

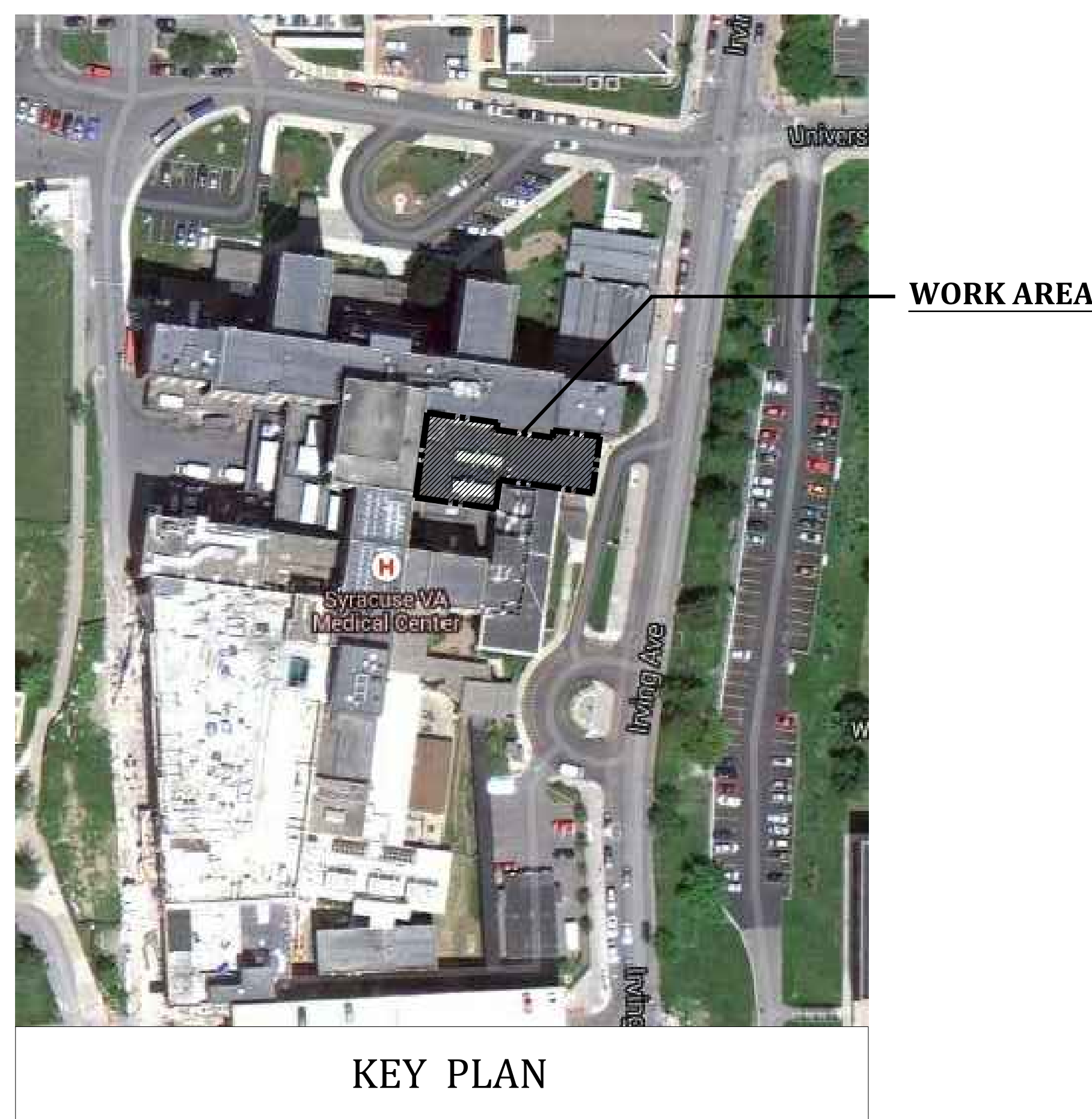


# V.A. MEDICAL CENTER SYRACUSE, NEW YORK

## MRI GANTRY ROOM DESIGN

800 IRVING AVENUE  
SYRACUSE, NEW YORK

PROJECT NO. 528A7-14-704



three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
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MD102	MECHANICAL SECOND LEVEL PIPING DEMOLITION PLAN
M101	MECHANICAL SECOND LEVEL NEW DUCTWORK PLAN
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E101	ELECTRICAL SECOND LEVEL NEW WORK POWER PLAN

**STATEMENT OF WORK:**

1. THE INTENT OF THIS PROJECT IS TO REPLACE THE EXISTING AHU IN THE CEILING OF ROOM M211 WITH A NEW FLOOR MOUNTED CRAC UNIT. ALL NEW DUCTWORK WILL BE INSTALLED IN ROOM M211. DISCONNECTION AND RECONNECTION OF POWER, CHILLED WATER, HUMIDIFICATION WATER AND CONDENSATE DRAINAGE IS INCLUDED IN THIS WORK SCOPE. IN ADDITION, A BACNET OVER ETHERNET CONNECTION FROM THE NEW CRAC UNIT TO THE EXISTING BAS CABINET IN ROOM M203A IS INCLUDED.
2. THE OUTAGE FOR CUT OVER TO THE NEW UNIT SHALL BE PERFORMED OVER A WEEKEND COORDINATED WITH THE COR. THE NEW CRAC UNIT SERVES THE MRI GANTRY ROOM (M219) AND EQUIPMENT ROOM (M217) WHICH CONTAINS COMPUTER EQUIPMENT. PREPARATION FOR THE CUT OVER AND WORK FOLLOWING THE CUT OVER MAY BE PERFORMED DURING NORMAL WORKING HOURS.

Revisions: _____ Date: _____	<b>CONSULTANTS:</b>   	Stamp 	<b>ARCHITECT/ENGINEERS:</b>  1740 MASSACHUSETTS AVE BOXBOROUGH, MA 01719 Phone: 978-266-3711 Fax: 978-415-5038	Drawing Title <b>COVER SHEET</b>	Project Title <b>MRI GANTRY ROOM DESIGN</b>	Project Number <b>528A7-14-704</b>	Office of Construction and Facilities Management  Department of Veterans Affairs	
					Approved Project Director  	Location <b>Syracuse, New York 13210</b>		Building Number <b>1</b>
					Date <b>06/11/2014</b>	Checked <b>RAE</b>		Drawn <b>JPS</b>



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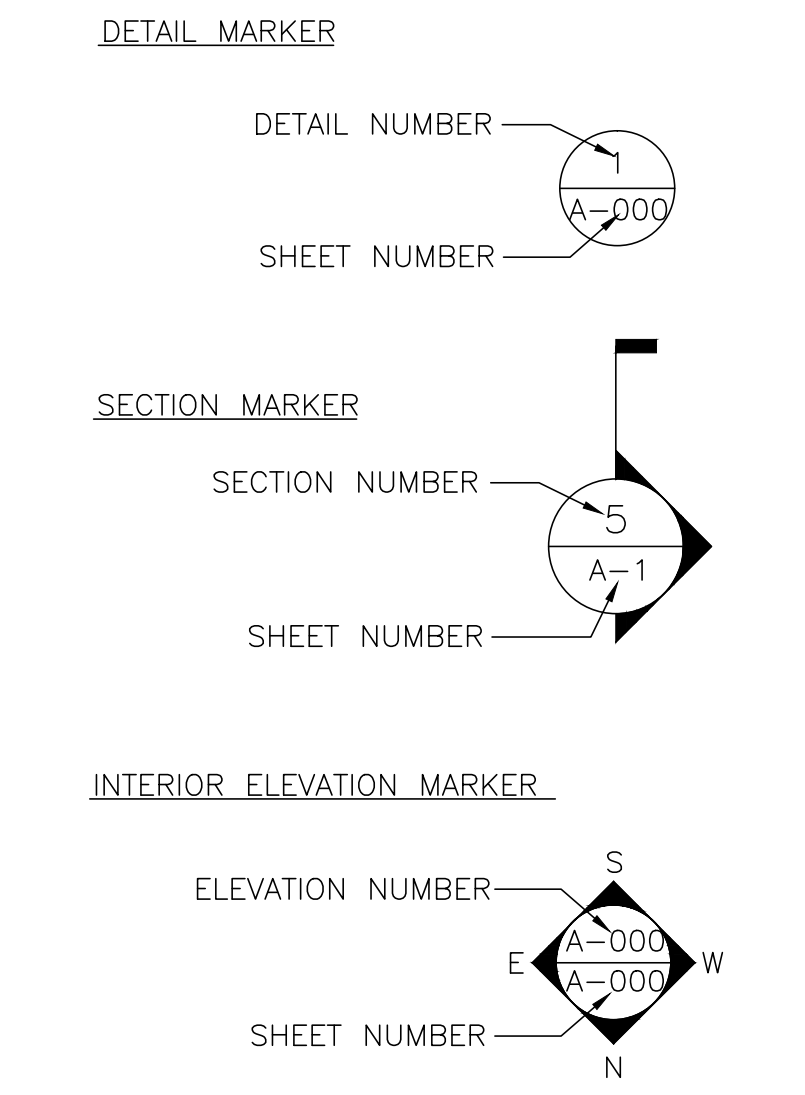
**SEQUENCE OF OPERATIONS:**



1. **COOLING MODE**
  - a. CONTROLLER SHALL MEASURE RETURN AIR TEMPERATURE AND MODULATE THE CHILLED WATER COIL VALVE TO MAINTAIN ITS COOLING SET POINT. COOLING SHALL BE ENABLED WHENEVER RETURN AIR TEMPERATURE IS MORE THAN 70°F. (ADJ.)
2. **HEATING MODE**
  - a. CONTROLLER SHALL MEASURE RETURN AIR TEMPERATURE AND MODULATE THE ELECTRIC REHEAT TO MAINTAIN ITS HEATING SET POINT. HEATING SHALL BE ENABLED WHENEVER RETURN AIR TEMPERATURE IS BELOW 68°F. (ADJ.)
3. **HUMIDIFICATION**
  - a. THE CONTROLLER SHALL MEASURE RETURN AIR RELATIVE HUMIDITY LEVEL AND MODULATE THE HUMIDIFIER TO MAINTAIN RELATIVE HUMIDITY SET POINT OF 40% RH. (ADJ.)
4. **ALARMS SHALL BE PROVIDED REMOTELY AT THE VAVC ECC. THE CONTRACTOR SHALL DEVELOP A TYPICAL POP-UP ALARM TO INDICATE TYPE OF ALARM. ALARMS SHALL INCLUDE BUT NOT BE LIMITED TO:**
  1. A GENERAL REMOTE ALARM SIGNAL SHALL BE PROVIDED TO THE BAS PANEL AS FOLLOWS:
    - a. HIGH TEMPERATURE = 72°F (ADJ.)
    - b. LOW TEMPERATURE = 66°F (ADJ.)
    - c. HIGH HUMIDITY LEVEL = 55% RH (ADJ.)
    - d. LOW HUMIDITY LEVEL = 35% RH (ADJ.)
    - e. NO AIR FLOW
    - f. HIGH FILTER ΔP
    - g. FIRE STAT TRIPPED
    - h. LOW VOLTAGE ALARM
    - i. TEMPERATURE SENSOR FAILURE
    - j. HUMIDITY SENSOR FAILURE
    - k. POWER FAILURE RESTART
    - l. HIGH CONDENSATE LEVEL
  2. IF THE RETURN AIR TEMPERATURE IS BELOW THE HEATING SETPOINT AND RETURN AIR HUMIDITY EXCEEDS 50% (ADJ.) AND THE BAS IS IN THE COOLING MODE, THE BUILDING BAS SHALL MODULATE CHILLED WATER TO CC-1 TO REDUCE OUTSIDE AIR HUMIDITY SUPPLIED TO AC-18.

