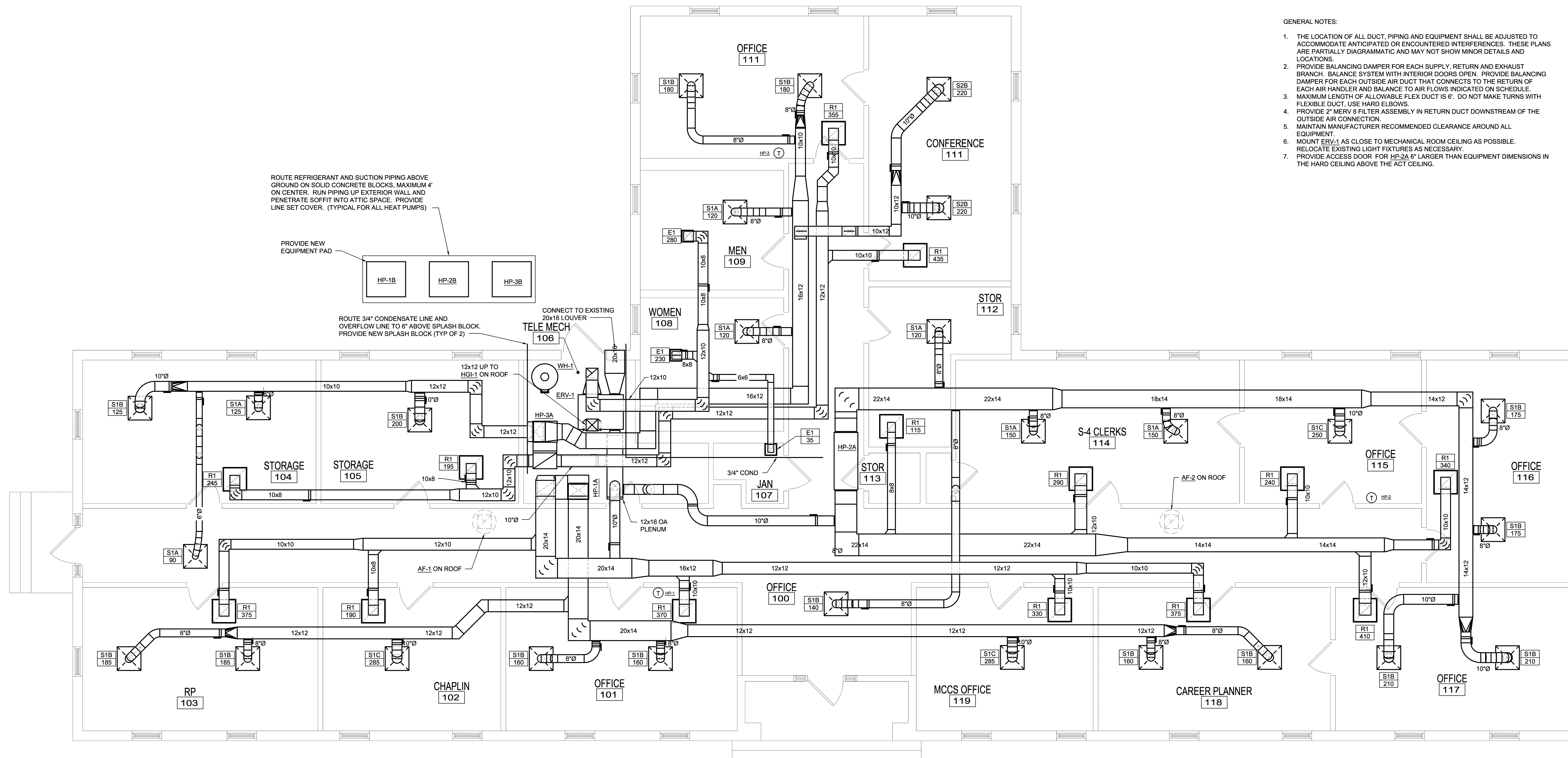


SYM.	PREP'D BY	DATE	APPROVED



- GENERAL NOTES:
1. THE LOCATION OF ALL DUCT, PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES. THESE PLANS ARE PARTIALLY DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS.
 2. PROVIDE BALANCING DAMPER FOR EACH SUPPLY, RETURN AND EXHAUST BRANCH. BALANCE SYSTEM WITH INTERIOR DOORS OPEN. PROVIDE BALANCING DAMPER FOR EACH OUTSIDE AIR DUCT THAT CONNECTS TO THE RETURN OF EACH AIR HANDLER AND BALANCE TO AIR FLOWS INDICATED ON SCHEDULE.
 3. MAXIMUM LENGTH OF ALLOWABLE FLEX DUCT IS 6'. DO NOT MAKE TURNS WITH FLEXIBLE DUCT. USE HARD ELBOWS.
 4. PROVIDE 2" MERV 8 FILTER ASSEMBLY IN RETURN DUCT DOWNSTREAM OF THE OUTSIDE AIR CONNECTION.
 5. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
 6. MOUNT ERV-1 AS CLOSE TO MECHANICAL ROOM CEILING AS POSSIBLE. RELOCATE EXISTING LIGHT FIXTURES AS NECESSARY.
 7. PROVIDE ACCESS DOOR FOR HP-2A 6" LARGER THAN EQUIPMENT DIMENSIONS IN THE HARD CEILING ABOVE THE ACT CEILING.

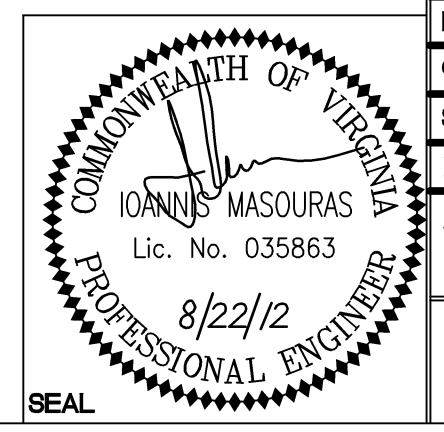
BUILDING 526 MECHANICAL NEW WORK PLAN
 1/4"=1'-0" 0 2 4 8

DISCLOSURE OF INFORMATION
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(a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless-
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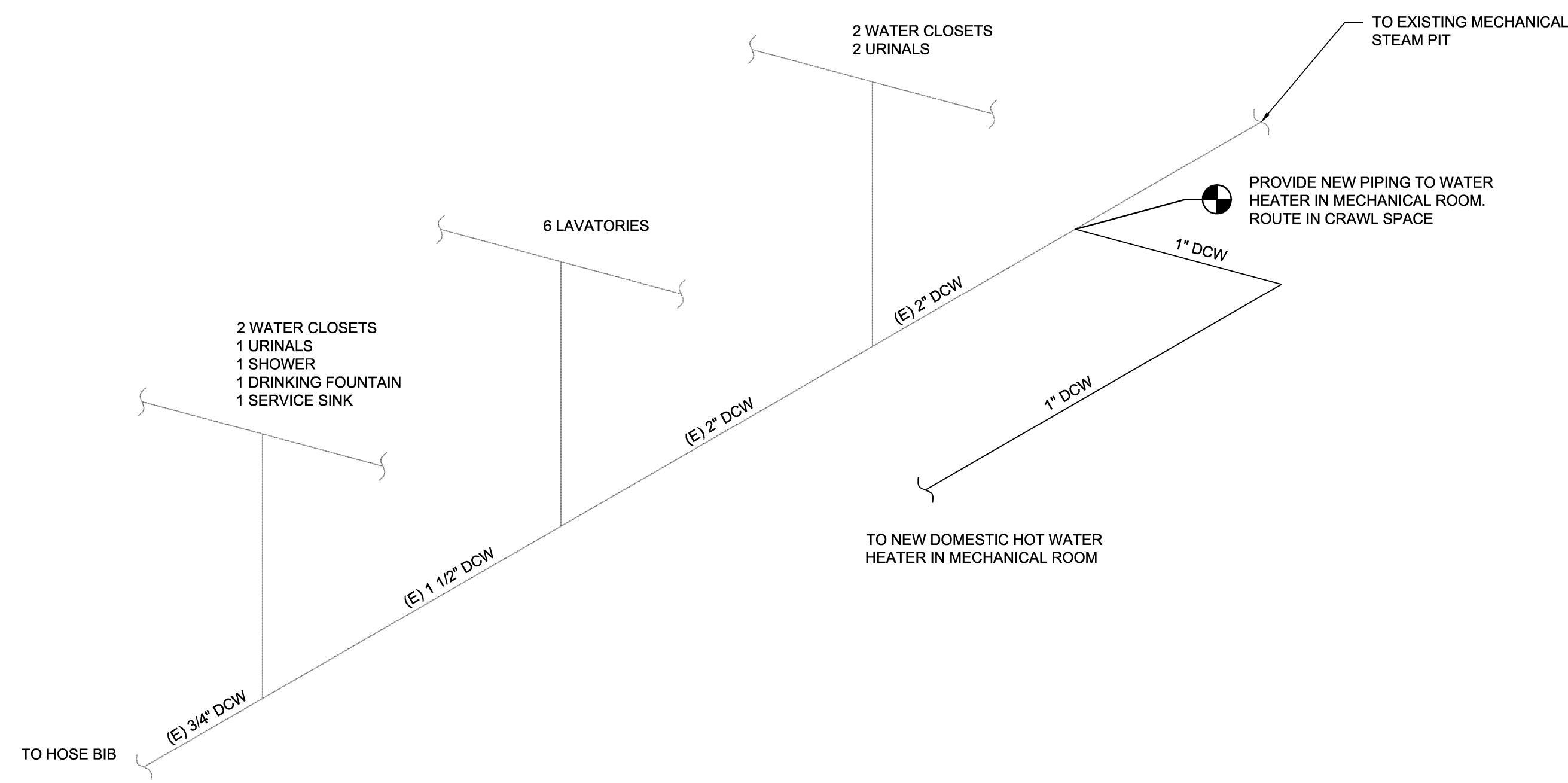
(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.

(c) The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

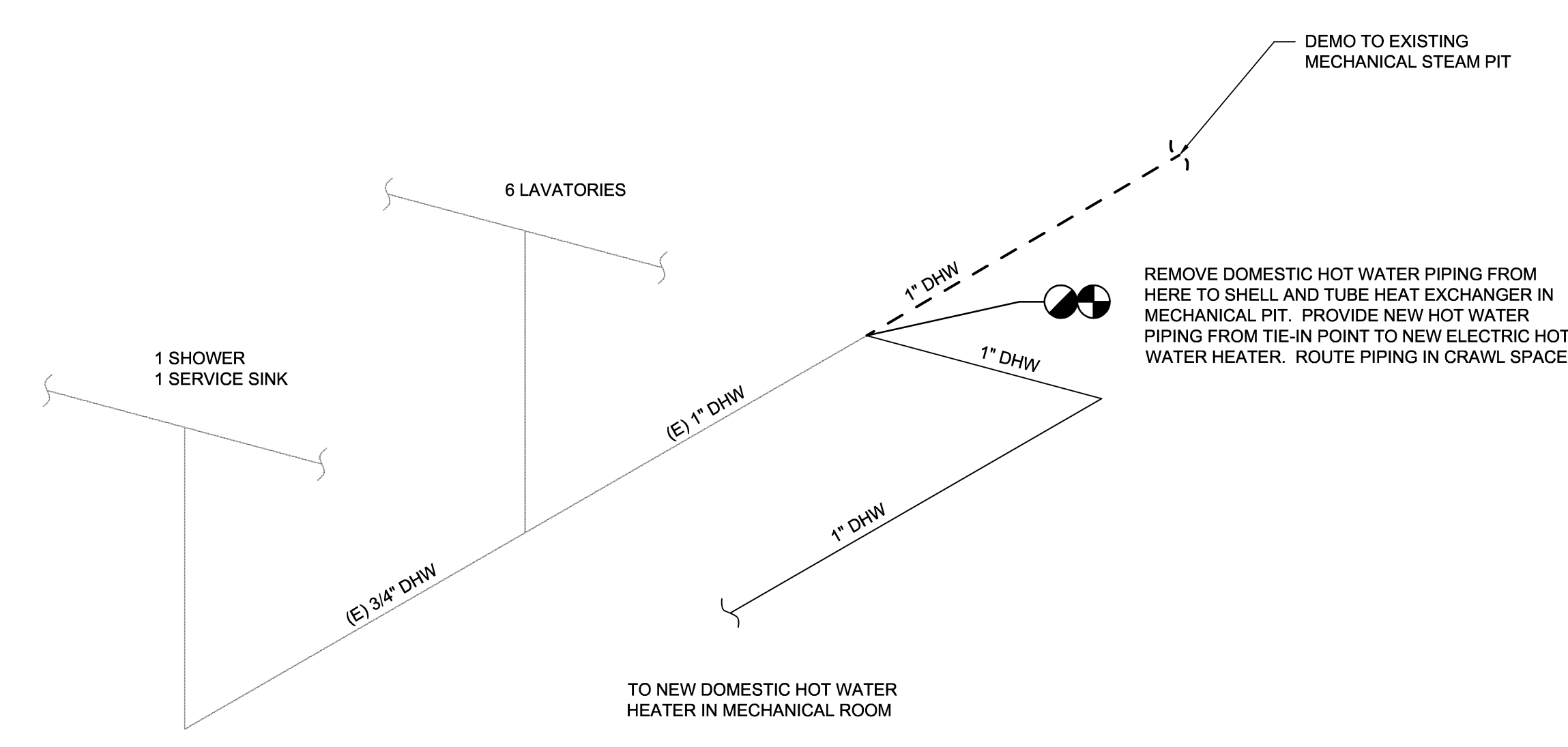


6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		M-112B PROJECT NO. CP12-0091 NAVAL FACILITIES ENGINEERING COMMAND	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 526 MECHANICAL NEW WORK PLAN		NAVFAC DRAWING NO. 60011389 CONSTR CONTR NO. N40085-12-B-0091	
DES. IM	DR. SWL	CHK. JHE	DESIGN DR.
APPROVED PWO OR OIC	DATE	SIZE	CODE IDENT NO.
		E	80091
SATISFACTORY TO	DATE	SCALE: AS SHOWN	SPEC No. 05-12-0091
			SHEET 45 OF 84

