FROM EDGE, UNLESS A GUARD OR PARAPET (MIN. 42" TALL) PROTECTS THE EDGE.
19. PROTECT DUCT INTERIORS FROM MOISTURE, DEBRIS, DUST & FOREIGN MATERIALS IN ACCORDANCE WITH SMACNA "DUCT CLEANLINESS FOR NEW CONSTRUCTION" GUIDELINES.

# HVAC SYMBOL LEGEND

-  TYPE OF EQUIPMENT (SEE EQUIPMENT SCHEDULE)
-  REFERENCE NUMBER
-  TYPE OF DIFFUSER (SEE DIFFUSER SCHEDULE)
-  CFM / FACE SIZE
-  SUPPLY DIFFUSER  
IF OTHER THAN 4-WAY, SHADING INDICATES NO FLOW ZONE
-  RETURN GRILLE
-  BALANCE DAMPER
-  MOTORIZED DAMPER
-  CEILING RADIATION DAMPER
-  SUPPLY DUCT
-  EXISTING SUPPLY DUCT
-  RETURN DUCT
-  EXISTING RETURN DUCT
-  EXHAUST DUCT (D.V. DESIGNATES DRYER VENT)
-  EXISTING EXHAUST DUCT (D.V. DESIGNATES DRYER VENT)
-  OUTSIDE AIR DUCT
-  FLEX DUCT
-  VENT / COMBUSTION AIR
-  CONDENSATION LINE
-  REFRIGERANT LINE
-  TIE INTO EXISTING
-  THERMOSTAT
-  CO2 DETECTOR

# GENERAL NOTES

1. REFER TO M/D100 FOR REMAINING HVAC NOTES, LEGENDS, DETAILS & SCHEDULES.
2. DUCTWORK & EQUIPMENT LABELED "EX." OR "EXISTING" IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.



# KEY NOTES

- 1 RELOCATE EXISTING RETURN GRILLE AS SHOWN.
- 2 INSTALL NEW 2-WAY SUPPLY GRILLE AT LOCATION SHOWN. CONNECT TO RELOCATED SUPPLY DUCT AS SHOWN. DIRECT FLOW PARALLEL TO HOOD, NOT TOWARD HOOD.
- 3 RELOCATE EXISTING SUPPLY DUCT TO LOCATION SHOWN.
- 4 INSTALL NEW RETURN DUCT AS SHOWN.
- 5 EXISTING 6-TON ROOFTOP UNIT #1 TO REMAIN. ADJUST OA TO AMOUNTS SHOWN IN TABLE BELOW.
- 6 EXISTING 5-TON ROOFTOP UNIT #2 TO REMAIN. ADJUST OA TO AMOUNTS SHOWN IN TABLE BELOW.
- 7 NEW MAKEUP AIR UNIT "MUA-1". SEE HOOD SHEETS.
- 8 NEW HOOD EXHAUST FAN. SEE KITCHEN HOOD DETAIL AND HOOD SHEETS. LOCATE DISCHARGE 36" ABOVE FRESH AIR INTAKES THAT ARE LOCATED WITHIN 10'-0" HORIZONTALLY.
- 9 EXISTING TYPE 2 HOOD & FAN EF-2 TO REMAIN.
- 10 EXTEND EXISTING DUCT RUNS TO NEW GRILLE LOCATIONS AS SHOWN.
- 11 EXISTING SUPPLY AND RETURN DUCTS TO REMAIN
- 12 NEW WALK IN COOLER. INSTALL EVAPORATOR AND CONDENSING UNIT, PIPING, AND START UP. CONDENSING UNIT TO GO ON ROOF.



# HVAC PLAN

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

AIR DEVICES SCHEDULE									
MARK	MFR.*	MODEL*	MOUNTING	SERVICE	THROW	FACE SIZE	MATERIAL	FINISH	REMARKS
A	PRICE	*	CEILING	SUPPLY	8'	24X24	STEEL	WHITE	WITH BUTTERFLY DAMPER

\* SELECT MODEL TO MATCH STYLE OF EXISTING GRILLES.

AIR BALANCE CALCULATION (CFM)				
SOURCE	INTAKE	EXHAUST	NET	NET %
KEF-1		3466	-3466	
BR EF	200	-200		
EF-2		400	-400	
MUA	2772		2772	
RTU-1	800		800	
RTU-2	500		500	
<b>TOTAL</b>	<b>4,072</b>	<b>-4,066</b>	<b>6</b>	<b>0%</b>

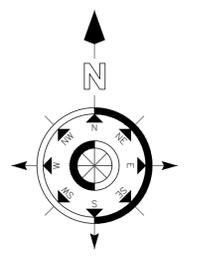
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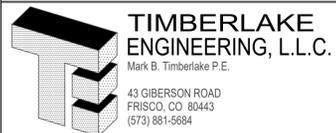
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REVISIONS:	DATE:
ADDED PREP SINK, RELOCATED HAND SINK	3/25/2020

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Mark Timberlake, P.E. MARCH 25, 2020  
PE-0049319



# HVAC PLAN

## HYPNO-CHIC RESTAURANT

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE:	01-12-2020	SHEET NO.	
DRAWN BY:	MBT		
PROJECT NO.:	19001		
SCALE:	1/4"=1'-0"		

**M100**



### ELECTRICAL SPECIFICATIONS

- ALL CONDUCTORS SHALL BE THIN COPPER ABOVE GRADE, XHHW-2 BELOW GRADE, MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
- ALL SERVICE WIRING, EXPOSED TO WEATHER, OR WIRING BELOW GRADE, SHALL BE IN RIGID GALVANIZED CONDUIT OR SCH. 40 PVC.
- ALL OTHER WIRING SHALL BE IN EMT, SCHEDULE 40 PVC, OR MC CABLE, UNLESS PROTECTED AND ENCLOSED WITHIN BUILDING MATERIALS, IN WHICH CASE TYPE NM CABLE MAY BE USED.
- WALL SWITCHES SHALL BE LEVITON #CS120 SERIES, OR APPROVED EQUAL. 20A. COLOR SHALL BE DETERMINED BY ARCHITECT. DIMMER SWITCHES SHALL BE SELECTED BY CONTRACTOR TO BE COMPATIBLE WITH LIGHT FIXTURES PROVIDED. COLOR SHALL BE DETERMINED BY ARCHITECT.
- DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT LEVITON #F580 SERIES, OR APPROVED EQUAL. 20A. GROUNDING, MATCHING COVER PLATE, COLOR AS DETERMINED BY ARCHITECT. USE SIDE WIRING ONLY.
- ARC-FAULT CIRCUIT INTERRUPTER BREAKERS SHALL BE COMBINATION TYPE BY SQUARE D, AND SHALL HAVE A DEDICATED NEUTRAL WIRE THROUGHOUT THE CIRCUIT.
- THE ENTIRE SYSTEM SHALL BE ELECTRICALLY CONTINUOUS AND PROPERLY GROUNDING. EVERY FEEDER AND BRANCH CONDUIT SHALL HAVE CODE SIZED GREEN INSULATED GROUND CONDUCTOR.
- FURNISH AND INSTALL ALL LIGHTING FIXTURES, LAMPS, FUSES, BREAKERS, ETC. TO COMPLETE THE BRANCH CIRCUITS INDICATED.
- ALL 120V, 20A LIGHTING AND RECEPTACLE CIRCUITS REQUIRING MORE THAN 100' OF CONDUCTORS (ONE WAY) SHALL BE #10 CONDUCTORS, MINIMUM.
- PROVIDE TYPEWRITTEN BREAKER SCHEDULE IN EACH PANELBOARD INDICATING ITEMS AND DEVICES SERVED BY ALL BREAKERS IN EACH PANEL.
- PERMANENTLY LABEL DISCONNECTS FOR HVAC EQUIPMENT WITH EQUIPMENT SERVED, AND PANEL AND CIRCUIT NUMBER.
- UNDERGROUND SPLICES TO BE MADE WITH DEVICES RATED FOR THAT APPLICATION.
- ALL ELECTRICAL PANELS AND DISCONNECTS SHALL HAVE A PERMANENT ARC-FLASH LABEL AFFIXED PER NEC 110.16.

### POWER SYMBOL LEGEND

- xx-xx POWER RECEPTACLE
- MOUNTING HEIGHT (INCHES)
- IF OTHER THAN 18" AFF (BOTTOM OF BOX)
- "WP" INDICATES WEATHERPROOF OUTDOOR RECEPTACLE.
- "AW" INDICATES ABOVE WINDOW RECEPTACLE
- "C" INDICATES ABOVE CEILING
- "E" INDICATES EXISTING RECEPTACLE TO REMAIN
- GFI DUPLEX CONVENIENCE OUTLET
- QUADPLEX CONVENIENCE OUTLET
- 208V OUTLET
- USB OUTLET EQUAL TO LEVITON #T5832 OR APPROVED EQUAL
- DATA / TELEPHONE JACK (MOUNTED @ 18" AFF U.N.O.)
- OUTLET BOX WITH 1" CONDUIT UP TO CEILING SPACE w/ PULL STRING.
- PHONE & DATA WIRING BY OWNER'S SUBCONTRACTOR.
- PHONE / DATA CABLING TO BE PLENUM RATED.
- DATA CABLING TO BE CAT6.
- JUNCTION BOX
- DISCONNECT
- TIE INTO EXISTING

### LIGHTING SYMBOL LEGEND

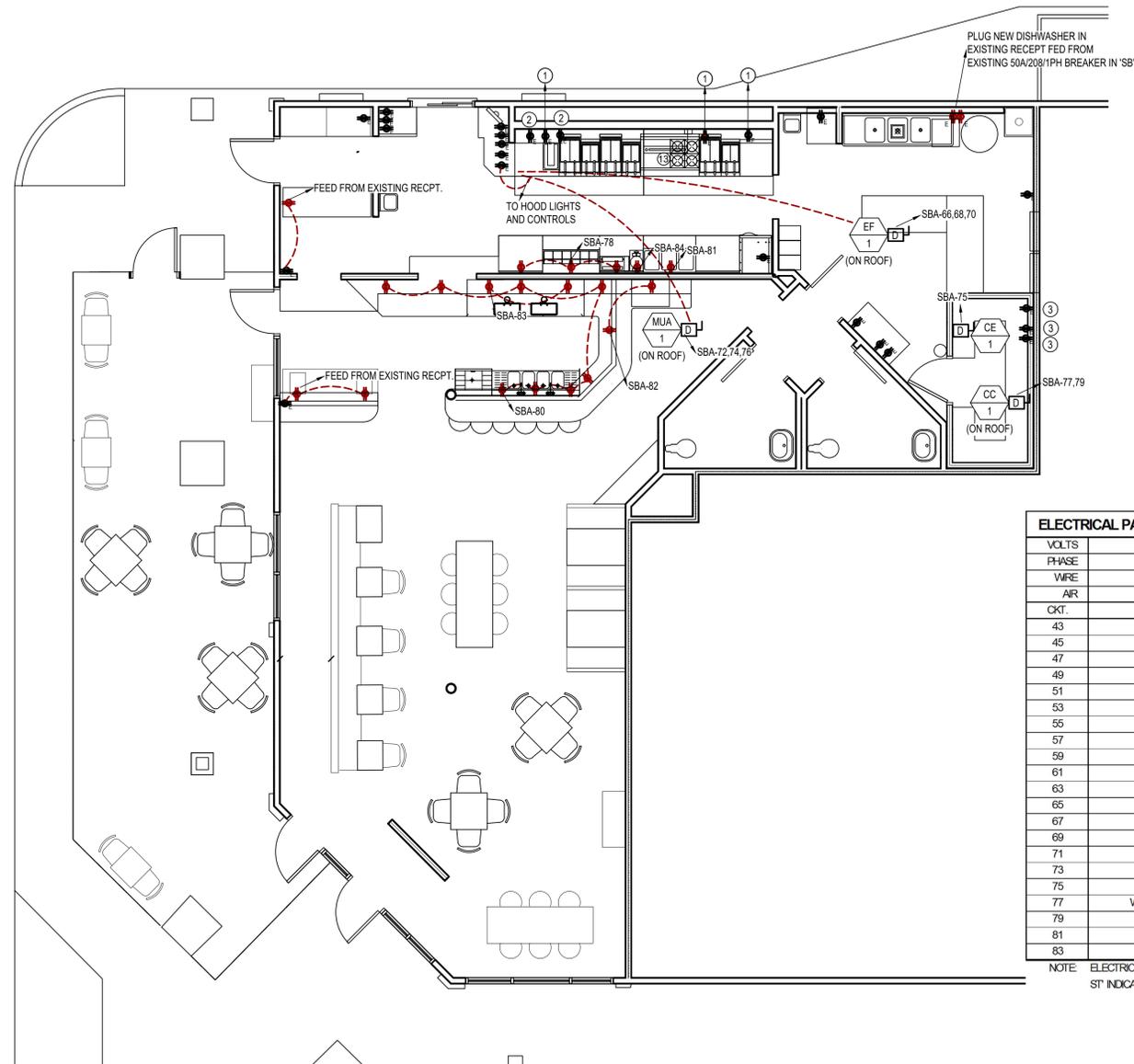
- LIGHTING FIXTURE
- UN-SWITCHED NIGHT LIGHT
- DARKENED INDICATES FIXTURE WITH EMERGENCY BALLAST
- INDICATES FIXTURE TYPE
- TOGGLE SWITCH
- TYPE OF SWITCH
- DIMMER SWITCH

### LIGHTING PLAN GENERAL NOTES

- EXISTING LIGHTING TO REMAIN.

### POWER PLAN GENERAL NOTES

- EQUIPMENT LABELED "E", "EX", OR EXISTING IS EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.



### POWER PLAN KEY NOTES

- EXISTING RECEPTACLE AND WIRING TO REMAIN AND USED FOR NEW EQUIPMENT. ELECTRICIAN TO TRACE CIRCUIT AND INSTALL NEW SHUNT TRIP BREAKER ON CIRCUITS FEEDING OUTLET. SHUNT TRIP TO BE CONTROLLED BY HOOD FIRE SUPPRESSION SYSTEM.
- EXISTING RECEPTACLE. ELECTRICIAN TO TRACE CIRCUIT AND EITHER DISCONNECT FROM POWER SOURCE OR INSTALL NEW SHUNT TRIP BREAKER ON CIRCUITS FEEDING OUTLET. SHUNT TRIP TO BE CONTROLLED BY HOOD FIRE SUPPRESSION SYSTEM.
- DEMO EXISTING RECEPTACLES, INSTALL NEW BLANK FACEPLATE, AND REMOVE CONDUCTORS BACK TO NEAREST JBOX ABOVE CEILING.

