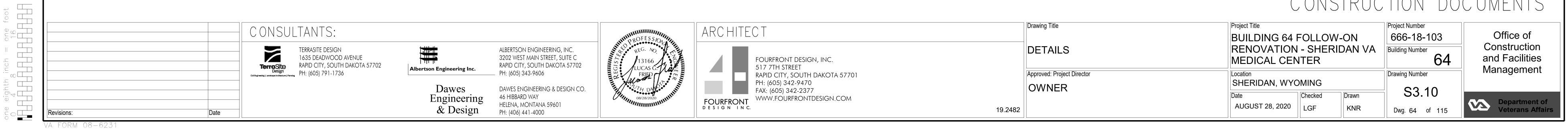
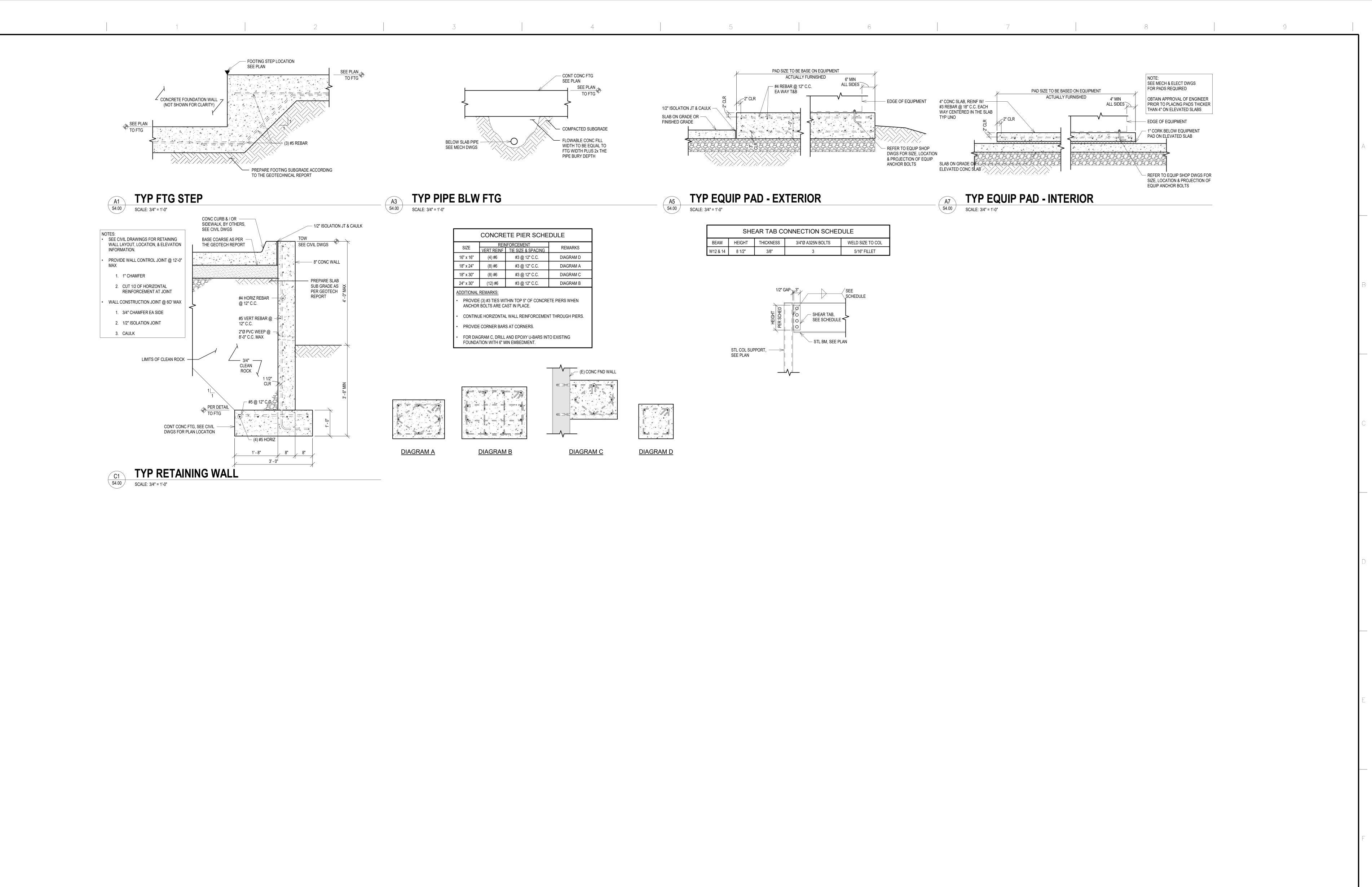


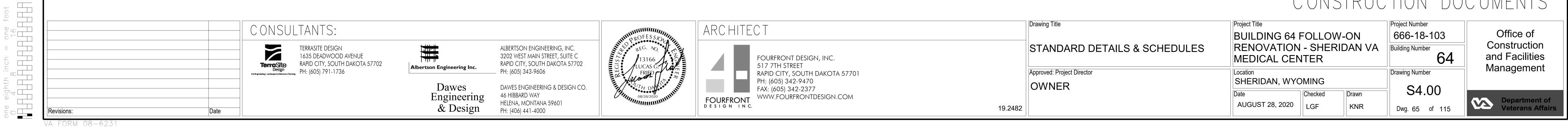
CONSTRUCTION DOCUMENTS



1 3 5



CONSTRUCTION DOCUMENTS



DUCT CONSTRUCTION SPECIFICATION

- RECTANGULAR DUCT SHALL BE GALVANIZED G60 OR G90 GRADE SHEETMETAL FORMED AND FABRICATED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE FOR PRESSURE CLASS OF <u>2" WG MINIMUM</u>. 26 GAGE METAL MINIMUM.
- ROUND DUCT SHALL BE GALVANIZED G60 OR G90 GRADE SHEETMETAL SPIRAL DUCTING FORMED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE FOR PRESSURE CLASS OF 2" WG MINIMUM. DIE CAST OR WELDED ELBOWS AND FITTINGS MEETING THE SAME SPECIFICATION ALLOWED. AT CONTRACTOR OPTION, LONGITUDE LOCK SEAM (SNAPPY) DUCT AND ADJUSTABLE FITTINGS ARE ALLOWED ONLY ON RESTROOM EXHAUST. 26 GAGE METAL MINIMUM.
- SEAL ALL DUCT SEAMS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE TABLE 1-2 SEAL <u>CLASS B</u>, MINIMUM.
- DUCT CONNECTOR SHALL BE STANDARD SLIP 'S' AND DRIVE CONNECTOR OF METAL GAGE NOT LESS THAN DUCT GAGE SPECIFIED IN #1. PROPRIETARY FLANGE CONNECTIONS SUCH AS WARD OR DUCT-MATE ARE
- SUPPORT ALL DUCTING IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE. NO EXCEPTIONS!
- DUCT LINER SHALL BE 1" OWENS CORNING 'LINA-COOUSTIC' BRAND, OR EQUAL. INSTALL ACCORDING TO MFR.
- INSULATE ALL EXTERIOR (OUTDOOR) DUCTING WITH RIGID 2" FIBERGLASS INSULATION WITH SEALED GALVANIZED CLADDING.

ALL RECTANGULAR ELBOWS TO CONTAIN SINGLE OR DOUBLE TURNING VEIN.

DUCT INSULATION/LINER REQUIREMENTS

- ALL SUPPLY DUCT INSTALLED NEW ON THIS PROJECT.
- ALL OUTSIDE AIR DUCT. ALL EXHAUST DUCT LOCATED BETWEEN THE BACKDRAFT DAMPER OF FAN AND BUILDING TERMINAL OUTLET
- ALL RETURN DUCT/PLENUM INSTALLED NEW ON THIS PROJECT.

DUCTWORK SYMBOLS KEY SECTION THROUGH RETURN OR EXHAUST AIR SECTION THROUGH SUPPLY OR OUTSIDE AIR DUCT SUPPLY, RETURN, EXHAUST, OR OUTSIDE AIR DUCT ACCESS DOOR (BOTTOM OR SIDE) ACOUSTICALLY LINED DUCT DAMPER, FIRE DAMPER, MANUAL VOLUME INCLINED DROP IN DIRECTION OF ARROW INCLINED RISE IN DIRECTION OF ARROW TRANSITION, RECTANGULAR TO ROUND FLEXIBLE DUCT TRANSITION OR OFFSETTING TRANSITION TRANSITION, RECTANGULAR HIGH EFFICIENCY TAKEOFF WITH DAMPER CEILING SUPPLY AIR DIFFUSER ## SIDEWALL SUPPLY AIR REGISTER ## **ELBOW TURNED DOWN** ELBOW TURNED UP ELBOW, RADIUS TYPE ELBOW, SQUARE OR RECTANGULAR TYPE WITH 22 GA SINGLE TURNING VANES RETURN OR EXHAUST AIR DUCT CEILING RETURN AIR REGISTER ## SIDEWALL RETURN AIR REGISTER ## OPEN END DUCT

FLEXIBLE CONNECTION

	PLUMBING/PI	PING SY	MBOLS
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
$-\!$	GATE, BALL, OR FUEL SOV VALVE	—	UNION, THREADED OR FLANGED
——>>>—	GLOBE VALVE	W H	WATER HAMMER ARRESTOR
——↓Ō⊢——	GAS COCK		FLOOR DRAIN
—— ₹——	PLUG VALVE	•	FLOOR SINK
	SOLENOID VALVE	0	FLOOR CLEANOUT, INT. OR EXT.
PRV	PRESSURE REDUCING VALVE	co	WALL CLEANOUT
── ►	CHECK VALVE	, 工	1/4 TURN BOILER DRAIN W/CAP
*	PRESS./TEMP. RELIEF VALVE	 +	HOSE BIBB, INTERIOR OR EXTERIOR
	RPP BACKFLOW PREVENTOR	р Б	90 DEGREE ELBOW (UP, DOWN, PLAN)
₩ <u>й</u> —й-₩	DOUBLE CHECK BACKFLOW PREV.	요 프 노	TEE FITTING (UP, DOWN, PLAN)
	WATER METER	户	WYE (PLAN VIEW)
<u> </u>	PRESSURE REDUCING VALVE	ľ	COMBINATION WYE & 1/8 BEND
P	THERMOMETER WITH WELL	T	WYE (VERTICAL) WITH 1/4 BEND
9	PRESSURE GAGE WITH SHUTOFF	√ 1	LONG RADIUS SAN. SEWER FITTING
Р	PRESSURE SWITCH	LABV_L	AUTOMATIC BALANCING VALVE
	PUMP	MBV	MANUAL BALANCING VALVE
	CONTROL VALVE, 2-WAY		DIRECTION OF FLOW
——————————————————————————————————————	CONTROL VALVE, 3-WAY		STRAINER, CAST IRON OR BRONZE
	NG OR LP EQUIPMENT REGULATOR		STRAINER WITH BLOW DOWN & PLUG
	FLEXIBLE PIPE CONNECTOR	$-\!\otimes\!-$	EXPANSION VALVE
S	STEAM TRAP	<u> </u>	AUTO AIR VENT, EXTEND TO DRAIN
€	POINT OF CONNECTION SYMBOL	Fs OR F	FLOW SWITCH
	CIRCUIT SETTER	- H	PETE'S PLUG

BASIC MECHANICAL REQUIREMENTS

FURNISH ALL LABOR AND MATERIALS AND PERFORM ALL OPERATIONS NECESSARY FOR THE INSTALLATION OF COMPLETE AND OPERATING MECHANICAL SYSTEMS SUBJECT TO THE CONDITIONS OF THE CONTRACT. PROVIDE SATISFACTORY OPERATION OF ALL EQUIPMENT AND CONTROLS TO THE ARCHITECT/ENGINEER UPON REQUEST.

ALL MATERIALS SHALL BE NEW. SUBSTITUTIONS SHALL BE APPROVED BY OWNER AND/OR ENGINEER.

VISIT THE PREMISES BEFORE SUBMITTING BID AS NO CHANGE ORDERS WILL BE ALLOWED FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.

COORDINATE AND ORDER THE PROGRESS OF WORK TO CONFORM TO THE PROJECT SCHEDULE AND THE PROGRESS OF THE WORK OF THE OTHER TRADES.

MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND BECAUSE OF THE SMALL SCALE, IT IS NOT POSSIBLE TO INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. VERIFY ALL SPACE REQUIREMENTS, COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE

PERFORM WORK IN ACCORDANCE WITH GOOD COMMERCIAL PRACTICE. THE GOOD APPEARANCE OF THE FINISHED WORK SHALL BE OF EQUAL IMPORTANCE WITH ITS MECHANICAL EFFICIENCY AND INTENT. THE OWNER MAY REJECT WORK IF WORKMANSHIP AND APPEARANCE ARE NOT SATISFACTORY.

INSTALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR

REGULATIONS TAKE PRECEDENCE.

COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AND ORDINANCES. COMPLY WITH REQUIREMENTS OF THE UTILITY COMPANIES. IN THE CASE OF DIFFERENCES BETWEEN THESE REQUIREMENTS AND ORDINANCES, THE MOST STRINGENT SHALL GOVERN. CALL FOR INSPECTIONS REQUIRED BY LOCAL BUILDING INSPECTION AUTHORITY.

PLANS AND SPECIFICATIONS GO HAND IN HAND. WHAT IS REQUIRED IN ONE IS REQUIRED IN BOTH. WHERE CONFLICTS BETWEEN SPECIFICATIONS AND PLANS EXIST, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.

MECHANICAL PLANS SUPERCEDE ARCHITECTURAL PLANS. BACKGROUND FLOOR PLANS USED FOR MECHANICAL DRAWINGS MAY SHOW DIFFERENT THAN THE FINAL ARCHITECTURAL LAYOUT. REFER TO ARCHITECTURAL DRAWINGS FOR ACTUAL DIMENSIONS AND LAYOUT PLACEMENTS FOR SPACE CONDITIONS.

MECHANICAL DETAILS MAY OR MAY NOT BE DIRECTLY REFERENCED. ALL DETAILS SHOWN ARE TO BE USED FOR BASIS OF INSTALLATION IN ALL CASES, IN COORDINATED EFFORT WITH MANUFACTURERS INSTALLATION RECOMMENDATIONS.

MECHANICAL SHEETS ARE NOT INTENDED TO SPECIFICALLY BE TRADE SPECIFIC TO MECHANICAL INSTALLATION WORK. ALL MECHANICAL AND ELECTRICAL TRADES ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES AND INCLUDING A COMPLETE PACKAGE WITHIN THEIR OFFER FOR A COMPLETE SYSTEM.

AT COMPLETION OF WORK, DELIVER COMPLETED PROJECT RECORD DOCUMENTS MARKED WITH FIELD CHANGES TO OWNER.

HETO* | VARIES | HIGH EFFICIENCY DUCT TAKEOFF

MD* VARIES MOTORIZED DAMPER ROUND

ON THIS PROJECT, UPON APPROVAL OF ENGINEER.

VARIES BALANCING DAMPER ROUND

PROVIDE A WRITTEN WARRANTY TO THE OWNER COVERING THE ENTIRE MECHANICAL WORK TO BE FREE FROM DEFECTIVE MATERIALS, EQUIPMENT AND WORKMANSHIP FOR A PERIOD OF 1 YEAR AFTER DATE OF ACCEPTANCE.

CLEAN EXPOSED SURFACES OF FURNACES, HOT WATER HEATERS, PLUMBING FIXTURES AND OTHER EXPOSED ITEMS OF GREASE, DIRT OR OTHER FOREIGN MATERIAL. REMOVE RUBBISH AND DEBRIS RESULTING FROM THE OPERATIONS AND LEAVE EQUIPMENT SPACES CLEAN AND READY FOR USE.

MAINTAIN ALL CEILING, FLOOR AND WALL FIRE AND SMOKE PROTECTION RATINGS. SEAL ALL CONDUIT AND ENCLOSURE PENETRATIONS TO COMPLY WITH UL ASSEMBLY AND BUILDING CODE REQUIREMENTS. ALL SEALANTS AND CONSTRUCTIONS SHALL BE APPROVED BY OWNER PRIOR TO APPLICATION. ALL OPENINGS SHALL BE SEALED DAILY.

CONTRACT DRAWINGS FOR MECHANICAL WORK ARE IN PART

DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, CONDUITS, AND APPROXIMATE SIZES AND LOCATIONS OF EQUIPMENT AND OUTLETS. MECHANICAL/ELECTRICAL TRADES SHALL FOLLOW THESE DRAWINGS IN LAYING OUT THEIR WORK, CONSULT GENERAL CONSTRUCTION DRAWINGS TO FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THEIR WORK, AND SHALL VERIFY SPACES IN WHICH THEIR WORK WILL BE INSTALLED. COORDINATE WORK WITH OTHER TRADES AND AS PROJECT CONDITIONS REASONABLY REQUIRE WITHOUT EXTRA COSTS TO OWNER.

ALL DUCTWORK DIMENSIONS, AS SHOWN ON THE DRAWINGS, ARE

VER 2012.

INTERNAL CLEAR DIMENSIONS AND DUCT SIZE SHALL BE INCREASED TO COMPENSATE FOR DUCT LINING THICKNESS.

PROVIDE ALL 90 DEGREE SQUARE ELBOWS WITH SINGLE RADIUS TURNING VANES UNLESS OTHERWISE INDICATED.

COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH

ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING, AND OTHER CEILING ITEMS AND MAKE DUCT MODIFICATIONS TO SUIT. AT CONTRATORS OPTION, FLEXIBLE DUCT MAY BE USED TO CONNECT SUPPLY REGISTERS AND DIFFUSERS ON THIS PROJECT

ONLY. RUNS OF FLEXIBLE DUCT SHALL NOT EXCEED 5 FEET, UNLESS SPECIFICALLY SHOWN ON DRAWING. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVIDED DUCTS AND

ADDITIONAL COST TO THE OWNER. MECHANICAL SYSTEMS SHALL COMPLY WITH INTERNATIONAL MECHANICAL CODE VER 2018 AND INTERNATIONAL ENERGY CODE

TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO

PLUMBING/PIPING SYSTEMS SHALL COMPLY WITH INTERNATIONAL

FUEL GAS CODE VER 2018 AND UNIFORM PLUMBING CODE VER 2018.

LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE EXACT LOCATIONS IN THE FIELD (NOT ALL UTILITIES ARE SHOWN).

APPLY FOR AND PAY FOR ALL PERMITS, FEES, LICENSES AND INSPECTIONS. ALL WORK IS SUBJECT TO APPROVAL BY THE CODE OFFICIAL AND ENGINEER. ALL CORRECTIONS SHALL BE MADE WITHOUT EXTRA COSTS TO OWNER.



CALL BEFORE YOU DIG

MEI	P ABBREVIATIONS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
A/G	ABOVE GRADE
B/G	BELOW GRADE
COND	CONDENSATE DRAIN CONTRACTOR PROVIDED CONTRACTOR
CPCI	INSTALLED
CPOI	CONTRACTOR PROVIDED OWNER
01 01	INSTALLED
CWR	CHILLED (HYDRONIC) WATER RETURN
CWS	CHILLED (HYDRONIC) WATER SUPPLY
DCW	DOMESTIC (POTABLÉ) COLD WATER
DHW	DOMESTIC (POTABLE) HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
EA	ENTERING AIR
EC	ELECTRICAL CONTRACTOR
EX	EXHAUST
G-SAN	GREASE SANITARY SEWER
GC HC	GENERAL CONTRACTOR HVAC CONTRACTOR
HWR	HOT (HYDRONIC) WATER RETURN
HWS	HOT (HYDRONIC) WATER RETORN HOT (HYDRONIC) WATER SUPPLY
HP	HIGH PRESSURE
IJS	IN JOIST SPACE
LA	LEAVING AIR
LP	PROPANE GAS
MA	MIXED AIR
MC	MECHANICAL CONTRACTOR
MP	MEDIUM PRESSURE
MPG	MEDIUM PRESSURE NATURAL GAS
NG OA	NATURAL GAS OUTSIDE/OUTDOOR AIR
OPCI	OWNER PROVIDED CONTRACTOR
OFCI	INSTALLED
OPOI	OWNER PROVIDED OWNER INSTALLED
PC	PLUMBING CONTRACTOR
RA	RETURN AIR
RECT	RECTANGULAR
SA	SUPPLY AIR
SCR	STEAM CONDENSATE RETURN
SAN	SANITARY SEWER
SS	STORM WATER SEWER
STM	STEAM
SYS	SYSTEM

GENERAL CONSTRUCTION NOTES ALL WORK PERFORMED IN CONJUNCTION WITH THESE DRAWINGS SHALL MEET ALL CURRENT APPLICABLE BUILDING AND ENERGY CODES.

ALL WORK PERFORMED IN CONJUNCTION WITH THESE DRAWINGS IS SUBJECT TO APPROVAL BY THE AUTHORITY HAVING JURISDICTION (CODE OFFICIAL).

ALL ROOF PENETRATIONS SHALL BE PATCHED AND SEALED, WITH WARRANTY FROM BUILDING ROOFING

THIS SET OF DOCUMENTS IS INTENDED FOR AHJ REVIEW AND SHALL BE CONSIDERED AS CONSTRUCTION DOCUMENTS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL CONDITIONS, EXISTING AND/OR NEW,

OF THE SITE AS WELL AS LOCATIONS, QUANTITIES, TYPE AND STYLE OF ALL PRODUCTS PROVIDED, WITH OWNER, PRIOR TO ORDERING OR INSTALLING.

PIPE	MATERIAL AND INSTALLAT	ΓΙΟΝ	REQUIREN	<u>/ΕΝ</u> Ί	S	
SERVICE OR SYSTEM	MATERIAL	PIPE SIZE	INSULATION THICKNESS	PIPE SIZE	PRESSURE TEST*	NOTES:
DOMESTIC COLD WATER	TYPE L COPPER, VIEGA PEX MODEL V5001 (INSIDE WALLS AND CRAWLSPACE ONLY), PRO-PRESS	ALL	1/2" FIBERGLASS	ALL	100 PSI AIR-30 MIN	1,2,3
DOMESTIC HOT WATER (100-180 DEG F)	TYPE L COPPER, VIEGA PEX MODEL V5002 (INSIDE WALLS AND CRAWLSPACE ONLY), PRO-PRESS	ALL	1" FIBERGLASS	ALL	100 PSI AIR-30 MIN	1,2,3
NATURAL GAS	BLACK T&C WITH BMI FITTINGS WELDED STEEL SCH 40	<=2" >2"	NONE	N/A	40 PSI AIR-60 MIN	2
SANITARY SEWER U/G	SCHEDULE 40 PVC DWV, HUBLESS CAST IRON	ALL	NONE	N/A	20 PSI AIR-60 MIN	
SANITARY SEWER A/G	SCHEDULE 40 PVC DWV, HUBLESS CAST IRON	ALL	NONE	N/A	20 PSI AIR-60 MIN	2
CONDENSATE	SCHEDULE 40 PVC DWV (FLEXIBLE TUBING NOT ALLOWED)	ALL	NONE	N/A	VISUAL INSPECTION	
HYDRONIC HOT WATER	TYPE L COPPER, BLACK STEEL T&C (MALLEABLE)	<1-1/2"	1-1/2" FIBERGLASS		75 DOLAID GO MINI	
S&R -	TYPE L COPPER, BLACK STEEL T&C (MALLEABLE)	1-1/2" - 2"	2" FIBERGLASS	N/A	75 PSI AIR-60 MIN 30 PSI AIR-120 MIN PEX	1,2
Sart	WELDED STEEL SCH 40,	>2"	2" FIBERGLASS		OUT OF AIR-120 WINT EX	
STEAM CONDENSATE	TYPE L COPPER, BLACK STEEL T&C (BCI)	<1-1/2"	1-1/2" FIBERGLASS		75 PSI AIR-60 MIN	
RETURN -	TYPE L COPPER, BLACK STEEL T&C (BCI)	1-1/2" - 2"	2" FIBERGLASS	N/A	30 PSI AIR-120 MIN PEX	1,2
11210111	WELDED STEEL SCH 40	>2"	2" FIBERGLASS		OUT OF AIR-120 WIIN FLX	
	TYPE L COPPER, BLACK STEEL T&C (MALLEABLE)	<2"	2-1/2" FIBERGLASS		75 PSI AIR-60 MIN	
STEAM	WELDED STEEL SCH 40	2" - 4"	2-1/2" FIBERGLASS	N/A	30 PSI AIR-00 MIN PEX	1,2
	WELDED STEEL SCH 40	>4"	4" FIBERGLASS		OUT OF AIR-120 MIN FEX	

INSULATION TO BE OF HEAVY DENSITY BONDED FIBERGLASS WITH ALL SERVICE JACKET (WHITE). FITTING TO BE PVC ZESTON COVERS WITH FLEXIBLE INSULATION WRAP. SEAL ALL JOINTS WITH SEALANT. K VALUE NOT EXCEEDING 0.27 BTU PER IN/H*FT^2*DEG F. SEISMIC BRACE ALL PIPE GREATER THAN 2-1/2" ID PER LOCAL CODE. ALL PIPING IN MECHANICAL ROOMS AND WATER SERVICES TO BE NSF RATED METALLIC PIPE. NO EXCEPTIONS.

GENERAL NOTE ALL: SEAL ALL NON RATED STRUCTURE PIPE PENETRATIONS INCLUDING DRAFT STOPS WITH SILICON OR FIRE RATED EXPANDING FOAM. SEAL ALL RATED PIPE PENETRATIONS IN ACCORDANCE WITH CONTRACTOR SELECTED MFR FIRE CAULK SYSTEM (AND/OR FIRE COLLAR) AND MATCH RATING WITH SPECIFIC UL LISTING. PROVIDE ENGINEER AND INSPECTOR FOR AHJ WITH SHOP DRAWING OF RATED ASSEMBLY PRIOR TO INSTALLATION.

