ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFS	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
AL	ACOUSTIC LINING
AP	ACCESS PANEL
ATC	AUTOMATIC TEMPERATURE CONTROL
AVB	AIR VOLUME CONTROL BOX
AWT	AVERAGE WATER TEMPERATURE
BD	BAROMETRIC DAMPER
BDD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BSC	BIO SAFETY CABINET
BT	BUCKET TRAP
BTU	BRITISH THERMAL UNITS
BTUH	BTU'S PER HOUR
℄	CENTERLINE
CC	COOLING COIL
CD	CEILING DIFFUSER
CDR	CEILING DIFFUSER, ROUND
CFM	CUBIC FEET PER MINUTE
CUH	CABINET UNIT HEATER
CVE	CONSTANT VOLUME EXHAUST
CVR	CONSTANT VOLUME RETURN
CVS	CONSTANT VOLUME SUPPLY
D	DEAERATOR
DB	DRY BULB
DIA	DIAMETER
DFD	DYNAMIC FIRE DAMPER WITH ACCESS DOOR
DN	DOWN
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
DV	DRAIN VALVE
EA	EXHAUST AIR
EAC	EXHAUST AIR CONTROLLER
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
EJB	EXPANSION JOINT, BELLOWS TYPE
EJO	EXPANSION JOINT, OFFSET TYPE
EL	ELEVATION
ER	EXHAUST REGISTER
ERV	EXHAUST ROOF VENTILATOR
ESP	EXTERNAL STATIC PRESSURE
ET	ELEPHANT TRUNK
EXF	EXFILTRATION
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
°F	DEGREE FAHRENHEIT
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
F.D.	FLOOR DRAIN
FD	FIRE DAMPER WITH ACCESS DOOR
FH	FUME HOOD
FHE	FUME HOOD EXHAUST
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
F&T	FLOAT & THERMOSTATIC TRAP
FPM	FEET PER MINUTE
FTR	FINNED TUBE RADIATION
FZP	FREEZE PROTECTION PUMP
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GRV	GRAVITY ROOF VENT
HC	HEATING COIL
HP	HORSEPOWER
HX	HEAT EXCHANGER
INF	INFILTRATION
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LBD	LINEAR BAR DIFFUSER
LBG	LINEAR BAR GRILLE
LFD	LAMINAR AIRFLOW DIFFUSER
LLD	LINEAR LOUVER DIFFUSER
LLG	LINEAR LOUVER GRILLE
LSD	LINEAR SLOT DIFFUSER
LSG	LINEAR SLOT GRILLE
LVD	LINEAR VARIABLE VOLUME DIFFUSER
LVG	LINEAR VARIABLE VOLUME GRILLE
LWT	LEAVING WATER TEMPERATURE
LF	LINEAR FEET
MBH	THOUSAND BTU'S PER HOUR
MH	MANHOLE
MOD	MOTOR OPERATED DAMPER
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
PD	PANEL DIFFUSER
PFD	PERFORATED FACE DIFFUSER
PFG	PERFORATED FACE GRILLE
PHC	PREHEAT COIL
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RG	RETURN GRILLE
RFG	RECTANGULAR FILTER GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
SA	SUPPLY AIR
SAC	SUPPLY AIR CONTROLLER
SAT	SOUND ATTENUATOR
SD	SMOKE DAMPER WITH ACCESS DOOR
SD/FD	COMBINATION SMOKE/FIRE DAMPER WITH ACCESS DOOR
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
SV	STEAM VENT

ABBREVIATIONS

TG	TRANSFER GRILLE
TT	THERMOSTATIC TRAP
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TYP	TYPICAL
TSP	TOTAL STATIC PRESSURE
UH	UNIT HEATER
UTR	UP THRU ROOF
V	VENT
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VI	VIBRATION ISOLATOR
VVE	VARIABLE VOLUME EXHAUST
VVF	VARIABLE VOLUME FAN POWERED
VVR	VARIABLE VOLUME RETURN
VVS	VARIABLE VOLUME SUPPLY
WB	WET BULB
WG	WATER GAUGE

PIPING SYMBOLS

- AIR OR STEAM VENT
- Ø DIAMETER
- DIRECTION OF FLOW
- EXPANSION JOINT, BELLOWS
- EXPANSION JOINT, OFFSET
- EXPANSION LOOP
- FLEXIBLE CONNECTION
- M FLOW METER
- DPT DIFFERENTIAL PRESSURE TRANSMITTER
- PIPE ANCHOR
- PIPE GUIDE
- PITCH OF PIPE, DOWN
- PRESSURE GAUGE AND VALVE
- P/T PRESSURE/TEMPERATURE PLUG
- REDUCER, CONCENTRIC
- REDUCER, ECCENTRIC STRAIGHT CROWN
- REDUCER, ECCENTRIC STRAIGHT INVERT
- RISER OR ELBOW DOWN
- RISER UP AND DOWN, ELBOW UP
- STEAM TRAP
- STRAINER
- STRAINER W/GATE VALVE W/NIPPLE & CAP
- THERMOMETER
- THERMOMETER WELL
- T THERMOSTAT
- UNION OR FLANGED CONNECTION
- VALVE, AUTOMATIC FLOW CONTROL
- VALVE, BALANCING
- VALVE, CHECK
- NS VALVE, CHECK NON-SLAM
- VALVE, DRAIN W/NIPPLE & CAP
- VALVE, NEEDLE
- VALVE, PRESSURE REGULATING
- VALVE, RELIEF (SAFETY)
- VALVE, SHUT-OFF
- VALVE, SHUT-OFF LOCK SHIELD
- VALVE, SOLENOID
- VALVE, THROTTLING
- VALVE, THREE-WAY CONTROL
- VALVE, TRIPLE DUTY
- VALVE, TWO-WAY CONTROL

PIPING NOMENCLATURE

—— BBD ——	BOILER BLOW DOWN
—— CHF ——	CHEMICAL FEED
—— D ——	DRAIN LINE
—— HPC ——	HIGH PRESSURE CONDENSATE
—— HPS ——	HIGH PRESSURE STEAM
– – HWR – –	HEATING WATER RETURN
—— HWS ——	HEATING WATER SUPPLY
—— LPC ——	LOW PRESSURE CONDENSATE
—— LPS ——	LOW PRESSURE STEAM
—— MPC ——	MEDIUM PRESSURE CONDENSATE
—— MPS ——	MEDIUM PRESSURE STEAM
—— MU ——	MAKE-UP WATER (FROM DOMESTIC COLD WATER)
– – PCHWR – –	PRIMARY CHILLED WATER RETURN
—— PCHWS ——	PRIMARY CHILLED WATER SUPPLY
—o— PC —o—	PUMPED CONDENSATE
—— RG ——	REFRIGERANT HOT GAS
—— RL ——	REFRIGERANT LIQUID
—— RS ——	REFRIGERANT SUCTION
– – SCHWR – –	SECONDARY CHILLED WATER RETURN
—— SCHWS ——	SECONDARY CHILLED WATER SUPPLY
—— SSR-W ——	SECONDARY WATER RETURN WEST
—— SS-W ——	SECONDARY WATER SUPPLY WEST
—— V ——	VENT, ATMOSPHERIC

BRANCH CONNECTIONS IN DOUBLE-LINE DUCTWORK

- RECTANGULAR PROPORTIONAL SPLIT
- BRANCH OFF BOTTOM 45° BOOT CONNECTION
- BRANCH OFF TOP 45° BOOT CONNECTION
- BRANCH OFF SIDE 45° BOOT CONNECTION
- BRANCH OFF SIDE CONICAL BELL MOUTH

AIR DISTRIBUTION, GENERAL SYMBOLS & NOMENCLATURE

- 22x10 — RECTANGULAR DUCT (FIRST NUMBER INDICATES PLAN DIMENSION,SECOND NUMBER INDICATES DEPTH)
- 22x10 — FLAT OVAL DUCT
- 12"ø — ROUND DUCT (12"ø DIAMETER)
- RADIUS ELBOW (NO TURNING VANES)
- HARD ELBOW (WITH TURNING VANES)
- DUCT TRANSITION (RECTANGULAR TO RECTANGULAR)
- DUCT TRANSITION (RECTANGULAR TO ROUND)
- RECTANGULAR SUPPLY DUCT UP
- RECTANGULAR SUPPLY DUCT DOWN
- 22x10 B / 14x10 T — DUCT INDICATION FOR STACKING T= TOP; B= BOTTOM
- 22x10 T / 14x10 B — DUCT INDICATION FOR STACKING T= TOP; B= BOTTOM
- VOLUME DAMPER
- DAMPER (TYPE AS INDICATED; BDD, BD, MOD, FD, SD/FD, ETC.)
- SPLITTER DAMPER
- T/H TEMP/HUMID SENSOR (DUCT MOUNTED)
- AV AUDIO VISUAL ALARM

BRANCH CONNECTIONS IN SINGLE-LINE DUCTWORK

- B RECTANGULAR PROPORTIONAL SPLIT OFF BOTTOM
- RECTANGULAR PROPORTIONAL SPLIT OFF SIDE
- T RECTANGULAR PROPORTIONAL SPLIT OFF TOP
- BRANCH OFF SIDE
- BRANCH OFF TOP
- BRANCH OFF BOTTOM
- RECTANGULAR PROPORTIONAL SPLIT