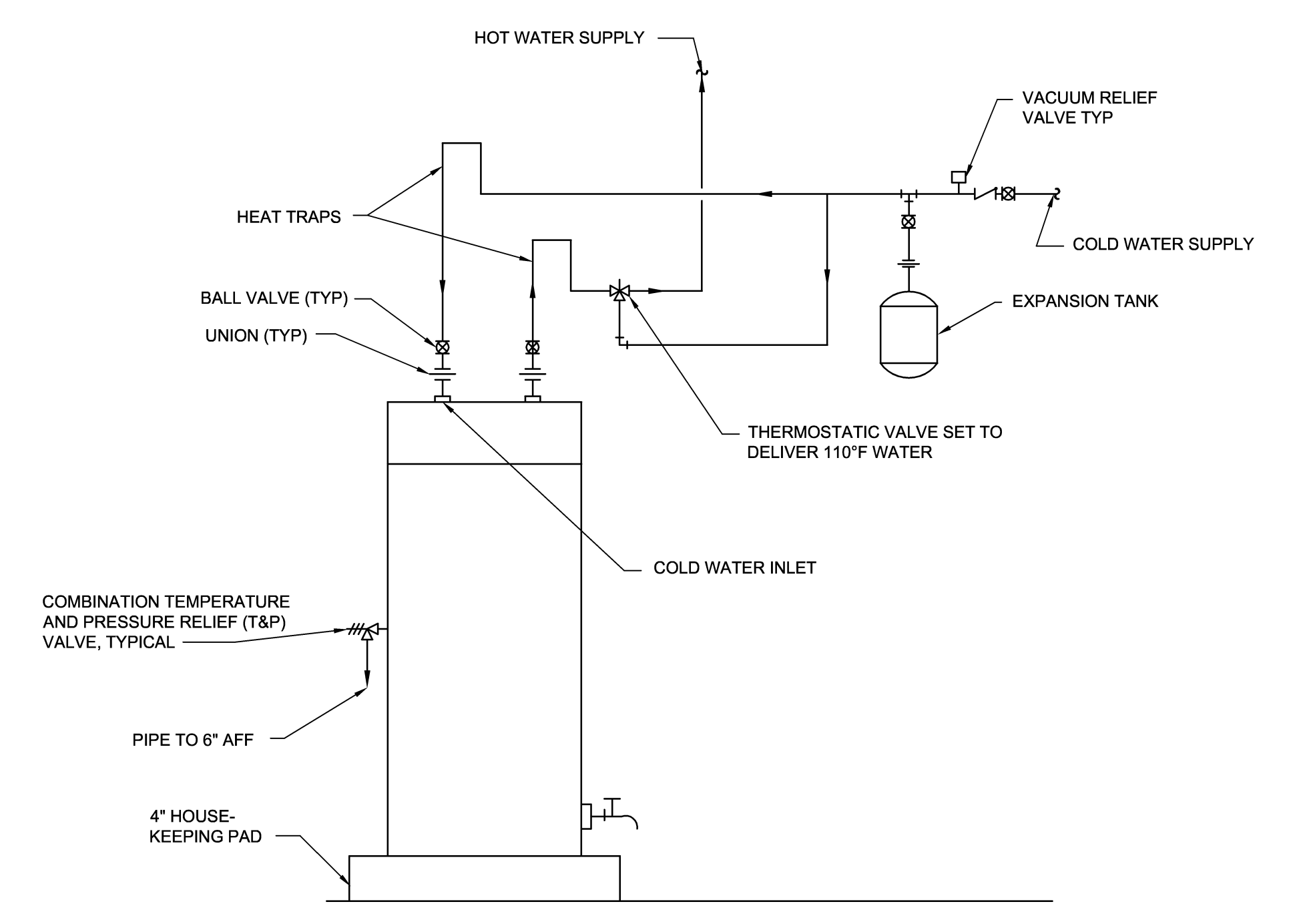
SYM.	PREP'D BY	DATE	APPROVED



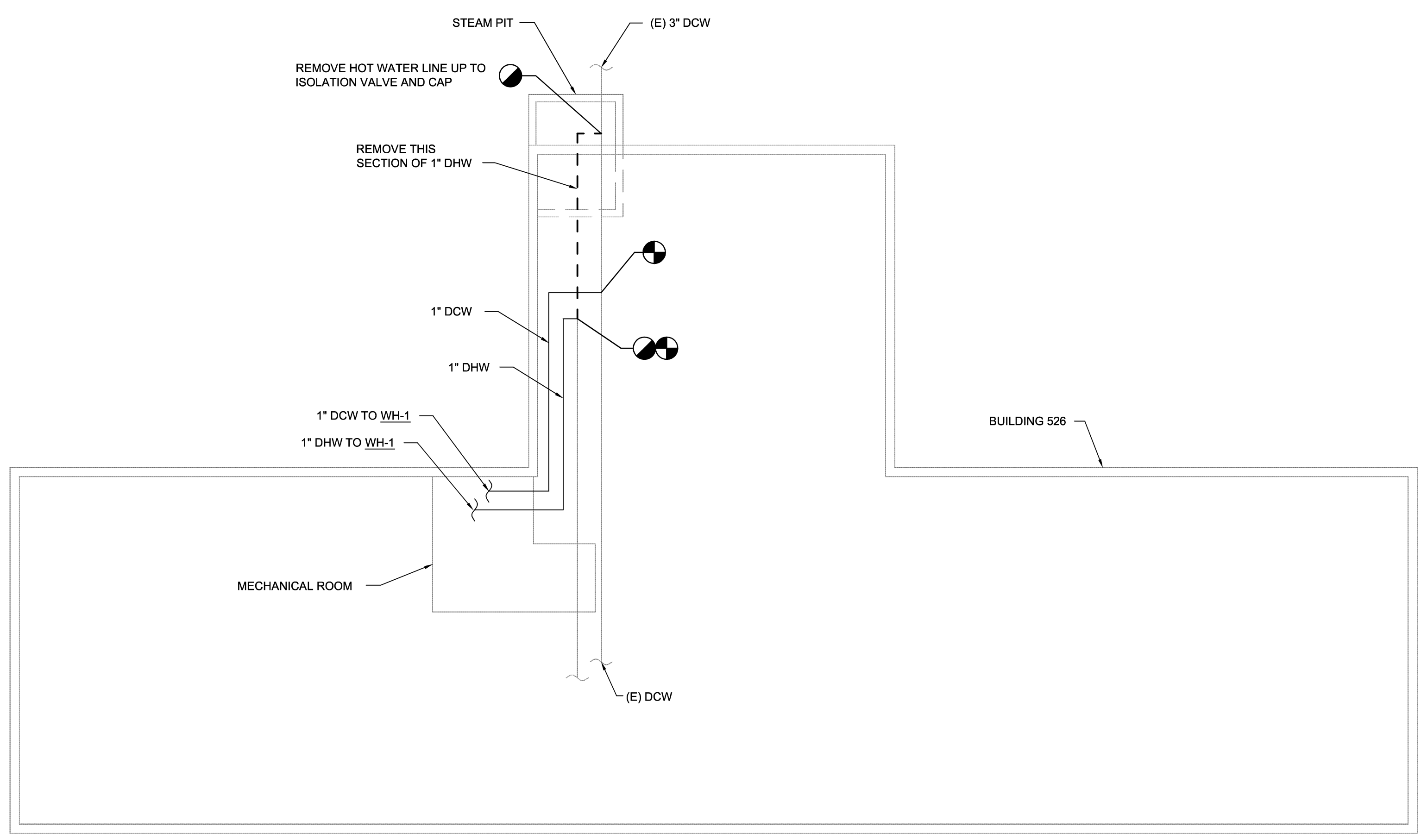
DOMESTIC COLD WATER RISER DIAGRAM
NOT TO SCALE



DOMESTIC HOT WATER RISER DIAGRAM
NOT TO SCALE



ELECTRIC WATER HEATER DETAIL
NOT TO SCALE

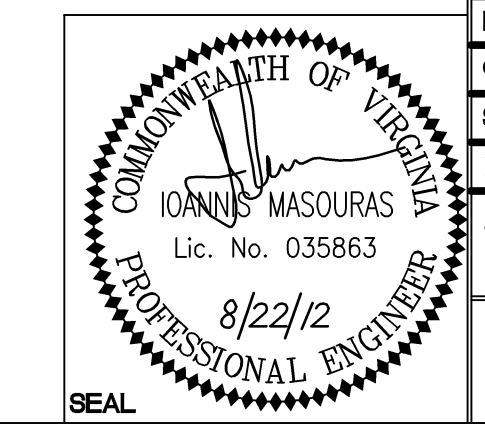


DOMESTIC WATER SITE PLAN
NOT TO SCALE

- PLUMBING NOTES:**
- THE LOCATION OF ALL PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES. THESE PLANS ARE PARTIALLY DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS.
 - STORE DOMESTIC HOT WATER AT 140 DEG F AND TEMPER TO 110 DEG F BEFORE BEING SUPPLIED TO BUILDING. PROVIDE MIXING VALVE.

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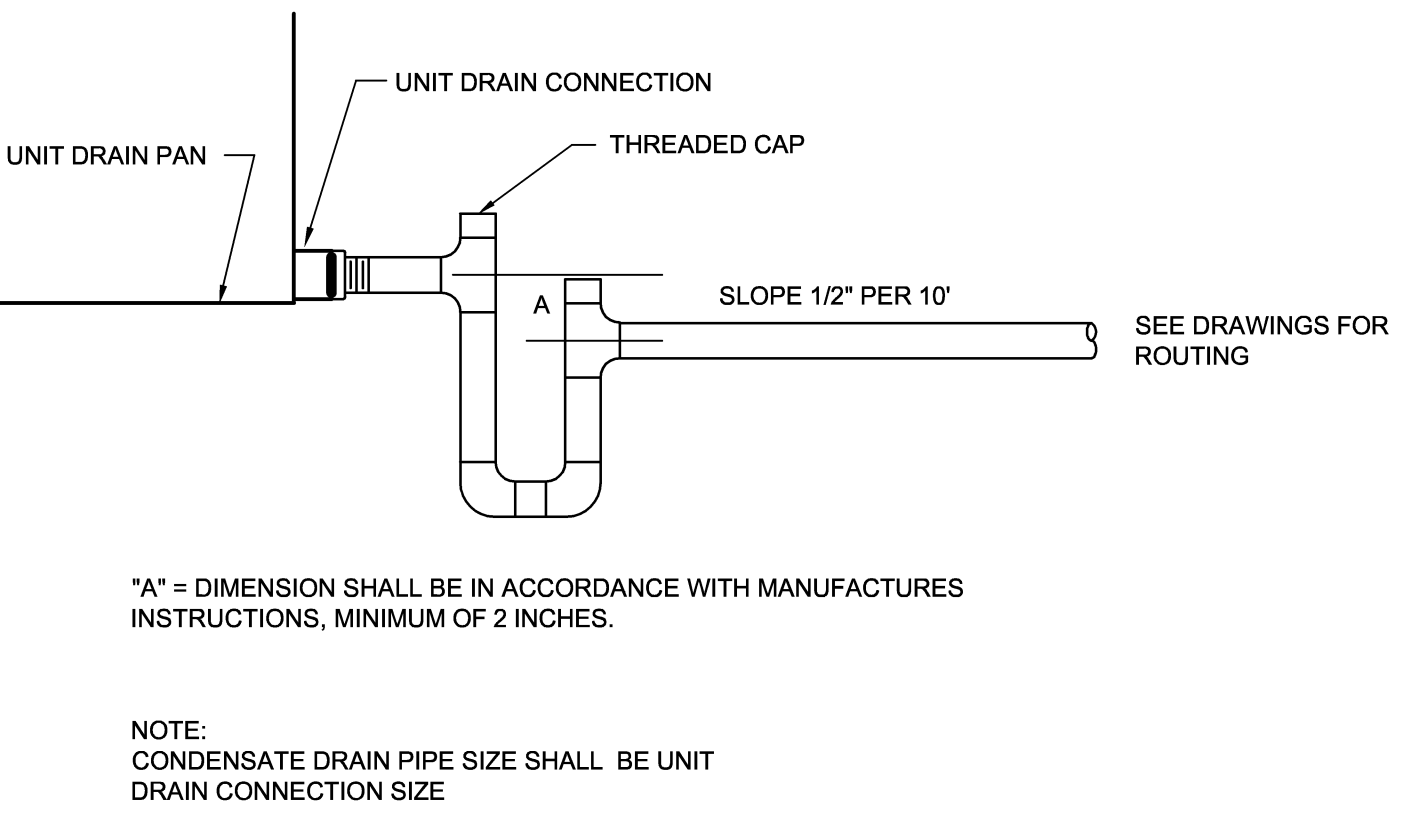


WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		M-112C PROJECT NO. CP12-0091	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES. IM	DR. SWL	HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 526 PLUMBING PLAN, DIAGRAMS & DETAILS	
CHK. JHE	SUBMITTED BY:	APPROVED PWO OR OICC	DATE
DESIGN DR.	APPROVED PWO OR OICC	DATE	DATE
SATISFACTORY TO	DATE	SCALE: AS SHOWN	SPEC No. 05-12-0091
NAVFAC DRAWING NO. 60011390		CONSTR CONTR NO. N40085-12-B-0091	
SHEET 46 OF 84		SHEET 46 OF 84	

SYM	PREP'D BY	DATE	APPROVED

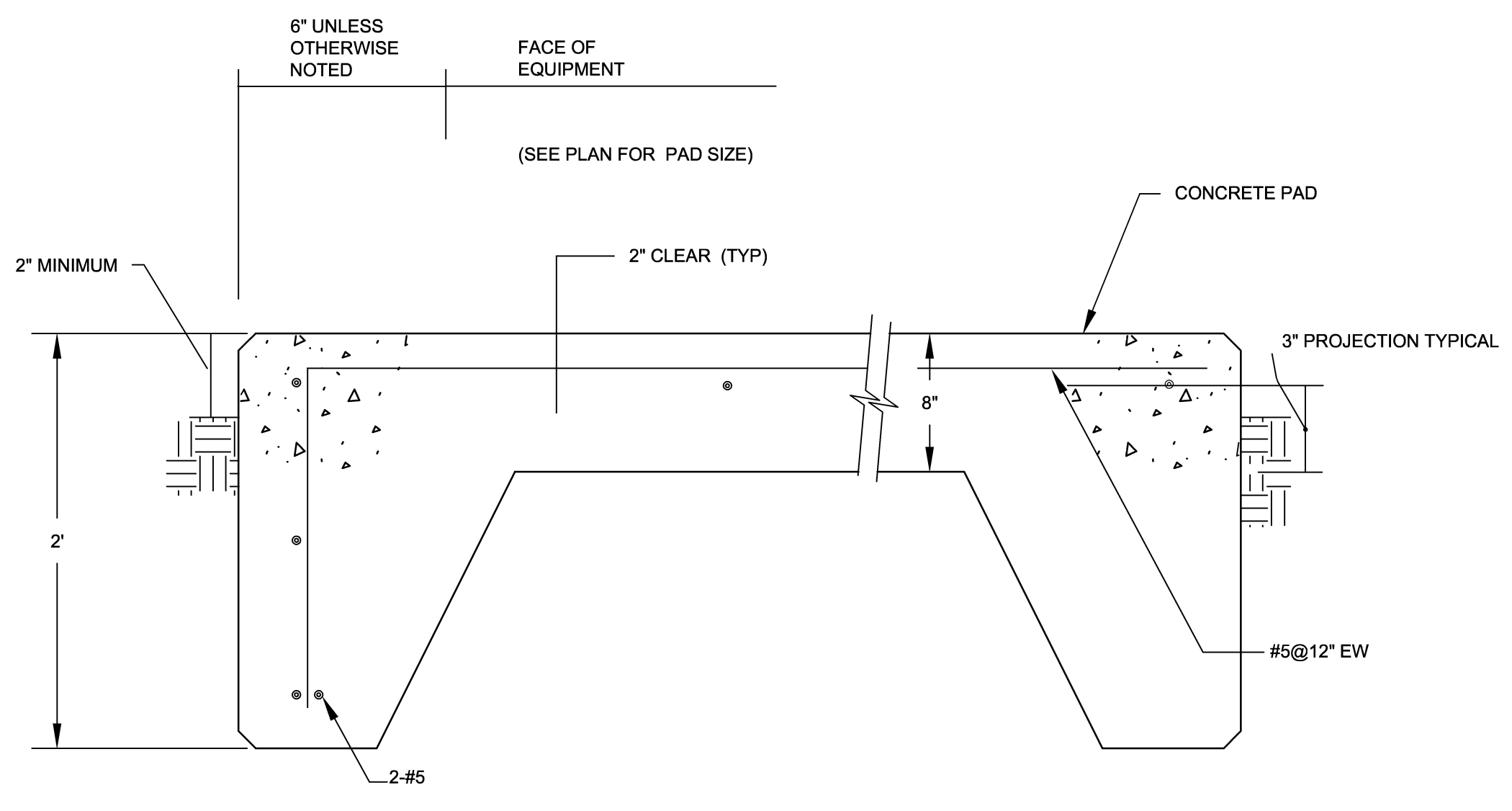
HEAT PUMP SCHEDULE					
INDOOR UNIT DESIGNATION	HP-1A	HP-2A	HP-3A		
OUTDOOR UNIT DESIGNATION	HP-1B	HP-2B	HP-3B		
LOCATION	VARIOUS	VARIOUS	VARIOUS		
MINIMUM COMBINED SEER RATING PER ARI	17.0	17.0	17.0		
MINIMUM COMBINED EER RATING PER ARI	12.2	12.2	12.2		
INDOOR UNIT	EVAPORATOR	TOTAL AIRFLOW (CFM)	1580	1580	1580
		OUTSIDE AIRFLOW (CFM)	110	185	350
		EXTERNAL STATIC PRESSURE (IN-WC)	.6	.6	.6
		TOTAL COOLING CAPACITY (MBH)	47.5	47.5	47.5
		HEAT PUMP HEATING CAPACITY AT 17° F (MBH)	29.2	29.2	29.2
	ELECTRICAL	ELECTRIC HEATING CAPACITY (KW)	5.0	5.0	5.0
		BLOWER MOTOR FLA (A)	9.1	9.1	9.1
		TOTAL MCA (A)	27	27	27
		VOLTAGE	208	208	208
		PHASE	1	1	1
FREQUENCY (Hz)	60	60	60		
BASED ON	LENNOX	LENNOX	LENNOX		
INDOOR UNIT MODEL	CBX32MV-048	CBX32MV-048	CBX32MV-048		
REFRIGERANT	R-410A	R-410A	R-410A		
OUTDOOR UNIT	ELECTRICAL	AMBIENT DESIGN TEMPERATURE (DEG F)	95	95	95
		MINIMUM CIRCUIT AMPACITY (A)	28.5	28.5	28.5
		MAXIMUM OVERCURRENT PROTECTION (A)	45	45	45
		MINIMUM HEATING COP AT 17° F	2.5	2.5	2.5
		MINIMUM HEATING COP AT 47° F	3.32	3.32	3.32
	ELECTRICAL	MINIMUM HEAT PUMP HSPF	8.7	8.7	8.7
		VOLTAGE (V)	208	208	208
		PHASE	1	1	1
		FREQUENCY (Hz)	60	60	60
		BASED ON	LENNOX	LENNOX	LENNOX
OUTDOOR SYSTEM MODEL	XP21-048-230	XP21-048-230	XP21-048-230		
REMARKS	1, 2 & 3	1, 2, 3 & 4	1, 2 & 3		

- REMARKS LEGEND:
1. PROVIDE CONDENSING UNIT SHUTOFF MOISTURE SENSOR IN AUXILIARY PORT OF INDOOR UNIT DRAIN PAN.
 2. PROVIDE SIDE RETURN UNIT STAND.
 3. PROVIDE ECM MOTOR ON INDOOR UNIT.
 4. PROVIDE SECONDARY DRAIN PAN EXTENDING 4" BEYOND AIR HANDLING UNIT ON ALL SIDES.



**AC DRAIN FOR HEAT PUMP AIR HANDLER
NEGATIVE PRESSURE DRAIN PAN**

NO SCALE



EXTERIOR EQUIPMENT PAD DETAIL

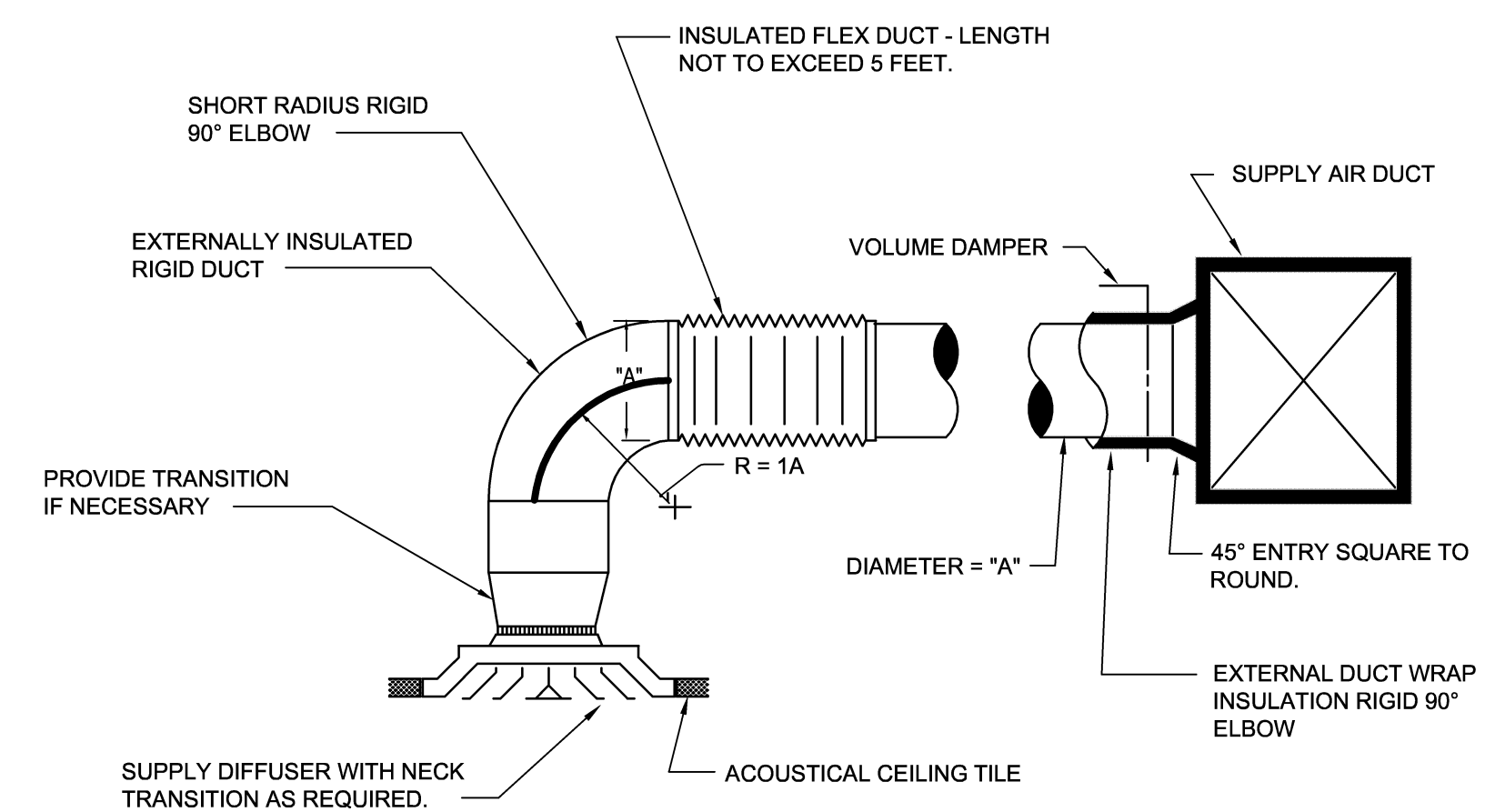
SCALE: NONE

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ENERGY RECOVERY VENTILATOR SCHEDULE		ERV-1
SUPPLY FAN	TOTAL FAN AIRFLOW (CFM)	645
	EXTERNAL STATIC PRESSURE (IN. WG)	.5
EXHAUST FAN	TOTAL FAN AIRFLOW (CFM)	545
	EXTERNAL STATIC PRESSURE (IN. WG)	.5
ENTHALPY WHEEL	OPERATING OUTSIDE AIRFLOW	645
	OPERATING EXHAUST AIRFLOW	545
	OUTDOOR EAT DBWB (COOLING)	95/79
	OUTDOOR EAT DBWB (HEATING)	20/16.6
	EXHAUST EAT DBWB (COOLING)	75/83
	EXHAUST EAT DBWB (HEATING)	70/53
	DELIVERED CONDITIONS DBWB (COOLING)	80/68.3
	DELIVERED CONDITIONS DBWB (HEATING)	52/643.6
	SUPPLY (MERV)	8
	EXHAUST (MERV)	8
ELECTRICAL	MCA (A)	18.3
	MOCAP (A)	25
	VOLTS (V)	115
	PHASE	1
FREQUENCY (Hz)	60	
BASED ON		GREENHECK
MODEL		MINVENT-750
REMARKS		1

- REMARKS LEGEND:
1. PROVIDE FACTORY MOUNTED CONTROLS FOR UNITS INCLUDING ALL REQUIRED MOTOR STARTERS, PROVIDE FACTORY REMOTE PANEL INCLUDING INDICATION FOR DIRTY FILTER, HAND-OFF-AUTO SWITCH, AND 7 DAY TIME CLOCK.



