

SHEET NUMBER	SHEET NAME
M001	MECHANICAL ABBREVIATIONS AND SYMBOLS
M002	MECHANICAL SITE PLAN
M101	MECHANICAL FLOOR PLAN
M102	MECHANICAL REFRIGERANT PIPING LAYOUT PLAN
M150	MECHANICAL ROOF PLAN
M501	MECHANICAL DETAILS
M502	MECHANICAL DETAILS
M590	MECHANICAL SPECIFICATIONS
M591	MECHANICAL SPECIFICATIONS
M592	MECHANICAL SPECIFICATIONS
M601	MECHANICAL SCHEDULE
M602	COOLER SPECIFICATIONS
M603	COOLER SPECIFICATIONS
M701	CAPTIVEAIRE DRAWINGS
M702	CAPTIVEAIRE DRAWINGS
M703	CAPTIVEAIRE DRAWINGS
M704	CAPTIVEAIRE DRAWINGS
M705	CAPTIVEAIRE DRAWINGS
M706	CAPTIVEAIRE DRAWINGS
M707	CAPTIVEAIRE DRAWINGS
M708	CAPTIVEAIRE DRAWINGS
M709	CAPTIVEAIRE DRAWINGS
M710	CAPTIVEAIRE DRAWINGS

- ALL FINAL HVAC EQUIPMENT INSTALL LOCATION TO BE COORDINATED WITH LANDLORD PRIOR TO INSTALLATION.
- ALL LIGHTS, PIPES, HVAC, ETC. CANNOT BE HUNG FROM GYPSUM ROOF DECK. ALL FIXTURES AND EQUIPMENT MUST BE HUNG FROM EXISTING STEEL STRUCTURE ON UNISTRUT SYSTEM - TYPICAL THROUGHOUT.
- HAZARDOUS MATERIAL MAY BE PRESENT IN CELESTORY WINDOWS FACING SMALLMAN STREET. THESE CANNOT BE DISTURBED AT ANY POINT DURING CONSTRUCTION.

RESPONSIBILITY MATRIX

THIS SCHEDULE IS PROVIDED FOR QUICK REFERENCE ONLY. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS. CONFLICTS BETWEEN THIS SCHEDULE AND THE REST OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION PRIOR TO BEGINNING WORK.

DESCRIPTION	FURNISHED			INSTALLED			REMARKS
	GENERAL CONTRACTOR	OWNER	LANDLORD	GENERAL CONTRACTOR	OWNER	LANDLORD	
DIVISION 23: HEATING, VENTILATING, AND AIR CONDITIONING							
23.1 HVAC DUCTWORK AND PIPING IDENTIFICATION							
23.1.1 HVAC DUCTWORK SYSTEM IDENTIFICATION	X			X			
23.1.2 PIPING SYSTEM IDENTIFICATION	X			X			
23.1.3 UTILITY SHUT OFF IDENTIFICATION IN KITCHEN	X			X			
23.1.4 VALVE TAGS AND CHART	X			X			
23.1.5 HVAC DAMPER IDENTIFICATION	X			X			
23.2 ROOF CURBS							
23.2.1 EXHAUST FAN CURBS	X			X			SCOPE OF WORK TO INCLUDE RIGGING, CURBS, AND ACCESSORIES
23.2.2 ROOF TOP UNIT CURBS	X			X			SCOPE OF WORK TO INCLUDE RIGGING, CURBS, AND ACCESSORIES
23.2.3 CONDENSING UNIT CURBS	X			X			GENERAL CONTRACTOR SCOPE OF WORK TO INCLUDE RIGGING, CURBS, AND ACCESSORIES
23.2.4 MAKE UP AIR UNIT CURBS	X			X			SCOPE OF WORK TO INCLUDE RIGGING, CURBS, AND ACCESSORIES
23.2.5 KITCHEN EXHAUST FAN CURBS	X			X			SCOPE OF WORK TO INCLUDE RIGGING, CURBS, AND ACCESSORIES
23.3 HVAC DUCTWORK SYSTEM COMPONENTS							
23.3.1 HVAC DUCTWORK	X			X			
23.3.2 INSULATION AND FIRE WRAP	X			X			GENERAL CONTRACTOR SCOPE OF WORK TO INCLUDE TENANT FIT OUT FROM LANDLORD POINT OF CONNECTION
23.3.3 DAMPERS	X			X			
23.3.4 SMOKE DETECTORS	X			X			
23.3.5 SUPPLY, RETURN, AND EXHAUST GRILLS AND REGISTERS	X			X			
23.4 MECHANICAL PIPING SYSTEM COMPONENTS							
23.4.1 WALK-IN COOLER AND FREEZER REFRIGERATION			X		X		WALK-IN COOLER AND FREEZER SUPPLIED BY VENDOR NO. 103 GENERAL CONTRACTOR SCOPE OF WORK TO INCLUDE PIPING INSTALLATION AND FINAL CONNECTION
23.4.2 REFRIGERATION FOR OTHER HVAC EQUIPMENT	X			X			
23.4.3 CHILLED WATER	X			X			
23.4.4 CONDENSER WATER	X			X			
23.4.5 HEATING HOT WATER	X			X			
23.4.6 VALVES AND ACCESSORIES (E.G. AIR VENTS)	X			X			
23.5 HVAC EQUIPMENT							
23.5.1 SUPPLY FAN	X			X			
23.5.2 TOILET EXHAUST FAN	X			X			
23.5.3 KITCHEN EXHAUST FAN			X	X			SUPPLIED BY VENDOR NO. 102
23.5.4 DUCTED AND NON-DUCTED HEATING AND COOLING UNITS			X	X			
23.5.5 MAKE UP AIR UNITS			X	X			SUPPLIED BY VENDOR NO. 102
23.5.6 ELECTRIC PATIO HEATERS	X			X			
23.5.7 CONDENSING UNITS	X			X			
23.5.8 RGF PHI SYSTEM	X			X			GENERAL CONTRACTOR TO PURCHASE FROM VENDOR NO. 7 VENDOR SUBSTITUTION IS NOT PERMITTED
23.6 KITCHEN EXHAUST WITH FIRE SUPPRESSION SYSTEM							
23.6.1 HOOD CONTROL PANEL		X		X			SUPPLIED BY VENDOR NO. 102
23.6.2 KITCHEN EXHAUST HOOD		X		X			SUPPLIED BY VENDOR NO. 102
23.6.3 STRUCTURAL SUPPORT	X			X			
23.6.4 ELECTRICAL AND CONTROL WIRING	X			X			
23.6.5 TANK SYSTEM		X		X			SUPPLIED BY VENDOR NO. 102 GENERAL CONTRACTOR TO COORDINATE AND FACILITATE SYSTEM SIGN-OFF
23.6.6 TANK WIRING AND UTILITIES CONNECTION	X			X			
23.6.7 TANK GAS VALVE		X		X			SUPPLIED BY VENDOR NO. 102
23.7 COMMISSIONING ACTIVITIES							
23.7.1 GREASE EXHAUST WATER LEAKAGE TEST	X			X			GENERAL CONTRACTOR TO PURCHASE FROM VENDOR NO. 6 VENDOR SUBSTITUTION IS NOT PERMITTED
23.7.2 TESTING AIR BALANCE (TAB) REPORT	X			X			GENERAL CONTRACTOR TO PURCHASE FROM VENDOR NO. 7 VENDOR SUBSTITUTION IS NOT PERMITTED

SUBMITTAL MATRIX

GENERAL CONTRACTORS TO ALSO REVIEW ARCHITECTURAL SPECIFICATIONS AS NOTED IN PLANS IN PLAN SECTION 700 OF THE ARCHITECTURAL PACKAGE FOR REQUIRED SUBMITTALS THAT MIGHT NOT BE LISTED BELOW.

SUBMITTAL DESCRIPTION	5	X	X	X	X	X	Required Before Time	Architect	Shake Shack	Physical Sample	Submitted for	Record
							(Quarantee Drop)	of Record	Shake	Required	Record	Record Only
Anchor Bolts Shops	5	X				X						
ATAS-Detailed Shop DWGS(Submitted by Owner Vendor to Owner/AOR prior to const.)	5	X				X						
Concrete Mix Design	5	X				X						
Construction Prefunctional Checklists	5	X				X						
Decorative Metal Shop Drawings	5	X				X						
Diffusers, Grills & Registers	5	X				X						
Doors, Frames & Hardware	7	X				X						
Ductwork Layout (if there are significant changes in field)	5	X				X						
Electrical Distribution Equipment	5	X				X						
Elevator & Vertical Transportation Shop Drawings	5	X				X						
Epoxy Floor	5	X				X						
Fire Alarm Shop Drawings & Device Cut Sheets	5	X				X						
Fire Sprinkler Shop Drawings, Hydraulic Calculations & Device Cut Sheets	5	X				X						
HVAC Equipment(if Carrier - Submitted by Owner Vendor to Owner/AOR prior to const.)	5	X				X						
Light Fixtures(Submitted by Owner Vendor to Owner/AOR prior to construction)	5	X				X						
MEP Tests, Start-Up, and Programming Reports	5	X				X						
Millwork - Material Submittals (if differs from spec)	5	X	X	X								
Millwork - Shop Drawings (custom items & design features only)	5	X										
Restroom Partitions	5	X				X						
Plumbing Fixtures	5	X				X						
Rolling Shop Drawings	5	X				X						
Rebar	5	X				X						
Stair Shop Drawings	5	X				X						
Structural Steel Shop Drawings	7	X				X						
Storefront - product data Submittal (if different from specified)	5	X										
Storefront - Shop Drawings	5	X										
Tile (if differs from spec)	5	X				X						
Window Film	5	X										

SYMBOLS

SYMBOL	DESCRIPTION
	THERMOSTAT
	REMOTE SENSOR
	SUPPLY DIFFUSER
	RETURN OR EXHAUST GRILLE
	SUPPLY OR FRESH AIR DUCT (SA OR FA)
	RETURN OR EXHAUST AIR DUCT (RA OR EA)
	RECTANGULAR DUCT FIRST FIGURE IS SIDE SHOWN
	ROUND DUCT
	VOLUME DAMPER (ELEV AND PLAN)
	TURNING VANES
	SUPPLY REGISTER OR GRILLE (R OR G)
	RETURN REGISTER OR GRILLE (R OR G)
	FRESH AIR INTAKE (FA)
	SQUARE CEILING DIFFUSER (SUPPLY)
	FAN COIL UNIT AND MARK
	MOTORIZED DAMPER
	REFRIGERANT LIQUID LINE
	REFRIGERANT SUCTION LINE

800 South Figueroa St.
Los Angeles, CA 90017
212.337.1090

CONSULTANTS:

MEPF ENGINEER
3035 S 72ND ST
OMAHA NE 68124
TEL 402.391.7680

SEALED SIGNATURE:

Date: 11/14/23

NO.	BY	DATE	DESCRIPTION
HL		2023-11-15	IFC SET
HL		2023-10-24	ADDENDUM A
HL		2023-09-05	ADDENDUM A
RAS		2023-07-05	PERMIT / BID
RAS		2023-06-12	75% SET
RAS		2023-04-26	DD SET

SHAKE SHACK - THE TERMINAL

1767 SMALLMAN STREET
PITTSBURGH, PA 15222
SHACK #1516

IFC

MECHANICAL ABBREVIATIONS & SYMBOLS

DRAWN BY:	RAS
CHECKED BY:	GRS
JOB NO:	20230073.00

M001

GENERAL NOTES:

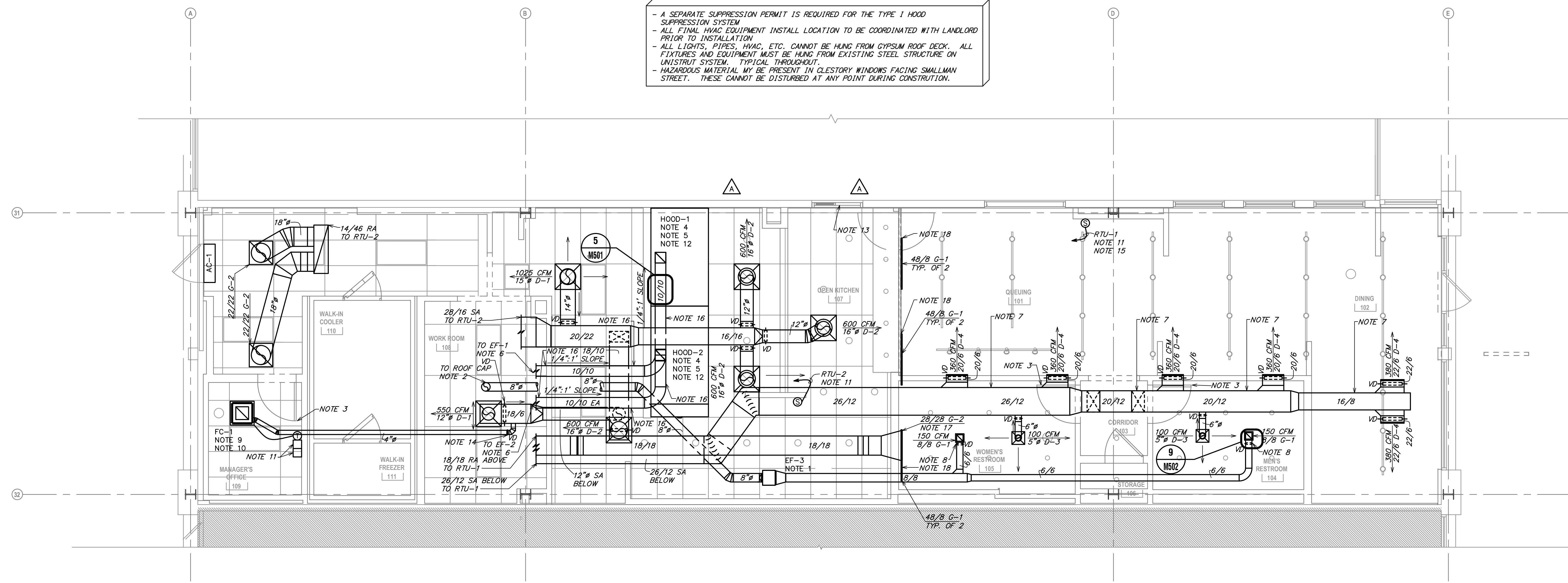
- A. EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS PROVIDED BY THE OWNER AND/OR LIMITED FIELD VERIFICATION BY OTHERS. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE PROJECT.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THE BID. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY EXTRAS DUE TO THE CONTRACTOR'S FAILURE TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION.
- C. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH DEMOLITION WORK PRIOR TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE TO DEMOLISH ALL EXISTING AS REQUIRED FOR INSTALLATION/CONSTRUCTION OF NEW WORK.
- E. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT AND LOCAL CODES.
- F. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL POWER REQUIREMENTS.
- G. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF ALL EQUIPMENT MAY BE PROPERLY COORDINATED.
- H. ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE WITH CONNECTIONS IN THE REQUIRED LOCATIONS AND WITH ADEQUATE SPACE FOR OPERATING AND SERVICING. THE DRAWINGS ARE GENERALLY DIAGNOMATIC AND INDICATE THE INTENT OF THE INSTALLATION WHILE THE SPECIFICATIONS AND EQUIPMENT LIST DENOTE THE TYPE AND QUALITY OF MATERIAL AND WORKMANSHIP TO BE USED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER AND/OR MORE COSTLY STANDARD WILL APPLY. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHOSE DECISION SHALL BE FINAL. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS REGARD ON BEHALF OF THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
- I. COORDINATE DUCT ROUTING AND HEIGHTS WITH GENERAL CONTRACTOR. VERIFY ALL CLEARANCES BEFORE STARTING WORK.
- J. THE CONTRACTOR SHALL INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT AS REQUIRED TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE CEILING HEIGHTS AND HEADROOM AND MAKE ALL EQUIPMENT REQUIRING MAINTENANCE OR REPAIR ACCESSIBLE.
- K. ALL DUCT CONNECTIONS TO HVAC EQUIPMENT MUST BE MADE WITH FLEXIBLE CONNECTORS.
- L. DO NOT ATTACH ANYTHING TO DECK ABOVE. ATTACH TO STRUCTURE (i.e. BEAMS, JOISTS) ONLY. DUCT HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE. ALL CONNECTIONS TO JOISTS SHALL BE MADE AT THE TOP CORNER.
- M. ALL DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER OR WRAPPED WITH 1-1/2" THICK FIRE RETARDANT FIBERGLASS WITH A REINFORCED ALUMINUM FOIL JACKET AND SHALL BE APPROVED FOR USE BY SMCMA AND NAIMA. RETURN AIR TRANSFER DUCTS AND RETURN DUCTWORK WITHIN 10 FEET OF THE UNIT FAN SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK VISIBLE TO THE PUBLIC SHALL BE INTERNALLY LINED AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT WRAP INSULATION IS NOT PERMITTED IN THESE AREAS.

- O. EXPOSED SPIRAL DUCT TO BE GALVANIZED FINISH, FREE FROM SCRATCHES, DENTS OR BLEMISHES AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT SHALL BE INTERNALLY LINED AND SEALED WITH DUCT SEALER COMPLETELY CONCEALED WITHIN THE DUCT JOINT. NO EXPOSED SEALER OR TAPE WILL BE ACCEPTED.
- P. ALL EXPOSED DUCTWORK SHALL BE INSTALLED TIGHT TO THE BOTTOM OF THE STRUCTURE.
- Q. PROVIDE REMOTE VOLUME DAMPER CONTROL MANUFACTURED BY YOUNG REGULATOR OR UNITE ENERTECH FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS.
- R. LOCATE CONTROLLER ABOVE ACCESSIBLE CEILING LOCATION. REFRIGERANT PIPING SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE.
- S. TENANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND/OR IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BIDDING. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF, DAMAGE TO, REPAIR OF ANY EXISTING UTILITY RUNS AND/OR IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK IN OR AROUND THE PREMISES.
- T. ALL ROOFING WORK SHALL BE PERFORMED BY LANDLORD'S APPROVED ROOFING CONTRACTOR AT TENANT'S EXPENSE, IF REQUIRED IN LEASE OR TENANT CRITERIA MANUAL.
- U. ROOF MOUNTED EQUIPMENT SHALL BE LABELED WITH THE TENANT NAME AND SPACE NUMBER WITH 3" HIGH WEATHER PROOF LETTERS.
- V. ALL GREASE EXHAUST DUCTWORK SHALL BE PROVIDED WITH 3" FOIL FACED THERMAL-CERAMIC INSULATION FOR GREASE DUCTS. INSULATION SHALL MEET NFPA 96 AND ASTM E 2336 REQUIREMENTS.
- W. GREASE DUCT LEAKAGE TESTING MUST BE PERFORMED PRIOR TO CONCEALMENT OF THE DUCTWORK.
- X. MECHANICAL CONTRACTOR SHALL PROVIDE TENANT WITH A WRITTEN ONE (1) YEAR MANUFACTURER'S WARRANTY ON ALL HVAC EQUIPMENT PROVIDED AND / OR INSTALLED. THE WARRANTY SHALL INCLUDE ALL LABOR, MATERIALS AND THREE (3) ROUTINE SERVICES INCLUDING FILTER CHANGE DURING A ONE (1) YEAR PERIOD.
- Y. AT THE COMPLETION OF CONSTRUCTION AN NEBB, AASC OR TABS CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND LANDLORD. PRIOR TO SCHEDULING BALANCING, COORDINATE WITH LANDLORD'S FIELD REPRESENTATIVE FOR THE VENDOR LISTED BELOW. IF APPROVED, THE BALANCING SHALL BE COMPLETED BY NATION TAB. CONTACT WILL TURNBOURGH AT WILL@NATIONTAB.COM OR 314-954-6244.
- Z. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LANDLORD'S TENANT CRITERIA MANUAL. TENANT CRITERIA MANUAL IS AN INTEGRAL PART OF THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LANDLORD REQUIREMENTS AT NO ADDITIONAL COST TO THE TENANT.
- AA. PARTS OF THE BASE BUILDING SYSTEMS THAT FALL INTO LEASE LINE SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.
- AB. PROVIDE ALL NECESSARY WIRING, RELAYS, DETECTORS, COMPONENTS, ETC., FOR FIRE ALARM OR CONTROL SYSTEM INTERLOCK IF APPLICABLE. VERIFY WITH BUILDING PERSONNEL BEFORE BID.

HVAC NOTES:

1. PROVIDE NEW EXHAUST FAN AS NOTED ON PLANS AND AS SCHEDULED ON SHEET M601.
2. PROVIDE 8" EXHAUST AIR DUCT UP TO GREENHECK ROOF GAP. CONTRACTOR SHALL FIELD VERIFY THAT THE LOCATION SHOWN IS A MINIMUM OF 10'-0" FROM ANY OUTDOOR AIR INTAKE. COORDINATE ROOF GAP PAINT COLOR WITH ARCHITECT AND OWNER.
3. NEW CAPTIVE GREASE EXHAUST HOOD TO BE FURNISHED BY OWNER FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. SEE CAPTIVE SHEETS FOR ADDITIONAL INFORMATION. BALANCE HOOD EXHAUST AS NOTED ON CAPTIVE SHEETS. VERIFY ALL MANUFACTURER AND CODE REQUIRED CLEARANCES ARE MAINTAINED. NOTIFY ARCHITECT IF ANY CONFLICTS OCCUR.
4. TRANSITION FROM HOOD EXHAUST COLLAR AS INDICATED ON PLANS AND EXTEND 10/10 KITCHEN HOOD GREASE EXHAUST DUCTWORK UP TO CORRESPONDING GREASE EXHAUST FAN ON ROOF. SEE SHEET M150 FOR CONTINUATION. GREASE DUCT SHALL BE WRAPPED WITH TWO (2) LAYERS OF THERMAL CERAMICS FAST WRAP XL, 1 1/2" THICK WITH 3" PERIMETER AND LONGITUDINAL OVERLAPS OR EQUIVALENT U.L. LISTED GREASE DUCT WRAP FOR ZERO CLEARANCE TO COMBUSTIBLES. REFER TO SHEET M502, DETAIL 5, FOR ADDITIONAL INFORMATION. TYPICAL.
5. PROVIDE CLEANOUTS ON GREASE DUCTWORK AS REQUIRED BY CODE. TYPICAL OF GREASE EXHAUST DUCTWORK.
6. DUCTWORK TO BE INSTALLED ABOVE THE RESTROOM STRUCTURE. COORDINATE ROUTING AND MOUNTING HEIGHT WITH LIGHTING FIXTURES AND ANY EXISTING CONDITIONS. NOTIFY THE ARCHITECTS OF ANY CONFLICTS AND COORDINATE WITH THE CONSTRUCTION MANAGER.
7. PROVIDE REMOTE VOLUME DAMPER AS INDICATED ON PLANS. REFERENCE SHEET M502, DETAIL 9, FOR ADDITIONAL INFORMATION. TYPICAL OF DIFFUSERS/GRILLES INSTALLED IN GYP. BOARD CEILINGS.
8. PROVIDE NEW FC UNIT AS NOTED ON PLANS AND AS SCHEDULED ON SHEET M601.
9. PROVIDE REFRIGERANT LINES FROM ASHP-1 ON ROOF TO FC-1 IN KITCHEN OFFICE. LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE.
10. COORDINATE WITH CAPTIVE/REAR ON REMOTE SENSORS AND COMFORT CONTROLS PACKAGE THAT IS TO BE INSTALLED IN THE OFFICE. VERIFY CONTROLS ARE A FULLY DIGITAL 7 DAY PROGRAMMABLE TYPE THERMOSTAT WITH REMOTE SENSING CAPABILITIES, AUTO CHANGE OVER AND AUTO SET BACK. MOUNT SENSOR AND CONTROLS AT 48" ABOVE FINISHED FLOOR. UNITS SERVING THE SAME TEMPERATURE ZONE SHALL BE INTERLOCKED TO PREVENT SIMULTANEOUS HEATING AND COOLING. LOCATE REMOTE TEMPERATURE SENSORS AS INDICATED ON PLAN. COORDINATE LOCATION WITH CONSTRUCTION MANAGER AND WALL GRAPHICS LAYOUT. REFERENCE CAPTIVE/REAR SHEETS FOR ADDITIONAL INFORMATION.
11. HOOD MANUFACTURER TO PROVIDE A "KIT" TO FASTEN THE BOTTOM FLANGE OF THE HOOD TO THE WALL, WITH ONE FASTENER PER STUD WALL. SIL-BOND RTV 4500 ALUMINUM SILICONE SEALANT OR APPROVED SIMILAR, TO BE APPLIED BY GENERAL CONTRACTOR/HOOD INSTALLER FOR ANY REMAINING SMALL GAPS. HOOD FASTENING "KIT" DETAIL TO BE INCLUDED IN MANUFACTURER DRAWINGS. REFERENCE SHEET M502, DETAIL 14, FOR ADDITIONAL INFORMATION.
12. AIR CURTAIN FOR SERVICE THRU WINDOW IS INTEGRAL TO THE WINDOW, IF REQUIRED BY SHAKE SHACK. REFER TO ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION.
13. BALANCE DAMPER TO PROVIDE 25 CFM.
14. PROVIDE WITH INSULATED BACK PANEL.
15. PROVIDE GREASE DUCT CLEANOUT(S) AT LOCATIONS REQUIRED BY CODE.
16. RETURN AIR GRILLE TO BE MOUNTED LOW, CLOSE TO REST ROOM CEILING LID COORDINATE FINAL INSTALLATION LOCATION WITH ARCHITECT AND CONSTRUCTION MANAGER.
17. TRANSFER GRILLES ARE TO BE MOUNTED EVENLY ACROSS THE TOP OF THE WALL. UPPER TRANSFER GRILLES ARE TO BE MOUNTED AS HIGH AS CONDITIONS ALLOW. LOWER TRANSFER GRILLES ARE TO BE MOUNTED IN HORIZONTAL ALIGNMENT WITH THE UPPER TRANSFER GRILLES. THE BOTTOM OF THE LOWER RETURN GRILLES ARE TO BE A MINIMUM OF 2'-0" A.F.F.. THE CONTRACTOR SHALL VERIFY THAT THE INSTALLATION LOCATION PERMITS AIR CIRCULATION BETWEEN THE UPPER AND LOWER TRANSFER GRILLES AND THAT A FREE AIR PATH EXISTS. COORDINATE FINAL INSTALLATION LOCATION WITH ARCHITECT AND CONSTRUCTION MANAGER.

▲ - A SEPARATE SUPPRESSION PERMIT IS REQUIRED FOR THE TYPE I HOOD SUPPRESSION SYSTEM
 - ALL FINAL HVAC EQUIPMENT INSTALL LOCATION TO BE COORDINATED WITH LANDLORD PRIOR TO INSTALLATION
 - ALL LIGHTS, PIPES, HVAC, ETC. CANNOT BE HUNG FROM GYPSUM ROOF DECK. ALL FIXTURES AND EQUIPMENT MUST BE HUNG FROM EXISTING STEEL STRUCTURE ON UNISTRUT SYSTEM. TYPICAL THROUGHOUT.
 - HAZARDOUS MATERIAL MAY BE PRESENT IN CLESTORY WINDOWS FACING SMALLMAN STREET. THESE CANNOT BE DISTURBED AT ANY POINT DURING CONSTRUCTION.



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

Bergmeyer
 800 South Figueroa St.
 51 Steiner St.
 Los Angeles, CA 90017
 Boston, MA 02210
 617.542.1025
 www.bergmeyer.com

Schnackel
 engineers
 New York • Miami • Dallas • Los Angeles • Seattle • Houston
 800.387.0400
 www.schnackel.com

MEP/E ENGINEER
 3035 S 72ND ST
 OMAHA NE 68124
 TEL. 402.391.7680

SEALED SIGNATURE:

 Date: 11/14/23

NO.	BY	DATE	DESCRIPTION
HL		2023-11-15	IFC SET
HL		2023-10-24	ADDENDUM A
RAS		2023-09-28	ADDENDUM A
RAS		2023-07-05	PERMIT / BID
RAS		2023-06-12	75% SET
RAS		2023-04-26	DD SET

SHAKE SHACK

SHAKE SHACK - THE TERMINAL

1767 SMALLMAN STREET
 PITTSBURGH, PA 15222
 SHACK #1516

IFC

MECHANICAL FLOOR PLAN

DRAWN BY: RAS
 CHECKED BY: GRS
 JOB NO: 20230073.00

M101

GENERAL NOTES:

- A. EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS PROVIDED BY THE OWNER AND/OR LIMITED FIELD VERIFICATION BY OTHERS. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE PROJECT.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THE BID. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY EXTRAS DUE TO THE CONTRACTOR'S FAILURE TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION.
- C. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH DEMOLITION WORK PRIOR TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE TO DEMOLISH ALL EXISTING AS REQUIRED FOR INSTALLATION/CONSTRUCTION OF NEW WORK.
- E. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT AND LOCAL CODES.
- F. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL POWER REQUIREMENTS.
- G. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF ALL EQUIPMENT MAY BE PROPERLY COORDINATED.
- H. ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE WITH CONNECTIONS IN THE REQUIRED LOCATIONS AND WITH ADEQUATE SPACE FOR OPERATING AND SERVICING. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE INTENT OF THE INSTALLATION WHILE THE SPECIFICATIONS AND EQUIPMENT LIST DENOTE THE TYPE AND QUALITY OF MATERIAL AND WORKMANSHIP TO BE USED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER AND/OR MORE COSTLY STANDARD WILL APPLY. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHOSE DECISION SHALL BE FINAL. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS REGARD ON BEHALF OF THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
- I. COORDINATE DUCT ROUTING AND HEIGHTS WITH GENERAL CONTRACTOR. VERIFY ALL CLEARANCES BEFORE STARTING WORK.
- J. THE CONTRACTOR SHALL INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT AS REQUIRED TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE CEILING HEIGHTS AND HEADROOM AND MAKE ALL EQUIPMENT REQUIRING MAINTENANCE OR REPAIR ACCESSIBLE.
- K. ALL DUCT CONNECTIONS TO HVAC EQUIPMENT MUST BE MADE WITH FLEXIBLE CONNECTORS.
- L. DO NOT ATTACH ANYTHING TO DECK ABOVE. ATTACH TO STRUCTURE (i.e. BEAMS, JOISTS) ONLY. DUCT HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE. ALL CONNECTIONS TO JOISTS SHALL BE MADE AT THE TOP CORNER.
- M. ALL DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK SHALL BE LINED WITH 1" ACUSTICAL DUCT LINER OR WRAPPED WITH 1-1/2" THICK FIRE RETARDANT FIBERGLASS WITH A REINFORCED ALUMINUM FOIL JACKET AND SHALL BE APPROVED FOR USE BY SMACNA AND NAIMA. RETURN AIR TRANSFER DUCTS AND RETURN DUCTWORK WITHIN FEET OF THE UNIT FAN SHALL BE LINED WITH 1" ACUSTICAL DUCT LINER.
- N. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK VISIBLE TO THE PUBLIC SHALL BE INTERNALLY LINED AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT WRAP INSULATION IS NOT PERMITTED IN THESE AREAS.