AIR DISTRIBUTION, GENERAL SYMBOLS & NOMENCLATURE

- TRANSFER DUCT, SEE DETAIL
- T TRANSFER DUCT, SEE DETAIL W/RETURN/TRANSFER GRILLE
- TRANSFER DUCT, SEE DETAIL W/RETURN/TRANSFER GRILLE
- AIR CUSHION, 12" LONG MIN.
- AIR CUSHION, 12" LONG MIN.
- VOLUME DAMPER
- * DAMPER (TYPE AS INDICATED; BDD, BD, MOD, FD, SD/FD, VD, ETC.)
- Ø DIAMETER
- DOOR LOUVER (FREE AREA IN SQ. FEET)
- U DOOR UNDERCUT
- D DUCT DROP (SLOPING)
- DUCT DROP (90°)
- R DUCT RISE (SLOPING)
- DUCT RISE (90°) (RISE AND DROP IN DIRECTION OF AIR FLOW)
- TRANSFER AIR
- D DUCT MOUNTED SMOKE DETECTOR
- FLEXIBLE CONNECTION
- FLEXIBLE DUCTWORK
- FLEXIBLE DUCTWORK
- HUMIDIFIER (DUCT MOUNTED)
- HUMIDIFIER (DUCT MOUNTED)
- H HUMIDISTAT
- T THERMOSTAT
- DUCT TRANSITION (RECTANGULAR TO RECTANGULAR)
- DUCT TRANSITION (RECTANGULAR TO ROUND)
- AFS AIRFLOW MEASURING STATION
- AFS AIRFLOW MEASURING STATION

AIR DISTRIBUTION, GENERAL SYMBOLS & NOMENCLATURE

AIR DEVICE DESIGNATION

( ) 8x8 CD-1 (3-3/4)
250 – 2W

- QUANTITY (IF MORE THAN ONE)
- CONNECTION SIZE. SINGLE DIMENSION INDICATES ROUND CONNECTION. FOR RECTANGULAR NECK, FIRST DIMENSION IS THE PLAN HORIZONTAL DIMENSION.
- TYPE IDENTIFICATION (SEE SCHEDULE)
- NO. & SIZE OF SLOTS (TYPE LPD ONLY)
- BLOW DIRECTION WHERE APPLICABLE (TYPE CD 4-WAY UNLESS NOTED OTHERWISE); (TYPE LPD 2-WAY UNLESS NOTED OTHERWISE)
- AIR QUANTITY – CFM

- 8x14 / CD-1 300 — FLEXIBLE BRANCH DUCT CONNECTION TO DIFFUSER. CONICAL BELL MOUTH OR SQUARE ROUND BOOT FITTING WITH VOLUME DAMPER.
- ROUND INLET CONNECTION TO DIFFUSER (CFM AND TYPE INDICATED)
- 14x10 — BRANCH DUCT CONNECTION TO DIFFUSER WITH VOLUME DAMPER.
- SQUARE INLET CONNECTION TO DIFFUSER
- SUPPLY DIFFUSER
- DIFFUSER (WITH BLANK-OFF) 3-WAY
- REGISTER OR GRILLE (RETURN, TRANSFER)
- REGISTER OR GRILLE (EXHAUST)

EQUIPMENT IDENTIFICATION

- AHU / 1 — SYMBOL OR TYPE (SEE SCHEDULE OR SPECIFICATIONS); IDENTIFICATION NUMBER (SEE SCHEDULE)
- A — FINNED TUBE RADIATION TYPE (SEE SCHEDULE OR SPECIFICATIONS)
- 3.4 — HEATING MBH
- 2'-0" — APPROXIMATE LENGTH OF ELEMENT

ALTERATION/DEMOLITION SYMBOLS

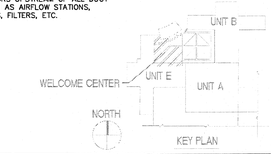
	POINT OF CONNECTION, NEW TO EXISTING
	TERMINATION OF DEMOLITION, REMOVAL
(E)	EXISTING TO REMAIN
(E)	EXISTING TO REMAIN
(R)	EXISTING TO BE REMOVED
(R)	EXISTING TO BE REMOVED
(RE)	RELOCATE EXISTING
(ER)	EXISTING RELOCATED

HVAC DRAWING LIST

DRAWING NUMBER	DRAWING NAME	ISSUE NO. 1
MG001	HVAC INDEX SHEET	X
MD101	HVAC DEVOLITION – FIRST FLOOR	X
MP201	HVAC SUB BASEMENT PLAN – NEW WORK/ DEMOLITION PIPING	X
MH211	HVAC FIRST FLOOR PLAN – DUCTWORK	X
MP212	HVAC FIRST FLOOR PLAN – PIPING – WELCOME CENTER	X
MH222	HVAC SECOND FLOOR PLAN – DUCTWORK	X
M301	HVAC FLOW DIAGRAMS	X
M401	HVAC EQUIPMENT SCHEDULES	X
M402	HVAC EQUIPMENT SCHEDULES	X
M501	HVAC PARTIAL PLANS	X
M601	HVAC DETAILS	X
M602	HVAC DETAILS	X
MH-8001	TEMPERATURE CONTROL DIAGRAMS	X
MH-8002	TEMPERATURE CONTROL DIAGRAMS	X
MH-8003	TEMPERATURE CONTROL DIAGRAMS	X

GENERAL NOTES

1. DUE TO THE SMALL SCALE OF THE DRAWINGS, ALL WORK REQUIRED IS NOT SHOWN ON THE FLOOR PLANS AND CERTAIN WORK IS SHOWN ON FLOW DIAGRAMS, RISER DIAGRAMS AND DETAILS. INCLUDE ALL REQUIRED WORK SHOWN ON PLANS, RISER DIAGRAMS, FLOW DIAGRAMS AND DETAILS.
2. WHERE THERE IS A CONFLICT BETWEEN THE FLOOR PLANS, DETAILS, SCHEDULES, DIAGRAMS OR SPECIFICATIONS, THE MORE STRINGENT CRITERIA SHALL APPLY
3. FLOW DIAGRAMS ARE INTENDED TO SHOW OVERALL RELATIONSHIP OF SYSTEM COMPONENTS AND MAY NOT INCLUDE ALL REQUIRED DAMPERS, VALVES AND ACCESSORIES. FLOW DIAGRAMS SHALL BE USED IN CONJUNCTION WITH DETAILS AND PLANS TO PROVIDE COMPLETE SYSTEMS.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPES, AND FOR EXACT LOCATIONS OF CEILING DIFFUSERS, GRILLES, REGISTERS AND OTHER DEVICES. PROVIDE BORDER STYLES SUITABLE FOR CEILING TYPE IN WHICH DEVICE IS INSTALLED.
5. LOCATE ALL PIPING IN OR AT CEILING UNLESS OTHERWISE INDICATED. BRANCH RUNOUTS TO TERMINAL UNITS AND REHEAT COILS SHALL BE MINIMUM 3/4 INCH UNLESS NOTED OTHERWISE.
6. AIR FLOW STATIONS SHALL BE FURNISHED BY DIVISION 25 FOR INSTALLATION IN DUCTWORK AND DUCTED FAN INLETS BY SHEET METAL CONTRACTOR. AIR FLOW STATIONS LOCATED IN AIR HANDLING UNITS SHALL BE INSTALLED BY DIVISION 25.
7. AUTOMATIC CONTROL DAMPERS LOCATED IN AIR HANDLING UNITS SHALL BE PROVIDED BY AHU MANUFACTURER. SMOKE DAMPERS SHALL BE PROVIDED AS A COMPLETE UL LISTED ASSEMBLY WITH DAMPER AND ACTUATOR. ALL OTHER DAMPER ACTUATORS SHALL BE PROVIDED BY DIVISION 25. ALL OTHER CONTROL DAMPERS SHOWN ON THE DRAWINGS SHALL BE FURNISHED BY DIVISION 25 FOR INSTALLATION IN DUCTWORK BY SHEET METAL CONTRACTOR.
8. PIPING, DUCTWORK AND EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT ROOM, OR SIMILAR ROOM HOUSING ELECTRICAL EQUIPMENT (TELEPHONE/DATA, ELEVATOR MACHINE ROOM), IS NOT PERMITTED TO BE INSTALLED IN THESE SPACES.
9. PROVIDE PIPING ISOLATION VALVES IN ACCESSIBLE LOCATIONS, AS CLOSE TO MAIN RISERS AND BRANCH TAKE-OFFS AS POSSIBLE.
10. PROVIDE VOLUME DAMPERS IN BRANCH RUNOUTS TO EACH AIR DEVICE. LOCATE VOLUME DAMPER AS CLOSE TO MAIN AS POSSIBLE.
11. PIPING AND DUCTWORK DRAWINGS ARE DIAGRAMMATIC AND MAY NOT INDICATE ALL OFFSETS, TRANSITIONS AND FITTINGS. PROVIDE ADDITIONAL OFFSETS, TRANSITIONS AND FITTINGS AS REQUIRED TO COORDINATE WITH OTHER TRADES AND TO ACCOMMODATE FIELD CONDITIONS..
12. FOR ALL DUCT AND PIPE PENETRATIONS THROUGH INTERIOR NON-RATED FULL HEIGHT PARTITIONS (PARTITIONS EXTENDING TO STRUCTURE), EXTEND INSULATION THROUGH PENETRATION. MAINTAIN COMPLETE VAPOR SEAL.
13. EQUIPMENT ROOM LAYOUTS ARE BASED ON EQUIPMENT BASIS OF DESIGN MANUFACTURER. OTHER ACCEPTABLE MANUFACTURERS LISTED IN THE SPECIFICATIONS MAY BE PROVIDED AS LONG AS THEIR PHYSICAL DIMENSIONS DO NOT IMPACT THE EQUIPMENT LAYOUT AS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE LAYOUT TO ENSURE THAT PROPER ACCESS FOR MAINTENANCE AND EQUIPMENT REMOVAL CAN BE MAINTAINED. MAKE ALL NECESSARY PIPING AND DUCTWORK MODIFICATIONS AS REQUIRED AT NO COST TO OWNER.
14. PROVIDE DUCT ACCESS DOORS UPSTREAM OF ALL DUCT MOUNTED EQUIPMENT SUCH AS AIRFLOW STATIONS, HUMIDIFIERS, REHEAT COILS, FILTERS, ETC.



