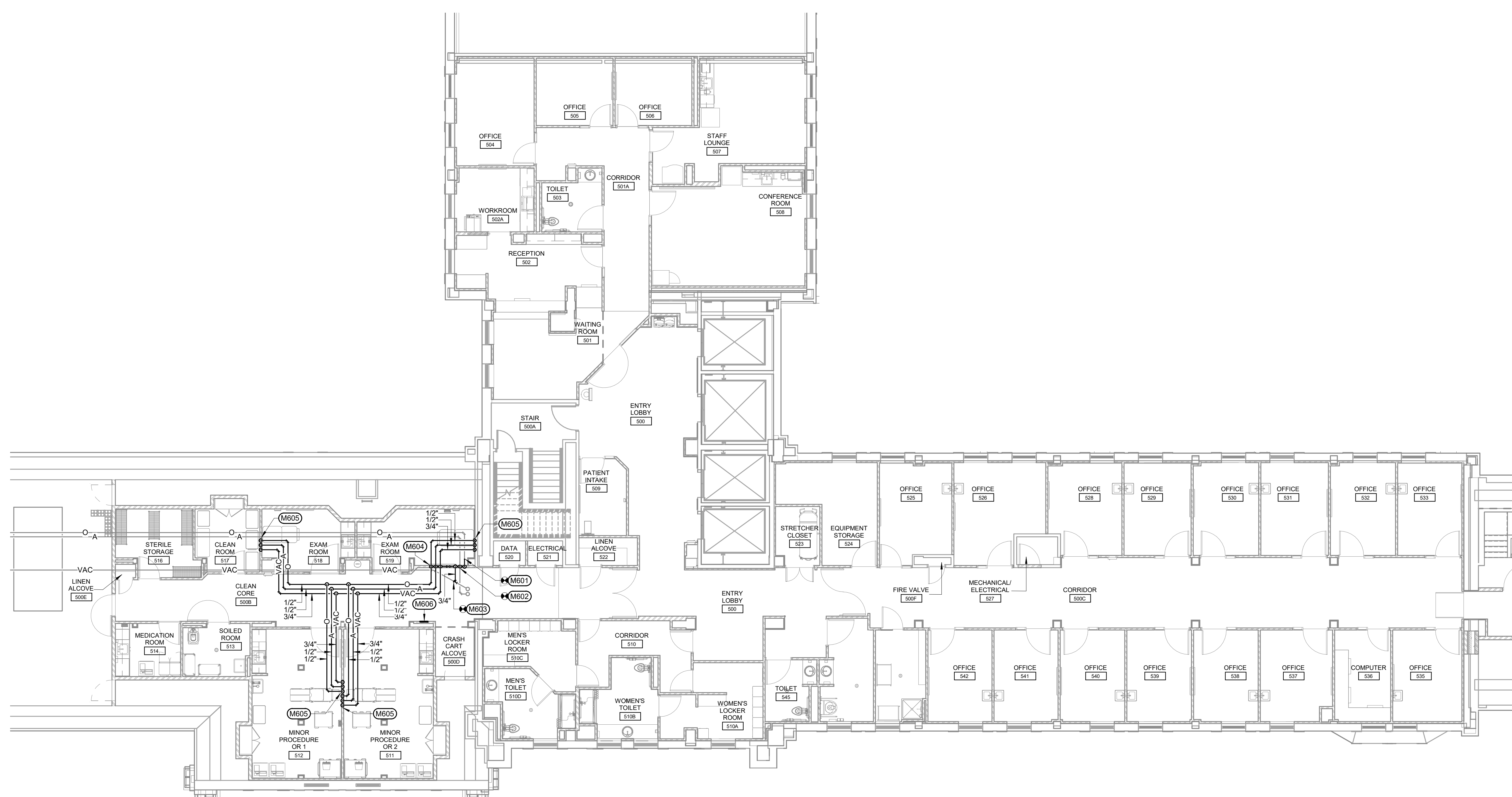
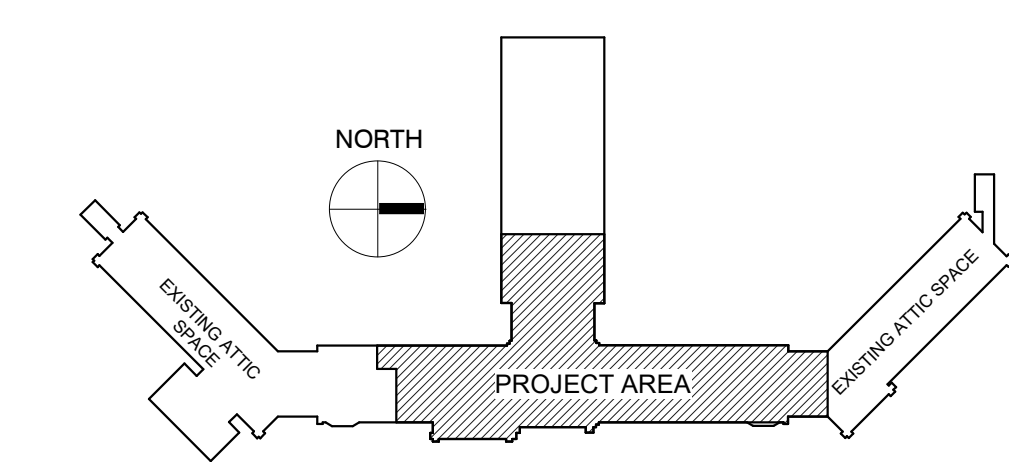


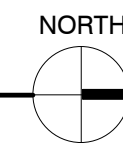
- KEYNOTES:**
- MECHANICAL SPECIFIC NOTES**
- M601 CONNECT NEW 1/2" OXYGEN TO EXISTING OXYGEN AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M602 CONNECT NEW 1/2" MEDICAL AIR TO EXISTING MEDICAL AIR AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M603 CONNECT NEW 3/4" VACUUM TO EXISTING VACUUM AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M604 ROUTE 3/4" VACUUM, 1/2" MEDICAL AIR, AND 1/2" OXYGEN DN TO MEDICAL GAS ZONE VALVE BOX. COORDINATE EXACT LOCATION WITH OWNER.
 - M605 ROUTE 3/4" VACUUM, 1/2" MEDICAL AIR, AND 1/2" OXYGEN DN TO MEDICAL GAS WALL OUTLETS. COORDINATE WITH ARCHITECTURAL PLANS.
 - M606 MEDICAL GAS ALARM PANEL. VERIFY EXACT LOCATION WITH OWNER. COORDINATE WITH ELECTRICAL CONTRACTOR.

- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
 - C DUCT SIZES ARE NET INSIDE DIMENSIONS.
 - D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - J WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
 - K REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - L ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - M INSTALLATION OF MEDICAL GAS SYSTEM SHALL FOLLOW STANDARD OPERATING PROCEDURES AS REQUIRED BY THE DEPARTMENT OF VETERAN AFFAIRS AND AS PER NFPA 99.
 - N PROVIDE OHMEDA STYLE OUTLETS. COORDINATE OUTLET TYPES WITH OWNER.

KEY PLAN:



MEDICAL GAS PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"