PROVIDE WITH MOTORIZED ACTUATOR WITH END SWITCH PROOF, CONTRACTOR TO SELECT PREFERRED VOLTAGE AND WIRE TO CONTROL DEVICE AS NECESSARY.

NOTE: ALL ITEMS LISTED ON THIS SCHEDULE ARE CONSIDERED BASIS OF DESIGN, AND PRODUCTS CONSIDERED EQUAL SHALL BE ELIGIBLE TO BE SUPPLIED AND INSTALLED

INDICATES ITEMS THAT MAY NOT BE SPECIFICALLY TAGGED ON PLAN SHEETS, BUT ARE NOTED IN FLOOR PLANS, DETAILS, SECTIONS, OR CALLOUTS SHALL BE PROVIDED

HVAC SPECIALTY SCHEDULE

| BALANCING DAMPER RECTANGULAR (<10" SINGLE / GREATER OPP BLD) NAILOR 1870 / 1020

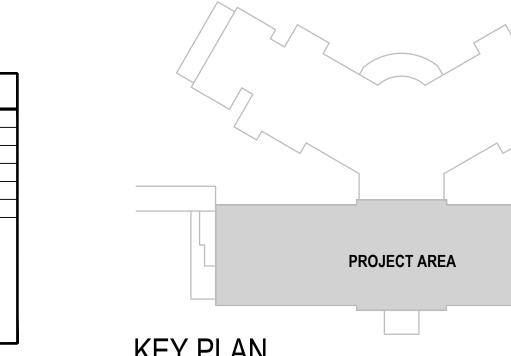
MD* | VARIES | MOTORIZED DAMPER RECTANGULAR (<10" SINGLE / GREATER OPP BLD) NAILOR 1870 / 1020

AND INSTALLED BY THE CONTRACTOR BASED ON REQUIREMENTS ASSOCIATED WITH THIS PROJECT.

PROVIDE WRITTEN AND SIGNED REPORT BY CONTRACTOR FOR ALL SYSTEMS TESTED, TYPE OF TEST, DATE, PRESSURE, TIME START, TIME END, AND SYSTEM TESTED. SUBMIT TO ENGINEER IN IOM SUBMITTAL.

HERCULES HTO

	SHEET LIST TABLE
SHEET NUMBER	SHEET TITLE
M000	PROJECT REQUIREMENTS & SPECIFICATIONS
M001	MECHANICAL SCHEDULES
M002	MECHANICAL DETAILS
M003	MECHANICAL DETAILS
M004	MECHANICAL DETAILS
M005	MECHANICAL CONTROLS DIAGRAM
M006	MECHANICAL CONTROLS DIAGRAM
M007	MECHANCIAL CONTROLS DIAGRAM
M100	FIRST & SECOND FLOOR HVAC DEMOLITION PLANS
M101	THIRD FLOOR HVAC DEMOLITION PLAN
M200	FIRST & SECOND FLOOR HVAC DUCTING PLANS
M201	THIRD FLOOR HVAC DUCTING PLAN
M202	ENLARGED MECHANICAL 207 MECHANCIAL PLAN
M300	FIRST & SECOND FLOOR HVAC PIPING PLANS
M301	THIRD FLOOR HVAC PIPING PLAN
M400	BASEMENT & FIRST FLOOR PLUMBING DEMOLITION PLANS
M401	SECOND FLOOR & THIRD FLOOR PLUMBING DEMOLITION PLANS
M500	PLUMBING SCHEDULES & DETAILS
M501	BASEMENT PLUMBING PLAN
M502	FIRST FLOOR PLUMBING PLANS
M503	SECOND FLOOR PLUMBING PLANS
M504	THIRD FLOOR PLUMBING PLANS
M505	NEW DOMESTIC WATER ISOMETRIC PLAN



NOT TO SCALE CONSTRUCTION DOCUMENT

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∥Owner

15.2226.17

Drawing Title **PROJECT REQUIREMENTS & SPECIFICATIONS** Approved: Project Director

Project Title **BUILDING 64 FOLLOW-ON** MEDICAL CENTER

WITH LOCKING QUAD

WITH LOCKING QUAD

WITH LOCKING QUAD

RENOVATION - SHERIDAN VA SHERIDAN, WYOMING Checked

AUGUST 28, 2020

666-18-103 Building Number Drawing Number

Dwg. 66 of 115

PM - WW

Project Number

Office of Construction and Facilities Management



+ **-**

VA FORM 08-623

NOTE: SNOW MELT LOOP PIPING UTILIZES 50% PROPYLENE GLYCOL SOLUTION SNOW MELT SCHEDULE TUBING | SUPPLY | NUMBER | TUBING TUBING WATER ACTIVE LOOP LEADER TOTAL LOOP GLYCOL FLOW LINEAR LOOP FLOW TOTAL FLOW PRESSURE DROP PRESSURE DROP TOTAL LOAD TOTAL LOAD IDENT. AREA S.F. OUTDOOR TEMP. NOTES SERVED MANIFOLD # SIZE AMOUNT DIFFER. (BTUH/SF) (BTUH) TEMPERATURE O.C. TEMP. LOOPS LENGTH LENGTH LENGTH FT. GPM GPM (LINEAR FT.) 55,500 600' 5.4 SM-1 300 -10 185 38 DEG 5/8" 130 200' 215' 0.0085 1.8 0.0410 8.8 SIDEWALK LOAD DOCK/ EAST 1220' SM-2 112850 38 DEG 5/8" 25 130 203' 213' 0.0085 1.8 10.9 0.0410 SIDEWALK 1. REFER TO SNOW MELt SPECIFICATION FOR MANUFACTURER AND COMPONENT DETAILS.

		DU	CTL	ESS SF	PLIT A	IR CO	NDI	TIONING	SYSTEM SCHEDULE	CU AC # #
EQUIP NO.	SERVICE	COOLING CAPACITY	CFM	REFRIG	TEMPE	SIGN RATURE		LECTRICAL	MANUFACTURER & MODEL	OPTIONS-ACCESSORIES
NO.		(BTU/HR.)			INDOOR	OUTDOOR	MCA	VOLTPHCY.		
AC-3	COOLING	24,000	470	R410-A	80 DB 67 WB	1	0.6	COMBINED	DAIKIN FAQ24TAVJU	2, 3, 4
CU-3	COOLING	24,000	-	R410-A	-	-	16.5	208/ 230V 1Ø - 60CY	DAIKIN RZR24TAVJU	1, 3, 4
NOTES		•								•

1. PROVIDE LOW AMBIENT KIT, OPERATIONAL DOWN TO 0°F. 2. MOUNT REMOTE CONTROL THERMOSTAT (#BRC2A71) ON WALL WHERE SHOWN ON PLANS.

SIZE REFRIGERANT LINESET STRICTLY PER MFR. DIRECTIONS 4. PROVIDE MFR. RECOMMENDED CONTROL WIRE AND POWER CONDUCTOR TO INTERCONNECT OUTDOOR & INDOOR UNIT.

						FA	N C	OIL U	NIT SC	CHEDUL	E.		FCU #
EQUIPMENT					I	HEATING COIL				ELECTRI	CAL	MANUFACTURER & MODEL	OPTIONS-ACCESSORIES
NO.	AREA SERVED	SUPPLY CFM	FILTERS	HOT WATER FLOW (GPM)	HEATING (MBTU/HR)	E.W.T (°F)	∆ T (°F)	HEATING COIL ROWS	BRANCH PIPE SIZE	VOLT./PH./CY.	WATTS	WARRIOT NOT OT LETT OF MICESEE	61 116116 7166266611126
FCU-1	STAIRWELL	360	1"	1.7	16.7	150	20	1	3/4"	120/1/60	71	DAIKIN FCVS-04	1, 2, 3, 4
FCU-2	STAIRWELL	360	1"	1.7	16.7	150	20	1	3/4"	120/1/60	71	DAIKIN FCVS-04	1, 2, 3, 4
FCU-3	STAIRWELL	360	1"	1.7	16.7	150	20	1	3/4"	120/1/60	71	DAIKIN FCVS-04	1, 2, 3, 4
FCU-4	STAIRWELL	360	1"	1.7	16.7	150	20	1	3/4"	120/1/60	71	DAIKIN FCVS-04	1, 2, 3, 4
NOTES:		•	•					•					

PROVIDE FACTORY PRE-WIRED DISCONNECT SWITCH. PROVIDE 4 ADDITIONAL 1" MERV 8 FILTERS WITH UNIT.

EXTEND CABINET COVER TO CONCEAL VALVES, CONTROLS AND CONDENSATE PUMP.

. FLOAT SWITCH IN MAIN CONDENSATE PAN.

			FAN SO	CHED	ULE					EF\ #
EQUIP.				STATIC			MOTOR		MANUFACTURER & MODEL	NOTES
NO.	SERVICE	LOCATION	CFM	PRESS. (IN. W.G.)	AMP	HP	SONES	VOLTPHCY.	MANUFACTURER & MODEL	NOTES
EF-2	EXHAUST	2ND FLOOR MECH	810	0.8	3.4	0.5	9.1	120-1-60	GREENHECK SQ-120-VG	1,2
RF-2	RETURN	2ND FLOOR MECH	14000	1.0	4.2	5	21	460-3-60	GREENHECK EQB-30-50	2

PROVIDE WITH FACTORY DISCONNECT, FACTORY SPEED CONTROL, AND FACTORY BACKDRAFT DAMPER.

INTERLOCK FAN WITH AHU-2 FOR OPERATION. PROVIDE WITH FACTORY BELT GUARD AND MOTOR COVER.

PROVIDE WITH FACTORY WIRED DISCONNECT SWITCH. PROVIDE WITH VFD WITH BACNET INTERFACE CARD.

2. PLATE AND FRAME HEAT EXCHANGER

			AIR SE	PARATOR SO	CHEDULE				AS #
IDENT	MFR	MODEL	SYSTEM	TYPE	GPM	INLET/ OUTLET SIZE (IN)	MAX P.D. (FT)	OPER. WEIGHT (LBS)	NOTES
AS-1	SPIROTHERM	VDN200	SNOW MELT	COALESCING	15	2"/2"	2'-0"	110	1, 2
	ATED FOR 150 PSI @ OMBINATION AIR/DIR								

			WATE	R-WATE	ER HEAT	ΓEXCH	ANGER	SCHEDULE			SMP #
IDENT.	PENT. SYSTEM		PRIMARY			ECONDAF	RY	HEATING CAPACITY	# OF PASSES	SCALE FACTOR	NOTES
		GPM	EWT	LWT	GPM	EWT	LWT	МВН	PASSES	FACTOR	
HEX-3	SNOW MELT	15	150	125	15	105	130	187.5	N/A	0.0005	1, 2
NOTE	S		-	-					-	-	•

AIR HANDLING UNIT SCHEDULE

 EQUIP. NO.
 SERVICE
 LOCATION
 MIND OUTSIDE AIR (CFM)
 SUPPLY FAN
 COOLING COIL

 AHU-2
 H/C/V
 2ND MECH
 6000
 15000
 3.55
 15
 375 MBH
 80
 44
 54
 79.6
 63.2
 54.9
 54.27
 439.6 MBTU
 32
 180
 150
 29
 60
 480-3-60
 TRANE CSAA030
 1,2,3,4,5,6

PROVIDE WITH FILTER, PREHEAT COIL, COOLING COIL, AND MIXED AIR (BLENDER) SECTIONS. PROVIDE WITH FACTORY VFD WITH BACNET INTERFACE CARD.

1. SYSTEM IS BASED ON 40% GLYCOL PRIMARY AND 50% GLYCOL SECONDARY.

HORIZONTAL DISCHARGE KIT, AND SMOKE DETECTORS (SUPPLY & MIXED). COORDINATE DOOR LOCATIONS WITH OPEN SIDE OF UNIT.

PROVIDE 4 ADDITIONAL SETS OF MERV 11 PRIMARY FILTERS AND MERV 8 PRE-FILTERS.

IT IS NON-OVERLOADING. QUOTE ALL CHANGES TO STARTERS & ELECTRICAL WORK.

UNIT IS INTENDED TO MODULAR SO IT CAN BE KNOCKED DOWN AND BROUGHT INTO THE BUILDING THROUGH THE WEST END WHERE THE EXISTING OUTDOOR AIR LOUVER IS LOCATED, AND FIELD ASSEMBLED IN THE MECHANICAL 207 SPACE.

				PUMP	SCHED	ULE								SMP #
IDENT	0)/07514	T)/DE	MANUEAGTURER	MODELNO		FEET		МОТ	TOR			STARTER		NOTES
IDENT.	SYSTEM	TYPE	MANUFACTURER	MODEL NO.	GPM	HEAD	H.P.	RPM	ELEC.	AMP	TYPE	LOCATION	DISC. TYPE	NOTES
SMP-1	SNOW MELT SYSTEM	INLINE	GRUNDFOS	MAGNA3 32-60-98126820	15	6	1/6	2194	115-230/1/60	1.01	Α	MECHANICAL ROOM	SEE ELEC	1
SMP-2	SNOW MELT SYSTEM	INLINE	GRUNDFOS	MAGNA3 40-180F-98126807	20	35	3/4	3487	115-230/1/60	5.26	А	MECHANICAL ROOM	SEE ELEC	1
NOTES		•								START	ER			•
1. IF ANY F	POINT ON PUMP CURVE EXCEEDS	S THIS H.P. GO TO NEX	T LARGER SIZE MOTOR AN	ID INCLUDE IN PUMP. MOTOR	MAY BE S	MALLER IF				A. V	FD WITH	BACNET INTERFACE CARE	PROVIDED BY D	OIV. 26.

A. VFD WITH BACNET INTERFACE CARD PROVIDED BY DIV. 26.

					VA	V IEF	RMINA	L SC	HED	ULE			<u></u>
EQUIPMENT	INLET	NOMINAL CFM	MINIMUM STATIC				HEATING CA						
NO.	SIZE	CAPACITY OF UNIT	PRESSURE AT INLET	CFM	AIR ENTERS (OF)	AIR LEAVES MAX ([©] F)	BTU/HR.	WATER ENT.(F)	WATER LVG.(*F)	GPM	BRANCH PIPE SIZE	MANUFACTURER & MODEL	NOTES
VAV-1	6"Ø	550	0.75	460	60	95	17,710	150	127	1.5	1/2"	NAILOR 3001 HEATING	1
VAV-2	7"Ø	800	0.75	600	60	95	17,710	150	127	1.5	1/2"	NAILOR 3001 HEATING	
VAV-3	6"Ø	550	0.75	420	60	95	16,170	150	129	1.5	1/2"	NAILOR 3001 HEATING	
VAV-4	5"Ø	400	0.75	300	60	95	11,550	150	127	1.0	1/2"	NAILOR 3001 HEATING	
VAV-5	6"Ø	550	0.75	400	60	95	11,550	150	127	1.0	1/2"	NAILOR 3001 HEATING	
VAV-6	10"Ø	1840	0.75	1540	60	95	59,290	155	125	4.0	3/4"	NAILOR 3001 HEATING	
						İ	NOT USI	ĒD					
						ľ	NOT USI	ΞD					
VAV-9	6"Ø	550	0.75	500	60	95	19,250	155	130	1.5	1/2"	NAILOR 3001 HEATING	
VAV-10	6"Ø	550	0.75	420	60	95	12,512	155	130	1.0	1/2"	NAILOR 3001 HEATING	
VAV-11	4"Ø	225	0.75	200	60	95	7,700	155	129	0.75	1/2"	NAILOR 3001 HEATING	
VAV-12	7"Ø	800	0.75	580	60	95	22,330	155	125	1.5	1/2"	NAILOR 3001 HEATING	
VAV-13	7"Ø	800	0.75	650	60	95	25,025	155	126	1.75	1/2"	NAILOR 3001 HEATING	
	•					ı	NOT USI	ΞD					
VAV-15	6"Ø	550	0.75	450	60	95	17,325	155	132	1.5	1/2"	NAILOR 3001 HEATING	
VAV-16	5"Ø	400	0.75	300	60	95	11,550	155	127	1.0	1/2"	NAILOR 3001 HEATING	
VAV-17	6"Ø	550	0.75	420	60	95	16,170	155	133	1.5	1/2"	NAILOR 3001 HEATING	
VAV-18	7"Ø	800	0.75	640	60	95	24,640	155	133	1.75	1/2"	NAILOR 3001 HEATING	
VAV-19	6"Ø	550	0.75	500	60	95	19,250	155	130	1.5	1/2"	NAILOR 3001 HEATING	
VAV-20	6"Ø	550	0.75	320	60	95	12,320	155	130	1.0	1/2"	NAILOR 3001 HEATING	
VAV-21	6"Ø	550	0.75	500	60	95	19,250	155	130	1.5	1/2"	NAILOR 3001 HEATING	
VAV-22	6"Ø	550	0.75	540	60	95	20,790	155	127	1.5	1/2"	NAILOR 3001 HEATING	
VAV-23	6"Ø	550	0.75	500	60	95	19,250	155	130	1.5	1/2"	NAILOR 3001 HEATING	
VAV-24	4"Ø	225	0.75	200	60	95	7,700	155	129	0.75	1/2"	NAILOR 3001 HEATING	
VAV-25	5"Ø	400	0.75	360	60	95	13,860	155	127	1.0	1/2"	NAILOR 3001 HEATING	
VAV-26	7"Ø	800	0.75	750	60	95	28,875	155	126	2.0	1/2"	NAILOR 3001 HEATING	
VAV-27	5"Ø	400	0.75	320	60	95	12,320	155	130	1.0	1/2"	NAILOR 3001 HEATING	
VAV-28	5"Ø	400	0.75	360	60	95	13,860	155	127	1.0	1/2"	NAILOR 3001 HEATING	
VAV-29	5"Ø	400	0.75	300	60	95	11,550	155	127	1.0	1/2"	NAILOR 3001 HEATING	
VAV-30	4"Ø	225	0.75	150	60	95	5,775	155	132	0.5	1/2"	NAILOR 3001 HEATING	

SG=SUPF	PLY GRILLE	RG=RETURN GRILLE	SD=SUPPLY DIFFUSER	EG=EXHAUST GRILLE	TG=TRANSFER GRILLE
TAG NO.	NECK SIZE	TYPE	MANUFACTURER & MODEL	MATL/FINISH	OPTIONS & ACCESSORIES
SG-1	VARIES	FLOOR REG	NAILOR-49-240-A	WHITE	
SD-1	VARIES	SQUARE CEILING DIFFUSER 24"x24" L/	AY-IN NAILOR RNSA12	24x24-L WHITE	
SD-2	VARIES	SQUARE CEILING DIFFUSER 12"x12" S	URFACE NAILOR RNSA11	12x12-S WHITE	
SD-3	VARIES	SQUARE CEILING DIFFUSER 24"x24" S	URFACE NAILOR RNSA12	24x24-S WHITE	
RG-1	VARIES	LOUVERED CEILING RETURN 24"x24" L	AY-IN NAILOR 5145H-O-L-2	24x24 WHITE	
RG-2	VARIES	LOUVERED CEILING RETURN SURFAC	E NAILOR 5145H-Ox	S WHITE	
EG-1	VARIES	LOUVERED CEILING EXHAUST SURFA	CE NAILOR 5145H-Ox	S WHITE	

PROJECT AREA NOT TO SCALE

1635 DEADWOOD AVENUE

DAWES ENGINEERING &

HELENA, MONTANA 59601

TERRASITE DESIGN

PH: (605) 791-1736

| PH: (406) 441-4000

MORRISON-MAIERLE RAPID CITY, SOUTH DAKOTA 57702 GILLETTE, WYOMING 82716 PH: (307) 685-3780

ALBERTSON ENGINEERING, INC. 2200 FOOTHILLS BLVD, SUITE A 3202 WEST MAIN STREET, SUITE C RAPID CITY, SOUTH DAKOTA 57702 PH: (605) 343-9606



FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PH: (605) 342-9470 FAX: (605) 342-2377 WWW.FOURFRONTDESIGN.COM DESIGN INC.

MECHANICAL SCHEDULES Approved: Project Director Owner

Project Title Project Number 666-18-103 BUILDING 64 FOLLOW-ON RENOVATION - SHERIDAN VA **Building Number** MEDICAL CENTER Drawing Number SHERIDAN, WYOMING Checked

Management Department of Veterans Affairs

4

VA FORM 08-6231

DESIGN CO. 46 HIBBARD WAY 575 MINNEHAHA AVENUE WEST ST. PAUL, MINNESOTA 55103 PH: (651) 251-1880

SUMMIT COMPANIES

15.2226.17

Drawing Title

AUGUST 28, 2020 PM - WW Dwg. 67 of 115

GRD ID SCHEDULE

01 SD-1

05 SD-2

06 SD-1

TAG STYLE CFM NECK SIZE

02 SD-1 230 8"Ø

03 SD-1 230 8"Ø 04 SD-2 100 6"Ø

07 SD-1 210 8"Ø 08 SD-1 210 8"Ø 09 SD-3 200 8"Ø 10 SD-3 200 8"Ø 11 SD-1 250 8"Ø 12 SD-3 200 8"Ø 13 SD-1 310 10"Ø 14 SD-1 310 10"Ø 15 SD-1 250 8"Ø 16 SD-1 200 8"Ø NOT USED 18 SD-2 50 4"Ø 19 SD-2 50 4"Ø

20 SD-1 200 8"Ø

21 SD-3 150 8"Ø 22 SD-1 150 8"Ø

23 SD-3 175 8"Ø 24 SD-1 150 8"Ø 25 SD-1 150 8"Ø 26 SD-1 200 8"Ø 27 SD-2 70 6"Ø 28 SD-1 80 6"Ø 29 SD-1 290 10"Ø 30 SD-1 290 10"Ø 31 SD-1 250 8"Ø 32 SD-1 250 8"Ø 33 SD-1 200 8"Ø NOT USED

35 SD-3 250 8"Ø

36 SD-1 300 10"Ø

37 SD-1 220 8"Ø

38 SD-1 250 8"Ø

40 SD-1 250 8"Ø 41 SD-1 320 8"Ø 42 SD-2 80 6"Ø 43 SD-2 80 6"Ø 44 SD-1 250 8"Ø 45 SD-1 220 8"Ø 46 SD-1 250 8"Ø 47 SD-1 220 8"Ø

48 SD-1 220 8"Ø

52 SD-2 100 6"Ø

59 SD-1 180 8"Ø

61 SD-1 180 8"Ø

100 6"Ø

250 8"Ø

320 10"Ø

100 6"Ø

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12"x12"

22"x22"

80 10"x6"

100 10"x6"