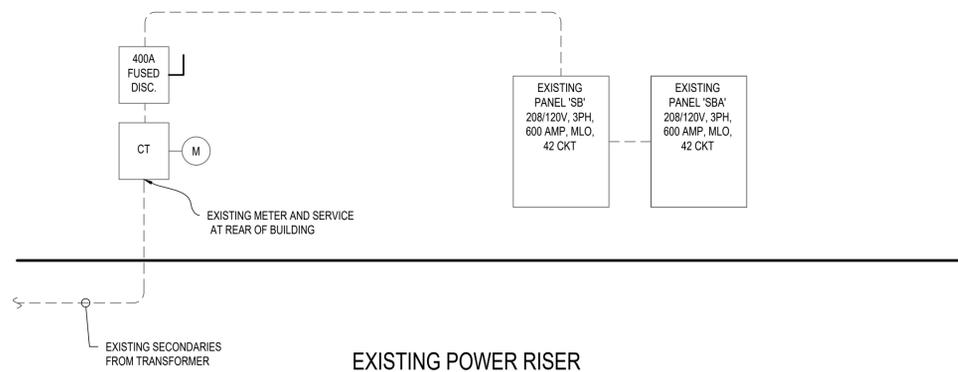
### ELECTRICAL PANEL SCHEDULE

ELECTRICAL PANEL SCHEDULE						PANEL NO.		SBA
VOLTS	208	MAIN CAPACITY:		600 MLO		"A" AMPS =		44
PHASE	3	MOUNTING:		RECESSED		"B" AMPS =		34
WIRE	SEE RISER	BUS MATERIAL:		COPPER		"C" AMPS =		59
AIR	SEE RISER	SQUARE D MODEL:		NQ				
CKT.	LOCATION/DESC.	BREAKER	AMPS	FH	AMPS	BREAKER	LOCATION/DESC.	CKT.
43	EXISTING	A					EXISTING	44
45	EXISTING	B					EXISTING	46
47	EXISTING	C					EXISTING	48
49	EXISTING	A					EXISTING	50
51	EXISTING	B					EXISTING	52
53	EXISTING	C					EXISTING	54
55	EXISTING	A					EXISTING	56
57	EXISTING	B					EXISTING	58
59	EXISTING	C					EXISTING	60
61	EXISTING	A	8		20-1 ST		UNDER HOOD RECEPTS	62
63	EXISTING	B			\		SHUNT TRIP SPACE	64
65	EXISTING	C	10		20-3		HOOD EF	66
67	EXISTING	A	10		\		\	68
69	EXISTING	B	10		\		\	70
71	EXISTING	C	4	15-3	\		HOOD MUA	72
73	EXISTING	A	4	\	\		\	74
75	WALK IN EVAP	20-1	5	B	4	\	\	76
77	WALK IN CONDENSER	20-2	10	C	15	20-1	BUN WARMER, SAND TABLE	78
79	\	\	10	A	12	20-1	BAR OUTLETS	80
81	WARMER TABLE	20-1	12	B	3	20-1	WAITRESS STAND, BAR OUTLETS	82
83	BEER TAPS	20-1	11	C	9	20-1	WAFFLE MAKER	84

NOTE: ELECTRICIAN TO VERIFY ALL EQUIPMENT POWER REQUIREMENTS PRIOR TO ANY EQUIPMENT & BREAKER PURCHASE OR INSTALLATION.  
ST\* INDICATES SHUNT TRIP BREAKER, WIRED TO HOOD FIRE SUPPRESSION CONTACTS.

### POWER PLAN

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



ELECTRICAL LOAD CALCULATION - EXISTING BUILDING (NEC 220-35)				
METER#	AMPS	VA	MULTIPLIER	TOTAL
MAX 1-YR DEMAND	--	31,600	1.25	39,500
NEW LOAD (SUM OF ALL PHASES)	137	16,440	1	16,440
TOTAL NEW SERVICE LOAD (VA)	--	--	--	55,940
TOTAL NEW SERVICE LOAD (AMPS/PHASE)	--	56,940	360	155
EXISTING ELECTRIC SERVICE IS 400 AMP, 208V, 3 PHASE, THEREFORE ADDED ELECTRICAL LOAD IS ACCEPTABLE.				

PEAK USED OCCURRED DURING LAST OCCUPANCY, PRIOR TO VACANCY, PER UTILITY. NEW LOADS HAVE BEEN INCLUDED, BUT NO CREDIT TAKEN FOR OLD EQUIPMENT THAT WAS REMOVED, AS THOSE LOADS ARE UNKNOWN. THEREFORE THIS CALCULATION IS QUITE CONSERVATIVE.

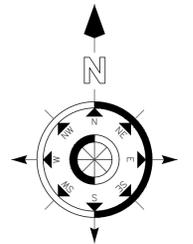
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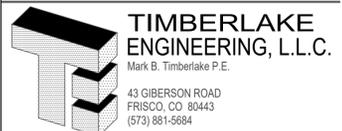
REVISIONS:	DATE:

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**R C R B D**  
**RECORD SET**  
**ELECTRICAL**



Mark Timberlake, P.E. FEB. 10, 2020  
PE-0049319



POWER & LIGHTING PLAN

### HYPNO-CHIC RESTAURANT

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

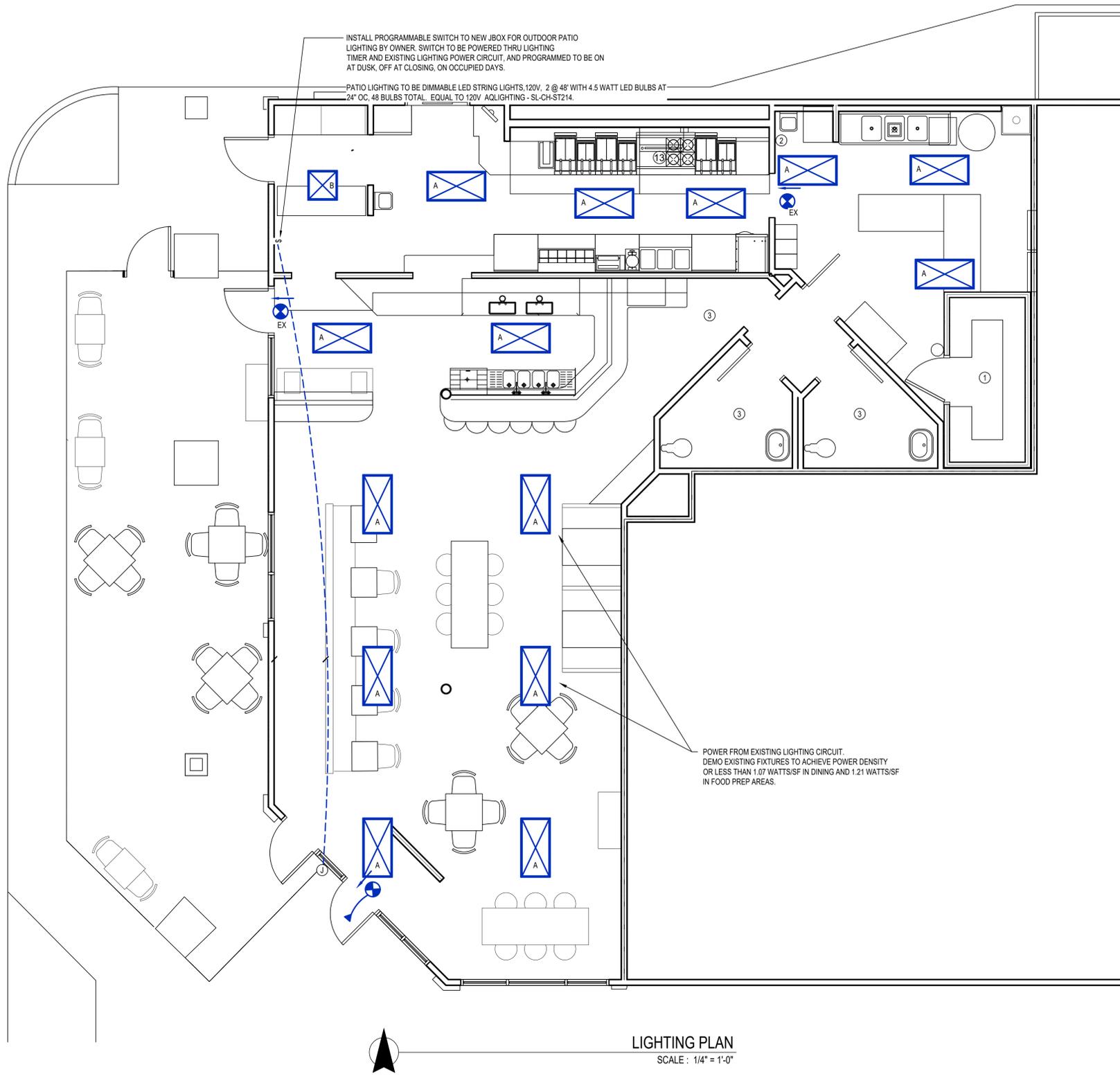
DATE: 01-12-2020 SHEET NO.

DRAWN BY: MBT

PROJECT NO: 19001

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

**EP100**



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

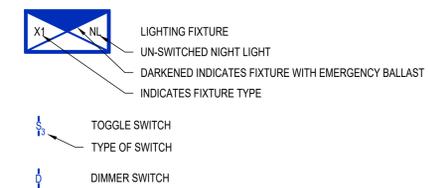
**GENERAL NOTES**

- ALL EMERGENCY, EXIT, AND NIGHT LIGHTS TO BE UN-SWITCHED, WIRED ON CIRCUIT WITHIN SAME ROOM.
- EQUIPMENT LABELED "EX." OR "EXISTING" IS EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.

**KEY NOTES**

- ELECTRICIAN TO INSTALL AND WIRE WALK IN LIGHT FIXTURES, PROVIDED WITH WALK-IN.
- LOCATION OF EXISTING LIGHTING SWITCHES. REPLACE EXISTING SWITCHES WITH WATTSTOPPER RT-200 PROGRAMMABLE SWITCH TO TURN LIGHTING OFF DURING UNOCCUPIED HOURS.
- EXISTING LIGHTING IN BATHROOMS AND HALLWAY TO REMAIN.

**LIGHTING SYMBOL LEGEND**



**ELECTRICAL SPECIFICATIONS**

- ALL CONDUCTORS SHALL BE THHN COPPER ABOVE GRADE, XHHW-2 BELOW GRADE, MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
- ALL SERVICE WIRING, EXPOSED TO WEATHER, OR WIRING BELOW GRADE, SHALL BE IN RIGID GALVANIZED CONDUIT OR SCH. 40 PVC.
- ALL OTHER WIRING SHALL BE IN EMT, SCHEDULE 40 PVC, OR MC CABLE, UNLESS PROTECTED AND ENCLOSED WITHIN BUILDING MATERIALS, IN WHICH CASE TYPE NM CABLE MAY BE USED.
- WALL SWITCHES SHALL BE LEVITON #CS120 SERIES, OR APPROVED EQUAL, 20A, COLOR SHALL BE DETERMINED BY ARCHITECT. DIMMER SWITCHES SHALL BE SELECTED BY CONTRACTOR TO BE COMPATIBLE WITH LIGHT FIXTURES PROVIDED, COLOR SHALL BE DETERMINED BY ARCHITECT.
- DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT LEVITON #T580 SERIES, OR APPROVED EQUAL, 20A, GROUNDING, MATCHING COVER PLATE, COLOR AS DETERMINED BY ARCHITECT. USE SIDE WIRING ONLY.
- ARC-FAULT CIRCUIT INTERRUPTER BREAKERS SHALL BE COMBINATION TYPE BY SQUARE D, AND SHALL HAVE A DEDICATED NEUTRAL WIRE THROUGHOUT THE CIRCUIT.
- THE ENTIRE SYSTEM SHALL BE ELECTRICALLY CONTINUOUS AND PROPERLY GROUNDED. EVERY FEEDER AND BRANCH CONDUIT SHALL HAVE CODE SIZED GREEN INSULATED GROUND CONDUCTOR. FURNISH AND INSTALL ALL LIGHTING FIXTURES, LAMPS, FUSES, BREAKERS, ETC. TO COMPLETE THE BRANCH CIRCUITS INDICATED.
- ALL 120V, 20A LIGHTING AND RECEPTACLE CIRCUITS REQUIRING MORE THAN 100' OF CONDUCTORS (ONE WAY) SHALL BE #10 CONDUCTORS, MINIMUM.
- PROVIDE TYPEWRITTEN BREAKER SCHEDULE IN EACH PANELBOARD INDICATING ITEMS AND DEVICES SERVED BY ALL BREAKERS IN EACH PANEL.
- PERMANENTLY LABEL DISCONNECTS FOR HVAC EQUIPMENT WITH EQUIPMENT SERVED, AND PANEL AND CIRCUIT NUMBER.
- UNDERGROUND SPLICES TO BE MADE WITH DEVICES RATED FOR THAT APPLICATION.
- ALL ELECTRICAL PANELS AND DISCONNECTS SHALL HAVE A PERMANENT ARC-FLASH LABEL AFFIXED PER NEC 110.16.

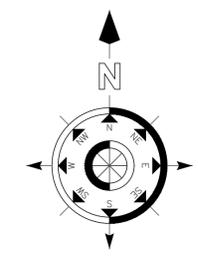
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**R C R B D**  
**RECORD SET**  
**ELECTRICAL**



Mark Timberlake, P.E. FEB. 10, 2020  
PE-0049319

**TIMBERLAKE ENGINEERING, L.L.C.**  
Mark B. Timberlake P.E.  
43 GIBERSON ROAD  
FRISCO, CO 80443  
(573) 881-5684

**LIGHTING PLAN**

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE:	01-12-2020	SHEET NO.
DRAWN BY:	MBT	
PROJECT NO.:	19001	
SCALE:	1/4"=1'-0"	

**EL100**

LIGHTING SCHEDULE												
MARK	MANUFACTURER*	MODEL NO.*	TYPE	VOLTS	AMPS	WATTS	LUMENS	CCT (*K)	CRI	LAMPS	MOUNTING	REMARKS
A	METALLUX	24FP4735C	2x4 FLAT PANEL	120	0.34	40.4	4990	3600	80	LED	GRID	
B	METALLUX	22FP4235C	2x2 FLAT PANEL	120	0.32	38.9	4641	3500	80	LED	GRID	

\* OR EQUAL

## ELECTRICAL SPECIFICATIONS

- ALL CONDUCTORS SHALL BE THHN COPPER ABOVE GRADE, XHHW-2 BELOW GRADE, MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
- ALL SERVICE WIRING, EXPOSED TO WEATHER, OR WIRING BELOW GRADE, SHALL BE IN RIGID GALVANIZED CONDUIT OR SCH. 40 PVC.
- ALL OTHER WIRING SHALL BE IN EMT, SCHEDULE 40 PVC, OR MC CABLE, UNLESS PROTECTED AND ENCLOSED WITHIN BUILDING MATERIALS, IN WHICH CASE TYPE NM CABLE MAY BE USED.
- WALL SWITCHES SHALL BE LEVITON #CS120 SERIES, OR APPROVED EQUAL. 20A. COLOR SHALL BE DETERMINED BY ARCHITECT. DIMMER SWITCHES SHALL BE SELECTED BY CONTRACTOR TO BE COMPATIBLE WITH LIGHT FIXTURES PROVIDED. COLOR SHALL BE DETERMINED BY ARCHITECT.
- DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT LEVITON #F580 SERIES, OR APPROVED EQUAL. 20A. GROUNDING, MATCHING COVER PLATE, COLOR AS DETERMINED BY ARCHITECT. USE SIDE WIRING ONLY.
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- THE ENTIRE SYSTEM SHALL BE ELECTRICALLY CONTINUOUS AND PROPERLY GROUNDING. EVERY FEEDER AND BRANCH CONDUIT SHALL HAVE CODE SIZED GREEN INSULATED GROUND CONDUCTOR.
- FURNISH AND INSTALL ALL LIGHTING FIXTURES, LAMPS, FUSES, BREAKERS, ETC. TO COMPLETE THE BRANCH CIRCUITS INDICATED.
- ALL 120V, 20A LIGHTING AND RECEPTACLE CIRCUITS REQUIRING MORE THAN 100' OF CONDUCTORS (ONE WAY) SHALL BE #10 CONDUCTORS, MINIMUM.
- PROVIDE TYPEWRITTEN BREAKER SCHEDULE IN EACH PANELBOARD INDICATING ITEMS AND DEVICES SERVED BY ALL BREAKERS IN EACH PANEL.
- PERMANENTLY LABEL DISCONNECTS FOR HVAC EQUIPMENT WITH EQUIPMENT SERVED, AND PANEL AND CIRCUIT NUMBER.
- UNDERGROUND SPLICES TO BE MADE WITH DEVICES RATED FOR THAT APPLICATION.
- ALL ELECTRICAL PANELS AND DISCONNECTS SHALL HAVE A PERMANENT ARC-FLASH LABEL AFFIXED PER NEC 110.16.

