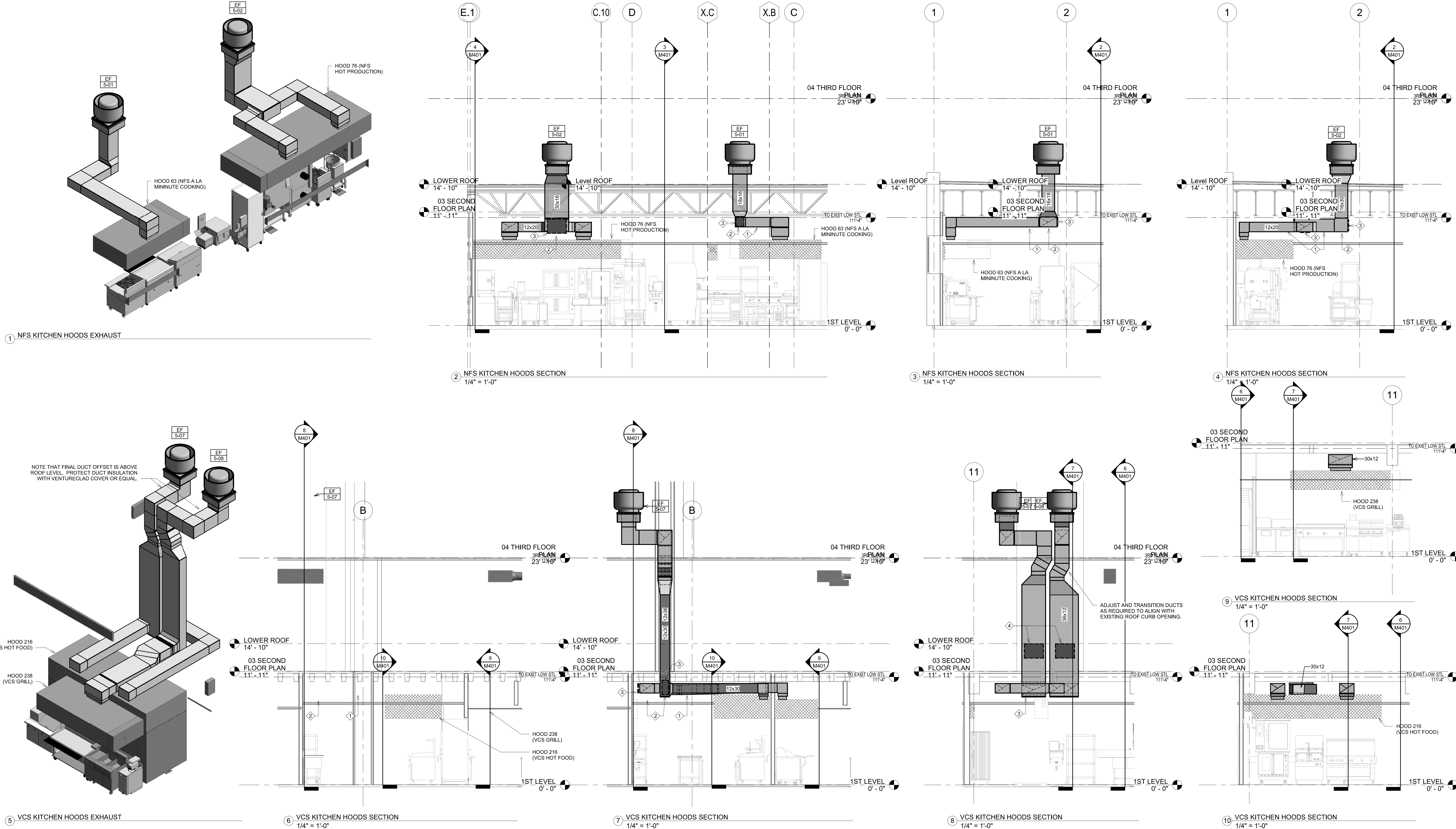


- KEY NOTES:
- 1 WELDED TYPE 1 GREASE EXHAUST DUCT. PITCH HORIZONTAL DUCT AT A MINIMUM OF 1/4 INCH PER FOOT DOWN TO LOW POINT. REFER TO ARCHITECTURAL PLANS FOR RATED ENCLOSURE.
 - 2 PROVIDE CLEANOUT DRAIN AT LOW POINT.
 - 3 PROVIDE UL LISTED ACCESS DOOR FITTED WITH AIR TIGHT GASKET AND BACK-FRAME CENTERED ON VERTICAL FACE OF DUCT. PROVIDE ACCESS DOOR EVERY 10' AND AT ALL CHANGES IN DIRECTION PER NFPA 96 REQUIREMENTS FOR PROPER CLEANING ACCESS.
 - 4 PROVIDE ACCESS DOORS PER KEY NOTE #3 APPROX 48" ABOVE SECOND FLOOR. COORDINATE RATED SHAFT ACCESS WITH ARCH.