107 EG-1 120 10"x6" 108 EG-1 80 10"x6" 109 EG-1 80 10"x6" 110 EG-1 50 10"x6"

112 EG-1 100 10"x6"

113 EG-1 100 10"x6" 114 EG-1 150 12"x6"

49 SD-1

50 SD-1 51 SD-1

53 SD-1

54 SD-1

55 SD-1

56 SD-1

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62 SD-1

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97 RG-1

98 RG-1

99 RG-1

100 RG-1

101 RG-1

102 RG-1

103 RG-1

104 RG-1

105 RG-1

106 EG-1

111 EG-1

77 RG-2

57 SD-1

200 | 8"Ø

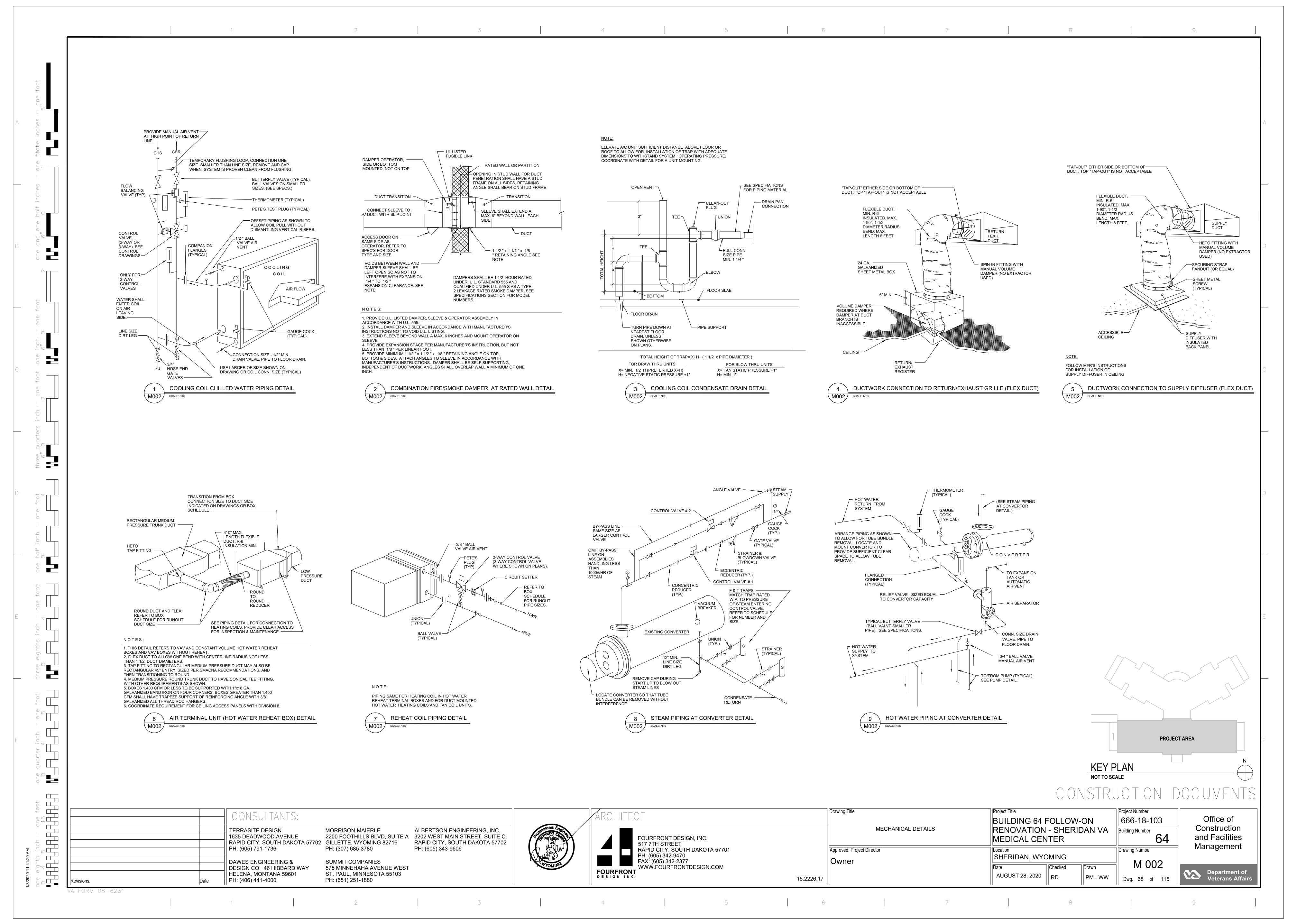
100 6"Ø

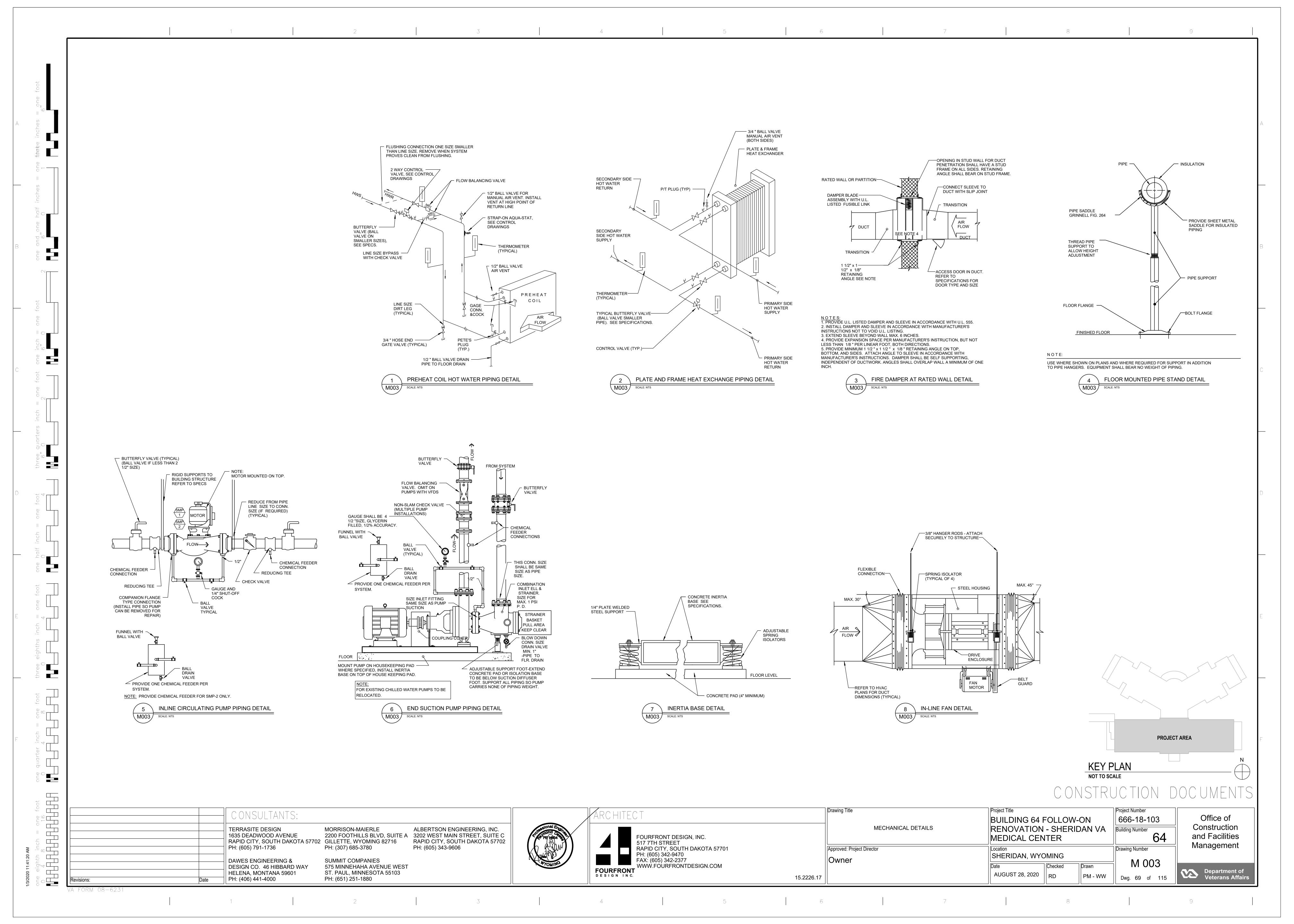
300 | 10"Ø

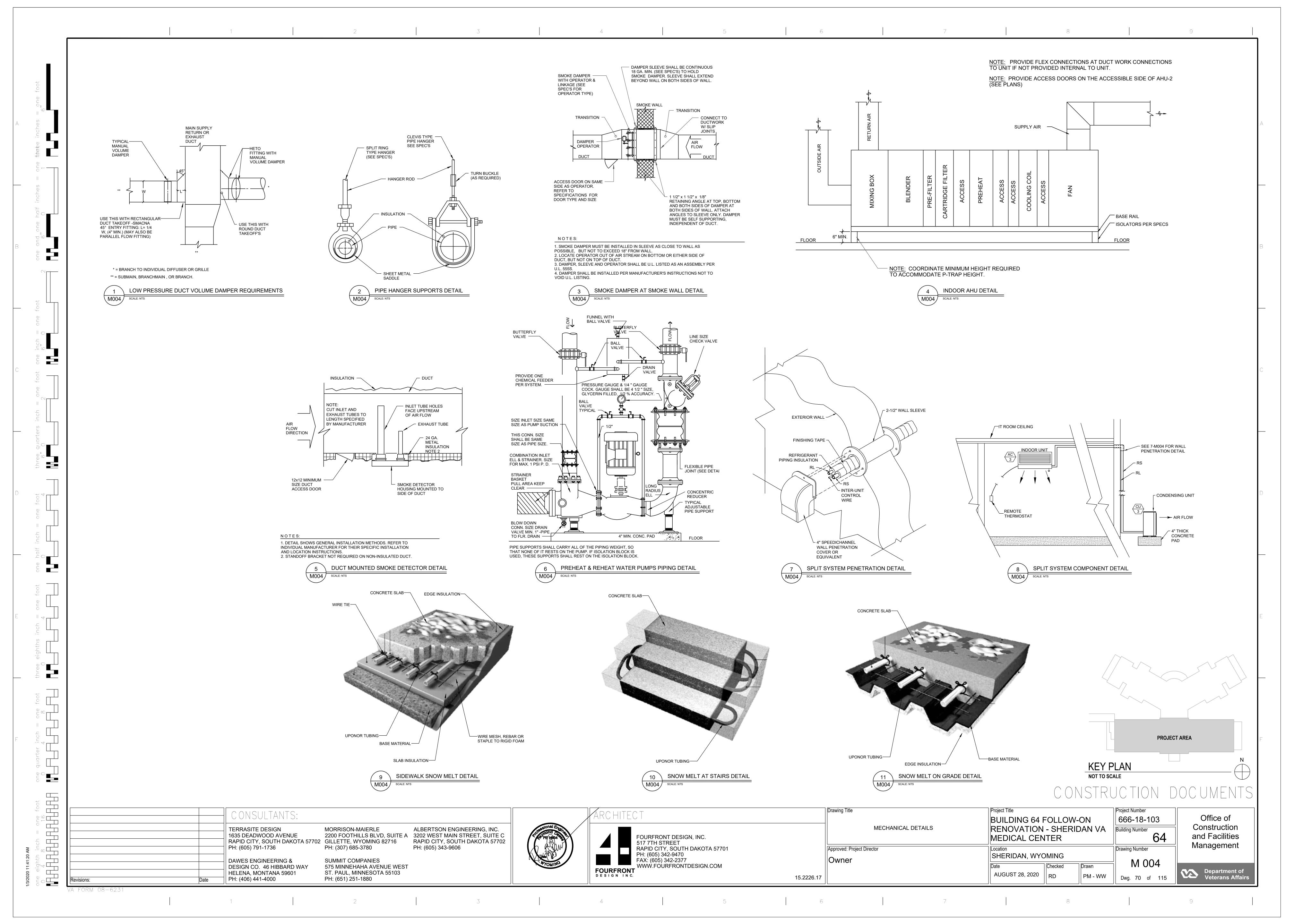
and Facilities

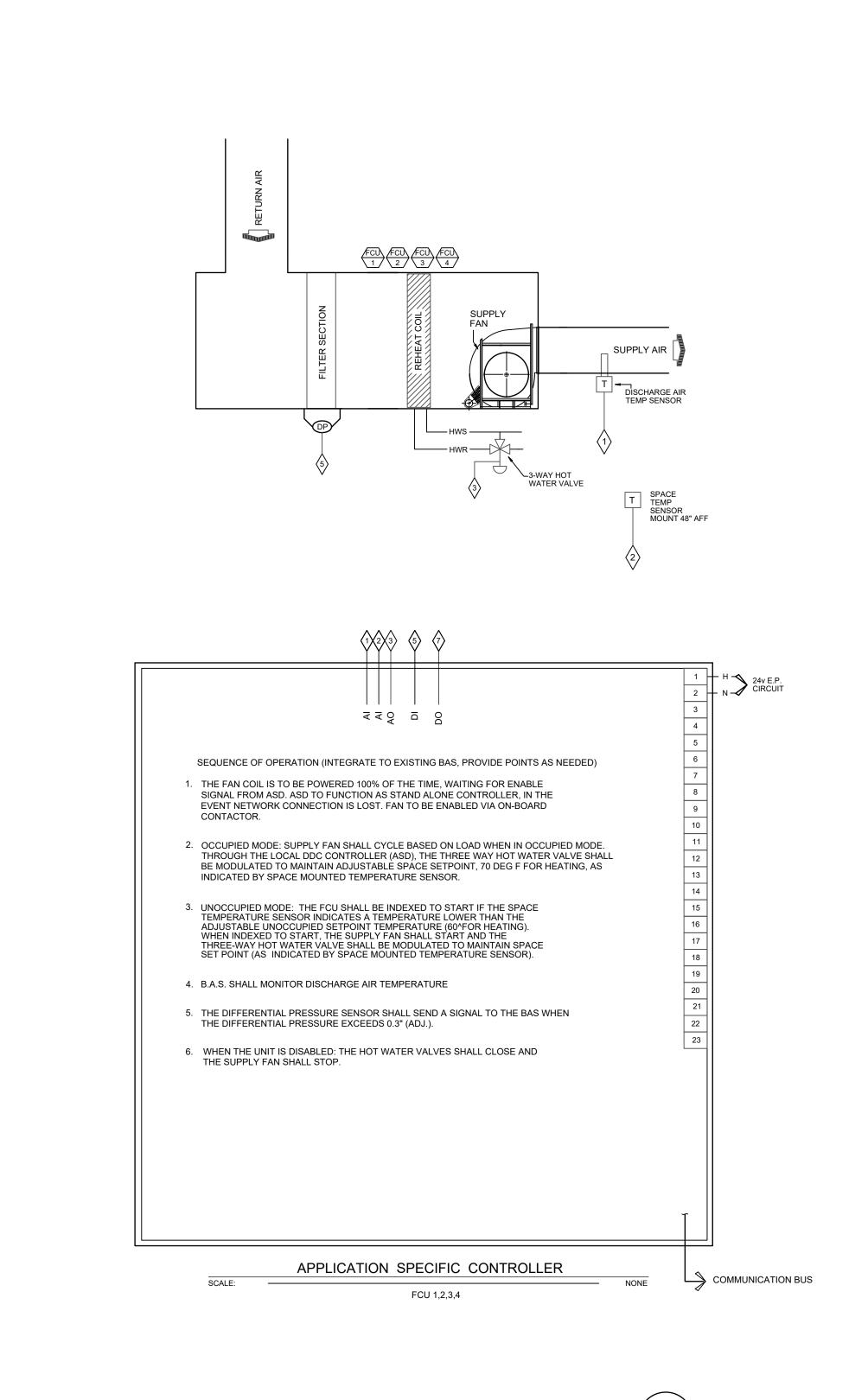
Office of

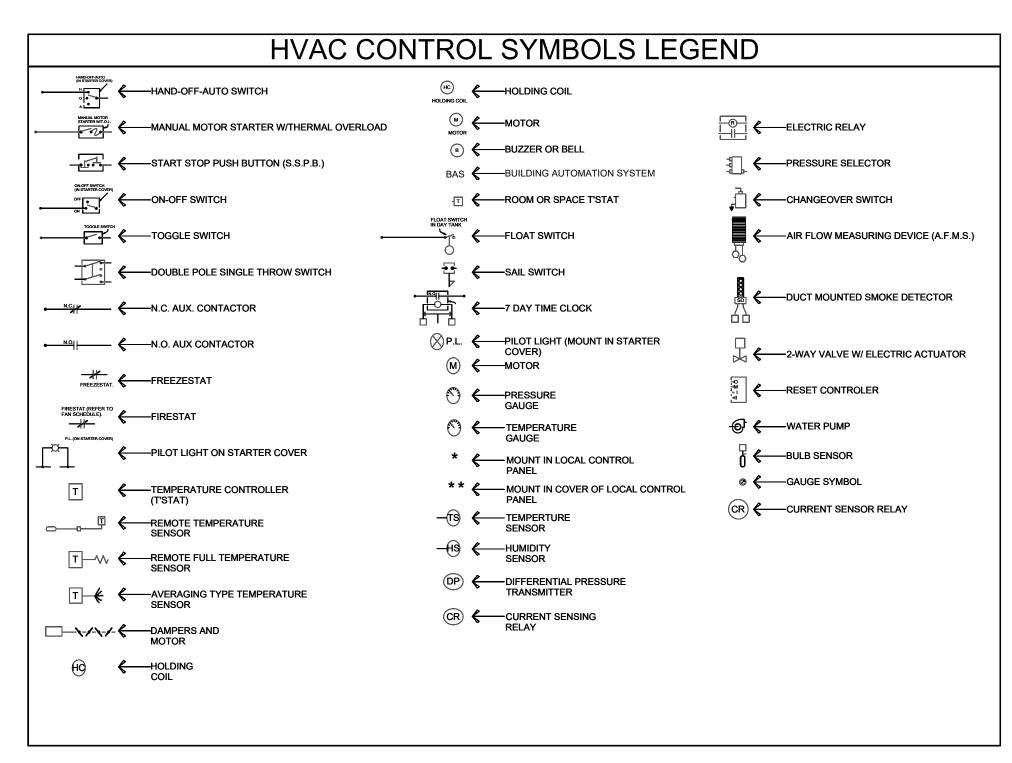
Construction



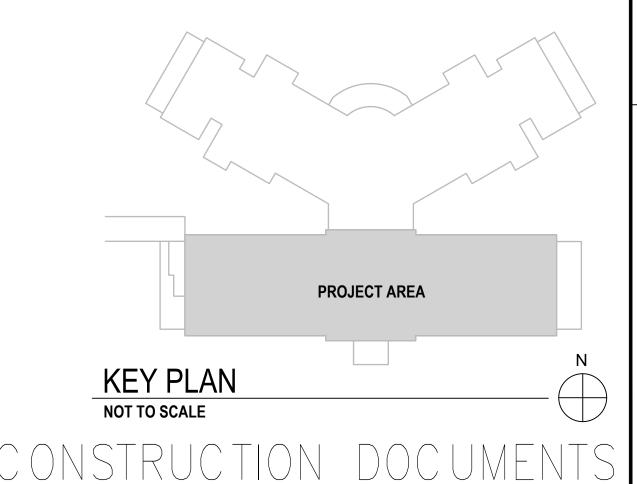








CC	ONTROL ABBREVIATIONS							
SYMBOL	DEFINITION							
T.O.L.	THERMAL OVERLOAD							
O.L.	OVERLOAD							
C.C.T.	CONTROL CIRCUIT TRANSFORMER							
M.M.S.	MANUAL MOTOR STARTER							
ows	OPERATOR WORKSTATION							
BAS	BUILDING AUTOMATION SYSTEM							
H.O.A.	HAND OFF AUTOMATIC							
A.F.M.S.	WIRE THRU AUX. CONTACT ON FAN MOTOR STARTER							
A.P.M.S.	WIRE THRU AUX. CONTACT ON PUMP MOTOR STARTER							
N.O.	NORMALLY OPEN							
N.C.	NORMALLY CLOSED							
AO	ANALOG OUTPUT							
Al	ANALOG INPUT							
DO	DIGITAL OUTPUT							
DI	DIGITAL INPUT							



1 FAN COIL UNIT CONTROL SCHEMATIC DIAGRAM
M005 SCALE: NTS

	CONSULTANTS:			
	CONSULTANTS.			
	TERRASITE DESIGN	MORRISON-MAIERLE	ALBERTSON ENGINEERING, INC.	
	1635 DEADWOOD AVENUE	2200 FOOTHILLS BLVD, SUITE A	3202 WEST MAIN STREET, SUITE C	
	RAPID CITY, SOUTH DAKOTA 57702	· · · · · · · · · · · · · · · · · · ·	RAPID CITY, SOUTH DAKOTA 57702	
	PH: (605) 791-1736	PH: (307) 685-3780	PH: (605) 343-9606	
	DAWES ENGINEERING &	SUMMIT COMPANIES		
	DESIGN CO. 46 HIBBARD WAY	575 MINNEHAHA AVENUE WEST		
	HELENA, MONTANA 59601	ST. PAUL, MINNESOTA 55103		
;	PH: (406) 441-4000	PH: (651) 251-1880		