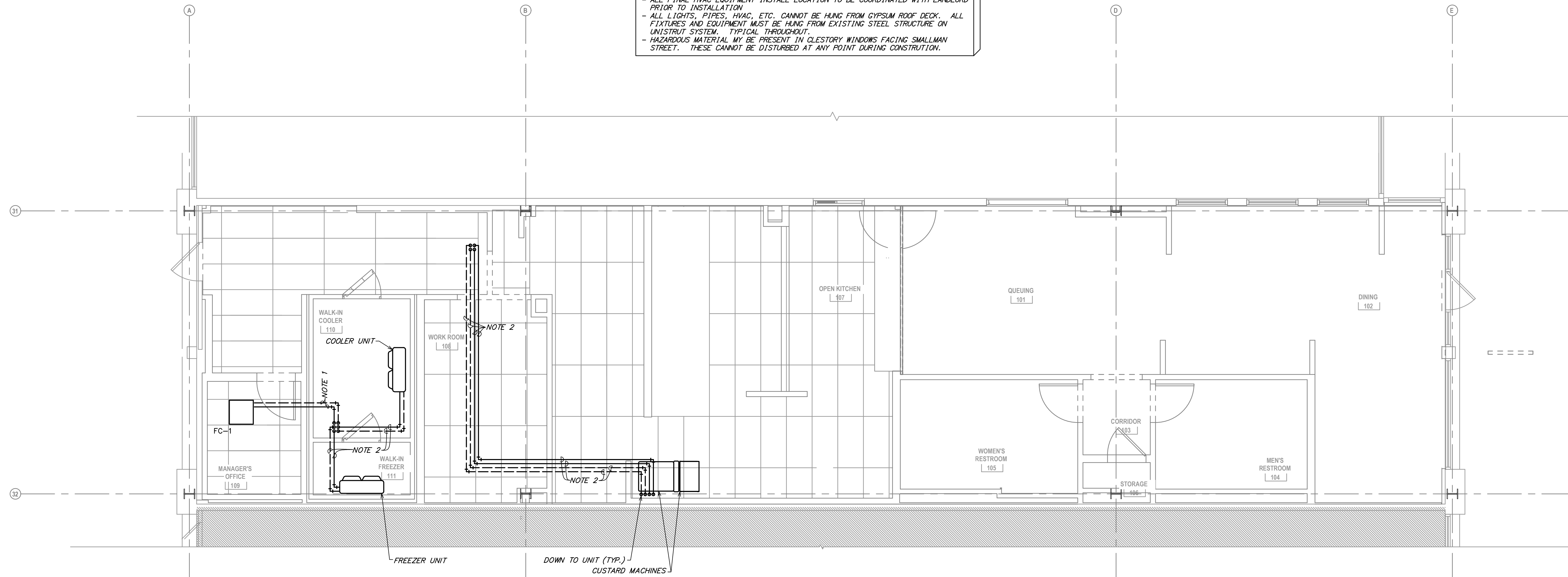
- O. EXPOSED SPIRAL DUCT TO BE GALVANIZED FINISH, FREE FROM SCRATCHES, DENTS OR BLEMISHES AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT SHALL BE INTERNALLY LINED AND SEALED WITH DUCT SEALER COMPLETELY CONCEALED WITHIN THE DUCT JOINT. NO EXPOSED SEALER OR TAPE WILL BE ACCEPTED.
- P. ALL EXPOSED DUCTWORK SHALL BE INSTALLED TIGHT TO THE BOTTOM OF THE STRUCTURE.
- Q. PROVIDE REMOTE VOLUME DAMPER CONTROL MANUFACTURED BY YOUNG REGULATOR OR UNITE ENERTECH FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS.
- R. LOCATE CONTROLLER ABOVE ACCESSIBLE CEILING LOCATION. REFRIGERANT PIPING SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE.
- S. TENANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND/OR OTHER IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BIDDING. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF, DAMAGE TO, REPAIR OF ANY EXISTING UTILITY RUNS AND/OR IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK IN OR AROUND THE PREMISES.
- T. ALL ROOFING WORK SHALL BE PERFORMED BY LANDLORD'S APPROVED ROOFING CONTRACTOR AT TENANT'S EXPENSE, IF REQUIRED IN LEASE OR TENANT CRITERIA MANUAL.
- U. ROOF MOUNTED EQUIPMENT SHALL BE LABELED WITH THE TENANT NAME AND SPACE NUMBER WITH 3" HIGH WEATHER PROOF LETTERS.
- V. ALL GREASE EXHAUST DUCTWORK SHALL BE PROVIDED WITH 3" FOIL FACED THERMAL-CERAMIC INSULATION FOR GREASE DUCTS. INSULATION SHALL MEET NFPA 96 AND ASTM E 2336 REQUIREMENTS.
- W. GREASE DUCT LEAKAGE TESTING MUST BE PERFORMED PRIOR TO CONCEALMENT OF THE DUCTWORK.
- X. MECHANICAL CONTRACTOR SHALL PROVIDE TENANT WITH A WRITTEN ONE (1) YEAR MANUFACTURER'S WARRANTY ON ALL HVAC EQUIPMENT PROVIDED AND / OR INSTALLED. THE WARRANTY SHALL INCLUDE ALL LABOR, MATERIALS AND THREE (3) ROUTINE SERVICES INCLUDING FILTER CHANGES DURING A ONE (1) YEAR PERIOD.
- Y. AT THE COMPLETION OF CONSTRUCTION AN NEBB, AASC OR TABB CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND LANDLORD. PRIOR TO SCHEDULING BALANCING, COORDINATE WITH LANDLORD'S FIELD REPRESENTATIVE FOR THE VENDOR LISTED BELOW. IF APPROVED, THE BALANCING SHALL BE COMPLETED BY NATION TAB. CONTACT WILL TURNBOURGH AT WILL@NATIONTAB.COM OR 314-954-6244.
- Z. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LANDLORD'S TENANT CRITERIA MANUAL. TENANT CRITERIA MANUAL IS AN INTEGRAL PART OF THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LANDLORD REQUIREMENTS AT NO ADDITIONAL COST TO THE TENANT.
- AA. PARTS OF THE BASE BUILDING SYSTEMS THAT FALL INTO LEASE LINE SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.
- AB. PROVIDE ALL NECESSARY WIRING, RELAYS, DETECTORS, COMPONENTS, ETC., FOR FIRE ALARM OR CONTROL SYSTEM INTERLOCK IF APPLICABLE. VERIFY WITH BUILDING PERSONNEL BEFORE BID.

HVAC NOTES:

1. PROVIDE REFRIGERANT LINES FROM ASH-1 ON ROOF TO FC-1 IN KITCHEN OFFICE (109) AS NOTED ON PLANS. LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE. ADJUST ROUTING AS NECESSARY IN FIELD FOR ANY OBSTACLES. COORDINATE EXACT LOCATION AND ROUTING WITH CONSTRUCTION MANAGER.
2. PROVIDE REFRIGERANT LINES FROM CONDENSING UNIT ON ROOF TO KITCHEN EQUIPMENT AS NOTED ON PLANS. LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE. ADJUST ROUTING AS NECESSARY IN FIELD FOR ANY OBSTACLES. COORDINATE EXACT LOCATION AND ROUTING WITH CONSTRUCTION MANAGER.

▲

- ALL FINAL HVAC EQUIPMENT INSTALL LOCATION TO BE COORDINATED WITH LANDLORD PRIOR TO INSTALLATION
 - ALL LIGHTS, PIPES, HVAC, ETC. CANNOT BE HUNG FROM GYPSUM ROOF DECK. ALL FIXTURES AND EQUIPMENT MUST BE HUNG FROM EXISTING STEEL STRUCTURE ON UNISTRUT SYSTEM. TYPICAL THROUGHOUT.
 - HAZARDOUS MATERIAL MAY BE PRESENT IN CLESTORY WINDOWS FACING SMALLMAN STREET. THESE CANNOT BE DISTURBED AT ANY POINT DURING CONSTRUCTION.



1 MECHANICAL REFRIGERANT PIPING LAYOUT PLAN
 SCALE: 1/4" = 1'-0"



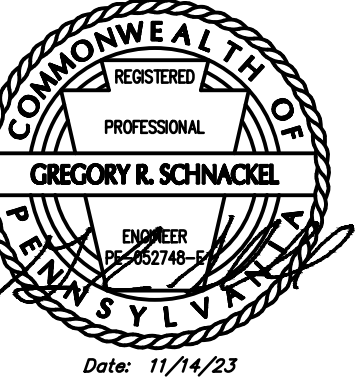
Bergmeyer

CONSULTANTS:



MEPF ENGINEER
 3035 S 72ND ST
 OMAHA NE 68124
 TEL. 402.391.7680

SEAL SIGNATURE:



NO.	BY	DATE	DESCRIPTION
HL		2023-11-15	IFC SET
HL		2023-10-24	ADDENDUM A
HL		2023-09-08	ADDENDUM A
RAS		2023-07-05	PERMIT / BID
RAS		2023-06-12	75% SET
RAS		2023-04-26	DD SET



SHAKE SHACK - THE TERMINAL

1767 SMALLMAN STREET
 PITTSBURGH, PA 15222
 SHACK #1516

IFC

MECHANICAL REFRIGERANT PIPING LAYOUT PLAN

DRAWN BY: RAS
 CHECKED BY: GRS
 JOB NO: 20230073.00

M102

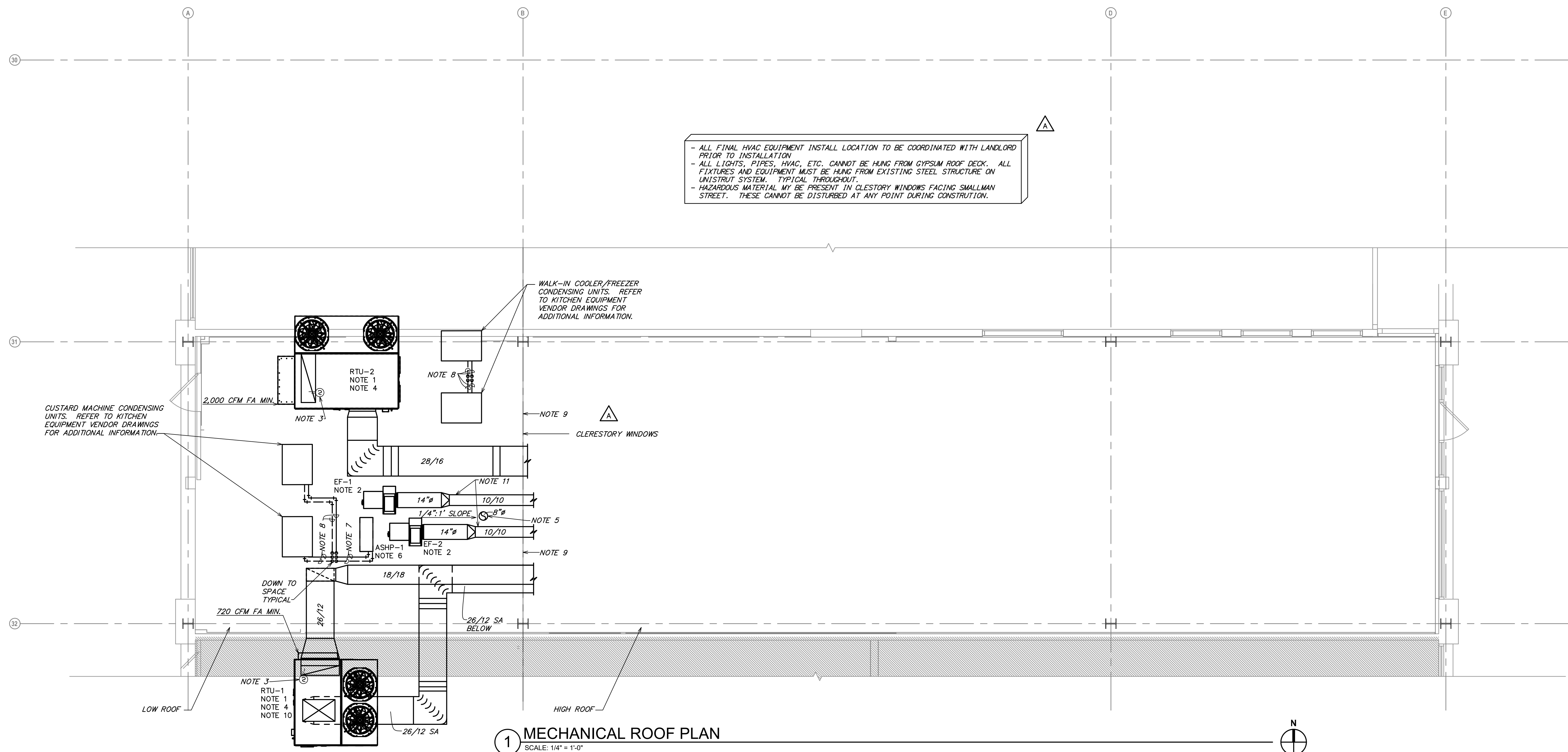
GENERAL NOTES:

- A. EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS PROVIDED BY THE OWNER AND/OR LIMITED FIELD VERIFICATION BY OTHERS. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE PROJECT.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THE BID. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY EXTRAS DUE TO THE CONTRACTOR'S FAILURE TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION.
- C. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH DEMOLITION WORK PRIOR TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE TO DEMOLISH ALL EXISTING AS REQUIRED FOR INSTALLATION/CONSTRUCTION OF NEW WORK.
- E. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT AND LOCAL CODES.
- F. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL POWER REQUIREMENTS.
- G. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF ALL EQUIPMENT MAY BE PROPERLY COORDINATED.
- H. ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE WITH CONNECTIONS IN THE REQUIRED LOCATIONS AND WITH ADEQUATE SPACE FOR OPERATING AND SERVICING. THE DRAWINGS ARE GENERALLY DIAGNOMATIC AND INDICATE THE INTENT OF THE INSTALLATION WHILE THE SPECIFICATIONS AND EQUIPMENT LIST DENOTE THE TYPE AND QUALITY OF MATERIAL AND WORKMANSHIP TO BE USED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER AND/OR MORE COSTLY STANDARD WILL APPLY. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHOSE DECISION SHALL BE FINAL. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS REGARD ON BEHALF OF THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
- I. COORDINATE DUCT ROUTING AND HEIGHTS WITH GENERAL CONTRACTOR. VERIFY ALL CLEARANCES BEFORE STARTING WORK.
- J. THE CONTRACTOR SHALL INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT AS REQUIRED TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE CEILING HEIGHTS AND HEADROOM AND MAKE ALL EQUIPMENT REQUIRING MAINTENANCE OR REPAIR ACCESSIBLE.
- K. ALL DUCT CONNECTIONS TO HVAC EQUIPMENT MUST BE MADE WITH FLEXIBLE CONNECTORS.
- L. DO NOT ATTACH ANYTHING TO DECK ABOVE. ATTACH TO STRUCTURE (I.E. BEAMS, JOISTS) ONLY. DUCT HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE. ALL CONNECTIONS TO JOISTS SHALL BE MADE AT THE TOP CORNER.
- M. ALL DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER OR WRAPPED WITH 1-1/2" THICK FIRE RETARDANT FIBERGLASS WITH A REINFORCED ALUMINUM FOIL JACKET AND SHALL BE APPROVED FOR USE BY SMACNA AND NAIMA. RETURN AIR TRANSFER DUCTS AND RETURN DUCTWORK WITHIN FEET OF THE UNIT FAN SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK VISIBLE TO THE PUBLIC SHALL BE INTERNALLY LINED AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT WRAP INSULATION IS NOT PERMITTED IN THESE AREAS.

- O. EXPOSED SPIRAL DUCT TO BE GALVANIZED FINISH, FREE FROM SCRATCHES, DENTS OR BLEMISHES AND PAINTED TO MATCH THE SURROUNDING AREA. DUCT SHALL BE INTERNALLY LINED AND SEALED WITH DUCT SEALER COMPLETELY CONCEALED WITHIN THE DUCT JOINT. NO EXPOSED SEALER OR TAPE WILL BE ACCEPTED.
- P. ALL EXPOSED DUCTWORK SHALL BE INSTALLED TIGHT TO THE BOTTOM OF THE STRUCTURE.
- Q. PROVIDE REMOTE VOLUME DAMPER CONTROL MANUFACTURED BY YOUNG REGULATORS OR UNITED ENERTECH FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS.
- R. LOCATE CONTROLLER ABOVE ACCESSIBLE CEILING LOCATION. REFRIGERANT PIPING SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER WITH LONG LENGTH WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE.
- S. TENANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND/OR OTHER IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BIDDING. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF, DAMAGE TO, REPAIR OF ANY EXISTING UTILITY RUNS AND/OR IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK IN OR AROUND THE PREMISES.
- T. ALL ROOFING WORK SHALL BE PERFORMED BY LANDLORD'S APPROVED ROOFING CONTRACTOR AT TENANT'S EXPENSE, IF REQUIRED IN LEASE OR TENANT CRITERIA MANUAL.
- U. ROOF MOUNTED EQUIPMENT SHALL BE LABELED WITH THE TENANT NAME AND SPACE NUMBER WITH 3" HIGH WEATHER PROOF LETTERS.
- V. ALL GREASE EXHAUST DUCTWORK SHALL BE PROVIDED WITH 3" FOIL FACED THERMAL-CERAMIC INSULATION FOR GREASE DUCTS. INSULATION SHALL MEET NFPA 96 AND ASTM E 2336 REQUIREMENTS.
- W. GREASE DUCT LEAKAGE TESTING MUST BE PERFORMED PRIOR TO CONCEALMENT OF THE DUCTWORK.
- X. MECHANICAL CONTRACTOR SHALL PROVIDE TENANT WITH A WRITTEN ONE (1) YEAR MANUFACTURER'S WARRANTY ON ALL HVAC EQUIPMENT PROVIDED AND / OR INSTALLED. THE WARRANTY SHALL INCLUDE ALL LABOR, MATERIALS AND THREE (3) ROUTINE SERVICES INCLUDING FILTER CHANGES DURING A ONE (1) YEAR PERIOD.
- Y. AT THE COMPLETION OF CONSTRUCTION AN NEBB, AASC OR TABS CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND LANDLORD. PRIOR TO SCHEDULING BALANCING, COORDINATE WITH LANDLORD'S FIELD REPRESENTATIVE FOR THE VENDOR LISTED BELOW. IF APPROVED, THE BALANCING SHALL BE COMPLETED BY NATION TAB. CONTACT WILL TURNBOURGH AT WILL@NATIONTAB.COM OR 314-954-6244.
- Z. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LANDLORD'S TENANT CRITERIA MANUAL. TENANT CRITERIA MANUAL IS AN INTEGRAL PART OF THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LANDLORD REQUIREMENTS AT NO ADDITIONAL COST TO THE TENANT.
- AA. PARTS OF THE BASE BUILDING SYSTEMS THAT FALL INTO LEASE LINE SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.
- AB. PROVIDE ALL NECESSARY WIRING, RELAYS, DETECTORS, COMPONENTS, ETC., FOR FIRE ALARM OR CONTROL SYSTEM INTERLOCK IF APPLICABLE. VERIFY WITH BUILDING PERSONNEL BEFORE BID.

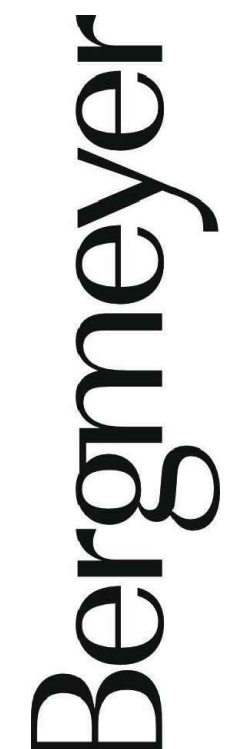
HVAC NOTES:

1. NEW CAPTIVEAIR RTU TO BE FURNISHED BY OWNER FOR INSTALLATION BY MECHANICAL CONTRACTOR. SEE CAPTIVEAIR SHEETS FOR ADDITIONAL INFORMATION. FIELD VERIFY EXACT LOCATION.
2. NEW CAPTIVEAIR GREASE EXHAUST FAN TO BE FURNISHED BY OWNER FOR INSTALLATION BY MECHANICAL CONTRACTOR. SEE CAPTIVEAIR SHEETS FOR ADDITIONAL INFORMATION. CONTRACTOR SHALL FIELD VERIFY THAT THE LOCATION SHOWN IS A MINIMUM OF 10'-0" FROM ANY OUTDOOR AIR INTAKE.
3. DUCT SMOKE DETECTOR ON RETURN SIDE DUCT AND SHUTDOWN RELAY SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. ALL WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.
4. RFG ENVIRONMENTAL GROUP, INC. AIR PURIFICATION SYSTEM TO BE PROVIDED BY INTAB. REFER TO RESPONSIBILITY MATRIX ON SHEET M001 FOR ADDITIONAL INFORMATION, SHEET M001 FOR SCHEDULE, AND SHEET M592 FOR SPECIFICATIONS.
5. CONTRACTOR SHALL FIELD VERIFY THAT THE RESTROOM EXHAUST DISCHARGE LOCATION SHOWN IS A MINIMUM OF 10'-0" FROM ANY OUTDOOR AIR INTAKE. PROVIDE ASPH AS NOTED ON PLANS AND SCHEDULED ON SHEET M601.
6. PROVIDE REFRIGERANT LINES FROM ASHP-1 ON ROOF TO FC-1 IN KITCHEN OFFICE. LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE.
7. PROVIDE REFRIGERANT LINES FROM KITCHEN EQUIPMENT CONDENSING UNITS ON ROOF TO UNITS IN THE KITCHEN SPACE AS INDICATED ON THE KITCHEN DRAWINGS. LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE.
8. ALL EXTERIOR DUCTWORK IS TO BE RAN THROUGH CLEARESTORY WINDOWS. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING, FASTENING, AND SUPPORT SYSTEMS FOR EXTERIOR DUCTWORK. REFERENCE DETAILS SHEETS FOR ADDITIONAL INFORMATION.
9. CONTRACTOR TO UTILIZE SIDE WALL DISCHARGE/RETURN OF THE CAPTIVEAIR CURB. REFERENCE CAPTIVEAIR DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ROUTING WITH CONSTRUCTION MANAGER. NOTIFY ENGINEER AND ARCHITECT WITH CONFLICTS.
10. PROVIDE GREASE DUCT CLEANOUT(S) AT LOCATIONS REQUIRED BY CODE.




- ALL FINAL HVAC EQUIPMENT INSTALL LOCATION TO BE COORDINATED WITH LANDLORD PRIOR TO INSTALLATION.
 - ALL LIGHTS, PIPES, HVAC, ETC. CANNOT BE HUNG FROM GYPSUM ROOF DECK. ALL FIXTURES AND EQUIPMENT MUST BE HUNG FROM EXISTING STEEL STRUCTURE ON UNISTRUIT SYSTEM TYPICAL THROUGHOUT.
 - HAZARDOUS MATERIAL MAY BE PRESENT IN CLESTORY WINDOWS FACING SMALLMAN STREET. THESE CANNOT BE DISTURBED AT ANY POINT DURING CONSTRUCTION.

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



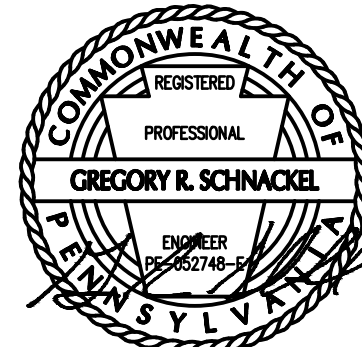
800 South Figueroa St.
 Los Angeles, CA 90017
 212.337.1090

CONSULTANTS:



MEPF ENGINEER
 3035 S 72ND ST
 OMAHA NE 68124
 TEL 402.391.7680

SEALED SIGNATURE:



Date: 11/14/23

HL	2023-11-15	IFC SET
HL	2023-10-24	ADDENDUM A
RAS	2023-09-06	ADDENDUM A
RAS	2023-07-05	PERMIT BID
RAS	2023-06-12	75% SET
RAS	2023-04-26	DD SET

SHAKE SHACK

SHAKE SHACK - THE TERMINAL

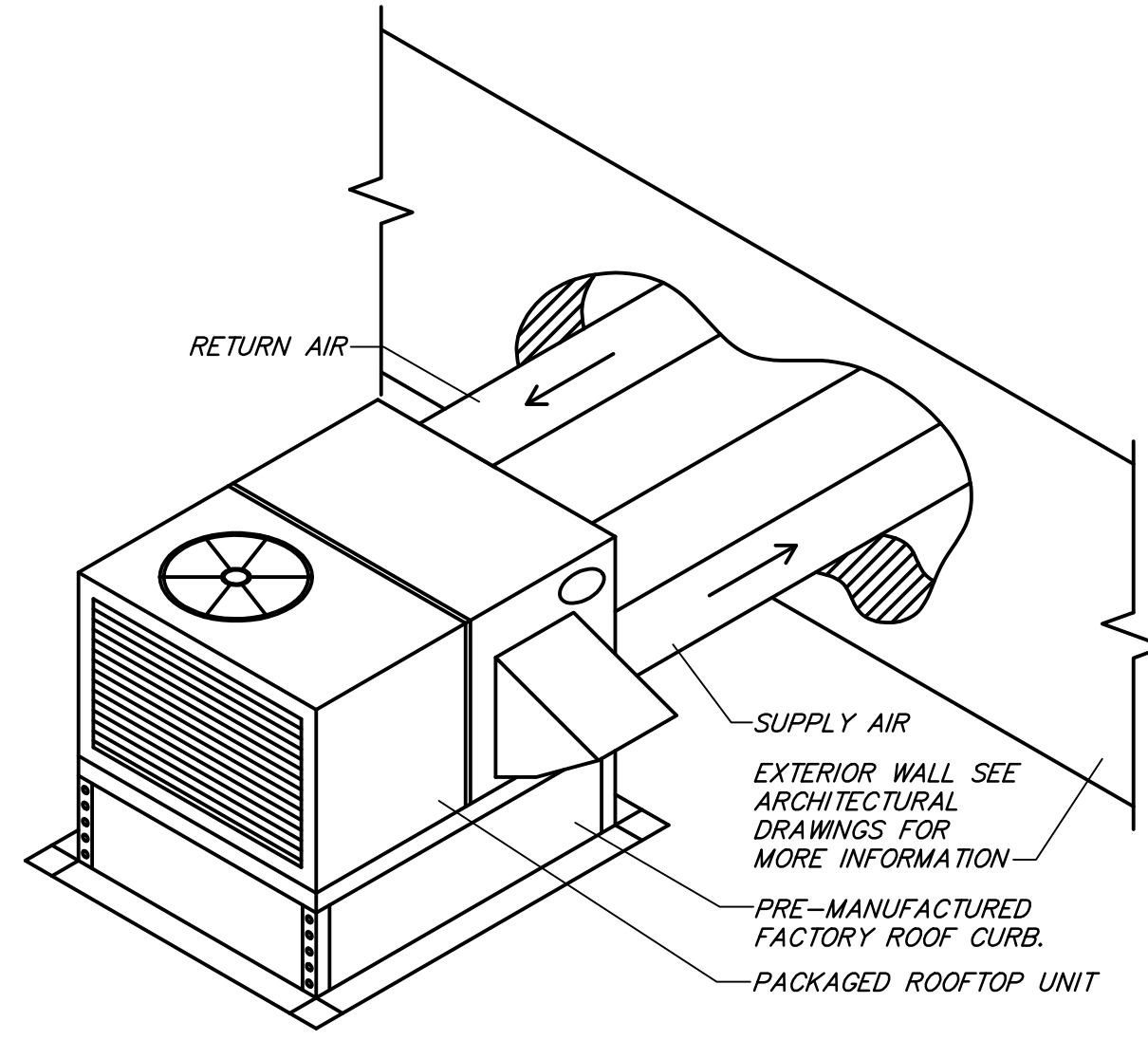
1767 SMALLMAN STREET
 PITTSBURGH, PA 15222
 SHACK #1516

