



A. REFER TO ARCH. REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHT FIXTURES AND OTHER CEILING MOUNTED DEVICES.

B. UTILIZE EXISTING LIGHTING CIRCUITS IN PANEL A FOR NEW LIGHTING LOADS.

1. PROVIDE PHILLIPS BODINE EJ-100-SD OR APPROVED EQUAL EMERGENCY LIGHTING INVERTER WITH MINIMUM OF 100W OUTPUT. INDICATED EMERGENCY LED FIXTURES SHALL BE CONNECTED TO INVERTER.
2. PROVIDE EMERGENCY BALLAST IN RELOCATED PENDANT FIXTURE.
3. TO BE SWITCHED WITH NEW L1 DOWNLIGHT AT LOWER LEVEL LANDING.
4. TO BE SWITCHED WITH NEW L1 DOWNLIGHTS AT LEVEL 1 LANDING AND ABOVE, STAIRS.

VA FORM 08-6231



TYPE	DESCRIPTION	MANUFACTURER	MODEL	MANUFACTURER (OPTION 1)	MODEL (OPTION 1)	MANUFACTURER (OPTION 2)	MODEL (OPTION 2)	LOAD	LAMP	BALLAST	VOLTAGE	MOUNTING	COMMENTS
F1	24" X 24" RECESSED DIRECT/INDIRECT FIXTURE WITH FROSTED ACRYLIC BASKET, HIGH REFLECTANCE BAKED MATTE WHITE INDIRECT REFLECTOR, IC-RATED	METALUX	2RD-IC SERIES	LITHONIA LIGHTING	2X2 AVANTE			39 VA	(2) 17W T8	ELECTRONIC	120V	RECESSED	PROVIDE EMERGENCY BALLAST WHERE INDICATED
F2A	2' UNDER-CABINET FIXTURE, LENSED FRONT, WHITE ENAMEL FINISH, AND UL LISTED FOR DAMP LOCATIONS	METALUX	CL SERIES	LITHONIA LIGHTING	ZUC SERIES			22 VA	(1) 17W T8	ELECTRONIC	120V	SURFACE	
F2B	3' UNDER-CABINET FIXTURE, LENSED FRONT, WHITE ENAMEL FINISH, AND UL LISTED FOR DAMP LOCATIONS	METALUX	CL SERIES	LITHONIA LIGHTING	ZUC SERIES			30 VA	(1) 25W T8	ELECTRONIC	120V	SURFACE	
F3	WALL-MOUNTED 2' FIXTURE WITH DOWNLIGHT ONLY, CODE GAUGE COLD ROLLED STEEL CONSTRUCTION, WHITE ENAMEL FINISH, PAINTED AFTER FABRICATION	METALUX	BI SERIES	LITHONIA LIGHTING	WP SERIES			39 VA	(1) 17W T8	ELECTRONIC	120V	WALL	
L1	6" ROUND LED RECESSED DOWNLIGHT WITH CLEAR DIFFUSE REFLECTOR, IC-RATED	WILLIAMS	IOLED P60 SERIES					18 VA	1100 LUMEN LED, 3000K		120V	RECESSED	CONNECT INDICATED FIXTURES TO EMERGENCY LIGHTING INVERTER IN ROOM 102
X1	EXIT SIGN WITH THERMOPLASTIC HOUSING, RED LED LETTERING, INTEGRAL Ni-CAD BATTERY PACK WITH SOLID STATE CHARGER	SURE-LITES	LPX SERIES	LITHONIA LIGHTING	LQM SERIES			9 VA	LED		120V	AS INDICATED ON DRAWINGS	

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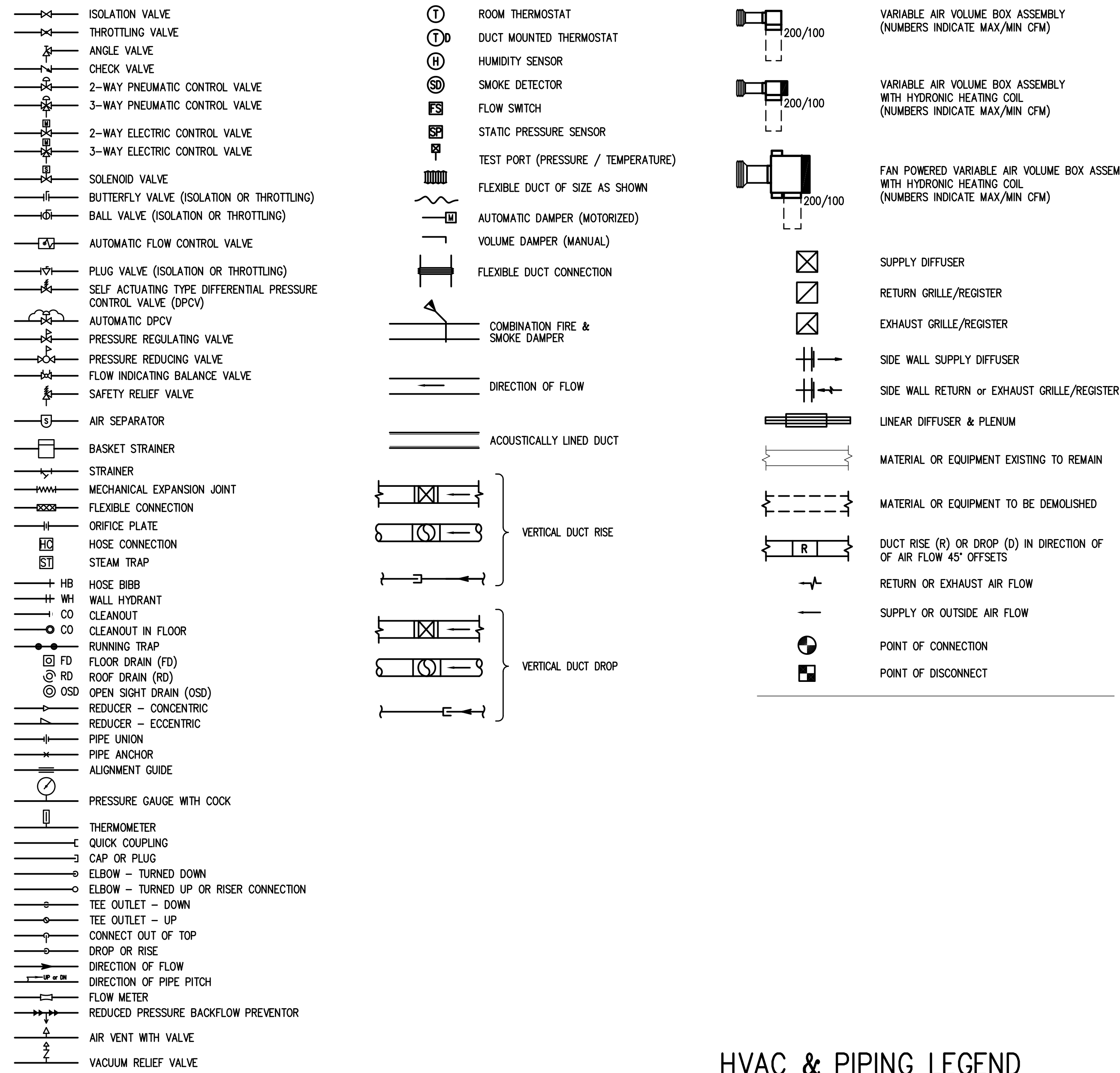
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Department of
Veterans Affairs

