

WATER PUMP SCHEDULE														
TAG NO.	TYPE	FLUID	PUMPING TEMP. (°F)	GPM	TDH (FT)	MINIMUM EFF. (%)	TOTAL CASING PRESSURE (PSIG)	RPM	MOTOR DATA		SUCTION (INCHES)	DISCHARGE (INCHES)	MANUFACTURER	MODEL
									HP	ELECTRICAL DATA				
P-1	END SUCTION	200 PROPYLENE GLYCOL	50	100	85*	50	175	1750	5	208V/3ø/60Hz	12	1 1/2	BELL & GOSSETT	SERIES 1510
P-2	END SUCTION	200 PROPYLENE GLYCOL	50	100	85*	50	175	1750	5	208V/3ø/60Hz	12	1 1/2	BELL & GOSSETT	SERIES 1510

\* TO BE CONFIRMED WITH GEOTHERMAL WELL FIELD DESIGN

MAKE-UP AIR UNIT SCHEDULE															
TAG	CFM	MIN. O.A. CFM	ESP IN. W.G.	HEATING CAPACITY			MOTOR DATA		FILTER DATA		MANUFACTURER	MODEL	REMARKS		
				EAT	LAT	AIR PD H <sub>2</sub> O	CAPACITY MBH	KW	HP	ELECTRICAL DATA				MIN. FA (FT <sup>2</sup> )	MAX. FV (FPM)
MAU-1	1000	1000	0.5	0	68	0.20	73.4	21.5	1/2	208V/3ø/60Hz	5.5	185	BRASCH	M110	PROVIDE SCR CONTROLLED COIL AND DUCT MOUNTED THERMOSTAT
MAU-2	700	700	0.8	0	72	0.20	54.4	16.0	1/2	208V/3ø/60Hz	5.5	127	BRASCH	M110	PROVIDE SCR CONTROLLED COIL AND DUCT MOUNTED THERMOSTAT

FAN SCHEDULE										
TAG	CFM	S.P. IN WG	RPM	MOTOR		SONES	TYPE	MANUFACTURER	MODEL	
				WATTS/HP	ELECTRICAL DATA					
EF-1	40	0.5	900	80 WATTS	120V/1ø/60Hz	4.3	CABINET CEILING FAN	GREENHECK	SP-B80	
EF-2	80	0.5	950	108 WATTS	120V/1ø/60Hz	2.8	CABINET CEILING FAN	GREENHECK	SP-B110	
EF-3	1000	1.5	1421	1/2 HP	208V/1ø/60Hz	12.7	UP BLAST KITCHEN	COOK	180 VCR-XP	
EF-4	200	0.5	1577	1/4 HP	120V/1ø/60Hz	12.7	IN-LINE	GREENHECK	BSQ-70-4	

WALL AND UNIT HEATER SCHEDULE								
TAG	CFM	ΔT (°F)	CAPACITY		ELECTRICAL DATA	SERVES	MANUFACTURER	MODEL
			MBTUH	KW				
WH-1	180	70	12.3	3.8	208V/1ø/60Hz	VESTIBULE 101	INDECO	WCI SERIES
UH-1	350	25	10.2	3.0	208V/1ø/60Hz	ROOMS 002, 003, 004	Q-MARK	MUH SERIES
UH-2	350	45	17.0	5.0	208V/1ø/60Hz	TRASH ROOM 114	Q-MARK	MUH SERIES

EXPANSION TANK SYSTEM SCHEDULE							
TAG NO.	TYPE	ACCEPTANCE CAPACITY (GALLONS)	TANK VOLUME (GALLONS)	PRV FILL PRESS. AT TANK	FILL SIZE TO SYSTEM	MANUFACTURER	MODEL
ET-1	DIAPHRAGM	53 *	53 *	12 PSI	3/4"	BELL & GOSSETT	SERIES "B"

\* TO BE CONFIRMED WITH GEOTHERMAL WELL FIELD DESIGN

WATER COOLED CONDENSING UNITS												
TAG NO.	BC UNIT SERVED	REFRIGERANT	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	WATER FLOW (GPM)	WATER PRESSURE DROP	DRAIN PIPE SIZE	ELECTRICAL DATA	MINIMUM CIRCUIT AMPS	MAXIMUM OVER CIRCUIT PROTECTION AMPS	MANUFACTURER	MODEL NO.
WCCU-1	BC-1	R410A	96,000	107,000	25	6.9 FL.	1"	208V/3ø/60Hz	25.5	40	mitsubishi-city multi	PQRY-P96TGMU-A
WCCU-2	BC-2	R410A	96,000	107,000	25	6.9 FL.	1"	208V/3ø/60Hz	25.5	40	mitsubishi-city multi	PQRY-P96TGMU-A
WCCU-3	BC-3	R410A	96,000	107,000	25	6.9 FL.	1"	208V/3ø/60Hz	25.5	40	mitsubishi-city multi	PQRY-P96TGMU-A
WCCU-4	BC-4	R410A	96,000	107,000	25	6.9 FL.	1"	208V/3ø/60Hz	25.5	40	mitsubishi-city multi	PQRY-P96TGMU-A

AIR CONDITIONING UNIT SCHEDULE													
TAG NO.	UNIT TYPE	REFRIGERANT	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	AIR VOLUME CFM LOW/HIGH SPEED	DRAIN PIPE SIZE	ELECTRICAL DATA	MINIMUM CIRCUIT AMPS	MAXIMUM OVER CIRCUIT PROTECTION AMPS	REFRIGERANT LINES		MANUFACTURER	MODEL NO.
										LIQUID SIZE	GAS SIZE		
AC-1#	FLOOR MOUNTED	R410A	6,000	6,700	195/230	1"	208V/1ø/60Hz	0.34	15	1/4"	1/2"	mitsubishi-city multi	PFY-P08NEMU-E
AC-2#	FLOOR MOUNTED	R410A	8,000	9,000	195/230	1"	208V/1ø/60Hz	0.34	15	1/4"	1/2"	mitsubishi-city multi	PFY-P08NEMU-E
AC-3	CEILING MOUNTED	R410A	12,000	13,500	320/390	1"	208V/1ø/60Hz	0.35	15	1/4"	1/2"	mitsubishi-city multi	PLFY-P12NCMU-E
AC-4	CEILING DUCTED	R410A	15,000	17,000	350/495	1"	208V/1ø/60Hz	1.33	15	1/4"	1/2"	mitsubishi-city multi	PEFY-P15NMHU-E
AC-5	WALL MOUNTED	R410A	30,000	34,000	780/990	1"	208V/1ø/60Hz	0.73	15	3/8"	5/8"	mitsubishi-city multi	PKFY-P30NFMU-E
AC-6	WALL MOUNTED	R410A	8,000	9,000	170/210	1"	208V/1ø/60Hz	0.16	15	1/4"	1/2"	mitsubishi-city multi	PKFY-P08NAMU-E
AC-7	WALL MOUNTED	R410A	8,000	6,700	170/210	1"	208V/1ø/60Hz	0.19	15	1/4"	1/2"	mitsubishi-city multi	PKFY-P08NAMU-E

\* PROVIDE CONDENSATE DRAIN PAN OVERFLOW SENSOR WITH UNIT SHUTDOWN SWITCH

GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW GENERAL PIPING, DUCT AND MECHANICAL LAYOUTS. CAREFULLY COORDINATE WITH ALL OTHER TRADES TO ASSURE THAT NO CONFLICTS EXIST.
- ACCESS DOORS SHALL BE INSTALLED IN DUCTS ADJACENT TO ALL CONTROL DEVICES, ETC. COORDINATE ACCESS DOOR LOCATIONS IN WALL/CEILING WITH ARCHITECT.
- CAREFULLY COORDINATE THE LOCATION OF ALL REFRIGERANT PIPING, CONDENSATE DRAINS, DUCTS, GRILLES, DIFFUSERS, ETC. WITH THE CEILING GRIDS, LIGHTS, TRUSSES, BEAMS, PLUMBING PIPING, JOISTS, ETC. PRIOR TO FABRICATION OF DUCTWORK. FAILURE TO COORDINATE WORK WITH OTHER TRADES SHALL NOT BE CONSIDERED CAUSE FOR EXTRAS.
- ALL DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED AND COORDINATED IN THE FIELD PRIOR TO INSTALLATION.
- VERIFY ALL ELEVATIONS SHOWN ON DRAWINGS. COORDINATE WORK WITH OTHER TRADES AND ADVISE THE CONTRACTOR AS TO THE EXACT SIZE AND LOCATION OF ALL OPENINGS IN THE STRUCTURE.
- EQUIPMENT, PIPING, DUCTWORK, ETC. SHALL NOT BE LOCATED OVER ELECTRICAL PANELS OR THROUGH ELECTRICAL ROOMS.
- COORDINATE ALL MOTOR SIZES, STARTERS, DISCONNECT SWITCHES, CONTROLS, ETC. PRIOR TO THE RELEASE OF ANY EQUIPMENT.
- VERIFY EXACT LOCATION OF ALL THERMOSTATS WITH THE DEPARTMENT IN THE FIELD BEFORE ROUGH-IN OF THERMOSTATS. NOTIFY THE DEPARTMENT 48 HOURS IN ADVANCE.
- REFERENCE THE ARCHITECTURAL DRAWINGS FOR SPECIFIC LOCATION OF ALL DEVICES.
- WHERE DUCTWORK AND PIPING PASS THROUGH FIRE-RATED PARTITIONS, CONTRACTOR SHALL MAINTAIN INTEGRITY OF THE FIRE-RATED PARTITIONS USING U.L. APPROVED SEALING METHODS AS SPECIFIED.
- CONTRACTOR SHALL PATCH AND REPAIR ALL SURFACES (FLOORS, WALLS, ETC.) DISTURBED DURING THE INSTALLATION OF THE MECHANICAL SYSTEMS.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SYMBOLS AND ABBREVIATIONS

