VA - FEE OFFICE

HOSPITAL RENOVATION AND UPGRADES

NOTE: DO NOT SCALE DRAWING

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FINAL SUBMISSION - FOR CONSTRUCTION

FULLY SPRINKLERED

Revisions:	Date

CONSULTANTS:

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title	FEE OFFICE COVER
Approved: Project Director	
Project Title	VA - FEE OFFICE
Location	CLARKSBURG, WV
Date	08-19-2011
Checked	
Drawn	
Project Number	1046
Building Number	
Drawing Number	GI001
	Dwg. 1 of 45

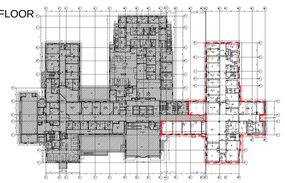
Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

VA - FEE OFFICE HOSPITAL RENOVATION AND UPGRADES

01
FIRST FLOOR



AREA OF ARCHITECTURAL WORK
ARCHITECTURAL
STRUCTURAL
CIVIL/SITE
MECHANICAL
PLUMBING
ELECTRICAL
FIRE PROTECTION
ENVIRONMENTAL
INTERIOR DESIGN
EQUIPMENT
SPECIALTIES

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general notes:

ALL NEW AND EXISTING OPENINGS THROUGH FIREWALLS AND FLOORS REQUIRE A PERMIT FROM THE VAMC AS PROVIDED FOR IN THE SPECIFICATIONS AND SHALL BE FIRE STOPPED BY THE END OF THE DAY.

ALL WORK SHALL BE SEPARATED FROM THE HOSPITAL ENVIRONMENT BY BARRIERS MEETING FIRE AND INFECTIOUS CONTROL REQUIREMENTS AS PROVIDED FOR IN THE SPECIFICATIONS.

THE CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS OF THE INFECTIOUS CONTROL REQUIREMENTS IN THE SPECIFICATIONS.

PERMITS ISSUED BY THE VAMC ARE REQUIRED FOR ALL HOT WORK, WALL PENETRATIONS AND ABOVE CEILING WORK.

ALL PERSONNEL ON SITE AUTHORIZED BY THE CONTRACTOR MUST WEAR AN IDENTIFICATION BADGE ISSUED BY THE VAMC OR OTHER APPROPRIATE FEDERAL GOVERNMENT AGENCY.

CONTRACTOR SHALL PROVIDE ALL REPORTS IN A TIMELY MANNER REQUIRED OF THE CONSTRUCTION WASTE MANAGEMENT PROVISIONS OF THE SPECIFICATIONS.

SITE CONDITIONS AND DESIGN DIMENSIONS SHALL BE REVIEWED AND APPROVED BY ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION. ARCHITECT TO REVIEW AND APPROVE AS-BUILT CONDITIONS BEFORE EACH STAGE OF CONSTRUCTION, IF APPLICABLE.

ALL WORK SHALL COMPLY WITH 2009 INTERNATIONAL IBC BUILDING CODE PROVISIONS AND SHALL PASS INSPECTIONS REQUIRED BY THE CONTRACTING OFFICER TECHNICAL REPRESENTATIVE.

materials, finishes, and miscellaneous notes:

FLASHING SHALL BE INSTALLED IN ALL PLACES REQUIRED TO PREVENT ENTRY OF WATER, WHETHER INDICATED SPECIFICALLY ON DRAWINGS OR NOT.

FLASHING MATERIAL SHALL BE SUBMITTED FOR APPROVAL.

ALL MATERIALS FROM FOUNDATION TO ROOF SHALL BE SPECIFIED BY GOVERMENT, IF UNSPECIFIED IN DRAWINGS AND/OR SPECIFICATIONS, CONTRACTORS WILL NOTIFY CONTRACTING OFFICER TECHNICAL REPRESENTATIVE AND THE CONTRACING OFFICE WILL PROVIDE DIRECTION IN REGARDS TO TYPE, COLOR, AND SIZE.

ALL FINISHES, INTERIOR AND EXTERIOR ALONG WITH DOORS, WINDOWS, FIXTURES, MILLWORK, EQUIPMENT,ETC. SHALL BE SELECTED BY GOVERNMENT.

PROVIDE BLOCKING AS REQUIRED AT ALL AREAS DESIGNATED TO RECEIVE MILLWORK OR REQUIRE ADDITIONAL SUPPORT.

PROVIDE MOISTURE RESISTANT (MR) GYPSUM BOARD IN ALL TOILET ROOMS & JANITORS CLOSET WALLS.

SEAL ALL PENETRATIONS NEW AND EXISTING BY THE END OF EACH WORK DAY FOUND OR CREATED IN SOUND, SMOKE AND FIRE RATED WALLS ACCORDING TO UL STANDARDS; MEETING TRADE QUALITY STANDARDS OF PRACTICE AS WELL.

fire and safety project review:

OCCUPANCY: HEALTH CARE
CONSTRUCTION TYPE: 2B
IBC CLASSIFICATION: INSTITUTIONAL, I-2

VICINITY MAP

PROJECT CONTACTS

OWNER:
US DEPARTMENT OF VETERAN AFFAIRS
LOUIS A JOHNSON VA HEALTHCARE SYSTEM
1 MED CENTER DRIVE
CLARKSBURG, WV 26301
P:304.623.3461

ARCHITECT:
SHELLEY MISSIMER, PRESIDENT
LAKESIDE ARCHITECTURE INC.
(D.B.A. LAI INC.)
RT 3 BOX 383 E
FAIRMONT, WV 26554
MD OFFICE: 301.387.3380
MD FAX: 301.387.3382
WV OFFICE: 304.288.3941
smissimer@lai-arc.com; rlindsey@lai-arc.com

STRUCTURAL ENGINEER:
JIM HOSKEN, PRES., AND CEO
SPECS ENGINEERING, INC.
105 S CENTER STREET # 100
CUMBERLAND, MD 21502-3022
P:301.777.2510
F:301.777.8419

M.E.P. ENGINEER:
GEORGE DeFREHN, PRESIDENT
EAST HILLS ENGINEERING ASSOCIATES
541 MAIN STREET
WINDBER, PA 15963
P:814.467.6877
F:814.467.6529

CIVIL ENGINEER:
N/A

ENVIRONMENTAL CONSUL.:
MARK BOGGS, PRES., AND CEO
BOGGS ENVIRONMENTAL CONSULTANTS, INC.
363 HIGH STREET
MORGANTOWN, WV 26505
P:304.292.1095
F:304.292.2320

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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: FEE OFFICE GENERAL INFORMATION	Project Title: VA - FEE OFFICE	Project Number: 1046	Office of Construction and Facilities Management
Approved: Project Director	Location: CLARKSBURG, WV	Building Number	
	Date: 08-19-2011 / Checked / Drawn	Drawing Number: GI002	Department of Veterans Affairs
		Dwg. 2 of 45	

VA FORM 08-6231

ARCHITECTURAL SYMBOLS

- CENTER LINE
- ELEVATION INDICATOR
- CENTER LINE INDICATOR
- CONTRACT LIMIT LINE
- DEMOLITION LINE
- EXISTING TO REMAIN LINE
- FEATURES ABOVE LINE INDICATOR
- FIRE RESISTIVE RATED LINE, 1 HOUR
- FIRE RESISTIVE RATED LINE, 2 HOUR
- FIRE RESISTIVE RATED LINE, 3 HOUR
- FIRE RESISTIVE RATED LINE, 4 HOUR
- FIRE-RATED, SMOKE BARRIER LINE, 1 HOUR
- FIRE-RATED, SMOKE BARRIER LINE, 2 HOUR
- FIRE-RATED, SMOKE BARRIER LINE, 3 HOUR
- FIRE-RATED, SMOKE BARRIER LINE, 4 HOUR
- HIDDEN FEATURES LINE
- NEW LINE
- PROPERTY LINE
- SMOKE BARRIER LINE
- BREAK, ROUND (USER DEFINES SIZE)
- BREAK, STRAIGHT (SEE SECTION INDICATORS, BUILDING, WITH BREAK STANDARDS)
- DETAIL INDICATOR
- DETAIL INDICATOR
- DETAIL INDICATOR FOR SMALL CONDITIONS
- DIMENSION LINE
- DOOR OPENING/BORROWED LIGHT IDENTIFIER
- DRAWING BLOCK TITLE, TYPICAL
- ELEVATION INDICATOR, EXTERIOR
- ELEVATION INDICATOR, INTERIOR, MULTIPLE VIEW
- ELEVATION INDICATOR, INTERIOR, SINGLE VIEW
- BUILDING SECTION INDICATOR
- DETAIL INDICATOR
- FURNITURE, FIXTURE, & EQUIPMENT INDICATOR
- GRAPHIC SCALE, 1/8"=1'-0"
- ROOM NAME AND NUMBER
- COLUMN GRID
- KEYNOTE
- WALL OR PARTITION TYPE
- FIRE EXTINGUISHER CABINET
- CORNER GUARD
- NORTH ARROW
- V V ITEM – VA SUPPLIED & INSTALLED
- VC ITEM – VA SUPPLIED & CONTRACTOR INSTALLED
- CC ITEM – CONTRACTOR SUPPLIED & INSTALLED

MATERIALS LEGEND

- CONCRETE
- EARTH
- BASE COURSE
- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- NEW CONSTRUCTION
- RIGID INSULATION
- BATT INSULATION

ARCHITECTURAL ABBREVIATIONS

NTS 1

1 : 1

A.F.F.	above finished floor
A/C	air conditioning
AB	anchor bolt
ABV	above
ACC	access
ACT	acoustical tile
AD	area drain
ADJ	adjacent
AGG	aggregate
ALT	alternate
ALUM	aluminum
AP	access panel
APPROX	approximate
ARCH	architect / architectural
ASPH	asphalt
B.M.	bench mark
B.N.	boundary nail
BLDG	building
BLK	block
BLKG	blocking
BM	beam
BN	bull nose
BO	bottom of
BP	bent plate
BPL	bearing plate
BRG	bearing
BTM	bottom
BUR	built up roofing
CA	construction administration
CAB	cabinet
CB	catch basin
CEM	cement
CER	ceramic
CI	cast iron
CIR	circle
CJ	control joint
CL	center line
CLG	ceiling
CLR	clear / clearance
CM	construction manager
CMT	ceramic mosaic tile
CMU	concrete masonry unit
CNTR	counter
COL	column
CONC	concrete
CONSTR	construction
CONT	continue or continuous
CONTR	contract / contractor
CPT	carpet / carpeted
CRS	course
CT	ceramic tile
CTR	center
D.F.	douglas fir
DEM	demolish / demolition
DEP	depressed
DF	drinking fountain
DIAG	diagonal
DIAM	diameter
DIM	dimension
DL	dead load
DN	down
DO	door opening
DPR	dispenser
DR	door
DS	downspout
DTL	detail
DW	dish washer
DWG	drawing
E	east
EA	each
EB	expansion bolt
EIFS	exterior insulation & finish system
EJ	expansion joint
EL	elevation
ELEC	electric / electrical
ELEV	elevator
ELEV	elevator
EMP	employee
EN	end nail
ENCL	enclosure
EP	electrical panelboard
EQ	equal
EQUIP	equipment
EWC	electric water cooler
EXH	exhaust
EXIST	existing
EXP	exposed
EXPSN	expansion
EXT	exterior
F.R.	fire rated / fire rating
FD	floor drain
FDN	foundation
FE	fire extinguisher
FEC	fire extinguisher closet
FF	finish floor
FIN	finish / finished
FLR	floor
FOC	face of concrete
FOM	face of masonry
FOS	face of studs
FPHB	frost proof hose bibb
FR	frame / framed / framing
FS	floor sink
FSE	food service equipment
FTG	footing
FUR	furred, furring
FVC	fire valve cabinet
GA	gage / gauge
GALV	galvanized
GC	general contract / general contractor
GD	grade / grading
GEN	general
GFRC	glass fiber reinforced concrete
GFRG	glass fiver reinforced gypsum
GI	galvanized iron
GL	glass, glazing
GS	gravel stop
GYP.BD.	gypsum board
H.C.	hollow core
H.P.	high point
HB	hose bibb
HC	handicap
HDR	header
HDW	hardware
HM	hollow metal
HORZ	horizontal
HR	hour
HT	height
HTG	heating
HVAC	heating / ventilating / air conditioning
HWD	hardwood
HYD	hydrant
ID	inside diameter
INCL	include / included / including
INFO	information
INSUL	insulation / insulating
INT	interior
INT	interior
INV	invert
JAN	janitor
JST	joist
JST BRG	joist bearing
JT	joint
KPL	kickplate
LAD	ladder
LAM	laminate / laminated
LAV	lavatory
LB	lag bolt
LG	long
LL	live load
LLH	long leg horizontal
LLV	long leg vertical
LOC	location
LP	low point
LT	light
LTL	lintel
LVR	louver
MAS	masonry
MAT	material / materials
MAX	maximum
MB	machine bolt
MECH	mechanic / mechanical
MFR	manufacture / manufactured /manufacturer
MH	manhole
MIC	microwave
MIN	minimum
MISC	miscellaneous
MO	masonry opening
MR	moisture resistant
MTL	metal
N	north
NAT	natural
NIC	not in contract
NO	number
NTS	not to scale
O.D.	outside diameter
OA	overall
OC	on center / on centers
OD	outside dimension
OH	overhead
OJ	open web joist / open web joists
OPG	opening
OPH	opposite hand
OPP	opposite
P.L.	property line
P.S.	parapet step
P/L	plastic laminate
PAR	parallel
PB	panic bar
PC	pipe column
PCST	pre-cast
PED	pedestal
PERF	perforate / perforated
PFB	prefabricate / prefabricated
PG	plate glass
PL	plate
PLAM	plastic laminate
PLAS	plaster
PLUMB	plumber / plumbing
PLYWD	plywood
PNL	panel
POL	polished
PR	pair
PRE.FIN.	prefinished
PROJ	projected / projection
PSF	pounds per square foot
PSI	pounds per square inch
PT	pressure treated
PTD	painted
PTN	partition
PVMT	pavement
QT	quarry tile
RAD	radius
RCP	reinforced concrete pipe
RD	roof drain
REF	reference
REFR	refrigerator
REG	register
REINF	reinforce / reinforcement / reinforced
REQ	required
RES	resilient
RET	retaining
RFL	reflect / reflected / reflective / reflector
RM	room
RO	rough opening
ROD	roof overflow drain
RTU	roof top unit
S	south
S/S	slop sink / service sink
SC	solid core
SCH	schedule
SD	storm drain
SEC	section
SF	square feet
SHT	sheet
SHTH	sheathing
SIM	similar
SPEC	specification / specifications
SPL	special
SQ	square
SS	stainless steel
ST	suite
STA	station
STD	standard
STL	steel
STRUCT	structure / structural
SUSP	suspended
SYM	symmetry / symmetrical
SYS	system
T&G	tongue & groove
TBD	to be determined
TEL	telephone
TERR	terrazzo
TG	tempered glass
THRESH	threshold
TKS	tack strip
TO	top of
TS	top of sheathing
TSL	top of slab
TST	top of steel
TW	top of wall
TYP	typical
UC	undercut
UNO	unless noted otherwise
UR	urinal
VB	vapor barrier
VB	vinyl base
VCT	vinyl composite tile
VERT	vertical
VIF	verify in field
VJ	v-joint / v-jointed
W	west
W.P.	work point
W/	with
WC	water closet
WD	wood
WG	wired glass
WH	wall hung
WIN	window
WM	wire mesh
WO	without
WP	waterproofing
WR	water resistant
WSCT	wainscot
WT	weight
WWF	welded wire fabric

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CONSULTANTS:

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-0657 FAX (814) 467-6529

LAI incorporated architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: FEE OFFICE ABBR. & LEGEND

Approved: Project Director

Project Title: VA - FEE OFFICE

Location: CLARKSBURG, WV

Date: 08-19-2011

Checked

Drawn

Project Number: 1046

Building Number

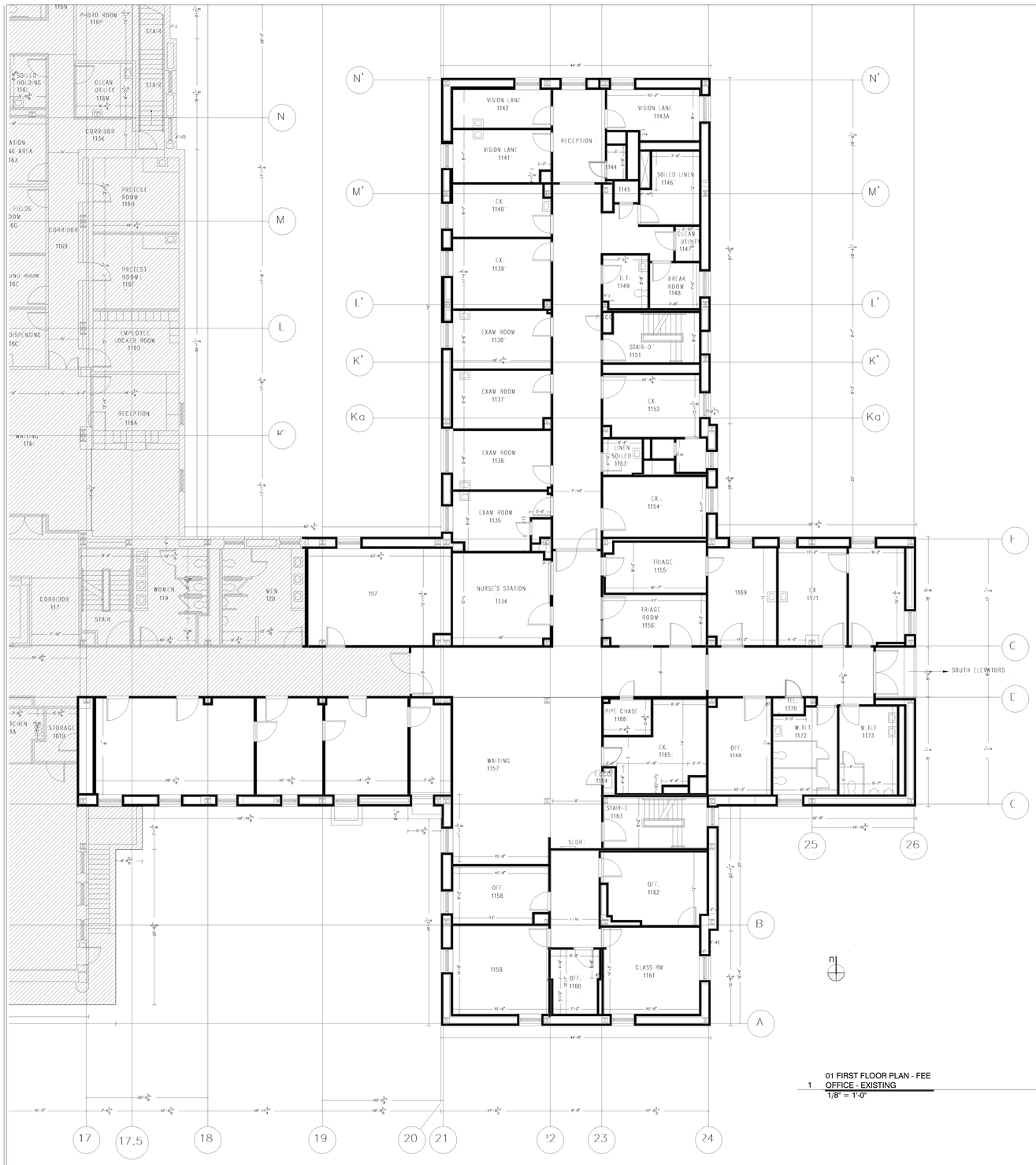
Drawing Number: GI003

Dwg. 3 of 45

Office of Construction and Facilities Management

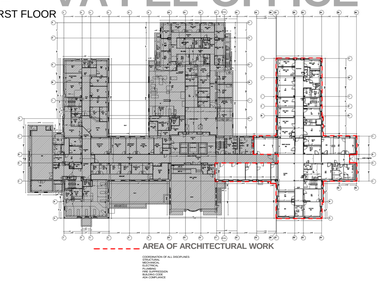
Department of Veterans Affairs

VA FORM 08-6231



01 FIRST FLOOR PLAN - FEE OFFICE - EXISTING
1 1/8" = 1'-0"

01 VA FEE OFFICE
FIRST FLOOR



2 01 FIRST FLOOR KEY Detail
1" = 60'-0"

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WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: FEE OFFICE
EXISTING FIRST FLOOR / EXISTING RCP

Approved: Project Director

Project Title: VA - FEE OFFICE

Location: CLARKSBURG, WV

Date: 08-19-2011

Checked

Drawn

Project Number: 1046

Building Number

Drawing Number: AD100

Dwg. 4 of 45

Office of Construction and Facilities Management

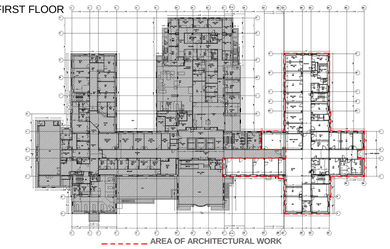
Department of Veterans Affairs

VA FORM 08-6231

1 01 FIRST FLOOR - FEE OFFICE - DEMOLITION PLAN
1/8" = 1'-0"

VA FEE OFFICE

01
FIRST FLOOR



2 01 FIRST FLOOR KEY Detail (2)
1" = 60'-0"

SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.

REMOVE EXISTING SIGNAGE, PLAQUES, PICTURES, DIRECTORIES, TACK BOARDS, TOILET ACCESSORIES, X-RAY FILM VIEWERS, WINDOW TREATMENTS, AND RELATED HARDWARE. REVIEW SALVAGABILITY WITH OWNER.

REMOVE EXISTING MASONRY COVE BASE WITHIN PROJECT AREA. PATCH AND REPAIR FOR INSTALLATION OF FINISHES. REVIEW EXISTING FOR EXTENT OF DEMOLITION WITH APPROVAL FROM ARCHITECT BEFORE DEMOLITION CAN PROCEED.

APPROX. 50% OF EXISTING WALLS ARE STRUCTURAL CLAY FACING TILE AND EXTEND TO EXISTING CONCRETE. FILL/PATCH FOLLOWING REMOVAL OF WALLS.

WHERE FINISH FLOORING IS REMOVED, REMOVE EXISTING BASE. CLEAN FLOORS AND WALLS OF MISC. ADHESIVE, RESIDUES ETC. GRIND FLOOR SMOOTH USING "HEPA FILTERING EQUIPMENT.

WHERE CEILINGS ARE REMOVED, REMOVE EXISTING CEILING MOUNTED ITEMS INCLUDING, BUT NOT LIMITED TO CURTAIN TRACK, I.V. TRACK, GRILLES, DIFFUSERS, SPEAKERS, SMOKE DETECTORS, SPRINKLERS, PATIENT LIFTS, ETC. SEE MEP DRAWINGS FOR RELOCATED ITEMS.

ALL EXISTING AND NEW PENETRATIONS CREATED DURING DEMOLITION AND CONSTRUCTION "MUST" BE FIRE STOPED BY THE END OF THE WORK DAY.

KEYED DEMOLITION NOTES

PLEASE NOTE: ALL WALLS THAT REMAIN, MATCH WITH NEW PAINT/FINISHES
N/A

1. REMOVE EXISTING DOOR AND FRAME AND PORTION OF EXISTING PARTITION AS REQUIRED FOR INSTALLATION OF NEW DOOR AND FRAME.
2. REMOVE EXISTING WALLS AND TRIM.
3. REMOVE EXISTING WALL/FLOOR TILE AND SETTING BED.
4. PATCH AND REPAIR WHERE WALLS ARE REMOVED.
5. REMOVE WALL GUARDS AND STORE FOR INSTALLATION AT LATER DATE
6. DEMO EXISTING TO ALLOW FOR NEW HVAC DUCTWORK SEE SHEET MH-401 (COORDINATE WITH MEP DRAWINGS)

NOTE:
1.WHERE EXISTING FRAME IS BEING REUSED MATCH EXISTING DOOR SIZE.
2.THIS WALL MUST BE 100% AIR TIGHT OR "SMOKE TIGHT".
3.THE WALL MUST BE OF SUFFICIENT STRENGTH AND RIGIDITY TO NOT BREAK ANY FIRE TAPED OR OTHERWISE SEALED JOINTS BY NORMAL USE OF THE DOOR FOR THE PERIOD OF CONSTRUCTION.

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WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title
FEE OFFICE
DEMOLITION PLAN - FEE OFFICE

Approved: Project Director

Project Title
VA - FEE OFFICE

Location
CLARKSBURG, WV

Date
08-19-2011

Checked

Drawn

Project Number
1046

Building Number

Drawing Number
AD101
Dwg. 5 of 45

Office of Construction and Facilities Management

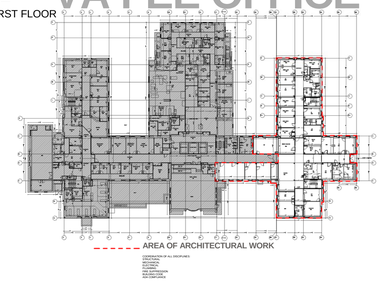
Department of Veterans Affairs

VA FORM 08-6231

1 01 FIRST FLOOR PLAN - FEE OFFICE - NEW
1/8" = 1'-0"

01 VA FEE OFFICE

FIRST FLOOR



2 01 FIRST FLOOR KEY Detail (3)
1" = 60'-0"

GENERAL NOTES:

ALL EXISTING AND NEW PENETRATIONS CREATED DURING DEMOLITION AND CONSTRUCTION "MUST" BE FIRE STOPPED BY THE END OF THE WORK DAY.

PROVIDE SMOKE SEALANTS AROUND ALL PENENTRATIONS IN MECHANICAL ROOM.

CONTRACTOR TO PROVIDE VAMC APPROVED RENOVATED AREA SIGNAGE TO MATCH FIRST FLOOR SEE FLOOR PLAN.

REPAIR DEMOLISHED SLABS TO LIKE NEW CONDITIONS

PROVIDE BLOCKING BEHIND ALL ALL AREAS REQUIRING MARKER BOARDS, FILM BOXES, ETC.

FINISHSCHEDULE

NOTE:
1. SEE PLANS - COORDINATE
2. PAINT COLOR AND FINISH (NEW): **SW Latte**
3. PAINT COLOR (TRIM): **SW Kilim Beige**
4. V.C.T.: **Mannington 123 Wheat**
5: CARPET: **Shaw Mimic Mezzotint modular tile**
6: HANDRAILS: **Acrovyn Cappuccino with cherry inset (IF NEEDED)**

PLANLEGEND OF WORK:

- ARCHITECTURAL & MEP
- MEP

ALTERNATES:

- HALLWAY ALTERNATE
- WAITING AREA ALTERNATE

NOTE: DO NOT SCALE DRAWING

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FINAL SUBMISSION - FOR CONSTRUCTION

FULLY SPRINKLERED

Revisions:	Date

CONSULTANTS:

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

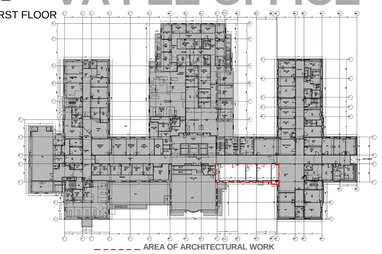
LAI incorporated architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: FEE OFFICE FIRST FLOOR PLAN	Project Title: VA - FEE OFFICE	Project Number: 1046	Office of Construction and Facilities Management
Approved: Project Director	Location: CLARKSBURG, WV	Building Number	
	Date: 08-19-2011 / Checked / Drawn	Drawing Number: AS101	Department of Veterans Affairs
		Dwg. 6 of 45	

VA FORM 08-6231

VA FEE OFFICE

01
FIRST FLOOR



2 01 FIRST FLOOR KEY Detail (ARCH)
1" = 60'-0"

FINISHSCHEDULE

NOTE:
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2. PAINT COLOR AND FINISH (NEW): **SW Latte**
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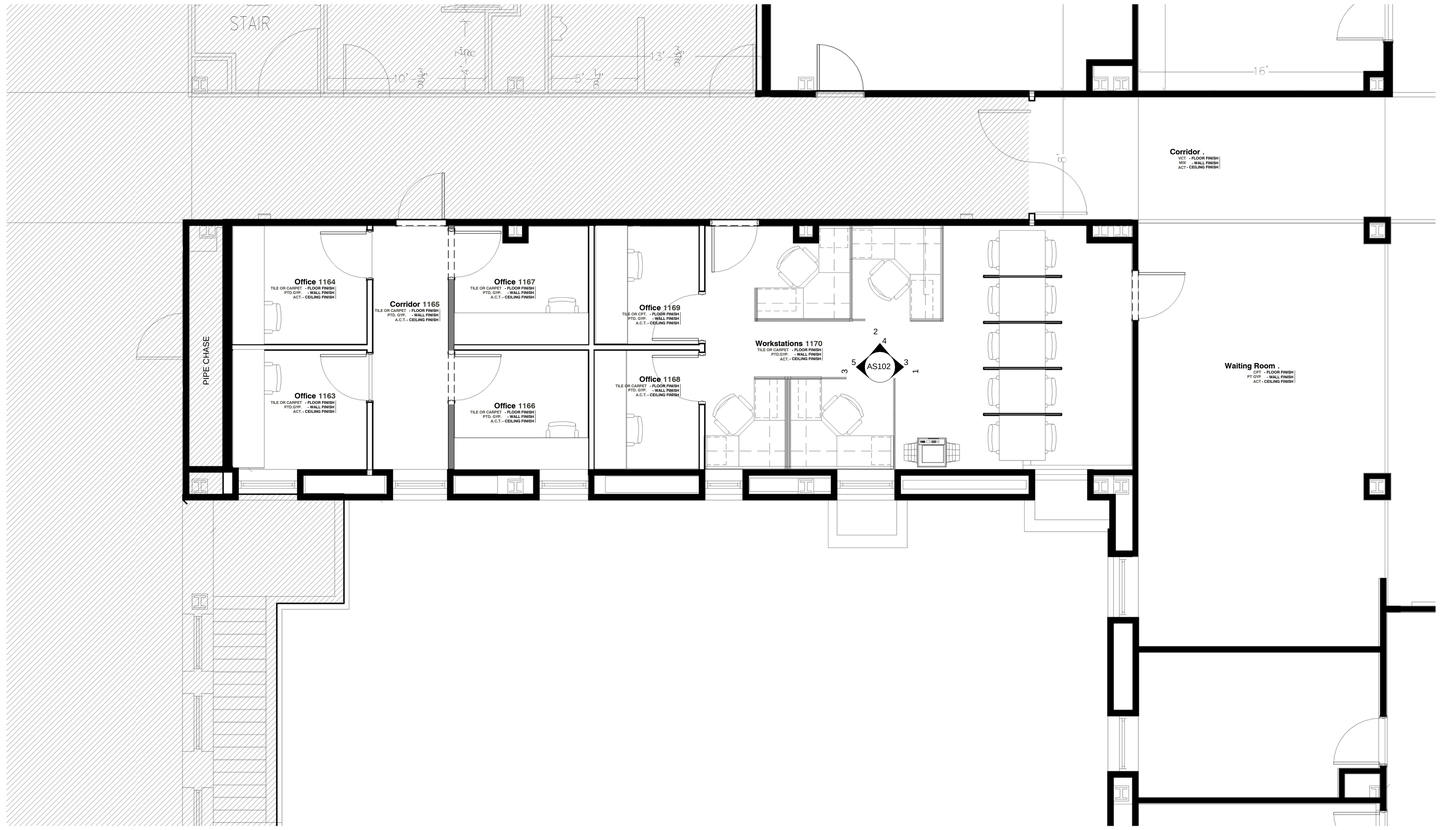
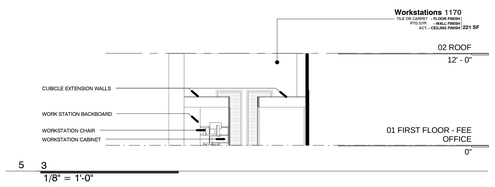
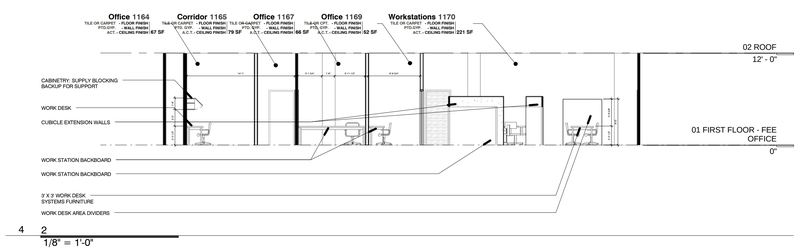
ALL FURNITURE -NOT IN CONTRACT-



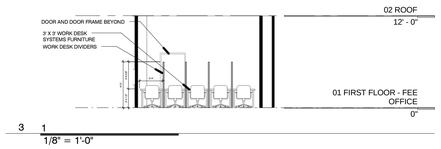
1 01 FIRST FLOOR PLAN - FEE OFFICE - FURNITURE PLAN
1/4" = 1'-0"



5 3
1/8" = 1'-0"



4 2
1/8" = 1'-0"



3 1
1/8" = 1'-0"

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ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-0857 FAX (814) 467-6529

LAI incorporated architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title	FEE OFFICE FIRST FLOOR - FURNITURE
Approved: Project Director	
Project Title	VA - FEE OFFICE
Location	CLARKSBURG, WV
Date	08-19-2011
Checked	
Drawn	
Project Number	1046
Building Number	
Drawing Number	AS102
Dwg. 7 of 45	

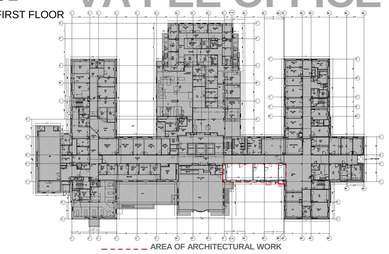
Office of Construction and Facilities Management

Department of Veterans Affairs

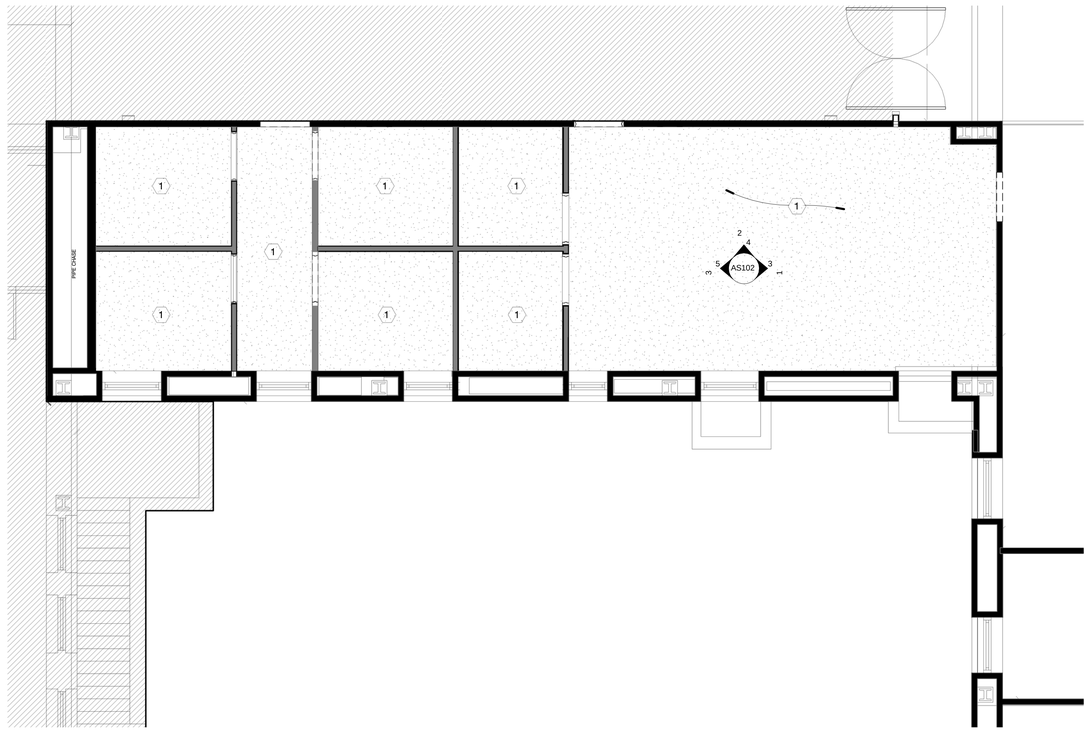
VA FORM 08-6231

01
FIRST FLOOR

VA FEE OFFICE



2 01 FIRST FLOOR KEY Detail (ARCH)(2)
1" = 60'-0"



3 01 FIRST FLOOR PLAN - FEE OFFICE - CARPETING PLAN
1/4" = 1'-0"

FINISHSCHEDULE

NOTE:
1. SEE PLANS - COORDINATE
2. PAINT COLOR AND FINISH (NEW): **SW Latte**
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FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions:	Date

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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title
FEE OFFICE
FIRST FLOOR PLAN - CARPET OPTIONS

Approved: Project Director

Project Title
VA - FEE OFFICE

Location
CLARKSBURG, WV

Date
08-19-2011

Checked

Drawn

Project Number
1046

Building Number

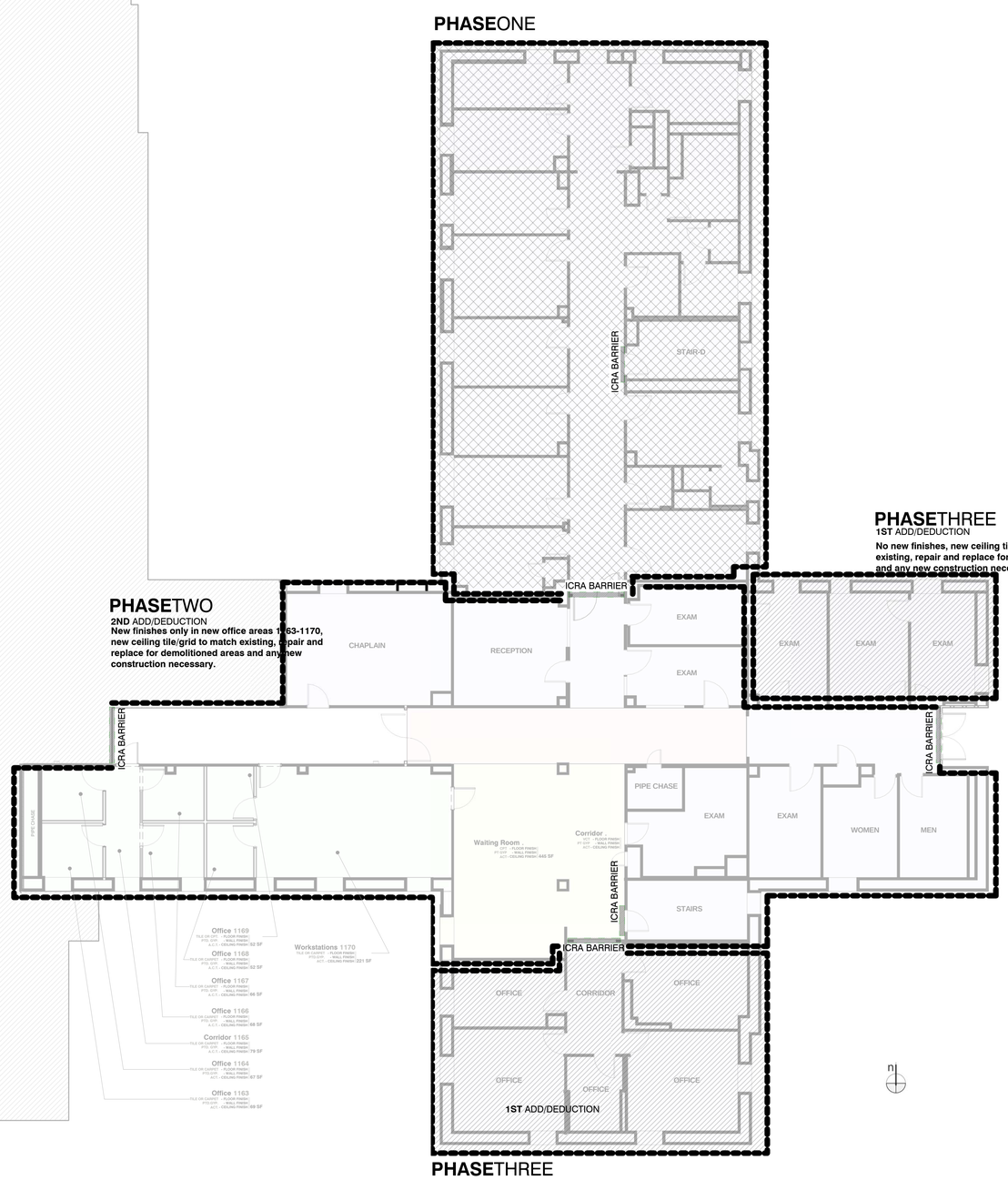
Drawing Number
AS103
Dwg. 8 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

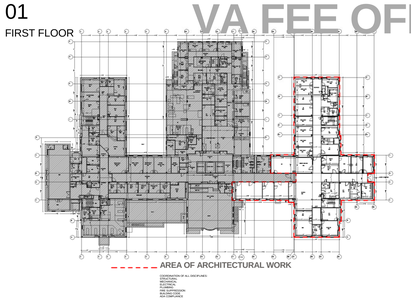
NO NEW FINISHES OTHER THAN CEILING TILE AND GRID



1 01 FIRST FLOOR PLAN - FEE OFFICE - PHASES LAYOUT
1/8" = 1'-0"

VA FEE OFFICE

01
FIRST FLOOR



2 01 FIRST FLOOR KEY Detail (4)
1" = 60'-0"

ICRA/PHASING PLAN GENERAL NOTES

1. G.C. shall attend the "Notice to Proceed" meeting ready to submit the following: Schedule of Values based on the AIA G702/G703 invoicing format, Cost loaded project schedule, OSHA 30 Certification for Supervision, Safety and Infection Control Program.
2. G.C. is to follow VA/ICRA regulation in performing all work.
3. G.C. is to coordinate with the VA for Off-hours access to the floors above and below the work area needed for mechanical tie-ins. Temporary ICRA barriers are to be installed around all work areas prior to construction.
4. Items delineated under the phase notes are not all inclusive of work to be performed. G.C. is responsible for performing all work shown in the contract documents in the work area designated.
5. G.C. is to inform and coordinated with the VA and architect/engineer of any conflicts that may arise in construction phases.
6. Follow all fire safety codes during construction.
7. Refer to the door schedule for ICRA barrier HM frame/door/hardware set types.
8. Paint all hard wall ICRA barriers white and maintain clean appearance.
9. The G.C. must provide a two week notice of any work to be performed off ours or any deliveries, stairwell closures and shutdown schedules. Contractor must be flexible on daily scheduling due to surgeries, medical procedures, etc. and may be required to stop tasks to accommodate these issues. Some tasks may have to take place during off hours or weekends.
10. Personal Requirements

A. Clothing shall be free of loose soil and debris upon exiting the construction zone. Long pants and sleeved shirts will be worn in construction areas.