MECHANICAL ABBREVIATIONS

A	AD ACCESS DOOR	L	LAT LEAVING AIR TEMPERATURE
ACFM ABSOLUTE CUBIC FEET PER MINUTE	LBS/HR POUNDS PER HOUR	LGT LENGTH	LPT LOW POINT
AFF ABOVE FINISHED FLOOR	LRA LOCKED ROTOR AMPERS	LWC LEAVING WATER TEMPERATURE	LWT LEAVING WATER TEMPERATURE
AFM AIR FLOW MEASURING DEVICE	LWC LEAVING WATER TEMPERATURE	LWT LEAVING WATER TEMPERATURE	
AFMS AIR FLOW MEASURING STATION			
AHU AIR HANDLING UNIT			
AMB AMBIENT			
AP ACCESS PANEL/AMB			
APPROX APPROXIMATE			
ASR AUTOMATIC SPRINKLER RISER			
B		M	
BFP BACKFLOW PREVENTOR	MBH MAXIMUM 1000 BTU/HR	MCC MOTOR CONTROL CENTER	
BHP BRAKE HORSEPOWER	MECH MECHANICAL	MER MECHANICAL EQUIPMENT ROOM	
BOD BOTTOM OF DUCT	MIN MINIMUM	MISC MISCELLANEOUS	
BOP BOTTOM OF PIPE	MTG MOUNTING		
BTU(H) BRITISH THERMAL UNIT (PER HOUR)			
C		N	
CAP CAPACITY	NC NOISE CRITERIA	N.C. NORMALLY CLOSED	
CDR CONDENSER	NC NOT IN CONTRACT	NO. NUMBER	
CFH CUBIC FEET PER HOUR	N.O. NORMALLY OPEN	NOM NOMINAL	
CFM CUBIC FEET PER MINUTE	NPSH NET POSITIVE SUCTION HEAD	NPSH (NRL) NEW LOCATION OF RELOCATED MATERIAL OR EQUIPMENT	
CI CAST IRON DOWN	NTS NOT TO SCALE		
CO CLEAN OUT DOMESTIC COMPRESSOR			
COND CONDENSATE			
CONT CONTINUATION			
CW COLD WATER			
D		O	
DB DECELS	OA OUTSIDE AIR	OD OUTSIDE AIR DAMPER	
DBA DECELS (A-WEIGHTED SCALE)	OD OUTSIDE DIAMETER	OD OVERFLOW DRAIN	
DBT DRY BULB TEMPERATURE, °F	OPR OPERATING	OV OUTLET VELOCITY	
DDC DIRECT DIGITAL CONTROL			
DIA DIAMETER			
DN DOWN			
DP DIFFERENTIAL PRESSURE			
DPT DEW POINT TEMPERATURE, °F			
DWG DRAWING			
DX DIRECT EXPANSION			
D&T DRIP & TRAP			
E		P	
EA EACH EXHAUST AIR	PD PRESSURE DROP (FEET OF WATER)	PRV PRESSURE REGULATING VALVE	
EAT ENTERING AIR TEMPERATURE	PSI POUNDS PER SQUARE INCH	PSIG POUNDS PER SQUARE INCH - GAUGE	
EER ENERGY EFFICIENCY RATIO			
EFF EFFICIENCY			
EGW ETHYLENE GLYCOL-WATER SOLUTION (% GLYCOL BY VOLUME)			
EL ELEVATION HEIGHT			
ENT ENTERING			
EQ EQUIVALENT			
ESP EXTERNAL STATIC PRESSURE			
EW ELECTRIC WATER COOLER			
EWC ENTERING WATER TEMPERATURE			
EWT EXHAUST			
EXP EXPANSION			
EXT EXTERNAL			
(E) EXISTING MATERIAL OR EQUIPMENT			
F		R	
F FAHRENHEIT	RA RETURN/RELIEF AIR	RAG RETURN AIR GRILLE	
FD FLOOR DRAIN	RC RAIN CONDUCTOR	RD ROOF DRAIN	
FDP FIRE DAMPER	RE REFERENCE	REG REGISTER	
FH FUME HOOD	RET RETURN	RH RELATIVE HUMIDITY	
FLA FULL LOAD AMPERES	(RL) RELOCATED MATERIAL OR EQUIPMENT	RLA RUNNING LOAD AMPS	
FLEX FLEXIBLE CONNECTION	RPM REVOLUTIONS PER MINUTE		
FLR FLOOR			
FM FLOW METER			
FPM FEET PER MINUTE			
FS FLOW SWITCH			
FSDP FIRE & SMOKE DAMPER			
FT FEET or FOOT			
G		T	
GAL GALLONS	TAB TESTING, ADJUSTING AND BALANCING	TEMP TEMPERATURE	
GPM GALLONS PER MINUTE	TP TOTAL PRESSURE	TYP TYPICAL	
GR GRAINS			
H		U	
HB HOSE BIBB	UON UNLESS OTHERWISE NOTED		
HG MERCURY HEIGHT			
HGT HEIGHT			
HO HUB OUTLET			
HP HORSEPOWER			
HR HOUR			
HUM HUMIDIFIER			
HZ HERTZ			
I		V	
ID INSIDE DIAMETER	V VOLTS	VAC VACUUM	
IE INVERT ELEVATION	VEL VELOCITY	VFD VARIABLE FREQUENCY DRIVE	
IFB INTEGRAL FACE AND BY-PASS	VTR VENT THRU ROOF		
IN INCHES			
K		W	
KW KILOWATTS	W WATTS	W/ WITH	
	W/O WITHOUT	WBT WET BULB TEMPERATURE	
	WDT WDT	WGT WEIGHT	
	WG WATER GAUGE	WMS WIRE MESH SCREEN	

MECHANICAL SYMBOLS



HVAC & PIPING LEGEND

CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
ERF	ENERGY RECOVERY FLUID (GLYCOL)
ATV	ATMOSPHERIC VENT (ATV)
HPS (PSIG)	HIGH PRESSURE STEAM
LPS (PSIG)	LOW PRESSURE STEAM
HPR (PSIG)	HIGH PRESSURE CONDENSATE RETURN
LPR (PSIG)	LOW PRESSURE CONDENSATE RETURN
PS	PUMPED CONDENSATE
D	CONDENSATE DRAIN
CF	CHEMICAL FEED
SA	SUPPLY AIR
RA	RETURN AIR
TE	TOILET EXHAUST
GE	GENERAL EXHAUST

GENERAL MECHANICAL NOTES

(NOTES APPLY TO ALL MECHANICAL DRAWINGS.)

