UNIVERSITY OF KENTUCKY
Purchasing Division

INVITATION FOR BIDS

CCK-2687-23
ADDENDUM# 5
03/07/2023

ATTENTION: This is not an order. Read all instructions, terms and conditions carefully.

IMPORTANT: BID AND ADDENDUM MUST BE RECEIVED BY: 03/09/2023 @ 3:00 P.M. LEXINGTON, KY TIME

Bidder must acknowledge receipt of this and any addendum as stated in the Invitation for Bids.

1. Please refer to and incorporate in your offer, the attached drawings from CMTA.
2. If you have any questions, please contact Ken Scott at the number below or at cckbidquestions@uky.edu.

OFFICIAL APPROVAL
UNIVERSITY OF KENTUCKY

Ken Scott 03/07/2023

Ken Scott / (859) 257-9102

SIGNATURE

_____

_____
Typed or Printed Name

University of Kentucky
Purchasing Division
322 Peterson Service Building
Lexington, KY 40506-0005

Sheet List	
Sheet Number	**Sheet Name**
G1.0	COVER SHEET
M1.0	MECHANICAL LEGEND
M2.0	H46 MECHANICAL PIPING DEMOLITION AND NEW WORK PLANS - PHASE I BASE BID
M2.1	MECHANICAL PIPING DEMOLITION AND NEW WORK PLANS - PHASE II BASE BID
M2.2	H46 MECHANICAL PIPING DEMOLITION AND NEW WORK PLANS - PHASE III ALTERNATE #1
M2.3	H46 MECHANICAL PIPING DEMOLITION AND NEW WORK PLANS - PHASE IV ALTERNATE #2
M2.4	H46 MECHANICAL PIPING DEMOLITION AND NEW WORK PLANS - PHASE V ALTERNATE #3
M3.0	MECHANICAL DETAILS

H46 STEAM PIPING REPLACEMENT

UNIVERSITY OF KENTUCKY

1/18/2023

UK/CMTA JOB #: 11130/XHSR22

UK PROJECT MANAGER: TOMI ANTIC

CMTA PROJECT MANAGER: SCOTT JOHNSON

800 ROSE STREET, LEXINGTON, KY 40536

BID DOCUMENTS

STATE OF KENTUCKY
ROBERT S. JOHNSON
27656
LICENSED PROFESSIONAL ENGINEER
MECHANICAL

REVISIONS		
NO.	DESCRIPTION:	DATE:
1	ADDENDUM #5	3/3/2023

UNIVERSITY OF KENTUCKY
Facilities Management - Medical Center

H46 STEAM PIPING REPLACEMENT

SCALE: AS NOTED	BLDG. NAME: CHANDLER MEDICAL CENTER	DRAWN BY: MDF	PROJ #: 11130/XHSR22
DATE: 08-31-2022	BLDG #: 0293	PROJ. MGR.: RSJ	

SHEET #
G1.0

MECHANICAL GENERAL NOTES

A THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS.

B ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.

C COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.

D OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)

E ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES. COORDINATE ALL OUTAGES WITH DAVID MOODY.

F LOCATIONS OF PIPING ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.

G ALL OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.

H COORDINATE ALL HVAC WORK WITH ELECTRICAL, PLUMBING AND OTHER TRADES TO AVOID INTERFERENCE WITH PIPING, DUCTS, CONDUIT AND OTHER EQUIPMENT.

I INSTALL ALL PIPING IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.

J THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.

MECHANICAL DEMOLITION NOTES

A ALL WALLS AND FLOOR SLABS SHALL BE REPAIRED TO MATCH EXISTING AND TO A LIKE NEW CONDITION. ALL RATED WALLS AND FLOOR SLABS SHALL BE PATCHED AND REPAIRED TO MAINTAIN RATING.

B ALL EXISTING BUILDING FINISHES SHALL BE PROTECTED DURING THE DEMOLITION PHASE.

C HEAVY DASHED LINES INDICATE ITEMS FOR REMOVAL (UON) AND LIGHT SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.

D ALL OUTAGES SHALL BE SCHEDULED THROUGH THE UK CPMD PROJECT REPRESENTATIVE FOR PROPER COORDINATION. A REQUEST FOR AN OUTAGE SHALL BE SUBMITTED IN WRITING A MINIMUM OF TWO WEEKS IN ADVANCE.

MECHANICAL HAZARDOUS MATERIALS NOTES

A THE CONTRACTOR IT IS HEREBY ADVISED THAT IS POSSIBLE THAT ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS ARE OR WERE PRESENT IN THIS BUILDING(S). ANY WORKER, OCCUPANT, VISITOR, ETC., WHO ENCOUNTERS ANY MATERIAL OF WHOSE CONTENT THEY ARE NOT CERTAIN SHALL PROMPTLY REPORT THE EXISTENCE AND LOCATION OF THAT MATERIAL TO THE OWNER. FURTHERMORE, THE CONTRACTOR SHALL INSURE THAT NO ONE COMES NEAR TO OR IN CONTACT WITH ANY SUCH MATERIAL OR FUMES THEREFROM UNTIL ITS CONTENT CAN BE ASCERTAINED TO BE NON-HAZARDOUS.

B CMTA, INC. HAS NO EXPERTISE IN THE DETERMINATION OF THE PRESENCE OF ANY HAZARDOUS MATERIAL. THEREFORE, NO ATTEMPT HAS BEEN MADE BY CMTA TO IDENTIFY THE EXISTENCE OR LOCATION OF ANY SUCH HAZARDOUS MATERIAL. FURTHERMORE, CMTA NOR ANY AFFILIATE HEREOF WILL NOT OFFER OR MAKE ANY RECOMMENDATIONS RELATIVE TO THE REMOVAL, HANDLING OR DISPOSAL OF SUCH MATERIAL.

C IF THE WORK WHICH IS TO BE PERFORMED INTERFACES, CONNECTS OR RELATES IN ANY PHYSICAL WAY WITH OR TO EXISTING COMPONENTS WHICH CONTAIN OR BEAR ANY HAZARDOUS MATERIAL, ASBESTOS BEING ONE, THEN IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO CONTACT THE OWNER AND SO ADVISE HIM IMMEDIATELY.

D THE CONTRACTOR BY EXECUTION OF THE CONTRACT FOR ANY WORK AND/OR BY THE ACCOMPLISHMENT OF ANY WORK THEREBY AGREE TO BRING NO CLAIM RELATIVE TO HAZARDOUS MATERIALS FOR NEGLIGENCE, BREACH OF CONTRACT, INDEMNITY, OR ANY OTHER SUCH ITEM AGAINST CMTA, ITS PRINCIPALS, EMPLOYEES, AGENTS OR CONSULTANTS. ALSO, THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD CMTA, ITS PRINCIPALS, EMPLOYEES, AGENTS AND CONSULTANTS HARMLESS FROM ANY SUCH RELATED CLAIMS WHICH MAY BE BROUGHT BY ANY SUBCONTRACTORS, SUPPLIERS OR ANY OTHER THIRD PARTIES.

E THE CONTRACTOR IS DIRECTED TO THE SPECIFICATIONS FOR FURTHER INFORMATION.

MECHANICAL PHASING NOTES

A THIS PROJECT INTERFACES EXTENSIVELY WITH EXISTING BUILDING SERVICES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND PHASE ALL TIE-INS AND INTERRUPTIONS OF EXISTING SERVICES TO MINIMIZE OR ELIMINATE DOWNTIME. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BARE ANY AND ALL COSTS ASSOCIATED WITH THIS PHASING, INCLUDING TEMPORARY SERVICES, TEMPORARY RELOCATION, PREMIUM TIME WORK, ETC. CONTRACTOR SHALL COORDINATE ALL SAID WORK WITH THE OWNER PER THE CONTRACT DOCUMENTS.

ABBREVIATIONS

AC	ALTERNATING CURRENT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AHJ	AUTHORITY HAVING JURISDICTION
AMP	AMPERE (AMP, AMPS)
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APD	AIR PRESSURE DROP
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS
ATU	AIR TERMINAL UNIT
AVG	AVERAGE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BREAK HORSEPOWER
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
C.I.	CAST IRON
CLG	CEILING
CLR	CLEAR
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COND	CONDENS (-ER, -ING, -ATION, -ATE)
CONT	CONTINU (-ED, -OUS)
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CV	VALVE FLOW COEFFICIENT
dB	DECIBEL
DB	DRY BULB
DBT	DRY BULB TEMPERATURE
DC	DIRECT CURRENT
DD	DUCT SMOKE DETECTOR
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE (-S)
DIA	DIAMETER (-S)
DN	DOWN
DWG	DRAWING
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVA (-TION, -TOR)
ENGR	ENGINEER
EQ	EQUAL
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EVAP	EVAPORAT (-E, -ING, -ED, -OR, -ION)
EWT	ENTERING WATER TEMPERATURE
EXP	EXPANSION
EXT	EXTERIOR
FA	FREE AREA

ABBREVIATIONS (CONTINUED)