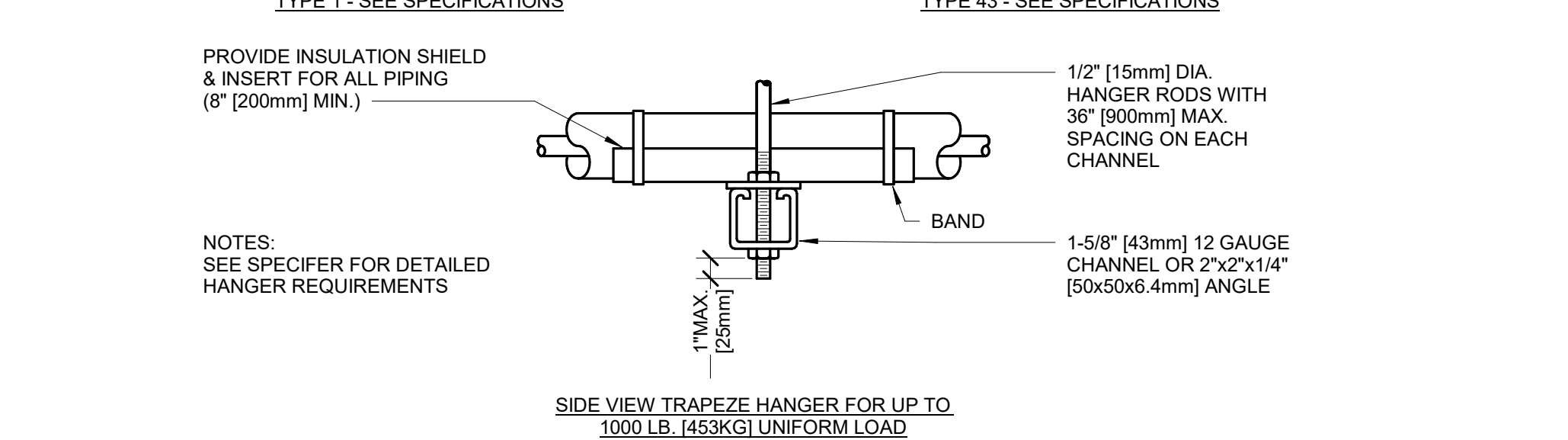
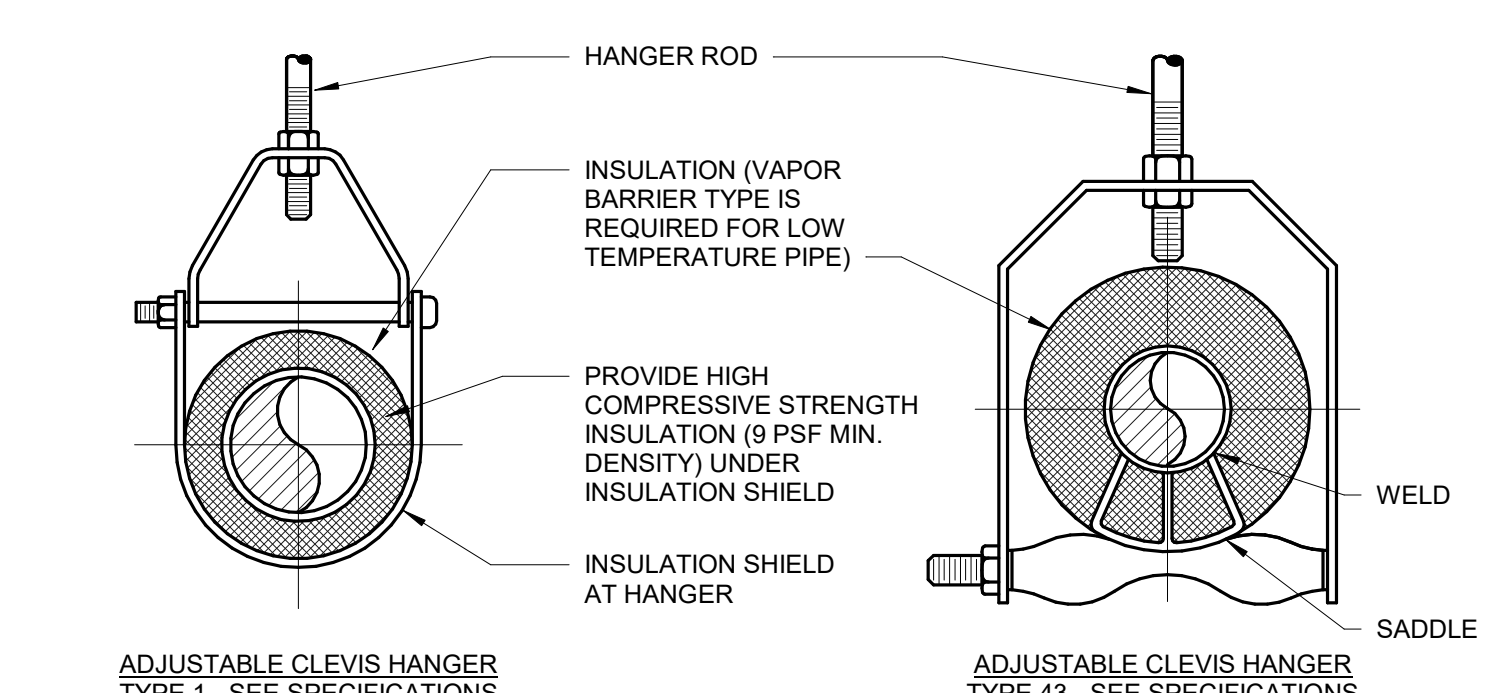
PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 15%;">Description</th> <th style="width: 10%;">Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	Description	Date				<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title MEDICAL GAS PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p>	<p>Drawing Number 5-PL103</p> <p>Dwg. 33 of 60</p>	<p>Office of Construction and Facilities Management</p>
No.	Description	Date											

MEDICAL GAS ALARM PANEL SCHEDULE

LOCATION	TYPE OF PANEL	GAGES	SERVICE INDICATOR LIGHTS
BOILER PLANT CONTROL OFFICE -OR- ENGINEERING CONTROL CENTER (ECC) -OR- OTHER LOCATION WITH ENGINEERING PERSONNEL SUPERVISION -AND- INTENSIVE CARE NURSING -OR- FIRE STATION -OR- PHONE SWITCHBOARD -OR- SECURITY OFFICE	MASTER (SYSTEM) ALARM PANEL	NO	LIQUID OXYGEN LEVEL LOW OXYGEN RESERVE SWITCHOVER OXYGEN RESERVE IN USE OXYGEN RESERVE LOW LIQUID LEVEL OXYGEN RESERVE PRESSURE LOW OXYGEN MAIN LINE PRESSURE LOW OXYGEN MAIN LINE PRESSURE HIGH NITROUS OXIDE CHANGE OVER TO SECONDARY NITROUS OXIDE RESERVE IN USE NITROUS OXIDE MAIN LINE PRESSURE LOW NITROUS OXIDE MAIN LINE PRESSURE HIGH NITROGEN CHANGE OVER TO SECONDARY NITROGEN RESERVE IN USE NITROGEN MAIN LINE PRESSURE LOW NITROGEN MAIN LINE PRESSURE HIGH MEDICAL AIR DEWPOINT HIGH MA COMPRESSOR MALFUNCTION MEDICAL AIR MAIN LINE PRESSURE LOW MEDICAL AIR MAIN LINE PRESSURE HIGH MA SYSTEM CARBON MONOXIDE HIGH DESICCANT DRYER MALFUNCTION DESICCANT DRYER POST FILTER DIRTY DESICCANT DRYER INLET FILTER DIRTY MAIN LINE FILTER BANK DIRTY MA REFRIGERATED DRYER POST FILTER DIRTY AFTER COOLER HIGH AIR TEMPERATURE MEDICAL VACUUM LINE VACUUM LOW MEDICAL VACUUM FILTER BACK PRESSURE TEST BUTTON
SURGERY CONTROL ROOM	AREA ALARM PANEL	YES	OXYGEN LINE PRESSURE ABNORMAL NITROUS OXIDE LINE PRESSURE ABNORMAL NITROGEN LINE PRESSURE ABNORMAL MEDICAL AIR LINE PRESSURE ABNORMAL MEDICAL VACUUM LINE VACUUM LOW TEST BUTTON
RECOVERY ROOMS CRITICAL CARE AREAS EMERGENCY AREAS PATIENT AREAS	AREA (ZONE) ALARM PANEL	YES	OXYGEN LINE PRESSURE ABNORMAL NITROUS OXIDE LINE PRESSURE ABNORMAL NITROGEN LINE PRESSURE ABNORMAL MEDICAL AIR LINE PRESSURE ABNORMAL MEDICAL VACUUM LINE VACUUM LOW TEST BUTTON



MAXIMUM PIPE/TUBING SUPPORT SPACING

NOM. SIZE	FT. [mm]	THRU 3/4\"/>											
PIPE	FT. [mm]	5 FT [1500]	6 FT [1800]	7 FT [2100]	8 FT [2400]	9 FT [2700]	10 FT [3000]	12 FT [3600]	14 FT [4200]	16 FT [4800]	18 FT [5400]	20 FT [6000]	24 FT [7200]
TUBING	FT. [mm]	5 FT [1500]	6 FT [1800]	7 FT [2100]	8 FT [2400]	9 FT [2700]	10 FT [3000]	12 FT [3600]	14 FT [4200]	16 FT [4800]	18 FT [5400]	20 FT [6000]	24 FT [7200]

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

1 PIPE HANGERS

SCALE: NO SCALE

MEDICAL GAS SYSTEM: DETAILS AND NOTES

MEDICAL GAS PIPING

PIPING LAYOUT IS DIAGRAMMATIC ONLY. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION AND COORDINATION OF ACTUAL LOCATIONS AND COORDINATE WITH OTHER TRADES.

ALL PRESSURE GAS PIPING SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR AND SHALL BE HARD-DRAWN SEAMLESS TYPE "K" OR "L" COPPER TUBING (ASTM B-819) AND BEAR ONE OF THE FOLLOWING MARKING: OXY, MED, OXY/MED, ACR/OXY, OR ACR/MED. TYPE "K" ONLY FOR NITROGEN SYSTEMS.

ALL VACUUM PIPING SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR AND SHALL BE HARD-DRAWN SEAMLESS TYPE "M" COPPER TUBING (ASTM B98) OR TYPE "L" COPPER MEDICAL GAS TUBING (ASTM B-819).