	NEW WORK	AC	AIR CONDITIONING UNIT
	CONDENSER WATER SUPPLY	AFF	ABOVE FINISHED FLOOR
	CONDENSER WATER RETURN	AS	AIR SEPARATOR
	REFRIGERANT LINES	BC	REFRIGERANT DISTRIBUTION CONTROLLER
	DRAIN	C.O.	CLEAN OUT
	ELBOW TURNED UP	DN	DOWN
	ELBOW TURNED DOWN	EBB	ELECTRIC BASEBOARD
	TEE TURNED UP	EF	EXHAUST FAN
	TEE TURNED DOWN	ER	EXHAUST REGISTER
	GROUND JOINT UNION	ET	EXPANSION TANK
	CAP	MD	MANUAL DAMPER
	GATE VALVE	MIN.	MINIMUM
	BALL VALVE	MAX.	MAXIMUM
	VALVE IN RISER	N.T.S.	NOT TO SCALE
	CHECK VALVE	OA	OUTSIDE AIR
	PRESSURE REDUCING VALVE	ø	PHASE OR DIAMETER
	RELIEF VALVE	P	PUMP
	DRAIN VALVE	RR	RETURN REGISTER
	STRAINER	RS	REFRIGERANT GAS
	FLEXIBLE CONNECTION	RL	REFRIGERANT LIQUID
	FLOOR DRAIN	SA	SUPPLY AIR
	PRESSURE GAUGE	SD	SUPPLY AIR DIFFUSER
	PIPE LINE THERMOMETER	SR	SUPPLY AIR REGISTER
	AUTOMATIC AIR VENT (AAV) TO DRAIN	TG	TRANSFER GRILLE
	MANUAL AIR VENT (AV) TO DRAIN	TYP	TYPICAL
	SUPPLY DUCT UP	UH	UNIT HEATER
	SUPPLY DUCT DOWN	WCCU	WATER COOLED CONDENSING UNIT
	RETURN DUCT UP	Ⓢ	THERMOSTAT
	RETURN DUCT DOWN		

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**LLI ENGINEERING**  
 4000 BRIDGE ROAD, SUITE 200    WESTPHAL, PA    724-939-8900

PROJECT NUMBER: 20070085

NO.	DATE	REVISION	APPL.
1	09/03/08	ISSUED FOR CONSTRUCTION	

SUBMITTED: \_\_\_\_\_

PROJECT DESIGNER: \_\_\_\_\_ PROJECT COORDINATOR: \_\_\_\_\_

APPROVED: \_\_\_\_\_

CHIEF-ENGINEER OF DESIGN: \_\_\_\_\_

APPROVED: \_\_\_\_\_

DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION: \_\_\_\_\_

COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
 OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494

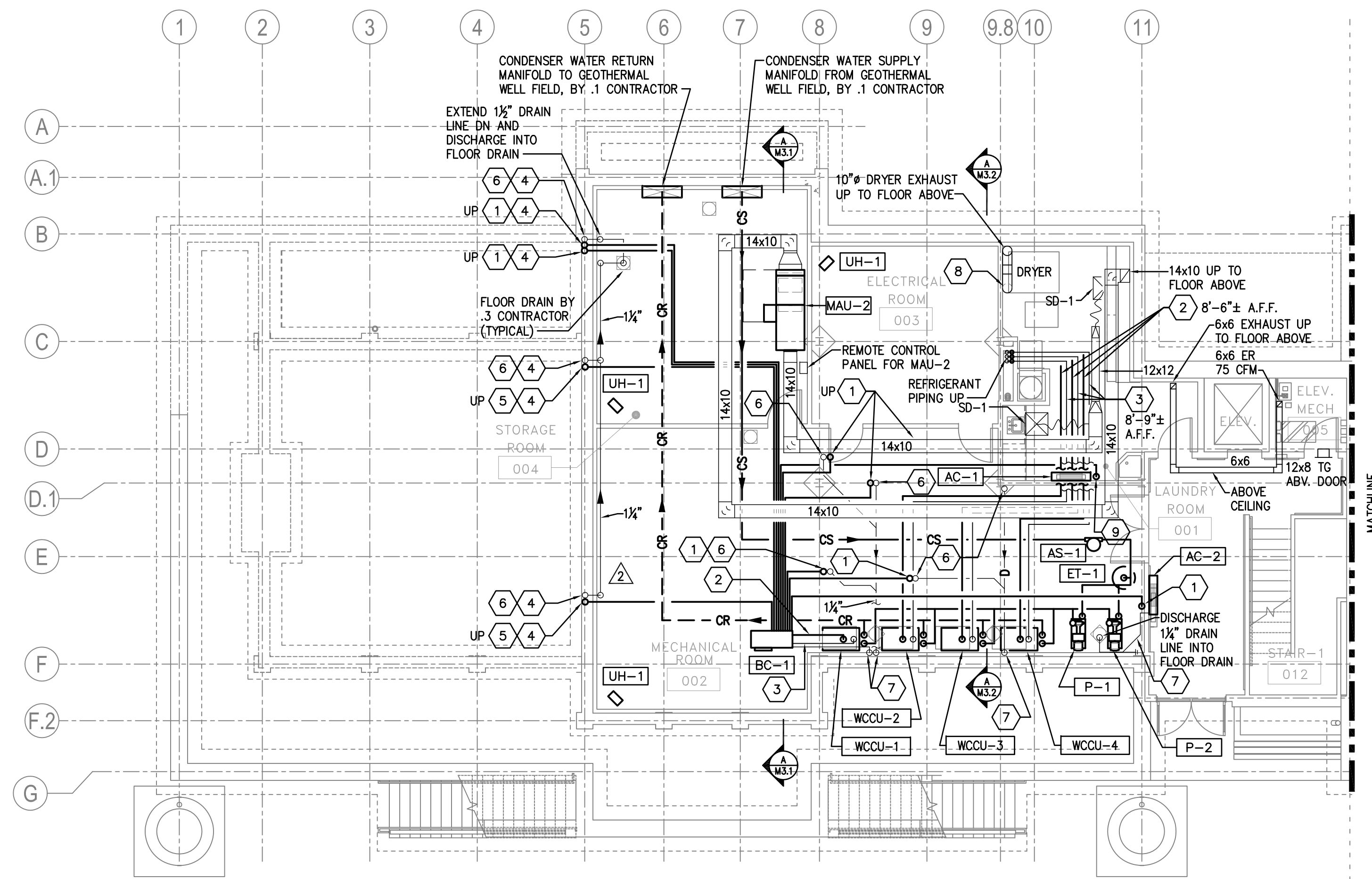
APPLICABLE CONTRACT NOS.

GENERAL:	FDC-133-4494.2	PLUMBING:	
HVAC:		ELECTRICAL:	
ROADWAY:			

THE INN AT BALD EAGLE STATE PARK  
 HOWARD AND LIBERTY TOWNSHIP,  
 CENTRE COUNTY, PENNSYLVANIA

HVAC SCHEDULES, SYMBOLS,  
 NOTES AND ABBREVIATIONS

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO.: M0.1
CHECKED BY: SRB	SCALE: AS NOTED	



