DUCTWORK SYMBOLS

- SUPPLY DUCT (UP & DOWN)
- EXHAUST DUCT (UP & DOWN)
- RETURN DUCT (UP & DOWN)
- ROUND AND SQUARE 4-WAY CEILING DIFFUSERS
- SQUARE 3-WAY CEILING DIFFUSERS
- SQUARE 2-WAY CEILING DIFFUSERS
- SQUARE 1-WAY CEILING DIFFUSERS
- LINEAR SLOT DIFFUSER
- SUPPLY TOP REGISTER OR GRILLE (WALL TYPE)
- EXHAUST OR RETURN CEILING REGISTER OR GRILLE
- EXHAUST OR RETURN BOTTOM REGISTER OR GRILLE (WALL TYPE)
- EXHAUST OR RETURN REGISTER OR TOP GRILLE (WALL TYPE)
- VANED ELBOW & AIR SPLIT TYPE DUCT TAKE-OFF
- CONNECT NEW DUCT TO EXISTING DUCT
- INCLINED RISE, IN DIRECTION OF AIR FLOW
- INCLINED DROP, IN DIRECTION OF AIR FLOW
- LIMIT OF DEMOLITION
- FLEXIBLE CONNECTION, EQUIPMENT, VIBRATION, OR SEISMIC
- VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS WITH VANES EVEN IF SYMBOL IS MISSING)
- VANED ELBOW (SHORT RADIUS)
- STANDARD RADIUS ELBOW (LONG RADIUS)
- NEW DUCT (INSIDE DIMENSIONS: WIDTH x DEPTH)
- EXISTING DUCT TO REMAIN
- EXISTING DUCT TO BE REMOVED
- LOUVER (LOUVER SPECIFIED IN ARCHITECTURAL SECTION.)
- FLEXIBLE DUCTWORK (INSULATED)
- DUCT WITH SOUND LINING
- MANUAL VOLUME DAMPER
- FIRE DAMPER
- BACK DRAFT DAMPER
- COMBINATION FIRE/SMOKE DAMPER
- POINT OF CHANGE IN DUCT CONSTRUCTION BY STATIC PRESSURE CLASS. THE NUMBER ASSIGNS PRESSURE CLASS (IN. OF WATER) WHICH WILL ACCOMMODATE MAXIMUM OPERATING PRESSURE IN THE DUCT SUBSECTION. THE SYMBOL CONTINUES THE ASSIGNMENT UNTIL THE DUCT TERMINATES OR ANOTHER SYMBOL APPEARS. A "N" SUPERSCRIPT INDICATES NEGATIVE PRESSURE.
- AUTOMATIC CONTROL DAMPER MODULATING
- AUTOMATIC CONTROL DAMPER TWO POSITION
- STAINLESS STEEL DUCT
- MANUAL SPLITTER DAMPER
- STANDARD BRANCH SUPPLY OR RETURN, NO SPLITTER (45° TAP)
- DUCT MOUNTED COIL (HOT WATER OR STEAM COIL)
- DUCT SMOKE DETECTOR
- COMBINATION FIRE/SMOKE DAMPER
- SMOKE DAMPER

VALVE SYMBOLS

- GATE VALVE - THREADED/FLANGED
- GATE VALVE WITH 3/4" HOSE ADAPTER
- CHECK VALVE
- WYE STRAINER (WITH BALL VALVE & HOSE CONNECTION)
- WYE STRAINER WITH VALVED DRAIN AND QUICK-COUPLE HOSE CONNECTOR
- FLEXIBLE CONNECTION
- ANGLE GLOBE VALVE
- BUTTERFLY VALVE
- BALL VALVE
- MODULATING CONTROL VALVE
- MODULATING CONTROL BUTTERFLY VALVE
- TWO POSITION CONTROL VALVE
- THREE-WAY MODULATING CONTROL VALVE
- THREE-WAY TWO POSITION CONTROL VALVE
- PRESSURE REGULATING VALVE
- PRESSURE SAFETY VALVE
- AUTOMATIC BALANCING CONTROL VALVE
- WATER BALANCE DEVICE
- CIRCUIT SETTER VALVE
- GATE VALVE WITH GLOBE-VALVED BYPASS
- PLUG VALVE
- CONTROL VALVE (CV) - FLOAT-OPERATED
- PRESSURE REDUCING VALVE (PRV)
- WATER LEVEL CONTROLLER
- FLOW METER
- AIRFLOW CONTROL VALVE W/ DDC CONTROLLER (RECTANGULAR OR ROUND MODELS)
- AIRFLOW CONTROL VALVE - FLOW DIAGRAM

TERMINAL UNIT SYMBOLS

- CONVECTOR OR RADIATOR (RECESSED)
- CONVECTOR OR RADIATOR (WALL HUNG)
- FLOOR MOUNTED VERTICAL RECESSED FAN COIL UNIT. LETTER INDICATES UNIT SIZE.
- FLOOR MOUNTED VERTICAL CABINET FAN COIL UNIT. LETTER INDICATES UNIT SIZE.
- THRU WALL AIR CONDITIONING UNIT. LETTER INDICATES UNIT SIZE.
- WINDOW TYPE AIR CONDITIONING UNIT. LETTER INDICATES UNIT SIZE.
- FLOOR MOUNTED HEAT PUMP. LETTER INDICATES UNIT SIZE.
- AIR CURTAIN
- UNIT HEATER (HORIZONTAL) STEAM OR HOT WATER (SEE SCHEDULES)
- 1'x4' RADIANT CEILING PANEL
- SUPPLY AIR TERMINAL UNIT WITH INTEGRAL REHEAT COIL TERMINAL UNIT SUPPLY (TUS) - DDC (WITHOUT COIL: TUS FOR EQUIPMENT ROOMS/COOLING ONLY OTHERWISE - TUE/TUR - EXHAUST OR RETURN TERMINAL UNIT)

PIPING SYMBOLS

HPS	HIGH PRESSURE STEAM (60 PSIG AND ABOVE)
HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
MPS	MEDIUM PRESSURE STEAM (16 PSIG THRU 59 PSIG)
MPR	MEDIUM PRESSURE STEAM CONDENSATE RETURN
LPS	LOW PRESSURE STEAM (15 PSIG AND BELOW)
LPR	LOW PRESSURE STEAM CONDENSATE RETURN
PC	CONDENSATE PUMP DISCHARGE
HWS	HOT WATER HEATING SUPPLY
HWR	HOT WATER HEATING RETURN
GHS	GLYCOL-WATER HEATING SUPPLY
GHR	GLYCOL-WATER HEATING RETURN
CWS	CONDENSER WATER SUPPLY (FROM TOWER)
CWR	CONDENSER WATER RETURN (TO TOWER)
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
GCS	CHILLED GLYCOL-WATER SUPPLY
GCR	CHILLED GLYCOL-WATER RETURN
MW	MAKE-UP WATER
D	DRAIN LINE
V	VENT LINE
GRS	GLYCOL-WATER RUN AROUND SUPPLY
GRR	GLYCOL-WATER RUN AROUND RETURN
X	EXISTING PIPE TO BE REMOVED
FWPD	FEEDWATER PUMP DISCHARGE
FWPS	FEEDWATER PUMP SUCTION
CTPD	CONDENSATE TRANSFER PUMP DISCHARGE
CTPS	CONDENSATE TRANSFER PUMP SUCTION
VR	VACUUM CONDENSATE RETURN
TC	TUBE CLEANER WATER SUPPLY
BO	BOILER BLOWOFF
CBD	CONTINUOUS BLOWDOWN
BWS	BOILER WATER SAMPLE
FWS	FEEDWATER SAMPLE (FROM DEAERATOR)
CF	CHEMICAL FEED
OFL	OVERFLOW
A	COMPRESSED AIR
G	NATURAL GAS MAIN FUEL
G(I)	NATURAL GAS IGNITER FUEL
LPG(I)	LIQUEFIED PETROLEUM GAS IGNITER FUEL
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
CW	COLD WATER (CITY WATER)
SW	SOFTENED WATER
HW	HOT WATER
RH	ROLLER-TYPE HANGER
SH	VARIABLE SPRING-TYPE HANGER (TYPE 51)*
SCH	SPRING CUSHION-TYPE HANGER (TYPE 48 OR 49)*
	CLEVIS-TYPE HANGER
TH	TRAPEZE HANGER (PROVIDE U-BOLT PIPE ATTACHMENT TO TRAPEZE EXCEPT WHERE RH ARE INDICATED)
PS	FLOOR-SUPPORTED PIPE STAND
RC	RISER CLAMP (TYPE 42)*
WB	WALL BRACKET (TYPE 31, 32, 33)*
CSH	CONSTANT SUPPORT HANGER (TYPE 54, 55, 56)*
SS	SLIDING SUPPORTS (TYPE 35)*

* TYPE NUMBERS REFER TO MANUFACTURER'S STANDARDIZATION SOCIETY STANDARD PRACTICE SP-58

DRAWING SYMBOLS

- DETAIL NUMBER
- DRAWING NUMBER WHERE DRAWN
- SECTION LETTER
- DRAWING NUMBER WHERE SHOWN
- BUILDING NO. WHERE EQUIPMENT IS LOCATED.
- EQUIPMENT ABBREVIATION (SUPPLY FAN)
- SUPPLY FAN NO. 3 IN BUILDING NO. 26
- TYPICAL UNIT NO.
- BUILDING NO. WHERE EQUIPMENT IS LOCATED
- ITEM (TERMINAL UNIT SHOWN)
- ITEM NUMBER (TERMINAL UNIT NO. 1)
- SERVED BY AIR HANDLER UNIT NO. 1
- SYSTEM DESIGNATION (SUPPLY AIR SHOWN)
- KEY NOTE SYMBOL
- MULTIPLE KEY NOTES APPLYING TO THE SAME ITEM
- POINT OF DISCONNECTION
- POINT OF CONNECTION - NEW TO EXISTING
- SPACE TEMPERATURE SENSOR/THERMOSTAT
- HUMIDITY SENSOR
- MULTI-TECHNOLOGY SPACE OCCUPANCY SENSOR
- BUILDING AUTOMATION SYSTEM/ECC CONTROL PANEL
- ROOM DIFFERENTIAL PRESSURE MONITOR/ALARM PANEL WITH KEY-SWITCH OVERRIDE
- START-STOP

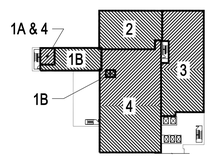
ABBREVIATIONS

A/E	ARCHITECT / ENGINEER
AB	AIR BLENDER
AAV	AUTOMATIC AIR VENT
ACC	AIR COOLED CONDENSER
ACCH	AIR COOLED CHILLER
ACCU	AIR-COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
ACD	AUTOMATIC CONTROL DAMPER,MODULATING
	AUTOMATIC CONTROL DAMPER,TWO POSITION
AD	ACCESS DOOR
AF	AFTER FILTER
AFCV	AIR FLOW CONTROL VALVE
AFF	ABOVE FINISHED FLOOR
AFMD	AIR FLOW MEASURING DEVICE
AFW	AIR FOIL WHEEL (FAN)
AHU	AIR-HANDLING UNIT
AMP	AMPERGE
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE
AS	AIR SEPARATOR
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AW	AIR WASHER
AXF	AXIAL FLOW
B	BOILER
BD	BUTTERFLY DAMPER
BDD	BACKDRAFT DAMPER
BDR	BASE BOARD RADIATOR
BFP	BACKFLOW PREVENTER
BFT	BOILER PLANT FIRE TUBE
BG	BOTTOM GRILLE
BHP	BRAKE HORSEPOWER
BHW	HOT WATER HEATING BOILER
BHX	BOILER BLOWDOWN HEAT EXCHANGER
BIW	BACKWARD INCLINED WHEEL (FAN)
BMT	BONE MARROW TRANSPLANT
BR	BOTTOM REGISTER
BRD	BAROMETRIC RELIEF DAMPER
BSC	BIOLOGICAL SAFETY CABINETS
BT	BLOWOFF TANK
BTC	BLOWOFF TANK CONTROL VALVE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWT	BOILER PLANT WATER TUBE
C	CENTIGRADE (CELCIUS)
CC	COIL
CCD	COOLING COIL CONDENSATE DRAIN
CD	CEILING DIFFUSER
CENT	CENTRIFICAL
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFT	CUBIC FEET
CFP	CHEMICAL FEED PUMP
CG	CEILING GRILLE
CH	CHILLER
CHP	CHILLED WATER PUMP
CHW	CHILLER WATER
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CI	CAST IRON
CM	CARBON MONOXIDE
CM	CUBIC METER
CM/S	CUBIC METER PER SECOND
CO	CLEAN OUT
CO2	CARBON DIOXODE
COMP	COMPRESSOR UNIT
COP	COEFFICIENT OF PERFORMANCE
CP	CONDENSATE PUMP
CR	CEILING REGISTER
CS	CONDENSATE STORAGE TANK
CSG	CLEAN STEAM GENERATOR
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME
CW	COLD WATER (POTABLE)
CWCC	CHILLED WATER COOLING COIL
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN (TO COOLING TOWER)
CWS	CONDENSER WATER SUPPLY (FROM COOLING TOWER)
D	DAMPER - AUTOMATIC
D-1	OUTDOOR AIR DAMPER
D-2	RETURN AIR DAMPER
D-3	RELIEF AIR DAMPER
DB	DECIBELS
Db	DRY-BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE
DF	DIFFUSER
DIA	DIAMETER
DIW	DEIONIZED WATER
DP	DEW POINT TEMPERATURE
DP	DIFFUSER PLATE
DPA	DIFFERENTIAL PRESSURE ASSEMBLY
DPS	DIFFERENTIAL PRESSURE SENSOR
DX	DIRECT EXPANSION
DXCC	DIRECT EXPANSION COOLING COIL
(D)	DEMOLISHED

EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	EVAPORATIVE COOLER
ECC	ENGINEERING CONTROL CENTER
ECU	EVAPORATIVE CONDENSER UNIT
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EGS	EMERGENCY GAS SHUTOFF
EGT	ENTERING GLYCOL TEMPERATURE
EH	EXHAUST HOOD
EJ	EXPANSION JOINT
EMD	END OF MAIN DRIP (STEAM)
ENT	ENTERING
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ERP	ELECTRIC RADIANT PANEL
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETO	ETHYLENE OXIDE
EUH	ELECTRIC UNIT HEATER
EWC	EVAPORATIVE WATER COOLER
EWT	ENTERING WATER TEMPERATURE
(E)	EXISTING
F	FAHRENHEIT
F&T	FLOAT AND THERMOSTATIC
FA	FREE AREA
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT (4 PIPE)
FCUC	FAN COIL UNIT COOLING
ONLY	
FCUH	FAN COIL UNIT HEATING ONLY
FCW	FORWARD CURVED WHEEL (FAN)
FD	FLOOR DRAIN
FD	FIRE DAMPER
FF	FINAL FILTER
FHX	FLUE GAS/FEEDWATER HEAT EXCHANGER
FM	FLOW METER
FOP	FUEL OIL PUMP
FOT	FUEL OIL TANK
FOHX	FUEL OIL HEAT EXCHANGER
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FPTU	FAN POWERED TERMINAL UNIT
FR	FLOOR REGISTER
FRP	FIBER REINFORCED POLYESTER
FSD	COMBINATION FIRE SMOKE DAMPER
FS	FLOW SWITCH
FSTAT	FREEZESTAT
FT	FEET
FT-LB	FOOT-POUND
FTR	FIN TUBE RADIATION
FV	FACE VELOCITY
GA	GAUGE
GAL	GALLONS
GH	GRAVITY HOOD
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GS	GALVANIZED STEEL
H	HUMIDIFIER
H&CW	HOT & COLD WATER
HAC	HOUSEKEEPING AID CLOSET
HB	HOSE BIBB
HC	HEATING COIL
HD	HEAD
HD	HOOD
HOA	HAND/OFF/AUTOMATIC
HP	HEAT PUMP
HP	HORSEPOWER
HPC	HIGH PRESSURE STEAM CONDENSATE RETURN
HPDT	HIGH PRESSURE DRIP TRAP
HPR	HIGH PRESSURE RETURN (STEAM CONDENSATE)
HPS	HIGH PRESSURE SUPPLY (STEAM)
HR	HOT WATER RETURN
HRC	HEAT RECOVERY COIL
HRD	HEAT RECOVERY DEVICE
HRP	HYDRONIC RADIANT (CEILING) PANEL
HRW	HEAT RECOVERY WHEEL
HSTAT	HUMIDISTAT
HTM	HUMIDIFIER TERMINAL
HUM	HUMIDIFIER UNIT MOUNTED
HVU	HEATING AND VENTILATING UNIT
HW	HOT WATER
HWC	HOT WATER COIL
HWHC	HOT WATER HEATING COIL
HWP	HEATING HOT WATER PUMP
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HWUH	HOT WATER UNIT HEATER
HVD	HOISTWAY VENT DAMPER
HX	HEAT EXCHANGER
HZ	HERTZ
I/O	INPUT/OUTPUT
IAQ	INDOOR AIR QUALITY
IBT	INVERTED BUCKET TRAP
ICF	IN-LINE CENTRIFUGAL FAN
ICU	INTENSIVE CARE UNIT
ID	INSIDE DIAMETER
IFB	INTEGRAL FACE AND BYPASS
IN	INCHES
IN HG	INCHES OF MERCURY
IN WC	INCH WATER COLUMN
IN WG	INCH WATER GAUGE
IN-LB	INCH-POUND
IPLV	INTERGRATED PART LOAD VALUE
IRH	INTRARED HEATER
IS	INSECT SCREEN
IU	INDUCTION UNIT
IV	INLET VANES