B. Personnel entering sterile/invasive procedure areas will be provided with a disposable jump suit, head covering, and shoe covering, which must be removed prior to leaving the area.

1. Tools and equipment must be damp-wiped prior to entry and exit from the sterile and invasive procedure areas.
2. Tools and equipment soiled with blood and body fluids will be cleaned with an approved germicide (E.G. Gavicide).
3. Provide Coordination Overlay Drawings for each discipline showing locations and fit below deck and above ceiling height.

ICRA TRAFFIC CONTROL NOTES

1. Designated entry and exit procedures will be defined (in conjunction) with any necessary interim life safety measures) for each construction project where applicable.
2. All egress pathways will be free of debris.
3. Unauthorized personnel will not be allowed to enter the construction zone. All personnel must be issues an ID badge prior to entering the site.
4. Only designated elevators will be used for construction activities during scheduled times.
5. Contractor to provide construction doors with push button cipher locks with core slots to match existing VA facility system. Contractor will use combination system to enter construction zones and VA will provide core and use their keys to enter the space. All construction area entrances will be fitted with lockable fire rated doors and will remain locked from entry into the construction zone. Panic bars to stairwells must be maintained. Lock cores must be compatible with the VA core system.

ICRA CONSTRUCTION NOTES

1. Isolate HVAC system in area where work is being done to prevent contamination of Duct. See specifications for air quality requirements.
2. Fire sprinkler protection must remain active at all times. Sprinkler head protection cages must be used during construction.
3. Complete all critical barriers to seal area from non-work area before construction begins. Barrier walls must meet or exceed UL465.
4. Maintain negative air pressure within work site utilizing "HEPA" equipped air filtrations units. Rated at 95% capture rate of 03 microns.
5. Seal all existing holes, pipes, conduits and punctures with fire rated caulking or materials, per code requirements.
6. Cleaning

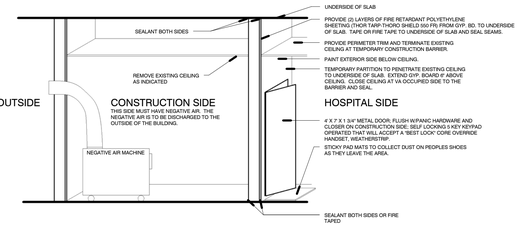
A. The construction zone and adjacent entry areas shall be maintained in a clean and sanitary manner by the contractors and will be swept and wet mopped daily or more frequently as needed to minimize dust generation. All vacuum cleaners and shop vacuums must be "HEPA" Filtered units.

B. Environmental Management Services will be responsible for the routine cleaning of adjacent areas including stairwells. Cleaning of hallways for materials delivery will be supported by Environmental Management Services. The contractor will be responsible for coordinating this cleanup immediately upon identification of a need.

1. Construct an Anteroom and require all personnel to pass through this room so they can be vacuumed using a "HEPA" vacuum cleaner before leaving the worksite or they can wear cloth paper coveralls that are removed each time they leave the work site.
2. Install contact mats/walk-off mats within the anteroom just outside the construction zone. The mat must be large enough to cover the entire threshold of the exit.
3. Contain construction waste before transport through corridors and services in tightly covered containers. Clean and sanitize exposed container parts prior to leaving anteroom or construction zone.
1. Smoke detectors must be sealed during construction activities, and operational during off hours. Pull station must be active at all times.
2. When using demolition chutes, the cut opening must be closed when not in use. The opening shall have fall protection safety rails and tie off as necessary. The chute an damper shall be sprayed with fine mist water as necessary. The dumpster shall be fully covered at all times, except for maintenance and manual fill.
3. Control, collection and disposal must be provided for any drain liquid or sludge encountered when demolishing plumbing. All issues while working on a specific line, such a s clogged lines or other damage that extend outside the construction work zone are the responsibility of the contractor to return to a fully functional system.

UPON COMPLETION OF THE PROJECT

1. Do not remove the barriers from work area until completed project is inspected by the COTR and authorized.
2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. Utilize zip walls to remove hard barriers.
3. Vacuum work area with disinfectant.
4. Wet mop with disinfectant.
5. Remove isolation of HVA system in areas where work is being performed.
6. Water supply lines will be flushed before placing newly renovated or constructed areas into service. COTR, infection control, safety office and plumbing shop will be notified prior to the scheduled date for the flushing procedure.



3 INTERIM LIFE SAFTEY MEASURERS
1/2" = 1'-0"

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FINAL SUBMISSION - FOR CONSTRUCTION

FULLY SPRINKLERED

Revisions:	Date

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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: FEE OFFICE PROPOSED PHASING PLAN

Approved: Project Director

Project Title: VA - FEE OFFICE

Location: CLARKSBURG, WV

Date: 08-19-2011 | Checked | Drawn

Project Number: 1046

Building Number

Drawing Number: AS104

Dwg. 9 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

DOOR SCHEDULE

Mark	Description	Style	Finish	Fire Rating	Frame	Frame Finish	Hardware	Head	Width	Height	Thickness	Type Comments
101	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 6	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
102	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 2	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
103	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 2	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
104	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 3	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
105	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 3	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
106	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 3	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
107	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 3	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
108	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 3	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
109	INTERIOR DOOR, 1B	SINGLE-FLUSH	SOLID WOOD - CLEAR FINISH		METAL, F1	PAINTED	SET 3	PTD.METAL	3' - 0"	7' - 0"	1 3/4"	
111	INTERIOR DOOR, 1A	DOUBLE FLUSH	SOLID WOOD - CLEAR FINISH	2HR	METAL, F1	PAINTED	SET 1	PTD.METAL	6' - 8"	7' - 0"	1 3/4"	ALIGNED WITH SMOKE COMPARTMENT BOUNDARY - SUPPLY W/ SWEEPS AND EQUIP WITH CLOSERS
112	INTERIOR DOOR, 1A	DOUBLE FLUSH	SOLID WOOD - CLEAR FINISH	1HR	METAL, G	PAINTED	SET 1	PTD.METAL	7' - 4"	6' - 6 17/32"	1 3/4"	SUPPLY W/ SWEEPS AND EQUIP WITH CLOSERS

Grand total: 11

DOORSCHEDULE

NOTE:
1. SEE PLANS - COORDINATE
2. SIZES AND FINISHES SUBJECT TO CHANGE
3. ALL LOCKS TO RECEIVE "BEST LOCK" CORES
4. ALL LOCKS WITH UNPINNED CORES TO BE DELIVERED TO THE COR
5. HARDWARE:

NOTES: HARDWARE:

MISCELLANEOUS HARDWARE
A.Cylinders for Various Partitions and Doors: Key cylinders same as entrance doors of area in which partitions and door occur, except as otherwise specified. Provide cylinders to operate locking devices where specified for following partitions and doors:
1.Folding doors and partitions.
2.Wicket door (in rollup door assemblies).
3.Slideup doors.
4.Swingup doors.
5.Firerated access doorsEngineer's key set.
6.Doors from corridor to electromagnetic shielded room.
7.Day gate on vault door.

B.Mutes: Conform to ANSI A156.16. Provide door mutes or door silencers Type L03011 or L03021, depending on frame material, of white or light gray color, on each steel or wood door frame, except at fire-rated frames, leadlined frames and frames for sound resistant, lightproof and electromagnetically shielded doors. Furnish 3 mutes for single doors and 2 mutes for each pair of doors, except double-acting doors. Provide 4 mutes or silencers for frames for each Dutch type door. Provide 2 mutes for each edge of sliding door which would contact door frame.

FINISHES
A.Exposed surfaces of hardware shall have ANSI A156.18, finishes as specified below. Finishes on all hinges, pivots, closers, thresholds, etc., shall be as specified below under "Miscellaneous Finishes." For field painting (final coat) of ferrous hardware, see Section 09 91 00, PAINTING.

B.626 or 630: All surfaces on exterior and interior of buildings, except where other finishes are specified.

C.Miscellaneous Finishes:
1.Hinges --interior doors: 652 or 630.
2.Pivots: Match door trim.
3.Door Closers: Factory applied paint finish. Dull or Satin Aluminum color.
D.Special Finish: Exposed surfaces of hardware for dark bronze anodized aluminum doors shall have oxidized oil rubbed bronze finish (dark bronze) finish on door closers shall closely match doors.
E.Anti-microbial Coating: All hand-operated hardware (levers, pulls, push bars, push plates, paddles, and panic bars) shall be provided with an anti-microbial/anti-fungal coating that has passed ASTM E2180 tests. Coating to consist of ionic silver (Ag+). Silver ions surround bacterial cells, inhibiting growth of bacteria, mold, and mildew by blockading food and respiration supplies.

BASE METALS
A. Apply specified U.S. Standard finishes on different base metals as following:

Finish	Base Metal
652	Steel
626	Brass or bronze
630	Stainless steel

INSTALLATION
A.Closer devices, including those with holdopen features, shall be equipped and mounted to provide maximum door opening permitted by building construction or equipment. Closers shall be mounted on side of door inside rooms, inside stairs, and away from corridors. At exterior doors, closers shall be mounted on interior side. Where closers are mounted on doors they shall be mounted with sex nuts and bolts; foot shall be fastened to frame with machine screws.

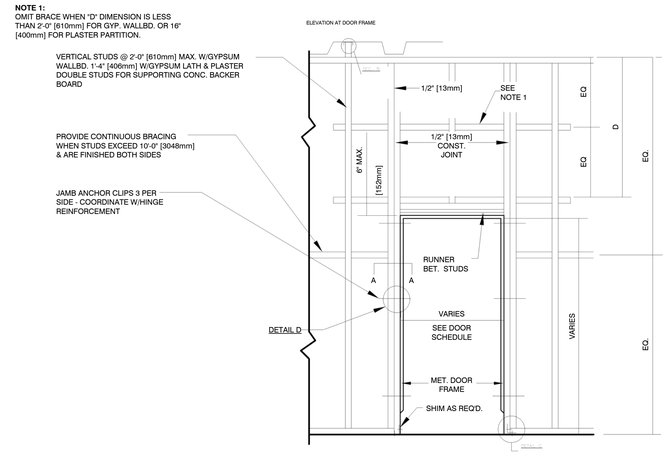
B.Hinge Size Requirements:

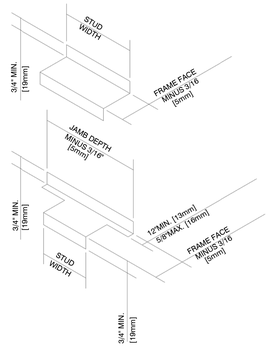
C. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.
D. Where new hinges are specified for new doors in existing frames or existing doors in new frames, sizes of new hinges shall match sizes of existing hinges; or, contractor may reuse existing hinges provided hinges are restored to satisfactory operating condition as approved by Contracting Officer's Technical Representative (COR). Existing hinges shall not be reused on door openings having new doors and new frames. Coordinate preparation for hinge cutouts and screw-hole locations on doors and frames.
E.Hinges Required Per Door:
Doors 1500 mm (5 ft) or less in height: 2 butts
Doors over 1500 mm (5 ft) high and not over 2280 mm (7 ft 6 in) high: 3 butts
Doors over 2280 mm (7 feet 6 inches) high: 4 butts
Dutch type doors: 4 butts
Doors with spring hinges 1370 mm (4 feet 6 inches) high or less: 2 butts
Doors with spring hinges over 1370 mm (4 feet 6 inches): 3 butts

F.Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, ceramic or quarry floor tile, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.
G.After locks have been installed; show in presence of Contracting Officer's Technical Representative (COR) that keys operate their respective locks in accordance with keying requirements. (All keys, Master Key level and above shall be sent Registered Mail to the Medical Center Director along with the bitting list. Also a copy of the invoice shall be sent to the Contracting Officer's Technical Representative (COR) for his records.) Installation of locks which do not meet specified keying requirements shall be considered sufficient justification for rejection and replacement of all locks installed on project.

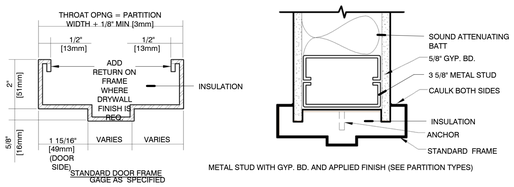
FINAL INSPECTION
A.Installer to provide letter to VA Resident/Contracting Officer's Technical Representative (COR) that upon completion, installer has visited the Project and has accomplished the following:
1.Re-adjust hardware.
2.Evaluate maintenance procedures and recommend changes or additions, and instruct VA personnel.
3.Identify items that have deteriorated or failed.
4.Submit written report identifying problems.

DEMONSTRATION
A.Demonstrate efficacy of mechanical hardware and electrical, and electronic hardware systems, including adjustment and maintenance procedures, to satisfaction of Resident/Contracting Officer's Technical Representative (COR) and VA Locksmith.

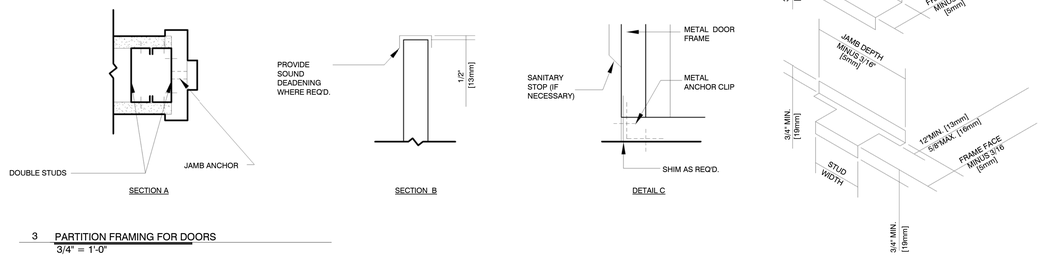




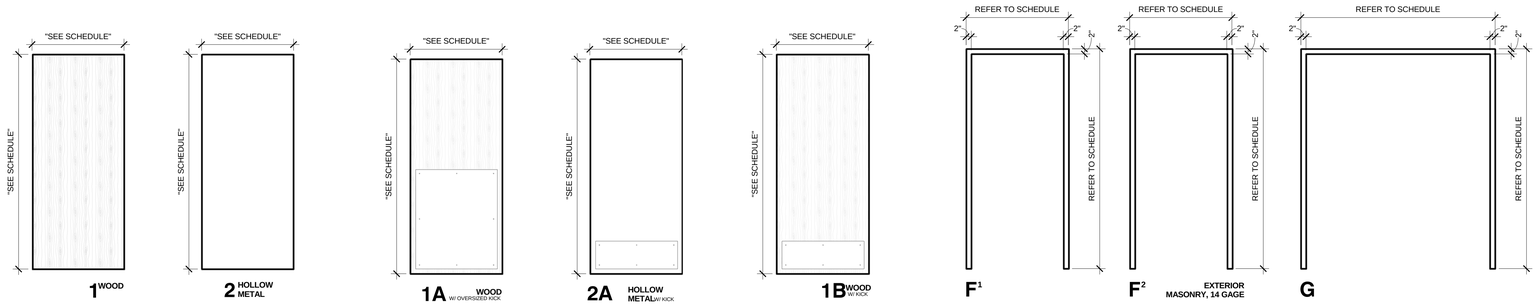
JAMB ANCHORS (FURNISHED WITH FRAME)
DETAIL D



2 DOOR FRAMES
1/2" = 1'-0"



3 PARTITION FRAMING FOR DOORS
3/4" = 1'-0"



1 DOOR FRAME TYPES
1/2" = 1'-0"

NOTE: DO NOT SCALE DRAWING

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FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions: | Date

CONSULTANTS:

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6857 FAX (814) 467-6529

LAI incorporated architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: FEE OFFICE DOOR AND FRAME SCHEDULE

Approved: Project Director

Project Title: VA - FEE OFFICE

Location: CLARKSBURG, WV

Date: 08-19-2011 | Checked | Drawn

Project Number: 1046

Building Number

Drawing Number: AS401

Dwg. 10 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

PARTITIONNOTES

DO NOT SCALE DRAWINGS.

CONCEAL MECHANICAL DUCTS, PIPES, ELECTRICAL CONDUIT, ETC., IN PARTITIONS, FLOORS, FURRED SPACES, OR ABOVE CEILINGS, UNLESS NOTED OTHERWISE.

VERIFY DIMENSIONS OF EXISTING CONDITION AT THE SITE. REPORT DISCREPANCIES TO CONTRACTING OFFICE BEFORE PROCEEDING WITH WORK.

REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHTS.

PROVIDE REINFORCEMENT OF HANDRAILS, CRASH RAILS, SHELVING, CASEWORK, OTHER WALL-MOUNTED EQUIPMENT, AND CEILING MOUNTED EQUIPMENT.

WHERE NEW PARTITIONS ALIGN AND ABUT EXISTING PARTITIONS, FINISHED SURFACES ARE TO BE IN THE SAME PLANE.

RETURN ADJACENT AREAS DISTURBED BY CONSTRUCTION TO THE CONDITION PRIOR TO CONSTRUCTION.

PATCH NEW AND EXISTING WALLS AND FLOOR STRUCTURE DISTURBED BY DEMOLITION OR PENETRATIONS FOR NEW WORK DAILY.

TO ISOLATE WORK AREAS FROM OCCUPIED AREAS, PROVIDE CONSTRUCTION AND DUST BARRICADES. BARRICADES SHALL HAVE LOCKABLE DOORS. COORDINATE WITH OWNER. (SEE SHEET AD101, DRAWING 3 - INTERIM LIFE SAFETY MEASURERS)

RETAIN AND PROTECT ITEMS DESIGNATED FOR REUSE WITHIN THE PROJECT. RETURN ITEMS TO VA AS INDICATED.

REVIEW STATUS OF SALVAGEABLE MATERIAL WITH VA PRIOR TO REMOVAL FROM THE SITE.

LIMITS OF PROJECT ARE SHOWN FOR GENERAL REFERENCE ONLY AND DO NOT ESTABLISH PRECISE BOUNDARIES OF WORK FOR ANY TRADE THAT MAY BE REQUIRED TO COMPLETE THE PROJECT.

FIRESTOP FLOOR / CEILING PENETRATIONS AND PENETRATIONS THROUGH RATED PARTITIONS DAILY.

SLOPE CONCRETE SLABS TOWARD FLOOR DRAINS.

THE KEYING OF PARTITION TYPES ON THE PLAN IS INTENDED TO AID THE CONTRACTOR IN UNDERSTANDING THE VARIOUS CONDITIONS LIKELY TO BE ENCOUNTERED. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHAT MATERIALS (I.E. SIZES AND TYPES OF FURRING) ARE REQUIRED TO COMPLETE THE PROJECT AS SHOWN.

ALL PARTITIONS ARE TO BE TYPE-A U.N.O.

IN ALL BATHROOMS, PROVIDE MOISTURE RESISTANT GWB (MR GWB) ON ALL WALLS. IF NECESSARY PER CONTRACT.

IN ALL OTHER ROOMS OR SPACES CONTAINING SINKS OR OTHER PLUMBING FIXTURES, INSTALL MOISTURE RESISTANT GWB (MR GWB) ON THE WET WALL, 4'-0" IN BOTH DIRECTIONS.

AT CERAMIC TILE, INSTALL CEMENTITIOUS BACKER BOARD

PROVIDE FIRE CODE "C" WHERE A FIRE RATED ASSEMBLY IS REQUIRED.

FOR FIRE RATED PARTITION DESIGNS (SEE TESTING AGENCIES LISTED):

-METAL STUDS MAY BE LARGER DIMENSION THAN LISTED, AND MAY BE SPACED MORE CLOSELY, FOR INDICATING RATING - THICKNESS OF GWB MAY BE INCREASED FOR THE INDICATED RATING.

FOR ALL FIRE RATED PARTITION ASSEMBLIES: -OBTAIN AND FULLY CONFORM TO DESIGN REQUIREMENTS FOR EACH PARTITION ASSEMBLY OF UNDERWRITERS LABORATORIES, INC.
-WHERE REQUIRED, MATERIALS SHALL BEAR THE CLASSIFICATION MAKINGS AND APPROVALS OF THE UNDERWRITERS LABORATORIES, INC.

-METALLIC OUTLET OR SWITCH BOXES LOCATED ON OPPOSITE SIDES OF WALLS OR PARTITIONS SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES, (U.L., INC.)

REFER TO FINISH SCHEDULE AND REFLECTED CEILING PLANS FOR THE CEILING TYPE AND HEIGHT. COORDINATE HEIGHTS OF GWB WITH CEILING HEIGHTS AND WITH PARTITION DETAILS SHOWN HERE.

REFER TO FINISH SCHEDULE, INTERIOR ELEVATIONS, AND ARCHITECTURAL CASEWORK DETAILS FOR WALL FINISHES AND WALL MOUNTED ACCESSORIES TO COORDINATE BLOCKING REQUIREMENTS.

PROVIDE ADEQUATE BACKUP AND BLOCKING FOR ALL WALL OR CEILING MOUNTED EQUIPMENT, ARCHITECTURAL WOODWORK, HANDRAILS, LIGHTING, OR OTHER MISCELLANEOUS ITEMS AS SHOWN ON DRAWINGS.

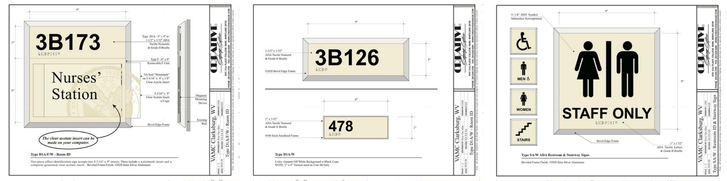
PARTITION THICKNESS DIMENSIONS AS SHOWN ARE MINIMUM NOMINAL DIMENSIONS. ACTUAL DIMENSIONS MAY DIFFER SLIGHTLY TO SUIT FIELD CONDITIONS.

AT INTERSECTIONS OF RATED WALL AND NON-RATED PARTITIONS, THE RATED PARTITION MUST BE CONTINUOUS TO MAINTAIN THE RATING.

REFER TO SHEET AS101 WALL TYPE F FOR LOCATIONS AND EXTENTS OF FIRE RATED PARTITIONS AND SMOKE PARTITIONS.

SEAL ALL JOINTS TIGHTLY AT PARTITIONS.

ALL PARTITIONS MUST BE CONSTRUCTED TO UNDERSIDE OF EXISTING DECK



4 ROOM IDENTIFICATION SIGNAGE
1/8" = 1'-0"

TO BE COORDINATED WITH INTERIOR DESIGNER

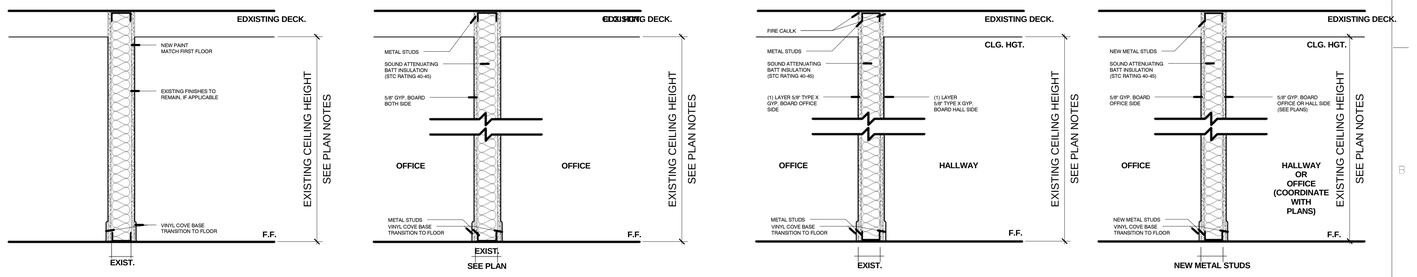
SIGNAGESCHEDULE:

DOOR 100: D1A/F/W SIGNAGE TYPE
DOOR 101: D1A/F/W SIGNAGE TYPE
DOOR 102: D1A/F/W SIGNAGE TYPE
DOOR 103: D1A/F/W SIGNAGE TYPE
DOOR 104: D1A/F SIGNAGE TYPE
DOOR 105: D1A/F SIGNAGE TYPE
DOOR 106: D1A/F SIGNAGE TYPE
DOOR 107: D1A/F SIGNAGE TYPE
DOOR 108: D1A/F SIGNAGE TYPE
DOOR 109: D1A/F SIGNAGE TYPE
DOOR 110: D1A/F SIGNAGE TYPE
DOOR 111: D1A/F SIGNAGE TYPE

MOUNTING: Mounting height shall be 60 in (1525 mm) above the finish floor to the centerline of the sign. Mounting location for such signage shall be so that a person may approach within 3 in (76 mm) of signage without encountering protruding objects or standing within the swing of a door. Mount on latch side of door.

FINISHSCHEDULE

NOTE:
1. SEE PLANS - COORDINATE
2. PAINT COLOR AND FINISH (NEW): **SW Latte**
3. PAINT COLOR (TRIM): **SW Kilim Beige**
4. V.C.T.: **Mannington 123 Wheat**
5: CARPET: **Shaw Mimic Mezzotint modular tile**
6: HANDRAILS: **Acrovyn Cappuccino with cherry inset**



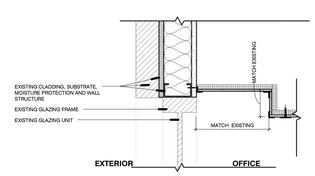
A EXISTING WALL, NEW PAINT; PAINT TO MATCH NEW - "SEE SHEET AS101"

B EXISTING METAL STUD WITH EXISTING FINISHES - "SEE SHEET AS101"

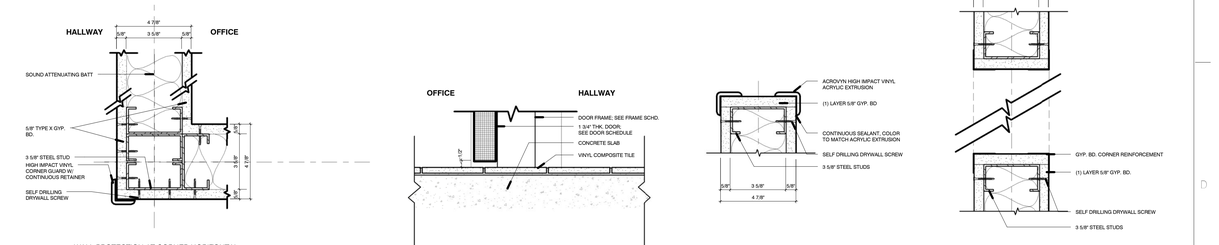
R EXISTING METAL STUD WALL WITH TYPE X GYP. - "SEE SHEET AS101"
1HR RATED - SMOKE BARRIER -WALL AT HALLWAY

N NEW METAL STUD OFFICE WALLS
NO RATING

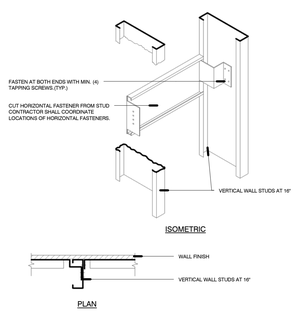
5 PARTITION TYPES
1" = 1'-0"



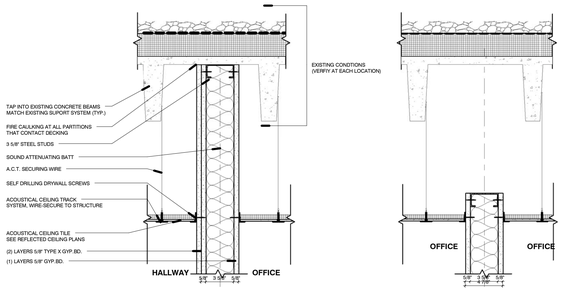
HEAD CONDITION AT EXTERIOR WINDOW AND OFFICE ACT (Typ.)



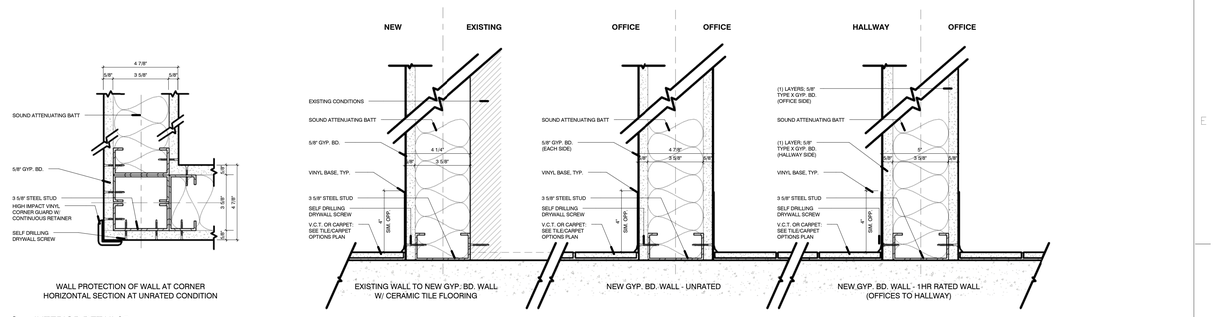
1 INTERIOR DETAILS1
3" = 1'-0"



6 BLOCKING DETAIL (TYP.)
1/4" = 1'-0"



3 INTERIOR DETAILS
1 1/2" = 1'-0"



2 INTERIOR DETAILS2
3" = 1'-0"

NOTE: DO NOT SCALE DRAWING

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FINAL SUBMISSION - FOR CONSTRUCTION

FULLY SPRINKLERED

Revisions:	Date

CONSULTANTS:

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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

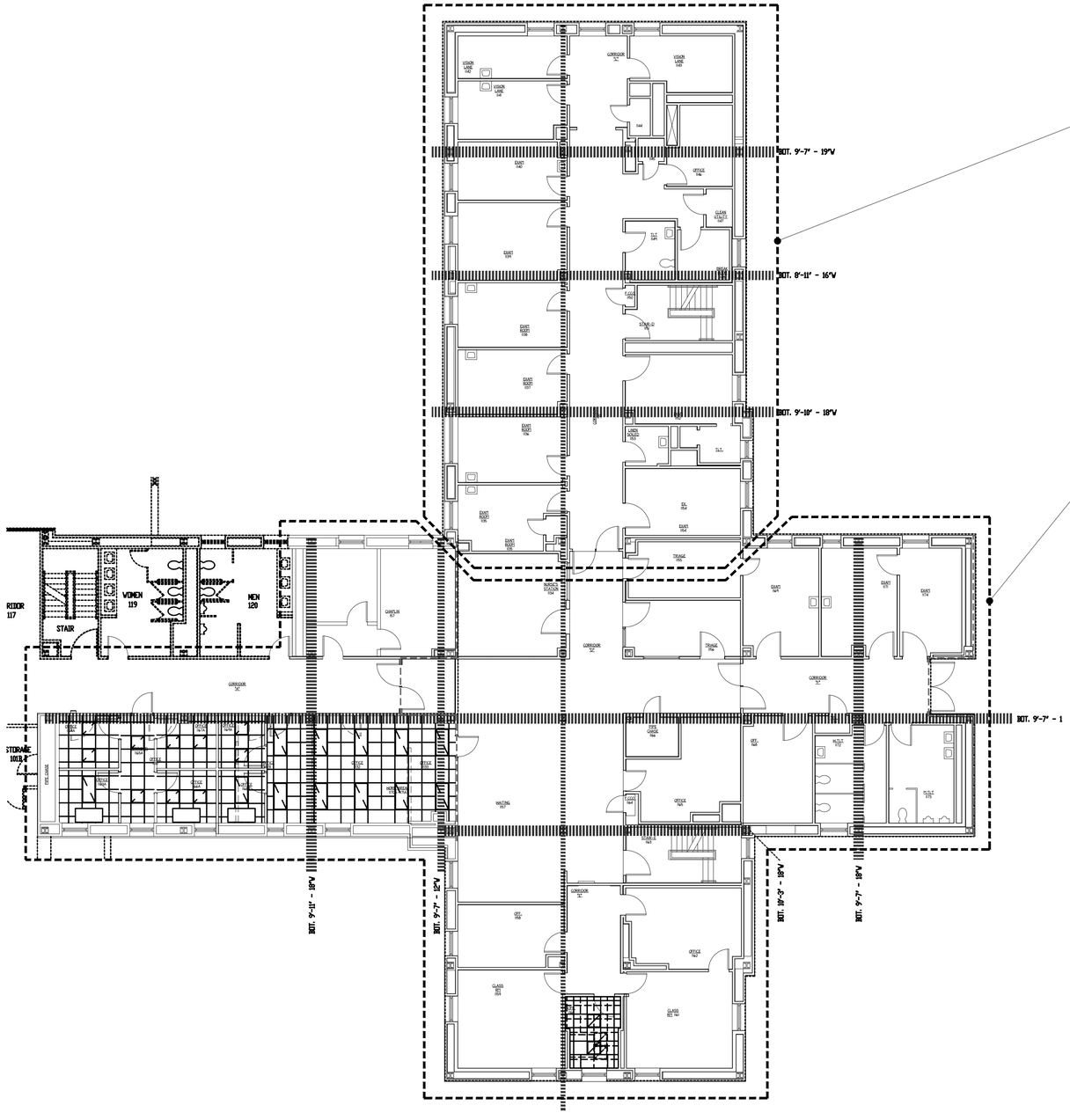
LAI incorporated architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: FEE OFFICE INTERIOR DETAILS	Project Title: VA - FEE OFFICE		Project Number: 1046
			Building Number
Approved: Project Director	Location: CLARKSBURG, WV		Drawing Number: AS402
	Date: 08-19-2011	Checked / Drawn	Dwg. 11 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



DRAWING REFERENCES:
FOR DEMOLITION OF HEATING EQUIPMENT REFER TO DRAWING MD-101, FOR DUCTWORK REFER TO DRAWING MH-401 AND FOR PIPING REFER TO DRAWING MP-401.

DRAWING REFERENCES:
FOR DEMOLITION OF HEATING EQUIPMENT REFER TO DRAWING MD-102, FOR DUCTWORK REFER TO DRAWING MH-402 AND FOR PIPING REFER TO DRAWING MP-402.

MASTER KEY PLAN

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

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GEORGE C. DeFEAN REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6577 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE MASTER KEY PLAN	Project Title: FEE OFFICE		Project Number: 1046
			Building Number: -
Approved: Project Director	Location: CLARKSBURG, VA		Drawing Number: MH/P-100
	Date: 10-31-2011	Checked: G.C.D.	Drawn: C.G.A.
			Dwg. 12 of 45

Office of Construction and Facilities Management

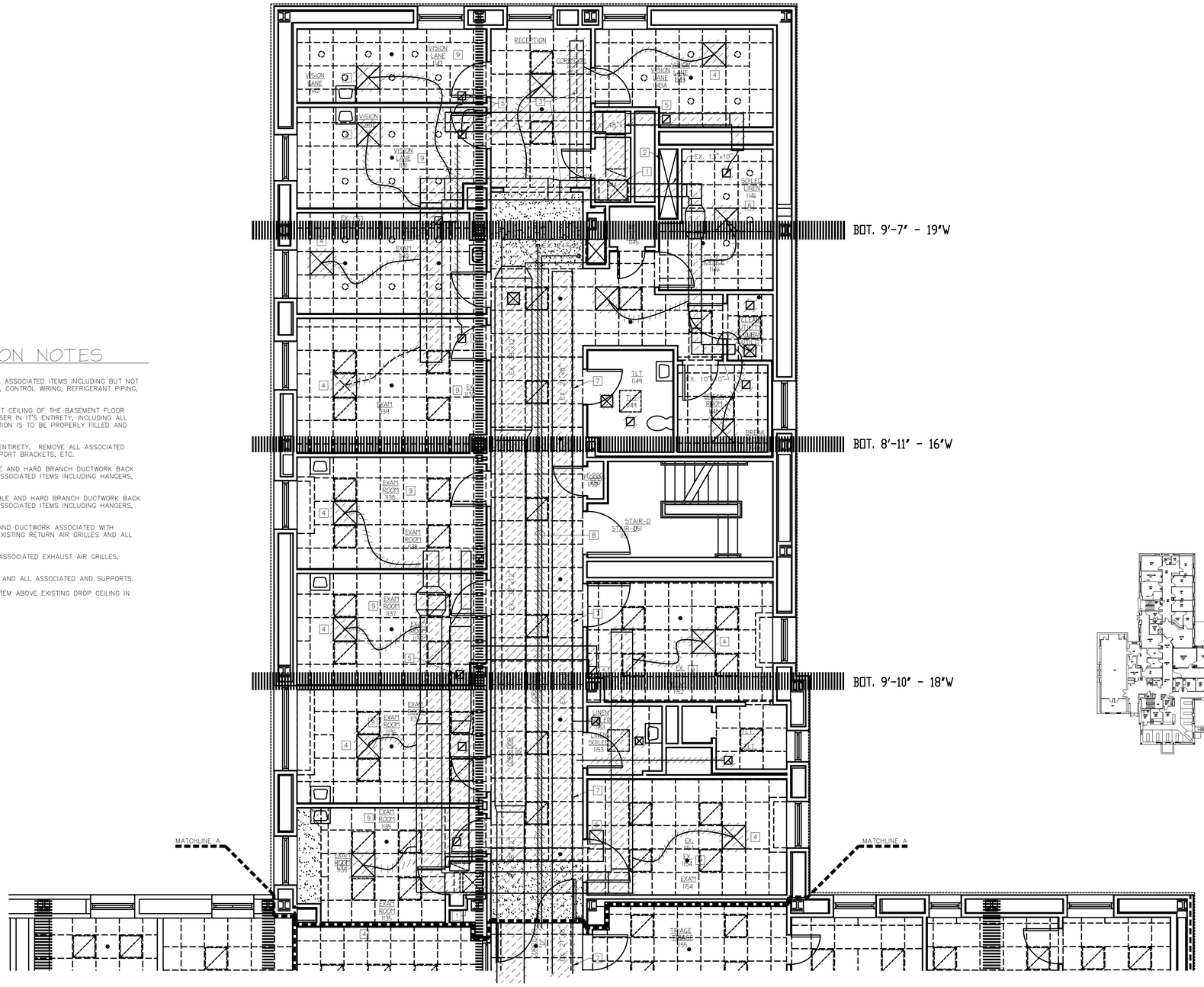
Department of Veterans Affairs

VA FORM 08-6231

SPECIFIC DEMOLITION NOTES

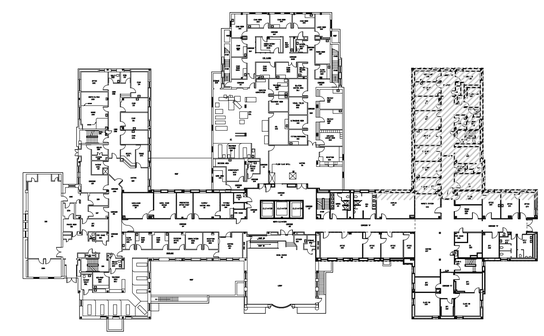
APPLY TO THIS DRAWING ONLY

1. REMOVE EXISTING FLOOR MOUNTED FURNACE AND ALL ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO EXISTING SUPPLY AND RETURN DUCTWORK, CONTROL WIRING, REFRIGERANT PIPING, GAS PIPING, ETC.
2. REMOVE EXISTING SUPPLY AIR DUCT – DISCONNECT AT CEILING OF THE BASEMENT FLOOR BELOW AND PROVIDE CAP. REMOVE SUPPLY DUCT RISER IN IT'S ENTIRETY, INCLUDING ALL HANGERS AND BRACKETS. EXISTING FLOOR PENETRATION IS TO BE PROPERLY FILLED AND SEALED PER DETAILS ON DRAWING MH–X.
3. REMOVE DUCTWORK SHOWN CROSS–HATCHED IN IT'S ENTIRETY. REMOVE ALL ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO HANGERS, SUPPORT BRACKETS, ETC.
4. REMOVE EXISTING CEILING DIFFUSER AND ALL FLEXIBLE AND HARD BRANCH DUCTWORK BACK TO MAIN DUCTWORK BEING REMOVED. REMOVE ALL ASSOCIATED ITEMS INCLUDING HANGERS, SUPPORT BRACKETS, ETC.
5. REMOVE EXISTING RETURN AIR GRILLE AND ALL FLEXIBLE AND HARD BRANCH DUCTWORK BACK TO MAIN DUCTWORK BEING REMOVED. REMOVE ALL ASSOCIATED ITEMS INCLUDING HANGERS, SUPPORT BRACKETS, ETC.
6. ROOM INACCESSIBLE – REMOVE EXISTING DIFFUSERS AND DUCTWORK ASSOCIATED WITH SUPPLY AIR AND MAKE–UP AIR SYSTEMS. REMOVE EXISTING RETURN AIR GRILLES AND ALL ASSOCIATED RETURN AIR DUCT.
7. REMOVE EXISTING EXHAUST AIR DUCTWORK AND ALL ASSOCIATED EXHAUST AIR GRILLES, HANGERS AND SUPPORTS BRACKETS.
8. REMOVE CHILLED WATER SUPPLY AND RETURN PIPING AND ALL ASSOCIATED AND SUPPORTS.
9. EXISTING ABANDONED PLASTER CEILING SUPPORT SYSTEM ABOVE EXISTING DROP CEILING IN THIS ROOM TO BE REMOVED IN IT'S ENTIRETY.