**ABBREVIATIONS AND SYMBOLS:**

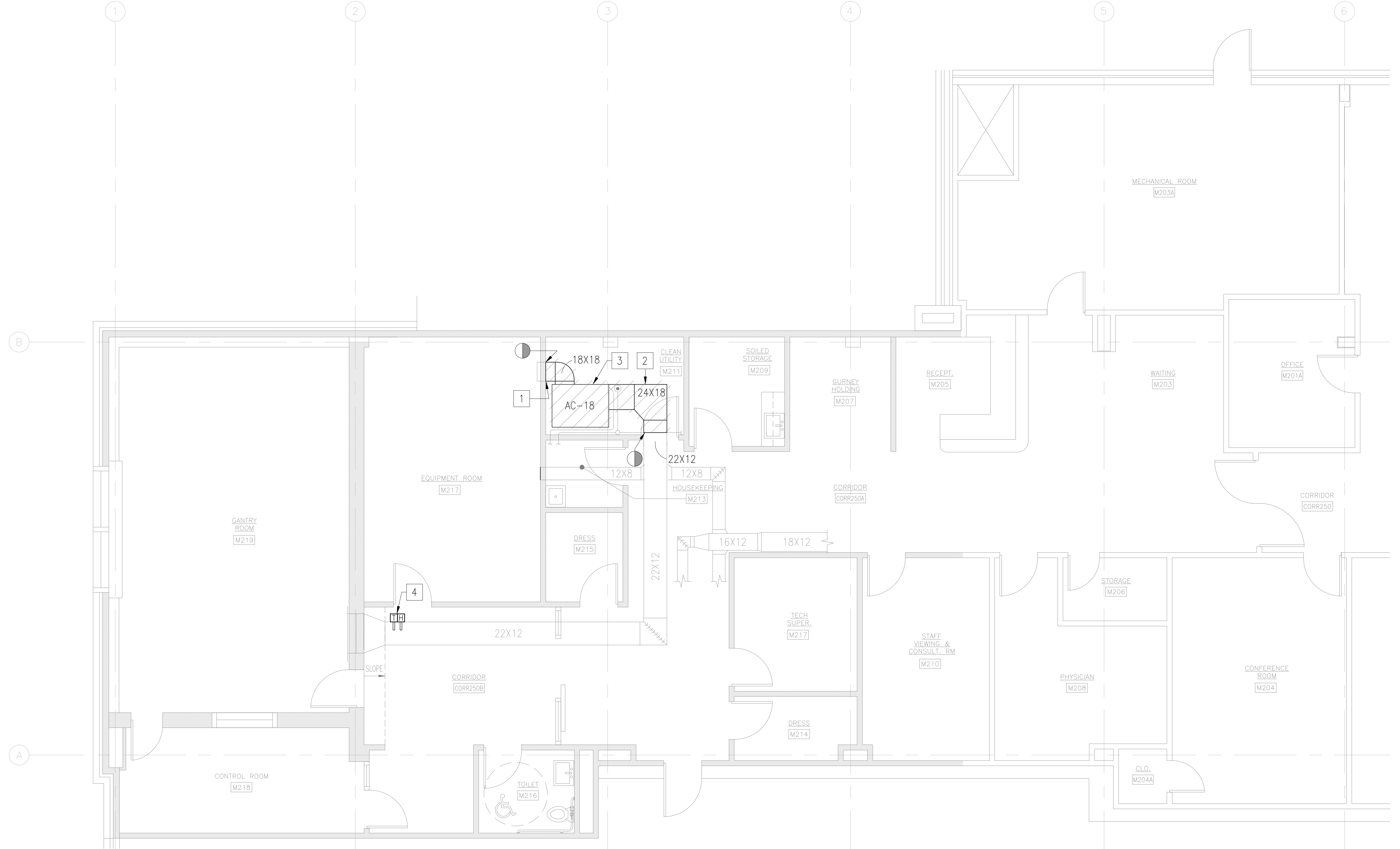
AB	ANCHOR BOLT	RA	RETURN AIR
AC	AIR CONDITIONING	RD	ROOF DRAIN
ACT	ACOUSTICAL CEILING TILE	REF	REFERENCE
ADDL	ADDITIONAL	REINF	REINFORCING
ADJ	ADJUSTABLE	REQ'D	REQUIRED
AFF	ABOVE FINISHED FLOOR	RH	RIGHT HAND
ALT	ALTERNATE	RM	ROOM
AL	ALUMINUM	RO	ROUGH OPENING
APD	AIR PRESSURE DROP	R/S	ROUGH SAWN
ARCH	ARCHITECTURAL	SC	SOLID CORE
ASPH	ASPHALT	SCWD	SOLID CORE WOOD DOOR
BAS	BUILDING AUTOMATION SYSTEM	SD	SMOKE DETECTOR
B/	BOTTOM of	SF	SQUARE FEET
BB	BOARD	SFLR	SUB-FLOOR
BL	BUILDING LINE	SIM	SIMILAR
BLDG	BUILDING	SL	SLOPE
BLK	BLOCK	SOG	SLAB-ON-GRADE
BLKG	BLOCKING	SPEC	SPECIFICATIONS
BP	BEARING PLATE	STL	STEEL
BR	BEDROOM	STR	STRUCTURAL
BSMT	BASEMENT	SV	SHEET VINYL FLOORING
BTVN	BETWEEN	T	TOILET
BRG	BEARING	T/	TOP OF
CB	CATCH BASIN	TAB	TESTING, ADJUSTING, & BALANCING
CC	COOLING COIL	TH	THICK / THICKNESS
CCD	COOLING COIL CONDENSATE DRAIN	T&G	TONGUE & GROOVE
CEM	CEMENT	TOF	TOP OF FOOTING
CG	CORNER GUARD	TOS	TOP OF STEEL
CHS	CHILL WATER SUPPLY	TOW	TOP OF WALL
CHR	CHILL WATER RETURN	TYP	TYPICAL
CJ	CONSTRUCTION JOINT or CONTROL JOINT	UNO	UNLESS NOTED OTHERWISE
CLG	CEILING	VB	VAPOR BARRIER
CMU	CONCRETE MASONRY UNIT	VCT	VINYL COMPOSITION TILE
COL	COLUMN	VERT	VERTICAL
COL	COMPACT(ED)	VSD	VARIABLE SPEED DRIVE
CONC	CONCRETE	W	WIDE/WIDTH
CONC	CONCRETE	W/	WITH
CONST	CONSTRUCTION	WB	WET BULB
CONT	CONTINUOUS	WC	WATER CLOSET
COORD	COORDINATE	WD	WOOD
CPT	CARPET	WIND.	WINDOW
CRS	COURSE	WPD	WATER PRESSURE DROP
CRS	COURSE	WWM	WELDED WIRE MESH
CT	CERAMIC TILE		
CW	COLD WATER		
D	DEEP / DEPTH		
DB	DRY BULB		
DBL	DOUBLE		
DET	DETAIL		
DF	DOUGLAS FIR		
DIA	DIAMETER		
DIM	DIMENSION		
DTL	DETAIL		
DW	DOMESTIC WATER		
DWG	DRAWING		
EA	EACH		
EL	ELEVATION		
ELEC	ELECTRIC		
ELEV	ELEVATION		
EQ	EQUAL		
EW	EACH WAY		
EXT	EXTERIOR		
EXG	EXISTING		
FBGL	FIBERGLASS		
FD	FLOOR DRAIN		
FFE	FINISH FLOOR ELEVATION		
FLR	FLOOR		
FNDN	FOUNDATION		
FP	FIREPLACE		
FR	FAMILY ROOM		
FTG	FOOTING		
GC	GENERAL CONTRACTOR		
GL	GLASS		
G&N	GLUE and NAIL		
GWB	GYPSON WALL BOARD		
GP	GYPSON		
H	HIGH		
HC	HOLLOW CORE		
HDR	HEADER		
HDW	HARDWARE		
HGT	HEIGHT		
HM	HOLLOW METAL		
HORZ	HORIZONTAL		
H.P.	HIGH POINT/HORSEPOWER		
H.R.	HANDRAIL		
HW	HOT WATER		
IN	INCHES		
INS	INSULATION		
INT	INTERIOR		
JAN.	JANITORIAL		
JST	JOIST		
JT	JOINT		
K	KITCHEN		
LF	LINEAR FEET		
LH	LEFT HAND		
LOC	LOCATION		
LVL	LAMINATED VENEER LUMBER		
MAT	MATERIAL		
MAX	MAXIMUM		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MH	MAN HOLE		
MIN.	MINIMUM		
MO	MASONRY OPENING		
MRI	MAGNETIC RESONANCE IMAGING		
MTL	METAL		
NIC	NOT IN CONTRACT		
NTS	NOT TO SCALE		
OC	ON CENTER		
OHD	OVERHEAD DOOR		
OPNG	OPENING		
PL	PLATE		
PSF	POUNDS PER SQUARE FOOT		
PSI	POUNDS PER SQUARE INCH		
PT (D)	PAINT (-ED)		
PWD	PLYWOOD		

- SYMBOLS**
- ⊗ CONNECT TO EXISTING
  - POINT OF DISCONNECTION
  - ⊖ THERMOSTAT
  - ⊙ SPRINKLER PENDANT
  - ⊥ SHUT OFF VALVE
  - ◁ REDUCER
  - ⊞ TWO WAY POSITION CONTROL VALVE
  - ⊞ MANUAL AIR VENT
  - ⊞ TEST PLUG
  - ⊞ UNION CONNECTIONS
  - ⊞ DRAIN WITH HOSE CONNECTION
  - ⊞ STRAINER
  - CONDUIT/PIPE UP
  - CONDUIT/PIPE DOWN
  - ⊞ RECEPTACLE
  - ⊞ FUSED SAFETY SWITCH
  - EXISTING
  - ⊞ DUCT PRESSURE
  - ⊞ TO BE DEMOLISHED (DUCTS)
  - ⊞ TO BE DEMOLISHED (PIPING/CONDUIT)



	<b>CONSULTANTS:</b>	Stamp 	<b>ARCHITECT/ENGINEERS:</b>  <b>EVERETT ENGINEERS</b> 1740 MASSACHUSETTS AVE BOXBOROUGH, MA 01719 Phone: 978-266-3711 Fax: 978-415-5038	<b>Drawing Title</b> GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND SEQUENCE OF OPERATIONS	<b>Project Title</b> MRI GANTRY ROOM DESIGN	<b>Project Number</b> 528A7-14-704	<b>Office of Construction and Facilities Management</b>  
				<b>Approved Project Director</b>	<b>Location</b> Syracuse, New York 13210	<b>Building Number</b> 1	
<b>Revisions</b>	<b>Date</b>				<b>Date</b> 06/11/2014	<b>Checked</b> RAE	

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**1 SECOND LEVEL - DUCTWORK DEMOLITION WORK PLAN**  
 MD101 SCALE: 1/4" = 1'-0"

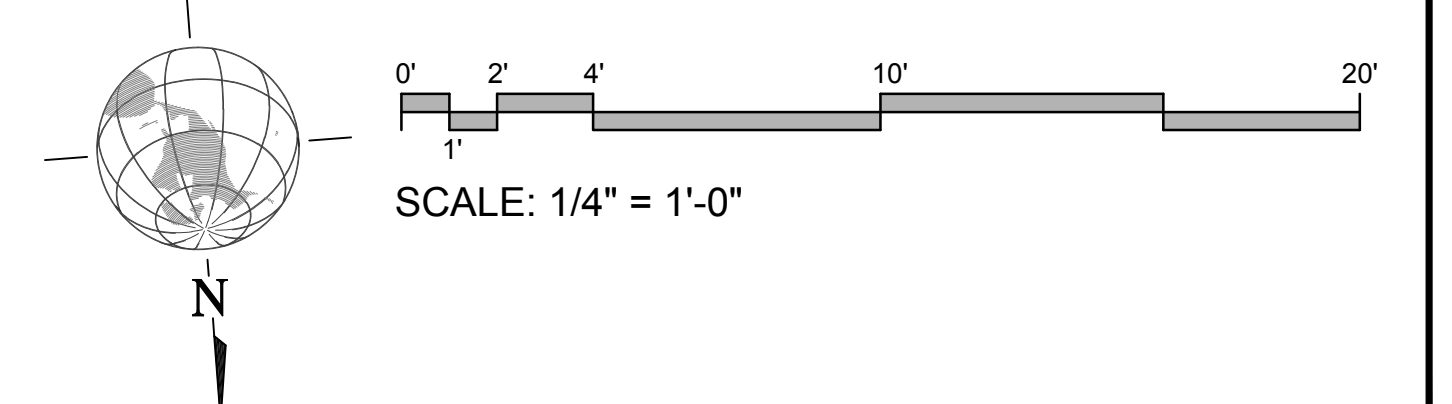
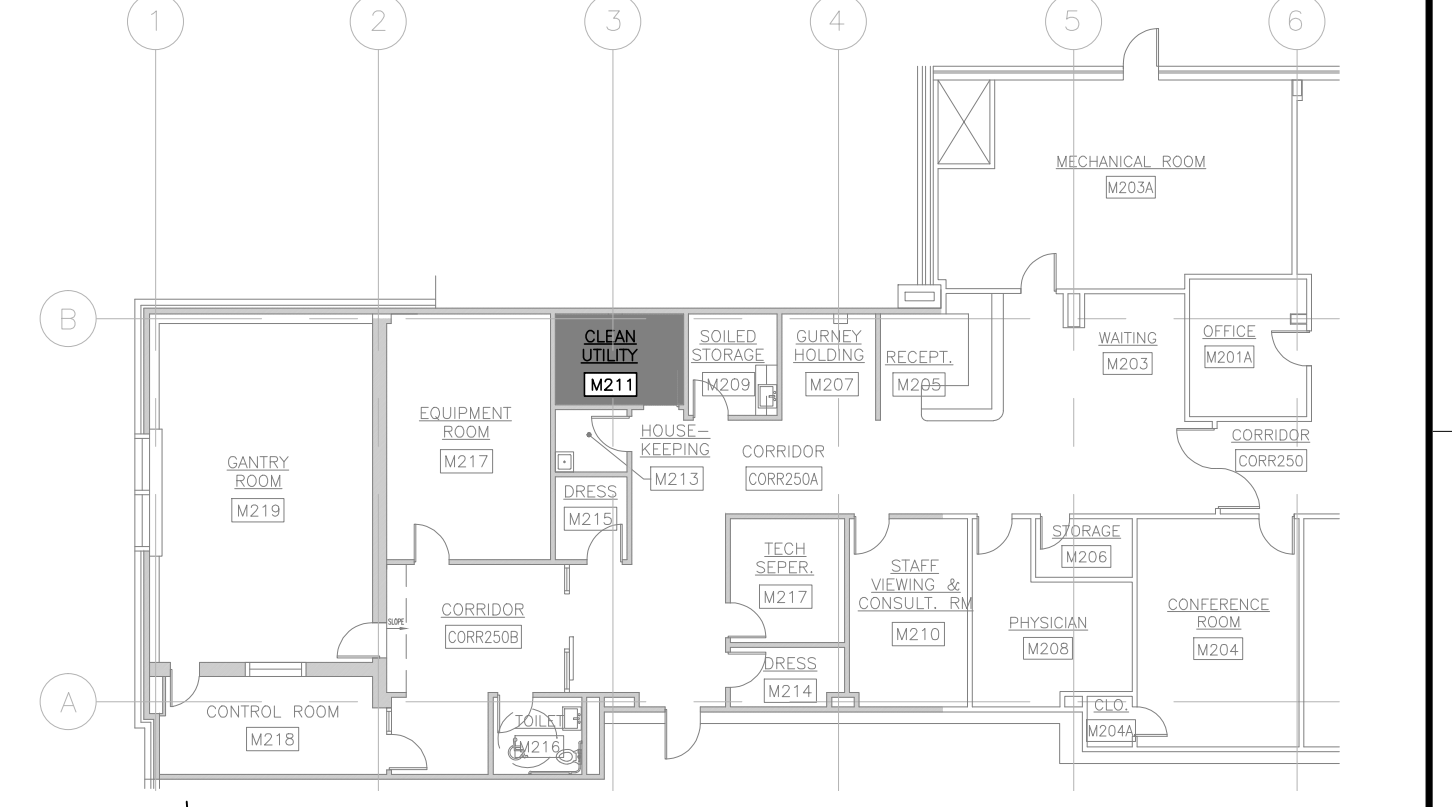
**KEYED DEMOLITION NOTES:**

- 1 DEMOLISH AND REMOVE EXISTING 18'X18" DUCT, INSULATION AND HANGERS FROM WALL TO AC-18 SUPPLY.
- 2 DEMOLISH AND REMOVE EXISTING DUCT, INSULATION AND HANGERS FROM WALL TO AC-18 RETURN.
- 3 DEMOLISH AND REMOVE EXISTING AC-18 AND ASSOCIATED HANGERS. DEMOLISH AND REMOVE EXISTING POWER PER ED101 AND PIPING PER MD102.
- 4 DEMOLISH AND REMOVE EXISTING RETURN AIR TEMPERATURE AND HUMIDITY SENSOR.