J	INTENTIONALLY LEFT BLANK
kg	KILOGRAM
kg/HR	KILOGRAM PER HOUR
kPa	KILOPASCAL
kW	KILOWATT
kWh	KILOWATT HOUR
L	LITER
L/h	LITERS PER HOUR (OR LITERS/HOUR)
L/m	LITERS PER MINUTE (OR LITERS/MINUTE)
L/s	LITERS PER SECOND (OR LITERS/SECOND)
LAT	LEAVING AIR TEMPERATURE
LBS/HR	POUNDS PER HOUR
LF	LINEAR FOOT (FEET)
LFD	LAMINAR FLOW DIFFUSER
LGT	LEAVING GLYCOL TEMPERATURE
LH	LATENT HEAT
LPC	LOW PRESSURE STEAM CONDENSATE RETURN
LPG	LIQUID PROPANE GAS
LPR	LOW PRESSURE RETURN (STEAM CONDENSATE)
LPRC	LOW PRESSURE STEAM RETURN (CLEAN)
LLHX	LIQUID TO LIQUID HEAT EXCHANGER
LPS	LOW PRESSURE STEAM
LPSC	LOW PRESSURE STEAM (CLEAN)
LSD	LINEAR SLOT DIFFUSER
LTCP	LOCAL TEMPERATURE CONTROL PANEL
LVG	LEAVING
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M	METER, SI UNIT
M/s	METERS PER SECOND (OR METERS/SECOND)
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MB	MIXING BOX
MBH	1000 BTUH
MCA	MINIMUM BRANCH CIRCUIT AMPACITY
MER	MECHANICAL EQUIPMENT ROOM
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MH	MANHOLE
MHP	MOTOR HORSEPOWER
MIN	MINIMUM
MM	MILLIMETER
MOV	MOTOR OPERATED VALVE
MPC	MEDIUM PRESSURE STEAM CONDENSATE RETURN
MPR	MEDIUM PRESSURE RETURN (STEAM CONDENSATE)
MPS	MEDIUM PRESSURE STEAM
MRI	MAGNETIC RESONANCE IMAGING
MTD	MEAN TEMPERATURE DIFFERENCE
MVD	MANUAL VOLUME DAMPER
MZ	MULTI-ZONE
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NG	NATURAL GAS
NGFM	NATURAL GAS FLOWMETER
NO	NORMALLY OPEN
NOAA	NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION
NOM	NOMINAL
NPLV	NON-STANDARD PART LOAD VALUE
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAG	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OD	OUTSIDE DIAMETER
OFM	OIL FLOWMETER
OR	OPERATING ROOM
P	PUMP
PA	PASCAL
PC	PUMPED CONDENSATE
PCF	POUNDS PER CUBIC FOOT (FEET)
PD	PRESSURE DROP
PEF	PROPELLER (TYPE) EXHAUST FAN
PF	PRE-FILTER
PG	PRESSURE GAGE
PGW	PROPYLENE GLYCOL-WATER (SOLUTION)
PHC	PREHEAT COIL
PPM	PARTS PER MILLION
PRS	PRESSURE REGULATING (VALVE) STATION
PRD	PRESSURE RELIEF DAMPER
PRV	PRESSURE REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
PSIG	POUNDS PER SQUARE INCH - GAGE
PSS	PRIMARY SECONDARY SYSTEM
PSV	PRESSURE SAFETY VALVE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
R/E	RETURN OR EXHAUST
RA	RETURN AIR
RAD	REFRIGERANT AIR DRYER
RAF	RADIO FREQUENCY
RAHX	ROTARY AIR HEAT EXCHANGER
RAT	RETURN AIR TEMPERATURE
RCCH	REMOTE CONDENSER CHILLER
RCU	RECIPROCATING CHILLER UNIT
RD	REFRIGERANT DISCHARGE
RDS	ROOM DATA SHEETS
REA	RELIEF AIR
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID LINE
RLA	RUN LOAD AMPERE
RO	REVERSE OSMOSIS
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RS	REFRIGERANT SUCTION
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
(R)	RELOCATED

SA	SUPPLY AIR
SAD	SOUND ATTENUATING DEVICE
SAT	SUPPLY AIR TEMPERATURE
SC	SHADING COEFFICIENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCI	SPINAL CODE INJURY
SCR	SILICON CONTROLLED RECTIFIER
SD	SMOKE DETECTOR
SD	SUPPLY AIR DIFFUSER
SD-1	SCHEMATIC DESIGN (SUBMISSION1)
SD-2	SCHEMATIC DESIGN (SUBMISSION2)
SDPR	SMOKE DAMPER
SDR	SMOKE DAMPER (RETURN)
SDS	SMOKE DAMPER (SUPPLY)
SEN	SENSIBLE HEAT
SF	SUPPLY FAN
SG	SUPPLY AIR GRILLE
SH	STEAM HUMIDIFIER
SHC	STEAM HEATING COIL
SI	SQUARE INCHES
SP	STATIC PRESSURE
SP GR	SPECIFIC GRAVITY
SPD	SUPPLY PROCESS AND DISTRIBUTION
SPRV	STEAM PRESSURE REDUCING VALVE
SPS	STATIC PRESSURE SENSOR
SQ FT	SQUARE FOOT (FEET)
SR	SUPPLY AIR REGISTER
S/S, SS	STAINLESS STEEL
SSHX	STEAM TO STEAM HEAT EXCHANGER
SSR	SOLID SEPARATOR
ST	STEAM TRAP
SUH	STEAM UNIT HEATER
SV	STEAM PRESSURE REDUCING VALVE
SVS	STEAM VENT SILENCER
SWHX	STEAM TO WATER HEAT EXCHANGER
T & PCV	TEMPERATURE AND PRESSURE CONTROL VALVE
TAB	TESTING, ADJUSTING, BALANCE
TD	TEMPERATURE DIFFERENCE
TDH	TOTAL DYNAMIC HEAD
TDS	TOTAL DISSOLVED SOLIDS
TG	TRANSFER GRILLE
TP	TRAP
TR	TOP REGISTER
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TU	TERMINAL UNIT
TWU	THRU-WALL UNIT
UC	UNDER CUT
UC	UNIT COOLER
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
URV	UPBLAST UNIT VENTILATOR
V	VALVE
VAF	VANE-AXIAL FAN
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER (MANUAL OPPOSED BLADE)
VFD	VARIABLE FREQUENCY DRIVE
VHA	VETERANS HEALTH ADMINISTRATION
VI	VIBRATION ISOLATOR
VIV	VARIABLE INLET VANES
VP	VACUUM PUMP
VPS	VARIABLE PRIMARY SYSTEM
VR	VACUUM (STEAM CONDENSATE) RETURN
VSD	VARIABLE SPEED DRIVE
VUH	VERTICAL UNIT HEATER
W	WATTS
WAG	WASTE ANETHESIA GAS
Wb	WET-BULB (TEMPERATURE)
WC	WATER COOLED
WCCH	WATER COOLED CHILLER
WCCU	WATER COOLED CONDENSING UNIT
WCHP	WATER COOLED HEAT PUMPS
WCPU	WATER COOLED PACKAGED UNIT
WEF	WALL EXHAUST FAN
WF	WATER FILTER
WFCV	WATER FLOW CONTROL VALVE
WFM	WATER FLOWMETER
WFMD	WATER FLOW MEASURING DEVICE
WG	WATER GAGE
WPD	WATER SIDE PRESSURE DROP
YR	YEAR



PLAN NORTH
ACTUAL NORTH
PROJECT LIMITS / PHASE

KEY PLAN
N.T.S.

100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED

NO.	DESCRIPTION	DATE

CONSULTANTS:

MILLER-REMICK LLC
PROFESSIONAL ENGINEER

THOMAS L. PHALEN
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

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Drawing Title: **MECHANICAL COVER SHEET**

Approved: Medical Center Director

Project Title: **RENOVATE SURGICAL SERVICE & UPGRADE OPERATING ROOMS**

Location: HUNTINGTON, WV

Date: 01-15-2016 | Checked: MPP | Drawn: JLR

Project Number: 581-13-101

Building Number: 1S

Drawing Number: M0.01

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

GENERAL NOTES AND CONDITIONS:

1. THESE DRAWINGS WERE PREPARED FROM INFORMATION TAKEN FROM THE AVAILABLE BUILDING DRAWINGS, ARCHITECTURAL BACKGROUNDS PROVIDED BY THE OWNER AND FIELD SURVEY INFORMATION COMPILED BY THE ENGINEERING DESIGN TEAM FOR THE PURPOSE OF ENGINEERING DESIGN. EXISTING CONDITIONS ARE SHOWN AS ACCURATELY AS POSSIBLE. THERE IS THE POSSIBILITY THAT CONDITIONS SHOWN ARE NOT EXACTLY AS EXISTING. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, LOCATIONS, SIZES AND CONDITIONS AT THE SITE AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO BEGINNING INSTALLATION OR FABRICATION WORK.
   - 1.1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE PLANS AND SPECIFICATIONS, AS WELL AS ALL RELATED PROJECT PLANS AND SPECIFICATIONS FROM OTHER DISCIPLINES, TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE AND COORDINATED RESPONSIBILITIES.
   - 1.2. SHOULD IT APPEAR THAT THE WORK INTENDED TO BE DESCRIBED OR RELATED WORK ARE NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THE DRAWINGS, OR IN THE SPECIFICATIONS, CONSULT THE ENGINEER FOR NECESSARY CLARIFICATIONS, AND CONFORM TO THOSE CLARIFICATIONS INSOFAR AS THEY ARE CONSISTENT WITH THE ORIGINAL DRAWINGS AND SPECIFICATIONS. IN NO CASE SHALL WORK PROCEED IN UNCERTAINTY.
   - 1.3. EQUIPMENT ARRANGEMENTS ARE DESIGNED TO SHOW PREFERRED CONFIGURATIONS TO SUIT KNOWN CONDITIONS. ACTUAL INSTALLATION BY CONTRACTOR MAY BE ALTERED AS REQUIRED TO SUIT FIELD CONDITIONS ENCOUNTERED DURING CONSTRUCTION WITHOUT COMPROMISING THE INTENT OF THE ORIGINAL DESIGN. COORDINATE ANY MODIFICATIONS WITH THE ENGINEER AND OWNER PRIOR TO STARTING WORK IN AREAS AFFECTED.
   - 1.4. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT SITE PRIOR TO STARTING WORK.
   - 1.5. DO NOT SCALE DRAWINGS.
2. BIDDERS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES AS THE NATURE AND SCOPE OF THE WORK. THE SUBMISSION OF A BID WILL BE EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND ENSURE THAT ALL ALTERNATE PRICING INFORMATION NOTED WITHIN THE CONSTRUCTION DOCUMENTS HAVE BEEN INCLUDED WITHIN THE ORIGINAL BID SUBMISSION. LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED, OR FOR ANY DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ACCEPTED.
3. THE CONTRACTOR WILL BE RESPONSIBLE FOR ENSURING THAT ALL RULES AND REGULATIONS, INCLUDING THOSE WHICH MAY BE ISSUED BY THE OWNER, ARE BEING OBSERVED, PARTICULARLY WORKPLACE SAFETY AND THE CONDUCT OF ALL THOSE EMPLOYED DIRECTLY AND INDIRECTLY ON THE PREMISES, AND THE OWNER'S EMPLOYEES WHO MAY BE IMPACTED OR AFFECTED BY CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL INSTALL SIGNAGE, BARRIERS, AND OTHER MEANS TO PROVIDE WARNING AND PERSONNEL SAFETY. PLACEMENT OF THESE ITEMS WILL BE COORDINATED WITH THE OWNER AND HIS ONGOING OPERATIONS AND WILL PROMPTLY BE REVISED WHEN WORK IN A PARTICULAR AREA HAS BEEN COMPLETED.
   - 3.1. DURING PERFORMANCE OF WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVISION AND MAINTENANCE OF WARNING SIGNS, LIGHT SIGNAL DEVICES, GUARD LIGHTS, BARRICADES, GUARD RAILS, FENCES AND OTHER DEVICES, APPROPRIATELY LOCATED ON AND AROUND THE JOB SITE WHICH GIVE PROPER AND UNDERSTANDABLE WARNING TO PERSONS WITH REGARD TO HAZARDOUS CONDITIONS, EQUIPMENT AND OPERATIONS BEING PERFORMED IN CONJUNCTION WITH THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH OTHER TRADES FOR ITEMS IN THEIR SCOPE OF WORK WHICH COULD REQUIRE ADDITIONAL MECHANICAL/PLUMBING WORK, AND ITEMS THAT ARE NOT INDICATED ON THE DRAWINGS.
5. THIS INSTALLATION WILL CONFORM TO ALL CODES AND THE REQUIREMENTS OF FEDERAL, STATE, AND LOCAL REGULATORY AGENCIES HAVING JURISDICTION. IN PARTICULAR, THE WORK WILL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE (2012 IBC), INCLUDING ALL OF ITS APPLICABLE SUBCODES AND AMENDMENTS.
6. ALL WORK WILL BE LAWFULLY EXECUTED IN A NEAT AND WORKMANLIKE MANNER AND WILL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING CODES (ABOVE), INDUSTRY STANDARDS, AND IN CONFORMANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS.
7. WORK UNDER THIS CONTRACT SHALL CONSIST OF THE CONTRACTOR PROVIDING ALL LABOR, MATERIALS, AND SERVICES, INCLUDING WORK NOT SPECIFICALLY SHOWN BUT REASONABLY IMPLIED. THIS SHALL INCLUDE CUTTING, PATCHING AND RESTORATION OF EXISTING SURFACES DAMAGED DURING THE CONSTRUCTION. CONTRACTOR SHALL ALSO PROVIDE ALL EQUIPMENT SHOWN OR SPECIFIED OR AN APPROVED EQUIVALENT. SUBSTITUTED EQUIPMENT OR MATERIALS SHALL NOT BE INSTALLED UNTIL GIVEN WRITTEN APPROVAL BY THE OWNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS INCURRED FOR NONCOMPLIANCE WITH THESE CONTRACT DOCUMENTS. CONTRACTOR WILL NOT BE ALLOWED CHANGE ORDERS FOR PROBLEMS ARISING FROM NEGLECT OF PROVISIONS INCLUDED IN THESE CONDITIONS.
9. MAINTAIN ORDERLY HOUSEKEEPING DURING CONSTRUCTION, AND UPON SUBSTANTIAL COMPLETION PERFORM FINAL CLEANUP. REMOVE CONSTRUCTION RUBBISH, SCAFFOLDING, EQUIPMENT, TEMPORARY PROTECTION, TEMPORARY FIELD STRUCTURES, AND OTHER MATERIALS OR EQUIPMENT THAT WAS REQUIRED IN CONNECTION WITH THE CONSTRUCTION, BUT NOT A PERMANENT PART THEREOF.
10. THOSE PERFORMING WORK AS A CONTRACTOR MUST EXAMINE SUBSTRATES AND CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND NOTIFY THE CONTRACTOR IN WRITING, OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. COMMENCEMENT OF WORK BY A TRADE ON A SURFACE OR CONSTRUCTION SHALL IMPLY ACCEPTANCE OF SUCH SURFACE OR CONSTRUCTION. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
11. THE CONTRACTOR SHALL SECURE ALL PERMITS AND APPLICATIONS AND PAY ANY AND ALL FEES AS REQUIRED. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND CERTIFICATES OF INSPECTION REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. DELIVER ALL PERMITS, CERTIFICATES AND APPROVALS TO THE OWNER AGENT PRIOR TO FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR MUST FILE NECESSARY DRAWINGS, PREPARE DOCUMENTS AND MAKE APPLICATIONS FOR EACH REQUIRE PERMIT AND INSPECTION, PRIOR TO COMMENCING WORK TO AVOID DELAYS DURING CONSTRUCTION.
12. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND MANUFACTURERS DATA SHEETS ON ALL EQUIPMENT AND MATERIALS SPECIFIED ON DRAWINGS FOR APPROVAL BY OWNER OR AGENT FOR THE OWNER. THESE DRAWINGS OR SHEETS SHALL CONTAIN ALL NECESSARY DATA, I.E., MANUFACTURER, CATALOG NUMBER, SIZE, DIMENSIONS, CAPACITY, WIRING DETAILS AND ALL OTHER ENGINEERING DATA AND DETAILS NECESSARY FOR COMPLETE CLARITY AND INSTALLATION.
13. THE CONTRACTOR SHALL KEEP ONE SET OF THE LATEST ISSUE OF DRAWINGS WHICH SHALL REFLECT THE ACTUAL INSTALLED CONDITIONS AND CONNECTIONS OF ALL EQUIPMENT AND DEVICES. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL MAINTENANCE INFORMATION AND INSTRUCTIONS RECEIVED WITH EQUIPMENT AND SYSTEMS. ALL "AS-BUILT" DRAWINGS AND MISCELLANEOUS INFORMATION SHALL BE GIVEN TO THE OWNER AND ENGINEER AT COMPLETION OF WORK. THE CONTRACTOR SHALL GUARANTEE ALL MATERIAL AND LABOR TO BE FREE FROM DEFECTS FOR A ONE YEAR PERIOD FROM THE TIME OF OWNER ACCEPTANCE. ANY DEFECTS OCCURRING DURING THIS PERIOD SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
14. AS DIRECTED BY THE OWNER, ALL EXISTING EQUIPMENT AND MATERIAL IN USABLE CONDITION THAT IS REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER, OR HANDLED AS INSTRUCTED BY THE OWNER, BE DISPOSED OF BY THE CONTRACTOR. ALL MATERIALS DEEMED FOR REMOVAL SHALL BE RECYCLED WHENEVER POSSIBLE, IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH WITHIN SPECIFICATION SECTION 01 74 19 (CONSTRUCTION WASTE MANAGEMENT).
15. CONTRACTOR IS TO PROVIDE ALL REQUIRED SCAFFOLDING, LADDERS, RIGGING, HOISTING AND ALL OTHER EQUIPMENT REQUIRED FOR THE INSTALLATION OF THEIR WORK.
16. ESTABLISH PASSAGE CLEARANCES REQUIRED TO DELIVER, INSTALL AND ERECT ALL REQUIRE EQUIPMENT. IF STRUCTURES, EQUIPMENT AND SYSTEMS MUST BE ALTERED TO PROVIDE PASSAGE OF EQUIPMENT, THE CONTRACTOR SHALL RESTORE STRUCTURES, EQUIPMENT AND SYSTEMS TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE; INCLUDING REMOVING AND REPLACEMENT OF ALL CEILING AS REQUIRED TO COMPLETE THE WORK.
17. EXCAVATION FOR UNDER SLAB OR UNDERGROUND INSTALLATION OF CONDUITS SHALL BE APPROACHED WITH EXTREME CAUTION SO AS NOT TO DAMAGE EXISTING UNDERGROUND PIPING, WIRING AND CONDUITS.