Revision#	Description	Date
1	ISSUE SET	08/18/2026

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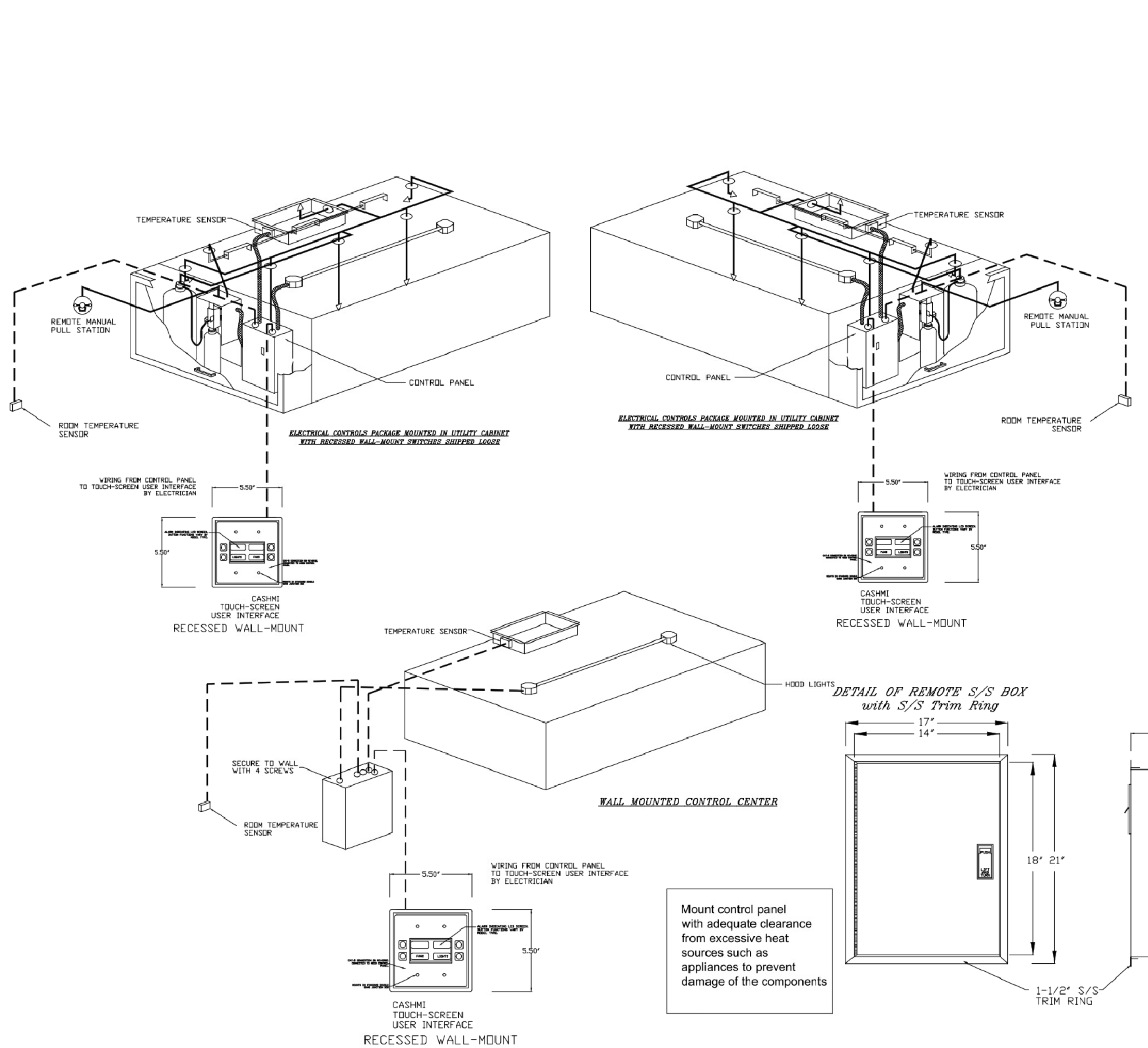
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