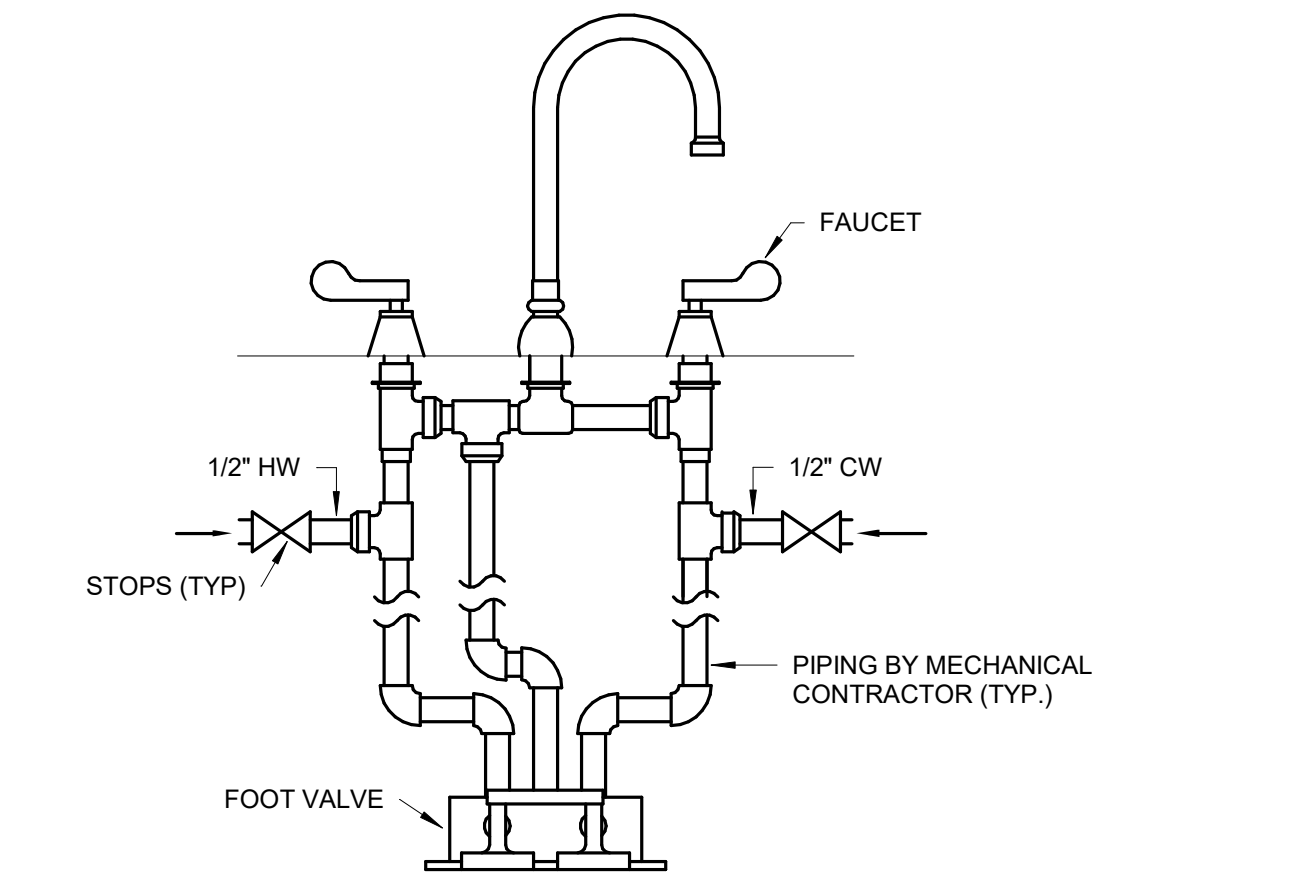
SUPPORT PIPING AS FOLLOWS:

1/2"	6 FT
3/4"	7 FT
1"	9 FT
1-1/4"	9 FT
1-1/2" AND LARGER	10 FT

ALL MEDICAL GAS EQUIPMENT SHALL BE PROVIDED BY A SINGLE SOURCE SUPPLIER WITH A MINIMUM 10 YEARS EXPERIENCE WITH MEDICAL GAS SYSTEM MAINTENANCE, CERTIFICATION AND TESTING OF MEDICAL GAS SYSTEMS AND EQUIPMENT AND MUST BE FACTORY TRAINED TO WARRANTY SUCH MEDICAL GAS SYSTEMS.

MEDICAL GAS SUPPLIER SHALL BE AN I.T.C. AND P.I.P.E. APPROVED CERTIFIER.

ROOMS #511, 512, 518, 519
48" AFF



2 DOUBLE FAUCET CONTROL DETAIL

SCALE: NO SCALE

100% CONSTRUCTION DRAWINGS

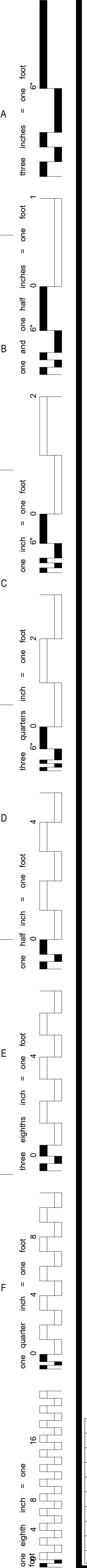
CONSULTANTS: WPE WEST PLAINS ENGINEERING, INC. 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		ARCHITECTS/ ENGINEERS: MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539		Drawing Title PLUMBING DETAILS Approved: Project Director		Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY Location SIOUX FALLS, SOUTH DAKOTA Date OCTOBER 17, 2017		Project Number 438-15-201 Building Number 5 Drawing Number 5- PL501 Dwg. 34 of 60		Office of Construction and Facilities Management	
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A three inches = one foot
 B one and one half inches = one foot
 C one inch = one foot
 D three quarters inch = one foot
 E three eighths inch = one foot
 F one eighth inch = one foot

PLUMBING FIXTURE SCHEDULE

UNIT TYPE	UNIT NUMBER	MANUFACTURER	MODEL	FIXTURE TYPE	SUPPLY			TRIM/REMARKS
					WASTE	VENT	HW	
FD	2"	ZURN	415B	2" OUTLET FLOOR DRAIN	2"	1 1/2"		1
FD	3"	ZURN	415B	3" OUTLET FLOOR DRAIN	3"	1 1/2"		2
IMB	1	GUY-GRAY	BIM875	ICE MAKER BOX		1/2"		3
OB	1	GUY-GRAY	B-200	OUTLET BOX	2"	1 1/2"	1/2"	4
P	101	ZURN	Z5645-BWL	WATER CLOSET (FLOOR MOUNTED FLUSH VALVE - BACK OUTLET) 1.6 GPF, ADA	4"	2"	1 1/4"	5
P	114	ACORN	2125-A	BARIATRIC WATER CLOSET (FLOOR MOUNTED FLUSH VALVE - BACK OUTLET) 1.6 GPF, ADA	4"	2"	1 1/4"	6
P	401	ZURN	Z831B4-XL	LAV INTERGRAL WITH COUNTERTOP, FAUCET ONLY	2"	1 1/2"	1/2"	7
P	501	ZURN	Z5888	CAST IRON SERVICE SINK 22"x18"	2"	1 1/2"	1/2"	8
P	502	ZURN	Z1996-24	MOP SERVICE SINK	3"	1 1/2"	1/2"	8
P	505	ZURN	Z5420	CLINIC SERVICE SINK	4"	1 1/2"	3/4"	10
P	518	ELKAY	EWS2520FC	SINGLE COMPARTMENT SS WALL MOUNTED SCRUB SINK WITH DOUBLE PEDAL FOOT VALVE	2"	1 1/2"	1/2"	11
P	528	ELKAY	LRAD221965	SINGLE COMPARTMENT SS COUNTERTOP SINK, 1.5 GPM LAMINAR FLOW WITH FOOT PEDAL CONTROLS	2"	1 1/2"	1/2"	12
P	528A	ELKAY	LRAD221965	SINGLE COMPARTMENT SS COUNTERTOP SINK, 1.5 GPM LAMINAR FLOW	2"	1 1/2"	1/2"	13
P	608	ELKAY	EZ5TLWWSLK	WATER CHILLER WITH BOTTLE FILLER (SPLIT LEVEL) ADA	2"	1 1/2"	1/2"	14
P	701	ZURN	Z7300-SS-HW-MT	ADA SHOWER ASSEMBLY W/ SLIDE BAR AND HANDWALL SHOWER 2.5 GPM		1/2"	1/2"	15
P	708	BRADLEY	S19-220FW	EYEFACE WASH FIXTURE WITH WALL BRACKET AND P-TRAP	2"	1 1/2"	1/2"	16