HVAC NOTES AND CONDITIONS:

1. ALL HVAC EQUIPMENT SHALL MEET THE REQUIREMENTS SET FORTH IN THE ANSI/ASHRAE/IESNA STANDARD 90.1 ENTITLED "ENERGY STANDARDS FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS".
2. ALL METALLIC DUCTWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARD "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" AND NFPA STANDARD 90A TITLED "INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS". ALL DUCTWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SMACNA PRESSURE CLASS.
3. ALL DUCTWORK DIMENSIONS, AS SHOWN ON THE DRAWINGS, ARE INTERNAL CLEAR DIMENSIONS. CONTRACTOR SHALL INCREASE THE DUCT SIZE ACCORDINGLY TO COMPENSATE FOR ACOUSTICAL DUCT LINING THICKNESS (UNLESS OTHERWISE NOTED). CONTRACTOR MAY ADJUST DUCT SIZES ACCORDINGLY TO SUIT FIELD CONDITIONS AS LONG AS THE DUCT FREE AREA AND STATIC PRESSURE DROP ARE EQUAL TO THE PROJECT DOCUMENTS.
4. CONTRACTOR SHALL PROVIDE ACCESS DOORS IN DUCTWORK FOR OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL FANS, VALVES, COILS AND MECHANICAL EQUIPMENT.
5. ADEQUATELY SIZED ACCESS PANELS SHOULD BE PROVIDED ON BOTH SIDES OF THE SMOKE DETECTORS, FIRE DAMPERS, SMOKE DAMPERS, VOLUME DAMPERS, HUMIDIFIERS, COILS AND OTHER DEVICES LOCATED IN THE DUCTWORK WHICH REQUIRE INSPECTION AND/OR MAINTENANCE.
6. CONTRACTOR SHALL PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCT WORK SYSTEMS (SUPPLY, RETURN, VENTILATION AIR AND EXHAUST) CONNECTED TO ALL AIR HANDLING UNITS, FANS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT (UNLESS NOTED OTHERWISE).
7. ALL AIR HANDLING SYSTEMS SHALL BE DESIGNED AND INSTALLED WITH BALANCE DAMPERS LOCATED IN THE MAIN SUPPLY, EXHAUST AND OUTSIDE AIR DUCTS FOR PROPER BALANCING OF EACH SYSTEM.
8. DUCTWORK WILL INCLUDE ALL DUCTS, FITTINGS, TURNING VANES, DAMPERS, SUPPORTS, AND ALL ACCESSORIES, SUBASSEMBLIES, AND PARTS INCORPORATED THEREIN OR REQUIRED FOR THE INSTALLATION AND COMPLETION OF SYSTEMS. ALL SUPPLY AND RETURN DUCT BRANCHES SHALL BE DESIGNED AND INSTALLED WITH BALANCE DAMPERS.
9. UNLESS NOTED OTHERWISE DUCT LEAKAGE CLASSES AND SEAL CLASSES WILL BE IN ACCORDANCE WITH CLASSES AND STANDARDS DESCRIBED IN SMACNA "DUCT CONNECTION STANDARDS METAL AND FLEXIBLE" AND "SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL".
10. SMOOTH TURN RADIUS DUCTWORK OR TURNING VANES AND 45 DEGREE ENTRY OR CONICAL DUCT BRANCH CONNECTIONS SHALL BE USED THROUGHOUT.
11. ALL DAMPER SHAFTING, RODS AND LINKAGE WILL HAVE CORROSION RESISTANT FINISH. ALL VOLUME DAMPERS WILL MOVE FREELY THROUGH FULL TRAVEL WITHOUT BINDINGS.
12. ALL DUCTWORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS, INCLUDING DIVING DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS, SHALL BE PROVIDED AT NO ADDITIONAL COST.
13. COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, LIGHTING AND OTHER CEILING ITEMS AND MAKE MINOR DUCT MODIFICATIONS TO SUIT.
14. INSTALL NEW THERMOSTATS FOR ALL NEW AND EXISTING ZONES.
15. CONTRACTOR SHALL PROPERLY SUPPORT & BRACE ALL DUCTWORK IN ACCORDANCE WITH SMACNA STANDARDS. DUCTWORK SUPPORT MATERIALS, UNLESS OTHERWISE INDICATED, SUPPORTS, FASTENERS, ANCHORS, STRAPS, TRIM AND ANGLES WILL GENERALLY BE THE SAME MATERIAL AS THE DUCTWORK, HOT DIPPED GALVANIZED.
16. DUCT HANGERS, SUPPORTS AND METHODS OF INSTALLATION WILL CONFORM TO SMACNA STANDARDS AND THE MANUFACTURERS' INSTALLATION REQUIREMENTS WHERE NOT OTHERWISE SPECIFIED, INDICATED OR REQUIRED.
17. ALL INTERIOR AND EXTERIOR WALL, CEILING AND ROOF OPENINGS AND DUCT AND PIPE THROUGH WALL PENETRATIONS, FRAMING, SLEEVES, WEATHERPROOFING AND FIRE SEALING SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.
18. BUILDING HAS BEEN DESIGNED USING THE VAHBS. CONTRACTOR SHALL PROVIDE AND INSTALL ALL FIRE DAMPERS IN ACCORDANCE WITH UL 555, MANUFACTURER'S REQUIREMENTS, AND PER NFPA 90A, EXCEPT WHERE SUPERCEDED BY THE VAFPDM. ALL FIRE DAMPERS SHALL BE UL LISTED AND LABELED CONSISTENT WITH THE WALLS OR FLOORS THAT ARE PENETRATED. PROVIDE ACCESS DOORS SIZED AND LOCATED TO FACILITATE TESTING AND RESETTING OF ALL FIRE DAMPERS.
19. INSULATE PER SPECIFICATION SECTION 23 07 11.
20. THE NEW DUCT SYSTEM IS TO BE CLEANED THOROUGHLY OF ALL DEBRIS BEFORE INSTALLING INLET/OUTLET DEVICES.
21. CONTRACTOR SHALL TEST ADJUST & BALANCE THE COMPLETED SYSTEM. ALL BALANCING WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF AN AABC OR NEBB-QUALIFIED SUPERVISOR WHO SHALL CERTIFY THE RESULTS.
22. TEST, ADJUST AND BALANCE WORK WILL DEMONSTRATE THAT ALL SYSTEMS OPERATE AS THEY WERE INTENDED TO. UPON COMPLETION OF THE WORK A WRITTEN TEST AND BALANCE REPORT WILL BE SUBMITTED TO THE OWNER. FORMS AND PROCEDURES UTILIZED FOR THIS WORK WILL BE AS PROPOSED BY THE AABC OR OTHER NATIONALLY RECOGNIZED ORGANIZATION ACCEPTABLE TO THE OWNER.
23. ALL DUCTWORK, PIPING AND EQUIPMENT SHOWN ON NEW WORK PLANS AND DETAILS SHALL BE CONSIDERED AS NEW UNLESS IDENTIFIED AS EXISTING TO REMAIN.

PIPING NOTES:

1. ALL PIPING MATERIALS AND COMPONENTS INCLUDING FITTINGS, PIPE, FLANGES, VALVES, ETC. SHALL BE DESIGNED, FABRICATED AND INSTALLED PER APPROPRIATE SECTIONS OF THE LATEST ANSI AND ASTM CODES AND STANDARDS AND THE MATERIAL SPECIFICATIONS FOUND IN THE PROJECT DOCUMENTS.
2. CONTRACTOR TO INSTALL HIGH POINT VENTS AT ALL SYSTEM HIGH POINTS AND LOW POINT DRAINS AT SYSTEM LOW POINTS. VENTS AND DRAINS ARE REQUIRED TO FACILITATE SYSTEM DRAINING AND VENTING DURING TESTING AND START-UP.
3. SURFACES TO BE SOLDERED SHALL BE CLEANED BRIGHT. THE JOINTS SHALL BE PROPERLY FLUXED AND MADE WITH APPROVED SOLDER. SOLDER JOINTS FOR POTABLE WATER SHALL BE MADE WITH A SOLDER CONTAINING NOT MORE THAN 0.2 PERCENT LEAD.
4. UNIONS SHALL BE INSTALLED AT ALL EQUIPMENT. THE USE OF DIELECTRIC UNIONS MUST BE INSTALLED IN AREAS WHERE JOINING OF DISSIMILAR METALS (ie CARBON STEEL TO COPPER OR BRONZE, ETC.). THIS IS TO FACILITATE PIPING REMOVAL AND REASSEMBLY FOR FUTURE MAINTENANCE WORK AND/OR PREVENT GALVANIC CORROSION.
5. CONTRACTOR SHALL PROPERLY BRACE, ANCHOR, AND SUPPORT ALL PIPING, VALVES ETC. UNLESS SHOWN OTHERWISE, ALL PIPE HANGERS AND SUPPORTS SHALL BE DESIGNED, MANUFACTURED AND INSTALLED PER MSS SP-58, MSS SP-69 AND MSS SP-89.
6. ALL ABOVEGROUND PIPING SHALL BE INSULATED AND JACKETED AS NOTED IN THE SPECIFICATIONS.
7. ALL PIPES THAT PASS THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND MADE WEATHER TIGHT.
8. ALL PIPING AND VALVES MUST BE PROPERLY IDENTIFIED AND LABELED PER ANSI 13.1, ENTITLED "SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS". ALL VALVES MUST BE IDENTIFIED AND TAGGED WITH WEATHERPROOF TAGS.
9. ALL PIPES OR TUBING WHICH PASS THROUGH RATED AND NON-RATED WALLS, FLOORS AND FOUNDATION WALLS, SHALL PASS THROUGH A SCHEDULE 40 CARBON STEEL PIPE SLEEVE. SLEEVES WHICH PASS THROUGH MASONRY SHALL BE GALVANIZED COATED. ALL SLEEVES SHALL BE INSTALLED FLUSH ON BOTH SIDES OF WALL PENETRATION.

   NON-RATED WALL: THE SLEEVE SHALL BE SIZED TO ALLOW FREE PASSAGE OF INSULATED AND NON-INSULATED PIPES AND TUBING.

   RATED WALL: PIPES WHICH PASS THROUGH FIRE-RATED WALLS & FLOOR SHALL USE THE APPROPRIATE CODE APPROVED, TESTED AND INSTALLATION METHOD OF SEALING WHILE MAINTAINING THE INTEGRITY OF THE WALL'S FIRE RATING(S).

   EXTENSION WALLS & FOUNDATION WALLS: PIPES WHICH PASS THROUGH EXTENSION WALLS OR FOUNDATION WALLS SHALL BE SEALED AND MADE WEATHER TIGHT.
10. INSULATE COLD AND HOT WATER PIPING WITH FIRE RETARDANT VAPOR BARRIER JACKET. PIPE INSULATION SHALL BE SEALED WITH A FIRE RESISTIVE ADHESIVE. SEE SPECIFICATIONS.
11. ALL PREFABRICATED/PREINSULATED PIPING & FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS & INSTRUCTIONS.
12. FIELD-ROUTED PIPING SHALL BE INSTALLED IN A MANNER THAT DOES NOT INTERFERE WITH THE REMOVAL OF EQUIPMENT OR FUTURE MAINTENANCE WORK. THE DESIGN & LAYOUT SHALL BE APPROVED BY THE FACILITY & ENGINEER PRIOR TO INSTALLATION.
13. THE CONTRACTOR MUST PROPERLY SUPPORT, GUIDE, & ANCHOR ALL PIPING & VALVES.LOCATIONS OF PIPE RACKS ARE SHOWN WITHIN THE PROJECT DRAWING DOCUMENTS. PIPE SUPPORT SPACING NOT DETAILED SHALL NOT EXCEED THE SPACING DISTANCES SHOWN ON THE TABLE IN THIS DRAWING.
14. UNLESS SHOWN OTHERWISE, ALL PIPE HANGERS & SUPPORTS SHALL BE DESIGNED, MANUFACTURED, & INSTALLED PER MSS SP-58.
15. INSULATION PROTECTION SADDLES SHALL BE INSTALLED AT ALL SUPPORT LOCATIONS WITHIN ALL SECTIONS OF THE INSULATED PIPING. INSULATION PROTECTION SADDLES ARE SHOWN & SPECIFIED WITHIN THE PROJECT CONTRACT DRAWINGS.
16. ALL MANUALLY OPERATED VALVES LOCATED 7'-0" ABOVE FLOOR OR PLATFORM SHALL BE PROVIDED & INSTALLED WITH CHAIN OPERATORS & CHAIN.
17. ALL ISOLATION VALVES LOCATED ON THE EXTERIOR ROUTED PIPING SYSTEM SHALL BE SUPPLIED WITH LOCKING DEVICES.
18. ALL NON PRE-ENGINEERED/PREINSULATED PIPING SHALL BE INSULATED & JACKETED PER THE PROJECT CONTRACT DOCUMENTS.
19. CONTRACTOR IS RESPONSIBLE FOR ALL CLEANING, HYDRO-TESTING, & COORDINATION OF INSPECTIONS OF THE NEW SYSTEMS IN ACCORDANCE WITH THE PROJECT CONTRACT DOCUMENTS & ALL APPLICABLE CODES.
20. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, & OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
21. ALL VALVES SHALL BE INSTALLED SO THAT VALVES REMAIN IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
22. ALL BALANCING VALVES & BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS & MAX. ADJUSTABLE STOPS (MEMORY STOPS).
23. ALL VALVES (EXCEPT CONTROL VALVES) & STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT & CONTROLS.
24. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.
25. ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
26. PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS, CHILLERS, COOLING TOWERS, & OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION EXCEPT WATER COILS. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE OR AS INDICATED ON THE DRAWINGS.

