FITZSIMONS BUILDING HEATING IMPROVEMENT WEST WING

PROJECT 21-174018

FOR CONSTRUCTION DOCUMENT SET
SEPTEMBER 1, 2023

MECHANICAL AND ELECTRICAL ENGINEER

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engineering a greener future™

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Mechanical and Electrical Engineering
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MECHANICAL LEGEND (NOTE: NOT ALL SYMBOLS SHOWN ARE USED ON THESE DRAWINGS)

– PLUMBING –

ABBR.	DESCRIPTION
RD	ROOF DRAIN
OD	OVERFLOW DRAIN
AD	AREA DRAIN
	DOWNSPOUT NOZZLE
FS	FLOOR SINK
FD	FLOOR DRAIN
FCO	FLOOR CLEANOUT
GCO	GRADE CLEANOUT
WCO	WALL CLEANOUT
	HORIZONTAL CLEANOUT
HB	HOSE BIBB
SA	SHOCK ABSORBER
	THERMOSTATIC RECIRCULATION VALVE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
DCVA	DOUBLE CHECK VALVE ASSEMBLY

– LABORATORY/MEDICAL SERVICES –

ABBR.	DESCRIPTION
O2	OXYGEN PIPING
VAC	VACUUM PIPING
N2O	NITROUS OXIDE PIPING
N	NITROGEN PIPING
MA	MEDICAL AIR PIPING
H	HYDROGEN PIPING
NL	LIQUID NITROGEN PIPING
LA	LABORATORY COMPRESSED AIR PIPING
SA	SCAVENGE AIR
WAGD	WASTE ANESTHETIC GAS DISPOSAL
CO2	CARBON DIOXIDE
	OXYGEN SERVICE OUTLET
	VACCUM SERVICE OUTLET
WAGD	WASTE ANESTHESIA GAS DISPOSAL OUTLET
	NITROUS OXIDE SERVICE OUTLET
	NITROGEN SERVICE OUTLET
	NATURAL GAS SERVICE OUTLET
	LABORATORY / MEDICAL AIR SERVICE OUTLET

– CONTROLS –

SYMBOL	DESCRIPTION
T ZONE#	THERMOSTAT WITH ZONE CALLOUT
HS ZONE#	HUMIDITY SENSOR WITH ZONE CALLOUT
TS ZONE#	TEMP SENSOR WITH ZONE CALLOUT
CO	CARBON MONOXIDE DETECTOR
CO_2	CARBON DIOXIDE SENSOR
DS XXX	DUCT STATIC PICKUP WITH AHU CALLOUT
BP XXX	BUILDING PRESSURE PICKUP WITH AHU CALLOUT
	DIGITAL INPUT, ANALOG INPUT
	DIGITAL OUTPUT, ANALOG OUTPUT
	BI-DIRECTIONAL NETWORK CONNECTION
	FLOW ARROW
FS	FLOW SWITCH
TS	DUCT TEMPERATURE SENSOR
TS	DUCT AVERAGING TEMP. SENSOR
TS	WELL MOUNTED TEMPERATURE SENSOR
MD	MOTORIZED CONTROL DAMPER
TL	TEMPERATURE LOW LIMIT THERMOSTAT
SD	DUCT SMOKE DETECTOR
ES	DAMPER\VALVE END SWITCH
DPS	DIFFERENTIAL PRESSURE SWITCH
HPS	HIGH PRESSURE SWITCH
PS	PRESSURE SWITCH MANUAL RESET
II	AQUASTAT
MS	MOTOR STARTER
CR	CONTROL RELAY
V	VARIABLE FREQUENCY DRIVE
V B/P	VARIABLE FREQUENCY DRIVE WITH BY-PASS
M	ELECTRIC MOTOR
TC	TEMPERATURE CONTROLLER
LT	LEVEL TRANSMITTER
PT	PRESSURE TRANSMITTER
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
FT	FLOW TRANSMITTER
EPT	ELECTRIC\PNEUMATIC TRANSDUCER
	CURRENT SWITCH/TRANSMITTER
ANN	ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
CAM	CONTROL ADDRESSABLE MODULE
MAM	MONITOR ADDRESSABLE MODULE
ESR	EMERGENCY STOP RELAY
LC	LEVEL CONTROLLER
EPO	EMERGENCY POWER OFF
AFS	AIR FLOW SWITCH

– PIPING –

ABBR.	DESCRIPTION
	PIPE DOWN
	PIPE UP
	TEE OUTLET UP
	TEE OUTLET DOWN
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
PCWS	PROCESS CHILLED WATER SUPPLY
PCWR	PROCESS CHILLED WATER RETURN
CTS	COOLING TOWER SUPPLY
CTR	COOLING TOWER RETURN
LPS	LOW PRESSURE STEAM SUPPLY
LPR	LOW PRESSURE RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY
MPR	MEDIUM PRESSURE RETURN
HPS	HIGH PRESSURE STEAM SUPPLY
HPR	HIGH PRESSURE RETURN
CDS	CONDENSER WATER SUPPLY
CDR	CONDENSER WATER RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RHG	REFRIGERANT HOT GAS
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL VENT
CA	COMPRESSED AIR
PC	PUMPED CONDENSATE
D	CONDENSATE OR EQUIPMENT DRAIN
GHXS	GEOTHERMAL HX SUPPLY
GHXR	GEOTHERMAL HX RETURN
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWC	DOMESTIC HOT WATER RE-CIRCULATING
DTW	DOMESTIC TEMPERED WATER
DI	DEIONIZED WATER
V	DOMESTIC VENT PIPING
AV	ACID VENT PIPING
W	SUSPENDED WASTE
W	BURIED WASTE
AW	ACID WASTE
GW	GREASE WASTE
OST	OVERFLOW STORM DRAIN
ST	SUSPENDED STORM DRAIN
ST	BURIED STORM DRAIN
G	NATURAL GAS

– PIPING –

ABBR.	DESCRIPTION
	GAS METER
	WATER METER
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	2-WAY CONTROL BALL VALVE
	BALANCE VALVE
	FLOW MEASURING STATION
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	GATE VALVE
	GLOBE VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	HOSE END DRAIN VALVE
	STRAINER
	STRAINER WITH BLOW DOWN VALVE
	PLUG VALVE
	GAS SHUTOFF VALVE
	SOLENOID VALVE
PRV	PRESSURE REGULATING VALVE
	THERMOWELL
	THERMOMETER WITH THERMOWELL
	UNION
	VENTURI
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	VACUUM BREAKER
	THERMOMETER
	GAUGE
	GAUGE WITH BALL VALVE
	DIFFERENTIAL PRESSURE GAUGE
	PRESSURE TEMPERATURE/TEST POINT
	PIPE ANCHOR
	PIPE GUIDE
	FLEX CONNECTION
	PIPE CAP
	PIPE BREAK
	FLOW ARROW
T IBT	STEAM TRAP (INVERTED BUCKET TRAP)
T TT	STEAM TRAP (THERMOSTATIC TRAP)
T FTT	STEAM TRAP (FLOAT AND THERMOSTATIC TRAP)

– HVAC –

ABBR.	DESCRIPTION
SA	POSITIVE PRESSURE DUCT UP
SA	POSITIVE PRESSURE DUCT DOWN
EA/RA	NEGATIVE PRESSURE DUCT UP
EA/RA	NEGATIVE PRESSURE DUCT DOWN
OA	OUTSIDE AIR INTAKE DUCT UP
OA	OUTSIDE AIR INTAKE DUCT DOWN
	ROUND DUCT UP
	ROUND DUCT DOWN
	CONICAL FITTING WITH DAMPER
	ECCENTRIC FITTING WITH DAMPER
	CONICAL FITTING WITHOUT DAMPER
	ECCENTRIC FITTING WITHOUT DAMPER
	ELBOW WITH TURNING VANES
	ELBOW WITHOUT TURNING VANES
	LONG RADIUS ELBOW
	SHORT RADIUS ELBOW
	SUPPLY DIFFUSER
	SUPPLY DIFFUSER ROUND NECK
	SUPPLY DIFFUSER SQUARE NECK
	EXHAUST/RETURN GRILLE SQUARE NECK
	EXHAUST/RETURN GRILLE ROUND NECK
	RETURN AIR GRILLE
	ROUND DIFFUSER
	SLOT DIFFUSER
	FLEXDUCT
	DUCTWORK
MVD	MANUAL VOLUME DAMPER
	FIRE DAMPER 1-1/2 HOUR UNLESS NOTED OTHERWISE
	FIRE/SMOKE DAMPER 1-1/2 HOUR UNLESS NOTED OTHERWISE
	SMOKE DAMPER
MD	MOTORIZED DAMPER
	SECURITY BARRIER
	ACCESS PANEL (SIZE)
	PUMP
	DUCT BREAK

– FIRE –

ABBR.	DESCRIPTION
FL	FIRE LINE
FVC	FIRE VALVE CABINET
	FIRE DEPARTMENT CONNECTION
	FIRE SPRINKLER PENDENT HEAD
	FIRE SPRINKLER UPRIGHT HEAD
	FIRE SPRINKLER SIDEWALL HEAD
TS	TAMPER SWITCH
	OS & Y GATE VALVE

APPLICABLE CODES

AHJ: UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CENTER

FIRE AUTHORITY: AURORA FIRE

REMODEL [X] NEW [ ]

YEAR	CODE
2021	INTERNATIONAL BUILDING CODE
2021	INTERNATIONAL MECHANICAL CODE
2018	INTERNATIONAL PLUMBING CODE
2021	INTERNATIONAL ENERGY CONSERVATION CODE
2021	INTERNATIONAL FIRE CODE
2020	NATIONAL ELECTRICAL CODE

IS THE BUILDING FULLY SPRINKLERED? [X] YES [ ] NO

IS THE BUILDING FULLY DETECTED? [X] YES [ ] NO

– ABBREVIATIONS –

AAP	AREA ALARM PANEL	LWT	LEAVING WATER TEMPERATURE
AFF	ABOVE FINISHED FLOOR	MA	MIXED AIR
BDD	BACK DRAFT DAMPER	MAP	MASTER ALARM PANEL
BFF	BELOW FINISH FLOOR	MGO	MEDICAL GAS OUTLET
CL	CENTERLINE	MOP	METHOD OF PROCEDURE
CO	CLEAN OUT	(N)	NEW
(E)	EXISTING	NC	NORMALLY CLOSED
EA	EXHAUST AIR	NO	NORMALLY OPEN
EAT	ENTERING AIR TEMPERATURE	OA	OUTSIDE AIR
ELEV	ELEVATION	OTCS	OPEN TO CEILING SPACE
ESP	EXTERNAL STATIC PRESSURE	RA	RETURN AIR
EWT	ENTERING WATER TEMPERATURE	SA	SUPPLY AIR
FFE	FINISHED FLOOR ELEVATION	TSP	TOTAL STATIC PRESSURE
IE	INVERT ELEVATION	VTR	VENT THROUGH ROOF
LAT	LEAVING AIR TEMPERATURE	ZVB	ZONE VALVE BOX

– GRAPHIC SYMBOLS –

#	KEY NOTE
	REVISION NUMBER
TAG	MECHANICAL EQUIPMENT TAG
	SHADING INDICATES MECHANICAL EQUIPMENT
	HATCHING INDICATES ITEM(S) TO BE REMOVED
	NORTH ARROW
	CONNECT TO EXISTING
EXIST NEW	CONNECT TO EXISTING PIPE
TYPE NECK CFM	DIFFUSER, REGISTER, GRILLE CFM CALLOUT
TYPE NECK CFM #	DIFFUSER, REGISTER, GRILLE CFM CALLOUT WITH QUANTITY
TYPE GPM ZONE LENGTH	BASEBOARD/FINTUBE RADIATION HEATING
TYPE AV-1 LEVEL	VAV TERMINAL BOX CALLOUT
1 M2.1	DETAIL BUBBLE DETAIL NUMBER SHEET NUMBER-WHERE DETAIL IS SHOWN
A M2.2	SECTION CUT SECTION LETTER SHEET NUMBER-WHERE SECTION IS SHOWN

GENERAL NOTES

CONTRACTOR SHALL REFERENCE SPECIFICATIONS FOR CONSTRUCTION MATERIALS AND INSTALLATION REQUIREMENTS. SPECIFICATIONS ARE A PART OF THE CONSTRUCTION DOCUMENTS. SHOULD ANY CONFLICT ARISE BETWEEN THE DRAWINGS AND SPECIFICATIONS, SUCH CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.

ALL PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED TO MAINTAIN THE REQUIRED RATING.

THESE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC.

ALL DUCTWORK DIMENSIONS SHOWN ARE INTERIOR CLEAR DIMENSIONS. ALLOWANCES FOR DUCT LINER OR INSULATION ARE NOT INCLUDED.

LOCATIONS AND INFORMATION FOR EXISTING MECHANICAL DEVICES AND EQUIPMENT SHOWN ON THESE PLANS ARE APPROXIMATE. THIS INFORMATION IS DERIVED FROM FIELD OBSERVATIONS AND AVAILABLE RECORD DRAWINGS.

REV: 06/29/2020

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REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KYLE R. DOWNEY

9/1/2023

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University of Colorado Anschutz Medical Campus

FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

MECHANICAL LEGEND

DATE: SEPTEMBER 1, 2023
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DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

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PUMP SCHEDULE

TAG	SERVICE	TYPE	GPM	HEAD (FT)	RPM	PEicl	MOTOR CONTROL TYPE	ELECTRICAL HP	ELECTRICAL V	ELECTRICAL PH	MANUFACTURER & MODEL	NOTES
HW-Q20-G-001	EAST WING HEATING	HORIZ. BASE MOUNTED	580	105.00	1,805	-	VFD W BYPASS	25	460	3	ARMSTRONG, 4030, 4x3x11.5-4p	1, 2
HW-Q20-G-002	EAST WING HEATING	HORIZ. BASE MOUNTED	580	105.00	1,805	-	VFD W BYPASS	25	460	3	ARMSTRONG, 4030, 4x3x11.5-4p	1, 2

GENERAL NOTES:
A PEicl = HYDRAULIC INSTITUTE PUMP EFFICIENCY INDEX FOR CONSTANT LOAD
B PROVIDE SHAFT GROUNDING KIT

NOTES:
1. FLUID IS 30% PROPYLENE GLYCOL @ 180°F
2. PROVIDE WITH MFG'S SUCTION DIFFUSER

EXPANSION TANK SCHEDULE

TAG	SYSTEM	TYPE	TANK VOLUME	ACCEPTANCE VOLUME	PRECHARGE PSIG	WORKING PRESSURE	NSF 61	ASME	FULL WEIGHT	MANUFACTURER MODEL	NOTES
EXP-WG-1	WEST HEATING WATER	FULL ACCEPTANCE BLADDER	158	158	40	150	NO	YES	1500	AMTROL, 600L	

NOTES:

MISCELLANEOUS MECHANICAL EQUIPMENT

TAG	DESCRIPTION	ELECTRICAL POWER	ELECTRICAL AMPS	ELECTRICAL V	ELECTRICAL PH	NOTES
GF	GLYCOL FEEDER, SEE SPECIFICATION 23 25 00, WATER TREATMENT	-	-	120	1	PLUG-IN POWER
AS	AIR SEPARATOR, SEE SPECIFICATION	-	-	-	-	-
PF	POT FEEDER, SEE SPECIFICATION	-	-	-	-	-

NOTES:

STEAM HEAT EXCHANGER SCHEDULE

TAG	PURPOSE	STEAM SIDE STEAM PRESSURE	STEAM SIDE FOUL. FACT	WATER SIDE GPM	WATER SIDE EWT F °F	WATER SIDE LWT °F	WATER SIDE WPD FT	WATER SIDE FLUID	WATER SIDE FOUL. FACT.	MBH	HEAT TRNSFR AREA SQ.FT	MANUFACTURER & MODEL	NOTES
HX-Q20-G-001	HEATING WATER	5 PSI	-	580	150	180	6.5	30% PG	0.0005	8,300	207	B&G, QSU-149-2	1, 2
HX-Q20-G-002	HEATING WATER	5 PSI	-	580	150	180	6.5	30% PG	0.0005	8,300	207	B&G, QSU-149-2	1, 2

GENERAL NOTES:
A. 150 PSI DESIGN RATING AT 375°F, ASME.
B. STEAM PRESSURE IS AT 5300' ASL (17 PSIA)
C. MAIN STEAM LINE PRESSURE 20PSI
D. TUBE-IN-SHELL DESIGN

NOTES:
1. PROVIDE MOUNTING SADDLE
2. PROVIDE WITH FLANGED CONNECTIONS

ADD ALT.

CABINET/UNIT HEATER SCHEDULE - HW

TAG	TYPE	HTG MBH	GPM	WPD FT. HD.	CFM	RPM	ELECTRICAL V/PH	ELECTRICAL FLA	ELECTRICAL OPD	MANUFACTURER & MODEL	NOTES
CUH-Q20-G-005	RECESSED WALL	51.3	5.2	3.10	625	-	115	0.9	15	STERLING RW SIZE 06	1, 2, 3, 4, 5, 6
CUH-Q20-G-006	RECESSED WALL	51.3	5.2	3.10	625	-	115	0.9	15	STERLING RW SIZE 06	1, 2, 3, 4, 5, 6
CUH-Q20-008-001	RECESSED WALL	35.3	3.6	1.20	635	-	115	0.9	15	STERLING RW SIZE 06	1, 2, 3, 4, 5, 6
UH-Q20-G-001	HORIZONTAL UH	80.0	9.6	0.41	2000	1140	115	4.5	15	TRANE S-132	1, 3, 4

GENERAL NOTES:
A. PERFORMANCE IS AT SITE CONDITIONS
B. HEATED FLUID IS 30% PROPYLENE GLYCOL AT 180°F EWT
C. EQUIPMENT WITH 208V NAMEPLATES SHALL HAVE MOTORS SUITABLE FOR OPERATION AT 180 VOLTS OR PROVIDED WITH 200V TO 208V TRANSFORMERS

1. INTEGRAL THERMOSTAT AND VALVE
2. EC MOTOR
3. BAS CONTROL
4. CFM SHOWN AT HIGH SPEED
5. PROVIDE WITH MANUFACTURER'S WALL SEAL KIT
6. HIGH CAPACITY MODEL WITH 2-ROW COIL

WEST RESTROOM & WEST STAIRWELL CONVECTOR ENCLOSURES

BB TAG	ROOM	EXISTING OPENING DIMS. W (IN.)	EXISTING OPENING DIMS. H (IN.)	EXISTING OPENING DIMS. D (IN.	NEW COVER DIMS. W (L+3)	NEW COVER DIMS. H (H+3)	QTY.	MANUFACTURER & MODEL	NOTES
BB-Q20-03W-001	W3111P	36	27	9	39	29	1	RITTLING RECESSED, 16 GA.	1, 2
BB-Q20-03W-002	W3111Q	36	27	9	39	29	1	RITTLING RECESSED, 16 GA.	1, 2
BB-Q20-03W-003	W3154	29	27	9	31	29	1	RITTLING RECESSED, 16 GA.	1, 2
BB-Q20-03W-004	W3152	60	27	9	63	29	1	RITTLING RECESSED, 16 GA.	1, 2
BB-Q20-GW-001	W G STAIR GS06	49	49	10	-	-	-	-	1, 3
-	W 3.5 STAIR 3S06	43	48	12	-	-	-	-	1, 3
-	W S STAIR 3S06	60	47	8	-	-	-	-	1, 3
BB-Q20-GW-002	SW G STAIR GS07	60	49	12	-	-	-	-	1, 3
-	SW 3.5 STAIR 3S07	44	48	12	-	-	-	-	1, 3

1. DIMENSIONS APPROXIMATE, FIELD VERIFY
2. VERIFY COVER REPLACEMENT AND COLOR WITH OWNER
3. EXISTING CABINET TO REMAIN

RADIATION SCHEDULE

TAG	TYPE	CAPACITY BTUH/LF	WPD FT	GPM	ELEMENT	ENCLOSURE	MANUFACTURER & MODEL	NOTES
A	FINTUBE	2030	-	8.0	B, 4-1/2"x4-1/2"	EXISTING	STERLING VERSALINE C45	1, 3
B	FINTUBE	814	-	5.1	B, 4-1/2"x4-1/2"	EXISTING	STERLING VERSALINE C45	2, 3

GENERAL NOTES:
A. HEATING CAPACITIES BASED ON 180 °F EWT, 160 °F
B. CAPACITIES ARE AT SITE CONDITIONS.
C. CAPACITIES BASED ON WATER