## POWER SYMBOL LEGEND

- XX-XX POWER RECEPTACLE
- MOUNTING HEIGHT (INCHES)
- IF OTHER THAN 18" AFF (BOTTOM OF BOX)
- "WP" INDICATES WEATHERPROOF OUTDOOR RECEPTACLE.
- "AW" INDICATES ABOVE WINDOW RECEPTACLE
- "C" INDICATES ABOVE CEILING
- "E" INDICATES EXISTING RECEPTACLE TO REMAIN
- GFI DUPLEX CONVENIENCE OUTLET
- QUADPLEX CONVENIENCE OUTLET
- 208V OUTLET
- USB OUTLET EQUAL TO LEVITON #T5832 OR APPROVED EQUAL
- DATA / TELEPHONE JACK (MOUNTED @ 18" AFF U.N.O.)
- OUTLET BOX WITH 1" CONDUIT UP TO CEILING SPACE w/ PULL STRING.
- PHONE & DATA WIRING BY OWNER'S SUBCONTRACTOR.
- PHONE / DATA CABLING TO BE PLENUM RATED.
- DATA CABLING TO BE CAT6.
- JUNCTION BOX
- DISCONNECT
- TIE INTO EXISTING

## LIGHTING SYMBOL LEGEND

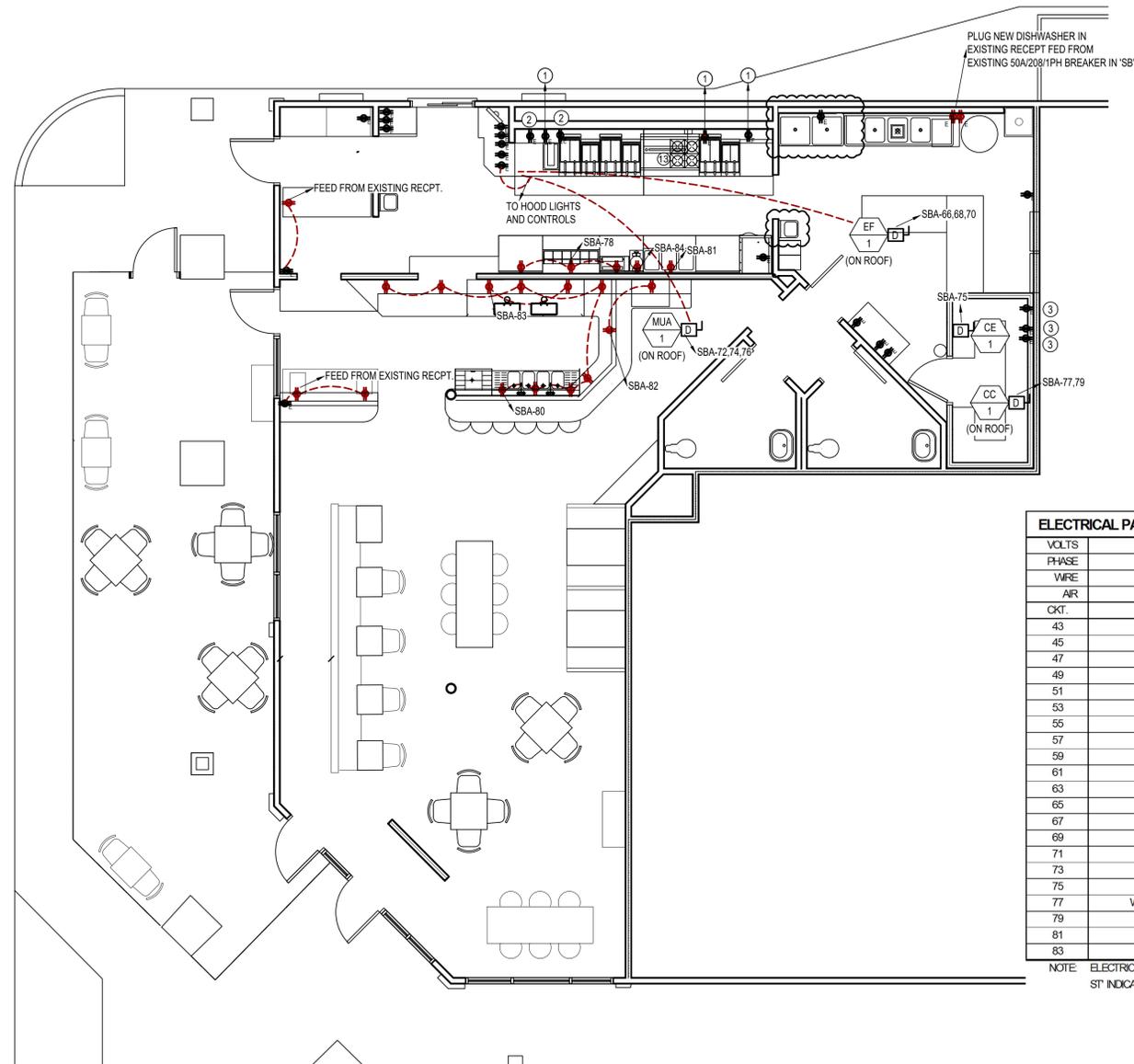
- X1 LIGHTING FIXTURE
- UN-SWITCHED NIGHT LIGHT
- DARKENED INDICATES FIXTURE WITH EMERGENCY BALLAST
- INDICATES FIXTURE TYPE
- TOGGLE SWITCH
- TYPE OF SWITCH
- DIMMER SWITCH

## LIGHTING PLAN GENERAL NOTES

- EXISTING LIGHTING TO REMAIN.

## POWER PLAN GENERAL NOTES

- EQUIPMENT LABELED "E", "EX", OR EXISTING IS EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.



## POWER PLAN KEY NOTES

- EXISTING RECEPTACLE AND WIRING TO REMAIN AND USED FOR NEW EQUIPMENT. ELECTRICIAN TO TRACE CIRCUIT AND INSTALL NEW SHUNT TRIP BREAKER ON CIRCUITS FEEDING OUTLET. SHUNT TRIP TO BE CONTROLLED BY HOOD FIRE SUPPRESSION SYSTEM.
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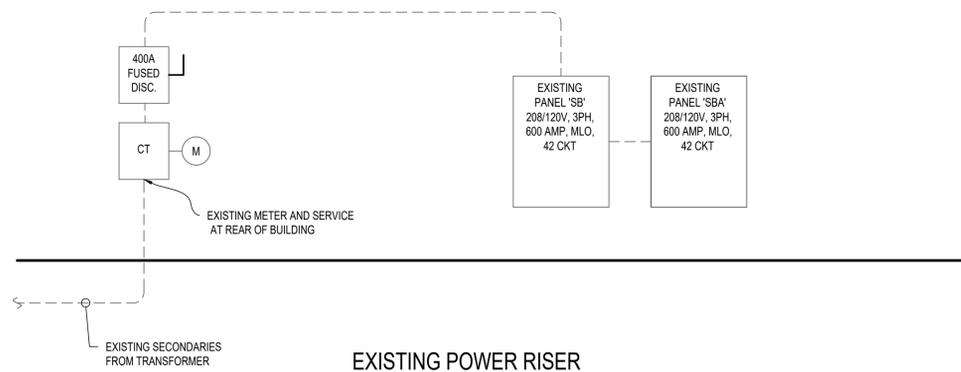
## ELECTRICAL PANEL SCHEDULE

ELECTRICAL PANEL SCHEDULE						PANEL NO. SBA		
VOLTS	208	MAIN CAPACITY:		600 MLO		"A" AMPS =		44
PHASE	3	MOUNTING:		RECESSED		"B" AMPS =		34
WIRE	SEE RISER	BUS MATERIAL:		COPPER		"C" AMPS =		59
AIR	SEE RISER	SQUARE D MODEL:		NQ				
CKT.	LOCATION/DESC.	BREAKER	AMPS	PH	AMPS	BREAKER	LOCATION/DESC.	CKT.
43	EXISTING	A					EXISTING	44
45	EXISTING	B					EXISTING	46
47	EXISTING	C					EXISTING	48
49	EXISTING	A					EXISTING	50
51	EXISTING	B					EXISTING	52
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57	EXISTING	B					EXISTING	58
59	EXISTING	C					EXISTING	60
61	EXISTING	A	8		20-1 ST		UNDER HOOD RECEPTS	62
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67	EXISTING	A	10		\		\	68
69	EXISTING	B	10		\		\	70
71	EXISTING	C	4	15-3			HOOD MUA	72
73	EXISTING	A	4		\		\	74
75	WALK-IN EVAP	20-1	5	B	4	\	\	76
77	WALK-IN CONDENSER	20-2	10	C	15	20-1	BUN WARMER, SAND TABLE	78
79	\	\	10	A	12	20-1	BAR OUTLETS	80
81	WARMER TABLE	20-1	12	B	3	20-1	WAITRESS STAND, BAR OUTLETS	82
83	BEER TAPS	20-1	11	C	9	20-1	WAFFLE MAKER	84

NOTE: ELECTRICIAN TO VERIFY ALL EQUIPMENT POWER REQUIREMENTS PRIOR TO ANY EQUIPMENT & BREAKER PURCHASE OR INSTALLATION.  
ST\* INDICATES SHUNT TRIP BREAKER, WIRED TO HOOD FIRE SUPPRESSION CONTACTS.

## POWER PLAN

SCALE: 3/16" = 1'-0"



ELECTRICAL LOAD CALCULATION - EXISTING BUILDING (NEC 220-35)				
METER#	AMPS	VA	MULTIPLIER	TOTAL
MAX 1-YR DEMAND	--	31,600	1.25	39,500
NEW LOAD (SUM OF ALL PHASES)	137	16,440	1	16,440
TOTAL NEW SERVICE LOAD (VA)	--	--	--	55,940
TOTAL NEW SERVICE LOAD (AMPS/PHASE)	--	56,940	360	155
EXISTING ELECTRIC SERVICE IS 400 AMP, 208V, 3 PHASE, THEREFORE ADDED ELECTRICAL LOAD IS ACCEPTABLE.				

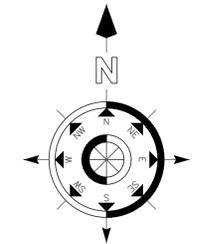
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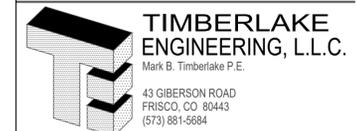
REVISIONS:	DATE:
ADDED PREP SINK, RELOCATED HAND SINK	3/25/2020

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Mark Timberlake, P.E.  
PE-0049319

MARCH 25, 2020



POWER & LIGHTING PLAN

## HYPNO-CHIC RESTAURANT

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

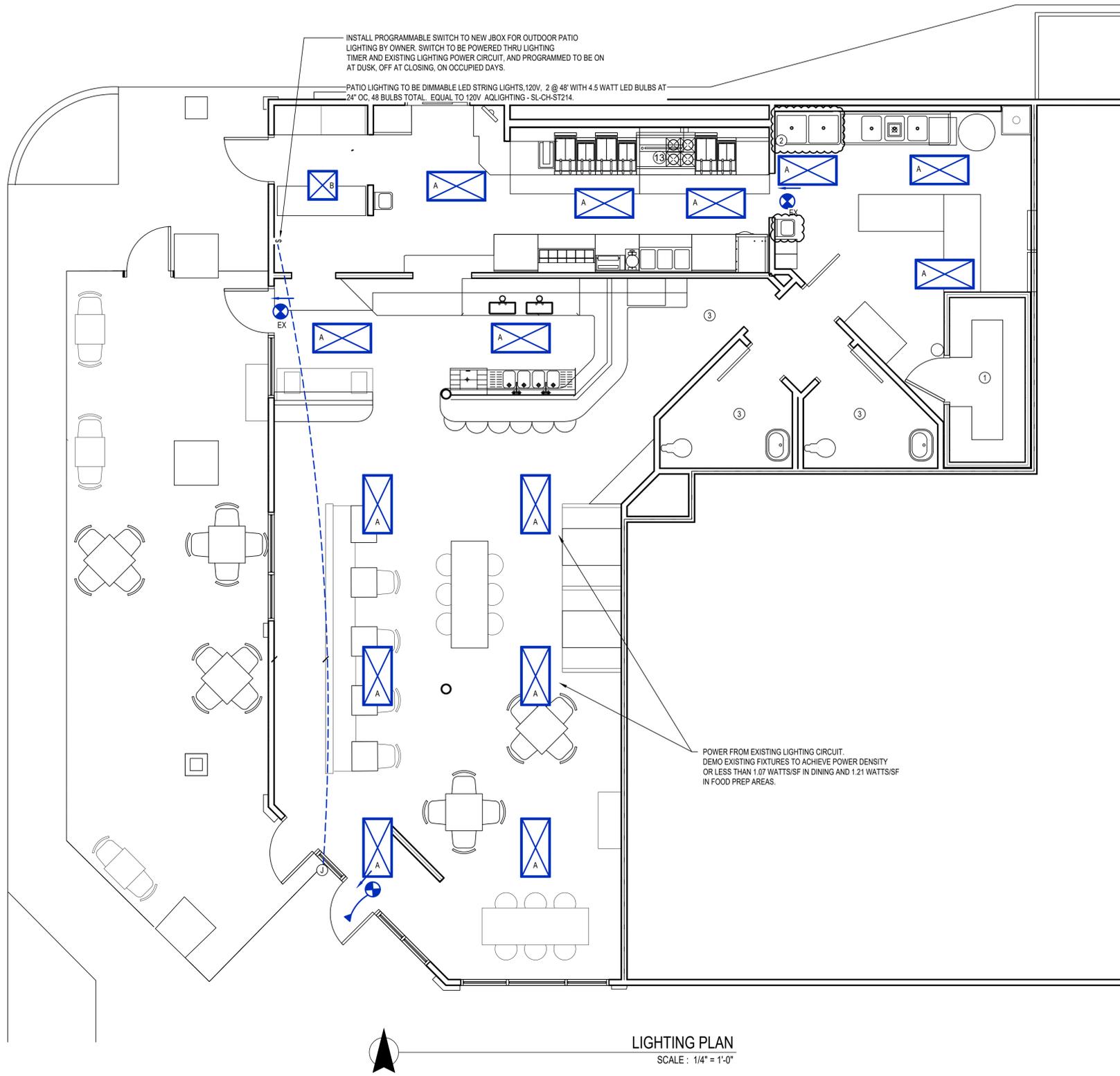
DATE: 01-12-2020 SHEET NO.

DRAWN BY: MBT

PROJECT NO: 19001

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

**EP100**



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

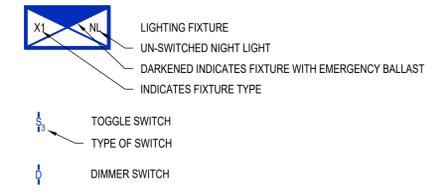
**GENERAL NOTES**

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2. EQUIPMENT LABELED "EX." OR "EXISTING" IS EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.