**NOTES:**

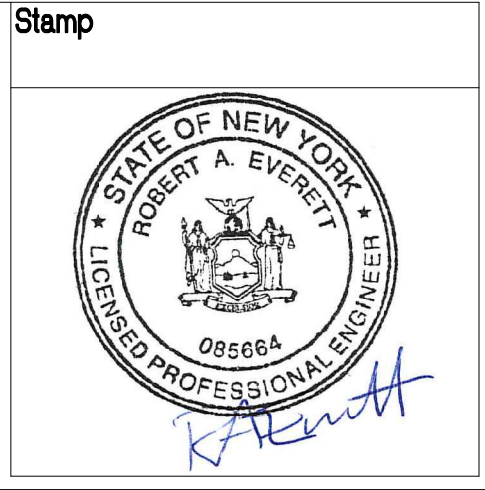
- 1. AC-18 IS LOCATED ABOVE SUSPENDED CEILING.
- 2. ALL SUSPENDED LAY-IN ACOUSTICAL TILES TO BE DEMOLISHED, REMOVED, AND DISPOSED OF OFF SITE.
- 3. CEILING GRID TO BE REUSED TO THE MAXIMUM EXTENT POSSIBLE.

**KEYPLAN:**



Revisions	Date

**CONSULTANTS:**



**ARCHITECT/ENGINEERS:**

**EVERETT ENGINEERS**

1740 MASSACHUSETTS AVE  
 BOXBOROUGH, MA 01719  
 Phone: 978-266-3711  
 Fax: 978-415-5038

**Drawing Title**  
 MECHANICAL  
 SECOND LEVEL DUCTWORK DEMOLITION PLAN

**Approved Project Director**

**Project Title**  
 MRI GANTRY ROOM DESIGN

**Project Number**  
 528A7-14-704  
**Building Number**  
 1

**Location**  
 Syracuse, New York 13210

**Date**  
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**Checked**  
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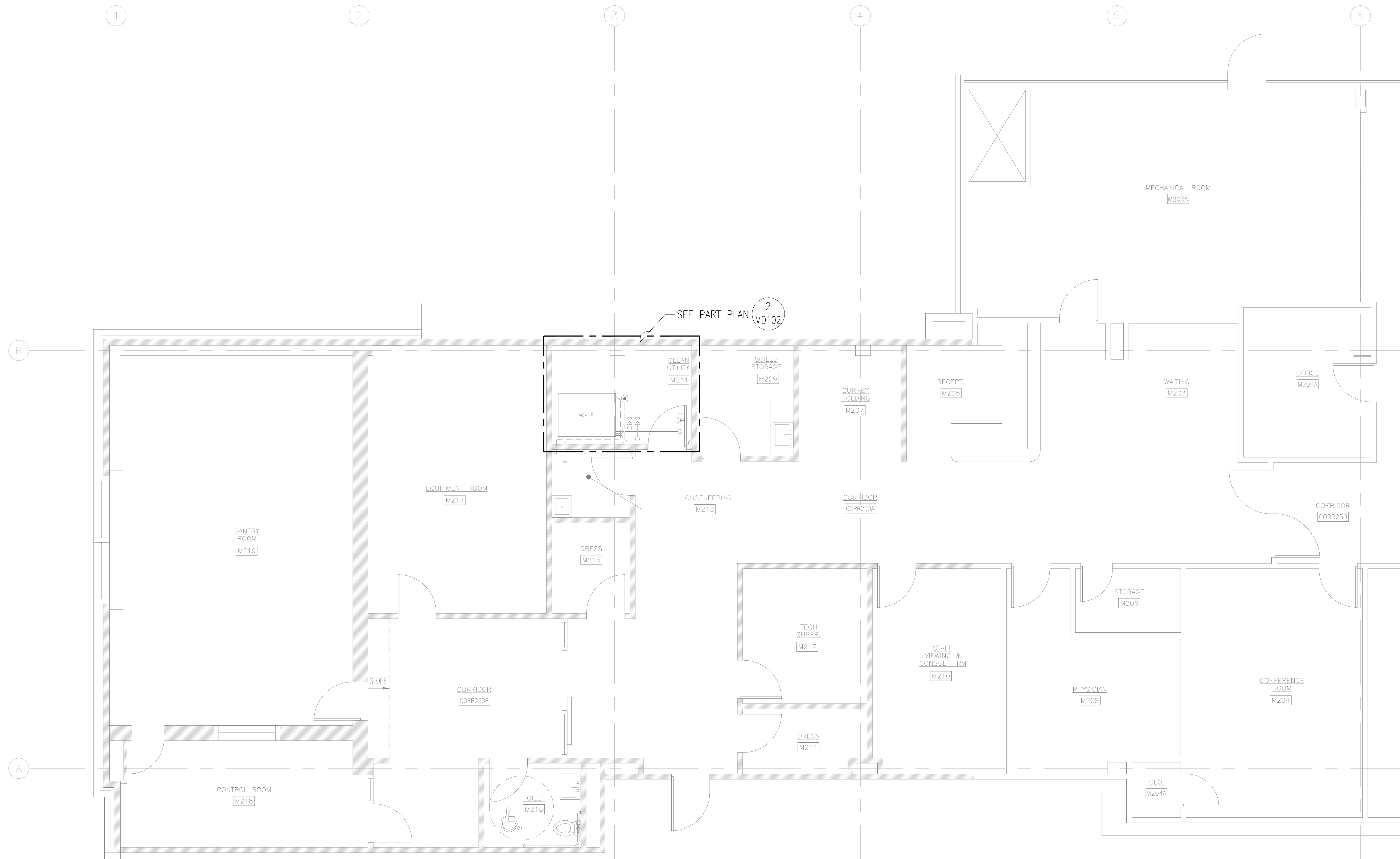
**Drawing Number**  
 MD101  
 Dwg. 3 of 9

**Office of Construction and Facilities Management**

Department of Veterans Affairs

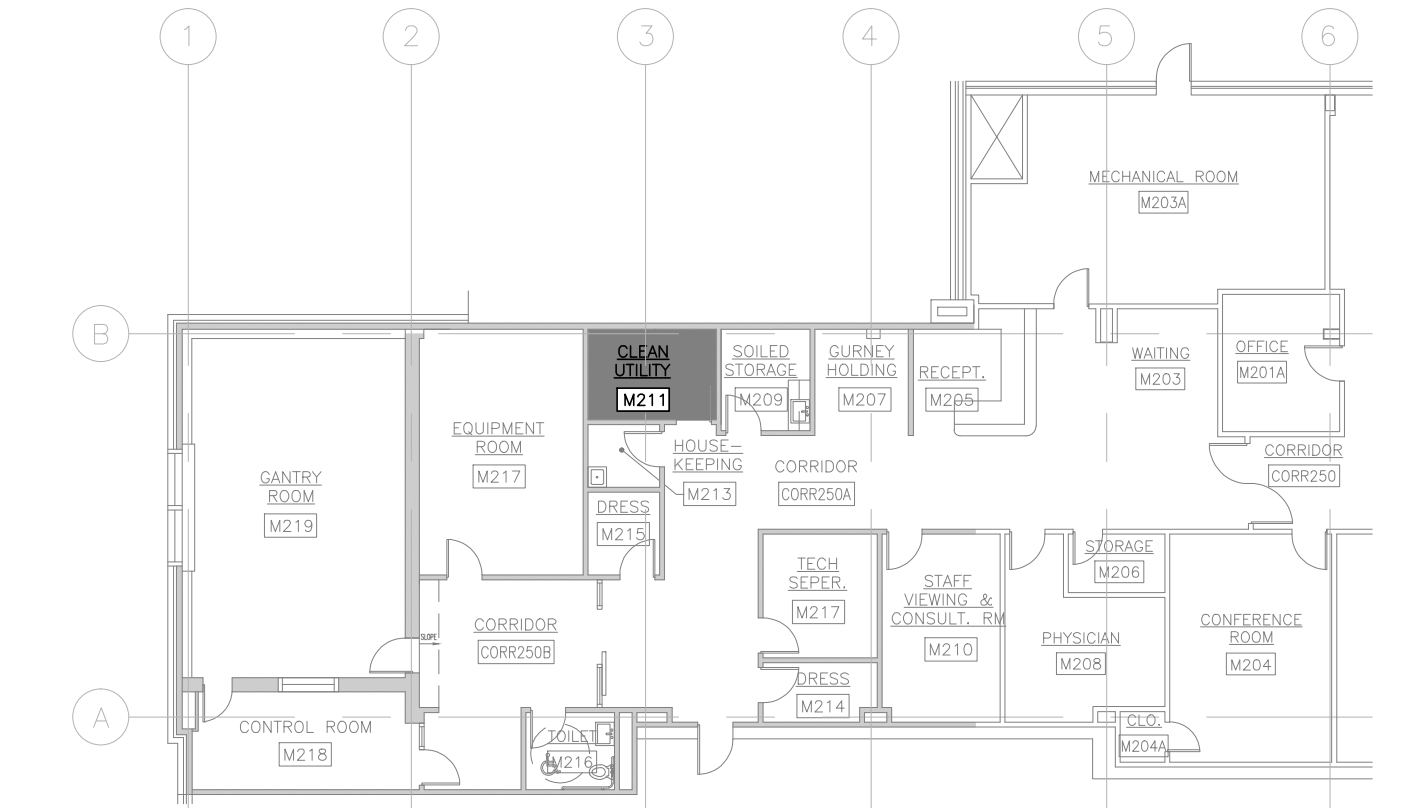


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 two inches = one foot  
 three inches = one foot



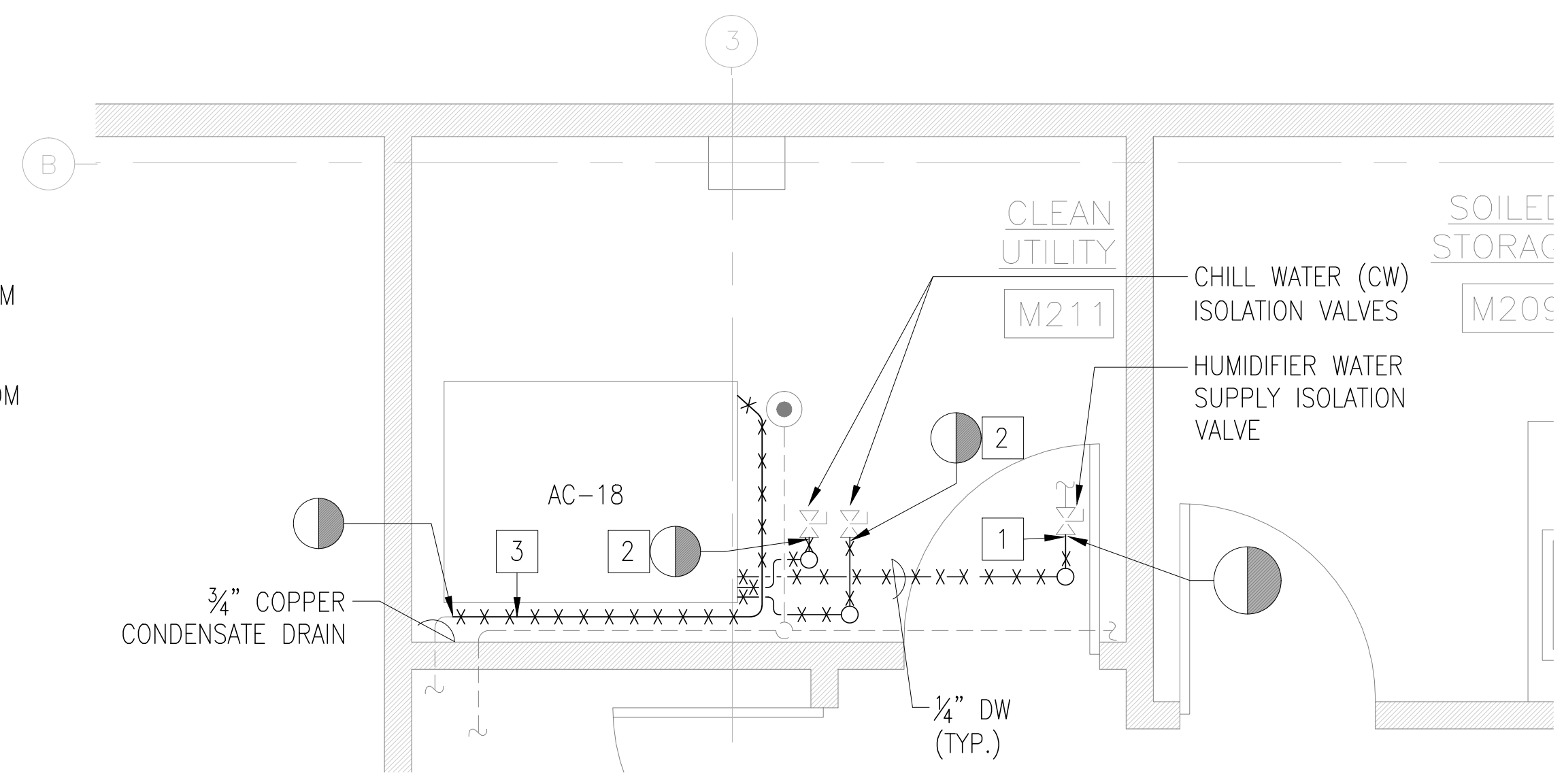
**1 SECOND LEVEL - KEY PLAN**  
 MD102 SCALE: 1/4" = 1'-0"

KEYPLAN:



0' 2' 4' 10' 20'  
 SCALE: 1/4" = 1'-0"  
 0' 1' 2' 5' 8' 10'  
 SCALE: 1/2" = 1'-0"  
 N

- KEYED DEMOLITION NOTES:**
- DEMOLISH AND REMOVE EXISTING 1/4" COPPER TUBING AND INSULATION FROM ISOLATION VALVE TO AC-18 HUMIDIFICATION CONNECTION.
  - DEMOLISH AND REMOVE EXISTING 3/4" COPPER TUBING AND INSULATION FROM CHILL WATER SUPPLY AND RETURN (CWS&CWR) ISOLATION VALVES TO AC-18 CHILL WATER (CW) CONNECTIONS.
  - DEMOLISH AND REMOVE EXISTING 3/4" COPPER DRAIN TUBING FROM AC-18 CONDENSATE PUMP DISCHARGE TO DRAIN PIPING.
- NOTES:**
- AC-18 IS LOCATED ABOVE SUSPENDED CEILING.
  - INSTALL DIELECTRIC UNIONS AT AC-18 FOR CHILL WATER AND DRAIN PIPING.