NOTES:
1. 3 STACKED ELEMENTS, 1" TUBES
2. 1 STACKED ELEMENT, 3/4" TUBE
3. SEE PLANS FOR CABINET INFORMATION

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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University of Colorado
Anschutz Medical Campus

FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN
MECHANICAL SCHEDULES

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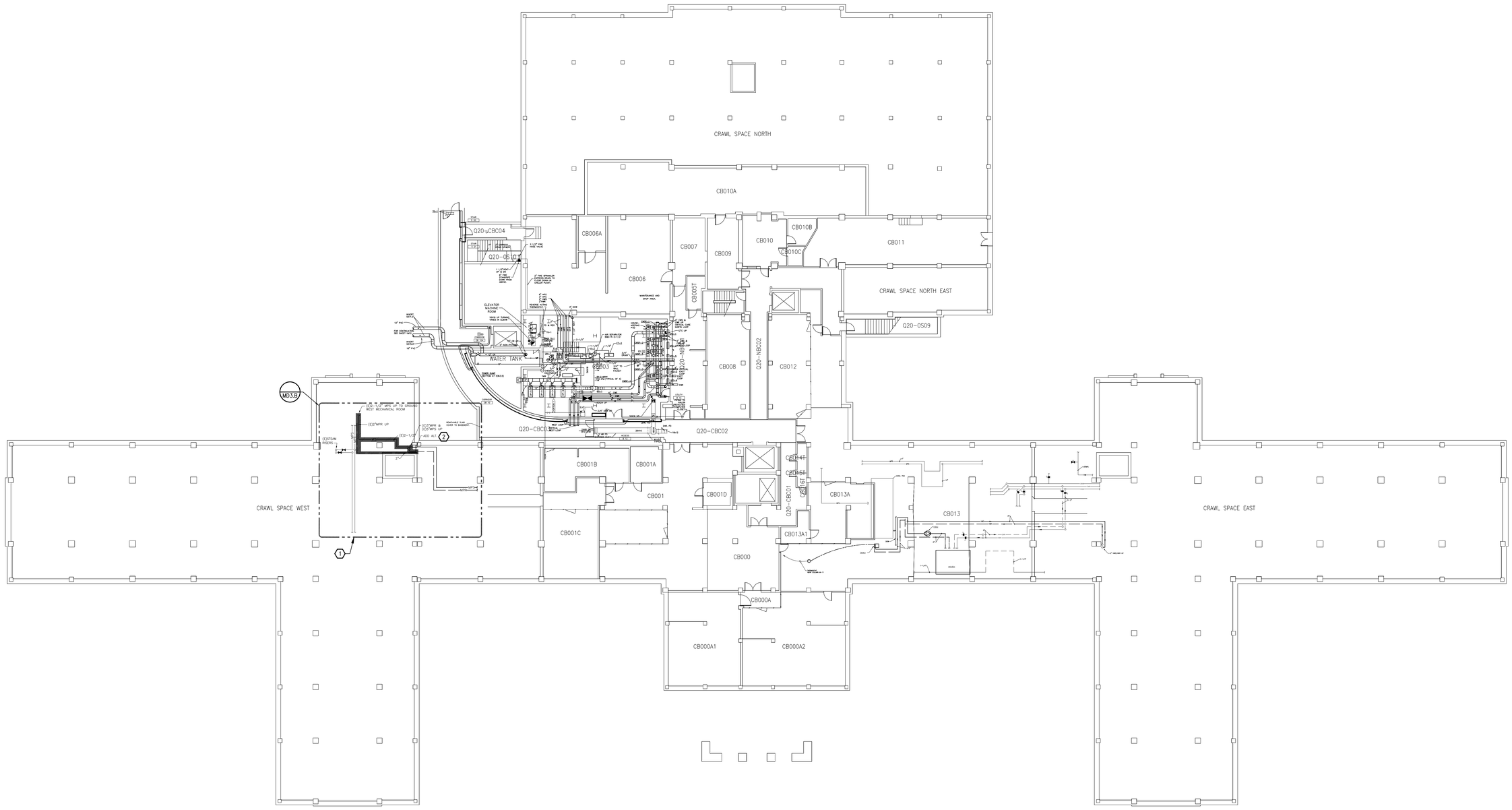


BASEMENT FLOOR OVERALL PIPING DEMOLITION PLAN

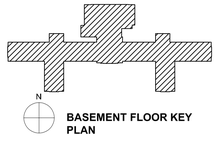
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE STEAM PIPING IN BASEMENT TO STAIRWELL 06 AND 07. REFER TO MD3.G0 FOR REFERENCE.
2. STEAM PIPING RISERS REMOVAL SHALL BE ADD ALTERNATE.



BASEMENT FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

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University of Colorado
Anschutz Medical Campus

FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

BASEMENT OVERALL
PIPING DEMOLITION PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

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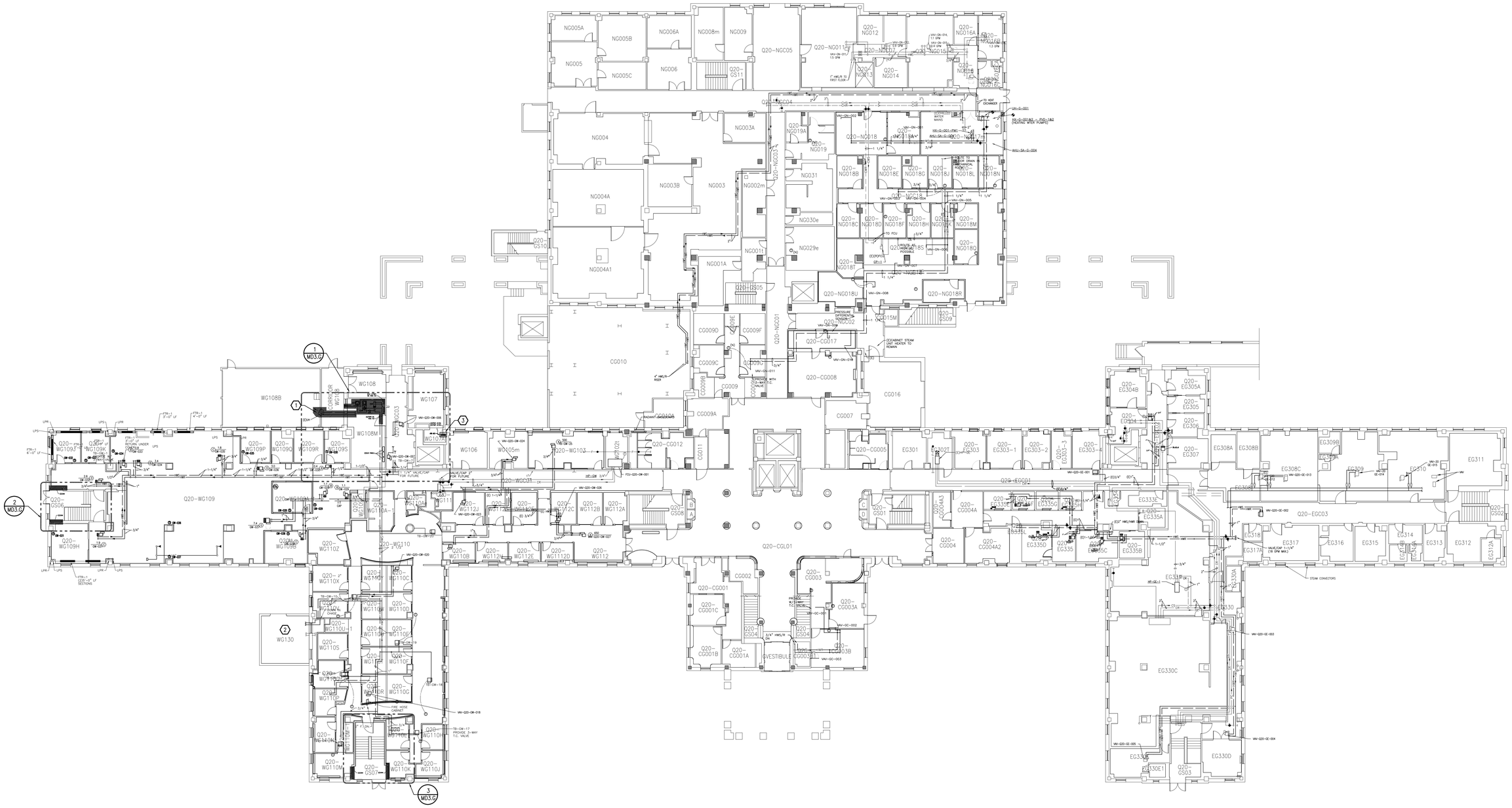
Save Date 27-Jul-23 by kdeotteyler
Plotted on 9/30/2023



GROUND FLOOR OVERALL PIPING DEMOLITION PLAN

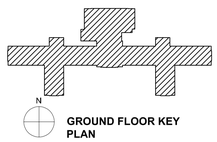
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM UNIT HEATER, CONTROLS, AND ASSOCIATED PIPING.
2. EXISTING AHU LOCATED IN THIS ROOM. REMOVE EXISTING AHU HEATING WATER 3-WAY CONTROL VALVE AND HEATING WATER COIL PIPING. REFER TO NEW WORK SHEET.
3. STEAM PIPING RISERS REMOVAL SHALL BE ADD ALTERNATE.



GROUND FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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Energy Consulting Sustainable Design

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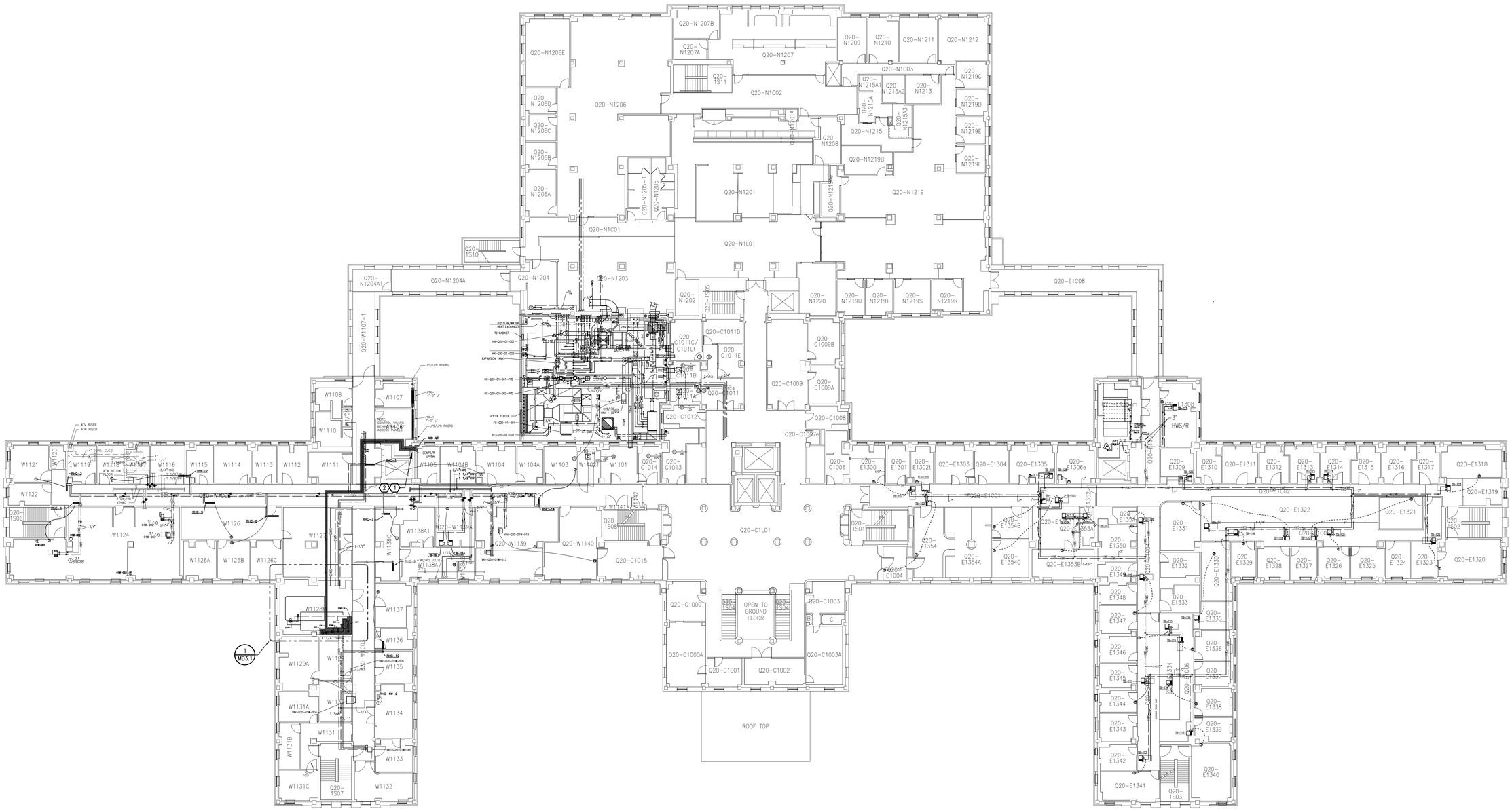
FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

GROUND OVERALL
PIPING DEMOLITION PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.G0
REVISION -

Created on 7/20/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_MD3.G0 GROUND OVERALL PIPING DEMO PLAN.dwg
Save Date 30-Aug-23 by kdoolittle
Plotted on 8/30/2023



FIRST FLOOR OVERALL PIPING DEMOLITION PLAN

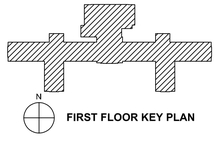
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE STEAM PIPING AND STEAM PIPING RISER.
2. STEAM PIPING RISERS REMOVAL SHALL BE ADD ALTERNATE.



REV.	DATE	DESCRIPTION

COLORADO LICENSED
KURT KRUSEMARK
62788
PROFESSIONAL ENGINEER
9/1/2023

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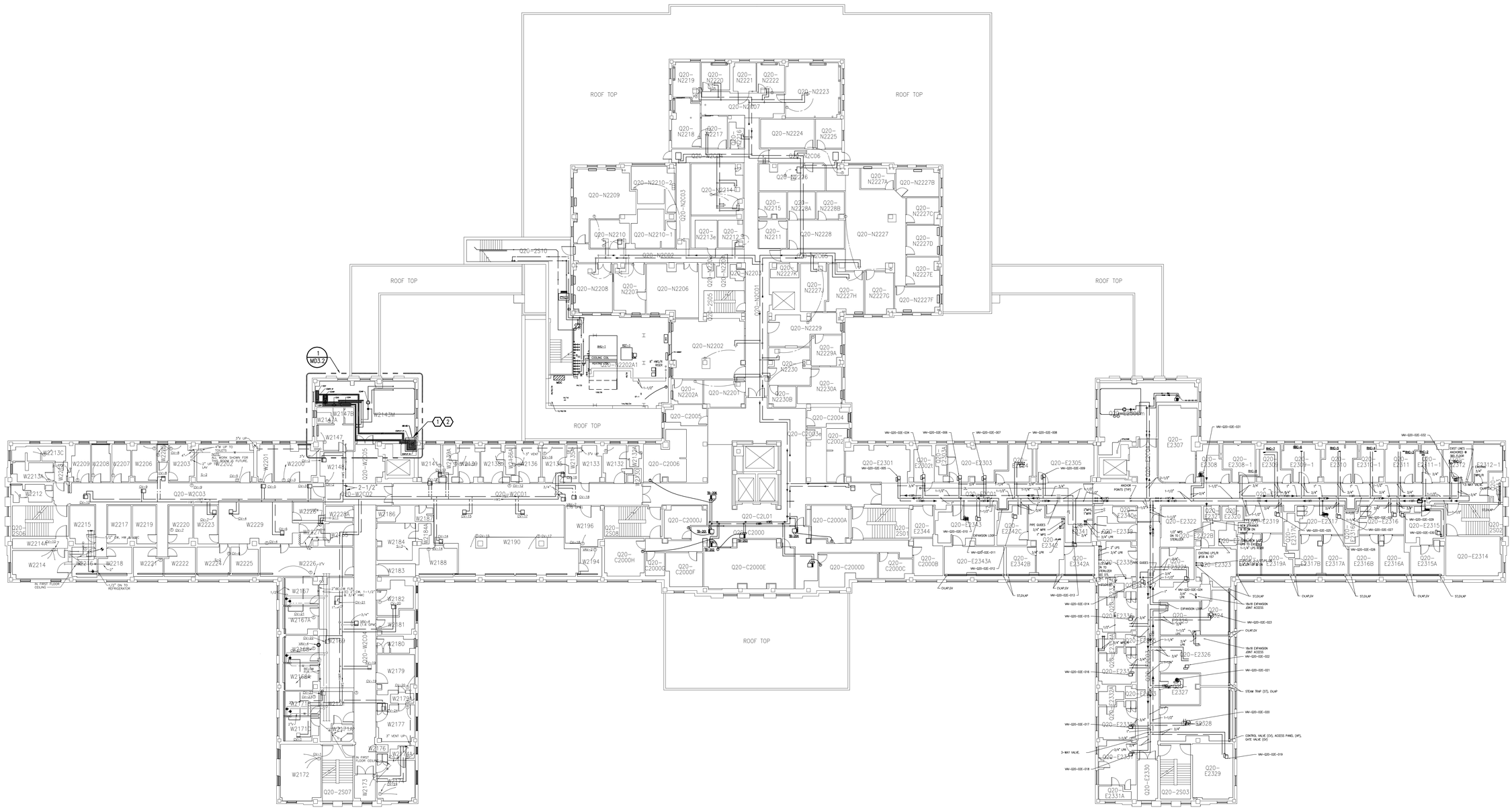
FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

FIRST FLOOR OVERALL
PIPING DEMOLITION PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.10
REVISION -

Created on 7/27/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_MD3.10 FIRST FLOOR OVERALL PIPING DEMOLITION PLAN.dwg
Save Date 27-Jul-23 by kdeslayter
Plotted on 8/30/2023



SECOND FLOOR OVERALL PIPING DEMOLITION PLAN

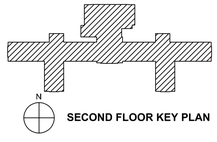
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE STEAM PIPING AND STEAM PIPING RISER.
2. STEAM PIPING RISERS REMOVAL SHALL BE ADD ALTERNATE.



REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

SECOND FLOOR OVERALL
PIPING DEMOLITION PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO. 20607

SHT.NO. MD3.20
REVISION -

Created on 7/27/2023
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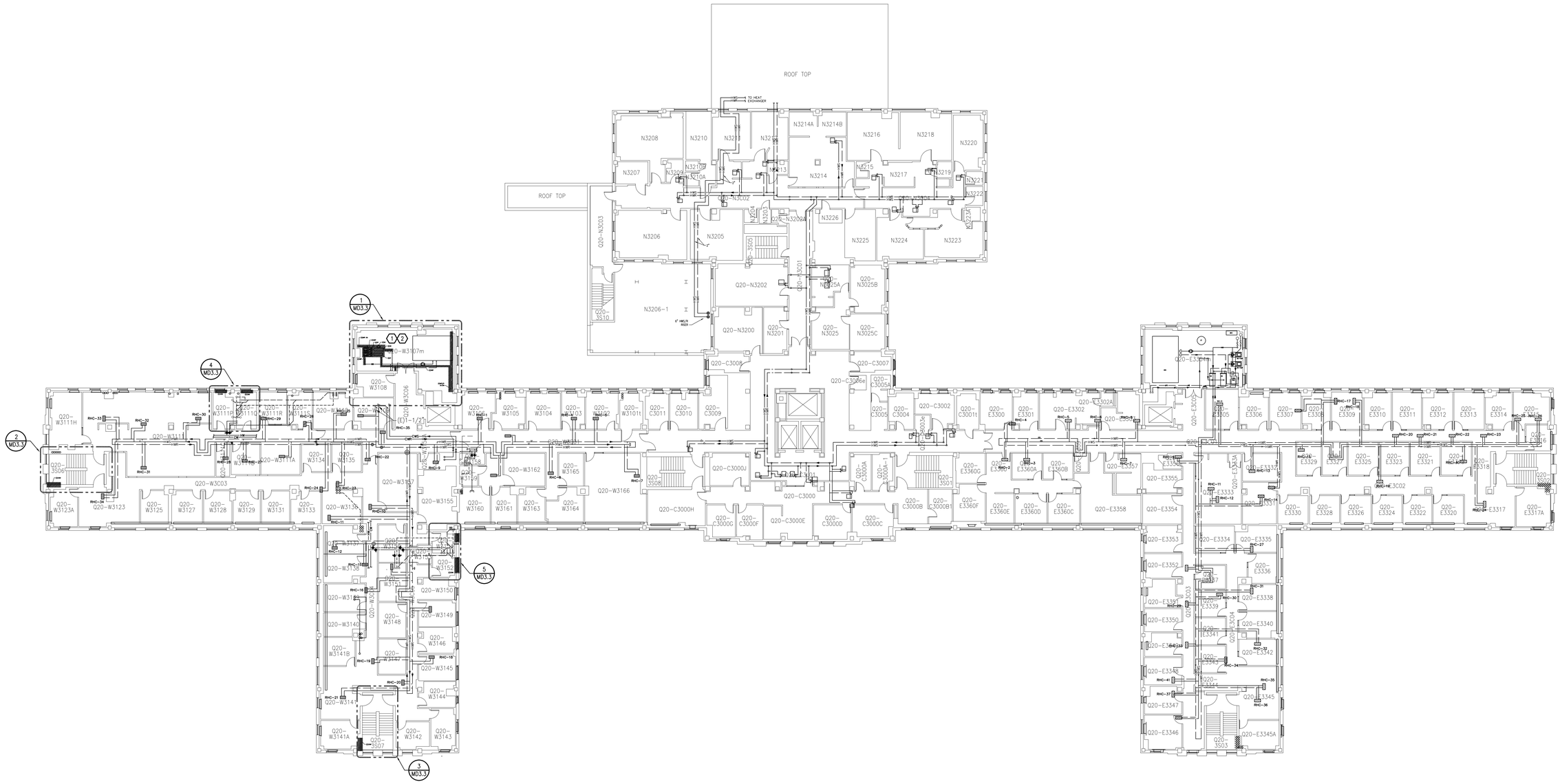
Save Date 27-Jul-23 by:kdestayler
Plotted on 8/30/2023



THIRD FLOOR OVERALL PIPING DEMOLITION PLAN

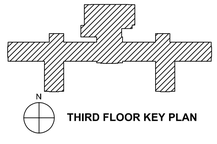
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. DEMOLITION WORK ON THIS FLOOR SHALL BE ADD ALTERNATE.
2. EXISTING AHU LOCATED IN THIS ROOM. REMOVE EXISTING AHU HEATING WATER 3-WAY CONTROL VALVE AND HEATING WATER COIL PIPING. REFER TO NEW WORK SHEET.