PARTIAL FIRST FLOOR PLAN – HVAC DEMOLITION

SCALE: 1/4" = 1'-0"



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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

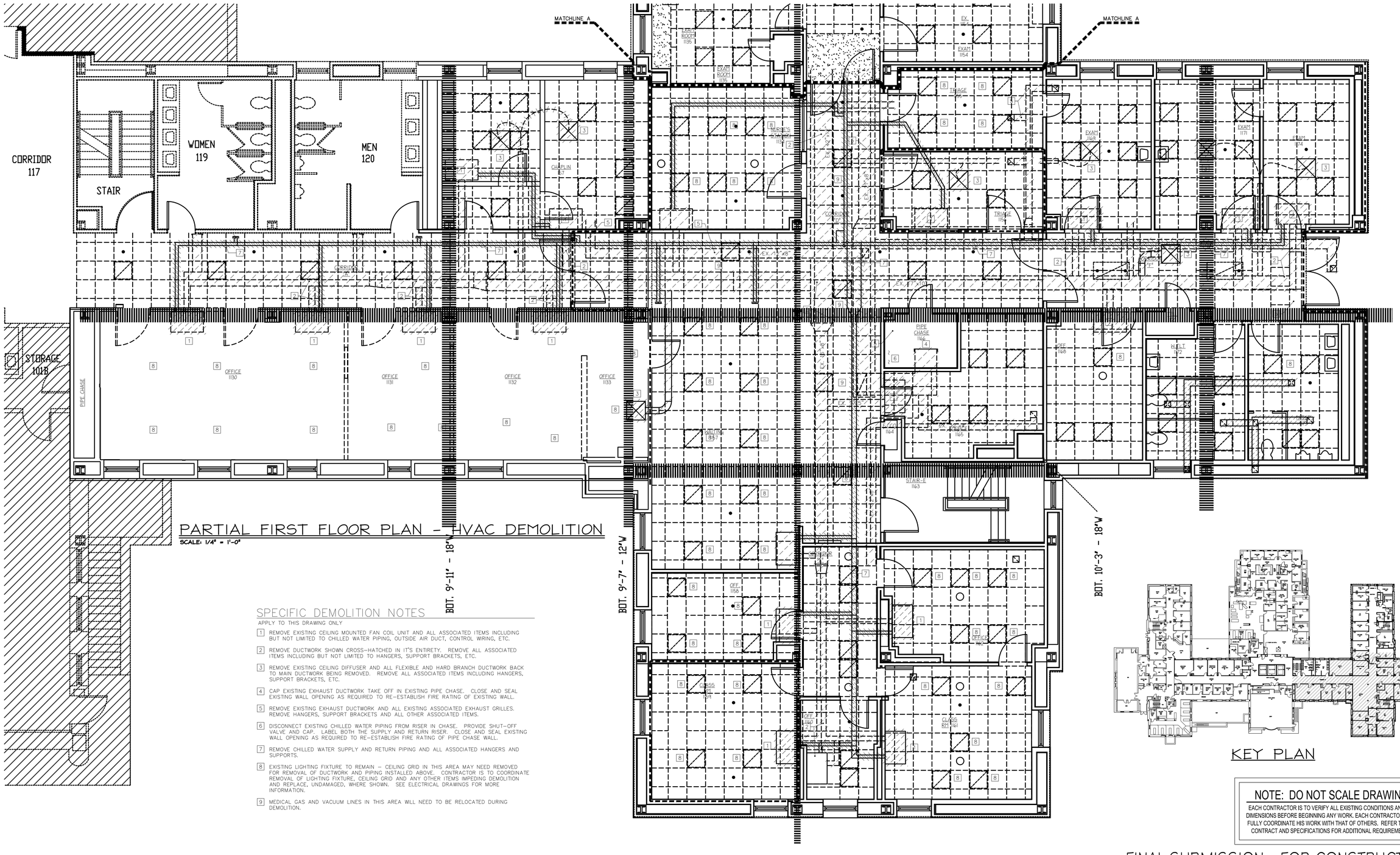
LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE PARTIAL FIRST FLOOR PLAN – HVAC DEMOLITION	Project Title: FEE OFFICE – –		Project Number: 1046
Approved: Project Director	Location: CLARKSBURG, VA		Building Number: –
	Date: 10-31-2011	Checked: G.C.D. / Drawn: C.G.A.	Drawing Number: MD-101 Dwg. 13 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08–6231



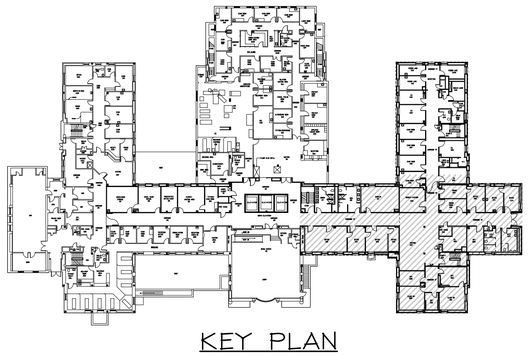
PARTIAL FIRST FLOOR PLAN - HVAC DEMOLITION

SCALE: 1/4" = 1'-0"

SPECIFIC DEMOLITION NOTES

APPLY TO THIS DRAWING ONLY

1. REMOVE EXISTING CEILING MOUNTED FAN COIL UNIT AND ALL ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO CHILLED WATER PIPING, OUTSIDE AIR DUCT, CONTROL WIRING, ETC.
2. REMOVE DUCTWORK SHOWN CROSS-HATCHED IN IT'S ENTIRETY. REMOVE ALL ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO HANGERS, SUPPORT BRACKETS, ETC.
3. REMOVE EXISTING CEILING DIFFUSER AND ALL FLEXIBLE AND HARD BRANCH DUCTWORK BACK TO MAIN DUCTWORK BEING REMOVED. REMOVE ALL ASSOCIATED ITEMS INCLUDING HANGERS, SUPPORT BRACKETS, ETC.
4. CAP EXISTING EXHAUST DUCTWORK TAKE OFF IN EXISTING PIPE CHASE. CLOSE AND SEAL EXISTING WALL OPENING AS REQUIRED TO RE-ESTABLISH FIRE RATING OF EXISTING WALL.
5. REMOVE EXISTING EXHAUST DUCTWORK AND ALL EXISTING ASSOCIATED EXHAUST GRILLES. REMOVE HANGERS, SUPPORT BRACKETS AND ALL OTHER ASSOCIATED ITEMS.
6. DISCONNECT EXISTING CHILLED WATER PIPING FROM RISER IN CHASE. PROVIDE SHUT-OFF VALVE AND CAP. LABEL BOTH THE SUPPLY AND RETURN RISER. CLOSE AND SEAL EXISTING WALL OPENING AS REQUIRED TO RE-ESTABLISH FIRE RATING OF PIPE CHASE WALL.
7. REMOVE CHILLED WATER SUPPLY AND RETURN PIPING AND ALL ASSOCIATED HANGERS AND SUPPORTS.
8. EXISTING LIGHTING FIXTURE TO REMAIN – CEILING GRID IN THIS AREA MAY NEED REMOVED FOR REMOVAL OF DUCTWORK AND PIPING INSTALLED ABOVE. CONTRACTOR IS TO COORDINATE REMOVAL OF LIGHTING FIXTURE, CEILING GRID AND ANY OTHER ITEMS IMPEDING DEMOLITION AND REPLACE, UNDAMAGED, WHERE SHOWN. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
9. MEDICAL GAS AND VACUUM LINES IN THIS AREA WILL NEED TO BE RELOCATED DURING DEMOLITION.



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WINDBER, PENNSYLVANIA 15963
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rt 3 box 383e
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ph: 304.288.3941

Drawing Title: FEE OFFICE PARTIAL FIRST FLOOR PLAN - HVAC DEMOLITION

Approved: Project Director

Project Title: FEE OFFICE - -

Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: C.G.A.

Project Number: 1046

Building Number: -

Drawing Number: MD-102

Dwg. 14 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

HVAC ABBREVIATIONS

A/E	ARCHITECT / ENGINEER
AAHX	AIR TO AIR HEAT EXCHANGER
AB	AIR BLENDER
AAV	AUTOMATIC AIR VENT
ACC	AIR COOLED CONDENSER
ACCH	AIR COOLED CHILLER
ACCU	AIR-COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
ACD	AUTOMATIC CONTROL DAMPER,MODULATING
ACD-TP	AUTOMATIC CONTROL DAMPER,TWO POSITION
AD	ACCESS DOOR
AF	AFTER FILTER
AFCV	AIR FLOW CONTROL VALVE
AFF	ABOVE FINISHED FLOOR
AFMD	AIR FLOW MEASURING DEVICE
AFW	AIR FOIL WHEEL (FAN)
AHU	AIR-HANDLING UNIT
AMP	AMPERGE
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE
AS	AIR SEPARATOR
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AW	AIR WASHER
AXF	AXIAL FLOW
B	BOILER
BD	BUTTERFLY DAMPER
BDD	BACKDRAFT DAMPER
BDR	BASE BOARD RADIATOR
BFP	BACKFLOW PREVENTER
BFT	BOILER PLANT FIRE TUBE
BG	BOTTOM GRILLE
BHP	BRAKE HORSEPOWER
BHW	HOT WATER HEATING BOILER
BHX	BOILER BLOWDOWN HEAT EXCHANGER
BIW	BACKWARD INCLINED WHEEL (FAN)
BMT	BONE MARROW TRANSPLANT
BR	BOTTOM REGISTER
BSC	BIOLOGICAL SAFETY CABINETS
BT	BLOWOFF TANK
BTC	BLOWOFF TANK CONTROL VALVE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWT	BOILER PLANT WATER TUBE
C	CENTIGRADE (CELCIUS)
CC	COOLING COIL
CCD	COOLING COIL CONDENSATE DRAIN
CD	CEILING DIFFUSER
CD-1	CONSTRUCTION DOCUMENTS (SUBMISSION1)
CD-2	CONSTRUCTION DOCUMENTS (SUBMISSION2)
CENT	CENTRIFICAL
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFT	CUBIC FEET
CFP	CHEMICAL FEED PUMP
CG	CEILING GRILLE
CH	CHILLER
CHP	CHILLED WATER PUMP
CHW	CHILLER WATER
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CI	CAST IRON
CM	CARBON MONOXIDE
CM	CUBIC METER
CM/S	CUBIC METER PER SECOND
CO	CLEAN OUT
CO2	CARBON DIOXIDE
COMP	COMPRESSOR UNIT
COP	COEFFICIENT OF PERFORMANCE
CP	CONDENSATE PUMP
CR	CEILING REGISTER
CS	CONDENSATE STORAGE TANK
CSG	CLEAN STEAM GENERATOR
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME
CW	COLD WATER (POTABLE)
CWCC	CHILLED WATER COOLING COIL
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN (TO COOLING TOWER)
CWS	CONDENSER WATER SUPPLY (FROM COOLING TOWER)
D	DAMPER - AUTOMATIC
D-1	OUTDOOR AIR DAMPER
D-2	RETURN AIR DAMPER
D-3	RELIEF AIR DAMPER
DB	DECIBELS
Db	DRY-BULB TEMPERATURE
DD-1	DESIGN DEVELOPMENT (SUBMISSION1)
DD-2	DESIGN DEVELOPMENT (SUBMISSION2)
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE
DF	DIFFUSER
DIA	DIAMETER
DIW	DEIONIZED WATER
DP	DEW POINT TEMPERATURE
DP	DIFFUSER PLATE
DPA	DIFFERENTIAL PRESSURE ASSEMBLY
DPS	DIFFERENTIAL PRESSURE SENSOR
DX	DIRECT EXPANSION
DXCC	DIRECT EXPANSION COOLING COIL
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	EVAPORATIVE COOLER
ECC	ENGINEERING CONTROL CENTER
ECU	EVAPORATIVE CONDENSER UNIT
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EGS	EMERGENCY GAS SHUTOFF
EGT	ENTERING GLYCOL TEMPERATURE
EH	EXHAUST HOOD
EJ	EXPANSION JOINT
EMD	END OF MAIN DRIP (STEAM)
ENT	ENTERING
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ERP	ELECTRIC RADIANT PANEL
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETO	ETHYLENE OXIDE
EUH	ELECTRIC UNIT HEATER
EWC	EVAPORATIVE WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EX.	EXISTING
F	FAHRENHEIT
F&T	FLOAT AND THERMOSTATIC
F/SDPR	COMBINATION FIRE SMOKE DAMPER
FA	FREE AREA
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT (4 PIPE)
FCUC	FAN COIL UNIT COOLING ONLY
FCUH	FAN COIL UNIT HEATING ONLY
FCW	FORWARD CURVED WHEEL (FAN)
FD	FLOOR DRAIN
FD	FIRE DAMPER
FF	FINAL FILTER
FHX	FLUE GAS/FEEDWATER HEAT EXCHANGER
FM	FLOW METER
FOP	FUEL OIL PUMP
FOT	FUEL OIL TANK
FOHX	FUEL OIL HEAT EXCHANGER
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FPTU	FAN POWERED TERMINAL UNIT
FR	FLOOR REGISTER
FRP	FIBER REINFORCED POLYESTER
FS	FLOW SWITCH
FSTAT	FREEZESTAT
FT	FEET
FT-LB	FOOT-POUND
FTR	FIN TUBE RADIATION
FV	FACE VELOCITY
GA	GAUGE
GAL	GALLONS
GH	GRAVITY HOOD
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GS	GALVANIZED STEEL
H	HUMIDIFER
H&CW	HOT & COLD WATER
HAC	HOUSEKEEPING AID CLOSET
HB	HOSE BIBB
HC	HEATING COIL
HD	HEAD
HD	HOOD
HOA	HAND/OFF/AUTOMATIC
HP	HEAT PUMP
HP	HORSEPOWER
HPDT	HIGH PRESSURE DRIP TRAP
HPR	HIGH PRESSURE RETURN (STEAM CONDENSATE)
HPS	HIGH PRESSURE SUPPLY (STEAM)
HRC	HEAT RECOVERY COIL
HRD	HEAT RECOVERY DEVICE
HRP	HYDRONIC RADIANT (CEILING) PANEL
HRW	HEAT RECOVERY WHEEL
HSTAT	HUMIDISTAT
HTM	HUMIDIFIER TERMINAL
HUM	HUMIDIFIER UNIT MOUNTED
HVU	HEATING AND VENTILATING UNIT
HW	HOT WATER
HWC	HOT WATER COIL
HWHC	HOT WATER HEATING COIL
HWP	HEATING HOT WATER PUMP
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HWUH	HOT WATER UNIT HEATER
HVD	HOSTWAY VENT DAMPER
HX	HEAT EXCHANGER
HZ	HERTZ
P	PUMP
PA	PASCAL
PC	PUMPED CONDENSATE
PCF	POUNDS PER CUBIC FOOT (FEET)
PD	PRESSURE DROP
PEF	PROPELLER (TYPE) EXHAUST FAN
PF	PRE-FILTER
PG	PRESSURE GAGE
PGW	PROPYLENE GLYCOL-WATER (SOLUTION)
PHC	PREHEAT COIL
PPM	PARTS PER MILLION
PRS	PRESSURE REGULATING (VALVE) STATION
PRV	PRESSURE REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PSS	PRIMARY SECONDARY SYSTEM
PSV	PRESSURE SAFETY VALVE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
R/E	RETURN OR EXHAUST
RA	RETURN AIR
RAD	REFRIGERANT AIR DRYER
RAF	RADIO FREQUENCY
RAHX	ROTARY AIR HEAT EXCHANGER
RAT	RETURN AIR TEMPERATURE
RCCH	REMOTE CONDENSER CHILLER
RCU	RECIPROCATING CHILLER UNIT
RD	REFRIGERANT DISCHARGE
RDS	ROOM DATA SHEETS
REA	RELIEF AIR
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID LINE
RLA	RUN LOAD AMPERE
RO	REVERSE OSMOSIS
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RS	REFRIGERANT SUCTION
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
SA	SUPPLY AIR
SAD	SOUND ATTENUATING DEVICE
SAT	SUPPLY AIR TEMPERATURE
SC	SHADING COEFFICIENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCI	SPINAL CODE INJURY
SCR	SILICON CONTROLLED RECTIFIER
SD	SMOKE DETECTOR
SD	SUPPLY AIR DIFFUSER
SD-1	SCHEMATIC DESIGN (SUBMISSION1)
SD-2	SCHEMATIC DESIGN (SUBMISSION2)
SDPR	SMOKE DAMPER
SDR	SMOKE DAMPER (RETURN)
SDS	SMOKE DAMPER (SUPPLY)
SEN	SENSIBLE HEAT
SF	SUPPLY FAN
SG	SUPPLY AIR GRILLE
SH	STEAM HUMIDIFIER
SHC	STEAM HEATING COIL
SI	SQUARE INCHES
SP	STATIC PRESSURE
SP GR	SPECIFIC GRAVITY
SPD	SUPPLY PROCESS AND DISTRIBUTION
SPRV	STEAM PRESSURE REDUCING VALVE
SPS	STATIC PRESSURE SENSOR
SQ FT	SQUARE FOOT (FEET)
SR	SUPPLY AIR REGISTER
SS	STAINLESS STEEL
SSHX	STEAM TO STEAM HEAT EXCHANGER
SSR	SOLID SEPARATOR
ST	STEAM TRAP
SUH	STEAM UNIT HEATER
SV	STEAM PRESSURE REDUCING VALVE
SVS	STEAM VENT SILENCER
SWHX	STEAM TO WATER HEAT EXCHANGER
T & PCV	TEMPERATURE AND PRESSURE CONTROL VALVE
TAB	TESTING, ADJUSTING, BALANCE
TD	TEMPERATURE DIFFERENCE
TDH	TOTAL DYNAMIC HEAD
TDS	TOTAL DISSOLVED SOLIDS
TG	TRANSFER GRILLE
TP	TRAP
TR	TOP REGISTER
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TU	TERMINAL UNIT
TWU	THRU-WALL UNIT
UC	UNDER CUT
UC	UNIT COOLER
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
URV	UPBLAST UNIT VENTILATOR
V	VALVE
VAF	VANE-AXIAL FAN
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER (MANUAL OPPOSED BLADE)
VFD	VARIABLE FREQUENCY DRIVE
VHA	VETERANS HEALTH ADMINISTRATION
VI	VIBRATION ISOLATOR
VIV	VARIABLE INLET VANES
VP	VACUUM PUMP
VPS	VARIABLE PRIMARY SYSTEM
VR	VACUUM (STEAM CONDENSATE) RETURN
VSD	VARIABLE SPEED DRIVE
VUH	VERTICAL UNIT HEATER
W	WATTS
WAG	WASTE ANETHESIA GAS
Wb	WET-BULB (TEMPERATURE)
WC	WATER COOLED
WCCH	WATER COOLED CHILLER
WCCU	WATER COOLED CONDENSING UNIT
WCHP	WATER COOLED HEAT PUMPS
WCPU	WATER COOLED PACKAGED UNIT
WEF	WALL EXHAUST FAN
WF	WATER FILTER
WFCV	WATER FLOW CONTROL VALVE
WFM	WATER FLOWMETER
WFMD	WATER FLOW MEASURING DEVICE
WG	WATER GAGE
WPD	WATER SIDE PRESSURE DROP
YR	YEAR

GENERAL SYMBOLS

- DIRECTION OF PIPE PITCH (DOWN)
- DIRECTION OF FLOW
- ANCHOR
- REDUCER OR INCREASER
- ECCENTRIC REDUCER
- TOP CONNECTION, 45° OR 90°
- BOTTOM CONNECTION, 45° OR 90°
- SIDE CONNECTION
- CAPPED OUTLET
- RISE OR DROP IN PIPE
- UNION
- PIPE UP
- PIPE DOWN
- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- LIMIT OF DEMOLITION
- INVERTED BUCKET TRAP SET INCLUDING PIPING ACCESSORIES
- FLOAT & THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES
- THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES
- THERMOMETER
- PRESSURE GAGE
- TEST PLUG (PRESSURE/TEMPERATURE)
- AAV — AUTOMATIC AIR VENT
- MV — MANUAL AIR VENT
- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- T — THERMOSTAT
- INVERTED BUCKET STEAM TRAP ASSEMBLY (T)
- CLOSED-FLOAT-THERMOSTATIC STEAM TRAP ASSEMBLY (T)
- THERMOSTATIC STEAM TRAP (T)
- PRESSURE GAGE (WITH SIPHON ON STEAM SERVICE)

HVAC SYMBOLS

- UP / DN — SUPPLY DUCT (UP & DOWN)
- UP / DN — EXHAUST DUCT (UP & DOWN)
- UP / DN — RETURN DUCT (UP & DOWN)
- 24 / 24 — ROUND AND SQUARE 4-WAY CEILING DIFFUSERS
- 24 — SQUARE 3-WAY CEILING DIFFUSERS
- 24 — SQUARE 2-WAY CEILING DIFFUSERS
- SQUARE 1-WAY CEILING DIFFUSERS
- LINEAR SLOT DIFFUSER
- SUPPLY TOP REGISTER OR GRILLE (WALL TYPE)
- EXHAUST OR RETURN CEILING REGISTER OR GRILLE
- EXHAUST OR RETURN BOTTOM REGISTER OR GRILLE (WALL TYPE)
- EXHAUST OR RETURN REGISTER OR TOP GRILLE (WALL TYPE)
- VANED ELBOW & AIR SPLIT TYPE DUCT TAKE-OFF
- CONNECT NEW DUCT TO EXISTING DUCT
- R — INCLINED RISE, IN DIRECTION OF AIR FLOW
- D — INCLINED DROP, IN DIRECTION OF AIR FLOW
- LIMIT OF DEMOLITION
- T — ROOM THERMOSTAT
- SPS — STATIC PRESSURE SENSOR
- SD — SMOKE DETECTOR
- 2'x4' RADIANT CEILING PANEL
- HPS — HIGH PRESSURE STEAM (60 PSIG AND ABOVE)
- HPR — HIGH PRESSURE STEAM CONDENSATE RETURN
- LPS — LOW PRESSURE STEAM (15 PSIG AND BELOW)
- LPR — LOW PRESSURE STEAM CONDENSATE RETURN
- PC — CONDENSATE PUMP DISCHARGE
- HWS — HOT WATER HEATING SUPPLY
- HWR — HOT WATER HEATING RETURN
- GHS — HOT GLYCOL-WATER HEATING SUPPLY
- GHR — HOT GLYCOL-WATER HEATING RETURN
- CHS — CHILLED WATER SUPPLY
- CHR — CHILLED WATER RETURN

GENERAL HVAC NOTES

1. ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
2. THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED. DUCT SIZES ARE NET INSIDE DIMENSIONS.
3. ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
4. TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
5. FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
6. DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
7. WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
8. WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" [175mm] ABOVE FINISHED FLOOR.
9. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
10. STEAM HEADER SET PRESSURE: 30 PSIG [kPa] NORMAL
    30 PSIG [kPa] LOW DEMAND PERIODS
11. ALTITUDE-BOILER ROOM FLOOR: ___ FT. [M] ABOVE SEA LEVEL
12. SEISMIC PROVISIONS NOT REQUIRED
13. ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED
14. ANY PENETRATIONS IN FIRE WALLS OR PARTITIONS THAT REQUIRE FIRE SEALING ARE TO BE SEALED PRIOR TO THE END OF THE BUSINESS DAY WHICH THEY ARE CUT.

ADDITIONAL LEGEND ITEMS

ABV.	ABOVE	G.V.	GATE VALVE
A.F.F.	ABOVE FINISHED FLOOR	G.C.	GENERAL CONTRACTOR
ALUM	ALUMINUM	H.C.	HEATING CONTRACTOR
APPROX.	APPROXIMATELY	H	HUMIDISTAT
BV	BALL VALVE	HWR	HOT WATER RETURN
BLW	BELOW	HWS	HOT WATER SUPPLY
BTW.	BETWEEN	HWS & R	HOT WATER SUPPLY&RETURN
CLG	CEILING	IER	INVERTED ECCENTRIC REDUCER
CO	CLEAN OUT	J	JUNCTION BOX
CHK. VA.	CHECK VALVE	M.O.D.	MOTOR OPERATED DAMPER
C.D.	CONDENSATE DRAIN	P.C.	PLUMBING CONTRACTOR
	POINT OF NEW CONNECTION	P.G.	PRESSURE GAUGE
DN.	DOWN	REFRIG.	REFRIGERANT
EA.	EACH		SELF BALANCING FLOW CONTROL VALVE
E.C.	ELECTRICAL CONTRACTOR	S	SMOKE DETECTOR
EXH	EXHAUST	T'STAT	THERMOSTAT
EXIST.	EXISTING	TH	THERMOMETER
F.C.	FLEXIBLE CONNECTION	TYP.	TYPICAL
	FLEXIBLE DUCTWORK		UNION
FLR.	FLOOR	VCD	VOLUME CONTROL DAMPER
FR.	FROM	W/	WITH

NOTE: DO NOT SCALE DRAWING

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FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

GEORGE C. DEFRAIN REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE GENERAL HVAC NOTES, SYMBOLS AND ABBREVIATIONS

Approved: Project Director

Project Title: FEE OFFICE - -

Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: C.G.A.

Project Number: 1046

Building Number: -

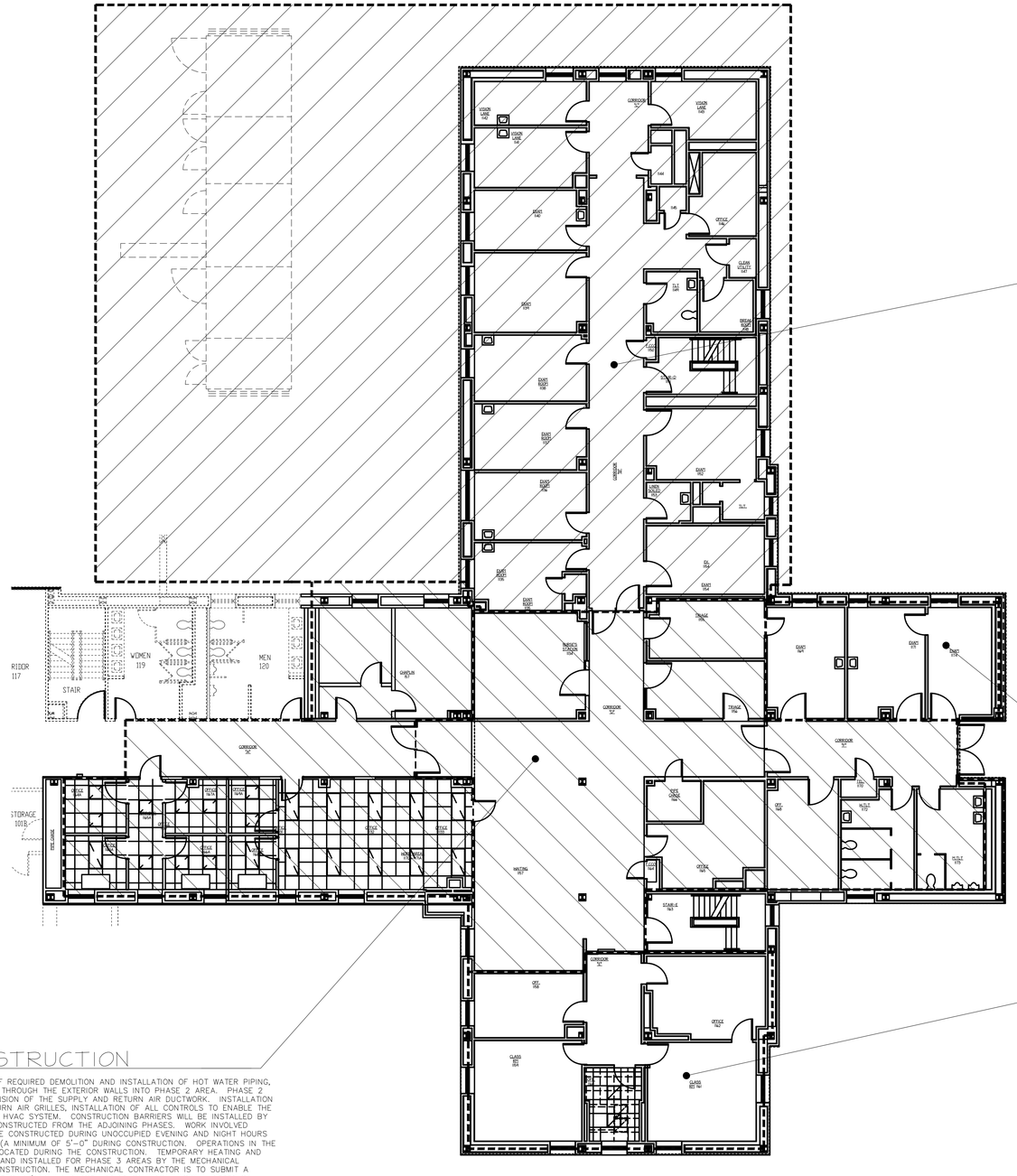
Drawing Number: MH-001

Dwg. 15 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



PHASE 1 CONSTRUCTION

PHASE 1 CONSTRUCTION IS TO CONSIST OF REQUIRED DEMOLITION AND INSTALLATION OF STEAM PIPING, PRESSURE REDUCING STATION, STEAM TO WATER HEAT EXCHANGER, DISTRIBUTION STEAM AND HOT WATER PIPING, ETC. PHASE 1 CONSTRUCTION IS TO INCLUDE INSTALLATION OF THE NEW ROOFTOP UNIT AND ANY STRUCTURAL MODIFICATIONS TO THE EXISTING ROOF, BUILDING, ETC. TO ACCOMMODATE THE INSTALLATION OF THE NEW ROOFTOP UNIT AND NEW SUPPLY AND RETURN AIR DUCTWORK THROUGH THE EXTERIOR WALLS INTO THE PHASE 1 AREA. PHASE 1 CONSTRUCTION IS ALSO TO INCLUDE EXTENSION OF SUPPLY AND RETURN AIR DUCTS, INSTALLATION OF TERMINAL BOXES, DIFFUSERS AND RETURN GRILLES, INSTALLATION OF ALL CONTROLS TO ENABLE THE PHASE 1 AREA TO OPERATE VIA THE NEW HVAC SYSTEM. A CONSTRUCTION BARRIER WILL BE INSTALLED BY THE G.C. TO SEPARATE THE AREA BEING CONSTRUCTED FROM THE THE ADJOINING PHASES. OPERATIONS IN THE PHASE 1 AREA WILL BE TEMPORARILY RELOCATED DURING CONSTRUCTION.

EXTREMELY IMPORTANT NOTE:

ALL WORK SHOWN ON DRAWING MP-101 PARTIAL BASEMENT FLOOR PLAN - HVAC PIPING IS TO BE INCLUDED IN PHASE 1.

PHASE 3 CONSTRUCTION

PHASE 3 CONSTRUCTION IS TO CONSIST OF RQUIRED DEMOLITION AND INSTALLATION OF HOT WATER PIPING, NEW SUPPLY AND RETURN AIR DUCTWORK FOR PHASE 2 AREA. PHASE 3 CONSTRUCTION IS ALSO TO INCLUDE EXTENSION OF SUPPLY AND RETURN AIR DUCTWORK, INSTALLATION OF TERMINAL BOXES, DIFFUSERS AND RETURN GRILLES, INSTALLATION OF ALL CONTROLS TO ENABLE THE PHASE 3 AREA TO OPERATE VIA THE NEW HVAC SYSTEM. CONSTRUCTION BARRIERS WILL BE INSTALLED BY THE G.C. TO SEPARATE THE AREA BEING CONSTRUCTED FROM THE ADJOINING PHASES. OPERATIONS IN THE PHASE 3 AREA WILL BE TEMPORARILY RELOCATED DURING THE CONSTRUCTION.

PHASE 2 CONSTRUCTION

PHASE 2 CONSTRUCTION IS TO CONSIST OF REQUIRED DEMOLITION AND INSTALLATION OF HOT WATER PIPING, NEW SUPPLY AND RETURN AIR DUCTWORK THROUGH THE EXTERIOR WALLS INTO PHASE 2 AREA. PHASE 2 CONSTRUCTION IS ALSO TO INCLUDE EXTENSION OF THE SUPPLY AND RETURN AIR DUCTWORK. INSTALLATION OF TERMINAL BOXES, DIFFUSERS AND RETURN AIR GRILLES, INSTALLATION OF ALL CONTROLS TO ENABLE THE PHASE 2 AREA TO OPERATE VIA THE NEW HVAC SYSTEM. CONSTRUCTION BARRIERS WILL BE INSTALLED BY THE G.C.TO SEPARATE THE AREA BEING CONSTRUCTED FROM THE ADJOINING PHASES. WORK INVOLVED ABOVE CORRIDOR CEILING WILL NEED TO BE CONSTRUCTED DURING UNOCCUPIED EVENING AND NIGHT HOURS BECAUSE CORRIDORS WILL BE KEPT OPEN (A MINIMUM OF 5'-0" DURING CONSTRUCTION. OPERATIONS IN THE PHASE 2 AREA WILL BE TEMPORARILY RELOCATED DURING THE CONSTRUCTION. TEMPORARY HEATING AND COOLING SYSTEMS ARE TO BE FURNISHED AND INSTALLED FOR PHASE 3 AREAS BY THE MECHANICAL CONTRACTOR DURING PHASE 2 OF THE CONSTRUCTION. THE MECHANICAL CONTRACTOR IS TO SUBMIT A PROPOSED DESIGN FOR THE TEMPORARY HEATING/COOLING SYSTEM PRIOR TO INSTALLATION. REFER TO REFER TO DRAWING TH-1, AND SPECIFICATION SECTION 23 05 11 PAGE 20 "3.2 TEMPORARY PIPING, EQUIPMENT AND HEATING/COOLING SYSTEMS". THE CONTRACTOR MAY SUBMIT AN ALTERNATE DESIGN FOR TEMPORARY HEATING/COOLING TO THE VA FOR APPROVAL.

PHASING PLAN - HVAC

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

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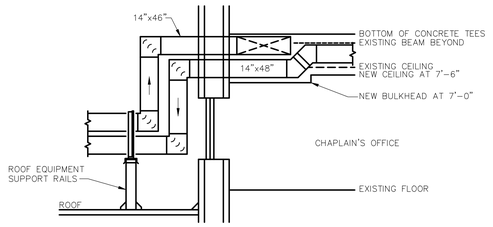
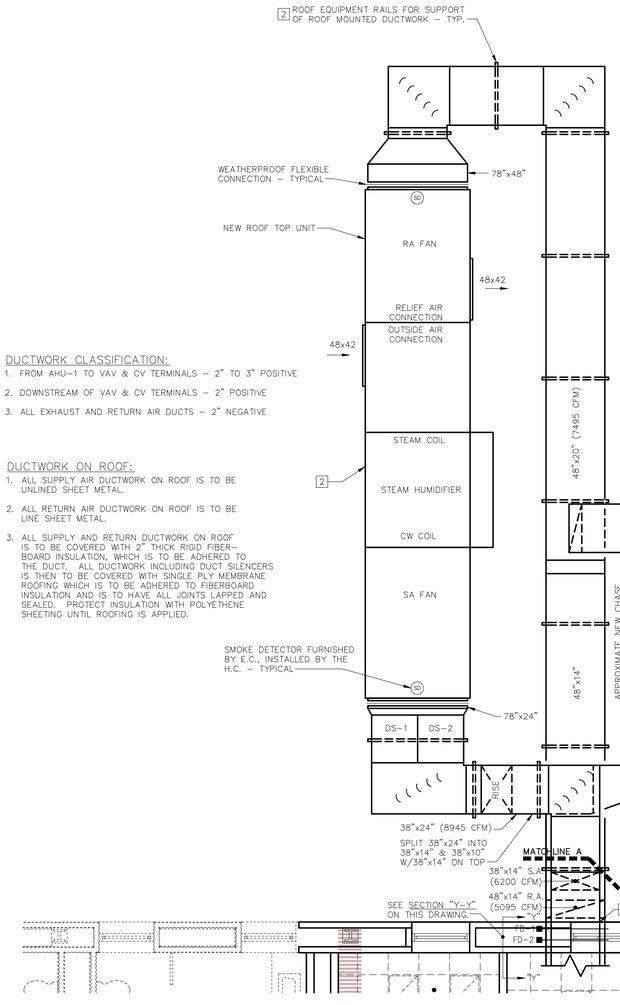
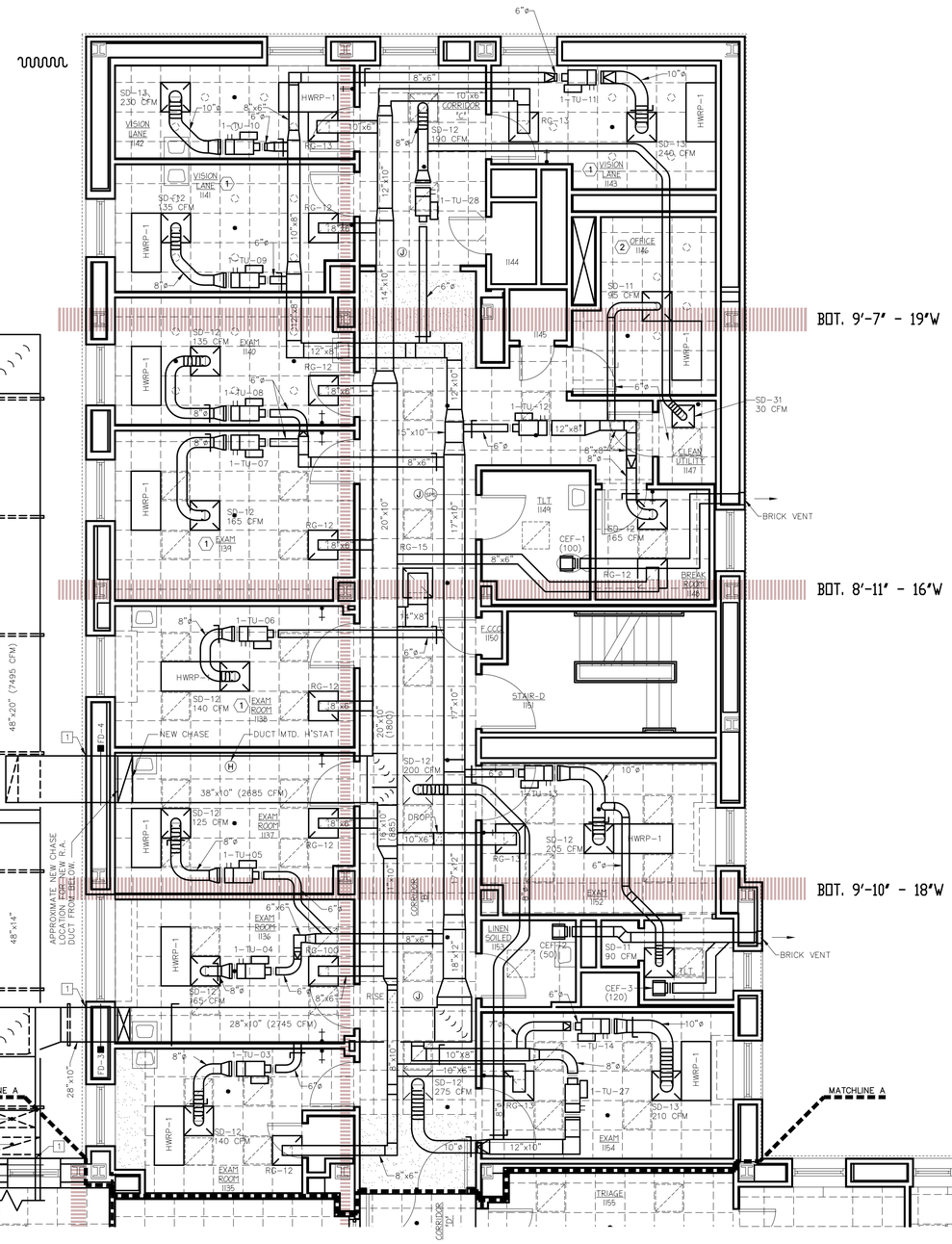


SECTION "Y-Y"





PARITIAL FIRST FLOOR PLAN - HVAC DUCTWORK

SCALE: 1/4" = 1'-0"

DUCTWORK CLASSIFICATION:

1. FROM AHU-1 TO VAV & CV TERMINALS – 2" TO 3" POSITIVE
2. DOWNSTREAM OF VAV & CV TERMINALS – 2" POSITIVE
3. ALL EXHAUST AND RETURN AIR DUCTS – 2" NEGATIVE

DUCTWORK ON ROOF:

1. ALL SUPPLY AIR DUCTWORK ON ROOF IS TO BE UNLINED SHEET METAL.
2. ALL RETURN AIR DUCTWORK ON ROOF IS TO BE LINE SHEET METAL.
3. ALL SUPPLY AND RETURN DUCTWORK ON ROOF IS TO BE COVERED WITH 2" THICK RIGID FIBER-BOARD INSULATION, WHICH IS TO BE ADHERED TO THE DUCT. ALL DUCTWORK INCLUDING DUCT SILENCERS IS THEN TO BE COVERED WITH SINGLE PLY MEMBRANE ROOFING WHICH IS TO BE ADHERED TO FIBERBOARD INSULATION AND IS TO HAVE ALL JOINTS LAPPED AND SEALED. PROTECT INSULATION WITH POLYETHENE SHEETING UNTIL ROOFING IS APPLIED.

WALL LEGEND

1-HR RATED FIRE WALL
1-HR RATED SMOKE WALL

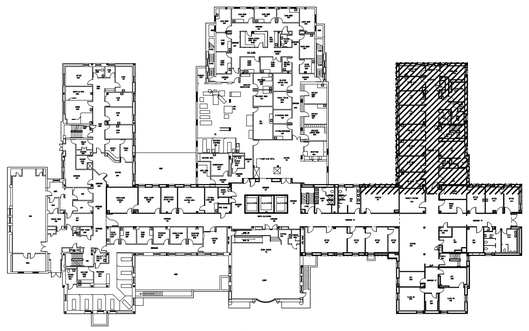
CONTRACTOR CAUTION NOTES:

THE CONTRACTOR IS TO THOROUGHLY REVIEW EXISTING LOCATIONS OF PLUMBING PIPING, MEDICAL GAS PIPING, SPRINKLER PIPING, ELECTRICAL AND DATA CONDUIT AND WIRING AND SUGGEST REVISIONS TO THE NEW HVAC SYSTEM DUCTWORK AND PIPING LAYOUTS. THESE REVISIONS ARE TO BE SHOWN ON COORDINATION DRAWINGS. THE FOLLOWING NOTES INDICATE POSSIBLE COORDINATION PROBLEM AREAS.

1. PLUMBING PIPING IN THE ENTIRE CONTRACT AREA MAY NEED TO BE REVISED TO INSTALL NEW HVAC SYSTEM COMPONENTS. ALL NECESSARY REVISIONS TO PLUMBING PIPING ARE TO BE INCLUDED IN THIS CONTRACT. AREAS SPECIFICALLY CALLED OUT WITH THIS NOTE ARE AREAS OF HEAVY CONCENTRATIONS OF EXISTING PIPING.
2. SPRINKLER PIPING IN THE ENTIRE CONTRACT AREA MAY NEED TO BE REVISED TO INSTALL NEW HVAC SYSTEM COMPONENTS. ALL NECESSARY REVISIONS TO SPRINKLER PIPING ARE TO BE INCLUDED IN THIS CONTRACT. AREAS SPECIFICALLY CALLED OUT WITH THIS NOTE ARE AREAS OF HEAVY CONCENTRATIONS OF EXISTING SPRINKLER PIPING.

SPECIFIC NOTE:

1. THE GENERAL CONTRACTOR IS TO CUT AND PATCH OPENINGS IN THE EXTERIOR WALLS NECESSARY FOR THE PASSAGE OF SUPPLY AND RETURN AIR DUCTWORK. PROVIDE ANGLE IRON LINTELS OF SIZES REQUIRED BY THE ARCHITECT. FLASH AND SEAL WALL OPENINGS AROUND DUCTS TO THE SATISFACTION OF THE V.A. AND THE ARCHITECT.
2. THE GENERAL CONTRACTOR IS TO CUT AND PATCH OPENINGS IN THE EXISTING ROOF NECESSARY FOR THE INSTALLATION OF EQUIPMENT SUPPORT RAILS FOR DUCTWORK AND ROOF CURB FOR AHU-1. GENERAL CONTRACTOR IS TO INSTALL CURB (INCLUDING FLASHING OF ROOF), CURB TO BE PROVIDED BY THE M.C. AND ASSEMBLED BY THE M.C. ON THE ROOF.