IFC

MECHANICAL ROOF PLAN

DRAWN BY: RAS
 CHECKED BY: GRS
 JOB NO: 20230073.00

M150



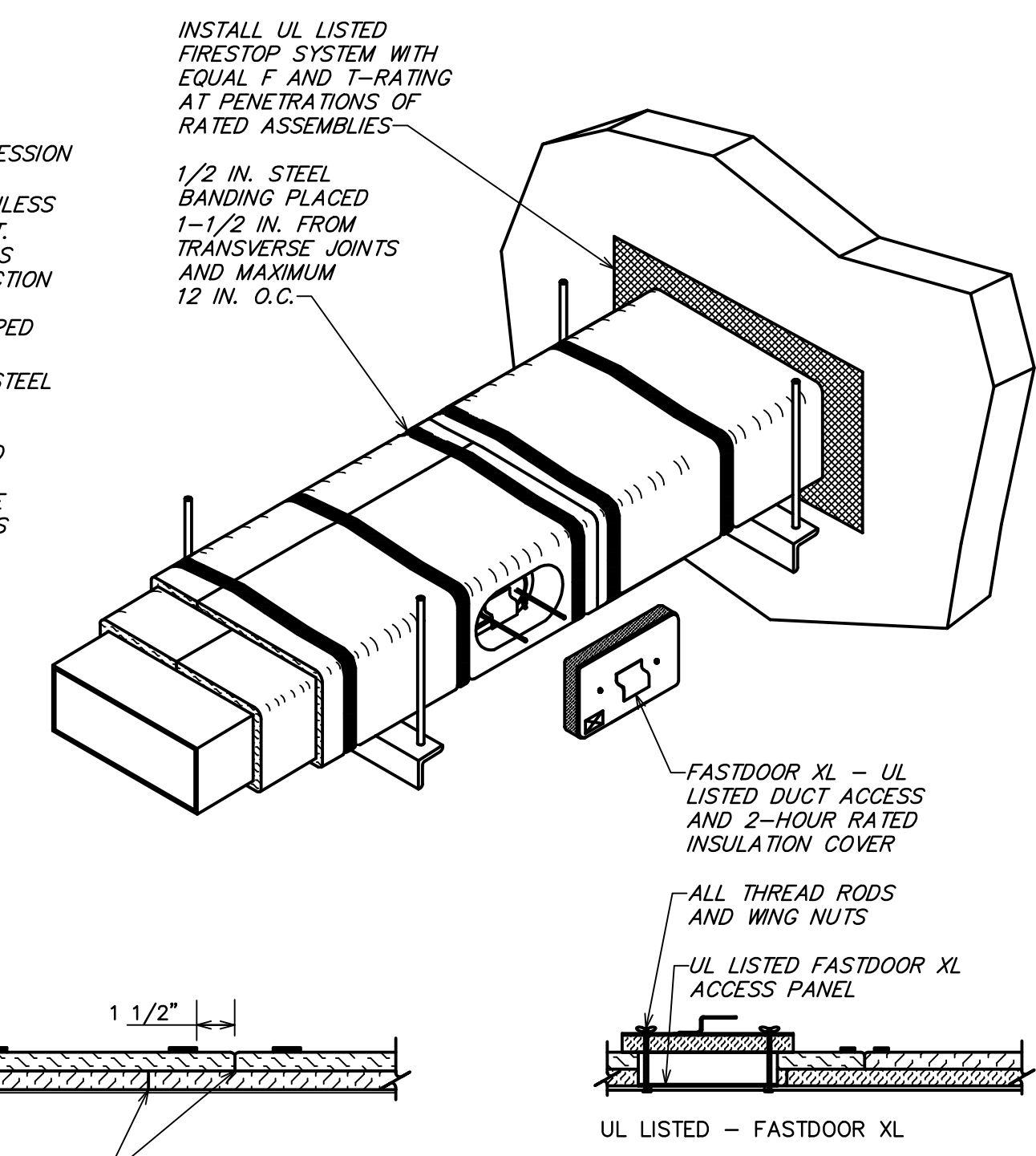
8 HORIZONTAL DISCHARGE DUCTING
NOT TO SCALE

MAXIMUM HALF OF DUCT PERIMETER	PAIR AT 10 FT. SPACING		PAIR AT 8 FT. SPACING		PAIR AT 5 FT. SPACING		PAIR AT 4 FT. SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2 = 30"	1" x 22 GA.	10 GA. (.135")	1" x 22 GA.	10 GA. (.135")	1" x 22 GA.	12 GA. (.106")	1" x 22 GA.	12 GA. (.106")
P/2 = 72"	1" x 18 GA.	3/8"	1" x 20 GA.	1/4"	1" x 22 GA.	1/4"	1" x 22 GA.	1/4"
P/2 = 96"	1" x 16 GA.	3/8"	1" x 18 GA.	3/8"	1" x 20 GA.	3/8"	1" x 22 GA.	1/4"
P/2 = 120"	1 1/2" x 16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 18 GA.	3/8"	1" x 20 GA.	1/4"
P/2 = 168"	1 1/2" x 16 GA.	1/2"	1 1/2" x 16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 18 GA.	3/8"
P/2 = 192"	---	1/2"	1 1/2" x 16 GA.	1/2"	1" x 16 GA.	3/8"	1" x 16 GA.	3/8"
P/2 = 193" UP	SPECIAL ANALYSIS REQUIRED							

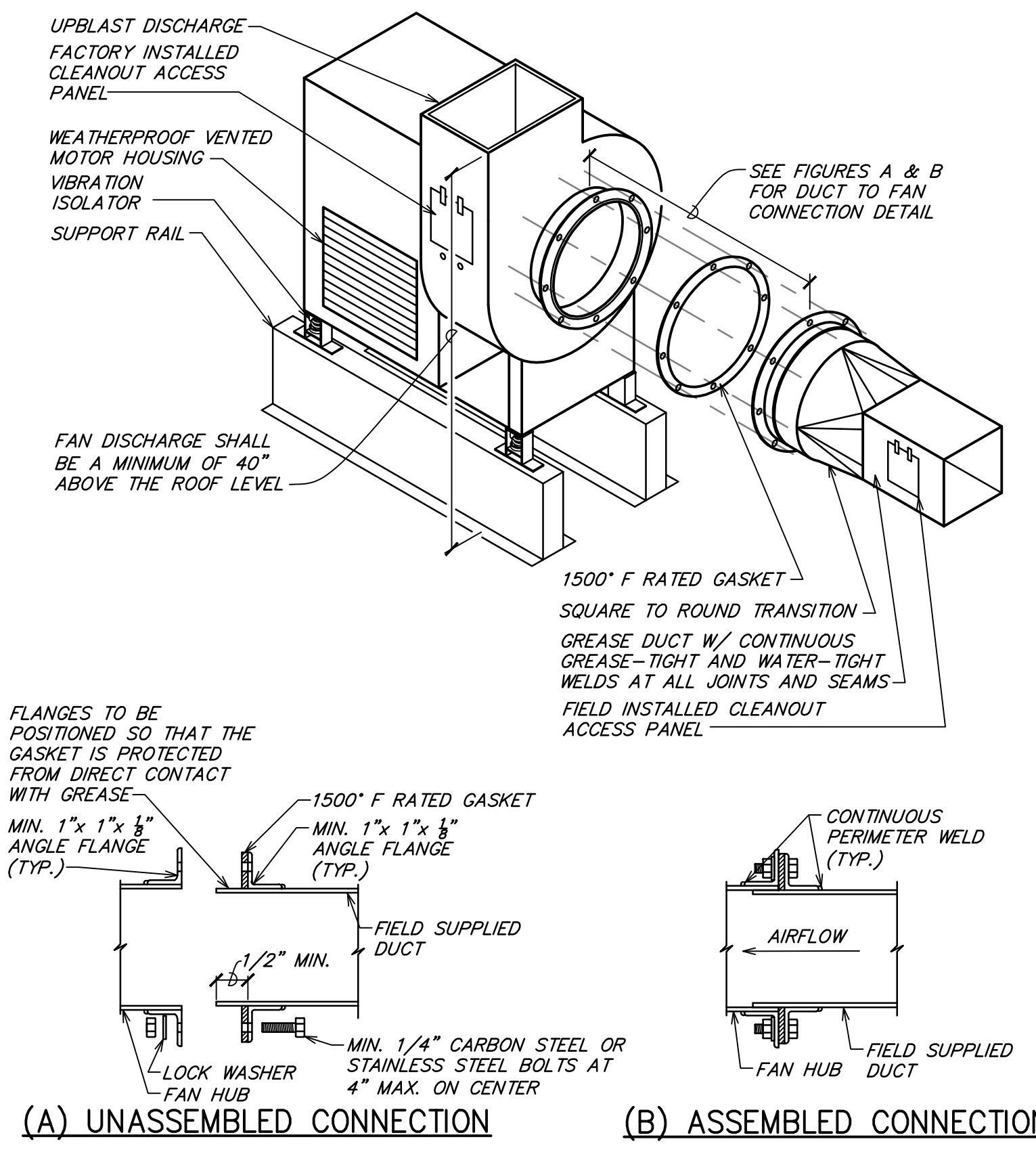
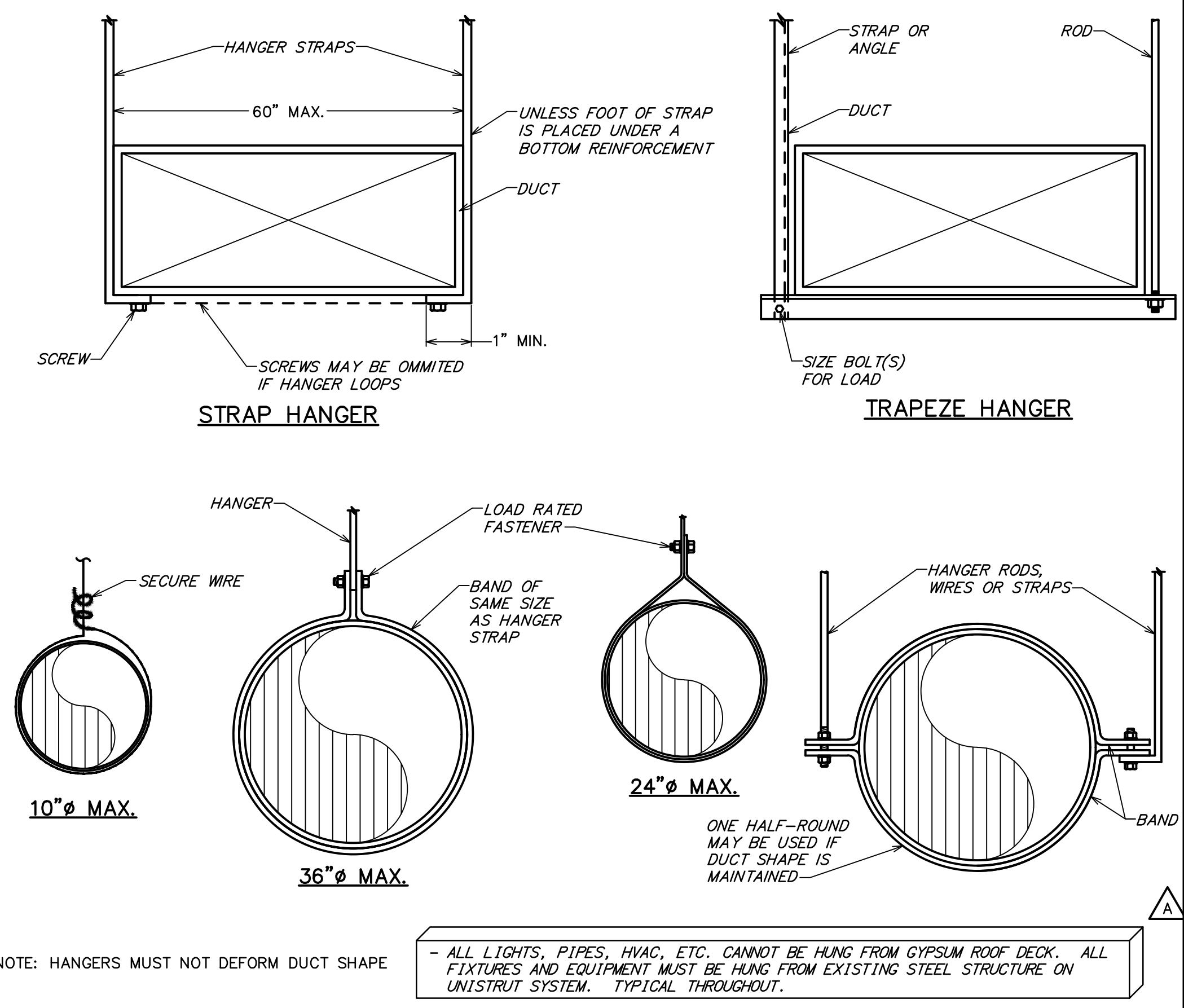
WHEN STRAPS ARE LAP JOINED USE THESE MINIMUM FASTENERS:	SINGLE HANGER MAXIMUM ALLOWABLE LOAD	
	STRAP	WIRE OR ROD (DIA.)
1" x 18, 20, 22 GA. - TWO #10 OR ONE 1/4" BOLT	1" x 22 GA. - 260 LBS.	0.106" - 80 LBS.
1" x 16 GA. - TWO 1/4" DIA.	1" x 20 GA. - 320 LBS.	0.135" - 120 LBS.
1" x 16 GA. - TWO 3/8" DIA.	1" x 18 GA. - 420 LBS.	0.162" - 160 LBS.
PLACE FASTENERS IN SERIES, NOT SIDE BY SIDE.	1" x 16 GA. - 700 LBS.	1/4" - 270 LBS.
	1 1/2" x 16 GA. - 1100 LBS.	3/8" - 680 LBS.
		1/2" - 1250 LBS.
		5/8" - 2000 LBS.
		3/4" - 3000 LBS.

4 RECTANGULAR DUCT HANGER TABLE
NOT TO SCALE

- NOTES:
- THERMAL CERAMICS FIREMASTER FASTWRAP XL IS TESTED TO ASTM E2336 AND UL LISTED PER HMK1.G18 TO PROVIDE ZERO CLEARANCE TO COMBUSTIBLES AND TO PROVIDE A 1 OR 2 HOUR EXPOSURE THROUGH PENETRATIONS. FIRESTOP SYSTEMS ARE TESTED IN ACCORDANCE WITH ASTM E 814 (UL 1479), ICC-ES APPROVAL PER REPORT ESR 2213 OR EST 2832.
 - COMPLIANT TO THE FOLLOWING CODES:
NFPA 96
INTERNATIONAL MECHANICAL CODES
UNIFORM MECHANICAL CODE
CALIFORNIA MECHANICAL CODE
 - INSULATION APPLIED IN TWO LAYERS WITH TIGHT COMPRESSION JOINT ON BOTH LAYERS AT ALL JOINTS.
 - MINIMUM 16 GAUGE CARBON STEEL (OR 18 GAUGE STAINLESS STEEL) RECTANGULAR OR ROUND GREASE EXHAUST DUCT.
 - INSTALL UL LISTED AND LIQUID TIGHT THERMAL CERAMICS FASTDOOR XL ACCESS DOORS AT ALL CHANGES IN DIRECTION AND AT MINIMUM EVERY 20 FT ON HORIZONTAL RUNS.
 - SUPPORT HANGER SYSTEMS DO NOT NEED TO BE WRAPPED PROVIDED THE HANGER RODS ARE MINIMUM OF 3/8" IN DIAMETER AND SUPPORTS ARE MINIMUM 2" x 1/8" IN. STEEL ANGLE OR SMACNA EQUIVALENT SUPPORT SYSTEM.
 - THERMAL CERAMICS DUCT WRAP SHALL BE INSTALLED DIRECTLY ONTO THE DUCT AND APPLIED FROM THE HOOD CONNECTION TO THE CONNECTION OF THE FAN.
 - THERMAL CERAMICS DUCT ENCLOSURE SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND UL LISTINGS.

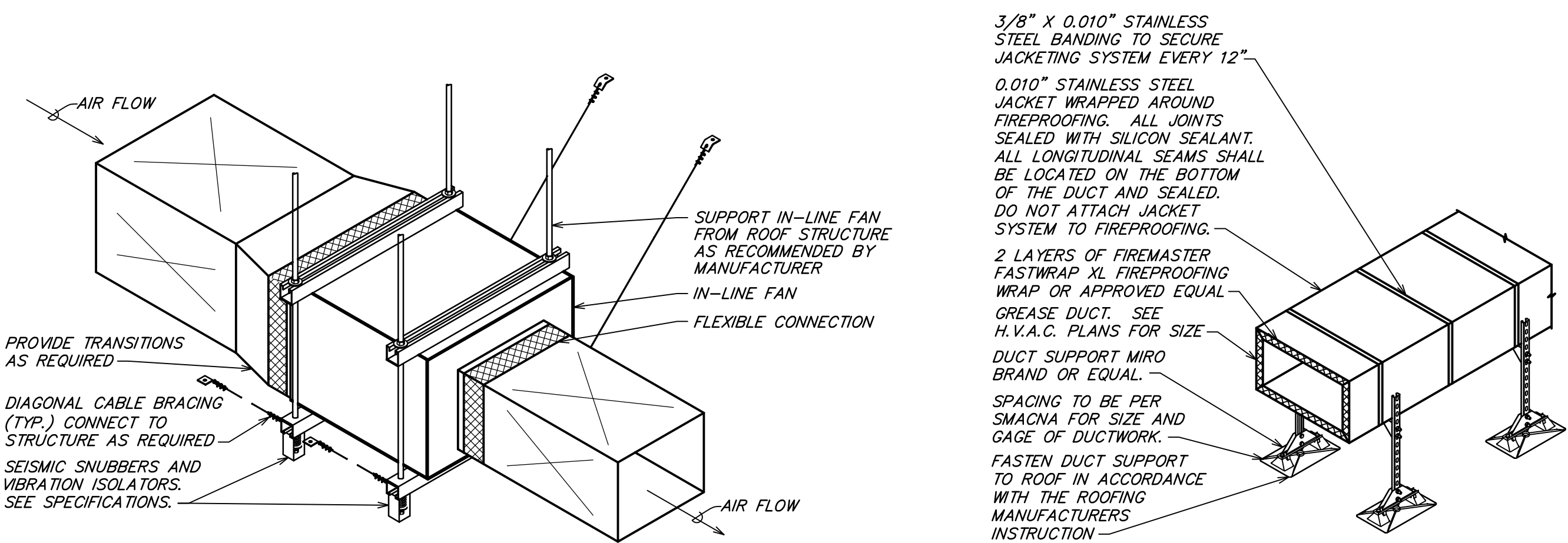


1 DUCTWORK DETAILS
NOT TO SCALE



9 UTILITY SET GREASE EXHAUST FAN
NOT TO SCALE

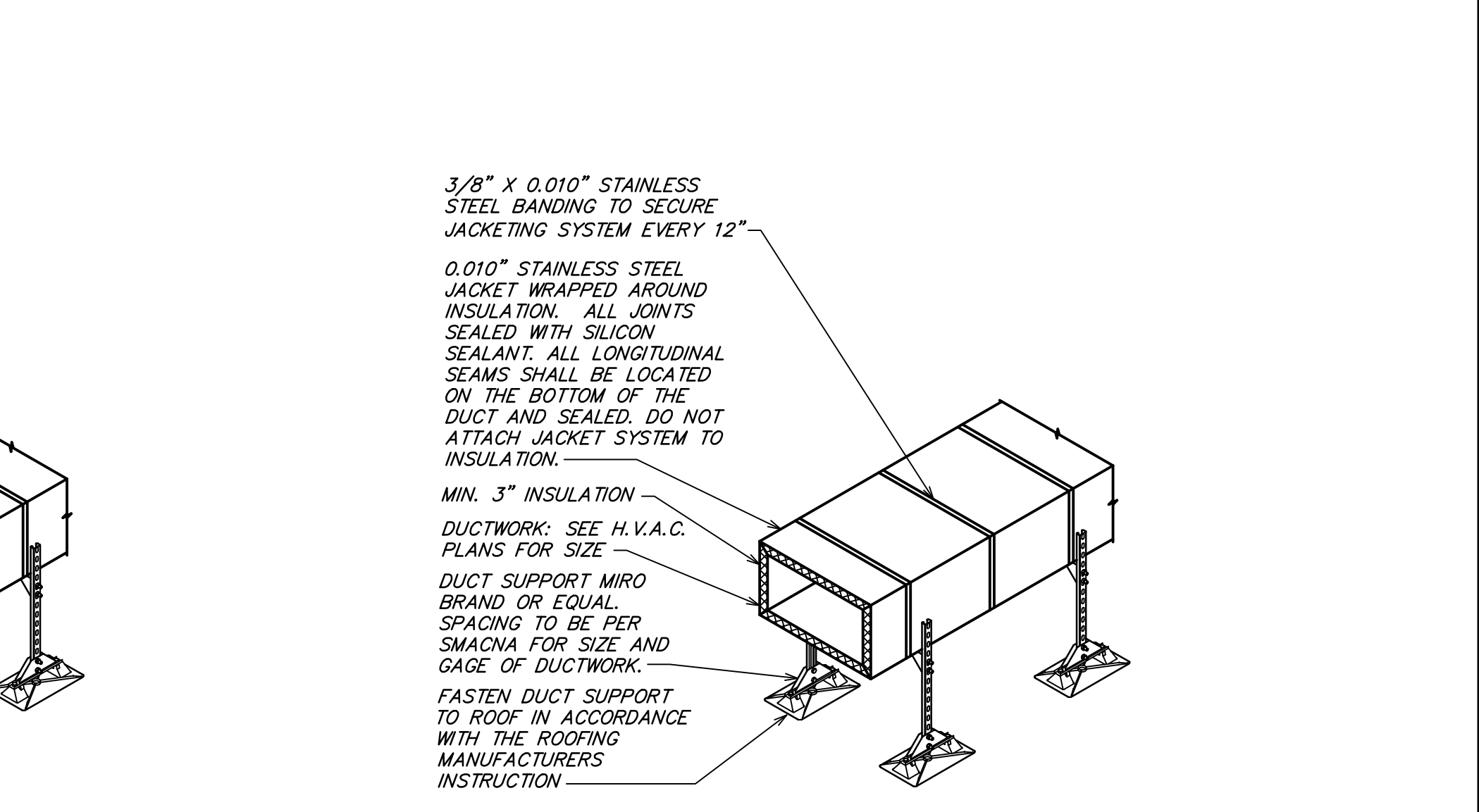
5 FIREMASTER FASTWRAP XL DETAIL
NOT TO SCALE



7 IN-LINE FAN DETAIL
NOT TO SCALE

6 TYPICAL EXTERIOR GREASE DUCT SECTION
NOT TO SCALE

2 DUCT HANGER DETAIL
NOT TO SCALE



3 EXTERIOR DUCT SECTION
NOT TO SCALE



NO.	BY	DATE	DESCRIPTION
1	HL	2023-11-15	IFC SET
2	HL	2023-10-24	ADDENDUM A
3	HL	2023-09-08	ADDENDUM A
4	RAS	2023-07-05	PERMIT BID
5	RAS	2023-06-12	75% SET
6	RAS	2023-04-26	DD SET



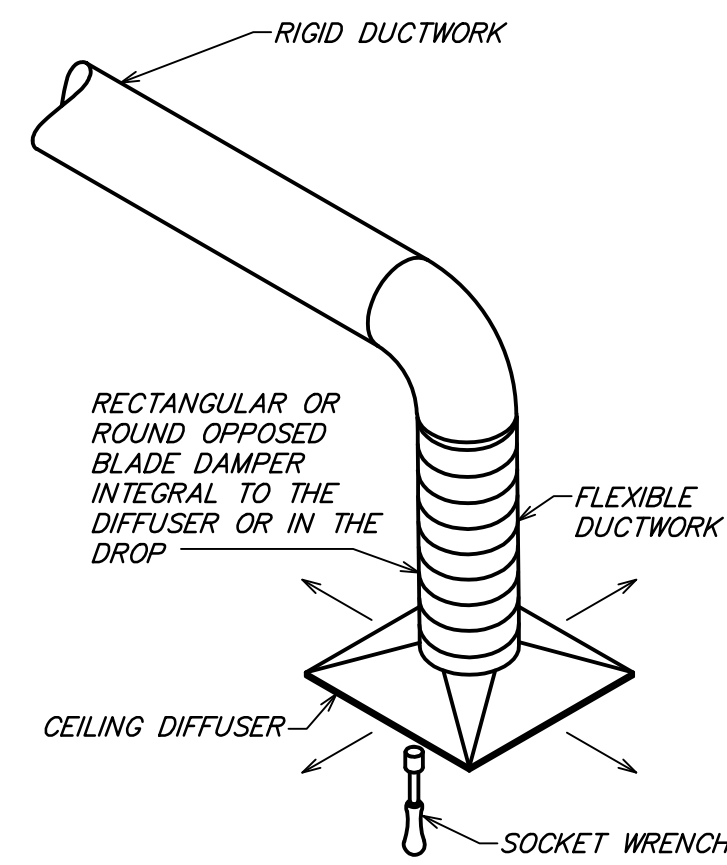
SHAKE SHACK - THE TERMINAL
1767 SMALLMAN STREET
PITTSBURGH, PA 15222
SHACK #1516