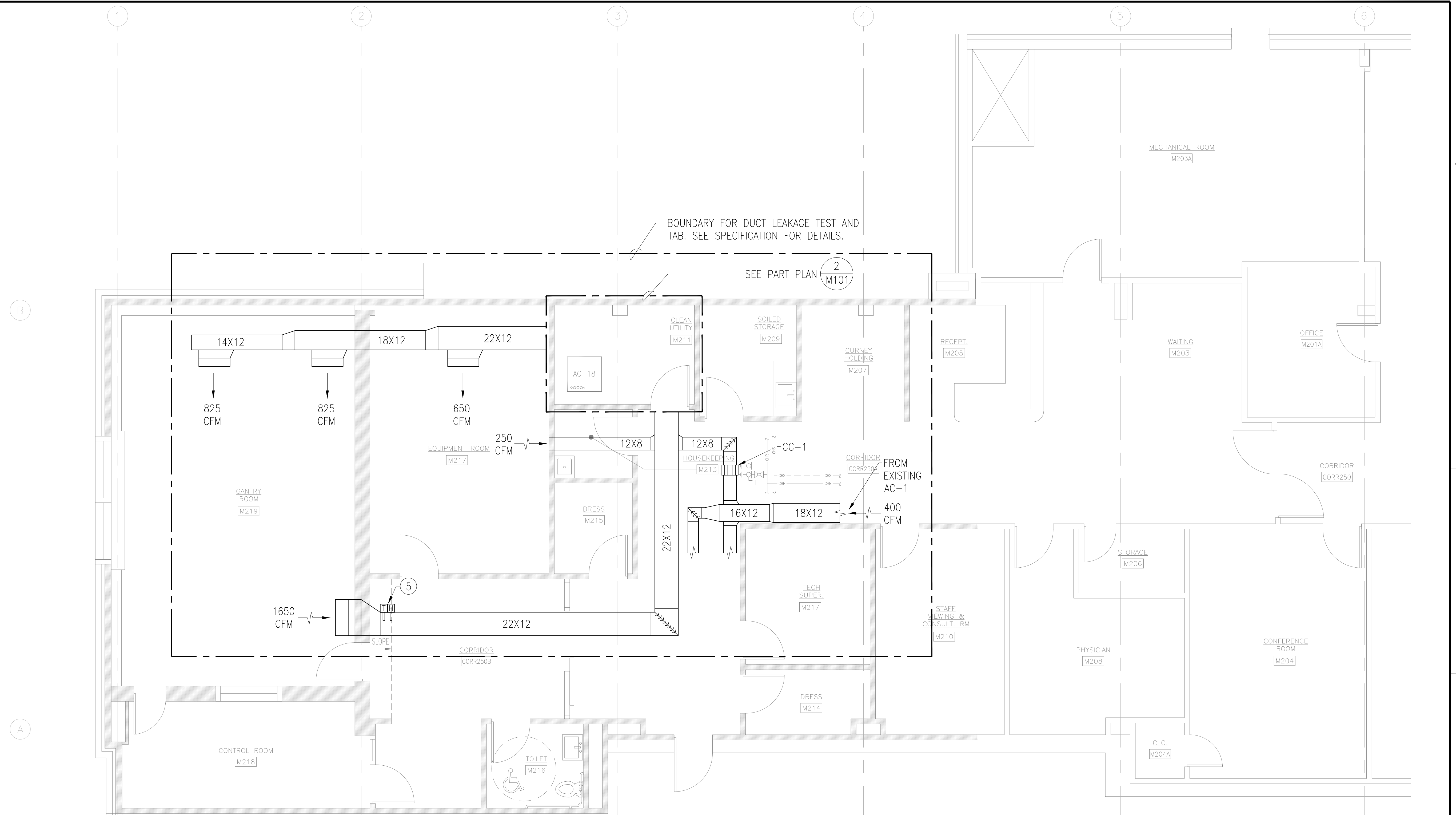


**2 ENLARGED PIPING DEMOLITION WORK PLAN**  
 MD102 SCALE: 1/2" = 1'-0"

Revisions	CONSULTANTS:	Stamp	ARCHITECT/ENGINEERS:	Drawing Title	Project Title	Project Number	Office of Construction and Facilities Management Department of Veterans Affairs
	Date		<b>EVERETT ENGINEERS</b> 1740 MASSACHUSETTS AVE BOXBOROUGH, MA 01719 Phone: 978-266-3711 Fax: 978-415-5038	<b>MECHANICAL SECOND LEVEL PIPING DEMOLITION PLAN</b>	MRI GANTRY ROOM DESIGN	528A7-14-704	
				Approved Project Director	Location	Building Number	Drawing Number <b>MD102</b> Dwg. 4 of 9
					Syracuse, New York 13210	1	
					Date	Checked	Drawn
					06/11/2014	RAE	JPS



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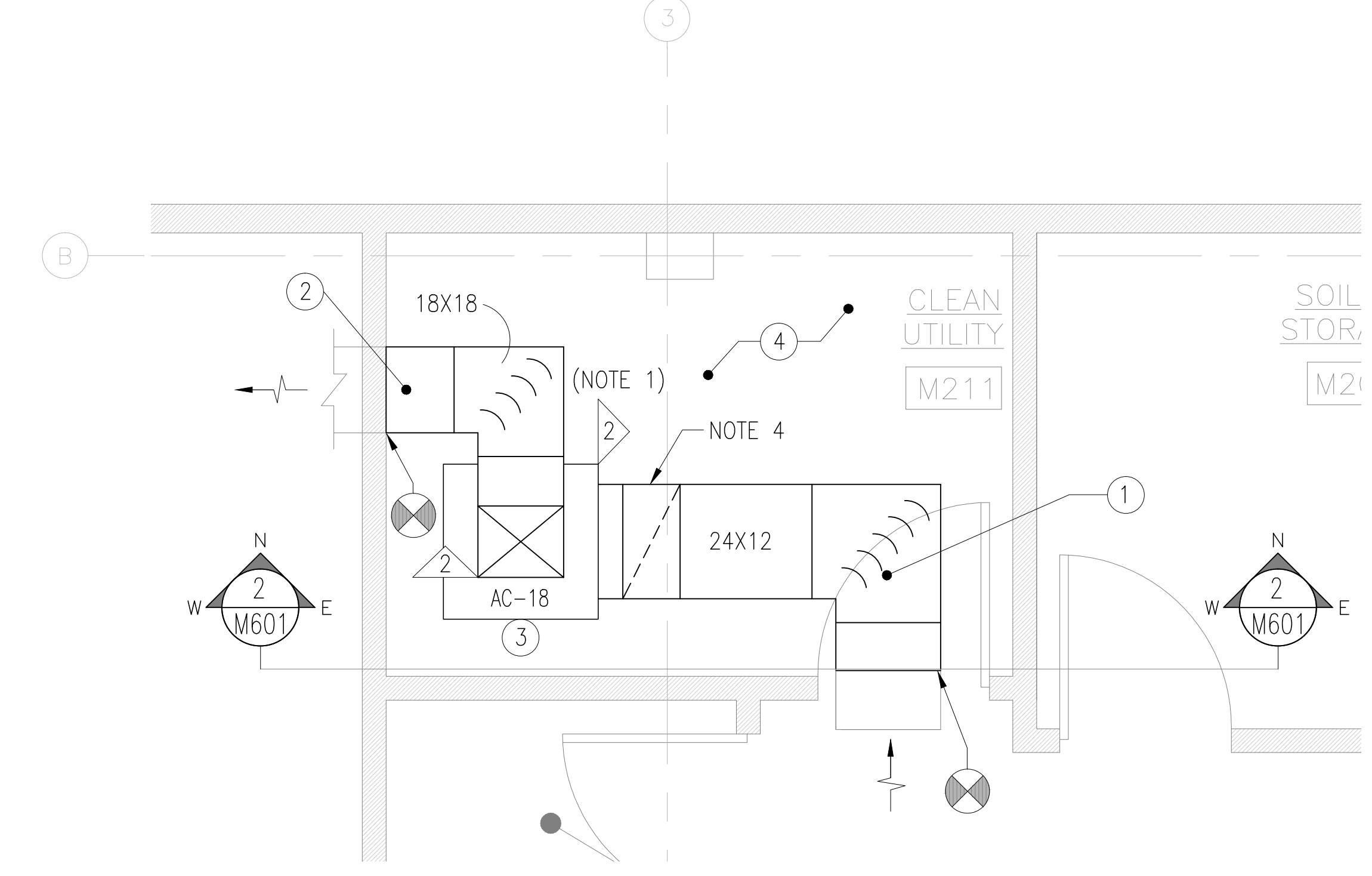
**1 SECOND LEVEL - KEY PLAN**  
M101 SCALE: 1/4" = 1'-0"

**NEW WORK KEYED MECHANICAL NOTES:**

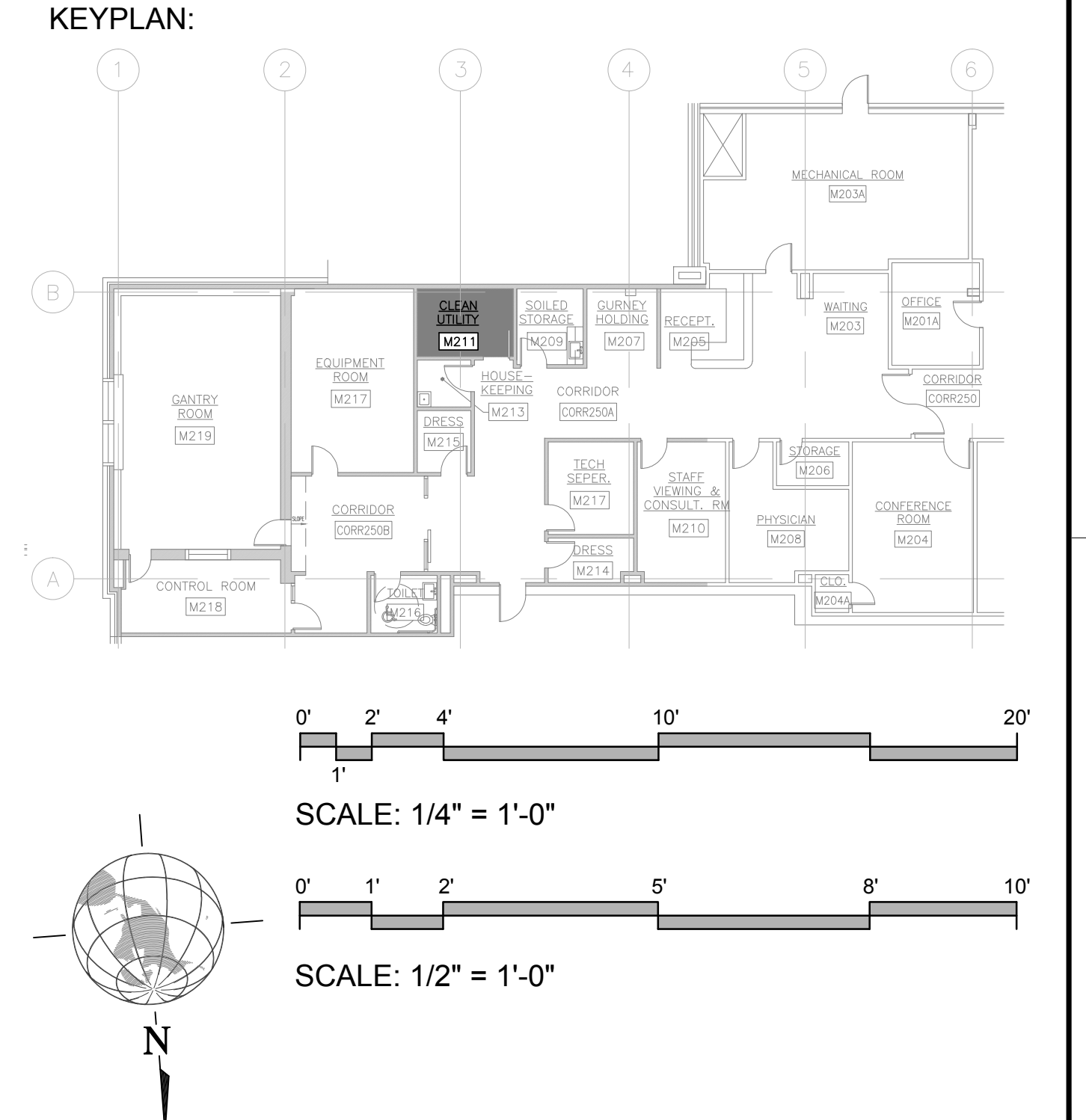
- ① INSTALL NEW INSULATED RETURN DUCT FROM ABOVE DOOR TO AC-18. INSTALL DUCT ABOVE CEILING.
- ② INSTALL NEW INSULATED SUPPLY DUCT FROM AC-18 TO WALL CONNECTION.
- ③ INSTALL NEW FLOOR MOUNTED AC UNIT. SEE **2 M601**.
- ④ RECONFIGURE EXISTING CEILING SUPPORT GRID AND INSTALL NEW SUSPENDED CEILING WITH BOX-OUTS AROUND PIPING/CONDUIT AND SUPPLY/RETURN DUCTWORK.
- ⑤ INSTALL NEW RETURN AIR TEMPERATURE AND HUMIDITY SENSOR. CONNECT TO NEW AC-18 PER MANUFACTURER'S INSTRUCTIONS.

**NOTES:**

1. ALL DUCTS ARE PRESSURE CLASS 2.
2. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES.
3. MOUNT AC-18 TO FLOOR PER MFR'S INSTRUCTIONS.
4. TRANSITION DUCT FROM 24X12 TO AC-18 RETURN AIR CONNECTION.