**KEY NOTES**

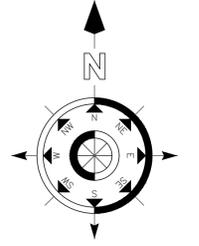
- ① ELECTRICIAN TO INSTALL AND WIRE WALK IN LIGHT FIXTURES, PROVIDED WITH WALK-IN.
- ② LOCATION OF EXISTING LIGHTING SWITCHES. REPLACE EXISTING SWITCHES WITH WATTSTOPPER RT-200 PROGRAMMABLE SWITCH TO TURN LIGHTING OFF DURING UNOCCUPIED HOURS.
- ③ EXISTING LIGHTING IN BATHROOMS AND HALLWAY TO REMAIN.

**LIGHTING SYMBOL LEGEND**



**ELECTRICAL SPECIFICATIONS**

1. ALL CONDUCTORS SHALL BE THIN COPPER ABOVE GRADE, XHHW-2 BELOW GRADE, MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
2. ALL SERVICE WIRING, EXPOSED TO WEATHER, OR WIRING BELOW GRADE, SHALL BE IN RIGID GALVANIZED CONDUIT OR SCH. 40 PVC.
3. ALL OTHER WIRING SHALL BE IN EMT, SCHEDULE 40 PVC, OR MC CABLE, UNLESS PROTECTED AND ENCLOSED WITHIN BUILDING MATERIALS, IN WHICH CASE TYPE NM CABLE MAY BE USED.
4. WALL SWITCHES SHALL BE LEVITON #CS120 SERIES, OR APPROVED EQUAL, 20A, COLOR SHALL BE DETERMINED BY ARCHITECT. DIMMER SWITCHES SHALL BE SELECTED BY CONTRACTOR TO BE COMPATIBLE WITH LIGHT FIXTURES PROVIDED, COLOR SHALL BE DETERMINED BY ARCHITECT.
5. DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT LEVITON #T580 SERIES, OR APPROVED EQUAL, 20A, GROUNDING, MATCHING COVER PLATE, COLOR AS DETERMINED BY ARCHITECT. USE SIDE WIRING ONLY.
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9. PROVIDE TYPEWRITTEN BREAKER SCHEDULE IN EACH PANELBOARD INDICATING ITEMS AND DEVICES SERVED BY ALL BREAKERS IN EACH PANEL.
10. PERMANENTLY LABEL DISCONNECTS FOR HVAC EQUIPMENT WITH EQUIPMENT SERVED, AND PANEL AND CIRCUIT NUMBER.
11. UNDERGROUND SPLICES TO BE MADE WITH DEVICES RATED FOR THAT APPLICATION.
12. ALL ELECTRICAL PANELS AND DISCONNECTS SHALL HAVE A PERMANENT ARC-FLASH LABEL AFFIXED PER NEC 110.16.



LIGHTING SCHEDULE												
MARK	MANUFACTURER*	MODEL NO.*	TYPE	VOLTS	AMPS	WATTS	LUMENS	CCT (*K)	CRI	LAMPS	MOUNTING	REMARKS
A	METALLUX	24FP4735C	2x4 FLAT PANEL	120	0.34	40.4	4990	3500	80	LED	GRID	
B	METALLUX	22FP4235C	2x2 FLAT PANEL	120	0.32	38.9	4641	3500	80	LED	GRID	

\* OR EQUAL

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REVISIONS:	DATE:
ADDED PREP SINK, RELOCATED HAND SINK	3/25/2020

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Mark Timberlake, P.E. MARCH 25, 2020  
PE-0049319

**TIMBERLAKE ENGINEERING, L.L.C.**  
Mark B. Timberlake P.E.  
43 GIBERSON ROAD  
FRISCO, CO 80443  
(573) 881-5684

**LIGHTING PLAN**

**HYPNO-CHIC RESTAURANT**

DATE:	01-12-2020	SHEET NO.
DRAWN BY:	MBT	
PROJECT NO.:	19001	
SCALE:	1/4"=1'-0"	

**EL100**

**RCRBD  
RECORD SET  
3.20.2020**

**PLUMBING SPECIFICATIONS**

- WASTE AND VENT PIPING INSIDE BUILDING SHALL BE SCH. 40 PVC DWV PLASTIC WITH SOLVENT WELD FITTINGS BELOW GRADE, AND SCH. 40 PVC DWV PVC, COPPER OR NO-HUB CAST IRON ABOVE GRADE. MINIMUM SLOPE: 1/4" PER FT 1 1/4" TO 2 1/2" PIPE, 1/8" PER FT 3" TO 6", 1/16" PER FT 8" AND LARGER. PVC TO BE SOLID CORE - CELLULAR CORE IS NOT ACCEPTABLE.
- WATER PIPING SHALL BE TYPE "K" COPPER BELOW GRADE, TYPE "L" COPPER ABOVE GRADE. THERE SHALL BE NO JOINTS IN WATER PIPING BELOW SLABS. UNDERGROUND COPPER JOINTS TO BE SILVER SOLDERED. IF PEX PIPING IS USED, PIPE SIZES MUST BE INCREASED BY ONE PIPE SIZE ABOVE WHAT IS SHOWN ON PLANS. ALTERNATIVELY, PEX-A PIPING MAY BE USED AT SIZES INDICATED IF MANUFACTURER'S ENGINEERED PLANS ARE PROVIDED SHOWING ACCEPTABLE PRESSURE DROP AND FLUID VELOCITIES.
- LP & NATURAL GAS PIPING ABOVE GRADE SHALL BE SCH. 40 BLACK STEEL PIPE WITH CLASS 150 MALLEABLE IRON THREADED FITTINGS. ALL NEW EXTERIOR GAS PIPING SHALL BE PAINTED TO MATCH BUILDING WHERE EXPOSED ON BUILDING FACE AND YELLOW IN ALL OTHER LOCATIONS. ROOFTOP MOUNTED PIPING SHALL BE FASTENED TO AND SUPPORTED BY "ROOFTOP BLOC".
- INSULATE ALL DOMESTIC WATER PIPING, INCLUDING BELOW SLAB, WITH 1/2" THICK PLENUM RATED ARMAFLEX.
- PLUMBING FIXTURES SHALL BE AS INDICATED ON DRAWING. FURNISH AND INSTALL CHROME STOP VALVES, SUPPLIES, ESCUTCHEONS AND TRAPS AS REQUIRED FOR ALL FIXTURES.
- ALL SEWER VENT TERMINATIONS SHALL BE LOCATED MINIMUM 10' HORIZONTALLY OR 3' HIGHER THAN ANY AIR INTAKE. PLUMBER IS RESPONSIBLE TO REROUTE ANY VENT TERMINATIONS AS REQUIRED TO ACCOMPLISH THIS REQUIREMENT.

**GENERAL NOTES**

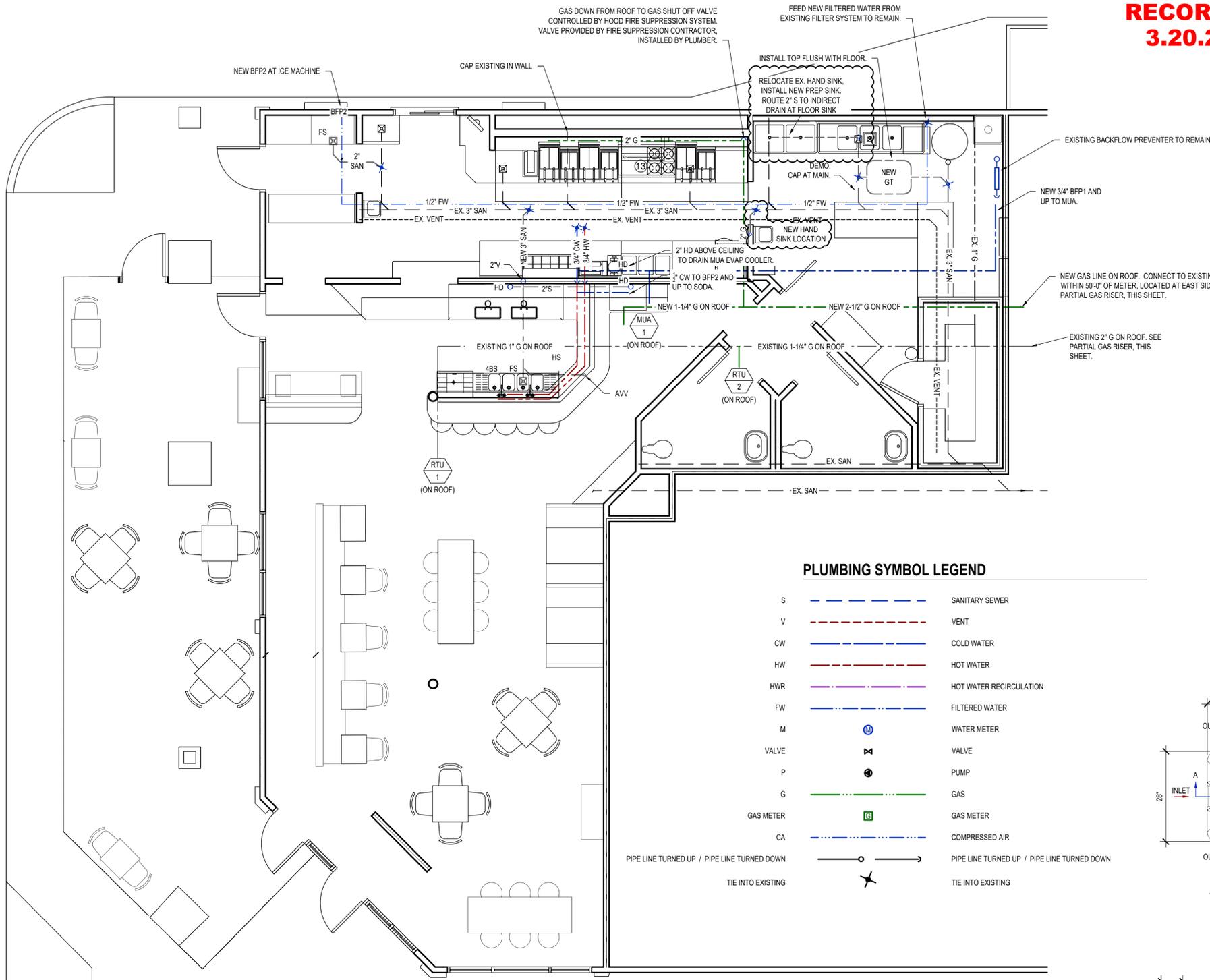
- REFER TO PD100 FOR REMAINING PLUMBING NOTES, LEGENDS, DETAILS & SCHEDULES
- PLUMBING EQUIPMENT & PIPING LABELED "EX." OR "EXISTING" IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

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REVISIONS:	DATE:
ADDED PREP SINK, RELOCATED HAND SINK	3/25/2020

THE PROFESSIONAL ENGINEER'S SEAL ON THIS DRAWING HAS BEEN AFFIXED IN ACCORDANCE WITH THE REQUIREMENTS OF STATE REGULATIONS. IN AFFIXING THIS SEAL THE ENGINEER TAKES RESPONSIBILITY FOR THE WORK SHOWN ON THIS DRAWING ONLY, AND HEREBY DISCLAIMS ANY AND ALL RESPONSIBILITY FOR OTHER PROJECT DRAWINGS NOT DIRECTLY BEARING THIS SEAL.



GAS DOWN FROM ROOF TO GAS SHUT OFF VALVE CONTROLLED BY HOOD FIRE SUPPRESSION SYSTEM. VALVE PROVIDED BY FIRE SUPPRESSION CONTRACTOR, INSTALLED BY PLUMBER.

FEED NEW FILTERED WATER FROM EXISTING FILTER SYSTEM TO REMAIN.

INSTALL TOP FLUSH WITH FLOOR.

RELOCATE EX. HAND SINK. INSTALL NEW PREP SINK. ROUTE 2" S TO INDIRECT DRAIN AT FLOOR SINK

EXISTING BACKFLOW PREVENTER TO REMAIN.

NEW 3/4" BFP1 AND UP TO MUA.

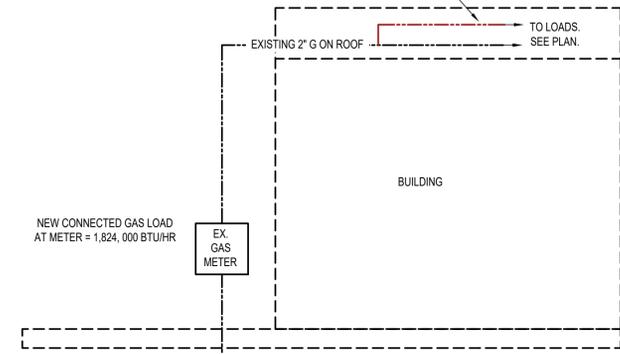
NEW GAS LINE ON ROOF. CONNECT TO EXISTING 2" GAS ON ROOF WITHIN 50'-0" OF METER. LOCATED AT EAST SIDE OF BUILDING. SEE PARTIAL GAS RISER, THIS SHEET.

EXISTING 2" G ON ROOF. SEE PARTIAL GAS RISER, THIS SHEET.

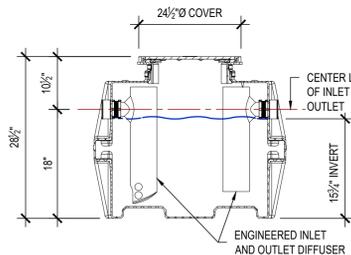
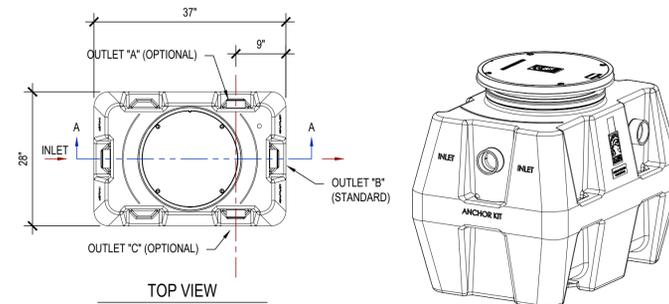
NEW GAS LINE ON ROOF. CONNECT TO EXISTING 2" GAS ON ROOF WITHIN 50'-0" OF METER. LOCATED AT EAST SIDE OF BUILDING.

**PLUMBING SYMBOL LEGEND**

S	---	SANITARY SEWER
V	---	VENT
CW	---	COLD WATER
HW	---	HOT WATER
HWR	---	HOT WATER RECIRCULATION
FW	---	FILTERED WATER
M	⊙	WATER METER
VALVE	⊗	VALVE
P	⊙	PUMP
G	---	GAS
GAS METER	⊙	GAS METER
CA	---	COMPRESSED AIR
PIPE LINE TURNED UP / PIPE LINE TURNED DOWN	↗ / ↘	PIPE LINE TURNED UP / PIPE LINE TURNED DOWN
TIE INTO EXISTING	✈	TIE INTO EXISTING



**PARTIAL GAS RISER**



**SECTION A-A**

**SCHIER PRODUCTS #GB-50**

- 4" PLAIN END INLET/OUTLET
- UNIT WEIGHT - W/COMPOSITE COVERS: 92 LBS.; W/CAST IRON COVERS: 172 LBS. (FOR WET WEIGHT ADD 433 LBS.)
- MAXIMUM OPERATING TEMPERATURE: 149° F CONTINUOUS
- CAPACITIES - LIQUID: 52 GAL.; GREASE: 249 LBS. SOLIDS: 12.5 GAL.
- BUILT-IN FLOW CONTROL. FOR SERIES INSTALLATIONS, ONLY INSTALL FLOW CONTROL ON THE FIRST UNIT IN THE SERIES IF NECESSARY.
- FOR GRAVITY DRAINAGE APPLICATIONS ONLY.
- DO NOT USE FOR PRESSURE APPLICATIONS.
- COVER PLACEMENT ALLOWS FULL ACCESS TO TANK FOR PROPER MAINTENANCE.
- VENT NOT REQUIRED UNLESS PER LOCAL CODE.
- ENGINEERED INLET AND OUTLET DIFFUSERS WITH INSPECTION PORTS ARE REMOVABLE TO INSPECT / CLEAN PIPING. FOR SERIES INSTALLATIONS, THE TOP OF THE INLET DIFFUSER ON THE FIRST UNIT IN THE SERIES MUST BE SEALED.
- INTEGRAL AIR RELIEF / ANTI-SIPHON / SAMPLING ACCESS.