- COMMENTS:**
- ZURN 415B CAST IRON FLOOR DRAIN WITH TYPE B POLISHED NICKEL BRONZE, LIGHT DUTY STRAINER AND 2" PIPE OUTLET SIZE.
 - ZURN 415B CAST IRON FLOOR DRAIN WITH TYPE B POLISHED NICKEL BRONZE, LIGHT DUTY STRAINER AND 3" PIPE OUTLET SIZE.
 - RECESSED ICE MAKER BOX WITH 1/2" SUPPLY GATE VALVE, CAPPED FOR FUTURE CONNECTION, FIXTURE MOUNTING HEIGHT 48" A.F.F.
 - PROVIDE WITH 1/2" WATER CONNECTION AND 2" WASTE CONNECTION.
 - BEMIS 1955C WHITE OPEN FRONT SEAT WITH SS CHECK HINGE, VITREOUS CHINA ELONGATED BOWL SIPHON JET, DUAL FLUSH VALVE, 1.6 GPF.
 - ACORN BARIATRIC FLOOR MOUNTED, TOP SUPPLY, BACK WASTE OUTLET FLUSH VALVE TOILET, OPEN FRONT, 1200 LBS RATED HINGED SEAT LESS COVER, DUAL FLUSH VALVE, 1.6 GPF.
 - ZURN Z831B4-XL CHROME PLATED RIGID GOOSENECK FAUCET WITH 4" WRIST BLADE HANDLES AND VANDAL RESISTANT 1.5 GPM LAMINAR FLOW OUTLET. PROVIDE WITH 17 GAUGE CHROME PLATED P TRAP, LA12K SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS, GRID DRAIN, TRUEBRO LAV PIPING SHIELD (WHITE), PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX), ADA COMPLIANT.
 - ZURN Z643M4-RC ROUGH CHROME PLATED FAUCET, ZURN TS2904IP2 ADJUSTABLE 2" CAST IRON BODY P-TRAP W/ CHROME PLATED BRONZE STRAINER, GASKET, AND CLEAN OUT PLUG.
 - ZURN Z843M4-RC, (BC) STAINLESS STEEL BUMPER GAURD, (HH) HOSE AND HOSE BRACKET, (SDL) 3" STAINLESS STEEL DRAIN WITH DOME STRAINER, (WG) STAINLESS STEEL WALL GUARD.
 - SIPHON JET, VITREOUS CHINA, FLOOR MOUNTED, WITH ACORN CSB TERRAZZO CLINIC SINK BASE, ZURN Z6084KAV-BWN BEDPAN WASHER FLUSH VALVE AND SERVICE SINK FAUCET WITH BEDPAN WASHER.
 - STAINLESS STEEL WALL MOUNTED, SINGLE STATION SCRUB SINK WITH ELKAY LK398C FOOT PEDAL VALVE, ELKAY 8-3/16" RIGID GOOSENECK SPOUT WITH AE19A VANDAL RESISTANT ANTI-HOSE AERATOR. PROVIDE WITH ELKAY LK188 STAINLESS STEEL STRAINER WITH INTEGRAL TAILPIECE, P-TRAP, AND SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS. PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX).
 - SINGLE COMPARTMENT STAINLESS STEEL COUNTERTOP SINK, DRAIN OUTLET IN CENTER OF BASIN, HOLE DRILLING CONFIGURATION 3 (3 HOLES AT 4" OC). PROVIDE WITH ZURN Z831B4-XL CHROME PLATED RIGID GOOSENECK FAUCET WITH 4" WRIST BLADE HANDLES AND VANDAL RESISTANT 1.5 GPM LAMINAR FLOW OUTLET. PROVIDE ZURN Z85800-XL DOUBLE FOOT PEDAL VALVE PROVIDE WITH 17 GAUGE CHROME PLATED P TRAP, EBC 588H STRAINER, AND LA12K SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS. PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX), SEE ARCHITECTURAL PLANS FOR COUNTERTOP ELEVATIONS, COORDINATE SINK OPENING WITH COUNTERTOP MILLWORK.
 - SINGLE COMPARTMENT STAINLESS STEEL COUNTERTOP SINK, DRAIN OUTLET IN CENTER OF BASIN, HOLE DRILLING CONFIGURATION 3 (3 HOLES AT 4" OC). PROVIDE WITH ZURN Z831B4-XL CHROME PLATED RIGID GOOSENECK FAUCET WITH 4" WRIST BLADE HANDLES AND VANDAL RESISTANT 1.5 GPM LAMINAR FLOW OUTLET. PROVIDE WITH 17 GAUGE CHROME PLATED P TRAP, EBC 588H STRAINER, AND LA12K SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS. PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX), SEE ARCHITECTURAL PLANS FOR COUNTERTOP ELEVATIONS, COORDINATE SINK OPENING WITH COUNTERTOP MILLWORK.
 - WATER COOLER WITH ELECTRONIC SENSOR OPERATED BOTTLE FILLER, PROVIDE WITH 17 GAUGE P TRAP AND EBC VA12K KEYED ANGLED STOP VALVE.
 - SHOWER TRIM, LEVER VOLUME CONTROL HANDLE, THERMOSTATIC VALVE CARTRIDGE, PERSONAL HAND HELD SHOWER S1701, 60 FLEXIBLE METAL HOSE HAND SPRAYER
 - PROVIDE WITH STAINLESS STEEL BASIN, EYEFACE WASH, STAINLESS STEELHANDLE AND FOOT ACTIVATION ACTVATION, DUST/BAR COVER, STAINLESS STEEL BALL VALVE, SCALD PROTECTION VALVE, MIXING VALVE AND INLINE STRAINER. PROVIDE WITH BRADLEY S19-2000 EFX8 EMERGENCY THERMOSTATIC MIXING VALVE.



100% CONSTRUCTION DRAWINGS

Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		Project Number 438-15-201	
Location SIoux FALLS, SOUTH DAKOTA		Building Number 5	
Date OCTOBER 17, 2017	Checked WM	Drawn DNT	Drawing Number 5- PL601
		Dwg. 35 of 60	

Office of
Construction
and Facilities
Management

Revisions:	Date

CONSULTANTS:

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 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND

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ARCHITECTS/ ENGINEERS:

MSH ARCHITECTS

625 S. MINNESOTA AVENUE, SUITE 204
SIOUX FALLS, SOUTH DAKOTA 57104-4873
TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title
PLUMBING SCHEDULES

Approved: Project Director

KEYNOTES:

M165 REMOVE EXISTING EXHAUST DUCT UP THRU FLOOR, AND CAP AT EXISTING EXHAUST DUCT THIS LOCATION. PATCH FLOOR TO MATCH EXISTING. PATCH CHASE WALLS TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. SEE HVAC VENTILATION PLAN - FOURTH FLOOR FOR NEW WORK THIS AREA.

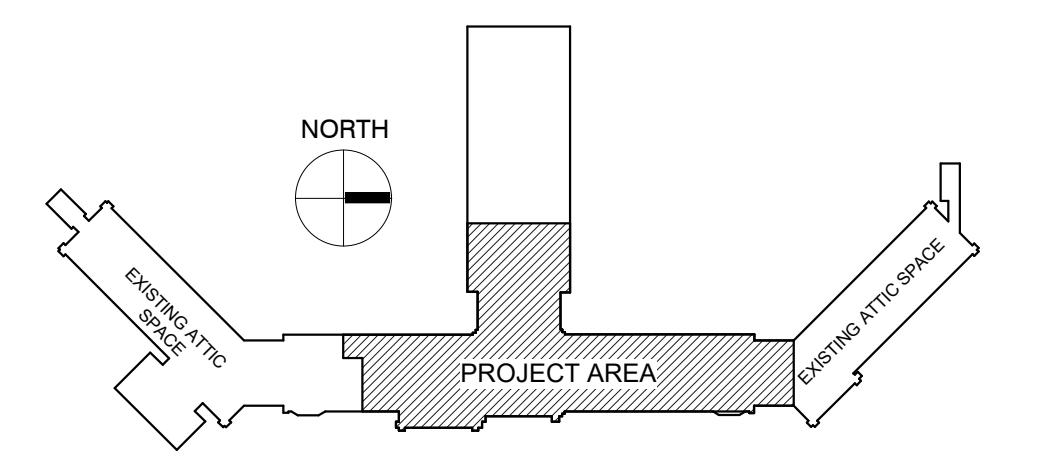
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- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