- INSTALL ALL WORK IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE AND THE REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.
- BRING TO THE ATTENTION OF THE ARCHITECT/ENGINEER ANY INFORMATIONAL CONFLICTS WITHIN THE SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR(S) SHALL NOT PROCEED WITH ANY WORK, EXCEPT AT ITS OWN RISK, UNTIL ALL CONFLICTS ARE RESOLVED AND THE CLARIFYING INFORMATION IS ISSUED TO THE CONTRACTOR(S) BY THE ARCHITECT/ENGINEER.
- COORDINATE ALL WALL MOUNTED DEVICES SUCH AS THERMOSTATS AND CONTROL PANELS WITH ARCHITECTURAL TRADES.
- ALL DIMENSIONS SHOWN FOR DUCTWORK ARE NET INSIDE DIMENSIONS.
- FURNISH AND INSTALL ALL MANUALLY OPERATED VOLUME CONTROL (BALANCING) DAMPERS NECESSARY TO PERFORM THE BALANCING WORK.
- THOUGH SOME OFFSETS & TRANSITIONS ARE SHOWN IN PIPING & SHEET METAL TO HELP INDICATE THE PHYSICAL RELATIONSHIP BETWEEN THEM, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL PIPING & SHEET METAL OFFSETS & TRANSITIONS REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF & WITH THE WORK OF ALL TRADES TO PROVIDE COMPLETE & OPERABLE SYSTEMS WITHOUT INTERFERENCES.
- DUCT CONSTRUCTION SHALL FOLLOW THE LATEST SMACNA STANDARDS FOR +/- 2" WG PRESSURE CLASSIFICATIONS.

GENERAL DEMOLITION NOTES

- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS DURING THE CONTRACTOR'S PRE-BID SITE VISIT(S) AND BRING TO THE ATTENTION OF THE ARCHITECT/ENGINEER ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND THE ACTUAL SITE CONDITION PRIOR TO BID FOR CLARIFICATION. AFTER A CONTRACT IS EXECUTED, THE CONTRACTOR SHALL SUBMIT A "REQUEST FOR INFORMATION".
- THE REQUIRED DEMOLITION IS NOT LIMITED TO THAT PORTION INDICATED ON THE PLANS ALONE, BUT SHALL INCLUDE ALL NECESSARY WORK INCIDENTAL THERETO AND WORK INDICATED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS WHICH IS NECESSARY TO ACCOMPLISH THE INTENT OF THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL NOT VIOLATE THE PHYSICAL SECURITY OF THE BUILDING DURING DEMOLITION OR ASSOCIATED OPERATIONS. COORDINATED SECURITY CLOSELY WITH THE OWNER.
- THE CONTRACTOR SHALL SCHEDULE ALL WORK, INCLUDING INTERRUPTIONS OF THE EXISTING UTILITIES, WITH THE OWNER. PRIOR TO STARTING WORK CONTRACTOR SHALL NOTE THAT THE BUILDING WILL BE OCCUPIED AND IN USE DURING PERIODS OF TIME THAT WORK UNDER THIS CONTRACT IS BEING PERFORMED.
- THE CONTRACTOR SHALL ARRANGE DEMOLITION TO AGREE WITH THE ACCOMPLISHMENT OF WORK UNDER THE VARIOUS PHASES AND IN COORDINATION WITH THE REQUIRED MODIFICATIONS.
- PROTECT EXISTING SYSTEMS WITHIN THE LIMITS OF WORK WHICH ARE TO BE RETAINED. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED EQUIPMENT OR SYSTEMS DUE TO CONTRACTOR NEGLIGENCE TO ITS ORIGINAL CONDITION AND TO THE COMPLETE SATISFACTION OF THE OWNER, AND AT NO COST TO THE OWNER.
- ALL FIXTURES AND EQUIPMENT INDICATED TO BE REMOVED SHALL HAVE ALL ASSOCIATED PIPING REMOVED BACK TO THE NEAREST BRANCH, MAIN, RISER OR STANDPIPE AND CAPPED IN A CONCEALED LOCATION.
- "CONCEALED LOCATION" IS DEFINED AS BEING ABOVE FINISHED CEILING, BELOW FINISHED FLOOR OR WITHIN FINISHED WALL OR PARTITION.
- IN A CONCEALED LOCATION CAP/PLUG OR MAKE READY FOR CONNECTION WITH NEW ANY EXISTING PIPING TO REMAIN. IN AREAS THAT WILL HAVE NO CEILING CAP/PLUG OR MAKE READY FOR CONNECTION WITH NEW IN A LOCATION TO PROVIDE THE MAXIMUM POSSIBLE HEADROOM. UNDER NO CIRCUMSTANCE MAY AN EXISTING PIPE BE LEFT OPEN.
- ALL FIXTURES, EQUIPMENT, PIPING AND ACCESSORIES WHICH HAVE BEEN REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE IN PLANS. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT SITE ALL REMOVED SPRINKLERS, EQUIPMENT, PIPING AND ACCESSORIES AS SOON AS POSSIBLE. A CREDIT SHALL BE INCLUDED IN THE BID FOR THE SALVAGE VALUE OF ALL REMOVED ITEMS.
- CAP ALL COPPER AND STEEL PIPING USING COMMERCIAL MANUFACTURED "CAPS". PLUG ALL CAST IRON PIPING USING COMMERCIAL MANUFACTURED "BLIND PLUGS". CAP/PLUG INSTALLATIONS SHALL BE IN ACCORDANCE WITH NEW WORK INSTALLATION PROCEDURES. CRIMPING OF TUBING IS NOT ACCEPTABLE.
- PRIOR TO DISRUPTION OF THE EXISTING SYSTEM, TEST AND MEASURE THE EXISTING AIR FLOW RATES AND STATIC PRESSURE IN ALL BRANCHES AND MAINS WHICH ARE TO BE RESTORED TO THEIR PREVIOUS FLOW RATES. THIS TEST SHALL BE SUBMITTED TO THE A/E AT THE TIME OF FINAL BALANCING. THE EXISTING AIR HANDLING SYSTEM AFFECTED BY THIS PROJECT SHALL BE MODIFIED AND RE-BALANCED TO FLOW RATES INDICATED ON THE DRAWINGS. FURNISH AND INSTALL ALL MANUAL BALANCE DAMPERS NECESSARY TO PERFORM THIS RE-BALANCING.