IFC

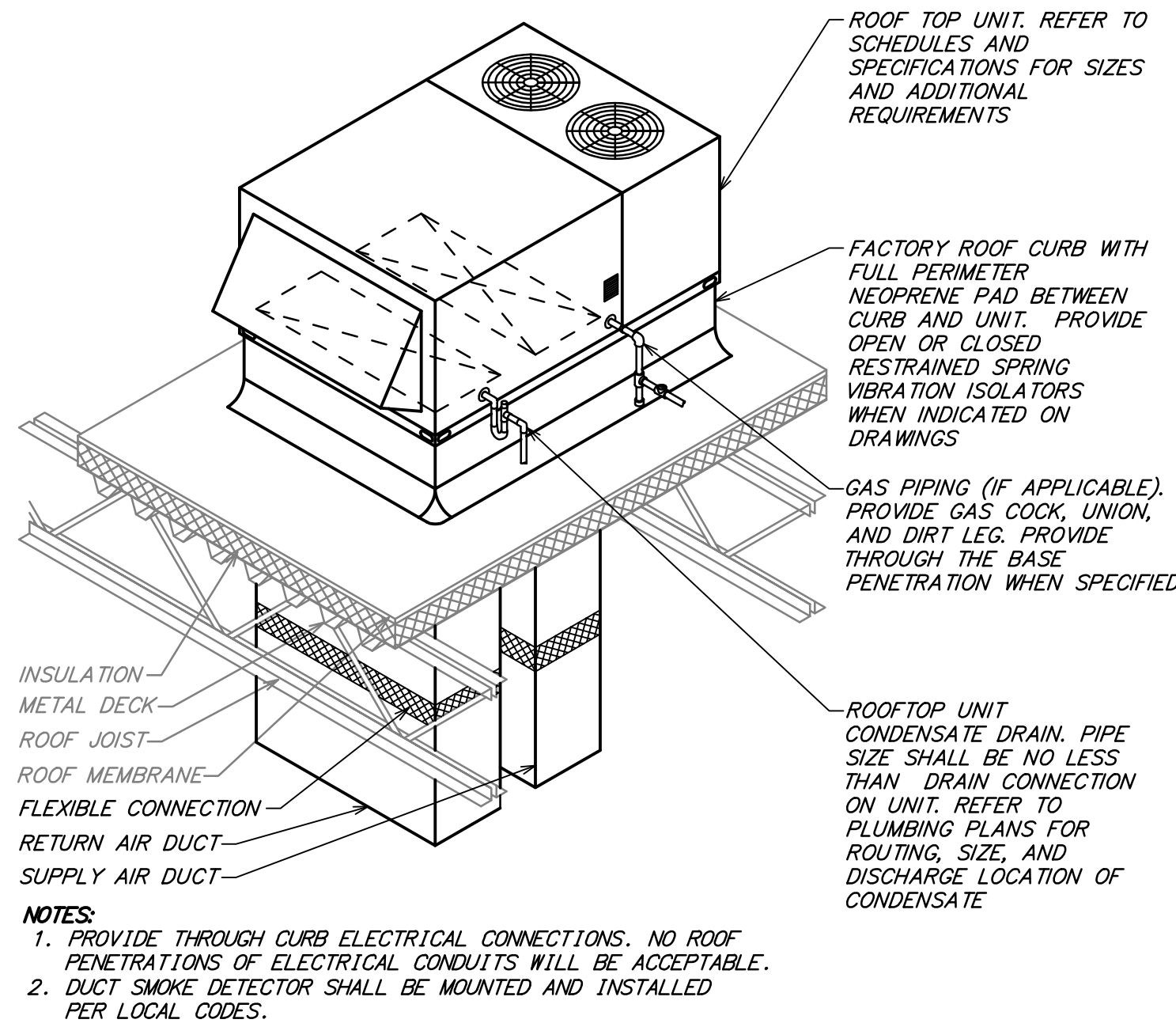
MECHANICAL DETAILS

DRAWN BY: RAS
CHECKED BY: GRS
JOB NO: 20230073.00

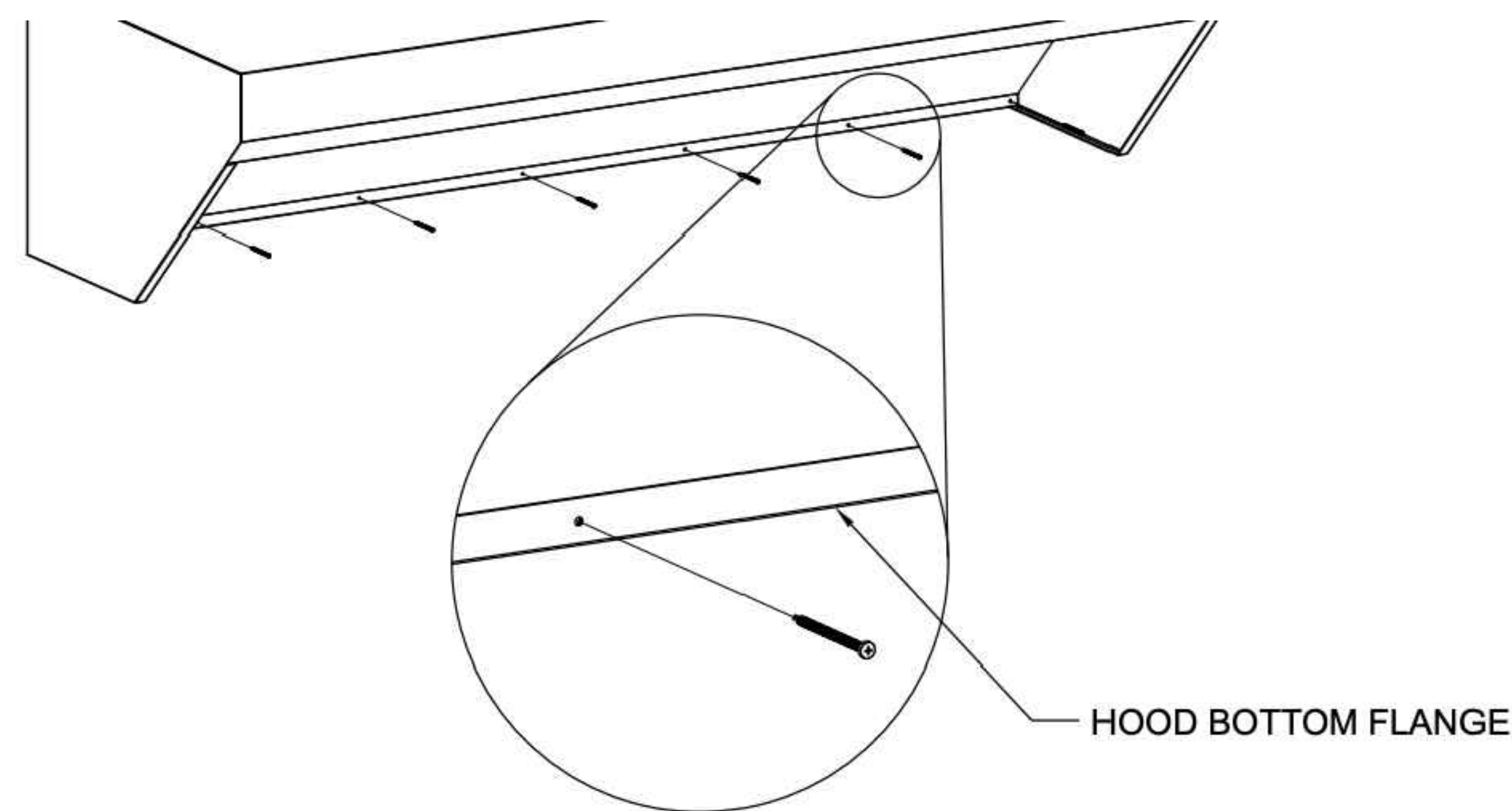
M501



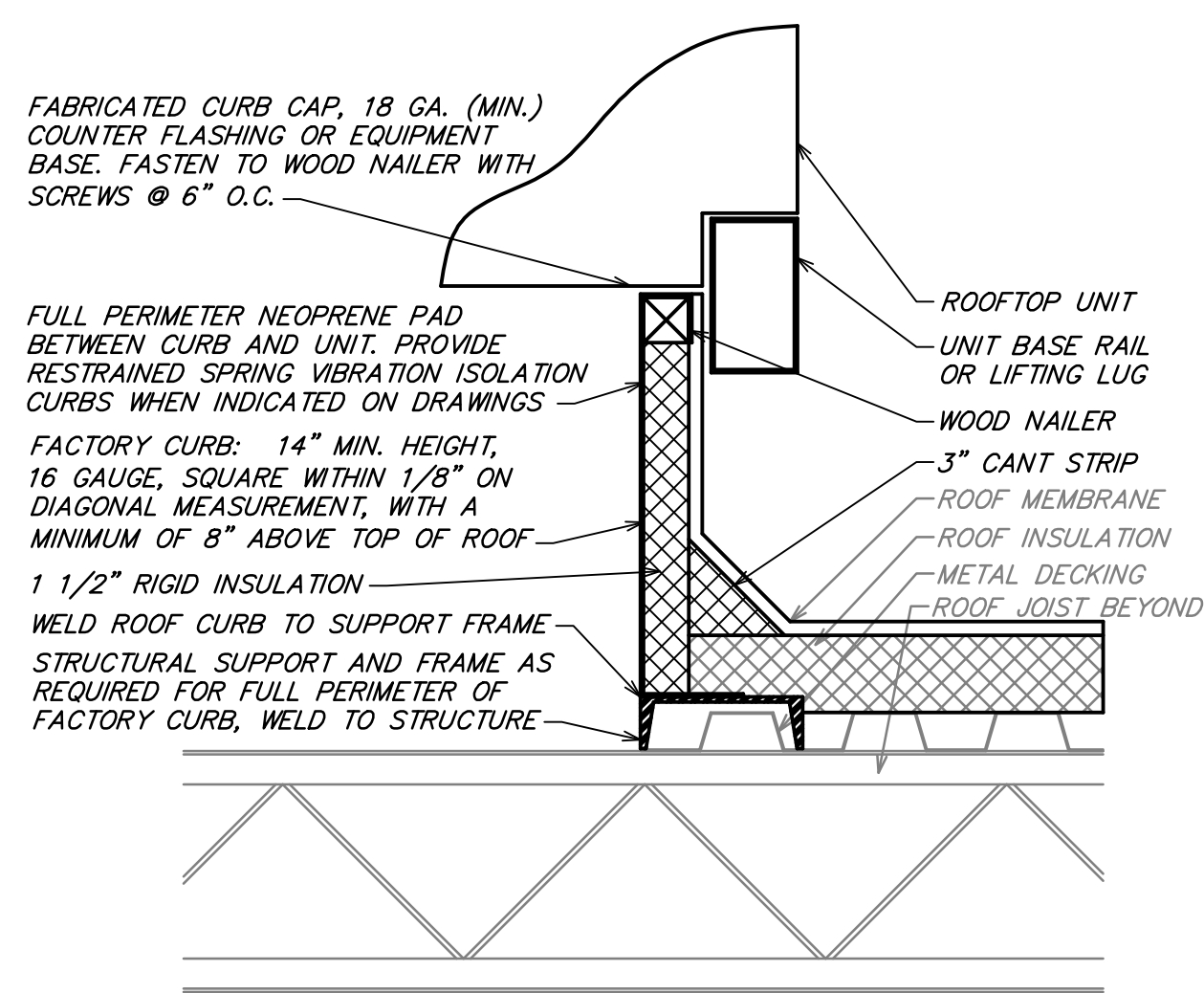
12 REMOTE VOLUME DAMPER CONTROLLER
NOT TO SCALE



13 TYPICAL ROOF TOP UNIT DETAIL
NOT TO SCALE

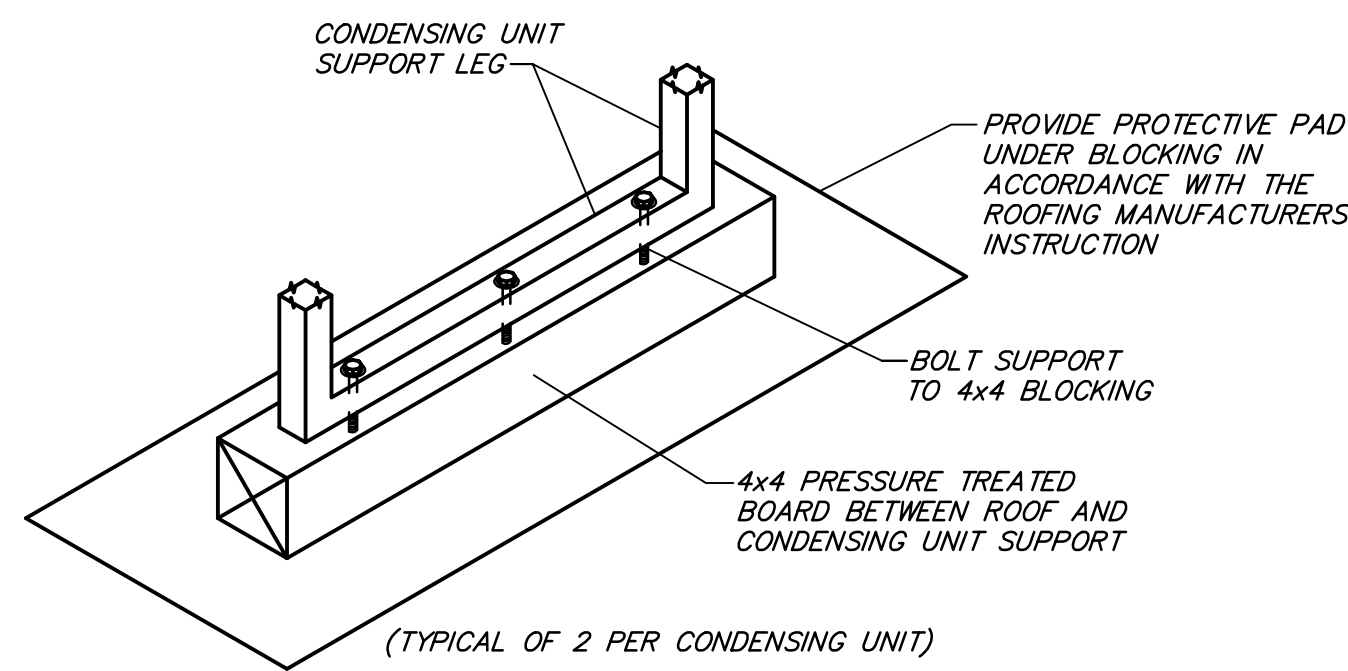


14 HOOD FASTENING DETAIL
NOT TO SCALE

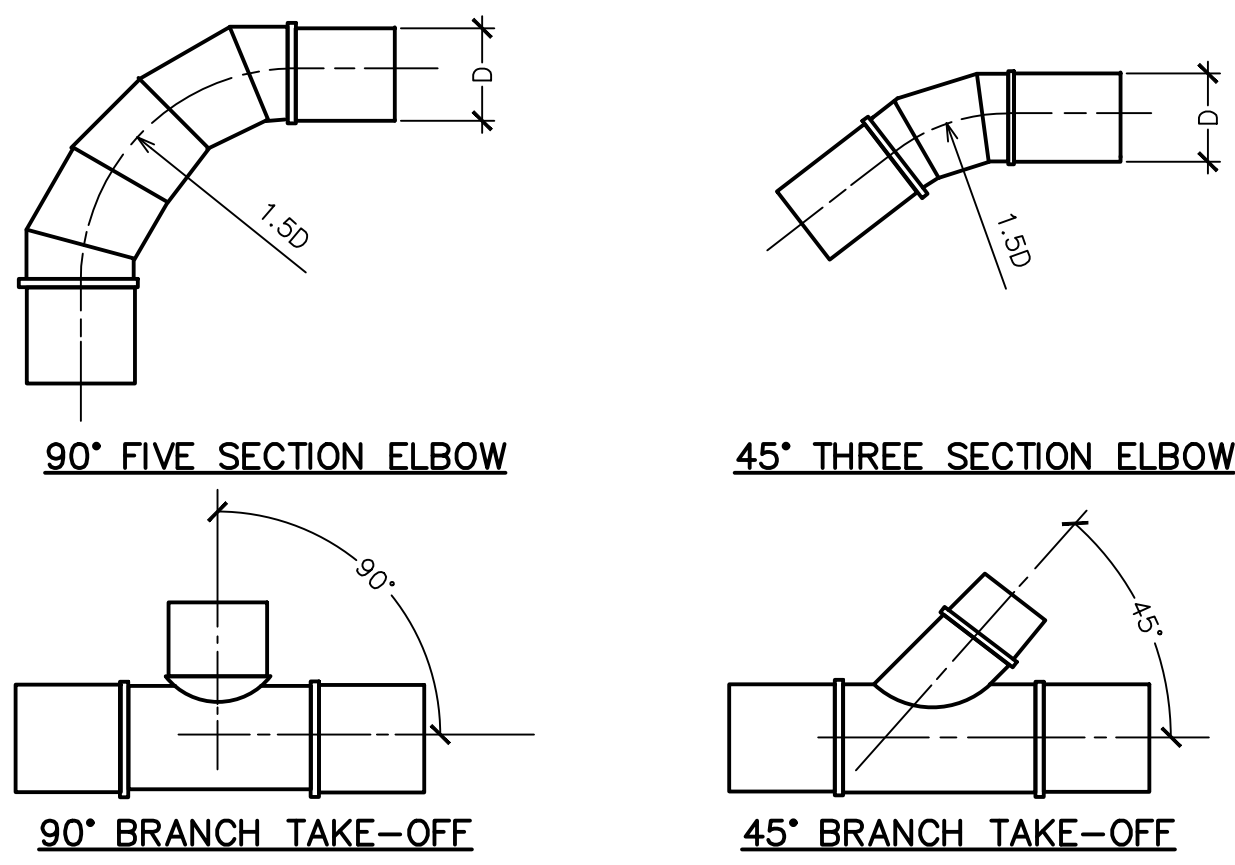


NOTES:
1. CUT AND PATCH EXISTING ROOF AS REQUIRED FOR NEW CURB INSTALLATION.
2. CURB SHALL BE SHIMMED LEVEL. PROVIDE TAPERED ROOF CURB IF REQUIRED.
3. SECURELY INSTALL CURB TO ROOF STRUCTURE; USE FASTENERS AS REQUIRED BY ROOF CONSTRUCTION.

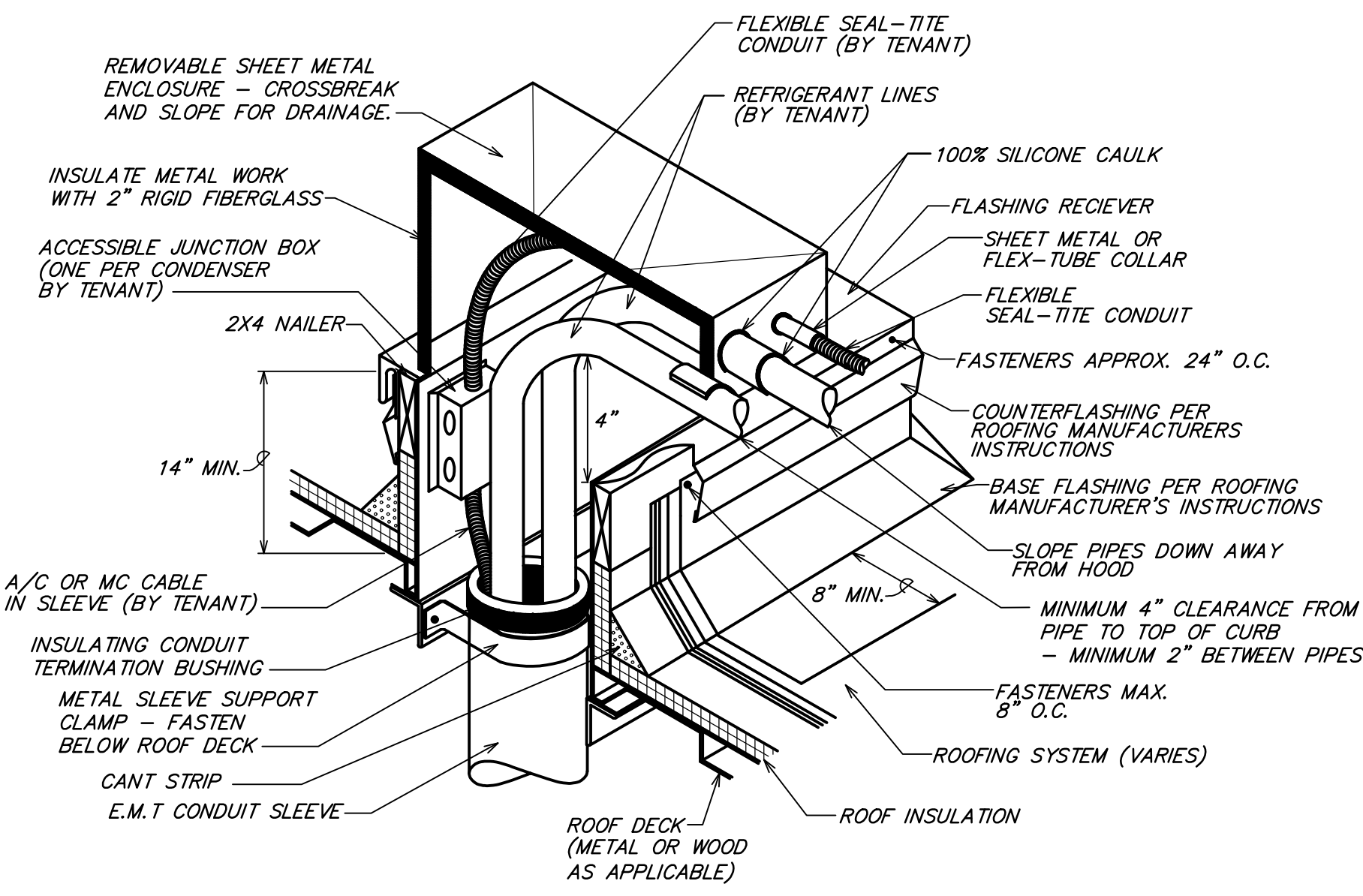
9 ROOF CURB DETAIL
NOT TO SCALE



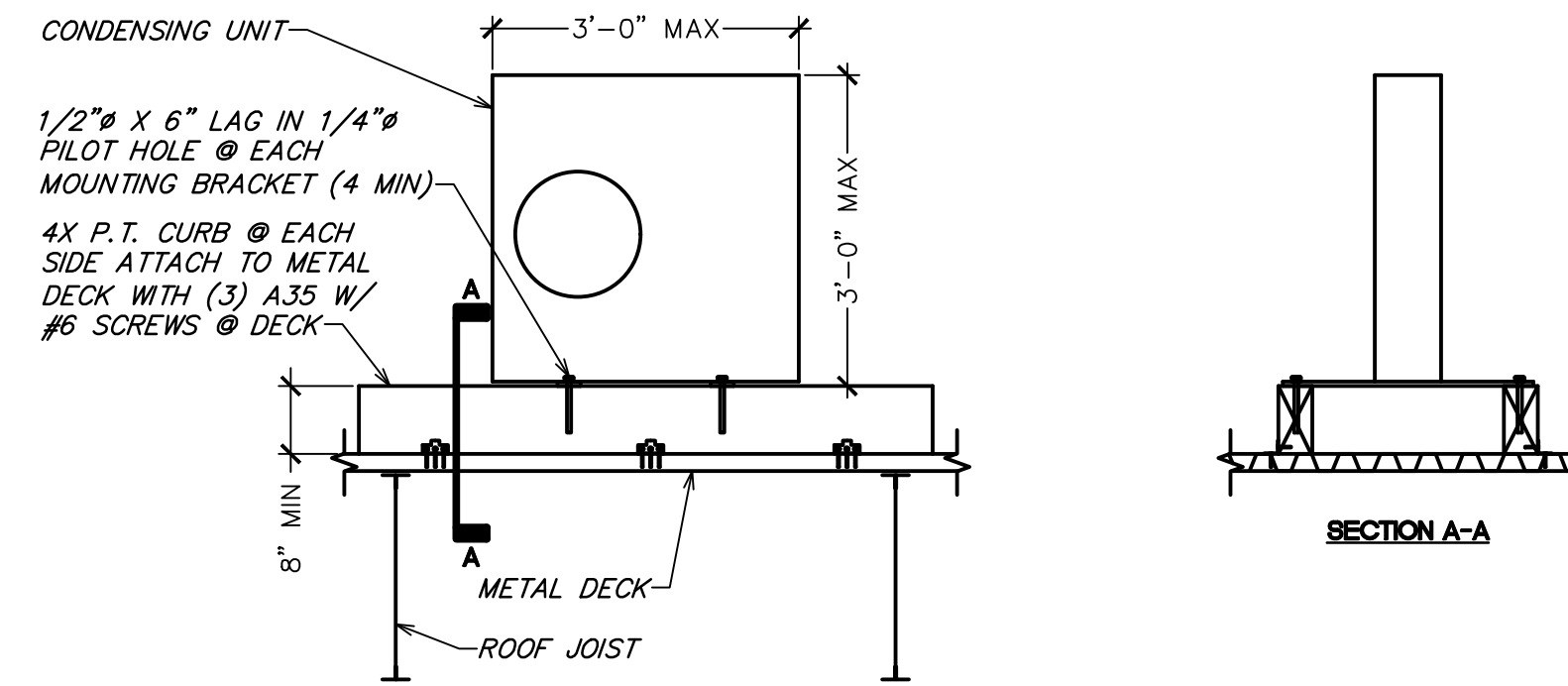
10 CONDENSING UNIT SUPPORT DETAIL
NOT TO SCALE



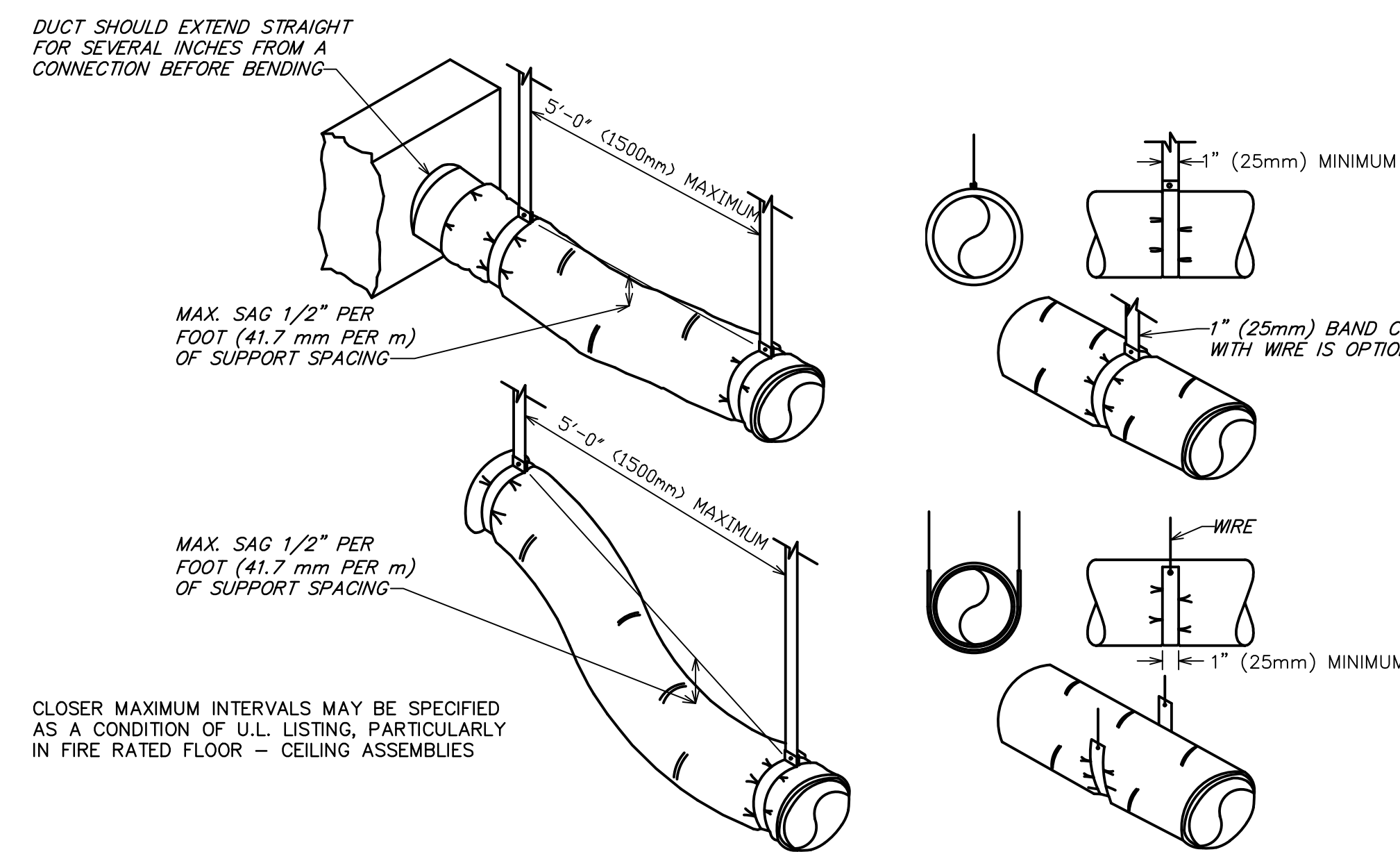
11 TYPICAL ROUND DUCT FITTINGS
NOT TO SCALE



5 CONDENSER REFRIGERANT LINE PIPING AND POWER THROUGH ROOF DECK
NOT TO SCALE



6 CONDENSING UNIT ANCHOR DETAIL (METAL)
NOT TO SCALE

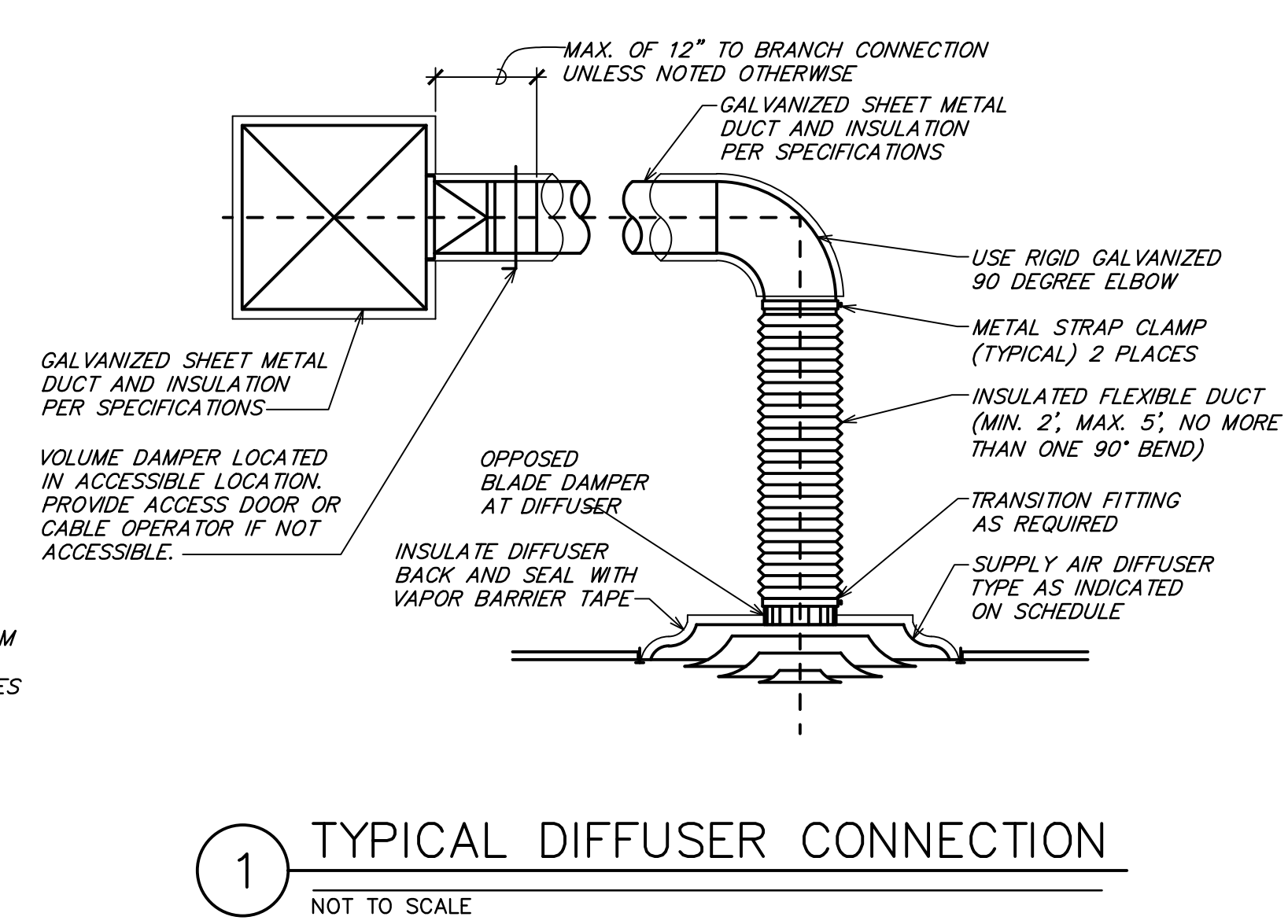


7 FLEXIBLE DUCT SUPPORTS
NOT TO SCALE

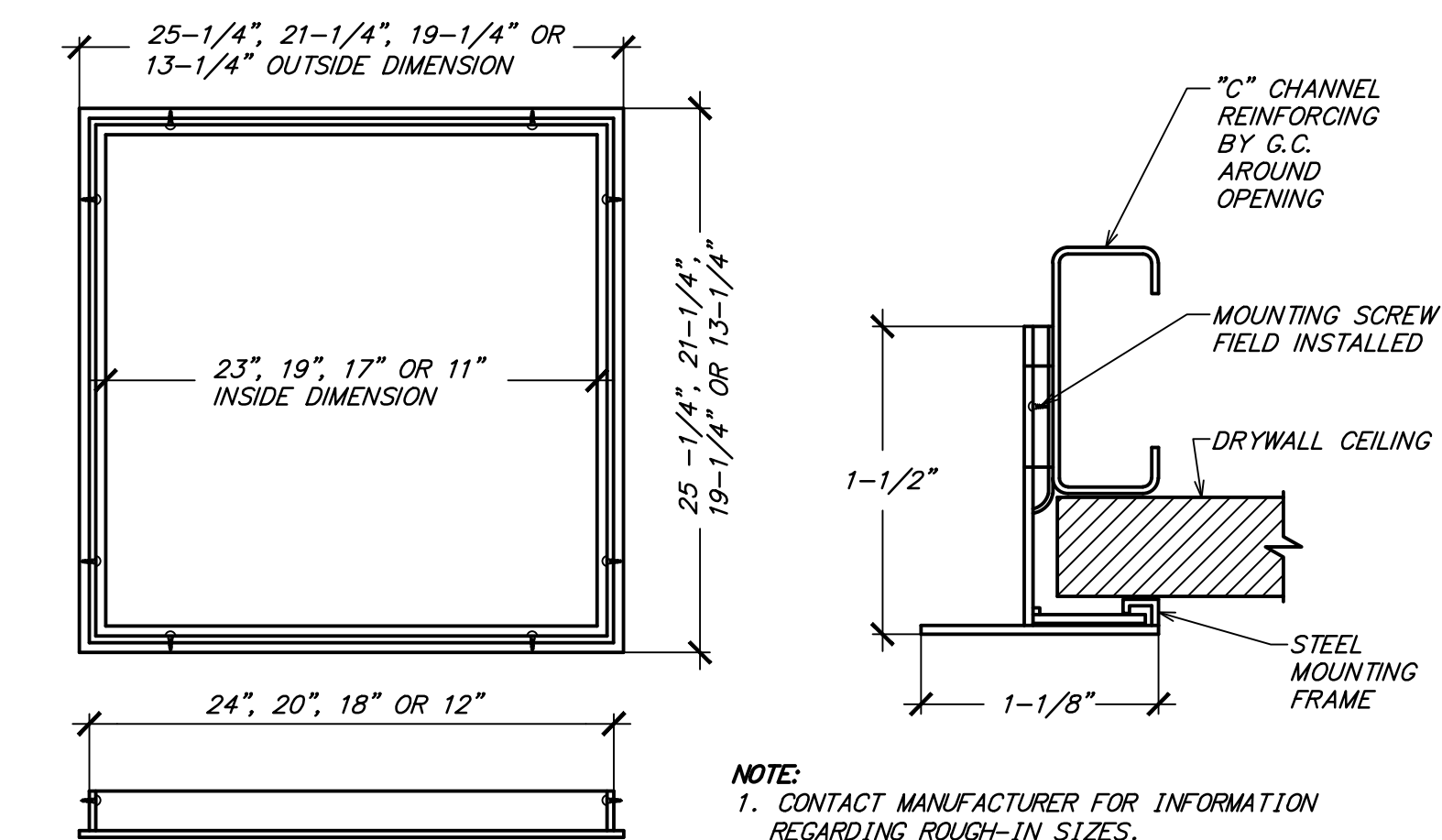
DIA.	WIRE DIA.	ROD	STRAP
10" DN	ONE 12 GA.	1/4"	1" x 22 GA.
11-18"	TWO 12 GA. OR ONE 8 GA.	1/4"	1" x 22 GA.
19-24"	TWO 10 GA.	1/4"	1" x 22 GA.
25-36"	TWO 8 GA.	3/8"	1" x 20 GA.
37-50"	-	TWO 3/8"	TWO 1" x 20 GA.
51-60"	-	TWO 3/8"	TWO 1" x 18 GA.
61-84"	-	TWO 3/8"	TWO 1" x 16 GA.
85-96"	-	TWO 1/2"	TWO 1 1/2" x 16 GA.