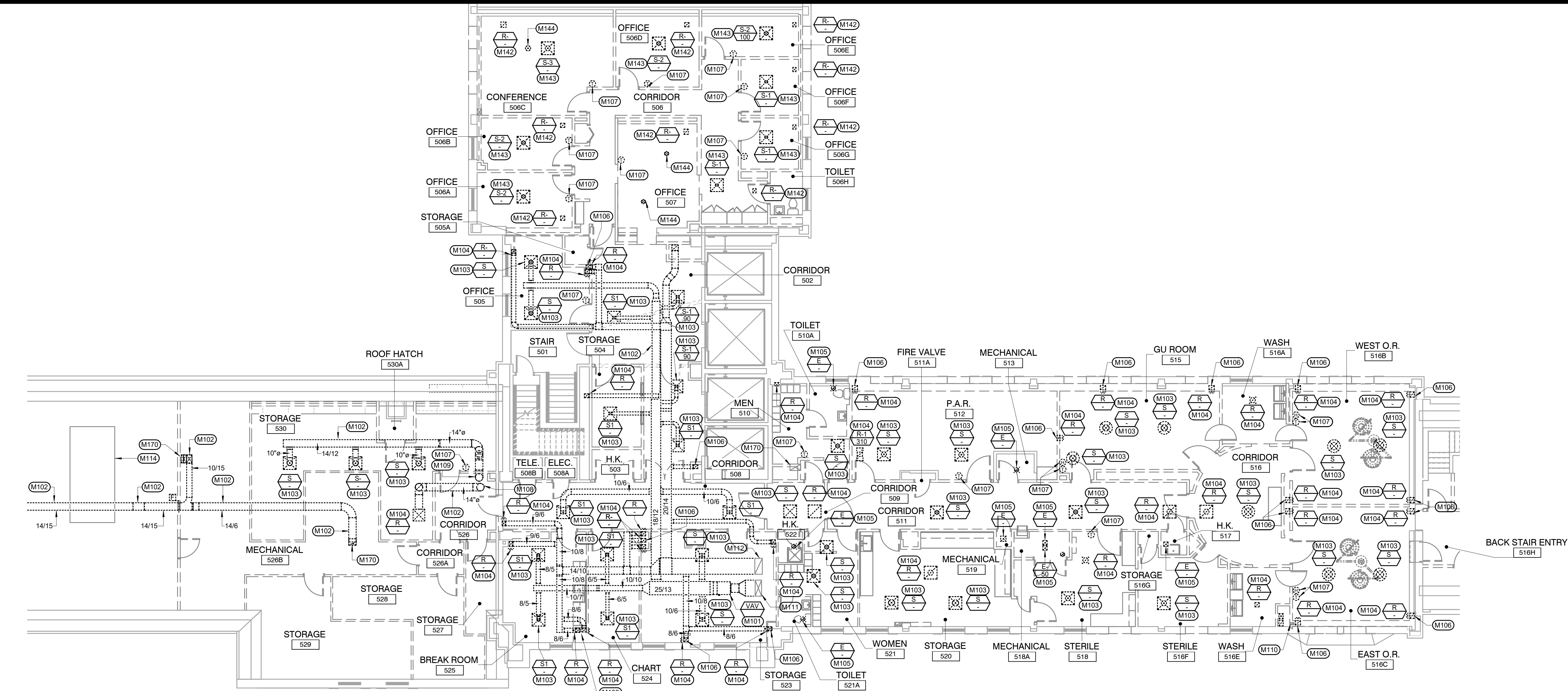
DEMOLITION HVAC VENTILATION PLAN - FOURTH FLOOR
SCALE: 1/8" = 1'-0"

PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

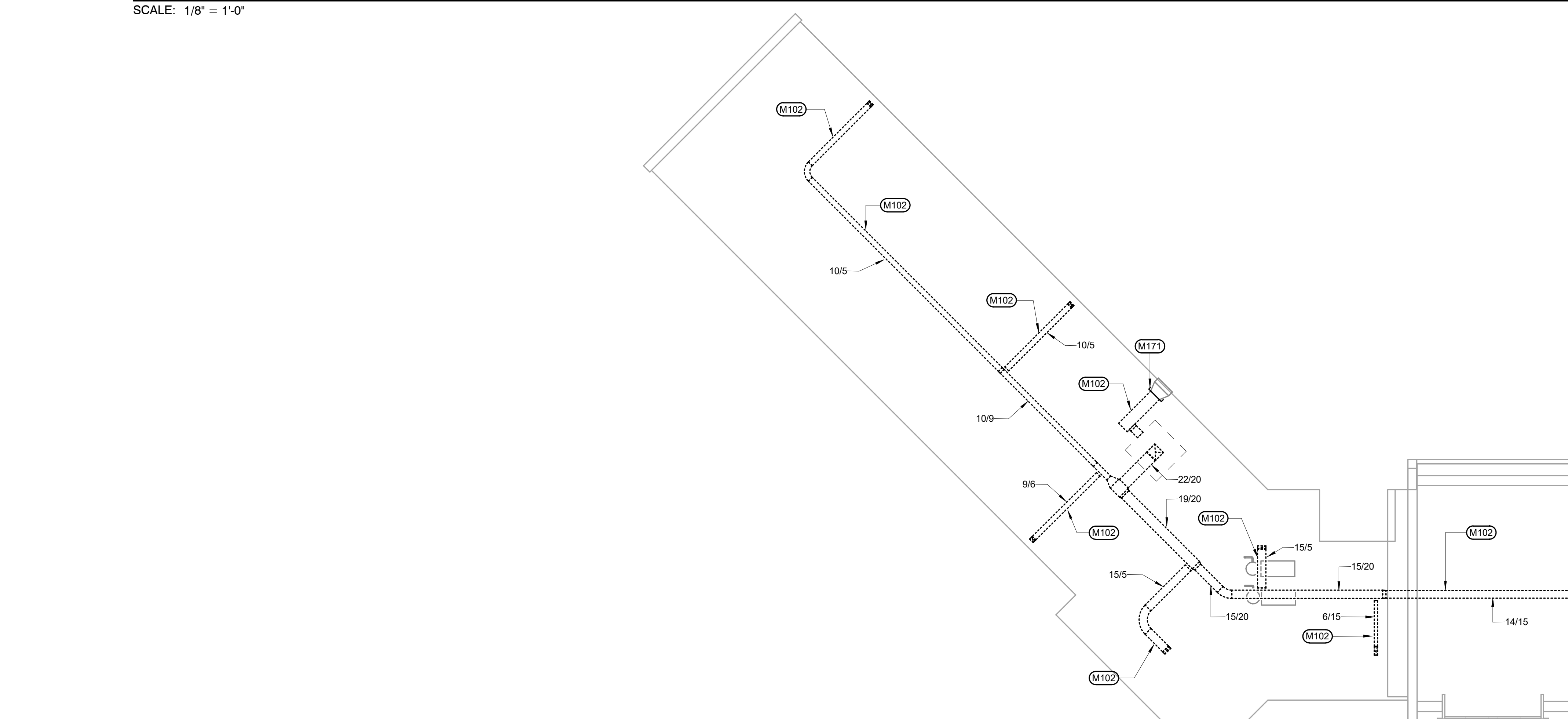
100% CONSTRUCTION DRAWINGS

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						Location SIOUX FALLS, SOUTH DAKOTA	Building Number 5	
Date OCTOBER 17, 2017	Checked WM	Drawn DNT						

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DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"

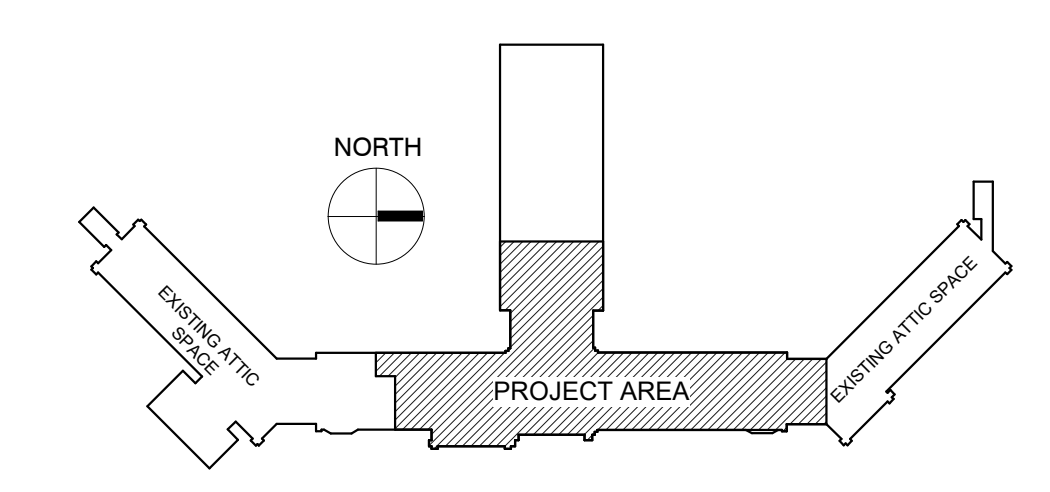


DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR - EXISTING ATTIC SPACE
SCALE: 3/32" = 1'-0"

- KEYNOTES:**
- M101 REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROLS. VERIFY EXACT SIZE AND LOCATION.
 - M102 REMOVE EXISTING DUCTWORK INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M103 REMOVE EXISTING DIFFUSER. REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M104 REMOVE EXISTING RETURN AIR GRILLE REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M105 REMOVE EXISTING EXHAUST AIR GRILLE REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M106 REMOVE EXISTING RETURN DUCTWORK DOWN IN WALL. VERIFY EXACT SIZE AND LOCATION.
 - M107 REMOVE EXISTING CONTROLS. AND EXISTING WIRING AND TUBING WHERE APPLICABLE. VERIFY EXACT SIZE AND LOCATION.
 - M108 REMOVE EXISTING RETURN DUCTWORK UP THRU FLOOR TO PENTHOUSE ABOVE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M109 REMOVE EXISTING SUPPLY DUCTWORK UP THRU FLOOR TO PENTHOUSE ABOVE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M110 EXISTING EXHAUST DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M111 EXISTING SUPPLY DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M112 EXISTING RETURN DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M114 EXISTING AIR HANDLING UNIT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M142 REMOVE EXISTING RETURN AIR GRILLE. REMOVE EXISTING DUCTWORK UP THRU LID. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION.
 - M143 REMOVE EXISTING DIFFUSER. REMOVE EXISTING DUCTWORK UP THRU LID. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION.
 - M144 REMOVE EXISTING DUCTWORK UP THRU LID. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION.
 - M170 REMOVE EXISTING EXHAUST RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FOURTH FLOOR BELOW. CAP DUCTWORK AT MAIN. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FOURTH FLOOR FOR CONTINUATION.
 - M171 PROVIDE A SHEET METAL INSULATED CAP AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING DUCTWORK.

- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
 - C DUCT SIZES ARE NET INSIDE DIMENSIONS.
 - D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
 - J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:

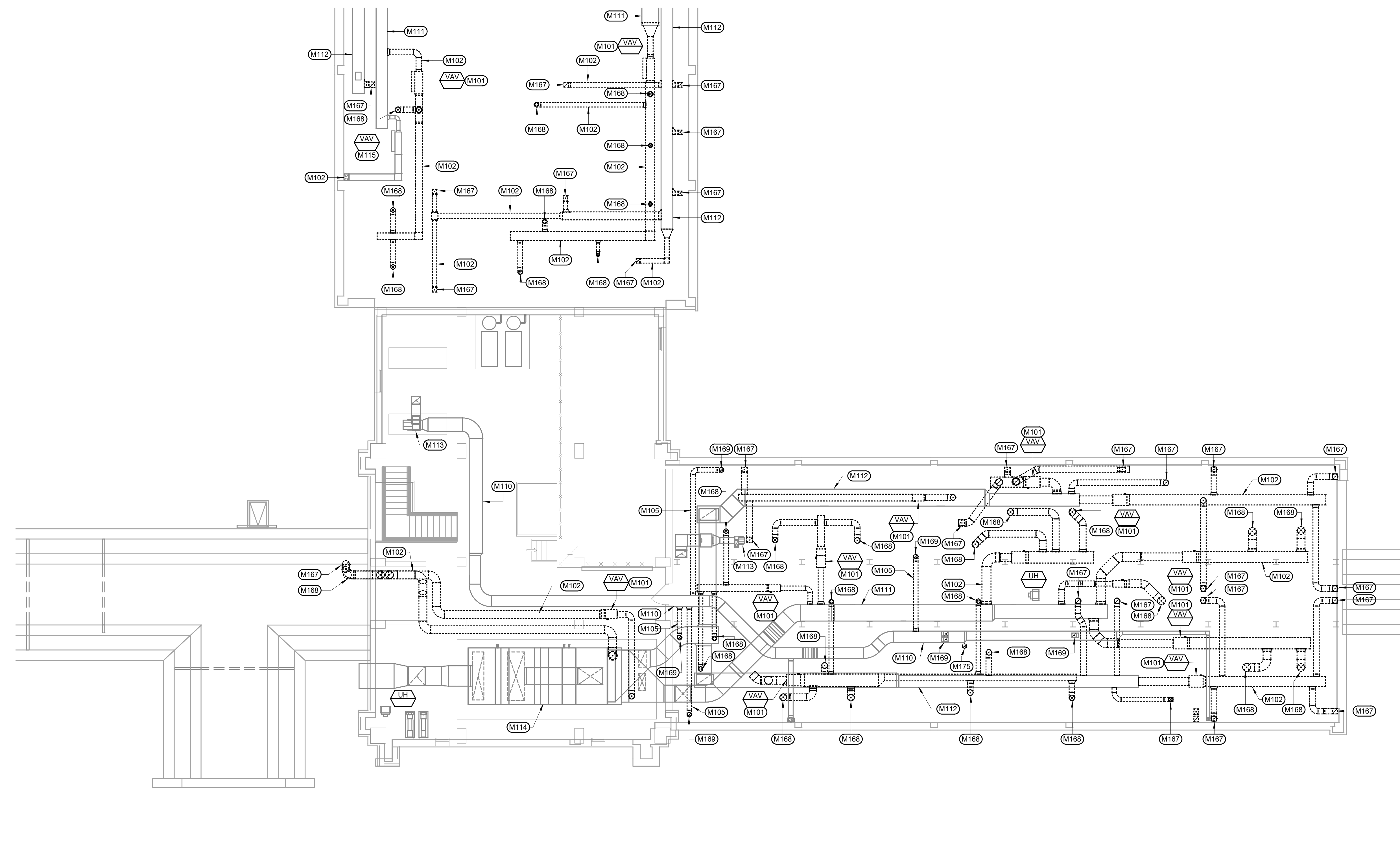


PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

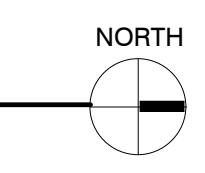
100% CONSTRUCTION DRAWINGS

CONSULTANTS: WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		ARCHITECTS/ ENGINEERS: 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513		 MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539		Drawing Title DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR Approved: Project Director		Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY Project Number 438-15-201 Building Number 5 Location SIOUX FALLS, SOUTH DAKOTA Date OCTOBER 17, 2017 Checked WM Drawn DNT		Drawing Number 5-MD102 Dwg. 37 of 60 Office of Construction and Facilities Management	
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A three inches = one foot
 B one and one half inches = one foot
 C one inch = one foot
 D three quarters inch = one foot
 E one half inch = one foot
 F three eighths inch = one foot
 G one quarter inch = one foot
 H one eighth inch = one foot



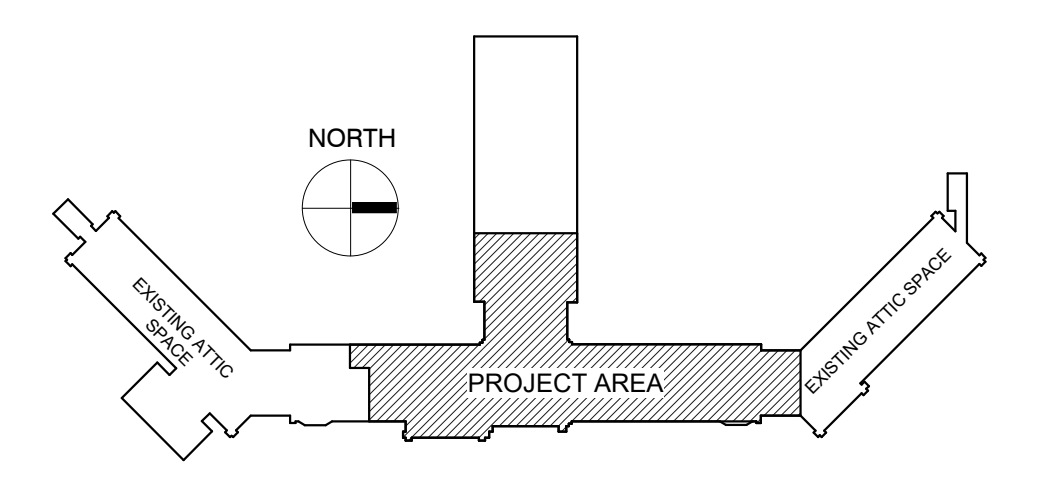
DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE
SCALE: 1/8" = 1'-0"



- KEYNOTES:**
- M101 REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROLS. VERIFY EXACT SIZE AND LOCATION.
 - M102 REMOVE EXISTING DUCTWORK INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M105 REMOVE EXISTING EXHAUST AIR GRILLE. REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M110 EXISTING EXHAUST DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M111 EXISTING SUPPLY DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M112 EXISTING RETURN DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M113 EXISTING EXHAUST FAN TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M114 EXISTING AIR HANDLING UNIT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M115 EXISTING VAV BOX TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M167 REMOVE EXISTING RETURN RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FIFTH FLOOR BELOW. CAP DUCTWORK AT MAIN. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M168 REMOVE EXISTING SUPPLY RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FIFTH FLOOR BELOW. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M169 REMOVE EXISTING EXHAUST RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FIFTH FLOOR BELOW. CAP DUCTWORK AT MAIN. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M175 REMOVE EXISTING EXHAUST STACK DUCTWORK FROM UP THRU ROOF, TO DOWN THRU PENTHOUSE FLOOR TO FIFTH FLOOR BELOW. PATCH PENTHOUSE FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR FOR FLOOR AND ROOF REPAIR. SEE ARCHITECTURAL PLANS. ALSO SEE ARCHITECTURAL PLANS FOR ASBESTOS REMOVE ON THIS DUCTWORK. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.

- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
 - C DUCT SIZES ARE NET INSIDE DIMENSIONS.
 - D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
 - J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:

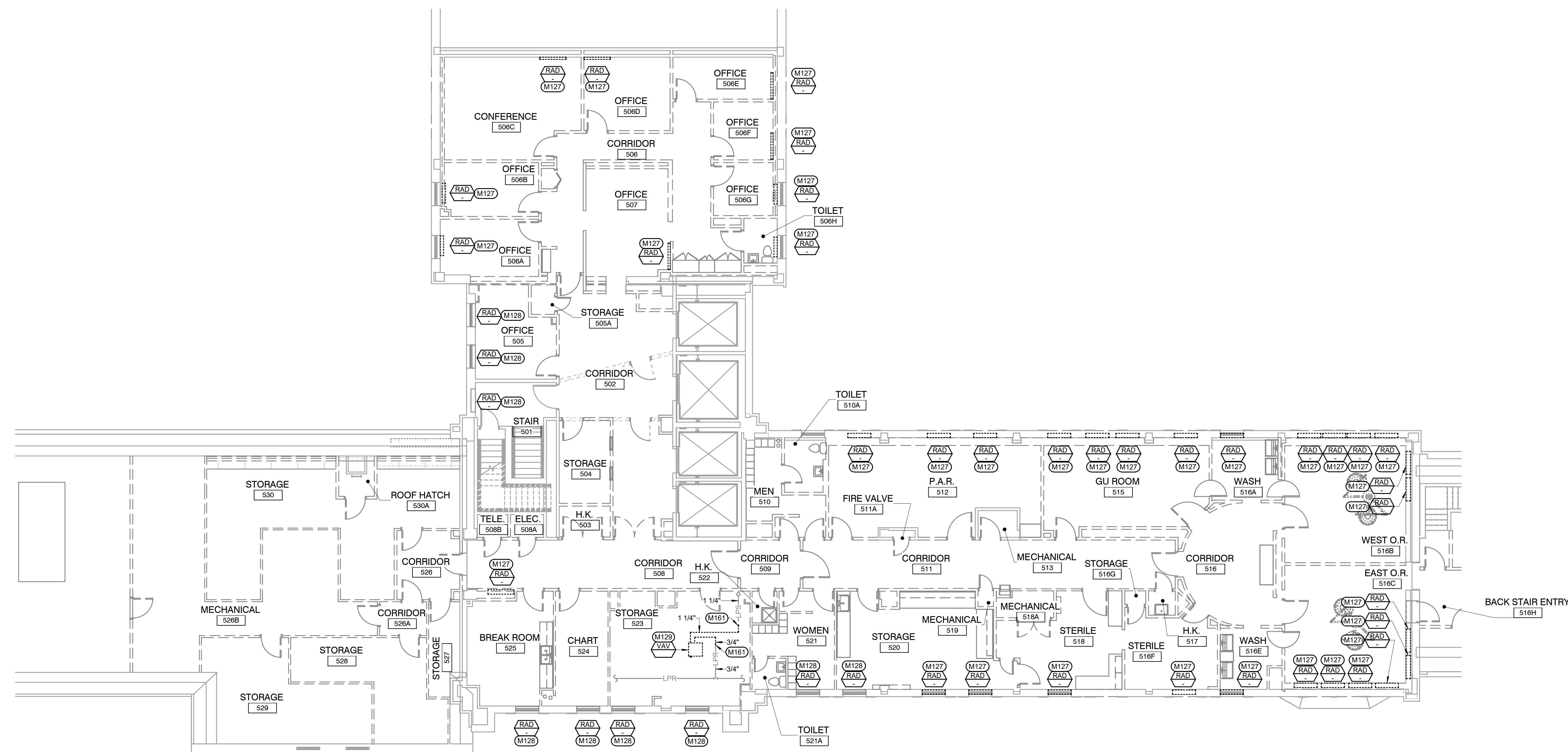


PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 15%;">Description</th> <th style="width: 10%;">Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	Description	Date							<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p> <p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-MD103</p> <p>Dwg. 38 of 60</p>	<p>Office of Construction and Facilities Management</p>
No.	Description	Date												

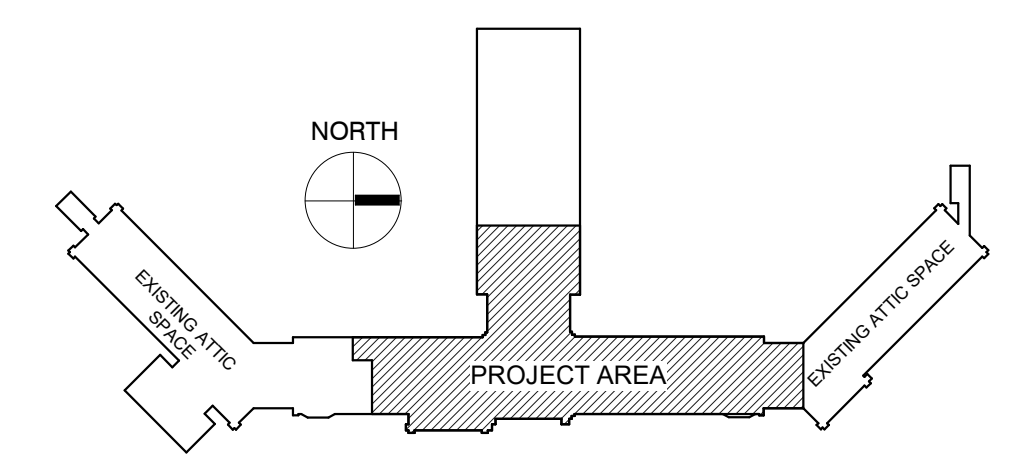
- KEYNOTES:**
- M127 REMOVE EXISTING CONVECTOR, CAP PIPING IN WALLS. VERIFY EXACT SIZE AND LOCATION. COORDINATE WITH GENERAL CONTRACTOR.**
- M128 EXISTING CONVECTOR TO REMAIN. VERIFY EXACT SIZE AND LOCATION.**
- M129 REMOVE EXISTING VAV BOX AND ASSOCIATED STEAM PIPING INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION.**
- M161 REMOVE EXISTING STEAM PIPING INDICATED AS DASHED BACK TO THIS LOCATION. PREPARE REMAINING STEAM PIPING FOR NEW CONNECTION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.**



DEMOLITION HVAC PIPING PLAN - FIFTH FLOOR
 SCALE: 1/8" = 1'-0"

- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
 - C DUCT SIZES ARE NET INSIDE DIMENSIONS.
 - D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
 - J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



PHASING PLAN NOTE:
 SEE ARCHITECTURAL PLANS
 FOR PHASING OF PROJECT

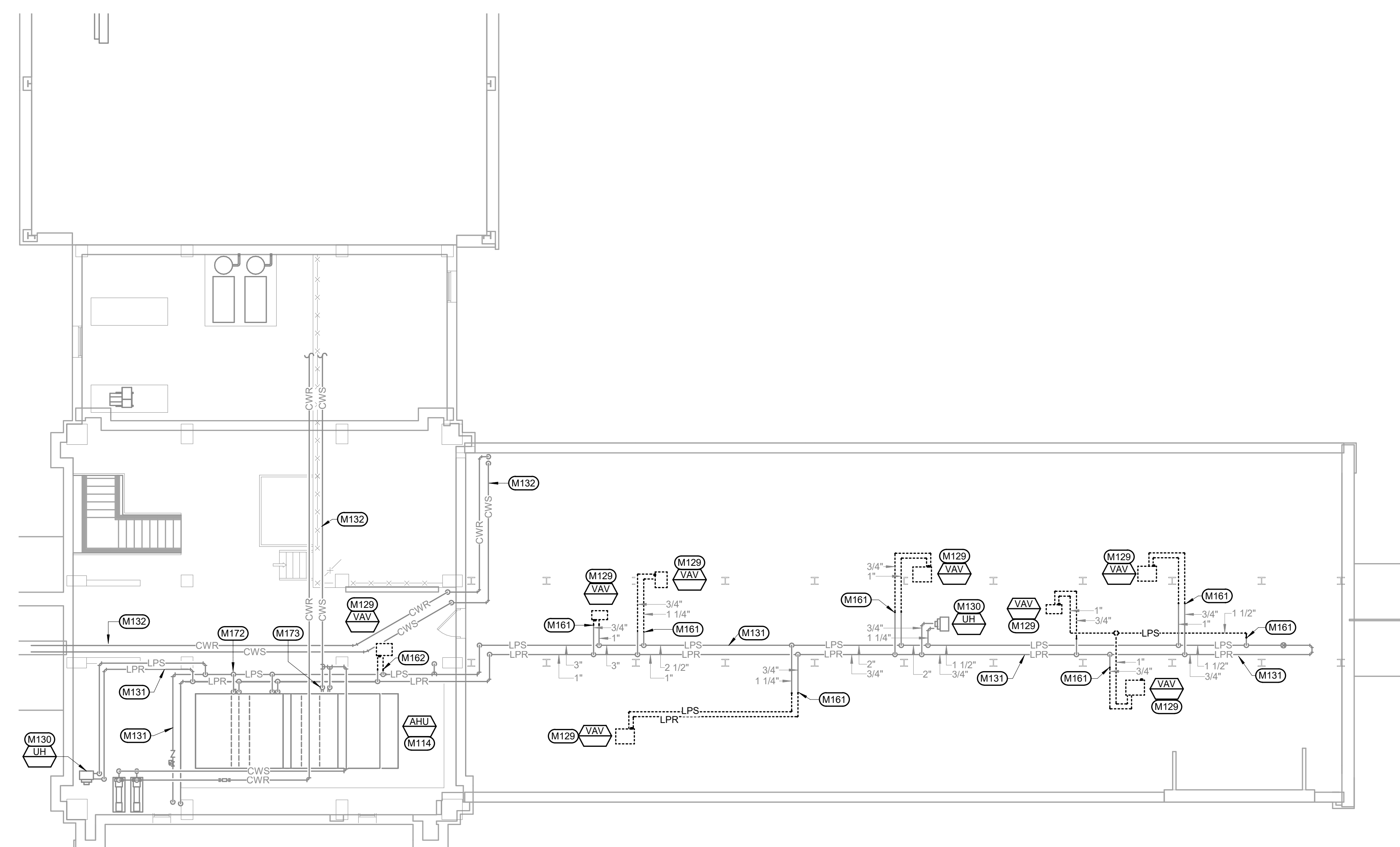
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No.	Description	Date											