KEY PLAN

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FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

GEORGE C. DeFEAN REGISTERED 12496 STATE OF VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

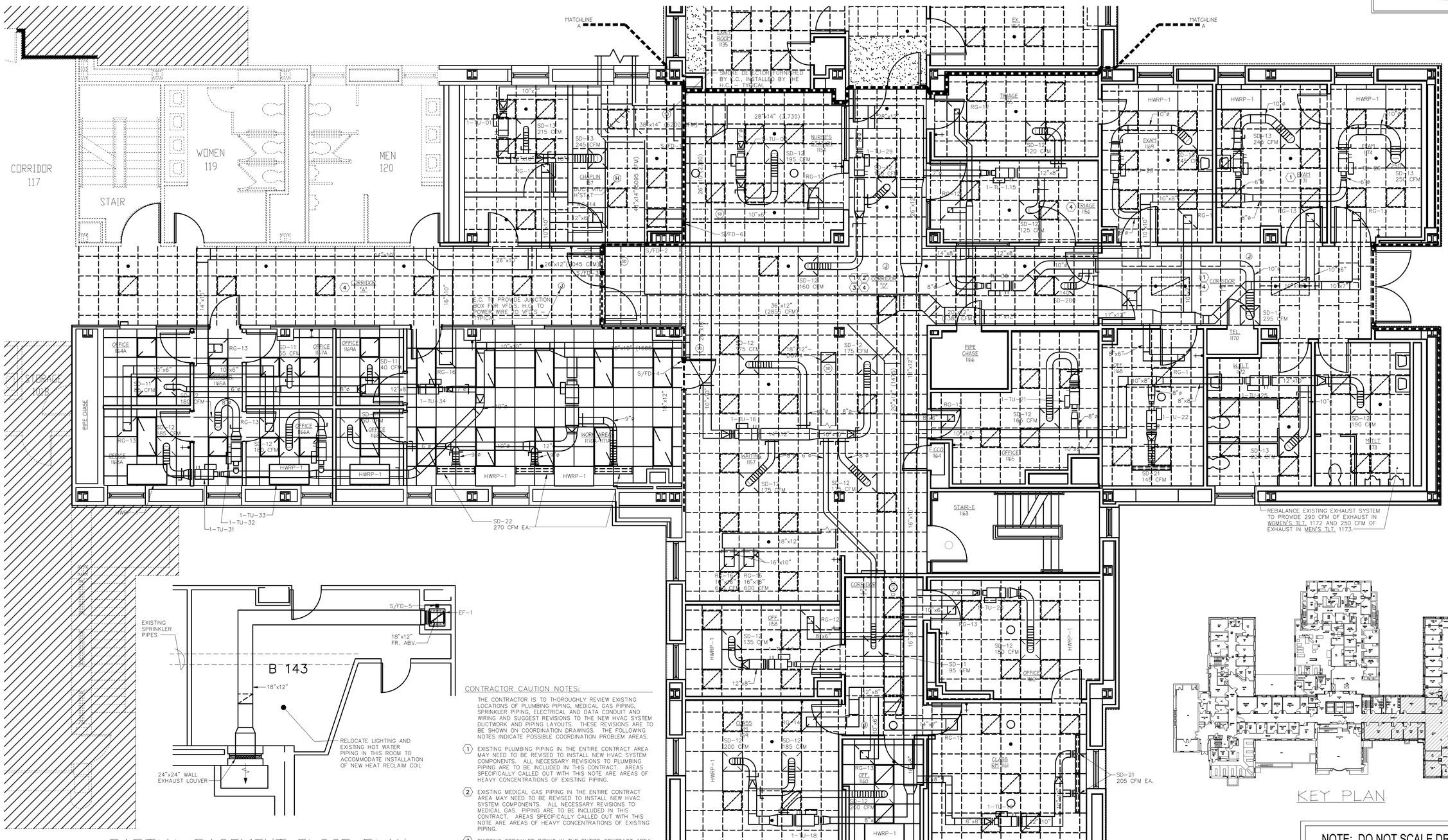
LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE PARTIAL FIRST FLOOR PLAN DUCTWORK	Project Title: FEE OFFICE - -		Project Number: 1046
Approved: Project Director	Location: CLARKSBURG, VA		Building Number: -
	Date: 10-31-2011	Checked: G.C.D. / Drawn: C.G.A.	Drawing Number: MH-401 Dwg. 17 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



PARTIAL FIRST FLOOR PLAN - HVAC DUCTWORK

SCALE: 1/4" = 1'-0"

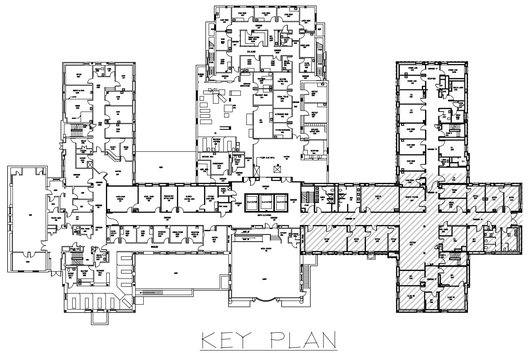
PARTIAL BASEMENT FLOOR PLAN - HVAC DUCTWORK

SCALE: 1/4" = 1'-0"

CONTRACTOR CAUTION NOTES:

THE CONTRACTOR IS TO THOROUGHLY REVIEW EXISTING LOCATIONS OF PLUMBING PIPING, MEDICAL GAS PIPING, SPRINKLER PIPING, ELECTRICAL AND DATA CONDUIT AND WIRING AND SUGGEST REVISIONS TO THE NEW HVAC SYSTEM DUCTWORK AND PIPING LAYOUTS. THESE REVISIONS ARE TO BE SHOWN ON COORDINATION DRAWINGS. THE FOLLOWING NOTES INDICATE POSSIBLE COORDINATION PROBLEM AREAS.

1. EXISTING PLUMBING PIPING IN THE ENTIRE CONTRACT AREA MAY NEED TO BE REVISED TO INSTALL NEW HVAC SYSTEM COMPONENTS. ALL NECESSARY REVISIONS TO PLUMBING PIPING ARE TO BE INCLUDED IN THIS CONTRACT. AREAS SPECIFICALLY CALLED OUT WITH THIS NOTE ARE AREAS OF HEAVY CONCENTRATIONS OF EXISTING PIPING.
2. EXISTING MEDICAL GAS PIPING IN THE ENTIRE CONTRACT AREA MAY NEED TO BE REVISED TO INSTALL NEW HVAC SYSTEM COMPONENTS. ALL NECESSARY REVISIONS TO MEDICAL GAS PIPING ARE TO BE INCLUDED IN THIS CONTRACT. AREAS SPECIFICALLY CALLED OUT WITH THIS NOTE ARE AREAS OF HEAVY CONCENTRATIONS OF EXISTING PIPING.
3. EXISTING SPRINKLER PIPING IN THE ENTIRE CONTRACT AREA MAY NEED TO BE REVISED TO INSTALL NEW HVAC SYSTEM COMPONENTS. ALL NECESSARY REVISIONS TO SPRINKLER PIPING ARE TO BE INCLUDED IN THIS CONTRACT. AREAS SPECIFICALLY CALLED OUT WITH THIS NOTE ARE AREAS OF HEAVY CONCENTRATIONS OF EXISTING SPRINKLER PIPING.
4. CONTRACTOR IS TO REVIEW EXISTING CONDUIT, WIRING, CABLE TRAYS, ETC. LOCATIONS IN THE CONTRACT AREA. CONTRACTOR IS TO REVISE DUCTWORK AND PIPING LAYOUT TO ALLOW EXISTING ELECTRICAL AND DATA ITEMS TO REMAIN IN PLACE IF POSSIBLE. WHERE EXISTING CONDUIT AND WIRING NEEDS TO BE RELOCATED THIS WORK IS TO BE INCLUDED IN THIS CONTRACT.



KEY PLAN

WALL LEGEND

1-HR RATED FIRE WALL
1-HR RATED SMOKE WALL

NOTE: DO NOT SCALE DRAWING

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ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
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WINDBER, PENNSYLVANIA 15963
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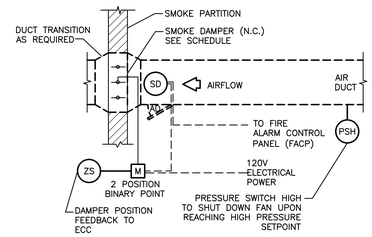
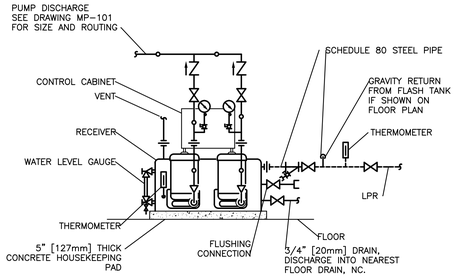


NOTE:
UPON DETECTION OF SMOKE BY THE SMOKE DETECTOR, THE SMOKE DAMPER SHALL CLOSE & SEND AN ALARM TO THE ECC.

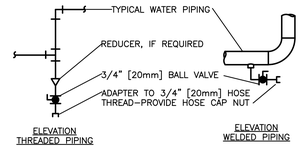
501-1 SMOKE DAMPER CONTROL DIAGRAM

NTS



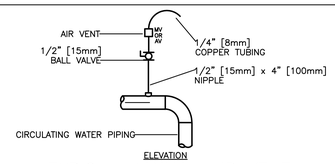
501-2 CONDENSATE PUMPS - PIPING CONNECTIONS

NTS



TYPICAL CHILLED AND HOT WATER PIPING DRAIN VALVE CONNECTIONS

NOTES:
1. DRAIN ALL LOW POINTS AS INDICATED ABOVE.
2. WHERE SCALE POCKETS ARE SHOWN ON PIPE RISER DIAGRAMS AND/OR PLANS LOCATE DRAIN AT BOTTOM OF SCALE POCKET.

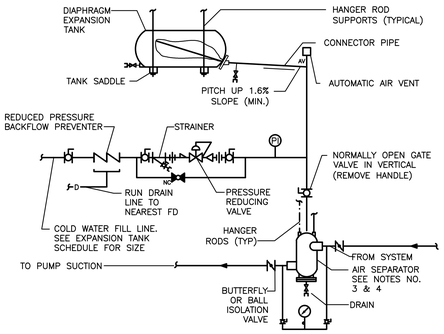


TYPICAL MANUAL AIR VENT

NOTES:
1. VENT ALL HIGH POINTS INDICATED ABOVE.
2. IF AUTOMATIC AIR VENTS ARE USED, PIPE DISCHARGE TO DRAIN.

DRAIN VALVE AND AIR VENT CONNECTIONS (HYDRONIC SYSTEMS)

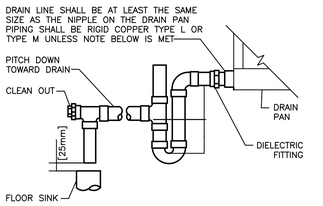
501-3 NTS



NOTES
1. SEE EXPANSION TANK SYSTEM SCHEDULE FOR COMPONENT SIZES.
2. PROVIDE STRAINER IN AIR SEPARATOR WHEN INDICATED IN EXPANSION TANK SCHEDULE.
3. FOR HOT WATER SYSTEMS 2" [50mm] AND SMALLER AND CHILLED WATER SYSTEMS USE IN-LINE AIR PURGER IN LIEU OF AIR SEPARATOR.
4. SET PRESSURE REDUCING VALVE SO PRESSURE AT HIGHEST POINT IN SYSTEM HAS A MINIMUM OF 4 PSIG. [28kPa]

HORIZONTAL EXPANSION TANK - PIPING CONNECTIONS

501-4 NTS



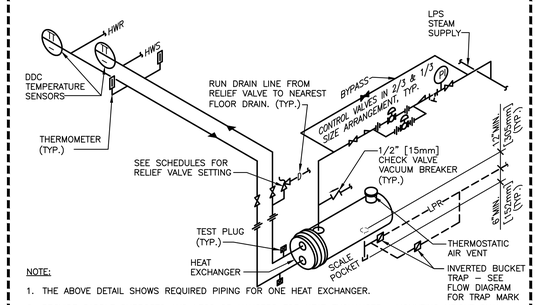
NOTE: 1. CPVC PIPE MAY BE USED ONLY IF APPROVED BY LOCAL VA AND IS INDOORS AND DOES NOT PASS THROUGH RATED BARRIERS.
2. DIELECTRIC FITTING TO BE USED WHEN TWO DISSIMILAR METALS ARE TO BE CONNECTED.

UNIT TYPE	A	B
DRAW THRU	2" [50mm] PLUS X	X
BLOW THRU	1" [25mm] MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

501-5 AIR HANDLING UNIT DRAIN TRAP DETAIL

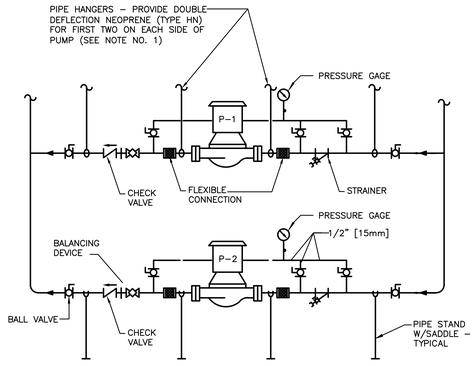
NTS



NOTE:
1. THE ABOVE DETAIL SHOWS REQUIRED PIPING FOR ONE HEAT EXCHANGER.
2. PROVIDE SADDLE SUPPORTS AND LEGS OR HANGERS FOR HEAT EXCHANGER. MOUNTING HEIGHT SHALL BE ADJUSTED TO FACILITATE GRAVITY RETURN OF STEAM CONDENSATE TO CONDENSATE PUMP RECEIVER.
3. MAKE THE BYPASS THE SAME SIZE AS THE CONNECTION TO THE LARGEST CONTROL VALVE.
4. CONTROL VALVES SHALL BE IN A ⅓ AND ⅔ SIZE ARRANGEMENT.

501-6 HEAT EXCHANGER - STEAM TO HOT WATER

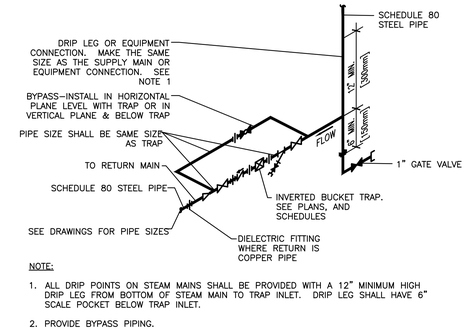
NTS



NOTES:
1. SUPPORT PUMP FROM PIPING ONLY. DO NOT SUPPORT PUMP FROM MOTOR.

501-7 IN-LINE PUMPS - CONNECTIONS

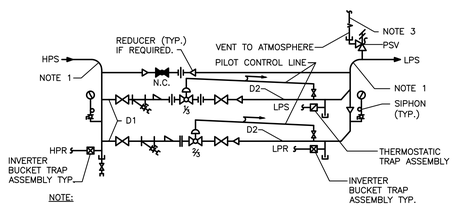
NTS



NOTE:
1. ALL DRIP POINTS ON STEAM MAINS SHALL BE PROVIDED WITH A 12" MINIMUM HIGH DRIP LEG FROM BOTTOM OF STEAM MAIN TO TRAP INLET. DRIP LEG SHALL HAVE 6" SCALE POCKET BELOW TRAP INLET.
2. PROVIDE BYPASS PIPING.

INVERTED BUCKET STEAM TRAP ASSEMBLY

501-8 NTS



NOTE:
1. SEE FLOOR PLANS FOR PIPE SIZES.
2. SEE EQUIPMENT SCHEDULES FOR VALVE DATA AND PIPE SIZES D1 AND D2. INSTALL VALVES AS RECOMMENDED BY MANUFACTURER.
3. MAKE BYPASS VALVE DISCHARGE PIPE THE SAME SIZE AS D2 FOR THE LARGEST PRV.
4. PROVIDE NECESSARY UNIONS FOR THE REMOVAL OF VALVE WITH SCREWED CONNECTIONS.

STEAM PRESSURE REDUCING STATION DOUBLE VALVE (1/3 AND 2/3)

501-9 NTS

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Drawing Title: FEE OFFICE HVAC DETAILS

Approved Project Director:

Project Title: FEE OFFICE
-
-

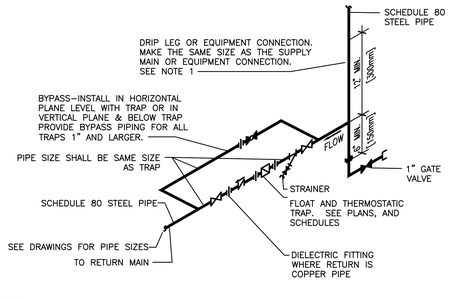
Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: C.G.A.

Project Number: 1046
Building Number: -
Drawing Number: MH-501
Dwg. 19 of 45

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

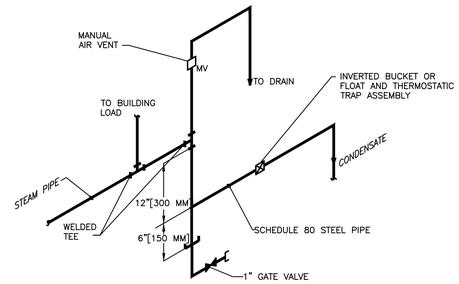


NOTE:

1. ALL DRIP POINTS ON STEAM MAINS SHALL BE PROVIDED WITH A 12" MINIMUM HIGH DRIP LEG FROM BOTTOM OF STEAM MAIN TO TRAP INLET. DRIP LEG SHALL HAVE 6" SCALE POCKET BELOW TRAP INLET.

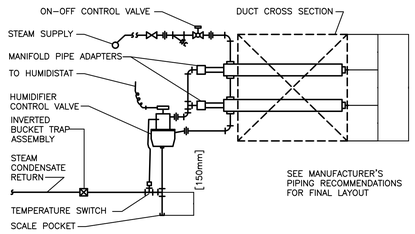
502-1 FLOAT AND THERMOSTATIC STEAM TRAP ASSEMBLY

NTS



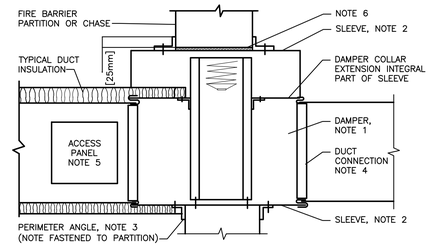
502-2 END OF STEAM LINE DRIP TRAP

NTS



502-3 STEAM HUMIDIFIER - PIPING CONNECTIONS (MULTIPLE DISPERSION TUBES)

NTS

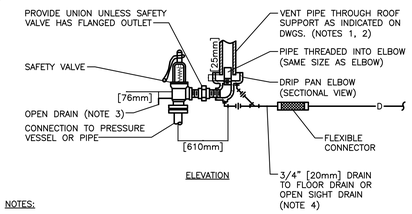


NOTE:

1. A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION, IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
2. GALVANIZED SLEEVE: GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
3. PERIMETER ANGELS: GALVANIZED STEEL, NOT LESS THAN 1 1/2"x1 1/2" [40x40mm], 14 GAGE, TO PROVIDE 1" [25mm] MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES.
4. BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA. ACCESS PANELS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS.
5. PROVIDE 1/4" TO 1/2" [6 TO 15mm] CLEARANCE ON HEIGHT AND WIDTH. FILL OPEN SPACE WITH ROCK WOOL FIRESTOP FIBER.
6. ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH 3" [75mm] HIGH
7. CONCRETE CURB AROUND OPENING FOR DUCT.

502-4 SECTION THRU FIRE DAMPER INSTALLATION

NTS

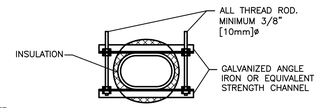


NOTES:

1. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, SIZE THE VENT PIPE SO THAT STEAM IS NOT BLOWN OUT AT THE VENT PIPE ENTRANCE. UTILIZE THE CALCULATION METHOD CONTAINED IN ANSI B31.1. POWER PIPING CODE, APPENDIX II.
2. VENT PIPE SHALL TERMINATE 6' [1829mm] MIN. ABOVE FINISHED ROOF.
3. DISCHARGE OF DRAIN MUST BE DIRECTED AWAY FROM PLATFORMS OR OTHER AREAS WHICH PERSONNEL MAY OCCUPY.
4. DO NOT CONNECT ANY OTHER DRAIN TO THE DRIP PAN ELBOW DRAIN PIPE.

502-5 STEAM SAFETY VALVE

NTS



NOTE:

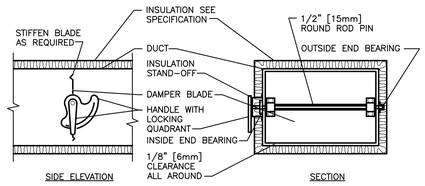
1. PROVIDE BRACING TO LIMIT THE AMPLITUDE OF WALL VIBRATION AND WALL DEFLECTION TO SPECIFIED MAXIMUMS.
2. MINIMUM BRACING REQUIREMENTS:

MAXIMUM DUCT WIDTH IN. [mm]	MAXIMUM SIZE ANGLE IN. [mm]	MAXIMUM SPACING IN. [mm]
UP TO 26 [650]	NONE	
27 [675] TO 40 [1000]	1–1/2x1–1/2x3/16 [40x40x7]	72 [1800]
41 [1000] TO 60 [1500]	2x2x3/16 [50x50x7]	48 [1200]
61 [1500] TO 72 [1800]	2x2x3/16 [50x50x7]	24 [600]

3. INSULATION: FOR COLD DUCTS INSULATE BRACES AND PROVIDE VAPOR BARRIER.

502-6 FLAT OVAL DUCT HANGERS/REINFORCEMENT

NTS

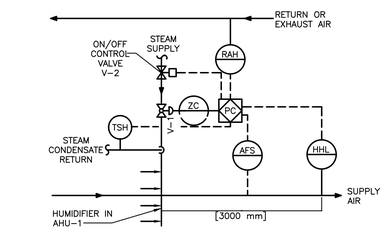


NOTE:

1. DELETE INSULATION STAND–OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI–BLADE DAMPERS & ROUND DAMPERS.

502-7 VOLUME DAMPER DETAIL

NTS

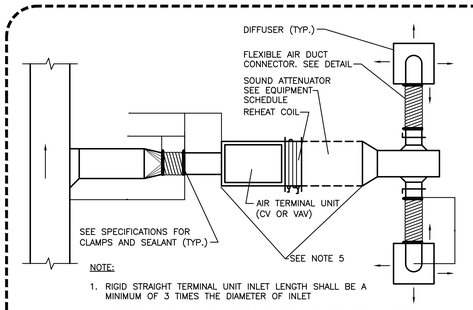


STEAM HUMIDIFIER

RETURN (OR EXHAUST) AIR HUMIDITY SHALL BE MONITORED. ON A CALL FOR HUMIDIFICATION, HUMIDIFIER VALVE V–1 SHALL MODULATE TO MAINTAIN THE RETURN (OR EXHAUST) AIR HUMIDITY SET POINT TO 30% (ADJUSTABLE). PRIOR TO ACTIVATION OF V–1, THE ON/OFF CONTROL VALVE V–2 SHALL BE ENABLED THROUGH ECC AND JACKET TEMPERATURE SENSED BY TSH SHALL BE WARM ENOUGH TO PREVENT CONDENSATION. THE HIGH LIMIT HUMIDITY SENSOR, LOCATED IN THE SUPPLY AIR DUCT 10 FEET AWAY FROM THE HUMIDIFIER SHALL DISABLE THE HUMIDIFIER AND GIVE AN ALARM SIGNAL TO THE ECC, IF THE SUPPLY AIR HUMIDITY EXCEEDS 90% RH (ADJUSTABLE). THE AIRFLOW SWITCH SHALL PROVE AIRFLOW BEFORE HUMIDITY CONTROLS ARE ACTIVATED.

502-8 STEAM HUMIDIFIER CONTROLS

NTS



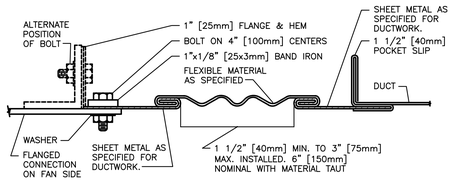
NOTE:

1. RIGID STRAIGHT TERMINAL UNIT INLET LENGTH SHALL BE A MINIMUM OF 3 TIMES THE DIAMETER OF INLET
2. A FLEXIBLE AIR DUCT CONNECTOR IS NOT MANDATORY FOR INLET TO THIS BOX, BUT ALLOWED TO ACCOMMODATE MINOR OFFSETS. MAXIMUM LENGTH 3'–0" [900mm].
3. A BRANCH DUCT SERVING AN INDIVIDUAL BOX MAY BE THE SAME SIZE AS THE BOX INLET, PROVIDED THE EQUIVALENT LENGTH OF THE BRANCH DUCT, AS SHOWN, DOES NOT EXCEED 10 FEET (3 METERS). FOR LONGER LENGTHS, INCREASE THE DUCT SIZE AND PROVIDE A DUCT TRANSITION TO MAINTAIN THE DUCT STATIC PRESSURE DROP AT OR BELOW 0.2"/100' [1.64Pa/m].
4. FLEXIBLE AIR DUCT CONNECTORS, WHEN USED FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER, SHALL NOT EXCEED 5'–0" [1500mm]. USE RIGID ELBOWS FOR CHANGE OF DIRECTION GREATER THAN 45°.
5. COMPONENT ARRANGEMENT MAY VARY BY MANUFACTURER. PROVIDE INSULATION W/VAPOR BARRIER FOR CONNECTING DUCT SECTIONS.

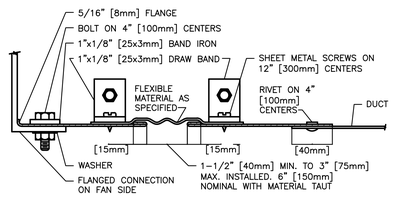
502-9 DUCT CONNECTIONS - AIR TERMINAL UNITS

NTS

DESIGNER'S NOTE: 1.INDICATE SOUND ATTENUATOR AS REQUIRED BY ACOUSTICAL ANALYSIS



RECTANGULAR FLEXIBLE CONNECTION



ROUND FLEXIBLE CONNECTION

502-10 FLEXIBLE DUCT CONNECTIONS

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FEE OFFICE HVAC DETAILS	FEE OFFICE - -	1046	
Approved Project Director	Location: CLARKSBURG, VA	Building Number: -	
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: C.G.A.	Drawing Number: MH-502 Dwg. 20 of 45	Department of Veterans Affairs

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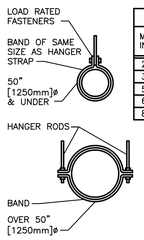
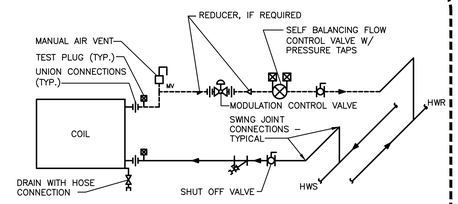


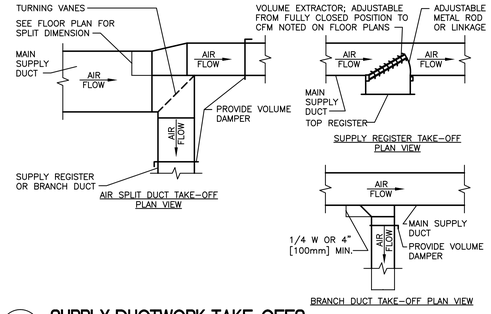
HANGER STRAPS OR RODS			
MAX. DUCT ø IN. [mm]	QUANTITY/SIZE IN. [mm]	MAX. LOAD LBS. [kg]	MAX SPACING IN. [mm]
26 [650]	ONE 1 [25] x 22 GA STRAP	260 [119]	144 [3600]
36 [900]	ONE 1 [25] x 18 GA STRAP	420 [190]	144 [3600]
50 [1250]	ONE 1 [25] x 16 GA STRAP	700 [317]	144 [3600]
60 [1500]	TWO 3/8 [10]ø. RODS	1320 [598]	144 [3600]
84 [2100]	TWO 1/2 [13]ø RODS	2500 [1133]	144 [3600]

NOTE:
TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

503-1 ROUND DUCT HANGERS
NTS

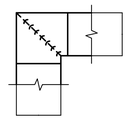


503-2 HOT WATER HEATING COILS FOR TERMINAL VAV/CV UNITS - PIPING CONNECTIONS
NTS



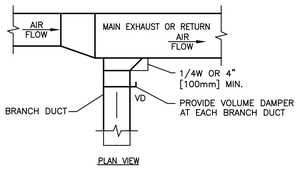
503-3 SUPPLY DUCTWORK TAKE-OFFS
NTS

DESIGNER'S NOTES:
1. THE SUPPLY REGISTER TAKE-OFF MAY BE USED FOR UP UP TO 25% OF THE MAIN DUCT CFM. THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM ANYTIME AND UP TO 40% WHEN THE MAIN DUCT VELOCITY IS 1000 FPM [5.1 M/S] OR LESS. THE AIR SPLIT DUCT TAKE-OFF SHALL BE USED IN ALL OTHER CASES AND MAY BE USED AT ANYTIME.
2. SHOW ALL VOLUME DAMPERS ON FLOOR PLANS.

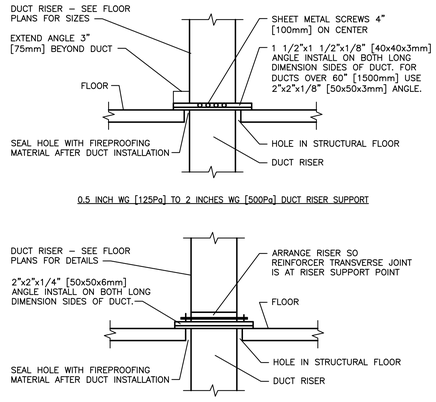


NOTE:
1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" [50mm] RADIUS, 1 1/2" [40mm] MAXIMUM SPACE BETWEEN VANES AND A 3/4" [20mm] TRAILING EDGE.
4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" [500mm] VANES SHALL BE DOUBLE VANE TYPE.

503-4 DUCTWORK SQUARE VANE ELBOWS
NTS

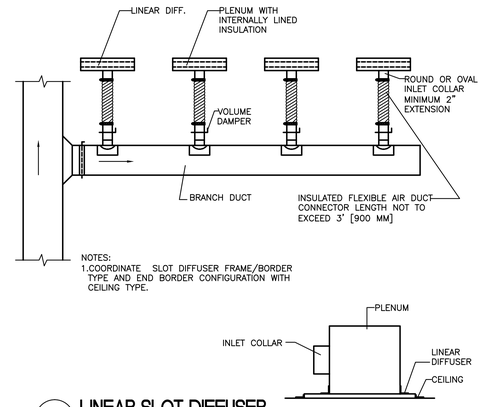


503-5 EXHAUST OR RETURN BRANCH DUCTWORK
NTS



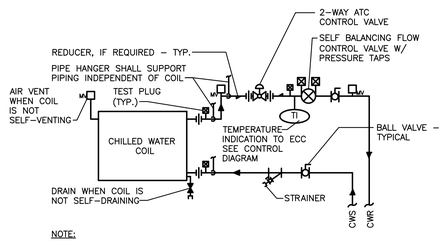
NOTE:
ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND FAN ROOM FLOORS SHALL BE PROVIDED WITH A 3" [75mm] HIGH CONCRETE CURB AROUND OPENING FOR DUCT.

503-6 DUCT RISER SUPPORTS
NTS



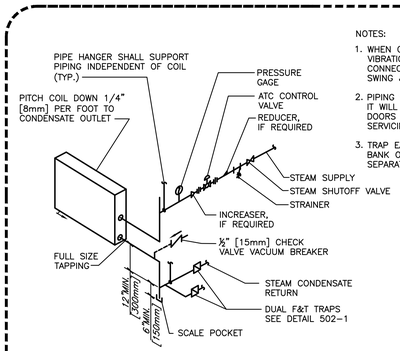
NOTES:
1.COORDINATE SLOT DIFFUSER FRAME/BORDER TYPE AND END BORDER CONFIGURATION WITH CEILING TYPE.

503-7 LINEAR SLOT DIFFUSER
NTS



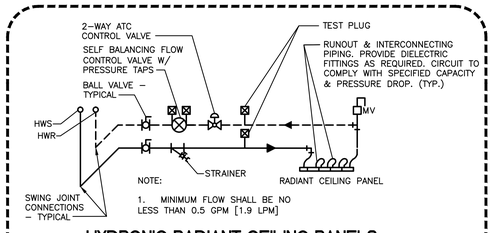
NOTE:
1. WHEN COIL IS INCLUDED IN CASING MOUNTED ON VIBRATION ISOLATORS THE FIRST 2 HANGERS FOR EACH PIPE SHALL BE SPRING & NEOPRENE TYPE. TYPE "H" FOR 4" [100mm]ø PIPE & SMALLER. TYPE "H-P" FOR 5" [125mm]ø PIPE & LARGER.
2. PIPING SHALL BE INSTALLED IN SUCH MANNER THAT IT WILL NOT BLOCK THE SWING OR USE OF ACCESS DOORS OR PANELS; NEITHER SHALL IT BLOCK THE SERVICING OF FILTERS, VALES, OR EQUIPMENT.
3. THE SELF BALANCING FLOW CONTROL VALVE MAY BE INSTALLED IN THE SUPPLY PIPING IF THE REQUIRED MINIMUM UPSTREAM AND DOWNSTREAM DIMENSIONS CANNOT BE OBTAINED IN THE RETURN PIPING.

503-8 CHILLED WATER COIL - PIPING CONNECTIONS
NTS



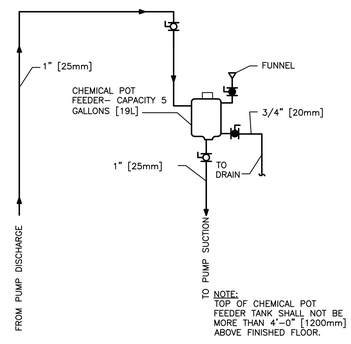
NOTES:
1. WHEN COIL IS INCLUDED IN CASING MOUNTED ON VIBRATION ISOLATOR UNITS, THE RUNOUT PIPING FOR CONNECTIONS TO COIL SHALL BE INSTALLED WITH SWING JOINTS TO ALLOW FOR THE VIBRATION.
2. PIPING SHALL BE INSTALLED IN SUCH MANNER THAT IT WILL NOT BLOCK THE SWING OR USE OF ACCESS DOORS OR PANELS; NEITHER SHALL IT BLOCK THE SERVICING OF FILTERS, VALVES, OR EQUIPMENT.
3. TRAP EACH COIL SEPARATELY WHEN INSTALLED IN A BANK OF TWO OR MORE HIGH. ALSO PROVIDE SEPARATE VACUUM BREAKER FOR EACH COIL.

503-9 STEAM COIL - PIPING CONNECTIONS
NTS



NOTE:
1. MINIMUM FLOW SHALL BE NO LESS THAN 0.5 GPM [1.9 LPM]

503-10 HYDRONIC RADIANT CEILING PANELS - PIPING CONNECTIONS
NTS



NOTE:
TOP OF CHEMICAL POT FEEDER TANK SHALL NOT BE MORE THAN 4'-0" [1200mm] ABOVE FINISHED FLOOR.

503-11 WATER TREATMENT - CLOSED SYSTEMS
NTS

NOTE: DO NOT SCALE DRAWING

EACH CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS AND ALL DIMENSIONS BEFORE BEGINNING ANY WORK. EACH CONTRACTOR IS TO FULLY COORDINATE HIS WORK WITH THAT OF OTHERS. REFER TO THE CONTRACT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

GEORGE C. DUPREE REGISTERED 12496 STATE OF PENNSYLVANIA PROFESSIONAL ENGINEER

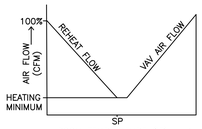
ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE HVAC DETAILS	Project Title: FEE OFFICE - -	Project Number: 1046	Office of Construction and Facilities Management
Approved: Project Director	Location: CLARKSBURG, VA	Building Number: -	
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: C.G.A.	Drawing Number: MH-503 Dwg. 21 of 45	Department of Veterans Affairs

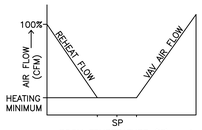
VA FORM 08-6231



VAV BOX CONTROL SEQUENCE

NO DEADBAND

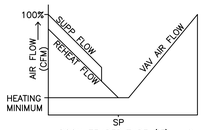
A. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
B. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF ± .5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING
C. THE REVERSE SHALL OCCUR ON THE RISE IN SPACE TEMPERATURE.



VAV BOX CONTROL SEQUENCE

W/DEADBAND

A. SET POINTS SHALL BE SET AS FOLLOWS:
COOLING 75°F (ADJ)
HEATING 70°F(ADJ)
DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINTS WILL BE MAINTAINED.
B. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
C. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF ± .5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING
D. THE REVERSE SHALL OCCUR ON THE RISE IN SPACE TEMPERATURE.



VAV BOX CONTROL SEQUENCE

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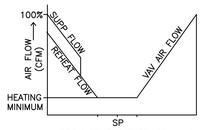
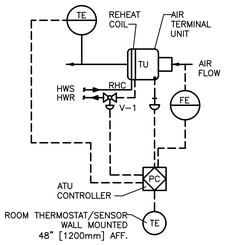
A. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
B. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF ± .5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING
C. VALVE V-2 SHALL BE ENABLED WHEN OUTSIDE AIR FALLS BELOW 40° F (ADJ) AND VALVE V-1 HAS BEEN MODULATED OPEN ABOVE 30% (ADJ). VALVE V-2 SHALL MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF ± .5°F HAS BEEN SELECTED TO PREVENT VALVE HUNTING. THE REVERSE SHALL OCCUR ON A RISE IN SPACE TEMPERATURE.



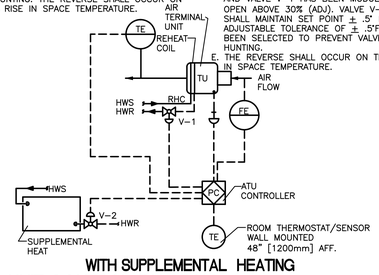
VAV BOX CONTROL SEQUENCE

W/DEADBAND

A. SET POINTS SHALL BE SET AS FOLLOWS:
COOLING 75°F (ADJ)
HEATING 70°F(ADJ)
DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINTS WILL BE MAINTAINED.
B. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
C. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF ± .5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING
D. VALVE V-2 SHALL BE ENABLED WHEN OUTSIDE AIR FALLS BELOW 40° F (ADJ) AND VALVE V-1 HAS BEEN MODULATED OPEN ABOVE 30% (ADJ). VALVE V-2 SHALL MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF ± .5°F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
E. THE REVERSE SHALL OCCUR ON THE RISE IN SPACE TEMPERATURE.



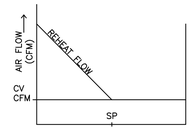
NO SUPPLEMENTAL HEATING



WITH SUPPLEMENTAL HEATING

504-1 VARIABLE VOLUME AIR TERMINAL UNIT CONTROL DIAGRAM

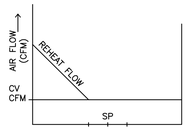
NTS



CV BOX CONTROL SEQUENCE

NO DEADBAND

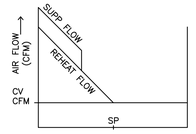
A. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5°, THE ADJUSTABLE TOLERANCE OF ± .5° HAS BEEN SELECTED TO PREVENT VALVE HUNTING
B. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.



CV BOX CONTROL SEQUENCE

W/DEADBAND

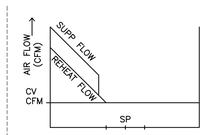
A. SET POINTS SHALL SET AS FOLLOWS:
COOLING 75° F (ADJ)
HEATING 70° F (ADJ)
DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINT WILL BE MAINTAINED
B. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5°,THE ADJUSTABLE TOLERANCE OF ± .5° HAS BEEN SELECTED TO PREVENT VALVE HUNTING
C. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.



CV BOX CONTROL SEQUENCE

NO DEADBAND

A. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5°, THE ADJUSTABLE TOLERANCE OF ± .5° HAS BEEN SELECTED TO PREVENT VALVE HUNTING
B. VALVE V-2 SHALL BE ENABLED WHEN OUTSIDE AIR FALLS BELOW 40° F (ADJ) AND VALVE V-1 HAS BEEN MODULATED OPEN ABOVE 30% (ADJ) V-2 SHALL THEN BE MODULATED TO MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF .5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
C. THE REVERSE SHALL OCCUR ON RISE IN AIR SPACE TEMPERATURE.



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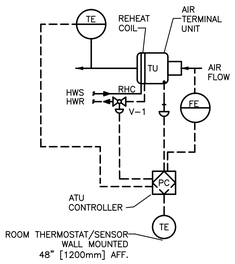
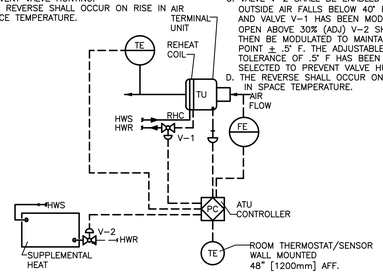
D. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.