FD	FIRE DAMPER
FL	FLOOR
FLA	FULL LOAD AMPS
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPC	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET **OR** FOOT
FUT	FUTURE
FV	FACE VELOCITY
GA	GAGE/GAUGE
GAL	GALLON (-S)
GC	GENERAL CONTRACTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRAINS
H	HUMIDITY
HD	HEAD
HG	MERCURY
HORIZ	HORIZONTAL
HP	H (-ORSEPOWER, -EAT PUMP)
HR	HOUR (-S)
HVAC	HEATING, VENTILATING, & AIR-CONDITIONING
Hz	HERTZ
ID	I (-DENTIFICATION, -NSIDE DIAMETER, -NSIDE DIMENSION)
IN	INCH (-ES)
INSUL	INSULAT (-ED, -ION)
INT	INTER (-IOR, -ERVAL)
IPS	IRON PIPE SIZE
kW	KILOWATT
kWh	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LF	LINEAR FEET/FOOT
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	BTU PER HOUR [THOUSANDS]
MCA	MINIMUM CIRCUIT AMPS
MFG	MANUFACTURER
MIN	MIN (-IMUM, -UTE)
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVERCURRENT PROTECTION [AMPS]
MTG	MOUNTING
N/A	NOT APPLICABLE
NC	NOISE CRITERIA **OR** NORMALLY CLOSED
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NIC	NOT IN CONTRACT

ABBREVIATIONS (CONTINUED)

NO	NORMALLY OPEN **OR** NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DI (-AMETER, -MENSION)
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OR	OPEN RECEPTACLE
OZ	OUNCE (-S)
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE [ELECTRICAL]
PLBG	PLUMBING
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	PPSI GAUGE
RH	RELATIVE HUMIDITY [%]
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SD	SMOKE DAMPER
SP	STATIC PRESSURE
SQ	SQUARE
SQ FT	SQUARE FEET **OR** FOOT
SQ IN	SQUARE INCH **OR** INCHES
TAB	TESTING AND BALANCING
TBD	TO BE DETERMINED
TE	TOP ELEVATION
TEMP	TEMPERATURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT (-AGE, -S)
VAR	VARI (-ABLE, -IES)
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FEQUENCY DRIVE
W	WATT (-AGE, -S)
WB	WET BULB
WBT	WET BULB TEMPERATURE
WPD	WATER PRESSURE DROP
WT	WEIGHT
W/	WITH
W/O	WITHOUT
%	PERCENT
ΔP	DIFFERENTIAL PRESSURE
ΔT	TEMPERATURE DIFFERENCE
℄	CENTERLINE

GENERAL SYMBOLS

#	TAGGED NOTE DESIGNATOR
A	REVISION TRIANGLE
ROOM NAME (SEE #)	ROOM TAG
TAG XXX-# INSTANCE XXXX	EQUIPMENT TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION

HVAC LEGEND

	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST AIR DIFFUSER
	TRANSFER AIR DIFFUSER W/ SOUND ATTENUATING BOOT
	SIDEWALL DIFFUSER/GRILLE
	SIDEWALL DIFFUSER/GRILLE
TAG XXX ADP/LOW #_###	AIR DEVICE TAG (REGISTER, GRILLE, DIFFUSER,LOUVER)
##x##	RECTANGULAR DUCT
#ø	ROUND/SPIRAL DUCT
##/##	FLAT OVAL DUCT
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT
EA	EXHAUST AIR DUCT
OA	OUTSIDE AIR DUCT
TA	TRANSFER AIR DUCT
CAE	COMBUSTION AIR EXHAUST DUCT
CAI	COMBUSTION AIR INTAKE DUCT
SA	SA AIR DUCT TURNING UP
SA	SA AIR DUCT TURNING DOWN
RA	RA AIR DUCT TURNING UP
RA	RA AIR DUCT TURNING DOWN
EA	EA AIR DUCT TURNING UP
EA	EA AIR DUCT TURNING DOWN
E(XXX)	EXISTING DUCT - (XXX) DENOTES SYSTEM
D(XXX)	DUCT TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
A(XXX)	DUCT TO BE ABANDONED IN PLACE - (XXX) DENOTES SYSTEM
	MITERED ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
T	THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CARBON DIOXIDE SENSOR
T/C	TEMPERATURE & CARBON DIOXIDE SENSOR
VERT. HORIZ.	MANUAL BALANCING/VOLUME DAMPER
VERT. HORIZ.	MOTORIZED DAMPER
VERT. HORIZ.	FIRE DAMPER
VERT. HORIZ.	SMOKE DAMPER
VERT. HORIZ.	COMBINATION FIRE & SMOKE DAMPER

MECHANICAL PIPING LEGEND

	PIPE ELBOW TURNING UP
	PIPE ELBOW TURNING DOWN
	PIPE TEE; CONNECTION ON TOP
	PIPE TEE; CONNECTION ON BOTTOM
	PIPE CAP
BFW	BOILER FEEDWATER
CAI/E	COMBUSTION AIR INTAKE/EXHAUST
CBS/R	CHILLED BEAM SUPPLY/RETURN
CD	CONDENSATE DRAIN
CHWS/R	CHILLED WATER SUPPLY/RETURN
CST	CLEAN STEAM PIPING
CWS/R	CONDENSER WATER SUPPLY/RETURN
DTS/R	DUAL TEMP. WATER SUPPLY/RETURN
GS/R	GEOTHERMAL WATER SUPPLY/RETURN
HPC	HIGH PRESSURE STEAM CONDENSATE
HPS(#)	HIGH PRESSURE STEAM: (#) DENOTES PRESSURE
HPS/R	HEAT PUMP WATER SUPPLY/RETURN
HRS/R	HEAT RECOVERY SUPPLY/RETURN PIPING
HWS/R	HEATING WATER SUPPLY/RETURN
LPC	LOW PRESSURE STEAM CONDENSATE
LPS(#)	LOW PRESSURE STEAM: (#) DENOTES PRESSURE
MPC	MEDIUM PRESSURE STEAM RETURN
MPS(#)	MEDIUM PRESSURE STEAM: (#) DENOTES PRESSURE
SPD	STEAM CONDENSATE PUMPED DISCHARGE
SVT	STEAM VENT PIPING
D(XXX)	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
E(XXX)	EXISTING PIPING - (XXX) DENOTES SYSTEM
A(XXX)	ABANDONED IN PLACE PIPING - (XXX) DENOTES SYSTEM
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	AUTOMATIC AIR VENT (AAV)
	MANUAL AIR VENT (MAV)
	MANUAL BALANCING VALVE (BV)
	BALL VALVE
	BUTTERFLY VALVE
	TRIPLE DUTY VALVE (TDV)
	STRAINER
	MANUAL ISOLATION VALVE
	GLOBE VALVE
	OS&Y (GATE) VALVE
	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	AUTO-FLOW CONTROL VALVE
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	FLEXIBLE PIPE CONNECTION
	FLOW METER (VENTURI)
	PIPING UNION
	FLOW SWITCH
	PRESSURE SWTICH
	TAMPER SWITCH
	THERMOMETER
	PETE'S PLUG; TEMPERATURE/PRESSURE PORT

APPLICABLE BUILDING CODES

APPLICABLE BUILDING CODES	DOCUMENT	YEAR
ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES	ANSI A117.1	2009
FIRE SPRINKLER CODE	NFPA 13	2013
INTERNATIONAL BUILDING CODE (IBC)	STATE EDITION	2015
INTERNATIONAL ENERGY CONSERVATION CODE (IECC) OR ASHRAE 90.1	STATE EDITION	2012 OR 2010
INTERNATIONAL FIRE CODE (IFC)	STATE EDITION	2015
INTERNATIONAL FUEL GAS CODE (IFGC)	STATE EDITION	2015
INTERNATIONAL MECHANICAL CODE (IMC)	STATE EDITION	2015
KENTUCKY PLUMBING CODE (KPC)	STATE EDITION	2017
INTERNATIONAL EXISTING BUILDING CODE (IEBC)	STATE EDITION	2009
NATIONAL ELECTRIC CODE (NEC)	NFPA 70	2017
NATIONAL FIRE ALARM & SIGNALING CODE	NFPA 72	2013
UNIFORM STATEWIDE BUILDING CODE		2018

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

STATE OF KENTUCKY · ROBERT S. JOHNSON · 27666 · LICENSED PROFESSIONAL ENGINEER · MECHANICAL

REVISIONS

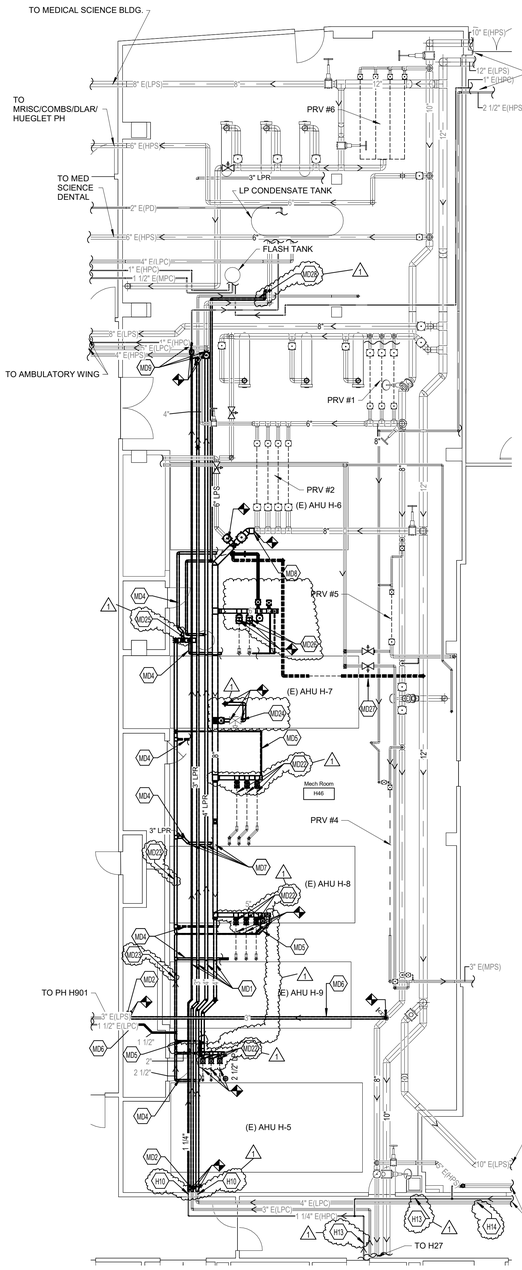
NO:	DESCRIPTION:	DATE:
1	ADDENDUM #5	3/3/2023