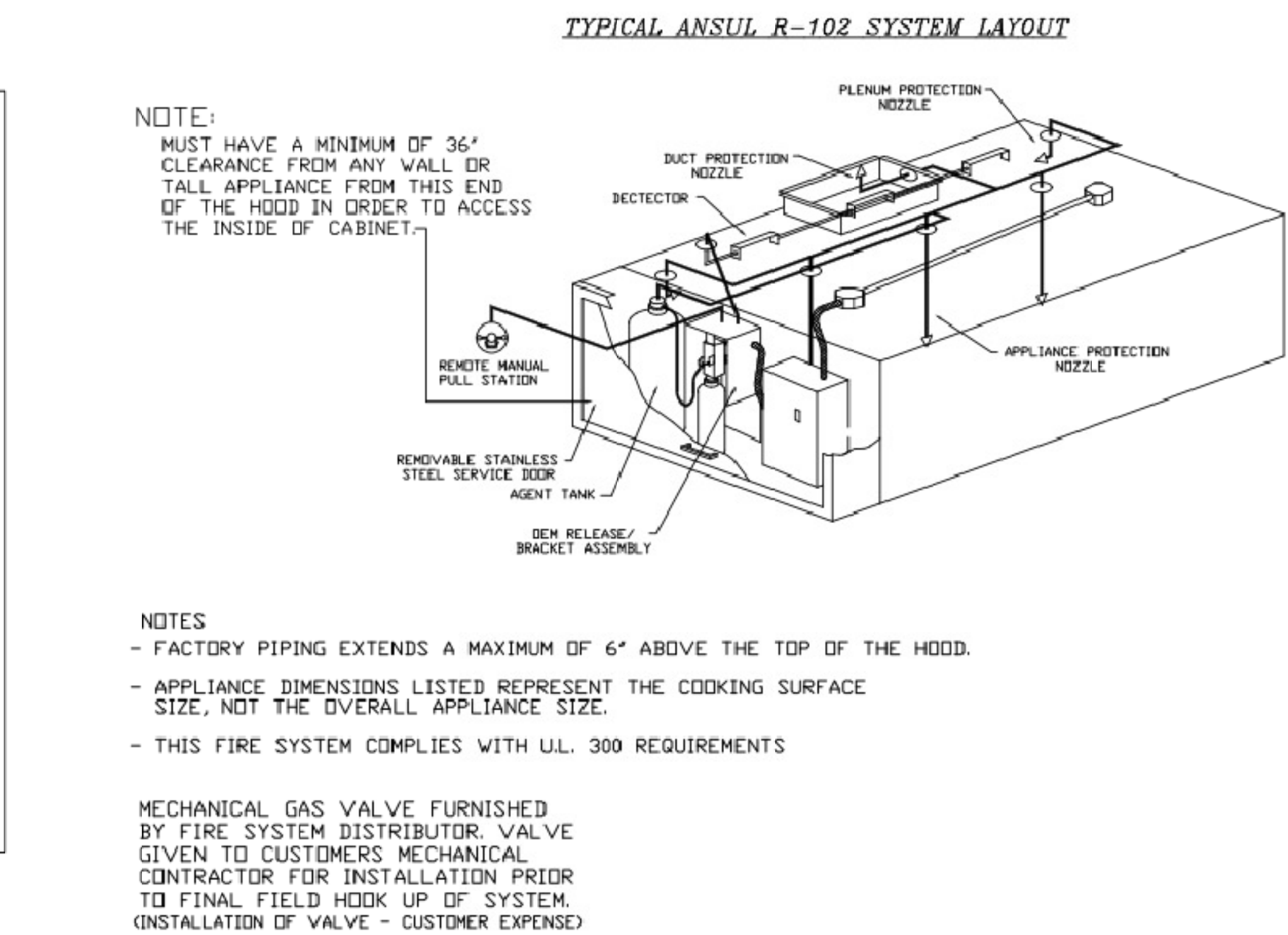
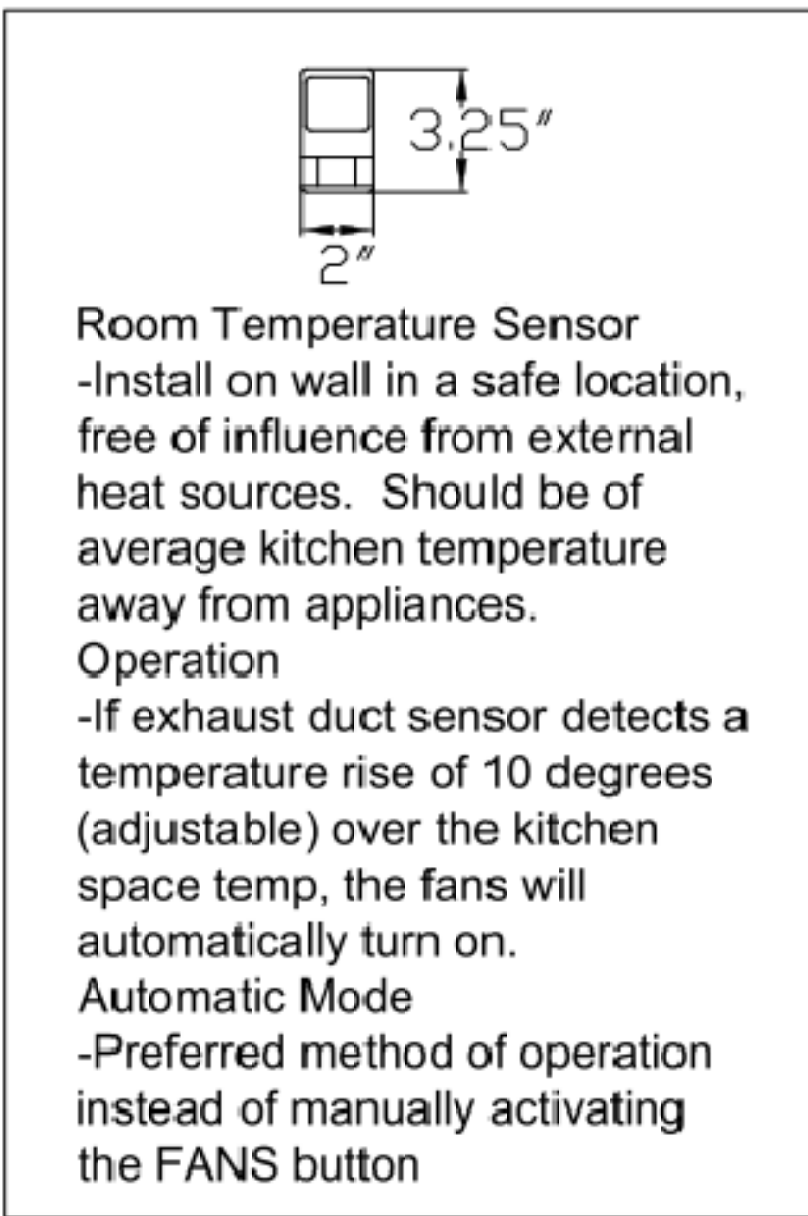
STAMP
14944
JASON R. GOTTLWALT
REGISTERED PROFESSIONAL ENGINEER
SOUTH DAKOTA
08-18-2026