**PLUMBING PLAN**

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

**PLUMBING FIXTURE SCHEDULE**

MARK	DESCRIPTION	MANUFACTURER	MODEL NO.	REMARKS
4BS	3 BASIN SINK			BY KITCHEN SUPPLIER
AVV	AIR ADMITTANCE VALVE	OATEY "SUREVENT"	39016	1-1/2" OR 2", GOOD FOR UP TO 20 DFU, LOCATE IN ACCESSIBLE LOCATION ABOVE FLOOD RIM OF FIXTURE
BFP1	BACKFLOW PREVENTER	WILKINS	975XL2	SIZE AS INDICATED ON DRAWINGS
BFP2	BACKFLOW PREVENTER	WILKINS	740	STAINLESS STEEL / PIPED TO NEAREST INDIRECT DRAIN
FS	FLOOR SINK	SOUX CHIEF	861-PN	PVC BODY, NICKEL-BRONZE FRAME AND GRATE
GT	GREASE TRAP - ABOVE OR BELOW GRADE	SCHIER PRODUCTS	GB-50	50 GPM, 41 LIQUID GALLONS, 128 LBS CAPACITY, LIFETIME WARRANTY
HD	HUB DRAIN WITH TRAP GUARD			WITH PROSET TG33-ZURN TRAP GUARD
HS	HAND SINK			BY KITCHEN SUPPLIER

\*OR EQUAL

**PLUMBING FIXTURE CONNECTION SCHEDULE**

FIXTURE	WATER		WASTE	VENT	WATER HAMMER ARRESTOR REQUIRED
	COLD	HOT			
LAVATORY	1/2"	1/2"	1 1/2"	1 1/4"	YES
WATER CLOSET - FLUSH VALVE	1"		4"	2"	YES
WATER CLOSET - TANK	1/2"		4"	2"	YES
URINAL	3/4"		2"	1 1/4"	YES
MOP SINK	1/2"	1/2"	3"	1 1/2"	NO
HAND SINK	1/2"	1/2"	2"	1 1/4"	NO
HAIR SINK	1/2"	1/2"	2"	1 1/4"	NO
SHOWER	1/2"	1/2"	3"	1 1/2"	NO
FLOOR DRAIN			3"	2"	NO
DF	1/2"		1 1/2"	1 1/4"	NO

NOTE:  
WASTE PIPING BELOW SLAB TO BE A MINIMUM OF 3".  
PROVIDE SHUT-OFF VALVES IN CW & HW LINES AT EACH FIXTURE.

**TYP. GREASE INTERCEPTOR DETAIL**



Mark Timberlake, P.E. MARCH 25, 2020 PE-0049319



**PLUMBING PLAN**

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

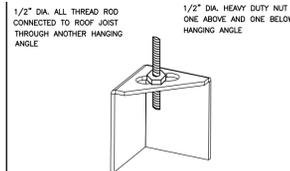
DATE: 01-12-2020 SHEET NO.

DRAWN BY: MBT

PROJECT NO: 19001

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

**P100**



ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR  
HANGING ANGLE IS PRE-FINISHED AT FACTORY

**HANGING ANGLE DETAILS**

HOOD STYLE / MODEL	450 DEGREES CFM/ft.	600 DEGREES CFM/ft.	700 DEGREES CFM/ft.
CANOPY ND2	150	200	250
WITH END PANELS (15% reduction)	127.5	170	212.5
SLOPED SMD-2	228	294	-
ISLAND ND-2WI	269	300	350
NDI	346	422	475

**ETL HOOD LISTING DETAIL**

EXHAUST CFM=LENGTH OF HOOD X CFM/IN/FT. (LOAD)  
SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED CFM  
TOTAL DUCT AREA=144 X (PPM)  
DUCT LENGTH= DUCT DEPTH

**CAPTIVE-AIRE VENTILATOR DUCT SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1000 FPM AND A SUPPLY VELOCITY OF 1000 FPM**

**CALCULATIONS UTILIZED**

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:



Listed under ETL File number 3054804-001/002

**BUILDING CODES**

CAPTIVE-AIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:

MATERIAL	CLEARANCE	REDUCTION SYSTEM
NON-COMBUSTIBLE	NONE REQUIRED	
LIMITED-COMBUSTIBLE	3" UNINSULATED STANDOFF	
COMBUSTIBLE	1" INSULATED STANDOFF	

**CLEARANCE TO COMBUSTIBLES**

**INSTALLATION**

- ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.
- ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.
- HANGING BRACKETS LOCATED AND WELDED AS SHOWN ON PLANS. ALL OTHER HANGER MATERIALS PROVIDED BY INSTALLING CONTRACTORS.
- ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER MECHANICAL CONTRACTOR'S PLANS.
- COOKING EQUIPMENT TO SHUT-OFF IN EVENT OF FIRE.
- EXHAUST FANS TO TURN ON IN EVENT OF FIRE.
- ALL LIGHTS FIXTURE SHOWN INSTALLED BY CAPTIVE-AIRE ARE FACTORY PREWIRED. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.
- LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
- SEISMIC RESTRAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
- INSTALLING CONTRACTORS ASSUME ALL RELATED RESPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.

**BALANCE**

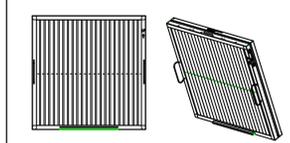
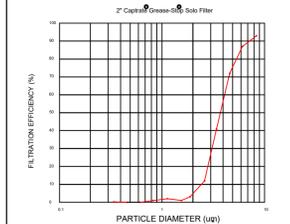
- KITCHEN HOODS MUST BE BALANCED WITH KITCHEN. KITCHEN SHALL BE NEGATIVE WITH RESPECT TO DRIVING AREA.
- RESTAURANT SHALL BE POSITIVE WITH RESPECT TO AMBIENT PRESSURE.

**ADDITIONAL**

- WRITTEN HOOD DIMENSIONS HAVE PRECEDENCE OVER SCALE.
- SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.

**GENERAL NOTES**

FILTER COLLECTION EFFICIENCY



CaptiveAire Captrate Solo Filter  
ETL Listed Grease Extracting Filters  
Made From 430 Stainless Steel

**FILTER DETAIL**

**HOOD INFORMATION - Job#4157525**

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	APPLIANCE DUTY	DESIGN CFM/ft	TOTAL EXH. CFM	EXHAUST PLENUM RISER(S)			MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG.			
								WIDTH	LENG.	HEIGHT				END TO END	ROW		
1	KH-L	5424 ND-2-ACPS-P	8' 8"	600 Deg.	Heavy	200	1733	4"	14"	1733	1621	-0.647"	1386	548	430 SS Where Exposed	LEFT	ALONE
2	KH-R	5424 ND-2-ACPS-P	8' 8"	600 Deg.	Heavy	200	1733	4"	14"	1733	1621	-0.647"	1386	548	430 SS Where Exposed	RIGHT	ALONE

**HOOD INFORMATION**

HOOD NO.	TAG	TYPE	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WGT	
			QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #			SWITCHES QUANTITY
1	KH-L	Captrate Solo Filter	6	20"	16"	85% See Filter Spec.	5	Recessed	NO	Wall Mnt	12"x48"x24"	Ansul R102	3.0/3.0	DCV-1111	1 Light 1 Fan	YES	570 LBS
2	KH-R	Captrate Solo Filter	6	20"	16"	85% See Filter Spec.	5	Recessed	NO							YES	570 LBS

**HOOD OPTIONS**

HOOD NO.	TAG	OPTION
1	KH-L	FIELD WRAPPER 18.00" High Front BACKSPLASH 122.00" High X 246.00" Long 430 SS Vertical LEFT SIDESPLASH 122.00" High X 72.00" Long 430 SS Vertical LEFT END STANDOFF (FINISHED) 1" Wide 54" Long Insulated LEFT WALL AS END PANEL
2	KH-R	FIELD WRAPPER 18.00" High Front BACKSPLASH 122.00" High X 140.00" Long 430 SS Vertical RIGHT SIDESPLASH 122.00" High X 72.00" Long 430 SS Vertical RIGHT END STANDOFF (FINISHED) 1" Wide 54" Long Insulated RIGHT WALL AS END PANEL

**PERFORATED SUPPLY PLENUM(S)**

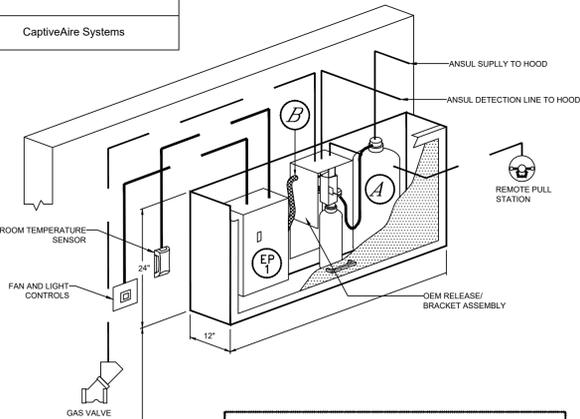
HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG.	DIA.	CFM	S.P.
1	KH-L	Front	105"	24"	6"	MUA	12"	28"		693	0.182"
						MUA	12"	28"		693	0.182"
						AC	8"	16"		274	0.084"
						AC	8"	16"		274	0.084"
2	KH-R	Front	105"	24"	6"	MUA	12"	28"		693	0.182"
						MUA	12"	28"		693	0.182"
						AC	8"	16"		274	0.084"
						AC	8"	16"		274	0.084"

**Fire System Information - Job#4157525**

FIRE SYSTEM NO.	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		Ansul R102	3.0/3.0	4	Wall Utility Cabinet Left	N/A

**CAS VALVE(S)**

FIRE SYSTEM NO.	TAG	TYPE	SIZE	SUPPLIED BY
1		Mechanical	2.000	CaptiveAire Systems



UTILITY CABINET SHOULD BE MOUNTED FLUSH WITH THE FINISHED CEILING

**WALL MOUNTED UTILITY CABINET**

- (A) ANSUL R-102 WET CHEMICAL FIRE SUPPRESSION SYSTEM
- (B) FACTORY PREWIRED CONDUIT FROM FIRE SYSTEM MICRO-SWITCH TO SUPPLY FAN SHUT-DOWN RELAY
- (EP) PREWIRED ELECTRICAL PANEL

FOR QUESTIONS, CALL THE COLORADO REGIONAL SALES OFFICE  
7300 S. Alton Way, #5B, Centennial, CO 80112  
PHONE: (720) 570-0981  
FAX: (919) 227-5999

**\*\*\* NOTE \*\*\***  
ALL WALLS AND STRUCTURES THAT COME WITHIN 18" OF HOOD MUST BE METAL STUDS AND SHEETROCK. WOOD STUDS OR ANY OTHER COMBUSTIBLE MATERIAL WITHIN 18" OF HOOD NOT ALLOWED

**\*\*\* NOTE \*\*\***  
HOOD MANUFACTURER RECOMMENDS NO RETURNS OR 4-WAY DIFFUSERS WITHIN 10 FEET OF HOOD IN ALL DIRECTIONS.

**\*\*\* NOTE \*\*\***  
MAKE-UP AIR SHALL BE DELIVERED INTO SPACE IN MANNER THAT WILL NOT DISRUPT HOODS ABILITY TO CAPTURE AND CONTAIN.

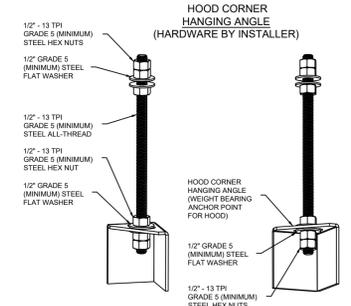
**RCRBD Record Set  
T.A.  
03/03/2020**

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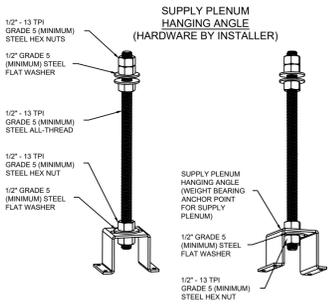
REVISIONS:	DATE:

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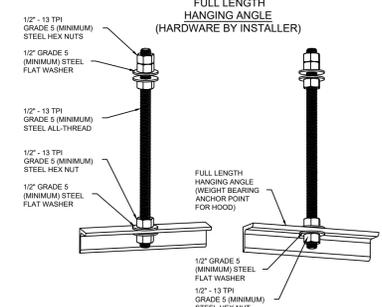
**ASSEMBLY INSTRUCTIONS**

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



**ASSEMBLY INSTRUCTIONS**

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**System Design Verification (SDV)**

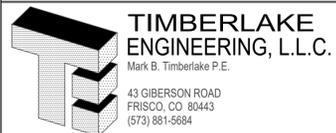
If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

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.



Mark Timberlake, P.E. FEB. 10, 2020  
PE-0049319



**HOOD PLAN**

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE:	01-12-2020	SHEET NO.
DRAWN BY:	MBT	
PROJECT NO.:	19001	
SCALE:	1/4"=1'-0"	

**H100**

NOTE: DESIGN AND MODEL NUMBERS ARE BASED ON CAPTIVEAIRE AS MANUFACTURER.

**EXHAUST FAN INFORMATION - Job#4157525**

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONES
1	KEF	DU240HFA	3466	1.500	1002	3.000	1.8990	3	208	10.2	788 FPM	278	21

**MUA FAN INFORMATION - Job#4157525**

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	MCA	MOCP	EVAP COOLER ENTERING DB TEMP.	EVAP COOLER ENTERING WB TEMP.	EVAP COOLER LEAVING DB TEMP.	EVAP COOLER LEAVING WB TEMP.	WEIGHT (LBS.)	SONES
2	KMAU	A2-D.250-20D	20MF-2-MOD	A2-D.250	2000	2772	0.500	1346	1.500	0.9480	3	208	4.4	5.5A	15A	90.0°F	60.0°F	70.0°F	60.0°F	949	12.2

**GAS FIRED MAKE-UP AIR UNIT(S)**

FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	KMAU	169780	156198	74 deg F	7 in. w.c. - 14 in. w.c.	Natural	92

**FAN OPTIONS**

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1	KEF	1 - Grease Box 1 - Fan Base Ceramic Seal - Installed At Plant - For Grease Ducts 1 - Motorized Backdraft Damper for A2-D Housing 1 - Low Fire Start 1 - Inlet Pressure Gauge, 0-35" 1 - Manifold Pressure Gauge, -5 to 15" wc
2	KMAU	1 - Freeze Protection Drain Kit for Evaporative Coolers 1 - Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) - Three Phase Only 1 - Size 2 Direct Fired Heater Low CFM Profile Package. Used on Heaters under 2500 cfm.