NOTES:
1. STRAPS ARE GALVANIZED STEEL; RODS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL. ALL ARE ALTERNATIVES.
2. TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS ONE LB/SF OF INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS.

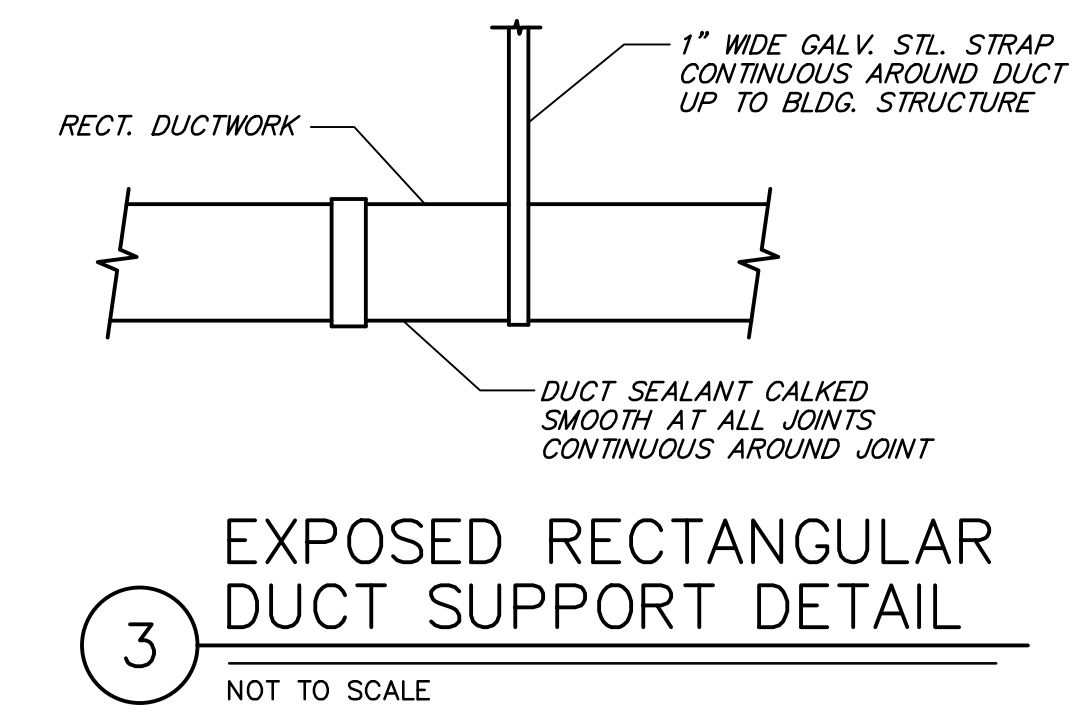
8 ROUND DUCT HANGER TABLE
NOT TO SCALE



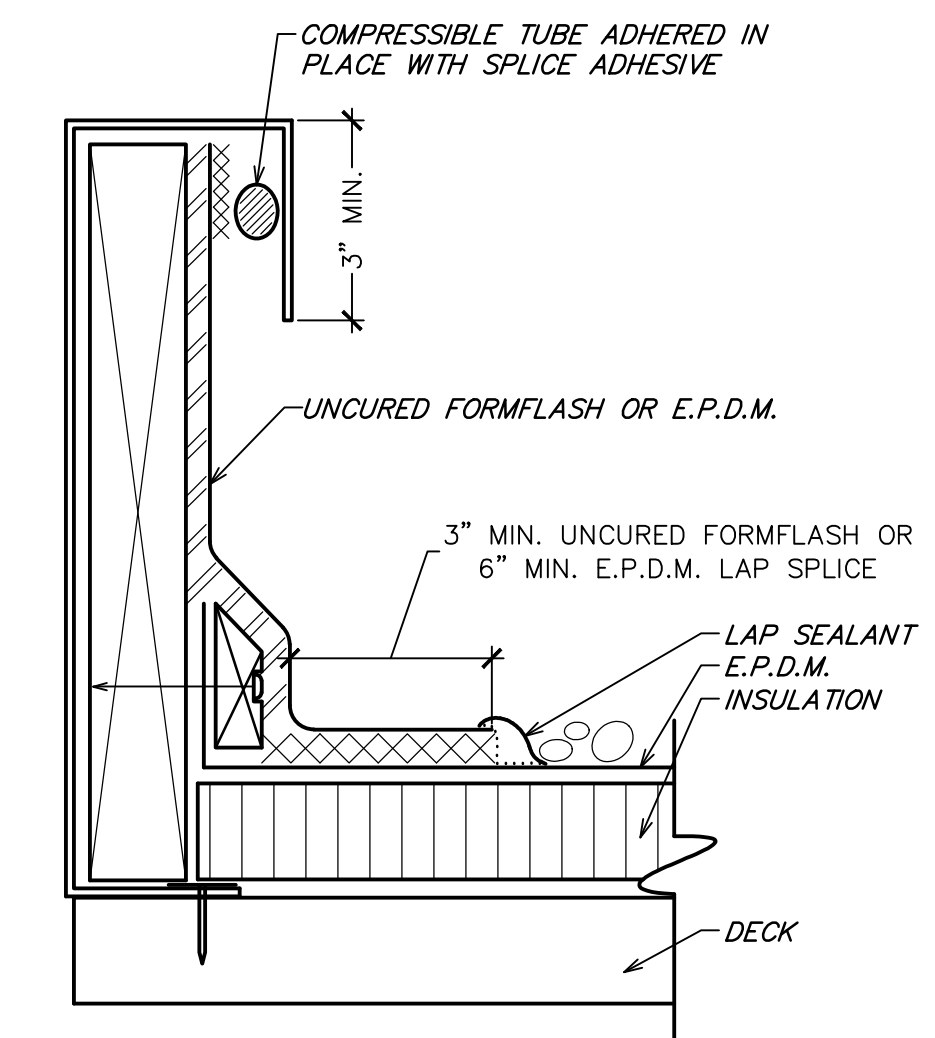
1 TYPICAL DIFFUSER CONNECTION
NOT TO SCALE



2 TYPICAL DRYWALL MOUNTING FRAME DETAIL
NOT TO SCALE



3 EXPOSED RECTANGULAR DUCT SUPPORT DETAIL
NOT TO SCALE



4 CURB FLASHING DETAIL
NOT TO SCALE

Functional Tests of the system completed and approved by the Commissioning Authority prior to starting TAB. Provide a qualified control system technician to operate the controls to assist the TAB technicians or provide sufficient training for the TAB technicians to operate the system without assistance...

1.01 SUMMARY A. See Section 01 913 - General Commissioning Requirements for overall objectives; comply with the requirements of Section 01 913.1. This section covers the contractor's responsibilities for commissioning, each subcontractor or installer responsible for the installation of a particular system or equipment item to that system or equipment item.

END OF SECTION SECTION 230993 - SEQUENCE OF OPERATIONS FOR HVAC CONTROLS PART 1 GENERAL 1.01 SECTION INCLUDES A. The contractor shall define the manner and method by which controls function. Requirements for each type of control system operation are specified. Equipment, materials, and system components required for control systems are specified in other sections...

Bergmeyer CONSULTANTS Schnackel engineers MEPP ENGINEER 3035 S 72ND ST. Los Angeles, CA 90071 TEL. 402.391.7680 SEAU SIGNATURE: [Signature] DATE: 11/14/23

SHAKE SHACK MECHANICAL SPECIFICATIONS 1767 SMALLMAN STREET PITTSBURGH, PA 15222 SHACK#1516 IFC M591

JOB #: 230300
 NAME: Shake Shack - 1516 The Terminal Pittsburgh
 DATE: 06/04/23
 CODE: 2018 INTERNATIONAL MECHANICAL CODE

ROOM #	NAME	Az AREA (FT ²)	TABLE 403.3.1.1 OCCUPANCY CATEGORY	TABLE 403.3.1.1 R _p PEOPLE OA (CFM/PER)	TABLE 403.3.1.1 R _a AREA OA (CFM/FT ²)	TABLE 403.3.1.1 OCCUPANT DENSITY (#/1000 FT ²)	Pz	R _p Pz	R _a Pz	Vbz	TABLE 403.3.1.1.2 E _z	Voz	V _{sz} MAX SUPPLY (CFM)	V _{sm} MIN SUPPLY (CFM)	Zp	INTERPOLATED TABLE 403.3.1.1.2.3.2 E _v
101	DINING ROOM	681	DINING ROOMS	7.5	0.18	70	48	380	123	483	0.80	603	2190	2190	0.281	0.87
102	CORRIDOR	30	CORRIDORS	0.0	0.08	0	0	0	2	2	0.80	2	90	90	0.045	1.00
103	WOMENS RESTROOM	128	NO LISTING	0.0	0.00	0	0	0	0	0	0.80	0	100	100	0.000	1.00
104	MENS RESTROOM	97	NO LISTING	0.0	0.00	0	0	0	0	0	0.80	0	100	100	0.000	1.00
105	CLOSET	16	NO LISTING	0.0	0.00	0	0	0	0	0	0.80	0	0	0	0.000	1.00
		850					48	380	124	484		605	2400	2400	0.281	0.87

OUTDOOR AIR CALCULATIONS PER EQUATION 4.1:
 SYMBOL VALUE DESCRIPTION
 Ps = 48 SYSTEM POPULATION
 SPz = 48 ZONE POPULATION
 D = 1.00 OCCUPANT DIVERSITY
 Voz = 484 UNCORRECTED OUTDOOR AIR INTAKE
 Zp (max) = 0.281 ZONE PRIMARY OUTDOOR AIR FRACTION (MAXIMUM)
 Ev = 0.87 SYSTEM VENTILATION EFFICIENCY
 SVpz = 2400 ZONE PRIMARY AIRFLOW
 Vot = 557 CODE REQUIRED OUTDOOR AIRFLOW RATE, CFM
 Voz = 720 DESIGN OUTDOOR AIRFLOW RATE, CFM

ROOM #	NAME	Az AREA (FT ²)	TABLE 403.3.1.1 OCCUPANCY CATEGORY	TABLE 403.3.1.1 R _p PEOPLE OA (CFM/PER)	TABLE 403.3.1.1 R _a AREA OA (CFM/FT ²)	TABLE 403.3.1.1 OCCUPANT DENSITY (#/1000 FT ²)	Pz	R _p Pz	R _a Pz	Vbz	TABLE 403.3.1.1.2 E _z	Voz	V _{sz} MAX SUPPLY (CFM)	V _{sm} MIN SUPPLY (CFM)	Zp	INTERPOLATED TABLE 403.3.1.1.2.3.2 E _v
106	FRONT OF HOUSE	158	KITCHEN (COOKING)	7.5	0.12	20	4	30	22	52	0.80	65	650	650	0.100	1.00
107	COOKLINE	231	KITCHEN (COOKING)	7.5	0.12	20	5	38	28	65	0.80	82	800	800	0.102	1.00
108	COLDLINE	188	KITCHEN (COOKING)	7.5	0.12	20	4	30	22	52	0.80	65	600	600	0.109	1.00
109	BOH	550	KITCHEN (COOKING)	7.5	0.12	20	11	83	66	149	0.80	166	1950	1950	0.095	1.00
110	MANAGERS OFFICE	70	OFFICE SPACES	5.0	0.08	0	2	10	4	14	0.80	18	350	350	0.051	1.00
		1,220					26	180	142	332		415	4350	4350	0.109	1.00

OUTDOOR AIR CALCULATIONS PER EQUATION 4.1:
 SYMBOL VALUE DESCRIPTION
 Ps = 26 SYSTEM POPULATION
 SPz = 26 ZONE POPULATION
 D = 1.00 OCCUPANT DIVERSITY
 Voz = 332 UNCORRECTED OUTDOOR AIR INTAKE
 Zp (max) = 0.189 ZONE PRIMARY OUTDOOR AIR FRACTION (MAXIMUM)
 Ev = 1.00 SYSTEM VENTILATION EFFICIENCY
 SVpz = 4350 ZONE PRIMARY AIRFLOW
 Vot = 332 CODE REQUIRED OUTDOOR AIRFLOW RATE, CFM
 Voz = 2,000 DESIGN OUTDOOR AIRFLOW RATE, CFM

1 OUTSIDE AIR CALCULATIONS

SETPOINT/CONTROL	RTU-1 DINING	RTU-2 KITCHEN	FC-1 OFFICE
SETPOINTS			
COOLING - OCCUPIED SETPOINT	75 F	75 F	75 F
COOLING - UNOCCUPIED SETPOINT	80 F	80 F	80 F
HEATING - OCCUPIED SETPOINT	70 F	70 F	70 F
HEATING - UNOCCUPIED SETPOINT	60 F	60 F	60 F
ECONOMIZER UPPER LIMIT SETPOINT	65 F	65 F	NA
ACCESSORIES			
HVAC SYSTEM OCCUPIED/UNOCCUPIED MODE - PROGRAMMABLE THERMOSTAT	YES	YES	YES
REMOTE TEMPERATURE SENSOR	YES	YES	NO
MOTORIZED OUTDOOR AIR DAMPER	YES	YES	YES
INTEGRATED ECONOMIZER	YES	YES	NO
ECONOMIZER FAULT DETECTION	YES	YES	NO
BAROMETRIC RELIEF	YES	NO	NO
POWERED EXHAUST RELIEF	NO	YES	NO
DEHUMIDIFICATION (HOT GAS REHEAT)	NO	NO	NO
SUPPLY FAN			
ON DURING OCCUPIED MODE	YES	YES	YES
VARIABLE VOLUME - MODULATE FAN SPEED	YES	YES	YES
SAFETIES AND INTERLOCKS			
RETURN AIR SMOKE DETECTOR	YES	YES	NO
LOW LIMIT FREEZE/STAT	YES	YES	YES
FIRE ALARM CONTROL PANEL INTERLOCK	YES	YES	YES
KITCHEN EXHAUST SYSTEM INTERLOCK	YES	YES	YES

EQUIPMENT TAG	SUPPLY AIRFLOW (CFM)	OUTDOOR AIRFLOW (CFM)	RETURN AIRFLOW (CFM)	EXHAUST AIRFLOW (CFM)	OA/SA (%)	REMARKS
RTU-1	2,400	720	1,680		30%	
RTU-2	4,000	2,000	2,000		50%	
FC-1	350	0	350		0%	
EF-1				1,150		
EF-2				1,140		
EF-5				300		
TOTAL	6,750	2,720	4,030	2,590		
RESULTING BUILDING PRESSURIZATION = 130 CFM						
PRESSURIZATION PERCENTAGE = 1.9 %						

CARRIER EQUIPMENT SHALL BE OBTAINED THROUGH SHAKE SHACK NATIONAL ACCOUNT. CONTACT CARRIER CORPORATION FOR PROPOSALS:
 KEN REVILLA
 CARRIER RETAIL STRATEGIC ACCOUNTS
 EMAIL: KEN.REVILLA@CARRIER.COM
 PHONE: (954) 218-0070

MARK	SERVICE	LOCATION	CEILING TYPE	MOUNTING TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
D-1	SUPPLY	CEILING	AC TILE	LAY-IN	TITUS	TMSA XX 24x24 3 26	[1,2,6]
D-2	SUPPLY	CEILING	AC TILE	LAY-IN	TITUS	PAR XX 24x24 3 26	[1,2,6]
D-3	SUPPLY	CEILING	GYP. BOARD	LAY-IN	TITUS	OMNI XX 12x12 3 26	[1,2,4,6]
D-4	SUPPLY	DUCT	NA	SURFACE	TITUS	300RL X X 1 26	[1,5-7]
G-1	EXHAUST	CEILING	GYP. BOARD	SURFACE	TITUS	50F X X 3 26	[1,3,5-7]
G-2	RETURN	CEILING	AC TILE	LAY-IN	TITUS	50F X X 3 26	[1,3,5,6]

REMARKS:
 1. TITUS IS THE BASE OF DESIGN. KRUEGER, PRICE, NAILOR, CARNES ARE EQUAL. NO EXCEPTIONS.
 2. SEE PLAN FOR NECK SIZE.
 3. PROVIDE 1/2" X 1/2" X 1" CORE.
 4. PROVIDE WITH MODEL TRM FRAME.
 5. SEE PLAN FOR SIZE.
 6. DIFFUSERS SHALL BE FINISHED TO MATCH CEILING/WALL/EXPOSED DUCT COLOR. COORDINATE WITH ARCHITECT.
 7. PROVIDE DIFFUSERS AND GRILLES WITH NO EXPOSED MOUNTING SCREWS.

MARK	COOLING (MBH)	HEATING (MBH)	SUPPLY AIR (CFM)	EXT. S.P. (IN)	FAN BHP	ELECTRICAL VOLT PH MCA MOCP	WEIGHT (LBS)	SEER /EER	MODEL NUMBER	REMARKS
RTU-1	--	--	--	--	--	--	--	--	CAPTIVEAIRE	[1-2]
RTU-2	--	--	--	--	--	--	--	--	CAPTIVEAIRE	[1-2]

COOLING CAPACITIES ARE BASED ON AHRI STANDARD 210/240 OR 340/360: 80F DB/ 67F WB INDOOR ENTERING AIR TEMPERATURE, 95F DB AIR ENTERING OUTDOOR FAN. SCHEDULED UNIT MAY DIFFER FROM AHRI STANDARD CFM.
 REFERENCE CAPTIVEAIRE DRAWINGS FOR ADDITIONAL INFORMATION.

MARK	LOCATION	SERVES	NOMINAL COOL (TONS)	HEATING AT 47F (MBH)	ELECTRICAL VOLT PH MCA MOCP	SEER /EER	HSPF /COP	MANUFACTURER	MODEL NUMBER	REMARKS			
ASHP-1	ROOF	FC-1	3/4	10.0	208	1	15.0	15	205/130	108/233	CARRIER	38MARB009	[1]

REMARKS:
 1. PROVIDE EQUIPMENT WITH SCOR GREATER THAN THE AVAILABLE FAULT CURRENT AT THE EQUIPMENT OR UPSTREAM PANELBOARD. REFER TO THE ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULES FOR AVAILABLE FAULT CURRENT AT UPSTREAM PANELBOARD.

MARK	NOMINAL (TONS)	COOLING (MBH)	HEATING (MBH)	SUPPLY AIR (CFM)	FAN (WATT)	ELECTRICAL VOLT PH MCA MOCP	SEER /EER	CARRIER MODEL NUMBER	REMARKS				
FC-1	3/4	11.73	8.79	10.00	350	45	208	1	0.2	N/A	205/130	40MBC009	[1-3]

REMARKS:
 1. PROVIDE CONDENSATE PUMP.
 2. INDOOR UNIT POWER PROVIDED FROM OUTDOOR UNIT.
 3. PROVIDE NEW, WRED, FULLY DIGITAL, 7 DAY PROGRAMMABLE TYPE THERMOSTAT WITH AUTO CHANGE OVER AND AUTO SET BACK.

MARK	LOCATION	SERVICE	AIRFLOW (CFM)	EXTERNAL STATIC (IN H2O)	SONES	MOTOR DATA FAN (W) VOLT PH	RPM	MANUFACTURER	MODEL NUMBER	REMARKS		
EF-1	ROOF	HOOD 1	--	--	--	--	--	--	CAPTIVEAIRE	--	[4]	
EF-2	ROOF	HOOD 2	--	--	--	--	--	--	CAPTIVEAIRE	--	[4]	
EF-3	INLINE	RESTROOMS	300	0.50	3.2	171	115	1	1,069	GREENHECK	CSP-A510	[1-3]

REMARKS:
 1. PROVIDE SOLID STATE SPEED CONTROL.
 2. PROVIDE MOTORIZED BACKDRAFT DAMPER.
 3. PROVIDE ROOF CAP WITH BUGSCREEN.
 4. REFERENCE CAPTIVEAIRE DRAWINGS FOR ADDITIONAL INFORMATION.

UNIT NO.	PLACEMENT	PHI CELL MODEL #	UV/CELL SIZE	RANGE	INDOOR PPM TARGET	SIZE	TRANSFORMER	POWER	IN-VOLT	OUT-VOLT	MCA	WEIGHT (LBS.)
RTU-1	BLOWER CABINET	PHI-PKG9-24V	14"	1,200-3,000 CFM	< 0.02 PPM	2.25"W x 13.5"L x 1.75"D	SHIP LOOSE	11W	115 VAC	24 VAC	0.50A	1 LBS
RTU-2	BLOWER CABINET	PHI-PKG14-24V	14"	3,000-8000 CFM	< 0.02 PPM	2.25"W x 19.5"L x 1.75"D	SHIP LOOSE	11W	115 VAC	24 VAC	0.50A	2 LBS

MARK	LENGTH (IN)	AIRFLOW (CFM)	HEATER IN (KW) OUT (MBH)	TEMP RISE (F)	FANS QTY HP	ELECTRICAL CIRCUIT (QTY) VOLT PH	MANUFACTURER	MODEL NUMBER	REMARKS			
AC-1	36.0	1,379	NA	NA	NA	1 1/2	1	115	1	MARS	STD236	[1-3]

REMARKS:
 1. PROVIDE AUTOMATIC DOOR SWITCH.
 2. PROVIDE UNIT MOUNTED CONTROL PANEL.
 3. VERIFY FINAL COLOR/FINISH WITH ARCHITECT.

1. Are the cooler/freezer equipped with door-closers that firmly close:
 - Doors 1, 2 equipped with Door Closer - Kason 1094 Sureclose Hydraulic

2. Doorways shall have strip doors, curtains, spring-hinged doors or other methods of infiltration:
 - Doors 1, 2 equipped with Strip curtain

3. For walk-in coolers-the wall, ceiling and door insulation of not less than R-25. Ceiling, wall, and door insulation to be 4", equating to R-32.
 - Ceiling, wall, and door insulation to be 4", equating to R-32.

4. Walk in Freezers shall contain floor insulation of not less than R-28.
 - Floor insulation to be no less than 4", equating to a minimum of R-32.

5. Identify type of evaporator fan motor and how it meets requirements:
 - Freezer: Manufacturer: HTPG - RUSSELL DOE Model: RL6E090DDARE Per C403.2.16(7), unit is equipped with a dual speed EC motor.
 - Cooler: Manufacturer: HTPG - RUSSELL DOE Model: RL6AD73ADARE Per C403.2.16(7), unit is equipped with a dual speed EC motor

6. Identify type of condenser fan motors and how it meets requirements:
 - Freezer: Manufacturer: HTPG - RUSSELL DOE Model: RFD230L45DANT Unit is a 2-1/3 HP and C403.2.16(8) should not apply.
 - Cooler: Manufacturer: HTPG - RUSSELL DOE Model: RFD080M4SEALNT Per C403.2.16(8), motor is a 208 volt / 3 phase motor.

7. Identify type of anti-sweat heater installed:
 - Door-1 - Threshold, Floorless Heated Panko, and heated Jamb
 - Door 2- Threshold, Floored NSF Heated, and heated Jamb

8. Identify light efficacy used:
 - Lights for cooler/freezer light efficacy: 120 (LM/W)

Bergmeyer
 800 South Figueroa St.
 Los Angeles, CA 90071
 212.337.1090

CONSULTANTS:
Schnackel engineers
 New York • Miami • Chicago • Los Angeles • Seattle • Honolulu
 800-381-0400
 MEFP ENGINEER
 3035 S 72ND ST
 OMAHA NE 68124
 TEL 402.391.7680

SEALED SIGNATURE:

REVISIONS:
 HL 2023-11-15 IFC SET
 HL 2023-10-24 ADDENDUM A
 HL 2023-09-06 ADDENDUM A
 RMS 2023-07-05 PERMIT / BID
 RMS 2023-06-12 75% SET
 RMS 2023-04-26 DD SET

NO. BY DATE DESCRIPTION

SHAKE SHACK
 SHAKE SHACK - THE TERMINAL
 1767 SMALLMAN STREET
 PITTSBURGH, PA 15222
 SHACK #1516

IFC

MECHANICAL SCHEDULES

DRAWN BY: RMS
 CHECKED BY: GRS
 JOB NO: 2023007.00

M601

FIRE SYSTEM INFORMATION - JOB#6086280

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0/4.0	46	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

NOTES

- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD.

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

JOB #: 6086280.
JOB NAME: SHAKE SHACK-1516-TERMINAL PITTSBURGH(KITCHEN)-R2.

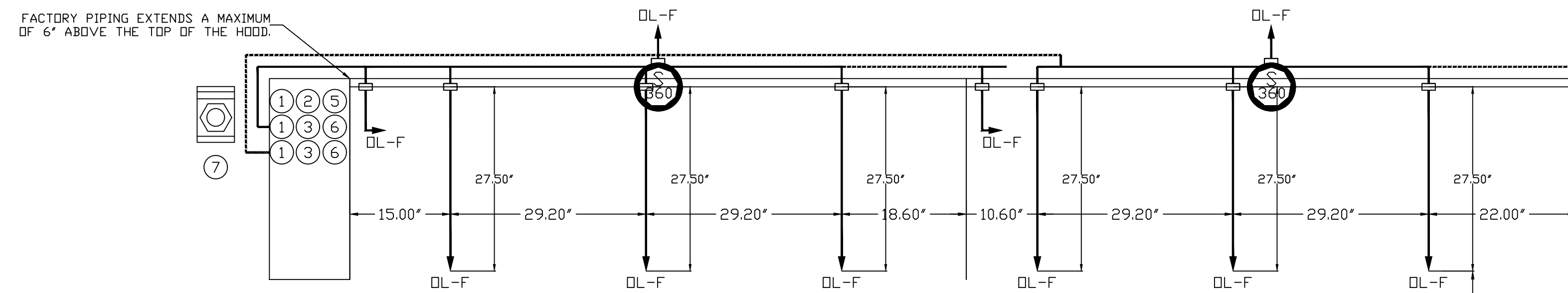
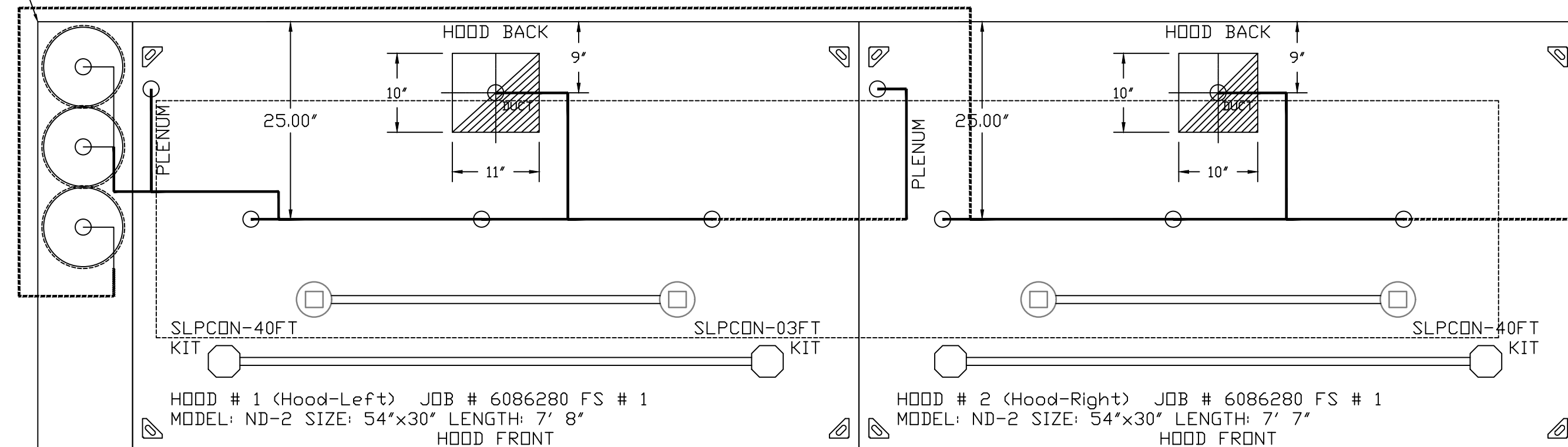
SYSTEM SIZE: TANK-SP-3 TOTAL FP REQUIRED: 46.
HOOD # 1 7' 8.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 10" x 11".
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.
HOOD # 2 7' 7.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 10" x 10".
HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.