Revisions	Date
ISSUE 1 - ISSUE FOR CONSTRUCTION	04.30.2013
95 % SUBMISSION	02.17.2012
75 % SUBMISSION	03.16.2011
25 % SUBMISSION	10.29.2010

VA FORM 08-6231

CONSULTANTS:

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Drawing Title: HVAC INDEX SHEET

Approved Project Director

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

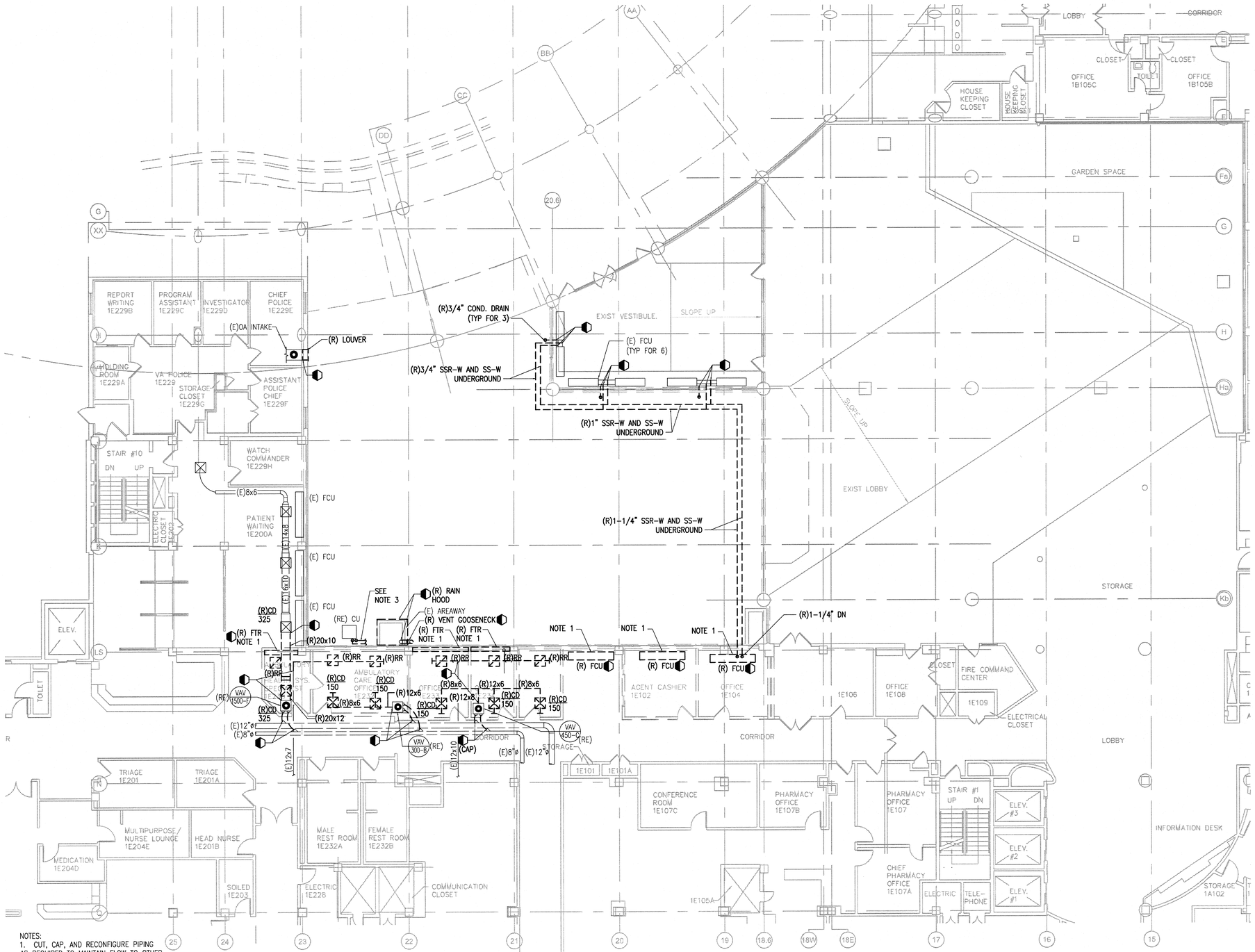
Project Number: 688-334 OIF/OEF

Building Number

Drawing Number: MG001

Office of Construction and Facilities Management

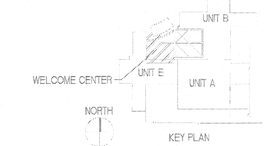
Department o Veterans Affairs



NOTES:
1. CUT, CAP, AND RECONFIGURE PIPING AS REQUIRED TO MAINTAIN FLOW TO OTHER EQUIPMENT IN THE LOOP

2. PROVIDE PRE-DEMOLITION AIRFLOW AUDIT AT LOCATIONS INDICATED BY THIS SYMBOL ⬤

3. REFRIGERANT PIPING TO BE RECONFIGURED TO ACCOMMODATE (E)CU IN NEW LOCATION (SEE MH222)



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CONSULTANTS:

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Drawing Title: HVAC DEMOLITION - FIRST FLOOR

Approved Project Director:

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

Project Number: 688-334 OIF/OEF

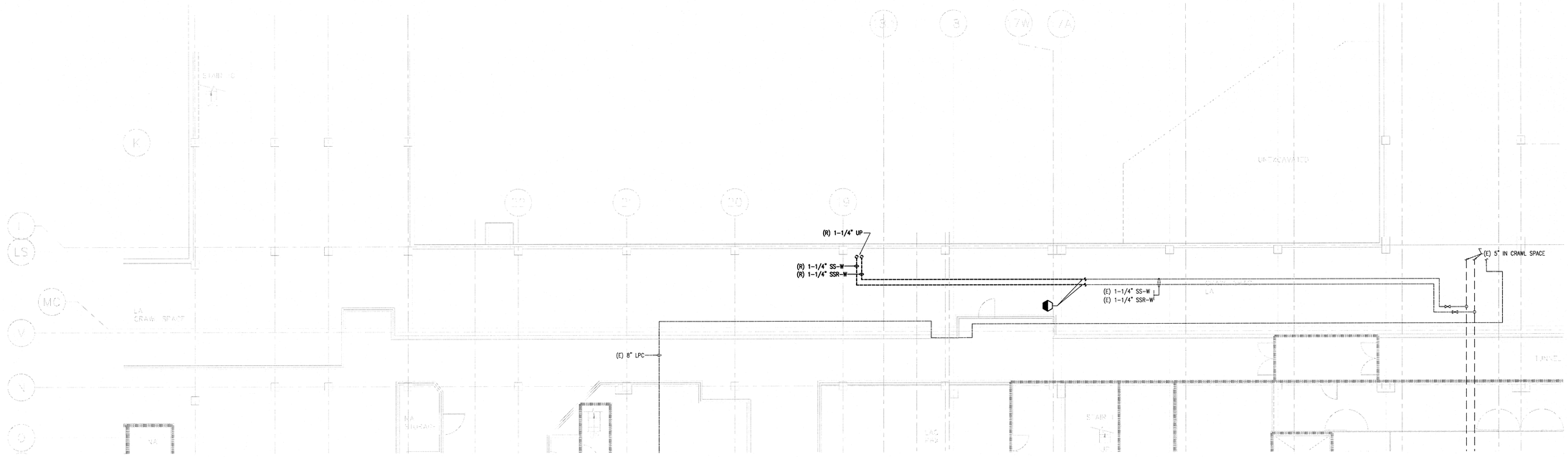
Building Number:

Drawing Number: MD101

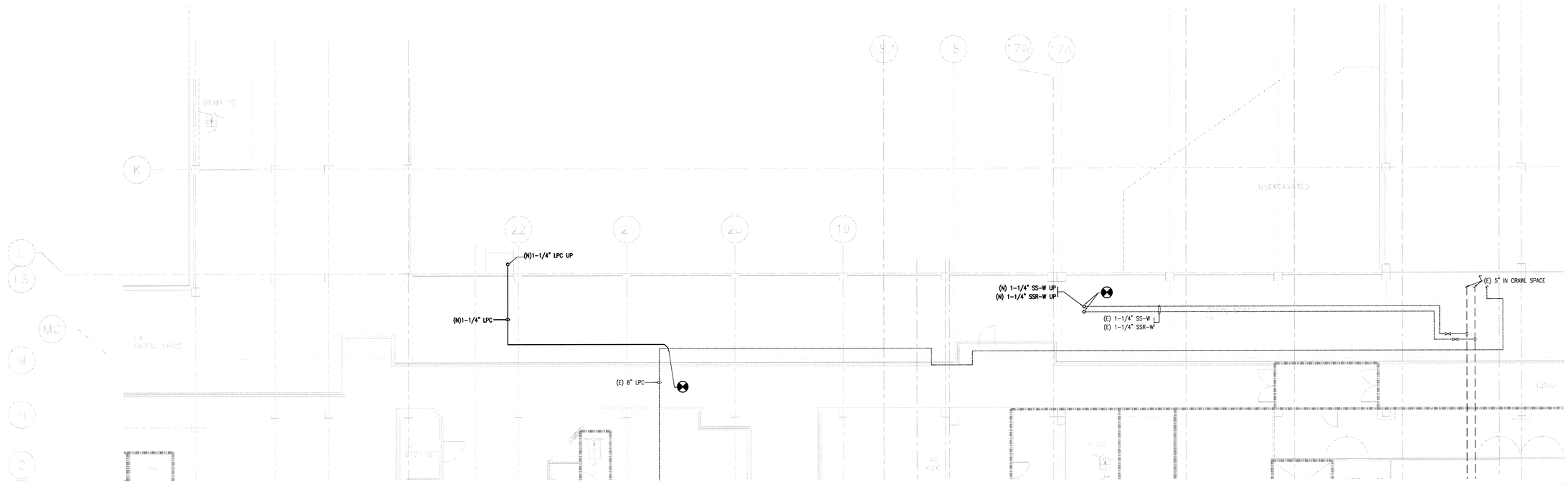
Office of Construction and Facilities Management

Department o Veterans Affairs

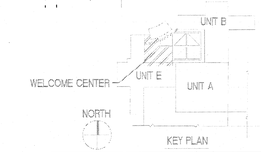
VA FORM 08-6231



2 MP201 SUB BASEMENT CRAWL SPACE PARTIAL PLAN – DEMOLITION
SCALE: 1/8"=1'-0"



1 MP201 SUB BASEMENT CRAWL SPACE PARTIAL PLAN – NEW WORK
SCALE: 1/8"=1'-0"



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CONSULTANTS:

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Drawing Title: HVAC SUB-BASEMENT PLAN NEW WORK/DEMOLITION - PIPING

Approved Project Director

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

Project Number: 688-334 OIF/OEF

Building Number

Drawing Number: MP201

Office of Construction and Facilities Management

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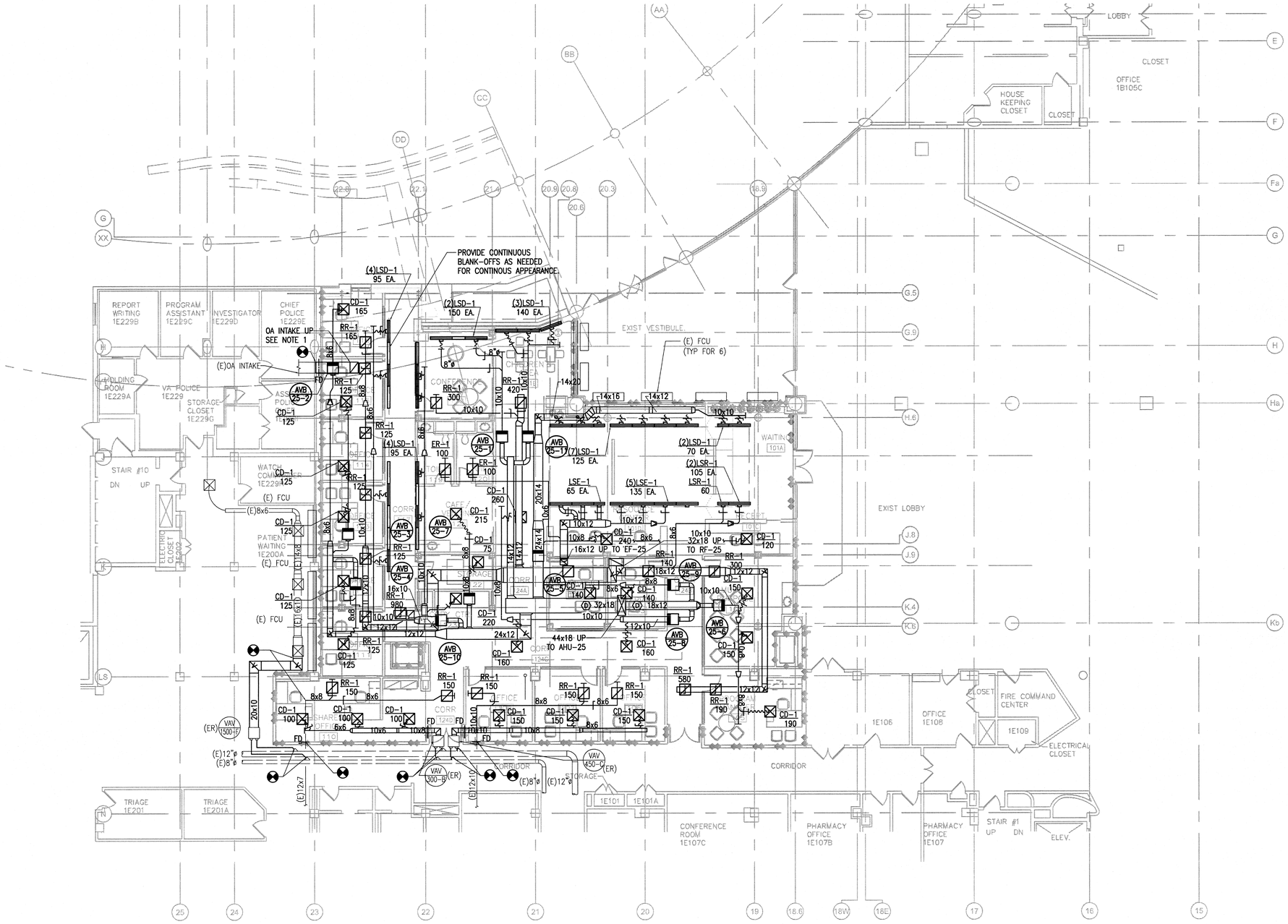
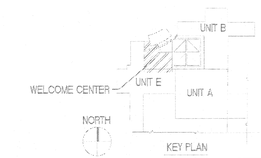


1 HVAC FIRST FLOOR PLAN – DUCTWORK
MH211 SCALE: 1/8"=1'-0"

NOTES:

1. EXTEND EXISTING DUCTWORK. FIELD VERIFY DUCT SIZE AND MATCH EXSITING.



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Drawing Title: HVAC FIRST FLOOR PLAN - DUCTWORK