**TYPICAL CEILING SUPPLY
DIFFUSER CONNECTION**

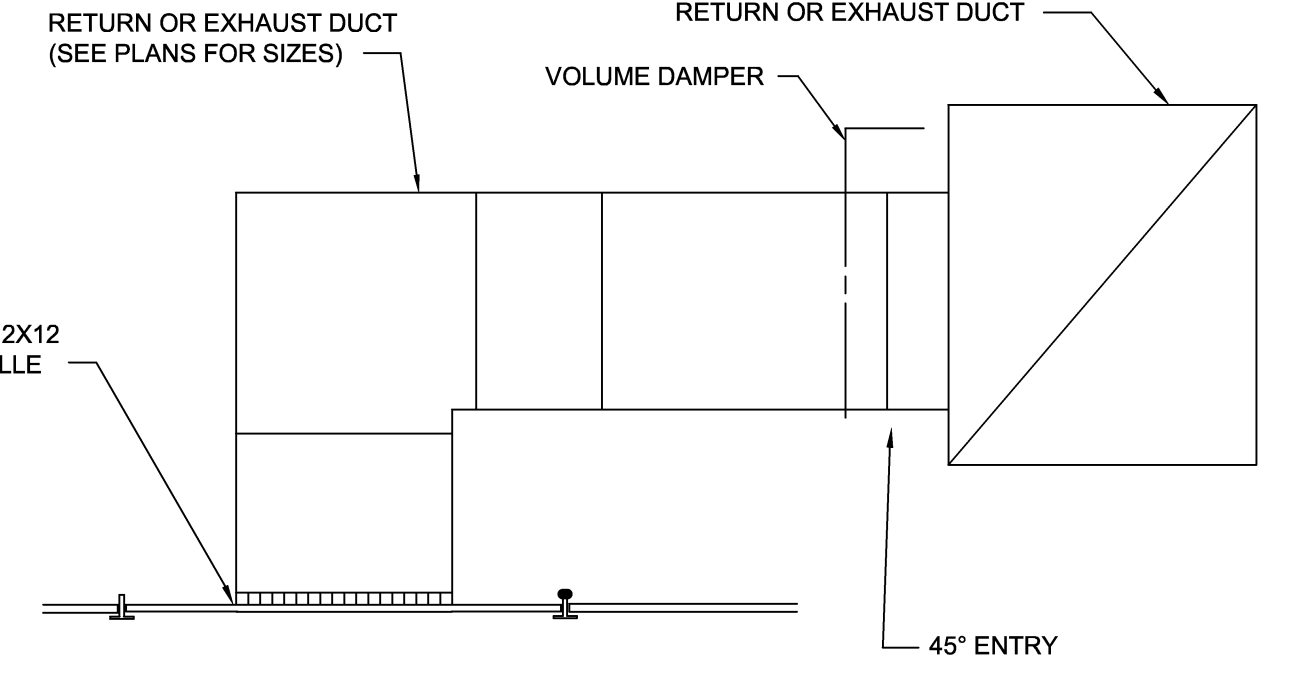
SCALE: NONE

ELECTRIC DOMESTIC WATER HEATER		WH-1
DESIGNATION		WH-1
LOCATION		MECH ROOM
STORAGE (GALLONS)		60
TOTAL CAPACITY (KW)		6
RECOVERY RATE @ 90 DEG F (GPH)		27
ELECTRICAL		--
VOLTS		208
PHASE		1
FREQUENCY (Hz)		60
REMARKS		1

- REMARKS LEGEND:
1. PROVIDE 3.2 GALLON EXPANSION TANK OR LARGER SUCH AS AMTROL ST-8 OR SIMILAR.

HOODED GRAVITY INTAKE SCHEDULE		HGI-1
DESIGNATION		HGI-1
LOCATION		INTAKE
USAGE		
AIRFLOW (CFM)		645
STATIC PRESSURE (IN H2O)		.03
THROAT AREA (SF)		1.45
THROAT VELOCITY (FPM)		445
THROAT DIAMETER (IN)		16.25
SELECTION BASED ON		GREENHECK
MODEL		GRSI-16
REMARKS		1

- REMARKS LEGEND:
1. PROVIDE BIRD SCREEN.



CEILING RETURN/EXHAUST GRILLE

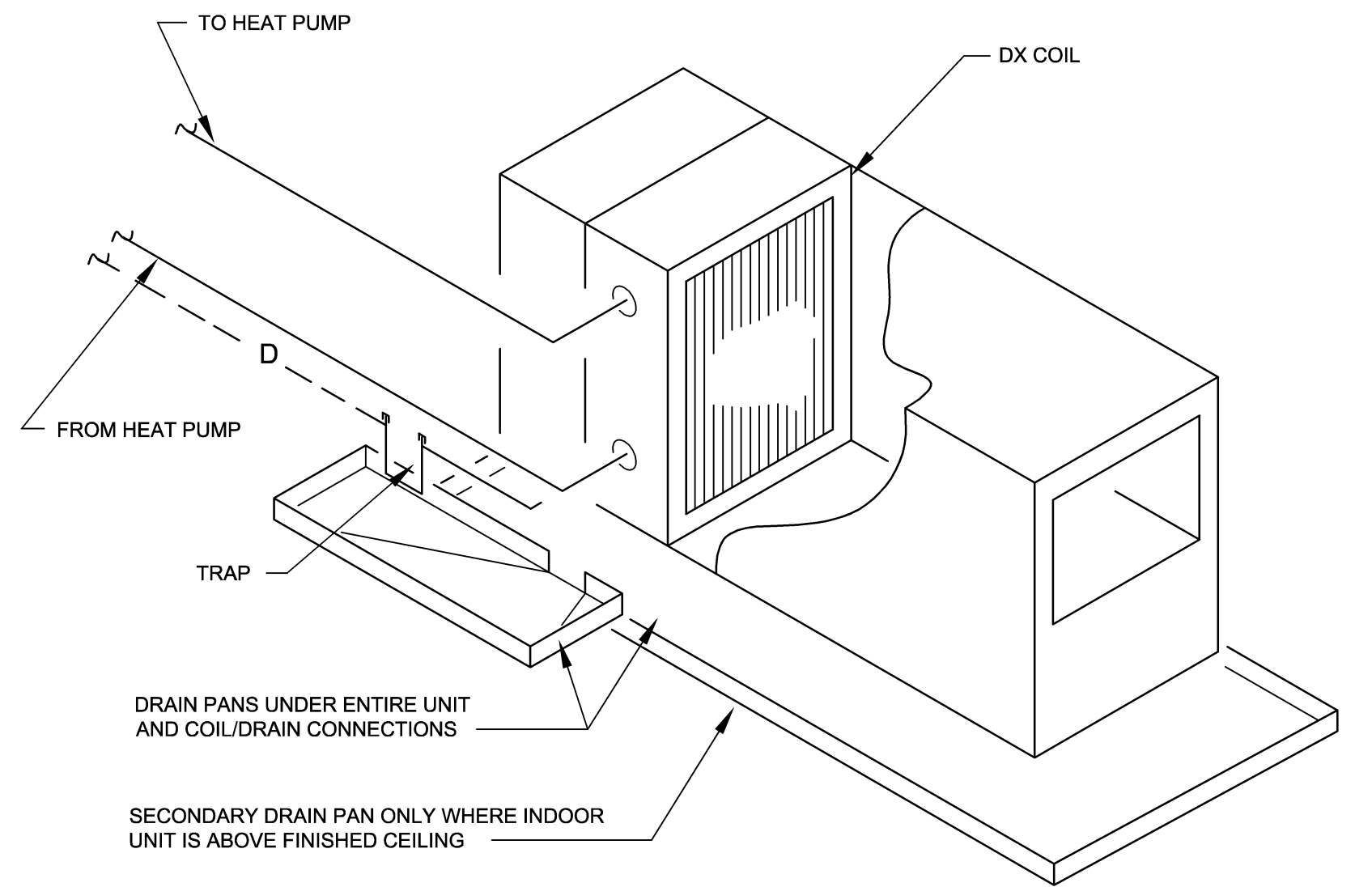
SCALE: NONE

ATTIC FAN SCHEDULE		
DESIGNATION	AF-1	AF-2
LOCATION	ROOF	ROOF
USAGE	ATTIC VENTILATION	ATTIC VENTILATION
FAN DATA	--	--
AIRFLOW (SCFM)	1700	1700
EXTERNAL SP (IN-H2O)	.125	.125
RPM	1725	1725
DRIVE TYPE	DIRECT	DIRECT
MOTOR DATA	--	--
HORSEPOWER	1/2	1/2
RPM	1750	1750
VOLTS	115	115
PHASE	60	80
HERTZ	1	1
SELECTION BASED ON	GREENHECK	GREENHECK
MODEL	LD-120-VG	LD-120-VG
REMARKS	1, 2, 3 & 4	1, 2, 3 & 4

- REMARKS LEGEND:
1. PROVIDE FAN WITH INTEGRAL BACK-DRAFT DAMPER, CONTINUOUS DUTY RATED.
 2. PROVIDE FAN WITH FACTORY MOUNTED DISCONNECT.
 3. PROVIDE FAN WITH ECM MOTOR AND WITH ADJUSTABLE SPEED.
 4. PROVIDE ATTIC MOUNTED THERMOSTATIC CONTROL, SET THERMOSTAT TO OPERATE FAN WHEN ATTIC EXCEEDS 66 DEG F.

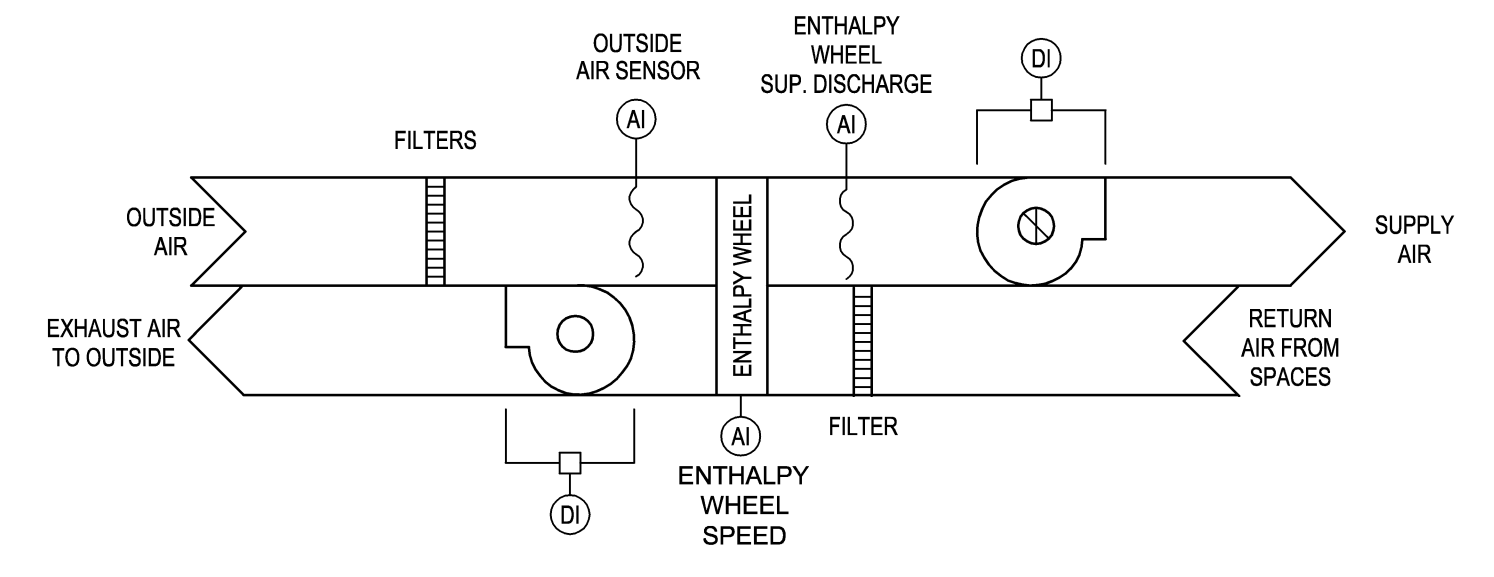
AIR TERMINAL DEVICE SCHEDULE				
DESIGNATION	S1	S2	R1	E1
TYPE	SUPPLY	SUPPLY	RETURN	EXHAUST
NECK SIZE	A=6"	A=6"	24x24	12x12
	B=8"	B=8"		
	C=10"	C=10"		
	D=12"	D=12"		
FRAME STYLE	LAY-IN	LAY-IN	LAY-IN	LAY-IN
AIR PATTERN	4 WAY	4 WAY	--	--
MAX NC RATING	25	25	25	25
MATERIAL	STEEL	STEEL	STEEL	STEEL
FINISH	BAKED ENAMEL	BAKED ENAMEL	BAKED ENAMEL	BAKED ENAMEL
BASED ON	PRICE	PRICE	PRICE	PRICE
MODEL	SCD	VPD-HC	81 SERIES	81 SERIES
REMARKS	--	1	--	--

- REMARKS LEGEND:
1. PROVIDE A SELF-MODULATING DIFFUSER WITH A COOLING SET POINT OF 75 DEG F (ADJUSTABLE) AND A HEATING SET POINT OF 66 DEG F (ADJUSTABLE).