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Drawing Title
MECHANICAL ABBREVIATIONS
AND SYMBOLS

Approved Project Director

-

Project Title
Administration Building
Renovation and
Cortège Parking

Location
Leavenworth National Cemetery/Leavenworth KSDate
MARCH 25, 2013

Checked

Drawn

Project Number
893CM3014

Building Number

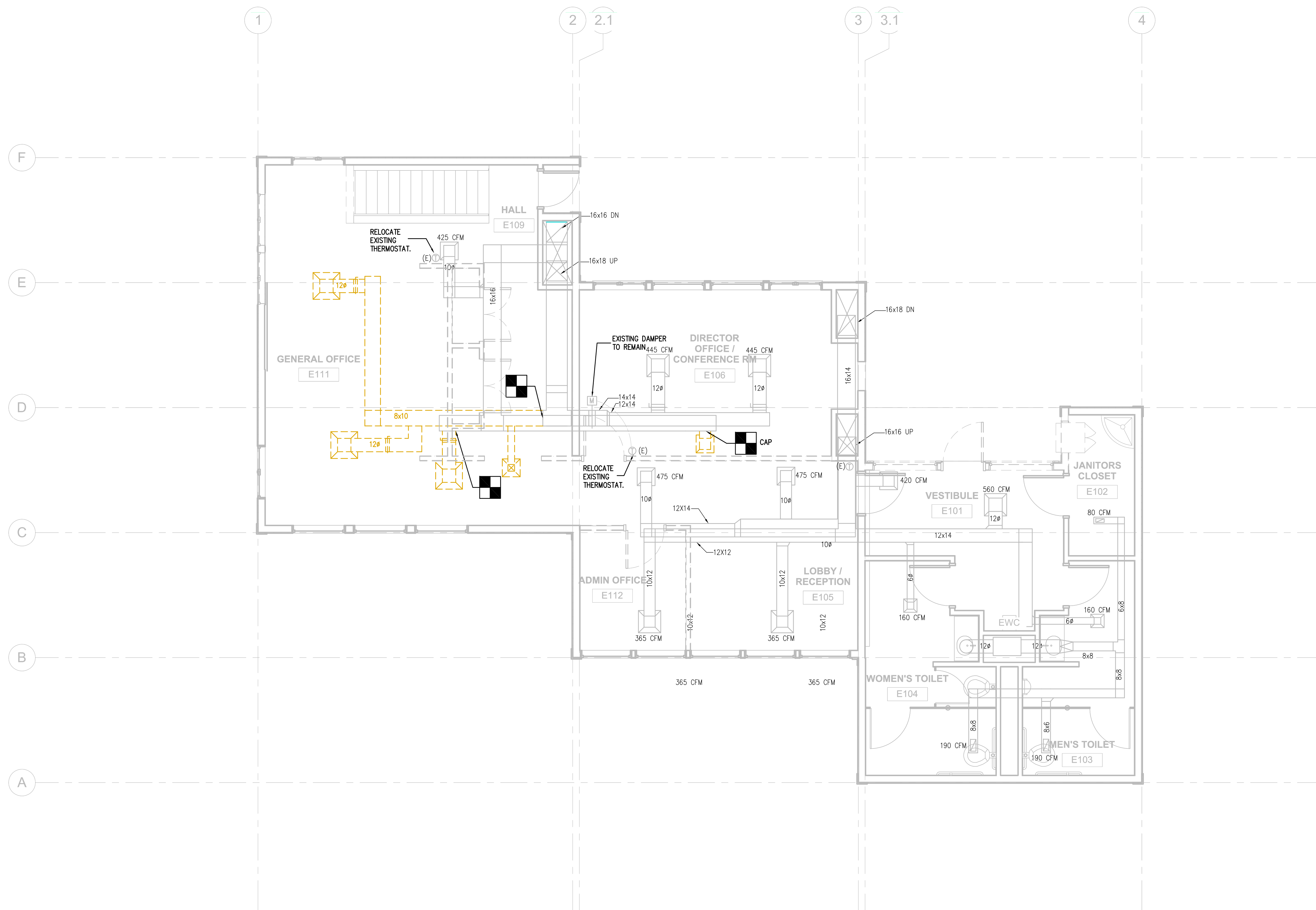
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SHEET NOTE

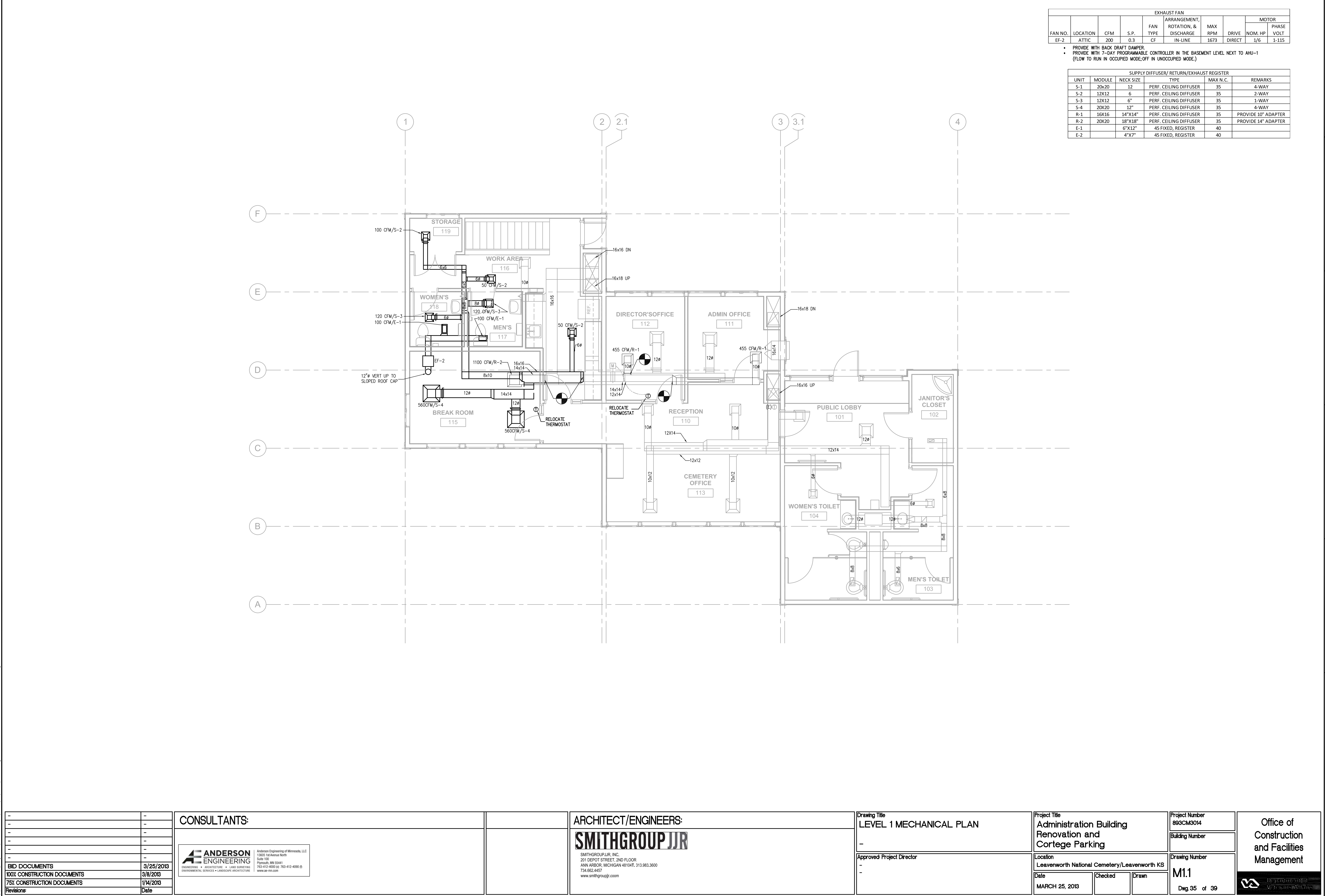
1. ALL DEMO WORK IS DISPLAYED IN DASHED LINES.