*MAXIMUM PIPE SPAN TABLE

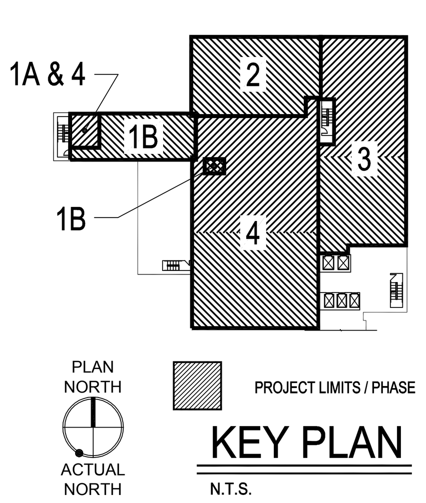
Cu TUBE (TYPE L)	SYSTEM TYPE		PIPE SIZE CS (SCH 40)	SYSTEM TYPE		PIPE SIZE CS (SCH 80)	SYSTEM TYPE		CAST IRON (ALL)
	LIQUID	VAPOR		LIQUID	VAPOR		LIQUID	VAPOR	
1/2"	5'-0"	6'-0"	1/2"	7'-0"	8'-0"	1/2"	7'-0"	8'-0"	N/A
3/4"	5'-0"	7'-0"	3/4"	7'-0"	9'-0"	3/4"	7'-0"	9'-0"	N/A
1"	6'-0"	8'-0"	1"	7'-0"	9'-0"	1"	7'-0"	9'-0"	N/A
1 1/4"	7'-0"	9'-0"	1 1/4"	8'-0"	9'-0"	1 1/4"	7'-0"	9'-0"	N/A
1 1/2"	8'-0"	10'-0"	1 1/2"	9'-0"	12'-0"	1 1/2"	9'-0"	12'-0"	SEE NOTE 2
2"	8'-0"	11'-0"	2"	10'-0"	13'-0"	2"	10'-0"	13'-0"	
2 1/2"	9'-0"	13'-0"	2 1/2"	11'-0"	14'-0"	2 1/2"	11'-0"	14'-0"	
3"	10'-0"	14'-0"	3"	12'-0"	15'-0"	3"	12'-0"	15'-0"	
N/A	N/A	N/A	4"	14'-0"	17'-0"	4"	14'-0"	17'-0"	
N/A	N/A	N/A	6"	17'-0"	21'-0"	6"	17'-0"	21'-0"	N/A
N/A	N/A	N/A	8"	19'-0"	24'-0"	8"	19'-0"	24'-0"	N/A
N/A	N/A	N/A	10"	22'-0"	26'-0"	N/A	N/A	N/A	N/A
N/A	N/A	N/A	12"	23'-0"	30'-0"	N/A	N/A	N/A	N/A

* NOTE 1: THE ABOVE TABLE IS DERIVED FROM MSS SP-58 AND THE ANSI/ASME B31.1. THIS TABLE DOES NOT APPLY WHERE THERE ARE CONCENTRATED LOADS BETWEEN SUPPORTS, i.e. FLANGES, VALVES ETC.

NOTE 2: 10 FT. MAX. SPACING MIN. (1) HANGER PER SECTION CLOSE TO JOINT & CHANGE OF DIRECTION & BRANCH CONNECTIONS

STRUCTURAL STEEL NOTES

1. FABRICATION & ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE "STEEL OF CONSTRUCTION MANUAL," 13TH EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) INCLUDING SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, & AISC CODE OF STANDARD PRACTICE.
2. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS & SHALL CONFORM TO "STRUCTURAL WELDING CODE ANSI/AWS D1.1," LATEST EDITION, AMERICAN WELDING SOCIETY (AWS).
3. WIDE FLANGE SHAPES: ASTM A992, GRADE 50
4. OTHER STRUCTURAL SHAPES & PLATES: ASTM A36, A572
5. STEEL PIPE: ASTM A53, GRADE B
6. STEEL TUBING: ASTM A500, GRADE B
7. GALVANIZED STRUCTURAL STEEL
   - A. STRUCTURAL SHAPES AND RODS ASTM A123
   - B. BOLTS, FASTENERS AND HARDWARE ASTM A153
8. ALL BOLTED CONNECTIONS SHALL BE WITH A325 HIGH STRENGTH BOLTS 3/4"ø MIN., UNLESS NOTED OTHERWISE.
9. ANCHOR RODS SHALL CONFORM TO ASTM F1554, UNLESS NOTED OTHERWISE.
10. WELDING ELECTRODES SHALL BE E70XX FOR MANUAL ARC WELDING. ALL WELDERS SHALL BE CERTIFIED BY THE AWS. MIN. WELD SIZE SHALL BE 3/16" UNLESS NOTED OTHERWISE.
11. CUTS, HOLES, COPING, ETC. REQUIRED FOR OTHER TRADES OR FIELD CONDITIONS SHALL BE SHOWN ON THE SHOP DRAWINGS & MADE IN THE SHOP. CUTTING OR BURNING OF MAIN STRUCTURAL MEMBERS IN THE FIELD WILL NOT BE PERMITTED.
12. SUBMIT SHOP DRAWINGS FOR FABRICATION & ERECTION OF STRUCTURAL STEEL. CLEARLY INDICATE COORDINATED DIMENSIONS. SHOP & ERECTION DRAWINGS MUST SHOW ALL SHOP/FLOOR & WELDS. INITIAL SHOP DRAWING SUBMITTAL SHALL INCLUDE PROPOSED CONNECTION DETAILS & JOB STANDARDS. PROVIDE SIGNED & SEALED CALCULATIONS FOR ALL NON-STANDARD CONNECTION DETAILS SHOWING DESIGN CAPACITIES.
13. STEEL MEMBERS SHOWN ON PLAN SHALL BE EQUALLY SPACED UNLESS NOTED OTHERWISE.
14. THE GENERAL CONTRACTOR & STEEL ERECTOR SHALL NOTIFY THE ENGINEER OF ANY FABRICATION OR ERECTION ERRORS OR DEVIATIONS & RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE.
15. ALTERNATE CONNECTION DETAILS MAY BE USED IF SUCH DETAILS ARE SUBMITTED TO THE ENGINEER FOR REVIEW & APPROVAL. HOWEVER, THE ENGINEER SHALL BE THE SOLE JUDGE OF ACCEPTANCE & THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE DETAILS SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF SUCH ALTERNATE DETAILS WHICH HE/SHE PROPOSES.
16. ALL INTERIOR STEEL SHALL BE PAINTED WITH SHOP STANDARD PRIMER UNLESS NOTED OTHERWISE.
17. STEEL ANGLES & PLATES ALONG WITH BOLTS, NUTS, & WASHERS, IN DIRECT CONTACT WITH EXTERIOR FINISH MASONRY, & ALL EXTERIOR EXPOSED STRUCTURAL STEEL, SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123 & A153.
18. EXISTING FRAMING REQUIRING WELDING SHALL BE THOROUGHLY CLEANED TO ENSURE PROPER WELDING. PROVIDE TEMPORARY SHORING WHEN WELDING TO EXISTING STEEL.
19. FIELD WELDED SURFACES WITHIN 4" OF WELD SHALL BE CLEANED & GROUND SMOOTH. AFTER WELDING COAT THE EXPOSED AREA WITH GALVANIZING REPAIR PAINT. GALVANIZING REPAIR PAINT SHALL BE A HIGH ZINC DUST CONTENT PAINT COMPLYING WITH FEDERAL SPECIFICATIONS DOD-P-21035A OR SSPC-PAINT-20, COLD GALVANIZING COMPOUND BY ZRC PRODUCTS CO. OR EQUAL.
20. GUYS & OTHER BRACING REQUIRED TO PROVIDE LATERAL STABILITY TO STEEL FRAME SHALL BE ADEQUATELY SIZED & ANCHORED. THIS BRACING SHALL REMAIN UNTIL PERMANENT BRACING ELEMENTS & ATTACHED CONSTRUCTION IS INSTALLED.
21. ALL CONNECTIONS SHALL BE FRAMED BEAM CONNECTIONS DESIGNED IN ACCORDANCE WITH THE AISC MANUAL & HALF OF THE ALLOWABLE UNIFORM LOAD FROM "MAXIMUM TOTAL UNIFORM LOAD" TABLES, BUT NOT LESS THAN 6 KIPS. PROVIDE DOUBLE ANGLE CONNECTIONS FULL DEPTH OF SUPPORTING BEAM, UNLESS OTHERWISE APPROVED. MIN. 2 BOLTS PER CONNECTION. SINGLE ANGLE OR SHEAR TAB CONNECTIONS ARE NOT ACCEPTABLE. ALL BEAM TO COLUMN CONNECTIONS SHALL BE DESIGNED FOR THE MIN. SHEAR REACTION INDICATED ABOVE IN COMBINATION WITH A 10 KIP AXIAL FORCE (ACTING IN BOTH TENSION & COMPRESSION).
22. VISUALLY INSPECT ALL FILLET WELDS. 10%%% OF ALL FIELD FILLET WELDS IN PRIMARY CONNECTIONS & MULTI-PASS WELDS SHALL BE TESTED BY THE MAGNETIC PARTICLE METHOD, COMPLYING WITH ASTM E709, PERFORMED ON THE ROOT PASS & ON THE FINISHED WELD.
23. FIELD TEST BOLTED CONNECTIONS IN ACCORDANCE WITH AISC.
24. ALL CONNECTIONS SHALL BE SYMMETRICAL ABOUT THE AXIS OF THE MEMBER CONNECTED. PROVIDE ONLY 1 GRADE OF BOLT FOR EACH BOLT DIAMETER TO BE USED IN THE CONNECTIONS. DO NOT MIX GRADES OR BOLTS.
25. PROVIDE 1/4" CAP PLATES ON ALL EXPOSED HSS MEMBER ENDS UNLESS NOTED OTHERWISE.



KEY PLAN

N.T.S.

100% CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

NO.	DESCRIPTION	DATE

CONSULTANTS:

MILLER-REMICK LLC PROFESSIONAL ENGINEER

ARCHITECT / ENGINEERS:

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Drawing Title: MECHANICAL GENERAL NOTES

Approved: Medical Center Director

Project Title: RENOVATE SURGICAL SERVICE & UPGRADE OPERATING ROOMS

Location: HUNTINGTON, WV

Date: 01-15-2016 | Checked: MPP | Drawn: JLR

Project Number: 581-13-101

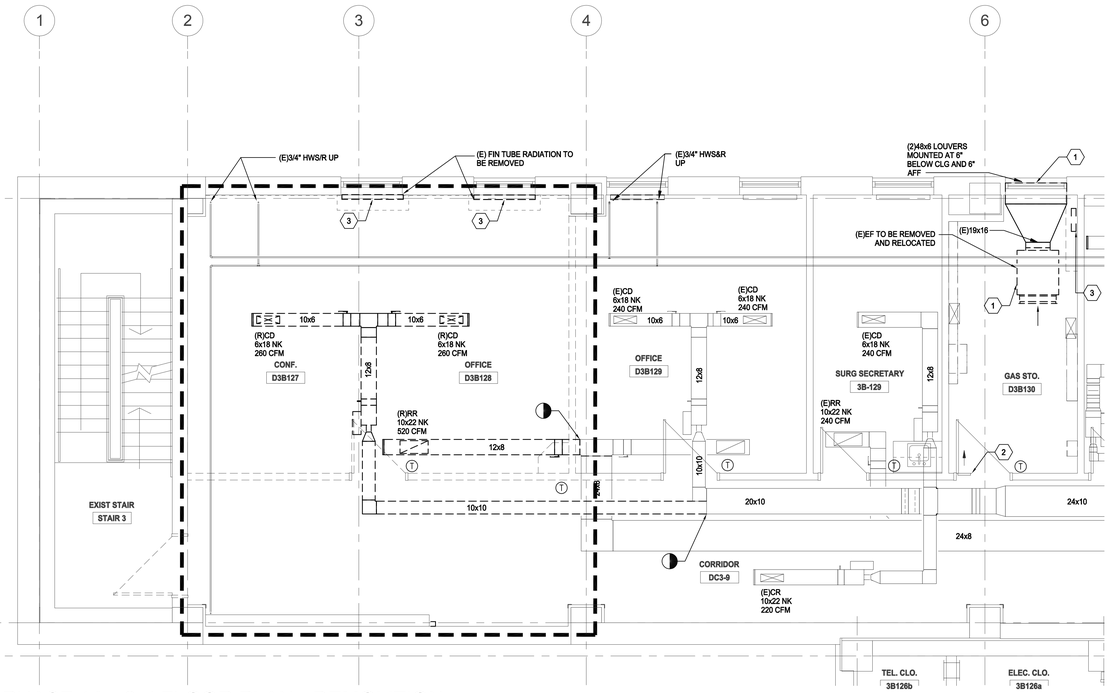
Building Number: 1S

Drawing Number: M0.02

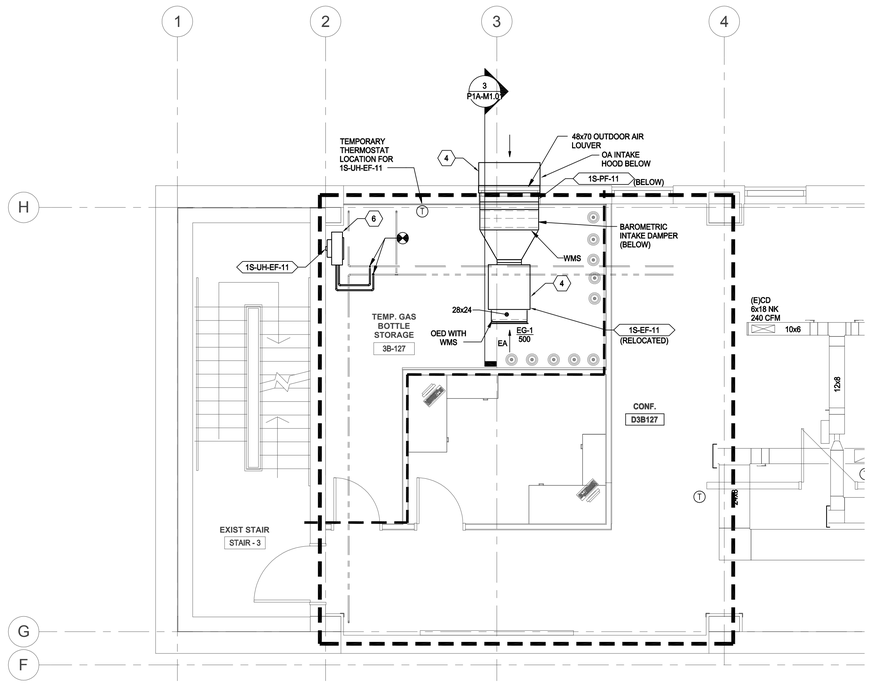
Office of Construction and Facilities Management

Department of Veterans Affairs

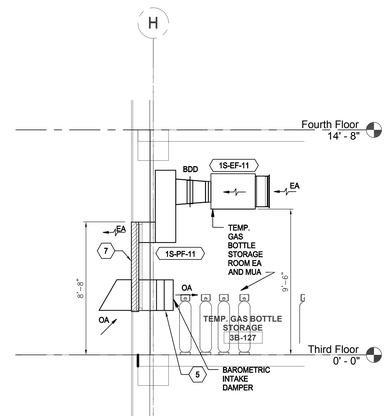
VA FORM 08-6231



1 PHASE 1A - 3rd FLOOR PLAN - DEMOLITION
1/4" = 1'-0"



2 PHASE 1A - 3rd FLOOR MECHANICAL PLAN - NEW WORK
1/4" = 1'-0"



3 TEMPORARY GAS STORAGE ROOM SECTION
1/4" = 1'-0"

SHEET KEYNOTES:

1. DEMOLISH EXISTING GAS STORAGE ROOM 3B-129 EXHAUST AND OUTDOOR AIR INTAKE DUCTWORK THROUGH BUILDING EXTERIOR WALL AS INDICATED. RELOCATE EXISTING EXHAUST FAN, 1S-EF-11, TO TEMP. GAS STORAGE ROOM AS SHOWN BY NEW WORK PARTIAL PLAN. COORDINATE POWER/BAS INTERCONNECTION FOR RELOCATED FAN WITHIN TEMPORARY GAS STORAGE ROOM LOCATION. SEAL ALL EXTERIOR BUILDING WALL PENETRATIONS IN ACCORDANCE WITH ARCHITECTURAL DETAILS AND SPECIFICATIONS.
2. SEAL ALL UNUSED INTERIOR WALL PENETRATIONS IN ACCORDANCE WITH ARCHITECTURAL DETAILS AND SPECIFICATIONS.
3. DEMOLISH ALL EXISTING FLOOR-MOUNTED HOT WATER PERIMETER HEATING UNITS. DEMOLISH ALL PIPING DOWN THROUGH THIRD FLOOR SLAB. CUT AND CAP PIPING BACK TO VERTICAL RISERS/MAIN PIPING IN CEILING OF SECOND FLOOR BELOW. FILL IN EXISTING SLAB PENETRATIONS IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS. COORDINATE REMOVAL OF PIPING IN PHASE 1A AREAS TO ENSURE PIPING THAT MUST REMAIN ACTIVE TO CONTINUOUSLY SERVE NON-PROJECT AREAS/FLOORS ABOVE & BELOW IS NOT DISTURBED OR IMPACTED. DEMOLISH ALL ASSOCIATED PNEUMATIC CONTROLS, VALVES, ETC. TURN LOCAL/ASSOCIATED THERMOSTATS OVER TO VAMC/CONFIRM VAMC DESIRE TO SALVAGE.
4. MOUNT EXISTING/RELOCATED EXHAUST FAN HIGH WITHIN ROOM (NO CEILING IN ROOM DURING USE AS TEMPORARY GAS STORAGE). COORDINATE FAN INLET LOCATION WITH ALL TRADES TO ENSURE THE AIRFLOW INTO THE EXHAUST FAN FROM THE ROOM IS NOT OBSTRUCTED/BLOCKED BY EXISTING CONDITIONS OR NEW PIPING/UTILITIES ROUTED INTO/THROUGH THE TEMPORARY GAS STORAGE ROOM. PROVIDE OFFSET PLENUM WITH BACKDRAFT DAMPER BETWEEN LOUVER DISCHARGE AND DISCHARGE OF EXHAUST FAN AS SHOWN TO CONNECT TO TOP OF TEMPORARY LOUVER WITHIN WINDOW OPENING.
5. PROVIDE INTAKE WEATHER HOOD ON EXTERIOR OF NEW LOUVER AND BAROMETRIC INTAKE AIR DAMPER ON INTERIOR OF OUTDOOR AIR INTAKE FILTER ASSEMBLY WITH WEIGHTS TESTED TO ENSURE THAT WHEN EXHAUST FAN IS OFF, DAMPER CLOSES. COORDINATE TIGHT SEAL OF THE TEMPORARY GAS STORAGE ROOM (AROUND ALL WALL PENETRATIONS, AT DOOR, ETC.) TO ALLOW MAKE-UP AIR TO THE ENTER TEMPORARY GAS STORAGE ROOM FROM OUTDOORS INSTEAD OF FROM THE ADJACENT PHASE 1B ACTIVE CONSTRUCTION AREA.
6. MOUNT NEW HOT WATER UNIT HEATER ON WALL AS SHOWN AT 6'-0" AFF (ABOVE FINISHED FLOOR), DIRECTING UNIT HEATER DISCHARGE AS REQUIRED TO ENSURE LOW OA INTAKE AIRFLOW IS HEATED WITHIN THE ROOM. LOCATE THERMOSTAT FOR UNIT HEATER IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. REFER TO DETAILS, CONTROLS DIAGRAMS AND EQUIPMENT SCHEDULES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
7. BLANK-OFF UNUSED PORTIONS OF NEW LOUVER (TEMPORARY EXHAUST/INTAKE LOUVER SIZED FOR FULL AREA OF EXTERIOR WALL EXISTING WINDOW OPENING - SEE ARCHITECTURAL FOR WINDOW REMOVAL/LOUVER SCOPE) WITH INSULATED PANELS TO PREVENT CONDENSATION. SEAL AROUND NEW LOUVER AND INTAKE WEATHER HOOD AIR AND WATER TIGHT IN ACCORDANCE WITH ARCHITECTURAL DETAILS AND SPECIFICATIONS.