REV.	DATE	DESCRIPTION

COLORADO LICENSED
KURT A. SCHUTTER
62788
PROFESSIONAL ENGINEER
9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

THIRD FLOOR OVERALL
PIPING DEMOLITION PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.30
REVISION -

Created on 7/27/2023
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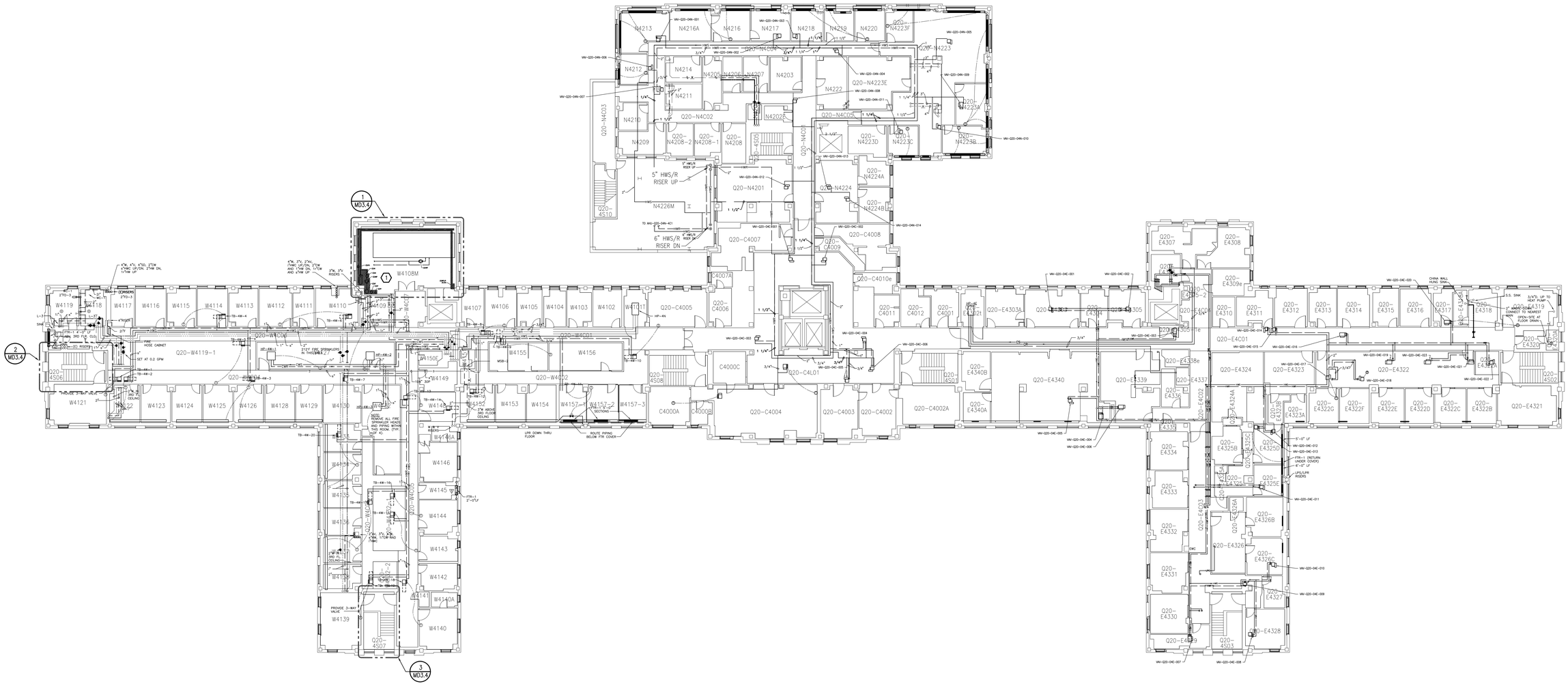
Plotted on 8/30/2023



FOURTH FLOOR OVERALL PIPING DEMOLITION PLAN

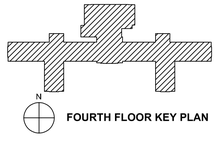
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. DEMOLITION WORK ON THIS FLOOR SHALL BE ADD ALTERNATE.



FOURTH FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 — 9/1/2023

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HEATING UPGRADE MASTERPLAN

FOURTH FLOOR OVERALL
PIPING DEMOLITION PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.40
REVISION -

Created on 3/13/2023
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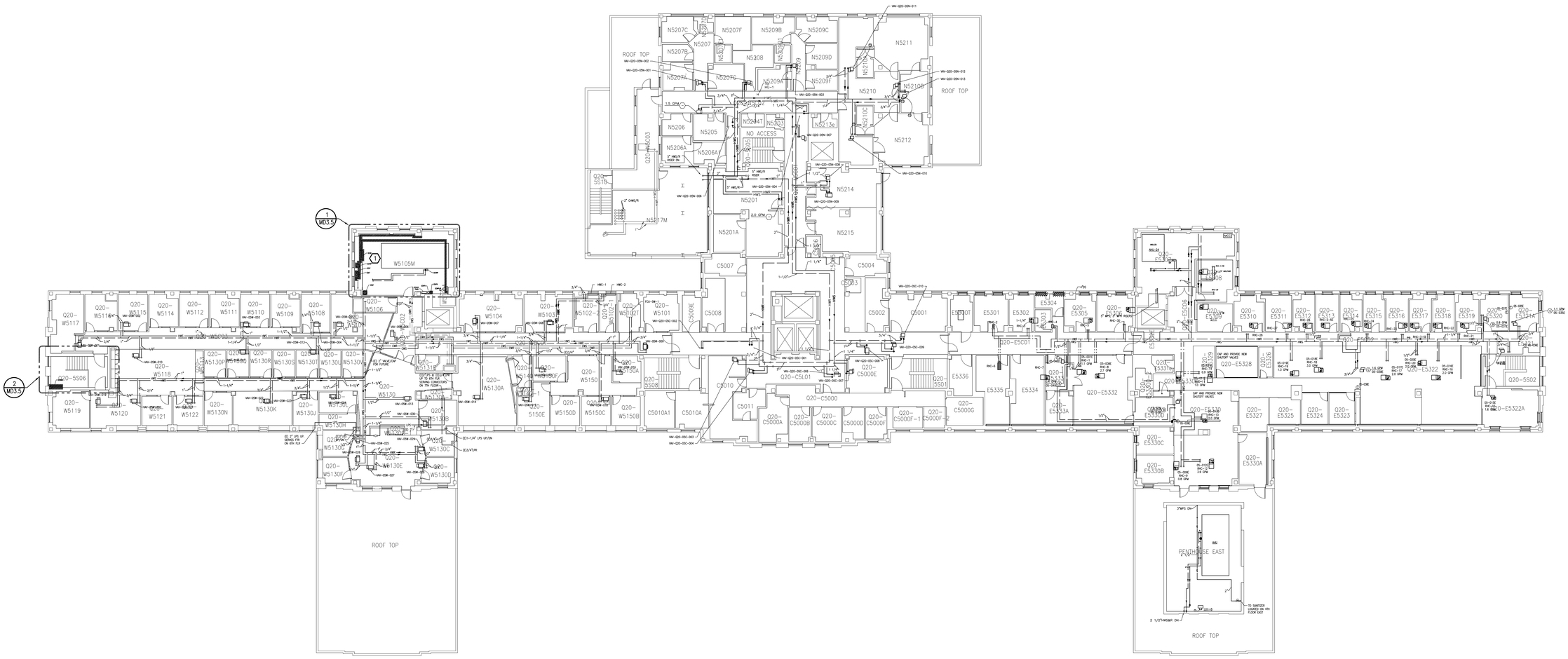
Save Date 27-Jul-23 by kdeslatyer
Plotted on 8/30/2023



FIFTH FLOOR OVERALL PIPING DEMOLITION PLAN

SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
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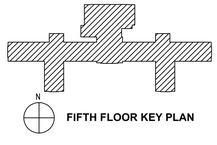
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. DEMOLITION WORK ON THIS FLOOR SHALL BE ADD ALTERNATE.



FIFTH FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788
9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

FIFTH FLOOR OVERALL
PIPING DEMOLITION PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.50
REVISION -

Created on 7/27/2023
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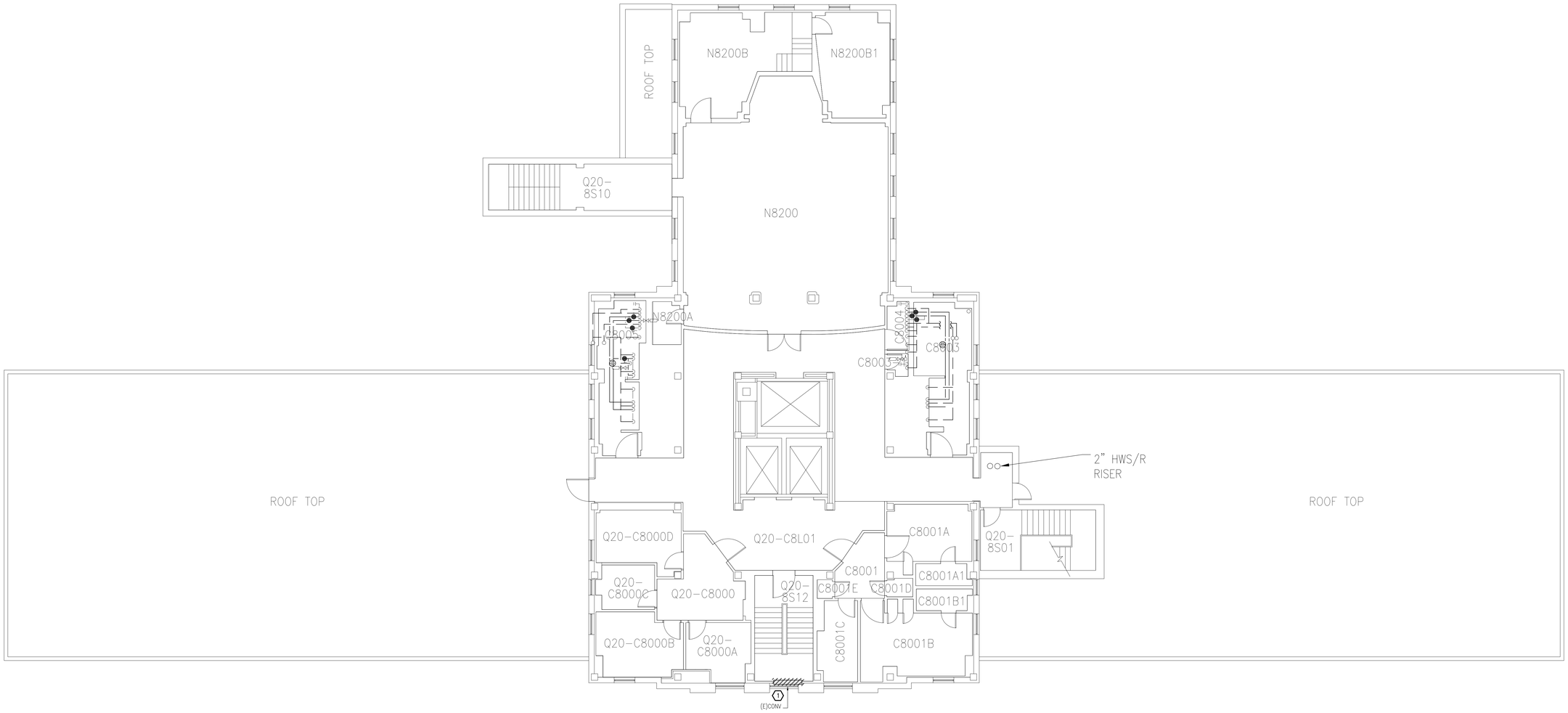
Save Date 27-Jul-23 by kdeclayter
Plotted on 8/30/2023



1
MD3.80

EIGHTH FLOOR OVERALL PIPING DEMOLITION PLAN – ADD ALT.

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
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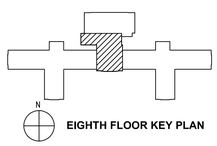
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE STEAM CONVECTOR HEATING ELEMENT AND CABINET COVER. CABINET TO REMAIN. REMOVE ASSOCIATED SEAM AND CONDENSATE PIPING AND FITTINGS BACK TO MAINS. CAP AT MAINS.



EIGHTH FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED
KYLE R. SCHUYLER
62788
PROFESSIONAL ENGINEER
9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

ENLARGED EIGHTH FLOOR
PIPING DEMOLITION PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.80
REVISION -

Created on 4/3/2023
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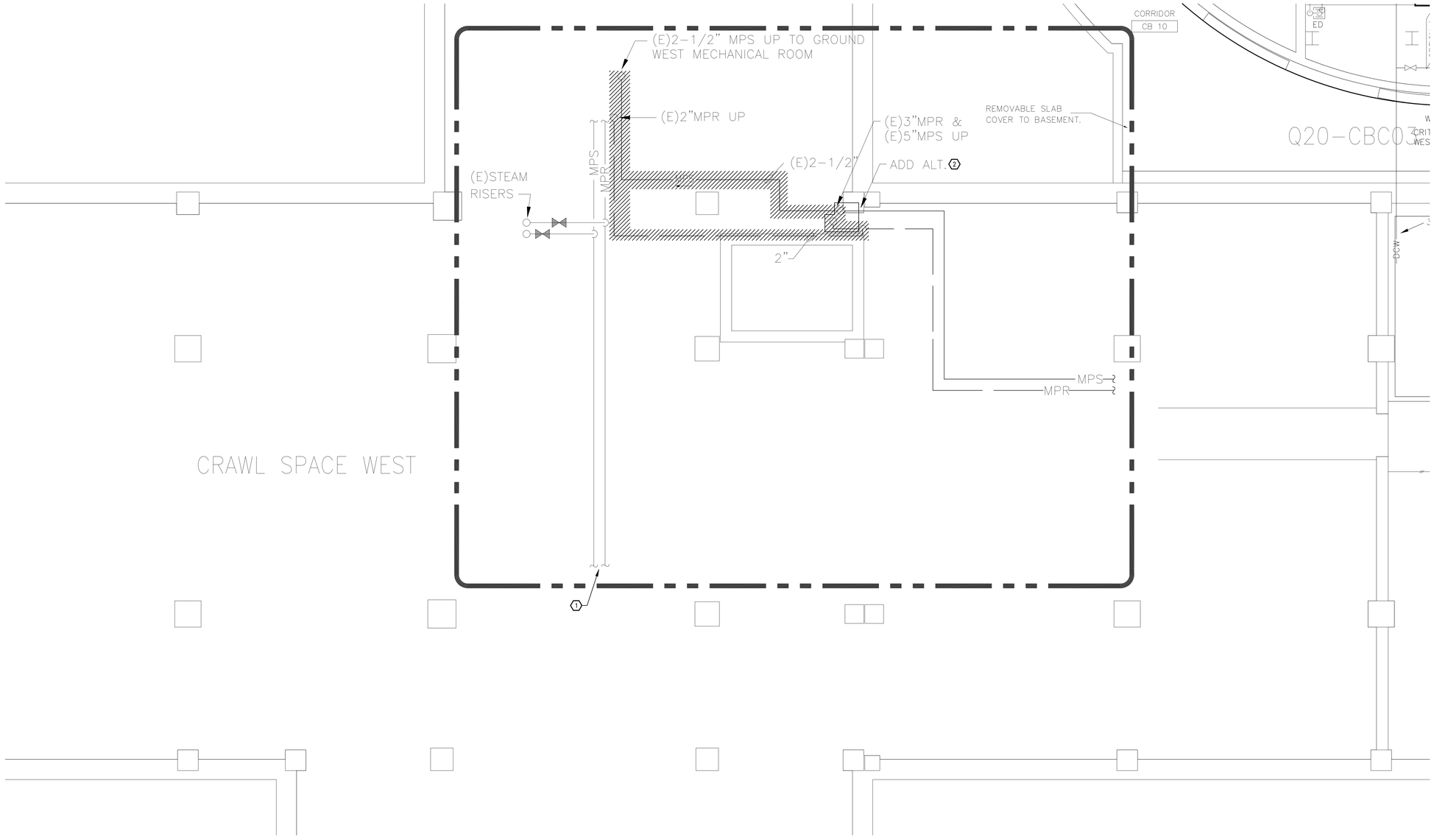
Save Date 27-Jul-23 by:kaseyler
Plotted on 8/30/2023



BASEMENT FLOOR ENLARGED WEST PIPING DEMOLITION PLAN

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
5. INVENTORY ALL EXISTING CONTROLLERS TO BE REMOVED AND PROVIDE LIST TO OWNER AND ENGINEER TO DETERMINE IF ANY CONTROLLERS SHALL BE SALVAGED BY THE OWNER.
6. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. STEAM PIPING TO WINDOW CONVECTOR RISERS TO REMAIN. REMOVE STEAM PIPING IN BASEMENT TO STAIRWELL 06 AND 07. REFER TO MD3.G0 FOR REFERENCE.
2. STEAM PIPING RISERS TO UPPER FLOORS SHALL BE ADD ALTERNATE.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KURT R. BLOMQUIST
9/1/2023

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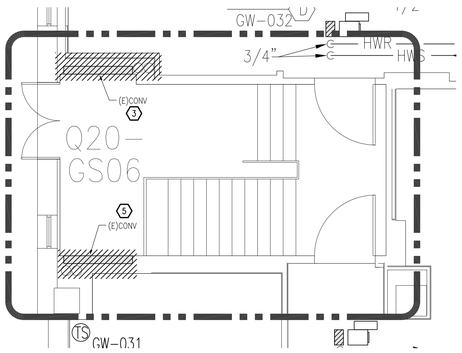
FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

BASEMENT ENLARGED EAST
PIPING DEMOLITION PLAN

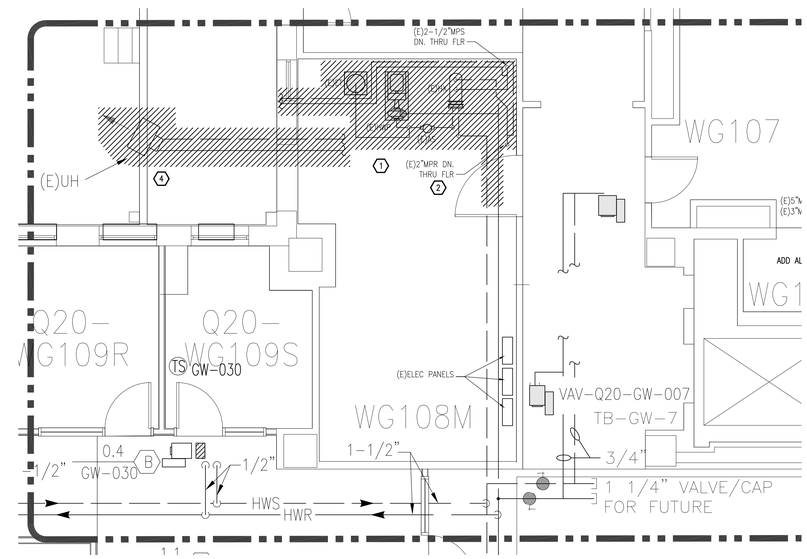
DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO. 20607