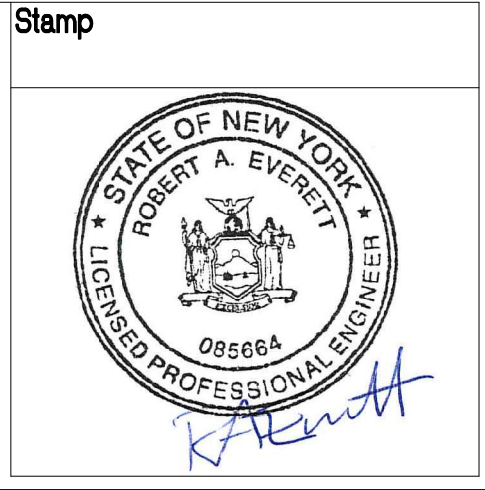


**2 ENLARGED NEW DUCTWORK PLAN**  
M101 SCALE: 1/2" = 1'-0"



Revisions	Date

**CONSULTANTS:**



**ARCHITECT/ENGINEERS:**

**EVERETT ENGINEERS**

1740 MASSACHUSETTS AVE  
BOXBOROUGH, MA 01719  
Phone: 978-266-3711  
Fax: 978-415-5038

**Drawing Title:**  
MECHANICAL  
SECOND LEVEL NEW DUCTWORK PLAN

**Approved Project Director:**

**Project Title:**  
MRI GANTRY ROOM DESIGN

**Project Number:**  
528A7-14-704  
Building Number  
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**Location:**  
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**Date:** 06/11/2014

**Checked:** RAE

**Drawn:** JPS

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M101  
Dwg. 5 of 9

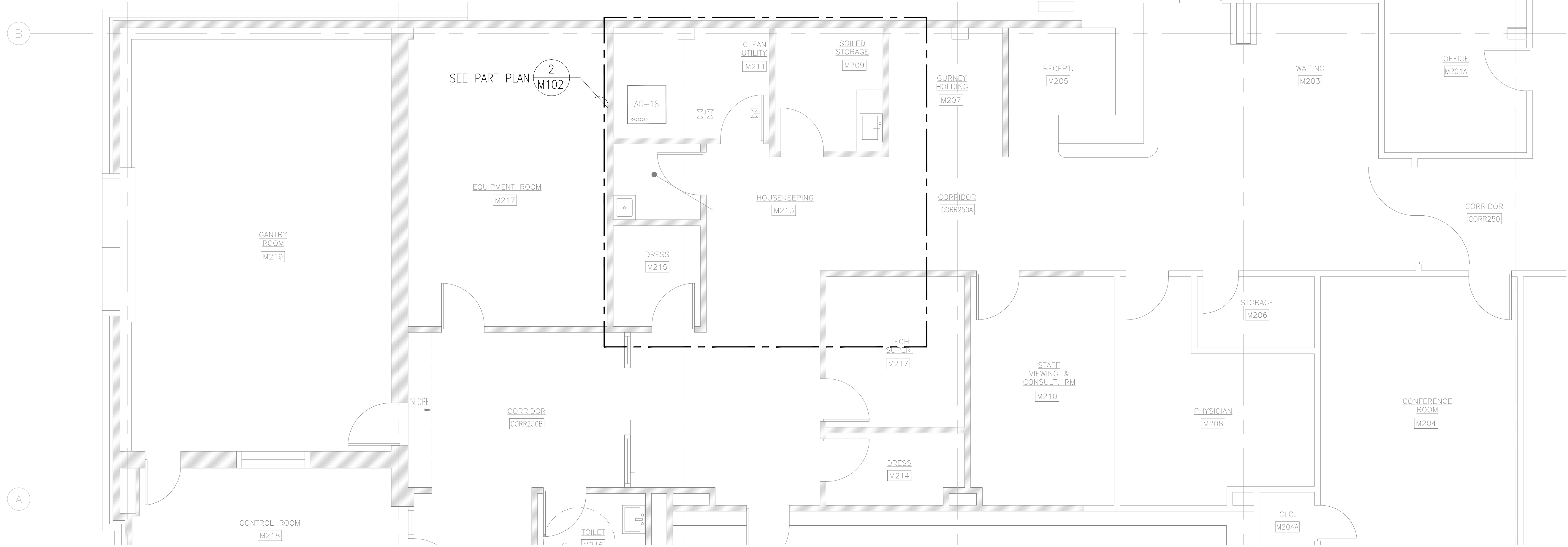
**Office of Construction and Facilities Management**

Department of Veterans Affairs

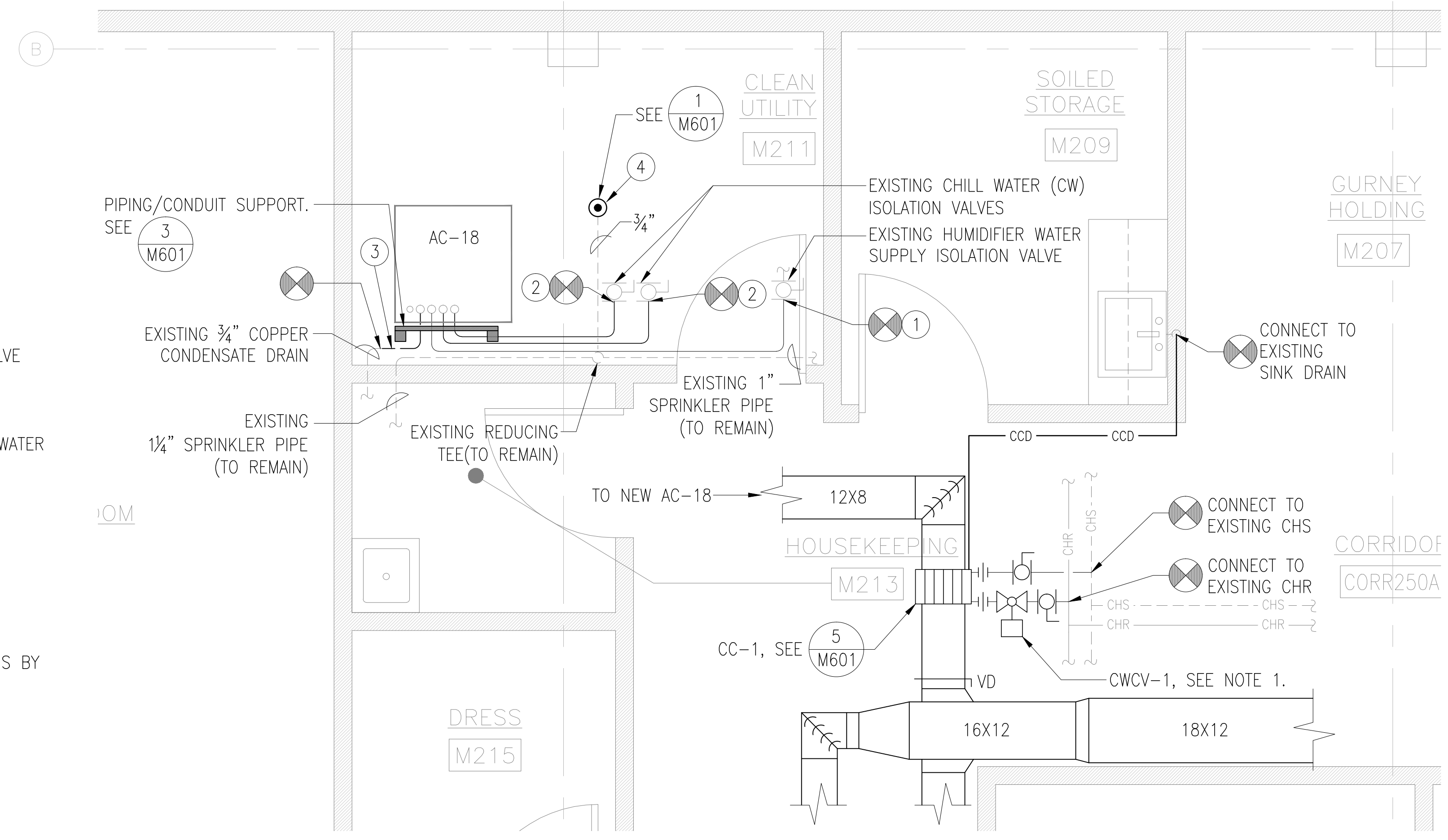


COOLING COIL SCHEDULE																										
MARK	LOCATION	AREA SERVED	SYSTEM AND/OR SERVICE	FAN AIR FLOW		MAX FACE VELOCITY		EAT				LAT		TOTAL CAPACITY		SENSIBLE CAPACITY		CHILLED WATER				REMARKS				
				CFM	(L/s)	FPM	(M/s)	Db		Wb		MBH	(kW)	MBH	(kW)	FLOW	EWT		LWT							
								'F	(°C)	'F	(°C)						'F	(°C)	'F	(°C)						
				GPM	(L/s)	'F	(°C)	'F	(°C)																	
CC-1	CORRIDOR 250A	MRI GANTRY ROOM	AC-18	400	189	400	2	89	32	73	23	70	21	58	15	19.4	5.7	10	2.9	4.5	0.3	45	7	55	13	

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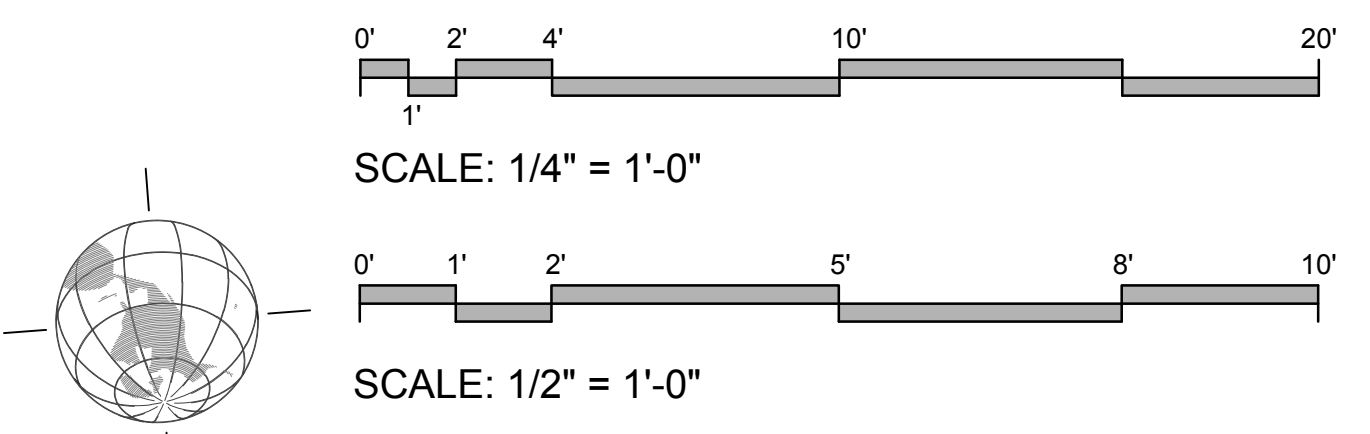
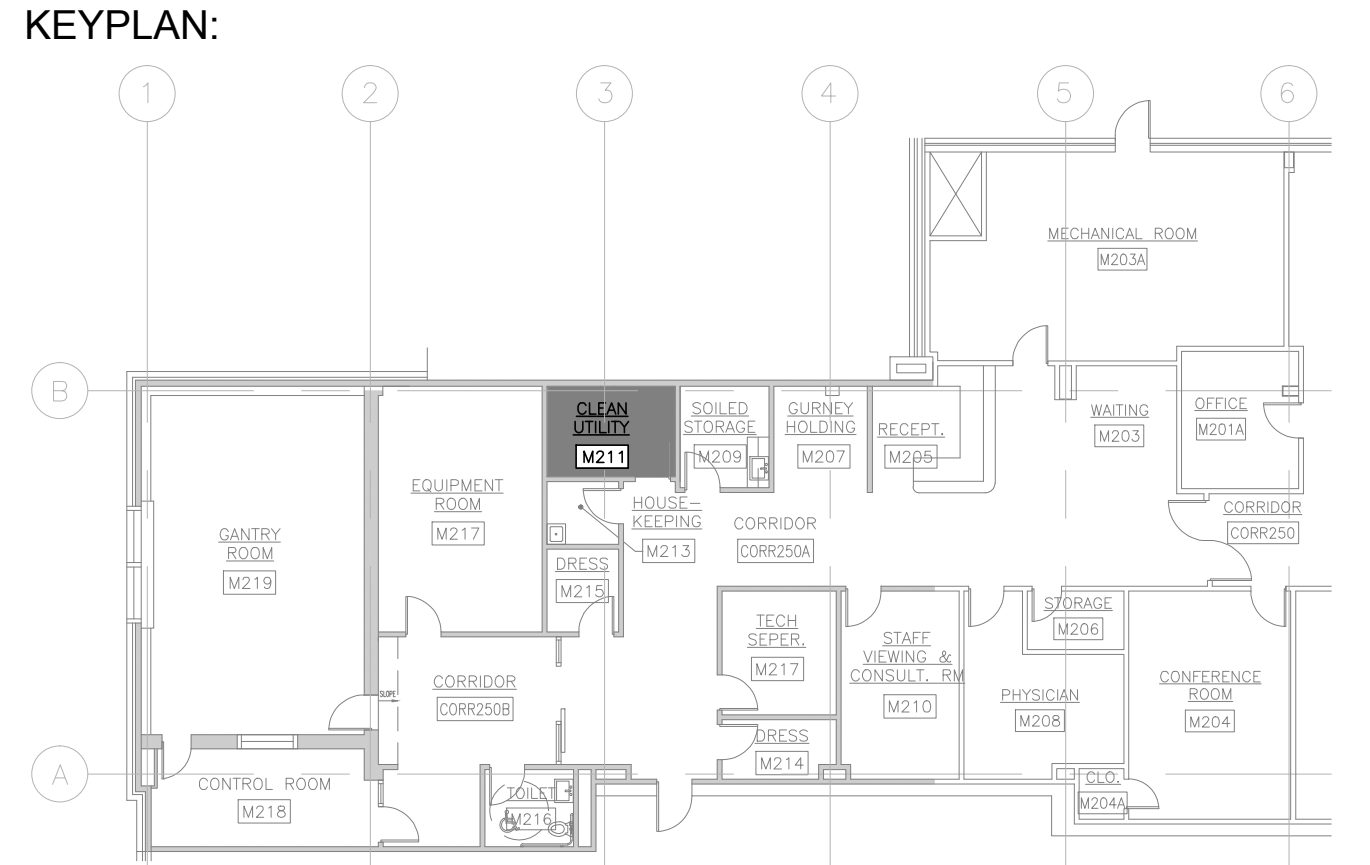
**1 SECOND LEVEL - KEY PLAN**  
SCALE: 1/4" = 1'-0"



**2 ENLARGED NEW PIPING WORK PLAN**  
SCALE: 1/2" = 1'-0"

- ① INSTALL NEW 1/2" COPPER TUBING AND INSULATION FROM ISOLATION VALVE TO AC-18 HUMIDIFICATION CONNECTION.
- ② INSTALL NEW 1" COPPER TUBING AND INSULATION FROM CHILL WATER SUPPLY AND RETURN (CHS&CHR) ISOLATION VALVES TO AC-18 COLD WATER (CW) CONNECTIONS.
- ③ INSTALL NEW 3/4" COPPER TUBING AND INSULATION FROM AC-18 CONDENSATE PUMP DISCHARGE TO DRAIN PIPING.
- ④ INSTALL NEW HANGER FOR EXISTING SPRINKLER HEAD PIPING.

**NOTE:**  
1. CWCV-1 CONTROLLED FOR DEHUMIDIFICATION SEQUENCE OF OPERATIONS BY BAS. SEE SEQUENCE OF OPERATIONS ON SHEET G1002.