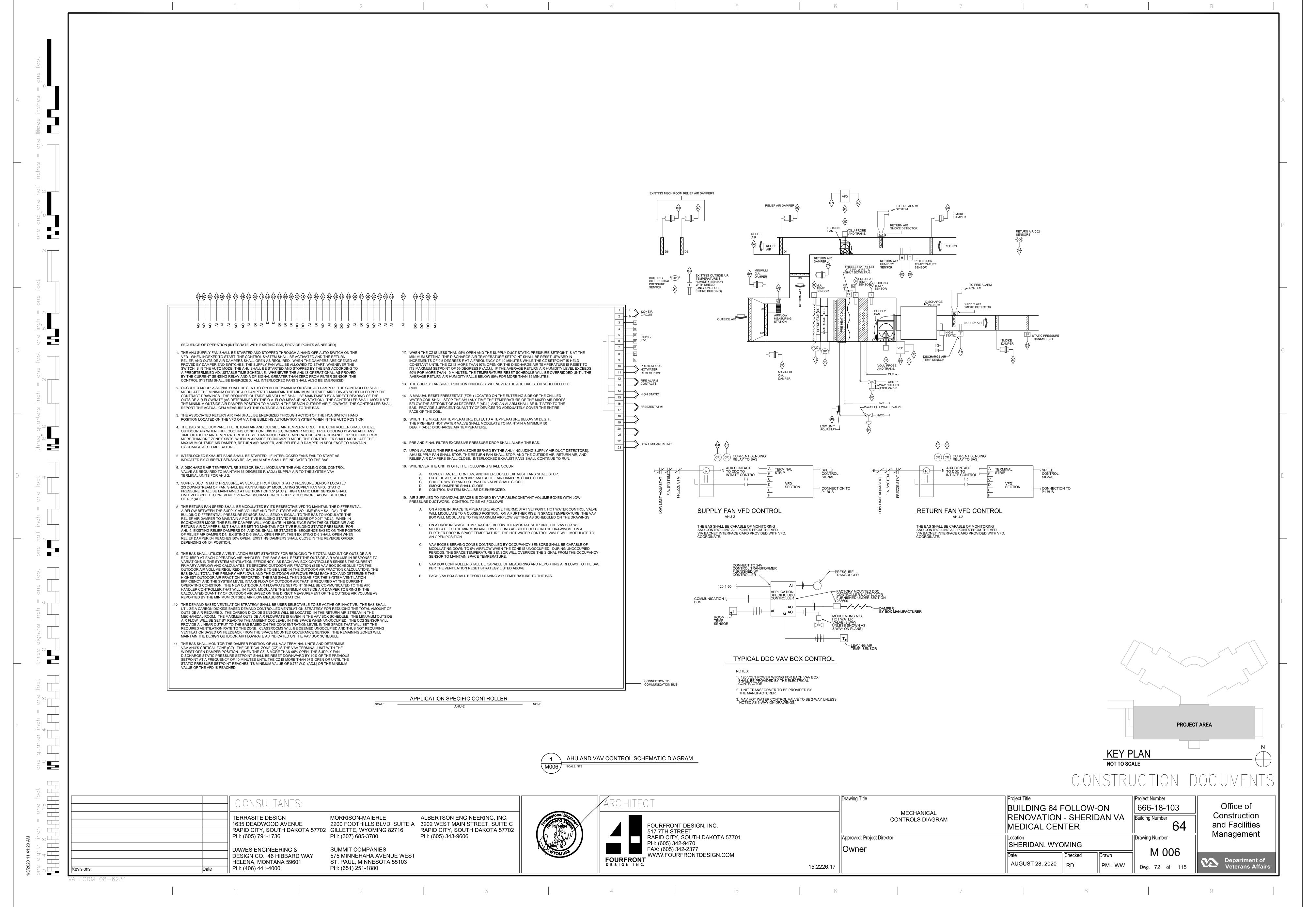
VA FORM 08-6231

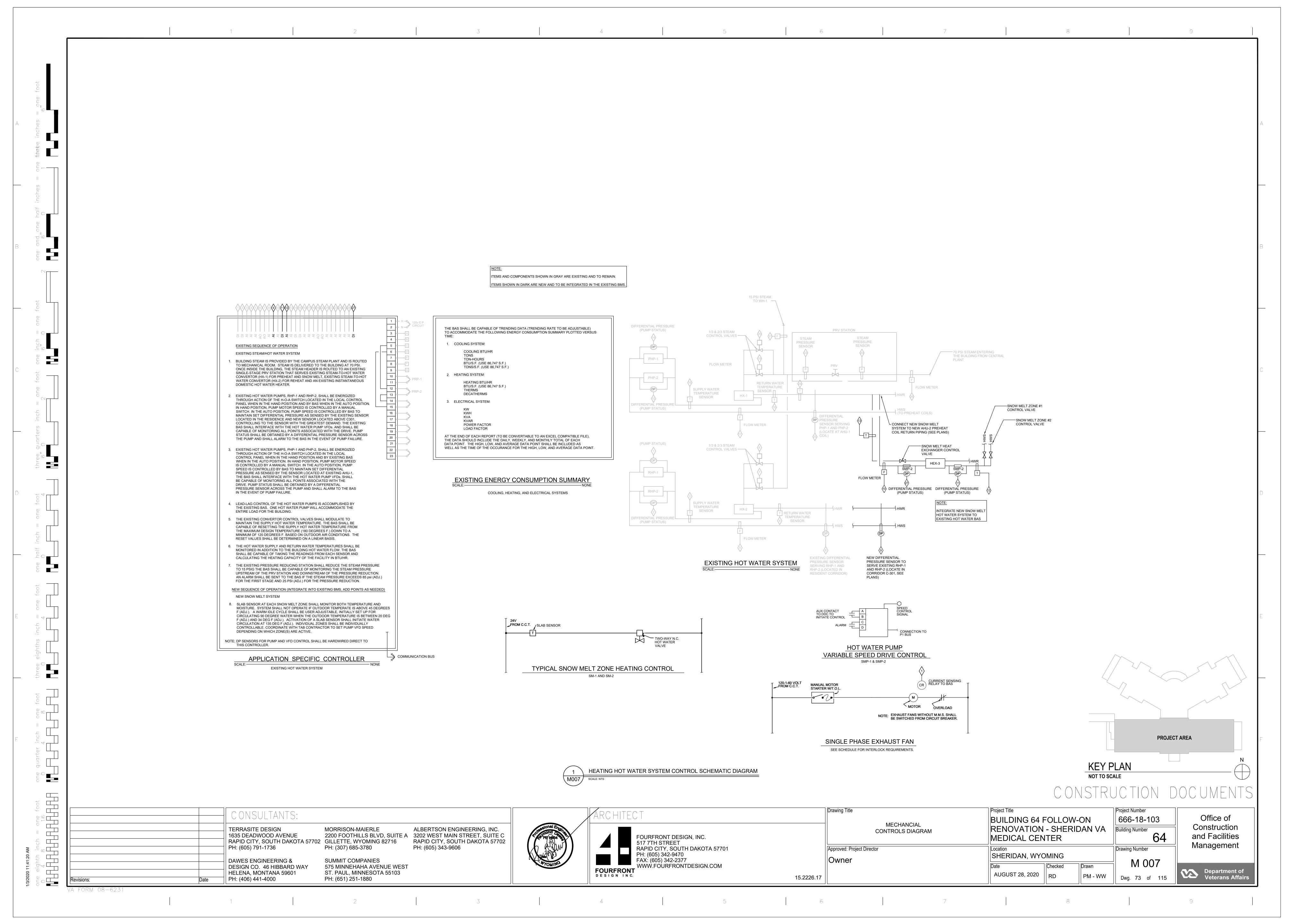


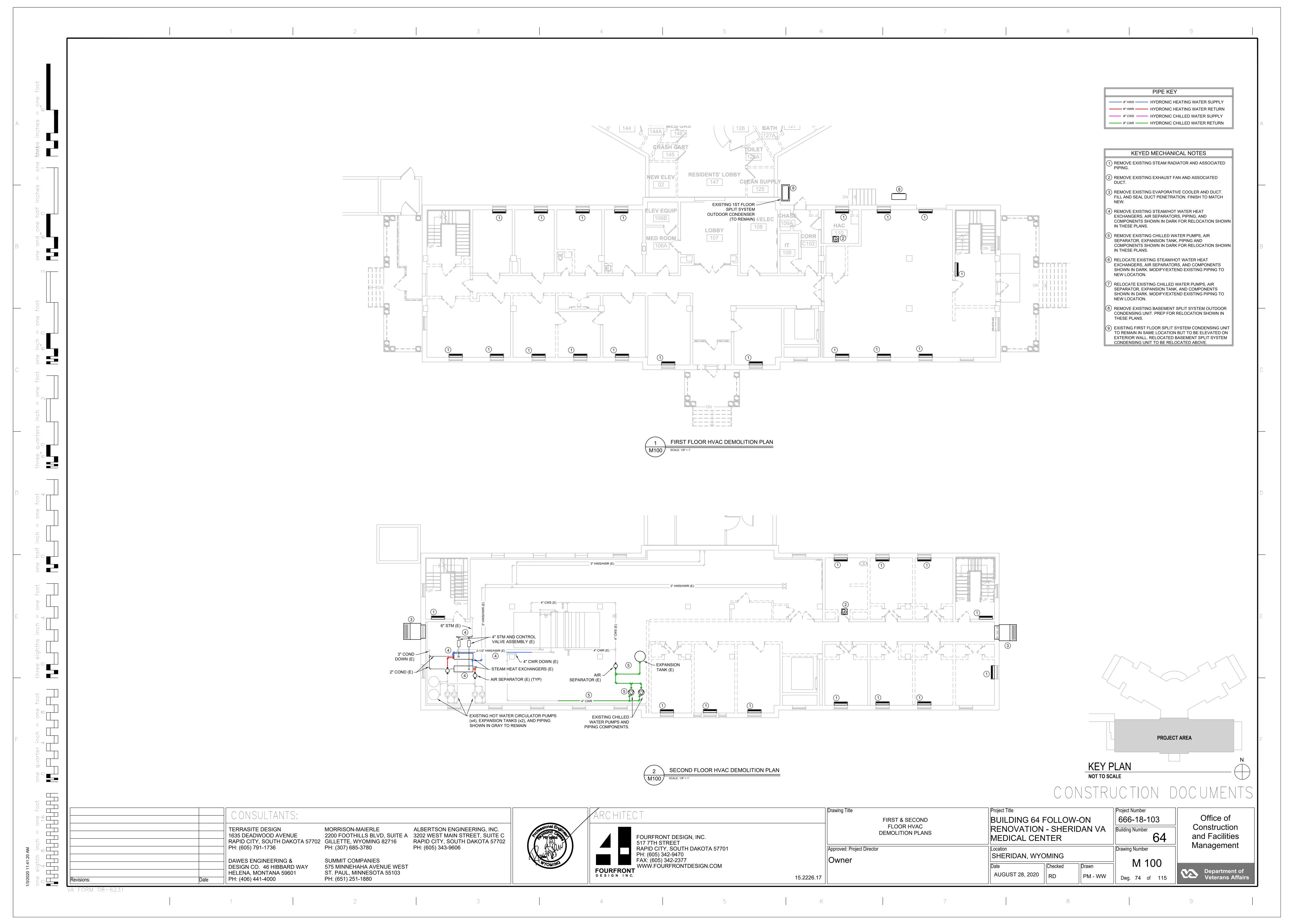
	Drawing Title MECHANICAL CONTROLS DIAGRAM
	Approved: Project Director Owner
15.2226.17	

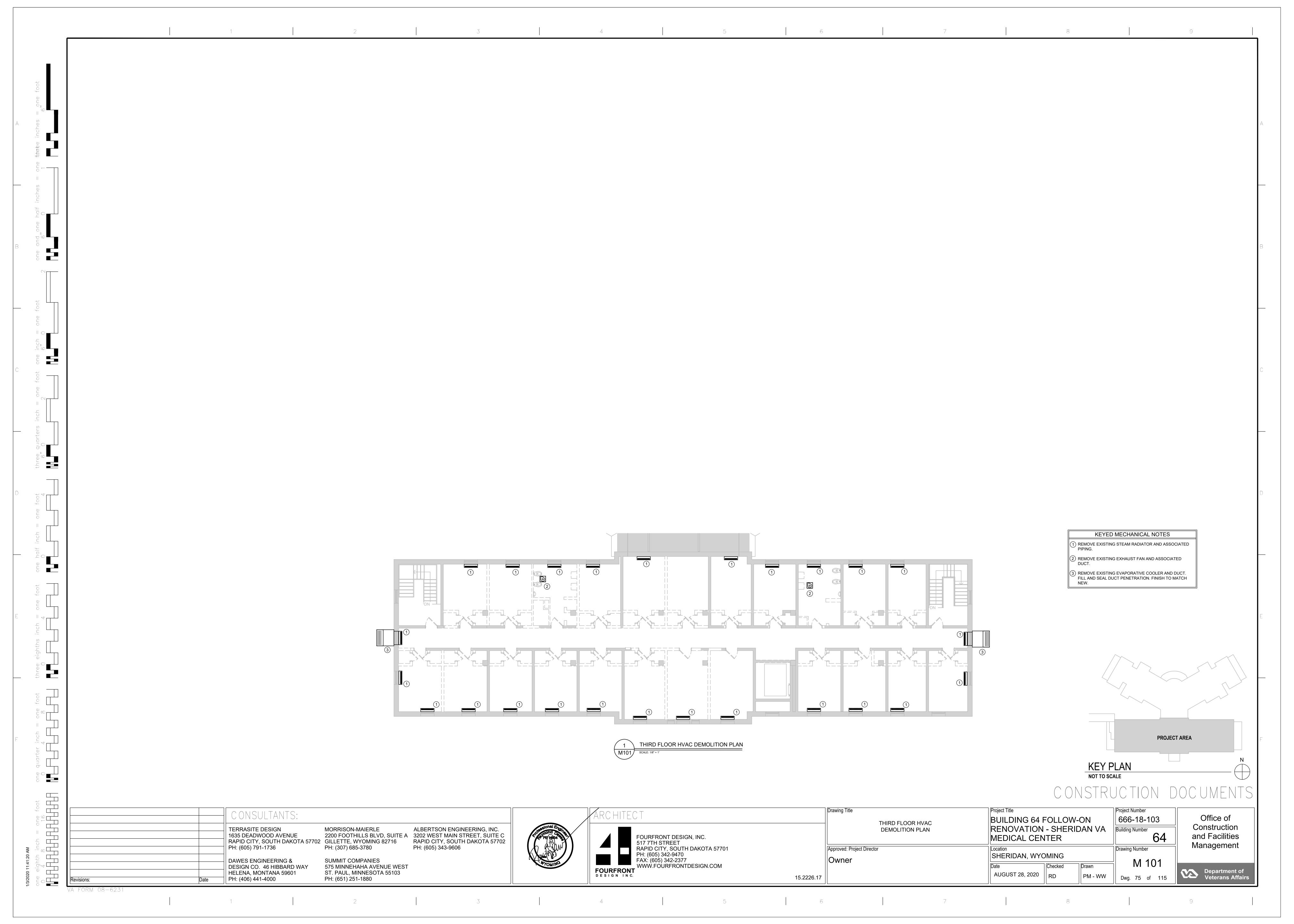
Project Title		Project Number								
BUILDING 64 F	666-18-103									
RENOVATION	RENOVATION - SHERIDAN VA									
MEDICAL CEN	ITER		64							
Location			Drawing Number							
SHERIDAN, WYC	MING		NA 005							
Date	Checked	Drawn	M 005							
AUGUST 28, 2020	RD	PM - WW	Dwg. 71 of 115							

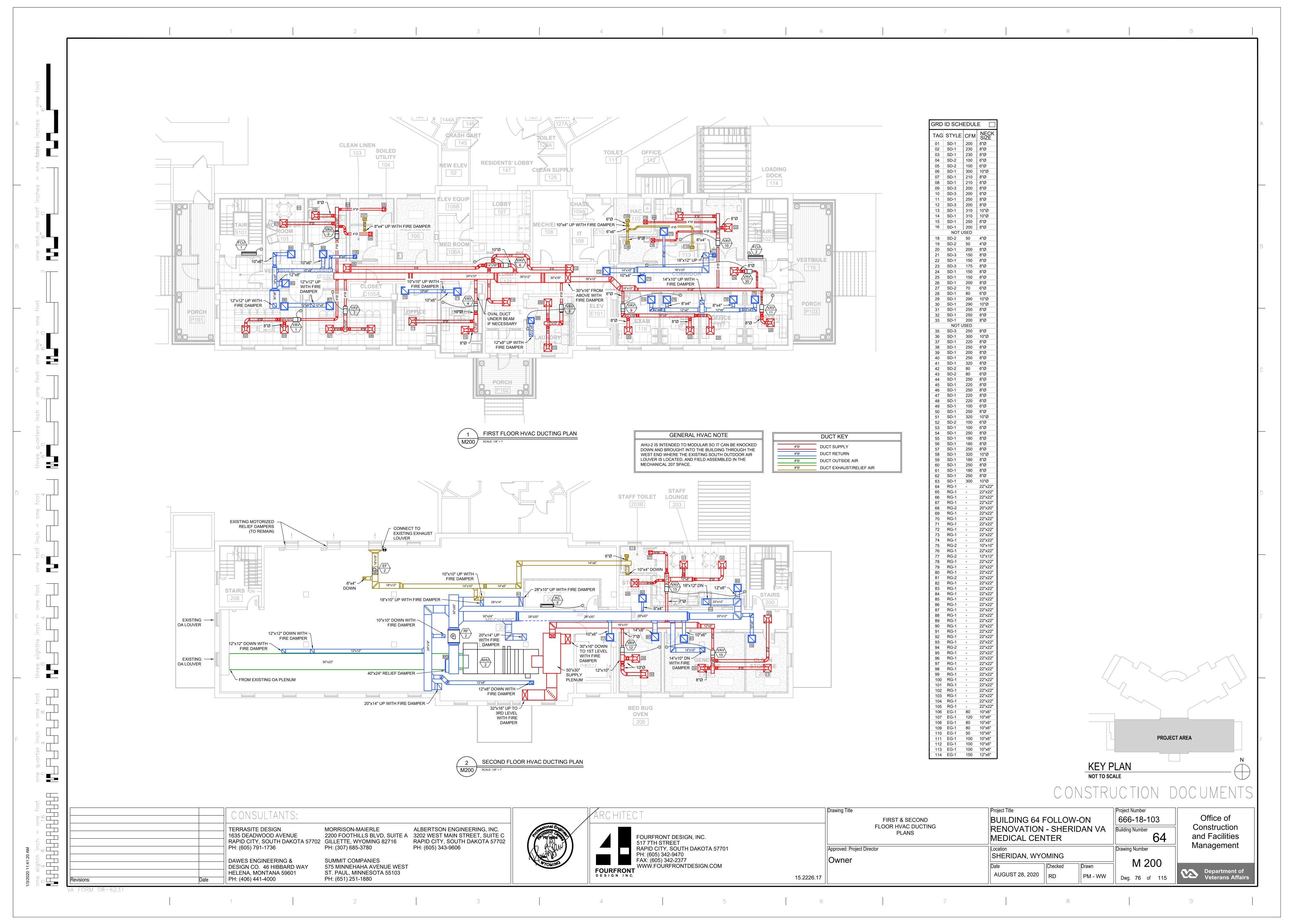
Office of Construction and Facilities Management Department of Veterans Affairs