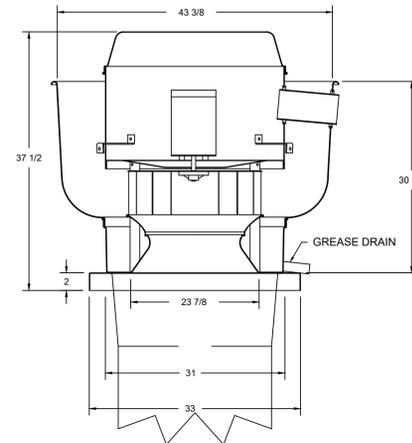
**FAN ACCESSORIES**

FAN UNIT NO.	TAG	EXHAUST				SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF	YES						
2	KMAU						YES	

**CURB ASSEMBLIES**

NO.	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF	59 LBS	Curb	31.500"W x 31.500"L x 26.000"H Vented Hinged
2	# 2	KMAU	90 LBS	Curb	31.000"W x 79.000"L x 20.000"H Insulated
	# 2			Rail	4.000"W x 4.000"L x 36.000"H

FAN #1 DU240HFA - EXHAUST FAN (KEF)



**FEATURES:**

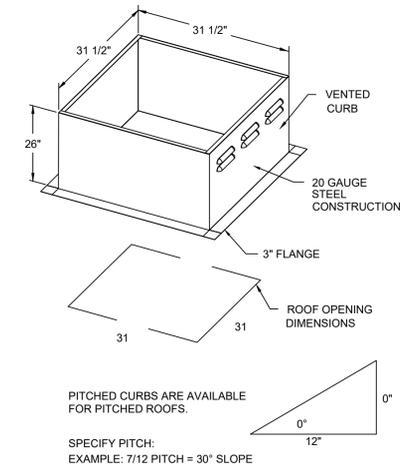
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

**NORMAL TEMPERATURE TEST**  
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

**ABNORMAL FLARE-UP TEST**  
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

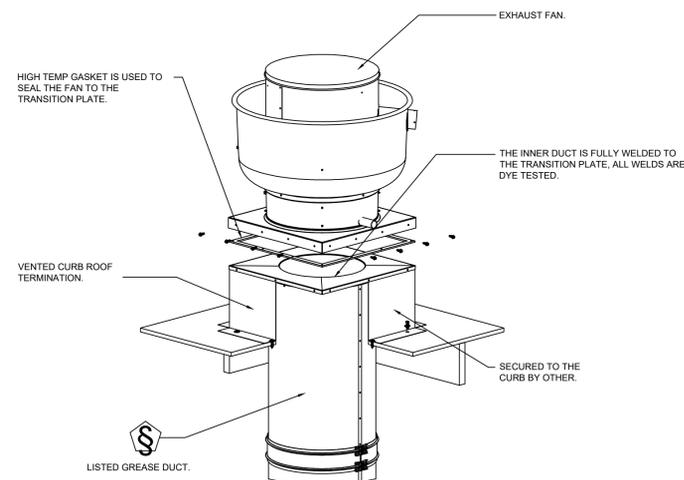
**OPTIONS**

GREASE BOX  
FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:  
EXAMPLE: 7/12 PITCH = 30° SLOPE



**RCRBD Record Set  
T.A.**

**03/03/2020**

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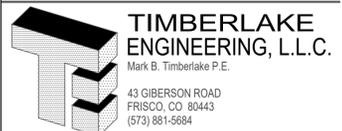
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Mark Timberlake, P.E. FEB. 10, 2020  
PE-0049319



**HOOD PLAN**

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

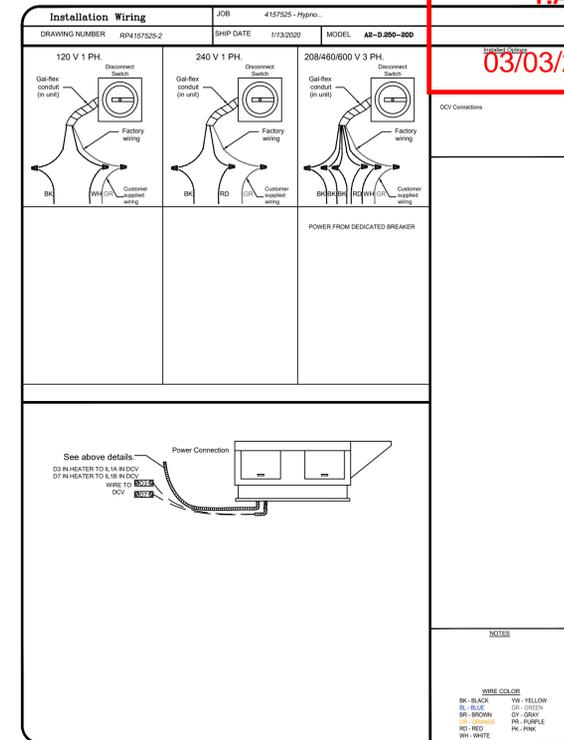
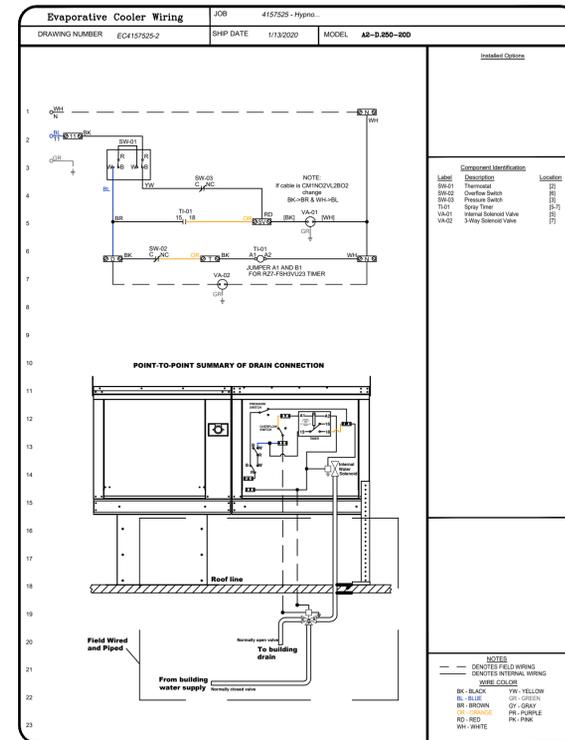
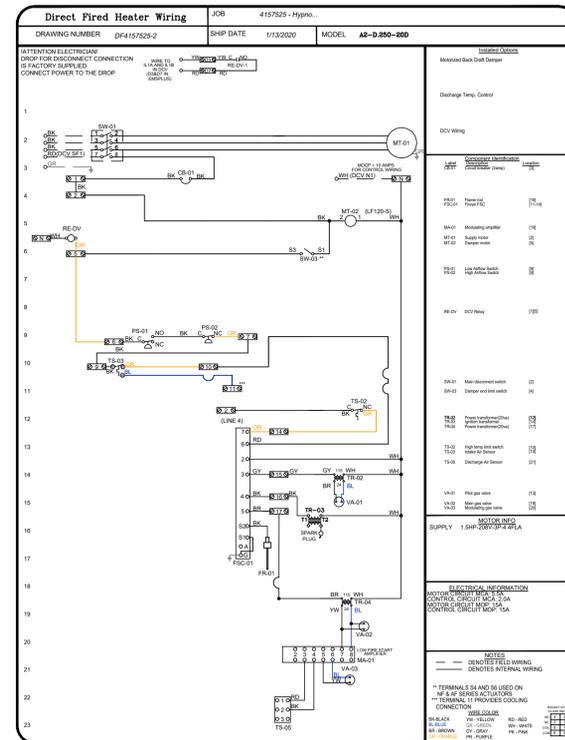
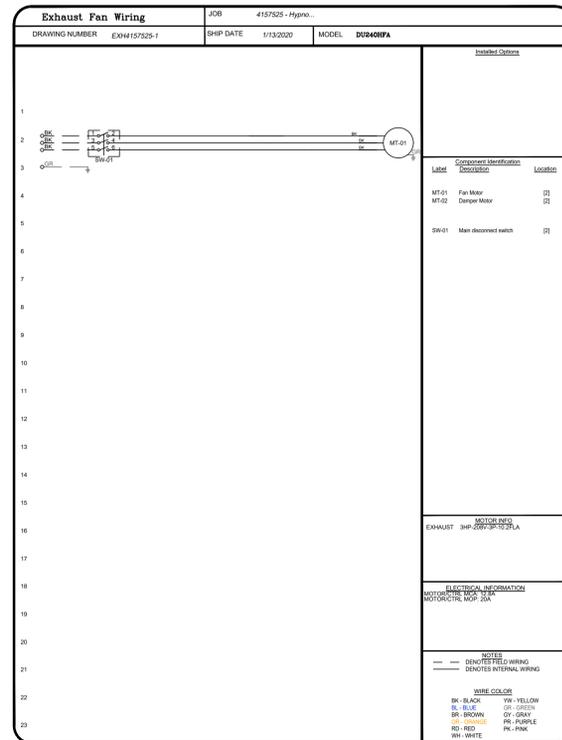
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DRAWN BY:	MBT	
PROJECT NO.:	19001	
SCALE:	1/4"=1'-0"	

**H101**

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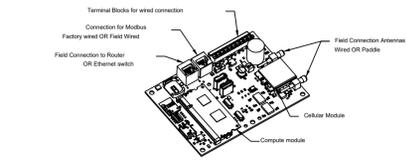
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REVISIONS:	DATE:

**RCRBD Record Set  
T.A.  
03/03/2020**

**ELECTRICAL PACKAGE - Job#4157525**

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	H.P.	VOLT.	FLA.	
1		DCV-1111	Wall Utility Cabinet Left	12 - Wall Utility Cab. on Left End	1 Light	Smart Controls DCV	KEF	Exhaust	3	3,000	208	10.2
				Hood # 1	1 Fan		KMAU	Supply	3	1,500	208	4.4

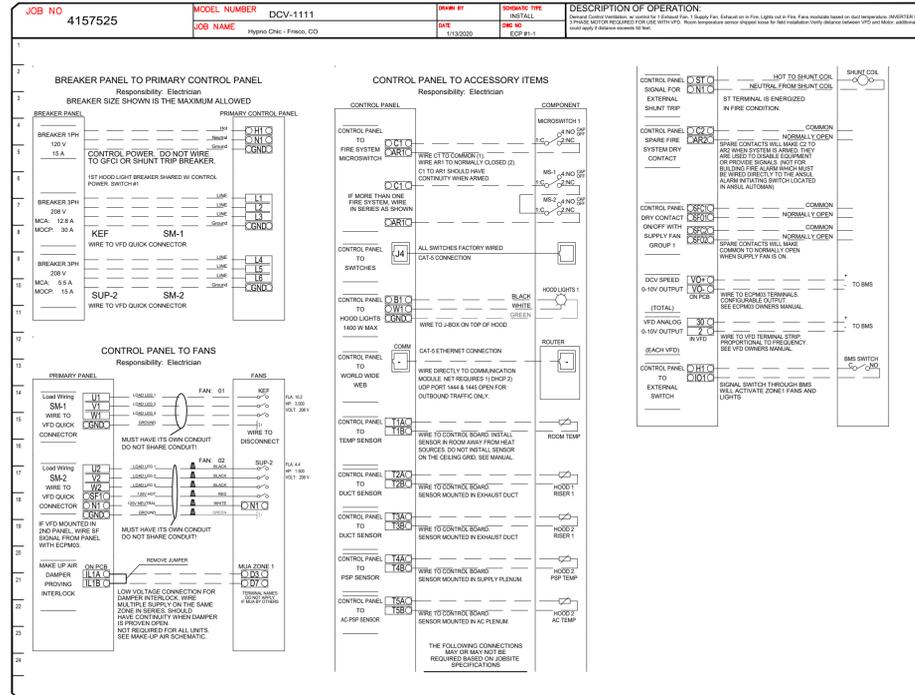


**CASink Monitor and Control**

- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

**MONITORING AND CONTROL POINTS LIST**

DCV Packages	Function	DC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR	MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCU Faults	MONITOR
Controller Faults	MONITOR	PCU Filter Clay Percentages	MONITOR
Fan Faults	MONITOR	Fire Condition	MONITOR
Fan Status	MONITOR	COBE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressure	MONITOR
PCU Filter Clay Percentages	MONITOR	Fans Buttons(s)	MONITOR & CONTROL
Fire Condition	MONITOR	Light Buttons(s)	MONITOR & CONTROL
COBE Fire System	MONITOR	Wash Buttons	MONITOR & CONTROL
Building Pressure	MONITOR		
Prep Time Buttons	MONITOR & CONTROL		
Fans Buttons	MONITOR & CONTROL		
Light Buttons	MONITOR & CONTROL		
Wash Buttons	MONITOR & CONTROL		



**HOOD CONTROL PANEL- DEMAND CONTROL VENTILATION (DCV)**

Written Specifications: The hood control panel with demand control ventilation automatically modulates fans based on cooking load. Modulation allows for energy savings compared to fans running on high speed during cooking operation.

Listings: Models Electrical Control Panel are ETL Listed under file number 101754591COL-001 and complies with UL508A Standards and CAN/CSA C22.2, No. 14-05 Standards.

ECPM03 Circuit Board is ETL Listed under file number 100901773BOX-001 and complies with UL 61010-1 Standard and CAN/CSA C22.2, No. 61010-1 Standards.

Sequence of Operations: The hood control panel interlocks the exhaust fan with makeup air unit.

The hood control panel is capable of operating in one or more of the following states at any given time.

**Automatic:** The DCV hood control package is designed to thermostatically activate the exhaust fans and make-up air for an exhaust hood whenever elevated temperatures are sensed in the exhaust system. This option will meet the requirements of IMC 507.1.1 and IMC 508.1 by providing a thermostat(s) mounted in the duct or hood riser to sense increased exhaust temperatures.

Once the duct temperature reaches the activation point, the exhaust fans and MAU will be activated. The controls also provide hysteresis to prevent cycling of the fans after the cooking appliances have been turned off and the heat in the exhaust system is reduced. The hysteresis is factory set 2 degrees and will keep the exhaust running until the temperature falls 2 degrees below the activation set point. A hysteresis timer also exists to keep the fans running for at least 30 min after being activated by the temperature rise.

The panel is factory configured to shut down supply fans, turn on the exhaust fans and turn off the hood lights in a fire condition.

The DCV turns down to 20-25% of total exhaust in prep mode. The system is capable of turning down to 0% when operating automatically if it does not sense a need for hood operation. The DCV will modulate the fans it is controlling based on demand and the low speed and high speed settings are fully adjustable based on demand.

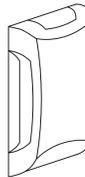
In the event of a fire, there are two forms of activation. The mechanical remote pull may be activated or the mechanical detection link in the hood may melt. The Ansul Automaton takes this mechanical activation and converts it to an electric notification signal via the microswitch and building-initiating switch. In either event, the DCV will be electrically notified via the Ansul Automaton. The DCV will then turn ON the exhaust fan, turn off the make-up air unit and turn off the hood lights. The Ansul Automaton will close the mechanical gas valve to close the gas line or if an electric gas valve is used, the hood control panel will send a signal to the shunted portion of the breaker panel to remove power from the cooking appliances. The building-initiating switch can be used to notify the building alarm system.

**Manual:** The system operates based on human input from an HMI.

**Schedule:** A weekly schedule can be set to run fans for a specified period throughout the day. There are three occupied times per day to allow for the user to set up a time that is suitable to their needs. Any time that is within the defined occupied time, the system will run suitable to their needs. Any time that is within the defined occupied time, the system will run at modulation mode and follow the fan procedure algorithm based on temperature during this time. During unoccupied time, the system will have an extra offset to prevent unintended activation of the system during a time where the system is not being occupied.

**Other:** The system operates based on the input from an external source (DDC, BMS or hard-wired interlock)

**ROOM TEMPERATURE SENSOR**



The Room Temperature sensor is a 10K Ohm Thermistor. The sensor provides constant room temperature to the controller. It should be installed on a wall somewhere in the space but not directly under the hood or close to an appliance so that the reading is not affected by heat.