Approved: Project Director

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

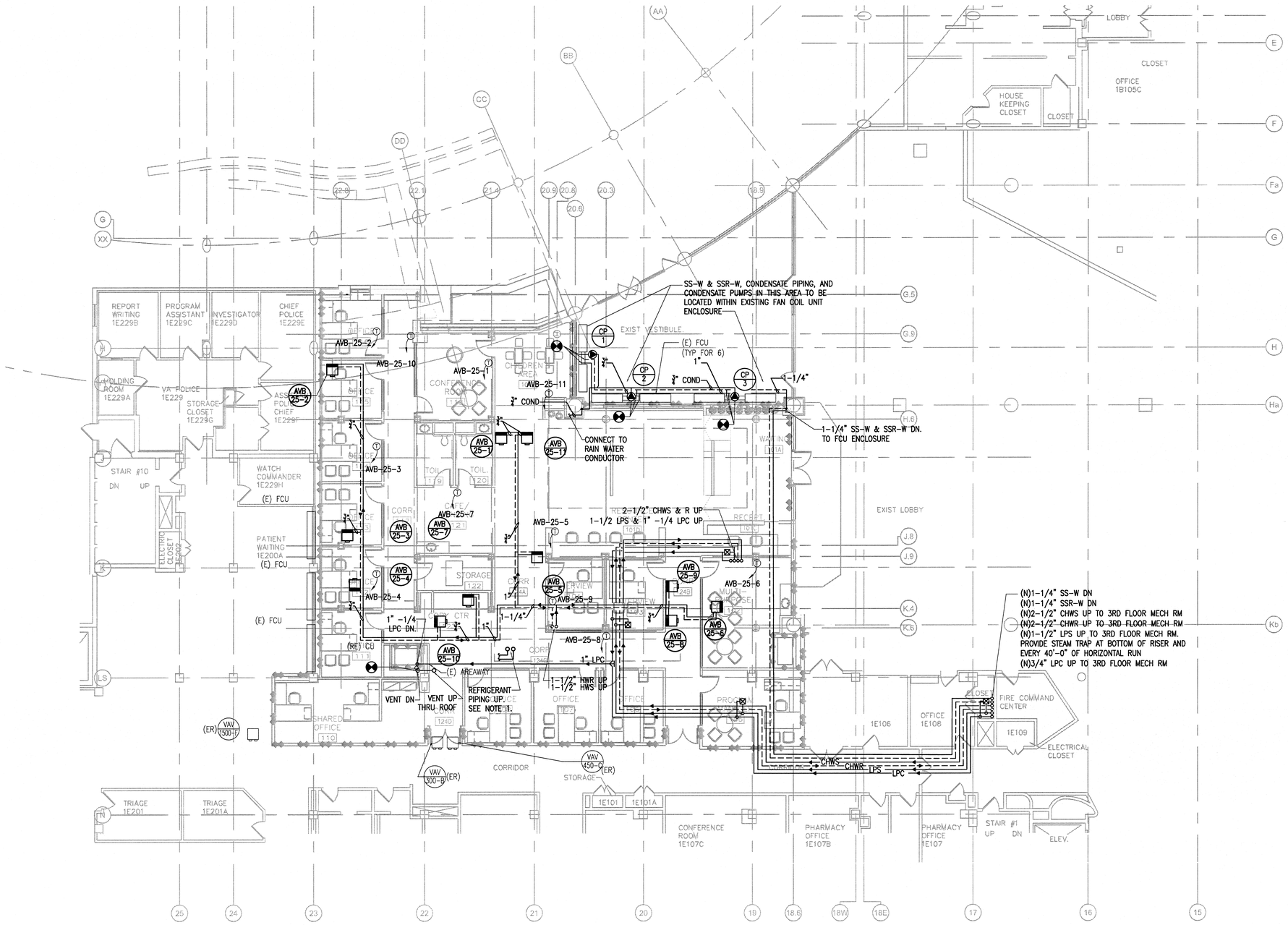
Project Number: 688-334 OIF/OEF

Building Number:

Drawing Number: MH211

Office of Construction and Facilities Management

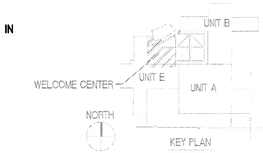
Department o Veterans Affairs



1 HVAC FIRST FLOOR PLAN – PIPING
MP212 SCALE: 1/8"=1'-0"

NOTES:

1. REFRIGERANT PIPING TO BE RECONFIGURED TO ACCOMMODATE (E)CU IN NEW LOCATION (SEE MH222)



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VA FORM 08-6231

CONSULTANTS:

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Drawing Title: HVAC FIRST FLOOR PLAN - PIPING

Approved Project Director

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

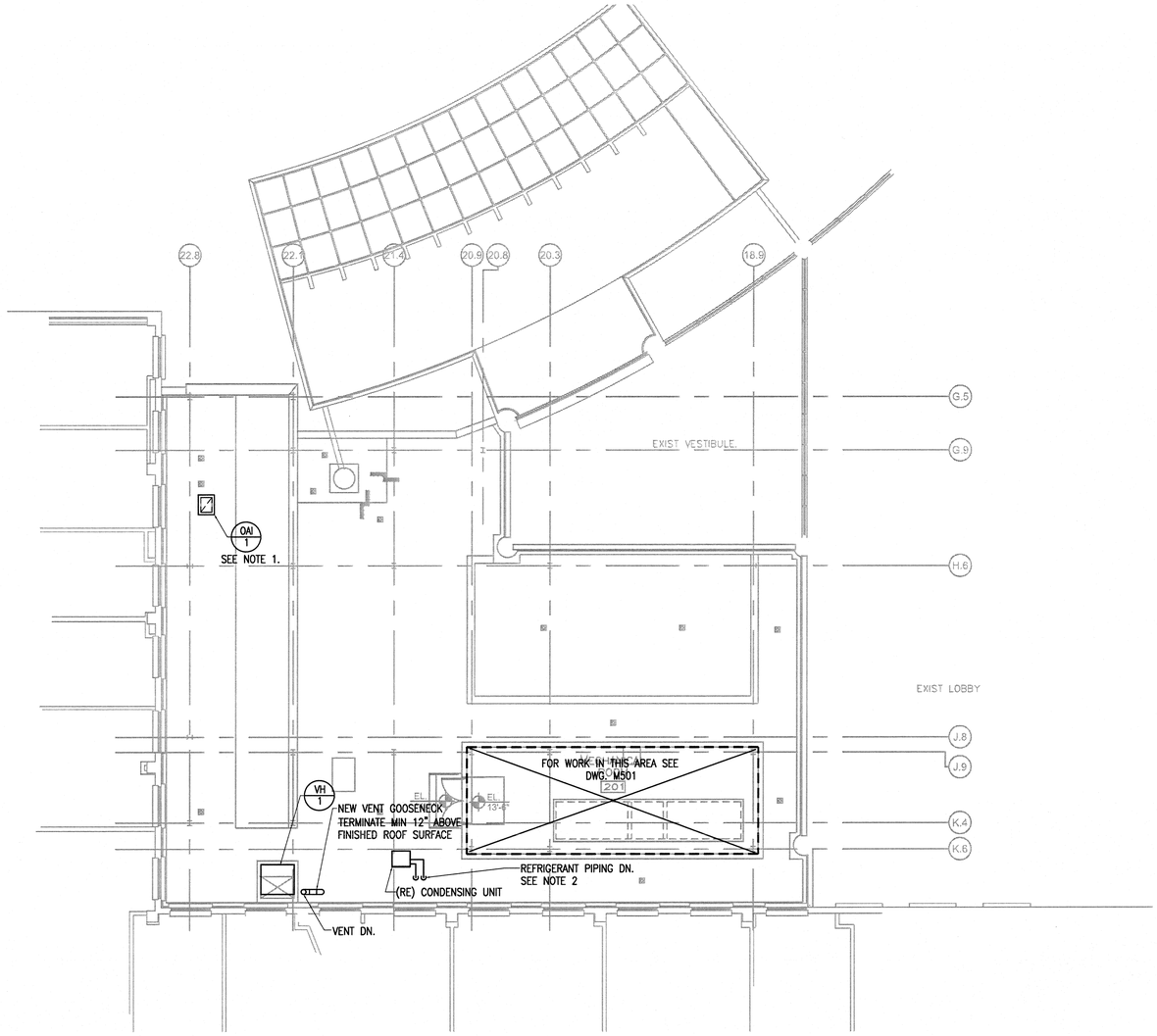
Project Number: 688-334 OIF/OEF

Building Number

Drawing Number: MP212

Office of Construction and Facilities Management

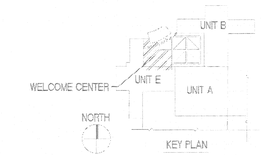
Department o Veterans Affairs



NOTES:

1. SIZE INTAKE HOOD THROAT AREA SUCH THAT THE PRESSURE DROP WILL NOT EXCEED 0.05" WG FOR THE MEASURED EXISTING AIR QUANTITY (SEE DWG MD101). MINIMUM INTAKE HOOD THROAT AREA SHALL NOT BE LESS THAN THE EXISTING LOUVER FACE AREA.

2. REFRIGERANT PIPING TO BE RECONFIGURED TO ACCOMMODATE (E)CU IN NEW LOCATION SHOWN ON THIS DWG.



Revisions	Date
ISSUE 1 - ISSUE FOR CONSTRUCTION	04.30.2013
95 % SUBMISSION	02.17.2012
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25 % SUBMISSION	10.29.2010

CONSULTANTS:

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Drawing Title: HVAC SECOND FLOOR PLAN - DUCTWORK

Approved: Project Director

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

Project Number: 688-334 OIF/OEF

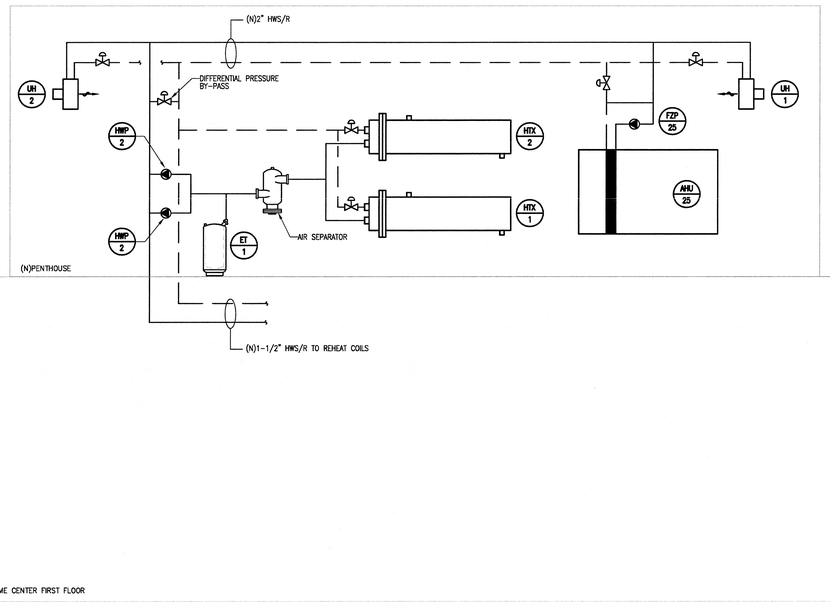
Building Number:

Drawing Number: MH222

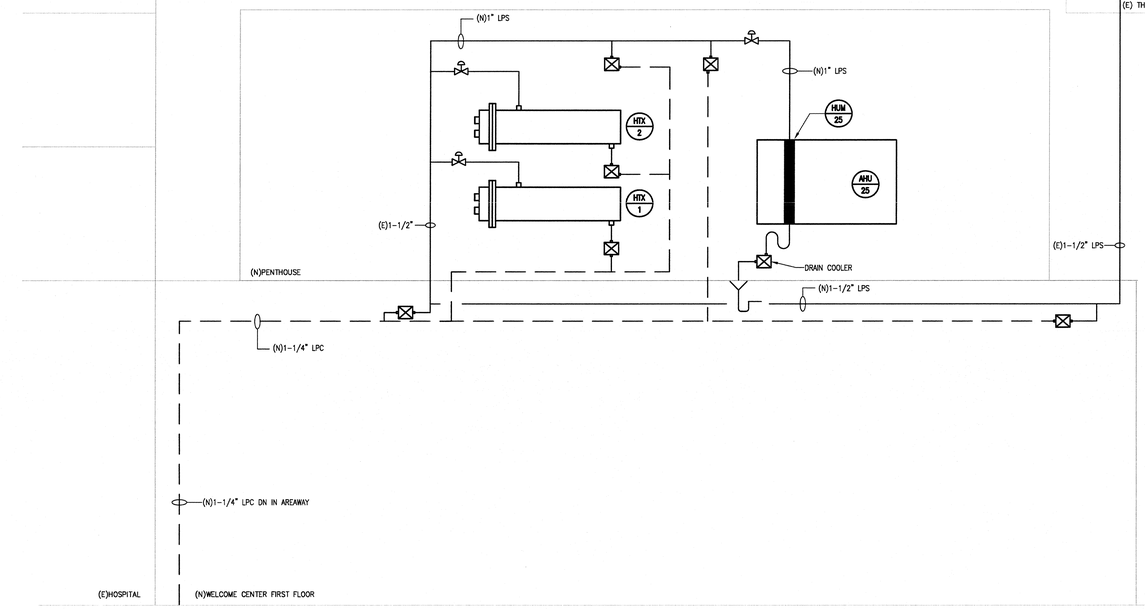
Office of Construction and Facilities Management

Department of Veterans Affairs

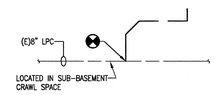
VA FORM 08-6231

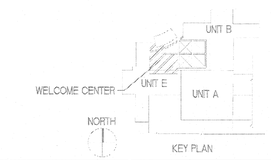


1 HOT WATER FLOW DIAGRAM
H3.1 SCALE: N.T.S.



2 STEAM FLOW DIAGRAM
H3.1 SCALE: N.T.S.





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Drawing Title: HVAC FLOW DIAGRAMS

Approved Project Director:

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

Project Number: 688-334 OIF/OEF

Building Number:

Drawing Number: M301

Office of Construction and Facilities Management

Department o Veterans Affairs

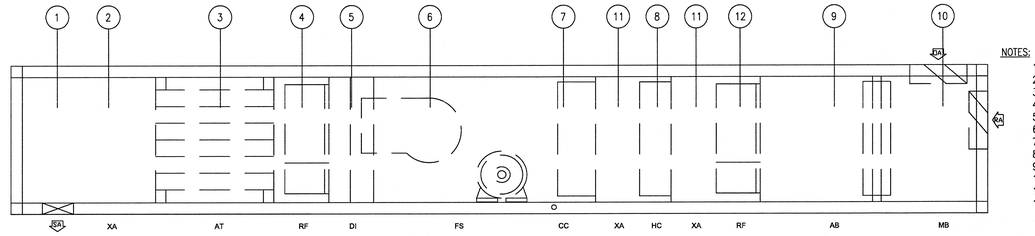
VA FORM 08-6231

AIR HANDLING UNIT SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TYPE (SEE NOTE 1)	SERVICE	LOCATION	TOTAL CFM	MIN OA CFM	SUPPLY FAN DATA (SEE NOTES 2 & 3) SP/IN WG. EXT.	TOT.	TYPE	MAX BHP	MOTOR HP	COOLING COIL EAT °F DB	WB	LAT °F DB	WB	MBH TOT.	SENS.	MAX. FACE VEL./ FPM	APD/ IN. WG	WATER (SEE NOTE 4) GPM	PD/FT. WG	MIN. ROWS	MAX FINS/IN.	ATC VALVE
AHU-25	VAV	WELCOME CENTER	MECH PENTHOUSE	5600	1680	2.25	6.91	AF	9.22	15	80.4	66	53	52	235.5	171.6	480	0.56	46.7	5.1	8	10	2-WAY

SYMBOL	PREHEAT/HEATING COIL (SEE NOTES 5, 6, 7, 8) LOC	EAT °F	LAT °F	MBH	FACE VEL. FPM	APD/ IN. WG	PRIM. WATER GPM	CIRC. WATER GPM	PD / FT.	ATC VALVE	FILTERS (SEE NOTE 9) LOC	APD/IN WG INIT.	FINAL	SIZE Width/Ht IN.	EFF. %	TYPE	REMARKS (SEE NOTES 11 & 12)	BASIS OF DESIGN
AHU-25	P	40	60.5	124	480	0.06	6.4	12.7	2.7		PF PF FF	0.3 0.55 0.6	0.6 1.3 1.4	(2)24x12 (2)24x24 EACH	30% 80-85 90-95			YORK SOLUTION 45X60

NOTES:
1. VAV = VARIABLE AIR VOLUME (W/ VFD ON SUPPLY FAN & ON RETURN FAN). CV - CONSTANT VOLUME
2. TOTAL SP IS AN ESTIMATED VALUE BASED ON INFORMATION OF ONE MANUFACTURER OF AHU's. ADJUST TOTAL AS REQUIRED BASED ON ACTUAL UNIT AND COIL LOSSES AND SPECIFIED EXTERNAL AND FILTER FINAL SP.
3. TYPE - BI= BACKWARD INCLINED, AF = AIR FOIL, FC = FORWARD CURVED
4. ENTERING CHILLED WATER TEMPERATURE OF 45°F.
5. LOC - P=PREHEAT LOCATION H=HEATING OR REHEAT LOCATION
6. PRIMARY HEATING WATER EWT = 160°F
7. PREHEAT COILS HAVE CIRCULATING PUMPS THAT MAINTAIN CONSTANT FLOW RATE THRU THE COIL. COIL CAPACITY IS CONTROLLED BY CHANGING THE COIL EWT. THIS IS ACCOMPLISHED THRU A CONTROL VALVE THAT MIXES PRIMARY HEATING WATER & COIL CIRC. WATER. VALVE FLOW IS SCHEDULED AS PRIMARY WATER GPM.
8. ALL PREHEAT COILS SHALL BE PARALLEL FLOW TYPE SIZED FOR MINIMUM TUBE VELOCITY OF 3 FT/S.
9. LOC - PF=PREFILTER LOCATION AF=AFTER/FILTER LOCATION
10. SEE DIAGRAM BELOW FOR ADDITIONAL ACCESSORY AND ARRANGEMENT INFORMATION
11. SEE ACOUSTICAL PERFORMANCE SCHEDULE.
12. FANS ARE TO BE INTERNALLY ISOLATED WITH SPRING ISOLATORS (2" DEFLECTION)
13. VFD's TO BE FURNISHED BY DIVISION 23 CONTRACTOR AND MEET REQUIREMENTS SPECIFIED IN DIVISION 26 POWER WIRING WILL BE PROVIDED BY DIVISION 26 CONTRACTOR.



NOTES:
1. DISCHARGE PLENUM
2. HUMIDIFIER
3. SOUND ATTENUATOR
4. HIGH EFFICIENCY FILTER (MERV 14)
5. DIFFUSER
6. SUPPLY FAN
7. COOLING COIL
8. HEATING COIL
9. AIR BLENDER
10. MIXING BOX
11. VARIABLE LENGTH ACCESS
12. PREFILTER (MERV 8 AND MERV 13)

CONVERTOR/HEAT EXCHANGER SCHEDULE

SYMBOL	LOCATION	SERVICE	MBH	FOUL. FACT.	TUBE SIDE GPM	EWT °F	LWT °F	PD/ FT.WG.	NO. OF PASSES	CONN. SIZE	SHELL SIDE STEAM. PSIG	STEAM PPH	CONN. SIZE SUP.	RET.	REMARKS	BASIS OF DESIGN
HTX-1	MECH. PENT	WELCOME CENTER	291	0.0004	29.1	140	160	0.4	2	1.5	10	302.2	2	1	SEE NOTE 1	BELL AND GOSSETT SU 4 2-2
HTX-2	MECH. PENT	WELCOME CENTER	291	0.0004	29.1	140	160	0.4	2	1.5	10	302.2	2	1	SEE NOTE 1	BELL AND GOSSETT SU 4 2-2

NOTES:
1. SET RELIEF VALVE PRESSURE AT 50 PSIG.

PUMP SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TYPE	LOCATION	SERVICE	GPM	TOTAL HEAD FT. WG	OPER. TEMP. °F	SIZE IN. SUCT.	DISCH.	EFF. %	RPM	HP	FOUND. TYPE	REMARKS	BASIS OF DESIGN
HWP-1	END SUCTION	MECH PENT	HW LOOP	29.1	50	160	1.5	1 1/4	48.8	1750	1.5	TYPE 1	SEE NOTE 1	B & G 1510 1-1/4AC
HWP-2	END SUCTION	MECH PENT	HW LOOP	29.1	50	160	1.5	1 1/4	48.8	1750	1.5	TYPE 1	SEE NOTE 1	B & G 1510 1-1/4AC
FZP-1	INLINE	AHU-25 HW CIRC.	HW COIL	12.7	25	160	1.25	1.25	39.7	1750	0.5	NA	SEE NOTE 1	B & G 60 1-1/4X5-1/4

NOTES:
1. PUMPS TO BE NON-OVERLOADING AT EVERY POINT ON PUMP CURVE.