HEAT PUMP INDOOR UNIT DETAIL

SCALE: NONE

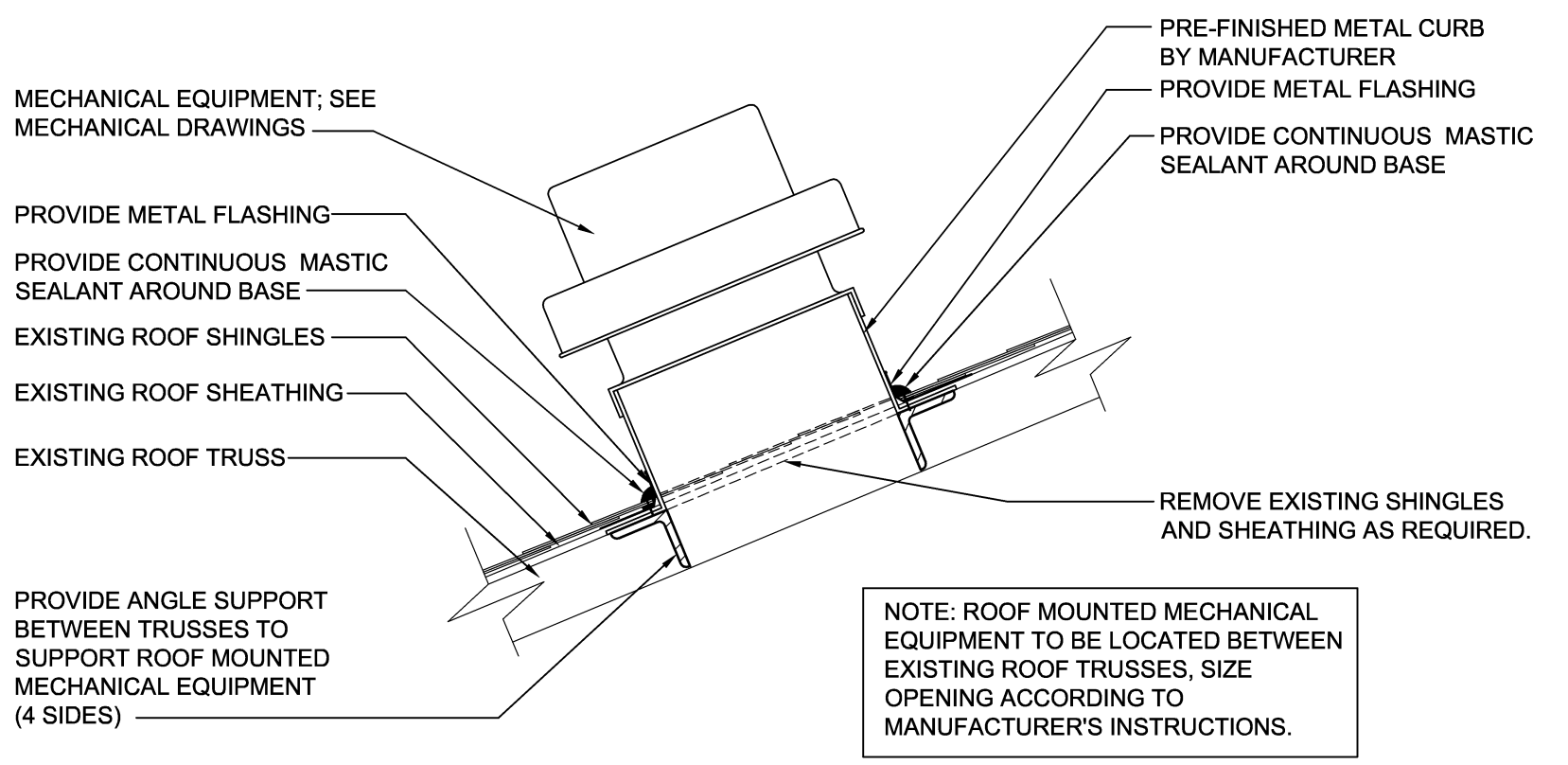


ENERGY RECOVERY VENTILATOR CONTROL DIAGRAM

- SCALE: NONE
- SEQUENCE OF OPERATION:
- DURING THE OCCUPIED MODE, THE ENERGY RECOVERY VENTILATOR SHALL RUN CONTINUOUSLY. DURING UNOCCUPIED MODE, THE UNIT WILL BE DISABLED WHERE THE SUPPLY AND EXHAUST FANS ARE OFF AND THE WHEEL DOES NOT ROTATE.
- DURING OPERATION, DIFFERENTIAL PRESSURE SENSORS SHALL BE USED TO CONFIRM STATUS OF SUPPLY AND EXHAUST FANS. A TACHOMETER SHALL BE USED TO VERIFY WHEEL OPERATION. IF AT ANY TIME THE UNIT IS COMMANDED ON AND EITHER OF THESE THREE OPERATIONAL PIECES OF THE UNIT ARE NOT FUNCTIONING, THE ENTIRE UNIT SHALL BE SHUT DOWN AND AN ALARM SENT.

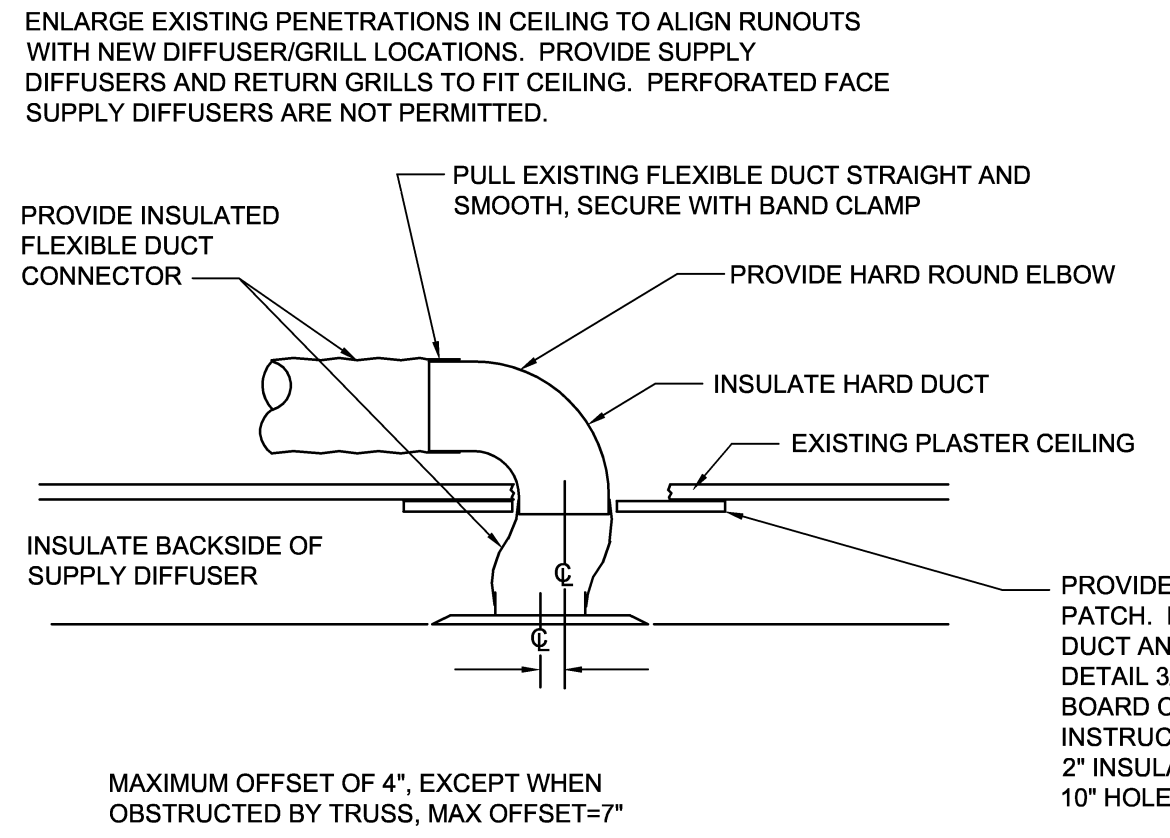
SPLIT SYSTEM HEAT PUMP SEQUENCE OF OPERATIONS

DURING THE OCCUPIED MODE, THE SPLIT SYSTEM AIR HANDLER FAN SHALL RUN CONTINUOUSLY TO SATISFY ROOM COMBINED THERMOSTAT AND HUMIDISTAT. THE SUPPLY AIR FAN ECM MOTOR SHALL REMAIN ON DURING OCCUPIED MODE AND THE SPEED SHALL MODULATE ACCORDING TO THE MANUFACTURER'S STANDARD SEQUENCE OF OPERATION TO CONTROL ROOM TEMPERATURE AND LIMIT HUMIDITY. IN THE HEATING MODE, THE THERMOSTAT SHALL NOT ENERGIZE THE AUXILIARY ELECTRIC HEAT IF THE HEAT PUMP MODE CAN MEET THE DEMAND, SUCH AS DURING WARM-UP FROM NIGHT SET BACK USING A SMART RECOVERY CAPABLE THERMOSTAT. FACTORY COMMUNICATING THERMOSTAT SHALL BE PROVIDED WITH 7 DAY PROGRAMMING TO ALLOW NIGHTWEEKEND SET-BACK. COMMUNICATE ALL STANDARD MANUFACTURER'S ALARMS FROM THE UNITS TO THE THERMOSTAT, AND INDICATE DIRTY FILTER. THERMOSTAT SHALL INCLUDE DEHUMIDIFICATION CONTROL TO INTEGRATE WITH HEAT PUMP CONTROLLER TO REDUCE FAN SPEED TO INCREASE LATENT PERFORMANCE AND REDUCE INDOOR AIR HUMIDITY.



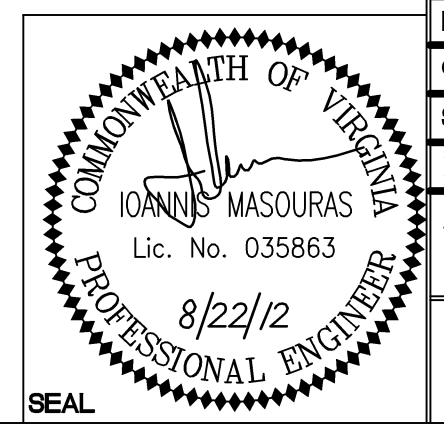
ROOF PENETRATION DETAIL

SCALE: NONE



TYP. DUCT TAKE OFF DETAIL

SCALE: NONE



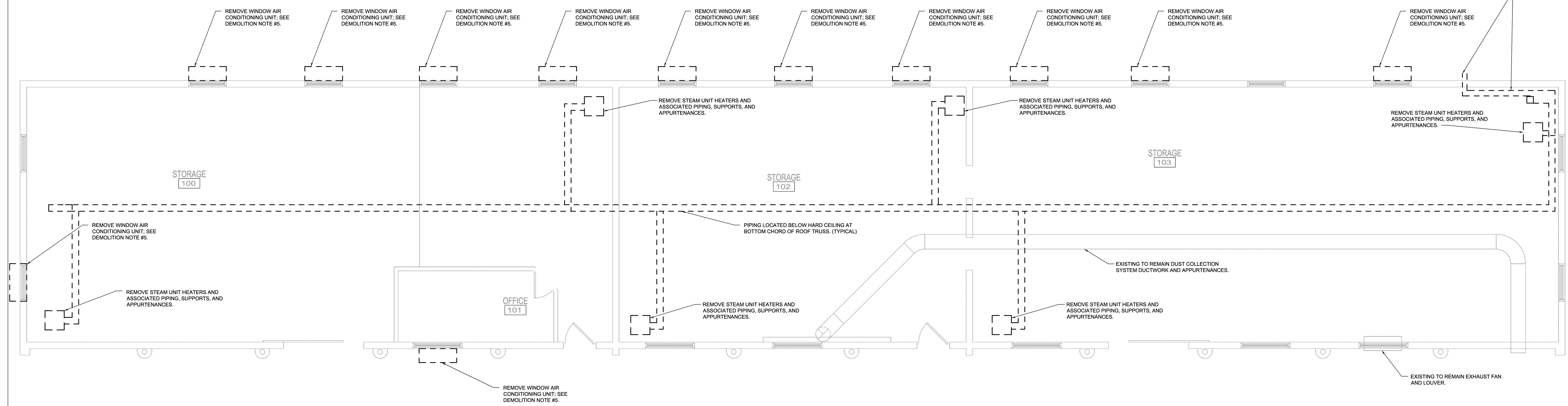
<p>WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com</p>		<p>M-112D</p> <p>PROJECT NO. CP12-0091</p> <p>NAVAL FACILITIES ENGINEERING COMMAND</p>	
<p>DEPT OF NAVY</p> <p>MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA</p> <p>HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 526 SCHEDULES, DETAILS & CONTROLS</p>		<p>NAVFAC DRAWING NO. 60011391</p> <p>CONSTR CONTR NO. N40085-12-B-0091</p>	
DES. IM	DR. SWL	CHK. JHE	SUBMITTED BY:
DESIGN DR.	APPROVED PWO OR OIOC	DATE	SIZE
SATISFACTORY TO	DATE	CODE IDENT NO.	80091
SCALE: AS SHOWN	SPEC No.	05-12-0091	SHEET 47 OF 84

SYM.	PREP'D BY	DATE	APPROVED

DEMOLITION NOTES:

1. DUCT LOCATIONS APPROXIMATE, CONTRACTOR TO VERIFY AS NECESSARY.
2. SEAL ALL BUILDING PENETRATIONS CREATED DURING DEMOLITION AND NOT RE-USED.
3. REMOVE ALL EQUIPMENT, DUCTWORK, DIFFUSERS, GRILLES, HANGERS AND INSULATION AS SHOWN.
4. TURN OVER ALL WINDOW AIR CONDITIONING UNITS BACK OVER TO GOVERNMENT.
5. REMOVE WINDOW AND FRAME IN ITS ENTIRETY. CLEAN AND PREPARE SURFACES FOR NEW WINDOW. SEE SHEET M-113B FOR WINDOW REPLACEMENT DETAILS.