UNIVERSITY OF KENTUCKY
Facilities Management - Medical Center

H46 STEAM PIPING REPLACEMENT

SCALE: AS NOTED	BLDG. NAME: CHANDLER MEDICAL CENTER	DRAWN BY: MDF	PROJ #: 11130/XHSR22
DATE: 08-31-2022	BLDG #: 0293	PROJ. MGR.: RSJ	

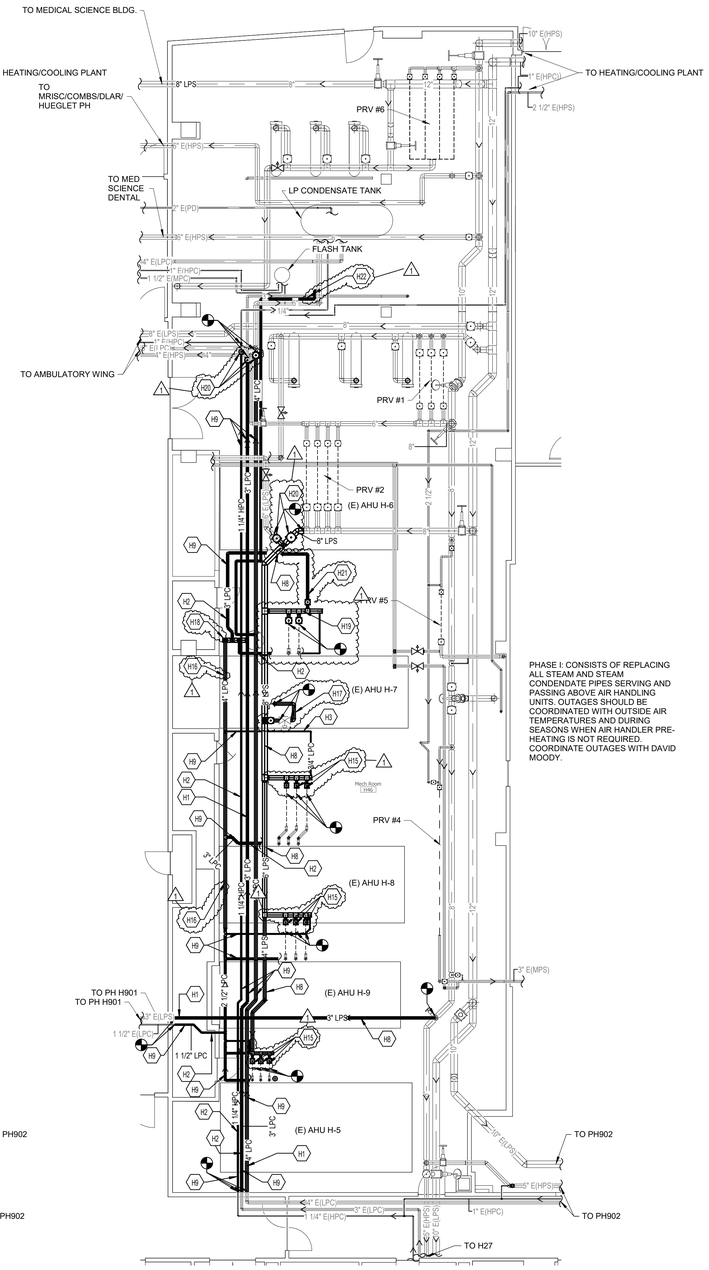
SHEET #: M1.0



H46 MECHANICAL PIPING DEMOLITION PLAN - PHASE I BASE BID

1 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'



H46 MECHANICAL PIPING NEW WORK PLAN - PHASE I BASE BID

2 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'

PHASE I: CONSISTS OF REPLACING ALL STEAM AND STEAM CONDENDATE PIPES SERVING AND PASSING ABOVE AIR HANDLING UNITS. OUTAGES SHOULD BE COORDINATED WITH OUTSIDE AIR TEMPERATURES AND DURING SEASONS WHEN AIR HANDLER PRE-HEATING IS NOT REQUIRED. COORDINATE OUTAGES WITH DAVID MOODY.

H27 MECHANICAL PIPING PLAN - PHASE I BASE BID

3 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'

1

TAGGED NOTES

##

H1 PROVIDE STEAM PIPE IN PLACE OF DEMOLISHED PIPE. REINSULATE AND PAINT TO UK STANDARD COLORS.

H2 PROVIDE STEAM CONDENSATE PIPE IN PLACE OF DEMOLISHED PIPE. REINSULATE AND PAINT TO UK STANDARD COLORS.

H3 PROVIDE NEW END OF MAIN CONDENSTATE PIPE AND NEW STEAM TRAP.

H8 NEW LOW PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H9 NEW STEAM CONDENSATE PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H10 PRIOR TO DEMOLITION OF THE LOW AND HIGH PRESSURE CONDENSATE RETURN PIPES, INSTALL TEMPORARY PIPING TO AHU FLOOR DRAIN FOR CONDENSATE DISPOSAL DURING OUTAGE.

H11 PRIOR TO DEMOLITION OF THE LOW PRESSURE CONDENSATE PIPE IN H46, INSTALL TEMPORARY PIPING TO NEARBY FLOOR SINK FOR CONDENSATE DISPOSAL DURING OUTAGE. DOMESTIC WATER HEATERS MUST REMAIN OPERATIONAL DURNG PHASE I OUTAGE EXCEPT FOR BRIEF OUTAGE TO INSTALL PIPING.

H12 UTILIZE EXISTING FLOOR SINK TO DISPOSE OF CONDENSATE DURING PHASE I OUTAGE.

H13 END OF MAIN STEAM CONDENSATE FROM H27 AND PH902 MUST REMAIN ACTIVE DURING OUTAGE.

H14 LOW PRESSURE CONDENSATE FROM PH907 MUST REMAIN ACTIVE DURING OUTAGE.

H15 PROVIDE NEW STEAM PIPE, VALVE AND STAINER AND CONNECT TO EXISTING TO REMAIN PIPE.

H16 STEAM CONDENSATE PIPE ROUTES THROUGH EXISTING AHU. CONTRACTOR TO MAKE ALL NECESSARY PROVISIONS TO REPLACE PIPING WITHIN AHU FOOTPRINT.

H17 PROVIDE NEW 4" STEAM PIPE, SHUT-OFF VALVE AND STRAINER AND CONNECT TO EXISTING TO REMAIN CONTROL VALVE. PROVIDE STEAM PIPING FROM CONTROL VALVE TO EXISTING STEAM PIPING INSIDE AHU. REINSTALL HEAT BLANKET ON VALVE AND STRAINER.

H18 PROVIDE NEW CONSENSATE PUMP MAINFOLD PIPING AND CONNECT TO EXISTING BENEATH FLOOR CONDENSATE TANK INLET.

H19 PROVIDE NEW STEAM PIPE AND VALVE AND CONNECT TO EXISTING TO REMAIN PIPE.

H20 PROVIDE SHUTOFF ISOLATION VALVE IN STEAM MAIN. ANY VALVE INSTALLED FOR PHASE ISOLATION OR IN THE STEAM MAIN SHALL BE VALVE MANUFACTURED BY ADAMS.

H21 PROVIDE NEW BRANCH PIPE, VALVE AND STAINER AND CONNECT TO EXISTING AHU COIL CONNECTIONS

H22 PROVIDE NEW CONDENSATE PUMP DISCHARGE PIPE FROM TRANSFER PUMP OUTLET TO CONDENSATE STORAGE TANK INLET PIPE.

MD1 PHASE I CONSISTS OF REPLACEMENT OF ALL STEAM AND CONDENSATE PIPING SERVING AND PASSING ABOVE ALL AIR HANDING UNITS. AS A FIRST SUB-PHASE, DEMOLISH ALL STEAM AND CONDENSATE PIPING SERVING AHU-5 AND ABOVE AHU-5 AND AHU-9. COORDINATE EXACT POINT OF DEMOLITION WITH OUTAGES. ONLY ONE AIR HANDING UNIT SHALL HAVE OUTAGE DURING PHASE I SUB-PHASES

MD2 ALL PIPING REPLACEMENT SHALL BE BOUNDED BY MECHANICAL ROOM WALLS.

MD4 DEMOLISH COMPLETE CONDENSATE PIPING FROM TRAP INLET INCLUDING TRAP. SEE DETAILS FOR TRAP SIZE.

MD5 DEMOLISH COMPLETE END OF MAIN CONDENSATE DRAIN PIPE INCLUDING TRAP AND ISOLATION VALVE.