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80% DOCUMENTS	3/24/2013
100% CONSTRUCTION DOCUMENTS	3/8/2013
75% CONSTRUCTION DOCUMENTS	1/4/2013
Revisions:	Date

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Drawing Title	
LEVEL 1 MECHANICAL DEMOLITION PLAN	
-	
Approved: Project Director	
3/8/2013	
-	

Project Title Administration Building Renovation and Cortège Parking			Project Number 893CN30314	
Location Leavenworth National Cemetery/Leavenworth KS			Drawing Number	
Date MARCH 25, 2013	Checked	Drawn	MD1.1 Dwg. 34 of 39	



SUPPLY/DIFFUSER/ RETURN/EXHAUST REGISTER					
UNIT	MODULE	NECK SIZE	TYPE	MAX N. C.	REMARKS
S-1	20x20	12	PERF. CEILING DIFFUSER	35	4-WAY
S-2	12X12	6	PERF. CEILING DIFFUSER	35	2-WAY
S-3	12X12	6"	PERF. CEILING DIFFUSER	35	1-WAY
S-4	20X20	12"	PERF. CEILING DIFFUSER	35	4-WAY
R-1	16X16	14"x14"	PERF. CEILING DIFFUSER	35	PROVIDE 10" ADAPTER
R-2	20X20	18"x18"	PERF. CEILING DIFFUSER	35	PROVIDE 14" ADAPTER
E-1		6"x12"	45 FIXED, REGISTER	40	
E-2		4"x9"	45 FIXED, REGISTER	40	

SUPPLY/DIFFUSER/ RETURN/EXHAUST REGISTER					
UNIT	MODULE	NECK SIZE	TYPE	MAX N.C.	REMARKS
S-1	20x20	12"	PERF. CEILING DIFFUSER	35	4-WAY
S-2	12x12	6"	PERF. CEILING DIFFUSER	35	2-WAY
S-3	12x12	6"	PERF. CEILING DIFFUSER	35	1-WAY
S-4	20x20	12"	PERF. CEILING DIFFUSER	35	4-WAY
R-1	16x16	14"X14"	PERF. CEILING DIFFUSER	35	PROVIDE 10" ADAPTER
R-2	20x20	18"X18"	PERF. CEILING DIFFUSER	35	PROVIDE 14" ADAPTER
E-1		6"X12"	45 FIXED, REGISTER	40	
E-2		4"X7"	45 FIXED, REGISTER	40	

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-	-
BID DOCUMENTS	3/25/2013
100% CONSTRUCTION DOCUMENTS	3/8/2013
75% CONSTRUCTION DOCUMENTS	1/14/2013
Revisions:	Date

CONSULTANTS:



ARCHITECT/ENGINEERS:

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Drawing Title
LEVEL 1 MECHANICAL PLAN

Approved: Project Director

Project Title
Administration Building
Renovation and
Cortege Parking

Location	Leavenworth National Cemetery/Leavenworth KS
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Date _____