NO SUPPLEMENTAL HEATING



WITH SUPPLEMENTAL HEATING

504-2 CONSTANT VOLUME AIR TERMINAL UNIT CONTROL DIAGRAM

NTS

NOTE: DO NOT SCALE DRAWING

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FINAL SUBMISSION - FOR CONSTRUCTION

FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

GEORGE C. DeFRANCO REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title	Project Title	Project Number	Office of Construction and Facilities Management
FEE OFFICE HVAC DETAILS	FEE OFFICE - -	1046	
Approved: Project Director	Location: CLARKSBURG, VA	Building Number: -	
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: C.G.A.	Drawing Number: MH-504	Department of Veterans Affairs
		Dwg. 22 of 45	

VA FORM 08-6231

HVAC DESIGN DATA

DESIGN CONDITIONS	SUMMER TEMP °F	SUMMER TEMP [°C]	SUMMER WET BULB TEMP °F	SUMMER WET BULB TEMP [°C]	SUMMER % HUMIDITY	WINTER TEMP °F	WINTER TEMP [°C]	WINTER DEWPOINT TEMP °F	WINTER DEWPOINT TEMP [°C]	WINTER % HUMIDITY	LOWEST AVERAGE ANNUAL DEWPOINT °F	LOWEST AVERAGE ANNUAL DEWPOINT [°C]
OUTDOOR DESIGN CONDITIONS	92	[33]	76	[24]	49	6	[-14]	0	[-18]	NA	-5	[-21]
INDOOR AREA DESIGN CONDITIONS												
EXAMINATION ROOM	75	[24]	---		20-60	70	[21]	---		20-60		
VISUAL FIELD	75	[24]	---		20-60	70	[21]	---		20-60		
ADMISSION / WAITING	75	[24]	---		20-60	70	[21]	---		20-60		
CLASSROOM	75	[24]	---		20-60	70	[21]	---		20-60		
CORRIDORS	75	[24]	---		20-60	70	[21]	---		20-60		
OFFICES	75	[24]	---		20-60	70	[21]	---		20-60		
TOILETS	---		---		---	68	[20]	---		---		
CLEAN UTILITY	---		---		---	68	[20]	---		---		
SOILED UTILITY	---		---		---	68	[20]	---		---		

SMOKE AND COMBINATION FIRE/SMOKE DAMPER SCHEDULE

MARK	LOCATION	FAN SYSTEM	SYSTEM AND/OR SERVICE	DUCT SIZE IN	DUCT SIZE [mm]	DUCT PRESSURE CLASS IN WG	DUCT PRESSURE CLASS [Pa]	REMARKS
FD-1	CHAPLIN 157	N/A	AHU-1	38X14	[ ]	0.2	[50]	SUPPLY AIR DUCT
FD-2	CHAPLIN 157	N/A	AHU-1	46X14	[ ]	0.08	[20]	RETURN AIR DUCT
FD-3	EXAM RM. 1136	N/A	AHU-1	28X10	[ ]	0.2	[50]	SUPPLY AIR DUCT
FD-4	EXAM RM. 1137	N/A	AHU-1	38X10	[ ]	0.08	[20]	RETURN AIR DUCT
S/FD-1	NURSE'S ST. 1134	N/A	AHU-1	38X14	[ ]	0.2	[50]	SUPPLY AIR DUCT
S/FD-2	CORRIDOR 'D'	N/A	AHU-1	48X14	[ ]	0.08	[20]	RETURN AIR DUCT
S/FD-3	CORRIDOR 'A'	N/A	AHU-1	26X12	[ ]	0.08	[20]	RETURN AIR DUCT
S/FD-4	WORK AREA 1170A-1171A	N/A	AHU-1	18X10	[ ]	0.2	[50]	SUPPLY AIR DUCT
S/FD-5	WORK AREA 1170A-1171A	EF-1	N/A	18X12	[ ]	0.08	[20]	EXHAUST AIR DUCT
S/FD-6	NURSE'S ST. 1134	N/A	AHU-1	10X6		0.08	[20]	RETURN AIR DUCT

FAN SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW CFM	AIR FLOW [L/s]	TSP IN	TSP [Pa]	FAN TYPE	FAN WHEEL	FAN CLASS	FAN ARRANGEMENT, ROTATION, AND DISCHARGE	FAN DIAMETER IN	FAN DIAMETER [mm]	FAN MIN % EFF	FAN DRIVE	FAN MAX RPM	MOTOR ELECTRICAL NOMINAL POWER BHP	NOMINAL POWER HP	NOMINAL POWER [kW]	PHASE	VOLT	RPM	SPEED CONTROL	CONTROL SEQUENCE	REMARKS
CEF-1	TOILET 1149	TOILET 1149	EXHAUST	100	[47]	0.25	[63]	CABINET	N/A	N/A	CEILING	8	[200]	N/A	DIRECT	1100	0.07	0.07	[ ]	1	120				
CEF-2	SOILED LINEN 1153	SOILED LINEN 1153	EXHAUST	40	[19]	0.25	[63]	CABINET	N/A	N/A	CEILING	6	[150]	N/A	DIRECT	838	0.02	0.02	[ ]	1	120				
CEF-3	TOILET 1152	TOILET 1152	EXHAUST	120	[57]	0.25	[63]	CABINET	N/A	N/A	CEILING	8	[200]	N/A	DIRECT	1183	0.15	0.15	[ ]	1	120				
EF-1	WAITING 1157	WAITING 1157	EXHAUST	1200	[570]	0.625	[160]	BOX	N/A	N/A	DOWN FLOW	21	[530]	N/A	DIRECT	1416	.26	.5	[ ]	1	120				
SF-1	1-AHU-1	FEE OFFICE	SUPPLY AIR	9605	[4500]	2	[500]	CENTRIFUGAL	AIRFOIL	2	TOP HORIZONTAL	21.5	[540]		BELT	2547	13.27	15	[11]	3	460	2029	VFD		
RF-1	1-AHU-1	FEE OFFICE	RETURN AIR	9605	[4500]	1	[250]	CENTRIFUGAL	AIRFOIL	1	TOP HORIZONTAL	21.56	[540]		BELT	1700	4	5	[4]	1	460	1361	VFD		

SOUND ATTENUATING DEVICE SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	AIRFLOW CFM	AIRFLOW [L/s]	APD IN WG	APD [Pa]	INLET SIZE IN	INLET SIZE [mm]	LENGTH IN	LENGTH [mm]	DYNAMIC INSERTION LOSS DB OCTAVE BAND AND MID-FREQUENCY [CPS] 63	125	250	500	1000	2000	4000	8000	REMARKS
DS-1	MAINTENANCE GARAGE ROOF	AHU-1	DUCT SILENCER	9600	[4500]	0.05	[13]	36"x24"	[240000]	36	[900]	3	4	9	18	17	12	9	8	----
DS-2	MAINTENANCE GARAGE ROOF	AHU-1	DUCT SILENCER	9600	[4500]	0.05	[13]	36"x24"	[ ]	36	[900]	3	4	9	18	17	12	9	8	----

NOTE

IN THE INLET SIZE COLUMN, WHEN ONE VALUE IS INDICATED, THE DUCT IS A ROUND DUCT. IF SIZE IS INDICATED AS ##" x ##," THE DUCT IS A RECTANGULAR DUCT WITH SPECIFICATIONS OF "DUCT WIDTH" BY "DUCT DEPTH."

AIR FILTER SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	MERV RATING	AIR FLOW CFM	AIR FLOW [L/s]	APD INITIAL IN	APD INITIAL [mm]	APD CHANGEOVER IN	APD CHANGEOVER [mm]	HOUSING TYPE	CARTRIDGES #	CARTRIDGES SIZE IN	CARTRIDGES SIZE [mm]	ARRANGEMENT	REMARKS
F-1	1-AHU-1	FEE OFFICE	1-AHU-1	7	9605	[4500]	0.19	[5]	1	[25]	SIDE SERVICE	4	24X20X2 + 20X20X2		PRE-FILTER	FOUR OF EACH SIZE OF FILTER PROVIDED PER UNIT
F-2	1-AHU-1	FEE OFFICE	1-AHU-1	11	9605	[4500]	0.3	[8]	1.2	[30]	SIDE SERVICE	4	24X20X12 + 20X20X12		AFTER-FILTER	FOUR OF EACH SIZE OF FILTER PROVIDED PER UNIT
F-3	1-AHU-1	FEE OFFICE	1-AHU-1	14	9605	[4500]	0.44	[11]	1.2		BAG-IN BAG-OUT	4	24X20X12 + 20X20X12		FINAL-FILTER	FOUR OF EACH SIZE OF FILTER PROVIDED PER UNIT

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CONSULTANTS:

FLOYD C. DeFRAIN REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

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Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

STEAM TO WATER HEAT EXCHANGER SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	TYPE	WATER CONDITIONS								STEAM PRESSURE				CONTROL VALVE		TRAP			REMARKS
					FLOW		EWT		LWT		WPD		ENT CONTROL VALVE		ENT HEAT EXCHANGER				TRAP #	CAPACITY		
					GPM	[L/s]	°F	[°C]	°F	[°C]	FT	[kPa]	PSIG	[kPa]	PSIG	[kPa]	LBS/HR	[kg/HR]		LBS/HR	[kg/HR]	
HX-1	MAINT GARAGE	FEE OFFICE	STEAM TO HW	SHELL & TUBE	55	[4]	180	[82]	160	[71]	< 1.0	#VALUE!	15	[100]	5	[35]	574	[260]	1-IB1 2-IB1		[ ]	----

EXPANSION TANK SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	APPROX SYSTEM VOLUME		SYSTEM TEMPERATURE RANGE				INITIAL PRESSURE IN TANK		MAX OPERATING PRESSURE		FILL PRESSURE AT TANK				MIN VOLUME TANK		MIN BLADDER VOLUME		PIPE SIZE TO TANK		COLD WATER FILL SIZE		REMARKS
						MIN		MAX						RELIEF VALVE		AT TANK										
				GAL	[L]	°F	[°C]	°F	[°C]	PSIG	[kPa]	PSIG	[kPa]	PSIG	[kPa]	PSIG	[kPa]	GAL	[L]	GAL	[L]	IN	[mm]	IN	[mm]	
EXP-1	MAINTENANCE GARAGE	TERMINAL UNITS RADIANT CLG. PANELS		225	[850]	50	[10]	180	[82]	12	[83]	125	[860]	12	[83]	30	[210]	21.7	[82]	N/A	#VALUE!		[ ]	N/A	#VALUE!	

AIR SEPARATOR SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	AIR SEPARATOR							REMARKS
				SIZE IN		FLOW		WPD		BUILT-IN STRAINER REQ'D	
				IN	[mm]	GPM	[L/s]	<FT	[kPa]		
1-AS1	MAINTENANCE ROOM	HW SYSTEM FOR FEE OFF / RED FIRM	TANGENTIAL	2.5	[63]	52	[3]	1	[3]	NO	---

PUMP SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	TYPE	CIRCULATING FLUID									MIN % EFF	ELECTRICAL MOTOR						REMARKS
					FLUID	FLOW		HEAD		NPSH AVAILABLE		TEMPERATURE		SP GR	NOMINAL POWER		PHASE	VOLT	MAX RPM	SPEED CONTROL	
						GPM	[L/s]	FT	[kPa]	FT	[kPa]	°F	[°C]		HP	[kW]					
P-1	MAINT. ROOM	FEE OFFICE & RED FIRM	AIR TERM. COILS & RADIANT CLG. PANELS	INLINE	HOT WATER	52	[3]	35	[560]	5	N/A	180	[82]	---	53	1.5	[1]	3	208	1800	YES	---
P-2	MAINT. ROOM	FEE OFFICE & RED FIRM	AIR TERM. COILS & RADIANT CLG. PANELS	INLINE	HOT WATER	52	[3]	35	[560]	5	N/A	180	[82]	---	53	1.5	[1]	3	208	1800	YES	---

STEAM HUMIDIFER SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SEVICE	HUMIDIFIER TYPE	AIR FLOW		# OF MANIFOLDS	EAT						LAT		SOURCE	STEAM						CONTROL TYPE	TRAP			REMARKS
							Db		Wb		DEWPOINT		DEWPOINT			PRESS ENT VALVE		PRESS ENT HEATER		FLOW			MARK	CAPACITY		
				CFM	[L/s]		°F	[°C]	°F	[°C]	°F	[°C]	°F	[°C]		PSIG	[kPa]	PSIG	[kPa]	LBS/HR	[kg/HR]			LBS/HR	[kg/HR]	
1-SH1	0190 MER	1-AHU1	UNIT-MOUNTED DISPERSION TUBE	9,605	[4500]	3	75	[24]	48	[9]	10	[-12]	45	[7]	CLEAN STEAM	15	[100]	8	[55]	170	[77]	C-1	1-TP7	500	[230]	

STEAM HEATING COIL SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	APPLICATION	AIR FLOW		MAX FACE VELOCITY		APD		TEMPERATURES				TOTAL MIN CAPACITY		STEAM									REMARKS
											EAT		LAT				ENT CONT VALVE		ENT COIL		FLOW		STEAM TRAP			
					CFM	[L/s]	FPM	[M/s]	IN WG	[Pa]	°F	[°C]	°F*	[°C]	MBH	[kW]	PSIG	[kPa]	PSIG	[kPa]	LBS/HR	[kg/HR]	MARK	LBS/HR	[kg/HR]	
1-SHC1	MAINTENANCE GARAGE ROOF	FEE OFFICE/ RED FIRM	1-AHU1	HEATING	9605	[4500]	635	[2.54]	0.11	[28]	46.3	[8]	80.7	[27]	362	[1200]	15	[100]	5	[35]	376	[170]	1-FT1 2-FT1	752	[340]	INTEGRAL FACE & BYPASS

STEAM PRESSURE REDUCING AND CONTROL VALVE SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	QUANTITY	REQUIRED CAPACITY		MAX FLOW WIDE OPEN VALVE		PRESSURE				REMARKS
								IN		OUT		
				LBS/HR	[kg/HR]	LBS/HR	[kg/HR]	PSIG	[kPa]	PSIG	[kPa]	
SPRV-1	LOADING DOCK	100-15 PSIG	1	492	[220]		[ ]	100	[690]	15	[100]	
SPRV-2	LOADING DOCK	100-15 PSIG	1	983	[450]			100	[690]	15	[100]	
SCV-1	MAINTENANCE GARAGE	HX-1	1	192	[87]		[ ]	15	[100]	5	[35]	
SCV-2	MAINTENANCE GARAGE	HX-1	1	382	[170]		[ ]	15	[100]	5	[35]	

STEAM CONDENSATE PUMP SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE UNIT	FLOW EACH PUMP		DISCHARGE PRESSURE		MIN RECEIVER SIZE		MOTOR					REMARKS
										NOMINAL POWER EACH		PHASE	VOLT	RPM	
				GPM	[L/s]	PSIG	[kPa]	GAL	[L]	HP	[W]				
CP-1	MECH ROOM	CONDENSATE RETURN	DUPLEX	9	[.6]	25	[170]	14	[53]	0.75	[560]	3	208	1750	---

STEAM TRAP SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	CAPACITY AT MIN DIFF PRESS		MIN DIFF PRESS		MIN INLET PRESS		TRAP TYPE	TRAP SIZE		ORIFACE SIZE		REMARKS
			LBS/HR	[kg/HR]	PSI	[kPa]	PSI	[kPa]		IN	[mm]	IN	[mm]	
1-FT1	AHU-1	1-SHC1	775	[350]	.5	[4]	5	[35]	F&T	1	[25]	.34	[9]	---
2-FT1	AHU-1	1-SHC1	775	[350]	.5	[4]	5	[35]	F&T	1	[25]	.34	[9]	---
3-FT1	MAINT. ROOM	END OF LPS MAIN	1200	[540]	.5	[35]	15	[100]	F&T	.75	[19]	.21	[5]	---
4-FT1	LOADING DOCK	1/3 PR. VALVE	1200	[540]	.5	[35]	15	[100]	F&T	.75	[19]	.21	[5]	---
1-IB1	MAINT. ROOM	HX-1	1750	[790]	.5	[4]	5	[35]	IB	1.0	[25]	.5	[13]	---
2-IB1	MAINT. ROOM	HX-1	1750	[790]	.5	[4]	5	[35]	IB	1.0	[25]	.5	[13]	---
3-IB1	LOADING DOCK	2/3 PR VALVE	830	[380]	.5	[35]	15	[100]	IB	.75	[19]	.25	[6]	---
4-IB1	LOADING DOCK	END OF HPS MAIN	625	[280]	50	[350]	100	[690]	IB	.75	[19]	.11	[3]	---

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GEORGE C. DeFILIPPI REGISTERED PROFESSIONAL ENGINEER 12496 STATE OF WEST VIRGINIA

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

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Dwg. 24 of 45

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

AIR TERMINAL UNIT SIZING SCHEDULE

SIZE	MIN ALLOWABLE AIR FLOW		MAX ALLOWABLE AIR FLOW		DUCT INLET SIZE		MAX APD		MAXIMUM SOUND POWER LEVEL (Re: 10^{-12} WATTS) FOR BOX DISCHARGE AT MAXIMUM INLET DUCT						HOT WATER HEATING COIL - SEE SEPARATE SCHEDULE										REMARKS
									OCTAVE BANDS						EAT		EWT		FLOW		MAX WPD		PIPE RUNOUT SIZE TO COIL		
	CFM	[L/s]	CFM	[L/s]	IN	[mm]	IN WG	[Pa]	2	3	4	5	6	7	°F	[°C]	°F	[°C]	GPM	[L/m]	FT	[kPa]	IN	[mm]	
A	~~60~~	~~[28]~~	~~170~~	~~[80]~~	~~4~~	~~[100]~~	~~0.4~~	~~[100]~~	~~69~~	~~65~~	~~58~~	~~52~~	~~51~~	~~47~~	~~55~~	~~[13]~~	~~140~~	~~[60]~~	~~0.5~~	~~[2]~~	~~3~~	~~[9]~~	~~0.75~~	~~[19]~~	NOT USED
B	~~90~~	~~[42]~~	~~260~~	~~[120]~~	~~5~~	~~[130]~~	~~0.4~~	~~[100]~~	~~69~~	~~63~~	~~59~~	~~52~~	~~51~~	~~47~~	~~55~~	~~[13]~~	~~140~~	~~[60]~~	~~0.5~~	~~[2]~~	~~3~~	~~[9]~~	~~0.75~~	~~[19]~~	NOT USED
C	130	[61]	300	[140]	6	[150]	0.4	[100]	69	67	61	55	52	49	55	[13]	140	[60]	0.7	[3]	4	[12]	0.75	[19]	----
D	~~160~~	~~[76]~~	~~490~~	~~[230]~~	~~7~~	~~[180]~~	~~0.4~~	~~[100]~~	~~70~~	~~68~~	~~63~~	~~57~~	~~53~~	~~49~~	~~55~~	~~[13]~~	~~140~~	~~[60]~~	~~0.7~~	~~[3]~~	~~4~~	~~[12]~~	~~0.75~~	~~[19]~~	NOT USED
E	230	[110]	500	[240]	8	[200]	0.4	[100]	71	68	59	53	51	47	55	[13]	140	[60]	1	[4]	3	[9]	0.75	[19]	----
F	~~270~~	~~[130]~~	~~790~~	~~[370]~~	~~9~~	~~[230]~~	~~0.4~~	~~[100]~~	~~71~~	~~69~~	~~60~~	~~54~~	~~51~~	~~47~~	~~55~~	~~[13]~~	~~140~~	~~[60]~~	~~1.5~~	~~[6]~~	4	~~[12]~~	~~0.75~~	~~[19]~~	NOT USED
G	350	[170]	800	[380]	10	[250]	0.4	[100]	74	68	61	57	54	52	55	[13]	140	[60]	1.5	[6]	4	[12]	0.75	[19]	----
H	500	[240]	1000	[470]	12	[300]	0.4	[100]	73	69	64	59	57	53	55	[13]	140	[60]	2.5	[10]	3	[9]	0.75	[19]	---
I	~~750~~	~~[350]~~	~~2250~~	~~[1100]~~	~~14~~	~~[350]~~	~~0.4~~	~~[100]~~	~~73~~	~~68~~	~~65~~	~~61~~	~~61~~	~~59~~	~~55~~	~~[13]~~	~~140~~	~~[60]~~	~~3.5~~	~~[13]~~	4	~~[12]~~	~~0.75~~	~~[19]~~	NOT USED
J	~~1000~~	~~[470]~~	~~3000~~	~~[1400]~~	~~16~~	~~[400]~~	~~0.4~~	~~[100]~~	~~73~~	~~68~~	~~66~~	~~60~~	~~58~~	~~55~~	~~55~~	~~[13]~~	~~140~~	~~[60]~~	~~4.5~~	~~[17]~~	4	~~[12]~~	~~1~~	~~[25]~~	NOT USED

NOTES

1. INLET STATIC BASED ON ARI 885-98.
2. THIS SCHEDULE IS USED WITH THE TERMINAL UNIT SCHEDULE AND HOT WATER HEATING COIL SCHEDULE.
3. CONTROL SEQUENCE SHALL BE AS INDICATED ON THE AIR TERMINAL UNIT SCHEDULE.
4. PROVIDE SOUND ATTENUATION AFTER-SECTION AS REQUIRED TO MEET ROOM NC LEVEL.

RADIANT CEILING PANEL SCHEDULE (HYDRONIC)

MARK	ROOM LOCATION	AREA SERVED	PANEL SIZE		HEATING										REMARKS
					HEATING CAPACITY		EWT		LWT		HOT WATER FLOWRATE		WPD		
			IN	[mm]	BTUH	[W]	°F	[°C]	°F	[°C]	GPM	[L/m]	FT	[kPa]	
HWRP-1	EXAM ROOM 1135	EXAM ROOM 1135	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	----
HWRP-1	EXAM ROOM 1136	EXAM ROOM 1136	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	EXAM ROOM 1137	EXAM ROOM 1137	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	EXAM ROOM 1138	EXAM ROOM 1138	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	EXAM ROOM 1139	EXAM ROOM 1139	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	EXAM ROOM 1140	EXAM ROOM 1140	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	VISION LANE 1141	VISION LANE 1141	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	VISION LANE 1142	VISION LANE 1142	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	VISION LANE 1143	VISION LANE 1143	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1146	OFFICE 1146	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	EXAM ROOM 1152	EXAM ROOM 1152	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	EXAM ROOM 1154	EXAM ROOM 1154	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1158	OFFICE 1158	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	CLASSROOM 1159	CLASSROOM 1159	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1160	OFFICE 1160	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1162	OFFICE 1162	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1163A	OFFICE 1163A	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1166A	OFFICE 1166A	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1168A	OFFICE 1168A	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1169	OFFICE 1169	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1171	OFFICE 1171	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	
HWRP-1	OFFICE 1174	OFFICE 1174	48 X 24	[1200 X 600]	1,500	[440]	180	[53]	160	[47]	0.5	[2]	0.23	[1]	

SINGLE DUCT AIR TERMINAL UNIT SCHEDULE

MARK	LOCATION	AREA AND/OR ROOM SERVED	SYSTEM AIR HANDLING	SIZE	AIR FLOW				ADDITIONAL SOUND ATTUNATION REQUIRED	CONTROL TYPE	CONTROL SEQUENCE	HEATING COIL			PERIMETER SUPPLEMENTAL HEAT LINK (RADIANT CLG. PANEL)	REMARKS
					MAX		MIN									
					CFM	[L/s]	CFM	[L/s]				HW	ELEC	NONE		
1-TU-01	CORRIDOR "A"	CHAPLIN ASST. 156 CHAPLIN 157	1-AHU1	E	460	[220]	176	[83]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	NONE NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-02	NURSES STATION 1134	NURSES STATION 1134	1-AHU1	C	195	[92]	128	[60]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-03	EXAM ROOM 1135	EXAM ROOM 1135	1-AHU1	C	140	[66]	108	[51]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-04	EXAM ROOM 1136	EXAM ROOM 1136	1-AHU1	C	165	[78]	124	[59]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-05	EXAM ROOM 1137	EXAM ROOM 1137	1-AHU1	C	125	[59]	121	[57]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-06	EXAM ROOM 1138	EXAM ROOM 1138	1-AHU1	C	140	[66]	126	[59]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-07	EXAM ROOM 1139	EXAM ROOM 1139	1-AHU1	C	165	[78]	148	[70]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-08	EXAM ROOM 1140	EXAM ROOM 1140	1-AHU1	C	135	[64]	108	[51]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-09	VISION LANE 1141	VISION LANE 1141	1-AHU1	C	135	[64]	73	[34]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-10	VISION LANE 1142	VISION LANE 1142	1-AHU1	C	230	[110]	143	[67]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-11	VISION LANE 1143	VISION LANE 1143	1-AHU1	C	240	[110]	149	[70]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-12	CORRIDOR "B"	OFFICE 1146 BREAK RM. 1148	1-AHU1	C	260	[120]	138	[65]	NONE	VAV VAV VAV	5 DEGREE DEADBAND	X	---	---	YES NONE NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-13	EXAM ROOM 1152	EXAM ROOM 1152 EXAM TLT. 1152A	1-AHU1	C	295	[140]	181	[85]	NONE	VAV VAV	5 DEGREE DEADBAND	X	---	---	YES NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-14	EXAM ROOM 1154	EXAM ROOM 1154	1-AHU1	C	210	[99]	134	[63]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-15	TRIAGE 1156	TRIAGE 1155 TRIAGE 1156	1-AHU1	C	245	[120]	220	[100]	NONE	VAV VAV	5 DEGREE DEADBAND	X	---	---	NONE NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-16	WAITING 1157	WAITING 1157 CORRIDOR 'E'	1-AHU1	H	795	[380]	795	[380]	NONE	CV CV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-17	OFFICE 1158	OFFICE 1158	1-AHU1	C	135	[64]	80	[38]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-18	CLASSROOM 1159	CLASSROOM 1159 OFFICE 1160	1-AHU1	G	600	[280]	280	[130]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-19	CLASSROOM 1161	CLASSROOM 1161	1-AHU1	E	410	[190]	212	[100]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-20	CLASSROOM 1162	CLASSROOM 1162	1-AHU1	C	180	[85]	109	[51]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-21	OFFICE 1165	OFFICE 1165	1-AHU1	C	165	[78]	100	[47]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-22	OFFICE 1168	OFFICE 1168	1-AHU1	C	195	[92]	95	[45]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-23	EXAM 1169	EXAM 1169	1-AHU1	C	245	[120]	141	[67]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-24	EXAM 1171	EXAM 1171	1-AHU1	C	210	[99]	139	[66]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-25	W TLT. 1172	W TLT. 1172 M TLT. 1173	1-AHU1	E	410	[190]	410	[190]	NONE	CV CV	5 DEGREE DEADBAND	X	---	---	NONE NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-26	EXAM 1174	EXAM 1174	1-AHU1	C	250	[120]	156	[74]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-27	EXAM ROOM 1154	CORRIDOR "B"	1-AHU1	E	475	[220]	475	[220]	NONE	CV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-28	CORRIDOR "C"	CLEAN UTIL. 1149	1-AHU1	C	220	[100]	220	[100]	NONE	CV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-29	CORRIDOR "D"	CORRIDOR "D"	1-AHU1	E	310	[150]	310	[150]	NONE	CV	5 DEGREE DEADBAND	X	---	---	NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-30	CORRIDOR "D"	CORRIDOR "D" CORRIDOR "F"	1-AHU1	E	445	[210]	445	[210]	NONE	CV CV	5 DEGREE DEADBAND	X	---	---	NONE NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-31	OFFICE 1163A	OFFICE 1163A	1-AHU1	C	180	[85]	70	[33]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-32	CORRIDOR 1165A	CORRIDOR 1165A	1-AHU1	C	180	[85]	70	[33]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-33	OFFICE 1166A	OFFICE 1166A	1-AHU1	C	185	[87]	75	[35]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	YES	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-34	WORK AREAS 1170A - 1171A	OFFICE 1164A OFFICE 1167A OFFICE 1169A	1-AHU1	C	180	[85]	118	[56]	NONE	VAV VAV VAV	5 DEGREE DEADBAND	X	---	---	NONE NONE NONE	UNIT TO BE FURNISHED WITH FLOW SENSORS
1-TU-35	WORK AREAS 1170A - 1171A	WORK AREAS 1170A - 1171A OFFICE 1168A	1-AHU1	H	860	[410]	435	[210]	NONE	VAV	5 DEGREE DEADBAND	X	---	---	NONE YES	UNIT TO BE FURNISHED WITH FLOW SENSORS

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FULLY SPRINKLERED

Revisions: | Date

CONSULTANTS:

GEORGE C. DeFEAN REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6577 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE HVAC SHEDULES CONT.

Approved: Project Director

Project Title: FEE OFFICE
Location: CLARKSBURG, VA
Date: 10-31-2011 | Checked: G.C.D. | Drawn: C.G.A.

Project Number: 1046
Building Number: –
Drawing Number: MH-603
Dwg. 25 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

AIR DEVICE SCHEDULE (SUPPLY)

MARK	TYPE	AIR FLOW MIN CFM	AIR FLOW MIN [L/s]	AIR FLOW MAX CFM	AIR FLOW MAX [L/s]	MAX APD IN WG	MAX APD [Pa]	MOUNTING	PANEL/FRAME SIZE IN x IN	PANEL/FRAME SIZE [mm x mm]	NECK SIZE IN	NECK SIZE [mm]	NC	DAMPER	FINISH	REMARKS
SD-11	LOUVERED FACE	30	[14]	100	[47]	0.040	[10]	LAY-IN CEILING	24 x 24	[600 x 600]	6 ø	[152 ø]	15	OBD	WHITE	----
SD-12	LOUVERED FACE	105	[50]	205	[97]	0.050	[13]	LAY-IN CEILING	24 x 24	[600 x 600]	8 ø	[152 ø]	15	OBD	WHITE	-----
SD-13	LOUVERED FACE	210	[99]	300	[140]	0.050	[13]	LAY-IN CEILING	24 x 24	[600 x 600]	10 ø	[254 ø]	15	OBD	WHITE	-----
SD-14	LOUVERED FACE	305	[140]	400	[190]	0.040	[10]	LAY-IN CEILING	24 x 24	[600 x 600]	12 ø	[152 ø]	20	OBD	WHITE	-----
SD-21	LOUVERED FACE	30	[14]	90	[42]	0.050	[13]	SURFACE MOUNTED	12 x 12	[300 x 300]	6 ø	[254 ø]	15	OBD	WHITE	-----
SD-22	LOUVERED FACE	95	[45]	180	[85]	0.100	[25]	SURFACE MOUNTED	12 x 12	[300 x 300]	8 ø	[254 ø]	15	OBD	WHITE	-----

NOTES

1. SEE FLOOR PLAN FOR THROW PATTERN.
2. SEE DETAIL FOR DAMPER IN BRANCH DUCT SERVING EACH DIFFUSER.
3. PROVIDE SQUARE TO ROUND ADAPTER WHERE REQUIRED.

AIR DEVICE SCHEDULE (LINEAR)

MARK	TYPE	AIR FLOW MIN CFM	AIR FLOW MIN [L/s]	AIR FLOW MAX CFM	AIR FLOW MAX [L/s]	MAX APD IN WG	MAX APD [Pa]	MIN THROW FT	MIN THROW [M]	MAX THROW FT	MAX THROW [M]	# OF SLOTS	SLOT WIDTH IN	SLOT WIDTH [mm]	PANEL/FRAME SIZE IN	PANEL/FRAME SIZE [mm]	NECK SIZE IN	NECK SIZE [mm]	THROW PATTERN	THROW TYPE	NC	DAMPER	FINISH	REMARKS
SD-21	LINEAR	120	[57]	180	[85]	0.05	66.70	4 - 7 -15		15 - 18 - 25		2	0.5	[13]	48 x 4	[600 x 127]	8 ø	[254 ø]	2 WAY	VERTICAL	15	IN NECK	WHITE	-----
SD-22	LINEAR	190	[90]	270	[130]	0.27	66.70	4 - 7 -15		17 - 21 - 30		2	0.75	[19]	48 x 4.5	[600 x 127]	9 ø	[254 ø]	2 WAY	VERTICAL	15	IN NECK	WHITE	

NOTES

1. SEE DETAIL FOR DAMPER IN BRANCH DUCT SERVING EACH DIFFUSER.
2. PROVIDE COLLAR AND TRANSITION AS REQUIRED.

AIR DEVICE SCHEDULE (RETURN)

MARK	TYPE	AIR FLOW MIN CFM	AIR FLOW MIN [L/s]	AIR FLOW MAX CFM	AIR FLOW MAX [L/s]	MAX APD IN WG	MAX APD [Pa]	MOUNTING	PANEL/FRAME SIZE IN x IN	PANEL/FRAME SIZE [mm x mm]	NECK SIZE IN x IN	NECK SIZE [mm x mm]	NC	DAMPER	FINISH	REMARKS
RG-11	PERFORATED	30	[14]	100	[47]	-0.050	-10.000	LAY IN CEILING	24 x 24	[600 x 600]	6 x 6	[152 DIAM]	15	OBD	WHITE	-----
RG-12	PERFORATED	105	[50]	175	[83]	-0.050	-10.000	LAY IN CEILING	24 x 24	[600 x 600]	8 x 8	[203 DIAM]	15	OBD	WHITE	-----
RG-13	PERFORATED	180	[85]	270	[130]	-0.050	-10.000	LAY IN CEILING	24 x 24	[600 x 600]	10 x 10	[254 DIAM]	15	OBD	WHITE	-----
RG-14	PERFORATED	275	[130]	400	[190]	-0.050	-10.000	LAY IN CEILING	24 x 24	[600 x 600]	12 x 12	[305 x 102]	15	OBD	WHITE	-----
RG-15	PERFORATED	405	[190]	545	[260]	-0.050	-10.000	LAY IN CEILING	24 x 24	[600 x 600]	14 x 14	[356 x 152]	15	OBD	WHITE	-----
RG-16	PERFORATED	550	[260]	625	[300]	-0.050	-10.000	LAY IN CEILING	24 x 24	[600 x 600]	16 x 16	[508 x 203]	15	OBD	WHITE	-----

NOTES:

WHERE NO CFM IS DESIGNATED WITH RETURN GRILLE MARK, BALANCE AIR FLOW THROUGH RETURN GRILLE SAME AS AIR FLOW SUPPLY TO ROOM.

PROVIDE SQUARE TO ROUND ADAPTER WHERE REQUIRED

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Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: C.G.A.

Project Number: 1046

Building Number: -

Drawing Number: MH-604

Dwg. 26 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

AIR HANDLING UNIT SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	TYPE	AIR FLOW	AIR FLOW						SUPPLY FAN MARK	RETURN OR RELIEF FAN MARK	EXHAUST FAN MARK	PREFILTER MARK	AFTER FILTER MARK	FINAL FILTER MARK	HEAT RECOVERY MARK	PREHEAT COIL MARK	COOLING COIL MARK	REHEAT COIL	HUMIDIFIER MARK	REMARKS
					SUPPLY		MIN OA		RETURN													
					CFM	[L/s]	CFM	[L/s]	CFM	[L/s]												
AHU-1	MAINTENANCE GARAGE ROOF	FEE OFFICE	CUSTOM	HORIZONTAL	9,605	[4500]	3,170	[1500]	6,435	[3000]	SF-1	RF-1	N/A	PF-1	AF-1	FF-1	N/A	N/A	CC-1	N/A	H-1	THIS UNIT IS TO BE FURNISHED W/ SMOKE DETECTORS IN THE SUPPLY AND RETURN

CHILLED WATER COOLING COIL SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW		MAX FACE VELOCITY		APD		EAT				LAT				TOTAL CAPACITY		SENSIBLE CAPACITY		CHILLED WATER								REMARKS
										Db		Wb		Db		Wb						FLOW		EWT		LWT		WPD		
				CFM	[L/s]	FPM	[M/s]	IN WG	[Pa]	°F	[°C]	°F	[°C]	°F	[°C]	°F	[°C]	MBH	[kW]	MBH	[kW]	GPM	[L/s]	°F	[°C]	°F	[°C]	FT	[M]	
1-CWC1	MAINTENANCE GARAGE ROOF	FEE OFFICE/ RED FIRM	AHU-1	9605	[4500]	477	[2]	0.8	[200]	80.5	[27]	67.3	[20]	52.8	[12]	52.4	[11]	436	[130]	291	[85]	87.2	[6]	45	[7]	55	[13]	17.1	[5]	-----

HOT WATER HEATING COIL SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	APPLICATION	AIR FLOW		MAX FACE VELOCITY		APD		TEMPERATURES				TOTAL MIN CAPACITY		COILS		HOT WATER								% GLYCOL	REMARKS
											EAT		LAT				ROWS	CIRC	FLOW		EWT		LWT		WPD			
					CFM	[L/s]	FPM	[M/s]	IN WG	[Pa]	°F	[°C]	°F	[°C]	MBH	[kW]	#	#	GPM	[L/s]	°F	[°C]	°F	[°C]	FT	[kPa]		
1-TU-01	CORRIDOR "A"	CHAPLIN ASST. 156 CHAPLIN 157	1-AHU-1	VAV OR CV TERMINAL COIL	460	[220]	552	[3]	0.22	[55]	55	[13]	103	[39]	24.22	[83]	2	2	2.00		180	[82]	156	[69]	0.64	[2]	N/A	NONE
1-TU-02	NURSES STATION 1134	NURSES STATION 1134	1-AHU-1		195	[92]	292	[2]	.04	[10]	55	[13]	91	[33]	6.81	[23]	1	1	0.50		180	[82]	153		0.1	[ ]		
1-TU-03	EXAM ROOM 1135	EXAM ROOM 1135	1-AHU-1		140	[66]	210	[1]	.02	[5]	55	[13]	93	[34]	5.80	[20]	1	1	0.50		180	[82]	156		0.1	[ ]		
1-TU-04	EXAM ROOM 1136	EXAM ROOM 1136	1-AHU-1		165	[78]	247	[1]	.03	[8]	55	[13]	96	[36]	6.27	[21]	1	1	0.50		180	[82]	155		0.1	[ ]		
1-TU-05	EXAM ROOM 1137	EXAM ROOM 1137	1-AHU-1		125	[59]	188	[1]	.01	[3]	55	[13]	93	[34]	5.10	[17]	1	1	0.50		180	[82]	160		0.1	[ ]		
1-TU-06	EXAM ROOM 1138	EXAM ROOM 1138	1-AHU-1		140	[66]	210	[1]	.02	[5]	55	[13]	93	[34]	5.8	[20]	1	1	0.50		180	[82]	156		0.1	[ ]		
1-TU-07	EXAM ROOM 1139	EXAM ROOM 1139	1-AHU-1		165	[78]	247	[1]	.03	[8]	55	[13]	94	[34]	6.27	[21]	1	1	0.50		180	[82]	155		0.1	[ ]		
1-TU-08	EXAM ROOM 1140	EXAM ROOM 1140	1-AHU-1		135	[64]	203	[1]	.02	[5]	55	[13]	94	[34]	5.80	[20]	1	1	0.50		180	[82]	155		0.1	[ ]		
1-TU-09	VISION LANE 1141	VISION LANE 1141	1-AHU-1		135	[64]	203	[1]	.02	[5]	55	[13]	94	[34]	5.73	[20]	1	1	0.50		180	[82]	157		0.1	[ ]		
1-TU-10	VISION LANE 1142	VISION LANE 1142	1-AHU-1		230	[110]	335	[2]	.05	[13]	55	[13]	107	[42]	12.95	[44]	2	2	1.00		180	[82]	154		0.12	[ ]		
1-TU-11	VISION LANE 1143	VISION LANE 1143	1-AHU-1		240	[110]	360	[2]	.06	[15]	55	[13]	106	[41]	13.20	[45]	2	2	1.00		180	[82]	154		0.12	[ ]		
1-TU-12	CORRIDOR "B"	OFFICE 1146 BREAK RM. 1148	1-AHU-1		260	[120]	390	[2]	.07	[18]	55	[13]	102	[39]	13.70	[47]	2	2	1.00		180	[82]	152		0.12	[ ]		
1-TU-13	EXAM ROOM 1152	EXAM ROOM 1152 EXAM TLT. 1152A	1-AHU-1		295	[140]	443	[2]	.08	[20]	55	[13]	101	[38]	14.60	[50]	2	2	1.00		180	[82]	151		0.12	[ ]		
1-TU-14	EXAM ROOM 1154	EXAM ROOM 1154	1-AHU-1		210	[99]	315	[2]	.04	[10]	55	[13]	90	[32]	8.05	[27]	1	1	1.00		180	[82]	164		0.47	[1]		
1-TU-15	TRIAGE 1156	TRIAGE 1155 TRIAGE 1156	1-AHU-1		245	[120]	368	[2]	.05	[13]	55	[13]	92	[33]	9.41	[32]	1	1	2.00		180	[82]	171		1.79	[5]		
1-TU-16	WAITING 1157	WAITING 1157 CORRIDOR 'E'	1-AHU-1		795	[380]	477	[2]	.08	[20]	55	[13]	98	[37]	37.0	[130]	2	4	2.00		180	[82]	143		0.25	[1]		
1-TU-17	OFFICE 1158	OFFICE 1158	1-AHU-1		135	[64]	203	[1]	.02	[5]	55	[13]	94	[34]	5.73	[20]	1	1	0.50		180	[82]	157		0.1	[ ]		
1-TU-18	CLASSROOM 1159	CLASSROOM 1159 OFFICE 1160	1-AHU-1		600	[280]	493	[3]	.18	[45]	55	[13]	105	[41]	31.6	[110]	2	3	2.50		180	[82]	155		0.75	[2]		
1-TU-19	CLASSROOM 1161	CLASSROOM 1161	1-AHU-1		410	[190]	493	[3]	.18	[45]	55	[13]	93	[34]	20.71	[71]	2	2	1.50		180	[82]	152		0.41	[1]		
1-TU-20	CLASSROOM 1162	CLASSROOM 1162	1-AHU-1		180	[85]	270	[1]	.04	[10]	55	[13]	93	[34]	7.44	[25]	1	1	1.00		180	[82]	165		0.47	[1]		
1-TU-21	OFFICE 1165	EXAM ROOM 1165	1-AHU-1		165	[78]	247	[1]	.03	[8]	55	[13]	96	[36]	6.45	[22]	1	1	1.00		180	[82]	167		0.47	[1]		
1-TU-22	OFFICE 1168	OFFICE 1168	1-AHU-1		145	[68]	218	[1]	.03	[8]	55	[13]	97	[36]	6.91	[24]	1	1	0.50		180	[82]	156		0.1	[ ]		
1-TU-23	EXAM 1169	OFFICE 1169	1-AHU-1		245	[120]	368	[2]	.06	[15]	55	[13]	90	[32]	9.41	[32]	1	1	2.00		180	[82]	170		1.79	[5]		
1-TU-24	EXAM 1171	OFFICE 1171	1-AHU-1		210	[99]	315	[2]	.04	[10]	55	[13]	93	[34]	8.69	[30]	2	2	1.00		180	[82]	163		0.12	[ ]		
1-TU-25	W TLT. 1172	W TLT. 1172 M TLT. 1173	1-AHU-1		410	[190]	493	[3]	.18	[45]	55	[13]	97	[36]	20.71	[71]	2	2	1.50		180	[82]	152		0.41	[1]		
1-TU-26	EXAM 1174	OFFICE 1174	1-AHU-1		250	[120]	375	[2]	.06	[15]	55	[13]	105	[41]	13.45	[46]	2	2	1.00		180	[82]	153		0.12	[ ]		
1-TU-27	EXAM ROOM 1154	CORRIDOR "B"	1-AHU-1		475	[220]	570	[3]	.23	[58]	55	[13]	105	[41]	22.09	[75]	2	2	1.50		180	[82]	150		0.41	[1]		
1-TU-28	CORRIDOR "C"	CORRIDOR "C" CLEAN UTILITY 1147	1-AHU-1		220	[100]	330	[2]	.05	[13]	55	[13]	92	[33]	8.20	[28]	1	1	1.00		180	[82]	163		0.47	[1]		
1-TU-29	CORRIDOR "D"	CORRIDOR "D"	1-AHU-1		310	[150]	372	[2]	.05	[13]	55	[13]	93	[34]	5.82	[20]	1	1	0.50		180	[82]	157		0.1	[ ]		
1-TU-30	CORRIDOR "D"	CORRIDOR "D" CORRIDOR "F"	1-AHU-1		445	[210]	534	[3]	.20	[50]	55	[13]	96	[36]	21.43	[73]	2	2	1.50		180	[82]	151		0.41	[1]		
1-TU-31	OFFICE 1163A	OFFICE 1163A	1-AHU-1		185	[87]	273	[1]	.04	[10]	55	[13]	93	[34]	7.44	[25]	1	1	1.00		180	[82]	165		0.47	[1]		
1-TU-32	CORRIDOR 1165A	CORRIDOR 1165A	1-AHU-1		180	[85]	270	[1]	.04	[10]	55	[13]	93	[34]	7.44	[25]	1	1	1.00		180	[82]	165		0.47	[1]		
1-TU-33	OFFICE 1166A	OFFICE 1166A	1-AHU-1		185	[87]	273	[1]	.04	[10]	55	[13]	93	[34]	7.44	[25]	1	1	1.00		180	[82]	165		0.47	[1]		
1-TU-34	WORK AREAS 1170A - 1171A	OFFICE 1164A OFFICE 1167A OFFICE 1169A	1-AHU-1		180	[85]	270	[1]	.04	[10]	55	[13]	93	[34]	7.44	[25]	1	1	1.00		180	[82]	165		0.47	[1]		
1-TU-35	WORK AREAS 1170A - 1171A	WORK AREAS 1170A - 1171A OFFICE 1168A	1-AHU1		860	[410]	516	[3]	.10	[25]	55	[13]	101	[38]	43.19	[150]	2	4	3.00		180	[82]	151		0.54	[2]		

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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE HVAC SHEDULES CONT.