MD6 COORDINATE OUTAGE IN PENTHOUSE 901 AND DEMOLISH STEAM AND CONDENSATE BRANCH PIPES. DEMOLISH STEAM PIPE BACK TO BRANCH ISOLATION VALVE. VALVE WILL BE REPLACED IN LATER PHASE. REPLACE ALL TRAPS AT BOTTOM OF STEAM RISERS.

MD7 PHASE I CONSISTS OF REPLACEMENT OF ALL STEAM AND CONDENSTATE PIPING SERVING AND PASSING ABOVE ALL AIR HANDING UNITS. ONLY ONE AIR HANDING UNIT SHALL AIRFLOW OUTAGE DURING PHASE I. UPON INITIAL CONDENSATE PIPE ISOLATION OUTAGE, PIPING TO MULTIPLE AHU'S CAN BE DEMOLISHED SIMULTANEOUSLY

MD8 PHASE I CONSISTS OF REPLACEMENT OF ALL STEAM AND CONDENSTATE PIPING SERVING AND PASSING ABOVE ALL AIR HANDING UNITS. ONLY ONE AIR HANDING UNIT SHALL HAVE AIRFLOW OUTAGE DURING PHASE 1. UPON INTIAL CONDENSATE PIPE ISOLATION OUTAGE, PIPING TO MULTIPLE AHU'S CAN BE DEMOLISHED SIMULTANEOUSLY. EXTENT OF REMOVAL SHALL BE TO STEAM PRESSURE REDUCING STATION.

MD9 DEMOLISH COMPLETE STEAM AND CONDENSATE PIPING AS SHOWN. DEMOLISH COMPLETE TO FITTING SHOWN.

MD22 DEMOLISH COMPLETE EACH AHU STEAM BRANCH PIPE AND ACCESSORIES UPTO AND INCLUDING EXISTING STRAINER UNLESS OTHERWISE INDICATED. PREPARE PIPING TO REMAIN FOR FUTURE RECONNECTION. ANY VALVE OR STRAINER HEAT BLANKET SHALL BE REMOVED, STORED WITHOUT DAMAGE AND REINSTALLED ON NEW VALVE AND/OR STRAINER.

MD23 DEMOLISH COMPLETE EXISTING CONDENSATE PIPE RUNNING THROUGH AHU.

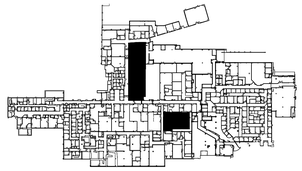
MD24 DEMOLISH COMPLETE EXISTING STEAM BRANCH, VALVE AND STRAINER SERVING HUMIDIFIER. EXISTING PNUEMATIC CONTROL VALVE TO REMAIN. DEMOLISH PIPING BETWEEN CONTROL VALVE AND AHU HOUSING. PREPARE PNEUMATIC CONTROL VALVE TO BE CONNECTED TO NEW STEAM PIPING. VALVE AND STRAINER HEAT BLANKET SHALL BE SALVAGED AND REINSTALLED ON NEW VALVE AND STRAINER.

MD25 DEMOLISH COMPLETE STEAM CONDENSATE PUMP PIPING MANIFOLD COMPLETE TO TANK INLET.

MD26 DEMOLISH COMPLETE EACH AHU STEAM BRANCH PIPE AND ISOLATION VALVE UPTO LIKE NEW EXISTING STRAINER. PREPARE STRAINER TO REMAIN FOR FUTURE RECONNECTION. ANY VALVE OR STRAINER HEAT BLANKET SHALL BE REMOVED, STORED WITHOUT DAMAGE AND REINSTALLED ON NEW VALVE AND EXISTING STRAINER.

MD27 DEMOLISH COMPLETE EXSTING STEAM BRANCH PIPE, PRV STATION AND ALL RELATED HANGERS AND EQUIPMENT TO UNION AT COIL CONNECTION. PERMANENTLY CAP HPS MAIN PIPE. PATCH AND REPAIR INSULATION AND JACKETING TO MATCH EXISTING.

MD28 DEMOLISH COMPLETE CONDENSATE PUMP DISCHARGE PIPE FROM TRANSFER PUMP TO CONDENSATE STORAGE TANK INLET PIPE.

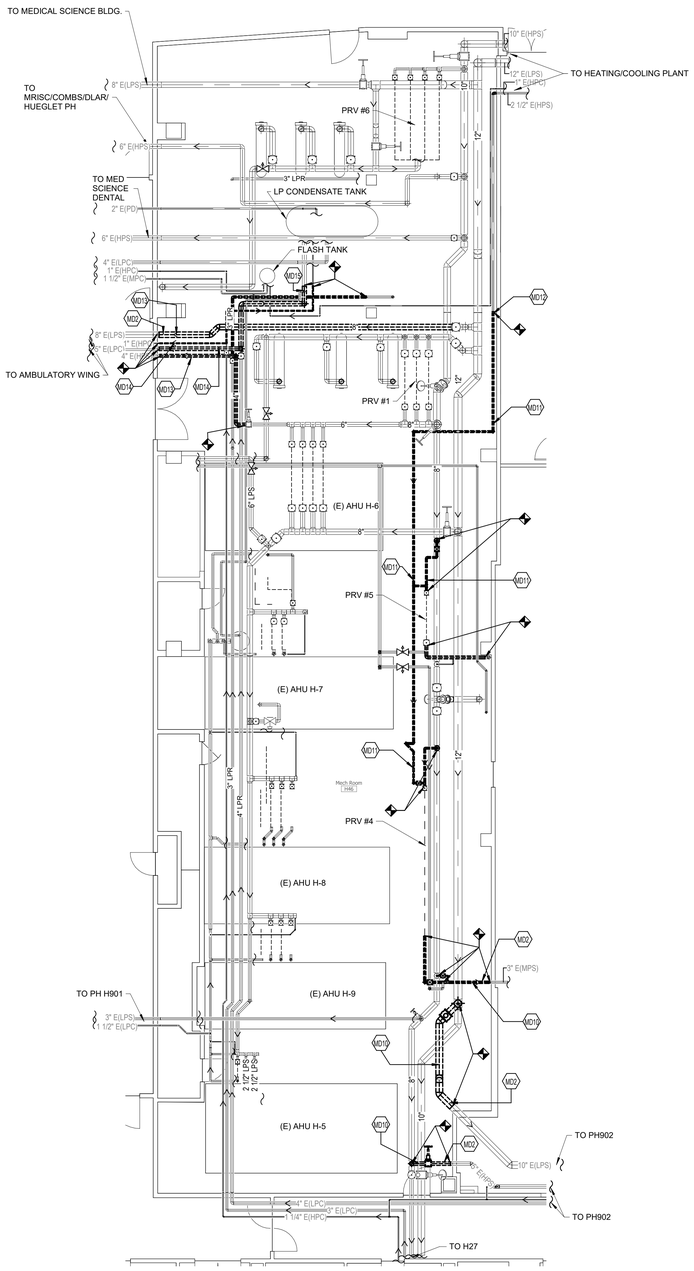


KEYPLAN

REVISIONS		
NO:	DESCRIPTION:	DATE:
1	ADDENDUM #5	3/3/2023

UNIVERSITY OF KENTUCKY
Facilities Management - Medical Center

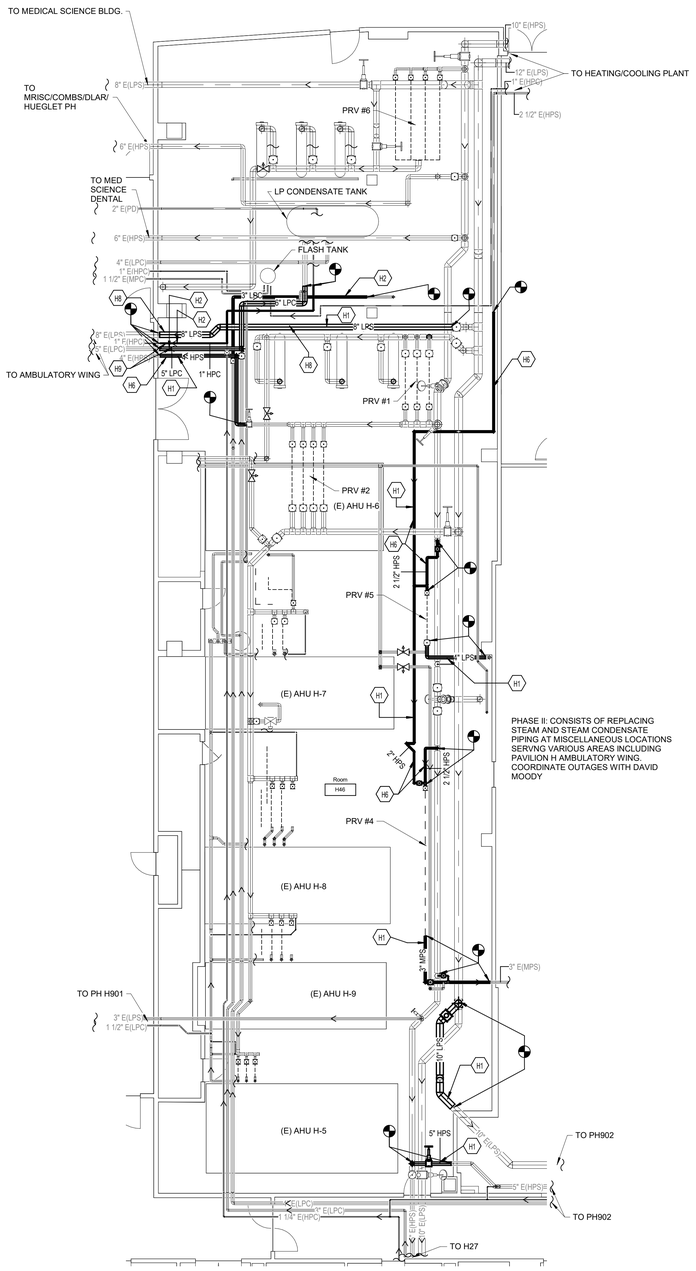
H46 STEAM PIPING REPLACEMENT			
SCALE: AS NOTED	BLDG. NAME: CHANDLER MEDICAL CENTER	DRAWN BY: MDF	PROJ #: 11130/XHSR22
DATE: 06-31-2022	BLDG. #: 0293	PROJ. MGR.: RSJ	SHEET #: M2.0