one eighth inch = one foot
 one quarter inch = one foot
 three eighths inch = one foot
 one half inch = one foot
 three quarters inch = one foot
 one inch = one foot
 one and one half inches = one foot
 three inches = one foot
 six inches = one foot

KEYNOTES:

- M** **MECHANICAL SPECIFIC NOTES**
- M114 EXISTING AIR HANDLING UNIT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M129 REMOVE EXISTING VAV BOX AND ASSOCIATED STEAM PIPING INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION.
 - M130 EXISTING UNIT HEATER TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M131 EXISTING LPR AND LPS PIPING TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M132 EXISTING CHILLED WATER PIPING TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M161 REMOVE EXISTING STEAM PIPING INDICATED AS DASHED BACK TO THIS LOCATION. PREPARE REMAINING STEAM PIPING FOR NEW CONNECTION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M162 REMOVE EXISTING STEAM PIPING INDICATED AS DASHED BACK TO MAIN. CAP EXISTING LPR AT MAIN. PREPARE EXISTING LPS FOR NEW CONNECTION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M172 REMOVE AND REPLACE STEAM CONTROL VALVE. VERIFY EXACT SIZE AND LOCATION. SEE SHEET MP103 -HVAC PIPING PLAN - PENTHOUSE FOR CONTINUATION.
 - M173 REMOVE AND REPLACE CHILLED WATER CONTROL VALVE. VERIFY EXACT SIZE AND LOCATION. SEE SHEET MP103 -HVAC PIPING PLAN - PENTHOUSE FOR CONTINUATION.



DEMOLITION HVAC PIPING PLAN - PENTHOUSE

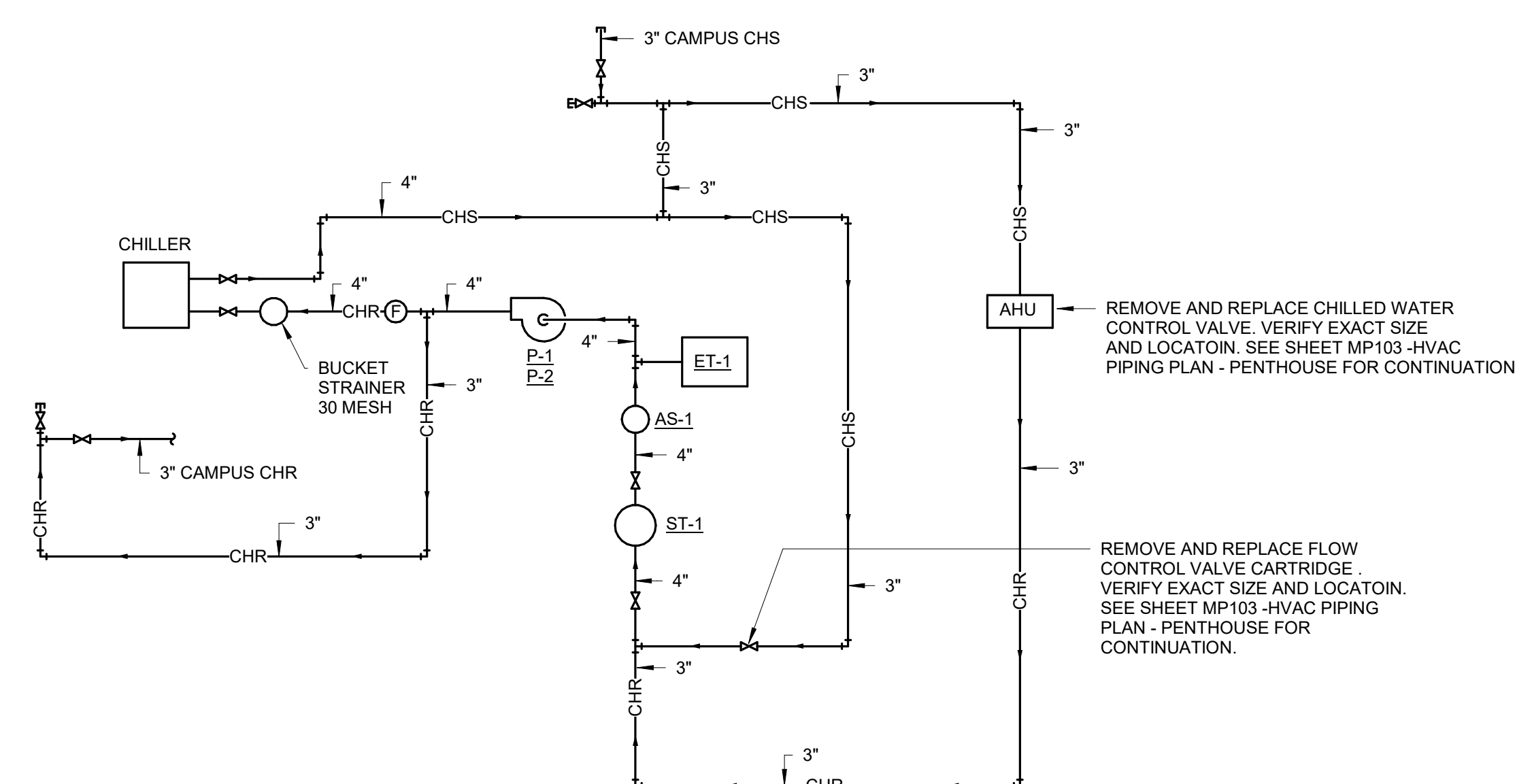
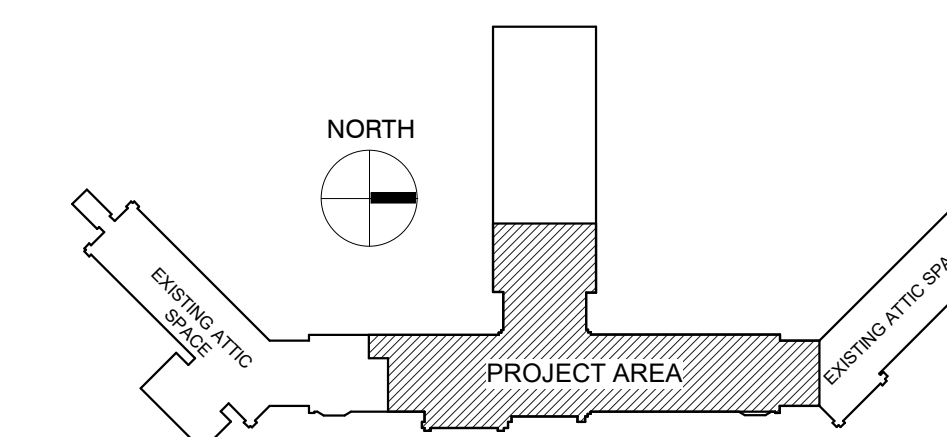
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES:

- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
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- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



2 CHILLED WATER PIPING SCHEMATIC - DEMOLITION

SCALE: NO SCALE

PHASING PLAN NOTE:

SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

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No.	Description	Date											