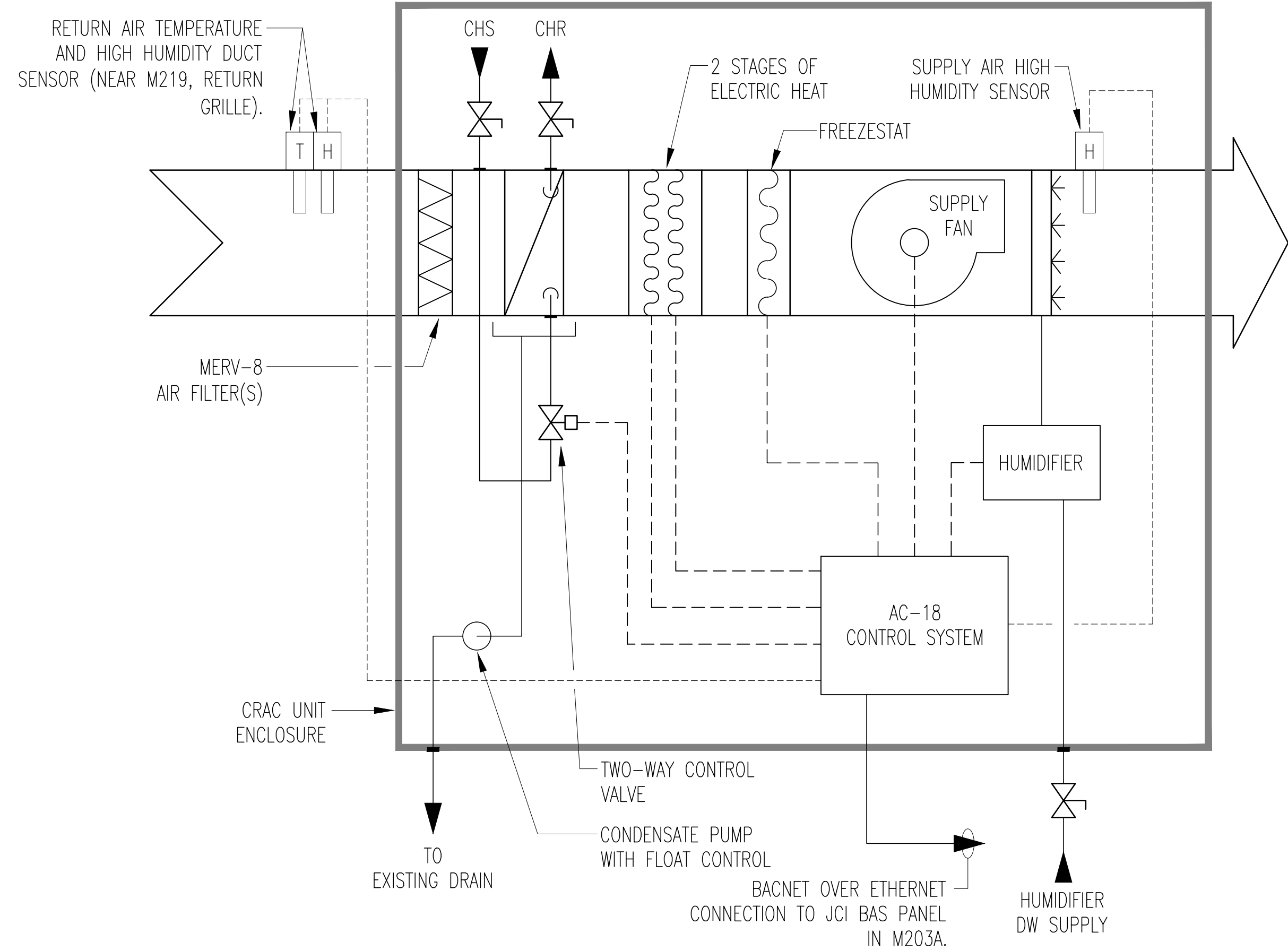
<b>CONSULTANTS:</b>  		<b>ARCHITECT/ENGINEERS:</b>  1740 MASSACHUSETTS AVE BOXBOROUGH, MA 01719 Phone: 978-266-3711 Fax: 978-415-5038	<b>Drawing Title</b> MECHANICAL SECOND LEVEL NEW PIPING WORK PLAN	<b>Project Title</b> MRI GANTRY ROOM DESIGN	<b>Project Number</b> 528A7-14-704 <b>Building Number</b> 1	<b>Office of Construction and Facilities Management</b> 
			<b>Approved Project Director</b>  	<b>Location</b> Syracuse, New York 13210	<b>Drawing Number</b> <b>M102</b> Dwg. 6 of 9	
<b>Revisions:</b>	<b>Date</b>			<b>Date</b> 06/11/2014	<b>Checked</b> RAE	<b>Drawn</b> JPS



COOLING ONLY TWO PIPE FAN COIL UNIT SCHEDULE

MARK	LOCATION (ROOM)	SERVES (ROOM)	TYPE	FAN AIR FLOW		EXTERNAL APD		COOLING REQUIREMENTS								CHILLED WATER				HEATING REQUIREMENTS		HUMIDIFICATION		FILTER				PIPING CONNECTIONS					FAN MOTOR					WEIGHT (LBS)	REMARKS								
				CFM	(L/s)	IN	WG	(Pa)	MIN SENS CAPACITY		MIN TOTAL CAPACITY		EAT				LAT				FLOW	EWT	LWT	COIL WPD	STAGES	kW/STAGE	kW	LBS/HR	DIM (IN)	MERV RATING	EFFECTIVE AREA (FT²)	QTY	CWS (IN)	CWR (IN)	HUMIDIFICATION WATER (IN)	DRAIN (IN)	POWER			PHASE	VOLT	RPM	SPEED CONTROL				
									BTUH	(W)	BTUH	(W)	*F	*C	*F	*C	*F	*C	*F	*C																	*F							*C	GPM	(L/s)	*F
AC-18	M211	M219	FLOOR MOUNT	2,350	(1200)	0.3	(200)	37,083	(10870)	39,035	(11430)	70	(29)	62.5	(21)	50	18.3	56	13.3	10	0.6	45	(7)	52.8	11.6	8.4	(30)	2	7.5	3.4	10	16X25X2	8	20.2	2	1 1/8	1 1/8	3/4	3/4	1	(1100)	3	208	1750	NONE	300	① ② ③

- ① PROVIDE BACNET OVER ETHERNET CONNECTION FROM AC-18 TO BUILDING AUTOMATION SYSTEM (BAS) PANEL.
- ② MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES.
- ③ PROVIDE INTEGRAL CONDENSATE PUMP WITH CHECK VALVE AND HIGH LEVEL ALARM.

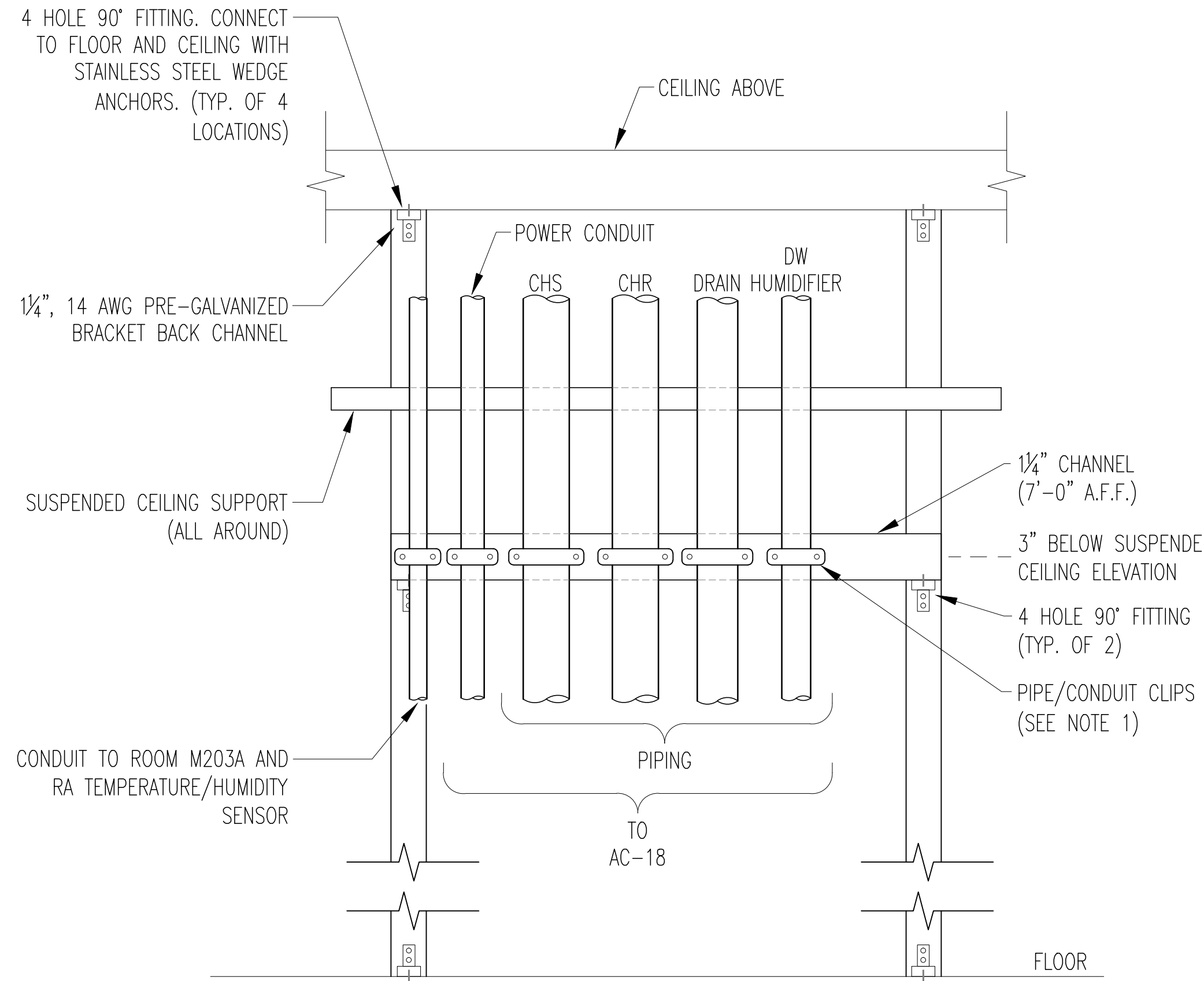


INPUT/OUTPUT POINTS LIST

TYPE	POINT NO.	DESCRIPTION	TYPE	POINT NO.	DESCRIPTION
ANL	1	TEMPERATURE SET POINT	DGT	19	UNIT ON/OFF CONTROL (0 = OFF, 1 = ON)
ANL	2	TEMPERATURE BAND	DGT	20	TEMPERATURE CONTROL TYPE 0=P 1=PI
ANL	3	TEMPERATURE HIGH ALARM SET POINT	DGT	21	HUMIDITY CONTROL TYPE 0=P 1=PI
ANL	4	TEMPERATURE LOW ALARM SET POINT	DGT	22	NO AIRFLOW ALARM
ANL	5	HUMIDITY SET POINT	DGT	23	HIGH HEAT ALARM
ANL	6	HUMIDITY HIGH ALARM SET POINT	DGT	24	HIGH CONDENSATE LEVEL ALARM
ANL	7	HUMIDITY LOW ALARM SET POINT	DGT	25	HIGH TEMPERATURE ALARM
ANL	8	HUMIDITY BAND	DGT	26	LOW TEMPERATURE ALARM
ANL	9	TEMPERATURE READING	DGT	27	HIGH HUMIDITY ALARM
ANL	10	HUMIDITY READING	DGT	28	LOW HUMIDITY ALARM
ANL	11	COIL 1 TEMPERATURE READING	DGT	29	WATER FLOW ALARM
INT	12	CURRENT DAY	DGT	30	FIRE ALARM
INT	13	CURRENT HOUR	DGT	31	HEATER 1 OUTPUT
INT	14	CURRENT MINUTE	DGT	32	HEATER 2 OUTPUT
INT	15	CURRENT MONTH	DGT	33	HUMIDIFIER OUTPUT
INT	16	CURRENT SECOND	DGT	34	RESET ALARM COMMAND
INT	17	CURRENT WEEKDAY	DGT	35	SYSTEM ALARM
INT	18	CURRENT YEAR	DGT	36	REMOTE ON COMMAND VIA DIGITAL INPUT

NOTE:  
1. THE CONTRACTOR SHALL INSTALL A BACNET OVER ETHERNET CONNECTION BETWEEN AC-18 AND THE JCI MATASYS SYSTEM INCLUDING ALL CONNECTORS, WIRING, CONDUIT, CONTROLLERS, TERMINATIONS, POINT MAPPING, ECC MONITORING GRAPHICS, START UP, ETC. FOR A COMPLETE AND OPERATING SYSTEM THAT INCLUDES ALL REQUIRED INPUT AND OUTPUT CONTROL AND MONITORING POINTS.

4 CONTROL DIAGRAM  
M601 NTS



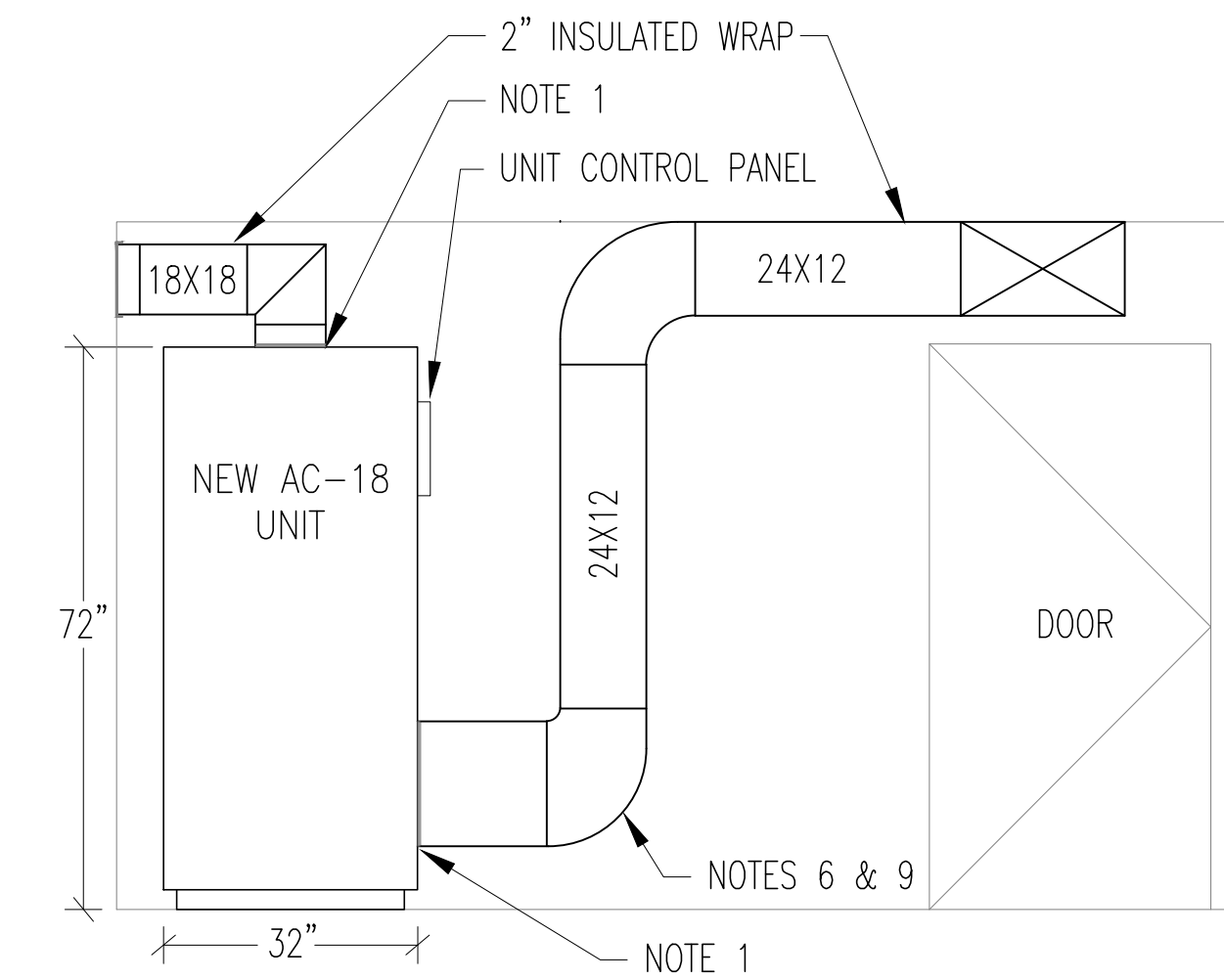
NOTES:

- 1. PIPING/CONDUIT CLIPS TO BE SIZE ACCORDING TO PIPE/CONDUIT SIZE TABLE.
- 2. RECONFIGURE SUSPENDED CEILING AROUND PIPING/CONDUIT WITH 2" CLEARANCE ALL AROUND.