SHT.NO. MD3.B
REVISION -

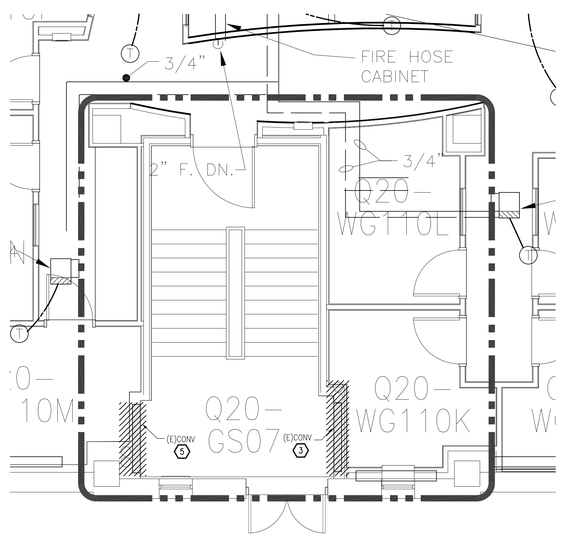
Created on 7/20/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_MD3.B BASEMENT EAST ENLARGED PIPING DEMOLITION PLAN.dwg
Save Date 27-Jul-23 by kdeslayler
Plotted on 8/30/2023



2 MD3.G GROUND FLOOR ENLARGED WEST STAIRWELL 06 PIPING DEMOLITION PLAN – ADD. ALT.
SCALE: 1/4"=1'-0"



1 MD3.G GROUND FLOOR ENLARGED WEST ROOM WG108M AREA PIPING DEMOLITION PLAN
SCALE: 1/4"=1'-0"



3 MD3.G GROUND FLOOR ENLARGED SOUTHWEST STAIRWELL 07 PIPING DEMOLITION PLAN – ADD. ALT.
SCALE: 1/4"=1'-0"

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
6. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMP, EXPANSION TANK, AIR SEPARATOR, AND ASSOCIATED PIPING. REMOVE COLD WATER FEED WATER AT CONNECTION. FEED WATER TO BE USED FOR NEW EQUIPMENT. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.
3. REMOVE STEAM CONVECTOR HEATING ELEMENT AND CABINET COVER. CABINET TO REMAIN. REMOVE ASSOCIATED STEAM AND CONDENSATE PIPING AND FITTINGS BACK TO MAINS AND CAP.
4. REMOVE EXISTING STEAM UNIT HEATER, CONTROLS, AND ASSOCIATED PIPING.
5. REMOVE STEAM CONVECTOR HEATING ELEMENT. CABINET TO REMAIN. REMOVE ASSOCIATED STEAM AND CONDENSATE PIPING AND FITTINGS BACK TO MAINS. CAP AT MAINS.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KIRK R. DEWYER
9/1/2023

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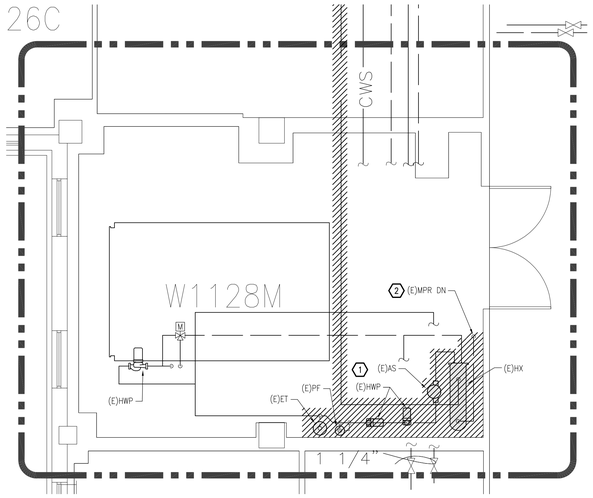
FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

GROUND ENLARGED
PIPING DEMOLITION PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.G
REVISION -

Created on 8/24/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_MD3.G GROUND ENLARGED PIPING DEMO PLANS.dwg
Save Date 27-Jul-23 by kdeadwyler
Plotted on 8/30/2023



1 / MD3.1 FIRST FLOOR ENLARGED WEST MECHANICAL ROOM PIPING DEMOLITION PLAN

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
6. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMPS, EXPANSION TANK, AIR SEPARATOR, AND ASSOCIATED PIPING AS SHOWN. REMOVE COLD WATER FEED WATER BACK TO MAIN AND CAP. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KYLE R. DEWYER 9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

FIRST FLOOR ENLARGED PIPING PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.1
REVISION -

Created on 4/5/2023
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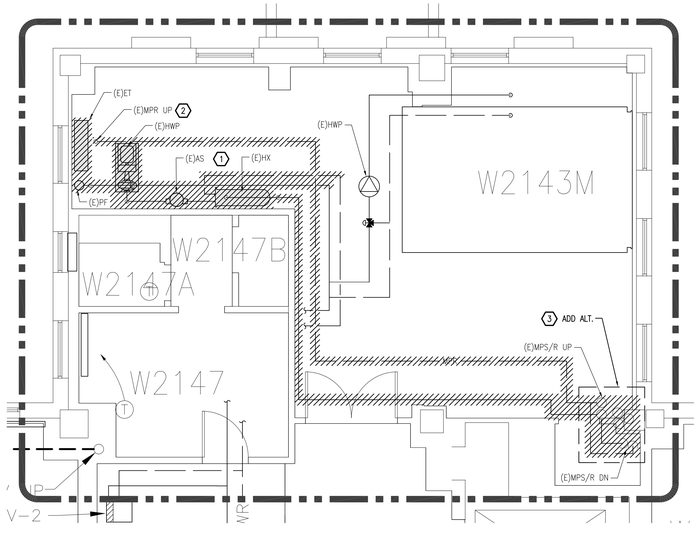
Save Date 27-Jul-23 by kdoshayler
Plotted on 8/30/2023



1 MD3.2 SECOND FLOOR ENLARGED WEST MECHANICAL ROOM PIPING DEMOLITION PLAN

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
6. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMP, EXPANSION TANK, AIR SEPARATOR, AND ASSOCIATED PIPING AS SHOWN. REMOVE COLD WATER FEED WATER BACK TO MAIN AND CAP. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.
3. STEAM PIPING RISERS REMOVAL SHALL BE ADD ALTERNATE.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

SECOND FLOOR ENLARGED
PIPING DEMOLITION PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.2
REVISION -

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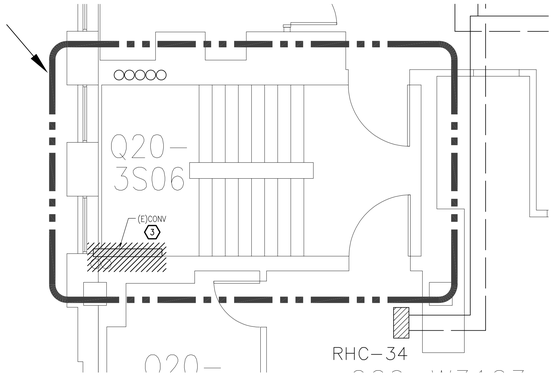
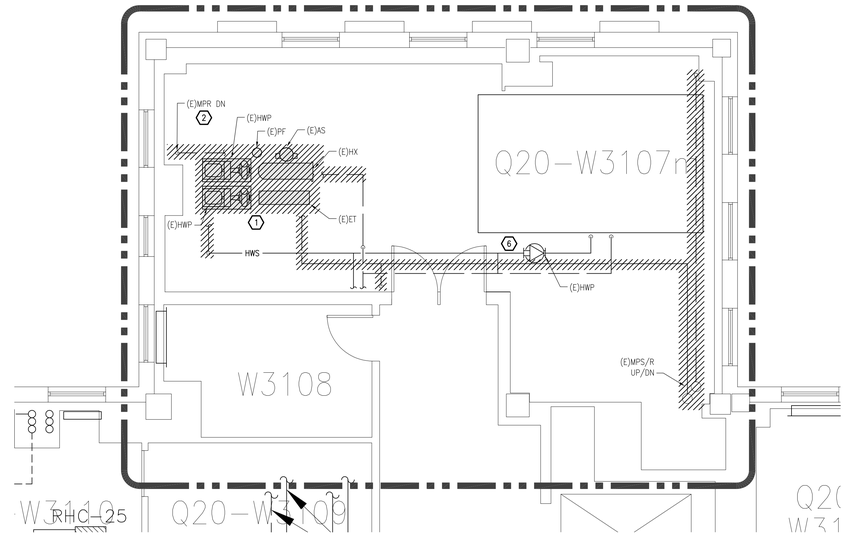
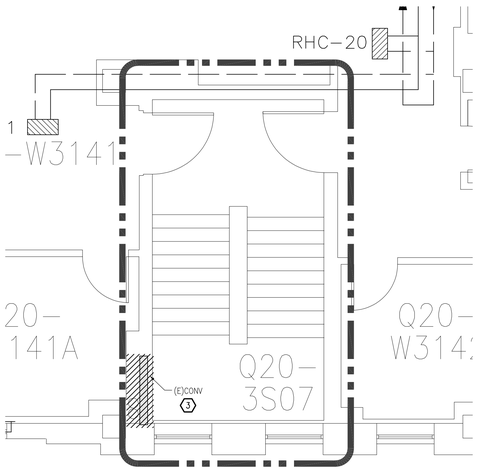
Save Date 27-Jul-23 by kdoshayler
Plotted on 8/30/2023



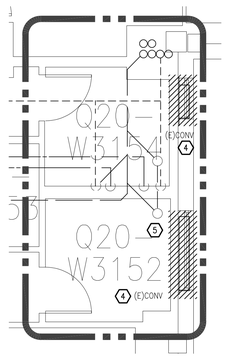
2 / M3.3 THIRD FLOOR ENLARGED WEST STAIRWELL 06 PIPING DEMOLITION PLAN – ADD. ALT.
SCALE: 1/4"=1'–0"



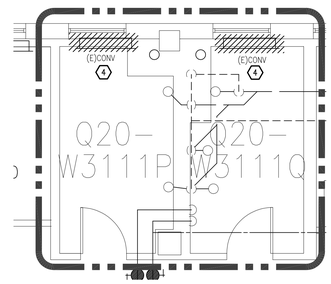
1 / MD3.3 THIRD FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING DEMOLITION PLAN – ADD ALT.
SCALE: 1/4"=1'–0"



3 / MD3.3 THIRD FLOOR ENLARGED SOUTHWEST STAIRWELL 07 PIPING DEMOLITION PLAN – ADD. ALT.
SCALE: 1/4"=1'–0"



5 / MD3.3 THIRD FLOOR ENLARGED WEST RESTROOM W3154 & W3152 PIPING DEMOLITION PLAN – ADD ALT.
SCALE: 1/4"=1'–0"



4 / MD3.3 THIRD FLOOR ENLARGED WEST RESTROOM W3111P & W3111Q PIPING DEMOLITION PLAN – ADD ALT.
SCALE: 1/4"=1'–0"

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
6. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMPS, EXPANSION TANK, AND AIR SEPARATOR MOUNTED ON SKID. REMOVE ASSOCIATED STEAM PIPING. REMOVE ASSOCIATED HEATING WATER SUPPLY PIPING UP TO JUST AFTER PUMP DISCHARGE CONNECTION. REMOVE ASSOCIATED HEATING WATER RETURN PIPING DOWNSTREAM OF HEAT EXCHANGER RETURN CONNECTION. REMOVE COLD WATER FEED WATER BACK TO MAIN AND CAP. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.
3. DISCONNECT STAIRWELL STEAM CONVECTOR AND ABANDON IN PLACE. REMOVE ITS ASSOCIATED PIPING AND FITTINGS BACK TO MAINS AND CAP.
4. REMOVE STEAM CONVECTOR HEATING ELEMENT. CABINET TO REMAIN. REMOVE ASSOCIATED STEAM AND CONDENSATE PIPING AND FITTINGS BACK TO MAINS. CAP AT MAINS.
5. EXISTING HAND RAIL AND TOILET PAPER DISPENSER MOUNTED TO CONVECTOR ENCLOSURE SHALL BE REMOVED AND REUSED. REFER TO NEW WORK.
6. REMOVE EXISTING AHU HEATING WATER 3–WAY CONTROL VALVE AND HEATING WATER COIL PIPING. REFER TO NEW WORK SHEET.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

THIRD FLOOR ENLARGED
PIPING DEMOLITION PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'–0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.3
REVISION -

Created on:5/31/2023
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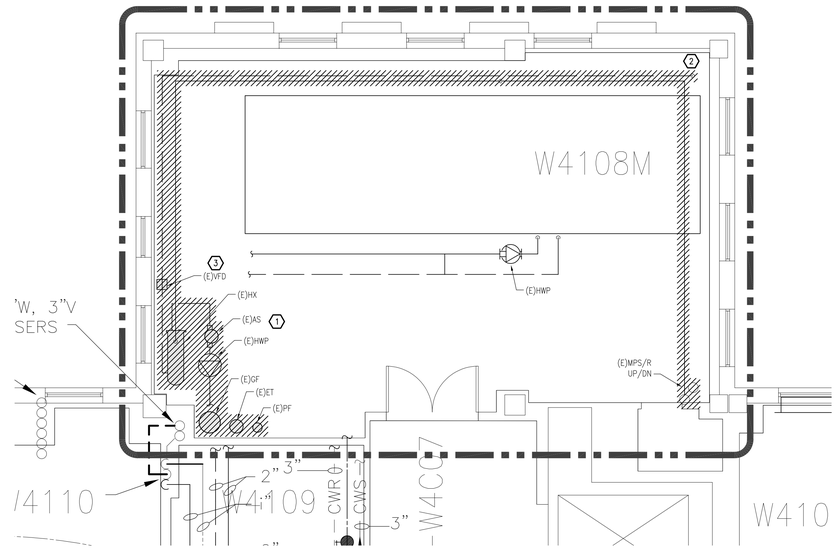
Save Date 27–Jul–23 by:ksoodwyler
Plotted on:8/30/2023



1 MD3.4 FOURTH FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING DEMOLITION PLAN – ADD ALT.

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
6. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMP, EXPANSION TANK, AND AIR SEPARATOR MOUNTED ON SKID. REMOVE ASSOCIATED STEAM PIPING. REMOVE ASSOCIATED HEATING WATER SUPPLY PIPING UP TO JUST AFTER PUMP DISCHARGE CONNECTION. REMOVE ASSOCIATED HEATING WATER RETURN PIPING DOWNSTREAM OF HEAT EXCHANGER RETURN CONNECTION. REMOVE COLD WATER FEED WATER BACK TO MAIN AND CAP. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.
3. SALVAGE PUMP VFD AND RETURN TO OWNER. REMOVE ASSOCIATED DIFFERENTIAL PRESSURE SENSOR.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KURT R. DEWITZ
9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

FOURTH FLOOR ENLARGED
PIPING DEMOLITION PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.4
REVISION -

Created on 4/5/2023
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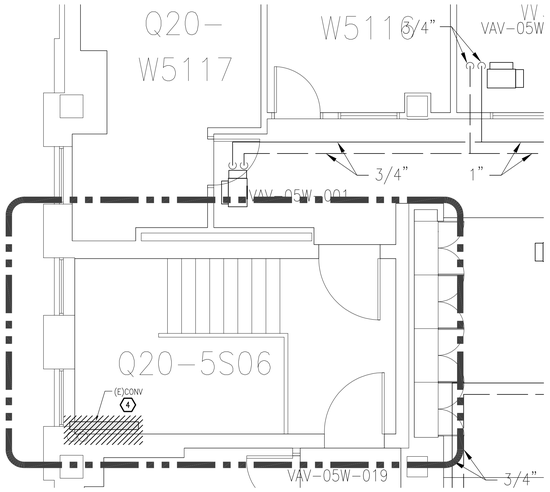
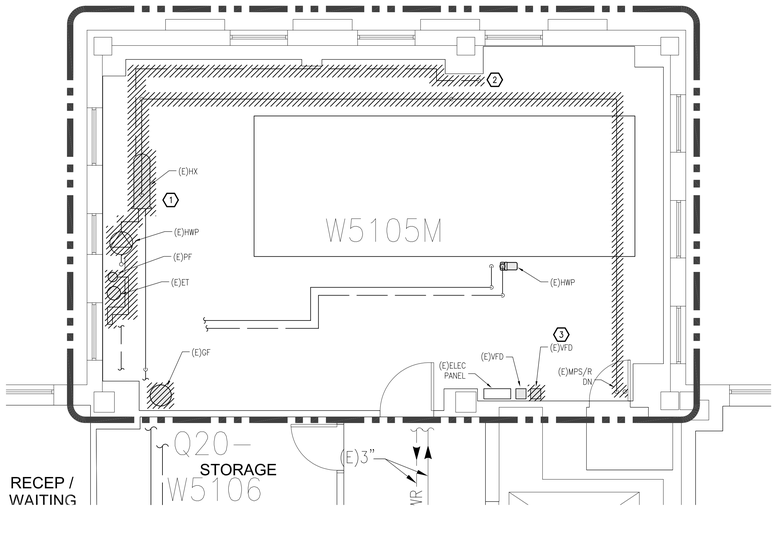
Save Date 27-Jul-23 by kdoshayler
Plotted on 8/30/2023



2 / MD3.5 FIFTH FLOOR ENLARGED WEST STAIRWELL 06 PIPING DEMOLITION PLAN – ADD. ALT.
SCALE: 1/4"=1'-0"



1 / MD3.5 FIFTH FLOOR ENLARGED WEST MECHANICAL ROOM PIPING DEMOLITION PLAN – ADD ALT.
SCALE: 1/4"=1'-0"

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
6. INVENTORY ALL EXISTING CONTROLLERS TO BE REMOVED AND PROVIDE LIST TO OWNER AND ENGINEER TO DETERMINE IF ANY CONTROLLERS SHALL BE SALVAGED BY THE OWNER.
7. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMP, EXPANSION TANK, AND AIR SEPARATOR MOUNTED ON SKID. REMOVE ASSOCIATED STEAM PIPING. REMOVE ASSOCIATED HEATING WATER PIPING BETWEEN PUMP DISCHARGE CONNECTION AND HEAT EXCHANGER RETURN CONNECTION. REMOVE COLD WATER FEED WATER BACK TO MAIN AND CAP. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.
3. SALVAGE PUMP VFD AND RETURN TO OWNER. REMOVE ASSOCIATED DIFFERENTIAL PRESSURE SENSOR.
4. DISCONNECT STAIRWELL STEAM CONVECTOR AND ABANDON IN PLACE. REMOVE ITS ASSOCIATED PIPING BACK TO MAINS AND CAP.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788
9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