GENERAL PIPING NOTES:

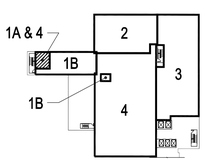
1. COORDINATE ARCHITECTURAL ICRA BARRIERS/RATED WALLS WITH ALL TRADES. RELOCATE/CAREFULLY MOUNT NEW PIPING AND DEVICES/CONTROL VALVES, ETC. REQUIRING MAINTENANCE/INSPECTION WHICH FALL ABOVE WHERE NEW WORK CONSTRUCTION BARRIERS/ICRA WALLS ARE AS REQUIRED. NEW WORK REQUIRED OUTSIDE OF THE ACTIVE PROJECT PHASE CONSTRUCTION/ ICRA BARRIERS (E.G. ABOVE ACTIVE EGRESS CORRIDOR CEILINGS, ETC.) SHALL BE COORDINATED WITH VAMC/COR AND IS RECOMMENDED TO OCCUR AFTER-HOURS WITH TEMPORARY ICRA ENCLOSURES CONSTRUCTED AND TAKEN DOWN DURING EACH WORK PERIOD TO MINIMIZE DUST/DIRT/DEBRIS IN THESE AREAS. WORK ZONES SHALL BE CLEANED THOROUGHLY FOLLOWING EACH SCHEDULED DEMOLITION EFFORT/WORK DAY. PATCH, SEAL AND FIRESTOP ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, CONTROLS, TUBING, ETC. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LOCATIONS OF CONSTRUCTION BARRIERS/ICRA WALLS FOR EACH PROJECT PHASE.
2. PRIOR TO EVERY PHASE OF THE PROJECT CONSTRUCTION EFFORTS, PERFORM TESTING AND BALANCING TO DOCUMENT AND MAINTAIN HYDRONIC FLOWS OUTSIDE OF THE PROJECT AND ACTIVE PHASE AREAS. DOCUMENT ALL EXISTING PEAK HYDRONIC FLOWS WITHIN THE PROJECT AREA PRIOR TO PROCEEDING TO THE NEXT PHASE.
3. ALL WORK WITHIN PROJECT AREAS MUST BE COORDINATED WITH OWNER FOR IMPACT TO ADJACENT SPACES. OFF HOUR WORK MUST BE INCLUDED AS REQUIRED TO MINIMIZE ADVERSE IMPACT FROM VIBRATION, NOISE, ODOR, ETC. TO ACTIVE/OCCUPIED ADJACENT AREAS. OFF-HOURS WORK REQUIRED WITHIN CORRIDORS AND REGIONS OF THE FLOOR OUTSIDE OF THE MAIN PROJECT AREA.
4. MINIMUM HEATING HOT WATER PIPING SIZE SHALL BE 3/4" UNLESS OTHERWISE NOTED.
5. COORDINATE FINAL LOCATIONS OF ALL WALL-MOUNTED CONTROLS DEVICES (TEMPERATURE SENSORS, ROOM PRESSURE MONITORS, KEY SWITCHES, PUSH BUTTONS, ETC. WITH ARCHITECTURAL ELEVATIONS, SPECIFICATIONS AND VAMC ENGINEERING PERSONNEL. COORDINATE FINAL LOCATIONS WITH ALL TRADES. VAMC COR SHALL HAVE FINAL APPROVAL OF ALL WALL-MOUNTED DEVICE LOCATION.
6. CONTROLS CONTRACTOR SHALL COORDINATE ALL LINE VOLTAGE POWER REQUIREMENTS FOR ALL BAS CONTROL PANELS AND SHALL COORDINATE ALL LOW VOLTAGE POWER AND WIRING FOR BAS CONTROL DEVICES, SPACE TEMPERATURE SENSORS, MULTI-TECHNOLOGY OCCUPANCY SENSORS, AIR TERMINAL UNITS (TUS), REHEAT COIL CONTROL VALVES, ETC. AS REQUIRED TO ACHIEVE SEQUENCES OF OPERATION AS INDICATED BY CONTROL DIAGRAMS. COORDINATE CONTROLS WORK WITH ALL TRADES.
7. CAREFULLY MOUNT ALL EQUIPMENT, VALVES, CONTROLLERS, ETC. REQUIRING MAINTENANCE/ACCESS/INSPECTION IN ACCESSIBLE LOCATIONS. PROVIDE CEILING ACCESS PANELS IN HARD CEILINGS OR LOCATE ITEMS ABOVE LAY-IN TILE CEILINGS/REMOVABLE TILES AS REQUIRED TO ENSURE ACCESS. REFER TO SPECIFICATIONS FOR ACCESS DOOR TYPES AND REQUIREMENTS.
8. REFER TO AIR TERMINAL UNIT DETAILS AND AIRFLOW CONTROL VALVE DETAILS FOR ACCESS AND PIPING REQUIREMENTS. HEATING HOT WATER PIPING AND CONTROL VALVE ROUTING AND LOCATION SHALL BE CAREFULLY COORDINATED TO ENSURE ACCESS TO AIR TERMINAL UNIT AND AIRFLOW CONTROL VALVE CONTROLS, REHEAT COIL CONTROL VALVE ACTUATOR, ETC. COORDINATE FINAL PIPE ROUTING, AIR TERMINAL UNIT/AIRFLOW CONTROL VALVE COIL CONNECTION LOCATIONS/CONTROL ENCLOSURE HAND, ETC. TO MAXIMIZE ACCESS CLEARANCES AND PREVENT BLOCKING DUCT ACCESS DOORS/CONTROL ENCLOSURES, ETC. WITH PIPING, CONDUIT, ETC. COORDINATE WORK WITH ALL TRADES TO ENSURE MAINTENANCE ACCESS/CLEARANCES ARE MAINTAINED AS SPECIFIED, DETAILED AND PER MANUFACTURER RECOMMENDATIONS.

GENERAL HVAC NOTES:

1. COORDINATE ARCHITECTURAL ICRA BARRIERS/RATED WALLS WITH ALL TRADES. RELOCATE/CAREFULLY MOUNT NEW DUCTWORK AND DEVICES REQUIRING MAINTENANCE/INSPECTION WHICH FALL ABOVE WHERE NEW WORK CONSTRUCTION BARRIERS/ICRA WALLS ARE AS REQUIRED. NEW WORK REQUIRED OUTSIDE OF THE ACTIVE PROJECT PHASE CONSTRUCTION/ ICRA BARRIERS (E.G. ABOVE ACTIVE EGRESS CORRIDOR CEILINGS, ETC.) SHALL BE COORDINATED WITH VAMC/COR AND IS RECOMMENDED TO OCCUR AFTER-HOURS WITH TEMPORARY ICRA ENCLOSURES CONSTRUCTED AND TAKEN DOWN DURING EACH WORK PERIOD TO MINIMIZE DUST/DIRT/DEBRIS IN THESE AREAS. WORK ZONES SHALL BE CLEANED THOROUGHLY FOLLOWING EACH SCHEDULED DEMOLITION EFFORT/WORK DAY. PATCH, SEAL AND FIRESTOP ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, CONTROLS, TUBING, ETC. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LOCATIONS OF CONSTRUCTION BARRIERS/ICRA WALLS FOR EACH PROJECT PHASE
2. PRIOR TO EVERY PHASE OF THE PROJECT CONSTRUCTION EFFORTS, PERFORM TESTING AND BALANCING TO DOCUMENT AND MAINTAIN AIRFLOWS OUTSIDE OF THE PROJECT AND ACTIVE PHASE AREAS. DOCUMENT ALL AIRFLOW AND SPACE PRESSURE/ROOM OFFSETS WITHIN THE PROJECT AREA PRIOR TO PROCEEDING TO THE NEXT PHASE.
3. ALL WORK WITHIN PROJECT AREAS MUST BE COORDINATED WITH OWNER FOR IMPACT TO ADJACENT SPACES. OFF HOUR WORK MUST BE INCLUDED AS REQUIRED TO MINIMIZE ADVERSE IMPACT FROM VIBRATION, NOISE, ODOR, ETC. TO ACTIVE/OCCUPIED ADJACENT AREAS. OFF-HOURS WORK REQUIRED WITHIN CORRIDORS AND REGIONS OF THE FLOOR OUTSIDE OF THE MAIN PROJECT AREA.
4. CONTROLS CONTRACTOR SHALL COORDINATE ALL LINE VOLTAGE POWER REQUIREMENTS FOR ALL BAS CONTROL PANELS AND SHALL COORDINATE ALL LOW VOLTAGE POWER AND WIRING FOR BAS CONTROL DEVICES, SPACE TEMPERATURE SENSORS, MULTI-TECHNOLOGY OCCUPANCY SENSORS, AIR TERMINAL UNITS (TUS), REHEAT COIL CONTROL VALVES, ETC. AS REQUIRED TO ACHIEVE SEQUENCES OF OPERATION AS INDICATED BY CONTROL DIAGRAMS. COORDINATE CONTROLS WORK WITH ALL TRADES.
5. CAREFULLY MOUNT ALL EQUIPMENT, VALVES, CONTROLLERS, ETC. REQUIRING MAINTENANCE/ACCESS/INSPECTION IN ACCESSIBLE LOCATIONS. PROVIDE CEILING ACCESS PANELS IN HARD CEILINGS OR LOCATE ITEMS ABOVE LAY-IN TILE CEILINGS/REMOVABLE TILES AS REQUIRED TO ENSURE ACCESS. REFER TO SPECIFICATIONS FOR ACCESS DOOR TYPES AND REQUIREMENTS.

GENERAL DEMOLITION NOTES:

1. COORDINATE ARCHITECTURAL ICRA BARRIERS/RATED WALLS WITH ALL TRADES. RELOCATE EXISTING/ACTIVE DUCTWORK AND DEVICES REQUIRING MAINTENANCE/INSPECTION WHICH FALL ABOVE WHERE DEMOLITION CONSTRUCTION BARRIERS/ICRA WALLS ARE AS REQUIRED. DEMOLITION WORK REQUIRED OUTSIDE OF THE ACTIVE PROJECT PHASE CONSTRUCTION/ICRA BARRIERS (E.G. ABOVE ACTIVE EGRESS CORRIDOR CEILINGS, ETC.) SHALL BE COORDINATED WITH VAMC/COR AND IS RECOMMENDED TO OCCUR AFTER-HOURS WITH TEMPORARY ICRA ENCLOSURES CONSTRUCTED AND TAKEN DOWN DURING EACH WORK PERIOD TO MINIMIZE DUST/DIRT/DEBRIS IN THESE AREAS. WORK ZONES SHALL BE CLEANED THOROUGHLY FOLLOWING EACH SCHEDULED DEMOLITION EFFORT/WORK DAY. PATCH, SEAL AND FIRESTOP ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, CONTROLS, TUBING, ETC. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LOCATIONS OF CONSTRUCTION BARRIERS/ICRA WALLS FOR EACH PROJECT PHASE.
2. PRIOR TO EVERY PHASE OF THE PROJECT CONSTRUCTION EFFORTS, PERFORM TESTING AND BALANCING TO DOCUMENT AND MAINTAIN AIRFLOWS OUTSIDE OF THE PROJECT AND ACTIVE PHASE AREAS. DOCUMENT ALL AIRFLOW AND SPACE PRESSURE/ROOM OFFSETS WITHIN THE PROJECT AREA PRIOR TO PROCEEDING TO THE NEXT PHASE.
3. ALL WORK WITHIN PROJECT AREAS MUST BE COORDINATED WITH OWNER FOR IMPACT TO ADJACENT SPACES. OFF HOUR WORK MUST BE INCLUDED AS REQUIRED TO MINIMIZE ADVERSE IMPACT FROM VIBRATION, NOISE, ODOR, ETC. TO ACTIVE/OCCUPIED ADJACENT AREAS. OFF-HOURS WORK REQUIRED WITHIN CORRIDORS AND REGIONS OF THE FLOOR OUTSIDE OF THE MAIN PROJECT AREA. ALL WORK SHALL BE COORDINATED WITH VAMC ENVIRONMENTAL / ABATEMENT CONTRACTOR. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. DESIGN INTENT, UNLESS NOTED OTHERWISE, IS PHASE BY PHASE TO FULLY DEMOLISH ALL EXISTING HVAC AND MECHANICAL TERMINAL EQUIPMENT, FINNED-TUBE PERIMETER RADIATORS, DUCTWORK, PIPING AND BUILDING AUTOMATION/PNEUMATIC CONTROLS WITHIN THE BUILDING 1S PROJECT AREAS AS SHOWN. PROPERLY CAP AND SEAL ALL EXISTING TO REMAIN DUCTWORK AND PIPING TO PREVENT LEAKAGE. CAP AND SEAL ALL EXISTING TO REMAIN/ACTIVE PNEUMATIC CONTROL TUBING MAINS TO PREVENT LEAKAGE OF CONTROL AIR REQUIRED OUTSIDE OF THE PROJECT AREAS. REVIEW WITH VAMC ENGINEERING PERSONNEL/COR ANY DEMOLISHED ITEMS DESIRED TO BE SALVAGED. TURN OVER TO THE VAMC AS DIRECTED BY VAMC COR. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO SPACE TEMPERATURE SENSORS, THERMOSTATS, HUMIDISTATS, SPACE DDC CONTROL DEVICES, ETC. THE VAMC MAY WISH TO RE-ASSIGN/RE-USE IN OTHER AREAS OF THE HOSPITAL.
5. ACTIVE VERTICAL AND HORIZONTAL PIPE RISERS OFFSETTING THROUGH THE PROJECT AREAS TO FLOORS ABOVE /ALONG PERIMETER WALLS AND AT SELECT COLUMN ENCLOSURES SHALL REMAIN. REMOVE INSULATION AND REINSULATE EXISTING TO REMAIN PIPING AS SPECIFIED. INSULATE PRIOR TO ENCLOSING IN NEW WALLS. IDENTIFY TO VAMC ENGINEERING PERSONNEL/COR ANY PIPING THAT IS SUSPECT FOR POOR CONDITION/EXCESSIVE RUST OR CORROSION/LEAKING, ETC. REPLACE PIPING SECTIONS DISCOVERED TO BE LEAKING AS DIRECTED/APPROVED BY VAMC.
6. CONTRACTOR SHALL SURVEY AND VERIFY IN THE FIELD ANY SUSPECTED ABANDONED-IN-PLACE PIPING AND DUCTWORK SYSTEMS AND DEMOLISH WHEREVER POSSIBLE. REVIEW QUESTIONABLE ITEMS WITH VAMC ENGINEERING PERSONNEL/COR PRIOR TO CUTTING, REMOVING OR DEMOLISHING. RELOCATE EXISTING ACTIVE RISERS AS REQUIRED TO CONCEAL/ROUTE THEM WITHIN IN NEW WALLS/COLUMN CLOSURES. SEE NEW WORK PLANS AND COORDINATE WITH ALL TRADES.
7. BUILDING 1S THIRD FLOOR SURGICAL AREAS ARE SERVED BY MULTIPLE EXISTING AIR HANDLING UNITS/FANS/PUMPS, ETC. COORDINATE PROPER SHUT-DOWN AND PROTECTION OF ALL EXISTING AHU'S, EXHAUST FANS, RATED WALL FIRE DAMPERS, SMOKE DAMPERS, SHAFT AND SHAFT WALL COMBINATION FIRE/SMOKE DAMPERS, ETC. DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION. PROJECT AREAS UNDER PHASED CONSTRUCTION SHALL BE MAINTAINED NEGATIVE WITH RESPECT TO ALL ADJACENCIES AROUND, ABOVE AND BELOW, AT ALL TIMES DURING CONSTRUCTION EFFORTS TO PREVENT THE MIGRATION OF DUST, DEBRIS AND ODORS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL VAMC ICRA REQUIREMENTS.