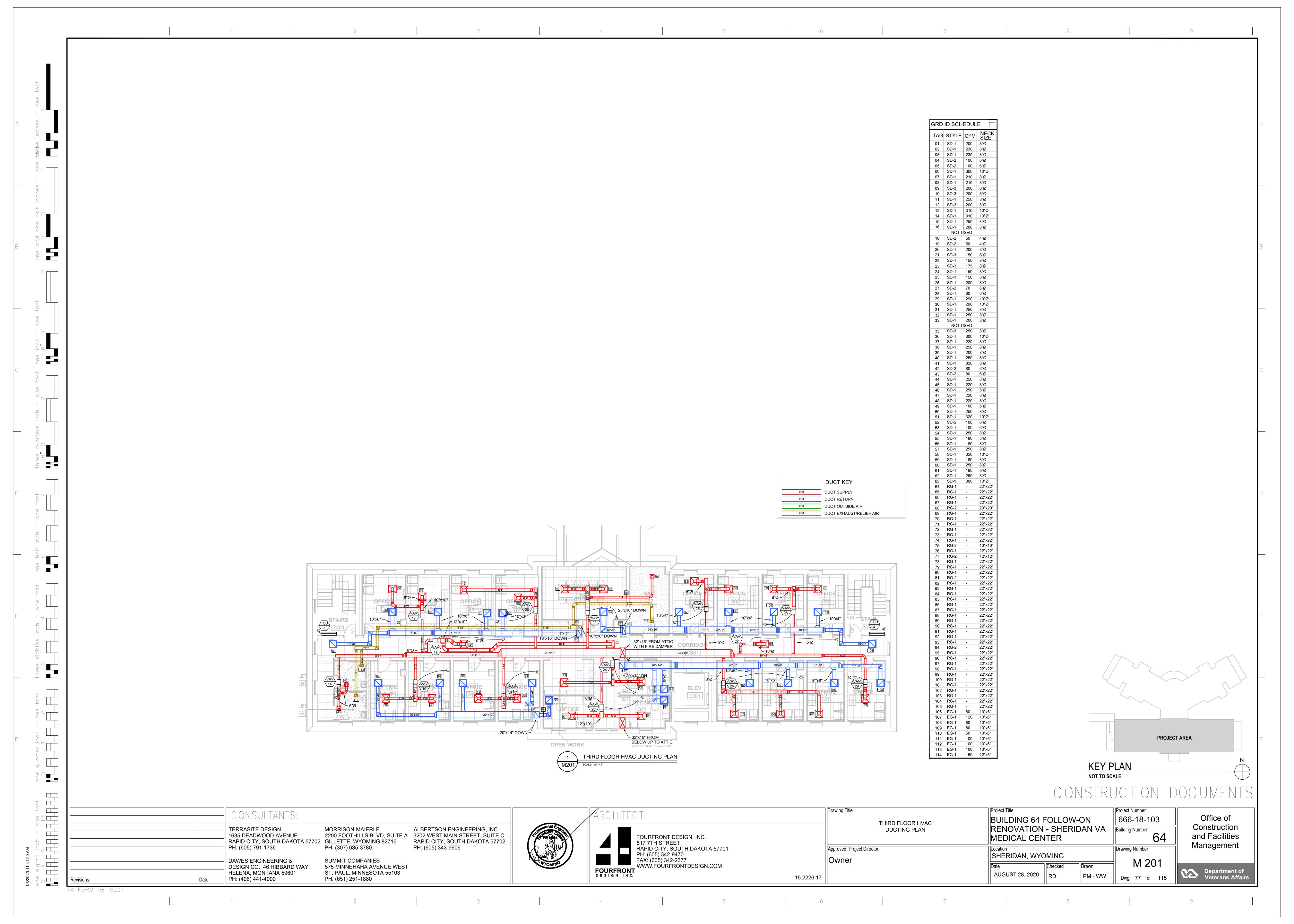


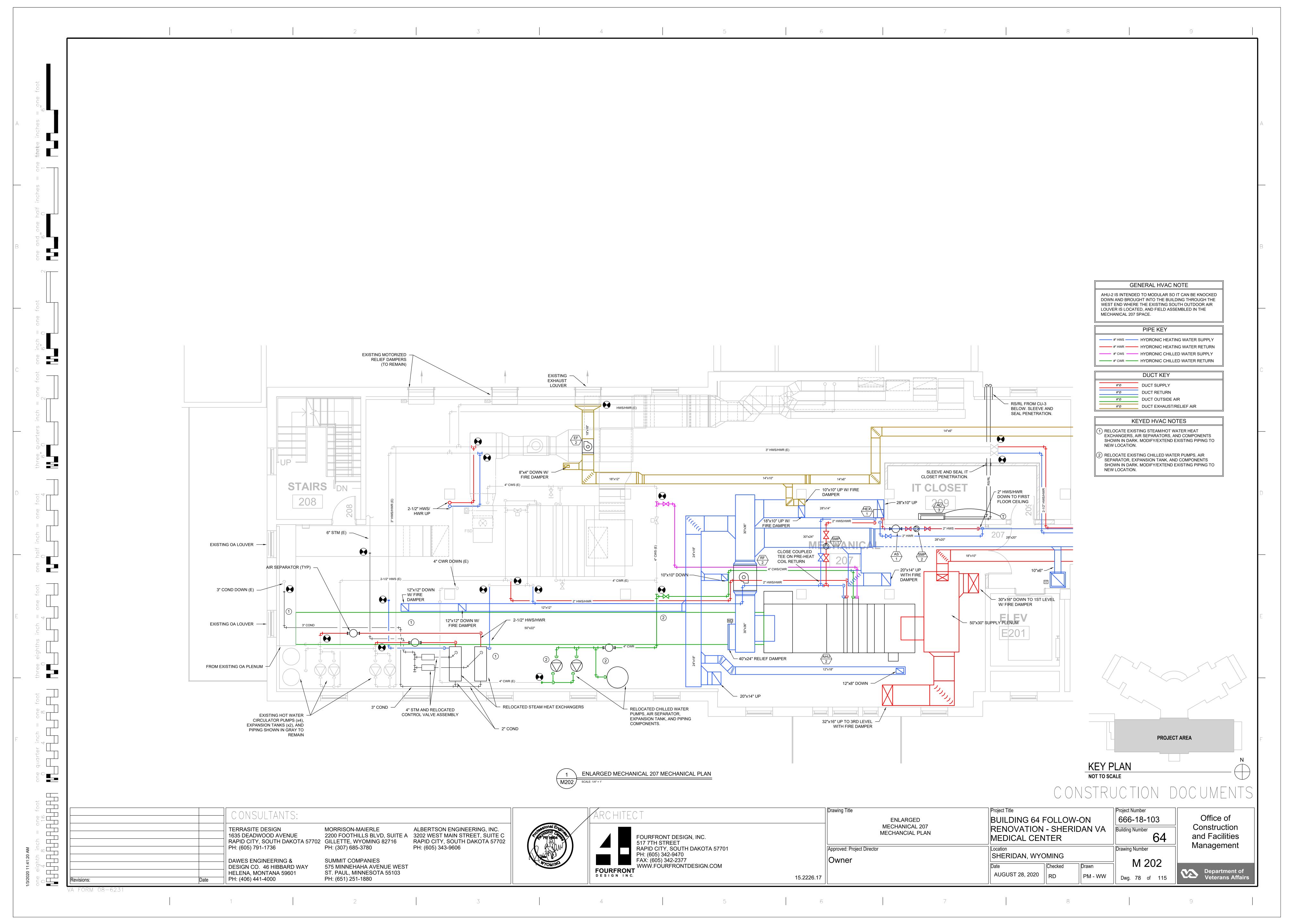


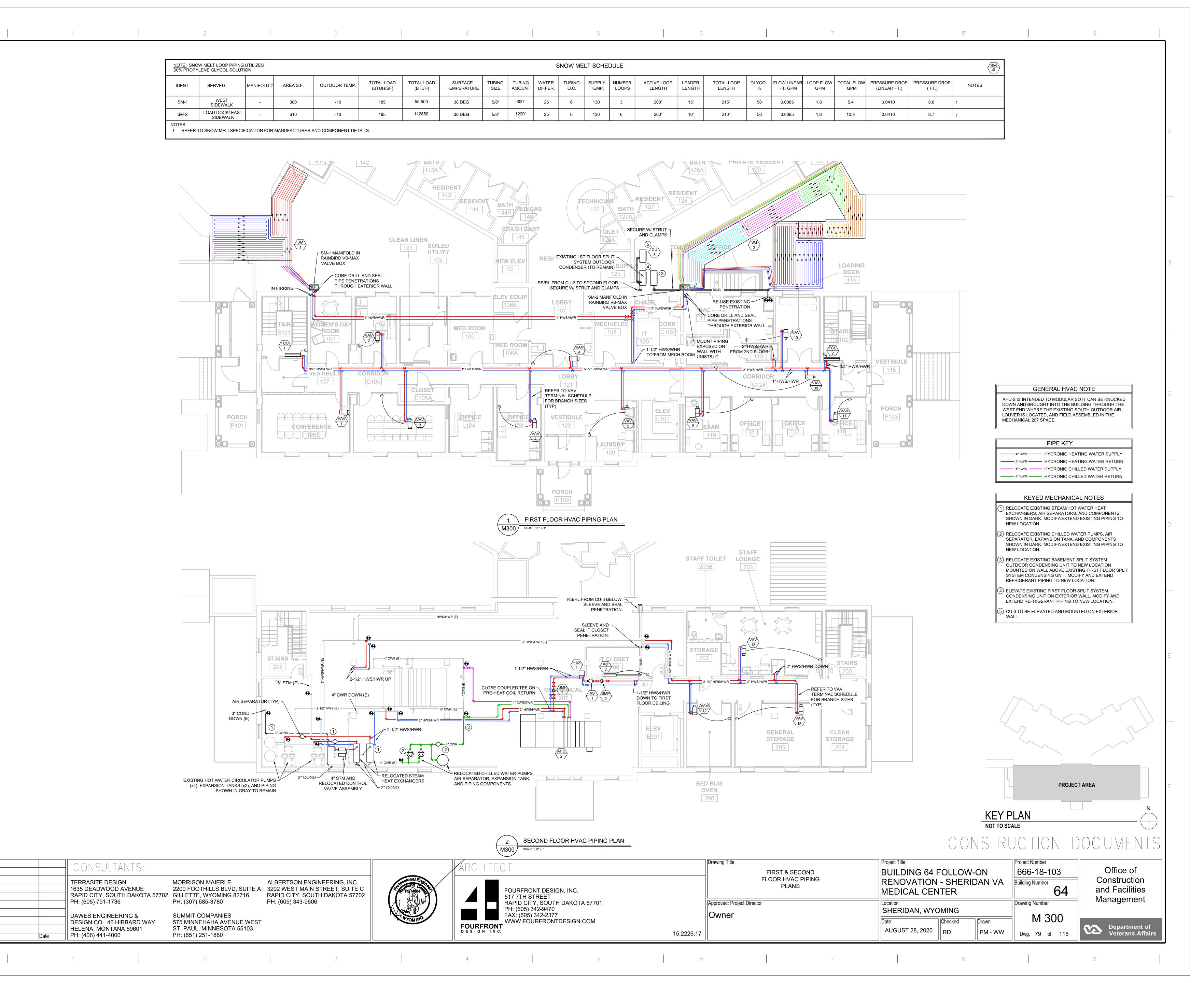




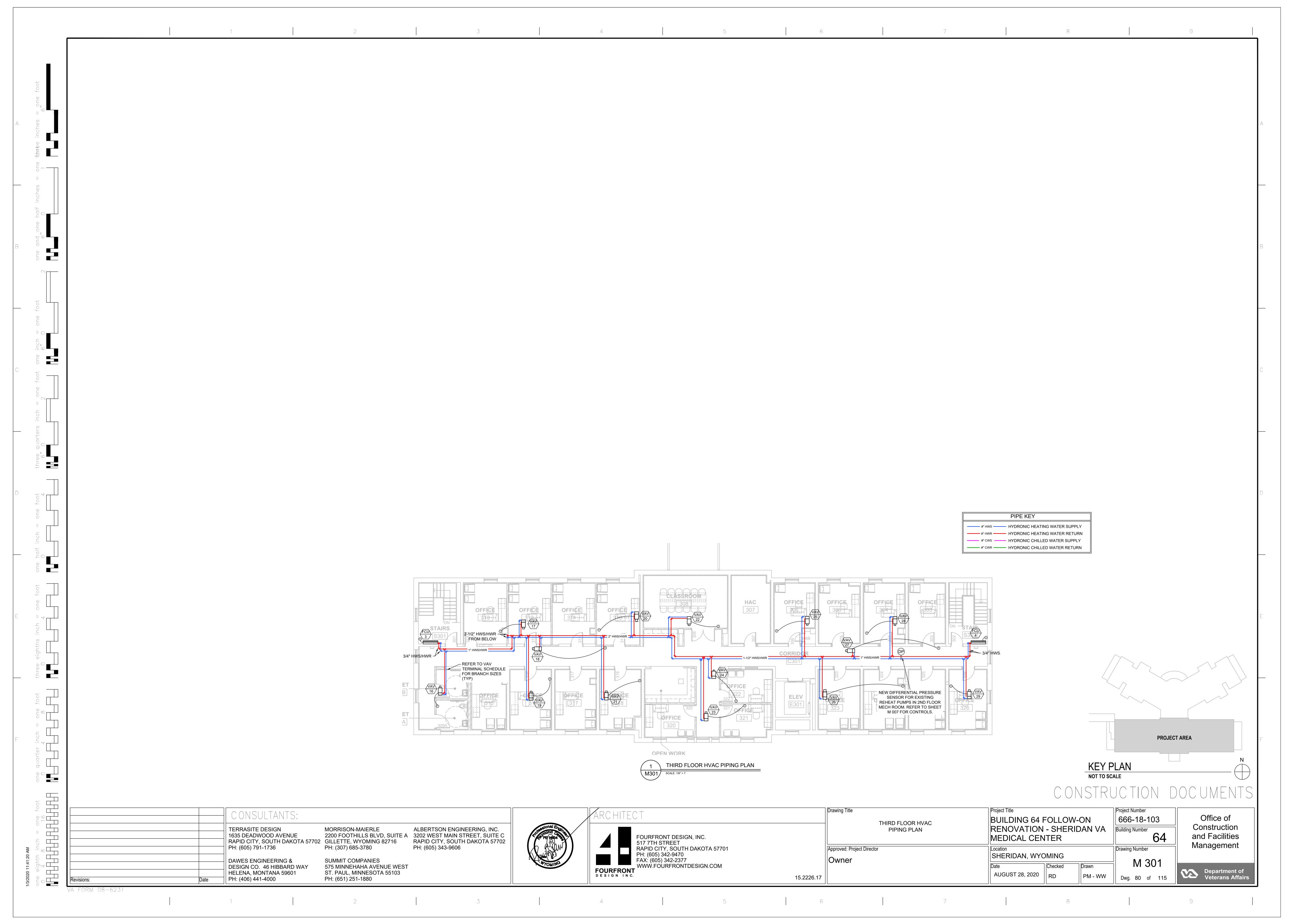


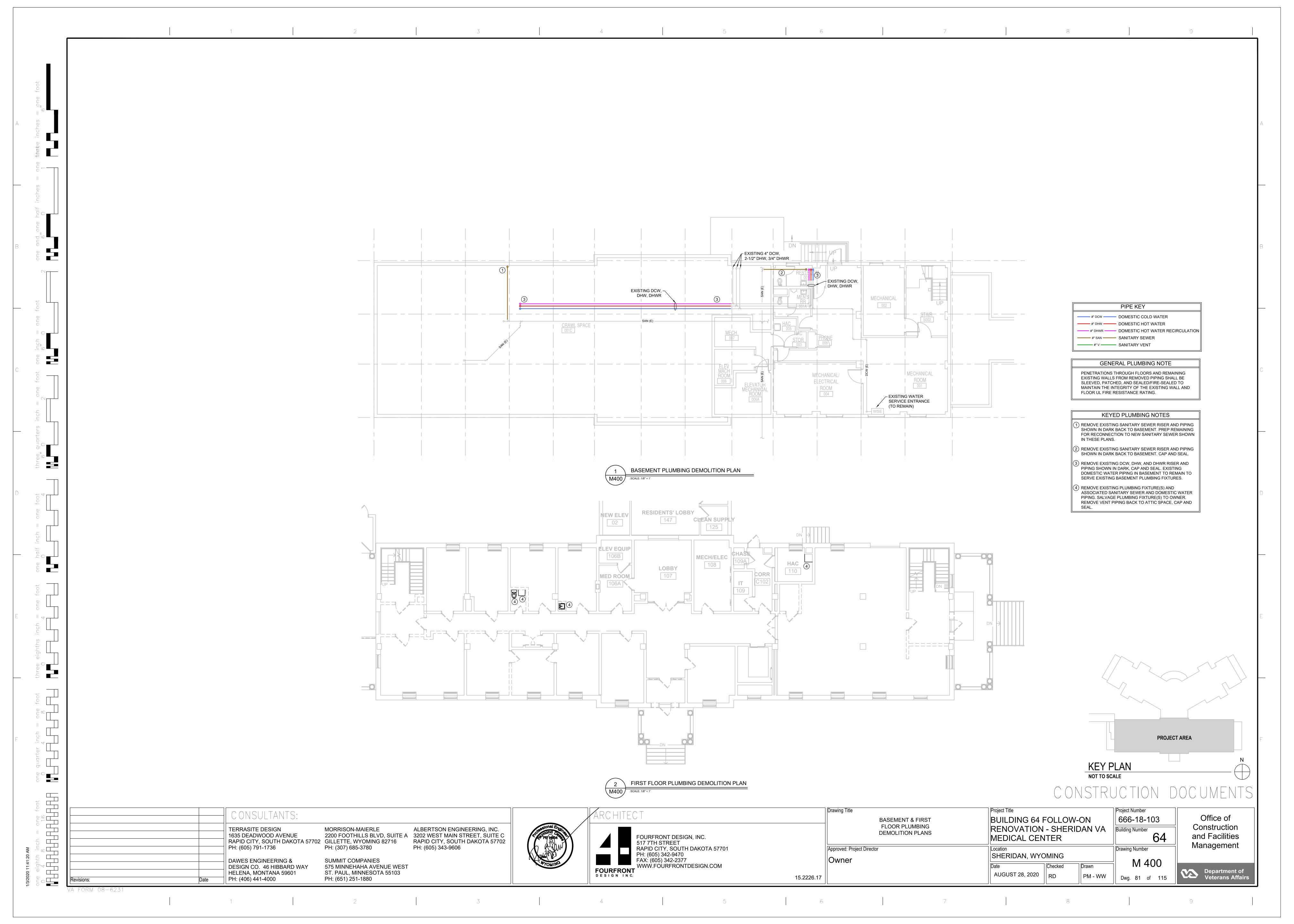


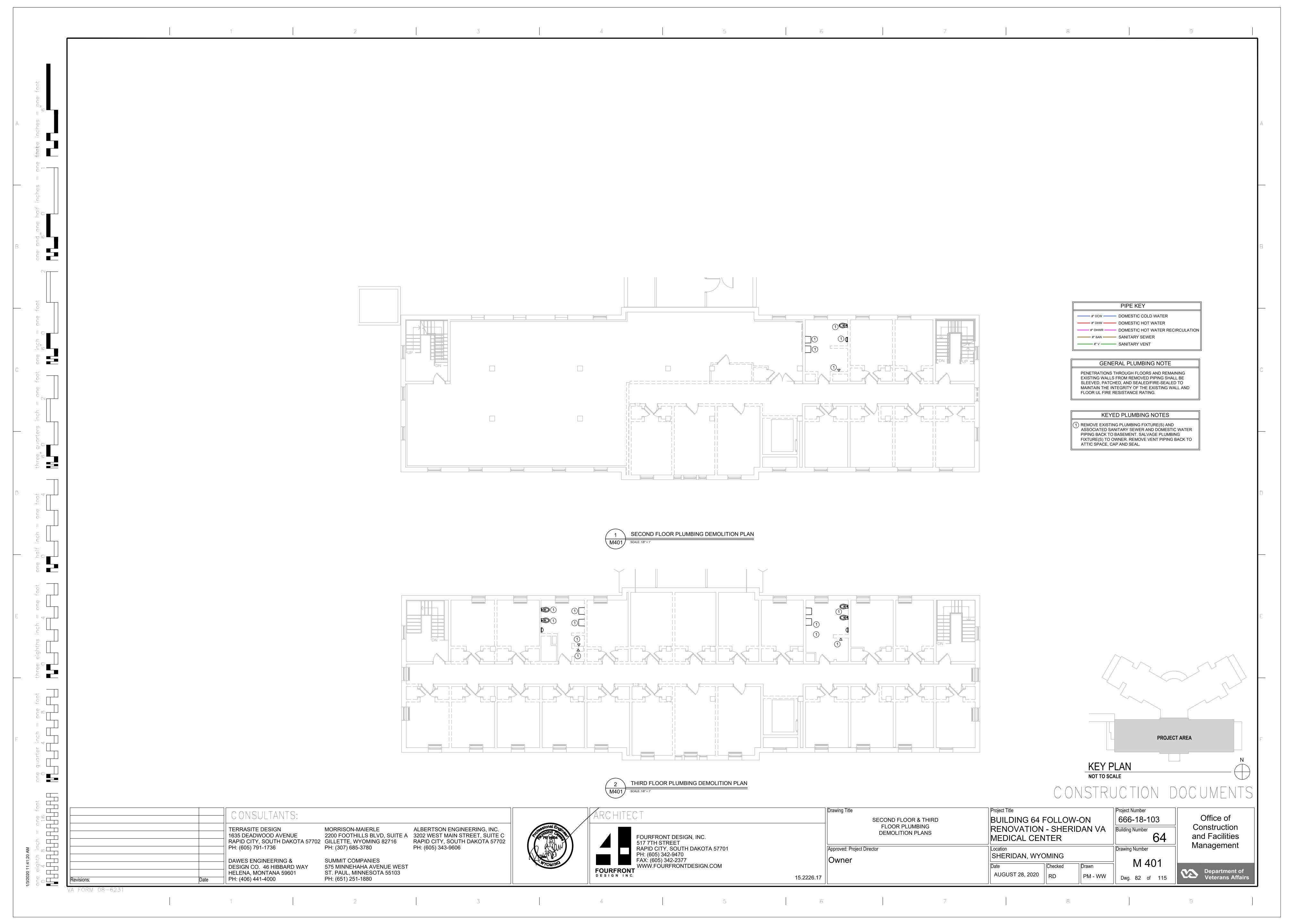


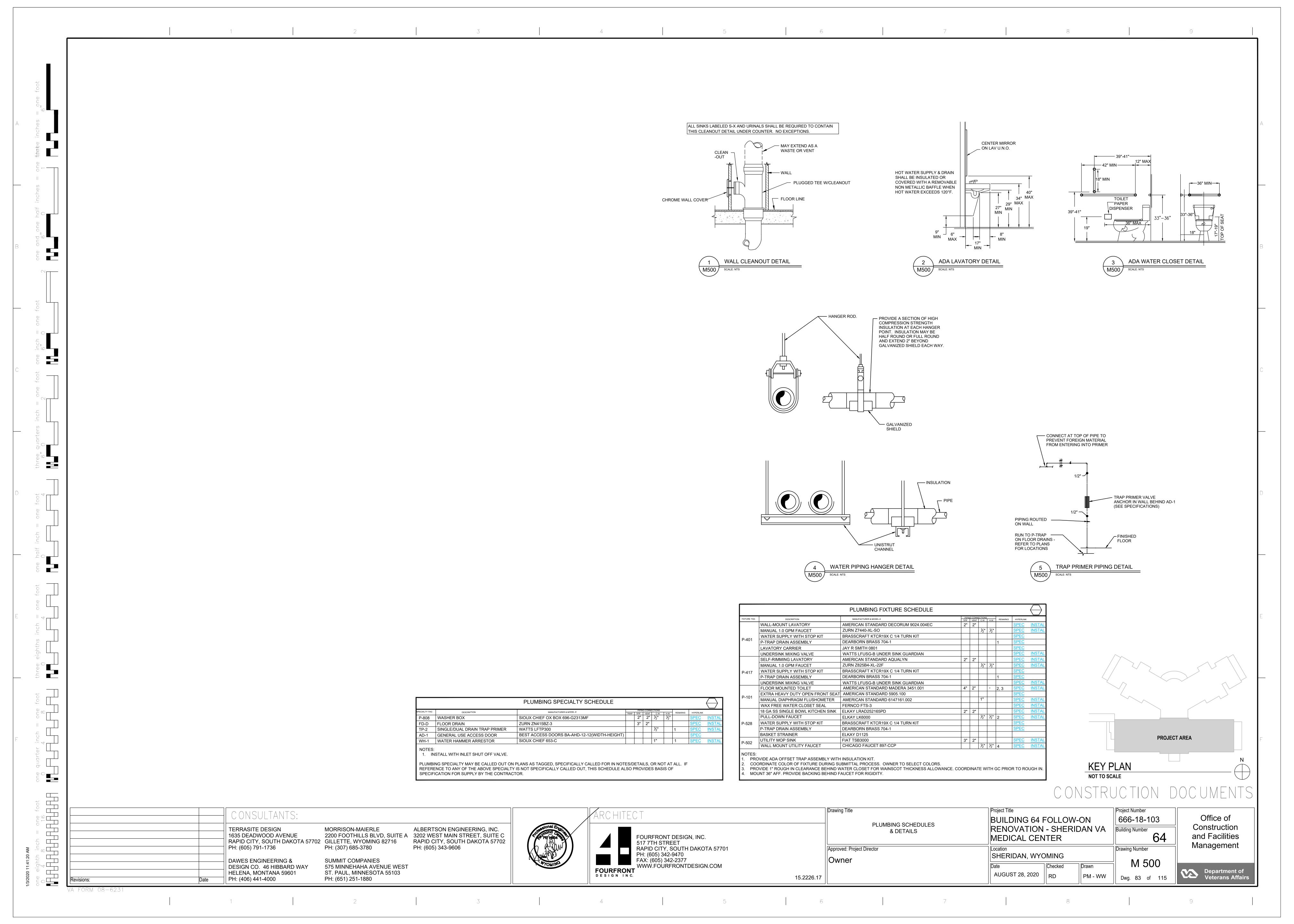


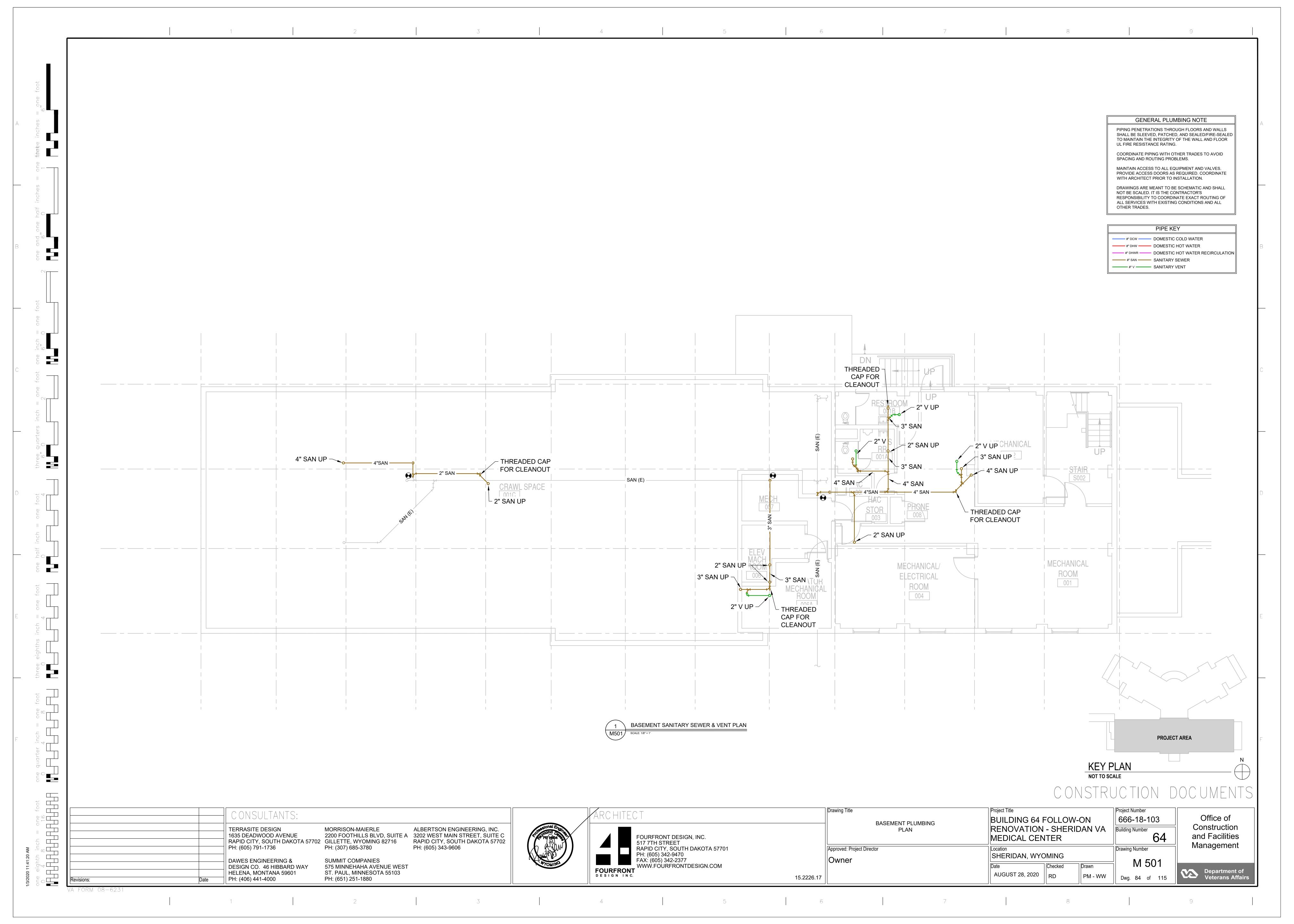
VA FORM 08-6231

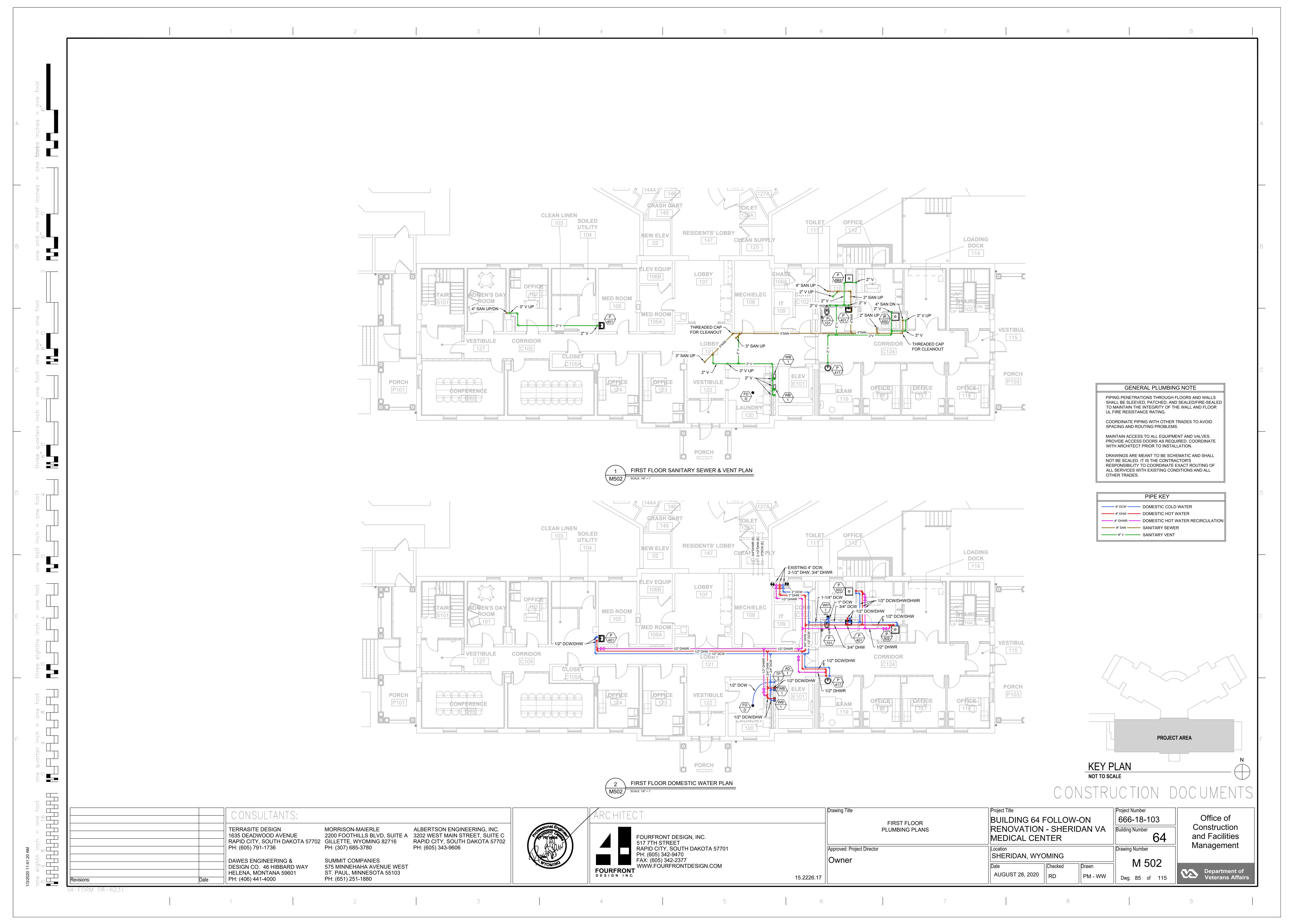


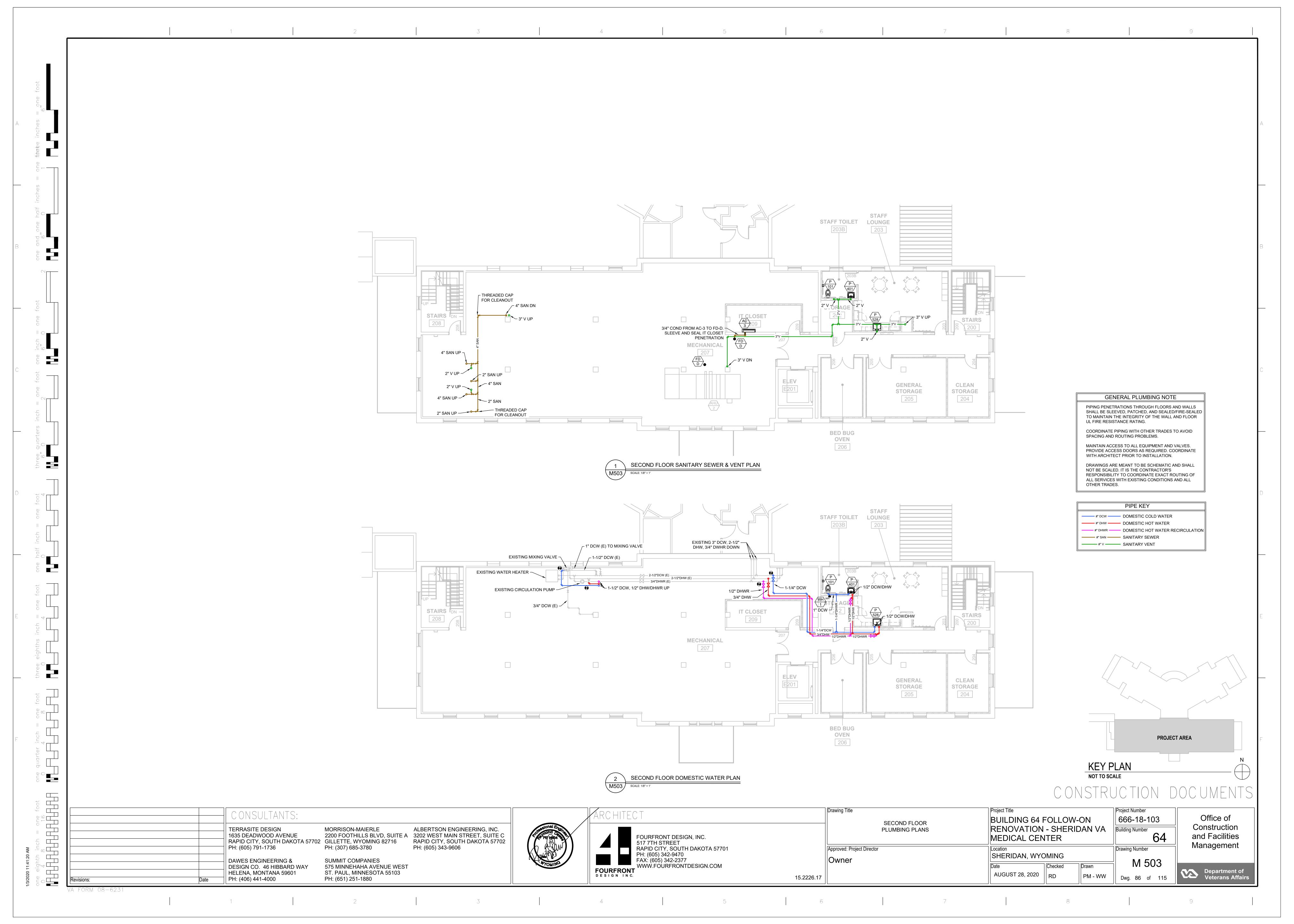


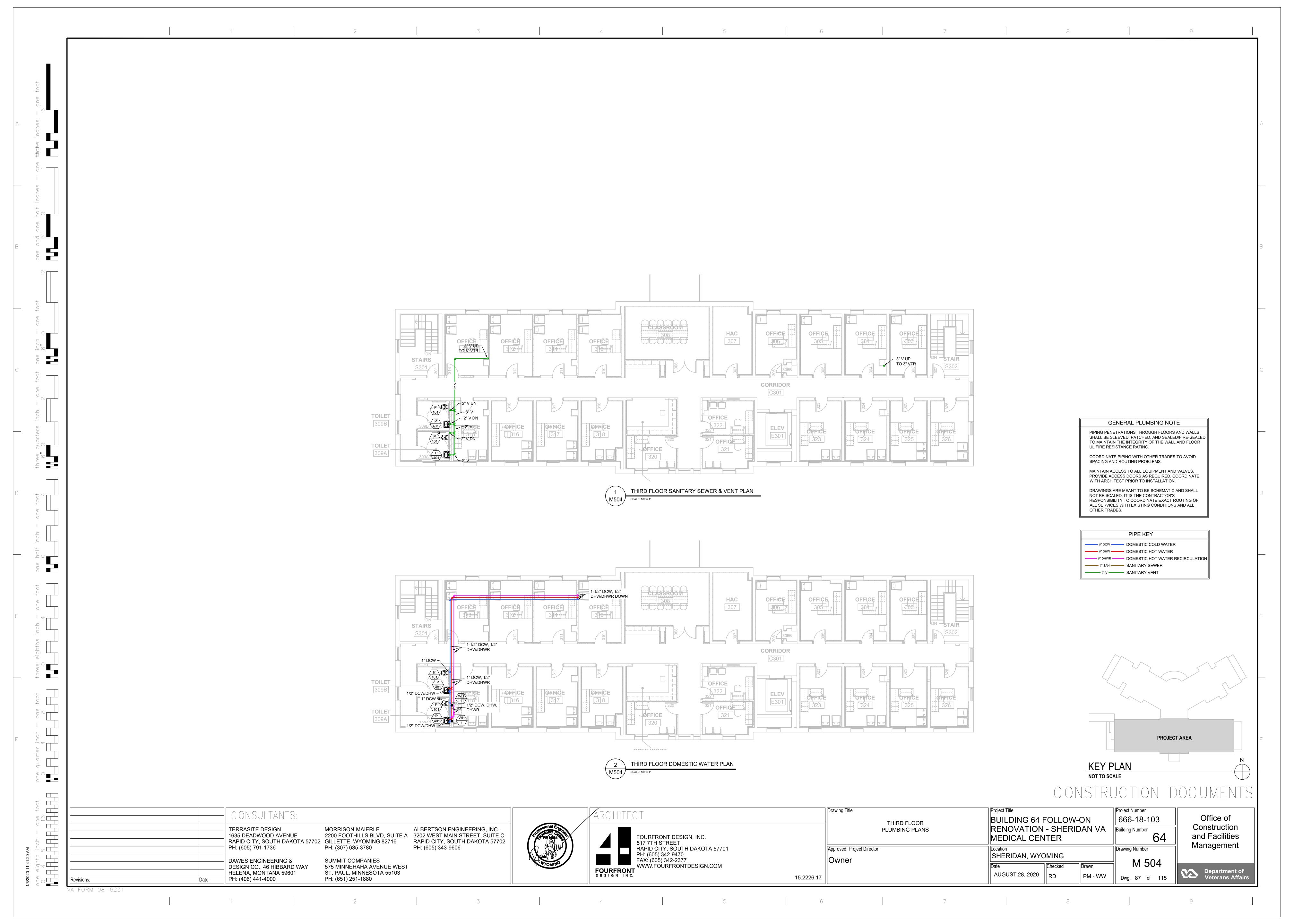


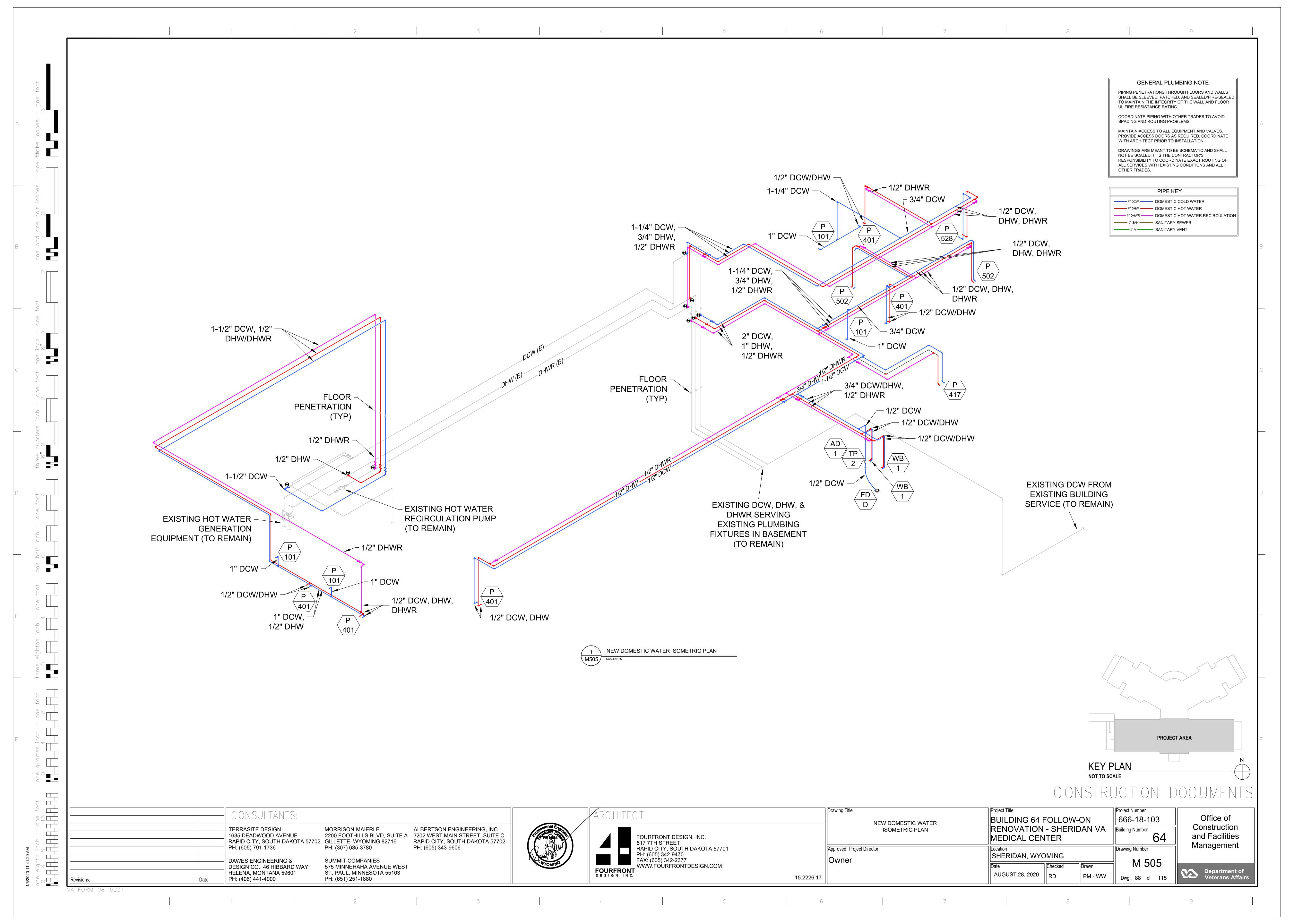












ELECTRICAL LEGEND (DETAILS) DELTA CONNECTION MOTOR, SINGLE-PHASE MOTOR, THREE-PHASE TRANSFORMER WYE CONNECTION EARTH GROUND

JUNCTION BOX PULL BOX PRESSURE SWITCH-CLOSE ON INCREASE PRESSURE SWITCH-OPEN ON INCREASE SWITCH, MULTIPOSITION SWITCH, NORMALLY CLOSED FLOAT DROP CORD, SINGLE CONVENIENCE OUTLET, 3-WIRE, SWITCH, NORMALLY CLOSED FOOT OPERATED SWITCH, NORMALLY CLOSED LIMIT SWITCH, NORMALLY CLOSED TEMPERATURE ACTIVATED SWITCH, NORMALLY CLOSED TIME DELAY SWITCH, NORMALLY OPEN FLOAT SWITCH, NORMALLY OPEN LIMIT SWITCH, NORMALLY OPEN TEMPERATURE ACTIVATED SWITCH, NORMALLY OPEN TIME DELAY SWITCH, SINGLE BREAK NORMALLY CLOSED RELAY CONTACT NORMALLY OPEN RELAY CONTACT FUSE WITH RATING MOLDED CASE CIRCUIT BREAKER LOW-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER HIGH-VOLTAGE OIL CIRCUIT BREAKER HIGH-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER SWITCH AND FUSE UNIT -**√**->> FUSED DRAWOUT POTENTIAL TRANSFORMER

INSTANTANEOUS OVERCURRENT RELAY

AC-DIRECTIONAL OVERCURRENT RELAY

STARTER, COMBINATION WITH DISCONNECT SWITCH

RECTIFIER, CATHODIC PROTECTION SANITARY

AC-TIME OVERCURRENT RELAY

DISCONNECT SWITCH, FUSED

DISCONNECT SWITCH, UNFUSED

STARTER OR MOTOR CONTROLLER

LOCKING OUT RELAY

GENERATOR, POWER

FUSIBLE LINK

BATTERY

POTHEAD

STRESS CONE

CAPACITOR

── LIGHTNING ARRESTOR

AMMETER

VOLTMETER

WATTMETER

WATT-HOUR METER

GENERAL CONSTRUCTION NOTES ELECTRICAL SYSTEMS SHALL COMPLY WITH 2017 NATIONAL ELECTRICAL CODE AND BE INSTALLED BY LICENSED CONTRACTORS. LIGHTING SHALL COMPLY WITH THE 2018 IECC.

VACANCY SENSOR

WATER HEATER

TRANSFORMER

XFMR

WEATHERPROOF

				WITH THE 201	8 IECC.
	FLE	CTRI	CAL ABBREVIATI	ONS	
		.01111	ONE NOBINE VIXII	0110	
1PH	SINGLE-PHASE	ELEV	ELEVATOR	MW	MEGAWATT MICROWAVE
1P 2/C	SINGLE POLE TWO-CONDUCTOR	EMCP	EMERGENCY MONITORING CONTROL PANEL	NA	NOT APPLICABLE
3/C	THREE-CONDUCTOR	EMER	EMERGENCY	NEC	NATIONAL ELECTRICAL CODE
3PH	THREE-PHASE	EMI	ELECTROMAGNETIC INTERFERENCE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS
4/C	FOUR-CONDUCTOR	EMT	ELECTRICAL METALLIC TUBING		ASSOCIATION
4W	FOUR-WIRE	ENCL	ENCLOSURE	NEUT OR N	_
AAP	ALARM ANNUNCIATOR PANEL	EPO EPRF	EMERGENCY POWER OFF EXPLOSION PROOF	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
AC	ALTERNATING CURRENT OR ARMORED	ESMT	EASEMENT	NIC	NOT IN CONTRACT
	CABLE	EWC	ELECTRIC WATER COOLER	NL	NIGHT LIGHT
ACC	ACCESSIBLE	EWH	ELECTRIC WATER HEATER	NO	NORMALLY OPEN
AFC	ABOVE FINISHED COUNTER, AUTOMATIC	EXIST	EXISTING	NS	NO SCALE
	FREQUENCY CONTROL, OR AVAILABLE FAULT CURRENT	FA	FIRE ALARM	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	FAAP	FIRE ALARM ANNUNCIATOR PANEL	ОС	ON CENTER
AFG	ABOVE FINISHED GRADE	FABL	FIRE ALARM BELL	OD	OUTSIDE DIAMETER
AH	AMPERE HOUR	FABX	FIRE ALARM BOX	OF	OWNER FURNISHED
AHJ	AUTHORITY HAVING JURISDICTION	FACP	FIRE ALARM CONTROL PANEL	OF/CI	OWNER FURNISHED/CONTRACTOR
AIC AMP	AMPERE INTERRUPTING CAPACITY AMPERE	FC FIXT	FOOTCANDLE FIXTURE	OF/OI	INSTALLED OWNER FURNISHED/OWNER INSTALLED
ASC	AMPS SHORT CIRCUIT	FLA	FULL LOAD AMPS	OF/OI OL	OVERLOAD
AT	AMPERE TRIP	FLEX	FLEXIBLE METALLIC CONDUIT	OS	OCCUPANCY SENSOR
ATS	AUTOMATIC TRANSFER SWITCH	FLT	FLOODLIGHT		
AUTO	AUTOMATIC	FLUOR	FLUORESCENT	Р	POLE
AV	AUDIO VISUAL		FLUORESCENT FIXTURE	PA	PUBLIC ADDRESS
BFF	BELOW FINISH FLOOR	FOUTT FP	TELEPHONE FLOOR OUTLET FIRE PROTECTION	PB	PANELBOARD, PULL BOX, OR PUSHBUTTON
BFG	BELOW FINISH FLOOR BELOW FINISH GRADE	FT	FEET OR FOOT	PBPU	PREFABRICATED BEDSIDE PATIENT UNIT
BLDG	BUILDING	FU SW	FUSED SWITCH	PCB	POLYCHLORINATED BIPHENYL
BPIP	BOILER PLANT INSTRUMENTATION PANEL	FVNR	FULL VOLTAGE NON-REVERSING	PEC	PHOTOELECTRIC CELL
BRKR	BREAKER	FVR	FULL VOLTAGE REVERSING	PED	PEDESTAL
BYP	BY PASS	C OD OND	CDOLIND	PEND	PENDANT POWER FACTOR
С	CONDUIT	G OR GND GEN	GROUND GENERATOR	PF PH	POWER FACTOR PHASE
CAB	CABINET	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	PNL	PANEL
CALC	CALCULATE	GTB	GROUND TERMINAL BOX	POD	POWER OPERATED DAMPER
CAP	CAPACITY			PT	POTENTIAL TRANSFORMER
CAT	CATALOG	HID	HIGH INTENSITY DISCHARGE	PTRV	POWER TYPE ROOF VENTILATION
CATV	COMMUNITY ANTENNA TELEVISION	HOA	HAND-OFF-AUTOMATIC	PVC	POLYVINYL CHLORIDE (PLASTIC)
CCR CCTV	CONTROL CONTACTOR CLOSED CIRCUIT TELEVISION	HP HT	HORSEPOWER HEIGHT	PWR	POWER
cd	CANDELA	HZ	HERTZ	RCP	REFLECTED CEILING PLAN
CD	CONSTRUCTION DOCUMENTS			REC	RECESSED
CF	CONTRACTOR FURNISHED	IESNA	ILLUMINATION ENGINEERING SOCIETY OF	RECPT	RECEPTACLE
CF/CI	CONTRACTOR FURNISHED/CONTRACTOR	11.40	NORTH AMERICA	RGS	RIGID GALVANIZED STEEL
CF/OI	INSTALLED CONTRACTOR FURNISHED/OWNER	IMC INCAND	INTERMEDIATE METAL CONDUIT INCANDESCENT	RM RMS	ROOM ROOT MEAN SQUARE
Ci /Oi	INSTALLED	IR	INFRARED	REQD	REQUIRED
CHW	CHILLED WATER	IWH	INSTANTANEOUS WATER HEATER		
CHWP	CHILLED WATER PUMP			SCC	SHORT CIRCUIT CAPACITY
CKT	CIRCUIT	J-BOX	JUNCTION BOX	SES	SERVICE ENTRANCE SECTION
CKT BRKR	CIRCUIT BREAKER	kV	KILOVOLT	SD SF	SMOKE DETECTOR
CLF CLG	CURRENT LIMITING FUSE CEILING	kVA	KILOVOLT KILOVOLT AMPERE	SHT	SQUARE FOOT (FEET) SHEET
CMU	CONCRETE MASONRY UNIT	kVAH	KILOVOLT AMPERE PER HOUR	SI	INTERNATIONAL SYSTEM OF UNITS