ENLARGED FIFTH FLOOR
PIPING DEMOLITION PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD3.5
REVISION -

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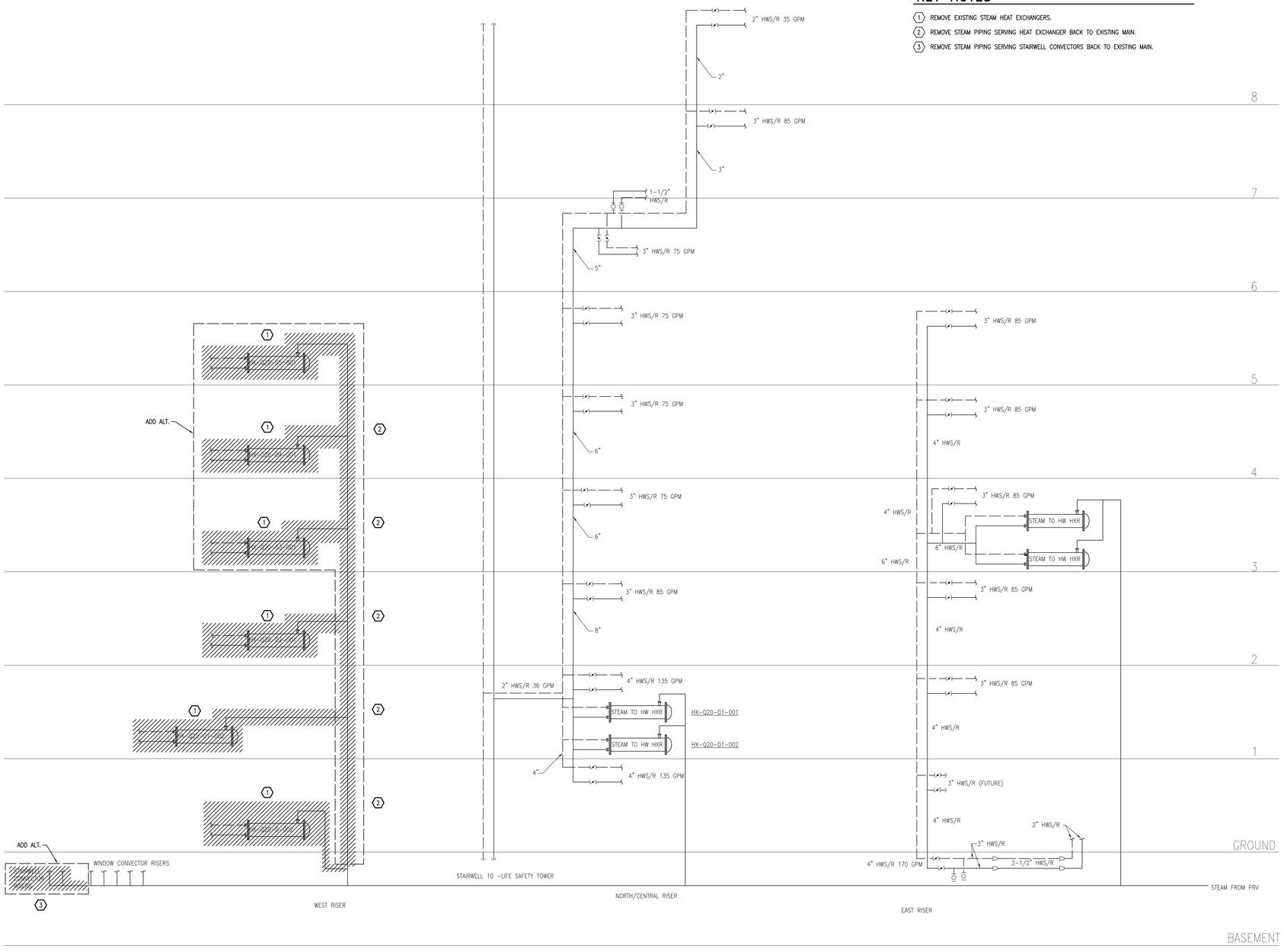
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_MD3.5 ENLARGED 5th FLR PIPING DEMOLITION PLANS.dwg
Save Date 27-Jul-23 by kdoschayler
Plotted on 8/30/2023

SHEET NOTES

1. EXISTING INFORMATION IS TAKEN FROM SITE INVESTIGATION AND EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY ACCURACY PRIOR TO COMMENCING WORK.
2. ALL RISERS AND HEAT EXCHANGERS SHALL REMAIN IN SERVICE AT THIS TIME UNTIL NEW RISERS AND HEAT EXCHANGERS ARE INSTALLED TO SERVE THE AREA.
3. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. REMOVE EXISTING STEAM HEAT EXCHANGERS.
2. REMOVE STEAM PIPING SERVING HEAT EXCHANGER BACK TO EXISTING MAIN.
3. REMOVE STEAM PIPING SERVING STAIRWELL CONVECTORS BACK TO EXISTING MAIN.



1 MD5.0 EXISTING HEATING WATER RISER DIAGRAM AND DEMOLITION
SCALE:NONE

REV.	DATE	DESCRIPTION

COLORADO LICENSED
KURT R. DEWYER
62788
PROFESSIONAL ENGINEER
9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

EXISTING HEATING WATER
RISER DIAGRAM AND DEMOLITION

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. MD5.0
REVISION -

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File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_MD5.0 EXISTING HEATING WATER RISER DIAGRAM.dwg
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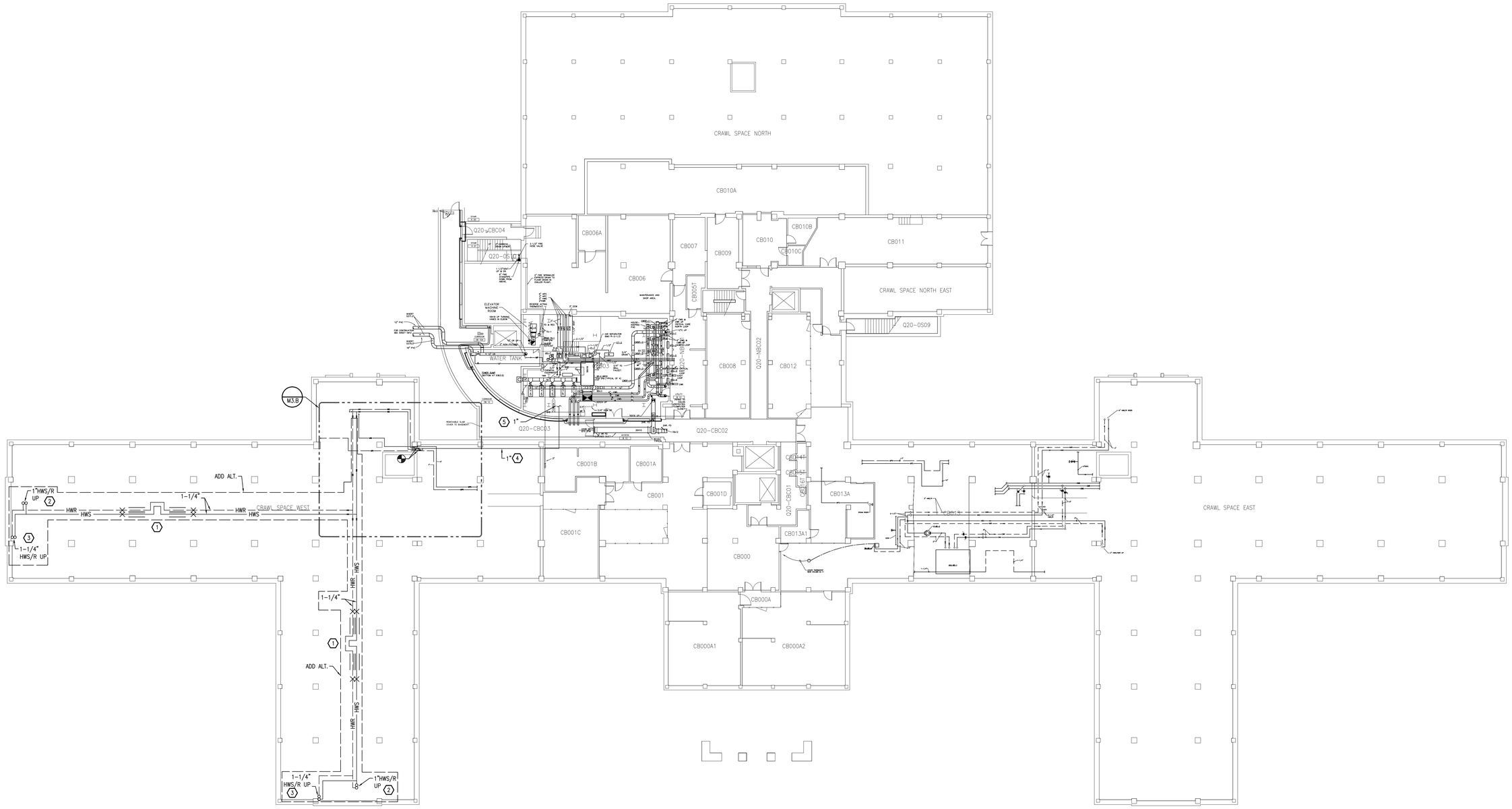
Plotted on 8/30/2023



BASEMENT FLOOR OVERALL PIPING PLAN

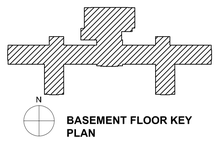
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. NEW HWS/R PIPING SERVING STAIRWELLS IS SHOWN AT INTENDED INSTALLATION LOCATIONS. REPORT FINDINGS AND DISCREPANCIES TO ENGINEER.
5. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. 6 FT. L X 3.5' W MIN. EXPANSION LOOP.
2. HEATING WATER PIPING UP TO CABINET UNIT HEATER ON FLOOR ABOVE.
3. HEATING WATER PIPING UP TO CONVECTOR ON FLOOR ABOVE.
4. HEATING WATER PIPING INTENDED FOR PIPE RISERS DRAIN DURING MAINTENANCE. SHUTOFF VALVES NORMALLY CLOSED.
5. ROUTE HEATING WATER PIPING TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM CB003
6. PIPE EXPANSION LOOP SHALL BE 12" WIDE BY 22" HEIGHT.



BASEMENT FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED
KYLE R. DEGOWIN
62788
PROFESSIONAL ENGINEER
9/1/2023

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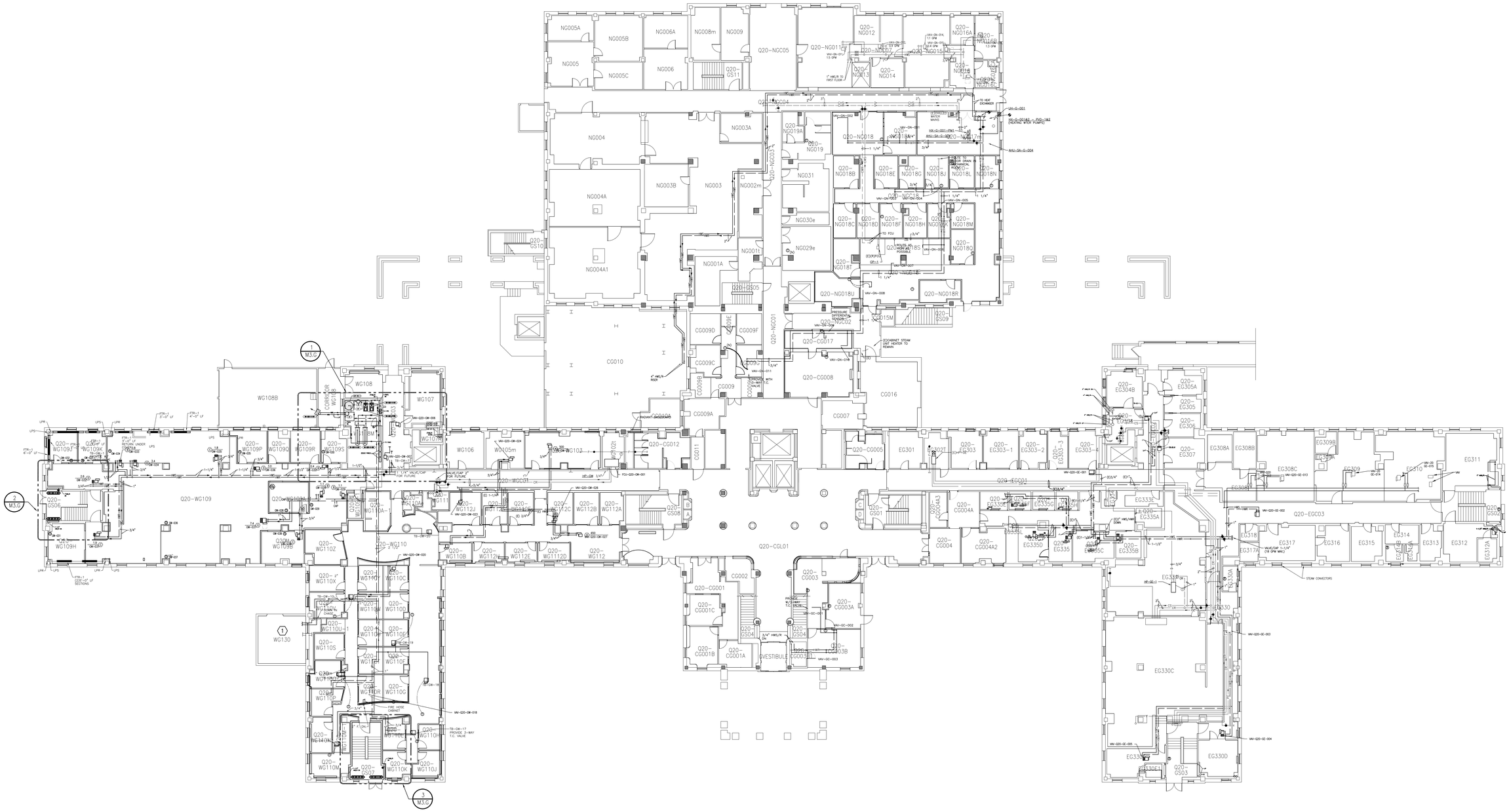
FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

BASEMENT OVERALL PIPING PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.B0
REVISION -

Created on 7/20/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.B0 BASEMENT OVERALL PIPING PLAN.dwg
Save Date 27-Jul-23 by kdoshayler
Plotted on 8/30/2023



GROUND FLOOR OVERALL PIPING PLAN

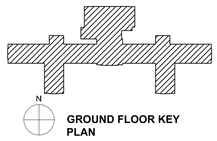
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

(1) EXISTING AHU LOCATED IN THIS ROOM. RECONFIGURE AHU HEATING WATER COIL PIPING AND COIL PUMP TO PROVIDE 2-WAY CONTROL VALVE. REFER TO DETAIL ON SHEET M4.1. EXISTING COIL PUMP TO BE REUSED.



GROUND FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

GROUND OVERALL PIPING PLAN

DATE: SEPTEMBER 1, 2023	
SCALE: NONE	
DESIGN BY: KRD	
DRAWN BY: KRD	
APPROVED BY: MLS	
PRJ. NO: 20607	
SHT.NO. M3.G0	REVISION -

Created on 7/18/2023
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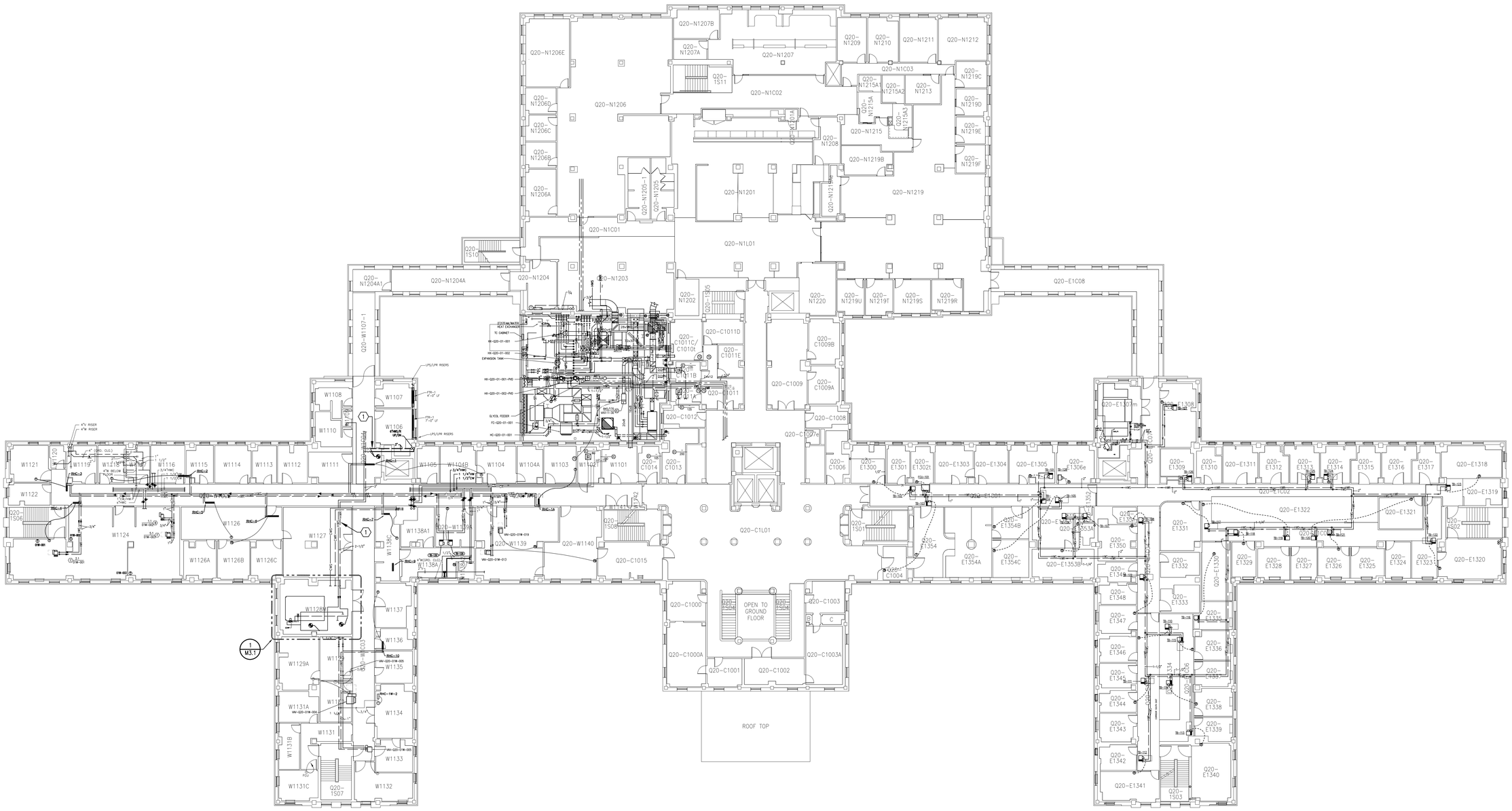
Save Date 27-Jul-23 by kdoolittle
Plotted on 8/30/2023



FIRST FLOOR OVERALL PIPING PLAN

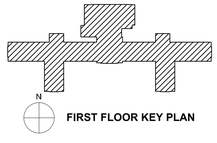
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. COORDINATE HEATING WATER PIPING MAINS WITH CONCURRENT PROJECT UNDER CONSTRUCTION.



REV.	DATE	DESCRIPTION

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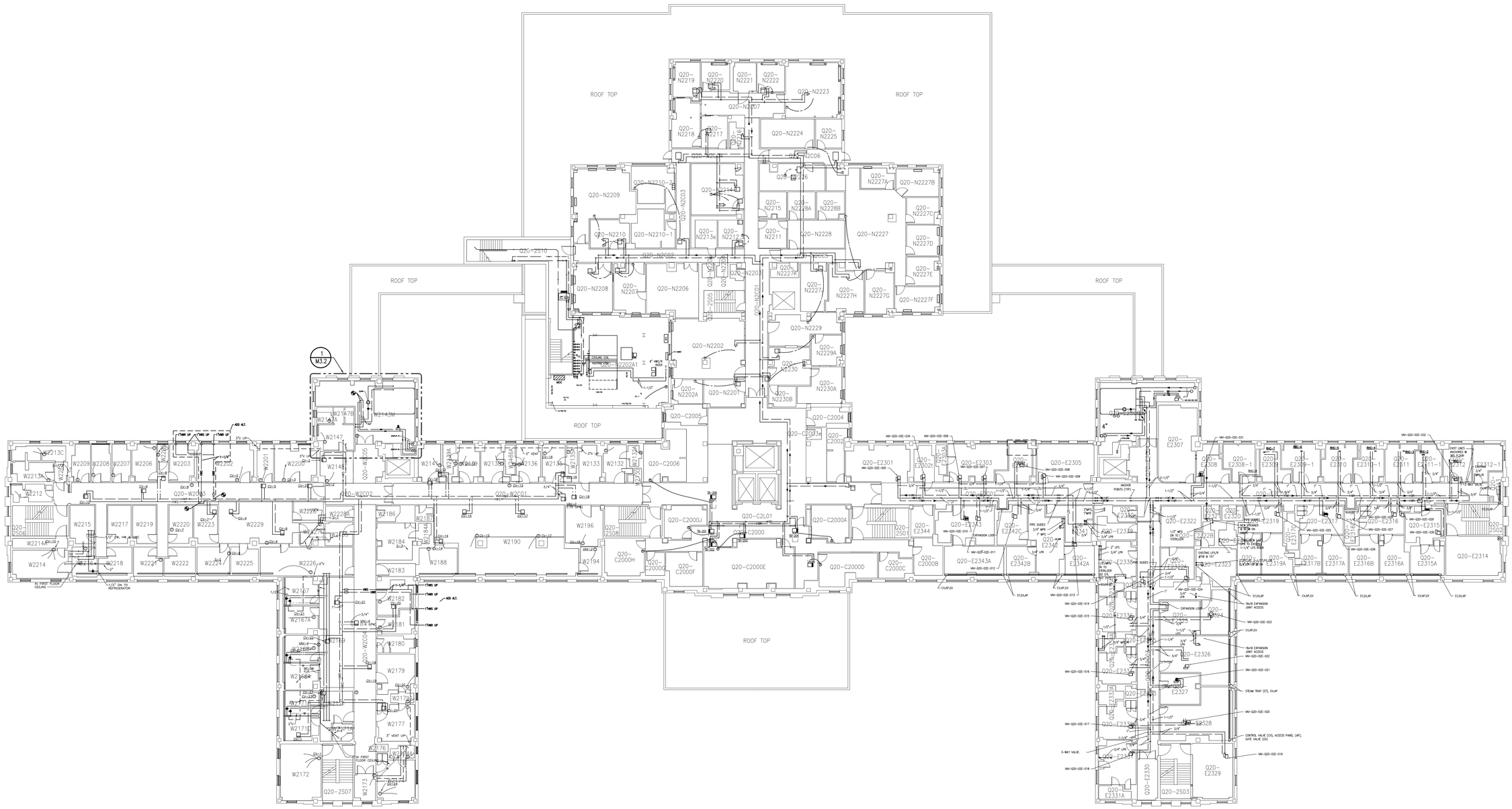
FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

FIRST FLOOR OVERALL
PIPING PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.10
REVISION -

Created on 7/27/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.10 FIRST FLOOR OVERALL PIPING PLAN.dwg
Save Date 30-Aug-23 by kdeclayter
Plotted on 8/30/2023

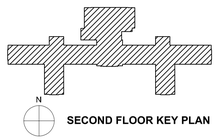


SECOND FLOOR OVERALL PIPING PLAN

SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.