UNIT HEATER SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TYPE	LOCATION	FAN CFM	HP	RPM	HEATING CAPACITY MBH	EAT °F	GPM	PD/ FT. WG	EWT °F	REMARKS	BASIS OF DESIGN
UH-1	EX	MECH PENT.	500	16 W	1550	18	-	1.9	0.8	160	SEE NOTES 1, 2, 3 AND 4	STERLING HS-118A
UH-2	EX	MECH PENT.	500	16 W	1550	18	-	1.9	0.8	160	SEE NOTES 1, 2, 3 AND 4	STERLING HS-118A

NOTES:
1. AIR FLOW INCLUDES ALLOWANCES FOR ALL INTEGRAL PRESSURE DROPS (INCLUDING INTAKE AND DISCHARGE GRILLES, COILS AND FILTERS).
2. TYPES - EX = EXPOSED, VCAB = VERTICAL RECESSED CABINET, HCAB = HORIZONTAL CABINET.
3. ALL UNITS SHALL BE HORIZONTAL DISCHARGE WITH INTEGRAL FAN GUARDS.
4. UNIT HEATER SHALL BE CONTROLLED THRU DDC SYSTEM.

FAN SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	TYPE	LOCATION	SERVICE	CFM	SP/ IN. WG	ROOF OPENING IN.X IN.	RPM	MOTOR MAX. BHP	HP	MOUNTING TYPE	MAX. NC	VFD	REMARKS	BASIS OF DESIGN GREENHECK
EF-25	UTIL	PENTHOUSE	GEN. EXHAUST	1070	1.15	NA	1725	0.4	3/4	PAD	62	NO	SEE NOTES 1, 2, 3, 4 AND 5	SWB-208-5
RF-25	TUB	PENTHOUSE	AHU-25 RETURN	4125	1.75	NA	1371	1.6	3	INLINE	70	YES	SEE NOTES 1, 2, 4 AND 5	TCB-2-16-30

NOTES:
1. FANS WITH SPEED CONTROLS SHALL BE SELECTED FOR SCHEDULED FAN PERFORMANCE AT MEDIAN AVALABLE RPM.
2. ALL FANS TO BE BELT DRIVEN UNLESS NOTED OTHERWISE.
3. ALL FANS ARE TO BE PROVIDED WITH BACK DRAFT DAMPERS.
4. PROVIDE FANS WITH ALL OPTIONAL GUARDS, COVERS AND SAFETY DEVICES.
5. TUB = TUBULAR CENTRIFUGAL, PROP = PROPELLER, UTIL = UTILITY SET, UP = UPBLAST, CAB = CABINET

EXPANSION TANK SCHEDULE

SYMBOL	TYPE	LOCATION	SERVICE	ACCEPT. GALLONS	DIA. IN.	HEIGHT IN.	FILL PRESS. PSIG	REMARKS	BASIS OF DESIGN
ET-1	MECH ROOM	MECH PENTHOUSE	HTX 1 & 2	2.4	12	19.5	25		AMTROL AX-15(V)

HUMIDIFIER SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)

SYMBOL	LOCATION	SERVICE	DISCHARGE LBS. STM/ HR.	STEAM SUPPLY PSIG	APPROX. DUCT WxH (IN.)	MAX. ABSORPT. DIST. (IN.)	REMARKS	BASIS OF DESIGN
H-25	PENTHOUSE	AHU-25	38	15	60x45	18	SEE NOTES 1, 2, 3 AND 4	DRI STEEM ULTRASORB LH

NOTES:
1. PROVIDE MULTIPLE MANIFOLDS AS REQUIRED TO MEET MAXIMUM ABSORPTION DISTANCE.
2. COORDINATE CONTROLS WITH ATC CONTRACTOR.
3. ALL HUMIDIFIERS SHALL HAVE FULLY MODULATING STEAM OUTPUT & FULLY MODULATING HIGH LIMIT.
4. PROVIDE AIRFLOW PROVING SWITCH

ACOUSTICAL PERFORMANCE SCHEDULE

UNIT NO.	MAXIMUM DISCHARGE SOUND POWER (dB) OCTAVE BAND 1 63 HZ	OCTAVE BAND 2 125 HZ	OCTAVE BAND 3 250 HZ	OCTAVE BAND 4 500 HZ	OCTAVE BAND 5 1K	OCTAVE BAND 6 2K	OCTAVE BAND 7 4K	OCTAVE BAND 8 8K
AHU-25 SUPPLY DISCHARGE	95	89	73	66	57	55	56	57
AHU-25 RETURN INLET	93	89	84	86	81	75	68	59
AHU-25 RADIATED	99	93	87	87	82	72	63	56

NOTES:
1. ALL SOUND LEVELS INCLUDE EFFECTS OF INTEGRAL SOUND ATTENUATION.

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Drawing Title: HVAC SCHEDULES

Approved Project Director

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

Project Number: 688-334 OIF/OEF

Building Number

Drawing Number: M401

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

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VENTILATION SCHEDULE																										
SYSTEM	ZONE	ROOM NUMBER & NAME	AREA (SQ FT)	CEILING HEIGHT (FT)	VOLUME (CU FT)	PERSONS	ASHRAE 62.1 2007 CFM PER PERSON	ASHRAE 62.1 2007 CFM PER SQ FT	ASHRAE 62.1 2007 REQ. O/A	VA GUIDELINES AC/HR O/A	VA GUIDELINES AC/HR S/A	VA GUIDELINES AC/HR EXH	VA GUIDELINES AIRFLOW (CFM) O/A	VA GUIDELINES AIRFLOW (CFM) S/A	REQ. PRESS REL.	EXH ALL AIR	ACTUAL (AS DESIGNED) AC/HR S/A	ACTUAL AC/HR O/A	ACTUAL AC/HR EXH	ACTUAL AIR FLOW (CFM) S/A	ACTUAL AIR FLOW (CFM) O/A	ACTUAL AIR FLOW (CFM) R/A	ACTUAL AIR FLOW (CFM) EXH	TRANS AIR	NOTES (SPECIAL REQS.)
AHU-25	25-11	101E CHILDRENS AREA	228	9	2052	8	5		40				0	0			10.5	3.2	0.0	360	108	360			
AHU-25	25-01	118 CONFERENCE ROOM	242	9	2178	4	5		20		6		0	218			8.3	2.5	0.0	300	90	300			
AHU-25	25-02	116 OFFICE	125	8	1000	2	5		10		4		0	67			9.9	3.0	0.0	165	50	165			
AHU-25	25-03	113 OFFICE	125	8	1000	2	5		10		4		0	67			7.5	2.3	0.0	125	38	125			
AHU-25	25-03	114 OFFICE	125	8	1000	2	5		10		4		0	67			7.5	2.3	0.0	125	38	125			
AHU-25	25-03	115 OFFICE	125	8	1000	2	5		10		4		0	67			7.5	2.3	0.0	125	38	125			
AHU-25	25-04	111 OFFICE	125	8	1000	2	5		10		4		0	67			7.5	2.3	0.0	125	38	125			
AHU-25	25-04	112 OFFICE	125	8	1000	2	5		10		4		0	67			7.5	2.3	0.0	125	38	125			
AHU-25	25-05	101A WAITING	1104	10	11040	19	5		95				0	0			5.5	1.6	4.0	1010	303	270	740		
AHU-25	25-06	102 MULTI PURPOSE	315	9	2835	8	5		40		6		0	284			6.3	1.9	0.0	300	90	300			
AHU-25	25-07	121 CAFE/VENDING	165	8	1320	1	5		5				0	0			9.8	2.9	0.0	215	65			200	
AHU-25	25-07	122 STORAGE	70	8	560				0				0	0			8.0	2.4	0.0	75	23	75			
AHU-25	25-07	119 TOIL	70	8	560				0			10	0	0			0.0	0.0	10.7		0		100		
AHU-25	25-07	120 TOIL	88	8	704				0			10	0	0			0.0	0.0	8.5		0		100		
AHU-25	25-08	124 CORRIDOR	768	9	6912	1	5		5		4		0	461			5.0	1.5	0.0	580	174	580			
AHU-25	25-09	103 INTERVIEW	130	8	1040	3	5		15		4		0	69			8.1	2.4	0.0	140	42	140			
AHU-25	25-09	104 INTERVIEW	130	8	1040	3	5		15		4		0	69			8.1	2.4	0.0	140	42	140			
AHU-25	25-10	117 CORRIDOR	380	16	6080	1	5		5		4		0	405			7.5	2.3	0.0	760	228	760			
AHU-25	25-10	123 COPY CTR	240	9	2160	1	5		5		4		0	144			6.1	1.8	0.0	220	66	220			
AHU-25	25-06	105 PROGRAM MANAGER	248	8	1984	2	5		10		4		0	132			5.7	1.7	0.0	190	57	190			