Approved: Project Director

Project Title: FEE OFFICE - -

Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: C.G.A.

Project Number: 1046

Building Number: -

Drawing Number: MH-605

Dwg. 27 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

Room Cooling and Heating Loads Output Data Summary Schedule

AHU No	Room No	Room Name	Room Data Sheet Used	Required Air Balance	Room Size: Area (SF)	Room Size: Height (Ft)	Room Size: Linear Ft of Ext. Wall (Ft)	Peak Room Cooling Load: Sensible (Btu/hr)	Peak Room Cooling Load: Latent (Btu/hr)	Peak Room Heating Load (Btu/Hr)	Heat Load per Linear Ft of Ext Wall	Ventilation Method and Requirements: VA Room Data Sheets Total ACH/O.A ACH	Ventilation Method and Requirements: ASHRAE 62.1-2007	Ventilation Method and Requirements: VA min OA of 15%	Supply Air Flow Requirments: Cooling (CFM)	Supply Air Flow Requirments: Heating (CFM)	Supply Air Flow Requirments: Total ACH based on Data Sheets (CFM)	Supply Air Flow Requirments: O.A. ACH based on Data Sheets (CFM)	%O.A (CFM)	Maximum Supply Airflow (CFM)	50% of Maximum Airflow (CFM)	Minimum Supply Airflow (CFM)	Actual Supply Airflow Provided (CFM)	Room Return Airflow (CFM)	Room Exhaust Airflow (CFM)	Room Air Balance	Supplimental Heat Required?	Room Status (VAV or Constant Volume)
1-AHU-1	156	Chaplin Asst.	Offices	(0)	114	8	23.5	4159	310	2101	89.4	4/2			216.00	84	60.80	30.40	0.14	216.00		84.00	220.00	-220.00		0.00	N	VAV
1-AHU-1	157	Chaplin	Offices	(0)	172	8	23.5	4690	266	2164	92.1	4/2			244.00	86	91.73	45.87	0.19	244.00		91.73	245.00	-245.00		0.00	N	VAV
1-AHU-1	1134	Nurse's Station	Offices	(0)	240	8	0	3043	372	0		4/2			158.00	0	128.00	64.00	0.33	158.00		128.00	195.00	-195		0.00	N	VAV
1-AHU-1	1135	Exam Room	Examination Room	(0)	134	8	7.5	2639	310	1723	229.7	6/2			137.00	69	107.20	35.73	0.26	137.00		107.20	140.00	-140		0.00	Y	VAV
1-AHU-1	1136	Exam Room	Examination Room	(0)	155	8	9.5	3107	240	2590	272.6	6/2			162	104	124.00	41.33	0.25	162.00		124.00	165.00	-165		0.00	Y	VAV
1-AHU-1	1137	Exam Room	Examination Room	(0)	151	8	9.5	2059	234	1197	126.0	6/2			107	48	120.80	40.27	0.32	120.80		120.80	125.00	-125		0.00	N	VAV
1-AHU-1	1138	Exam Room	Examination Room	(0)	157	8	9.5	2669	243	1975	207.9	6/2			139	79	125.60	41.87	0.30	139.00		125.60	140.00	-140		0.00	N	VAV
1-AHU-1	1139	Exam Room	Examination Room	(0)	185	8	11.5	2901	287	2227	193.7	6/2			151	89	148.00	49.33	0.30	151.00		148.00	165.00	-165		0.00	N	VAV
1-AHU-1	1140	Exam Room	Examination Room	(0)	135	8	8.5	2599	310	1859	218.7	6/2			135	74	108.00	36.00	0.27	135.00		108.00	135.00	-135		0.00	Y	VAV
1-AHU-1	1141	Vision Lane	Treatment - Visual	(0)	134	8	8.5	2568	310	1826	214.8	4/2			134	73	71.47	35.73	0.26	134.00		73.00	135.00	-135		0.00	Y	VAV
1-AHU-1	1142	Vision Lane	Treatment - Visual	(0)	100	8	22.25	4426	310	3581	160.9	4/2			230	143	53.33	26.67	0.12	230.00		143.00	230.00	-230		0.00	N	VAV
1-AHU-1	1143a	Vision Lane	Treatment - Visual	(0)	117	8	23.75	4610	310	4508	189.8	4/2			240	149	62.40	31.20	0.13	240.00		149.00	240.00	-240		0.00	N	VAV
1-AHU-1	1146	Triage Office	Offices	(0)	103	8	12	1620	155	1512	126.0	4/2			84	60	54.93	27.47	0.29	84.00		60.00	95.00	95		190.00	N	VAV
1-AHU-1	1147	Clean Utility	Clean Utility/Storage	(+)	21	8	5.5	415	33	703	127.8	4/-			22	28	11.20	0.00	0.00	28.00		N/A	30.00	-25		5.00	N	CV
1-AHU-1	1148	Break Room	N/A	(0)	56	8	7.5	3169	310	1953	260.4	-/-		x	165	78	0.00	0.00	0.00	165.00		78.00	165.00	-165		0.00	Y	VAV
1-AHU-1	1149	Toilet	Toilets Public	(--)	60	8	0	613	0	0		10/-			32	0	80.00	0.00	0.00	80.00		N/A	80.00	0	-105	-25.00	N	CV
1-AHU-1	1152	Exam Room	Examination Room	(0)	158	8	10	3908	245	2069	206.9	6/2			203.00	83.00	126.40	42.13	0.21	203.00		126.40	205.00	-205		0.00	N	VAV
1-AHU-1	1152a	Toilet Room	Toilets Public	(--)	40	8	5.5	1714	62	1195	217.3	10/-			89.00	48.00	53.33	0.00	0.00	89.00		N/A	90.00	0	-120	-30.00	Y	CV
1-AHU-1	1153	Soiled Linen	Soiled Utity/Sbrage	(--)	36	8	0	457	56	0		6/-			24.00	0.00	28.80	0.00	0.00	28.80		N/A	30.00	0	-40	-10.00	N	CV
1-AHU-1	1154	Exam Room	Examination Room	(0)	167	8	9.75	4014	259	2016	206.8	6/2			209.00	81.00	133.60	44.53	0.21	209.00		133.60	210.00	-210		0.00	N	VAV
1-AHU-1	1155	Triage	Examination Room	(0)	135	8	0	1872	310	0		6/2			97	0	108.00	36.00	0.30	108.00		108.00	120.00	-120		0.00	N	VAV
1-AHU-1	1156	Triage	Examination Room	(0)	140	8	0	1922	310	0		6/2			100	0	112.00	37.33	0.30	112.00		112.00	125.00	-125		0.00	N	VAV
1-AHU-1	1157	Waiting	Admission/Waiting	(-)	658	7.58	9.5	9017	1020	1985	208.9	6/2			469	69	498.76	166.25	0.24	498.80		N/A	700.00	0	-1200	-500.00	N	CV
1-AHU-1	1158	Office	Offices	(0)	139	8.58	9.25	2600	310	1943	210.1	4/2			135	78	79.51	39.75	0.29	135.00		79.51	135.00	-135		0.00	Y	VAV
1-AHU-1	1159	Classroom	Classroom	(0)	225	8	30	7316	930	5337	177.9	6/2			381	213	180.00	60.00	0.16	381.00		213.00	385.00	-385		0.00	N	VAV
1-AHU-1	1160	Office	Offices	(0)	81	8	7.25	3727	126	905	124.8	4/2			194	67	43.20	21.60	0.11	194.00		67.00	200.00	-200		0.00	N	VAV
1-AHU-1	1161	Classroom	Classroom	(0)	221	8.5	30	7741	930	5304	176.8	6/2			403	212	187.85	62.62	0.15	403.00		212.00	405.00	-405		0.00	N	VAV
1-AHU-1	1162	Office	Offices	(0)	191	8.5	10	3456	296	1770	177.0	4/2			180	71	108.23	54.12	0.30	180.00		108.23	180.00	-180		0.00	N	VAV
1-AHU-1	1163a	New Office	Offices	(0)	105	8	14	6723	163	3320	237.1	4/2			350	133	56.00	28.00	0.08	350.00		133.00	350.00	-350		0.00	Y	VAV
1-AHU-1	1164a	New Office	Offices	(0)	105	8	0	1332	163	0		4/2			69	0	56.00	28.00	0.33	69.00		56.00	85.00	-85		0.00	N	VAV
1-AHU-1	1165	Exam Room	Examination Room	(0)	185	8	9.25	2672	287	218	23.6	6/2			139	9	148.00	49.33	0.30	148.00		148.00	165.00	-165		0.00	N	VAV
1-AHU-1	1166a	New Office	Offices	(0)	66	8	8.75	3563	102	1849	211.3	4/2			185	74	35.20	17.60	0.10	185.00		74.00	185.00	-185		0.00	Y	VAV
1-AHU-1	1167a	New Office	Offices	(0)	64	8	0	809	99	0		4/2			42	0	34.13	17.07	0.31	42.00		34.13	55.00	-55		0.00	N	VAV
1-AHU-1	1168	Office	Offices	(0)	160	8.83	10.25	2290	248	1071	104.5	4/2			119	43	94.19	47.09	0.32	119.00		94.19	145.00	-145		0.00	N	VAV
1-AHU-1	1168a	New Office	Offices	(0)	49	8	6.75	3304	76	1597	236.6	4/2			172	64	26.13	13.07	0.07	172.00		64.00	175.00	-175		0.00	Y	VAV
1-AHU-1	1169	Exam Room	Examination Room	(0)	176	8	11.25	4716	273	1985	176.4	6/2			245	79	140.80	46.93	0.19	245.00		140.80	245.00	-245		0.00	N	VAV
1-AHU-1	1169a	New Office	Offices	(0)	49	8	0	618	76	0		4/2			32	0	26.13	13.07	0.33	32.00		26.13	40.00	-40		0.00	N	VAV
1-AHU-1	1170a	New Office	Offices	(0)	462	8	28	11534	716	5084	181.6	4/2			600	203	246.40	123.20	0.21	600.00		246.40	600.00	-600		0.00	N	VAV
1-AHU-1	1171	Exam Room	Examination Room	(0)	173	8	11.25	4045	268	1959	174.1	6/2			210	78	138.40	46.13	0.22	210.00		138.40	210.00	-210		0.00	N	VAV
1-AHU-1	1172	Women's Toilet	Toilets Public	(--)	143	8	10.5	4229	0	2101	200.1	10/-			220	84	190.67	0.00	0.00	220.00		N/A	220.00	0	-290	-70.00	N	CV
1-AHU-1	1173	Men's Toilet	Toilets Public	(--)	140	8	9.5	2117	0	3048	320.8	10/-			110	122	186.67	0.00	0.00	186.70		N/A	190.00	0	-250	-60.00	Y	CV
1-AHU-1	1174	Exam Room	Examination Room	(0)	144	8	9.25	4785	310	4690	507.0	6/2			249	156	115.20	38.40	0.15	249.00		156.00	250.00	-250		0.00	Y	VAV
1-AHU-1		Corridor A	Corridors	(+)	426	8	0	4391	0	0		4/2			227.00	0.00	227.20	113.60	0.33	227.20		N/A	345.00	-195		150.00	N	CV
1-AHU-1		Corridor B	Corridors	(+)	562	8	0	3897	0	0		4/2			203.00	0.00	299.73	149.87	0.32	299.70		N/A	475.00	-255		220.00	N	CV
1-AHU-1		Corridor C	Corridors	(+)	115	8	8	3626	0	1786	223.3	4/2			189.00	71.00	61.33	30.67	0.16	189.00		N/A	190.00	-160		30.00	Y	CV
1-AHU-1		Corridor D	Corridors	(+)	527	7.58	0	5384	0	0.00		4/2			280.00	0.00	266.31	133.16	0.29	280.00		N/A	460.00	-235		225.00	N	CV
1-AHU-1		Corridor E	Corridors	(+)	125	8	0	1279	0	0		4/2			67.00	0.00	66.67	30.67	0.32	67.00		N/A	95.00	-55		55.00	N	CV
1-AHU-1		Corridor F	Corridors	(+)	231	8	0	2364	0	0		4/2			123.00	0.00	123.20	140.27	0.48	140.00		N/A	295.00	-240		10.00	N	CV

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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE HVAC SHEDULES CONT.

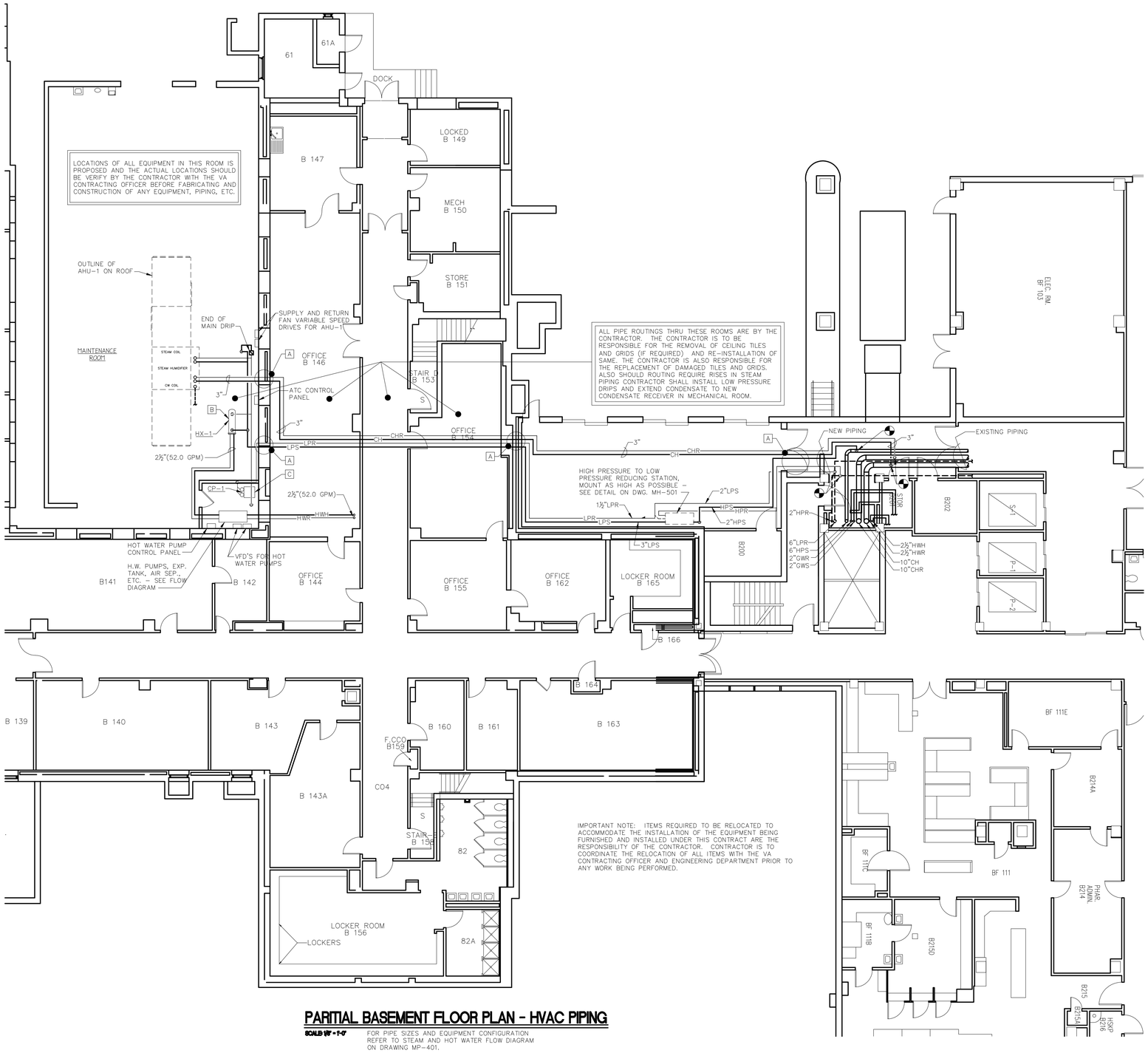
Approved Project Director

Project Title: FEE OFFICE
Location: CLARKSBURG, VA
Date: 10-31-2011
Checked: G.C.D.
Drawn: C.G.A.

Project Number: 1046
Building Number: -
Drawing Number: MH-606
Dwg. 28 of 45

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



PARITIAL BASEMENT FLOOR PLAN - HVAC PIPING

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

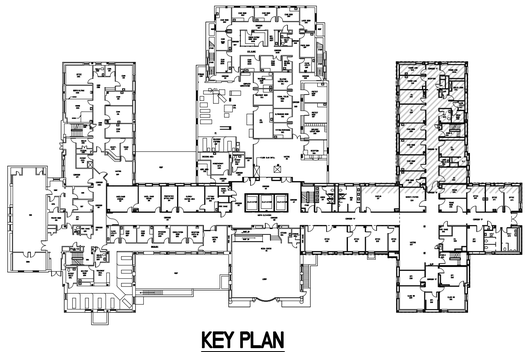
FOR PIPE SIZES AND EQUIPMENT CONFIGURATION REFER TO STEAM AND HOT WATER FLOW DIAGRAM ON DRAWING MP-401.

SPECIFIC NOTES:

A. SLEEVE ALL PIPING THRU MASONRY WALL IN SCHEDULE 40 STEEL PIPE SLEEVES. FIRESTOP ALL PIPING THRU MASONRY WALLS.

B. STEAM TO WATER HEAT EXCHANGER. REFER TO PIPING DETAIL 501-6 AND SCHEDULE ON DRAWING MH-602. INSTALL AS HIGH AS POSSIBLE.

C. PROPOSED LOCATION OF FLOOR MOUNTED DUPLEX CONDENSATE PUMP. REFER TO PIPING DETAIL 501-2 AND SCHEDULE ON DRAWING MH-602.



KEY PLAN

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CONSULTANTS:

GEORGE C. DEFREIN REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title	Project Title	Project Number
FEE OFFICE PARTIAL BASEMENT FLOOR PLAN HVAC PIPING	FEE OFFICE - -	1046
Approved: Project Director	Location: CLARKSBURG, VA	Building Number: -
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: C.G.A.	Drawing Number: MP-101 Dwg. 29 of 45

Office of Construction and Facilities Management

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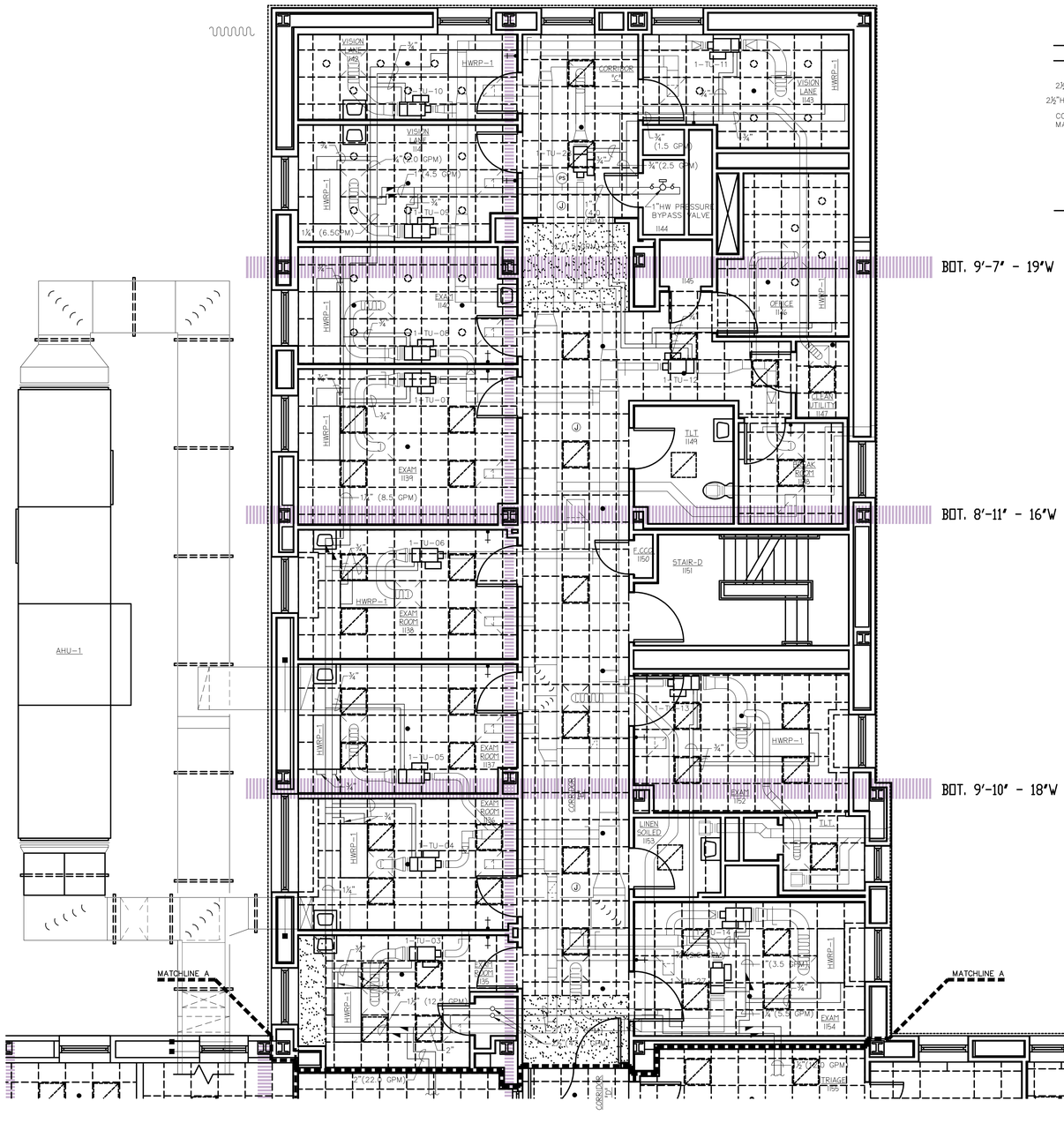
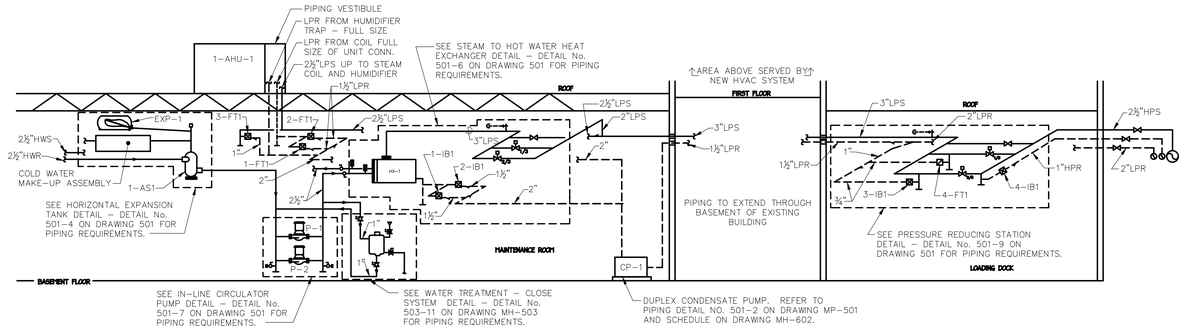
VA FORM 08-6231



PARTIAL FLOOR PLAN - HVAC PIPING

SCALE: 1/4" = 1'-0"



STEAM AND HOT WATER FLOW DIAGRAM

NO SCALE

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FULLY SPRINKLERED

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CONSULTANTS:

GEORGE C. DERREN REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title	Project Title	Project Number
FEE OFFICE PARTIAL FIRST FLOOR PLAN HVAC PIPING	FEE OFFICE - -	1046
Approved: Project Director	Location: CLARKSBURG, VA	Building Number: -
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: C.G.A.	Drawing Number: MP-401 Dwg. 30 of 45

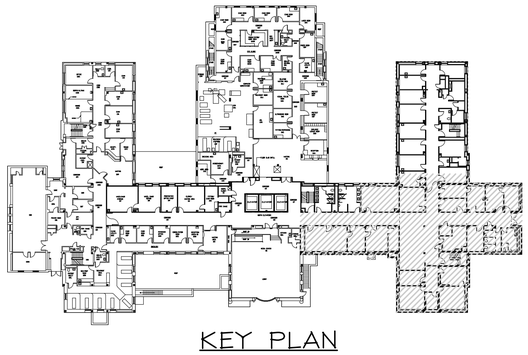
Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

PARITIAL FLOOR PLAN - HVAC PIPING

SCALE: 1/4" = 1'-0"



KEY PLAN

NOTE: DO NOT SCALE DRAWING

EACH CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS AND ALL DIMENSIONS BEFORE BEGINNING ANY WORK. EACH CONTRACTOR IS TO FULLY COORDINATE HIS WORK WITH THAT OF OTHERS. REFER TO THE CONTRACT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FINAL SUBMISSION - FOR CONSTRUCTION

FULLY SPRINKLERED

Revisions:	Date

CONSULTANTS:

GEORGE C. DEFRENN REGISTERED 12496 STATE OF PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title	Project Title	Project Number
FEE OFFICE PARTIAL FIRST FLOOR PLAN HVAC PIPING	FEE OFFICE - -	1046
		Building Number: -
Approved: Project Director	Location: CLARKSBURG, VA	Drawing Number: MP-402
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: C.G.A.	Dwg. 31 of 45

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page MP-403 Sett 32 (not Used)

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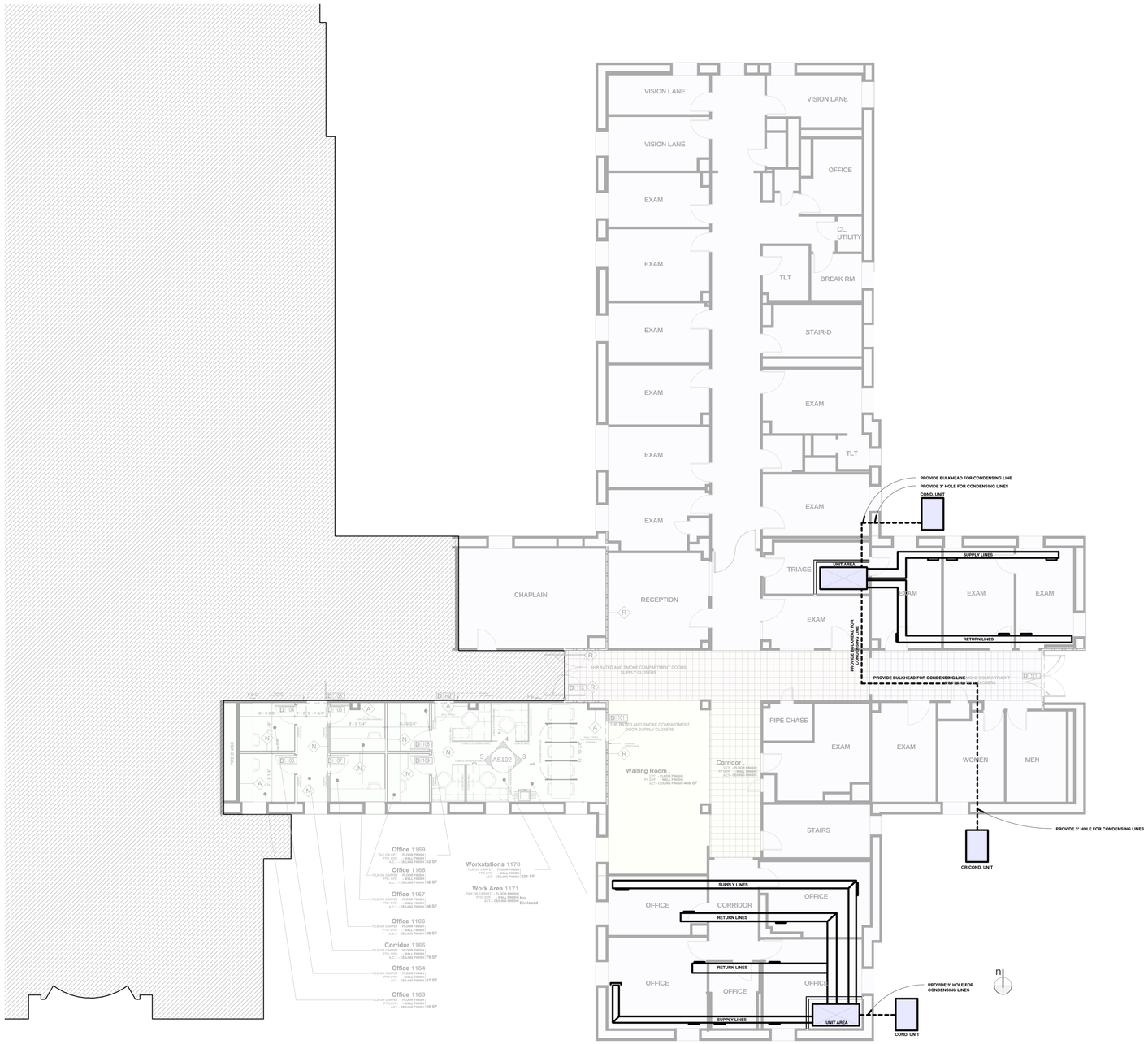

01 FIRST FLOOR PLAN - FEE OFFICE - TEMPORARY HVAC (Option 1 - Heat Pumps)
1 1/8" = 1'-0"

TEMPORARY HVAC NOTES:

TEMP HEAT NOTE FOR DRAWINGS:
1) CONNECT UNITS TO SPARE BREAKER IN PANEL BOARD 1-1LNC. FURNISH AND INSTALL BREAKER TO MATCH PANEL MANUFACTURER IF NONE AVAILABLE.

FOR SMALL THREE OFFICES – YORK THGD18 WITH MATCHING EVAPORATOR AND BLOWER WITH 8KW ELECTRIC HEATER. (1 ½ TONS WITH 18,000 BTU)
FOR CLASSROOM WING – YORK THGD48 WITH MATCHING EVAPORATOR AND BLOWER WITH 15KW ELECTRIC HEATER. (4 TONS WITH 48,000 BTU)

NOTE: DO NOT SCALE DRAWING

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ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture studio
rt 3 box 383e
Fairmont, WV 26554
office: 304.288.3941

Drawing Title: TEMPORARY HVAC OPTIONS
Approved: Project Director
Project Title: VA - FEE OFFICE
Location: CLARKSBURG, WV
Date: 12-17-2010
Checked
Drawn
Project Number: 1032
Building Number
Drawing Number: TH - 1
Dwg. 33 of 45

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DEMOLITION NOTES:

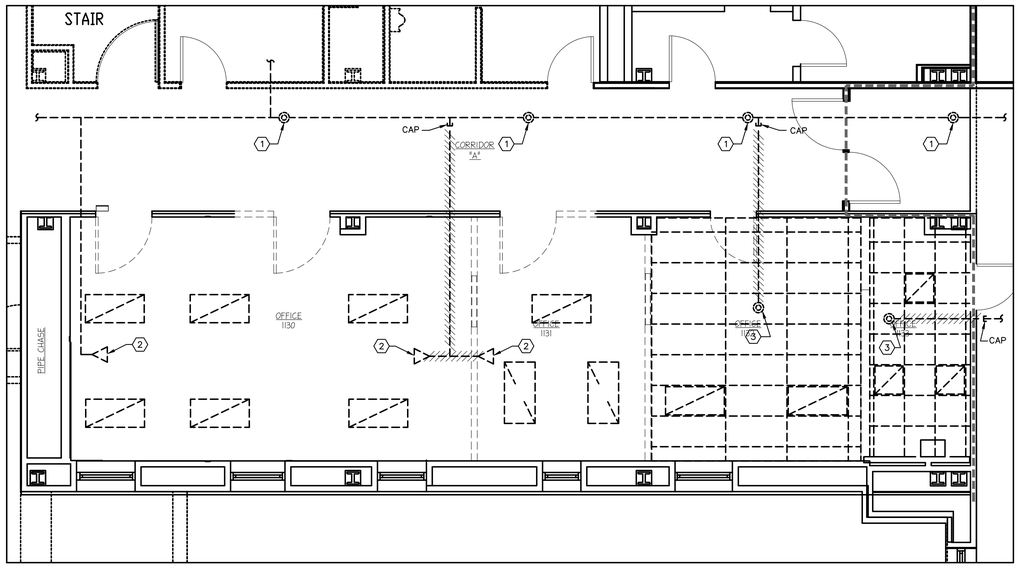
1. EXISTING SPRINKLER DRAWINGS WERE USED AS REFERENCE FOR EXISTING PIPING AND SPRINKLER HEAD LOCATIONS. EXACT LOCATIONS TO BE FIELD VERIFIED.
2. ALL PRESENT EXPOSED PIPING, SUPPORTS AND HEADS OR ACCESSIBLE CONCEALED PIPING (ABOVE CEILINGS) NOT REQUIRED AS PART OF THE REMODELED SYSTEMS SHALL BE COMPLETELY REMOVED.
3. WHERE EXISTING PIPING IS CONCEALED IN EXISTING PARTITIONS, WALLS OR CHASES TO BE REMOVED OR INTERFERES WITH REMODELING CONSTRUCTION, THE CONTRACTOR SHALL REMOVE PIPING OR RELOCATE PIPING IF IT IS PART OF THE REMODELED SYSTEM OR EXISTING SYSTEM TO REMAIN.

EXISTING CONDITION NOTES:

1. THE INTERIOR OF THE STRUCTURE IS COMPLETELY PROTECTED BY A WET SPRINKLER SYSTEM.
2. THE EXISTING SPRINKLERS AND ASSOCIATED PIPING LOCATED IN AREAS THAT ARE NOT BEING RENOVATED SHALL REMAIN UNLESS COORDINATION WITH THE WORK OF OTHER TRADES REQUIRES IT TO BE RELOCATED.

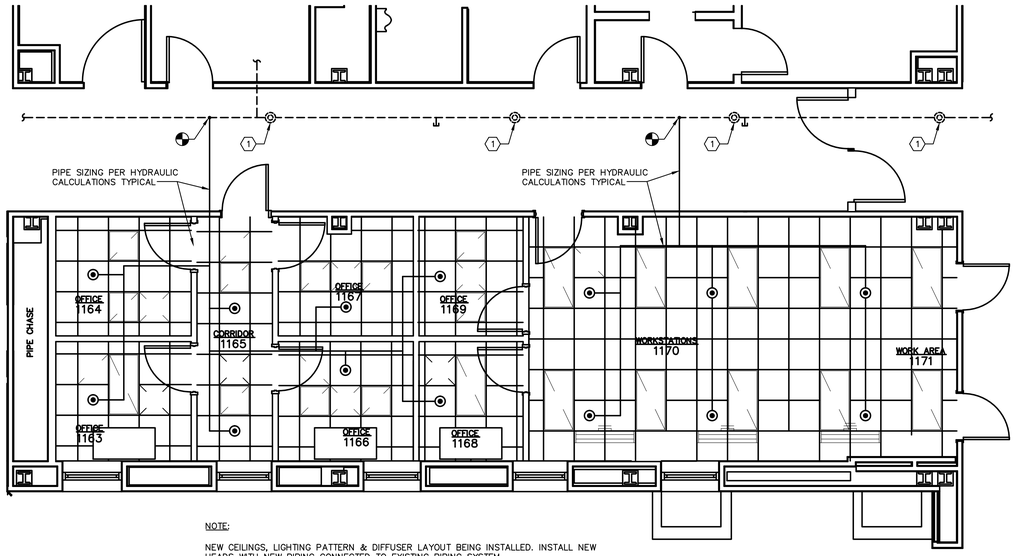
IMPORTANT NOTES:

1. THIS CONTRACTOR SHALL VERIFY ALL NEW CEILING HEIGHTS WITH THE GENERAL CONTRACTOR BEFORE INSTALLING ANY PIPING OR EQUIPMENT.
2. COORDINATE APPROVED WORKING HOURS WITH THE GENERAL CONTRACTOR AND OWNER.
3. THE ACTUAL LOCATIONS OF EXISTING PIPING, DUCTWORK, AND EQUIPMENT IS TO BE DETERMINED AT THE SITE. CHANGES REQUIRED TO DUCT AND PIPING ROUTINGS AND LOCATIONS OF NEW EQUIPMENT DUE TO THE ACTUAL LOCATIONS OF EXISTING ITEMS IS TO BE INCLUDED IN THE CONTRACT.
4. PRIOR TO STARTING ANY INSTALLATION WORK, ALL CONTRACTORS SHALL CLOSELY COORDINATE LOCATIONS OF DUCTWORK, PLUMBING SYSTEM PIPING, SPRINKLER PIPING, LIGHTING, CONDUIT, ETC. ON THIS PROJECT.



FLOOR PLAN - FIRE PROTECTION DEMOLITION

SCALE: 1/4"=1'-0"



NOTE:

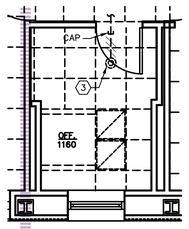
NEW CEILINGS, LIGHTING PATTERN & DIFFUSER LAYOUT BEING INSTALLED. INSTALL NEW HEADS WITH NEW PIPING CONNECTED TO EXISTING PIPING SYSTEM.

FLOOR PLAN - FIRE PROTECTION NEW WORK

SCALE: 1/4"=1'-0"

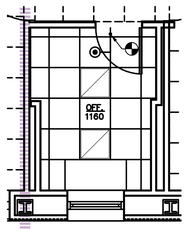
SPECIFIC NOTES:

1. EXISTING PENDANT SPRINKLER HEAD TO REMAIN
2. EXISTING SIDEWALL SPRINKLER HEAD TO BE REMOVED
3. REMOVE EXISTING PENDENT SPRINKLER HEAD & BRANCH PIPING



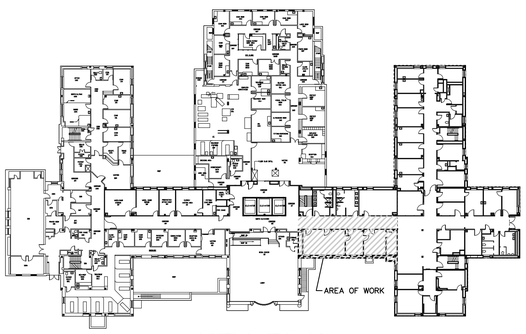
FLOOR PLAN - FIRE PROTECTION DEMOLITION

SCALE: 1/4"=1'-0"



FLOOR PLAN - FIRE PROTECTION NEW WORK

SCALE: 1/4"=1'-0"



KEY PLAN

GENERAL FIRE PROTECTION NOTES:

1. THE SPRINKLER SYSTEM SHOWN ON THESE DRAWINGS IS A SCHEMATIC REPRESENTATION FOR BIDDING PURPOSES ONLY.
2. COORDINATE SPRINKLER DEFLECTOR LOCATION WITH LIGHT FIXTURES, DUCTWORK, ETC.. REVISE SPRINKLER LOCATIONS AS REQUIRED TO MAINTAIN PROPER CLEARANCES AS PER N.F.P.A.#13.
3. SPRINKLER PIPING TO BE LOCATED ABOVE ALL CEILINGS (NEW AND EXISTING), UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL FINISH SCHEDULE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL WORK IN ACCORDANCE WITH N.F.P.A.#13 AND LOCAL AND STATE REQUIREMENTS.
5. PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH N.F.P.A. #13
6. COORDINATE LOCATIONS OF ALL PIPING AND EQUIPMENT WITH OTHER CONTRACTORS.
7. TESTING AND INSPECTION PER N.F.P.A.#13, CHAPTER 8, SYSTEM ACCEPTANCE.
8. WET SYSTEM PIPE SIZING SHALL BE HYDRAULICALLY CALCULATED TO PROVIDE DESIGN DENSITY OF .10 GPM/1500 SQ. FT.,WET SYSTEM – LIGHT HAZARD OCCUPANCY (AND WET SYSTEM MORDANCY HAZARD OCCUPANCY WHERE REQUIRED).
9. PROVIDE PIPE SLEEVES AND FIRE STOPPING MATERIAL AT ALL FIRE RATED CONSTRUCTION PENETRATIONS.
10. AT LOCATIONS WHERE NEW PIPING CONNECTS TO EXISTING PIPING, VERIFY EXACT LOCATION, ELEVATION AND SIZE BEFORE INSTALLING ANY NEW PIPING.
11. WHEREVER APPLICABLE SPRINKLER HEADS ARE TO BE LOCATED AT CENTER LINE OF SUSPENDED CEILING TILES (EACH DIRECTION).

FIRE PROTECTION SYMBOLS AND ABBREVIATIONS

- NEW SPRINKLER PIPING
- EXISTING SPRINKLER PIPING
- NEW WET PENDANT SPRINKLER HEAD
- EXISTING PENDANT SPRINKLER HEAD
- EXISTING SIDEWALL SPRINKLER HEAD
- INDICATES NEW CONNECTION TO PIPING

NOTE: DO NOT SCALE DRAWING

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CONSULTANTS:

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ARCHITECT/ENGINEERS:

East Hills Engineering Associates
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541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE FIRE PROTECTION	Project Title: FEE OFFICE - -		Project Number: 1046
			Building Number: -
Approved: Project Director	Location: CLARKSBURG, VA		Drawing Number: FP-1
	Date: 10-31-2011	Checked: G.C.D.	Drawn: C.G.A.

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DRAWING NOTES (NOTES APPLY TO THIS DRAWING ONLY)

1. CEILING GRID TO BE REMOVED BY G.C., EXISTING LIGHTING FIXTURE TO BE REMOVED BY E.C., E.C. IS TO DISCONNECT EXISTING WIRING AND REMOVE EXISTING LIGHTING FIXTURE, EXISTING WIRING IS TO REMAIN, E.C. IS TO RE-INSTALL FIXTURE AFTER DEMOLITION OF HEATING COMPONENTS AND THE CEILING GRID SYSTEM IS RE-INSTALLED. EXTEND EXISTING WIRING AND RECONNECT.
2. EXISTING FLOOR MOUNTED FURNACE TO BE REMOVED BY H.C., E.C. IS TO DISCONNECT WIRING AND REMOVE WIRING AND CONDUITS BACK TO SOURCE.