SECOND FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED
KARL R. DEWITZ
62788
PROFESSIONAL ENGINEER
9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

SECOND FLOOR OVERALL PIPING PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.20
REVISION -

Created on 5/30/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.20 SECOND FLOOR OVERALL PIPING PLAN.dwg
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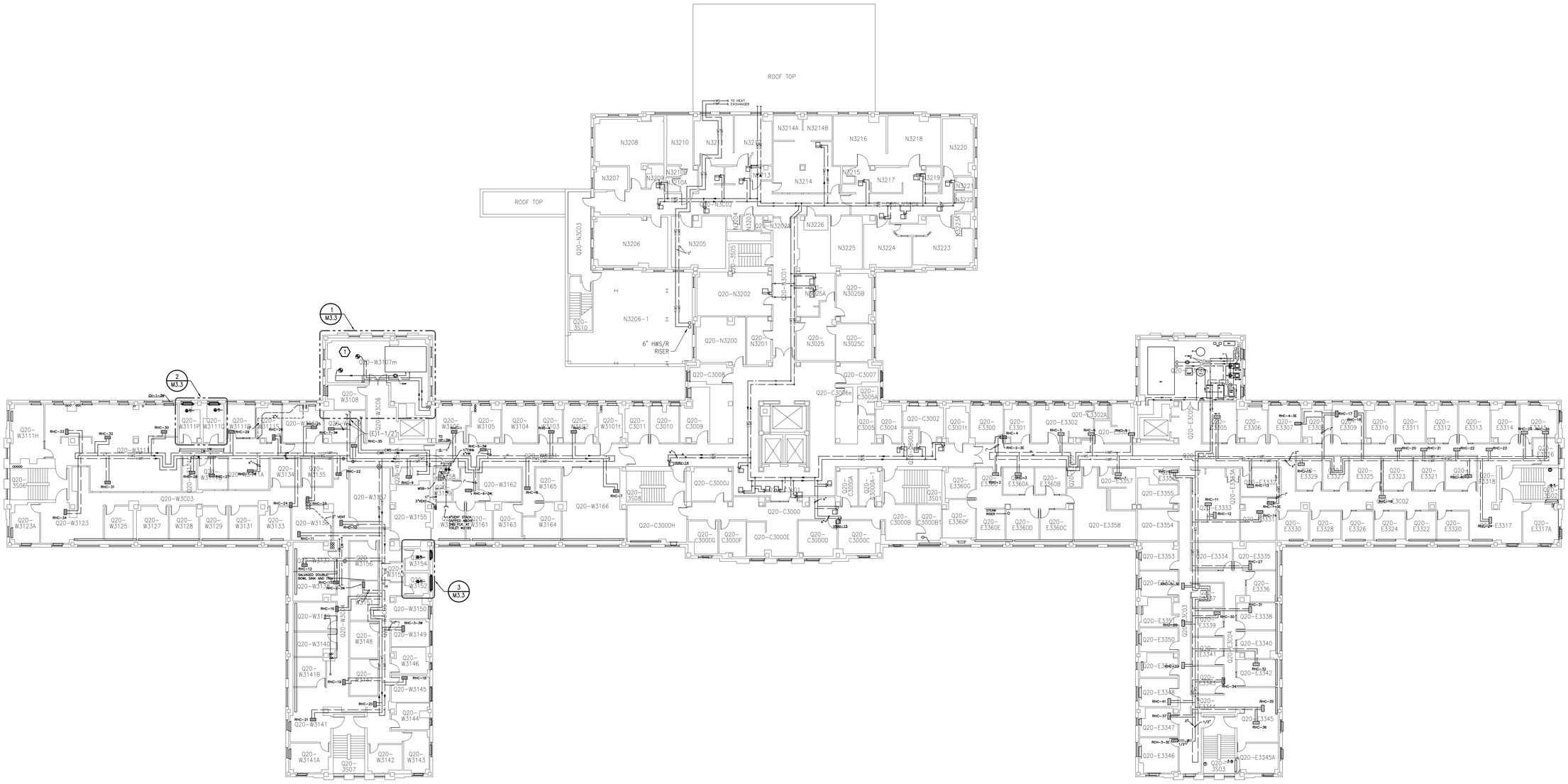
Plotted on 8/30/2023



THIRD FLOOR OVERALL PIPING PLAN

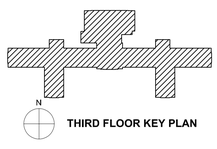
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

(1) NEW WORK ON THIS FLOOR SHALL BE ADD ALTERNATE.



REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 — 9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

THIRD FLOOR OVERALL
PIPING PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.30
REVISION -

Created on 7/27/2023
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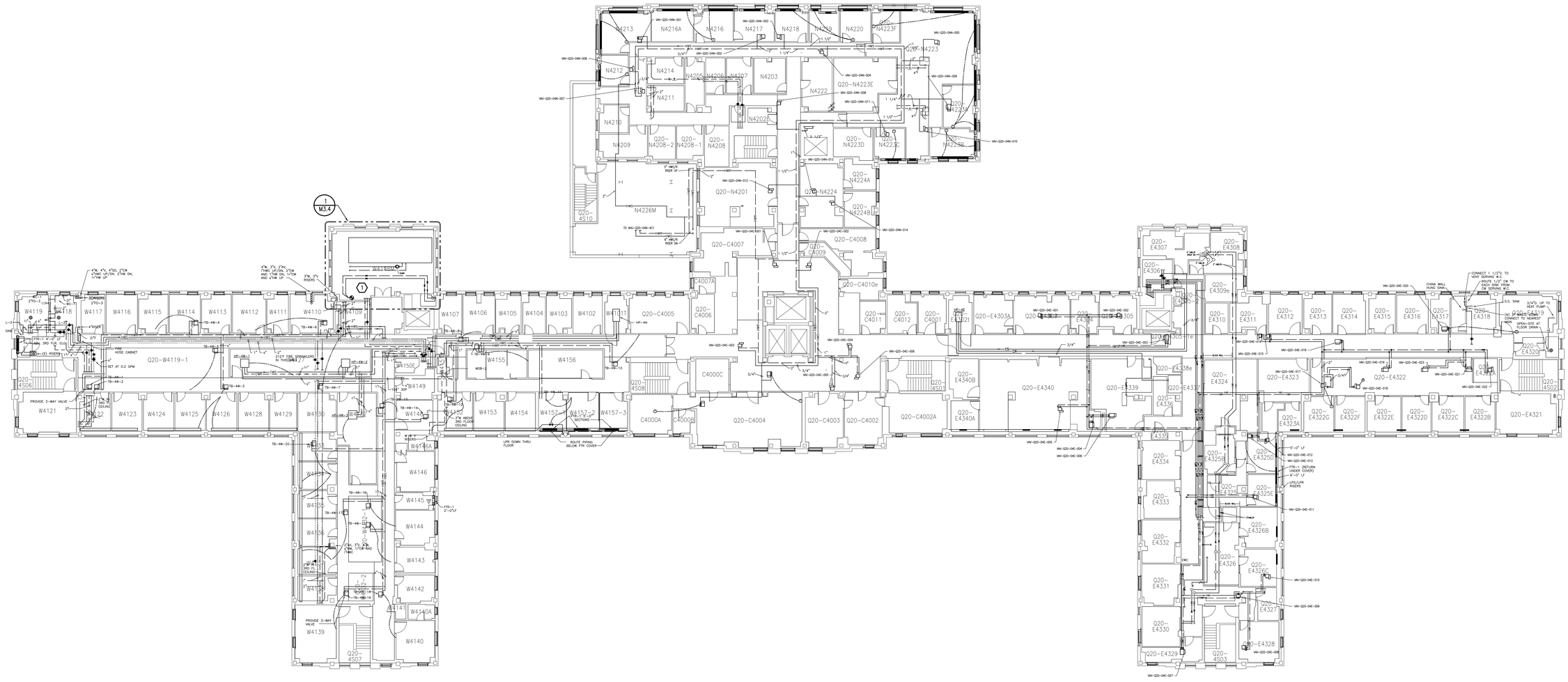
Plotted on 8/30/2023



FOURTH FLOOR OVERALL PIPING PLAN

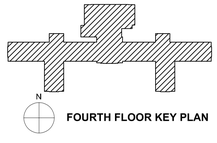
SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. NEW WORK ON THIS FLOOR SHALL BE ADD ALTERNATE.



FOURTH FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

FOURTH FLOOR OVERALL PIPING PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO. 20607

SHT.NO. M3.40
REVISION -

Created on 3/28/2023
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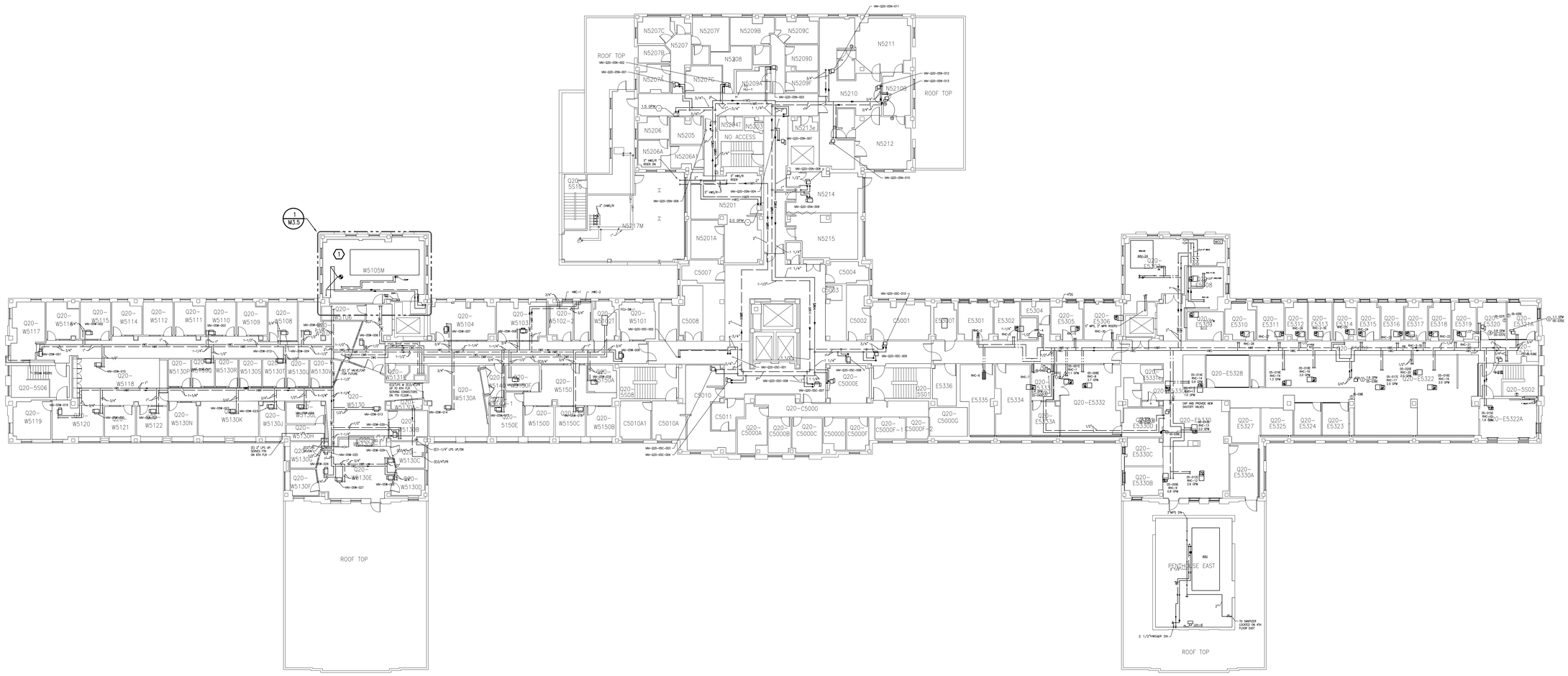
Save Date 27-Jul-23 by kdeclayter
Plotted on 8/30/2023



FIFTH FLOOR OVERALL PIPING PLAN

SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. NEW WORK ON THIS FLOOR SHALL BE ADD ALTERNATE.

FIFTH FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

FIFTH FLOOR OVERALL PIPING PLAN

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.50
REVISION -

Created on 5/24/2023
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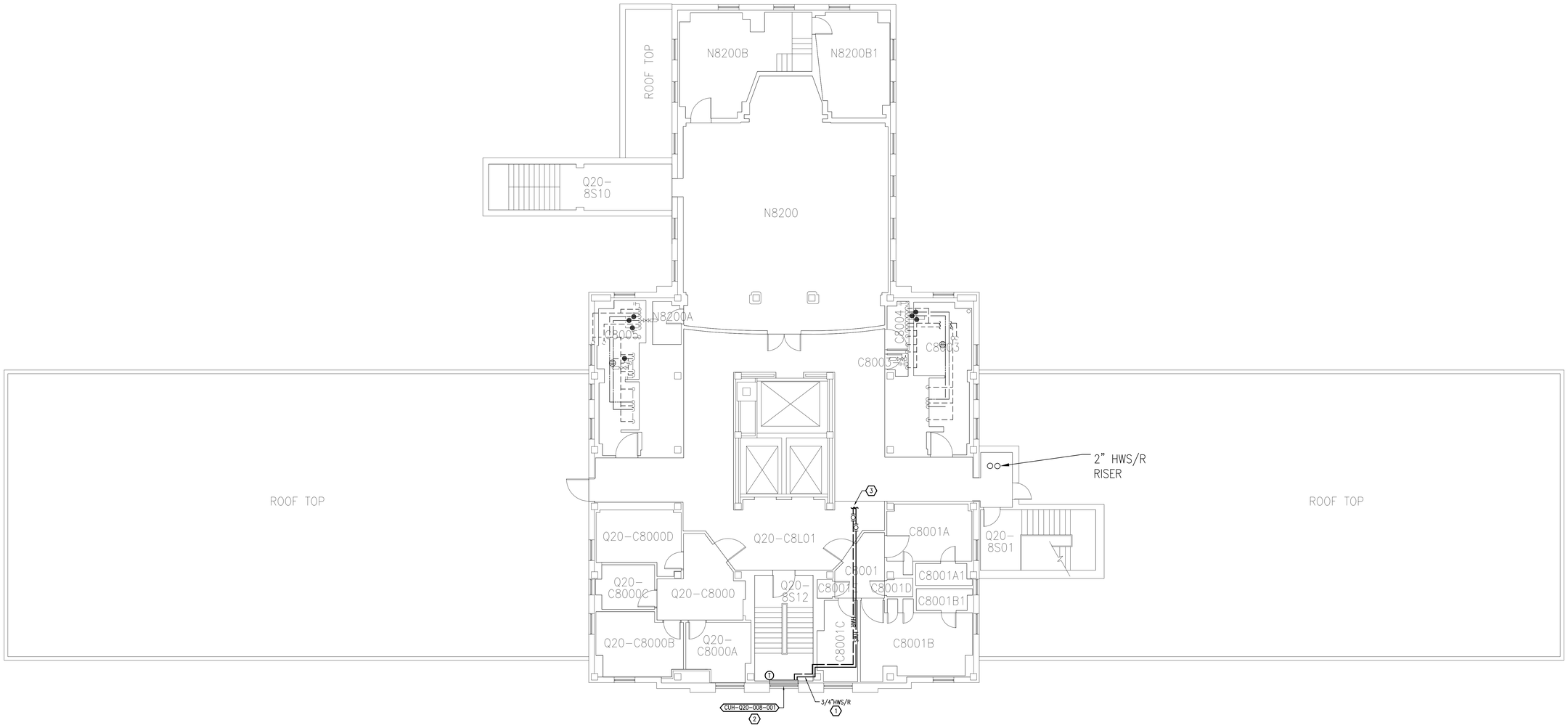
Save Date 27-Jul-23 by kdeslayer
Plotted on 8/30/2023



1 M3.80 EIGHTH FLOOR OVERALL PIPING PLAN – ADD ALT.

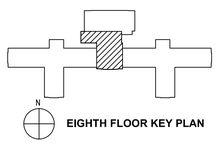
SCALE: 1/8"=1'-0"

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
5. NEW HWS/R PIPING SERVING STAIRWELLS IS SHOWN AT INTENDED INSTALLATION LOCATIONS. REPORT FINDINGS AND DISCREPANCIES TO ENGINEER.
6. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
7. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. STACK HEATING WATER SUPPLY AND RETURN PIPING MOUNTED TO WALL. PROVIDE SOFFIT AROUND PIPING, REFER TO DETAIL.
2. PROVIDE HW RECESSED CABINET UNIT HEATER WITH INTEGRAL THERMOSTAT.
3. ROUTE HEATING WATER PIPING BACK TO HYDRONIC MAINS LOCATED ON THIS FLOOR.



EIGHTH FLOOR KEY PLAN

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 MARK S. MCDONALD 9/1/2023

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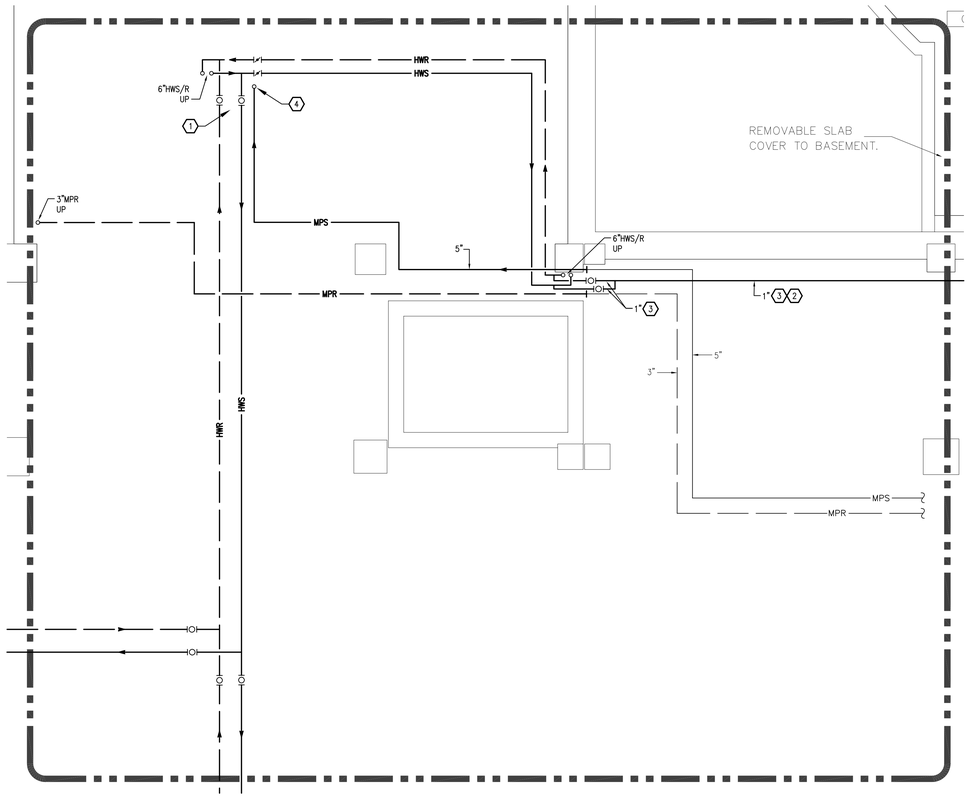
FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

ENLARGED EIGHTH FLOOR
PIPING PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.80
REVISION -

Created on:5/14/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.80 EIGHTH FLOOR OVERALL PIPING PLAN.dwg
Save Date 30-Aug-23by:sdoctayler
Plotted on:8/30/2023



BASEMENT FLOOR ENLARGED WEST PIPING PLAN

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. PROVIDE 1-1/2" HWS/R VALVED AND CAPPED STUBOUTS. CONNECTED IN ADD. ALT.
2. ROUTE HEATING WATER PIPING TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM CB003. REFER TO SHEET M3.B0.
3. HEATING WATER PIPING INTENDED FOR PIPE RISERS DRAIN DURING MAINTENANCE. SHUTOFF VALVES NORMALLY CLOSED.
4. PROVIDE STEAM TRAP FOR RISE. ROUTE TO MEDIUM PRESSURE RETURN PIPING MAIN.