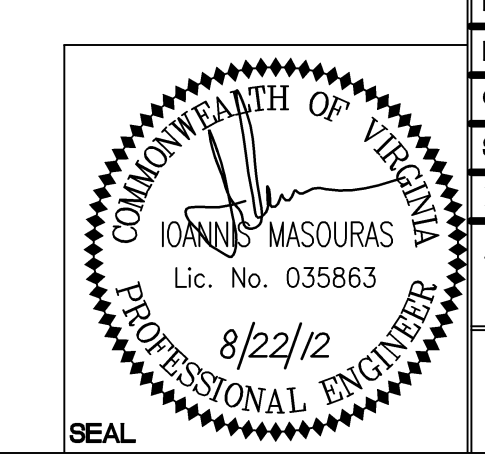
REMOVE ALL STEAM AND CONDENSATE PIPES, RELATED EQUIPMENT AND APPURTENANCES BACK TO 24" BELOW GRADE AND CAP. FOLLOW UNDERGROUND STEAM LINES BACK TO STEAM PIT WHERE BRANCHES CONNECT TO MAINS. REMOVE BRANCH PIPING TO ENTRANCE OF STEAM PIT AND PROVIDE CAP. PROVIDE BLIND FLANGE TO EXISTING BRANCH STEAM AND CONDENSATE ISOLATION VALVE AND TAG VALVES TO REMAIN CLOSED. ABANDON CAPPED BRANCH STEAM AND CONDENSATE LINE BETWEEN STEAM PIT AND BUILDING.



BUILDING 1106 MECHANICAL DEMOLITION PLAN
 1/4"=1'-0" 0" 2" 4" 8"

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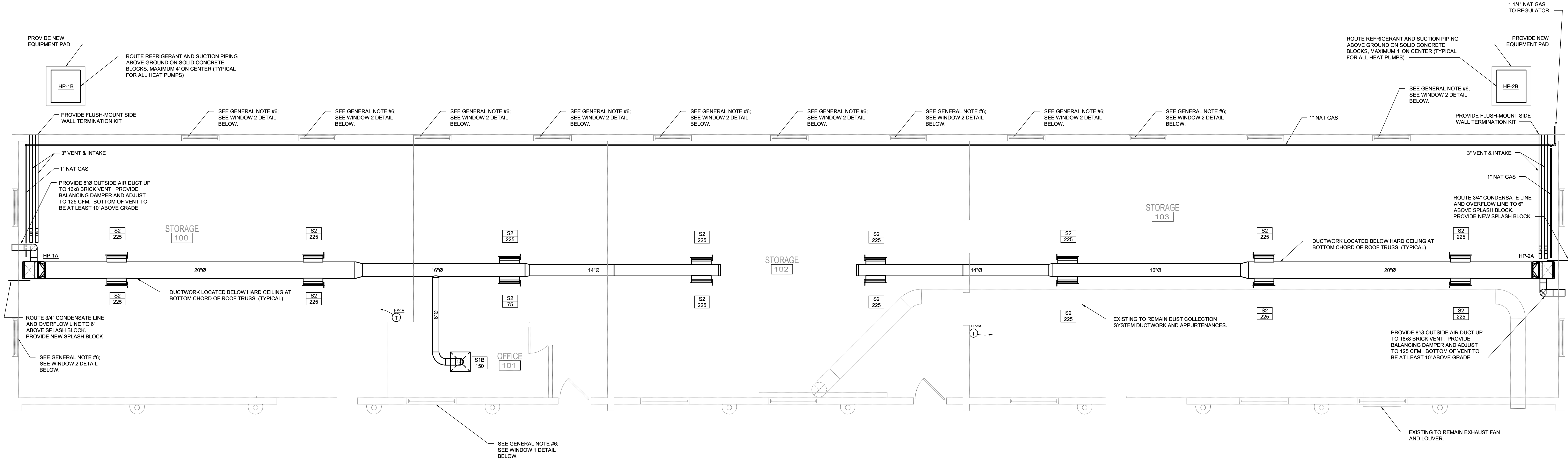


WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		M-113A PROJECT NO. CP12-0091	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES.	IM	HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT	
DR.	SWL	BUILDING 1106 MECHANICAL DEMOLITION PLAN	
CHK.	JHE	NAVFAC DRAWING NO. 60011392	
SUBMITTED BY:		SIZE	CODE IDENT NO.
DESIGN DR.		E	80091
APPROVED PWO OR OIC	DATE	CONSTR CONTR NO.	N40085-12-B-0091
SATISFACTORY TO	DATE	SPEC No.	05-12-0091
SCALE: AS SHOWN		SHEET 48 OF 84	

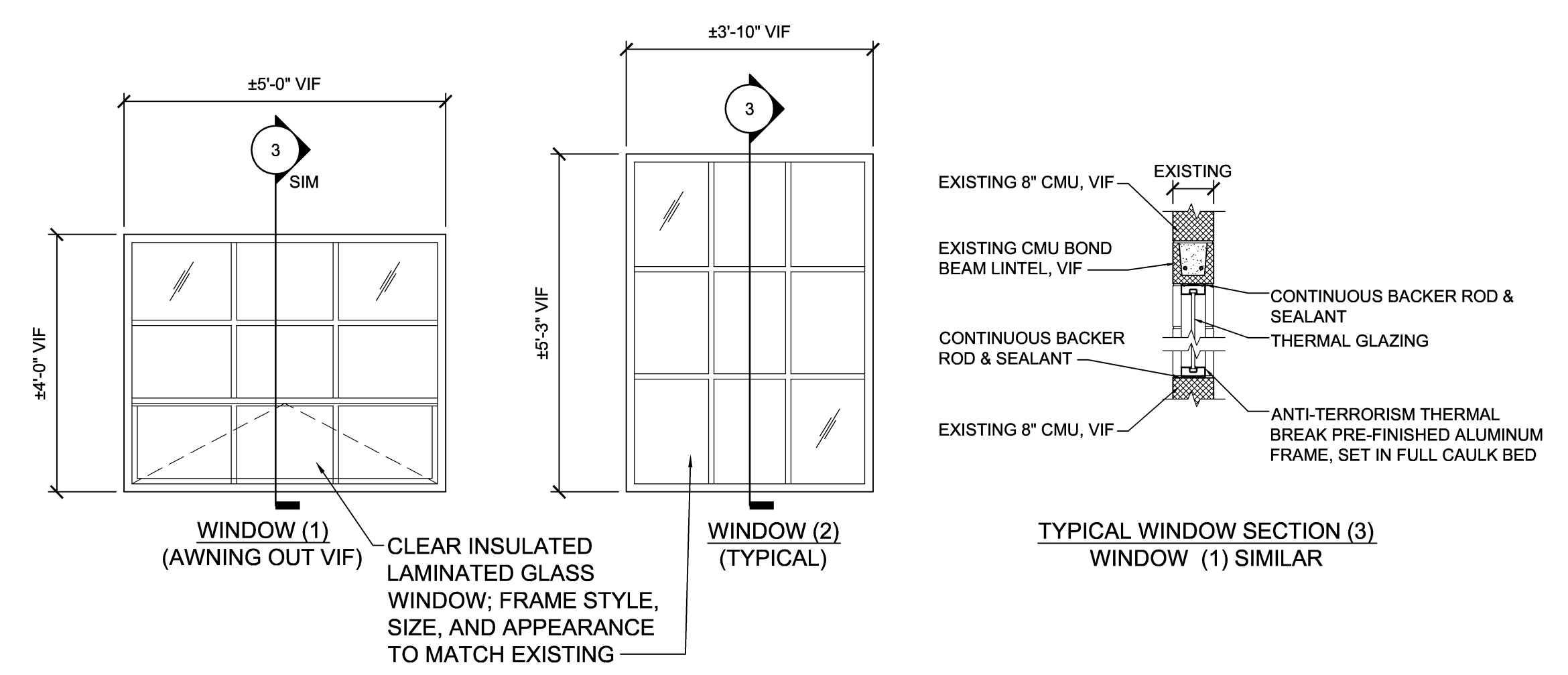
SYM.	PREP'D BY	DATE	APPROVED

- GENERAL NOTES:
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 2. PROVIDE VOLUME DAMPER FOR EACH BRANCH.
 3. MAXIMUM LENGTH OF ALLOWABLE FLEX DUCT IS 6'. DO NOT MAKE TURNS WITH FLEXIBLE DUCT, USE HARD ELBOWS.
 4. PROVIDE 2" MERV 8 ASSEMBLY FILTER.
 5. INSULATE ENTIRE ATTIC SPACE WITH UNFACED R-30 BATT INSULATION.
 6. REPLACE WINDOW WITH INSULATED WINDOW FRAME STYLE, SIZE, AND APPEARANCE TO MATCH EXISTING; CONTRACTOR TO VERIFY WINDOW TYPE SIZE AND LOCATION IN FIELD PRIOR TO FABRICATION.

- NATURAL GAS NOTE:
1. TOTAL CONNECTED NATURAL GAS DEMAND FOR THIS BUILDING IS 220 MBH AT 10 IN-H2O.



BUILDING 1106 MECHANICAL NEW WORK PLAN
 1/4"=1'-0" 0' 2' 4' 8'

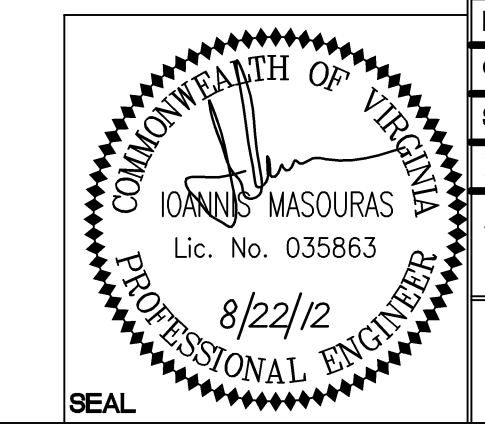


- NOTES:
1. REPLACE WINDOW WITH INSULATED WINDOW FRAME STYLE, SIZE, AND APPEARANCE TO MATCH EXISTING; CONTRACTOR TO VERIFY WINDOW TYPE SIZE AND LOCATION IN FIELD PRIOR TO FABRICATION.
 2. SEE SPECIFICATIONS.

A WINDOW DETAILS
 1/2"=1'-0" 0' 1' 2' 4'

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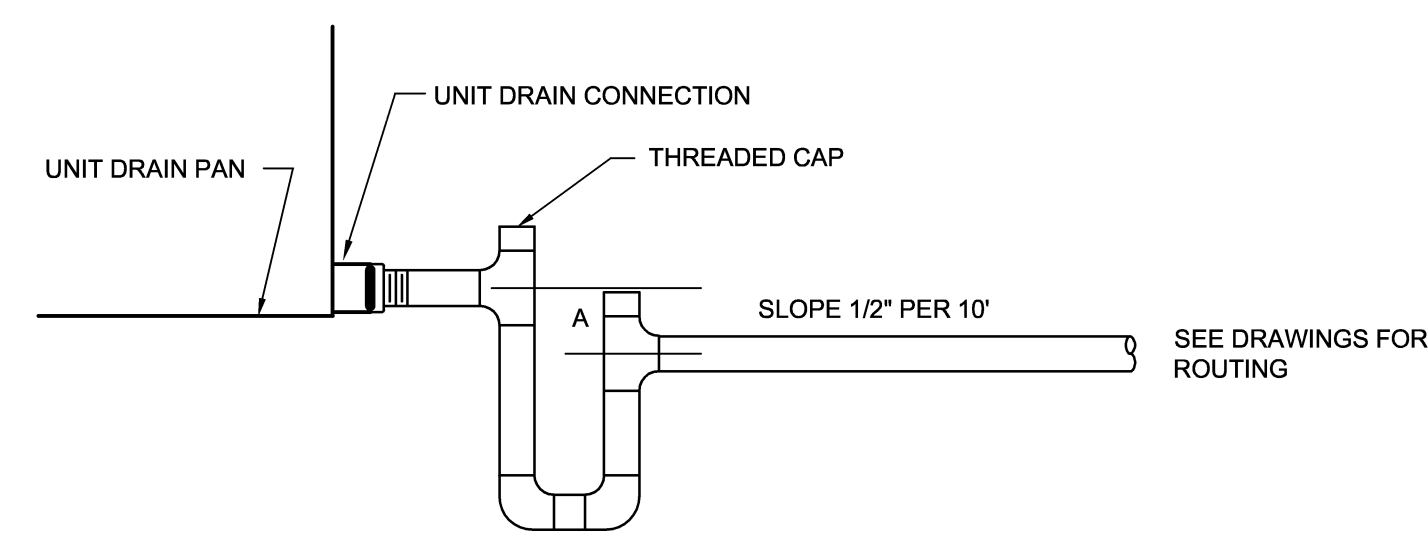
WileyWilson 6606 West Broad St., Suite 500 Richmond, Virginia 23230-1717 804.264.7242 wileywilson.com		M-113B PROJECT NO. CP12-0091 NAVAL FACILITIES ENGINEERING COMMAND	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 1106 MECHANICAL NEW WORK PLAN		NAVFAC DRAWING NO. 60011393 CONSTR CONTR NO. N40085-12-B-0091	
DES. IM	DR. SWL	DATE	SIZE
CHK. JHE	SUBMITTED BY:	APPROVED PWO OR OIC	CODE IDENT NO.
DESIGN DR.	8/22/12	DATE	80091
SATISFACTORY TO	DATE	SCALE: AS SHOWN	SPEC No. 05-12-0091
		SHEET 49 OF 84	