H46 MECHANICAL PIPING DEMOLITION PLAN - PHASE II BASE BID

1 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'

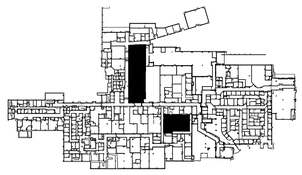


PHASE II: CONSISTS OF REPLACING STEAM AND STEAM CONDENSATE PIPING AT MISCELLANEOUS LOCATIONS SERVNG VARIOUS AREAS INCLUDING PAVILION H AMBULATORY WING. COORDINATE OUTAGES WITH DAVID MOODY

H46 MECHANICAL PIPING NEW WORK PLAN - PHASE II - BASE BID

2 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'



KEYPLAN

TAGGED NOTES

H1 PROVIDE STEAM PIPE IN PLACE OF DEMOLISHED PIPE. REINSULATE AND PAINT TO UK STANDARD COLORS.

H2 PROVIDE STEAM CONDENSATE PIPE IN PLACE OF DEMOLISHED PIPE. REINSULATE AND PAINT TO UK STANDARD COLORS.

H6 NEW HIGH PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 2" THICK, 2" THRU 4" PIPE SIZE - 3" THICK AND 5" OR LARGER PIPE SIZE 3-1/2" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H8 NEW LOW PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H9 NEW STEAM CONDENSATE PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

MD2 ALL PIPING REPLACEMENT SHALL BE BOUNDED BY MECHANICAL ROOM WALLS.

MD10 DEMOLISH COMPLETE STEAM BRANCH PIPE SERVING PENTHOUSE INCLUDING GATE VALVE.

MD11 DEMOLISH COMPLETE STEAM PIPING AS SHOWN.

MD12 DEMOLISH PIPE TO BUILDING TRANSITION POINT. PIPING BEYOND TO BE DEMOLISHED IN FUTURE PHASE.

MD13 DEMOLISH COMPLETE STEAM PIPING SERVING CHANDLER AMBULATORY WING.

MD14 DEMOLISH COMPLETE STEAM CONDENSATE PIPING SERVING CHANDLER AMBULATORY WING.

MD15 DEMOLISH EXISTING CONDENSATE PIPING TO LIKE NEW PIPING CONNECTED TO CONDENSATE AND FLASH TANK. FIELD COORDINATE EXACT LOCATION

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NO:	DESCRIPTION:	DATE:
1	ADDENDUM #5	3/3/2023

UNIVERSITY OF KENTUCKY
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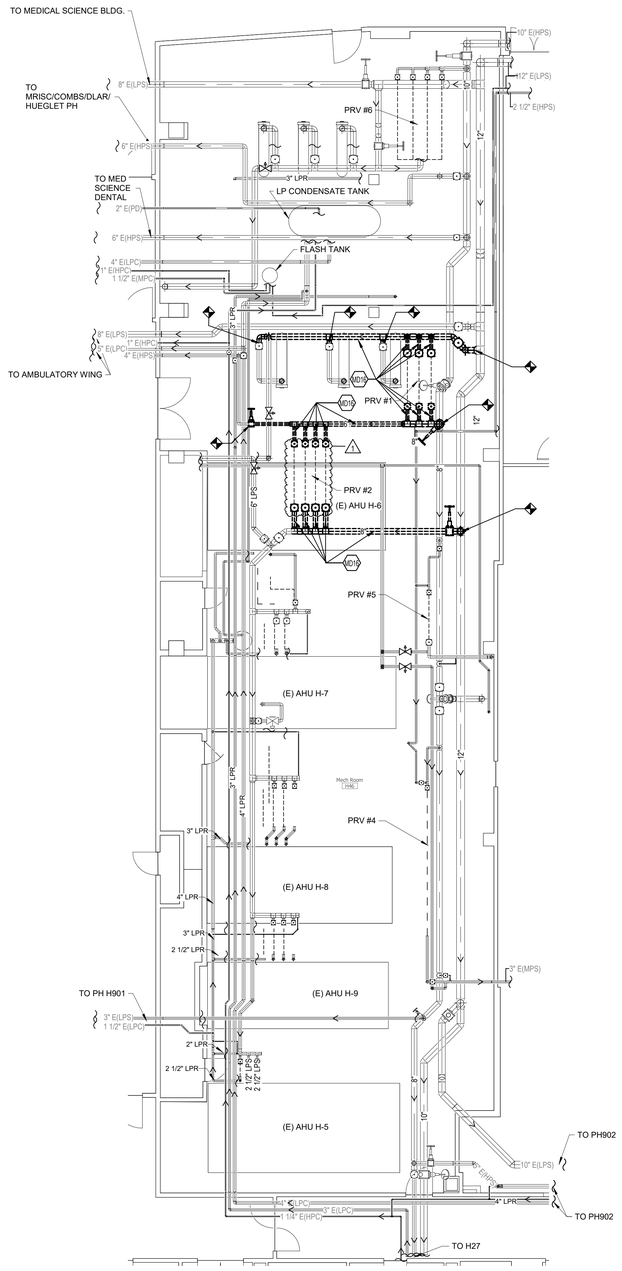
H46 STEAM PIPING REPLACEMENT

SCALE: AS NOTED	BLDG. NAME: CHANDLER MEDICAL CENTER	DRAWN BY: MDF	PROJ #: 11130/XHSR22
DATE: 08-31-2022	BLDG #: 0293	PROJ. MGR.: RSJ	

SHEET # M2.1



H46 MECHANICAL PIPING DEMOLITION PLAN - PHASE III ALTERNATE #1

1 SCALE: 1/8" = 1'-0"

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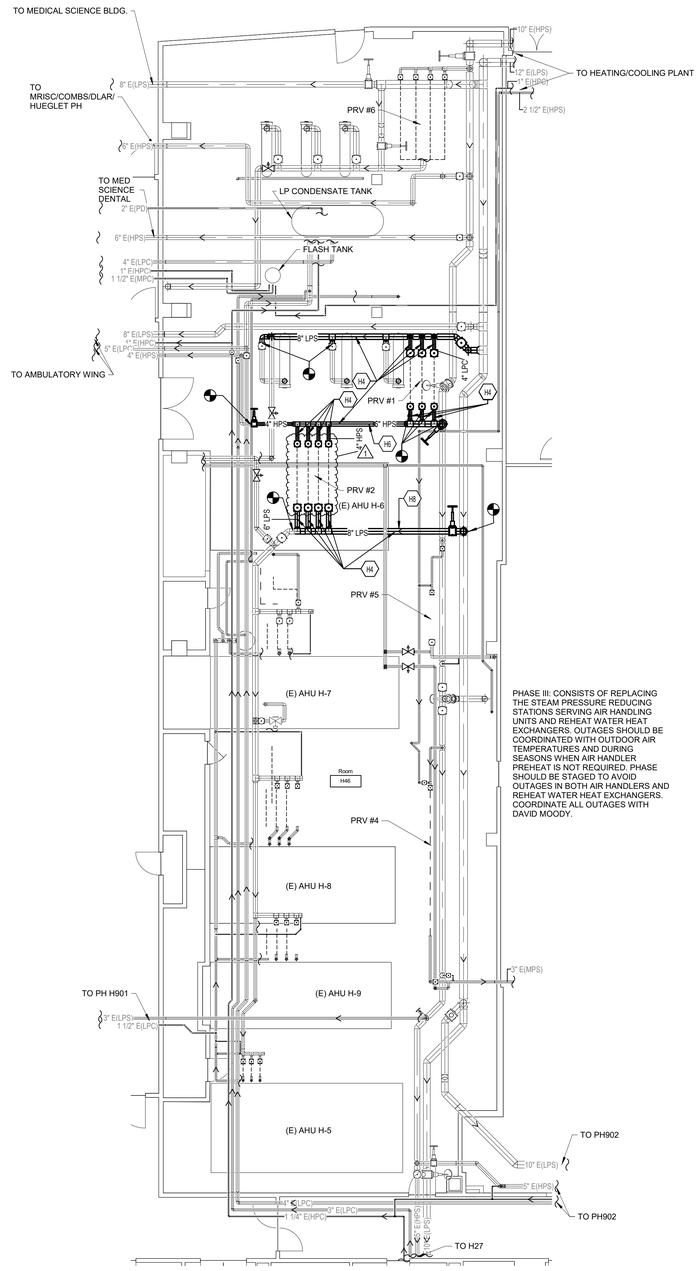
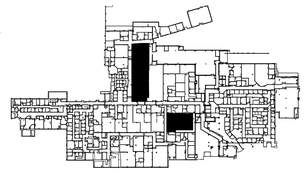


PHASE III: CONSISTS OF REPLACING THE STEAM PRESSURE REDUCING STATIONS SERVING AIR HANDLING UNITS AND REHEAT WATER HEAT EXCHANGERS. OUTAGES SHOULD BE COORDINATED WITH OUTDOOR AIR TEMPERATURES AND DURING SEASONS WHEN AIR HANDLER PREHEAT IS NOT REQUIRED. PHASE SHOULD BE STAGED TO AVOID OUTAGES IN BOTH AIR HANDLERS AND REHEAT WATER HEAT EXCHANGERS. COORDINATE ALL OUTAGES WITH DAVID MOODY.