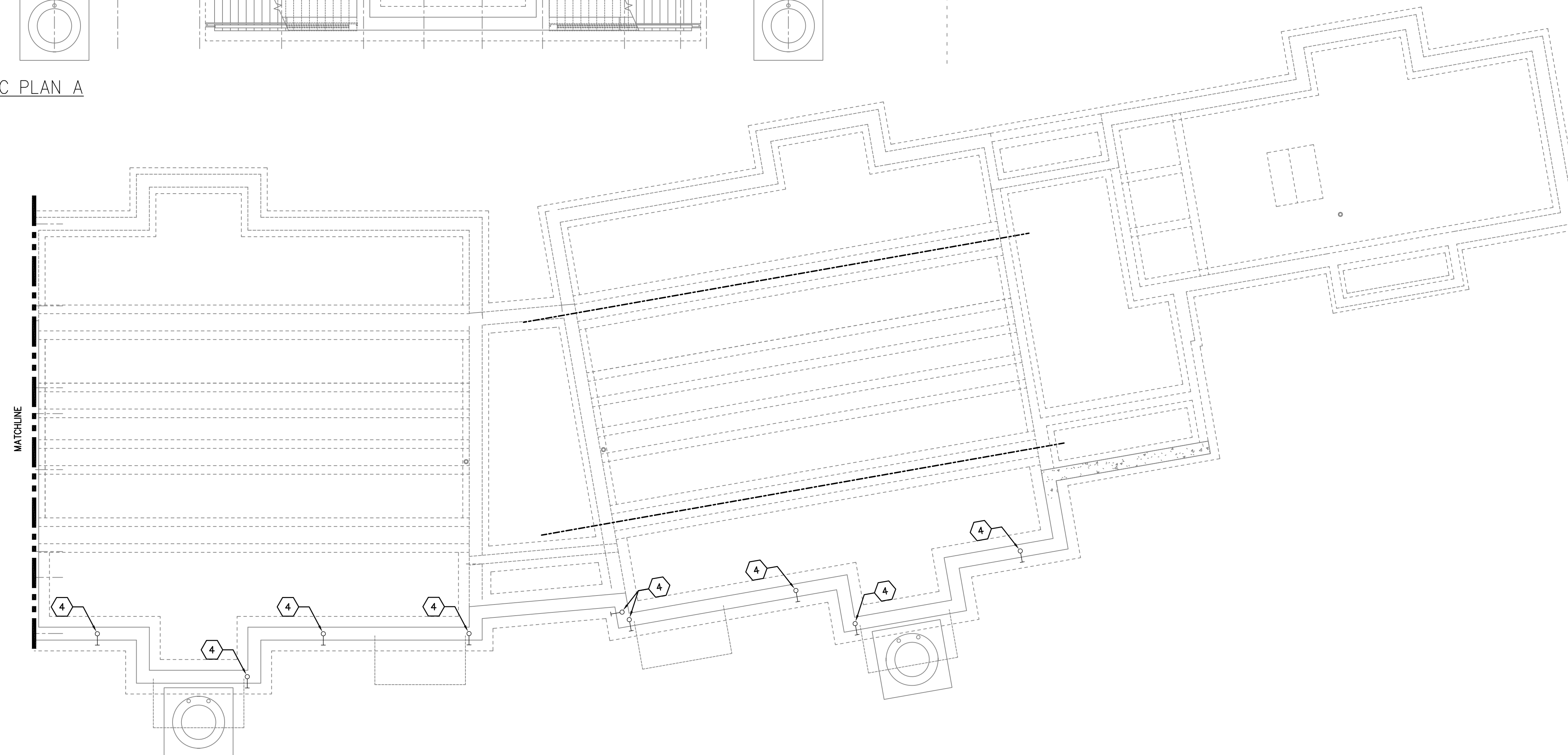
**KEY NOTES:**

- 1 LINE REPRESENTS (1) 1/4" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE.
- 2 3/4" REFRIGERANT LIQUID LINE
- 3 3/8" REFRIGERANT GAS LINE
- 4 SET SLEEVES/KNOCKOUTS IN CONCRETE FOR PIPING. COORDINATE WITH .1 CONTRACTOR. SEAL AS SPECIFIED.
- 5 LINE REPRESENTS (1) 3/8" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE.
- 6 1/4" DRAIN LINE FROM ABOVE
- 7 EXTEND 1/4" DRAIN LINE DN AND DISCHARGE INTO FLOOR DRAIN (FLOOR DRAIN BY .3 CONTRACTOR)
- 8 CONNECT 8" DRYER EXHAUST VENT TO DRYER. TRANSITION TO 10" IN VERTICAL RISE.
- 9 1/4" DRAIN TO FLOOR DRAIN.

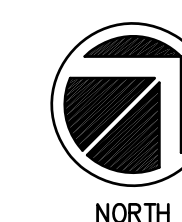
**GENERAL NOTES:**

- 1. FOR PIPING DIAGRAM SEE DRAWING M4.0
- 2. FOR PIPING IN CHASE BEHIND CHUTES SEE DETAILS ON DRAWING M5.0
- 3. FOR AC PIPING SEE DETAIL ON DRAWING M5.0
- 4. SUPPLY DIFFUSER NOTED AS SD-1 SHALL BE 24"x24" 4-WAY BLOW WITH 12" NECK. 350 CFM EACH.

1 BASEMENT HVAC PLAN A  
SCALE: 1/8" = 1'-0"



2 BASEMENT HVAC PLAN B  
SCALE: 1/8" = 1'-0"



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**LLI ENGINEERING**  
6000 BROOKTREE ROAD, SUITE 300 WESTFORD, PA 724 634-8800  
PROJECT NUMBER 20070085

1	09/01/10	RECORD DRAWING	
1	09/05/10	ADDENDUM NO. 1	
1	09/03/08	ISSUED FOR CONSTRUCTION	
NO.	DATE	REVISION	APPR.

SUBMITTED	
PROJECT DESIGNER	PROJECT COORDINATOR
APPROVED	
CHIEF - DIVISION OF DESIGN	
APPROVED	
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION	

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

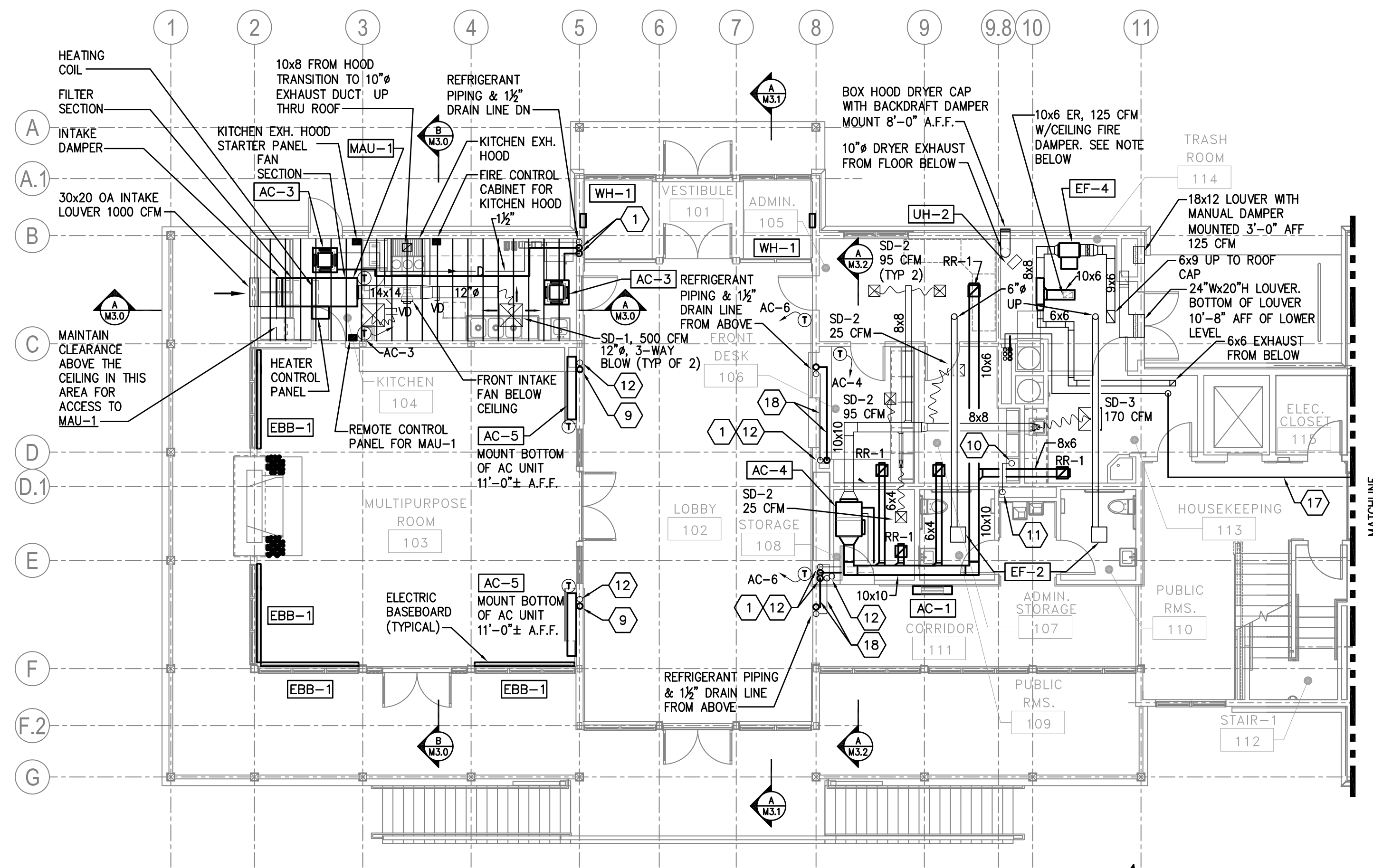
PROJECT NO: FDC-133-4494  
APPLICABLE CONTRACT NO'S.

GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

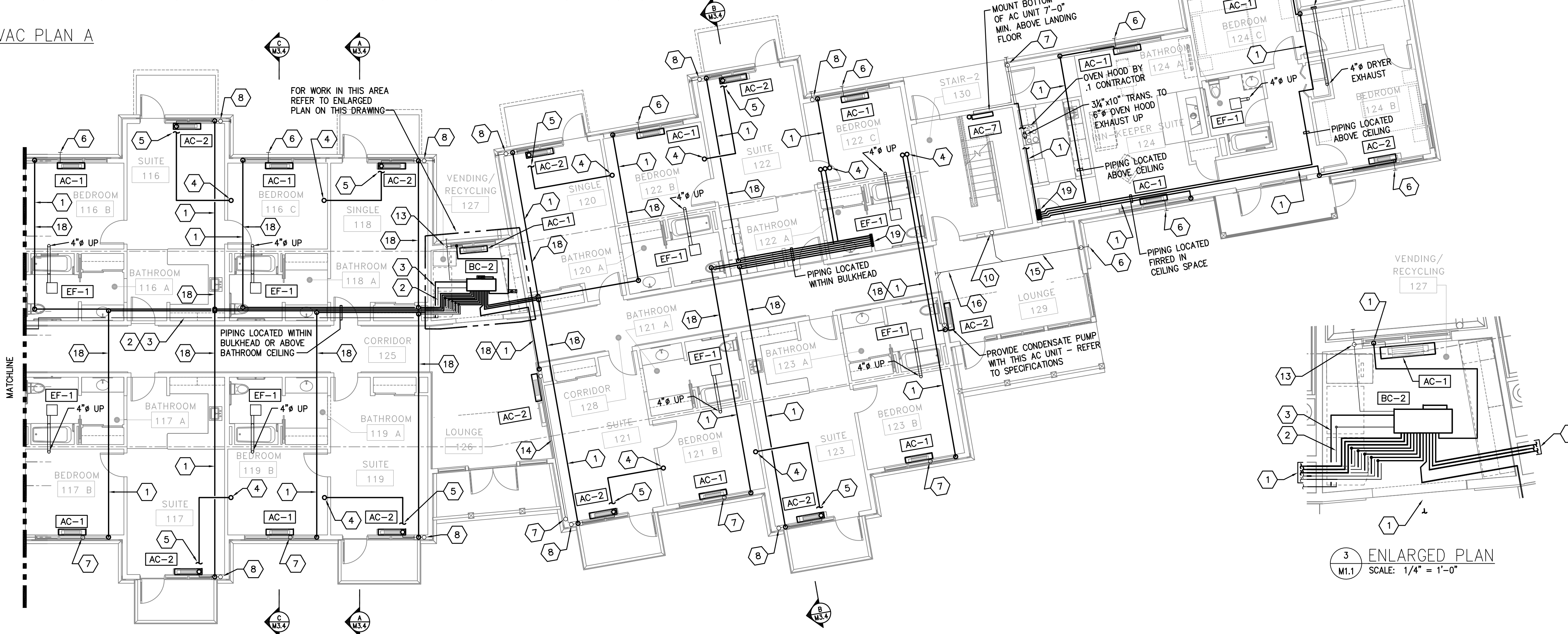
THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

BASEMENT PLAN  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO: M1.0
CHECKED BY: SRB	SCALE: AS NOTED	



1 LOWER LEVEL HVAC PLAN A  
M1.1 SCALE: 1/8" = 1'-0"



2 LOWER LEVEL HVAC PLAN B  
M1.1 SCALE: 1/8" = 1'-0"

KEY NOTES:

- 1 LINE REPRESENTS (1) 1/4" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE.
- 2 3/8" REFRIGERANT LIQUID LINE
- 3 3/8" REFRIGERANT GAS LINE
- 4 LINE REPRESENTS (1) 1/4" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE FROM FLOOR ABOVE. ROUTE PIPING THRU JOIST AND JOIST SPACE ABOVE LOWER LEVEL CEILING.
- 5 LINE REPRESENTS (1) 1/4" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE UP TO FLOOR ABOVE TO SERVE AC UNIT ON UPPER LEVEL.
- 6 1 1/2" CONDENSATE DRAIN ROUTED FROM BACK OF AC UNIT DOWN THRU EXTERIOR WALL PENETRATE VENEER TO TERMINATE DRAIN 3" ABOVE FINISHED GRADE WITH SPLASH BLOCK. REFER TO DETAIL 3/M3.3.
- 7 1 1/2" CONDENSATE DRAIN ROUTED FROM BACK OF AC UNIT DOWN THRU EXTERIOR WALL IN AIR SPACE BEHIND STONE VENEER FINISH. PENETRATE VENEER TO TERMINATE DRAIN 3" ABOVE FINISHED GRADE WITH SPLASH BLOCK. REFER TO DETAIL 2/M3.3.
- 8 1 1/2" CONDENSATE DRAIN ROUTED FROM BACK OF AC UNIT THRU EXTERIOR WALL AND TIE INTO 1 1/2" CONDENSATE DRAIN FROM FLOOR ABOVE. ROUTE PIPING DOWN THRU EXTERIOR WALL IN AIR SPACE BEHIND STONE VENEER FINISH. PENETRATE VENEER TO TERMINATE DRAIN 3" ABOVE FINISHED GRADE WITH SPLASH BLOCK. REFER TO DETAIL 1/M3.3.
- 9 LINE REPRESENTS (1) 3/8" REFRIGERANT LIQUID LINE AND (1) 3/8" REFRIGERANT GAS LINE.
- 10 1 1/2" CONDENSATE DRAIN FROM AC UNIT ON FLOOR ABOVE.
- 11 1 1/2" CONDENSATE DRAIN DOWN TO FLOOR BELOW.
- 12 1 1/2" CONDENSATE DRAIN DOWN THRU WALL TO FLOOR BELOW.
- 13 1 1/2" CONDENSATE DRAIN ROUTED FROM BACK OF BC UNIT THRU EXTERIOR WALL TIE INTO 1 1/2" CONDENSATE DRAIN FROM FLOOR ABOVE AND 1 1/2" CONDENSATE DRAIN FROM BACK OF AC UNIT. ROUTE PIPING DOWN THRU EXTERIOR WALL IN AIR SPACE BEHIND STONE VENEER FINISH. PENETRATE VENEER TO TERMINATE DRAIN 3" ABOVE FINISHED GRADE WITH SPLASH BLOCK.
- 14 1 1/2" CONDENSATE DRAIN ROUTED FROM BACK OF AC UNIT THRU WALL SPACE AND DROP WHERE INDICATED TO FLOOR BELOW.
- 15 1 1/2" CONDENSATE DRAIN ROUTED THRU JOISTS AND JOIST SPACE WITHIN LOWER LEVEL CEILING SPACE. PROVIDE ACCESS DOOR IN CEILING AT CLEANOUT.
- 16 1 1/2" CONDENSATE DRAIN PUMPED FROM BACK OF FLOOR MOUNTED AC UNIT TO ABOVE CEILING. ROUTE PIPING THRU JOISTS AND JOIST SPACE AND TIE INTO 1 1/2" CONDENSATE DRAIN FROM AC UNIT ON UPPER LEVEL.
- 17 LINE REPRESENTS (1) 3/4" REFRIGERANT LIQUID LINE AND (1) 3/4" REFRIGERANT GAS LINE. ROUTE PIPING THRU JOISTS AND JOIST SPACE WITHIN LOWER LEVEL CEILING SPACE.
- 18 ROUTE PIPING THRU JOISTS AND JOIST SPACE WITHIN LOWER LEVEL CEILING SPACE.
- 19 1/4" REFRIGERANT LIQUID LINES AND 1/2" REFRIGERANT GAS LINES FROM FLOOR ABOVE.

GENERAL NOTES:

- 1. SUPPLY DIFFUSERS NOTED AS SD-2 SHALL BE 12x12 4-WAY BLOW WITH 6" NECK. REFER TO PLAN FOR THE ROOM CFM.
- 2. SUPPLY DIFFUSER NOTED AS SD-3 SHALL BE 24x24 4-WAY BLOW WITH 8" NECK, 170 CFM.
- 3. RETURN REGISTERS NOTED AS RR-1 SHALL BE 12x12 WITH THE CFM BEING THE TOTAL CFM BEING SUPPLIED TO THE SPACE.
- 4. FOR PIPING DIAGRAM SEE DRAWING M4.0
- 5. FOR PIPING IN CHASE BEHIND CHUTES SEE DETAILS ON DRAWING M5.0
- 6. FOR AC PIPING SEE DETAIL ON DRAWING M5.0

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**LLI ENGINEERING** PROJECT NUMBER  
8000 BROOKTREE ROAD, SUITE 300 WESTFORD, PA 724 634-8800 20070085

NO.	DATE	REVISION	APPR.
1	09/03/08	ISSUED FOR CONSTRUCTION	
2	09/02/08	ADDENDUM NO. 1	
3	09/05/08	REVISION NO. 3 - REVISED EXHAUST DUCTWORK	
4	10/01/08	RECORD DRAWING	

SUBMITTED: \_\_\_\_\_  
PROJECT DESIGNER: \_\_\_\_\_ PROJECT COORDINATOR: \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
CHIEF - DIVISION OF DESIGN: \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION: \_\_\_\_\_

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494  
APPLICABLE CONTRACT NO'S:

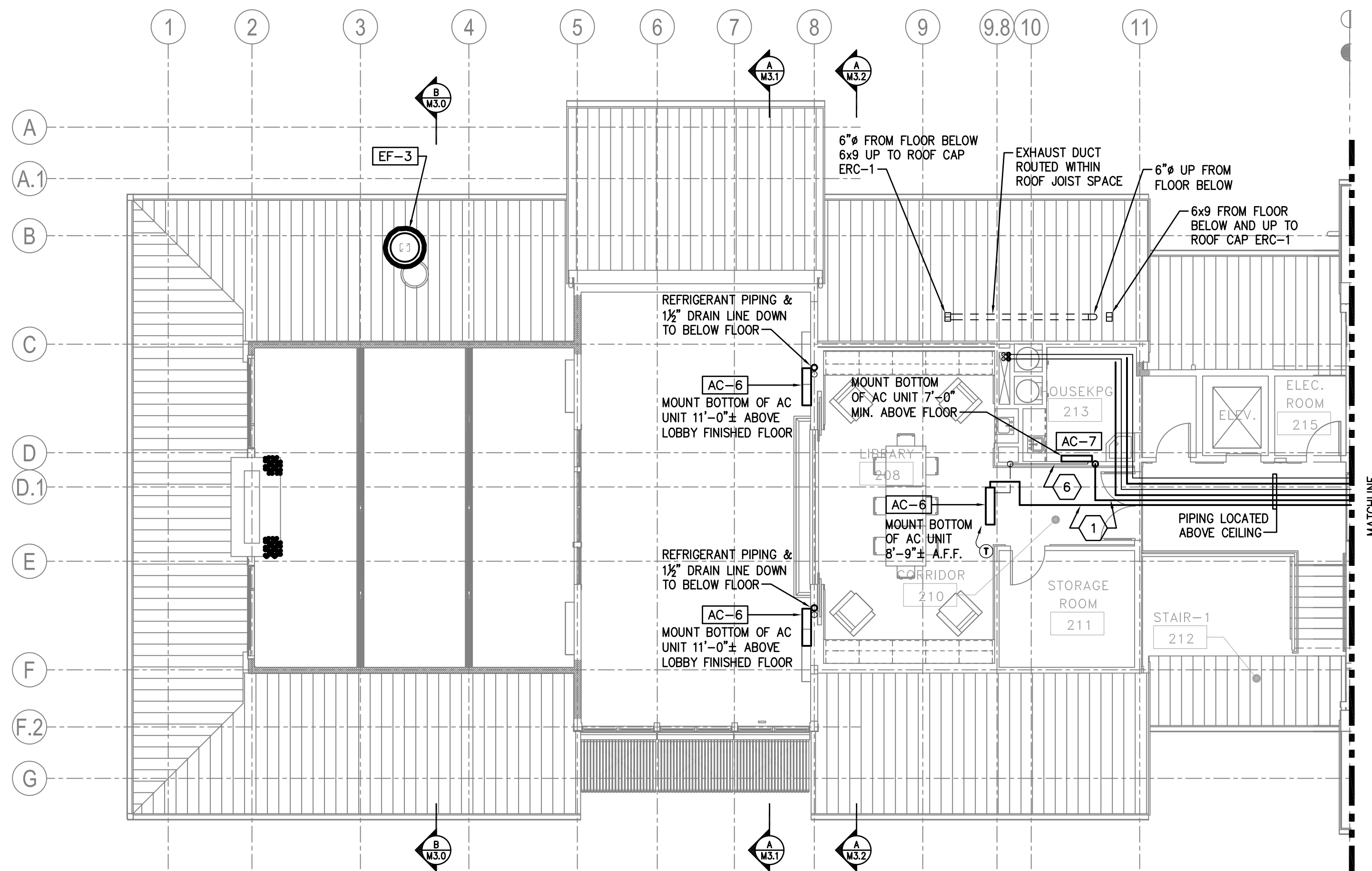
GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

LOWER LEVEL FLOOR PLAN  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO.:
CHECKED BY: SRB	SCALE: AS NOTED	<b>M1.1</b>





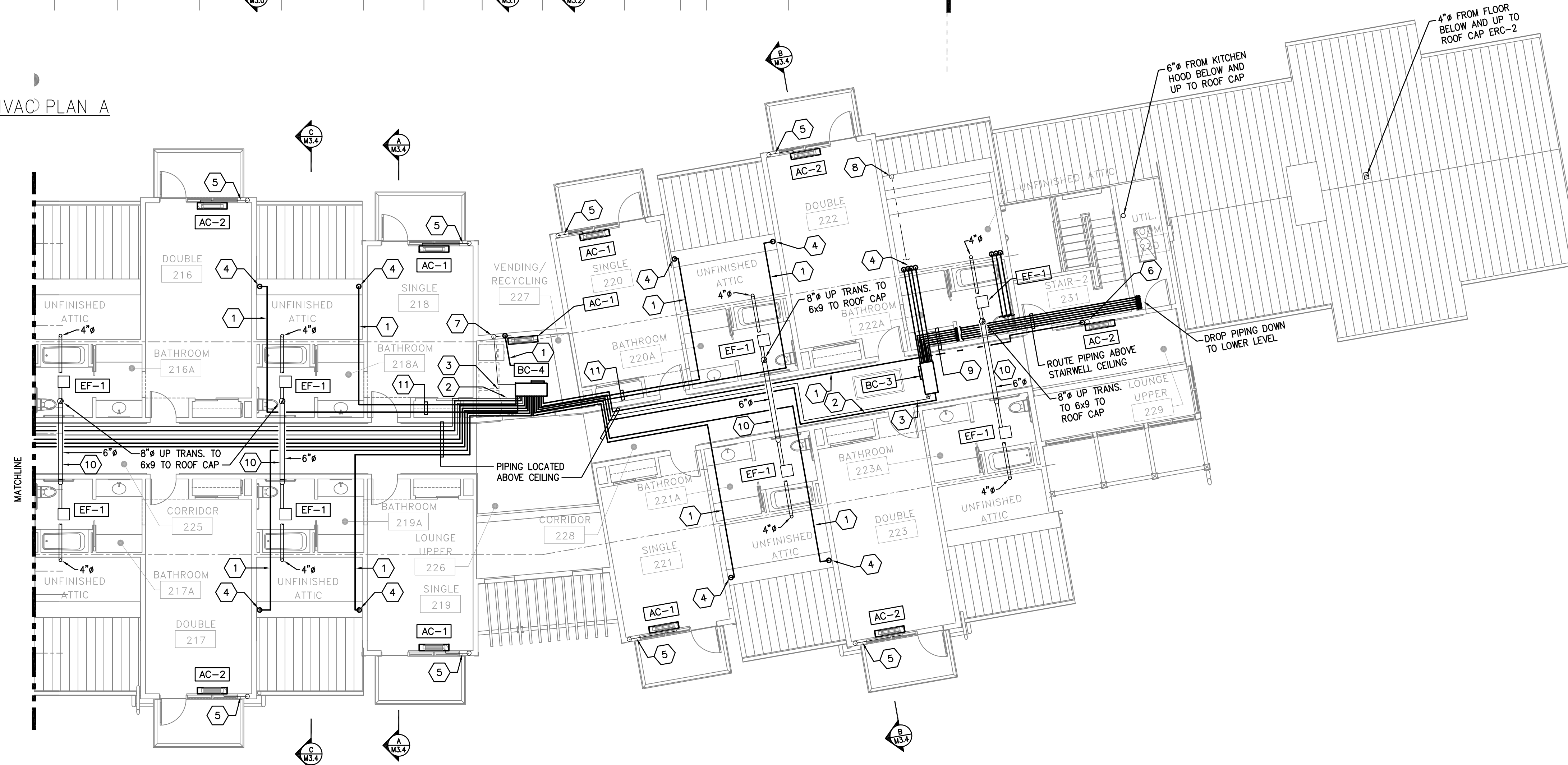
**KEY NOTES:**

- 1 LINE REPRESENTS (1) 1/4" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE.
- 2 3/4" REFRIGERANT LIQUID LINE
- 3 7/8" REFRIGERANT GAS LINE
- 4 LINE REPRESENTS (1) 1/4" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE. DROP PIPING THRU ATTIC SPACE FLOOR TO FLOOR BELOW.
- 5 1/4" CONDENSATE DRAIN ROUTED FROM BACK OF AC UNIT THRU EXTERIOR WALL AND DROP BELOW AND UP TO ROOF CAP ERC-1
- 6 1/4" CONDENSATE DRAIN ROUTED FROM BACK OF AC UNIT THRU EXTERIOR WALL AND DROP WHERE INDICATED TO FLOOR BELOW. REFER TO DETAIL 2/M3.3.
- 7 1/4" CONDENSATE DRAIN ROUTED FROM BACK OF AC UNIT, TIE INTO 1/4" CONDENSATE DRAIN ROUTED FROM BACK OF BC UNIT THRU EXTERIOR WALL AND DROP WHERE INDICATED TO FLOOR BELOW. REFER TO DETAIL 2/M3.3.
- 8 1/4" CONDENSATE DRAIN FROM BACK OF BC UNIT THRU ATTIC SPACE AND DROP WHERE INDICATED TO FLOOR BELOW.
- 9 ROUTE PIPING FROM BC UNIT ABOVE CEILING AND DROP THRU WALL TO LOWER LEVEL.
- 10 REFER TO SECTION 'C' ON DRAWING M3.4 FOR EXHAUST DUCT ROUTING.
- 11 PIPING LOCATED WITHIN BULKHEAD OR ABOVE BATHROOM CEILING.