SYM.	PREP'D BY	DATE	APPROVED

HEAT PUMP SCHEDULE				
INDOOR UNIT DESIGNATION		HP-1A	HP-2A	
OUTDOOR UNIT DESIGNATION		HP-1B	HP-2B	
LOCATION		VARIOUS	VARIOUS	
BLOWER UNIT	FURNACE	TOTAL AIRFLOW (CFM)	1900	1900
		OUTSIDE AIRFLOW (CFM)	125	125
		EXTERNAL STATIC PRESSURE (IN-WC)	.5	.5
		INPUT CAPACITY (MBH)	110	110
		OUTPUT HEATING CAPACITY (MBH)	105	105
	ELECTRICAL	MINIMAX NATURAL GAS INLET PRESSURE	4.5/10.5	4.5/10.5
		MINIMUM EFFICIENCY	95	95
		CONFIGURATION	UPFLOW	UPFLOW
		BLOWER MOTOR FLA (A)	10.9	10.9
		MAXIMUM OVERCURRENT PROTECTION	15	15
BASED ON		LENNOX	LENNOX	
INDOOR UNIT MODEL		EL195UH110XE60C	EL195UH110XE60C	
CASED COIL	TOTAL AIRFLOW (CFM)	1900	1900	
	TOTAL COOLING CAPACITY (MBH)	57	57	
	HEAT PUMP HEATING CAPACITY AT 17° F (MBH)	34.2	34.2	
	CASE COIL MODEL NUMBER	CX34-49	CX34-49	
MINIMUM COMBINED SEER RATING PER ARI		15	15	
MINIMUM COMBINED EER RATING PER ARI		11.5	11.5	
REFRIGERANT		R-410A	R-410A	
OUTDOOR UNIT	ELECTRICAL	AMBIENT DESIGN TEMPERATURE (DEG F)	95	95
		MINIMUM CIRCUIT AMPACITY (A)	34.1	34.1
		MAXIMUM OVERCURRENT PROTECTION (A)	50	50
		MINIMUM HEATING COP AT 17° F	2.56	2.56
		MINIMUM HEATING COP AT 47° F	3.58	3.58
		MINIMUM HEAT PUMP HSPF	9.2	9.2
		VOLTAGE (V)	208	208
		FREQUENCY (Hz)	60	60
BASED ON		LENNOX	LENNOX	
OUTDOOR SYSTEM MODEL		XP21-060-230	XP21-060-230	
REMARKS		1, 2 & 3	1, 2 & 3	

- REMARKS LEGEND
1. PROVIDE FLUE CONDENSATE TRAP WITH OVERFLOW SWITCH OPTION.
 2. PROVIDE SIDE RETURN UNIT STAND.
 3. PROVIDE ECM MOTOR ON INDOOR UNIT.

AIR TERMINAL DEVICE SCHEDULE			
DESIGNATION	S1	S2	R1
TYPE	SUPPLY	SUPPLY	RETURN
	A=6"	14x6	28x20
	B=8"		
	C=10"		
D=12"			
FRAME STYLE	LAY-IN	SURFACE	SURFACE
AIR PATTERN	4 WAY	2-WAY	--
MAX NC RATING	20	25	30
MATERIAL	STEEL	STEEL	STEEL
FINISH	BAKED ENAMEL	BAKED ENAMEL	BAKED ENAMEL
BASED ON	PRICE	PRICE	PRICE
MODEL	SCD	720	700

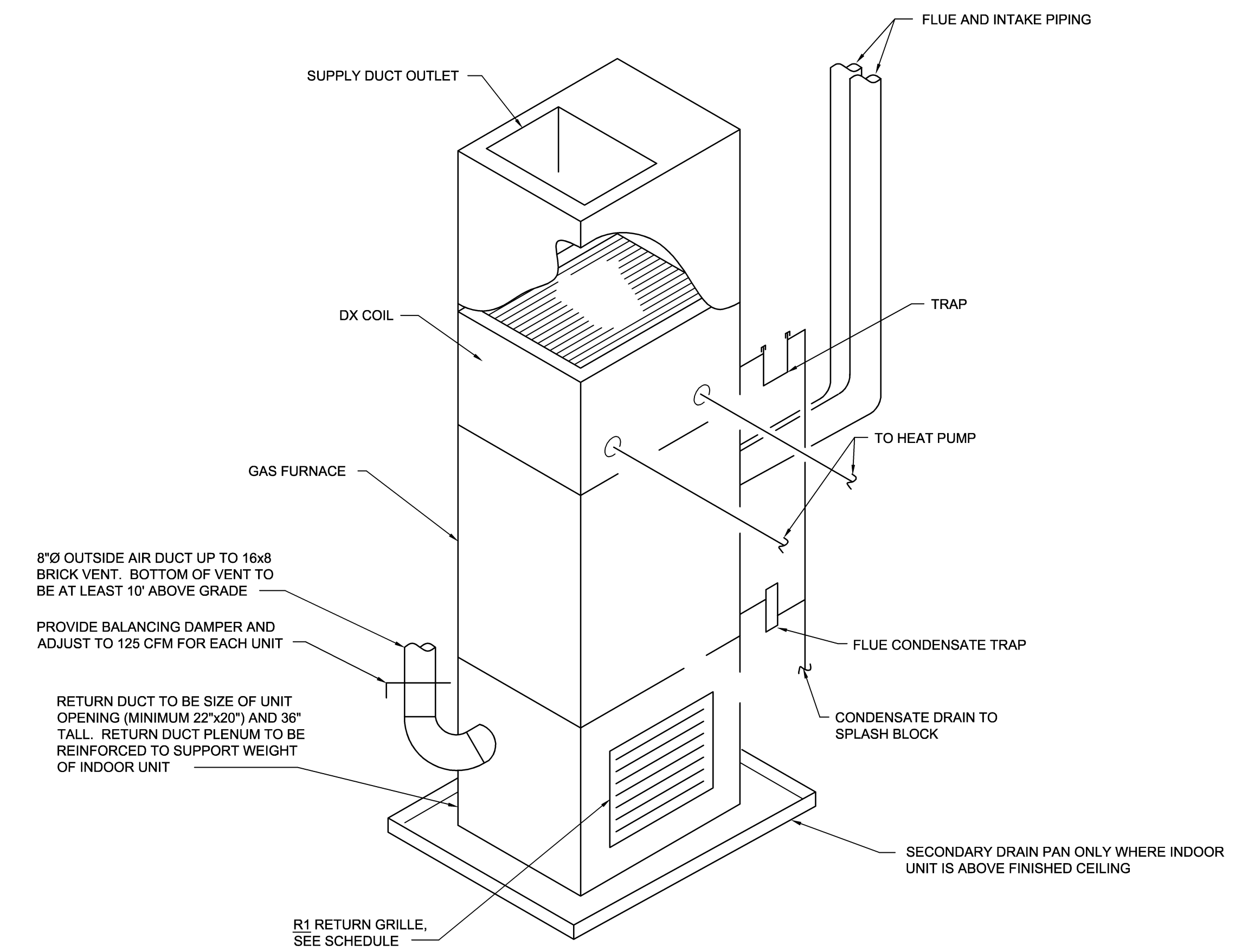


A = DIMENSION SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, MINIMUM OF 2 INCHES.