H46 MECHANICAL PIPING NEW WORK PLAN - PHASE III ALTERNATE #1

2 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'



KEYPLAN

TAGGED NOTES

(##)

H4 PROVIDE NEW STEAM PIPING AND PRESSURE REDUCING STATION. REFER TO DETAIL FOR PRV DETAILS. REPLACE ALL END OF MAIN CONDENSATE PIPING, TRAPS AND RELATED COMPONENTS.

H6 NEW HIGH PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 2" THICK, 2" THRU 4" PIPE SIZE - 3" THICK AND 5" OR LARGER PIPE SIZE 3-1/2" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERMINCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H8 NEW LOW PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPT0 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERMINCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

MD16 DEMOLISH COMPLETE EXISTING STEAM PIPING AND STEAM PRESSURE REDUCING STATION.

STATE OF KENTUCKY
ROBERT S. JOHNSON
27666
LICENSED PROFESSIONAL ENGINEER

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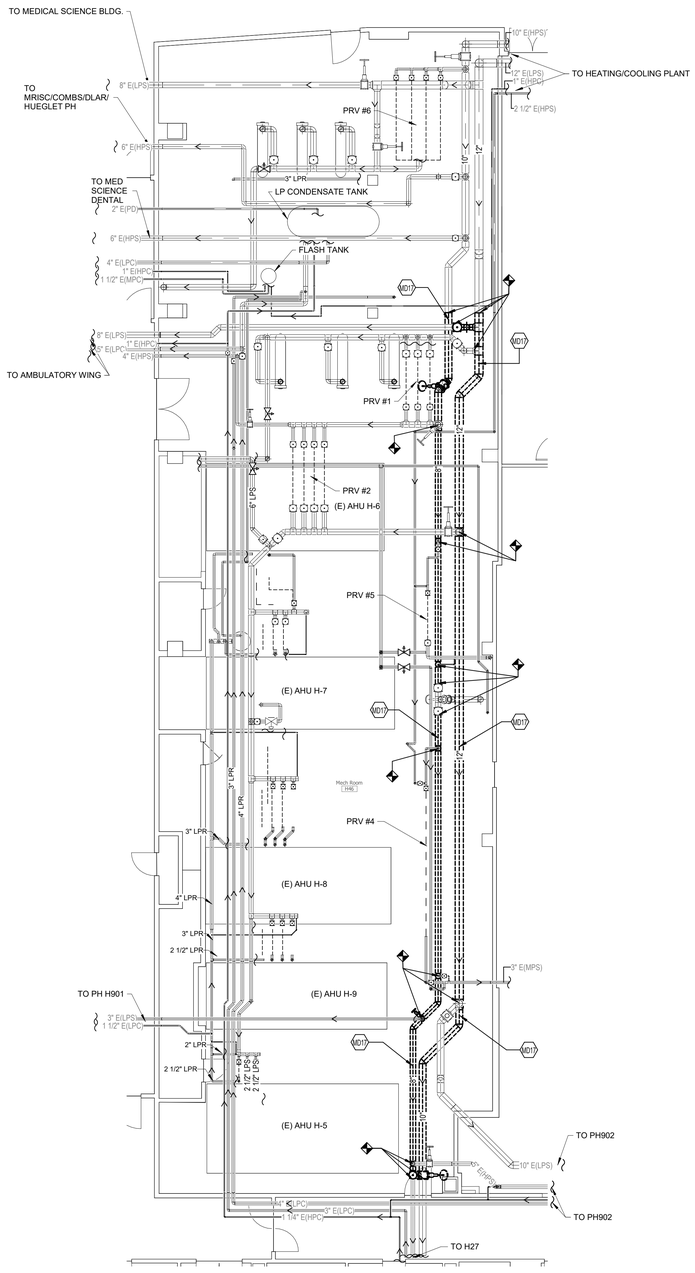
UNIVERSITY OF KENTUCKY
Facilities Management - Medical Center

H46 STEAM PIPING REPLACEMENT

SCALE: AS NOTED	BLDG. NAME: CHANDLER MEDICAL CENTER	DRAWN BY: MDF	PROJ #: 11130/XHSR22
DATE: 08-31-2022	BLDG #: 0293	PROJ. MGR.: RSJ	

SHEET # M2.2



H46 MECHANICAL PIPING DEMOLITION PLAN - PHASE IV ALTERNATE #2

1 SCALE: 1/8" = 1'-0"

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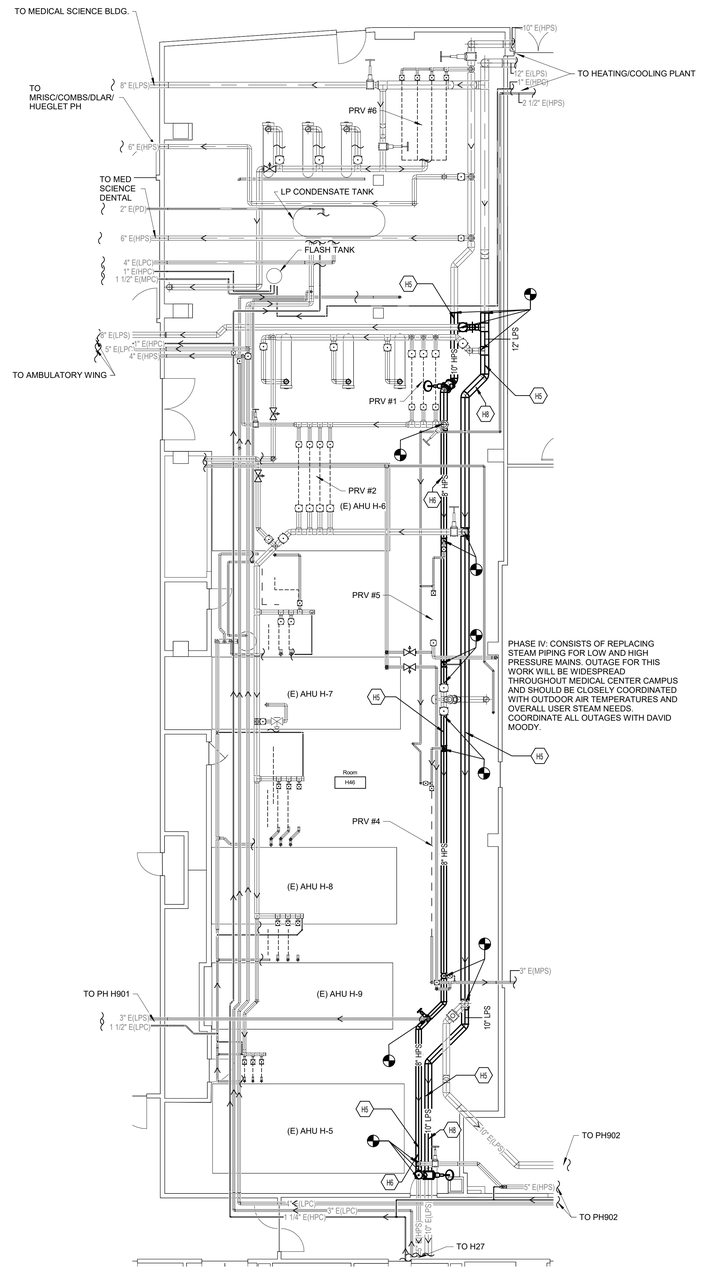
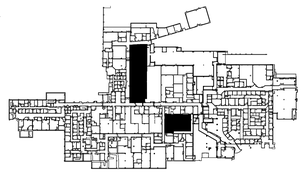


H46 MECHANICAL PIPING NEW WORK PLAN - PHASE IV ALTERNATE #2

2 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'

PHASE IV: CONSISTS OF REPLACING STEAM PIPING FOR LOW AND HIGH PRESSURE MAINS. OUTAGE FOR THIS WORK WILL BE WIDESPREAD THROUGHOUT MEDICAL CENTER CAMPUS AND SHOULD BE CLOSELY COORDINATED WITH OUTDOOR AIR TEMPERATURES AND OVERALL USER STEAM NEEDS. COORDINATE ALL OUTAGES WITH DAVID MOODY.



KEYPLAN

TAGGED NOTES

##

H5 PROVIDE NEW STEAM PIPING AND VALVES. COORDINATE SUB-PHASES AND OUTAGES WITH DAVID MOODY.