COAX	COAX CABLE	kVAR	KILOVOLT AMPERE REACTIVE	SPEC	SPECIFICATION
COMM	COMMUNICATION	kW	KILOWATT	SPST	SINGLE POLE, SINGLE THROW
CONC	CONCRETE	kWH	KILOWATT HOUR	SPDT	SINGLE POLE, DOUBLE THROW
CONT CONTR	CONTINUE CONTRACTOR	kWHM	KILOWATT HOUR METER	SURF SW	SURFACE SWITCH
COORD	COORDINATE	LED	LIGHT EMITTING DIODE	SWBD	SWITCHBOARD
CPT	CONTROL POWER TRANSFORMER	LF	LINEAR FEET (FOOT)	SWGR	SWITCHGEAR
CRI	COLOR RENDERING INDEX	LM	LUMEN		
CT	CURRENT TRANSFORMER	LP	LIGHT POLE	TC	TIME CLOCK
CTV CU	CABLE TELEVISION COPPER	LPS LRA	LOW PRESSURE SODIUM LOCKED ROTOR AMPS	TEL TP	TELEPHONE TWISTED PAIR
CU FT	CUBIC FEET	LTCP	LOCAL TEMPERATURE CONTROL PANEL	TPS	TWISTED PAIR TWISTED PAIR SHIELDED
CUR	CURRENT	LT	LIGHT	TTB	TELEPHONE TERMINAL BOARD
		LTG	LIGHTING	TV	TELEVISION
DB	DECIBEL	LTG PNL	LIGHTING PANEL	TYP	TYPICAL
DC	DIRECT CURRENT	LTNG	LIGHTNING LOW VOLTAGE	LIED	LINDEREI OOR DUCT
DCP DEG C	DIMMER CONTROL PANEL DEGREES CELSIUS	LV	LOW VOLIAGE	UFD UGND	UNDERFLOOR DUCT UNDERGROUND
DEG C DEG F	DEGREES CELSIOS DEGREES FAHRENHEIT	MATV	MASTER ANTENNA TELEVISION SYSTEM	UL	UNDERWRITERS LABORATORY
DEMO	DEMOLITION	MAX	MAXIMUM	UON	UNLESS OTHERWISE NOTED
DIAG	DIAGRAM	MC	METAL-CLAD	UPS	UNINTERRUPTIBLE POWER SUPPLY
DISC	DISCONNECT	MCA	MINIMUM CIRCUIT AMPS	UTIL	UTILITY
DISTR	DISTRIBUTION DISTRIBUTION DANIEL	MCB MCC	MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER	\/	VOLT
DISTR PNL DMR SW	DISTRIBUTION PANEL DIMMER SWITCH	MDP	MAIN DISTRIBUTION PANEL	V VA	VOLT VOLT AMPERE
DIVIR SW	DOWN	MECH	MECHANICAL	VA VAR	VOLT AMPERE REACTIVE
DPDT	DOUBLE POLE, DOUBLE THROW	MG	MOTOR GENERATOR	VFD	VARIABLE FREQUENCY DRIVE
DPST	DOUBLE POLE, SINGLE THROW	MH	MANHOLE	VOLT	VOLTAGE
DRSW	DOOR SWITCH	MIN	MINIMUM	VS	VACANCY SENSOR

MOUNTING

MAIN LUGS ONLY

MEGAVOLT-AMPERE

MLO

MAXIMUM OVERCURRENT PROTECTION

MANUAL TRANSFER SWITCH

GENERAL NOTES

EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR. MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN

MANUFACTURERS AND MODEL NUMBERS SHOWN IN PLANS ARE CONSIDERED A BASIS OF DESIGN. EQUAL PRODUCT VENDORS ARE WELCOMED TO OFFER IN LIEU OF SHOWN, BUT ALL SALIENT FEATURES AND PERFORMANCE AS THAT OF BASIS OF DESIGN. OFFERING VENDORS SHALL BEAR THE RISK OF PROVIDING "EQUAL" BASED PRODUCTS.

GENERAL NOTES - DEMOLITION

FOR EXISTING EQUIPMENT, SUCH AS LIGHTING FIXTURES, WIRING DEVICES, CONDUITS, ETC., SHOWN ON PLANS TO BE REMOVED, COMPLETELY CUT/CAP CONDUITS AT THE AREA OF WORK PERIMETER AND REMOVE CONDUIT WITHIN THE WORK AREA, DISCONNECT WIRING AT THE OVERCURRENT PROTECTIVE DEVICE AND REMOVE WIRING COMPLETELY FROM THE ABANDONED CONDUITS.

DISCONNECT ALL ABANDONED WIRING OF ALL TYPES AT THE OVERCURRENT PROTECTIVE DEVICE. COMPLETELY REMOVE ALL ABANDONED WIRING.

MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED

	AON = AUTO ON AOF = AUTO OFF MON = MANUAL ON	MOF = MANUAL OFF	LIGHTING CO		SCHE IE DELAY OFF		AY LIGHT DE	ETECTION	3W =	THREE WAY	,	4W = 4 WA	AY	E = ENAI	BLED	[D = DISABLE	ED	
SWITCH SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	LIGHTING AMP	FAN AMP RATING	LIGTHING + FAN AMP	1011		Lucu		NTROL OPTI			I	T	La coccone	I	NOTES	HYPERLIN
\$	WALL SWITCH	HUBBELL	CS120	RATING 20	20	RATING 20	AON -	AOF	мом Е	моғ	MOWO _	TDO _	DLD _	3W	4W	0-10V DIM	-	2	SPEC
\$2	DUAL POLE WALL SWITCH	HUBBELL	CSB220	20	20	20	-	-	E	E	-	-	-	-	<u> </u>	-	-	1,2	SPEC
\$ 3	THREE WAY SWITCH HUBBEL		CS320	20	20	20	-	-	E	E	-	-	-	E	-	-	-	2	SPEC
\$4	FOUR WAY SWITCH	HUBBELL	CSB420	20	20	20	-	-	E	E	-	-	-	-	E	-	-	2	SPEC
\$DOOR	DOOR JAMB SWITCH	PASS & SEYMOUR	1200	15	15	15	-	-	Е	Е	-	-	-	-	-	-	-	5	SPEC
\$ D	DIMMER SWITCH	LUTRON	DVSTV	8	8	8	-	-	E	E	-	-	-	-	-	E	-	2	SPEC
\$3D	THREE WAY DIMMER SWITCH	LUTRON	DVSTV	8	8	8	-	-	E	E	-	-	-	E	-	E	-	2	SPEC
\$os	WALL OCCUPANCY SENSOR SWITCH	LUTRON	MS-OPS6M2U-DV	6	3	3	E	E	D	E	Е	30m	D	-	-	-	-	2	SPEC
\$ 308	THREE WAY OCCUPANCY SENSOR SWITCH	LEGRAND	PW-103N	800W	1/6 HP	-	D	Е	E	E	-	30m	-	-	-	-	-	2	SPEC
\$ 40s	FOUR WAY OCCUPANCY SENSOR SWITCH	LEGRAND	PW-103N	800W	1/6 HP	-	D	Е	E	Е	-	30m	-	-	-	-	-	2	SPEC
\$osd	OCCUPANCY SENSOR DIMMER SWITCH	LUTRON	MS-Z101	8	4.4	4.4	Е	Е	D	Е	Е	30m	D	-	-	E	-	2	SPEC
\$рн	OUTDOOR PHOTOCELL	HUBBELL	DLCPCO	-	-	-	-	-	-	-	-	-	10	-	-	E	-	2,3	SPEC
(S)	CEILING OCCUPANCY SENSOR SWITCH	HUBBELL	OMNI-DT-500	.033	.033	.033	Е	Е	-	-	-	30m	-	-	-	-	-	3	SPEC
тс	ELECTRONIC 24-HOUR TIME SWITCH	INTERMATIC	ET1100	20	1 HP	-		-	-	-	-	-	-	-	-	-	-	4	SPEC

SWITCH TO BE DUAL POLE.

PROVIDE SWITCHES WITH LOW VOLTAGE POWER PACKS AS REQUIRED.

COORDINATE COLOR WITH OWNER/ARCHITECT. SENSOR IS RATED FOR 24VDC INSTEAD OF LINE VOLTAGE. CONTRACTOR TO PROVIDE NECESSARY RELAYS AND WIRING COMPONENTS FOR A COMPLETE INSTALLATION. SET DAYTIME LIGHTING HOURS FOR BETWEEN 6 AM AND 10 PM. SET NIGHTTIME LIGHTING HOURS BETWEEN 10 PM AND 6 AM.

	SCHEDULE OF DISCONNECTS												
	CONNECTED LOAD							DISCONNECT		FUSE			
EQUIPMENT	HP	W	FLA	MCA	PH	VOLTS	TYPE	MFR.	CATALOG NO.	TYPE	SIZE	POLES	NOTES
FCU-1,2,3,4	-	71	-	-	1	120	FUSESTAT	COOPER	BP/SSU	EDISON BASE CLASS T	1A	1	-
EF-2	0.5	-	3.4	-	1	120	FUSESTAT	COOPER	BP/SSU	EDISON BASE CLASS T	4A	1	-
AHU-2	-	-	-	35	3	480	HEAVY DUTY FUSED	SCHNEIDER ELECTRIC	H362N	CARTRIDGE CLASS R	35A	3	-
RF-2	5	-	4.2	-	3	480	HEAVY DUTY FUSED	-	-	CARTRIDGE CLASS R	5A	3	2
SMP-1	1/6	-	1.01	-	1	120	GENERAL DUTY FUSED	-	-	CARTRIDGE CLASS R	2A	3	2
SMP-2	3/4	-	5.26	-	1	120	GENERAL DUTY FUSED	-	-	CARTRIDGE CLASS R	6A	3	2
CU-3	-	-	-	0.6	1	208	HEAVY DUTY FUSED	SCHNEIDER ELECTRIC	H221NRB	CARTRIDGE CLASS R	20A	2	1
AC-3	-	-	-	16.5	1	208	GENERAL DUTY FUSED	SCHNEIDER ELECTRIC	D321N	CARTRIDGE CLASS R	20A	3	-

ENCLOSURE TO BE RAINTIGHT.

PROVIDE IN CABINET FOR COMBINATION VFD/DISCONNECT. REFER TO SCHEDULE OF MOTOR STARTERS.