GENERAL NOTES - DEMOLITION

A. EXISTING EQUIPMENT, SUCH AS LIGHTING FIXTURES, WIRING DEVICES, CONDUITS, ETC., SHOWN ON THE PLANS TO BE REMOVED COMPLETELY, CUT/CAP CONDUITS AT THE AREA OF WORK PERIMETER AND REMOVE CONDUIT WITHIN THE WORK AREA, DISCONNECT WIRING AT OVERCURRENT PROTECTIVE DEVICE AND REMOVE WIRING COMPLETELY FROM ABANDONED CONDUITS.

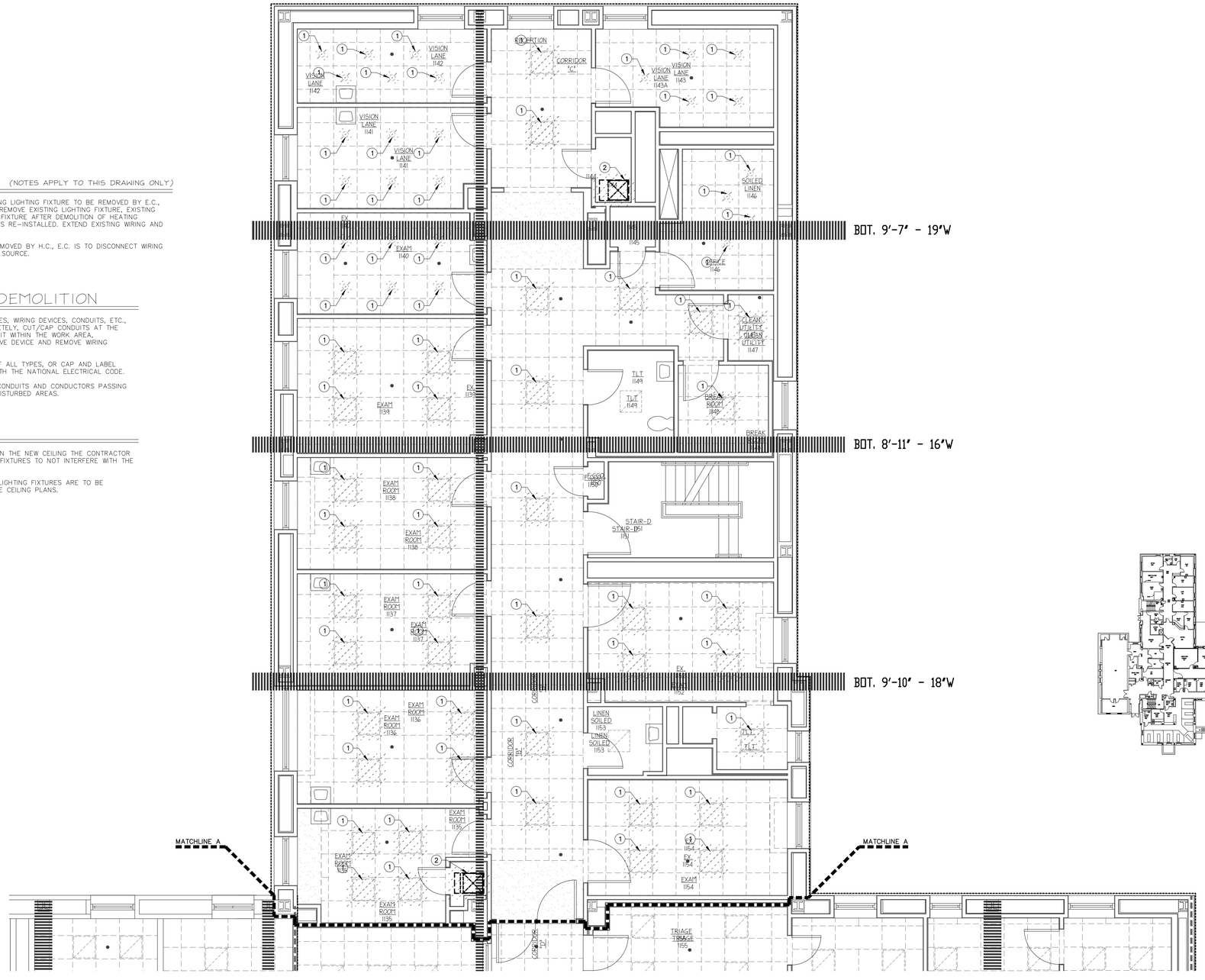
B. REMOVE ALL ACCESSIBLE ABANDONED WIRING OF ALL TYPES, OR CAP AND LABEL JUNCTION BOX FOR RE-USE, IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE.

C. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVING UNDISTURBED AREAS.

GENERAL NOTES

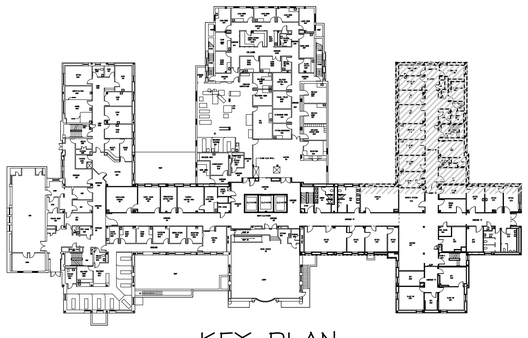
A. WHERE NEW HEATING EQUIPMENT IS INSTALLED IN THE NEW CEILING THE CONTRACTOR IS TO SHIFT THE RELOCATION OF THE EXISTING FIXTURES TO NOT INTERFERE WITH THE NEW HEATING EQUIPMENT.

B. ALL FINAL LOCATIONS AND ARRANGEMENTS OF LIGHTING FIXTURES ARE TO BE OBTAINED FROM THE ARCHITECTURAL REFLECTIVE CEILING PLANS.



PARTIAL FIRST FLOOR PLAN - ELECTRICAL DEMOLITION

SCALE: 1/4" = 1'-0"



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ph: 304.288.3941

Drawing Title: FEE OFFICE PARTIAL FIRST FLOOR PLAN - ELECTRICAL DEMOLITION	Project Title: FEE OFFICE - -	Project Number: 1046	Office of Construction and Facilities Management
Approved: Project Director	Location: CLARKSBURG, VA	Building Number: -	
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: B.J.P.	Drawing Number: ED-1 Dwg. 35 of 45	Department of Veterans Affairs

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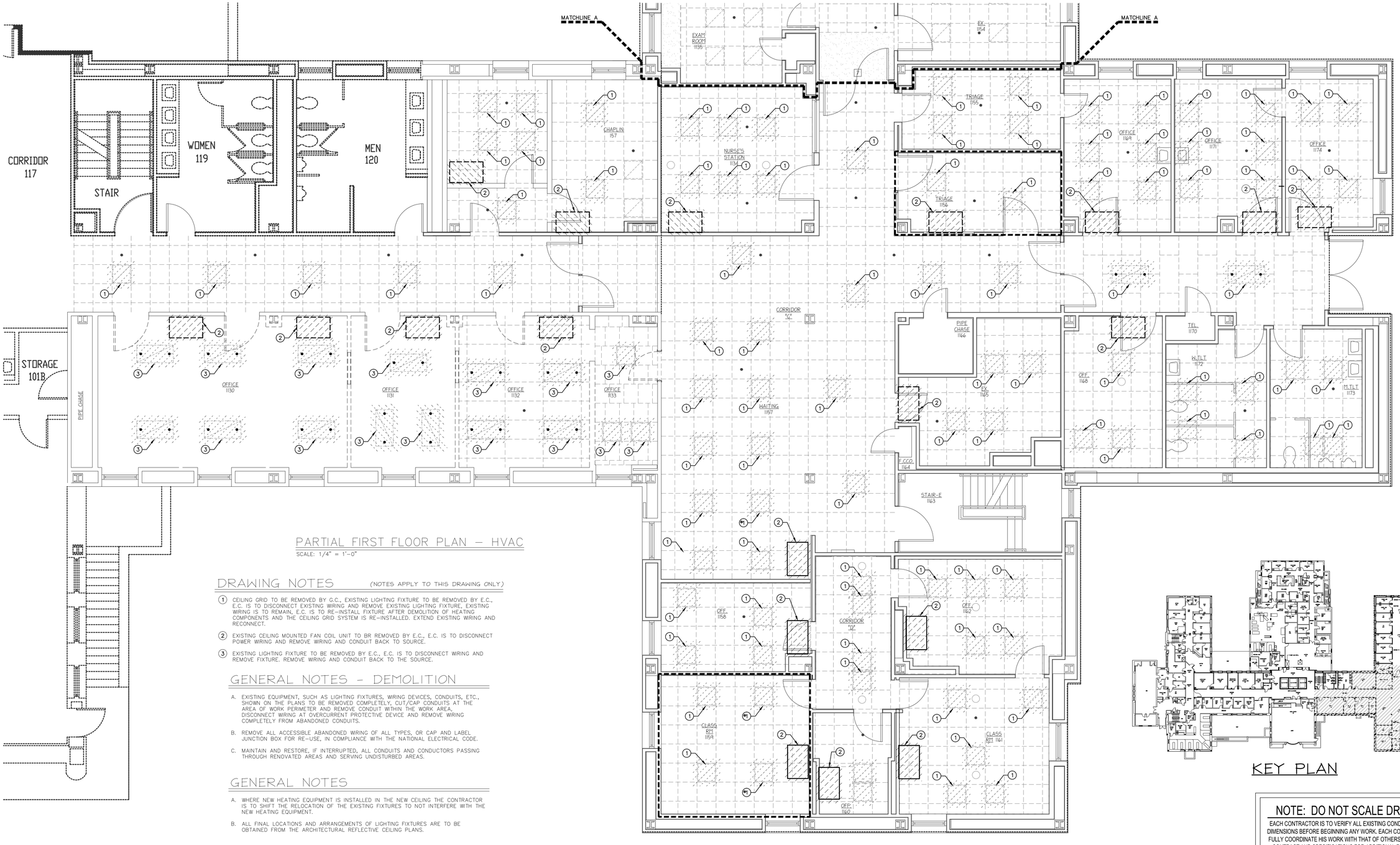

PARTIAL FIRST FLOOR PLAN – HVAC

SCALE: 1/4" = 1'-0"

DRAWING NOTES

(NOTES APPLY TO THIS DRAWING ONLY)

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2. EXISTING CEILING MOUNTED FAN COIL UNIT TO BR REMOVED BY E.C., E.C. IS TO DISCONNECT POWER WIRING AND REMOVE WIRING AND CONDUIT BACK TO SOURCE.
3. EXISTING LIGHTING FIXTURE TO BE REMOVED BY E.C., E.C. IS TO DISCONNECT WIRING AND REMOVE FIXTURE. REMOVE WIRING AND CONDUIT BACK TO THE SOURCE.

GENERAL NOTES – DEMOLITION

A. EXISTING EQUIPMENT, SUCH AS LIGHTING FIXTURES, WIRING DEVICES, CONDUITS, ETC., SHOWN ON THE PLANS TO BE REMOVED COMPLETELY, CUT/CAP CONDUITS AT THE AREA OF WORK PERIMETER AND REMOVE CONDUIT WITHIN THE WORK AREA, DISCONNECT WIRING AT OVERCURRENT PROTECTIVE DEVICE AND REMOVE WIRING COMPLETELY FROM ABANDONED CONDUITS.

B. REMOVE ALL ACCESSIBLE ABANDONED WIRING OF ALL TYPES, OR CAP AND LABEL JUNCTION BOX FOR RE-USE, IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE.

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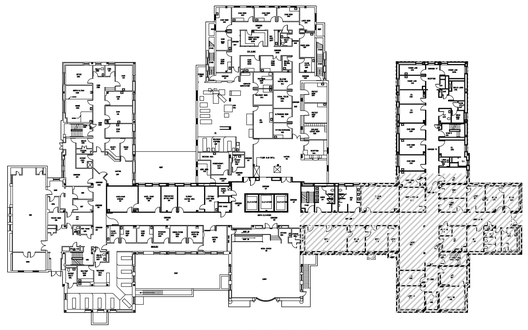
GENERAL NOTES

A. WHERE NEW HEATING EQUIPMENT IS INSTALLED IN THE NEW CEILING THE CONTRACTOR IS TO SHIFT THE RELOCATION OF THE EXISTING FIXTURES TO NOT INTERFERE WITH THE NEW HEATING EQUIPMENT.

B. ALL FINAL LOCATIONS AND ARRANGEMENTS OF LIGHTING FIXTURES ARE TO BE OBTAINED FROM THE ARCHITECTURAL REFLECTIVE CEILING PLANS.



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rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title	FEE OFFICE PARTIAL FIRST FLOOR PLAN - ELECTRICAL DEMOLITION
Approved: Project Director	
Project Title	FEE OFFICE - -
Location	CLARKSBURG, VA
Date	10-31-2011
Checked	G.C.D.
Drawn	B.J.P.
Project Number	1046
Building Number	-
Drawing Number	ED-2 Dwg. 36 of 45

Office of Construction and Facilities Management

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ELECTRICAL LEGEND

(XX)	2'X2' RECESSED LIGHTING FIXTURE, LETTER TYPE AND CIRCUIT NUMBER AS SHOWN ON THE DRAWINGS, SEE LIGHTING FIXTURE SCHEDULE FOR INFORMATION, LETTER IN CIRCLE DENOTES FIXTURE TYPE ON LIGHTING FIXTURE SCHEDULE, LETTERING OUTSIDE FIXTURE IS THE PANEL DESIGNATION AND NUMBER AFTER PANEL DESIGNATION IS THE CIRCUIT NUMBER.
(XX)	2'X4' RECESSED LIGHTING FIXTURE, LETTER TYPE AND CIRCUIT NUMBER AS SHOWN ON THE DRAWINGS, SEE LIGHTING FIXTURE SCHEDULE FOR INFORMATION, LETTER IN CIRCLE DENOTES FIXTURE TYPE ON LIGHTING FIXTURE SCHEDULE, LETTERING OUTSIDE FIXTURE IS THE PANEL DESIGNATION AND NUMBER AFTER PANEL DESIGNATION IS THE CIRCUIT NUMBER.
	HOSPITAL GRADE DUPLEX RECEPTACLE, 20 AMPERE, 125 VOLT, 2-POLE, 3 WIRE GROUNDING TYPE, NEMA 5-20R, MOUNTED 1'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. PROVIDE RECEPTACLE COVER. FURNISH AND INSTALL CLEAR TAPE IDENTIFICATION WITH PANEL/CIRCUIT NUMBER IN BLACK LETTERS, REFER TO SPECIFICATIONS FOR MORE INFORMATION.
J	CONNECTION POINT IN SPECIFIC EQUIPMENT, EXTEND FLEXIBLE CONDUIT AND WIRING AND CONNECT TO EQUIPMENT WIRING IN EQUIPMENT JUNCTION BOX.
XX	DRAWING NOTE, NUMBER DENOTES CORRESPONDING DRAWING NOTE LOCATED ON THAT DRAWING, REFER TO DRAWING NOTES FOR THAT DRAWING
	HOMERUN TO PANELBOARD, ARROWS INDICATE NUMBER OF CIRCUITS IN RUN, CIRCUIT DESIGNATION ADJACENT TO ARROW, LETTER INDICATES PANEL DESIGNATION AND NUMBER AFTER PANEL DESIGNATION IS THE CIRCUIT NUMBER.
	EXISTING POWER PANEL TO REMAIN AND BE USED TO OBTAIN POWER, REFER TO EXISTING PANEL SCHEDULES.
$	SINGLE POLE WALL SWITCH, 20 AMPERE, 120/277 VOLT, SPECIFICATION GRADE, MOUNTED 4'-0" ABOVE FINISHED FLOOR.
$	WALL MOUNTED OCCUPANCY SENSOR WITH TIME DELAY OPERATION, DUAL TECHNOLOGIES SENSING, 1ø-120 VOLT, MOUNT AT 4'-0" ABOVE FINISHED FLOOR
OS	CEILING MOUNTED OCCUPANCY SENSOR WITH TIME DELAY OPERATION, DUAL TECHNOLOGIES SENSING, 1ø-120 VOLT, MOUNTED ON CEILING
P	DATA OUTLET MOUNTED AT 48" ABOVE FINISHED FLOOR

ELECTRICAL ABBREVIATIONS

A	AMPERES (AMPS)
B.F.C.	BELOW FINISHED CEILING
EA.	EACH
E.C.	ELECTRICAL CONTRACTOR
FT	FEET
GA.	GAUGE
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
Hp	HORSEPOWER
KW	KILOWATT
MAX	MAXIMUM
MIN	MINIMUM
M.L.O.	MAIN LUGS ONLY
P.C.	PLUMBING CONTRACTOR
ø	PHASE
TYP.	TYPICAL
W	WATT

LIGHTING SWITCHING NOTES

1. WHERE CEILING MOUNTED OCCUPANCY SENSORS ARE SHOWN, WALL SWITCHES ARE ALSO INDICATED, CONTRACTOR IS TO WIRE WALL SWITCH IN CONJUNCTION WITH THE OCCUPANCY SENSOR, REFER TO MANUFACTURERS WIRING DIAGRAMS.

GENERAL LIGHTING NOTES

1. THE CONTRACTOR IS TO VERIFY CEILING TYPES (PLASTIC, LAY-IN, ETC.) PRIOR TO ORDERING FIXTURES. FURNISH AND INSTALL ALL MOUNTING HARDWARE (EX. PLASTER RINGS, ETC.) FOR EACH FIXTURE AS REQUIRED TO PROPERLY MOUNT FIXTURE IN EACH CEILING TYPE. REFER TO ARCHITECTURAL ROOM FINISH SCHEDULE(S) AND THE ARCHITECTURAL REFLECTED CEILING PLAN(S) FOR THE TYPE OF CEILING TO BE INSTALLED IN EACH ROOM/AREA AND THE ARRANGEMENT OF THE LIGHTING FIXTURES.
2. REFER TO THE LIGHTING FIXTURE SCHEDULE, AND SPECIFICATIONS FOR THE NUMBER OF LAMPS AND TYPE OF LAMPS TO BE INSTALLED IN EACH FIXTURE.

DEVICE OUTLET NOTES

1. ALL GENERAL USE RECEPTACLES ARE TO BE MOUNTED AT 1'-6" (18") ABOVE FINISHED FLOOR UNLESS NOTED ON DRAWINGS OTHERWISE.
2. ALL MOUNTING HEIGHTS ON THE DRAWING FOR DEVICES ARE TO THE CENTER LINE OF THE DEVICE.

GENERAL NOTES

(NOTES APPLY TO ALL DRAWINGS)

1. ALL ELECTRICAL ITEMS REMOVED BY THE E.C. ARE TO BE PROPERLY DISPOSED OF BY THE ELECTRICAL CONTRACTOR OFF SITE UNLESS NOTED OTHERWISE.
2. IF A BRANCH CIRCUIT OF AN ELECTRICAL DEVICE PART OF THE DEMOLITION (AS SHOWN ON THIS DRAWING) CONTINUES ON AND FEEDS AN ELECTRICAL DEVICE(S) THAT IS NOT PART OF THE DEMOLITION, THE E.C. IS TO REMOVE THE DEVICE TO BE DEMOLISHED ONLY AND RECONNECT THE ELECTRICAL DEVICE(S) TO REMAIN BACK TO THE ORIGINAL BRANCH CIRCUIT – OTHERWISE, REMOVE THE WIRE BACK TO THE SOURCE.
3. THE CONTRACTOR IS TO DISCONNECT AND RENDER DEAD WIRING TO EQUIPMENT THAT IS TO BE REMOVED. THE CONTRACTOR IS TO REMOVE ALL EXPOSED CONDUIT AND WIRING TO SAME.
4. WHERE EXISTING FIXTURES, OUTLETS, CONDUITS, ETC. INTERFERE WITH THE NEW WORK IN REMODELED AREAS, THE CONTRACTOR IS TO REMOVE THE EQUIPMENT AS REQUIRED. NEW CONDUITS, CONDUCTORS, JUNCTION BOXES, ETC. ARE TO BE INSTALLED FOR THE CIRCUITS AFFECTED IN THE AREA. WHERE FIXTURES, SWITCHES OR OTHER DEVICES ARE REMOVED AND UNUSED OPENINGS REMAIN, THE CONTRACTOR IS TO REMOVE THE BOX AND REPAIR AND FINISH THE OPENING TO MATCH THE ADJACENT SURFACES.
5. EXISTING EXPOSED CONDUIT AND WIRING NOT PART OF THE REMODELING IS TO BE REMOVED. EXISTING CONCEALED WIRING NOT PART OF THE REMODELING IS TO BE DISCONNECTED AND RENDERED "DEAD".
6. EXISTING WIRING AND CONDUITS TO REMOVED EQUIPMENT IS NOT TO BE REUSED, WIRING AND CONDUITS TO NEW EQUIPMENT AND RELOCATED EXISTING EQUIPMENT IS TO BE NEW UNLESS NOTED OTHERWISE
7. THE ENTIRE ELECTRICAL INSTALLATION IS TO CONFORM TO THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE,
8. THE E.C. IS TO FIELD VERIFY FOR POTENTIAL INTERFERENCES PRIOR TO INSTALLATION. ELECTRICAL ITEMS THAT INTERFERE, ARE TO BE RELOCATED OR MODIFICATIONS ARE TO BE MADE TO PROPOSED CONSTRUCTION AS CONTRACT MODIFICATION
9. (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
10. MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.
11. EACH 1ø-120 VOLT CIRCUIT IS TO HAVE A SEPARATE DEDICATED NEUTRAL, SHARING OF A COMMON NEUTRAL IS NOT PERMITTED.
12. ALL INSTALLED DEVICES ARE TO BE IVORY IN COLOR WITH MATCHING THERMOPLASTIC COVER PLATES UNLESS NOTED OTHERWISE ON THE DRAWINGS OR IN THE SPECIFICATIONS.
13. THE CONTRACTOR IS TO MAINTAIN CONTINUITY OF EXISTING BRANCH CIRCUITS THAT ARE TO REMAIN BUT ALTERED TO ACCOMPLISH THE REMODELING.
14. UNINTERRUPTED ELECTRICAL SERVICE IS TO BE MAINTAINED DURING THE ENTIRE TIME REQUIRED FOR THE COMPLETE INSTALLATION OF THE WORK CONTEMPLATED UNDER THESE SPECIFICATIONS AND THE DRAWINGS.
15. THE INTERIOR AND EXTERIOR PREMISES OF THE BUILDING IS TO BE KEPT AS CLEAN AS POSSIBLE DURING THE ENTIRE CONSTRUCTION. E.C. IS TO CLEAN THE AREA DAILY.
15. ALL POTENTIAL BIDDINGS FOR THE PROJECT ARE ENCOURAGED TO PARTICIPATE IN THE CONTRACTING OFFICERS/GOVERNMENTS WALK THROUGH OF THE SITE TO ASCERTAIN THE COMPLEXITIES ILLUSTRATED IN THE PROJECT DRAWINGS.

NOTE: DO NOT SCALE DRAWING

EACH CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS AND ALL DIMENSIONS BEFORE BEGINNING ANY WORK. EACH CONTRACTOR IS TO FULLY COORDINATE HIS WORK WITH THAT OF OTHERS. REFER TO THE CONTRACT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions | Date

CONSULTANTS:

GEORGE C. DeFRANCO REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE ELECTRICAL SYMBOLS AND ABBREVIATIONS

Approved: Project Director

Project Title: FEE OFFICE
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Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: B.J.P.

Project Number: 1046

Building Number: -

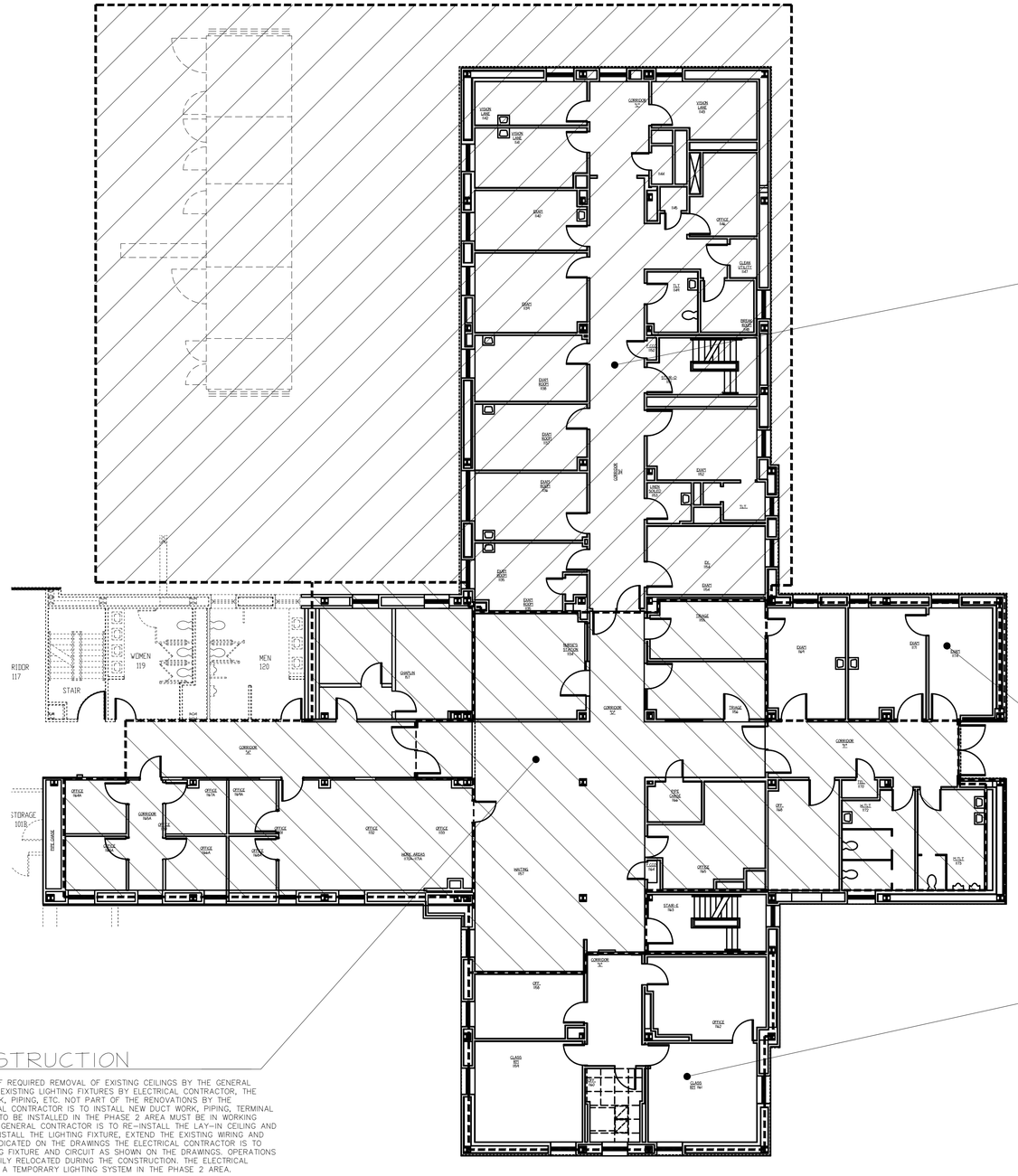
Drawing Number: E-0

Dwg. 37 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231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DRAWING NOTES (NOTES APPLY TO THIS DRAWING ONLY)

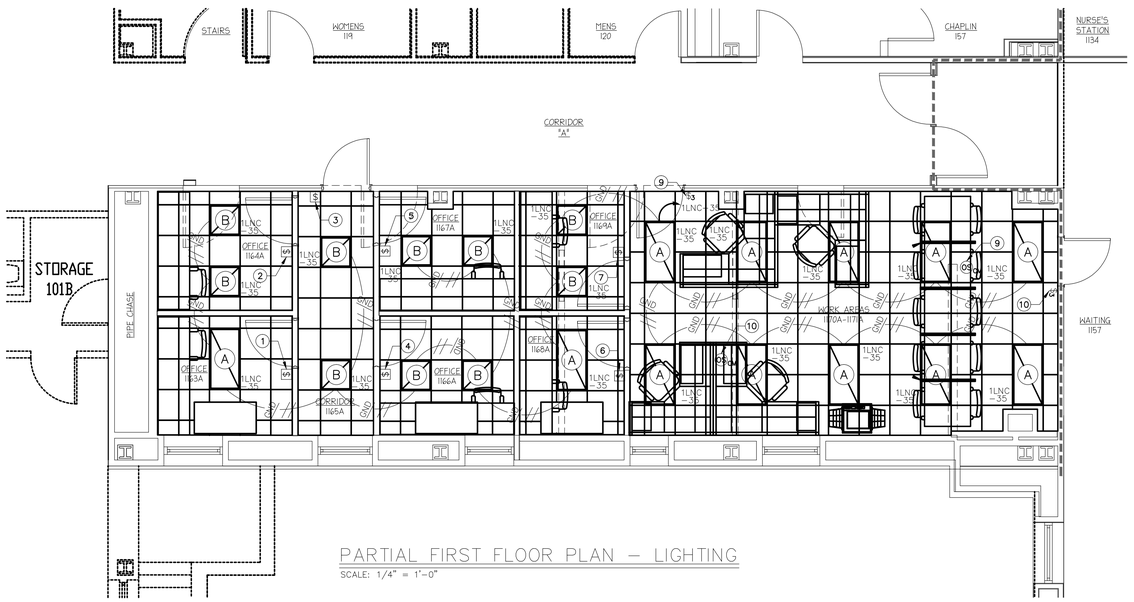
1. NEW WALL MOUNTED OCCUPANCY SENSOR FOR OFFICE 1163A LIGHTING
2. NEW WALL MOUNTED OCCUPANCY SENSOR FOR SLIDE OFFICE 1164A LIGHTING
3. NEW WALL MOUNTED OCCUPANCY SENSOR FOR CORRIDOR 1165A LIGHTING
4. NEW WALL MOUNTED OCCUPANCY SENSOR FOR OFFICE 1166A LIGHTING
5. NEW WALL MOUNTED OCCUPANCY SENSOR FOR SLIDE OFFICE 1167A LIGHTING
6. NEW CEILING MOUNTED OCCUPANCY SENSOR FOR CORRIDOR 1168A LIGHTING
7. NEW WALL MOUNTED OCCUPANCY SENSOR FOR OFFICE 1169A LIGHTING
8. NEW WALL MOUNTED OCCUPANCY SENSOR FOR WORK AREAS 1170A–1171A LIGHTING
9. NEW CEILING MOUNTED OCCUPANCY SENSOR FOR WORK AREAS 1170A–1171A LIGHTING.
10. NEW WALL MOUNTED THREE-WAY OVERRIDE SWITCH FOR WORK AREAS 1170A–1171A LIGHTING

GENERAL NOTES

A. ALL FINAL LOCATIONS AND ARRANGEMENTS OF LIGHTING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL REFLECTED CEILING PLAN.

B. (1) EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

C. MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.



PARTIAL FIRST FLOOR PLAN – LIGHTING

SCALE: 1/4" = 1'-0"

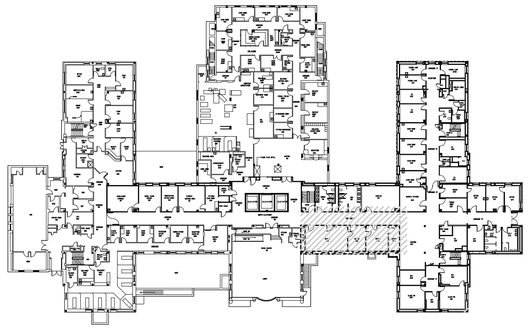
MOTION SENSOR SCHEDULE

SYMBOL	NUMBER OF CONTROL POLES	TYPE OF TECHNOLOGY	MOUNTING	REMARKS
$WSD	1	PASSIVE INFRARED (PIR)	RECESSED/ WALL	REMARKS
OS CM-PDT	1	PASSIVE INFRARED (PIR) ULTRASONIC	SURFACE/ CEILING	REMARKS

• OR APPROVED EQUIVALENT

OCCUPANCY SENSOR INSTALLATION NOTES

1. SENSORS IN ELECTRICAL/ MECHANICAL LOCATIONS NEED TO BE VERIFIED WITH AUTHORITY HAVING JURISDICTION. REFER TO NEC 110.26(D) Illumination – "Illumination shall be provided for all working spaces about service equipment, switchboards, panelboards, or motor control centers installed indoors. Additional lighting outlets shall not be required where the work space is illuminated by an adjacent light source or as permitted by 210.70(A)(1), Exception No. 1, for switched receptacles. In electrical equipment rooms, the illumination shall not be controlled by automatic means only."
2. ONE POWER PACK IS NEEDED PER CIRCUIT/ZONE TO BE CONTROLLED BY LOW VOLTAGE SENSORS. E.C. IS TO FIELD VERIFY THE REQUIRED NUMBER OF POWER PACKS NEEDED TO MAKE A COMPLETE SYSTEM.
3. ADDITIONAL SENSORS MAY BE REQUIRED TO PROVIDE COMPLETE COVERAGE DEPENDING ON PARTITION, FURNITURE, AND SHELVING PLACEMENT – E.C. IS TO FIELD VERIFY EXACT LOCATIONS OF ALL OBSTRUCTIONS WITHIN EACH SPACE TO DETERMINE EXACT NUMBER OF SENSORS REQUIRED TO PROVIDE A FULLY FUNCTIONAL SYSTEM.
4. SENSOR MASKING KITS MAY BE REQUIRED TO LIMIT COVERAGE WITHIN SOME AREAS – E.C. IS TO COORDINATE DESIRED LIMITS OF ALL OCCUPANCY SENSORS WITHIN EACH SPACE WITH OWNER.
5. ALL OCCUPANCY SENSOR LOCATIONS SHOWN ON FLOOR PLANS ARE APPROXIMATE – E.C. IS TO REFER TO SENSOR MANUFACTURER'S INSTRUCTIONS TO DETERMINE FINAL SENSOR LOCATION PRIOR TO BEGINNING INSTALLATION. THE OCCUPANCY SENSOR SYSTEM IS TO SENSE THE PRESENCE OF HUMAN ACTIVITY WITHIN THE DESIRED SPACE AND FULLY CONTROL THE "ON" / "OFF" FUNCTION OF THE LIGHTING LOADS AUTOMATICALLY. SENSORS SHALL TURN "ON" THE LOAD WITHIN 2 FEET OF ENTRANCE AND SHALL NOT INITIATE "ON" OUTSIDE OF ENTRANCE.
6. E.C. IS TO SET THE DESIRED TIME DELAY SETTINGS AND SWITCHING OPERATION FOR ALL OCCUPANCY SENSORS, TIME DELAY IS TO BE SET FOR 15 MINUTES
7. IN ROOMS OR AREAS WITH MULTIPLE SENSORS, THE SENSORS IN COMBINATION ARE TO COVER ENTIRE AREA AND BE INTERCONNECTED SO THAT DETECTION OF OCCUPANCY IN ANY SENSOR WILL ENABLE ALL ROOM OR AREA LIGHTS.



KEY PLAN

NOTE: DO NOT SCALE DRAWING

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FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions	Date

CONSULTANTS:

GEORGE C. DeFRANK REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

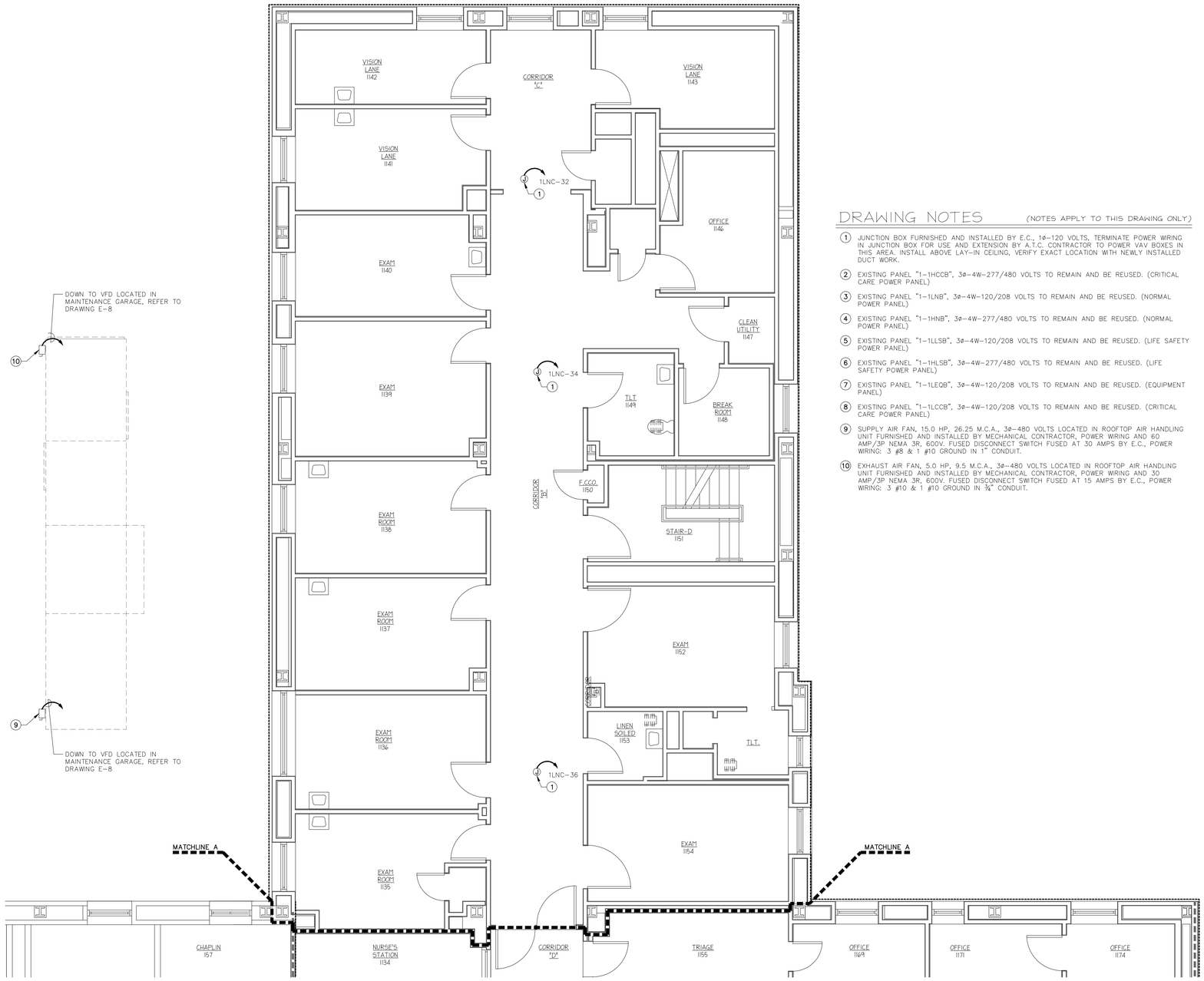
LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title	Project Title	Project Number	Building Number
FEE OFFICE PARTIAL FIRST FLOOR PLAN - LIGHTING	FEE OFFICE - -	1046	-
Approved: Project Director	Location: CLARKSBURG, VA	Drawing Number	
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: B.J.P.	E-2 Dwg. 39 of 45	

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



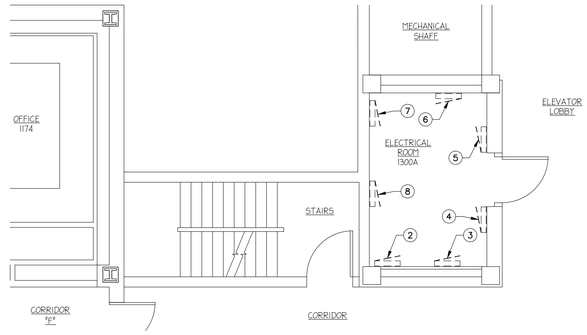
PARTIAL FIRST FLOOR PLAN - POWER

SCALE: 1/4" = 1'-0"

DRAWING NOTES

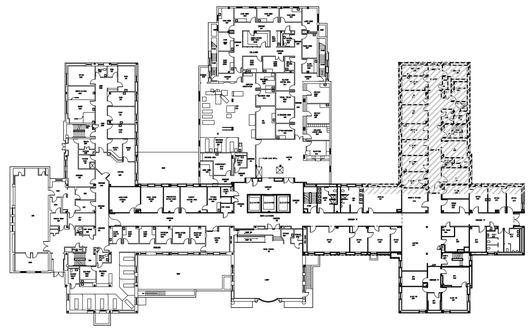
(NOTES APPLY TO THIS DRAWING ONLY)

1. JUNCTION BOX FURNISHED AND INSTALLED BY E.C., 1ø-120 VOLTS, TERMINATE POWER WIRING IN JUNCTION BOX FOR USE AND EXTENSION BY A.T.C. CONTRACTOR TO POWER VAV BOXES IN THIS AREA. INSTALL ABOVE LAY-IN CEILING, VERIFY EXACT LOCATION WITH NEWLY INSTALLED DUCT WORK.
2. EXISTING PANEL "1-1HCCB", 3ø-4W-277/480 VOLTS TO REMAIN AND BE REUSED. (CRITICAL CARE POWER PANEL)
3. EXISTING PANEL "1-1LNB", 3ø-4W-120/208 VOLTS TO REMAIN AND BE REUSED. (NORMAL POWER PANEL)
4. EXISTING PANEL "1-1HNB", 3ø-4W-277/480 VOLTS TO REMAIN AND BE REUSED. (NORMAL POWER PANEL)
5. EXISTING PANEL "1-1LLSB", 3ø-4W-120/208 VOLTS TO REMAIN AND BE REUSED. (LIFE SAFETY POWER PANEL)
6. EXISTING PANEL "1-1HLSB", 3ø-4W-277/480 VOLTS TO REMAIN AND BE REUSED. (LIFE SAFETY POWER PANEL)
7. EXISTING PANEL "1-1LEQB", 3ø-4W-120/208 VOLTS TO REMAIN AND BE REUSED. (EQUIPMENT PANEL)
8. EXISTING PANEL "1-1LCCB", 3ø-4W-120/208 VOLTS TO REMAIN AND BE REUSED. (CRITICAL CARE POWER PANEL)
9. SUPPLY AIR FAN, 15.0 HP, 26.25 M.C.A., 3ø-480 VOLTS LOCATED IN ROOFTOP AIR HANDLING UNIT FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, POWER WIRING AND 60 AMP/3P NEMA 3R, 600V. FUSED DISCONNECT SWITCH FUSED AT 30 AMPS BY E.C., POWER WIRING: 3 #8 & 1 #10 GROUND IN 1" CONDUIT.
10. EXHAUST AIR FAN, 5.0 HP, 9.5 M.C.A., 3ø-480 VOLTS LOCATED IN ROOFTOP AIR HANDLING UNIT FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, POWER WIRING AND 30 AMP/3P NEMA 3R, 600V. FUSED DISCONNECT SWITCH FUSED AT 15 AMPS BY E.C., POWER WIRING: 3 #10 & 1 #10 GROUND IN ¾" CONDUIT.