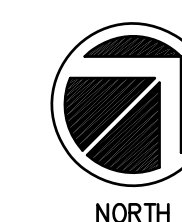
**GENERAL NOTES:**

- 1. FOR PIPING DIAGRAM SEE DRAWING M4.0
- 2. FOR PIPING IN CHASE BEHIND CHUTES SEE DETAILS ON DRAWING M5.0
- 3. FOR AC PIPING SEE DETAIL ON DRAWING M5.0

1 UPPER LEVEL HVAC PLAN A  
SCALE: 1/8" = 1'-0"



2 UPPER LEVEL HVAC PLAN B  
SCALE: 1/8" = 1'-0"



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**LLI ENGINEERING** PROJECT NUMBER  
20070085  
6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 934-8800

150570	RECORD DRAWING		
1	ISSUED	ISSUED FOR CONSTRUCTION	
NO.	DATE	REVISION	APPR.
SUBMITTED		PROJECT DESIGNER	PROJECT COORDINATOR
APPROVED		CHIEF - DIVISION OF DESIGN	
APPROVED		DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION	

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494

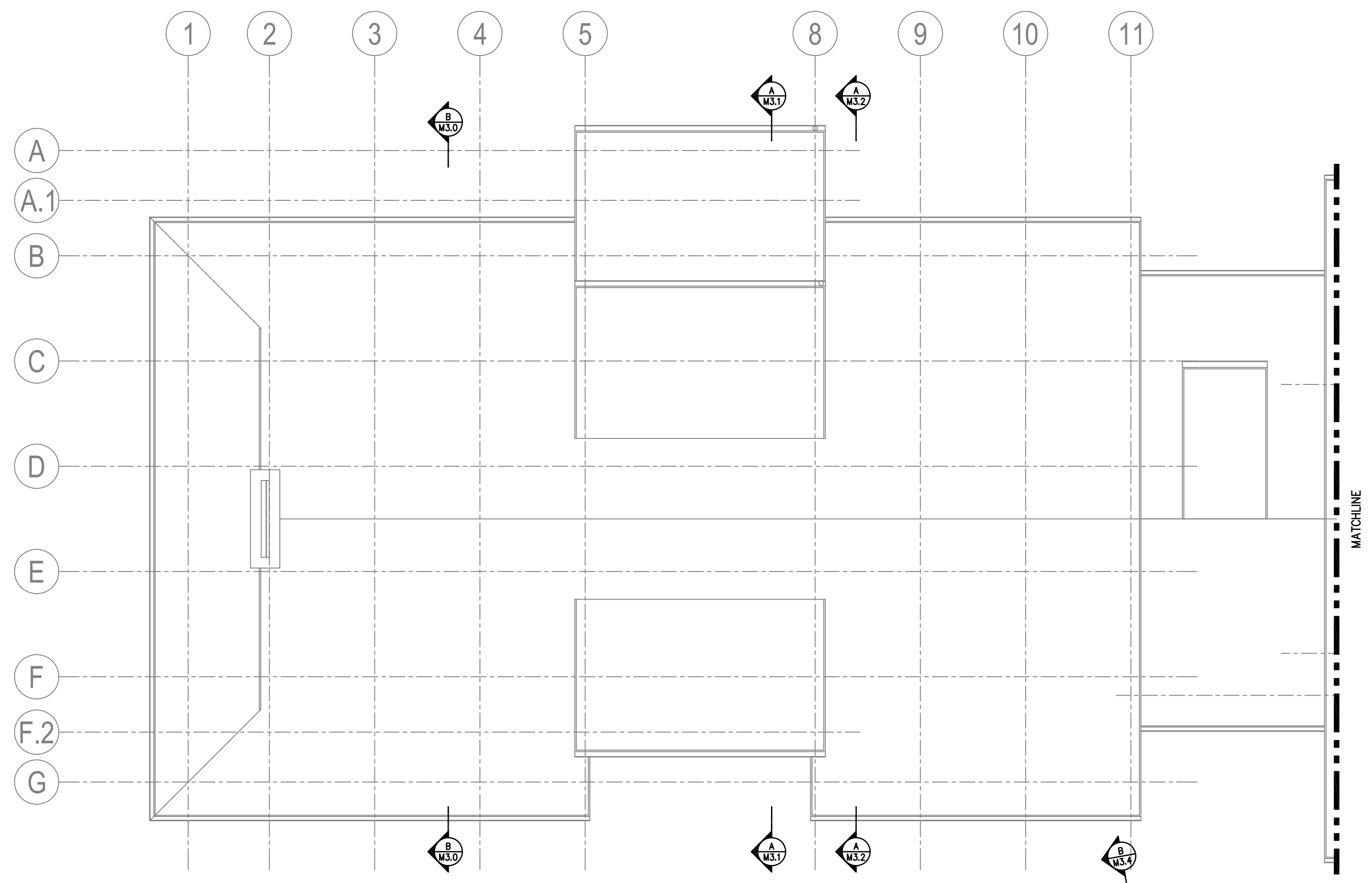
APPLICABLE CONTRACT NO'S.

GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

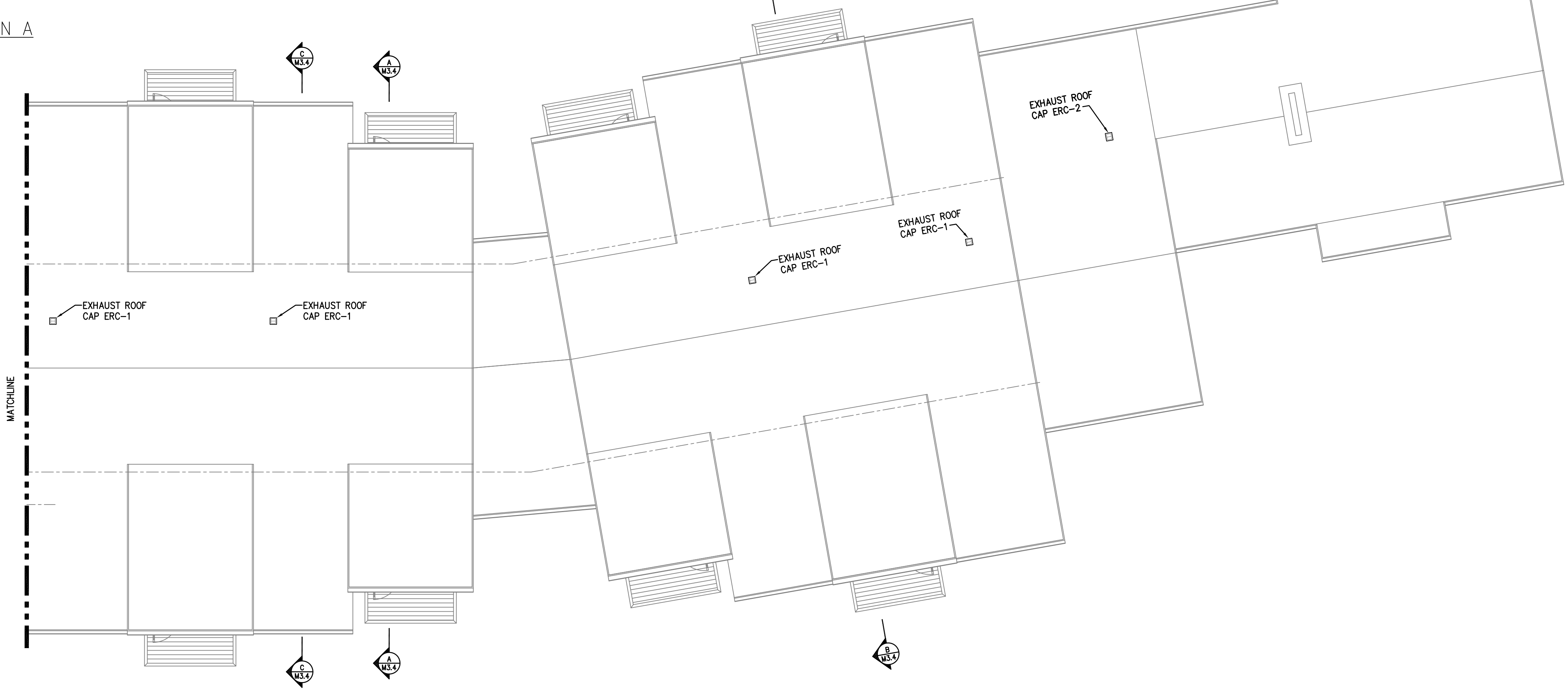
THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

UPPER LEVEL FLOOR PLAN  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO: M1.2
CHECKED BY: SRB	SCALE: AS NOTED	



1 ROOF HVAC PLAN A  
SCALE: 1/8" = 1'-0"



2 ROOF HVAC PLAN B  
SCALE: 1/8" = 1'-0"



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**LLI ENGINEERING**  
6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 934-8800  
PROJECT NUMBER 20070085