PIPING/CONDUIT SIZES

DW HUMIDIFIER	1/4" WITH 1" INSULATION
DRAIN	3/4" WITH 1" INSULATION
CHS/CHR	1" WITH 1" INSULATION
POWER CONDUIT	1"
THERMOSTAT AND CONDUIT	3/4"

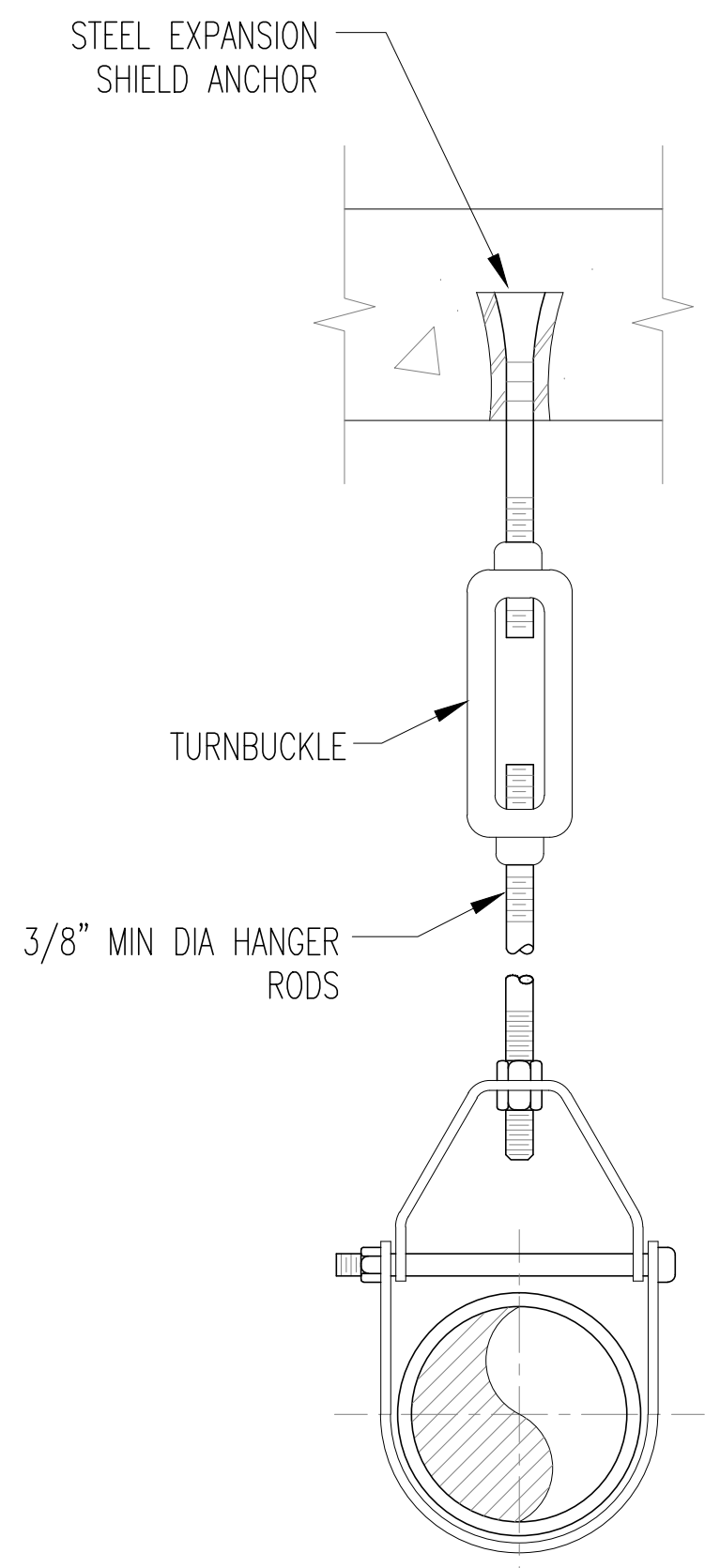
3 PIPING AND CONDUIT SUPPORT DETAIL  
M601 NTS



NOTES:

- 1. INSTALL FLEXIBLE CONNECTION BETWEEN AC-18 AND SUPPLY AND RETURN DUCTS (2 PLACES).
- 2. ALL NEW DUCTWORK TO BE 18 AWG PRESSURE CLASS 2.
- 3. SLIPS AND DRIVES TO BE MINIMUM OF 20 AWG.
- 4. SUPPORT DUCTWORK AT LEAST ONCE AND AT INTERVALS NOT TO EXCEED 48".
- 5. LEAKAGE TESTING AND AIRFLOW TESTING, ADJUSTING AND BALANCING SHALL BE PERFORMED WITH BOUNDARIES AS INDICATED ON M101.
- 6. TRANSITION 24X12 DUCT TO MATCH RETURN AIR OPENING ON AC-18. (TYPICAL 32"X24").
- 7. RECONFIGURE SUSPENDED CEILING GRID AROUND SUPPLY AND RETURN DUCTWORK WITH 2" CLEARANCE ALL AROUND.
- 8. INSTALL ALL NEW ACOUSTICAL TILES IN CEILING GRID.
- 9. INSTALL DUCTWORK SUCH THAT UNIT CONTROL PANEL CAN BE READ AND OPERATED LOCALLY.

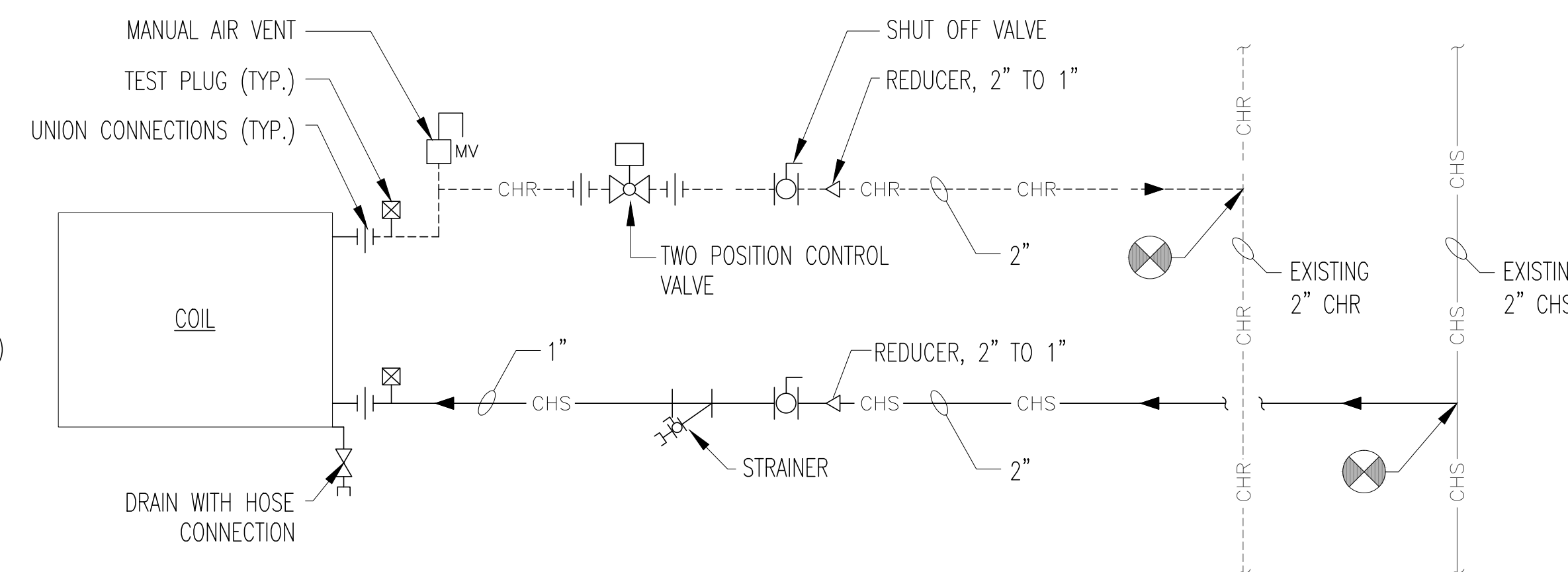
2 ELEVATION - CLEAN UTILITY ROOM M211  
M601 SCALE: 1/4" = 1'-0"



1 PIPE HANGER DETAIL  
M601 NTS

DESIGNER'S NOTE:

- 1. THIS DETAIL IS APPLICABLE TO: COOLING COIL UNITS (CHILLED WATER)
  - DUCT-MOUNTED COOLING COIL



5 COOLING COILS - PIPING CONNECTIONS  
M601 NTS

0' 2' 4' 10' 20'  
SCALE: 1/4" = 1'-0"

CONSULTANTS:

Stamp



ARCHITECT/ENGINEERS:

**EVERETT ENGINEERS**

1740 MASSACHUSETTS AVE  
BOXBOROUGH, MA 01719  
Phone: 978-266-3711  
Fax: 978-415-5038

Drawing Title

MECHANICAL SCHEDULE, DETAILS,  
DIAGRAMS, AND ELEVATION

Approved Project Director

Project Title

MRI GANTRY ROOM DESIGN

Location  
Syracuse, New York 13210

Date  
06/11/2014

Checked  
RAE

Drawn  
JPS

Project Number  
528A7-14-704

Building Number  
1

Drawing Number  
M601

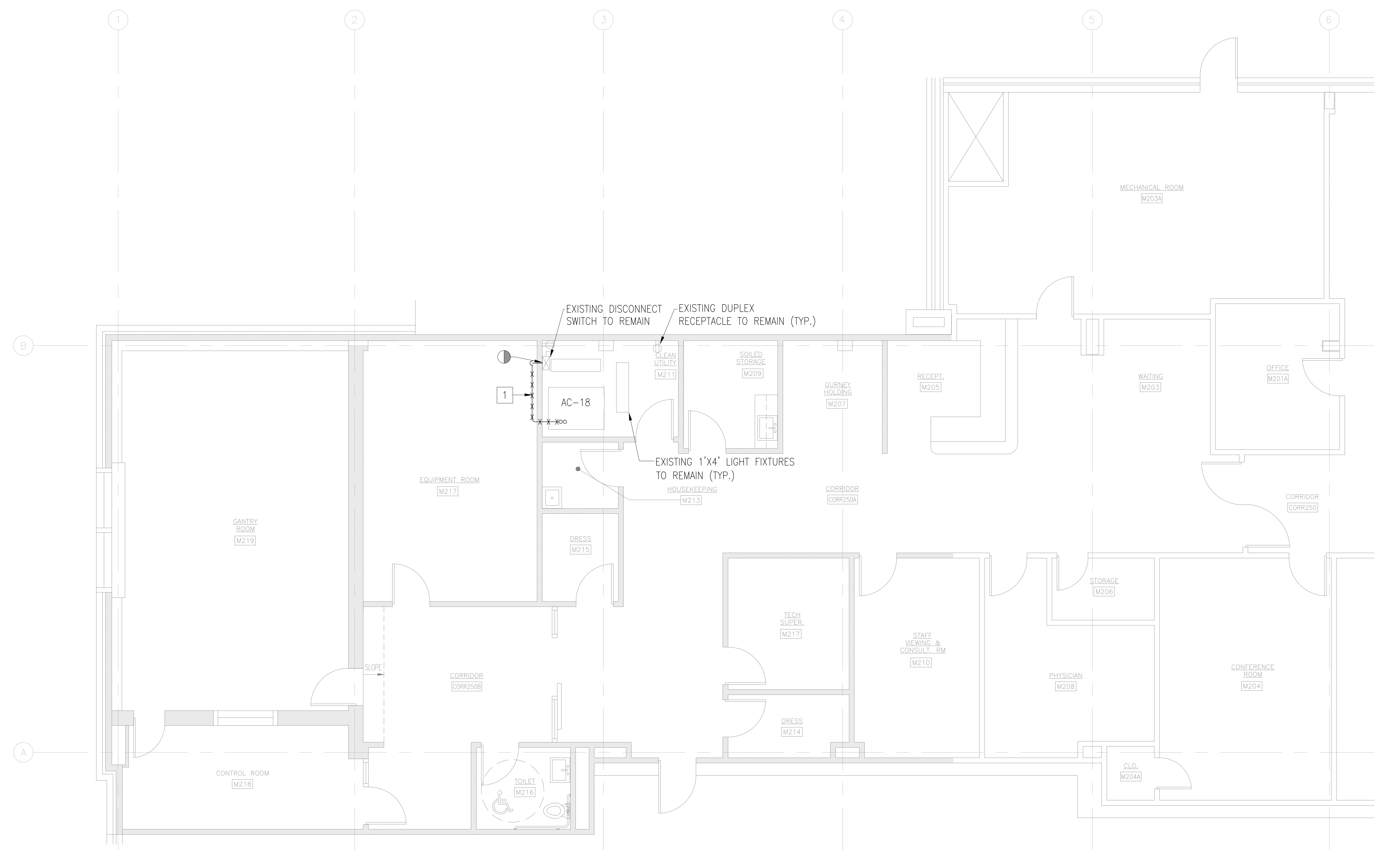
Dwg. 7 of 9

Office of  
Construction  
and Facilities  
Management



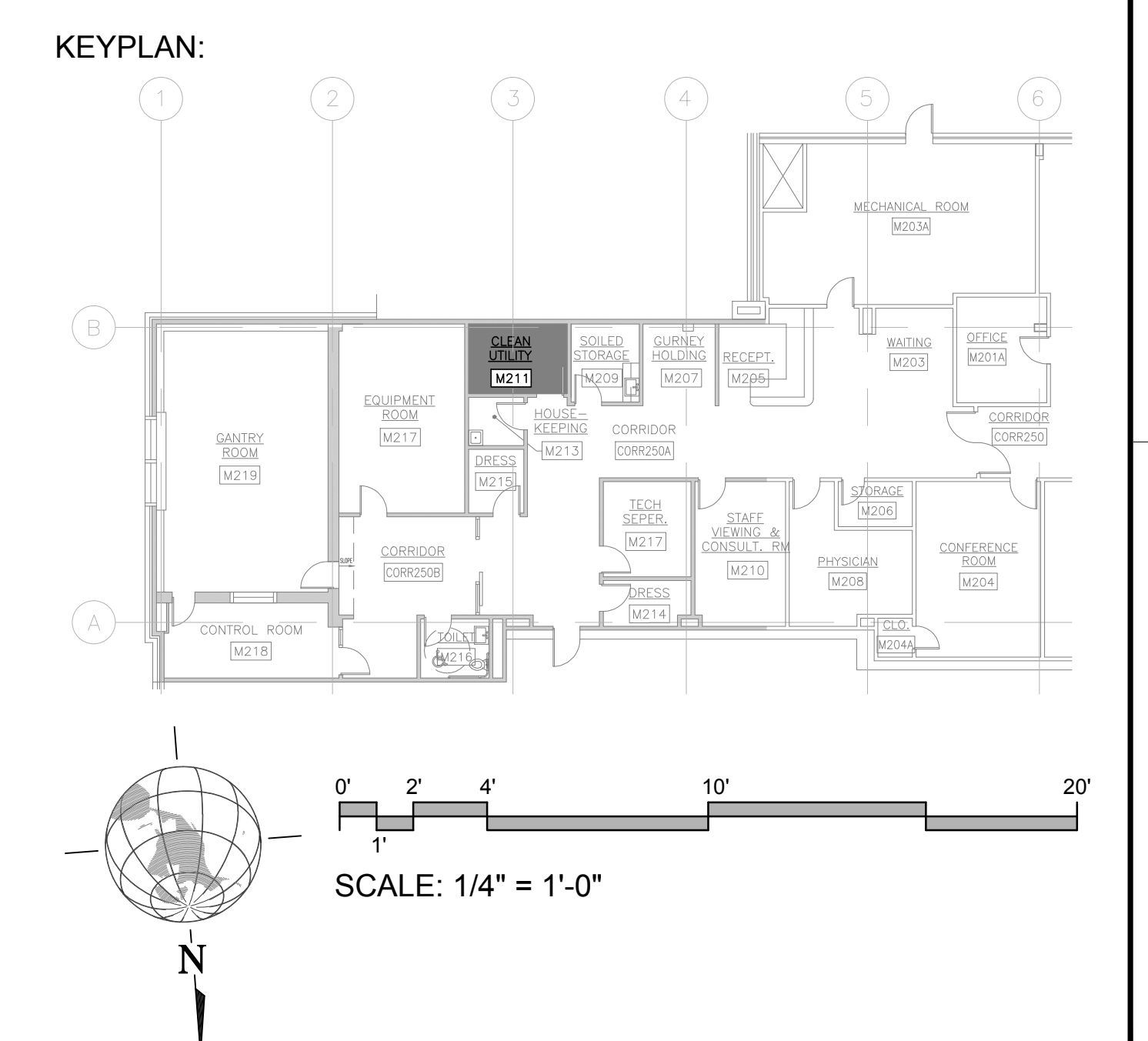


three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 three eighths inch = one foot  
 one half inch = one foot  
 three quarters inch = one foot  
 one eighth inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



**1 SECOND LEVEL - DEMOLITION POWER PLAN**  
 ED101 SCALE: 1/4" = 1'-0"

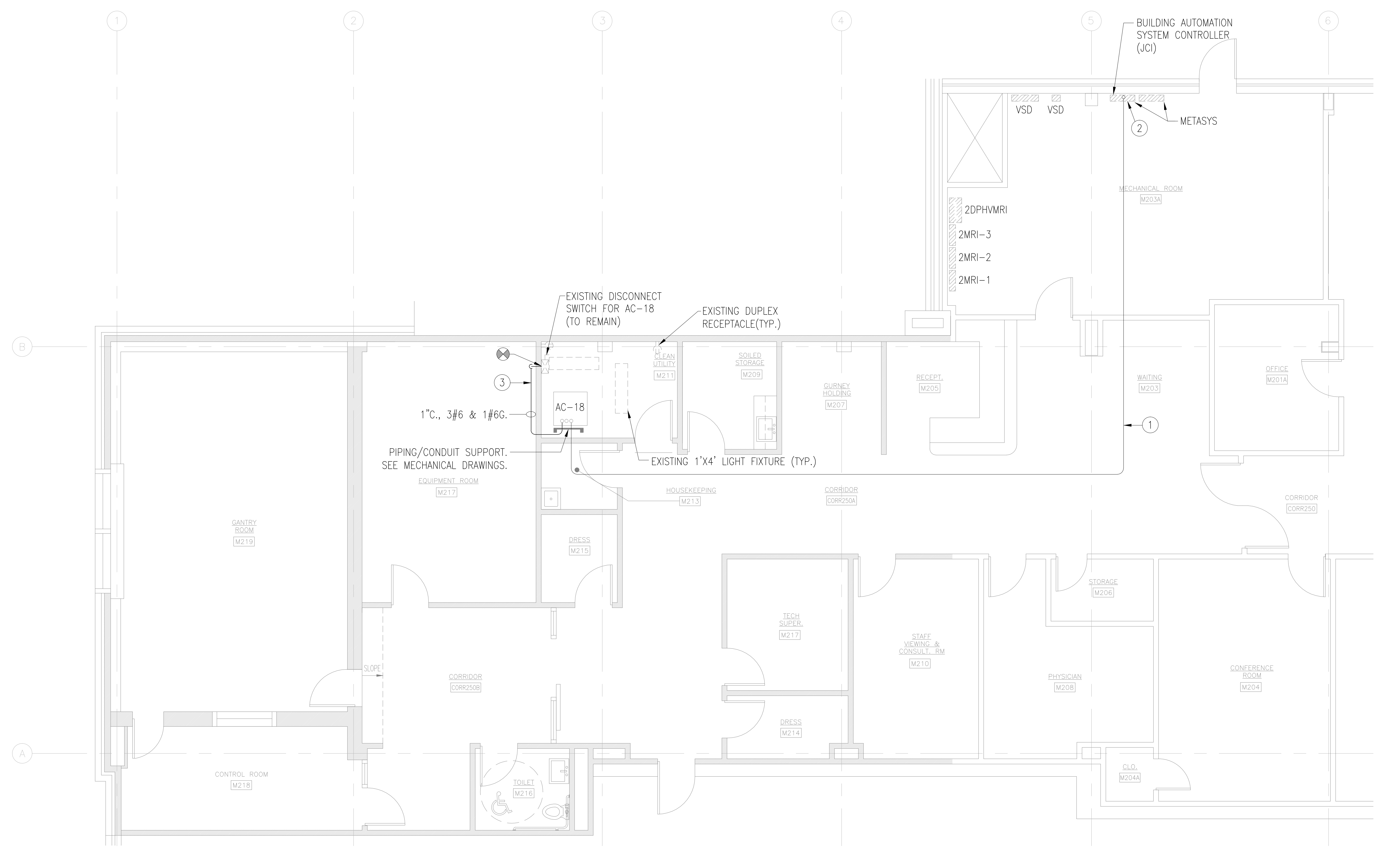
**KEYED DEMOLITION NOTES:**  
 1 DEMOLISH AND REMOVE EXISTING CABLE AND CONDUIT FROM EXISTING DISCONNECT SWITCH TO AC-18.



Revisions Date	CONSULTANTS:	Stamp 	ARCHITECT/ENGINEERS: <b>EVERETT ENGINEERS</b> 1740 MASSACHUSETTS AVE BOXBOROUGH, MA 01719 Phone: 978-266-3711 Fax: 978-415-5038	Drawing Title ELECTRICAL SECOND LEVEL DEMOLITION POWER PLAN	Project Title MRI GANTRY ROOM DESIGN	Project Number 528A7-14-704 Building Number 1	Office of Construction and Facilities Management Department of Veterans Affairs
	Approved Project Director	Location Syracuse, New York 13210	Date 06/11/2014	Checked RAE	Drawn JPS	Drawing Number <b>ED101</b> Dwg. 8 of 9	

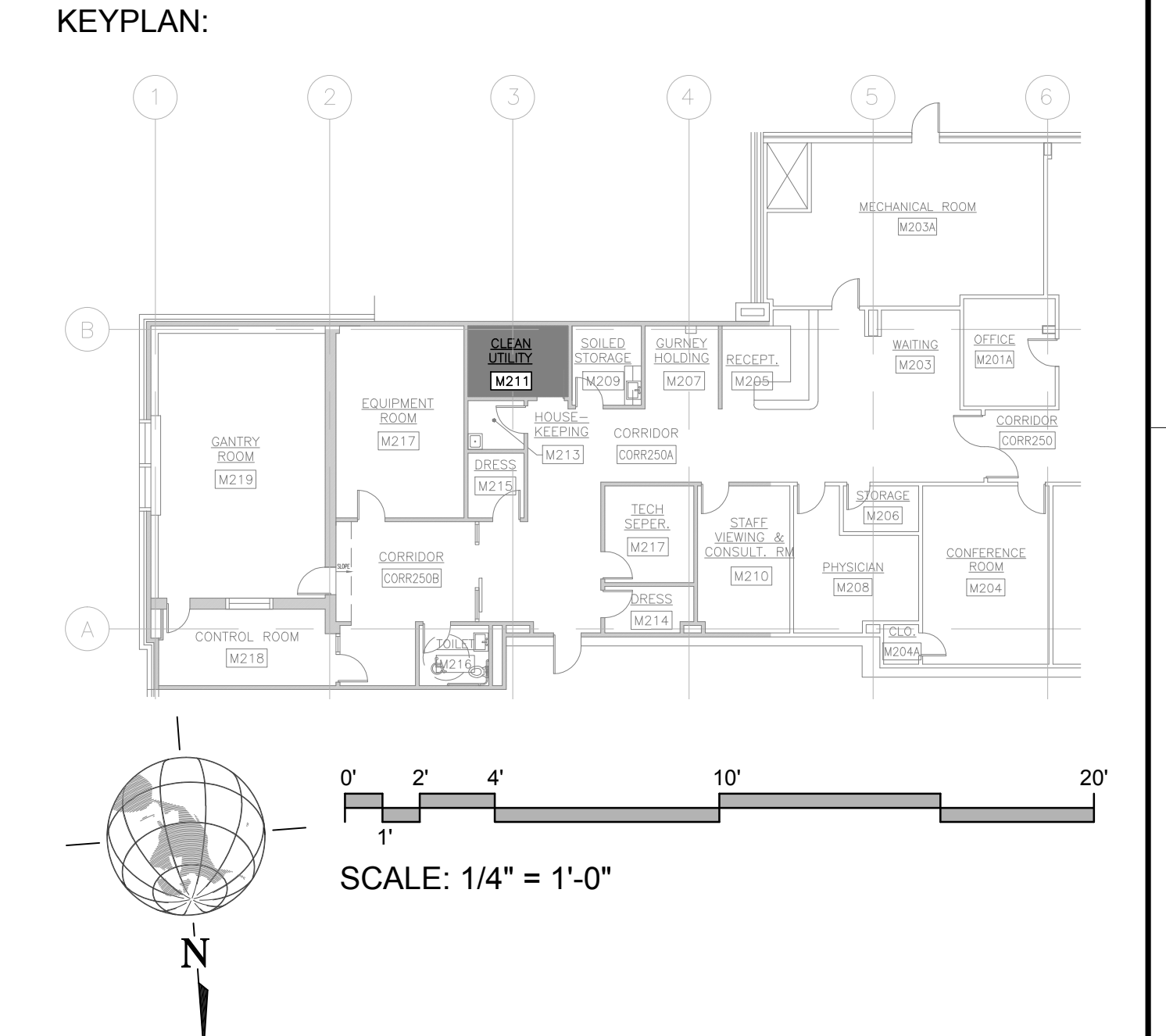


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 one quarter inch = one foot  
 one eighth inch = one foot



**1 SECOND LEVEL - NEW WORK POWER PLAN**  
 ED101 SCALE: 1/4" = 1'-0"

- NEW WORK KEYED NOTES:**
- ① COORDINATE WITH MECHANICAL AND INSTALL NEW ETHERNET CONNECTION IN 3/4" CONDUIT FROM AC-18 TO JCI CONTROLLER PANEL IN MECHANICAL ROOM M203A.
  - ② COORDINATE WITH JCI TO PROVIDE INPUT/OUTPUT POINTS VIA ETHERNET CONNECTION BETWEEN AC-18 AND THE BUILDING AUTOMATION SYSTEM. JCI CONTACT IS 315-415-2310.
  - ③ INSTALL NEW CONDUIT AND CABLE FROM EXISTING DISCONNECT SWITCH IN ROOM M211 TO AC-18.



Revisions Date	<b>CONSULTANTS:</b>		Stamp 	<b>ARCHITECT/ENGINEERS:</b> <b>EVERETT ENGINEERS</b> 1740 MASSACHUSETTS AVE BOXBOROUGH, MA 01719 Phone: 978-266-3711 Fax: 978-415-5038		Drawing Title <b>ELECTRICAL                  SECOND LEVEL NEW WORK POWER PLAN</b>		Project Title <b>MRI GANTRY ROOM DESIGN</b>		Project Number <b>528A7-14-704</b> Building Number <b>1</b>		Office of Construction and Facilities Management 
	Approved Project Director		Location <b>Syracuse, New York 13210</b>		Drawing Number <b>E101</b> Dwg. 9 of 9							
	Date <b>06/11/2014</b>		Checked <b>RAE</b>		Drawn <b>JPS</b>							