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

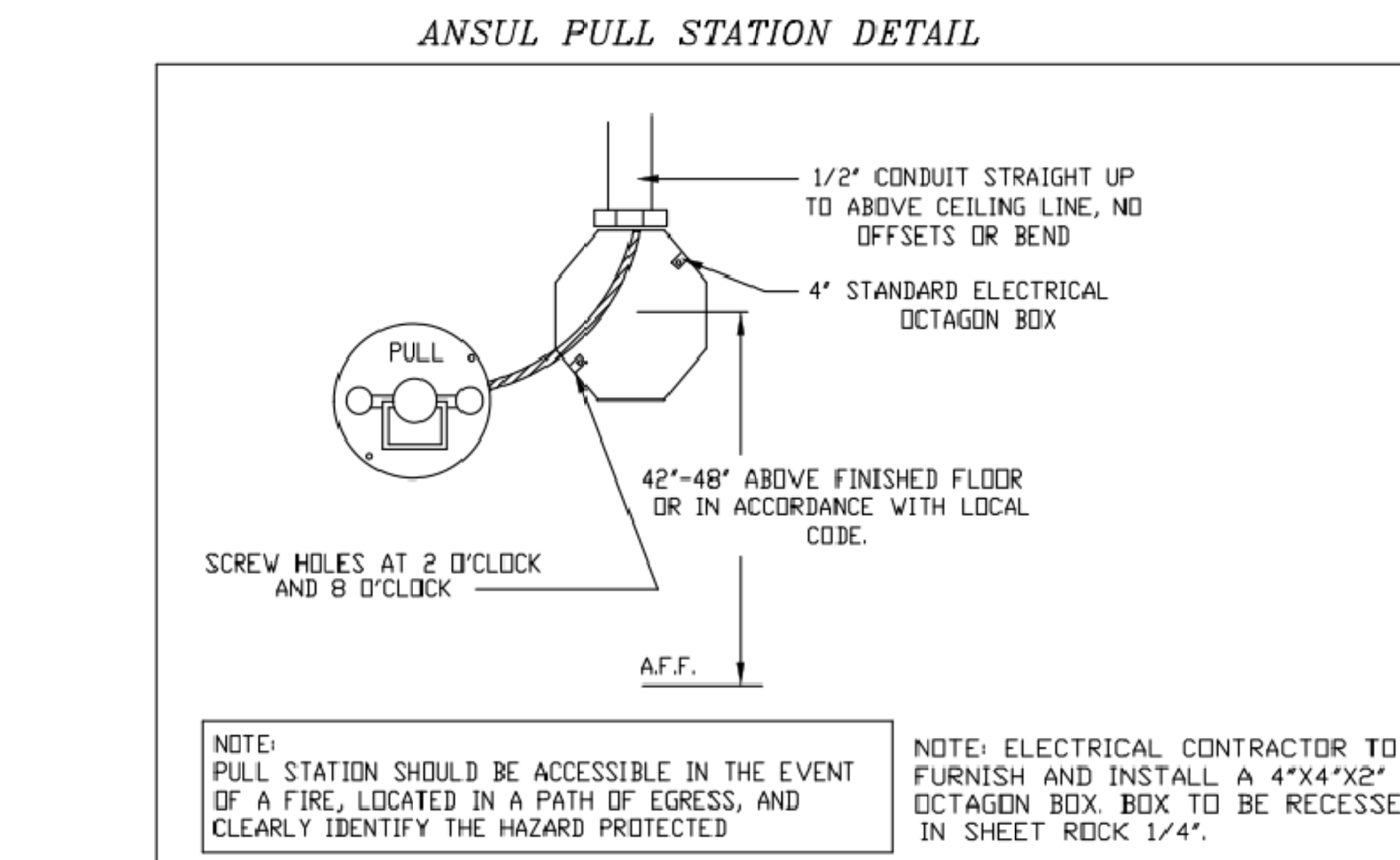
Drawing Title KITCHEN EXHAUST 3D VIEWS AND SECTION DETAILS	Phase	Project Title RENOVATE FIRST FLOOR FOR NEW KITCHEN FOR THE SIOUX FALLS VA MEDICAL CENTER	Project Number VA #438-21-403 SGA #201956
Approved:		Location SIOUX FALLS, SOUTH DAKOTA	Building Number 5
		Issue Date 08-18-2026	Drawing Number M401
		Checked JG	Drawn EC/TM