PARTIAL FIRST FLOOR PLAN - ELECTRICAL ROOM 1300A

SCALE: 1/4" = 1'-0"



KEY PLAN

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Drawing Title	FEE OFFICE PARTIAL FIRST FLOOR PLAN - POWER
Approved: Project Director	
Project Title	FEE OFFICE - -
Location	CLARKSBURG, VA
Date	10-31-2011
Checked	G.C.D.
Drawn	B.J.P.
Project Number	1046
Building Number	-
Drawing Number	E-3 Dwg. 40 of 45

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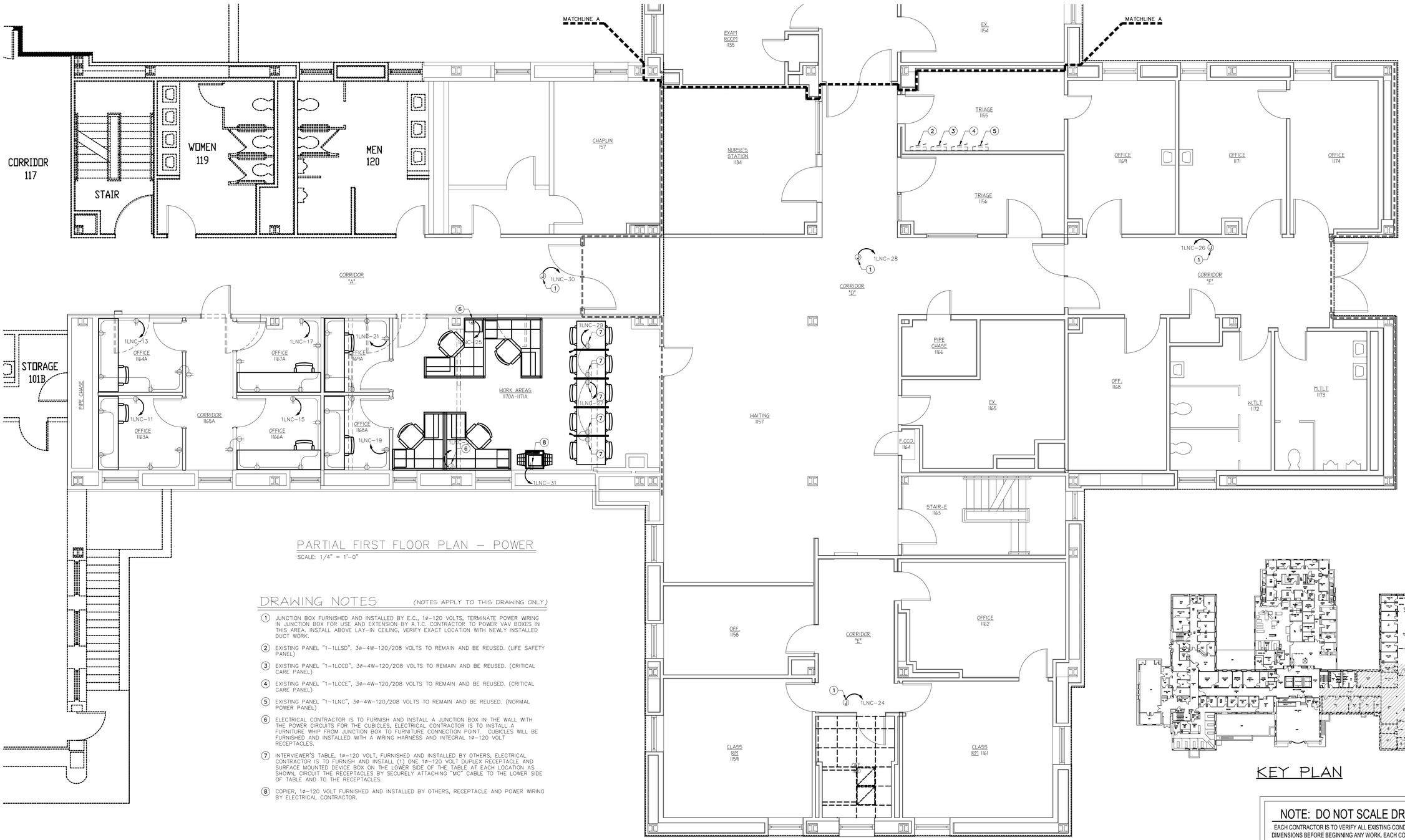


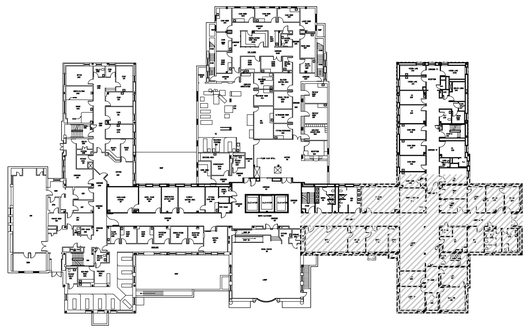
PARTIAL FIRST FLOOR PLAN – POWER

SCALE: 1/4" = 1'-0"

DRAWING NOTES

(NOTES APPLY TO THIS DRAWING ONLY)

1. JUNCTION BOX FURNISHED AND INSTALLED BY E.C., 1ø–120 VOLTS, TERMINATE POWER WIRING IN JUNCTION BOX FOR USE AND EXTENSION BY A.T.C. CONTRACTOR TO POWER VAV BOXES IN THIS AREA. INSTALL ABOVE LAY–IN CEILING, VERIFY EXACT LOCATION WITH NEWLY INSTALLED DUCT WORK.
2. EXISTING PANEL "1–1LLSD", 3ø–4W–120/208 VOLTS TO REMAIN AND BE REUSED. (LIFE SAFETY PANEL)
3. EXISTING PANEL "1–1LCCD", 3ø–4W–120/208 VOLTS TO REMAIN AND BE REUSED. (CRITICAL CARE PANEL)
4. EXISTING PANEL "1–1LCCE", 3ø–4W–120/208 VOLTS TO REMAIN AND BE REUSED. (CRITICAL CARE PANEL)
5. EXISTING PANEL "1–1LNC", 3ø–4W–120/208 VOLTS TO REMAIN AND BE REUSED. (NORMAL POWER PANEL)
6. ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL A JUNCTION BOX IN THE WALL WITH THE POWER CIRCUITS FOR THE CUBICLES, ELECTRICAL CONTRACTOR IS TO INSTALL A FURNITURE WHIP FROM JUNCTION BOX TO FURNITURE CONNECTION POINT. CUBICLES WILL BE FURNISHED AND INSTALLED WITH A WIRING HARNESS AND INTEGRAL 1ø–120 VOLT RECEPTACLES.
7. INTERVIEWER'S TABLE, 1ø–120 VOLT, FURNISHED AND INSTALLED BY OTHERS, ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL (1) ONE 1ø–120 VOLT DUPLEX RECEPTACLE AND SURFACE MOUNTED DEVICE BOX ON THE LOWER SIDE OF THE TABLE AT EACH LOCATION AS SHOWN, CIRCUIT THE RECEPTACLES BY SECURELY ATTACHING "MC" CABLE TO THE LOWER SIDE OF TABLE AND TO THE RECEPTACLES.
8. COPIER, 1ø–120 VOLT FURNISHED AND INSTALLED BY OTHERS, RECEPTACLE AND POWER WIRING BY ELECTRICAL CONTRACTOR.



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Revisions:	Date

CONSULTANTS:

GEORGE C. DeFREIN REGISTERED 12496 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

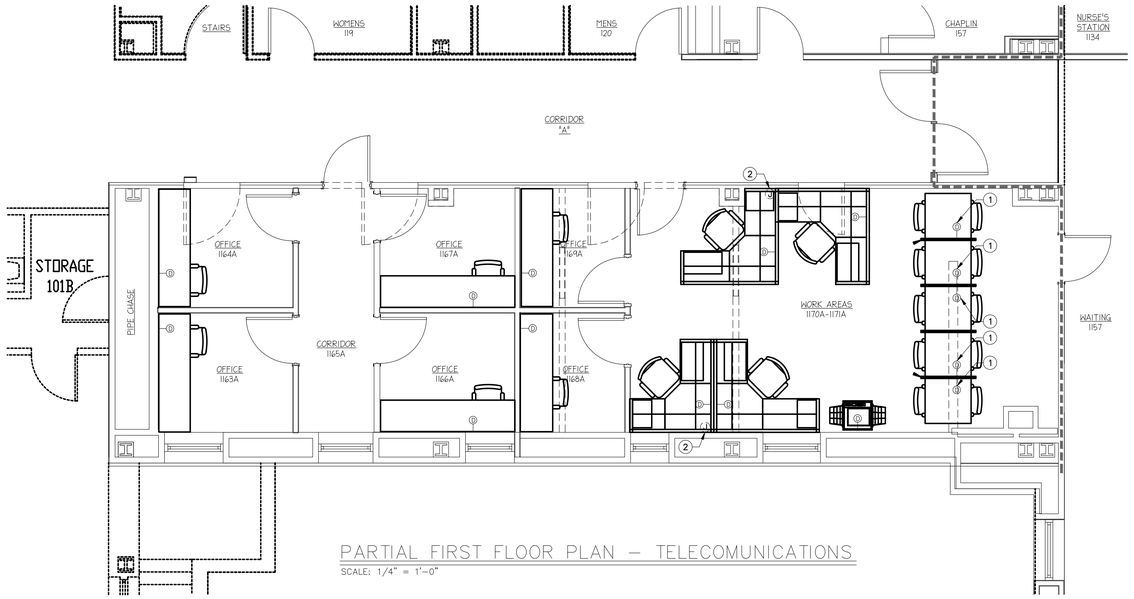
ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title	Project Title	Project Number	
FEE OFFICE PARTIAL FIRST FLOOR PLAN POWER	FEE OFFICE - -	1046	Office of Construction and Facilities Management
Approved: Project Director	Location: CLARKSBURG, VA	Building Number: -	
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: B.J.P.	Drawing Number: E-4 Dwg. 41 of 45	Department of Veterans Affairs

VA FORM 08-6231

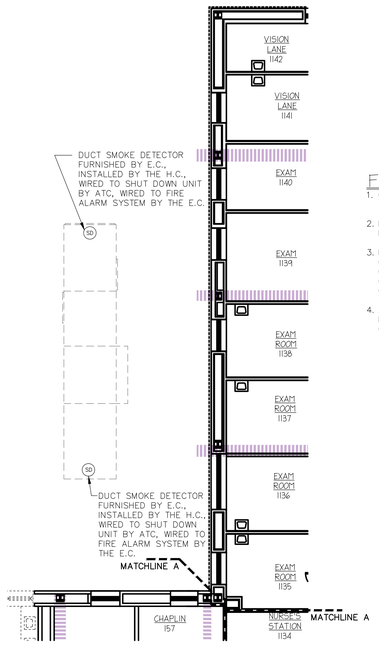


PARTIAL FIRST FLOOR PLAN – TELECOMUNICATIONS

SCALE: 1/4" = 1'-0"

DRAWING NOTES (NOTES APPLY TO THIS DRAWING ONLY)

1. INTERVIEWER'S TABLE, 1ø-120 VOLT, FURNISHED AND INSTALLED BY OTHERS, ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL (1) ONE DATA OUTLET AND SURFACE MOUNTED DEVICE BOX ON THE LOWER SIDE OF THE TABLE AT EACH LOCATION AS SHOWN, SECURELY ATTACH WIRING TO THE LOWER SIDE OF THE TABLE.
2. ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL A JUNCTION BOX IN THE WALL WITH THE DATA WIRING FOR THE CUBICLES, ELECTRICAL CONTRACTOR IS TO INSTALL A FURNITURE WHIP FROM JUNCTION BOX TO FURNITURE CONNECTION POINT. CUBICLES WILL BE FURNISHED A LOW VOLTAGE WIREWAY. ELECTRICAL CONTRACTOR IS TO EXTEND DATA WIRING THROUGH THE LOW VOLTAGE WIREWAY TO THE DATA OUTLET, DATA OUTLET FURNISHED AND INSTALL BY ELECTRICAL CONTRACTOR

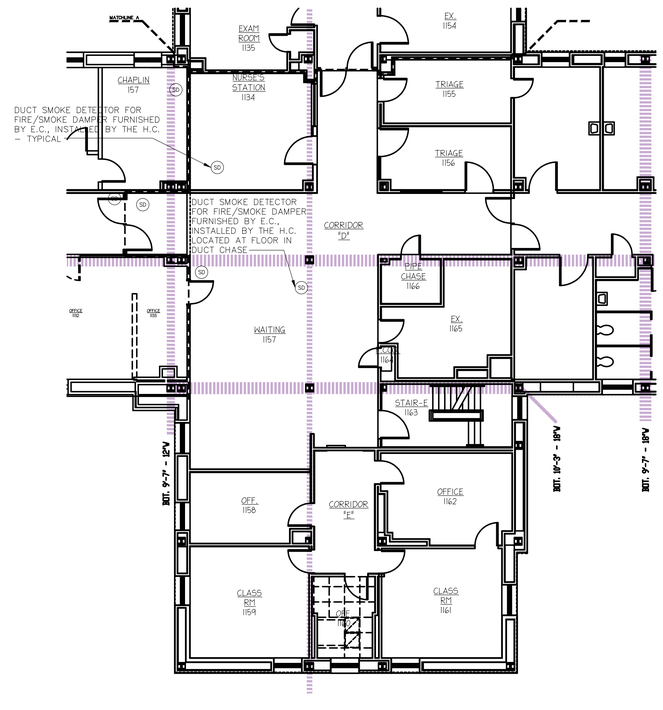


PARTIAL FIRST FLOOR PLAN
FIRE ALARM

SCALE: 1/4" = 1'-0"

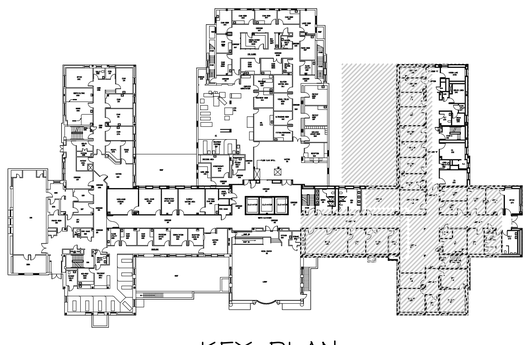
FIRE ALARM NOTES:

1. CONNECT ALL FIRE ALARM DEVICES TO THE NEAREST FIRE ALARM CIRCUIT IN THE AREA.
2. FIRE ALARM COMPONENTS ARE TO MATCH EXISTING COMPONENTS CURRENTLY BEING UTILIZED IN THIS AREA OF THE HOSPITAL.
3. EXISTING WALL MOUNTED FIRE ALARM COMPONENTS LOCATED IN THE CONSTRUCTION AREA ARE TO REMAIN IN PLACE NO WORK IS REQUIRED. COMPONENT LOCATED IN THE EXISTING CEILINGS ARE TO BE REMOVED FOR CEILING REMOVAL AND REINSTALLED IN THE NEW CEILINGS OR RE-INSTALLED CEILINGS.
4. ALL DUCT SMOKE DETECTORS ARE TO BE FURNISHED BY THE E.C. INSTALLED BY THE H.C., THE ATC WILL WIRE TO SHUT DOWN THE CORRESPONDING UNITS OR FIRE/SMOKE DAMPER, THE E.C. IS TO WIRE DUCT SMOKE DETECTORS TO THE EXISTING FIRE ALARM CONTROL PANEL.



PARTIAL FIRST FLOOR PLAN
FIRE ALARM

SCALE: 1/4" = 1'-0"



KEY PLAN

NOTE: DO NOT SCALE DRAWING

EACH CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS AND ALL DIMENSIONS BEFORE BEGINNING ANY WORK. EACH CONTRACTOR IS TO FULLY COORDINATE HIS WORK WITH THAT OF OTHERS. REFER TO THE CONTRACT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions	Date

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GEORGE C. DEPEW REGISTERED PROFESSIONAL ENGINEER 12496 STATE OF PENNSYLVANIA

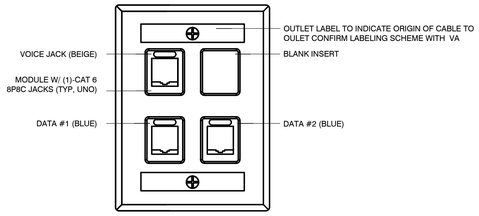
ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

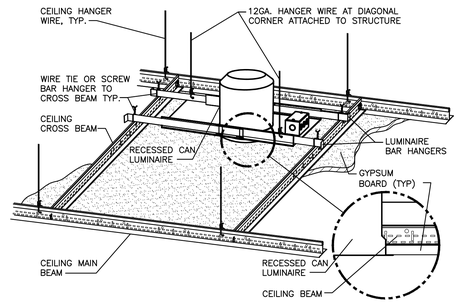
LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE PARTIAL FIRST FLOOR PLAN – TELECOMMUNICATIONS + FIRE ALARM	Project Title: FEE OFFICE – –	Project Number: 1046	Office of Construction and Facilities Management
Approved Project Director	Location: CLARKSBURG, VA	Building Number: –	
	Date: 10-31-2011 / Checked: G.C.D. / Drawn: B.J.P.	Drawing Number: E-5 Dwg. 42 of 45	Department of Veterans Affairs

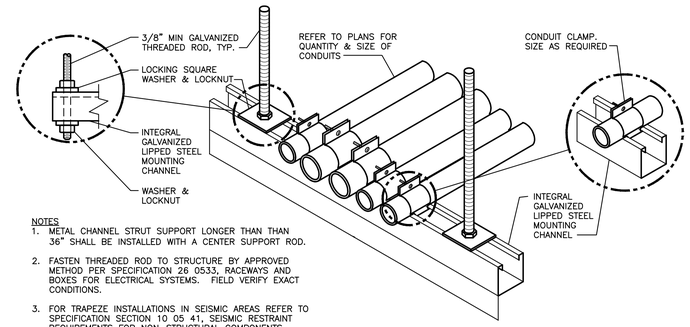
VA FORM 08-6231



1 DATA PLATE DETAIL
NTS

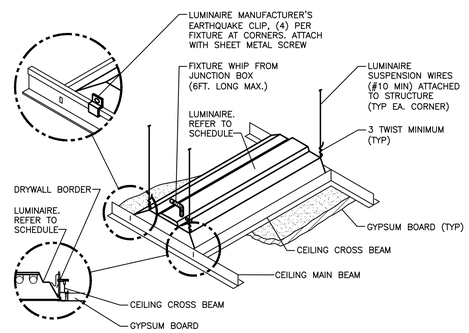


2 DOWNLIGHT MOUNTING - GYPBOARD CEILING
NTS

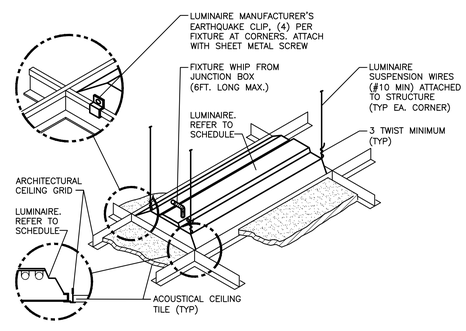


NOTES
1. METAL CHANNEL STRUT SUPPORT LONGER THAN THAN 36" SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATION 26 0533, RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.
3. FOR TRAPEZE INSTALLATIONS IN SEISMIC AREAS REFER TO SPECIFICATION SECTION 10 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

3 CONDUIT TRAPEZE MOUNTING DETAIL
NTS



4 LUMINAIRE MOUNTING - GYPBOARD CEILING
NTS



5 LUMINAIRE MOUNTING - LAY-IN CEILING
NTS

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Revisions	Date

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ARCHITECT/ENGINEERS:

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MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt **3** box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE ELECTRICAL DETAILS

Approved: Project Director

Project Title: FEE OFFICE
-
-

Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: B.J.P.

Project Number: 1046
Building Number: -
Drawing Number: E-6
Dwg. 43 of 45

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231

LIGHTING FIXTURE SCHEDULE

SYMBOL	FIXTURE DESCRIPTION	LAMPS	VOLTS	MOUNTING	SPECIFICATION
A	ARCHITECTURAL RECESSED TROFFER	LED	120	RECESSED/CEILING	HOUSING: DURABLE 20 GAUGE STEEL HOUSING WITH STANDARD TROFFER ACCESS PLATE FOR ELECTRICAL INSTALLATION DRIVER: FIELD REPLACEABLE LIGHT ENGINE INTEGRATES LED'S, HIGH EFFICIENCY DRIVER, POWER SUPPLY, THERMAL MANAGEMENT, AND OPTICAL MIXING COMPONENTS, OPTICAL SYSTEM: OPTICAL SYSTEM UTILIZES A UNIQUE COMBINATION OF REFLECTIVE AND REFRACTIVE OPTICAL COMPONENTS TO ACHIEVE A UNIFORM, COMFORTABLE APPEARANCE. PIXELATION, COLOR FRINGING, AND DIRECT VIEW OF UNSHIELDED LED'S ARE ELIMINATED. LOWER REFLECTOR FINISHED WITH HIGH REFLECTANCE WHITE POLYESTER POWDER COATING THAT CREATES A COMFORTABLE VISUAL TRANSITION FROM THE DIFFUSER TO THE CEILING PLANE. OPTIMAL DISTRIBUTION OF LIGHT BALANCES THE DELIVERY OF HIGH ILLUMINANCE LEVELS TO HORIZONTAL SURFACES WITH AN IDEAL AMOUNT TO VERTICAL SURFACES. HEAT SINK: THERMAL MANAGEMENT SYSTEM THAT IS INSTALLED ON THE ROOM SIDE OF THE FIXTURE. HEAT SINK IS INTEGRATED WITH-IN THE DIFFUSING LENS AND USES THE CONTROLLED ENVIRONMENT OF HE ROOM TO AID IN COOLING. TECHOLOGY: GENERATES WHITE LIGHT WITH LED'S TO DELIVER HIGH EFFICIENCY COLOR CHARACTERISTICS BY MIXING THE LIGHT FROM UNSATURATED YELLOW AND RED LED'S. LABELS: UL LISTED POWER FACTOR: 0.9 TEMPERATURE RATING:: DESIGNED TO OPERATE IN TEMPERATURES 35°C AND BELOW ROOM SIDE AND PLENUM SIDE
SYMBOL	FIXTURE DESCRIPTION	LAMPS	VOLTS	MOUNTING	SPECIFICATION
A	ARCHITECTURAL RECESSED TROFFER	LED	120	RECESSED/CEILING	HOUSING: DURABLE 20 GAUGE STEEL HOUSING WITH STANDARD TROFFER ACCESS PLATE FOR ELECTRICAL INSTALLATION DRIVER: FIELD REPLACEABLE LIGHT ENGINE INTEGRATES LED'S, HIGH EFFICIENCY DRIVER, POWER SUPPLY, THERMAL MANAGEMENT, AND OPTICAL MIXING COMPONENTS, OPTICAL SYSTEM: OPTICAL SYSTEM UTILIZES A UNIQUE COMBINATION OF REFLECTIVE AND REFRACTIVE OPTICAL COMPONENTS TO ACHIEVE A UNIFORM, COMFORTABLE APPEARANCE. PIXELATION, COLOR FRINGING, AND DIRECT VIEW OF UNSHIELDED LED'S ARE ELIMINATED. LOWER REFLECTOR FINISHED WITH HIGH REFLECTANCE WHITE POLYESTER POWDER COATING THAT CREATES A COMFORTABLE VISUAL TRANSITION FROM THE DIFFUSER TO THE CEILING PLANE. OPTIMAL DISTRIBUTION OF LIGHT BALANCES THE DELIVERY OF HIGH ILLUMINANCE LEVELS TO HORIZONTAL SURFACES WITH AN IDEAL AMOUNT TO VERTICAL SURFACES. HEAT SINK: THERMAL MANAGEMENT SYSTEM THAT IS INSTALLED ON THE ROOM SIDE OF THE FIXTURE. HEAT SINK IS INTEGRATED WITH-IN THE DIFFUSING LENS AND USES THE CONTROLLED ENVIRONMENT OF HE ROOM TO AID IN COOLING. TECHOLOGY: GENERATES WHITE LIGHT WITH LED'S TO DELIVER HIGH EFFICIENCY COLOR CHARACTERISTICS BY MIXING THE LIGHT FROM UNSATURATED YELLOW AND RED LED'S. LABELS: UL LISTED POWER FACTOR: 0.9 TEMPERATURE RATING:: DESIGNED TO OPERATE IN TEMPERATURES 35°C AND BELOW ROOM SIDE AND PLENUM SIDE

EXISTING PANEL UTILITY SHOP 3

CCT NO	LOAD DESCRIPTION	WIRE SIZE	LOAD Kva	C/B SIZE	PHASE A	PHASE B	PHASE C	C/B SIZE	LOAD Kva	WIRE SIZE	LOAD DESCRIPTION	CCT NO
* 1		---	---	20	•			20	---	---		2 *
* 3	DRILL PRESS	---	---			•			---	---	GRINDER	4 *
* 5		---	---	3			•	3	---	---		6 *
* 7	LIGHTING AND RECEPTACLES	---	---	20/1	•			20/1	---	---	MICROWAVE	8 *
9	---	---	---	---		•		20/1	---	---	MICROWAVE	10*
*11		---	---	15			•	20/1	0.5	12	DUPLEX PUMP CNT. PNL.	12
*13	LATHE	---	---		•			20/1	0.5	12	ATC CNT. PNL.	14
*15		---	---	3		•		20/1	0.5	12	AHU-1 CNT. PNL.	16
17	SPACE	---	---	---			•	15	0.6	12		18
19	SPACE	---	---	---	•				0.6	12	CONDENSATE PUMPS	20
21	SPACE	---	---	---		•		3	0.6	12		22
23	SPACE	---	---	---			•	---	---	---	SPARE	24
25	SPACE	---	---	---	•			---	---	---	SPARE	26
27	SPACE	---	---	---		•		---	---	---	SPARE	28
29	SPACE	---	---	---			•	---	---	---	SPARE	30
31	SPACE	---	---	---	•			---	---	---	SPARE	32
33	SPACE	---	---	---		•		---	---	---	SPARE	34
35	SPACE	---	---	---			•	---	---	---	SPARE	36
37	SPACE	---	---	---	•			---	---	---	SPARE	38
39	SPACE	---	---	---		•		---	---	---	SPARE	40
41	SPACE	---	---	---			•	---	---	---	SPARE	42
	VOLTAGE 208/120. 3ø-4W			PHASE A			4700	LOCATION: MAINTENANCE GARAGE				
	SIZE/TYPE BUS: 225A	A.I.C.:10,000		PHASE B			4720	MOUNTING: SURFACE				
	SIZE/TYPE MAINS: 225A MLO			PHASE C			4923	FED FROM: PANEL BLEQA				
	LUGS #1/0			SUB TOTAL (KVA)			14343	REMARKS:				

NOTES: * DENOTES EXISTING CIRCUIT TO REMAIN *

EXISTING PANEL 1-1LNC

CCT NO	LOAD DESCRIPTION	WIRE SIZE	LOAD Kva	C/B SIZE	PHASE A	PHASE B	PHASE C	C/B SIZE	LOAD Kva	WIRE SIZE	LOAD DESCRIPTION	CCT NO
* 1	SPARE	---	---	30/1	•			20/1	---	---	SPARE	2 *
* 3	SPARE	---	---	30/1		•		20/1	---	---	SPARE	4 *
* 5	SPARE	---	---	20/1			•	20/1	---	---	SPARE	6 *
* 7	SPARE	---	---	30/1	•			20/1	---	---	SPARE	8 *
* 9	SPARE	---	---	20/1		•		20/1	---	---	SPARE	10*
*11	RECEPTACLES 1163A	12	900	20/1			•	20/1	---	---	SPARE	12*
13	RECEPTACLES 1164A	12	1080	20/1	•			20/1	---	---	SPARE	14*
15	RECEPTACLES 1165A	12	1080	20/1		•		20/1	---	---	SPARE	16*
17	RECEPTACLES 1166A	12	900	20/1			•	20/1	---	---	SPARE	18*
19	RECEPTACLES 1167A	12	900	20/1	•			20/1	---	---	SPARE	20*
21	RECEPTACLES 1168A	12	900	20/1		•		20/1	---	---	SPARE	22*
23	9RECEPTACLES 1169A	12	1080	20/1			•	20/1	400	12	VAV 1158, 1159, 1161, 1162	24
25	RECEPTACLES 1170A-1171A	12	1080	20/1	•			20/1	500	12	VAV 1134, 1156, 1157, 1166, CORR. D	26
27	RECEPTACLES 1170A-1171A	12	540	20/1		•		20/1	600	12	VAV 1168, 1169, 1171, 1172, 1174, CORR. F	28
29	RECEPTACLES 1170A-1171A	12	360	20/1			•	20/1	400	12	VAV 1170A-1171A, CORR. A	30
31	RECEPTACLES 1170A-1171A	12	540	20/1	•			20/1	600	12	VAV 1141-1143, CORR. C	32
33	COPIER 1170A-1171A	12	1200	20/1		•		20/1	400	12	VAV 1138-1140, CORR. B	34
35	LIGHTING 1163A-1171A	12	484	20/1			•	20/1	400	12	VAV 1135-1137, 1152, 1154	36
*37				---	•			60	---			38
*39	RANGE FROM ROOM 167	6		---		•		---	---	---	SPARE	40
*41				3			•	3	---			42
	VOLTAGE 208/120. 3ø-4W			PHASE A			4700	LOCATION: 1ST FLOOR TRIAGE ROOM 1156				
	SIZE/TYPE BUS: 225A	A.I.C.:10,000		PHASE B			4720	MOUNTING: SURFACE				
	SIZE/TYPE MAINS: 225A MLO			PHASE C			4923	FED FROM: PANEL 1LNB				
	LUGS #1/0			SUB TOTAL (KVA)			14343	REMARKS:				

NOTES: * DENOTES EXISTING CIRCUIT TO REMAIN *

CIRCUIT BREAKER NOTES

1. ALL CIRCUIT BREAKER TO BE FURNISHED AND INSTALLED BY THE E.C. ARE TO MATCH THE MANUFACTURER OF THE EXISTING PANELBOARD IN WHICH THEY ARE TO BE INSTALLED.
2. ALL CIRCUIT BREAKER THAT ARE FURNISHED AND INSTALLED IN EXISTING PANELBOARDS ARE TO BE OF THE BOLT-IN TYPE.
3. ALL REMOVED CIRCUIT BREAKER ARE TO BE TURNED OVER TO THE GOVERNMENT AT THIS FACILITY.

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Revisions | Date

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WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE ELECTRICAL SCHEDULES

Approved: Project Director

Project Title: FEE OFFICE - -

Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: B.J.P.

Project Number: 1046

Building Number: -

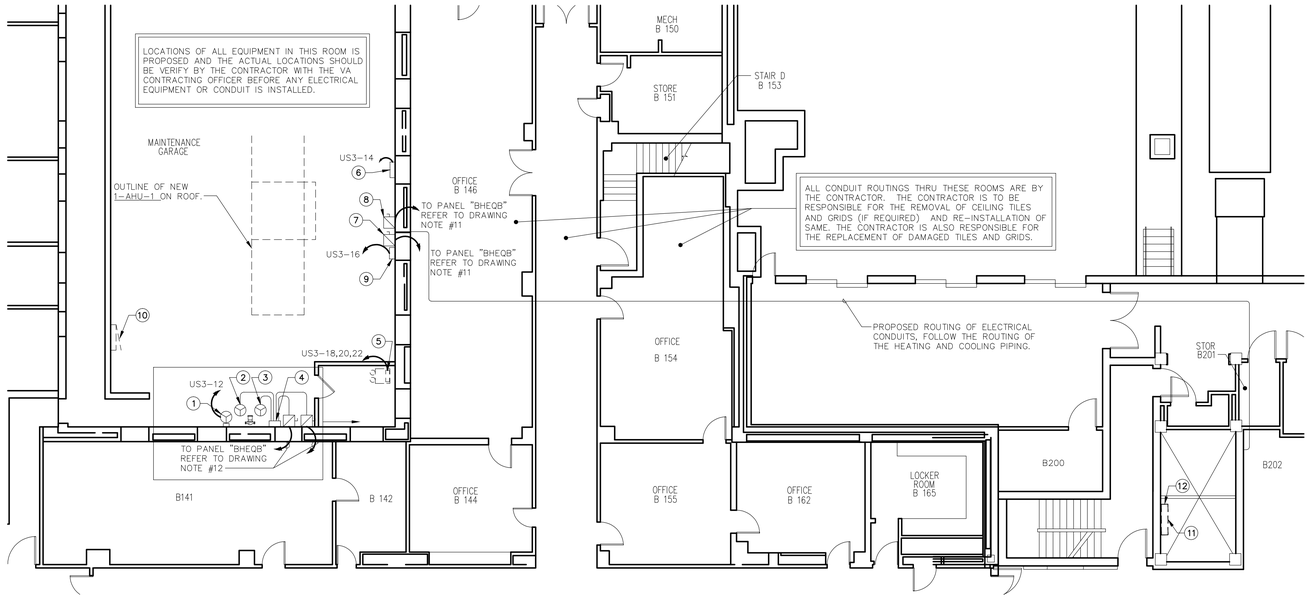
Drawing Number: E-7

Dwg. 44 of 45

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



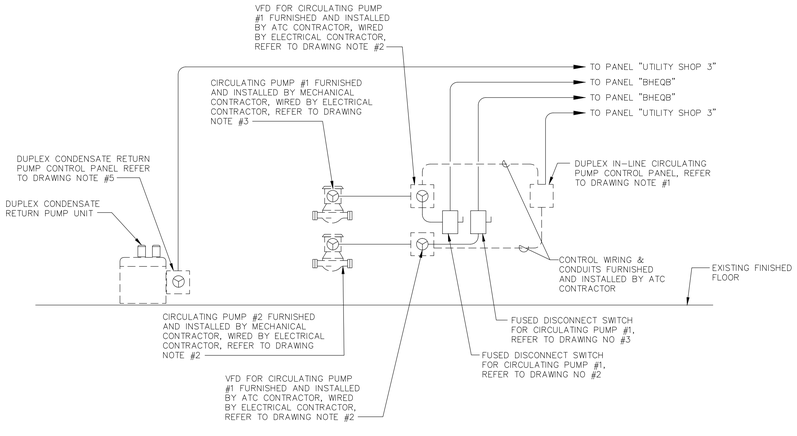
DRAWING NOTES

1. DUPLEX IN-LINE CIRCULATING PUMP CONTROL PANEL, 1ø-120 VOLTS FURNISHED AND INSTALLED BY ATC CONTRACTOR. POWER WIRING BY ELECTRICAL CONTRACTOR
2. DUPLEX IN-LINE CIRCULATING PUMP NO. 1, 1½ Hp, 3ø-480 VOLTS FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, ATC CONTRACTOR TO FURNISH AND INSTALL A VFD CONTROL, ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL A 30 AMP/3P FU. DISCONNECT SWITCH, 600 VOLTS, IN A NEMA 1 ENCLOSURE, FUSED AT 15, WIRE SIZE: 3 #10 & 1 #10 GROUND IN ¾" CONDUIT.
3. DUPLEX IN-LINE CIRCULATING PUMP NO. 2, 1½ Hp, 3ø-480 VOLTS FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, ATC CONTRACTOR TO FURNISH AND INSTALL A VFD CONTROL, ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL A 30 AMP/3P FU. DISCONNECT SWITCH, 600 VOLTS, IN A NEMA 1 ENCLOSURE, FUSED AT 15, WIRE SIZE: 3 #10 & 1 #10 GROUND IN ¾" CONDUIT.
4. DUPLEX IN-LINE CIRCULATING PUMPS, 3ø-480 VOLTS, (2) VFD'S FURNISHED BY THE ATC CONTRACTOR, E.C. IS TO POWER WIRE THROUGH VFD'S TO PUMPS. REFER TO PUMPING EQUIPMENT WIRING DETAIL ON THIS DRAWING FOR DETAILS.
5. DUPLEX CONDENSATE PUMP CONTROL PANEL, (2) ¾ Hp (ONE DUTY, ONE STAND-BY), 3ø-208 VOLTS FURNISHED AND INSTALLED BY H.C.. POWER WIRING BY ELECTRICAL CONTRACTOR, WIRE SIZE: 3 #10 & 1 #10 GROUND IN ¾" CONDUIT.
6. ATC CONTROL CONTROL PANEL FURNISHED AND INSTALLED BY ATC CONTRACTOR, 1ø-120 VOLTS, POWER WIRING BY E.C..
7. 30 AMP/3P FU. 3ø-480 VOLT DISCONNECT SWITCH FU. AT 15 AMPS FOR 1-1AHU-1 RETURN AIR FAN, 5.0 Hp, FURNISHED AND INSTALLED BY E.C., POWER WIRING BY E.C., WIRE SIZE: 3 #10 & 1#10 GROUND IN ¾" CONDUIT.
8. 30 AMP/3P FU. 3ø-480 VOLT DISCONNECT SWITCH FU. AT 30 AMPS FOR 1-1AHU-1 SUPPLY AIR FAN, 15.0 Hp, FURNISHED AND INSTALLED BY E.C., POWER WIRING BY E.C., WIRE SIZE: 3 #8 & 1#10 GROUND IN ¾" CONDUIT.
9. 1-AHU-1 CONTROL PANEL, 1ø-120 VOLTS FURNISHED AND INSTALLED BY ATC, POWER WIRING BY E.C. REFER TO 1-AHU-1 WIRING DETAIL ON THIS DRAWING.
10. EXISTING PANEL UTILITY SHOP (US) 3, 3ø-4W-120/208 VOLTS TO REMAIN.
11. EXISTING PANEL 1-BHEQB 3ø-4W-277/480 VOLTS TO REMAIN, E.C. IS TO FURNISH AND INSTALL A NEW 30AMP/3P CIRCUIT BREAKER FOR THE AHU-1 SUPPLY FAN AND A NEW 15AMP/3P CIRCUIT BREAKER FOR AHU-1 RETURN FAN, UNIT IS LOCATED ON THE MAINTENANCE GARAGE. REFER TO DRAWING E-3 FOR LOCATION. ALSO REFER TO PARTIAL BASEMENT FLOOR PLAN PROPOSED EQUIPMENT LOCATIONS – ELECTRICAL ON THIS DRAWING. CIRCUIT BREAKERS ARE TO MATCH EXISTING PANEL MANUFACTURER.
12. E.C. IS TO FURNISH AND INSTALL TWO (2) NEW 15AMP/3P CIRCUIT BREAKER ONE FOR IN-LINE CIRCULATING PUMP #1 AND ONE FOR CIRCULATING PUMP #2 REFER TO PARTIAL BASEMENT FLOOR PLAN PROPOSED EQUIPMENT LOCATIONS – ELECTRICAL ON THIS DRAWING FOR LOCATION. CIRCUIT BREAKERS ARE TO MATCH EXISTING PANEL MANUFACTURER.

PARTIAL BASEMENT FLOOR PLAN
PROPOSED EQUIPMENT LOCATIONS - ELECTRICAL

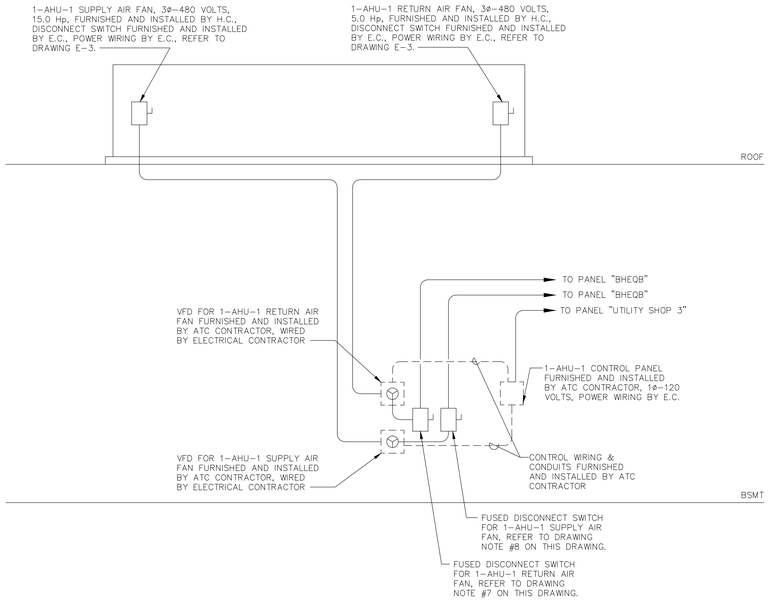
SCALE: 1/8" = 1'-0"

IMPORTANT NOTE: ITEMS REQUIRED TO BE RELOCATED TO ACCOMMODATE THE INSTALLATION OF THE EQUIPMENT BEING FURNISHED AND INSTALLED UNDER THIS CONTRACT ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS TO COORDINATE THE RELOCATION OF ALL ITEMS WITH THE VA CONTRACTING OFFICER AND ENGINEERING DEPARTMENT PRIOR TO ANY WORK BEING PERFORMED.



PUMPING EQUIPMENT WIRING DETAIL

NO SCALE



1-AHU-1 WIRING DETAIL

NO SCALE

NOTE: DO NOT SCALE DRAWING

EACH CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS AND ALL DIMENSIONS BEFORE BEGINNING ANY WORK. EACH CONTRACTOR IS TO FULLY COORDINATE HIS WORK WITH THAT OF OTHERS. REFER TO THE CONTRACT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

FINAL SUBMISSION - FOR CONSTRUCTION
FULLY SPRINKLERED

Revisions:	Date

CONSULTANTS:

GEORGE C. DEFRAN REGISTERED PROFESSIONAL ENGINEER 12496 STATE OF PENNSYLVANIA

ARCHITECT/ENGINEERS:

East Hills Engineering Associates
MECHANICAL/ELECTRICAL SYSTEMS DESIGN
541 MAIN STREET
WINDBER, PENNSYLVANIA 15963
PHONE (814) 467-6877 FAX (814) 467-6529

LAI incorporated
architecture | design
rt 3 box 383e
fairmont, wv 26554
ph: 304.288.3941

Drawing Title: FEE OFFICE
PARTIAL BASEMENT FLOOR PLAN
PROPOSED EQUIP LOCATION - ELECT

Approved: Project Director

Project Title: FEE OFFICE
-
-

Location: CLARKSBURG, VA

Date: 10-31-2011 | Checked: G.C.D. | Drawn: B.J.P.

Project Number: 1046
Building Number: -
Drawing Number: E-8
Dwg. 45 of 45

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231