Checked

Drawn

Project Number
893CM3014

Building Number

Drawing Number
 2 2 2 2

M1.1

Office of
Construction
and Facilities
Management



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

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PLUMBING ABBREVIATIONS

ABBR	DESCRIPTION	ABBR	DESCRIPTION
ABBR	ABBREVIATION	KW	KILOWATTS
ADA	AMERICANS WITH DISABILITIES ACT	LAV	LAVATORY
ATF	ABOVE FINISHED FLOOR	LGT	LENGTH
AG	ABOVE GRADE	LPG	LIQUID PETROLEUM GAS
AMB	AMBIENT	LWT	LEAVING WATER TEMPERATURE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE		
AP	ACCESS PANEL	MAX	MAXIMUM
APPROX	APPROXIMATE	MBH	1000 BTU/HR
BFP	BACKFLOW PREVENTOR (TYPE AS INDICATED)	MIN	MINIMUM
BFV	BUTTERFLY VALVE	MISC	MISCELLANEOUS
BHP	BRAKE HORSEPOWER	MSB	MOP SERVICE BASIN
BLV	BALANCING VALVE	MTG	MOUNTING
BTU/H	BRITISH THERMAL UNIT PER HOUR		
BV	BALL VALVE	NA	NOT APPLICABLE
		N.C.	NORMALLY CLOSED
CA	UTILITY COMPRESSED AIR (PRESSURE AS INDICATED)	NIC	NOT IN CONTRACT
CAP.	CAPACITY	NO	NITROUS OXIDE
CFM	CUBIC FEET PER MINUTE	N.O.	NORMALLY OPEN
CI	CAST IRON	NO.	NUMBER
CO	CLEANOUT	NOM	NOMINAL
COMP	COMPRESSOR	NTS	NOT TO SCALE
COND	CONDENSATE		
CONT	CONTINUATION	OD	OUTSIDE DIAMETER
CV	CHECK VALVE	OFL	OVERFLOW
CW	DOM. COLD WATER	ORD	OVERFLOW ROOF DRAIN
		OSD	OPEN SITE DRAIN
DF	DRINKING FOUNTAIN	PC	PUMPED CONDENSATE
DIA	DIAMETER	PD	PUMPED DISCHARGE (TYPE AS INDICATED)
DN	DOWN	POI	PLUMBING DRAINAGE INSTITUTE
DOM	DOMESTIC	PH	PHASE (ELECTRICAL)
DWH	DOMESTIC WATER HEATER	PPM	PARTS PER MILLION
DWG	DRAWING	PRESS.	PRESSURE
DWS	(CHILLED) DRINKING WATER SUPPLY	PRV	PRESSURE REDUCING VALVE
DWR	(CHILLED) DRINKING WATER RETURN	PSI	POUNDS PER SQUARE INCH
		PSIG	POUNDS PER SQUARE INCH - GAUGE
EA	EACH	PV	PLUG VALVE
ECO	EXTERIOR CLEANOUT	PW	PROCESS WATER
EEW	EMERGENCY EYE WASH		
EEW/ESH	COMBINATION EMERGENCY EYE WASH/EMERGENCY SHOWER	REF	REFERENCE
EEW/EFW	COMBINATION EMERGENCY EYE WASH/EMERGENCY FACE WASH	RD	ROOF DRAIN
EFF	EFFICIENCY	RL	RELOCATED MATERIAL OR EQUIPMENT
EFW	EMERGENCY FACE WASH	RS	REVERSE OSMOSIS SUPPLY
EL	ELEVATION	RPM	REVOLUTIONS PER MINUTE
EQ	EQUIVALENT	RV	PRESSURE RELIEF VALVE
ESH	EMERGENCY SHOWER		
ET	EXPANSION TANK	SAH	SANITARY OR WASTE
EWC	ELECTRIC WATER COOLER	SCFM	STANDARD CUBIC FEET PER MINUTE
EWI	ENTERING WATER TEMPERATURE	SOW	SOFTENED COLD WATER
EXP	EXPANSION	SE	SEWAGE EJECTOR
EXT	EXTERNAL	SG	SPECIFIC GRAVITY
(E)	EXISTING MATERIAL OR EQUIPMENT	SK	SINK
		SH	SHOWER
°F	DEGREES FAHRENHEIT	SHW	SOFTENED HOT WATER
FOO	FLOOR CLEANOUT	SP	SUMP PUMP
FD	FLOOR DRAIN	SPEC	SPECIFICATION
FDC	FOUNDATION DRAIN COLLECTOR	SQ. FT.	SQUARE FEET
FL	FLOOR	SS	STAINLESS STEEL
FL	FLOOR	SSD	SUB-SOL DRAINAGE
FPM	FEET PER MINUTE	ST	STORM (RAINWATER)
FPS	FEET PER SECOND	STD	STANDARD
FS	FLOOR SINK	STM	STEAM
FT	FEET OR FOOT	SV	SOLENOID VALVE
FTD	FOOTER DRAINAGE		
		TEMP	TEMPERATURE
G	NATURAL GAS (PRESSURE AS INDICATED)	TP	TRAP PRIMER
GAL	GALLON	TPU	TRAP PRIMER UNIT
GC	GAS COCK	TPV	TEMPERATURE AND PRESSURE RELIEF VALVE
GPD	GALLONS PER DAY	TW	TEMPERED WATER
GPH	GALLONS PER HOUR	TYP	TYPICAL
GPM	GALLONS PER MINUTE		
GPR	GAS PRESSURE REGULATOR	UN	UNLESS OTHERWISE NOTED
GV	GATE VALVE	UR	URNAL
HB	HOSE BIBB	V	SANITARY VENT
HG	MERCURY	VEL	VELOCITY
HGT	HEIGHT	VTR	VENT THRU ROOF
HP	HORSE POWER		
HPCW	HIGH PRESSURE DOM. COLD WATER	W/	WITH
HPHW	HIGH PRESSURE DOM. HOT WATER (TEMP. 110° OR AS INDICATED)	WC	WATER CLOSET
HPHWR	HIGH PRESSURE DOM. HOT WATER RETURN (TEMP. 110° OR AS INDICATED)	WC	WATER CLOUSE
		WHA	WATER HAMMER ARRESTOR
HW	DOM. HOT WATER (TEMP. 110° OR AS INDICATED)	WH	WALL HYDRANT
HWR	DOM. HOT WATER RETURN (TEMP. 110° OR AS INDICATED)	W/O	WITHOUT
HR	HOUR	YD	YARD
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
IN.	INCHES		

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ISOLATION VALVE or GATE VALVE		REDUCER - CONCENTRIC
	BALANCING VALVE		REDUCER - ECCENTRIC
	ANGLE VALVE		PIPE UNION
	CHECK VALVE		PIPE ANCHOR
	SOLENOID VALVE		PIPE ALIGNMENT GUIDE
	BUTTERFLY VALVE		PRESSURE GAUGE WITH COCK
	BALL VALVE		THERMOMETER
	PLUG VALVE or GAS COCK		QUICK COUPLING
	PRESSURE REGULATOR VALVE		CAP OR PLUG
	FLOW INDICATING BALANCE VALVE		ELBOW - TURNED DOWN
	PRESSURE RELIEF VALVE or TEMP PRESSURE RELIEF VALVE		ELBOW - TURNED UP
	BASKET STRAINER		TEE OUTLET - DOWN
	STRAINER		BRANCH TOP CONNECTION
	MECHANICAL EXPANSION JOINT		DROP OR RISE
	FLEXIBLE CONNECTION		DIRECTION OF FLOW
	CLEANOUT		FLOW METER
	FLOOR CLEANOUT or EXTERIOR CLEANOUT		BACKFLOW PREVENTOR (TYPE AS INDICATED BY ASSE STANDARD)
	FLOOR DRAIN		AIR VENT WITH VALVE
	FLOOR DRAIN ABOVE		WATER HAMMER ARRESTOR
	ROOF DRAIN		HEAT TRACED PIPE (SYSTEM AS INDICATED)
	ROOF DRAIN ABOVE		HOSE BIBB
	OPEN SITE DRAIN		WALL HYDRANT
			POINT OF CONNECTION
			POINT OF DISCONNECT
			RISER AND SIZE

PLUMBING PIPING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DOM COLD WATER		SANITARY VENT
	DOM HOT WATER (TEMP 110° OR AS INDICATED)		SANITARY OR WASTE DRAIN
	DOM HOT WATER RETURN (TEMP 110° OR AS INDICATED)		STORM (RAINWATER) DRAIN
	LOW PRESSURE DOM COLD WATER		UNDER SLAB SANITARY DRAIN
	HIGH PRESSURE DOM COLD WATER		UNDER SLAB STORM DRAIN
	LOW PRESSURE DOM HOT WATER (TEMP 110° OR AS INDICATED)		ACID RESISTANT WASTE
	HIGH PRESSURE DOM HOT WATER (TEMP 110° OR AS INDICATED)		ACID RESISTANT VENT
	LOW PRESSURE DOM HOT WATER RETURN (TEMP 110° OR AS INDICATED)		WASTE
	HIGH PRESSURE DOM HOT WATER RETURN (TEMP 110° OR AS INDICATED)		UTILITY COMPRESSED AIR (PRESSURE AS INDICATED)
	HIGH TEMP DOM HOT WATER		NATURAL GAS (PRESSURE AS INDICATED)
	HIGH TEMP DOM HOT WATER RETURN		LIQUID PETROLEUM GAS
	SOFTENED COLD WATER		FOUNDATION DRAIN
	SOFTENED HOT WATER		PUMP DISCHARGE (TYPE AS INDICATED)
	TEMPERED WATER		SUBSOL DRAINAGE
	PROCESS WATER		(CHILLED) DRINKING WATER SUPPLY
			(CHILLED) DRINKING WATER RETURN
			NATURAL GAS VENT