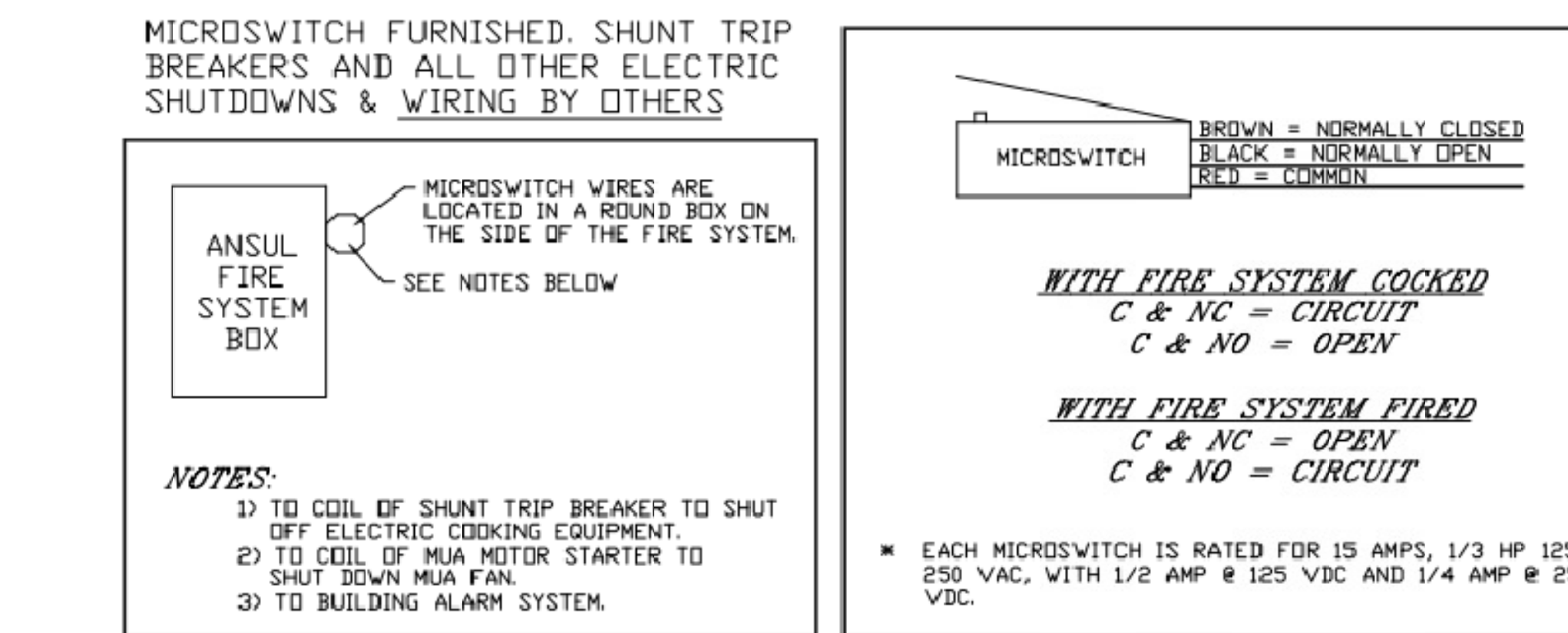
1 TYPICAL KITCHEN HOOD CONTROLS DETAILS
NO SCALE



2 TYPICAL ANSUL R-102 SYSTEM LAYOUT
1/8" = 1'-0"



3 TYPICAL ANSUL PULL STATION DETAIL
1/8" = 1'-0"



4 TYPICAL ANSUL SYSTEM WIRING DETAIL
1/8" = 1'-0"

CONSULTANTS		ARCHITECT OF RECORD		STAMP		Office of Construction and Facilities Management		Drawing Title		Phase		Project Title		Project Number	
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1 ISSUE SET 08/18/2026		2		3		4		5		6		7		8	
Revision# Description Date		Issue Date 08-18-2026		Checked JG		Drawn ECTM		M402		Project Number VA #438-21-403 SGA #201956		Building Number 5		Drawing Number	