Typically a system will have one room temperature sensor. However, systems configured with 2 fan zones have the option to be ordered with 2 room temperature sensors, one for each zone. They should be mounted in the space accordingly.

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Mark Timberlake, P.E. FEB. 10, 2020  
PE-0049319

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**HOOD PLAN**

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE:	01-12-2020	SHEET NO.
DRAWN BY:	MBT	
PROJECT NO.:	19001	
SCALE:	1/4"=1'-0"	

**H103**

DuctWork #1 Parts - Job#4157525

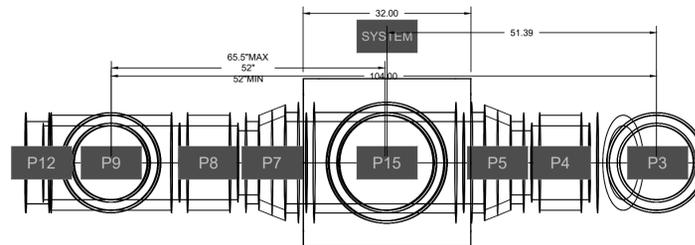
Tag	Part #	CFM	S.P.	Weight	Velocity	QTY	Description
P1	DW1411DWLT-2R-S	1733	-0.004	14.89	1621.12	1	Double Wall Duct - 14" Inner Duct, 11" long - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell.
P2	DW1401DWOFFSETASY-2R-S	1733	-0.003	12.97	1621.12	1	Double Wall Duct - 14" Inner Duct Riser & 1 Degree Offset - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell.
P3	DW1490DWASY-2R-S	1733	-0.1125	33.30	1621.12	1	Double Wall Duct - 14" Inner 90 Duct - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell.
P4	DW1411DWLT-2R-S	1733	-0.004	14.89	1621.12	1	Double Wall Duct - 14" Inner Duct, 11" long - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell.
P5	DW1418DWRNDADPEC2ASY-2R-S	1733	-0.036	18.52	1621.12	1	Double Wall Duct - 14" X 18" RND2RND Eccentric Adapter - 2 Layers Reduced Clearance - 18" X 22" Stainless Steel Outer Shell.
P6	DW18DWTEASY-2R-S	3466	-0.4875	55.68	1961.35	1	Double Wall Duct - 18" Inner Tee Duct - 2 Layers Reduced Clearance - 22" Stainless Steel Outer Shell.
P7	DW1418DWRNDADPEC2ASY-2R-S	1733	-0.036	18.52	1621.12	1	Double Wall Duct - 14" X 18" RND2RND Eccentric Adapter - 2 Layers Reduced Clearance - 18" X 22" Stainless Steel Outer Shell.
P8	DW1427DWAJD-2R-S	1733	-0.004	52.12	1621.12	1	Double Wall Adjustable Duct - 14" Inner Duct - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell. Min Length = 11" / Max Length = 24.5" / Adjustment = 13.5" / Adjustable Section May Need To Be Cut. Includes single and double wall "V" Clamps.
P9	DW14DWTEASY-2R-S	1733	-0.1125	41.37	1621.12	1	Double Wall Duct - 14" Inner Tee Duct - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell.
P10	DW1401DWOFFSETASY-2R-S	1733	-0.003	12.97	1621.12	1	Double Wall Duct - 14" Inner Duct Riser & 1 Degree Offset - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell.
P11	DW1427DWAJD-2R-S	1733	-0.005	52.12	1621.12	1	Double Wall Adjustable Duct - 14" Inner Duct - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell. Min Length = 11" / Max Length = 24.5" / Adjustment = 13.5" / Adjustable Section May Need To Be Cut. Includes single and double wall "V" Clamps.
P12	DW14DWACCCDOORCOV-2R-S			22.25		1	Double Wall Duct - 14" Inner Access Door & 18" Access Door Cover With Clamps - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Shell.
P13	DW1801DWOFFSETASY-2R-S	3466	-0.003	14.66	1961.35	1	Double Wall Duct - 18" Inner Duct Riser & 1 Degree Offset - 2 Layers Reduced Clearance - 22" Stainless Steel Outer Shell.
P14	DW1847DWAJDTP-2R-S	3466	-0.01	108.88	1961.35	1	Double Wall Adjustable Duct Transition Plate - 18" Inner Duct - 2 Layers Reduced Clearance - 22" Stainless Steel Outer Shell. Min Length = 11" / Max Length = 48.5" / Adjustment = 30.5" / Adjustable Section May Need To Be Cut. Includes single and double wall "V" Clamps.
P15	DW3118TPDBEX	3466	0	11.50	1961.35	1	Duct to Curb Transition 3/4" Down Turn, 31-1/2" Curb to 18" Duct, 16 GA Aluminumized, Non-Standard Part. For Use With Exhaust Fans.
	DW18DWRISER-2R-S			8.15		1	Double Wall Riser Cover - Used On 14" Inner Riser, 4" long - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Riser Shell Assembly. Includes Insulation & Single V Clamps For Inner & Outer Connections.
	DW18DWRISER-2R-S			8.15		1	Double Wall Riser Cover - Used On 14" Inner Riser, 4" long - 2 Layers Reduced Clearance - 18" Stainless Steel Outer Riser Shell Assembly. Includes Insulation & Single V Clamps For Inner & Outer Connections.
	3M-2000PLUS			0.80		4	Duct - 3M Fire Barrier 2000 Plus Silicone - Used as sealant to Seal Duct Joints.
	DW14DWCLASY-2R-S			7.21		5	Duct - 14" Duct - 18" Double "V" Clamp - 2R Insulation & Single "V" Clamp Included - Reduced Clearance.
	DW18DWCLASY-2R-S			8.70		3	Duct - 18" Duct - 22" Double "V" Clamp - 2R Insulation & Single "V" Clamp Included - Reduced Clearance.
Total Weight				566.29			

DOUBLE WALL FACTORY BUILT DUCTWORK

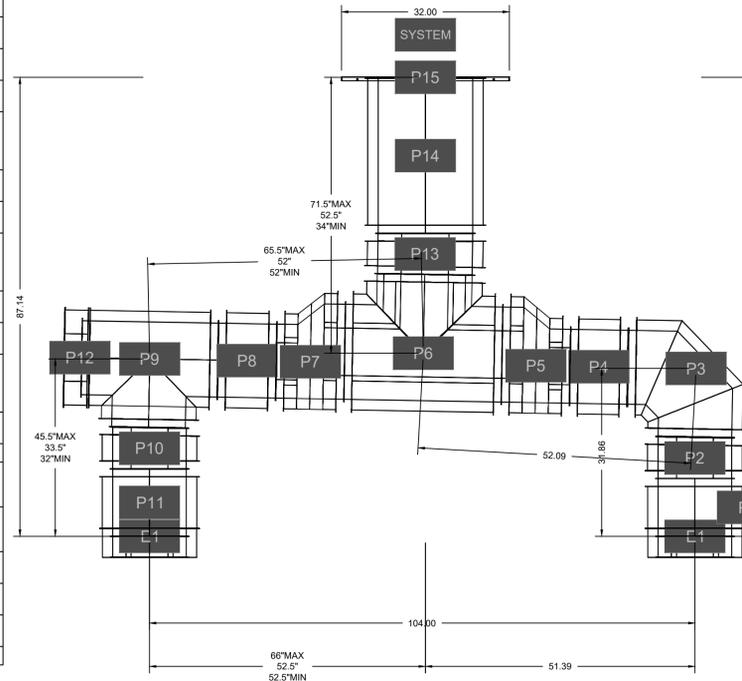
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (ft)
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'

VERTICAL			
TYPE	WALL SUPPORT (ft)	CURB SUPPORT (ft)	FLOOR SUPPORT (ft)
2R & 2R HT	20'	24'	24'
3R	10'	24'	24'
3Z	10'	24'	24'



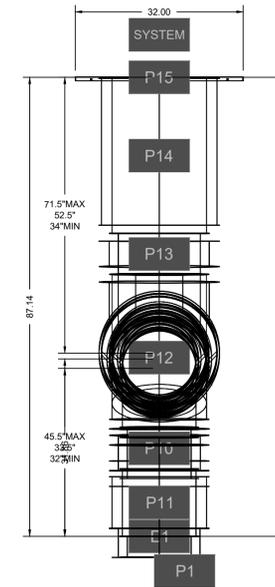
DuctWork #1 Front View



DuctWork #1 Top View

DuctWork #1 SE View

DuctWork #1 Side View T.A.



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T.A.  
03/03/2020

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Mark Timberlake, P.E. FEB. 10, 2020  
PE-0049319



HOOD PLAN

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE:	01-12-2020	SHEET NO.
DRAWN BY:	MBT	
PROJECT NO.:	19001	
SCALE:	1/4"=1'-0"	

**H104**

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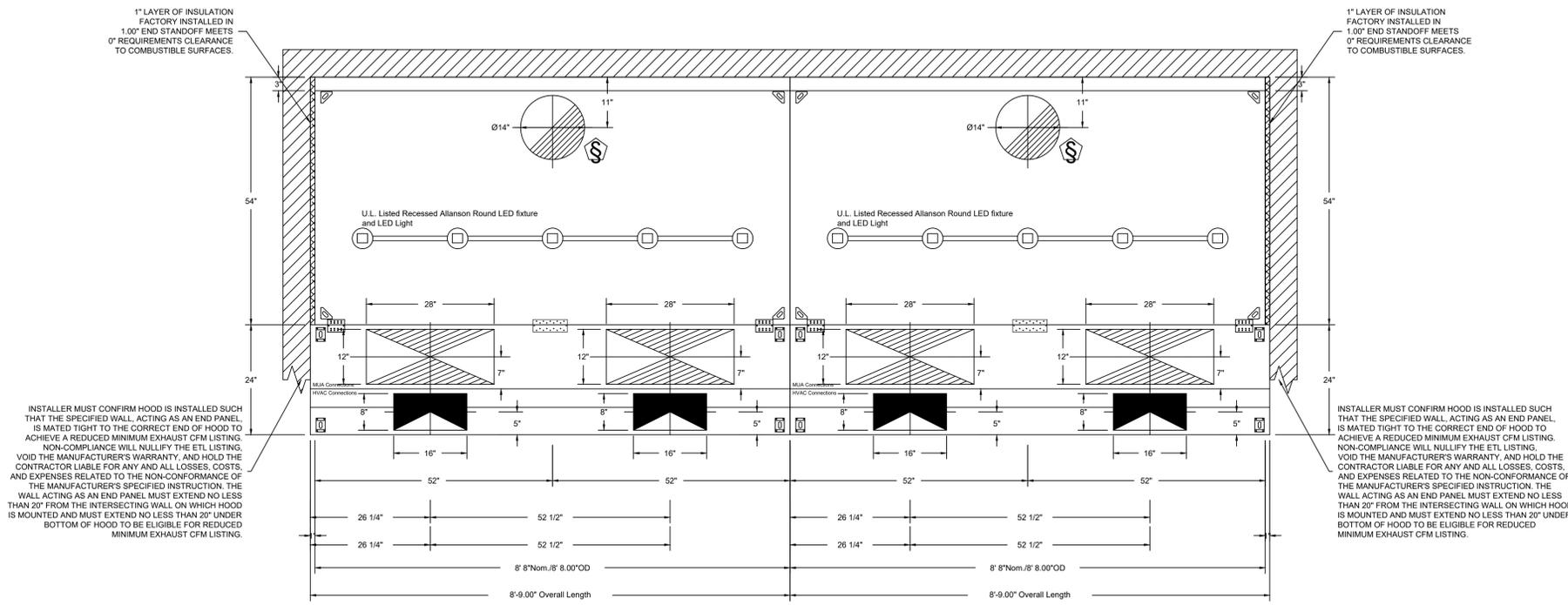
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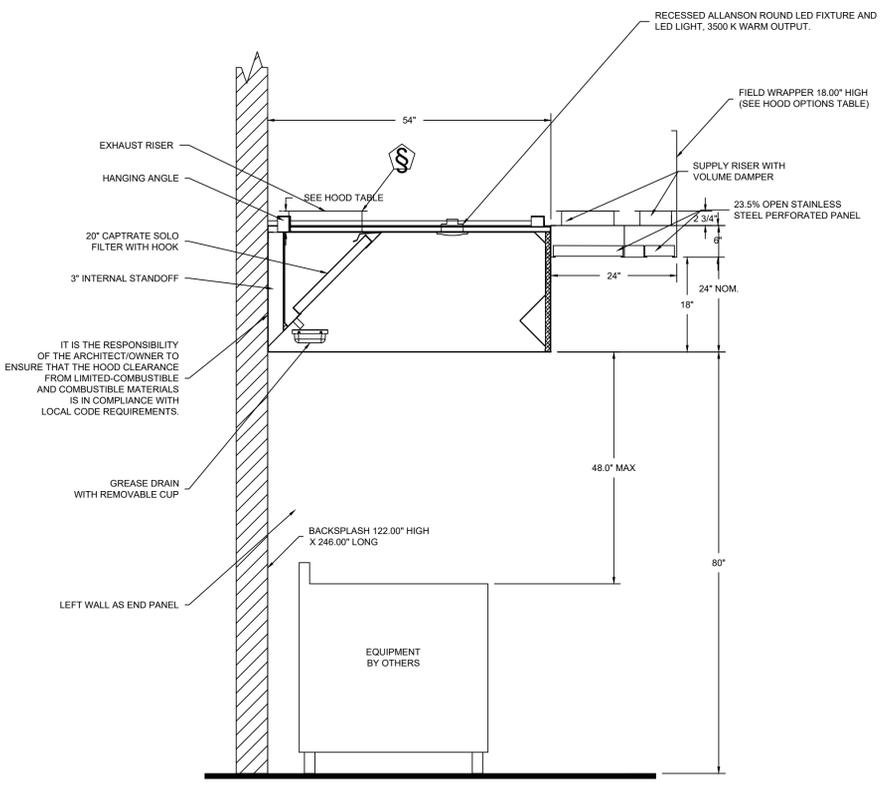
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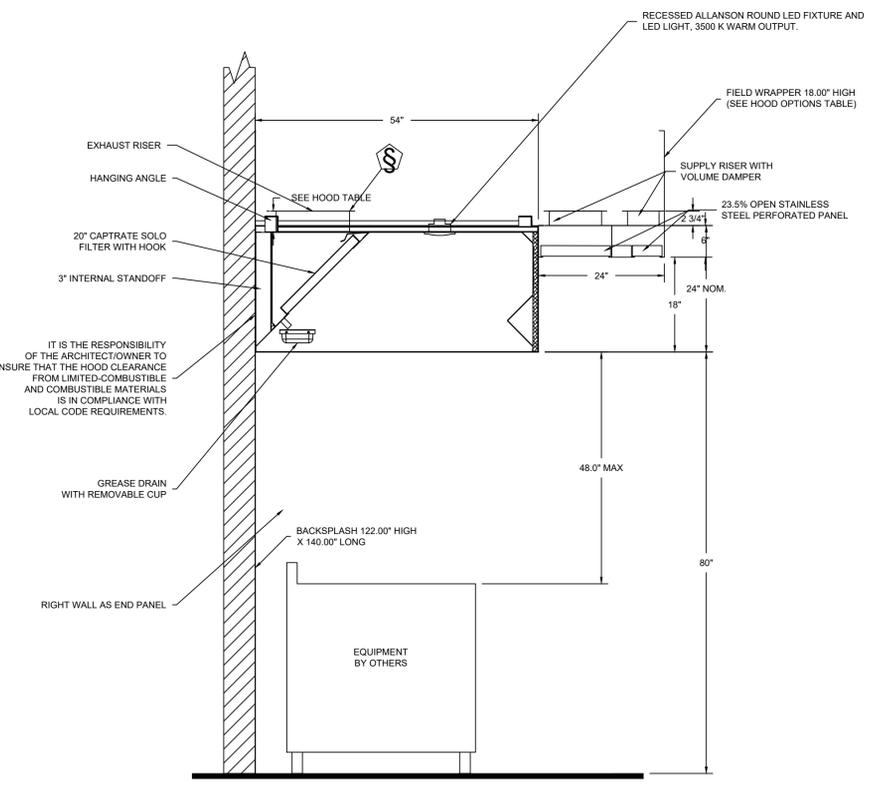
PLAN VIEW - Hood #1 (KH-L)  
8' 8.00" LONG 5424ND-2-ACPSP-F