H6 NEW HIGH PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 2" THICK, 2" THRU 4" PIPE SIZE - 3" THICK AND 5" OR LARGER PIPE SIZE 3-1/2" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H8 NEW LOW PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPTO 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

MD17 DEMOLISH COMPLETE EXISTING STEAM MAINS AND VALVES. COORDINATE WITH PREVIOUS PHASES AND ENSURE ALL STEAM PIPING AND FITTING HAVE BEEN REPLACED NEW. COORDINATE OUTAGE LENGTHS AND SUB-PHASES AS REQUIRED WITH DAVID MOODY.

ROBERT S. JOHNSON 27666 LICENSED PROFESSIONAL ENGINEER STATE OF KENTUCKY

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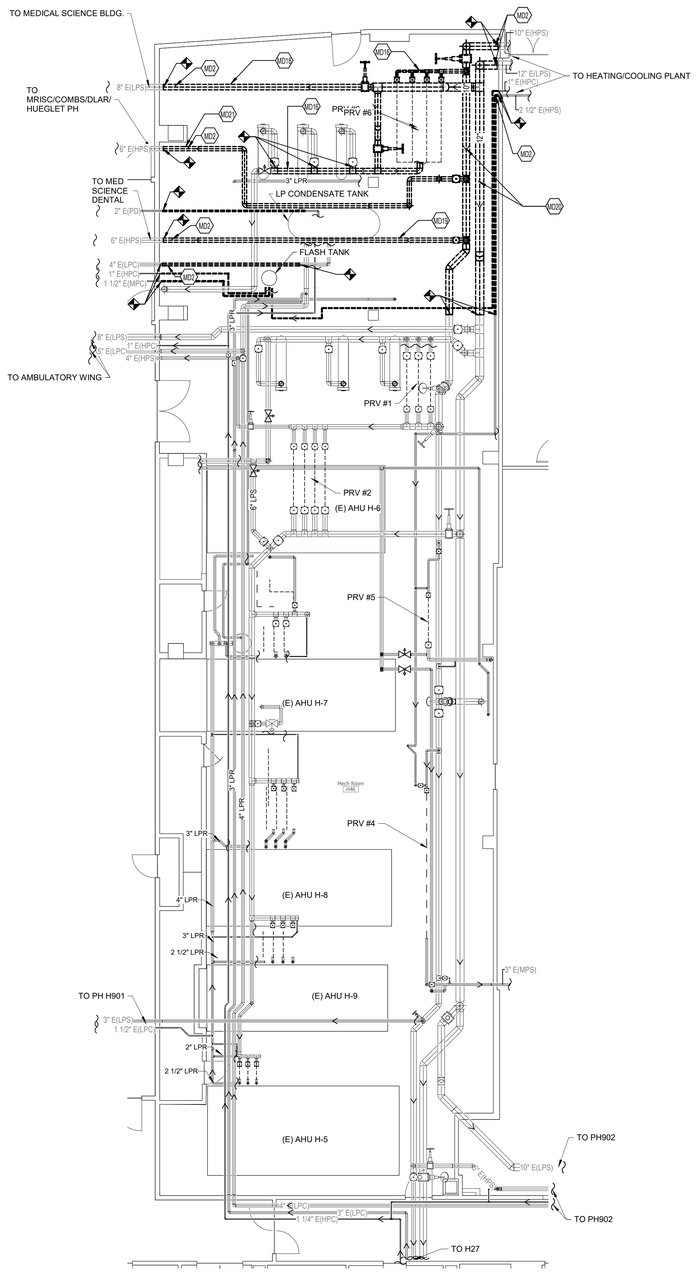
UNIVERSITY OF KENTUCKY
Facilities Management - Medical Center

H46 STEAM PIPING REPLACEMENT

SCALE: AS NOTED	BLDG. NAME: CHANDLER MEDICAL CENTER	DRAWN BY: MDF	PROJ. #: 11130/XHSR22
DATE: 08-31-2022	BLDG. #: 0293	PROJ. MGR.: RSJ	

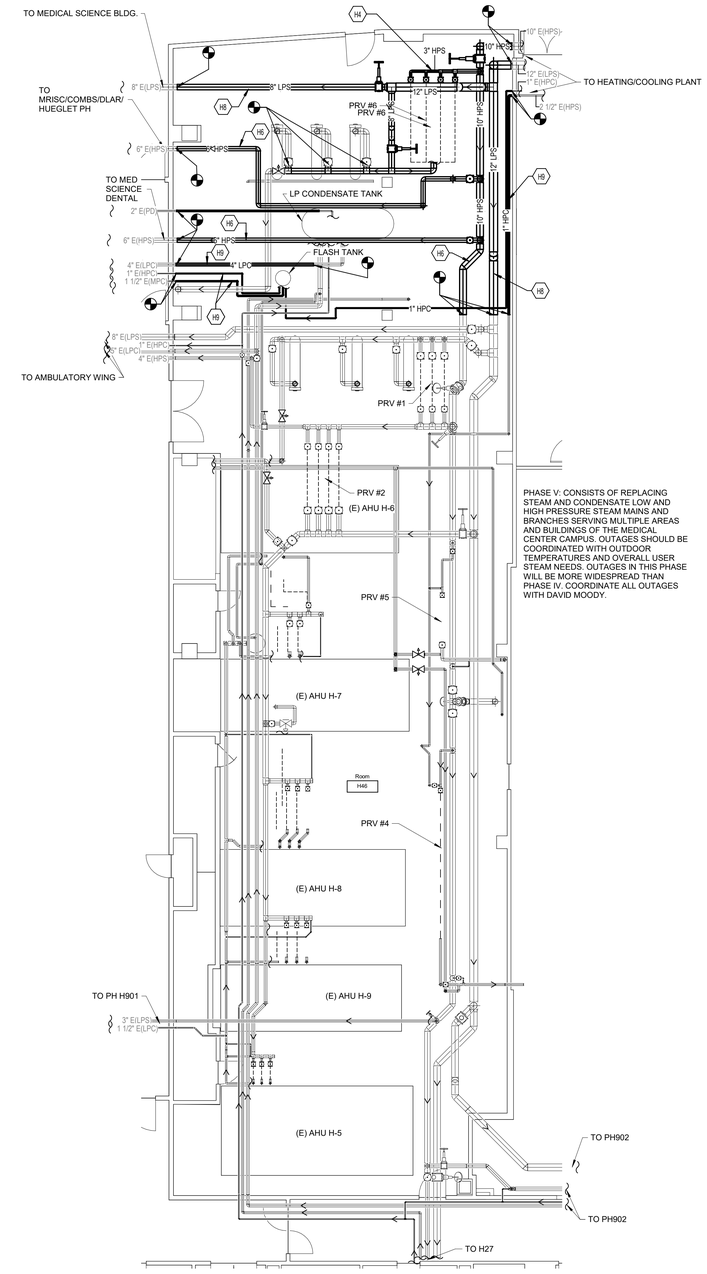
SHEET # M2.3



H46 MECHANICAL PIPING DEMOLITION PLAN - PHASE V ALTERNATE #3

1 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'



PHASE V: CONSISTS OF REPLACING STEAM AND CONDENSATE LOW AND HIGH PRESSURE STEAM MAINS AND BRANCHES SERVING MULTIPLE AREAS AND BUILDINGS OF THE MEDICAL CENTER CAMPUS. OUTAGES SHOULD BE COORDINATED WITH OUTDOOR TEMPERATURES AND OVERALL USER STEAM NEEDS. OUTAGES IN THIS PHASE WILL BE MORE WIDESPREAD THAN PHASE IV. COORDINATE ALL OUTAGES WITH DAVID MOODY.

H46 MECHANICAL PIPING NEW WORK PLAN - PHASE V ALTERNATE #3

2 SCALE: 1/8" = 1'-0"

0 2' 4' 8' 16' 24' 32'

TAGGED NOTES

##

H4 PROVIDE NEW STEAM PIPING AND PRESSURE REDUCING STATION. REFER TO DETAIL FOR PRV DETAILS. REPLACE ALL END OF MAIN CONDENSATE PIPING, TRAPS AND RELATED COMPONENTS.

H6 NEW HIGH PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPT0 1-1/2" PIPE SIZE - 2" THICK, 2" THRU 4" PIPE SIZE - 3" THICK AND 5" OR LARGER PIPE SIZE 3-1/2" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H8 NEW LOW PRESSURE STEAM PIPE SHALL BE INSULATED AS FOLLOWS: UPT0 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

H9 NEW STEAM CONDENSATE PIPE SHALL BE INSULATED AS FOLLOWS: UPT0 1-1/2" PIPE SIZE - 1-1/2" THICK, 2" AND LARGER PIPE SIZE - 3" THICK. PROVIDE NEW INSULATION SADDLES AT ALL LOCATIONS OF EXISTING HANGERS. INSULATION SHALL BE OWENS-CORNING MODEAL 25ASJ/SSL OR EQUAL FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. THE INSULATION SHALL BE HEAVY DENSITY PIPE INSULATION WITH A K FACTOR OF .23 AT 75F MEAN TEMPERATURE. THE INSULATION SHALL BE WRAPPED WITH A VAPOR BARRIER JACKET. THE JACKET SHALL HAVE AN INSIDE FOIL SURFACE WITH SELF SEALING LAP AND A WATER VAPOR PERMABILITY OF 0.02 PERM/INCH. ALL CIRCUMFERENTIAL JOINTS SHALL BE VAPOR SEALED WITH BUTT STRIPS. ALL INSULATION SHALL BE INSTALLED IN STRICT ACCORADANCE WITH MANUFACTURER'S REQUIREMENTS.