MAKE-UP AIR UNIT SCHEDULE

MECHANICAL (237316, 237319, 237433)

EQUIPMENT TAG	APPLICATION	FACE & BYPASS DAMPERS (YES/NO)	MIXING BOX (YES/NO)	MINIMUM OUTDOOR AIR CFM	COOLING COIL	HEATING COIL	HEAT RECOVERY COIL	CONDENSING UNIT	AIR PRE-FILTER	AIR 2ND STAGE-FILTER	HUMIDIFIER	SUPPLY FAN	EXHAUST FAN	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
MAU 5-01	NFS KITCHEN AND SUPPORT	NO	NO	10,000	MAUCC 01	MAUHC 01	N/A	MAUCU 01	MAUPF 01	MAUFF 01	N/A	MAUS 01	MAUR 01	GREENHECK	RV-110-50	1,2,3,4,5,6
MAU 5-02	VCS SERVING AND RETAIL	NO	NO	10,000	MAUCC 02	MAUHC 02	N/A	MAUCU 02	MAUPF 02	MAUFF 02	N/A	MAUS 02	MAUR 02	GREENHECK	RV-110-50	1,2,3,4,5,6

GENERAL MECHANICAL NOTES:

A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

MECHANICAL NOTES:

- INCLUDE ROOF CURB PROVIDED BY MANUFACTURER AND INSTALLED BY CONTRACTOR. USE CURRENT ROOFING CONTRACTOR IF REQUIRED TO MAINTAIN EXISTING ROOF WARRANTIES.
- CABINET TO HAVE MINIMUM 2" FOAM WALL (R13) CONSTRUCTION WITH THERMAL BREAKS TO PREVENT INTERIOR OR EXTERIOR CONDENSATION.
- EXTERIOR OF CABINET SHALL BE PROVIDED WITH PERMATECTOR, 3 MIL POLYESTER POWDER COATING, OR EQUAL.
- INCLUDE INFORMATION ON ANY REQUIRED UNIT SECTION BREAKS REQUIRED FOR SHIPPING. PROVIDE ALL RIGGING POINT FOR REQUIRED CRANE LIFT TO ROOF LOCATION SHOWN ON PLANS.
- DO NOT INSTALL PIPING CONNECTIONS EXPOSED TO WEATHER OUTSIDE OF UNIT. ALL PIPING SHALL BE BROUGHT UP THROUGH CURB AND BE CONTINUALLY INSULATED AND/OR PROTECTED INTO INTERIOR OF ROOFTOP UNIT CABINET.
- PROTECT CONDENSATE DRAIN TRAP FROM POTENTIAL FREEZING CONDITIONS. INCLUDE OVERFLOW FLOAT SWITCH ALARM WITHIN CONDENSATE DRAIN PAN TO NOTIFY BAS OF ANY POTENTIAL OVERFLOW ISSUES.

ELECTRICAL

EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	CONTROLLER FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYPER	FUSE SIZE (AMPS)	DISCONNECT AT MOTOR NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
MAU 5-01	236A	208 V	3	24000	VFD	DIV 23/DIV 26	AT UNIT	DIV 23	250A	-	NEMA 4	DIV 26/DIV 26	ON UNIT	SWBD 5-1	2	2 1/2" C, 3-250 & 1# 4 GND	1
MAU 5-02	236A	208 V	3	24000	VFD	DIV 23/DIV 26	AT UNIT	DIV 23	250A	-	NEMA 4	DIV 26/DIV 26	ON UNIT	SWBD 5-1	3	2 1/2" C, 3-250 & 1# 4 GND	1

GENERAL ELECTRICAL NOTES:

- WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION.
- MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.

ELECTRICAL NOTES:

- PROVIDE VFD FOR EACH INDIVIDUAL MOTOR(4)

CONTROLLER TYPES:

VFD - VARIABLE FREQUENCY MOTOR CONTROLLER
MMS - MANUAL MOTOR STARTER (WITH OVERLOADS)
CP - CONTROL PANEL
MAGS - MAGNETIC STARTER
MRS/MSS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)

MAKE-UP AIR UNIT - PREFILTER SCHEDULE

MECHANICAL (234100)

EQUIPMENT TAG	AHU SERVED	TYPE	CFM	NUMBER OF MODULES	SIZE PER MODULE (H"xL"xD")	EFFICIENCY (%)	MERV RATING	APD CLEAN (IN W.C.)	APD AT 50% LOADING (IN W.C.)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
MAUPF 01	MAU 5-01	2" PLEATED	10,000	6	24"x24"x2"	30	8	0.3"	0.7"	CAMFIL-FARR	30/30	1,2
MAUPF 02	MAU 5-02	2" PLEATED	10,000	6	24"x24"x2"	30	8	0.3"	0.7"	CAMFIL-FARR	30/30	1,2

MECHANICAL NOTES:

- INCLUDE FILTER HOLDING RACK AND CLIPS FULLY ACCESSIBLE THROUGH ROOFTOP UNIT SERVICE DOOR.
- PROVIDE TWO(2) SET OF FILTERS UPON OCCUPANCY. EXTRA SET SHALL BE TURNED OVER TO OWNER FOR STORAGE FOR FIRST REPLACEMENT SET.