PLAN VIEW - Hood #2 (KH-R)  
8' 8.00" LONG 5424ND-2-ACPSP-F

ACPSP ships loose for field installation



SECTION VIEW - MODEL 5424ND-2-ACPSP-F  
HOOD - #1 (KH-L)



SECTION VIEW - MODEL 5424ND-2-ACPSP-F  
HOOD - #2 (KH-R)



Mark Timberlake, P.E. FEB. 10, 2020  
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HOOD PLAN

**HYPNO-CHIC RESTAURANT**

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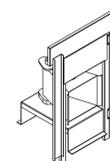
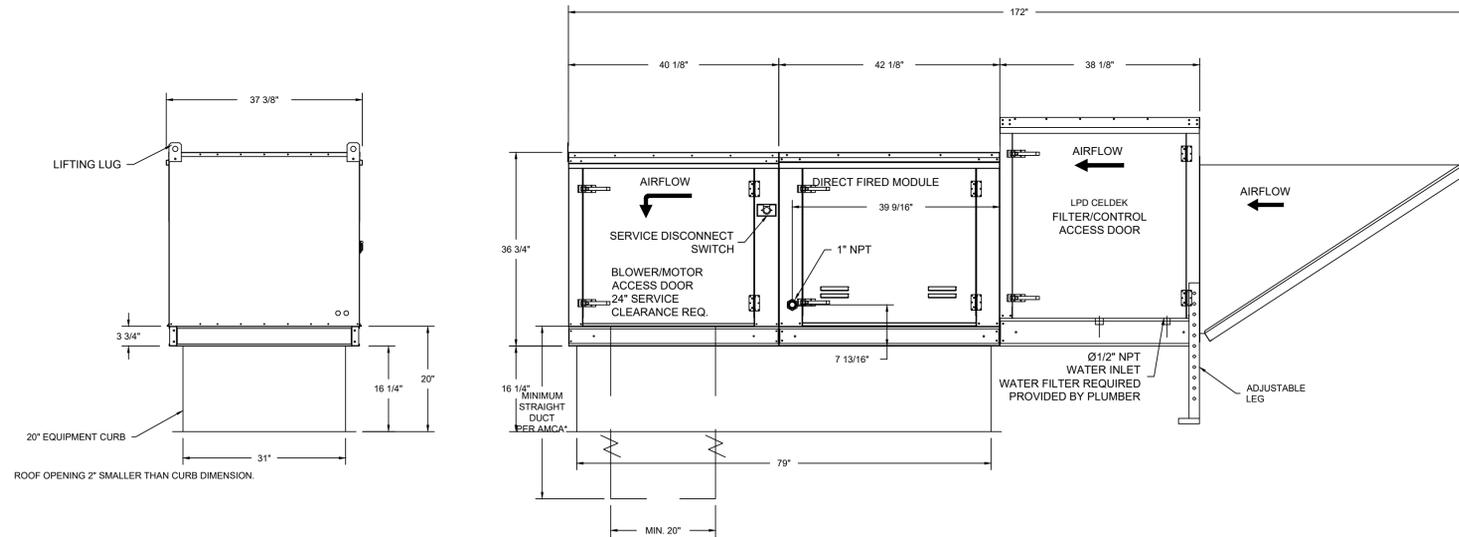
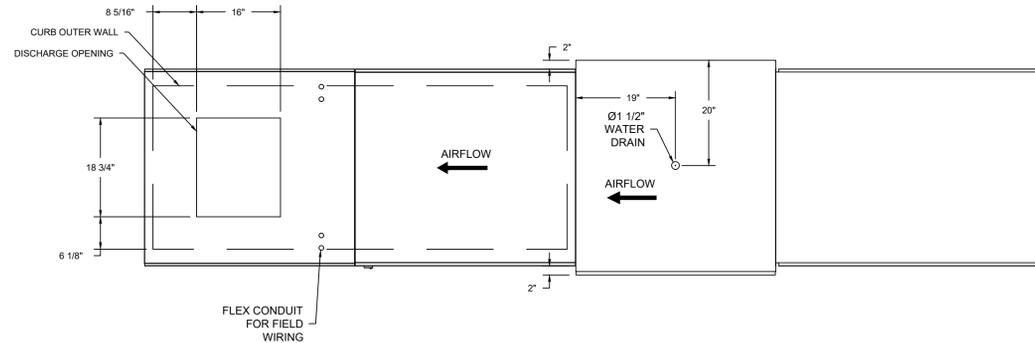
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**H105**

- FAN #2 A3-D.250-200 - HEATER (KMAU)
- 1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" DIRECT DRIVE FAN
- 2. EVAP COOLER (LPD CELDEK) - W/INTAKE HOOD W/IEZ FILTERS
- 3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
- 4. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED
- 5. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
- 6. GAS PRESSURE GAUGE. 0.05" 2" DIAMETER, 1/4" THREAD SIZE
- 7. GAS PRESSURE GAUGE. -5 TO +15 INCHES WC. 2.5" DIAMETER, 1/4" THREAD SIZE
- 8. FREEZE PROTECTION DRAIN CONTROL KIT FOR EVAPORATIVE COOLERS. INCLUDES 3-WAY WATER SOLENOID VALVE 8316G064 (SHIPPED LOOSE), PRESSURE SWITCH INSTALLED UPSTREAM OF 2WAY SOLENOID IN UNIT. BRASS TEE, 2 NPT HALF INCH NIPPLES, AND TWO STAGE THERMOSTAT T678A1361.
- 9. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
- 10. PROFILE PLATE CONFIGURATION FOR SIZE 2 DIRECT FIRED UNIT FOR LOW CFM APPLICATIONS.

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. 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 20" X 20"

SUPPLY SIDE HEATER INFORMATION:  
 WINTER TEMPERATURE = 1°F. TEMP. RISE = 74°F.  
 BTUs CALCULATED OFF ACTUAL AIR DENSITY  
 OUTPUT BTUs AT ALTITUDE OF 0.0 ft. = 219146  
 INPUT BTUs AT ALTITUDE OF 0.0 ft. = 238203  
 OUTPUT BTUs AT ALTITUDE OF 9075 ft. = 156198  
 INPUT BTUs AT ALTITUDE OF 9075 ft. = 169781



Direct Fired (DF) Profile Plate Assembly

**Direct Fired Profile Plate Specifications:**  
**Description:**  
 Direct fired burners shall have patented (US Patent No. US9609523B2), self-adjusting profile plates designed to ensure proper air velocity and pressure drop across the burner. Profile plates shall allow burners to achieve clean combustion by limiting by-product levels to a maximum of 50ppm of carbon monoxide (CO) and 50ppm of nitrogen dioxide (NO2). Units shall be configured with the blower mounted downstream of the burner. This arrangement will ensure a consistent airflow, regardless of inlet air temperature.  
**Application:**  
 Spring-loaded burner profile plates are engineered to automatically react to the momentum of a fast air stream, without the need for any motors or actuators to mechanically adjust them. With this feature, all DF units are designed for demand control ventilation (DCV) requirements.  
**Certifications:**  
 All profile plate assemblies shall be included in the DF unit's ETL listing and comply with combined safety standards ANSI Z53.4 and CSA 3.7 (non-recirculating DF heaters) and ANSI Z53.18 (recirculating DF heaters).  
**General Construction:**  
 -Profile plates shall be formed from G90 galvanized steel.  
 -Profile plates shall vary in size per unit.  
 -Profile plates shall be mounted along the same plane as the discharge of the burner.  
 -Design shall incorporate properly torqued, permanently mounted spring hinges.  
 -Spring hinges shall be made from plated steel.

RCRBD Record Set  
T.A.  
03/03/2020

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Mark Timberlake, P.E. FEB. 10, 2020  
 PE-0049319

**TIMBERLAKE ENGINEERING, L.L.C.**  
 Mark B. Timberlake P.E.  
 43 GIBERSON ROAD  
 FRISCO, CO 80443  
 (573) 881-5684

**HOOD PLAN**

**HYPNO-CHIC RESTAURANT**

255 ANGLER'S DRIVE, SUITE A, STEAMBOAT SPRINGS, CO 80487

DATE:	01-12-2020	SHEET NO.
DRAWN BY:	MBT	
PROJECT NO.:	19001	
SCALE:	1/4"=1'-0"	

H106

NOTE: DESIGN AND MODEL NUMBERS ARE BASED ON CAPTIVEAIRE AS MANUFACTURER.



# Interior Lighting Compliance Certificate

## Project Information

Energy Code: 2015 IECC  
 Project Title: Hypno-Chick Restaurant Remodel  
 Project Type: Alteration

Construction Site:  
 255 Angler's Drive, Suite A  
 Steamboat Springs, CO

Owner/Agent:

Designer/Contractor:  
 Mark Timberlake  
 Timberlake Engineering  
 Frisco, CO

## Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Dining Area - Family Restaurant	677	0.89	603
2-Common Space Types:Food Preparation	523	1.21	633
Total Allowed Watts =			1235

## Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Common Space Types:Family dining area (677 sq.ft.)				
LED 3: LED Panel 41W:	1	6	41	246
Common Space Types:Food preparation (523 sq.ft.)				
LED 2: LED Panel 41W:	1	9	41	369
Total Proposed Watts =				615

## Interior Lighting PASSES

### Interior Lighting Compliance Statement

*Compliance Statement:* The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Signature

Date





# Mechanical Compliance Certificate

## Project Information

Energy Code: 2015 IECC  
Project Title: Hypno-Chick Restaurant Remodel  
Location: Steamboat Springs, Colorado  
Climate Zone: 7  
Project Type: Alteration

Construction Site:  
255 Angler's Drive, Suite A  
Steamboat Springs, CO

Owner/Agent:

Designer/Contractor:  
Mark Timberlake  
Timberlake Engineering  
Frisco, CO

## Mechanical Systems List

### Quantity System Type & Description

- 1 HVAC System 1 (Single Zone):  
Heating: 1 each - Duct Furnace, Gas, Capacity = 170 kBtu/h  
Proposed Efficiency = 100.00% Ec, Required Efficiency: 80.00 % Ec  
Cooling: 1 each - Other, Capacity = 100 kBtu/h, Evaporatively Cooled Condenser, Air Economizer  
No minimum efficiency requirement applies  
Fan System: FAN SYSTEM 1 | KITCHEN HOOD -- Compliance (Motor nameplate HP method) : Passes
- Fans:  
FAN 1 Supply, Constant Volume, 2772 CFM, 1.5 motor nameplate hp, 0.0 fan efficiency grade

## Mechanical Compliance Statement

*Compliance Statement:* The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

\_\_\_\_\_  
Name - Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



# Inspection Checklist

Energy Code: 2015 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR4] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR8] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.2.4.5, C403.2.4.6 [FO9] <sup>3</sup>	Snow/ice melting system sensors for future connection to controls. Freeze protection systems have automatic controls installed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] <sup>3</sup>	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7] <sup>3</sup>	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8] <sup>3</sup>	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] <sup>3</sup>	Thermally ineffective panel surfaces of sensible heating panels have insulation $\geq$ R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.13 [ME71] <sup>2</sup>	Unenclosed spaces that are heated use only radiant heat.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.3 [ME55] <sup>2</sup>	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.2.4.7 [ME113] <sup>2</sup>	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.6.1 [ME59] <sup>1</sup>	Demand control ventilation provided for spaces $>500$ ft <sup>2</sup> and $>25$ people/1000 ft <sup>2</sup> occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow $>3,000$ cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.6.2 [ME115] <sup>3</sup>	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.7 [ME57] <sup>1</sup>	Exhaust air energy recovery on systems meeting Table C403.2.7(1) and C403.2.7(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.8 [ME116] <sup>3</sup>	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9 [ME60] <sup>2</sup>	HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9 [ME10] <sup>2</sup>	Ducts and plenums sealed based on static pressure and location.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9.1.3 [ME11] <sup>3</sup>	Ductwork operating $>3$ in. water column requires air leakage testing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3 [ME62] <sup>1</sup>	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4.4.6 [ME110] <sup>3</sup>	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C408.2.2.1 [ME53] <sup>3</sup>	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5, C403.5.1, C403.5.2 [ME123] <sup>3</sup>	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15] <sup>1</sup>	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL18] <sup>1</sup>	Occupancy sensors installed in required spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1, C405.2.2.3 [EL23] <sup>2</sup>	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.2.1 [EL22] <sup>2</sup>	Automatic controls to shut off all building lighting installed in all buildings.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.3 [EL16] <sup>2</sup>	Daylight zones provided with individual controls that control the lights independent of general area lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.3.1, C405.2.3.2 [EL20] <sup>1</sup>	Primary sidelighted areas are equipped with required lighting controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.3.1, C405.2.3.3 [EL21] <sup>1</sup>	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL4] <sup>1</sup>	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL8] <sup>1</sup>	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.5 [EL25] <sup>null</sup>	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.3 [EL6] <sup>1</sup>	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17] <sup>3</sup>	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.3, C408.2.5.3 [FI8] <sup>3</sup>	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.2 [FI27] <sup>3</sup>	HVAC systems and equipment capacity does not exceed calculated loads.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1 [FI47] <sup>3</sup>	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1.2 [FI38] <sup>3</sup>	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1.3 [FI20] <sup>3</sup>	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2 [FI39] <sup>3</sup>	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.1, C403.2.4.2.2 [FI40] <sup>3</sup>	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.3 [FI41] <sup>3</sup>	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.4.1 [FI18] <sup>1</sup>	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Interior Lighting fixture schedule for values.</i>
C405.5.1 [FI19] <sup>1</sup>	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Exterior Lighting fixture schedule for values.</i>
C408.2.1 [FI28] <sup>1</sup>	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3.1 [FI31] <sup>1</sup>	HVAC equipment has been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.2 [FI10] <sup>1</sup>	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.3 [FI32] <sup>1</sup>	Economizers have been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.4 [FI29] <sup>1</sup>	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [FI7] <sup>3</sup>	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [FI16] <sup>3</sup>	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.3 [FI43] <sup>1</sup>	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.4 [FI30] <sup>1</sup>	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [FI33] <sup>1</sup>	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)





March 26, 2020

Malea Michael-Ferrier  
Routt County Regional Building Dept.  
136 6<sup>th</sup> Street, Ste 201  
Steamboat Springs, CO 80487

Re: TB-20-139; 255 Angler's Drive  
Narrative of Drawing Changes in Addm. #1

Hi Malea,

As requested, the following is a narrative of drawing changes on the recently submitted Addm. #1. The changes are also clouded on all the sheets submitted.

1. Hand sink was relocated
2. Prep sink was added.

The plumbing sheet P100 indicates the required plumbing changes.

The other sheets simply show the sinks in their new locations as part of the background.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mark Timberlake', with a long horizontal flourish extending to the right.

Mark Timberlake  
**Timberlake Engineering**  
110 East Beaver Creek Blvd, Units 305-307  
Avon, CO 81620  
573.881.5684 phone