KEY PLAN
N.T.S.

100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED

NO.	DESCRIPTION	DATE

CONSULTANTS:

MILLER-REMICK LLC
PROFESSIONAL ENGINEER

ARCHITECT / ENGINEERS:

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Drawing Title: MECHANICAL PHASE 1A - 3RD FLOOR PLANS - DEMOLITION AND NEW WORK	Project Title: RENOVATE SURGICAL SERVICE & UPGRADE OPERATING ROOMS	Project Number: 581-13-101	Office of Construction and Facilities Management
Approved: Medical Center Director	Location: HUNTINGTON, WV	Building Number: 1S	
	Date: 01-15-2016 / Checked: MPP / Drawn: JLR	Drawing Number: P1A-M1.01	Department of Veterans Affairs

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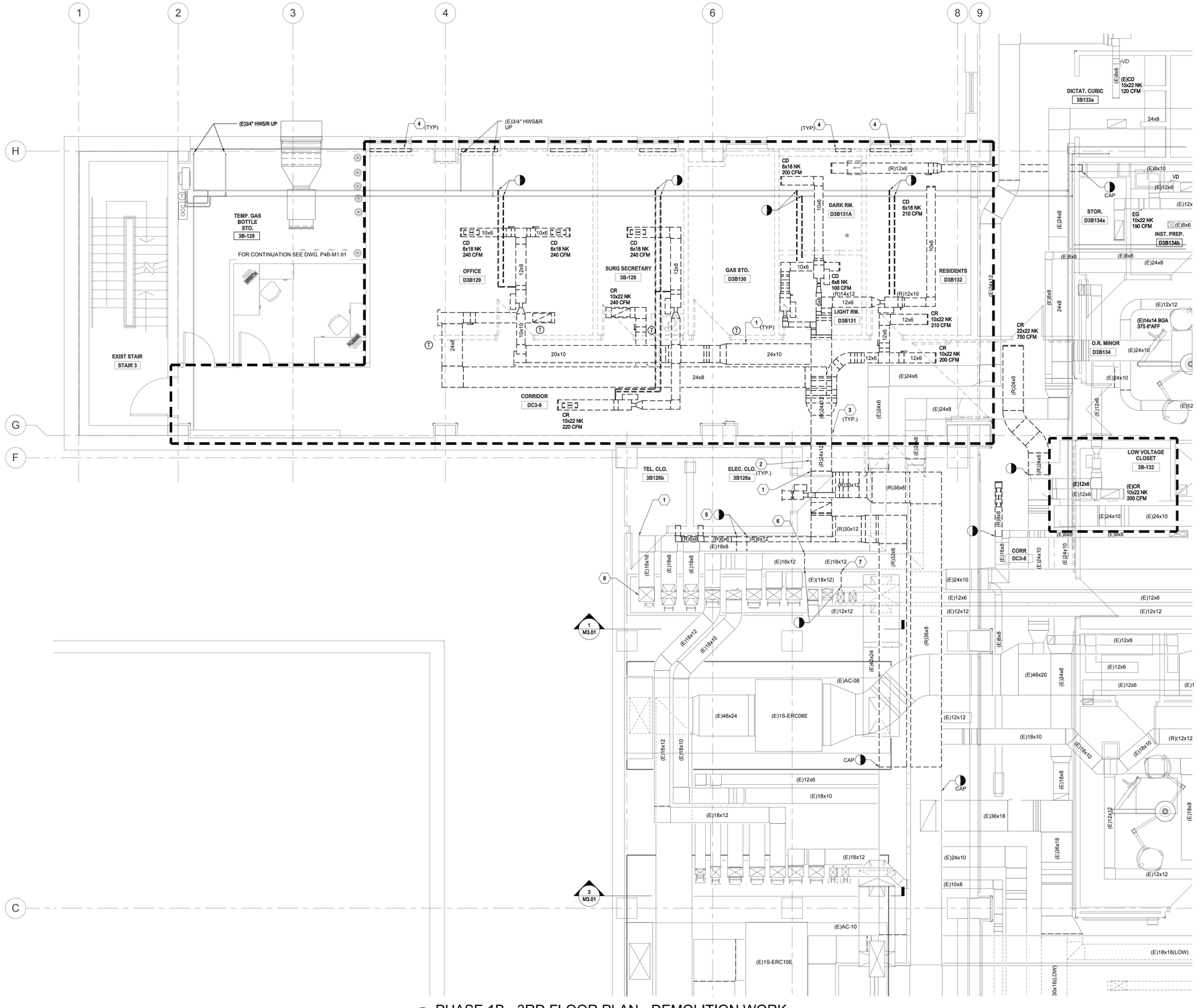

1 PHASE 1B - 3RD FLOOR PLAN - DEMOLITION WORK
1/4" = 1'-0"

SHEET KEYNOTES:

1. COORDINATE REMOVAL OF DEMOLISHED DUCTWORK AND PIPING WITHIN PHASE 1B AREAS AND WITHIN THE EXISTING THIRD FLOOR MER TO ENSURE THAT DUCTWORK AND PIPING THAT MUST REMAIN ACTIVE UNTIL PHASE 4A DEMOLITION EFFORTS AND/OR MUST REMAIN ACTIVE TO CONTINUOUSLY SERVE NON-PROJECT AREAS/FLOORS ABOVE & BELOW IS NOT DISTURBED OR IMPACTED. DEMOLITION WITHIN MECHANICAL EQUIPMENT ROOM SHALL BE COORDINATED WITH VAMC COR AND SURGERY ACTIVITIES CAREFULLY. DEMOLITION EFFORTS ARE RECOMMENDED TO OCCUR AFTER-HOURS/WHEN NO SURGERY ACTIVITY IS OCCURRING TO ENSURE THAT AIRFLOW RATES/SPACE PRESSURIZATION/TEMPERATURE AND HUMIDITY WITHIN THE AREAS BEING ACTIVELY SERVED BY AC-8/EF-8, AC-9/RF-9, AC-10/EF-10, EF-15 AND EF-16 ARE NOT DISTURBED/REMAIN STABLE.
2. CUT EXISTING AC-8/RF-9 DUCTWORK ROUTED HIGH WITHIN EXISTING THIRD FLOOR MECH EQUIPMENT ROOM AT POINTS SHOWN. DESIGN INTENT IS FOR DUCTWORK FROM PHASE 1B AREAS TO BE DEMOLISHED BACK TO AC-9/RF-9 MAINS AT POINT ABOVE MER ENTRY DOORS TO OPEN/CLEAR SPACE FOR NEW DUCT PATHWAYS. DO NOT ABANDON ANY DUCTWORK IN PLACE UNLESS SPECIFICALLY DIRECTED/APPROVED BY VAMC/COR AND DESIGN TEAM HAS BEEN NOTIFIED ON SHOP DRAWINGS.
3. SEAL ALL UNUSED INTERIOR WALL PENETRATIONS AND FIRESTOP ALL DUCTWORK/PIPING WALL AND SLAB PENETRATIONS IN ACCORDANCE WITH MECHANICAL DETAILS, ARCHITECTURAL DETAILS AND SPECIFICATIONS.
4. DEMOLISH ALL EXISTING FLOOR-MOUNTED HOT WATER PERIMETER HEATING UNITS. DEMOLISH ALL PIPING DOWN THROUGH THIRD FLOOR SLAB. CUT AND CAP PIPING BACK TO VERTICAL RISERS/MAIN PIPING IN CEILING OF SECOND FLOOR BELOW. FILL IN EXISTING SLAB PENETRATIONS IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS. DEMOLISH ALL ASSOCIATED PNEUMATIC CONTROLS, VALVES, ETC. TURN LOCAL/ASSOCIATED THERMOSTATS OVER TO VAMC/CONFIRM VAMC DESIRE TO SALVAGE.
5. DEMOLISH TOP TWO LEVELS OF DUCT (BOTH 18x8) FROM THIS POINT TO BOUNDARY OF PHASE. CAP AND SEAL.
6. DEMOLISH TOP LEVEL OF DUCT (18x12) FROM THIS POINT TO BOUNDARY OF PHASE. DUCT IS TO REMAIN ACTIVE TO END OF PHASE 2 WORK TO KEEP EXISTING OR 4 (MINOR) AND IN OPERATION UNTIL NEW ORS 1, 2 & 3 ARE OPERATIONAL.
7. DEMOLISH TOP LEVEL OF DUCT (18x12) FROM THIS POINT TO BOUNDARY OF PHASE. DUCT IS TO REMAIN ACTIVE UNTIL START OF PHASE 2 WORK.
8. DEMOLITION OF EXISTING TERMINAL AND INSTALLATION OF NEW 1S-ACV-08-01 TO OCCUR IN PHASE #2.

GENERAL DEMOLITION NOTES:

1. COORDINATE ARCHITECTURAL ICRA BARRIERS/RATED WALLS WITH ALL TRADES. RELOCATE EXISTING/ACTIVE DUCTWORK AND DEVICES REQUIRING MAINTENANCE/INSPECTION WHICH FALL ABOVE WHERE DEMOLITION CONSTRUCTION BARRIERS/ICRA WALLS ARE AS REQUIRED. DEMOLITION WORK REQUIRED OUTSIDE OF THE ACTIVE PROJECT PHASE CONSTRUCTION/ICRA BARRIERS (E.G. ABOVE ACTIVE EGRESS CORRIDOR CEILINGS, ETC.) SHALL BE COORDINATED WITH VAMC/COR AND IS RECOMMENDED TO OCCUR AFTER-HOURS WITH TEMPORARY ICRA ENCLOSURES CONSTRUCTED AND TAKEN DOWN DURING EACH WORK PERIOD TO MINIMIZE DUST/DIRT/DEBRIS IN THESE AREAS. WORK ZONES SHALL BE CLEANED THOROUGHLY FOLLOWING EACH SCHEDULED DEMOLITION EFFORT/WORK DAY. PATCH, SEAL AND FIRESTOP ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, CONTROLS, TUBING, ETC. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LOCATIONS OF CONSTRUCTION BARRIERS/ICRA WALLS FOR EACH PROJECT PHASE.
2. PRIOR TO EVERY PHASE OF THE PROJECT CONSTRUCTION EFFORTS, PERFORM TESTING AND BALANCING TO DOCUMENT AND MAINTAIN AIRFLOWS OUTSIDE OF THE PROJECT AND ACTIVE PHASE AREAS. DOCUMENT ALL AIRFLOW AND SPACE PRESSURE/ROOM OFFSETS WITHIN THE PROJECT AREA PRIOR TO PROCEEDING TO THE NEXT PHASE.
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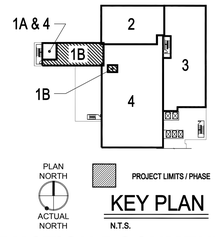
4. DESIGN INTENT, UNLESS NOTED OTHERWISE, IS PHASE BY PHASE TO FULLY DEMOLISH ALL EXISTING HVAC AND MECHANICAL TERMINAL EQUIPMENT, FINNED-TUBE PERIMETER RADIATORS, DUCTWORK, PIPING AND BUILDING AUTOMATION/PNEUMATIC CONTROLS WITHIN THE BUILDING 1S PROJECT AREAS AS SHOWN. PROPERLY CAP AND SEAL ALL EXISTING TO REMAIN DUCTWORK AND PIPING TO PREVENT LEAKAGE. CAP AND SEAL ALL EXISTING TO REMAIN/ACTIVE PNEUMATIC CONTROL TUBING MAINS TO PREVENT LEAKAGE OF CONTROL AIR REQUIRED OUTSIDE OF THE PROJECT AREAS. REVIEW WITH VAMC ENGINEERING PERSONNEL/COR ANY DEMOLISHED ITEMS DESIRED TO BE SALVAGED. TURN OVER TO THE VAMC AS DIRECTED BY VAMC COR. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO SPACE TEMPERATURE SENSORS, THERMOSTATS, HUMIDISTATS, SPACE DDC CONTROL DEVICES, ETC. THE VAMC MAY WISH TO RE-ASSIGN/RE-USE IN OTHER AREAS OF THE HOSPITAL.
5. ACTIVE VERTICAL AND HORIZONTAL PIPE RISERS OFFSETTING THROUGH THE PROJECT AREAS TO FLOORS ABOVE /ALONG PERIMETER WALLS AND AT SELECT COLUMN ENCLOSURES SHALL REMAIN. REMOVE INSULATION AND REINSULATE EXISTING TO REMAIN PIPING AS SPECIFIED. INSULATE PRIOR TO ENCLOSING IN NEW WALLS. IDENTIFY TO VAMC ENGINEERING PERSONNEL/COR ANY PIPING THAT IS SUSPECT FOR POOR CONDITION/EXCESSIVE RUST OR CORROSION/LEAKING, ETC. REPLACE PIPING SECTIONS DISCOVERED TO BE LEAKING AS DIRECTED/APPROVED BY VAMC.
6. CONTRACTOR SHALL SURVEY AND VERIFY IN THE FIELD ANY SUSPECTED ABANDONED-IN-PLACE PIPING AND DUCTWORK SYSTEMS AND DEMOLISH WHEREVER POSSIBLE. REVIEW QUESTIONABLE ITEMS WITH VAMC ENGINEERING PERSONNEL/COR PRIOR TO CUTTING, REMOVING OR DEMOLISHING. RELOCATE EXISTING ACTIVE RISERS AS REQUIRED TO CONCEAL/ROUTE THEM WITHIN IN NEW WALLS/COLUMN CLOSURES. SEE NEW WORK PLANS AND COORDINATE WITH ALL TRADES.
7. BUILDING 1S THIRD FLOOR SURGICAL AREAS ARE SERVED BY MULTIPLE EXISTING AIR HANDLING UNITS/FANS/PUMPS, ETC. COORDINATE PROPER SHUT-DOWN AND PROTECTION OF ALL EXISTING AHU'S, EXHAUST FANS, RATED WALL FIRE DAMPERS, SMOKE DAMPERS, SHAFT AND SHAFT WALL COMBINATION FIRE/SMOKE DAMPERS, ETC. DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION. PROJECT AREAS UNDER PHASED CONSTRUCTION SHALL BE MAINTAINED NEGATIVE WITH RESPECT TO ALL ADJACENCIES AROUND, ABOVE AND BELOW, AT ALL TIMES DURING CONSTRUCTION EFFORTS TO PREVENT THE MIGRATION OF DUST, DEBRIS AND ODORS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL VAMC ICRA REQUIREMENTS.



KEY PLAN
N.T.S.