MAKE-UP AIR UNIT - SECDOND STAGE FILTER SCHEDULE

MECHANICAL (234133)

EQUIPMENT TAG	AHU SERVED	TYPE	CFM	NUMBER OF MODULES	SIZE PER MODULE (H"xL"xD")	EFFICIENCY (%)	MERV RATING	APD CLEAN (IN W.C.)	APD AT 50% LOADING (IN W.C.)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
MAUFF 01	MAU 5-01	4" PLEATED	10,000	6	24"x24"x4"	90	13	0.4	0.8	CAMFIL-FARR	AEROPLEAT	1,2
MAUFF 02	MAU 5-02	4" PLEATED	10,000	6	24"x24"x4"	90	13	0.4	0.8	CAMFIL-FARR	AEROPLEAT	1,2

MECHANICAL NOTES:

- INCLUDE A MAGNAHELIC GAUGE AROUND ENTIRE PREFILTER ASSEMBLY FOR MONITORING PRESSURE DROP FOR PERIODIC FILTER EXCHANGES.
- PROVIDE TWO(2) SET OF FILTERS UPON OCCUPANCY. EXTRA SET SHALL BE TURNED OVER TO OWNER FOR STORAGE FOR FIRST REPLACEMENT SET.

MAKE-UP AIR UNIT - SUPPLY FAN SCHEDULE

MECHANICAL (233416)

EQUIPMENT TAG	AHU SERVED	NUMBER OF FANS	TYPE	CLASS	CFM PER FAN	TOTAL CFM	ESP (IN W.C.)	TOTAL SP (IN W.C.)	WHEEL DIAMETER (IN)	VFD (YES/NO)	FAN RPM	BHP	DRIVE TYPE (BELT/DIRECT)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
MAUS 01	MAU 5-01	2	PLENUM	2	5,000	10,000	3.0"	4.4"	20"	YES	2008	4.91	DIRECT	GREENHECK	APD500	1,2,3,4
MAUS 02	MAU 5-02	2	PLENUM	2	5,000	10,000	3.0"	4.4"	20"	YES	2008	4.91	DIRECT	GREENHECK	APD500	1,2,3,4

GENERAL MECHANICAL NOTES:

A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

MECHANICAL NOTES:

- FABS SHALL ALL BE DIRECT DRIVE WITH FACTORY MOUNTED VFD FOR SPEED CONTROL. COORDINATION WITH CONTROLS CONTRACTOR FOR INTEGRATION WITH SEQUENCE OF OPERATION.
- INCLUDE TRIP FROM FACTORY AUTHORIZED TECHNICIAN TO CHECK FOR FAN WHEEL BALANCE AND VIBRATION DURING INITIAL START-UP.
- AIRFLOWS LISTED ABOVE INCLUDE ADDITIONAL CAPACITY FOR PARTIAL REDUNDANCY WHILE OPENING BYPASS DAMPER TO SUPPORT/SERVE ADJACENT AREAS IN CASE OF MAU FAILURE FROM ONE OF THESE TWO UNITS. SEE AIRFLOW DIAGRAM AND SEQUENCE OF OPERATION.
- EXTERNAL STATIC PRESSURE (ESP) LISTED ABOVE INCLUDES ADEQUATE DIRTY FILTER ALLOWANCES. MANUFACTURER MAY CALCULATE TOTAL STATIC PRESSURE WITHOUT DOUBLING-UP ON THAT ALLOWANCE.

MAKE-UP AIR UNIT - RETURN / EXHAUST FAN SCHEDULE

MECHANICAL (233416)

EQUIPMENT TAG	AHU SERVED	NUMBER OF FANS	TYPE	CLASS	CFM PER FAN	TOTAL CFM	ESP (IN W.C.)	TOTAL SP (IN W.C.)	WHEEL DIAMETER (IN)	VFD (YES/NO)	FAN RPM	BHP	DRIVE TYPE (BELT/DIRECT)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
MAUR 01	MAU 5-01	2	PLENUM	2	2500	5,000	1.0	1.0	14"	YES	2056	0.74	DIRECT	GREENHECK	APD355	1,2,3
MAUR 02	MAU 5-02	2	PLENUM	2	2500	5,000	1.0	1.0	14"	YES	2056	0.74	DIRECT	GREENHECK	APD355	1,2,3