GENERAL PLUMBING NOTES

1. INSTALL ALL PLUMBING IN ACCORDANCE WITH THE ILLINOIS PLUMBING CODE AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.
2. BRING TO THE ATTENTION OF THE ARCHITECT ANY INFORMATIONAL CONFLICTS WITHIN THE SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK EXCEPT AT HIS OWN RISK UNTIL ALL CONFLICTS ARE RESOLVED AND THE CLARIFYING INFORMATION IS ISSUED TO THE CONTRACTOR BY THE ARCHITECT.
3. INSTALL ALL SANITARY DRAINAGE PIPING 3" AND LARGER AT 1/8" PER FOOT SLOPE. INSTALL PIPING SMALLER THAN 3" AT 1/4" PER FOOT SLOPE.
4. PROVIDE CLEANOUTS WHERE INDICATED ON DRAWINGS AND WHERE REQUIRED BY THE APPLICABLE CODES.
5. PROVIDE TRAP PRIMER VALVES AND DISTRIBUTION UNITS AS REQUIRED TO PROVIDE TRAP SEALS ON ALL FLOOR DRAINS INDICATED FOR TRAP PRIMING. INSTALL TRAP PRIMER VALVE AND DISTRIBUTION UNITS LEVEL AND LOCATED IN AN ACCESSIBLE LOCATION.
6. PROVIDE WATER HAMMER ARRESTORS WHERE QUICK CLOSING VALVES ARE UTILIZED. LOCATE ARRESTORS AS PER PDI RECOMMENDATIONS AND IN AN ACCESSIBLE LOCATION.
7. INSTALL BACKFLOW PREVENTOR ASSEMBLIES IN AN ACCESSIBLE LOCATION AND IN ACCORDANCE WITH THE APPLICABLE CODES. PIPE RELIEF OUTLET DISCHARGE TO NEAREST FLOOR DRAIN. PROVIDE AIR GAP FITTING AND FUNNEL AS REQUIRED.
8. IDENTIFY ALL PIPING SYSTEMS, VALVES AND EQUIPMENT AS INDICATED IN THE SPECIFICATION.
9. INSULATE ALL DOMESTIC WATER PIPING AS INDICATED IN THE SPECIFICATION.
10. INSULATE WATER SUPPLIES AND DRAINAGE PIPING SERVING ADA LAVATORIES AND SINKS AS PER THE SPECIFICATIONS.
11. INSTALL VALVES AND ACCESSORIES ON PIPING SERVING EQUIPMENT TO ALLOW SERVICING OR REMOVAL OF EQUIPMENT WITHOUT HAVING TO REMOVE ALL PIPING AND ACCESSORIES.
12. PROVIDE UNIONS, VACUUM BREAKERS, STRAINERS, ETC. AS REQUIRED ON ALL PIPE CONNECTIONS TO EQUIPMENT AT LOCATIONS INDICATED. MAKE FULLY OPERABLE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS DURING THE CONTRACTOR'S PRE-BID SITE VISIT(S) AND BRING TO THE ATTENTION OF THE ARCHITECT/ENGINEER ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND THE ACTUAL SITE CONDITION PRIOR TO BID FOR CLARIFICATION. AFTER A CONTRACT IS EXECUTED, THE CONTRACTOR SHALL SUBMIT A "REQUEST FOR INFORMATION".
2. THE REQUIRED DEMOLITION IS NOT LIMITED TO THAT PORTION INDICATED ON THE PLANS ALONE, BUT SHALL INCLUDE ALL NECESSARY WORK CONSIDERED THERE TO AND WORK INDICATED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS WHICH IS NECESSARY TO ACCOMPLISH THE INTENT OF THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL NOT VIOLATE THE PHYSICAL SECURITY OF THE BUILDING DURING DEMOLITION OR ASSOCIATED OPERATIONS. COORDINATE SECURITY CLOSELY WITH THE OWNER.
4. THE CONTRACTOR SHALL SCHEDULE ALL WORK, INCLUDING INTERRUPTIONS OF THE EXISTING UTILITIES, WITH THE OWNER. PRIOR TO STARTING WORK CONTRACTOR SHALL NOTE THAT THE BUILDING WILL BE OCCUPIED AND IN USE DURING PERIODS OF TIME THAT WORK UNDER THIS CONTRACT IS BEING PERFORMED.
5. THE CONTRACTOR SHALL ARRANGE DEMOLITION TO AGREE WITH THE ACCOMPLISHMENT OF WORK UNDER THE VARIOUS PHASES AND IN COORDINATION WITH THE REQUIRED MODIFICATIONS.
6. PROTECT EXISTING SYSTEMS WITHIN THE LIMITS OF WORK WHICH ARE TO BE RETAINED. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED EQUIPMENT OR SYSTEMS DUE TO CONTRACTOR NEGLIGENCE TO ITS ORIGINAL CONDITION AND TO THE COMPLETE SATISFACTION OF THE OWNER, AND AT NO COST TO THE OWNER.
7. ALL FIXTURES AND EQUIPMENT INDICATED TO BE REMOVED SHALL HAVE ALL ASSOCIATED PIPING REMOVED BACK TO THE NEAREST BRANCH, MAIN, RISER OR STANDPIPE AND CAPPED IN A CONCEALED LOCATION.
8. "CONCEALED LOCATION" IS DEFINED AS BEING ABOVE FINISHED CEILING, BELOW FINISHED FLOOR OR WITHIN FINISHED WALL OR PARTITION. SEE ARCHITECTURAL PLANS FOR FINISH INFORMATION.
9. IN A CONCEALED LOCATION CAP/PLUG OR MAKE READY FOR CONNECTION WITH NEW ANY EXISTING PIPING TO REMAIN. IN AREAS THAT WILL HAVE NO CEILING CAP/PLUG OR MAKE READY FOR CONNECTION WITH NEW IN A LOCATION TO PROVIDE THE MAXIMUM POSSIBLE HEADROOM. UNDER NO CIRCUMSTANCE MAY AN EXISTING PIPE BE LEFT OPEN.
10. ALL FIXTURES, EQUIPMENT, PIPING AND ACCESSORIES WHICH HAVE BEEN REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT SITE ALL REMOVED SPRINKLERS, EQUIPMENT, PIPING AND ACCESSORIES AS SOON AS POSSIBLE. A CREDIT SHALL BE INCLUDED IN THE BID FOR THE SALVAGE VALUE OF ALL REMOVED ITEMS.
11. CAP ALL COPPER AND STEEL PIPING USING COMMERCIAL MANUFACTURED "CAPS". PLUG ALL CAST IRON PIPING USING COMMERCIAL MANUFACTURED "BLIND PLUGS". CAP/PLUG INSTALLATIONS SHALL BE IN ACCORDANCE WITH NEW WORK INSTALLATION PROCEDURES. CRIMPING OF TUBING IS NOT ACCEPTABLE.