MD2 ALL PIPING REPLACEMENT SHALL BE BOUNDED BY MECHANICAL ROOM WALLS.

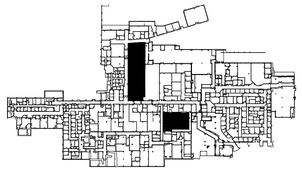
MD16 DEMOLISH COMPLETE EXISTING STEAM PIPING AND STEAM PRESSURE REDUCING STATION.

MD18 DEMOLISH COMPLETE EXISTING STEAM PIPING SERVING MEDICAL SCIENCE BUILDING.

MD19 DEMOLISH COMPLETE EXISTING STEAM PIPING SERVING MEDICAL SCIENCE BUILDING DENTAL WING.

MD20 DEMOLSIH COMPLETE EXISTING STEAM MAINS. COORDINATE EXTENT OF DEMOLITION WITH PREVIOUS PHASE.

MD21 DEMOLISH COMPLETE EXISTING STEAM PIPING SERVING MRISC/COMBS/DLAR



KEYPLAN

STATE OF KENTUCKY
ROBERT S. JOHNSON
27666
LICENSED
PROFESSIONAL ENGINEER

REVISIONS

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UNIVERSITY OF KENTUCKY
Facilities Management - Medical Center

H46 STEAM PIPING REPLACEMENT

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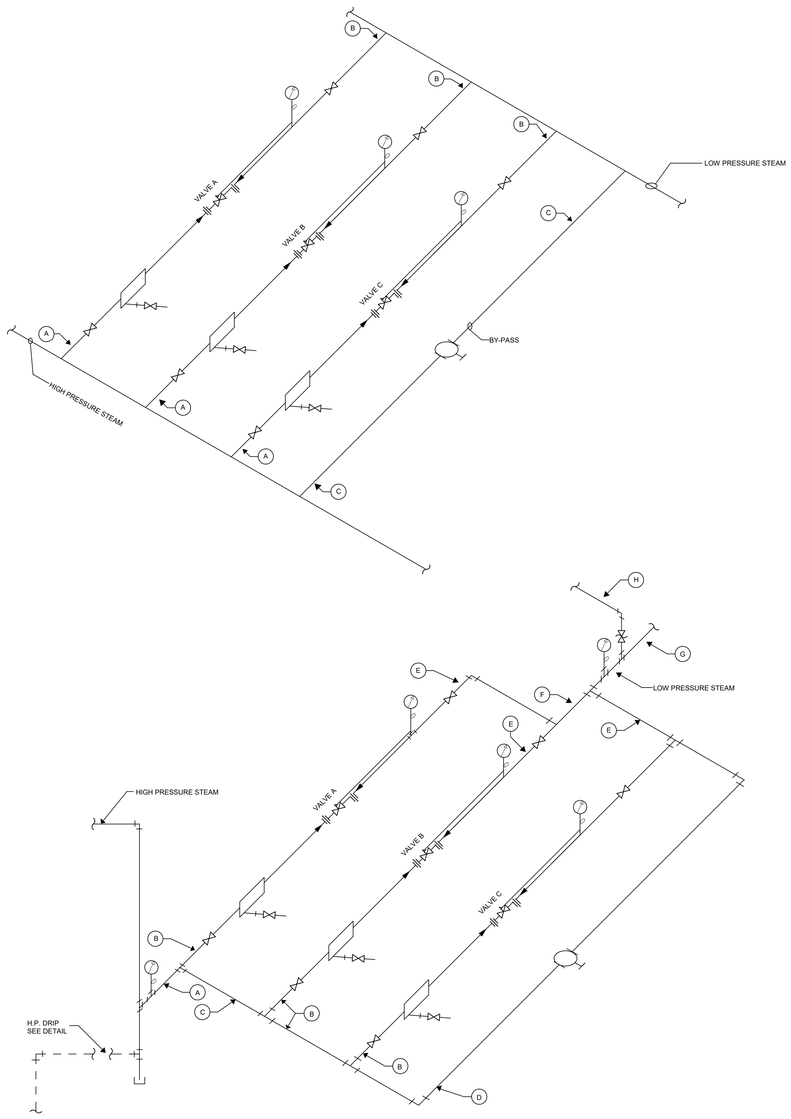
SHEET #
M2.4



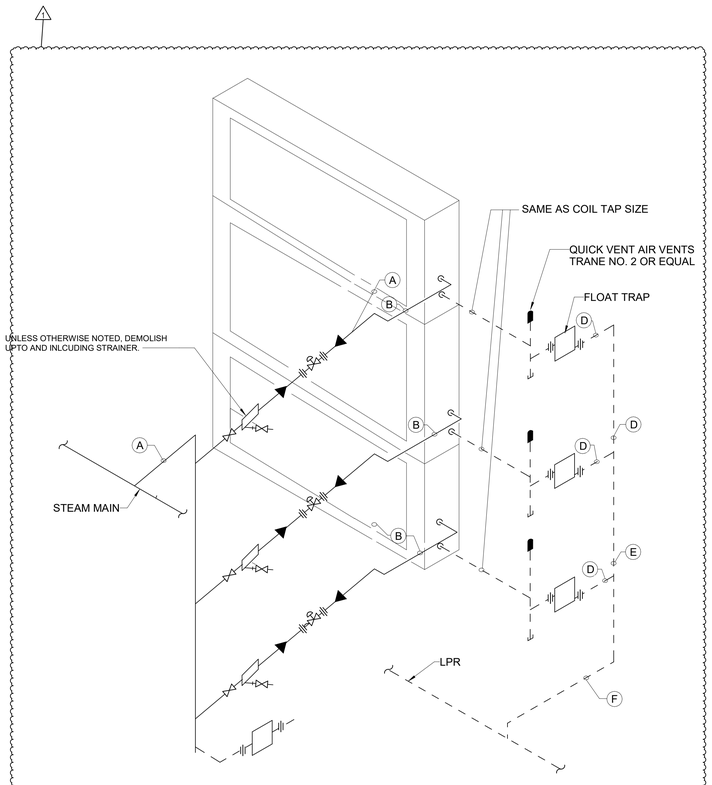
PRESSURE REDUCING VALVE STATION - PRV #1 - #4, #6

2 SCALE: NONE

PRV		ENT STEAM PRES.	VALVE A			VALVE B			VALVE C			PIPE SIZES							
NO.	LOCATION		SIZE	#/HR	PRES.	SIZE	#/HR	PRES.	SIZE	#/HR	PRES.	A	B	C	D	E	F	G	H
1	H-46	160 PSI	1 1/2"	3750	14 PSI	1 1/2"	3750	13 PSI	-	-	-	3"	6"	2"	-	-	-	-	-
2	H-46	160 PSI	1 1/2"	4052	14 PSI	1 1/2"	4052	13 PSI	1 1/2"	4052	12 PSI	4"	6"	2 1/2"	-	-	-	-	-
3	H-46	160 PSI	1"	1580	60 PSI	-	-	-	-	-	-	2 1/2"	3"	1"	-	-	-	-	-
4	H-46	160 PSI	1"	1600	25 PSI	-	-	-	-	-	-	2 1/2"	4"	1"	-	-	-	-	-
6	H-46	160 PSI	1 1/2"	4160	7 PSI	1 1/2"	4160	6 PSI	1 1/2"	4160	6 PSI	5"	3"	4"	3"	6"	8"	8"	8"

STEAM PRESSURE REDUCING STATION COMPONENT SIZES

1 SCALE: NONE



SYSTEM	A	B	C	D	E	F	SIZE	TRAP #/HR	NO.
H-5(1)	4"	2 1/2"	-	1 1/2"	-	2"	1"	281	2
(2)		2"	-	1 1/4"	-	1 1/2"	1 1/4"	395	2
H-6	6"	3"	4"	2"		3"	1 1/2"	1500	3
H-7(1)	6"	2 1/2"	3"	1 1/4"	2"	2"	1 1/4"	575	3
(2)		2 1/2"	3"	1 1/4"	2"	2"	1 1/4"	510	3
(3)		2"	3"	1 1/4"		2"	1 1/4"	460	3
H-8(1)	6"	2 1/2"	4"	1 1/2"	2"		1 1/4"	770	3
(2)		2 1/2"	3"	1 1/2"	2"	2"	1 1/4"	690	3
(3)		2 1/2"	3"	1 1/2"	2"	2"	1 1/4"	640	3
H-9(1)	6"	2 1/2"	-	1 1/2"	-	2"	1 1/4"	630	2
(2)		2 1/2"	-	1 1/4"	-	2"	1 1/4"	560	2
(3)		2"	-	1 1/4"	-	2"	1 1/4"	500	2

AIR HANDLER COIL COMPONENT SIZES

3 SCALE: NONE

REVISIONS		
NO.	DESCRIPTION:	DATE:
1	ADDENDUM #5	3/3/2023

UNIVERSITY OF KENTUCKY
Facilities Management - Medical Center

H46 STEAM PIPING REPLACEMENT

SCALE:	AS NOTED	BLDG. NAME:	CHANDLER MEDICAL CENTER	DRAWN BY:	MDF	PROJ. #	11130/XHSR22
DATE:	08-31-2022	BLDG. #	0293	PROJ. MGR.:	RSJ		

SHEET # M3.0