	LIGHTING FIXTURE SCHEDULE												
	LETTER		FIXTURE							LAMP		NOTES	LIVDEDLINIK
SYMBOL	DESIG.	MANUFACTURER	DESCRIPTION	CATALOG NO.	LOCATION	TYPE	HEIGHT	TYPE	NO.	WATTS	LUMEN	NOTES	HYPERLINK
♀, 愛	AD	HUBBELL LIGHTING	SLENDER WALLPACK	SG1-30-4K7-FT-UNV-DB-PCU-CS	WALL	SURFACE	10'	LED	-	29	3060	1,2 B	SPEC
©	AG	BEACON	OUTDOOR EDGE-LIT CEILING LIGHT	SRT1-20-4K8-5QW-UNV-DB	CEILING	SURFACE	-	LED	-	20	2500	1,2 -	SPEC
0	АН	SELUX	SATURN BOLLARD	SABL-4-TS-1G1-30-BZ-UNV-PC	SITE	-	-	LED	-	26	2470	1,2 B	SPEC
\odot	AJ	SELUX	SATURN 2 POST TOP	SA2L-TS-1-L50-30-12-BZ-UNV-PCT S635-12-BZ-REC	SITE	-	-	LED	-	49.84	5258	1,2 B	SPEC
	FF	DAY BRITE	2x4 LED TROFFER	2-AVE-G-49L-840-4-ACR-UNV-DIM-FMA24	CEILING	SURFACE	-	LED	-	44.1	4854	1,2 -	SPEC
	GF	DAY BRITE	2x4 LED TROFFER	2-AVE-G-49L-840-4-ACR-UNV-DIM	CEILING	RECESSED	-	LED	-	44.1	4854	1,2 -	SPEC
	GS	DAY BRITE	2x4 LED TROFFER	2-AVE-G-32L-840-4-ACR-UNV-DIM	CEILING	RECESSED	-	LED	-	31.3	3103	1,2 -	SPEC
0	PA	PRESCOLITE	3" LED DOWNLIGHT	LTR-3RD-H-SL-10L-DM1-IC_LTR-3RD-T-SL-40K-8-WD-VS-WT-AM	CEILING	RECESSED	-	LED	-	12	1000	1,2 -	SPEC
	SD	DAY BRITE	SURFACE LINEAR LED	OWL-4-40L-840-UNV-DIM	CEILING	SURFACE	-	LED	-	37	3933	1,2 -	SPEC
	WB	COLUMBIA LIGHTING	LED STAIRWELL LUMINAIRE	ESL-4-40-ML-FA-W-ED-U-NXOS	WALL	SURFACE	8'	LED	-	40.1	4614	1,2 A	SPEC
	wc	OCL LIGHTING	2' LED WALL SCONCE	HO1-S1SA-24-MW-MWP-LED1/40K-UNV-DMO	WALL	SURFACE	7'	LED	-	30	2050	1,2 -	SPEC
Ω	WE	STONCO	VAPORTITE LED	VWXL-14-NW-G1-8	WALL	SURFACE	-	LED	-	14	1390	1,2 -	SPEC
⊗•	XA	CHLORIDE	EXIT SIGN	55L-3R	CEILING	SURFACE	-	LED	-	2.48	-	1,2,3 -	SPEC

DRSW

ELEC

EMPTY CONDUIT

DRAWING

DISCONNECT SWITCH

EQUIPMENT GROUND

ELECTRIC OR ELECTRICAL

ELECTRICAL LEGEND

(FLOORPLAN)

RECEPTACLE, SPECIAL PURPOSE 208V,

30A, 3 PHASE, 3-POLE 4W, NEMA 15-30R.

RECEPTACLE, SPECIAL PURPOSE 208V,

RECEPTACLE, SPECIAL PURPOSE 208V, 60A, 3 PHASE, 3 POLE, 4W, NEMA 15-60R.

RECEPTACLE, SWITCHED DUPLEX

[1981mm] AFF. MINIMUM).

50A, 3 PHASE, 3 POLE, 4W, NEMA 15-50R.

CENTERS OR AS DESIGNATED ON DRAWINGS), MTD

3-GANG COMPARTMENT BOX IN FLOOR

FOR TELEPHONE, DATA & RECEPTACLE.

INSTANTANEOUS OVERCURRENT RELAY

AC-DIRECTIONAL OVERCURRENT RELAY

3'-6" [1067mm] AFF OR AS INDICATED.

AC-TIME OVERCURRENT RELAY

DISCONNECT SWITCH, FUSED

VARIABLE FREQUENCY DRIVE

DISCONNECT SWITCH, UNFUSED

STARTER OR MOTOR CONTROLLER

LOCKING OUT RELAY

TIME CLOCK

SWITCH, SPST

SWITCH, SPDT

\$4 SWITCH, FOUR WAY

\$DOOR SWITCH, DOOR JAMB

\$k SWITCH, KEY OPERATED

\$PB SWITCH, PUSH BUTTON

\$x SWITCH, EXPLOSION PROOF

\$PH SWITCH, PHOTOCELL

\$LM SWITCH, LOW VOLTAGE MASTER

\$MC SWITCH, MOMENTARY CONTACT

\$M SWITCH, MANUAL MOTOR STARTING

SWITCH, MOTOR SNAP WITH

SWITCH, WITH PILOT LIGHT

SWITCH, REMOTE CONTROL

SWITCH, WEATHER PROOF

PILOT LIGHT (THERMAL TYPE)

SWITCH, OCCUPANCY SENSOR

SWITCH, OCCUPANCY SENSOR DIMMER

\$□ SWITCH, DIMMER

\$F SWITCH, FUSED

\$L SWITCH, LOCK

GROUNDING TYPE, 20A, W/#12 CONDUCTORS IN

FLEXIBLE CORD (CENTER LINE OF OUTLET: 6'-6"

ELECTRICAL STRIP MOLD (OUTLETS ON 2'-0" [610mm]

STARTER, COMBINATION WITH DISCONNECT SWITCH

RECTIFIER, CATHODIC PROTECTION SANITARY

CONDUIT TERMINATED 6" [152mm] AFF IN STANDARD

BOX FOR EXTENSION TO EQUIPMENT AS DIRECTED.

VENTILATOR OR FAN COIL UNIT OUTLET

CONDUIT TERMINATED W/COUPLING

EXTENSION TO EQUIPMENT AS DIRECTED.

SWITCH, THREE WAY OCCUPANCY SENSOR

(FLUSH W/FINISHED FLOOR) FOR

SWITCH, THREE WAY DIMMER

\$40S SWITCH, FOUR WAY OCCUPANCY SENSOR

MOTOR, SINGLE-PHASE

MOTOR, THREE-PHASE

DUCT, CELL FLOOR HEADER

DUCT, UNDERFLOOR JUNCTION BOX

BRANCH CIRCUIT HOMERUN. LINES INDICATE

HI VOLTAGE SWITCH ON CONCRETE PAD

LOW VOLTAGE SWITCH ON CONCRETE PAD

FLOOR OUTLET, DATA COMMUNICATION

PANELBOARD CABINET, FLUSH MOUNTED

PANELBOARD CABINET, SURFACE MOUNTED

RECEPTACLE, DUPLEX ON EMERGENCY POWER

OUTLET, DATA COMMUNICATION

RECEPTACLE, CLOCK HANGER

RECEPTACLE, GFCI DUPLEX

RECEPTACLE, QUADRAPLEX

RECEPTACLE, SINGLE WITH SWITCH

RECEPTACLE, SPECIAL PURPOSE 120V,

20A, 1 PHASE, 2-POLE, 3W, NEMA 5-20R.

RECEPTACLE, SPECIAL PURPOSE 208V,

20A, 1 PHASE, 2-POLE, 3W, NEMA 6-20R.

RECEPTACLE, SPECIAL PURPOSE 120V,

30A, 1 PHASE, 2-POLE, 3W, NEMA 5-30R.

RECEPTACLE, SPECIAL PURPOSE 208V,

30A, 1 PHASE, 2-POLE, 3W, NEMA 6-30R.

RECEPTACLE, SPECIAL PURPOSE 208V,

60A, 1 PHASE, 3-POLE, 4W, NEMA 14-60R.

RECEPTACLE, DUPLEX

RECEPTACLE, SINGLE

DISTRIBUTION PANEL

LIGHTING PANEL

DUAL POWER AND TELECOMMUNICATIONS MANHOLE

NUMBER OF CIRCUITS, NEUTRAL, AND SWITCH LEG

CONDUCTORS. ONE SEPARATE GREEN GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH

TRANSFORMER

T T DUCT. TROLLEY

WYE CONNECTION

EARTH GROUND

HOMERUN; NOT SHOWN

RIGID CONDUIT LINE = RC

DIRECT BURIAL CABLE = DB

JUNCTION BOX

C C LADDER CABLE TRAY

PULL BOX

WIREWAY

POWER DUCT = P

BUSWAY

SUBSTATION

PROVIDE ALL NECESSARY HARDWARE OR KITS FOR MOUNTING LUMINAIRE AS NOTED BY LOCATION AND TYPE. LUMINAIRE SHOWN IS A BASIS OF DESIGN. EQUIVALENT LUMINAIRES TO BE APPROVED BY ENGINEER PRIOR TO

REFER TO PLANS FOR DIRECTIONAL ARROWS, SINGLE OR DOUBLE SIDED.

A. ON BOARD OCCUPANCY SENSING. B. ON BOARD PHOTO CONTROL. C. 0-10 V DIMMING.

CONTROL NOTES:

D. TRIAC DIMMING.

15.2226.17

E. EMERGENCY BACKUP BATTERY ON FIXTURES WITH ADDITIONAL E TAG.

SCHEDULE OF MOTOR STARTERS AND EQUIPMENT CONTROLLERS											
	MO	ΓOR			STARTER			O.L.		/ICES	
UNIT	LOAD	PH	VOLTS	MFR.	CATALOG NO.	SIZE	POLES	HTRS	SWT	PILOT	NOT
SMP-1	1/6 HP	1	120	-	-	00	1	-	-	-	1,2
SMP-2	3/4 HP	1	120	-	-	00	1	-	-	-	1,2
RF-2	5 HP	3	480	-	-	0	3	-	-	-	1,2
AHU-2	35 MCA	3	480	-	-	2	3	-	-	-	3
NOTES:											

PROVIDE IN CABINET FOR COMBINATION VFD/DISCONNECT. PROVIDE WITH HOA WITH FULL VFD BYPASS.

FACTORY MOUNTED EXTERNAL VFD.

DESIGN INC.

	Sheet List Table
SHEET NUMBER	SHEET TITLE
E 000	ELECTRICAL CODES AND REQUIREMENTS
E 001	PANEL SCHEDULES
E 002	ELECTRICAL DETAILS
E 003	ELECTRICAL SERVICE SCHEMATIC
E 004	ELECTRICAL SITE PLAN
E 100	BASEMENT POWER PLANS
E 101	FIRST FLOOR POWER PLANS
E 102	SECOND FLOOR POWER PLANS
E 103	THIRD FLOOR POWER PLANS
E 201	FIRST FLOOR LIGHTING PLANS
E 202	SECOND FLOOR LIGHTING PLANS

THIRD FLOOR LIGHTING PLANS



PROJECT AREA

KEY PLAN **NOT TO SCALE**

Project Number

Dwg. 89 of 115

DAWES ENGINEERING &

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Approved: Project Director Owner

Drawing Title BUILDING 64 FOLLOW-ON **ELECTRICAL CODES** RENOVATION - SHERIDAN VA AND REQUIREMENTS MEDICAL CENTER

666-18-103 Building Number Drawing Number SHERIDAN, WYOMING

PM - WW

Checked

AUGUST 28, 2020

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

GENERAL PANEL SCHEDULE NOTES PANEL 64L3A IS THE ONLY NEW PANEL. ALL OTHER PANELS ARE EXISTING AND INTENDED TO BE REUSED. NO NEW BREAKERS ARE INTENDED IN EXISTING PANELS. REUSE EXISTING SPARE BREAKERS AS SHOWN. L-L VOLT: 208 PHASE: 3 MAIN: LUG Y BRE

IQ L-N VOLT: 120 WIRES: 4 WIRE SIZE: (EXISTING)

AMP: 250 NEURAL 100% COND. SIZE: (EXISTING) L-L VOLT: 480 PHASE: 3 MAIN: LUG Y
L-N VOLT: 277 WIRES: 4 WIRE SIZE: (EXISTING)
AMP: 800 NEURAL 100% COND. SIZE: (EXISTING)
 PHASE:
 3
 MAIN:
 LUG N

 WIRES:
 4
 WIRE SIZE:
 (EXISTING)
 MFR/MODEL: SQUARE D NQ AIC: 10,000 MFR/MODEL: SQUARE D HCP MFR/MODEL: SQUARE D NQ AIC: 22,000 ALL LABELS, BREAKER SIZES AND LOADS SHOWN IN DESCRIPTION BREAKER TYPE POLE AMP L-LOAD R-LOAD O-LOAD T/S/O/M A/E/H PHASE T/S/O/M O-LOAD R-LOAD L-LOAD BREAKER AMP POLE TYPE DESCRIPTION GREY ARE EXISTING TO REMAIN. ALL LABELS AND LOADS SHOWN IN DARK ARE CHANGES TO EXISTING. RELABEL PANELS AS SHOWN IN REMODELED PANEL SCHEDULES. SPACE SPACE CONTRACTOR TO TRACK DOWN EXISTING CIRCUITS AND SPACE RELABEL ALL BREAKERS IN PANEL 64LBA THAT ARE SHOWN AS "*". ALL NEW LABELS TO BE DESCRIPTIVE OF SPACE WHAT THE CIRCUIT IS AND BE UNIQUE FROM ONE 64H1A, 64H2A CHILLER SPARE SUMMARY CONNECTED LOADS SUMMARY CONNECTED LOADS ELEVATOR 64TBA T=TRANSFORMER TOTAL CONNECTED LOAD 11.5 AMP | 1174 | 720 | 600 E | LOAD | E 1100 | 2160 | 168 | SUMMARY CONNECTED LOADS RECEPTACLES (FIRST 10KW) 13.4 AMP 11.1 KVA 225 AMP 81.0 KVA TOTAL DEMAND LOAD S=SUBFEED 0 H (VOLT-AMPERES) H 0 T 0 RECEPTACLES (REMAINDER) DESIGN (MAX) O=OTHER M=MOTOR 212 AMP SUMMARY CONNECTED LOADS SUMMARY CONNECTED LOADS A=APPLIANCE 0 H (VOLT-AMPERES) H 0 LEGEND/KEY T=TRANSFORMER E=EQUIPMENT 20.7 AMP 5.747 KVA 7.9 AMP 2.179 KVA H-HEATING TOTAL DEMAND LOAD 88.4 AVIP 31.8 KVA
DESIGN (MAX) 250 AVIP 90.0 KVA R=RECEPTACLES S=SUBFEED LEGEND/KEY T=TRANSFORMER O=OTHER 5.8 AMP L=LIGHTING TOTAL CONNECTED LOAD 616.5 AMP 512.5 KVA 162 AMP 58.1 KVA M=MOTOR CONN.=CONNECTED SPARE LOAD DEM.=DEMAND TOTAL DEMAND LOAD 547.3 AMP S=SUBFEED O=OTHER M=MOTOR CONNECTED LOAD BALANCE SUMMARY E=EQUIPMENT SPR=SPARE PHASE A 85.9 AMP 10.308 KVA SPC=SPACE 253 AMP -167.2 KVA H-HEATING PHASE B 95.1 AMP 11.414 KVA D.F.=DEMAND FACTOR R=RECEPTACLES A=APPLIANCE CONNECTED LOAD BALANCE SUMMARY 99.2 AMP 11.906 KVA L=LIGHTING GFCI=GROUND FAULT CIRCUIT E=EQUIPMENT PHASE A
PHASE B 624.2 AMP 172.913 KVA CONN.=CONNECTED H-HEATING DEM.=DEMAND R=RECEPTACLES SPR=SPARE SPC=SPACE CONN.=CONNECTED D.F.=DEMAND FACTOR DEM.=DEMAND DESIGN (MAX) GFCI=GROUND FAULT CIRCUIT SPR=SPARE SPC=SPACE SUMMARY CONNECTED LOADS D.F.=DEMAND FACTOR 0 H (VOLT-AMPERES) H 0 T 0 O 0 O GFCI=GROUND FAULT CIRCUIT T=TRANSFORMER 250 AMP O=OTHER 110 AMP 39.6 KVA M=MOTOR A=APPLIANCE CONNECTED LOAD BALANCE SUMMARY E=EQUIPMENT 160.9 AMP 19.306 KVA R=RECEPTACLES 183.7 AMP 22.042 KVA L=LIGHTING CONN.=CONNECTED DEM.=DEMAND SPR=SPARE SPC=SPACE D.F.=DEMAND FACTOR GFCI=GROUND FAULT CIRCUIT ST-SHUNT TRIP EF-1-1 THIRD FLOOR EMLITES 1 20 586 SPARE RHP-1 CHP-2 0 10380 0 S S 0 S 0 9660 0 H (VOLT-AMPERES) H 0 SUMMARY CONNECTED LOADS 0 H (VOLT-AMPERES) H 0 0 H (VOLT-AMPERES) H 0 T=TRANSFORMER T=TRANSFORMER 25.7 AMP TOTAL DEMAND LOAD 68.1 AMP SUMMARY CONNECTED LOADS SUMMARY CONNECTED LOADS TOTAL DEMAND LOAD S=SUBFEED S=SUBFEED TOTAL DEMAND LOAD 130.2 AMP 108.2 KVA 250 AMP 125 AMP DESIGN (MAX) Q=OTHER 224 AMP M=MOTOR 57 AMP M=MOTOR 95 AMP M=MOTOR SPARE LOAD A=APPLIANCE A=APPLIANCE A=APPLIANCE CONNECTED LOAD BALANCE SUMMARY CONNECTED LOAD BALANCE SUMMARY E=EQUIPMENT E=EQUIPMENT 83.9 AMP 141.0 AMP 39.057 KVA RECEPTACLES (FIRST 10KW) PHASE B 25.5 AMP 3.06 KVA R=RECEPTACLES R=RECEPTACLES TOTAL DEMAND LOAD 157.7 AMP 56.8 KVA S=SUBFEED 141.1 AMP 39.08 KVA R=RECEPTACLES PHASE C 25.0 AMP L=LIGHTING 81.6 AMP 9.79 KVA L=LIGHTING RECEPTACLES (REMAINDER) O=OTHER L=LIGHTING 139.1 AMP CONN.=CONNECTED CONN.=CONNECTED CONN.=CONNECTED DEM.=DEMAND LARGEST MOTOR DEM.=DEMAND A=APPLIANCE DEM.=DEMAND SPR=SPARE CONNECTED LOAD BALANCE SUMMARY APPLIANCES E=EQUIPMENT 9.1 KVA SPC=SPACE SPC=SPACE 164.8 AMP 19.774 KVA H-HEATING SPC=SPACE D.F.=DEMAND FACTOR D.F.=DEMAND FACTOR 141.4 AMP 7 16.963 KVA R=RECEPTACLES D.F.=DEMAND FACTOR GFCI=GROUND FAULT CIRCUIT GFCI=GROUND FAULT CIRCUIT 152.1 AMP 7 18.25 KVA GFCI=GROUND FAULT CIRCUIT CONN.=CONNECTED 14 % -8 % DEM.=DEMAND SPR=SPARE SPC=SPACE D.F.=DEMAND FACTOR GFCI=GROUND FAULT CIRCUIT L-L VOLT: 208 PHASE: 3 MAIN: LUG Y BF
L-N VOLT: 120 WIRES: 4 WIRE SIZE: (EXISTING)

AMP: 50 NEURAL 100% COND. SIZE: (EXISTING) L-L VOLT: 208 PHASE: 3 MAIN: LUG N BF L-N VOLT: 120 WIRES: 4 WIRE SIZE: (EXISTING) AMP: 225 NEURAL 100% COND. SIZE: (EXISTING) L-L VOLT: 208 PHASE: 3 L-N VOLT: 120 WIRES: 4 AMP: 125 NEURAL 100% L-L VOLT: 208 PHASE: 3 MAIN: LUG Y
L-N VOLT: 120 WIRES: 4 WIRE SIZE: (EXISTING)
AMP: 200 NEURAL 100% COND. SIZE: (EXISTING) WIRE SIZE: (8) #3 THHN + #2 CU COND. SIZE: 2" EMT MFR/MODEL: SQUARE D NQ | DESCRIPTION | BREAKER | TYPE | POLE | AMP | L-LOAD | R-LOAD | O-LOAD | T/S/O/M | A/E/H | PHASE | T/S/O/M | A/E/H | O-LOAD | R-LOAD | L-LOAD | BREAKER | A/E/H | DESCRIPTION | AMP | POLE | TYPE | DESCRIPTION | SPACE | SPAC R-LOAD R-LOAD O-LOAD T/S/O/M/ PHASE T/S/O/M O-LOAD R-LOAD L-LOAD BREAKER AMP POLE TO SPARE STAFF LOUNGE GFCIW OFFICE 305 RECPS OFFICE 306 RECPS 641P3 REFRIGERATOR SNOW MELT PUMP HAC 307 RECPS CLASS 308 W RECPS STAFF LOUNGE GFCI E CLASS 308 E RECPS OFFICE 310 RECPS 64-1P2 (BUILDING 0 | 1440 | 0 E | LOAD | E 0 | 0 | SUMMARY CONNECTED LOADS SUMMARY CONNECTED LOADS 0 H (VOLT-AMPERES) H 0 T 0 PANEL 64L3A LEGEND/KEY
T=TRANSFORMER TOTAL CONNECTED LOAD 9.5 AMP RECEPTACLES (FIRST 10KW) TOTAL DEMAND LOAD 9.4 AMP 3.4 KVA S=SUBFEED 50 AMP RECEPTACLES (REMAINDER) 18.0 KVA DESIGN (MAX) SPARE LOAD SUMMARY CONNECTED LOADS 0 8460 0 E LOAD E 0 8460 600 SUMMARY CONNECTED LOADS SUMMARY CONNECTED LOADS 0 SUMMARY CONNECTED LOADS A=APPLIANCE 0 H (VOLT-AMPERES) H 0 T 0 0 H (VOLT-AMPERES) H 0 CONNECTED LOAD BALANCE SUMMARY APPLIANCES E=EQUIPMENT 10.2 AMP 1.22 KVA 10.2 AMP 1.22 KVA PHASE A H-HEATING 1.22 KVA R=RECEPTACLES 8.3 AMP T=TRANSFORMER T=TRANSFORMER TRANSFORMER CONN.=CONNECTED TOTAL DEMAND LOAD 147.7 AMP S=SUBFEED TOTAL DEMAND LOAD 39.4 AMP 14.2 KVA S=SUBFEED DEM.=DEMAND 125 AMP O=OTHER O=OTHER DESIGN (MAX) DESIGN (MAX) SPR=SPARE DESIGN (MAX) 200 AMP 72.0 KVA O=OTHER 77 AMP 27.7 KVA SPARE LOAD SPARE LOAD 86 AMP 30.8 KVA SPC=SPACE SPARE LOAD M=MOTOR A=APPLIANCE A=APPLIANCE D.F.=DEMAND FACTOR A=APPLIANCE TONNECTED LOAD BALANCE SUMMARY CONNECTED LOAD BALANCE SUMMARY E=EQUIPMENT E=EQUIPMENT GFCI=GROUND FAULT CIRCUIT E=EQUIPMENT PHASE A PHASE B 171.3 AMP 20.56 KVA PHASE A 49.5 AMP 5.94 KVA 140.7 AMP 16.878 KVA H-HEATING 175.3 AMP 21.037 KVA R=RECEPTACLES PHASE B 45.5 AMP R=RECEPTACLES 151.1 AMP 18.128 KVA R=RECEPTACLES 173.4 AMP 20.81 KVA 51.0 AMP 146.7 AMP 17.608 KVA L=LIGHTING CONN.=CONNECTED CONN.=CONNECTED RANSFORMER CONN.=CONNECTED DEM = DEMAND DEM.=DEMAND DEM.=DEMAND SPR=SPARE SPR=SPARE SPR=SPARE **PROJECT AREA** SPC=SPACE SPC=SPACE SPC=SPACE 173.2 AMP 48.6 AMP D.F.=DEMAND FACTOR GFCI=GROUND FAULT CIRCUIT GFCI=GROUND FAULT CIRCUIT GFCI=GROUND FAULT CIRCUIT **KEY PLAN NOT TO SCALE** Drawing Title Project Title Project Number Office of 666-18-103 BUILDING 64 FOLLOW-ON PANEL SCHEDULES Construction RENOVATION - SHERIDAN VA Building Number MORRISON-MAIERLE ALBERTSON ENGINEERING, INC. TERRASITE DESIGN **1635 DEADWOOD AVENUE** 2200 FOOTHILLS BLVD, SUITE A 3202 WEST MAIN STREET, SUITE C and Facilities FOURFRONT DESIGN, INC. MEDICAL CENTER RAPID CITY, SOUTH DAKOTA 57702 GILLETTE, WYOMING 82716 RAPID CITY, SOUTH DAKOTA 57702 517 7TH STREET Management PH: (605) 791-1736 PH: (307) 685-3780 PH: (605) 343-9606 RAPID CITY, SOUTH DAKOTA 57701 Approved: Project Director Drawing Number PH: (605) 342-9470 SHERIDAN, WYOMING ∥Owner FAX: (605) 342-2377 **SUMMIT COMPANIES** DAWES ENGINEERING & WWW.FOURFRONTDESIGN.COM Checked DESIGN CO. 46 HIBBARD WAY 575 MINNEHAHA AVENUE WEST

DESIGN INC.