100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED

NO.	DESCRIPTION	DATE

CONSULTANTS:

MILLER-REMICK LLC
PROFESSIONAL ENGINEER

ARCHITECT / ENGINEERS:

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M.E.P. & Structural Engineering
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Drawing Title
MECHANICAL
PHASE 1B - 3RD FLOOR PLAN - DEMOLITION WORK

Approved: Medical Center Director

Project Title
RENOVATE SURGICAL SERVICE & UPGRADE OPERATING ROOMS

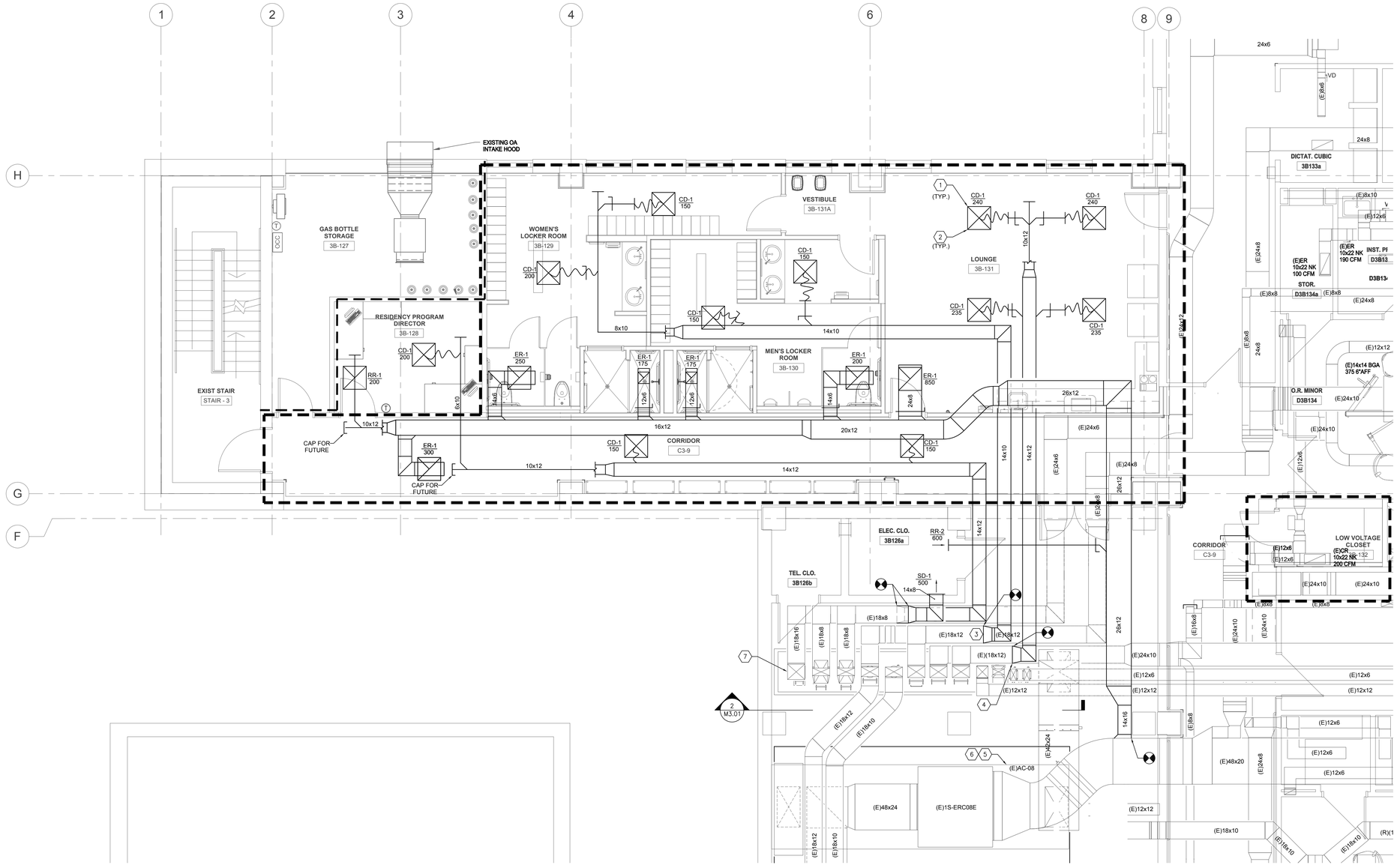
Location HUNTINGTON, WV

Date 01-15-2016 | Checked MPP | Drawn MS

Project Number **581-13-101**
Building Number **1S**
Drawing Number **P1B-MD1.01**

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



1 PHASE 1B - 3rd FLOOR DUCTWORK PLAN - NEW WORK

1/4" = 1'-0"

GENERAL HVAC NOTES:

1 COORDINATE ARCHITECTURAL ICRA BARRIERS/RATED WALLS WITH ALL TRADES. RELOCATE/CAREFULLY MOUNT NEW DUCTWORK AND DEVICES REQUIRING MAINTENANCE/INSPECTION WHICH FALL ABOVE WHERE NEW WORK CONSTRUCTION BARRIERS/ICRA WALLS ARE AS REQUIRED. NEW WORK REQUIRED OUTSIDE OF THE ACTIVE PROJECT PHASE CONSTRUCTION/ ICRA BARRIERS (E.G. ABOVE ACTIVE EGRESS CORRIDOR CEILINGS, ETC.) SHALL BE COORDINATED WITH VAMC/COR AND IS RECOMMENDED TO OCCUR AFTER-HOURS WITH TEMPORARY ICRA ENCLOSURES CONSTRUCTED AND TAKEN DOWN DURING EACH WORK PERIOD TO MINIMIZE DUST/DIRT/DEBRIS IN THESE AREAS. WORK ZONES SHALL BE CLEANED THOROUGHLY FOLLOWING EACH SCHEDULED DEMOLITION EFFORT/WORK DAY. PATCH, SEAL AND FIRESTOP ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, CONTROLS, TUBING, ETC. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LOCATIONS OF CONSTRUCTION BARRIERS/ICRA WALLS FOR EACH PROJECT PHASE

2 PRIOR TO EVERY PHASE OF THE PROJECT CONSTRUCTION EFFORTS, PERFORM TESTING AND BALANCING TO DOCUMENT AND MAINTAIN AIRFLOWS OUTSIDE OF THE PROJECT AND ACTIVE PHASE AREAS. DOCUMENT ALL AIRFLOW AND SPACE PRESSURE/ROOM OFFSETS WITHIN THE PROJECT AREA PRIOR TO PROCEEDING TO THE NEXT PHASE.

3 ALL WORK WITHIN PROJECT AREAS MUST BE COORDINATED WITH OWNER FOR IMPACT TO ADJACENT SPACES. OFF HOUR WORK MUST BE INCLUDED AS REQUIRED TO MINIMIZE ADVERSE IMPACT FROM VIBRATION, NOISE, ODOR, ETC. TO ACTIVE/OCCUPIED ADJACENT AREAS. OFF-HOURS WORK REQUIRED WITHIN CORRIDORS AND REGIONS OF THE FLOOR OUTSIDE OF THE MAIN ACTIVE PHASE PROJECT AREA.

4 CONTROLS CONTRACTOR SHALL COORDINATE ALL LINE VOLTAGE POWER REQUIREMENTS FOR ALL BAS CONTROL PANELS AND SHALL COORDINATE ALL LOW VOLTAGE POWER AND WIRING FOR BAS CONTROL DEVICES, SPACE TEMPERATURE SENSORS, MULTI-TECHNOLOGY OCCUPANCY SENSORS, AIR TERMINAL UNITS (TUS), REHEAT COIL CONTROL VALVES, ETC. AS REQUIRED TO ACHIEVE SEQUENCES OF OPERATION AS INDICATED BY CONTROL DIAGRAMS. COORDINATE CONTROLS WORK WITH ALL TRADES.

5 CAREFULLY MOUNT ALL EQUIPMENT, VALVES, CONTROLLERS, ETC. REQUIRING MAINTENANCE/ACCESS/INSPECTION IN ACCESSIBLE LOCATIONS. PROVIDE CEILING ACCESS PANELS IN HARD CEILINGS OR LOCATE ITEMS ABOVE LAY-IN TILE CEILINGS/REMOVABLE TILES AS REQUIRED TO ENSURE ACCESS. REFER TO SPECIFICATIONS FOR ACCESS DOOR TYPES AND REQUIREMENTS.

⬡ SHEET KEYNOTES:

1 COORDINATE FINAL LOCATIONS OF ALL DUCT-MOUNTED EQUIPMENT (AIR TERMINAL UNITS, AIR TERMINAL UNITS WITH INTEGRAL REHEAT COILS, ETC. TO ENSURE MAINTENANCE ACCESS AS REQUIRED BY MANUFACTURER. AIR TERMINAL UNIT CONTROL ENCLOSURES, ACTUATORS, REHEAT COIL DUCT-ACCESS DOORS, REHEAT COIL CONTROL VALVES, ETC. SHALL ALL BE CLEAR OF OBSTRUCTIONS AND ACCESSIBLE FOR MAINTENANCE AND INSPECTION. COORDINATE WORK WITH ALL TRADES.

2 COORDINATE FINAL LOCATIONS FOR ALL DIFFUSERS, REGISTERS, AND GRILLES IN CEILING AND SIDEWALL LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND PHASED NEW WORK PLANS. EACH NEW SPACE'S AIRFLOW PATTERNS MUST BE COORDINATED WHERE POSSIBLE TO AVOID DIRECT SUPPLY AIR DISCHARGE ONTO SPACE TEMPERATURE/HUMIDITY SENSORS AND TO AVOID THE MOUNTING OF SUPPLY AIR OUTLETS IMMEDIATELY NEXT TO RETURN/EXHAUST INLETS. REFER TO DRAWING M7.00 FOR ADDITIONAL SPACE PRESSURIZATION/TRANSFER AIR OFFSET AND AHU ZONING INFORMATION AND REQUIREMENTS.

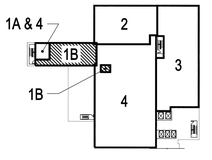
3 EXISTING DUCT IS PRESENTLY FEEDING 0R #4 (MINOR). NEW DUCT IS TO BE INSTALLED AS SHOWN EXCEPT ELBOW AND CONNECTION TO EXISTING 18x12. DEMOLITION OF EXISTING DUCT AND CONNECTION OF NEW DUCT TO OCCUR AT THE END OF PHASE 2, WHEN NEW ORs 1, 2 & 3 ARE FUNCTIONAL.

4 EXISTING DUCT IS FEEDING SURGERY SUPPORT AREAS. NEW DUCT IS TO BE INSTALLED AS SHOWN EXCEPT ELBOW AND CONNECTION OF NEW DUCT TO EXISTING 18x12. DEMOLITION OF EXISTING DUCT AND CONNECTION OF NEW DUCT TO OCCUR AT THE START OF PHASE 2.

5 REPLACE ASHRAE 95% GRADE FINAL FILTERS WITH HEPA FILTERS. REPLACE EXISTING FILTER HOLDING FRAME WITH HOLDING FRAME APPROPRIATE FOR HEPA FILTERS WITH BOLT TYPE FASTENERS FOR FILTERS WITH COMPRESSION TYPE GASKETS. SEAL ASSEMBLY AIR TIGHT.

6 REBALANCE AC-08. AC-09 AND AC-10 AFTER MODIFICATIONS MADE FOR PHASE 1B.

7 DEMOLITION OF EXISTING TERMINAL AND INSTALLATION OF NEW 1S-ACV-08-01 TO OCCUR IN PHASE #2.



KEY PLAN
N.T.S.

100% CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

NO.	DESCRIPTION	DATE

CONSULTANTS:

MILLER-REMICK LLC PROFESSIONAL ENGINEER

THOMAS L. PHANEUF 14634 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT / ENGINEERS:

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M.E.P. & Structural Engineering
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Drawing Title: **MECHANICAL PHASE 1B - 3RD FLOOR DUCTWORK PLAN - NEW WORK**

Approved: Medical Center Director

Project Title: **RENOVATE SURGICAL SERVICE & UPGRADE OPERATING ROOMS**

Location: HUNTINGTON, WV

Date: 01-15-2016 | Checked: MPP | Drawn: MS

Project Number: **581-13-101**

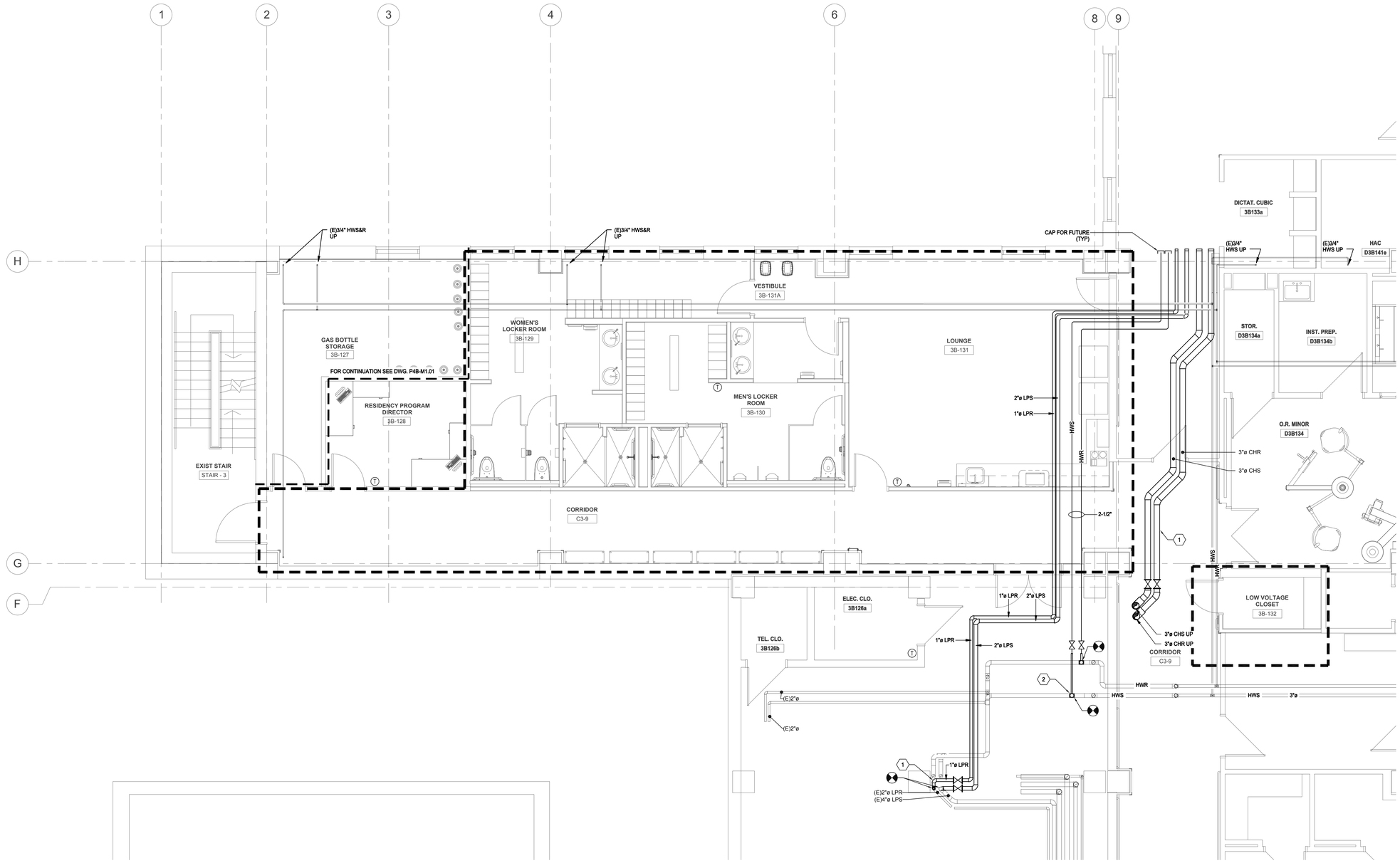
Building Number: 1S

Drawing Number: **P1B-MH1.01**

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



1 PHASE 1B - 3rd FLOOR PIPING PLAN - NEW WORK
1/4" = 1'-0"

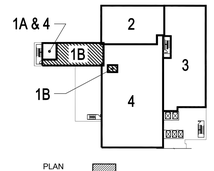
GENERAL PIPING NOTES:

1. COORDINATE ARCHITECTURAL ICRA BARRIERS/RATED WALLS WITH ALL TRADES. RELOCATE/CAREFULLY MOUNT NEW PIPING AND DEVICES/CONTROL VALVES, ETC. REQUIRING MAINTENANCE/INSPECTION WHICH FALL ABOVE WHERE NEW WORK CONSTRUCTION BARRIERS/ICRA WALLS ARE AS REQUIRED. NEW WORK REQUIRED OUTSIDE OF THE ACTIVE PROJECT PHASE CONSTRUCTION/ ICRA BARRIERS (E.G. ABOVE ACTIVE EGRESS CORRIDOR CEILINGS, ETC.) SHALL BE COORDINATED WITH VAMC/COR AND IS RECOMMENDED TO OCCUR AFTER-HOURS WITH TEMPORARY ICRA ENCLOSURES CONSTRUCTED AND TAKEN DOWN DURING EACH WORK PERIOD TO MINIMIZE DUST/DIRT/DEBRIS IN THESE AREAS. WORK ZONES SHALL BE CLEANED THOROUGHLY FOLLOWING EACH SCHEDULED DEMOLITION EFFORT/WORK DAY. PATCH, SEAL AND FIRESTOP ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, CONTROLS, TUBING, ETC. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LOCATIONS OF CONSTRUCTION BARRIERS/ICRA WALLS FOR EACH PROJECT PHASE.
2. PRIOR TO EVERY PHASE OF THE PROJECT CONSTRUCTION EFFORTS, PERFORM TESTING AND BALANCING TO DOCUMENT AND MAINTAIN HYDRONIC FLOWS OUTSIDE OF THE PROJECT AND ACTIVE PHASE AREAS. DOCUMENT ALL EXISTING PEAK HYDRONIC FLOWS WITHIN THE PROJECT AREA PRIOR TO PROCEEDING TO THE NEXT PHASE.
3. ALL WORK WITHIN PROJECT AREAS MUST BE COORDINATED WITH OWNER FOR IMPACT TO ADJACENT SPACES. OFF HOUR WORK MUST BE INCLUDED AS REQUIRED TO MINIMIZE ADVERSE IMPACT FROM VIBRATION, NOISE, ODOR, ETC. TO ACTIVE/OCCUPIED ADJACENT AREAS. OFF-HOURS WORK REQUIRED WITHIN CORRIDORS AND REGIONS OF THE FLOOR OUTSIDE OF THE MAIN PROJECT AREA.
4. MINIMUM HEATING HOT WATER PIPING SIZE SHALL BE 3/4" UNLESS OTHERWISE NOTED.
5. COORDINATE FINAL LOCATIONS OF ALL WALL-MOUNTED CONTROLS DEVICES (TEMPERATURE SENSORS, ROOM PRESSURE MONITORS, ETC. SWITCHES, PUSH BUTTONS, ETC. WITH ARCHITECTURAL ELEVATIONS, SPECIFICATIONS AND VAMC ENGINEERING PERSONNEL. COORDINATE FINAL LOCATIONS WITH ALL TRADES. VAMC COR SHALL HAVE FINAL APPROVAL OF ALL WALL-MOUNTED DEVICE LOCATION.
6. CONTROLS CONTRACTOR SHALL COORDINATE ALL LINE VOLTAGE POWER REQUIREMENTS FOR ALL BAS CONTROL PANELS AND SHALL COORDINATE ALL LOW VOLTAGE POWER AND WIRING FOR BAS CONTROL DEVICES, SPACE TEMPERATURE SENSORS, MULTI-TECHNOLOGY OCCUPANCY SENSORS, AIR TERMINAL UNITS (TUS), REHEAT COIL CONTROL VALVES, ETC. AS REQUIRED TO ACHIEVE SEQUENCES OF OPERATION AS INDICATED BY CONTROL DIAGRAMS. COORDINATE CONTROLS WORK WITH ALL TRADES.
7. CAREFULLY MOUNT ALL EQUIPMENT, VALVES, CONTROLLERS, ETC. REQUIRING MAINTENANCE/ACCESS/INSPECTION IN ACCESSIBLE LOCATIONS. PROVIDE CEILING ACCESS PANELS IN HARD CEILINGS OR LOCATE ITEMS ABOVE LAY-IN TILE CEILINGS/REMOVABLE TILES AS REQUIRED TO ENSURE ACCESS. REFER TO SPECIFICATIONS FOR ACCESS DOOR TYPES AND REQUIREMENTS.
8. REFER TO AIR TERMINAL UNIT DETAILS AND AIRFLOW CONTROL VALVE DETAILS FOR ACCESS AND PIPING REQUIREMENTS. HEATING HOT WATER PIPING AND CONTROL VALVE ROUTING AND LOCATION SHALL BE CAREFULLY COORDINATED TO ENSURE ACCESS TO AIR TERMINAL UNIT AND AIRFLOW CONTROL VALVE CONTROLS, REHEAT COIL CONTROL VALVE ACTUATOR, ETC. COORDINATE FINAL PIPE ROUTING, AIR TERMINAL UNIT/AIRFLOW CONTROL VALVE COIL CONNECTION LOCATIONS/CONTROL ENCLOSURE HAND, ETC. TO MAXIMIZE ACCESS CLEARANCES AND PREVENT BLOCKING DUCT ACCESS DOORS/CONTROL ENCLOSURES, ETC. WITH PIPING, CONDUIT, ETC. COORDINATE WORK WITH ALL TRADES TO ENSURE MAINTENANCE ACCESS/CLEARANCES ARE MAINTAINED AS SPECIFIED, DETAILED AND PER MANUFACTURER RECOMMENDATIONS.