CONSULTANTS:



ARCHITECT/ENGINEERS:



SMITHGROUPJJR, INC.
201 DEPOT STREET, 2ND FLOOR
ANN ARBOR, MICHIGAN 48104-3133
734.662.4457
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Drawing Title PLUMBING ABBREVIATIONS AND SYMBOLS

Approved Project Director

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Project Title
Administration Building
Renovation and
Cortège Parking

Location
Leavenworth National Cemetery/Leavenworth KS

Date
MARCH 25, 2013

Checked

Drawn

Project Number
893CM3014

Building Number

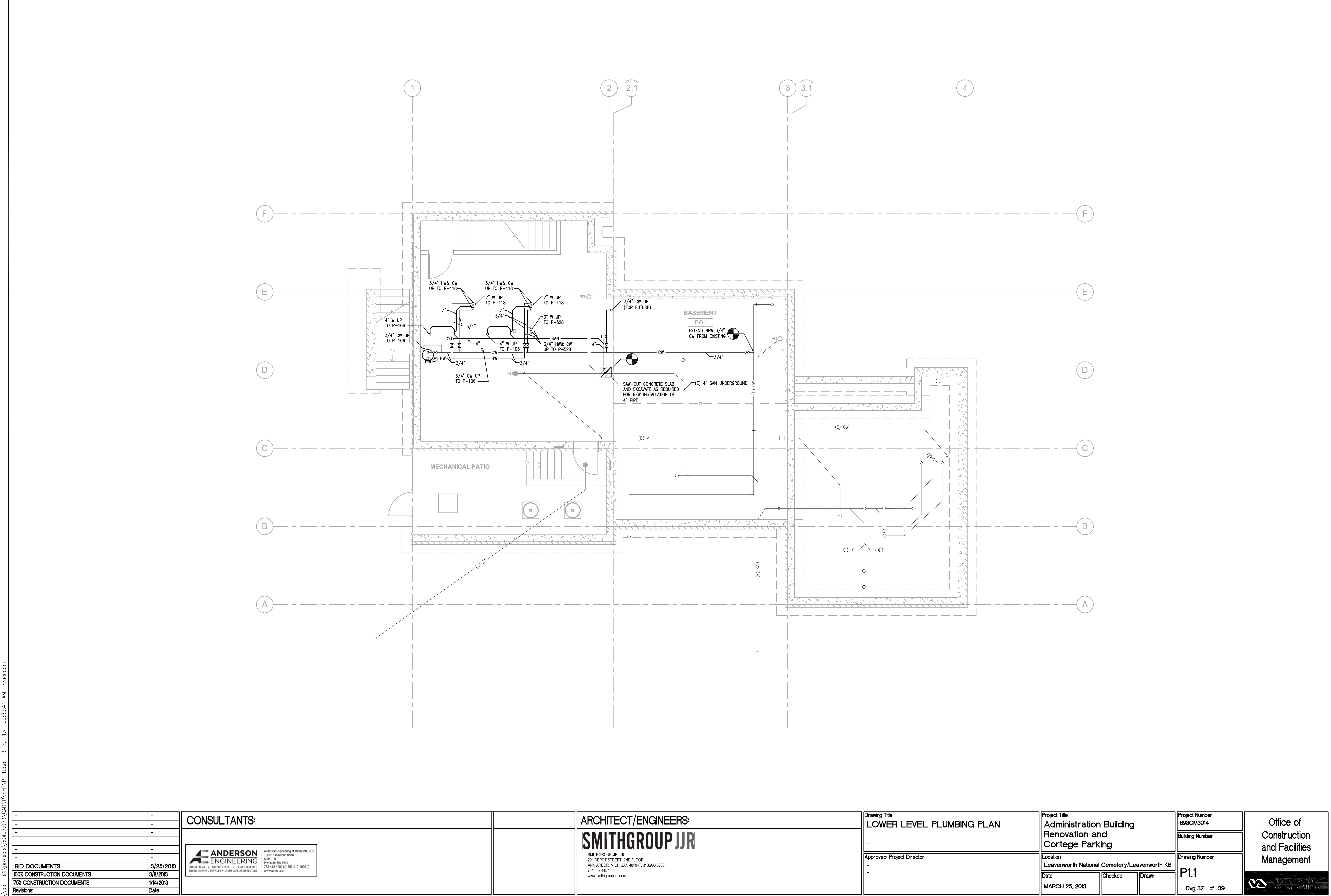
Drawing Number



P0.1

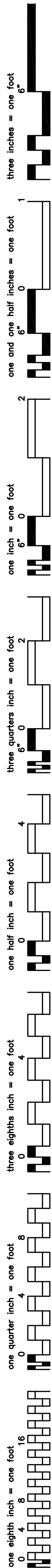
Dwg 36 of 39


Office of
Construction
and Facilities
Management








	-	CONSULTANTS:	<div><div>ANDERSON ENGINEERING</div><div>Anderson Engineering of Minnesota, LLC 13605 1st Avenue North Suite 100 Plymouth, MN 55441 763-412-8000 / 763-412-4000 (f) www.ae-eri.com</div></div>	ARCHITECT/ENGINEERS: <div> SMITHGROUP JJR, INC. 201 DETROIT STREET, 4TH FLOOR ANN ARBOR, MICHIGAN 48104T. 313.983.3600 734.662.4407 www.smithgroupjjr.com</div>	Drawing Title LOWER LEVEL PLUMBING PLAN	Project Title Administration Building Renovation and Cortage Parking	Project Number 893CM3014	Office of Construction and Facilities Management		
	-				Approved Project Director - -	Location Leavenworth National Cemetery/Leavenworth KS	Building Number			
	-						Drawing Number			
	-						P1.1			
	-						Date MARCH 25, 2013		Checked	Drawn
	-						Dwg. 37 of 39			
BID DOCUMENTS	3/25/2013									
100% CONSTRUCTION DOCUMENTS	3/8/2013									
75% CONSTRUCTION DOCUMENTS	1/4/2013									
Revisions	Date									






















































































































































































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