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

LEGEND - FIRE CABINET TANK SYSTEM

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

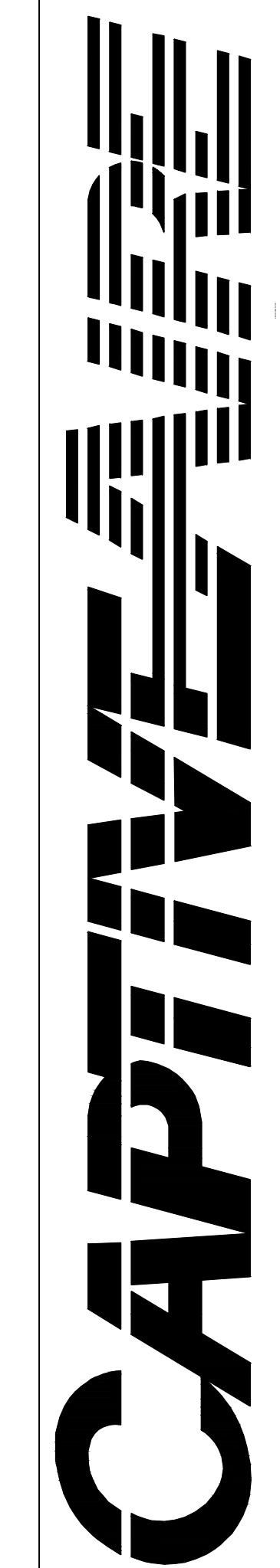
- SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES. EACH 90 DEGREE ELBOW ADDS 1/3 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS.



NOZZLE HEIGHT 35'-50" FROM COOKING SURFACE. (45.25')

TANK OVERLAPPING PROTECTION - 30 HIGH PROXIMITY 170000' L X 30000' D

REVISIONS	
DESCRIPTION	DATE



PO Box 2520, 1 Union Ave, Bala Cynwyd, PA 19004 PHONE: (267) 504-4126 EMAIL: rep108@captiveaire.com

Shake Shack-1516-Terminal Pittsburgh(Kitchen)-R2
PITTSBURGH, PA, 15222

DATE: 6/30/2023
DWG.#: 6086280
DRAWN BY: Joe.shiiba
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 3

Bergmeyer
LA 800 South Figueroa St. Los Angeles, CA 90017 213.337.1090
BOS 51 Shaver St. Boston, MA 02210 617.542.1025
www.bergmeyer.com

CONSULTANTS:
Schnackel engineers
New York • Miami • Dallas • Los Angeles • Seattle • Honolulu
MEPF ENGINEER
3035 S 72ND ST
OMAHA NE 68124
TEL 402.391.7680

SEAL SIGNATURE:

NO.	BY	DATE	DESCRIPTION



SHAKE SHACK - THE TERMINAL
1767 SMALLMAN STREET
PITTSBURGH, PA 15222
SHACK #1516

IFC

CAPTIVEAIRE DRAWINGS

DRAWN BY:	RAS
CHECKED BY:	GRS
JOB NO:	20230073.00

M703

EXHAUST FAN INFORMATION - JOB#6086280

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDNES
1	KEF-1	1	USB113DD-RM	CAPTIVEAIRE	1138	1.000	1365	TEAD-ECM	1.000	0.3300	1	208	6.9	996 FPM	202	10.1
2	KEF-2	1	USB113DD-RM	CAPTIVEAIRE	1150	1.000	1369	TEAD-ECM	1.000	0.3340	1	208	6.9	1007 FPM	202	10.2

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	UTILITY SET GREASE CUP
		1	BI13 - 24" DISCHARGE EXTENSION
		1	BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE
		1	BI13 - INLET CONNECTION STANDARD 14" FLANGED GREASE DUCT
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMD3 PREWIRE (TELCO MOTOR), CCW ROTATION
2	KEF-2	1	UTILITY SET GREASE CUP
		1	BI13 - 24" DISCHARGE EXTENSION
		1	BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE
		1	BI13 - INLET CONNECTION STANDARD 14" FLANGED GREASE DUCT
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMD3 PREWIRE (TELCO MOTOR), CCW ROTATION

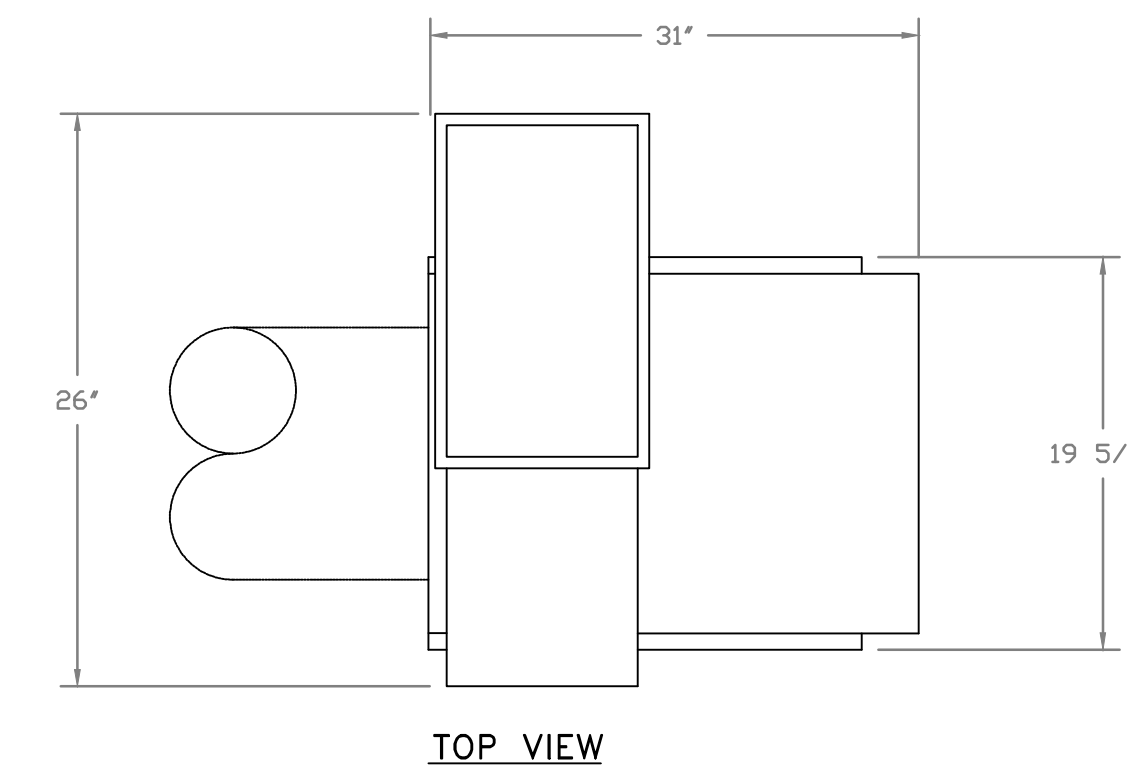
FAN ACCESSORIES

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

CURB ASSEMBLIES

NO	IN FAN	WEIGHT	ITEM	SIZE
1	# 1	36 LBS	RAIL	4.000"W X 36.000"L X 12.000"H COMES AS A SET OF 2.
2	# 2	36 LBS	RAIL	4.000"W X 36.000"L X 12.000"H COMES AS A SET OF 2.

FANS #1 (KEF-1), #2 (KEF-2) - USB113DD-RM EXHAUST FAN

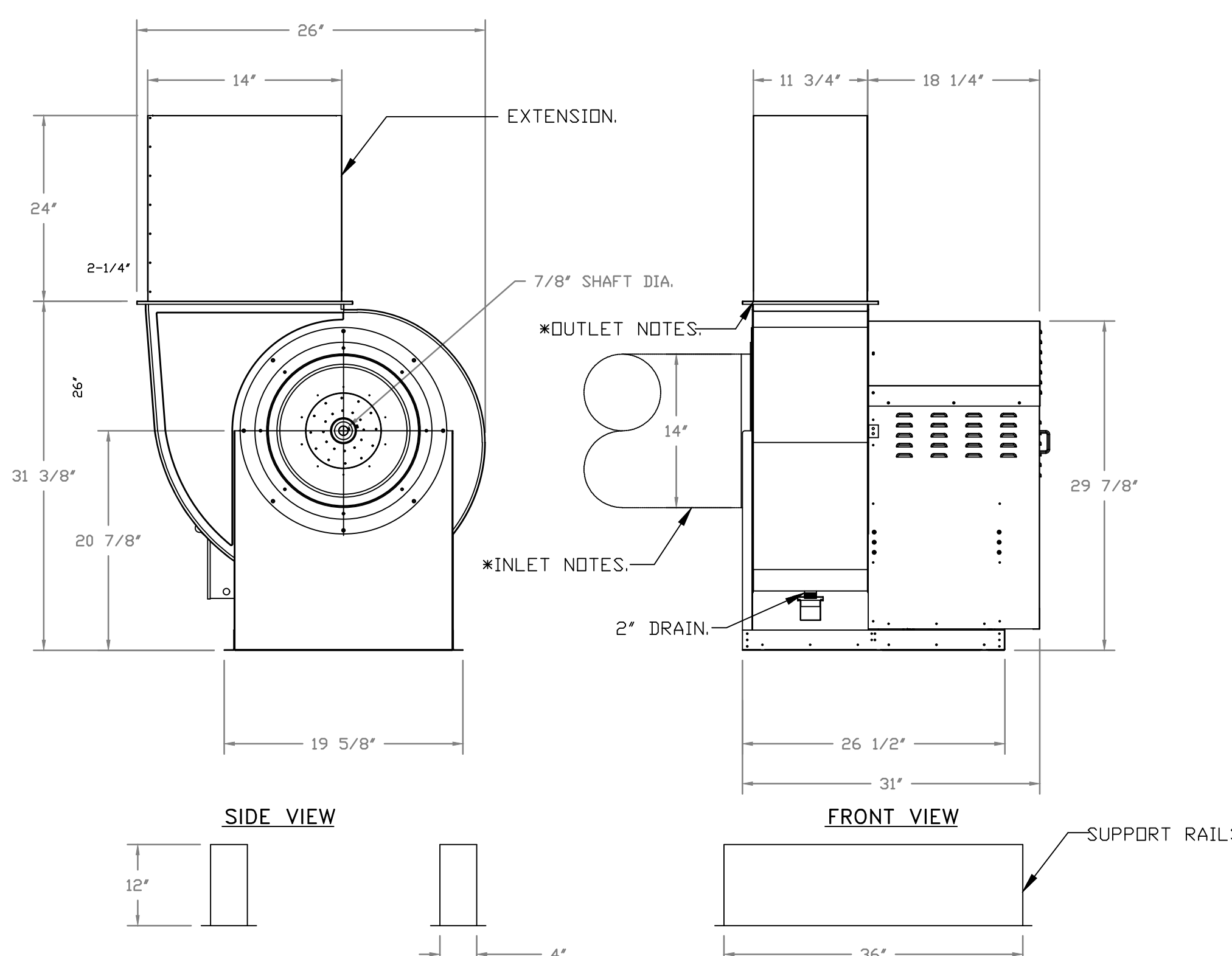


FEATURES:

- ROOF MOUNTED FANS.
- UL705.
- UL762 AND ULC-S645 (RESTAURANT MODEL).
- HIGH HEAT OPERATION DIRECT DRIVE 350°F (176°C).
- HEAT SLINGER.
- NEMA 3R SAFETY DISCONNECT SWITCH.
- GREASE CLASSIFICATION TESTING.
- 2" DRAIN.
- MOTOR WEATHER COVER.
- FULLY SEALED SCROLL HOUSING.
- SCROLL ACCESS DOOR.
- FLANGE 1 1/4".

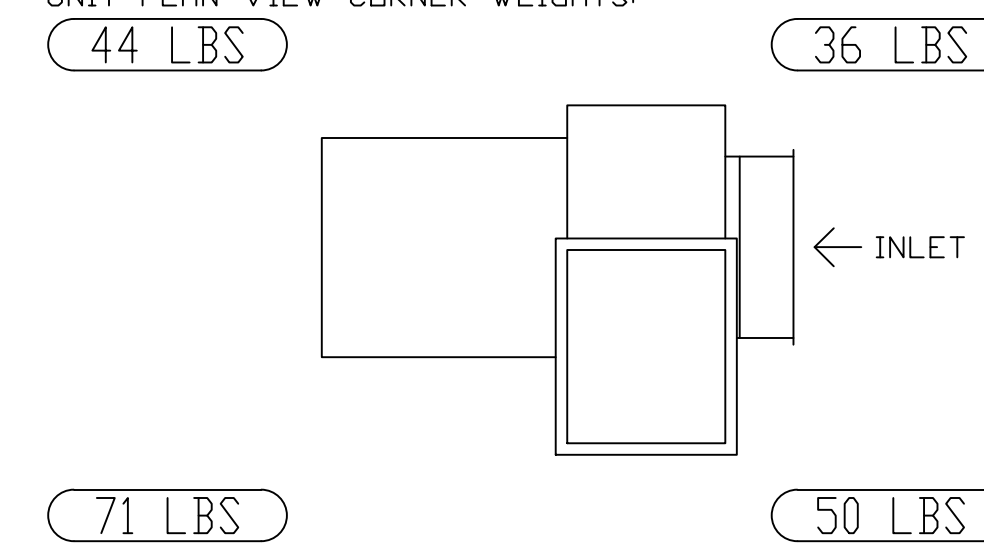
OPTIONS:

- UTILITY SET GREASE CUP.
- BI13 - 24" DISCHARGE EXTENSION.
- BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE.
- BI13 - INLET CONNECTION STANDARD 14" FLANGED GREASE DUCT.
- ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMD3 PREWIRE (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



* INLET/OUTLET NOTES:
LENGTH OF THE STRAIGHT DUCT ON THE INLET AND OUTLET TO BE 3 TIMES THE EQUIVALENT DUCT DIAMETER BEFORE CONNECTING TO ANY FITTINGS SUCH AS ELBOWS TO AVOID SYSTEM EFFECT.

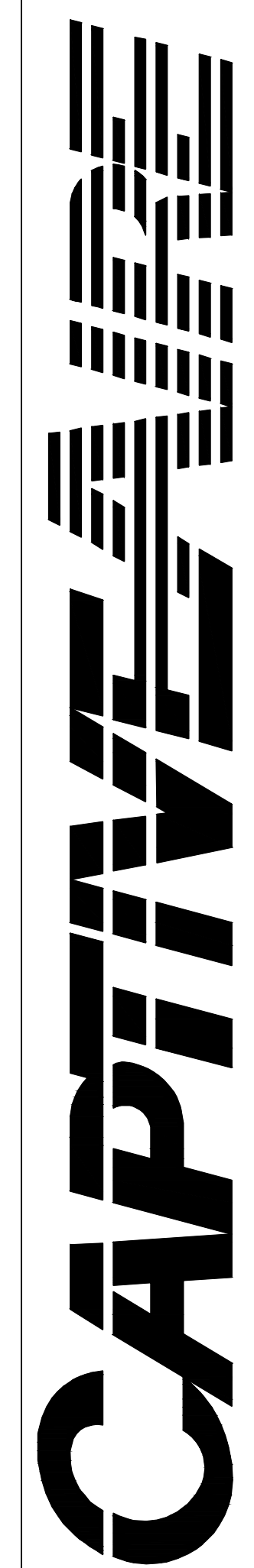
UNIT PLAN VIEW CORNER WEIGHTS:



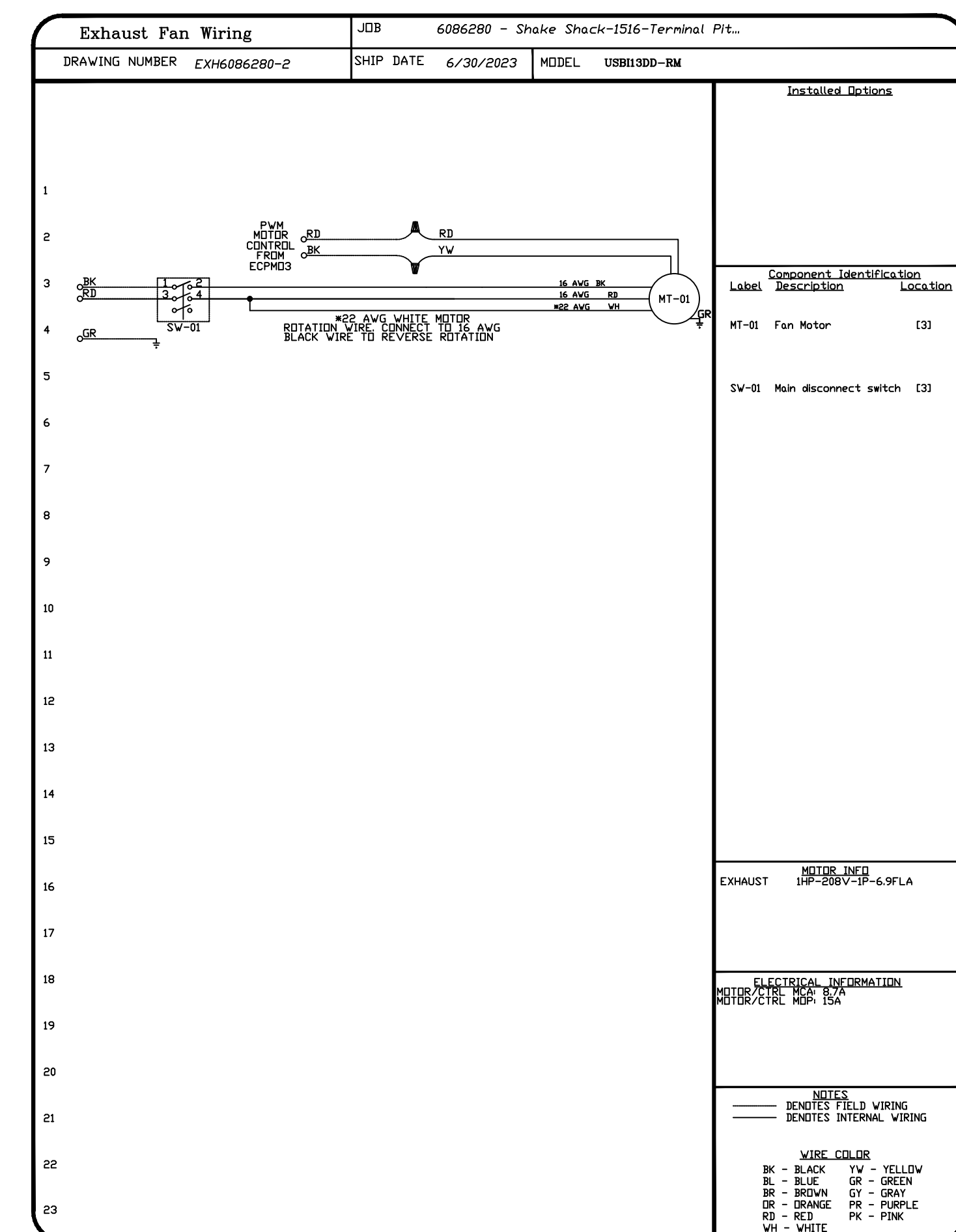
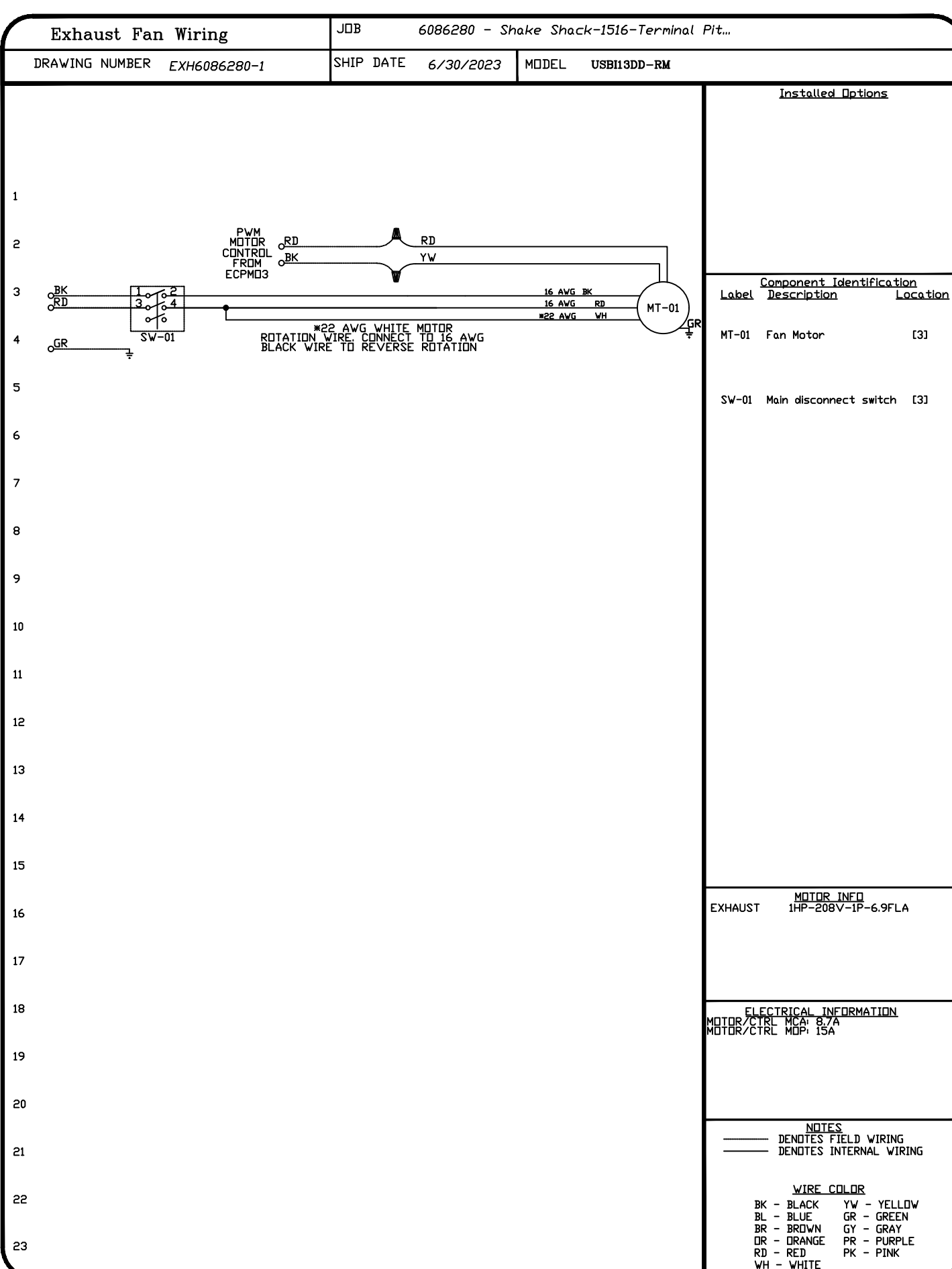
CORNER WEIGHTS ARE CALCULATED BASED ON VERTICAL DISCHARGE. SUPPORT DUCT PROPERLY BEFORE FAN TO ENSURE CORNER WEIGHTS ARE NOT AFFECTED.

NORMAL TEMPERATURE TEST DIRECT DRIVE EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 350°F (176°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

REVISIONS	
DESCRIPTION	DATE



Eastern, PA. Mechanical
PO Box 2550, Union Ave. Bala Cynwyd, PA, 19004 PHONE: (267) 504-4126 EMAIL: reg108@captivair.com



Shake Shack-1516-Terminal Pittsburgh(Kitchen)-R2
PITTSBURGH, PA, 15222

DATE: 6/30/2023
DWG.#: 6086280
DRAWN BY: joe.shiiba
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 4

Bergmeyer
800 South Figueroa St.
Los Angeles, CA 90017
212.337.1090

Schnackel engineers
MEPF ENGINEER
3035 S 72ND ST
OMAHA NE 68124
TEL 402.391.7680

PROFESSIONAL ENGINEER
GREGORY R. SCHNACKEL
Date: 11/14/23

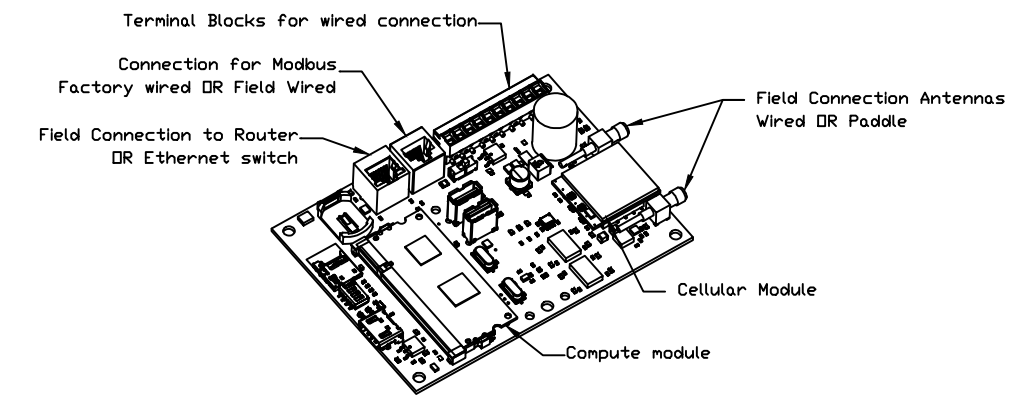
SHAKE SHACK
SHAKE SHACK - THE TERMINAL
1767 SMALLMAN STREET
PITTSBURGH, PA 15222
SHACK #1516

IFC
CAPTIVEAIRE DRAWINGS

M704

ELECTRICAL PACKAGE - JOB#6086280

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Ø	HP	VOLT	FLA
1		SC-20110MA	UTILITY CABINET LEFT	UTILITY CABINET LEFT HOOD # 1	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	KEF-1	EXHAUST	1	1.000	208	6.9
							KEF-2	EXHAUST	1	1.000	208	6.9