15.2226.17

Department of Veterans Affairs

AUGUST 28, 2020

PM - WW

Dwg. 90 of 115

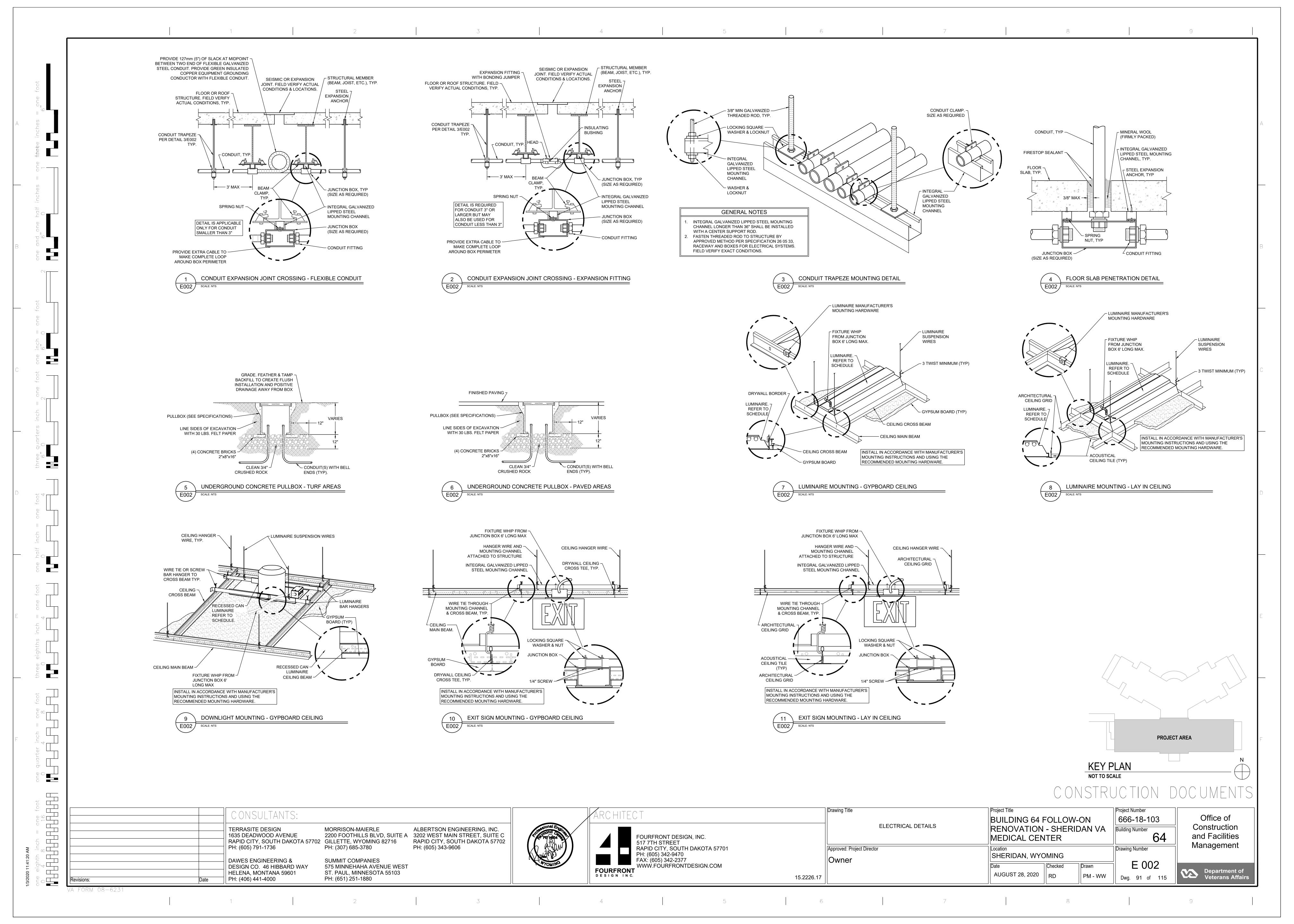
VA FORM 08-623

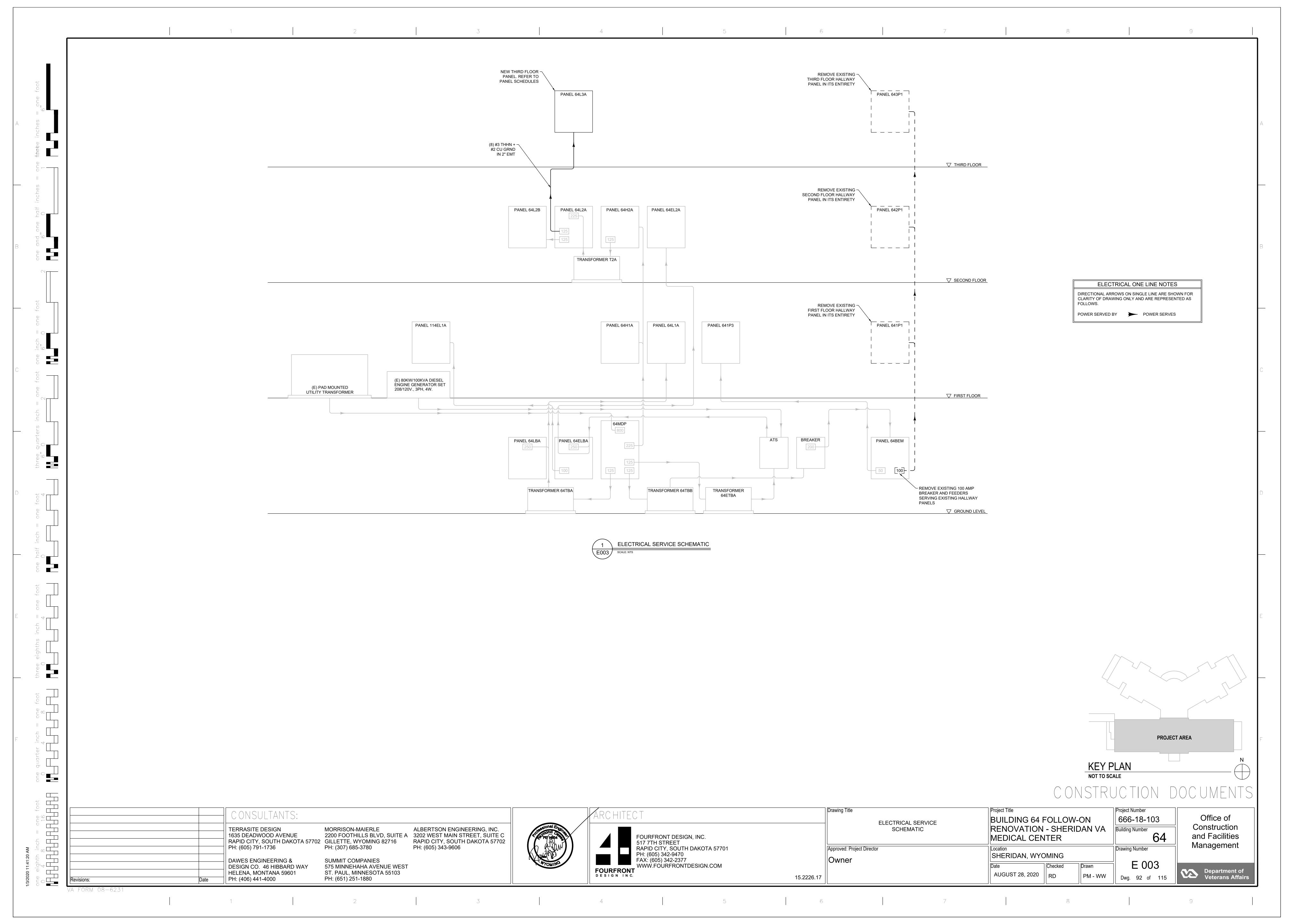
ST. PAUL, MINNESOTA 55103

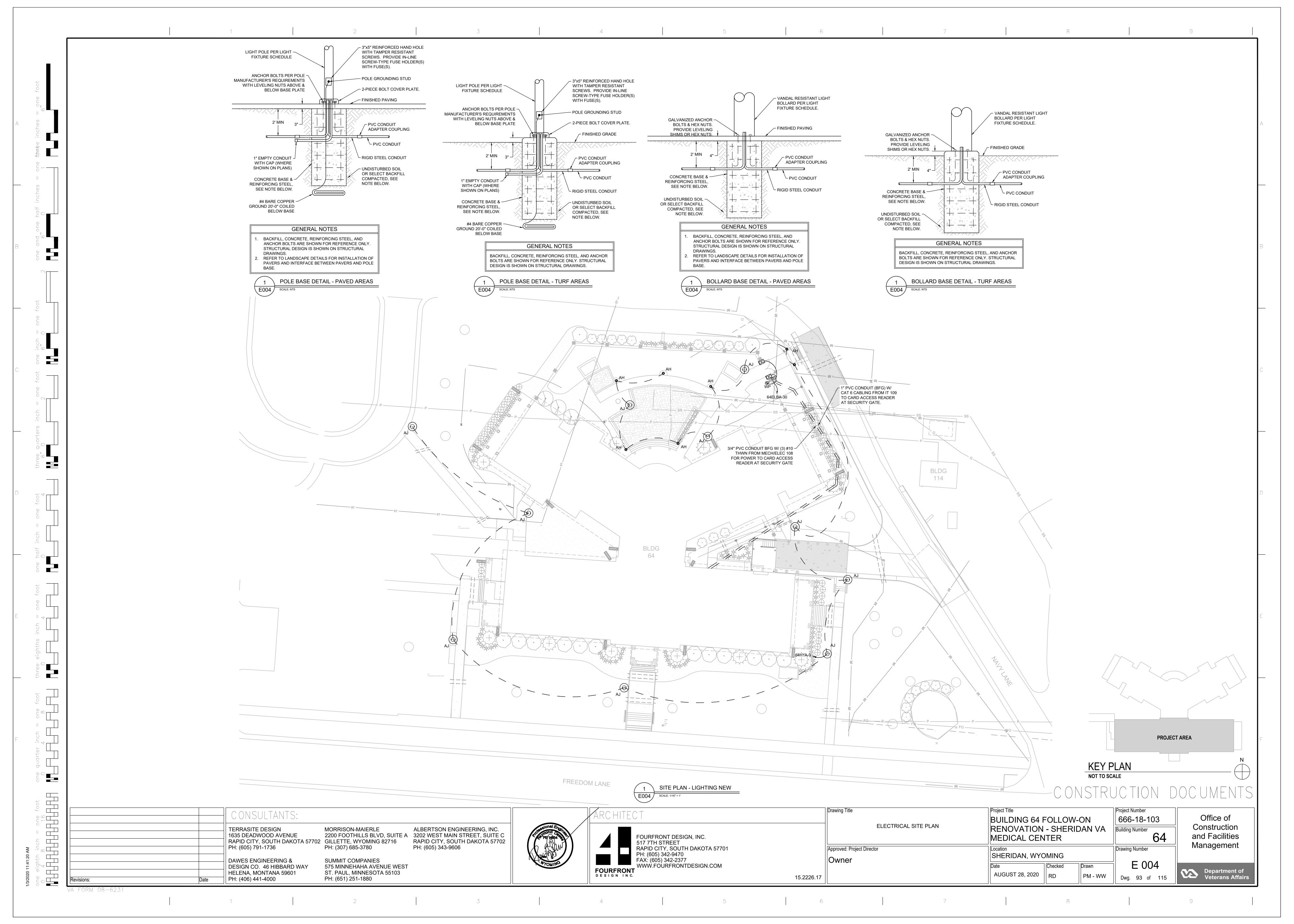
PH: (651) 251-1880

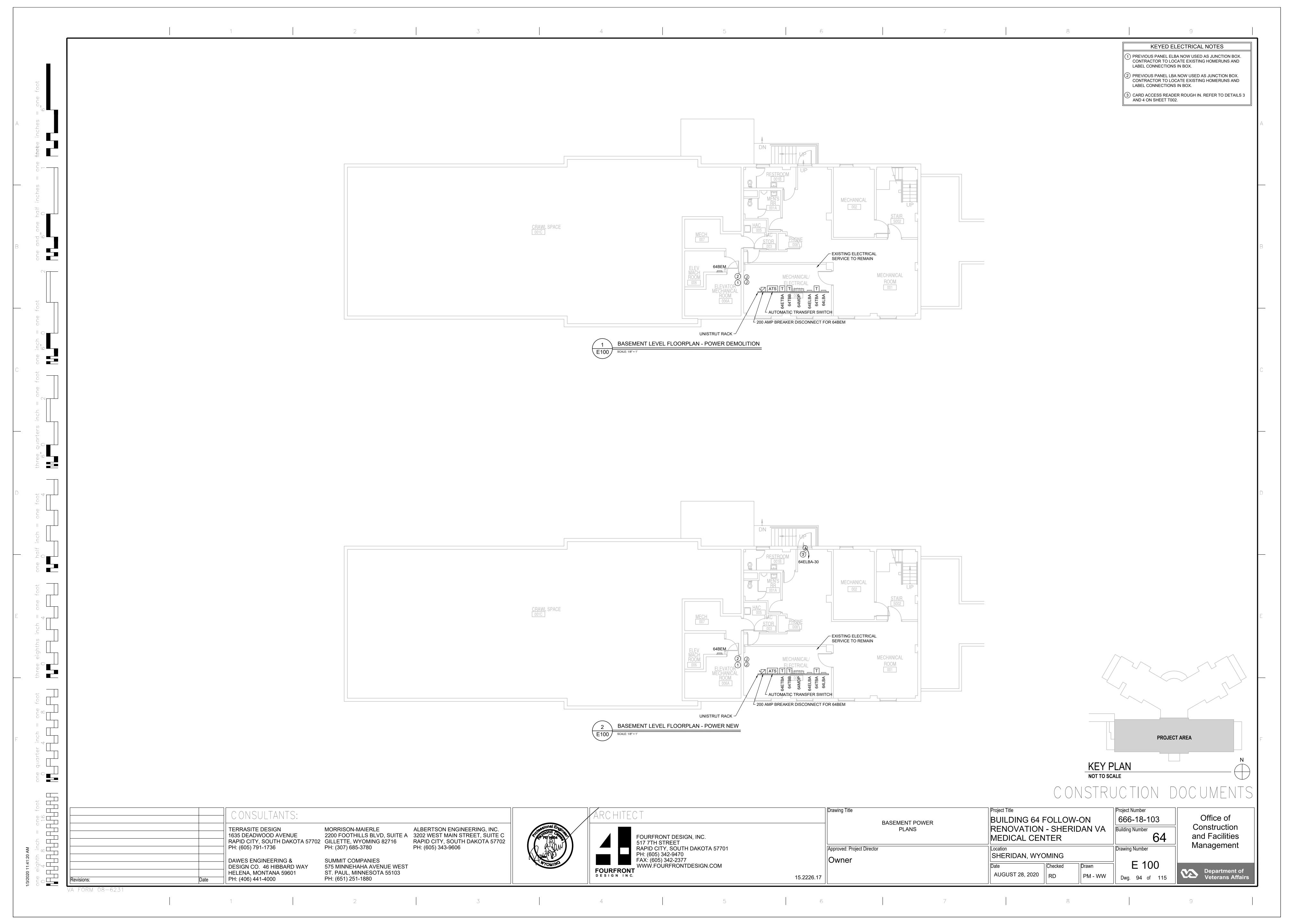
HELENA, MONTANA 59601

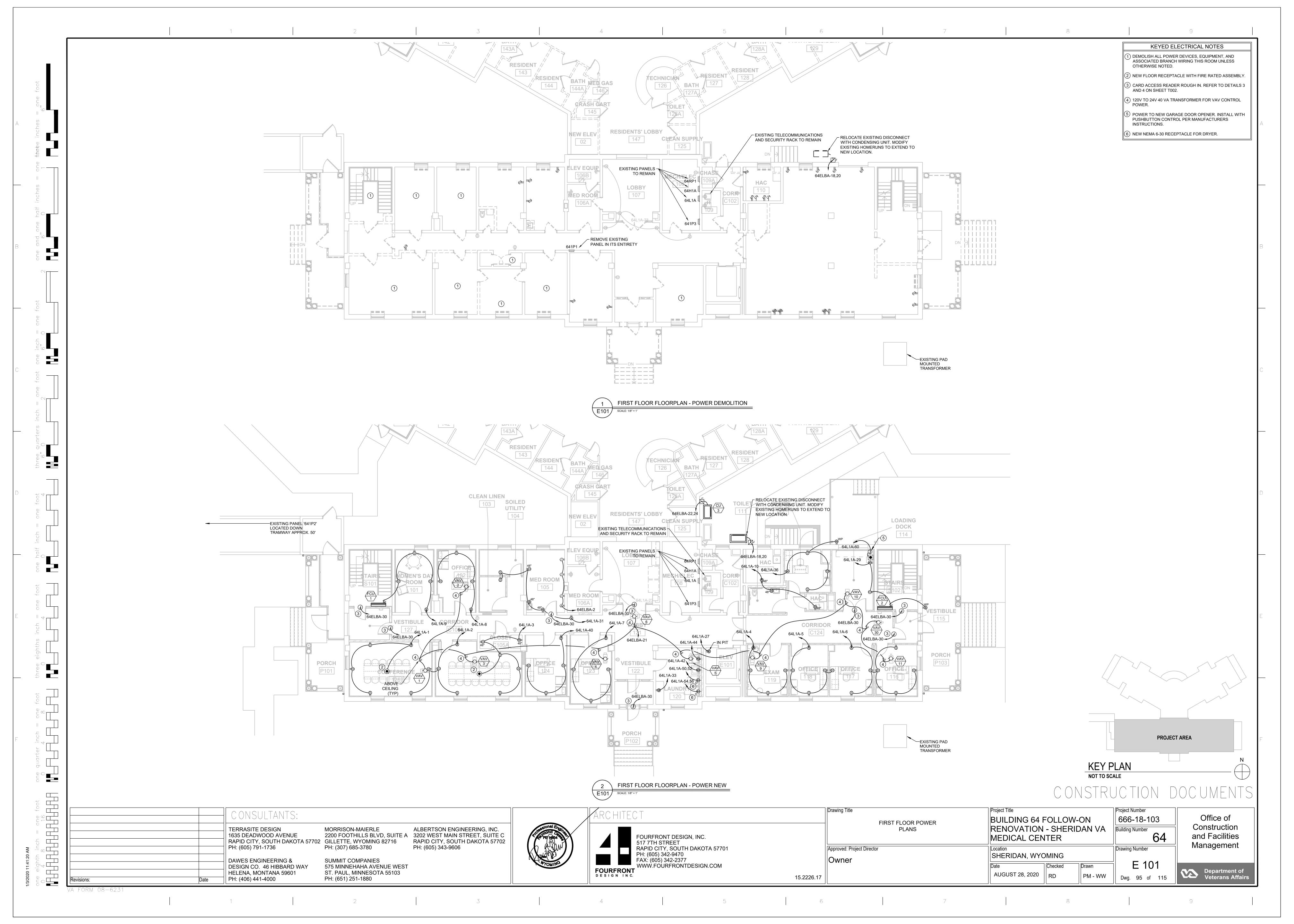
PH: (406) 441-4000











KEYED ELECTRICAL NOTES) CONNECT NEW AIR HANDLER CONTROL AND LIGHTING POWER TO EXISTING AIR HANDLER CONTROL AND LIGHTING POWER AS SHOWN. COORDINATE WITH CONTROLS CONTRACTOR FOR LOCATION. 2) CARD ACCESS READER ROUGH IN. REFER TO DETAILS 3 AND 4 ON SHEET T002. 3) 120V TO 24V 40 VA TRANSFORMER FOR VAV CONTROL POWER. /- EXISTING PANELS AND TRANSFORMER TO REMAIN EXISTING TELECOMMUNICATIONS -64EL2A-18 AND SECURITY RACK TO REMAIN FOR WATER HEATER 64EL2A-38,40,42,44,46,48 ✓ REMOVE EXISTING CONTROLS— PANEL IN ITS ENTIRETY 64EL2A-16 RELOCATE EXISTING COMBINATION ~ VFD AND DISCONNECTS WITH CHILLED WATER PUMPS. MODIFY EXISTING HOMERUNS TO EXTEND TO 64EL2A-25,27,29 NEW LOCATION. 64EL2A-37,39,41 64EL2A-31,33,35 64L2A-25,27,29 64H2A-25,27,29 64H2A-32,34,36 SECOND FLOOR FLOORPLAN - POWER DEMOLITION STAFF TOILET LOUNGE _ EXISTING PANELS AND TRANSFORMER TO REMAIN PROVIDE 2 NEW QUAD RECEPTACLES FOR POWER TO OF/OI TELECOMMUNICATIONS AND SECURITY RACKS. MOUNT RECEPTACLES ON WALL. SHOWN HERE FOR CLARITY ONLY. HEATER CONTROLS— 64EL2A-38,40,42,44,46,48 ABOVE -CEILING (TYP) RELOCATE EXISTING COMBINATION
VFD AND DISCONNECTS WITH CHILLED WATER PUMPS. MODIFY EXISTING HOMERUNS TO EXTEND TO NEW LOCATION. 64H2A-38,40,42 CLEAN 64EL2A-25,27, 64EL2A-37,39,41 64EL2A-31,33,35 64L2A-25,27,29 BED BUG OVEN 206 64H2A-25,27,29 64H2A-32,34,36 PROJECT AREA 2 SECOND FLOOR FLOORPLAN - POWER NEW E102 SCALE: 1/8" = 1' **KEY PLAN NOT TO SCALE** Drawing Title Project Title Project Number Office of 666-18-103 BUILDING 64 FOLLOW-ON SECOND FLOOR Construction RENOVATION - SHERIDAN VA ALBERTSON ENGINEERING, INC. TERRASITE DESIGN MORRISON-MAIERLE POWER PLANS Building Number and Facilities 1635 DEADWOOD AVENUE 2200 FOOTHILLS BLVD, SUITE A 3202 WEST MAIN STREET, SUITE C FOURFRONT DESIGN, INC. 517 7TH STREET MEDICAL CENTER RAPID CITY, SOUTH DAKOTA 57702 GILLETTE, WYOMING 82716 RAPID CITY, SOUTH DAKOTA 57702 Management PH: (605) 343-9606 PH: (307) 685-3780 RAPID CITY, SOUTH DAKOTA 57701 PH: (605) 791-1736 Approved: Project Director Drawing Number PH: (605) 342-9470 FAX: (605) 342-2377 SHERIDAN, WYOMING Owner SUMMIT COMPANIES DAWES ENGINEERING & 575 MINNEHAHA AVENUE WEST www.fourfrontdesign.com Checked DESIGN CO. 46 HIBBARD WAY FOURFRONT DESIGNINC. Department of Veterans Affairs ST. PAUL, MINNESOTA 55103 HELENA, MONTANA 59601 AUGUST 28, 2020 PM - WW 15.2226.17 Dwg. 96 of 115 PH: (406) 441-4000 PH: (651) 251-1880 VA FORM 08-6231

KEYED ELECTRICAL NOTES) SWITCH RECEPTACLES IN THIS ROOM WITH CEILING OCCUPANCY SENSOR AS SHOWN. 2 DEMOLISH ALL POWER DEVICES, EQUIPMENT, AND ASSOCIATED BRANCH WIRING THIS ROOM UNLESS OTHERWISE NOTED. 3) JUNCTION BOXES FOR CARD ACCESS READER. REFER TO DETAILS 3 AND 4 ON SHEET T002. (4) 120V TO 24V 40 VA TRANSFORMER FOR VAV CONTROL 643P1 PANEL IN ITS ENTIRETY THIRD FLOOR FLOORPLAN - POWER DEMOLITION E103 | SCALE: 1/8" = 1' ABOVE – CEILING (TYP) TOILET TOILET 309A PROJECT AREA THIRD FLOOR FLOORPLAN - POWER NEW **KEY PLAN NOT TO SCALE** one eighth inch = one ioot

4 8 16

HEHEREREE Drawing Title Project Number Office of BUILDING 64 FOLLOW-ON 666-18-103 THIRD FLOOR POWER Construction RENOVATION - SHERIDAN VA TERRASITE DESIGN MORRISON-MAIERLE ALBERTSON ENGINEERING, INC. **PLANS** Building Number and Facilities 1635 DEADWOOD AVENUE 2200 FOOTHILLS BLVD, SUITE A 3202 WEST MAIN STREET, SUITE C FOURFRONT DESIGN, INC. 517 7TH STREET MEDICAL CENTER RAPID CITY, SOUTH DAKOTA 57702 GILLETTE, WYOMING 82716 RAPID CITY, SOUTH DAKOTA 57702 Management PH: (605) 343-9606 PH: (307) 685-3780 RAPID CITY, SOUTH DAKOTA 57701 PH: (605) 791-1736 Approved: Project Director Drawing Number PH: (605) 342-9470 FAX: (605) 342-2377 SHERIDAN, WYOMING Owner SUMMIT COMPANIES DAWES ENGINEERING & Checked 575 MINNEHAHA AVENUE WEST www.fourfrontdesign.com DESIGN CO. 46 HIBBARD WAY FOURFRONT DESIGNINC. Department of Veterans Affairs HELENA, MONTANA 59601 ST. PAUL, MINNESOTA 55103 AUGUST 28, 2020 Dwg. 97 of 115 PM - WW 15.2226.17 H: (406) 441-4000 PH: (651) 251-1880 VA FORM 08-6231