NOTE: CONDENSATE DRAIN PIPE SIZE SHALL BE UNIT DRAIN CONNECTION SIZE

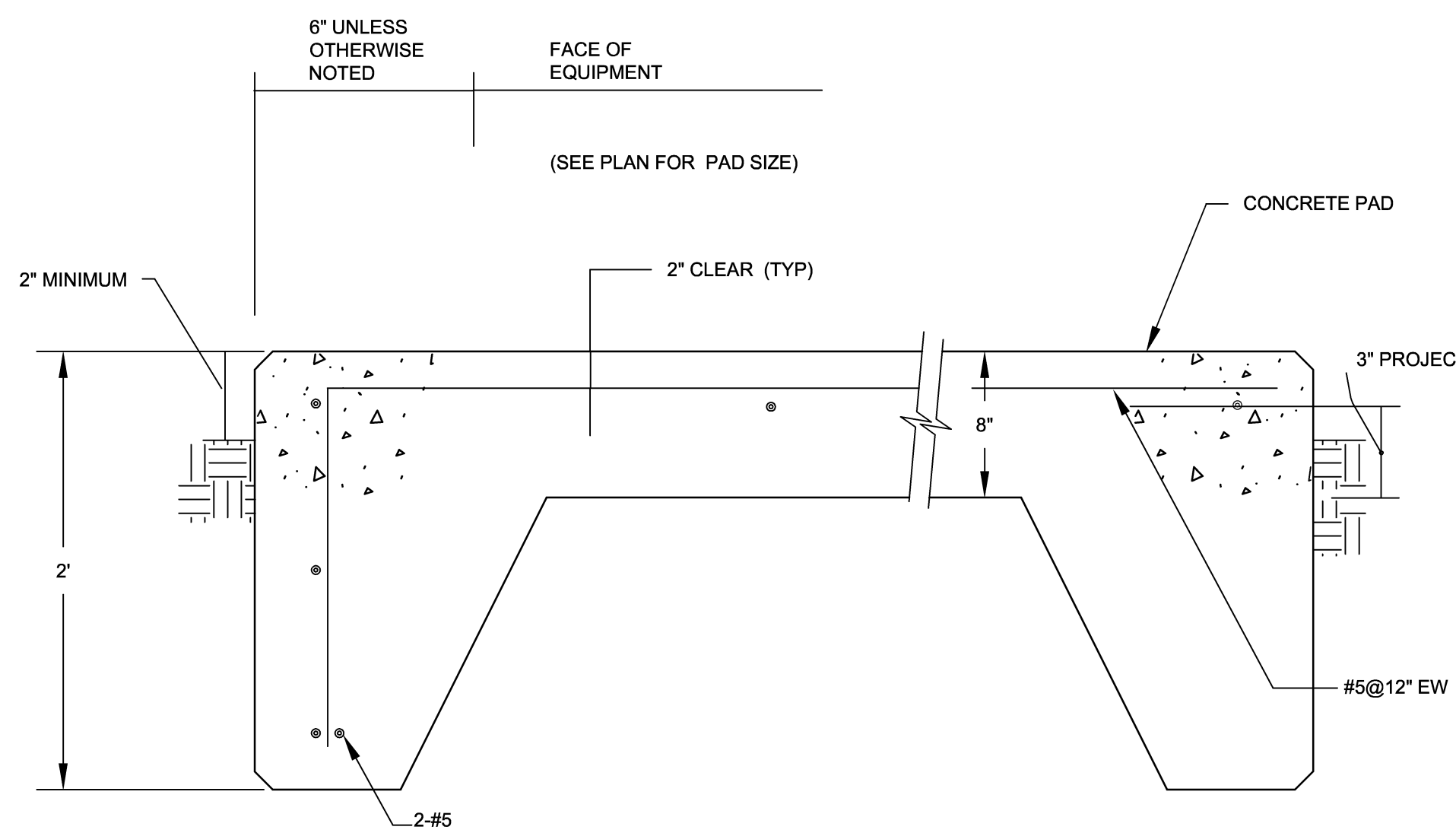
**AC DRAIN FOR HEAT PUMP AIR HANDLER
NEGATIVE PRESSURE DRAIN PAN**

NO SCALE



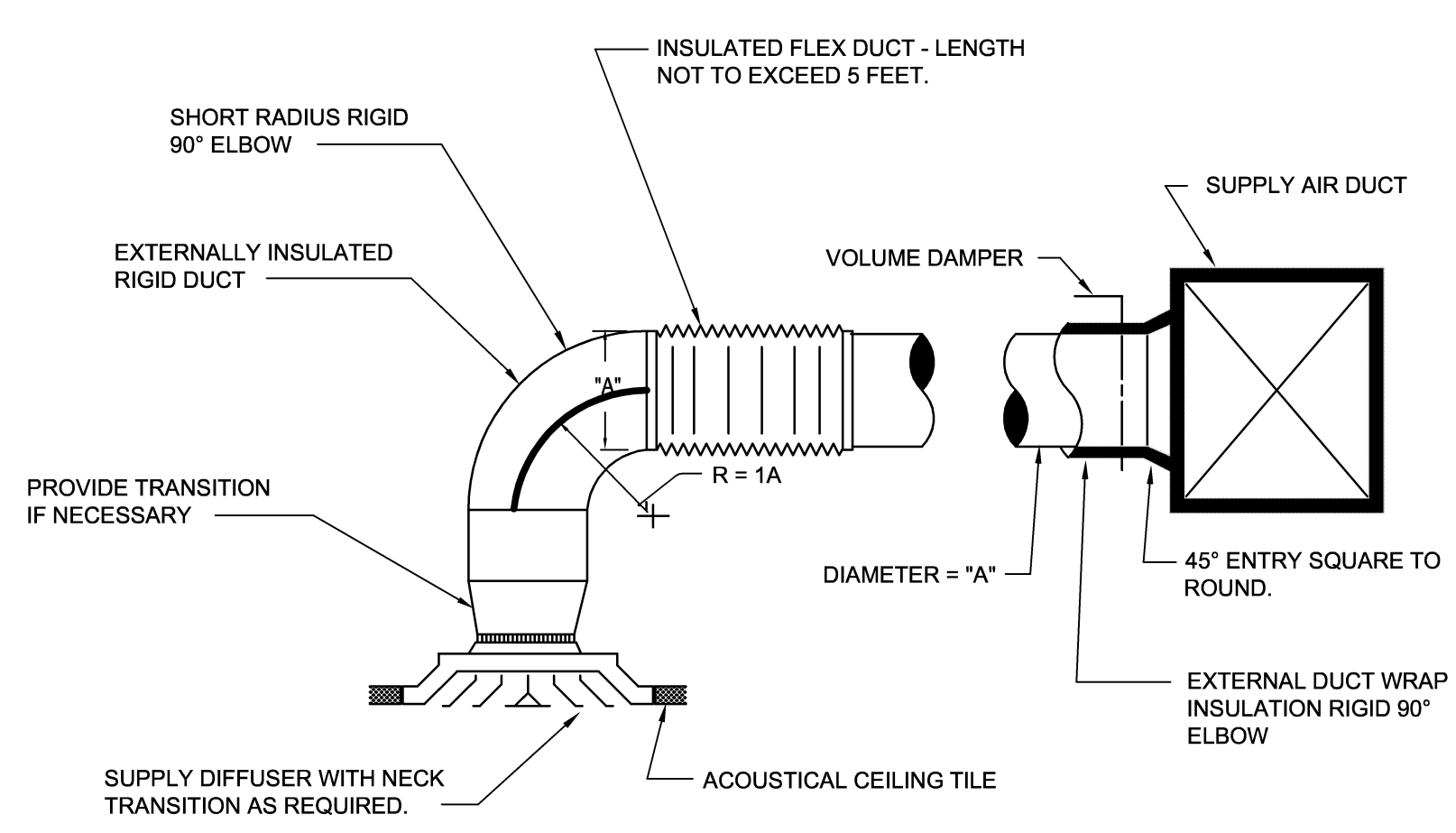
HEAT PUMP INDOOR UNIT DETAIL

SCALE: NONE



EXTERIOR EQUIPMENT PAD DETAIL

SCALE: NONE



**TYPICAL CEILING SUPPLY
DIFFUSER CONNECTION**

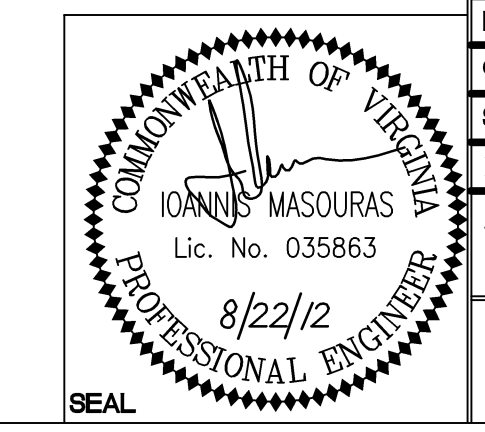
SCALE: NONE

SPLIT SYSTEM HEAT PUMP SEQUENCE OF OPERATIONS

DURING THE OCCUPIED MODE, THE SPLIT SYSTEM AIR HANDLER FAN SHALL RUN CONTINUOUSLY TO SATISFY ROOM COMBINED THERMOSTAT AND HUMIDISTAT. THE SUPPLY AIR FAN ECM MOTOR SHALL REMAIN ON DURING OCCUPIED MODE AND THE SPEED SHALL MODULATE ACCORDING TO THE MANUFACTURERS STANDARD SEQUENCE OF OPERATION TO CONTROL ROOM TEMPERATURE AND LIMIT HUMIDITY. IN THE HEATING MODE, THE THERMOSTAT SHALL NOT ENERGIZE THE AUXILIARY ELECTRIC HEAT IF THE HEAT PUMP MODE CAN MEET THE DEMAND, SUCH AS DURING WARM-UP FROM NIGHT SET BACK USING A SMART RECOVERY CAPABLE THERMOSTAT. FACTORY COMMUNICATING THERMOSTAT SHALL BE PROVIDED WITH 7 DAY PROGRAMMING TO ALLOW NIGHTWEEKEND SET-BACK. COMMUNICATE ALL STANDARD MANUFACTURERS ALARMS FROM THE UNITS TO THE THERMOSTAT, AND INDICATE DIRTY FILTER THERMOSTAT SHALL INCLUDE DEHUMIDIFICATION CONTROL TO INTEGRATE WITH HEAT PUMP CONTROLLER TO REDUCE FAN SPEED TO INCREASE LATENT PERFORMANCE AND REDUCE INDOOR AIR HUMIDITY.

DISCLOSURE OF INFORMATION
Contractor shall comply as follows:

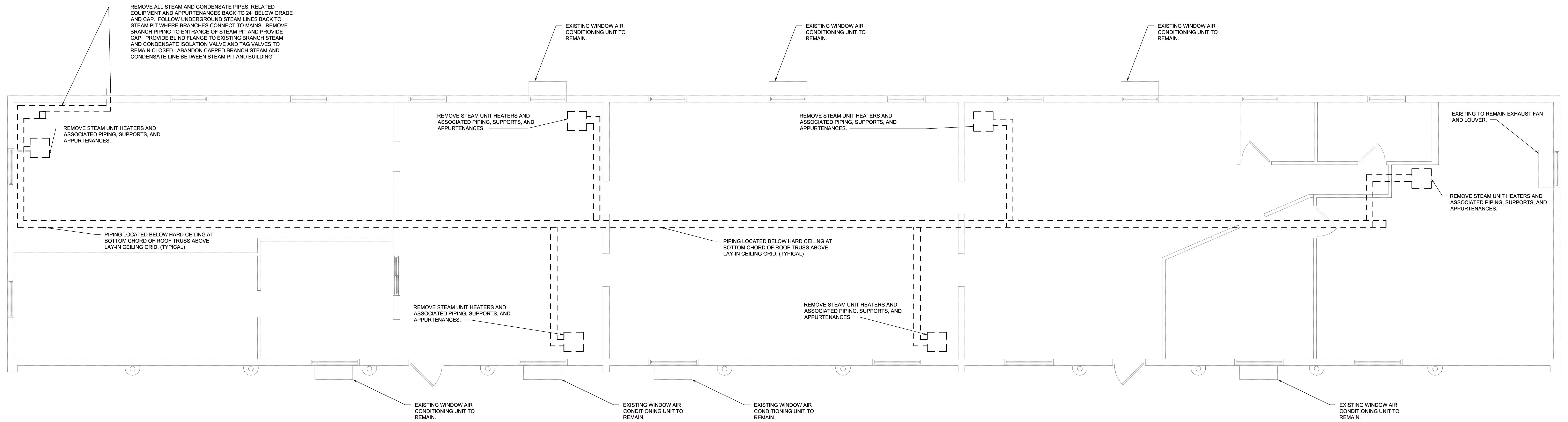
- The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless the Contracting Officer has given prior written approval; or
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DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 1106 SCHEDULES, DETAILS & CONTROLS		NAVFAC DRAWING NO. 60011394 CONSTR CONTR NO. N40085-12-B-0091	
DES. IM	DR. SWL	CHK. JHE	DESIGN DR.
APPROVED PWO OR OIOC	DATE	SIZE E	CODE IDENT NO. 80091
SATISFACTORY TO	DATE	SCALE AS SHOWN	SPEC No. 05-12-0091
		SHEET 50 OF 84	

SYM.	PREP'D BY	DATE	APPROVED

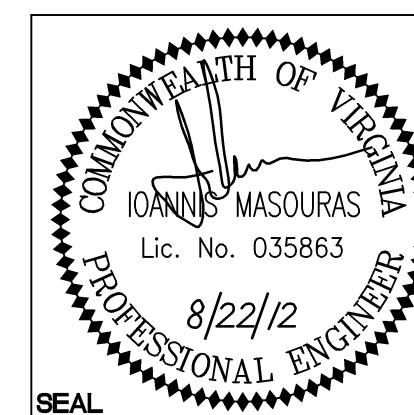
- DEMOLITION NOTES:
- DUCT LOCATIONS APPROXIMATE, CONTRACTOR TO VERIFY AS NECESSARY.
 - SEAL ALL BUILDING PENETRATIONS CREATED DURING DEMOLITION AND NOT RE-USED.
 - REMOVE ALL EQUIPMENT, DUCTWORK, DIFFUSERS, GRILLES, HANGERS AND INSULATION AS SHOWN.
 - WHERE WINDOW AIR CONDITIONERS ARE REMOVED, REPAIR PENETRATIONS TO MATCH EXISTING CONSTRUCTION.



BUILDING 1107 MECHANICAL DEMOLITION PLAN
 1/4"=1'-0" 0" 2" 4" 8"

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DES. IM	DR. SWL	HVAC/DHW IMPROVEMENTS, VARIOUS FACILITIES, HADNOT POINT BUILDING 1107 MECHANICAL DEMOLITION PLAN	
CHK. JHE	SUBMITTED BY:	APPROVED PWO OR OICC	DATE
DESIGN DR.	APPROVED PWO OR OICC	DATE	DATE
SATISFACTORY TO		DATE	DATE
SIZE E	CODE IDENT NO. 80091	NAVFAC DRAWING NO. 60011395	CONSTR CONTR NO. N40085-12-B-0091
SCALE: AS SHOWN	SPEC No. 05-12-0091	SHEET 51 OF 84	

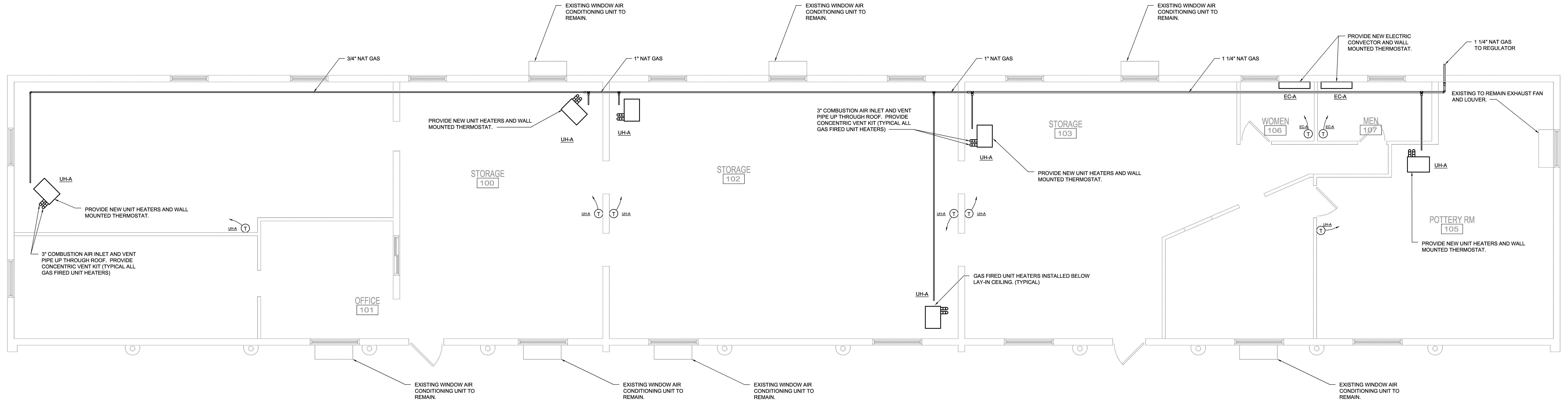
SYM.	PREP'D BY	DATE	APPROVED

GENERAL NOTES:

1. THE LOCATION OF ALL DUCT, PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES. THESE PLANS ARE PARTIALLY DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS.
2. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
3. INSTALL GAS PIPE IN ACCORDANCE WITH 2012 NORTH CAROLINA FUEL GAS CODE.
4. INSULATE ENTIRE ATTIC SPACE WITH UNFACED R-30 BATT INSULATION.

NATURAL GAS NOTE:

1. TOTAL CONNECTED NATURAL GAS DEMAND FOR THIS BUILDING IS 180 MBH AT 10 IN-H2O.

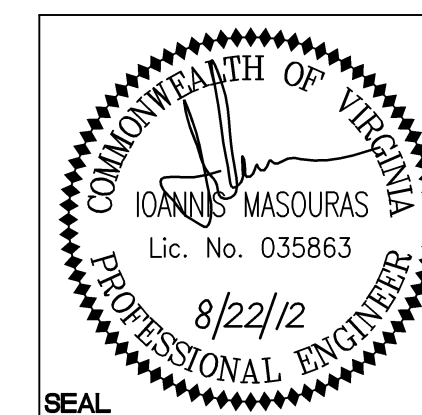


BUILDING 1107 MECHANICAL NEW WORK PLAN
 1/4"=1'-0" 0" 2" 4" 8"

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CHK. JHE	SUBMITTED BY:	APPROVED PWO OR OIC	DATE
DESIGN DR.	APPROVED PWO OR OIC	DATE	DATE
SATISFACTORY TO	DATE	SIZE	CODE IDENT NO.
		E	80091
		CONSTR CONTR NO.	N40085-12-B-0091
		SPEC No.	05-12-0091
		SCALE: AS SHOWN	SHEET 52 OF 84