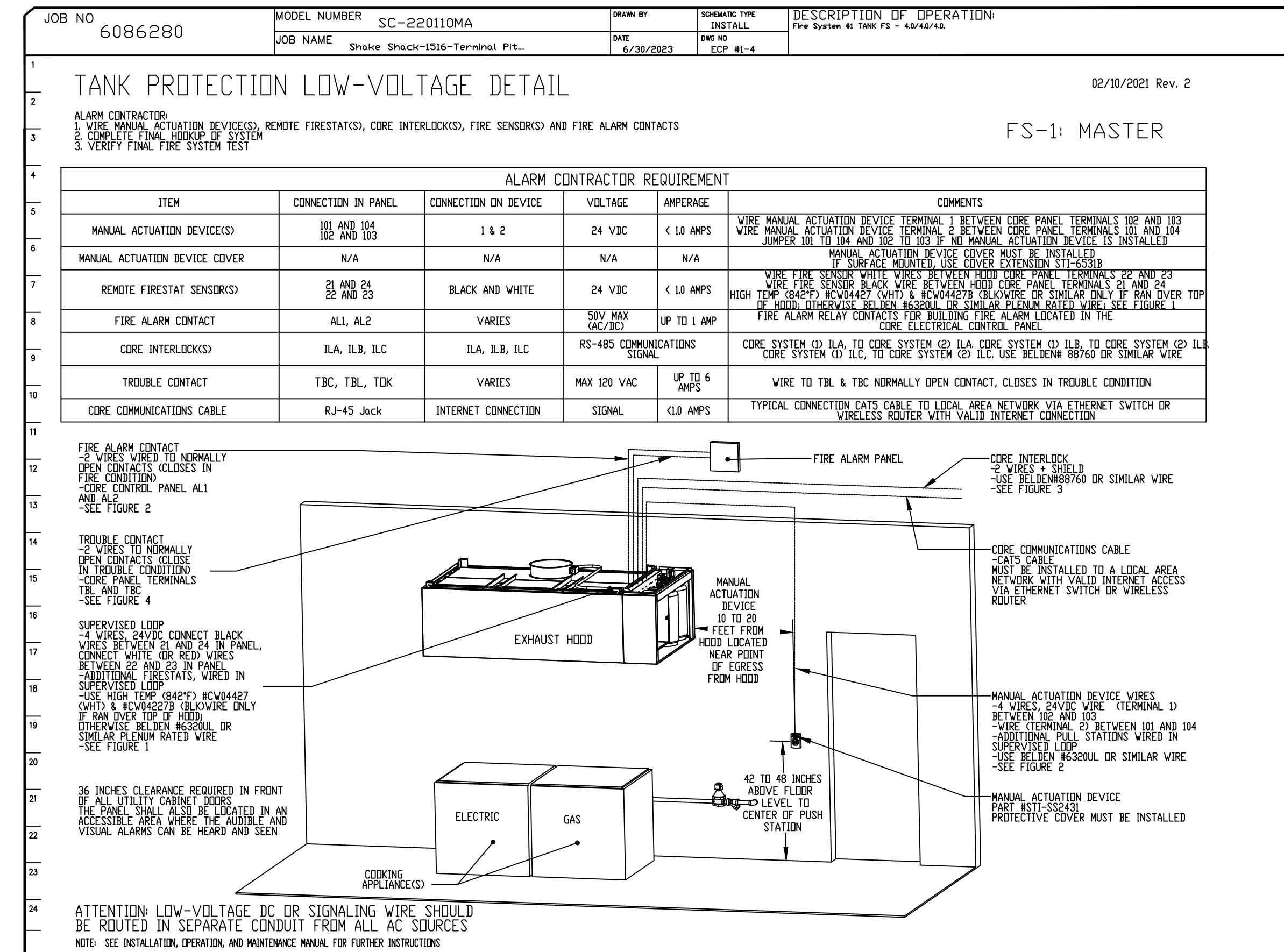
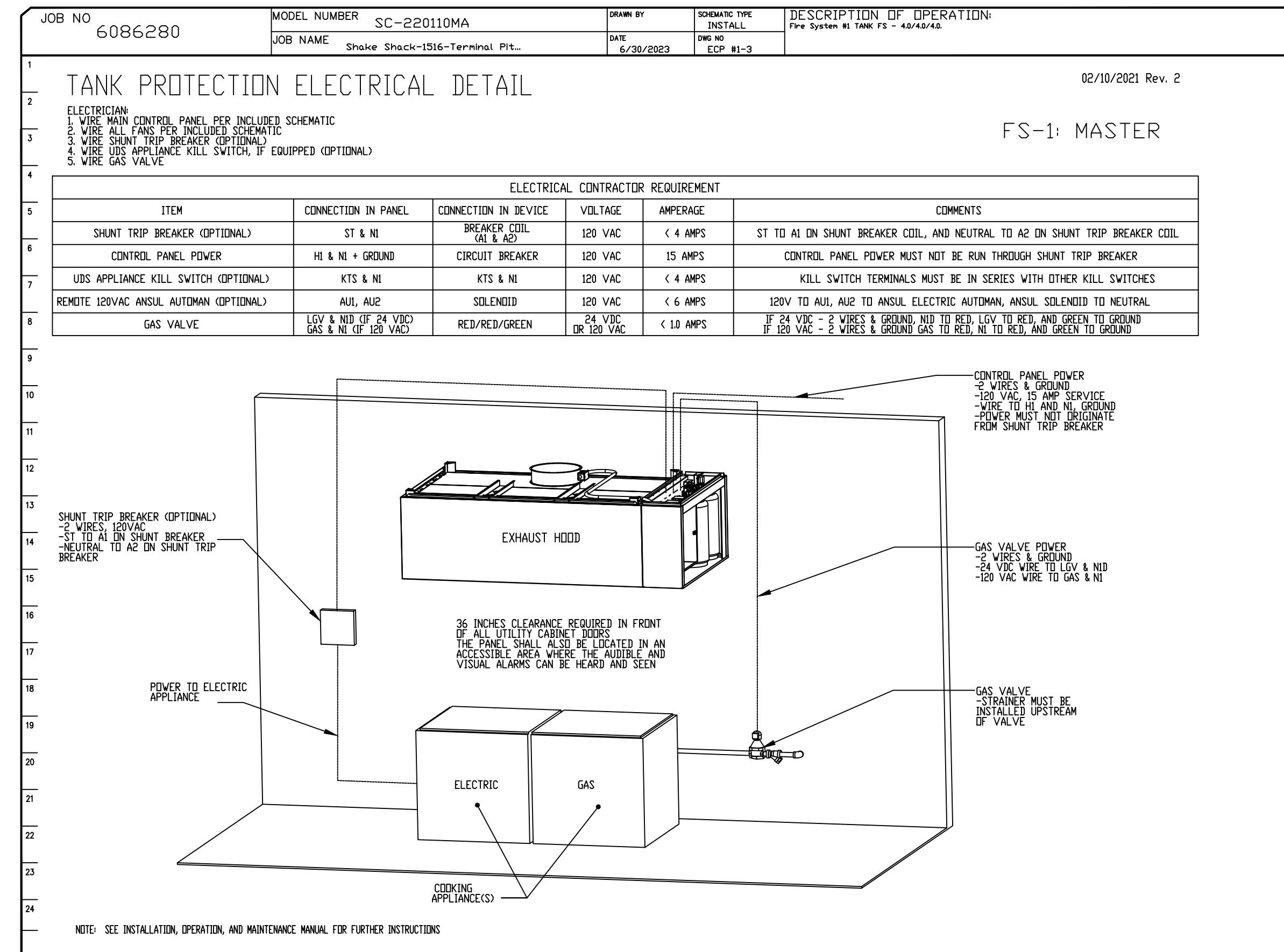
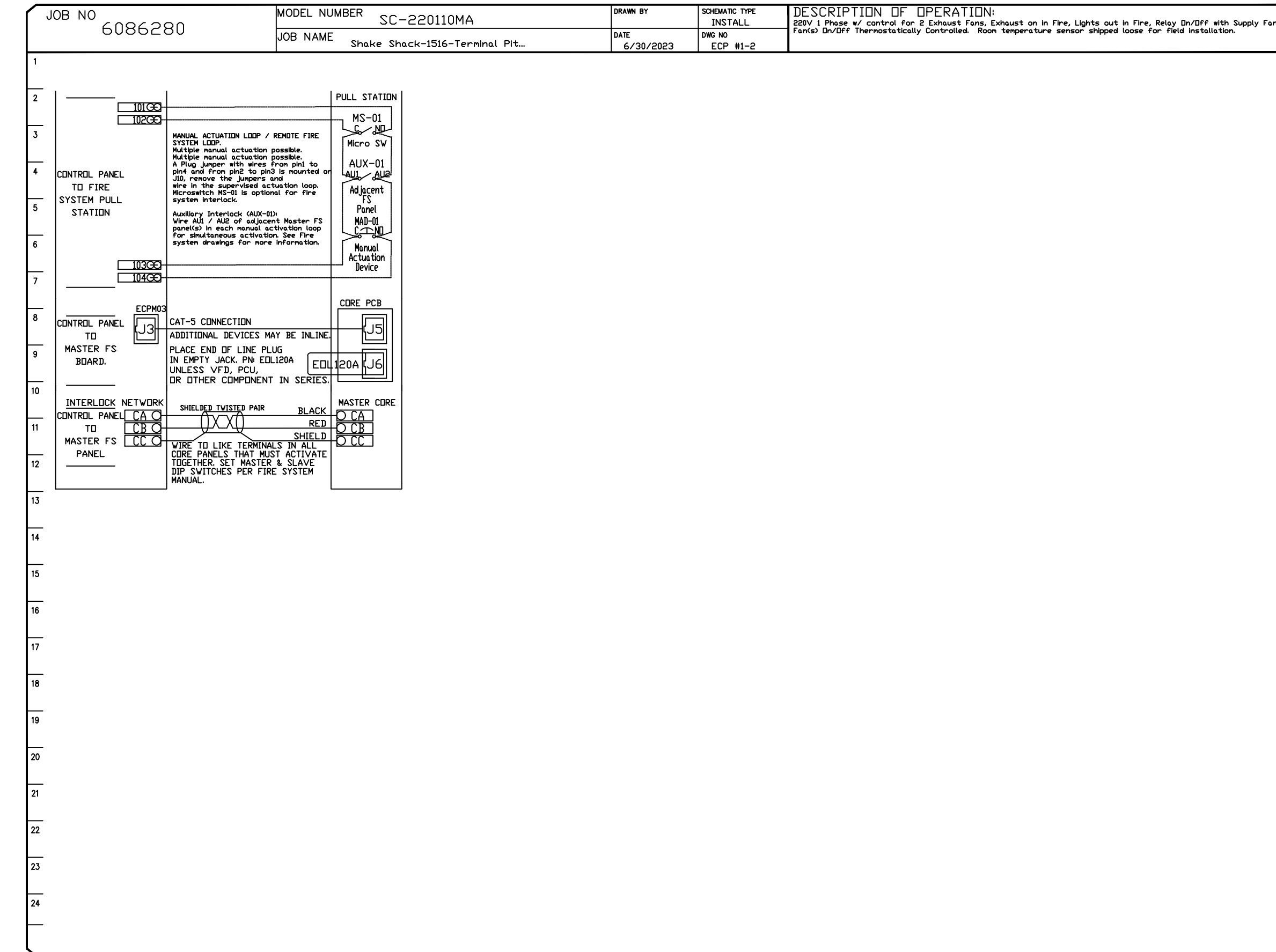
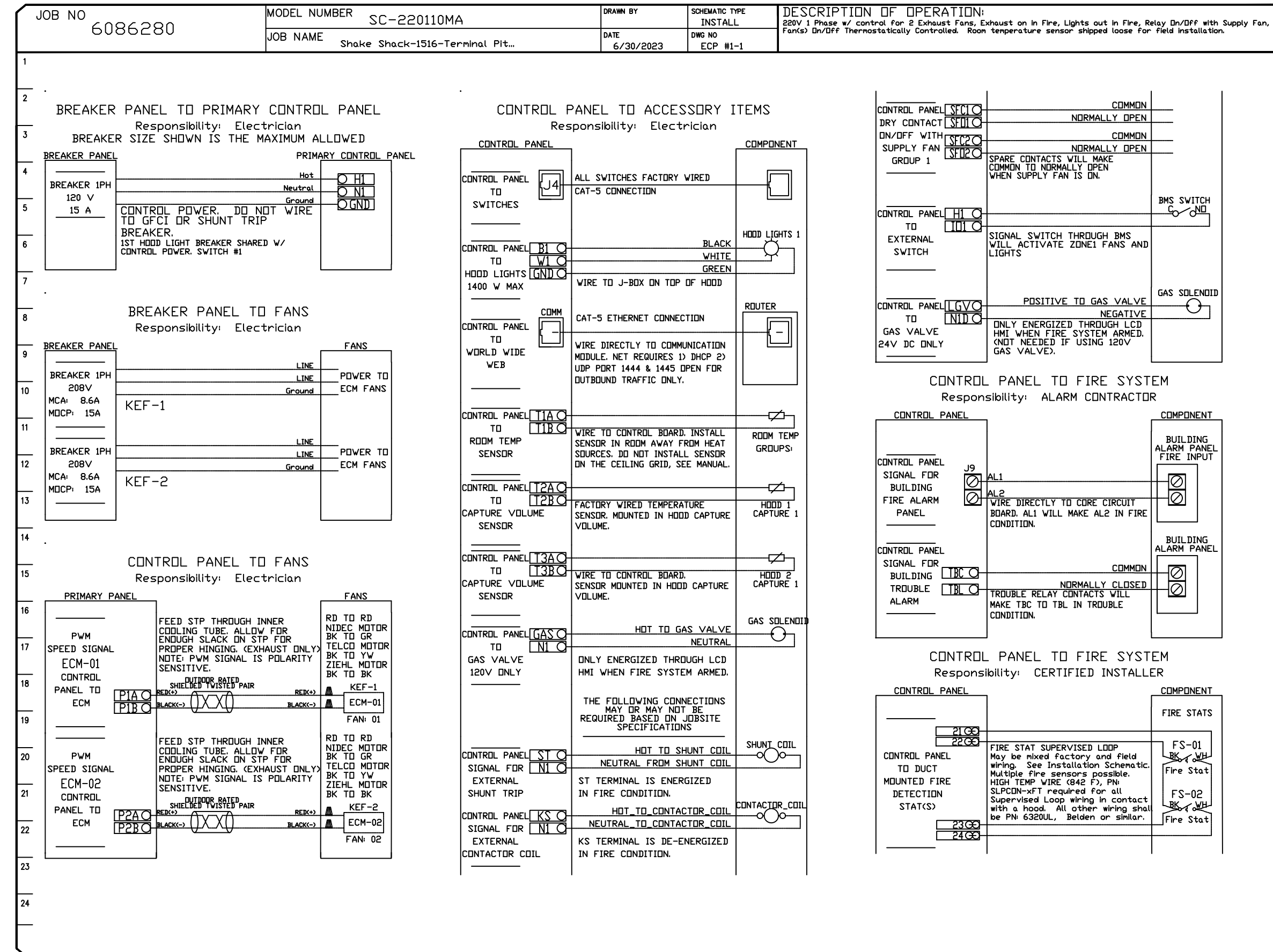


CASlink Monitor and Control

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	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MHA Discharge Temperature	MONITOR	MHA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Status	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCV Faults	MONITOR
Controller Faults	MONITOR	PCV Filter Clog Percentages	MONITOR
Fan Status	MONITOR	COSE Filter System	MONITOR
PCV Faults	MONITOR	Building Pressure	MONITOR
PCV Filter Clog Percentages	MONITOR	Fans Button(s)	MONITOR & CONTROL
Fire Condition	MONITOR	Light Button(s)	MONITOR & CONTROL
COSE Filter System	MONITOR	Wash Button	MONITOR & CONTROL
Building Pressure	MONITOR		
Prop Time Button	MONITOR & CONTROL		
Fans Button	MONITOR & CONTROL		
Light Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



REVISIONS

NO	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

CAPTIVE

Eastern, PA Mechanical

PO Box 2520, 1 Union Ave, Bala Cynwyd, PA, 19004 PHONE: (267) 504-4726 EMAIL: reg.08@captiveme.com

Shake Shack-1516-Terminal Pittsburgh(Kitchen)-R2

PITTSBURGH, PA, 15222

DATE: 6/30/2023

DWG #: 6086280

DRAWN BY: Joe.shilba

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

MASTER DRAWING

SHEET NO. 5

Bergmeyer

800 South Figueroa St.
Los Angeles, CA 90071
212.337.1090

CONSULTANTS:

Schnackel engineers

New York • Miami • Chicago • Los Angeles • Seattle • Houston

MEP/F ENGINEER
3035 S 72ND ST
OMAHA NE 68124
TEL 402.391.7680

SEALED SIGNATURE:

CAPTIVE

PROFESSIONAL
CORY R. SCHNEIDER
Date: 11/14/23

REVISIONS

NO	DATE	DESCRIPTION
1	2023-11-15	IFC SET
2	2023-10-24	ADDENDUM A
3	2023-09-05	ADDENDUM A
4	2023-07-05	PERMIT / BID
5	2023-06-12	75% SET
6	2023-04-26	DD SET

NO. BY DATE DESCRIPTION

SHAKE SHACK

SHAKE SHACK - THE TERMINAL

1767 SMALLMAN STREET
PITTSBURGH, PA 15222
SHACK #1516

IFC

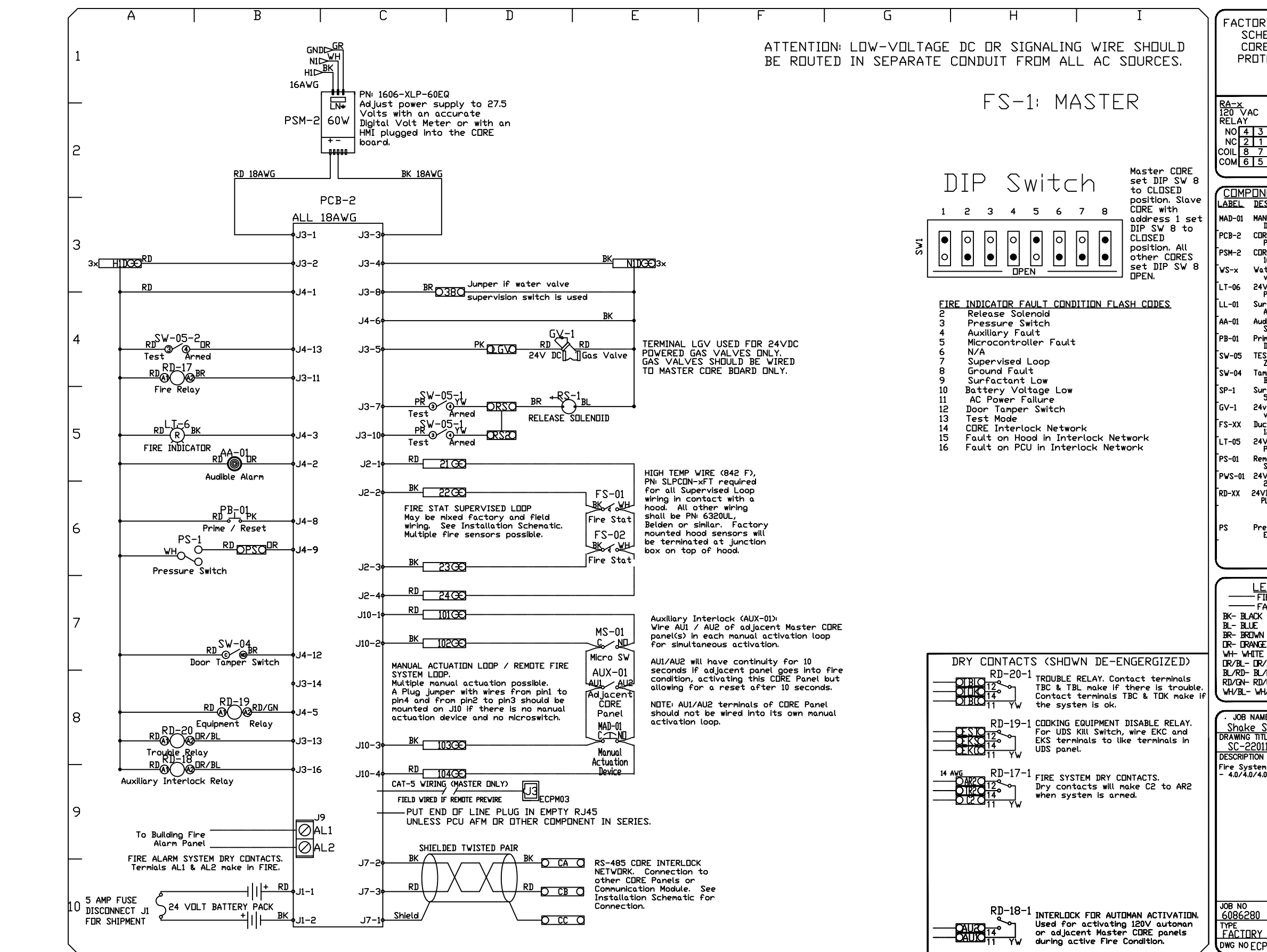
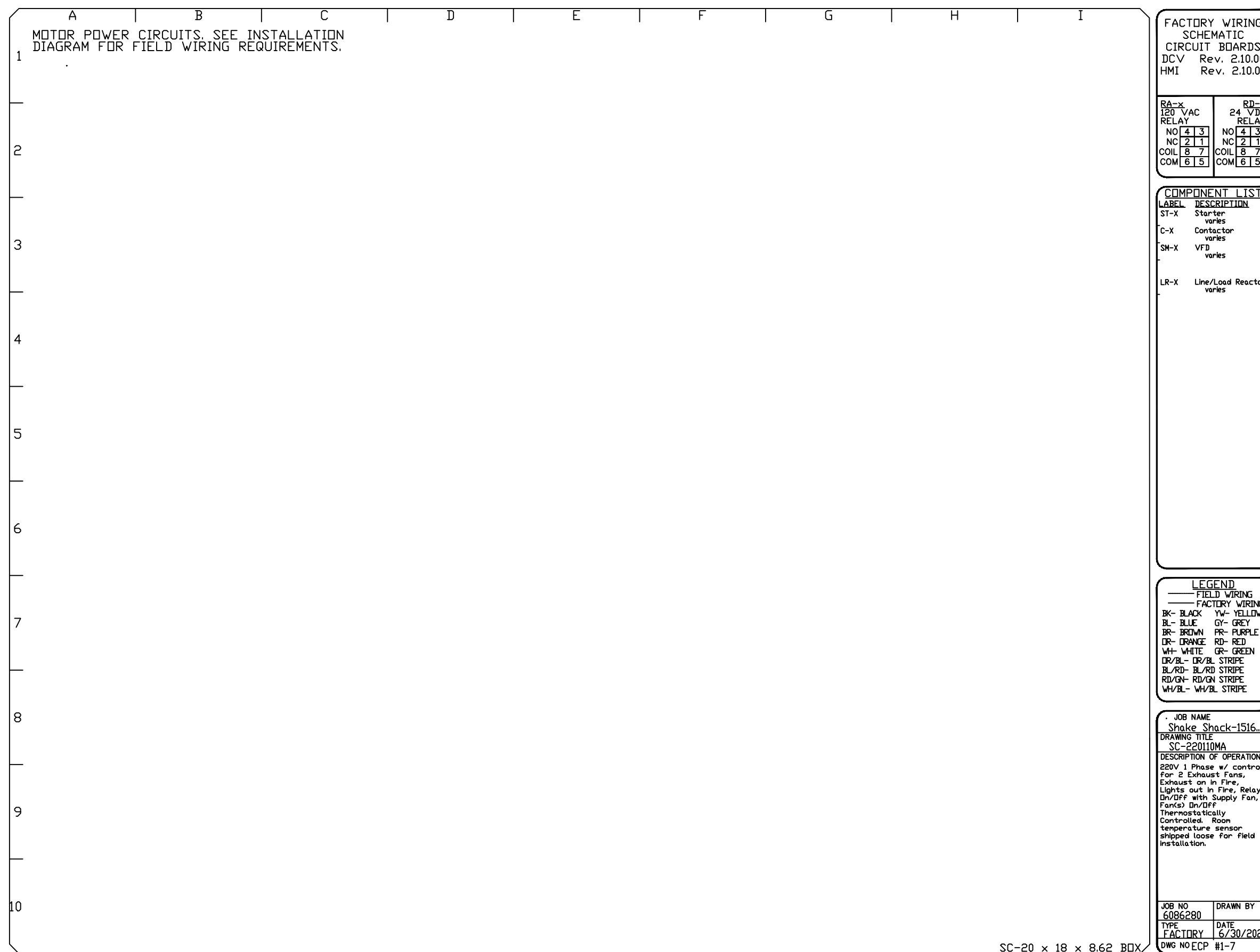
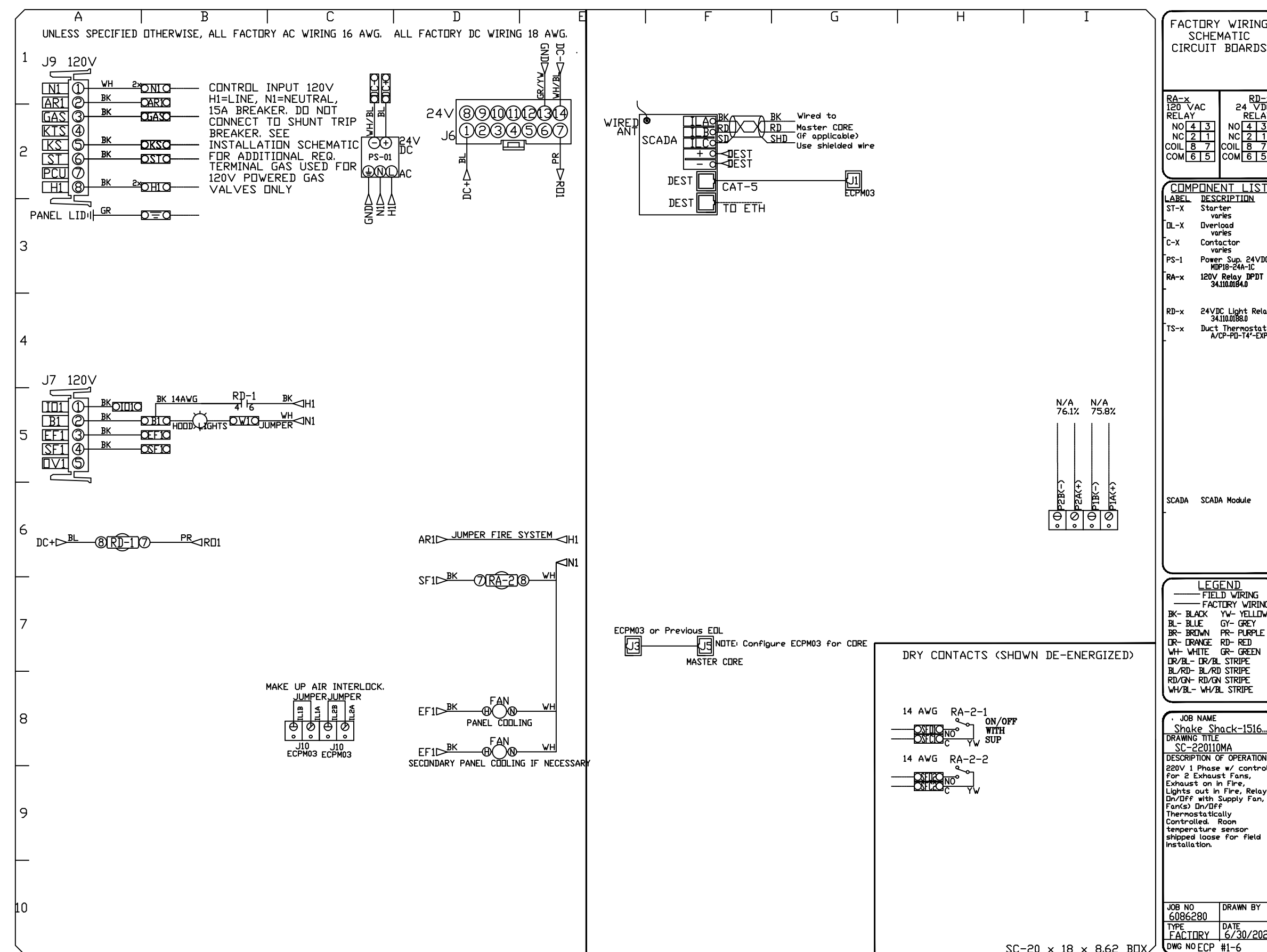
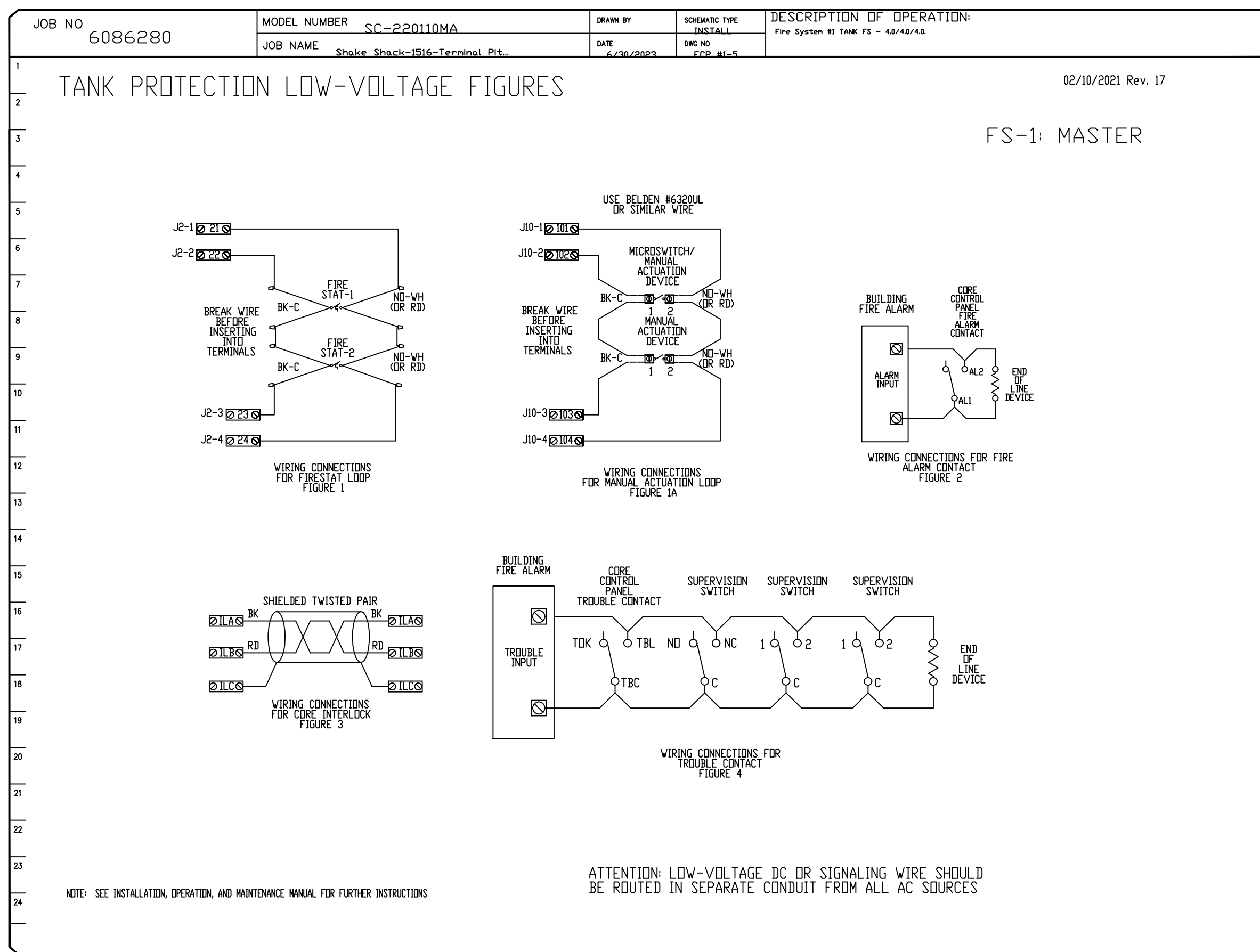
CAPTIVEAIRE DRAWINGS

DRAWN BY: RAS

CHECKED BY: GRS

JOB NO: 2023007.00

M705



REVISIONS

NO.	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Eastern, PA Mechanical

PO Box 2520, 1 Union Ave, Bala Cynwyd, PA 19004 PHONE: (267) 504-4126 EMAIL: reg.08@captivair.com

Shake Shack-1516-Terminal Pittsburgh(Kitchen)-R2

PITTSBURGH, PA, 15222

DATE: 6/30/2023

DWG.#: 6086280

DRAWN BY: Joe.shilba

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

MASTER DRAWING

SHEET NO. 6

Bergmeyer

CONSULTANTS:

Schnackel engineers

MEPF ENGINEER
 3035 S 72ND ST
 OMAHA NE 68124
 TEL 402.391.7680

SEALED SIGNATURE:

CAPTIVEAIRE

SHAKE SHACK - THE TERMINAL

1767 SMALLMAN STREET
 PITTSBURGH, PA 15222
 SHACK #1516

IFC

CAPTIVEAIRE DRAWINGS

DATE: 6/30/2023

DWG.#: 6086280

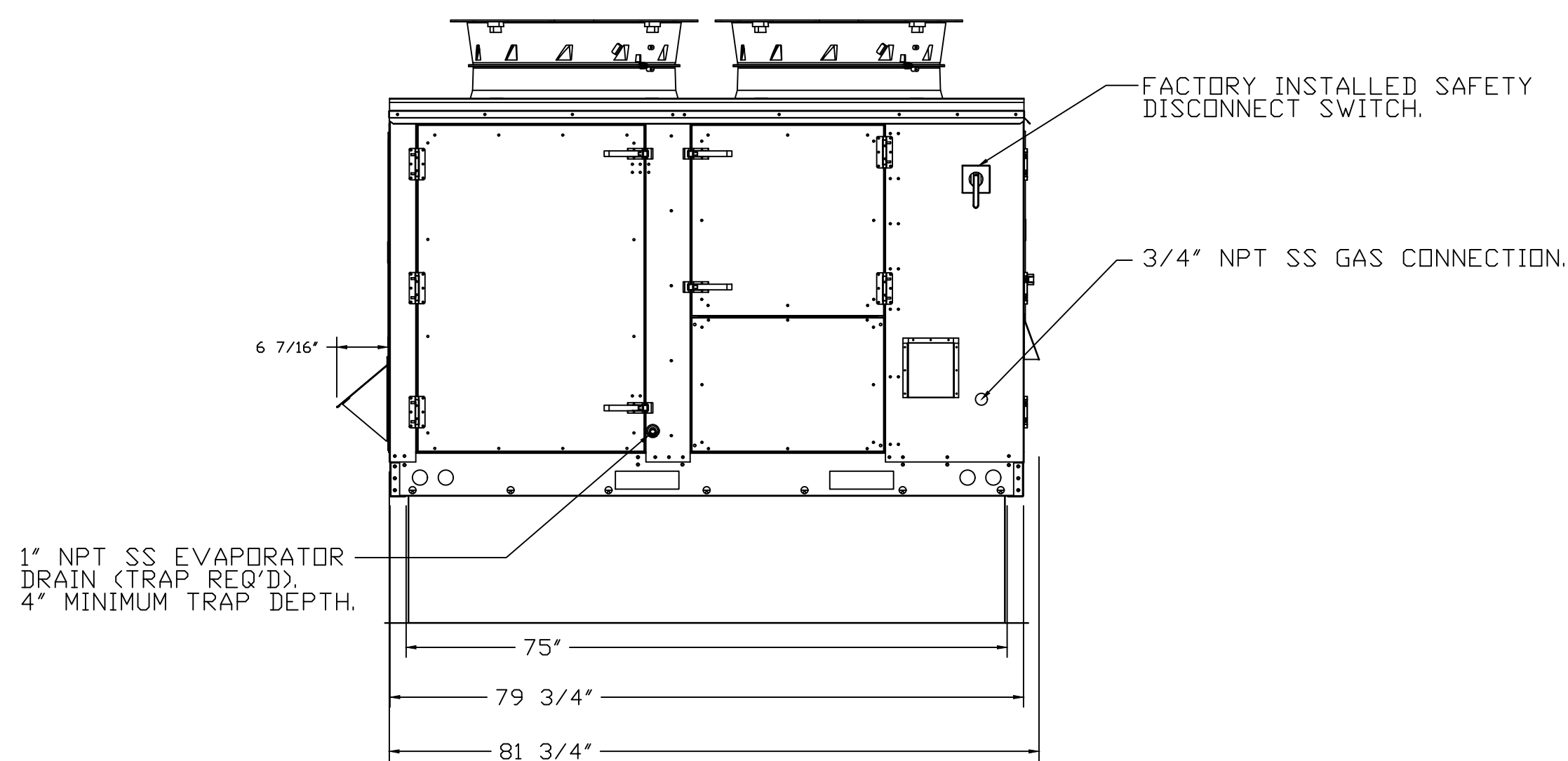
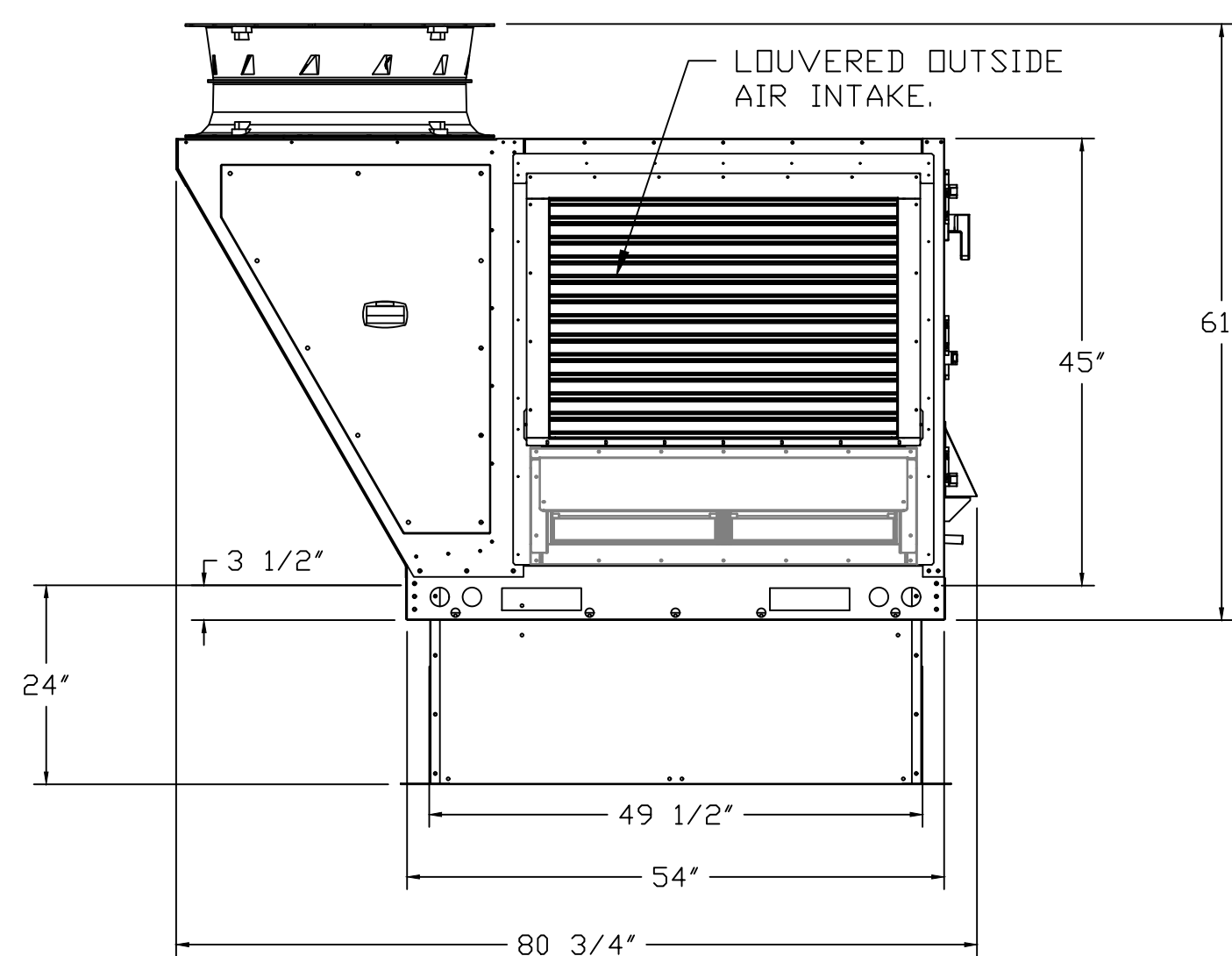
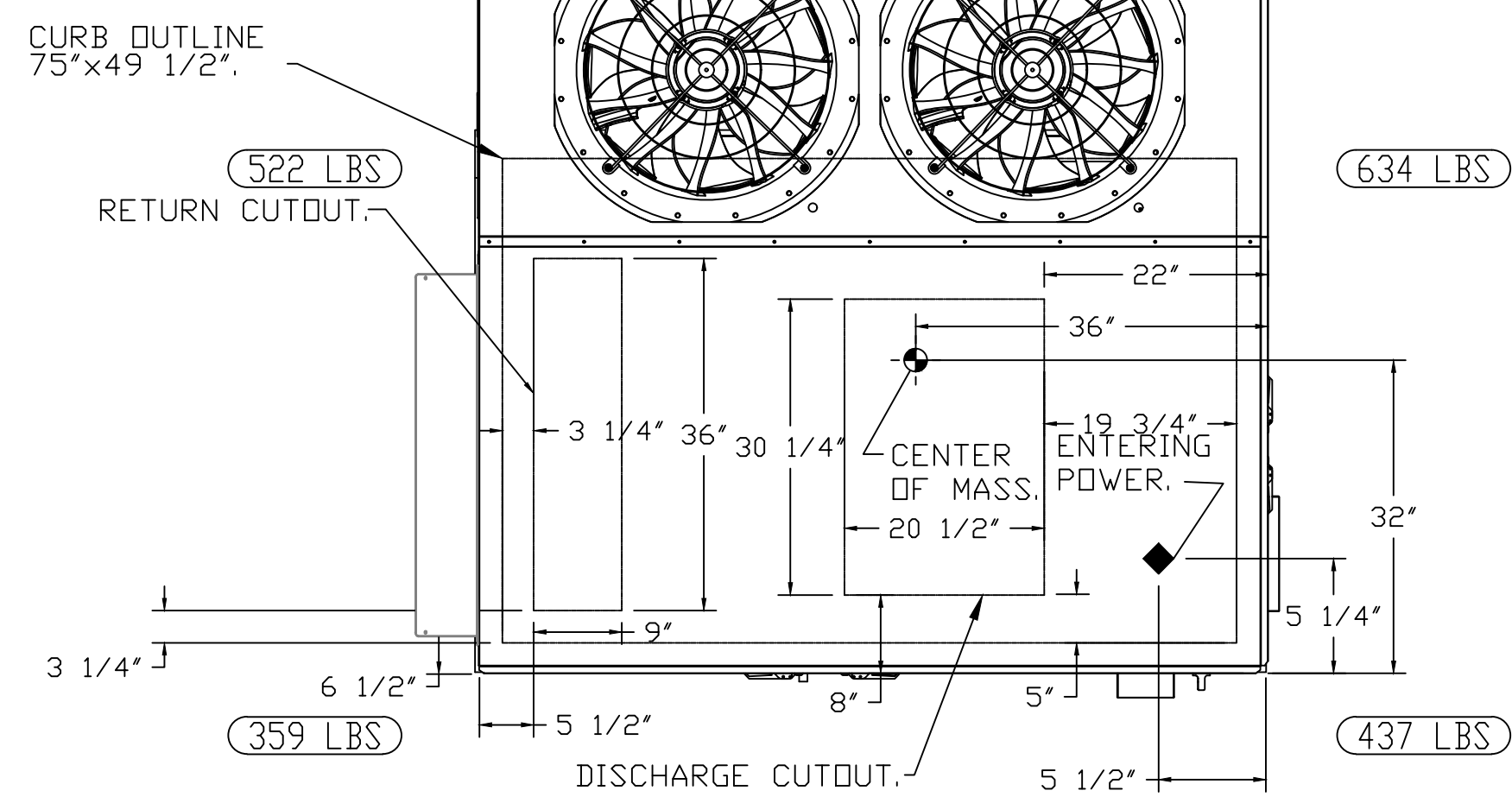
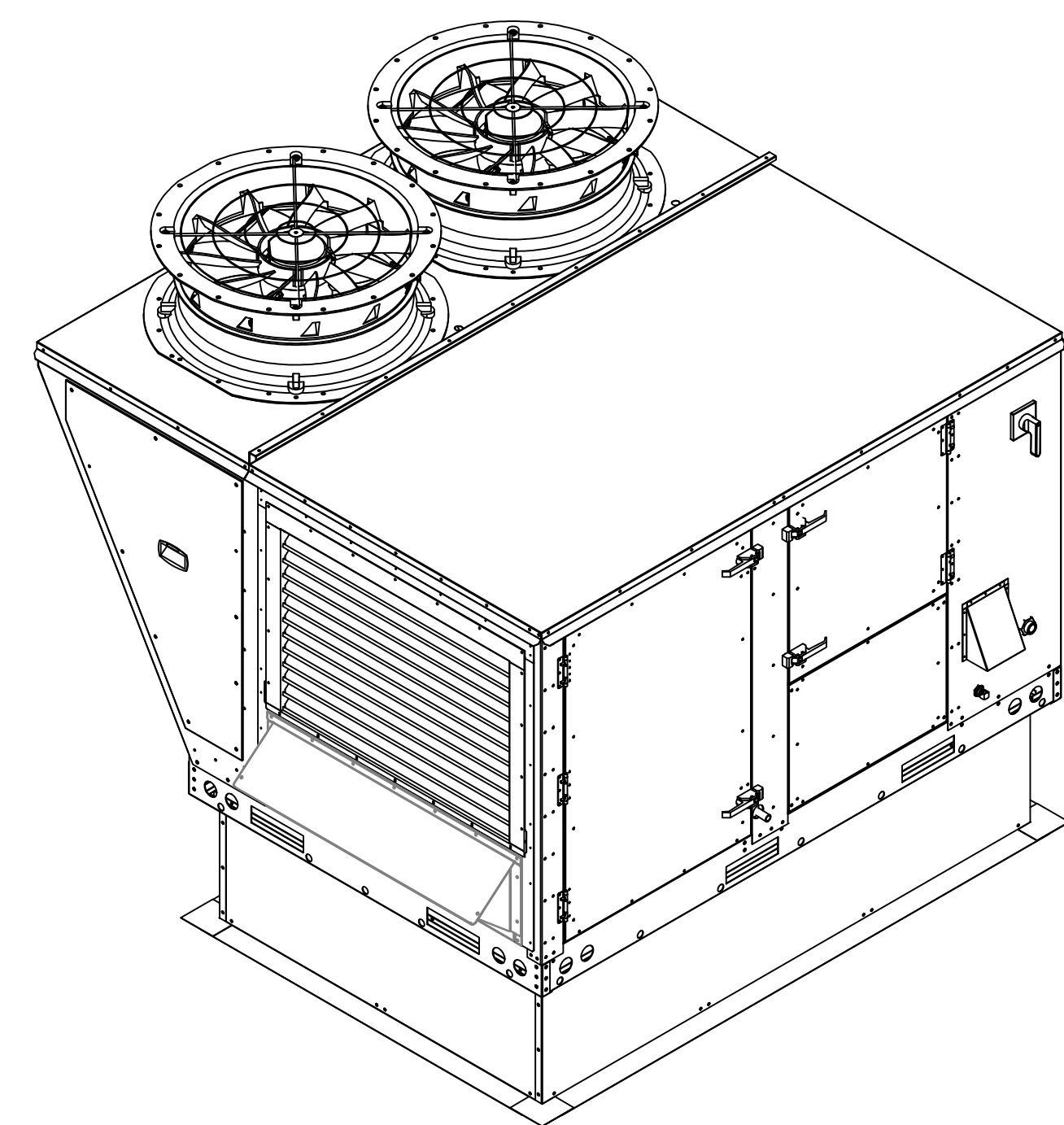
DRAWN BY: Joe.shilba

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

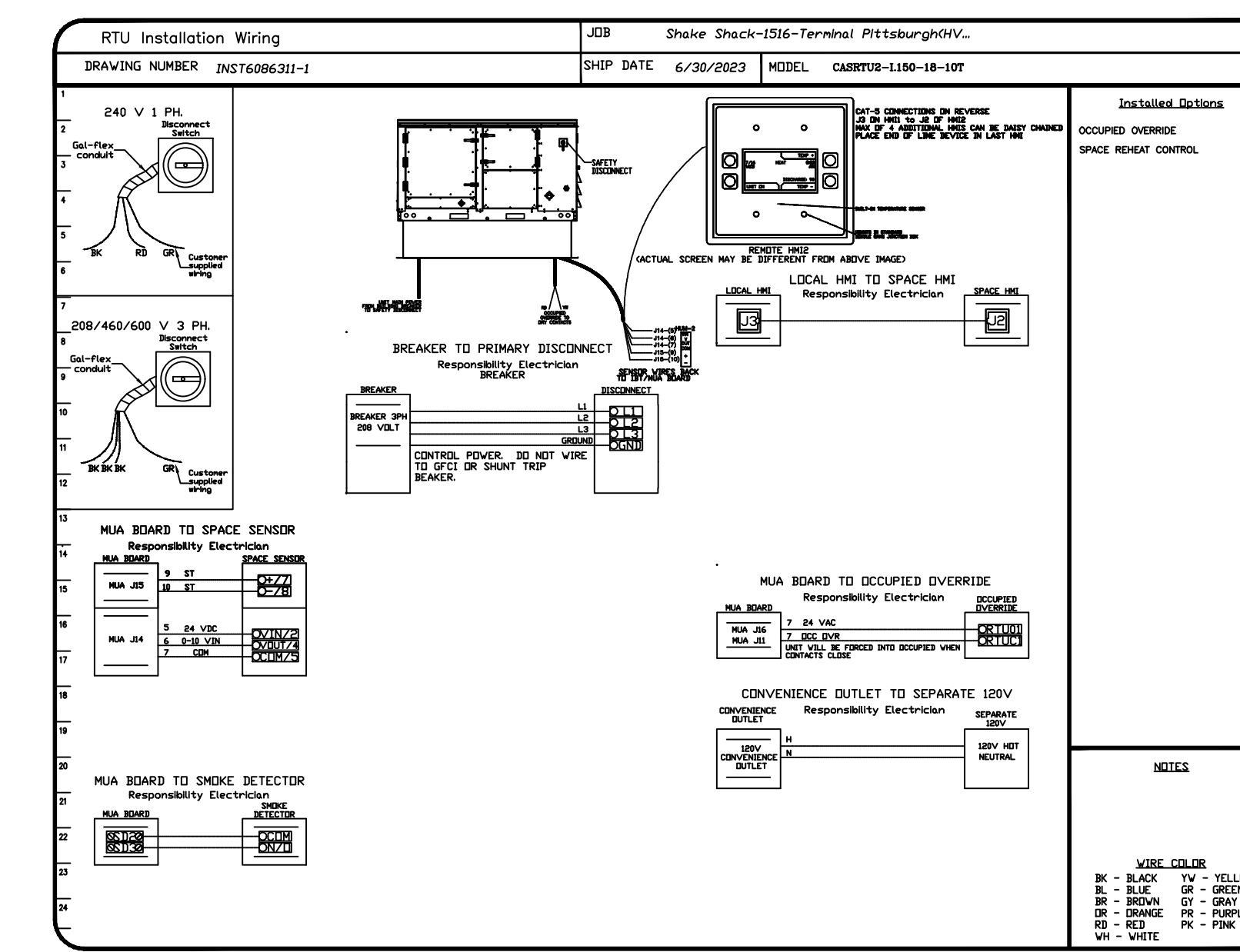
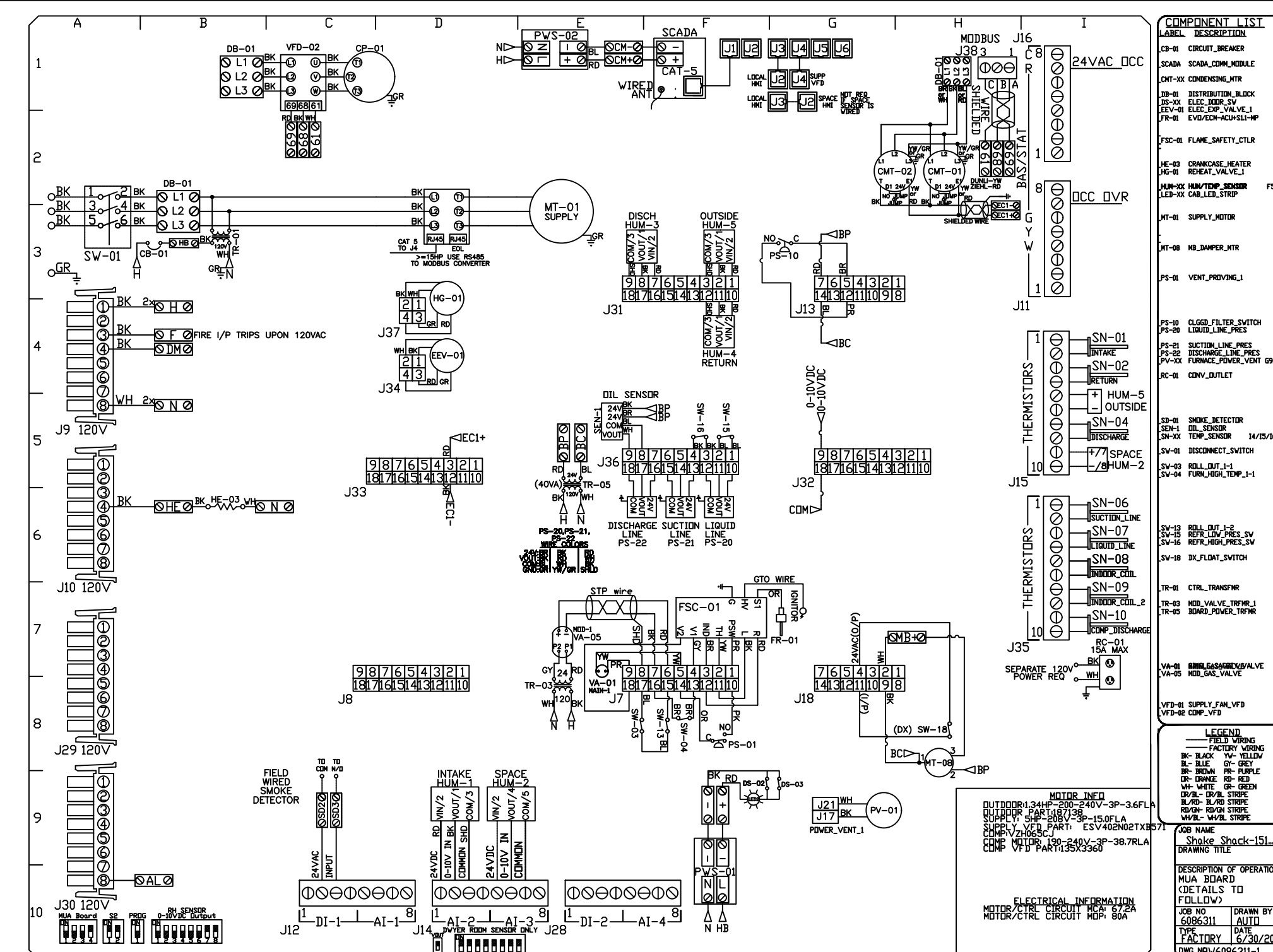
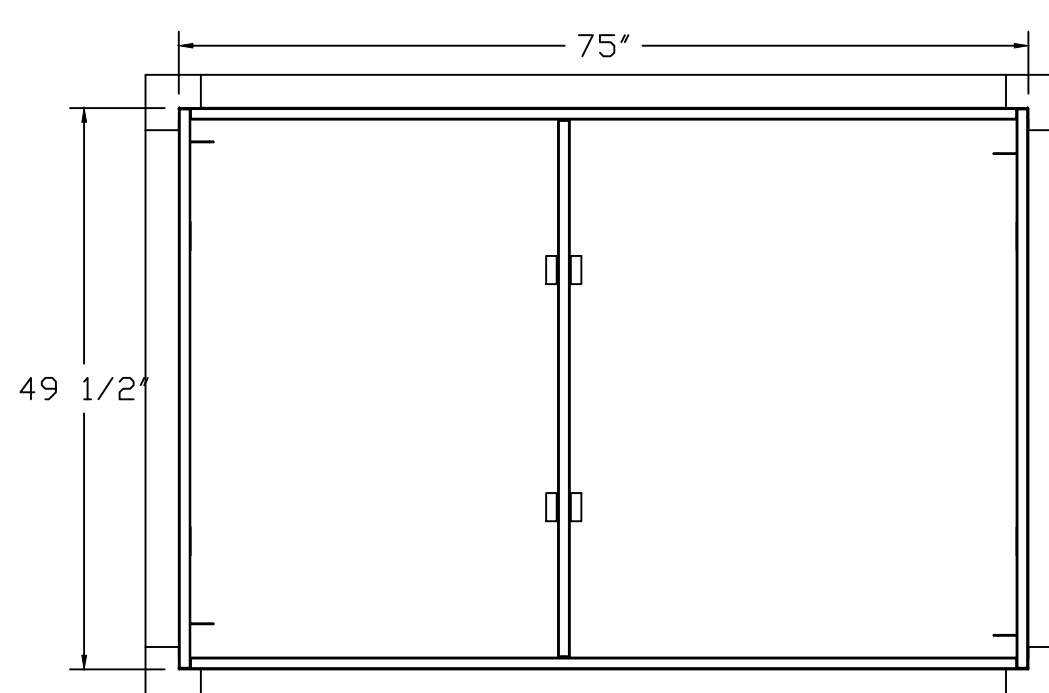
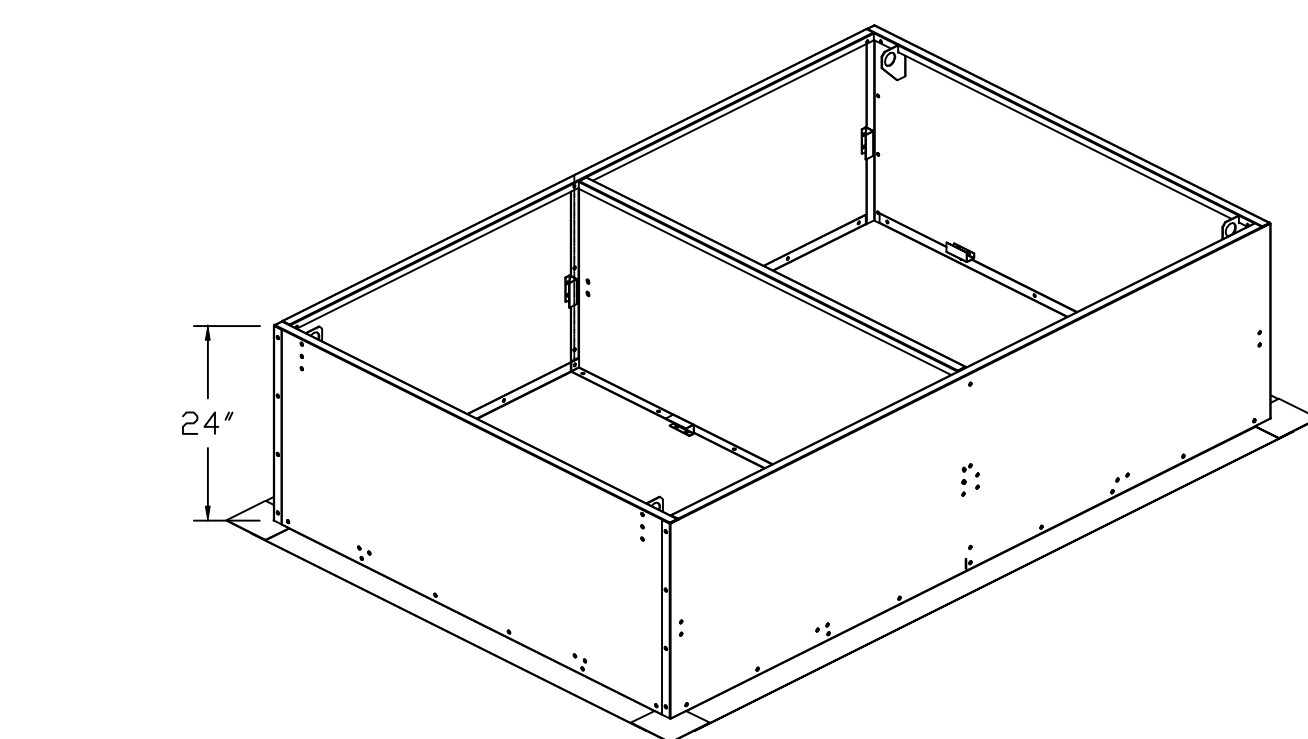
MASTER DRAWING

SHEET NO. 6

M706



1" NPT SS EVAPORATOR DRAIN (TRAP REQ'D)
4" MINIMUM TRAP DEPTH



NO.	BY	DATE	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

CAPTIVE

Eastern, PA Mechanical

PO Box 2520, 1 Union Ave, Bala Cynwyd, PA 19004 PHONE: (267) 504-4125 EMAIL: reg.109@captiveaire.com

Shake Shack-1516-Terminal PittsburghHVAC-R1

PITTSBURGH, PA, 15222

DATE: 6/30/2023

DWG #: 6086311

DRAWN BY: Joe.shilka

SCALE: 1/2" = 1'-0"

MASTER DRAWING

SHEET NO. 2

FAN #1 CASRTU2-1150-18-10T - HEATER (RTU-1)

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

Bergmeyer

800 South Figueroa St.
Los Angeles, CA 90017
212.337.1090

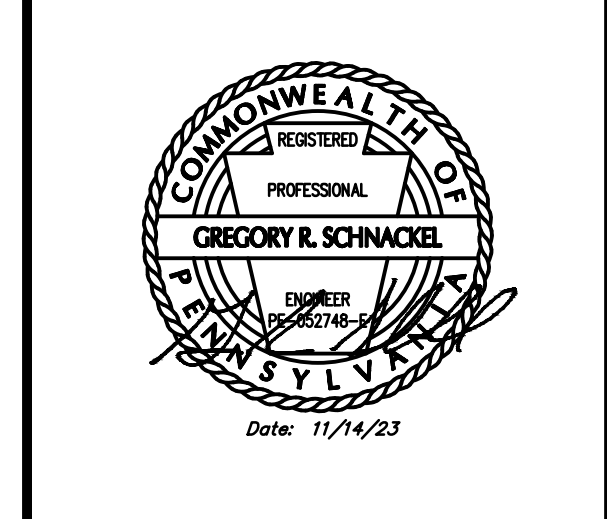
51 Shaver St.
Boston, MA 02210
617.542.1025

CONSULTANTS:

Schnackel engineers

New York • Miami • Chicago • Los Angeles • Seattle • Honolulu
800-367-0403

MEPF ENGINEER
3035 S 72ND ST
OMAHA NE 68124
TEL 402.391.7680



NO.	BY	DATE	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



SHAKE SHACK - THE TERMINAL

1767 SMALLMAN STREET
PITTSBURGH, PA 15222
SHACK #1516

IFC

CAPTIVEAIRE DRAWINGS

DRAWN BY: RAS

CHECKED BY: GRS

JOB NO: 20230073.00

M709