AIR VOLUME CONTROL BOX SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)																	
SYMBOL	TYPE	SERVICE	INLET SIZE IN.	PRIMARY AIR COOLING (CFM) MAX.	PRIMARY AIR COOLING (CFM) MIN.	MAX NC @ 1 1/2" W.G. (SEE NOTE 2)	ATC SCHEME	NORM. DAMP. POS.	MBH	EAT °F	LAT °F	WATER (NOTE 3) GPM	WATER (NOTE 3) PD/FT.WG	WATER (NOTE 3) VALVE	MIN. ROWS	REMARKS (SEENOTE 4)	BASIS OF DESIGN
AVB-25-1	VAV	118 CONFERENCE ROOM	6	300	220	30	DDC	N.O.	5.9	55	80	0.6	7	2-WAY	1		TITUS DESV
AVB-25-2	VAV	116 OFFICE	4	165	85	30	DDC	N.O.	2.3	55	80	0.2	7	2-WAY	1		TITUS DESV
AVB-25-3	VAV	113 OFFICE, 114 OFFICE, 115 OFFICE	6	375	200	30	DDC	N.O.	5.4	55	80	0.5	7	2-WAY	1		TITUS DESV
AVB-25-4	VAV	111 OFFICE, 112 OFFICE	5	250	135	30	DDC	N.O.	3.6	55	80	0.4	7	2-WAY	1		TITUS DESV
AVB-25-5	CV	101A WAITING	12	1375	700	30	DDC	N.O.	18.9	55	80	1.9	7	2-WAY	1		TITUS DESV
AVB-25-6	VAV	102 MULTI PURPOSE, 105 PROGRAM MANAGER	7	490	420	30	DDC	N.O.	11.3	55	80	1.1	7	2-WAY	1		TITUS DESV
AVB-25-7	VAV	121 CAFE/VENDING, 122 STORAGE, 119 TOIL, 120 TOIL	6	290	150	30	DDC	N.O.	4.1	55	80	0.4	7	2-WAY	1		TITUS DESV
AVB-25-8	VAV	124 CORRIDOR	8	580	465	30	DDC	N.O.	12.6	55	80	1.3	7	2-WAY	1		TITUS DESV
AVB-25-9	VAV	103 INTERVIEW, 104 INTERVIEW	6	280	140	30	DDC	N.O.	3.8	55	80	0.4	7	2-WAY	1		TITUS DESV
AVB-25-10	VAV	117 CORRIDOR, 123 COPY CTR	10	980	550	30	DDC	N.O.	14.9	55	80	1.5	7	2-WAY	1		TITUS DESV
AVB-25-11	CV	101E CHILDRENS AREA	7	410	410	30	DDC	N.O.	11.1	55	80	1.1	7	2-WAY	1		TITUS DESV

NOTES:

1. BOX WIDE OPEN STATIC PRESSURE LOSS, IN. WG. INCLUDING HEATING COIL
2. MAXIMUM MANUFACTURER'S RATED NC AT STATIC PRESSURE DROP OF 0.4" WG BASED ON 10 dB-12 ROOM ABSORPTION, 5'-0" LONG ACOUSTICALLY LINED DISCHARGE DUCT AND END REFLECTION DUE TO A SINGLE DIFFUSER (NOTE: ACTUAL INSTALLATION MAY VARY FROM BASIS OF RATING).
3. CAPACITY BASED ON 160 deg F ENTERING WATER TEMPERATURE. 3/4" BRANCH PIPE SIZE TO WATER COIL UNLESS OTHERWISE NOTED ON DRAWINGS. TWO OR THREE WAY ATC VALVE AS NOTED.
4. UNITS TO HAVE PRESSURE INDEPENDENT PRIMARY AIR CONTROL, MULTI-POINT INLET VELOCITY SENSOR, BOTTOM ACCESS, INTEGRAL 24V CONTROL TRANSFORMER, SINGLE POINT ENTRY, FAN POWERED UNITS TO HAVE 1" INDUCED AIR FILTER AND BOTTOM SERVICE ACCESS.

AIR DEVICE SCHEDULE										
SYMBOL	DESCRIPTION	NECK SIZE (IN.)	FLOW RANGE (CFM)	NO. SLOTS	SLOT WIDTH (IN.)	MAX. P.D. (IN. WG)	BLOW PATTERN	MAX. N.C.	REMARKS	BASIS OF DESIGN
CD-1	24x24 LOUVERED FACE CEILING DIFFUSER	6"Ø 8"Ø 10"Ø 12"Ø	0-120 121-280 281-380 381-480	- - - -	- - - -	0.1	4 WAY UNLESS NOTED OTHERWISE FIELD CHANGEABLE	30	SEE NOTES 1, 2, 3, 4, 5, 6, 7	TITUS TDC
LSD-1	4'-0" LONG ALUMINUM LINEAR SLOT DIFFUSER	8"Ø	0-150	3	3/4	0.1	2-WAY ADJUSTABLE	30	SEE NOTES 1, 2, 3, 4, 6 & 7	TITUS ML
RR-1	24x24 PERFORATED RETURN REGISTER	6x6 10x10 12x12 18x18 22x22	0-100 101-275 276-400 401-900 901-1700	- - - - -	- - - - -	0.06	-	30	SEE NOTES 2, 4, 5, 6, 7	TITUS PAR
ER-1	24x24 PERFORATED EXHAUST REGISTER	6x6 10x10 12x12 18x18 22x22	0-100 101-280 281-400 401-900 901-1350	- - - - -	- - - - -	0.06	-	30	SEE NOTES 2, 4, 5, 6, 7	TITUS PAR

NOTES:

1. FLEXIBLE DUCT SIZE TO MATCH NECK SIZE.
2. ADJUST AIR DEVICE SIZE OR DESIGNATION WHERE AIR FLOW INDICATED ON THE DRAWINGS EXCEEDS SCHEDULED FLOW RANGE, MAX. P.D. OR MAX. N.C.
3. PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED. PROVIDE FIELD FABRICATED PLENUMS WHERE FACTORY PLENUMS WILL NOT FIT DUE TO FIELD CONDITIONS.
4. PROVIDE PLASTER FRAMES FOR ALL AIR DEVICES MOUNTED IN PLASTER CEILINGS. SEE ARCHITECTURAL REFLECTED CEILING PLANS.
5. PROVIDE 24x24 DROP PANEL FOR LAY-IN CEILING.
6. ALL SIZES INDICATED FOR T-BAR CEILINGS ARE NOMINAL - EXACT SIZE TO BE LESS TO ALLOW DEVICES TO LAY IN CEILING.
7. REFER TO ARCHITECTURAL DETAILS FOR MOUNTING AND FLANGE TYPE FOR CEILINGS OTHER THAN LAY IN TYPE.
8. PROVIDE VENT WOOD SUPPLY DIFFUSER MODUAL WITH INTERIOR BLACK INSULATION AND DIRECTIONAL VANES.
9. PROVIDE REMOTE CEILING DAMPER REGULATOR (YOUNG REGULATOR) WHEN MOUNTED IN GYPSUM AND PANEL CEILINGS. REGULATOR TO BE MOUNTED IN PLENUM AND ADJUSTED THRU THE DIFFUSER AS PER MANUFACTURER'S RECOMMENDATION.

ROOF MOUNTED VENTILATOR SCHEDULE							
SYMBOL	SERVICE	CFM	APD IN. WG.	THROAT IN. X IN.	OVERALL DIMENSION LxWxH	REMARKS	BASIS OF DESIGN
VH-1	CRAWSPACE VENTILATION	-	-	48 x 54	56 X 62 X 30.5		PENNBARRY / PH
OAI-1	EXISTING INTAKE	-	-	18 x 24	25.8 X 31.8 X 14.5	SEE NOTE 1	PENNBARRY / PH

NOTES:

1. NEW INTAKE THROAT SIZE TO BE AT A MINIMUM THE SAME AS THE LOUVER SIZE. CONTRACTOR TO VERIFY IN FIELD.

CONDENSATE PUMP UNIT SCHEDULE (SEE HPE SCHEDULE FOR ELECTRICAL SERVICE)															
SYMBOL	TYPE	LOCATION	SERVICE	NO. OF PUMPS	GPH EA.	TOTAL HEAD FT. WG	MAX. NPSH FT. WG	OPER. TEMP. °F	SIZE IN. SUCT.	SIZE IN. DISCH.	RPM EA.	HP EA.	RECEIVER GAL.	REMARKS	BASIS OF DESIGN
CP-3	-	VESTIBULE	EXISTING FCU'S	1	45	10	-	120 MAX	3/8	3/8	-	1/30	3/10		LITTLE GIANT VCC-20
CP-3	-	VESTIBULE	EXISTING FCU'S	1	45	10	-	120 MAX	3/8	3/8	-	1/30	3/10		LITTLE GIANT VCC-20
CP-3	-	VESTIBULE	EXISTING FCU'S	1	45	10	-	120 MAX	3/8	3/8	-	1/30	3/10		LITTLE GIANT VCC-20

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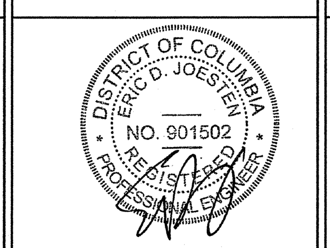

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Drawing Title: HVAC SCHEDULES

Approved: Project Director

Project Title: OIF / OEF WELCOME CENTER DEPARTMENT OF VETERANS AFFAIRS VAMC

Location: Veterans Affairs Medical Center, 50 Irving Street NW Washington DC

Date: 4-30-2013 | Checked: - | Drawn: TJR

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