GENERAL MECHANICAL NOTES:

A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

MECHANICAL NOTES:

- FABS SHALL ALL BE DIRECT DRIVE WITH FACTORY MOUNTED VFD FOR SPEED CONTROL. COORDINATION WITH CONTROLS CONTRACTOR FOR INTEGRATION WITH SEQUENCE OF OPERATION.
- INCLUDE TRIP FROM FACTORY AUTHORIZED TECHNICIAN TO CHECK FOR FAN WHEEL BALANCE AND VIBRATION DURING INITIAL START-UP.
- NOTE AIRFLOW LISTED ABOVE IS FOR RECIRCULATION MODE (DURING UNOCCUPIED HOURS ONLY). NORMAL OPERATION IS 100% OUTDOOR AIR, REFER TO SEQUENCE OF OPERATION.

MAKE-UP AIR UNIT - COOLING COIL SCHEDULE - DX

MECHANICAL (237433, 237333, 237339)

EQUIPMENT TAG	AHU SERVED	CFM	COIL					AIR					REFRIGERANT TYPE	SUCTION TEMPERATURE (F)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
			NUMBER OF COILS	EACH COIL SIZE (W"xH")	ROWS	FINS PER INCH	EAT		LAT		FACE VELOCITY (FPM)	APD (IN W.C.)							
MAUCC 01	MAU 5-01	10,000	1	per manuf.	6	12	91.0	72.0	54.7	53.9	<450	0.80	R-410A	45.0	394	595	GREENHECK	-	1, 2, 3
MAUCC 02	MAU 5-02	10,000	1	per manuf.	6	12	91.0	72.0	54.0	53.9	<450	0.80	R-410A	45.0	394	595	GREENHECK	-	1, 2, 3

MECHANICAL NOTES:

- CONFIRM THAT UNITARY CONTROLLER FOR REFRIGERANT COIL WILL COMMUNICATE WITH CONTROLS CONTRACTOR (BAS) TO PERFORM DISCHARGE TEMPERATURE RESET INCLUDED IN SEQUENCES.
- PROVIDE WITH DOUBLE SLOPED STAINLESS STEEL DRAIN PAN. INCLUDE FLOAT SWITCH FOR DETECTION OF OVERFLOW CONDITION TO REMOTELY ALARM TO BAS.
- REFER TO PIPING AND FLOW DIAGRAMS FOR ADDITIONAL PIPING COMPONENTS REQUIRED.

MAKE-UP AIR UNIT - HEATING COIL SCHEDULE - HEATING WATER

MECHANICAL (238216)

EQUIPMENT TAG	AHU SERVED	CFM	NUMBER OF COILS	EACH COIL SIZE (W"xH")	ROWS	FINS PER INCH	EAT (F)	LAT (F)	FACE VELOCITY (FPM)	APD (IN W.C.)	EWI (F)	LWT (F)	GPM	GLYCOL TYPE	GLYCOL %	WPD (FT)	CAPACITY (MBH)	MANUFACTURER	MECHANICAL NOTES
MAUHC 01	MAU 5-01	10,000	1	per manuf.	2	10	-20	79.6	500	0.50	160	130	73	PROPYLENE	40	3.2	1078	GREENHECK	1,2,3
MAUHC 02	MAU 5-02	10,000	1	per manuf.	2	10	-20	79.6	500	0.50	160	130	73	PROPYLENE	40	3.2	1078	GREENHECK	1,2,3

MECHANICAL NOTES:

- NOTE THAT INCOMING WATER TEMPERATURES WILL VARY SIGNIFICANTLY BASED ON OUTDOOR AIR CONDITIONS AND ENERGY RECLAIM. REFER TO CONTROLS SEQUENCE.
- REFER TO PIPING AND FLOW DIAGRAMS FOR ALL PIPING COMPONENTS REQUIRED. CONFIRM ACCESSIBILITY TO ALL COMPONENTS INDICATED ON DRAWINGS.
- IF MULTIPLE COILS ARE PROVIDED, INCLUDE DEDICATED BALANCING VALVES TO EQUALIZE FLOW THROUGH EACH COIL.

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Revision	Description	Date
1	ISSUE SET	08/18/2026

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08-18-2026



08-18-2026

Office of
Construction
and Facilities
Management

VA

U.S. Department
of Veterans Affairs

Drawing Title

MECHANICAL/ ELECTRICAL MAU
SCHEDULES

Approved:

Phase

Project Title

RENOVATE FIRST FLOOR FOR
NEW KITCHEN FOR THE SIOUX
FALLS VA MEDICAL CENTER

Location

SIOUX FALLS, SOUTH DAKOTA

Issue Date

08-18-2026

Checked

JG

Drawn

EC/TM

Project Number

VA #438-21-403
SGA #201956

Building Number

5

Drawing Number

M501