REV.	DATE	DESCRIPTION

COLORADO LICENSED
KURT R. DEWITZER
62788
PROFESSIONAL ENGINEER
9/1/2023

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FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

BASEMENT ENLARGED EAST
PIPING PLAN

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.B
REVISION -

Created on:5/30/2023
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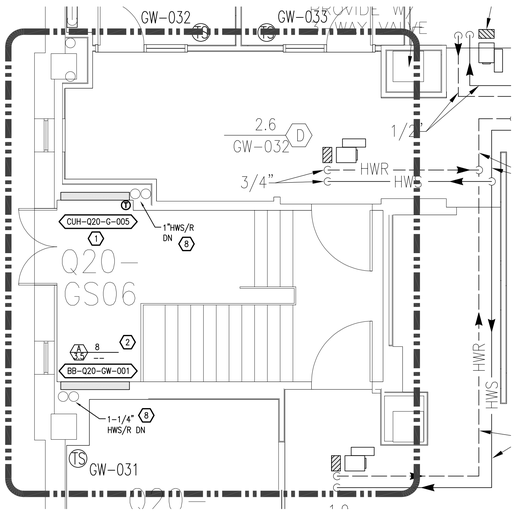
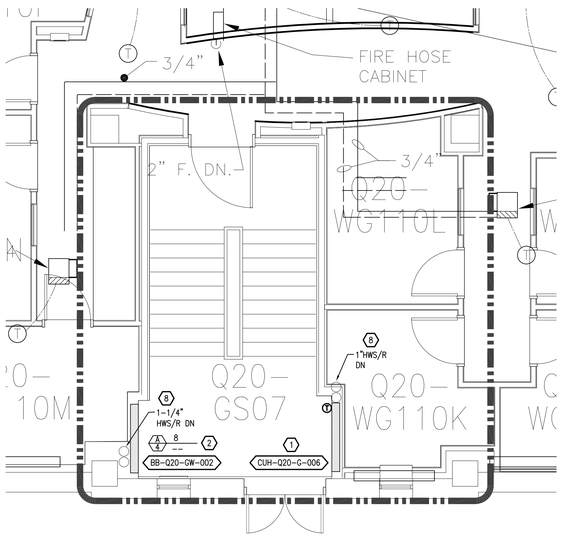
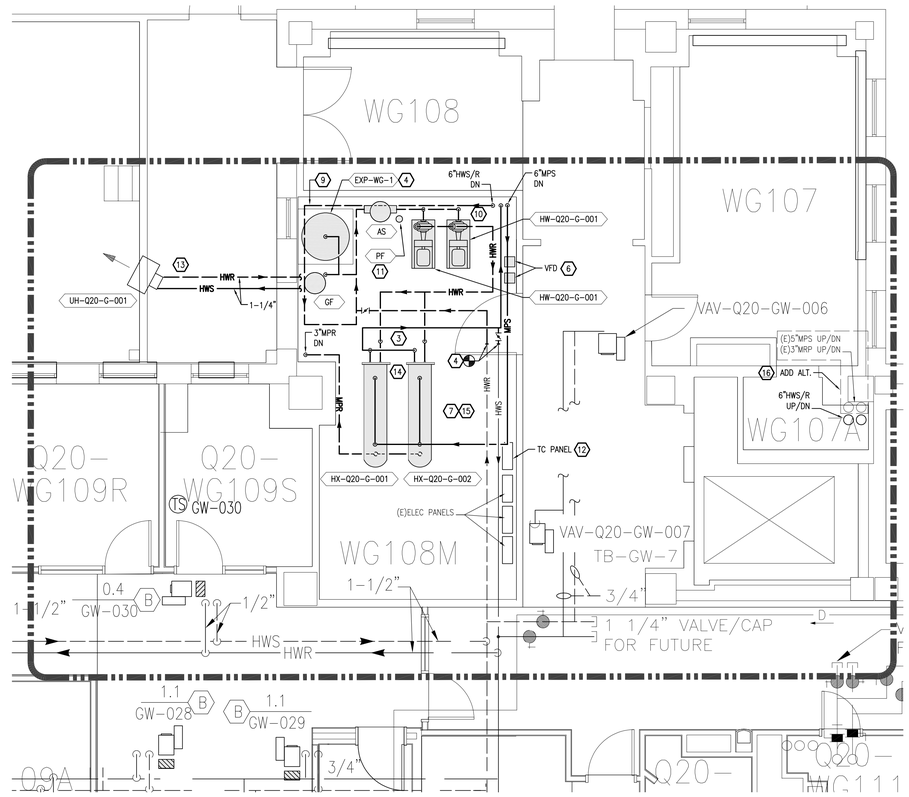
Save Date 27-Jul-23 by:ddeclayer
Plotted on:8/30/2023



2 / M3.G GROUND FLOOR ENLARGED WEST STAIRWELL 06 PIPING PLAN – ADD. ALT.
SCALE: 1/4"=1'-0"



3 / M3.G GROUND FLOOR ENLARGED SOUTHWEST STAIRWELL 07 PIPING PLAN – ADD. ALT.
SCALE: 1/4"=1'-0"



1 / M3.G GROUND FLOOR ENLARGED WEST ROOM WG108M AREA PIPING PLAN
SCALE: 1/4"=1'-0"

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
5. NEW HWS/R PIPING SERVING STAIRWELLS IS SHOWN AT INTENDED INSTALLATION LOCATIONS. REPORT FINDINGS AND DISCREPANCIES TO ENGINEER.
6. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
7. X-RAY ALL NEW FLOOR PENETRATIONS.
8. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.
9. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. PROVIDE HW RECESSED CABINET UNIT HEATER WITH INTEGRAL THERMOSTAT.
2. PROVIDE NEW BASBOARD HEATING ELEMENT INSIDE EXISTING CONVECTOR ENCLOSURE. CONTROL SHALL BE INTERLOCKED WITH ADJACENT CABINET UNIT HEATER THERMOSTAT. COORDINATE WITH ELECTRICAL FOR CONVENIENCE OUTLET, LOCATED IN RECESS SPACE BELOW HEATER.
3. PROVIDE NEW STEAM HEAT EXCHANGER SYSTEM. REFER TO STEAM HEAT EXCHANGER PIPING AND CONTROL DIAGRAM.
4. CONNECT EXISTING HEATING WATER FLOOR PIPING MAINS TO NEW HEATING WATER SYSTEM PIPING MAINS.
5. PROVIDE NEW EXPANSION TANK. DO NOT CLOSE SYSTEM AFTER FILLING UNTIL SYSTEM FLUID HAS REACHED ROOM TEMPERATURE (>60°F).
6. PROVIDE HEATING WATER PUMP VFDS. COORDINATE WITH ELECTRICAL.
7. PAINT MECHANICAL ROOM FLOOR WITH TWO PART WATER BASED PAINT. COORDINATE COLOR WITH OWNER.
8. PROVIDE HEATING WATER SUPPLY AND RETURN PIPING TO CABINET UNIT HEATER/CONVECTOR ON GROUND FLOOR.
9. PROVIDE DOMESTIC FEED WATER MAKEUP FROM EXISITING TO NEW CONNECTION. REFER TO STEAM HEAT EXCHANGER PIPING AND CONTROL DIAGRAM.
10. COORDINATE PUMP LOCATION WITH EXISTING FLOOR DRAIN.
11. PROVIDE POT FEEDER. REFER TO STEAM HEAT EXCHANGER PIPING AND CONTROL DIAGRAM.
12. PROVIDE NEW TEMPERATURE CONTROL PANEL. COORDINATE WITH ELECTRICAL. COORDINATE WITH OWNER FOR PROVIDING NEW DATA DROP CONNECTION.
13. PROVIDE UNIT HEATER IN SIMILAR LOCATION TO REMOVED STEAM UNIT HEATER MOUNTED UP HIGH. CONNECT HEATING WATER SUPPLY AND RETURN PIPING TO MAIN DISTRIBUTION PIPING.
14. PROVIDE AND INSTALL NEW MOISTURE DETECTOR UNDER HEAT EXCHANGER TO DETECT LEAKS. REFER TO CONTROL DIAGRAM.
15. PROVIDE ALLOWANCE FOR 100 SQFT OF DRYWALL AND REPAIRS.
16. STEAM PIPING RISERS TO REMAIN EXISTING AS ADD ALTERNATE.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788
9/1/2023

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University of Colorado
Anschutz Medical Campus

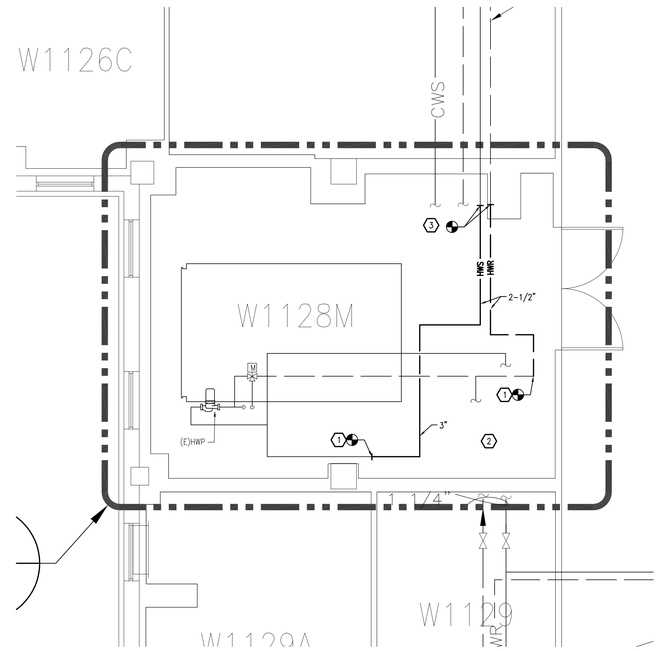
FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

GROUND ENLARGED
PIPING PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.G
REVISION -

Created on 7/27/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.G GROUND ENLARGED PIPING PLANS.dwg
Save Date 27-Jul-23 by kdoctleyler
Plotted on 8/30/2023



1 / M3.1 FIRST FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING PLAN

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
6. X-RAY ALL NEW FLOOR PENETRATIONS.
7. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. NEW HEATING WATER PIPING MAINS HAS BEEN COORDINATED AND PROVIDED WITH CONCURRENT PROJECT UNDER CONSTRUCTION. CONNECT EXISTING AHU HEATING WATER PIPING TO NEW PIPING MAINS.
2. PAINT MECHANICAL ROOM FLOOR WITH TWO PART WATER BASED PAINT. COORDINATE COLOR WITH OWNER.
3. PROVIDE ALLOWANCE FOR 50 SQFT OF DRYWALL AND REPAIRS.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KURT RODEWALD
9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

FIRST FLOOR ENLARGED PIPING PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.1
REVISION -

Created on 8/30/2023
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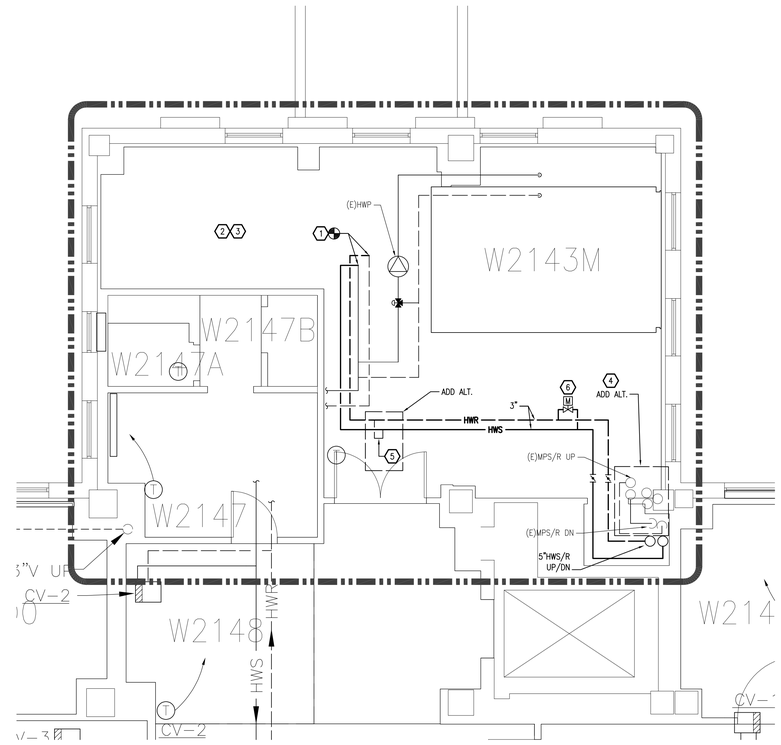
Save Date 30-Aug-23 by kdoistayler
Plotted on 8/30/2023



1 / M3.2 SECOND FLOOR ENLARGED WEST MECHANICAL ROOM PIPING PLAN

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
5. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.
6. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
7. X-RAY ALL NEW FLOOR PENETRATIONS.
8. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. CONNECT NEW HEATING WATER FLOOR PIPING MAINS TO EXISTING HEATING WATER MAINS TO SERVE ENTIRE FLOOR.
2. PAINT MECHANICAL ROOM FLOOR WITH TWO PART WATER BASED PAINT. COORDINATE COLOR WITH OWNER.
3. PROVIDE ALLOWANCE FOR 50 SQFT OF DRYWALL AND REPAIRS.
4. STEAM PIPING RISERS TO REMAIN EXISTING AS ADD ALTERNATE.
5. PROVIDE DIFFERENTIAL PRESSURE SENSOR FOR NEW HEATING WATER PUMP CONTROL APPROXIMATELY 2/3 DISTANCE TO MOST REMOTE DEVICE AS ADD ALTERNATE.
6. PROVIDE MODULATING BYPASS VALVE SIZED. REFER TO CONTROL DIAGRAM.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KURT R. DOWNEY

9/1/2023

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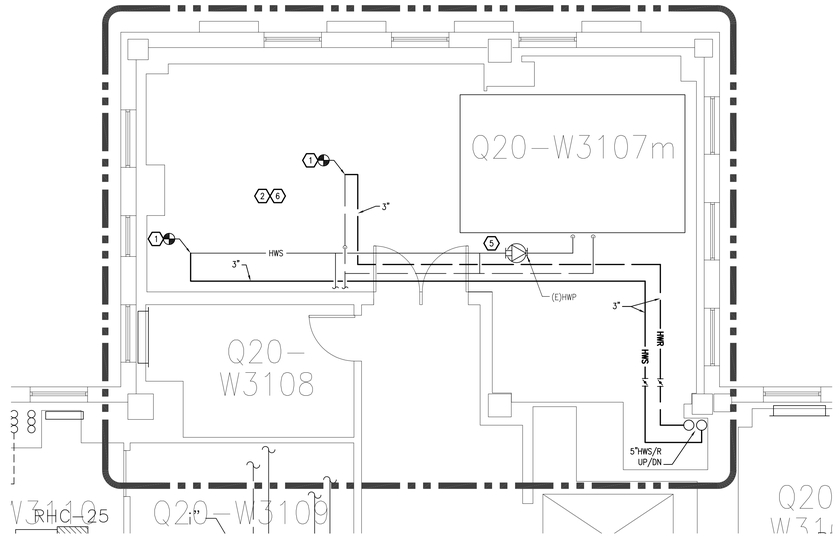
FITZSIMONS BUILDING
HEATING UPGRADE MASTERPLAN

SECOND FLOOR ENLARGED
PIPING PLANS

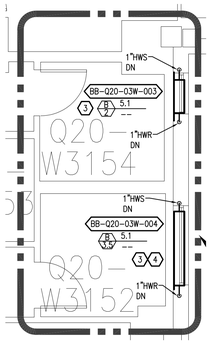
DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.2
REVISION -

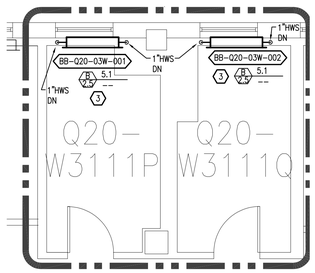
Created on 7/18/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.2 ENLARGED 2ND FLR PIPING PLANS.dwg
Save Date 28-Jul-23 by kdeclayier
Plotted on 8/30/2023



1 / M3.3 THIRD FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING PLAN – ADD ALT.
SCALE: 1/4"=1'-0"



3 / M3.3 THIRD FLOOR ENLARGED WEST RESTROOM W3154 & W3152 PIPING DEMOLITION PLAN – ADD ALT.
SCALE: 1/4"=1'-0"



2 / M3.3 THIRD FLOOR ENLARGED WEST RESTROOM W3111P & W3111Q PIPING PLAN – ADD ALT.
SCALE: 1/4"=1'-0"

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
5. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.
6. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
7. X-RAY ALL NEW FLOOR PENETRATIONS.
8. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. CONNECT NEW HEATING WATER FLOOR PIPING MAINS TO EXISTING HEATING WATER MAINS TO SERVE ENTIRE FLOOR.
2. PAINT MECHANICAL ROOM FLOOR WITH TWO PART WATER BASED PAINT. COORDINATE COLOR WITH OWNER.
3. NEW CONVECTOR. ADD ALT. REFER TO SCHEDULE AND DETAIL.
4. INSTALL EXISTING HAND RAIL AND TOILET PAPER DISPENSER TO FACE OF CONVECTOR SIMILAR TO EXISTING. REFER TO DEMO WORK.
5. RECONFIGURE AHU HEATING WATER COIL PIPING AND COIL PUMP TO PROVIDE 2-WAY CONTROL VALVE. REFER TO DETAIL ON SHEET M4.1. EXISTING COIL PUMP TO BE REUSED.
6. PROVIDE ALLOWANCE FOR 50 SQFT OF DRYWALL AND REPAIRS.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 MILAN SCHAYKER
9/1/2023

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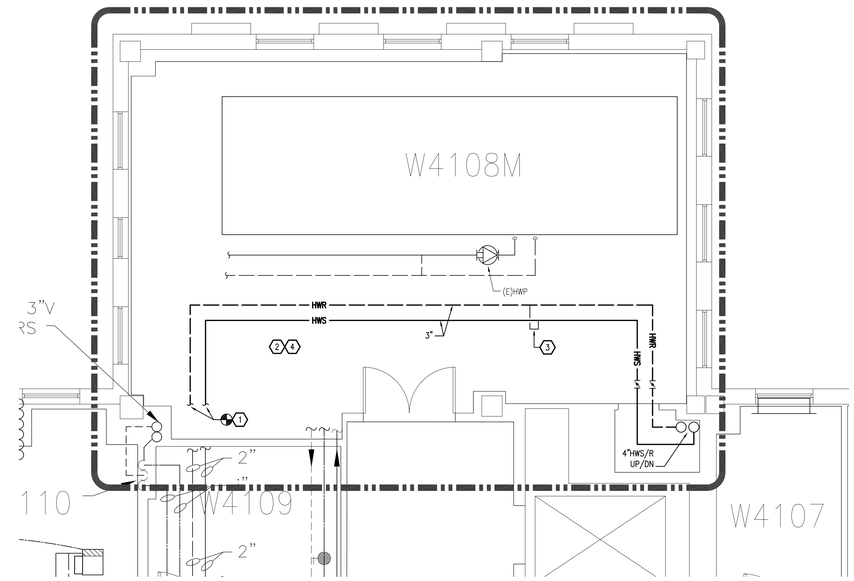
FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

THIRD FLOOR ENLARGED PIPING PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.3
REVISION -

Created on 6/26/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.3 ENLARGED 3RD FLR PIPING PLANS.dwg
Save Date 27-Jul-23 by kdoschayler
Plotted on 8/30/2023



1 / M3.4 FOURTH FLOOR ENLARGED WEST MECHANICAL ROOM PIPING PLAN – ADD ALT.