⬡ SHEET KEYNOTES:

1 COORDINATE FINAL ROUTING THROUGH CEILINGS AND MECHANICAL EQUIPMENT ROOM FOR AHU UTILITY PIPING IN ACCORDANCE WITH ACTUAL FIELD CONDITIONS. CONECT NEW CONDENSATE RETURN FROM AHU TO EXISTING CONDENSATE RETURN MAIN RISER WITHIN MECHANICAL EQUIPMENT ROOM AS CLOSE TO FLOOR AS POSSIBLE. PROVIDE DRIP LEGS AND STEAM DRIP TRAPS PIPED INTO THE RETURN CONDENSATE HEADER AT ALL CHANGES IN STEAM LINE ELEVATION AS REQUIRED/OUTLINED BY SPECIFICATIONS AND INDICATED BY STEAM CONDENSATE PIPING DETAILS. PROVIDE COORDINATION DRAWINGS AS REQUIRED BY SPECIFICATIONS FOR ALL PHASES OF CONSTRUCTION AND ALL UTILITY TIE-IN WORK TO EXISTING MAIN UTILITIES/NEW AHU, ETC.

2 PROVIDE ISOLATION VALVES FOR ALL NEW HEATING HOT WATER BRANCH TAKE-OFFS FROM EXISTING MAINS. PROVIDE ISOLATION VALVES TO ALLOW REHEAT ZONES TO BE SHUT-DOWN WITHOUT ISOLATING THE MAIN PIPING OFFSETTING THROUGH THE THIRD FLOOR TO FLOORS ABOVE.



KEY PLAN
N.T.S.

100% CONSTRUCTION DOCUMENTS
FULLY SPRINKLERED

NO.	DESCRIPTION	DATE

CONSULTANTS:

MILLER-REMICK LLC
PROFESSIONAL ENGINEER

ARCHITECT / ENGINEERS:

Miller-Remick LLC
M.E.P. & Structural Engineering
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Drawing Title
MECHANICAL
PHASE 1B - 3RD FLOOR PIPING PLAN - NEW WORK

Approved: Medical Center Director

Project Title
RENOVATE SURGICAL SERVICE & UPGRADE OPERATING ROOMS

Location HUNTINGTON, WV

Date 01-15-2016 | Checked MPP | Drawn JLR

Project Number **581-13-101**
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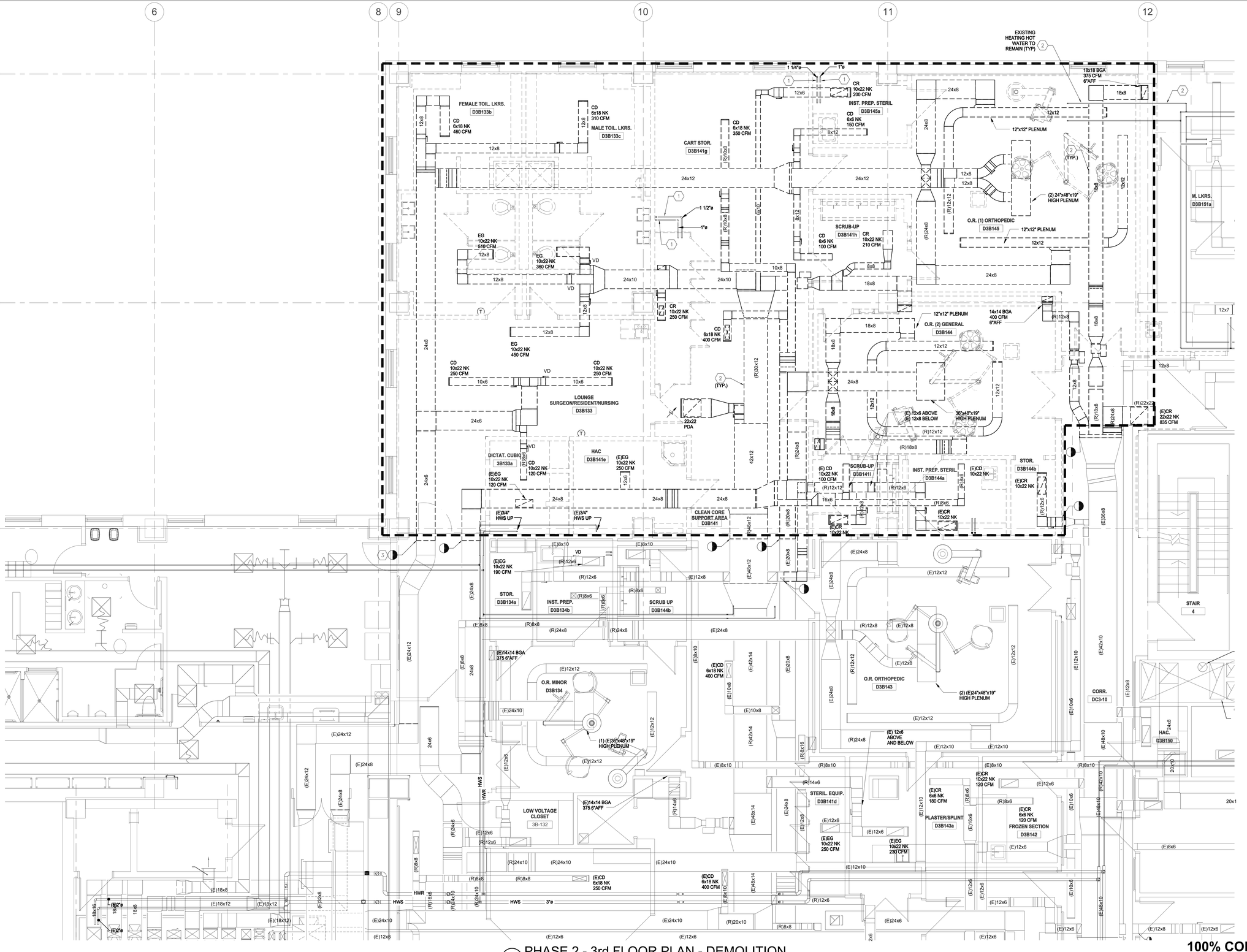

1 PHASE 2 - 3rd FLOOR PLAN - DEMOLITION
1/4" = 1'-0"

GENERAL DEMOLITION NOTES:

1. COORDINATE ARCHITECTURAL ICRA BARRIERS/RATED WALLS WITH ALL TRADES. RELOCATE EXISTING/ACTIVE DUCTWORK AND DEVICES REQUIRING MAINTENANCE/INSPECTION WHICH FALL ABOVE WHERE DEMOLITION CONSTRUCTION BARRIERS/ICRA WALLS ARE AS REQUIRED. DEMOLITION WORK REQUIRED OUTSIDE OF THE ACTIVE PROJECT PHASE CONSTRUCTION/ICRA BARRIERS (E.G. ABOVE ACTIVE EGRESS CORRIDOR CEILINGS, ETC.) SHALL BE COORDINATED WITH VAMC/COR AND IS RECOMMENDED TO OCCUR AFTER-HOURS WITH TEMPORARY ICRA ENCLOSURES CONSTRUCTED AND TAKEN DOWN DURING EACH WORK PERIOD TO MINIMIZE DUST/DIRT/DEBRIS IN THESE AREAS. WORK ZONES SHALL BE CLEANED THOROUGHLY FOLLOWING EACH SCHEDULED DEMOLITION EFFORT/WORK DAY. PATCH, SEAL AND FIRESTOP ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, CONTROLS, TUBING, ETC. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LOCATIONS OF CONSTRUCTION BARRIERS/ICRA WALLS FOR EACH PROJECT PHASE.
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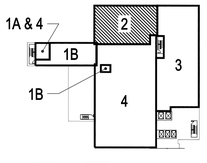
3. ALL WORK WITHIN PROJECT AREAS MUST BE COORDINATED WITH OWNER FOR IMPACT TO ADJACENT SPACES. OFF HOUR WORK MUST BE INCLUDED AS REQUIRED TO MINIMIZE ADVERSE IMPACT FROM VIBRATION, NOISE, ODOR, ETC. TO ACTIVE/OCCUPIED ADJACENT AREAS. OFF-HOURS WORK REQUIRED WITHIN CORRIDORS AND REGIONS OF THE FLOOR OUTSIDE OF THE MAIN PROJECT AREA. ALL WORK SHALL BE COORDINATED WITH VAMC ENVIRONMENTAL / ABATEMENT CONTRACTOR. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. DESIGN INTENT, UNLESS NOTED OTHERWISE, IS PHASE BY PHASE TO FULLY DEMOLISH ALL EXISTING HVAC AND MECHANICAL TERMINAL EQUIPMENT, FINNED-TUBE PERIMETER RADIATORS, DUCTWORK, PIPING AND BUILDING AUTOMATION/PNEUMATIC CONTROLS WITHIN THE BUILDING 1S PROJECT AREAS AS SHOWN. PROPERLY CAP AND SEAL ALL EXISTING TO REMAIN DUCTWORK AND PIPING TO PREVENT LEAKAGE. CAP AND SEAL ALL EXISTING TO REMAIN/ACTIVE PNEUMATIC CONTROL TUBING MAINS TO PREVENT LEAKAGE OF CONTROL AIR REQUIRED OUTSIDE OF THE PROJECT AREAS. REVIEW WITH VAMC ENGINEERING PERSONNEL/COR ANY DEMOLISHED ITEMS DESIRED TO BE SALVAGED. TURN OVER TO THE VAMC AS DIRECTED BY VAMC COR. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO SPACE TEMPERATURE SENSORS, THERMOSTATS, HUMIDISTATS, SPACE DDC CONTROL DEVICES, ETC. THE VAMC MAY WISH TO RE-ASSIGN/RE-USE IN OTHER AREAS OF THE HOSPITAL.
5. ACTIVE VERTICAL AND HORIZONTAL PIPE RISERS OFFSETTING THROUGH THE PROJECT AREAS TO FLOORS ABOVE /ALONG PERIMETER WALLS AND AT SELECT COLUMN ENCLOSURES SHALL REMAIN. REMOVE INSULATION AND REINSULATE EXISTING TO REMAIN PIPING AS SPECIFIED. INSULATE PRIOR TO ENCLOSING IN NEW WALLS. IDENTIFY TO VAMC ENGINEERING PERSONNEL/COR ANY PIPING THAT IS SUSPECT FOR POOR CONDITION/EXCESSIVE RUST OR CORROSION/LEAKING, ETC. REPLACE PIPING SECTIONS DISCOVERED TO BE LEAKING AS DIRECTED/APPROVED BY VAMC.
6. CONTRACTOR SHALL SURVEY AND VERIFY IN THE FIELD ANY SUSPECTED ABANDONED-IN-PLACE PIPING AND DUCTWORK SYSTEMS AND DEMOLISH WHEREVER POSSIBLE. REVIEW QUESTIONABLE ITEMS WITH VAMC ENGINEERING PERSONNEL/COR PRIOR TO CUTTING, REMOVING OR DEMOLISHING. RELOCATE EXISTING ACTIVE RISERS AS REQUIRED TO CONCEAL/ROUTE THEM WITHIN IN NEW WALLS/COLUMN CLOSURES. SEE NEW WORK PLANS AND COORDINATE WITH ALL TRADES.
7. BUILDING 1S THIRD FLOOR SURGICAL AREAS ARE SERVED BY MULTIPLE EXISTING AIR HANDLING UNITS/FANS/PUMPS, ETC. COORDINATE PROPER SHUT-DOWN AND PROTECTION OF ALL EXISTING AHU'S, EXHAUST FANS, RATED WALL FIRE DAMPERS, SMOKE DAMPERS, SHAFT AND SHAFT WALL COMBINATION FIRE/SMOKE DAMPERS, ETC. DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION. PROJECT AREAS UNDER PHASED CONSTRUCTION SHALL BE MAINTAINED NEGATIVE WITH RESPECT TO ALL ADJACENCIES AROUND, ABOVE AND BELOW, AT ALL TIMES DURING CONSTRUCTION EFFORTS TO PREVENT THE MIGRATION OF DUST, DEBRIS AND ODORS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL VAMC ICRA REQUIREMENTS.

⬡ SHEET KEYNOTES:

1. DEMOLISH EXISTING STEAM AND CONDENSATE PIPING WHERE SHOWN DOWN THROUGH THIRD FLOOR SLAB. CUT AND CAP BACK TO ASSOCIATED MAINS WITHIN CEILING OF SECOND FLOOR BELOW. COORDINATE REMOVAL OF PIPING WITH ALL TRADES. COORDINATE INFILL AND REPAIR OF SLAB OPENINGS AS PER ARCH AND STRUCTURAL DETAILS AND SPECS.
2. COORDINATE REMOVAL OF DEMOLISHED DUCTWORK AND PIPING WITHIN ALL PHASE 2 AREAS TO ENSURE DUCTWORK AND PIPING THAT MUST REMAIN ACTIVE UNTIL SUBSEQUENT PHASE DEMOLITION EFFORTS AND PIPING THAT MUST REMAIN ACTIVE TO CONTINUOUSLY SERVE NON-PROJECT AREAS/FLOORS ABOVE & BELOW IS NOT DISTURBED OR IMPACTED. DEMOLITION WITHIN PHASE 2 AREAS SHALL BE COORDINATED WITH VAMC COR AND SURGERY ACTIVITIES CAREFULLY. DEMOLITION EFFORTS ARE RECOMMENDED TO OCCUR AFTER-HOURS/WHEN NO SURGERY ACTIVITY IS OCCURRING TO ENSURE THAT AIRFLOW RATES/SPACE PRESSURIZATION/TEMPERATURE AND HUMIDITY WITHIN THE AREAS BEING ACTIVELY SERVED BY AC-8/EF-8, AC-10/EF-10, EF-15 AND EF-16 ARE NOT DISTURBED/REMAIN STABLE.
3. DEMOLISH 3 LEVELS OF DUCT (24x6, 24x6 AND 24x12) FROM THIS POINT TO FULL EXTENT OF DISTRIBUTION.



PLAN NORTH
ACTUAL NORTH
PROJECT LIMITS / PHASE
KEY PLAN
N.T.S.

100% CONSTRUCTION DOCUMENTS

FULLY SPRINKLERED

NO.	DESCRIPTION	DATE

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Approved: Medical Center Director

Drawing Title: **MECHANICAL PHASE 2 - 3RD FLOOR PLAN - DEMOLITION WORK**

Project Title: **RENOVATE SURGICAL SERVICE & UPGRADE OPERATING ROOMS**

Location: HUNTINGTON, WV

Date: 01-15-2016 | Checked: MPP | Drawn: MS

Project Number: **581-13-101**

Building Number: **1S**

Drawing Number: **P2-MD1.01**

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231