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
5. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.
6. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
7. X-RAY ALL NEW FLOOR PENETRATIONS.
8. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. CONNECT NEW HEATING WATER FLOOR PIPING MAINS TO EXISTING HEATING WATER MAINS TO SERVE ENTIRE FLOOR.
2. PAINT MECHANICAL ROOM FLOOR WITH TWO PART WATER BASED PAINT. COORDINATE COLOR WITH OWNER.
3. PROVIDE DIFFERENTIAL PRESSURE SENSOR FOR NEW HEATING WATER PUMP CONTROL APPROXIMATELY 2/3 DISTANCE TO MOST REMOTE DEVICE.
4. PROVIDE ALLOWANCE FOR 50 SQFT OF DRYWALL AND REPAIRS.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KURT A. DOWNING
9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

FOURTH FLOOR ENLARGED PIPING PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.4
REVISION -

Created on 7/27/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M3.4 ENLARGED 4TH FLR PIPING PLAN.dwg
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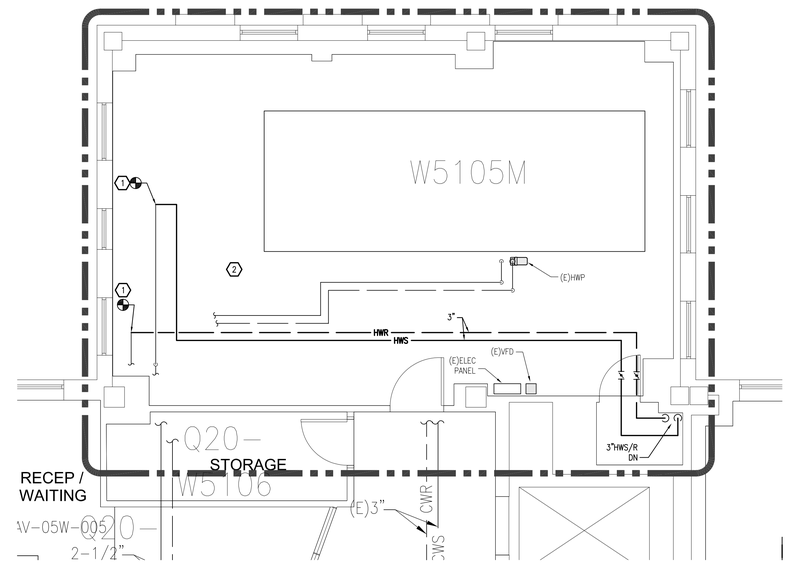
Plotted on 8/30/2023



1 / M3.5 FIFTH FLOOR ENLARGED WEST MECHANICAL ROOM PIPING PLAN – ADD ALT.

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

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
3. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
4. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
5. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.
6. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
7. X-RAY ALL NEW FLOOR PENETRATIONS.
8. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES

1. CONNECT NEW HEATING WATER FLOOR PIPING MAINS TO EXISTING HEATING WATER MAINS TO SERVE ENTIRE FLOOR.
2. PAINT MECHANICAL ROOM FLOOR WITH TWO PART WATER BASED PAINT. COORDINATE COLOR WITH OWNER.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 KURT R. DEWITZ
9/1/2023

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

ENLARGED FIFTH FLOOR PIPING PLANS

DATE: SEPTEMBER 1, 2023
SCALE: 1/4"=1'-0"
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607

SHT.NO. M3.5
REVISION -

Created on 7/20/2023
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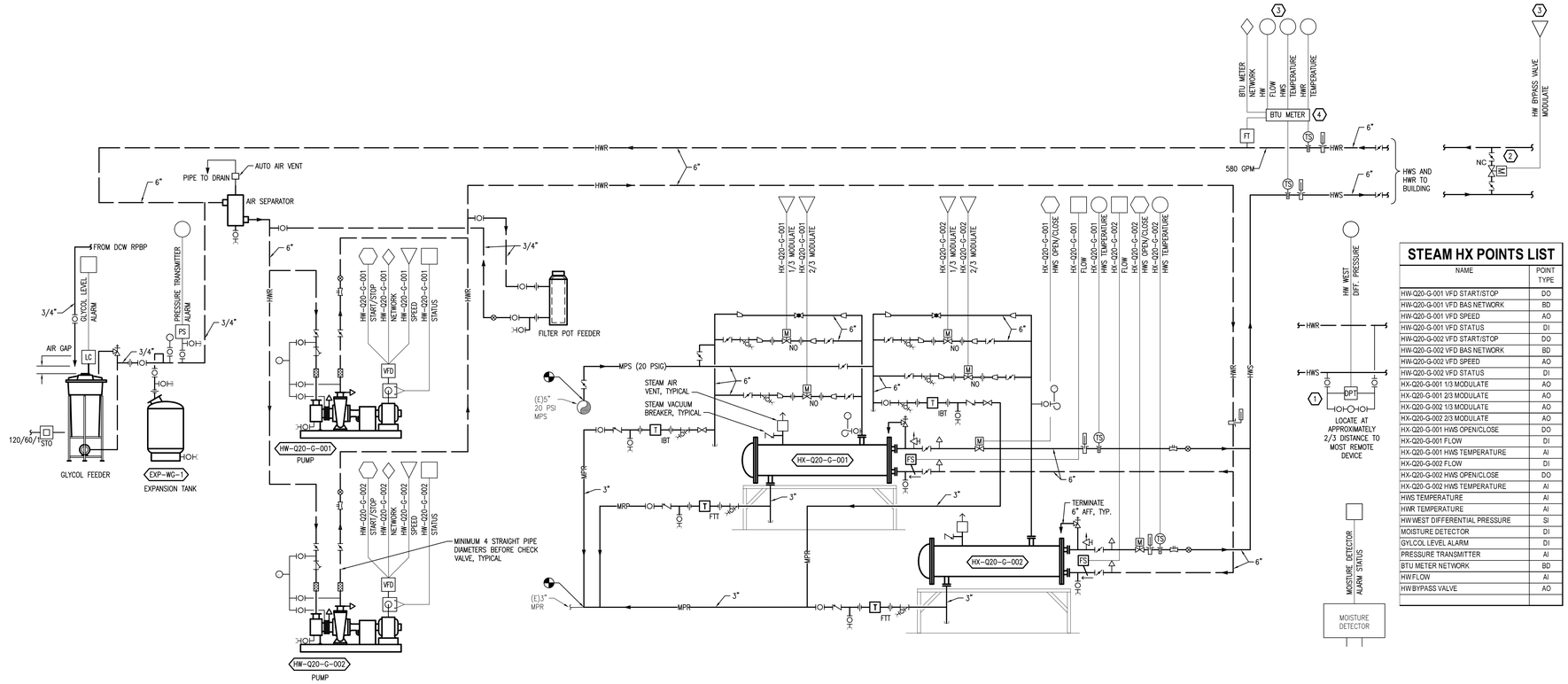
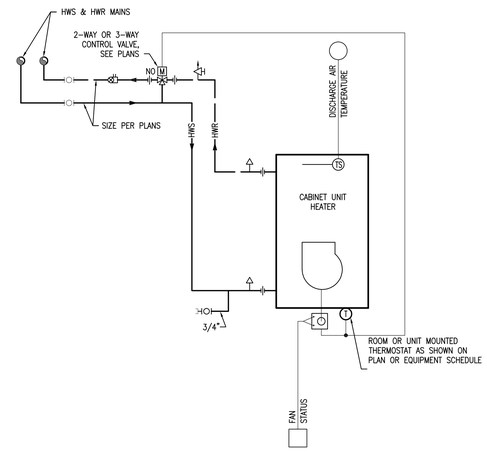
Save Date 27-Jul-23 by kdeckelyer
Plotted on 8/30/2023



STEAM HX POINTS LIST

NAME	POINT TYPE
HW-Q20-G-001 VFD START/STOP	DO
HW-Q20-G-001 VFD BAS NETWORK	BD
HW-Q20-G-001 VFD SPEED	AO
HW-Q20-G-001 VFD STATUS	DI
HW-Q20-G-002 VFD START/STOP	DO
HW-Q20-G-002 VFD BAS NETWORK	BD
HW-Q20-G-002 VFD SPEED	AO
HW-Q20-G-002 VFD STATUS	DI
HX-Q20-G-001 1/3 MODULATE	AO
HX-Q20-G-001 2/3 MODULATE	AO
HX-Q20-G-002 1/3 MODULATE	AO
HX-Q20-G-002 2/3 MODULATE	AO
HX-Q20-G-001 HWS OPEN/CLOSE	DO
HX-Q20-G-001 FLOW	DI
HX-Q20-G-001 HWS TEMPERATURE	AI
HX-Q20-G-002 FLOW	DI
HX-Q20-G-002 HWS OPEN/CLOSE	DO
HX-Q20-G-002 HWS TEMPERATURE	AI
HWS TEMPERATURE	AI
HWR TEMPERATURE	AI
HW WEST DIFFERENTIAL PRESSURE	SI
MOISTURE DETECTOR	DI
GYLCOL LEVEL ALARM	DI
PRESSURE TRANSMITTER	AI
BTU METER NETWORK	BD
HW FLOW	AI
HW BYPASS VALVE	AO

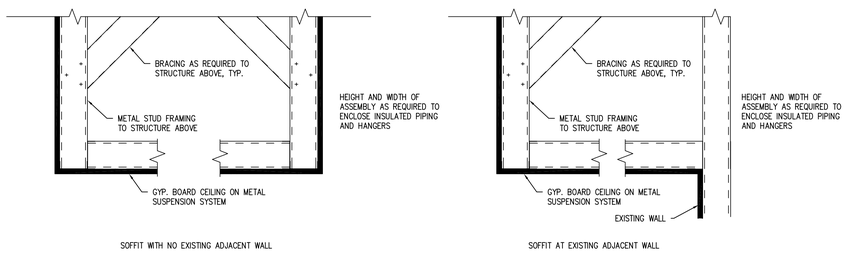
2 M4.1 STEAM HEAT EXCHANGER PIPING AND CONTROL DIAGRAM
SCALE: NONE



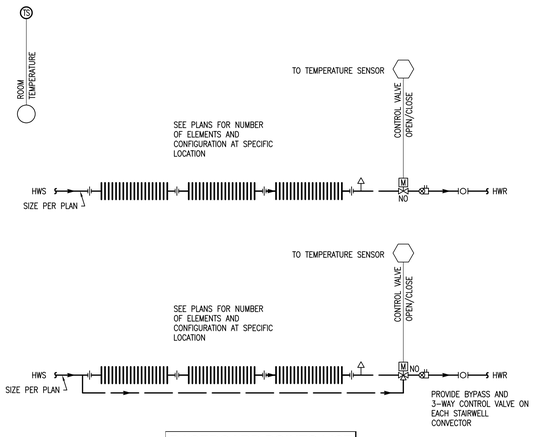
HEATER POINTS LIST

NAME	POINT TYPE
FAN STATUS	DI
DISCHARGE AIR TEMPERATURE	AI

1 M4.1 CABINET/UNIT HEATER PIPING AND CONTROL DIAGRAM – ADD. ALT.
SCALE: NONE
NOTES:
1. INSTALL FLOW MEASURING DEVICES PER MANUFACTURER'S RECOMMENDATIONS
2. REDUCERS SHALL BE PROVIDED AT COIL AND TEMPERATURE CONTROL VALVE WHERE REQUIRED.



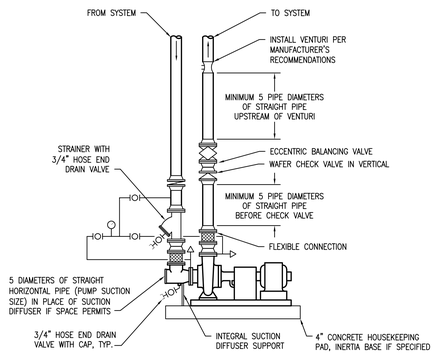
6 M4.1 SOFFIT FOR PIPING ENCLOSURE DETAILS
SCALE: NONE
NOTES:
1. TAPE, SKIM AND FINISH GYP. BOARD JOINTS.
2. PRIME AND PAINT FINISHED GYP. BOARD ASSEMBLY.



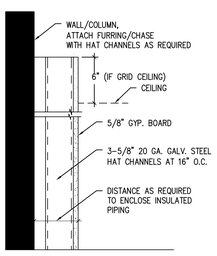
BASEBOARD POINTS LIST

NAME	POINT TYPE
ROOM TEMPERATURE	AI
CONTROL VALVE OPEN/CLOSE	DO

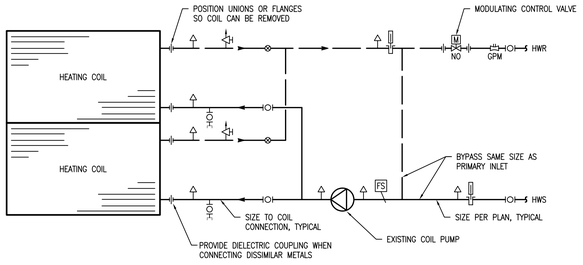
2 M4.1 BASEBOARD CONVECTORS DIAGRAM – ADD. ALT.
SCALE: NONE



3 M4.1 END SUCTION PUMP DIAGRAM
SCALE: NONE



5 M4.1 CHASE/FURRING FOR PIPING ENCLOSURE DETAIL
SCALE: NONE
NOTES:
1. TAPE, SKIM AND FINISH GYP. BOARD JOINTS.
2. PRIME AND PAINT FINISHED GYP. BOARD ASSEMBLY.



4 M4.1 2-WAY VALVE PUMPED HEATING COIL DETAIL
SCALE: NONE (STACKED COIL SHOWN, SINGLE COIL SIMILAR)
NOTES:
1. INSTALL FLOW MEASURING DEVICES PER MANUFACTURER'S RECOMMENDATIONS
2. REDUCERS SHALL BE PROVIDED AT COIL AND TEMPERATURE CONTROL VALVE WHERE REQUIRED.
3. THERMOMETERS REQUIRED ON PIPE SIZES 3" & LARGER ONLY.

KEY NOTES

1. SEE FLOOR PLAN SHEET M3.4 FOR PROPOSED LOCATION OF HOT WATER DIFFERENTIAL PRESSURE TRANSMITTER.
2. PROVIDE AND INSTALL A MODULATING BYPASS VALVE SIZED FOR MAXIMUM FLOW BETWEEN 160–190 GPM WITH 12–15 PSI PRESSURE DROP. SEE FLOOR PLAN SHEET M3.2 FOR PROPOSED LOCATION OF HEATING WATER SYSTEM BYPASS VALVE. INSTALL SHALL MATCH EXISTING PIPE MATERIAL AND FITTINGS.
3. THESE POINTS SHALL BE HARDWIRED BACK TO THE SAME CONTROLLER THAT THE PUMP AND HEAT EXCHANGER CONTROL LOGIC RESIDE IN.
4. PROVIDE AND INSTALL NEW FLOW METER PER MANUFACTURER'S REQUIREMENTS.

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788 9/1/2023

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Energy Consulting Sustainable Design

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FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

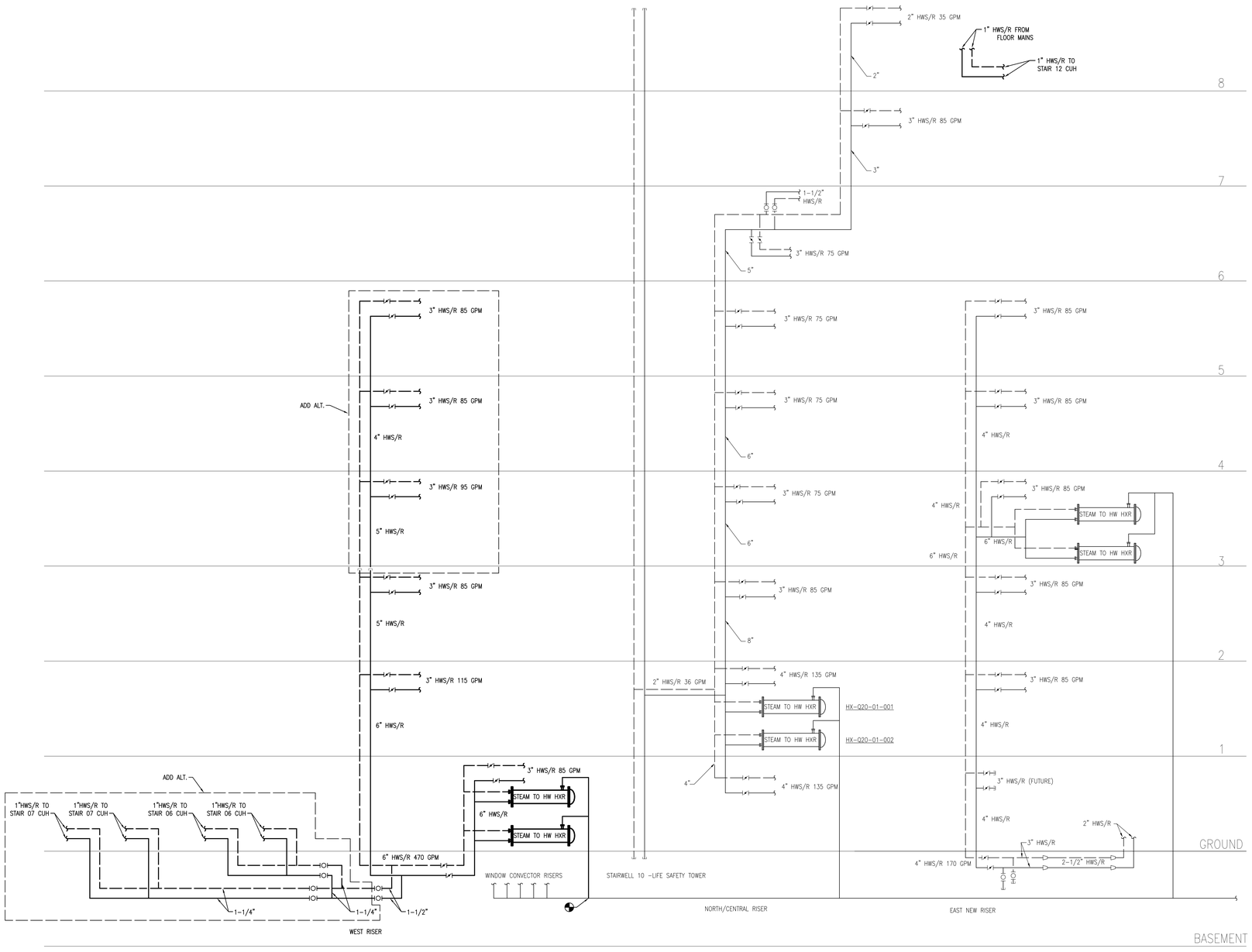
MECHANICAL DETAILS

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO: 20607
SHT.NO. M4.1
REVISION -

Created on 7/28/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M4.1 MECHANICAL DETAILS.dwg
Save Date 29-Jul-23 by kdeschayler
Plotted on 8/30/2023

SHEET NOTES

1. NORTH/CENTRAL AND EAST RISERS INSTALLED AS PART OF PREVIOUS PROJECT.
2. WEST RISER INSTALLED AS PART OF THIS PROJECT.
3. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.



1 M5.0 NEW HEATING WATER RISER DIAGRAM
SCALE:NONE

REV.	DATE	DESCRIPTION

COLORADO LICENSED PROFESSIONAL ENGINEER 62788
9/1/2023

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Mechanical and Electrical Engineering
Energy Consulting Sustainable Design

University of Colorado
Anschutz Medical Campus

FITZSIMONS BUILDING HEATING UPGRADE MASTERPLAN

NEW HEATING WATER DIAGRAM

DATE: SEPTEMBER 1, 2023
SCALE: NONE
DESIGN BY: KRD
DRAWN BY: KRD
APPROVED BY: MLS
PRJ. NO. 20607

SHT.NO. M5.0
REVISION -

Created on 7/27/2023
File Path: W:\Jobs20\20607\1Dwgs\AutoCAD\Sheets\Phase 3\20607_M5.0 NEW HEATING WATER RISER DIAGRAM.dwg
Save Date 27-Jul-23 bykdestwyler
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