150170	RECORD DRAWING		
1	ISSUED FOR CONSTRUCTION		
NO.	DATE	REVISION	APPR.

PROJECT DESIGNER	PROJECT COORDINATOR
APPROVED	APPROVED
CHIEF - DIVISION OF DESIGN	
APPROVED	
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION	

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494

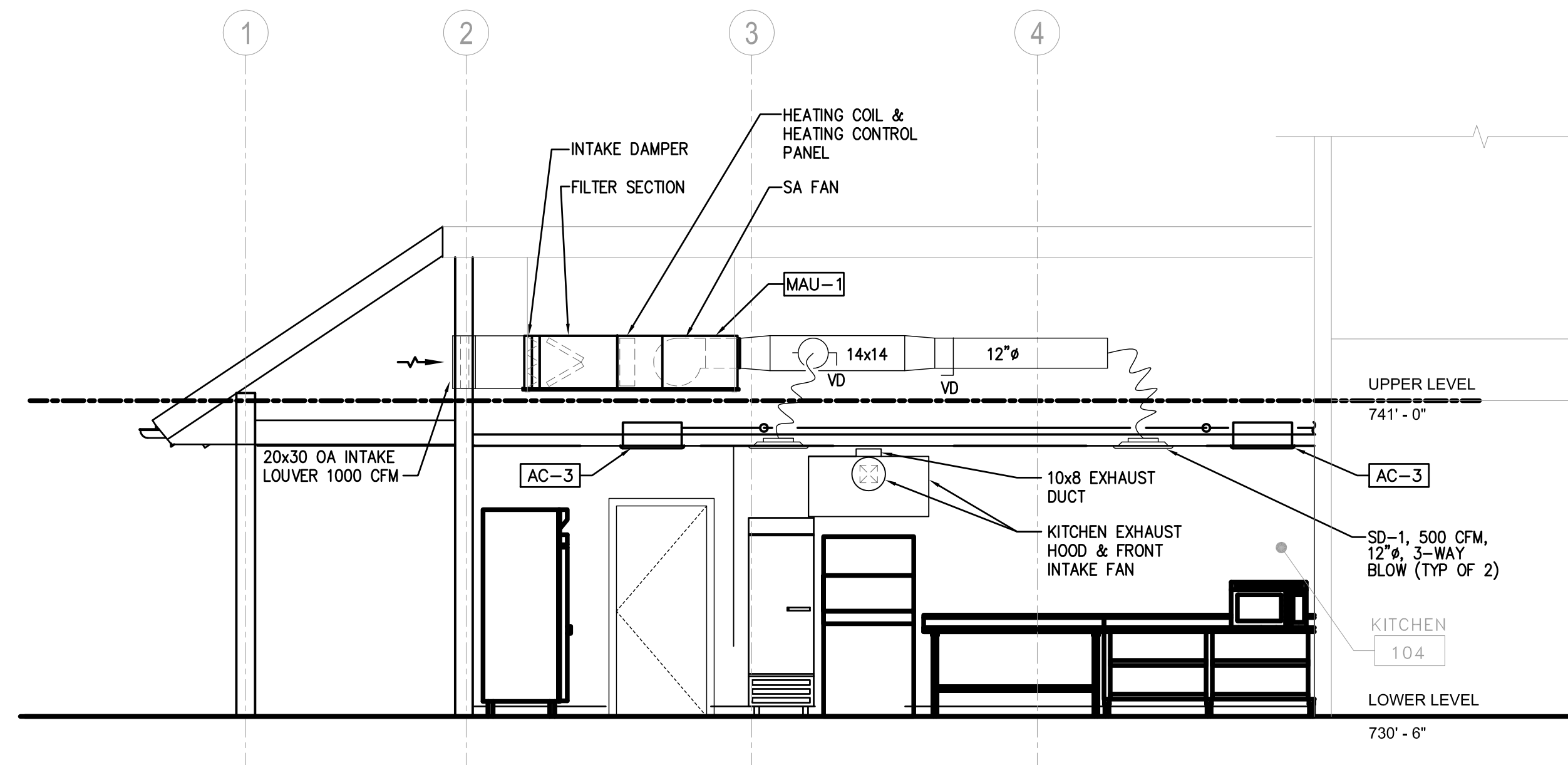
APPLICABLE CONTRACT NO'S.

GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

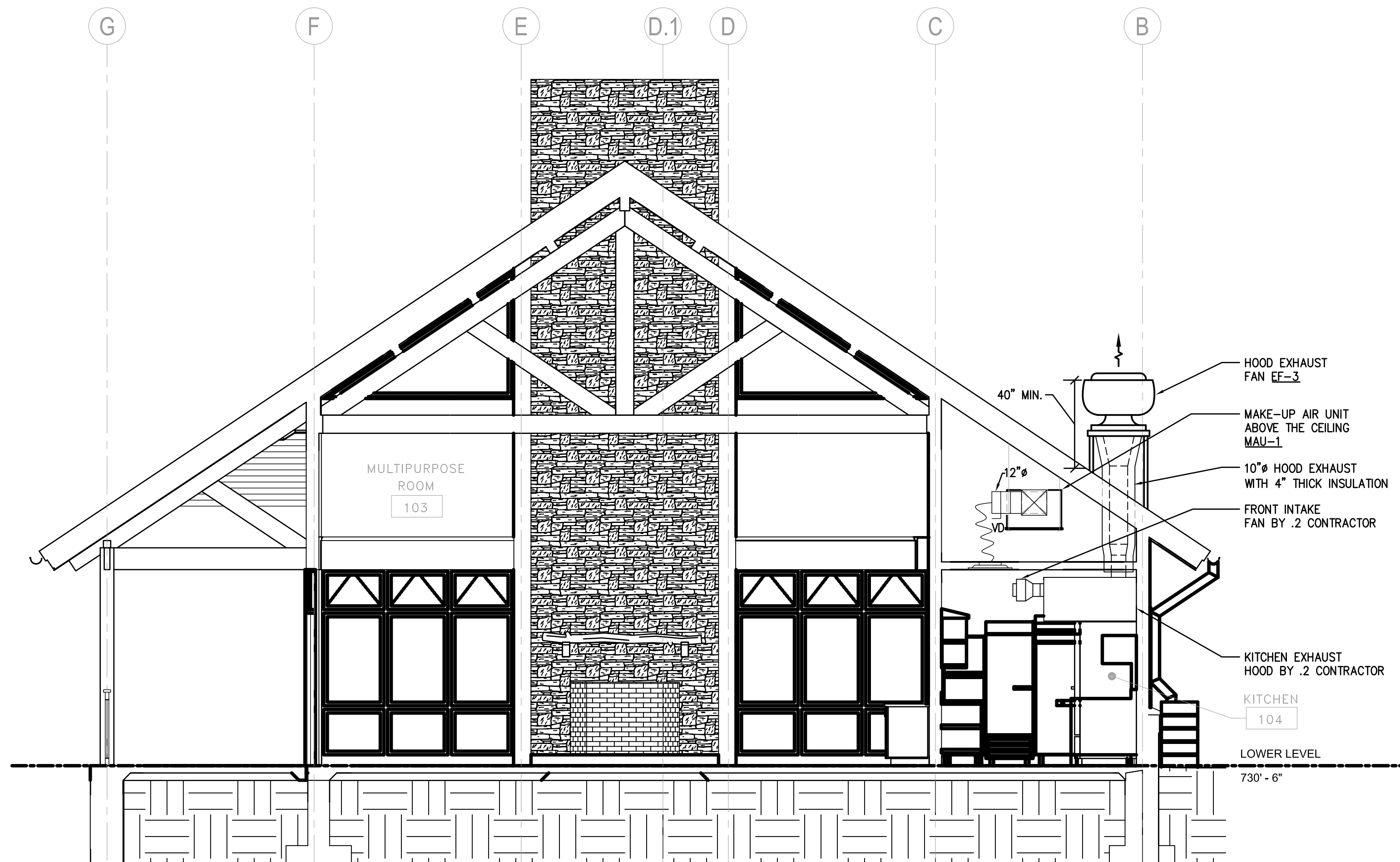
THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

ROOF PLAN  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO: M1.3
CHECKED BY: SRB	SCALE: AS NOTED	



**A SECTION**  
M3.0 SCALE: 1/4" = 1'-0"



**B SECTION**  
M3.0 SCALE: 1/4" = 1'-0"

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**LLI ENGINEERING**  
6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 934-8800

PROJECT NUMBER  
20070085

1	09/03/08	ISSUED FOR CONSTRUCTION	
NO.	DATE	REVISION	APPR.

SUBMITTED	
PROJECT DESIGNER	PROJECT COORDINATOR
APPROVED	
CHIEF - DIVISION OF DESIGN	
APPROVED	
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION	

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494

APPLICABLE CONTRACT NO'S.

GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

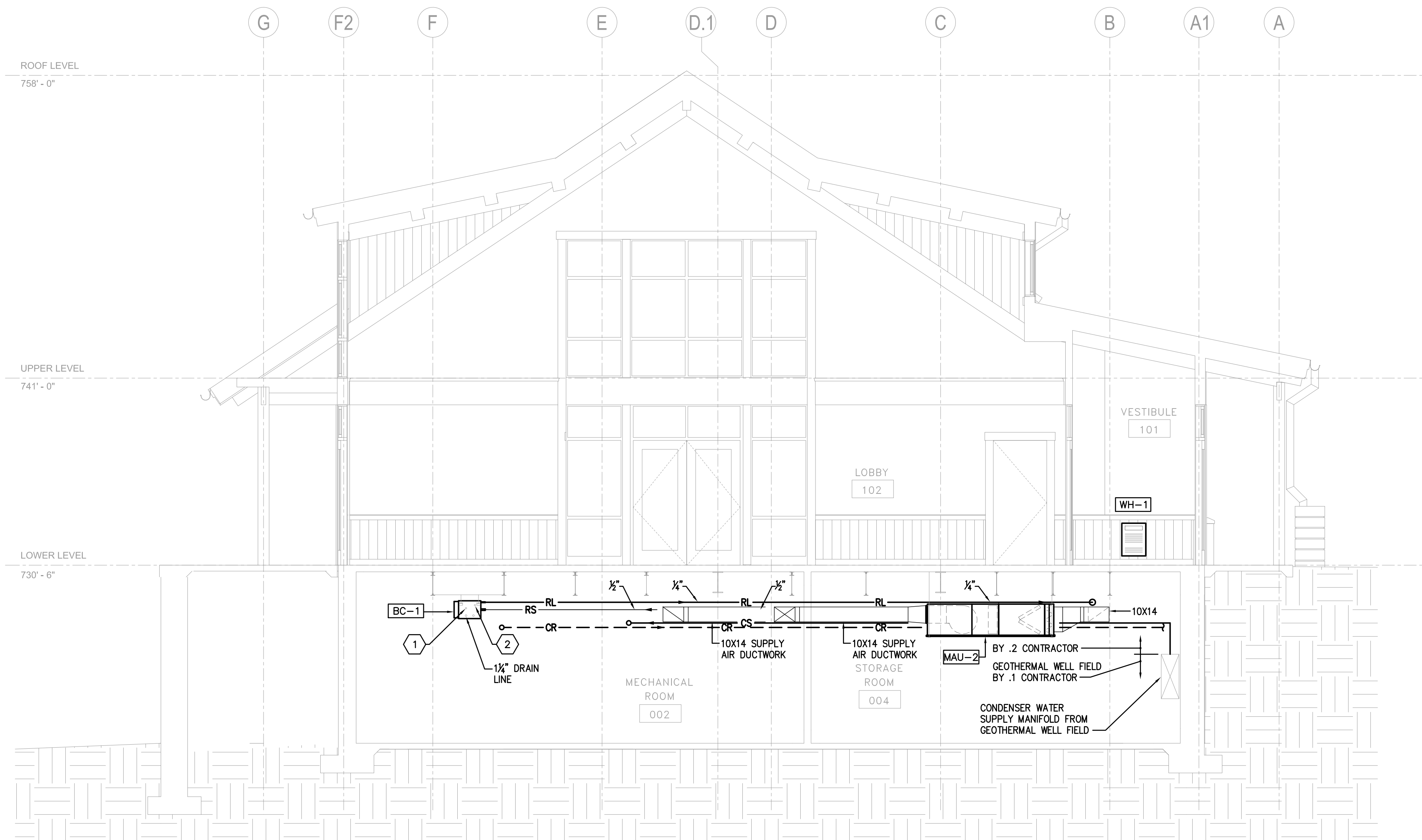
THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

SECTIONS  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO.:
CHECKED BY: SRB	SCALE: AS NOTED	<b>M3.0</b>

KEY NOTES:

- ① 3/4" REFRIGERANT LIQUID LINE
- ② 3/8" REFRIGERANT GAS LINE



A SECTION LOBBY  
M3.1 SCALE: 1/4" = 1'-0"

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**LLI ENGINEERING**  
6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 834-8800

PROJECT NUMBER  
20070085

△	10/1/10	RECORD DRAWING	
△	09/26/08	ADDENDUM NO. 1	
1	09/23/08	ISSUED FOR CONSTRUCTION	
NO.	DATE	REVISION	APPR.

SUBMITTED	
PROJECT DESIGNER	PROJECT COORDINATOR
APPROVED	
CHIEF - DIVISION OF DESIGN	
APPROVED	
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION	

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

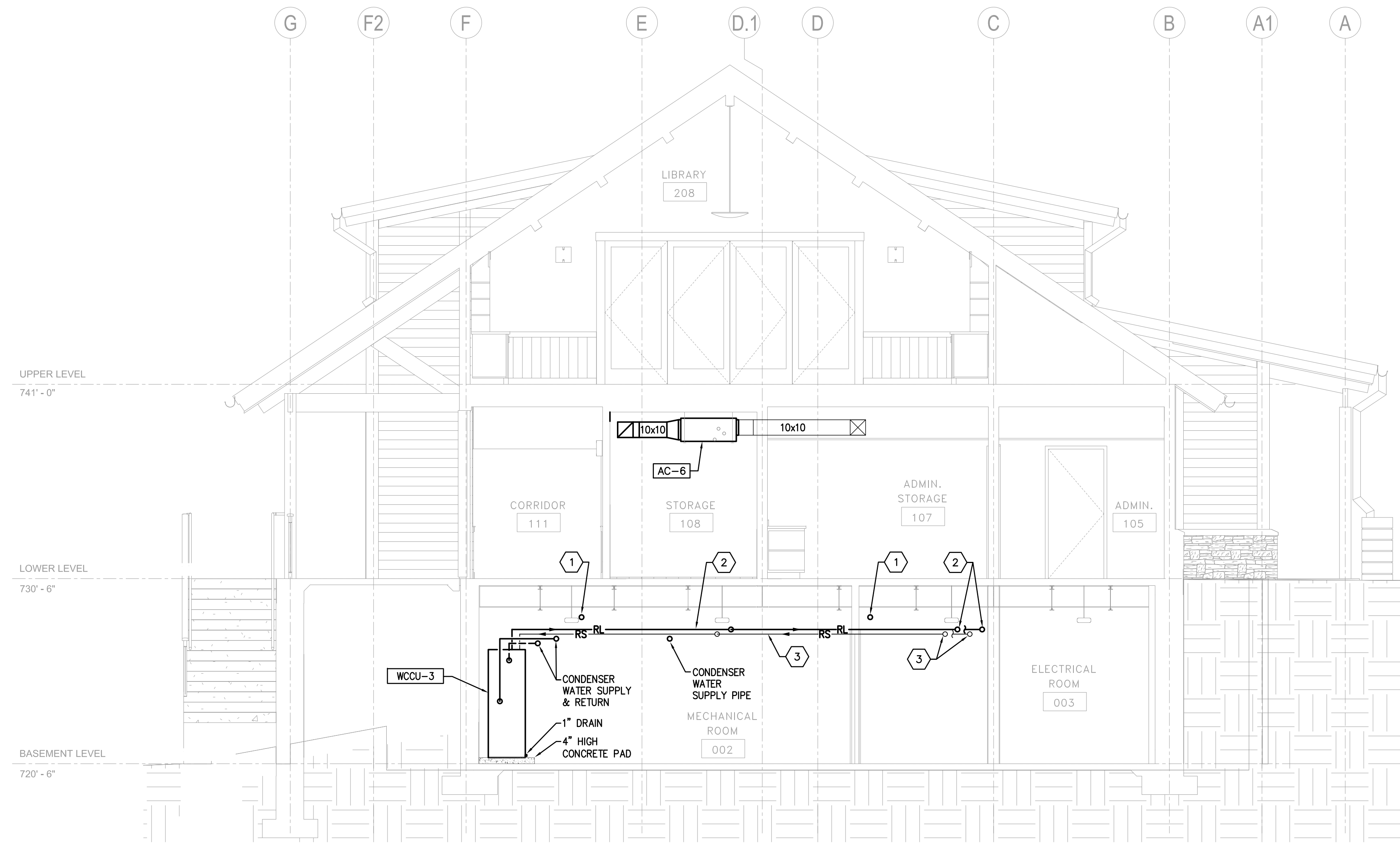
PROJECT NO: FDC-133-4494

APPLICABLE CONTRACT NO'S.	
GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

SECTIONS  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO.:
CHECKED BY: SRB	SCALE: AS NOTED	<b>M3.1</b>



**A SECTION**  
 M3.2 SCALE: 1/4" = 1'-0"

- KEY NOTES:**
- 1 LINE REPRESENTS 3/4" REFRIGERANT LIQUID LINE AND 1/2" REFRIGERANT GAS LINE.
  - 2 3/4" REFRIGERANT LIQUID LINE
  - 3 1/2" REFRIGERANT GAS LINE

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**LLI ENGINEERING**  
 6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 834-8800  
 PROJECT NUMBER 20070085

10/1/10	RECORD DRAWING		
1	09/03/08	ISSUED FOR CONSTRUCTION	
NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT DESIGNER		PROJECT COORDINATOR	
APPROVED			
CHIEF - DIVISION OF DESIGN			
APPROVED			
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION			

COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
 OFFICE OF PARKS AND FORESTRY

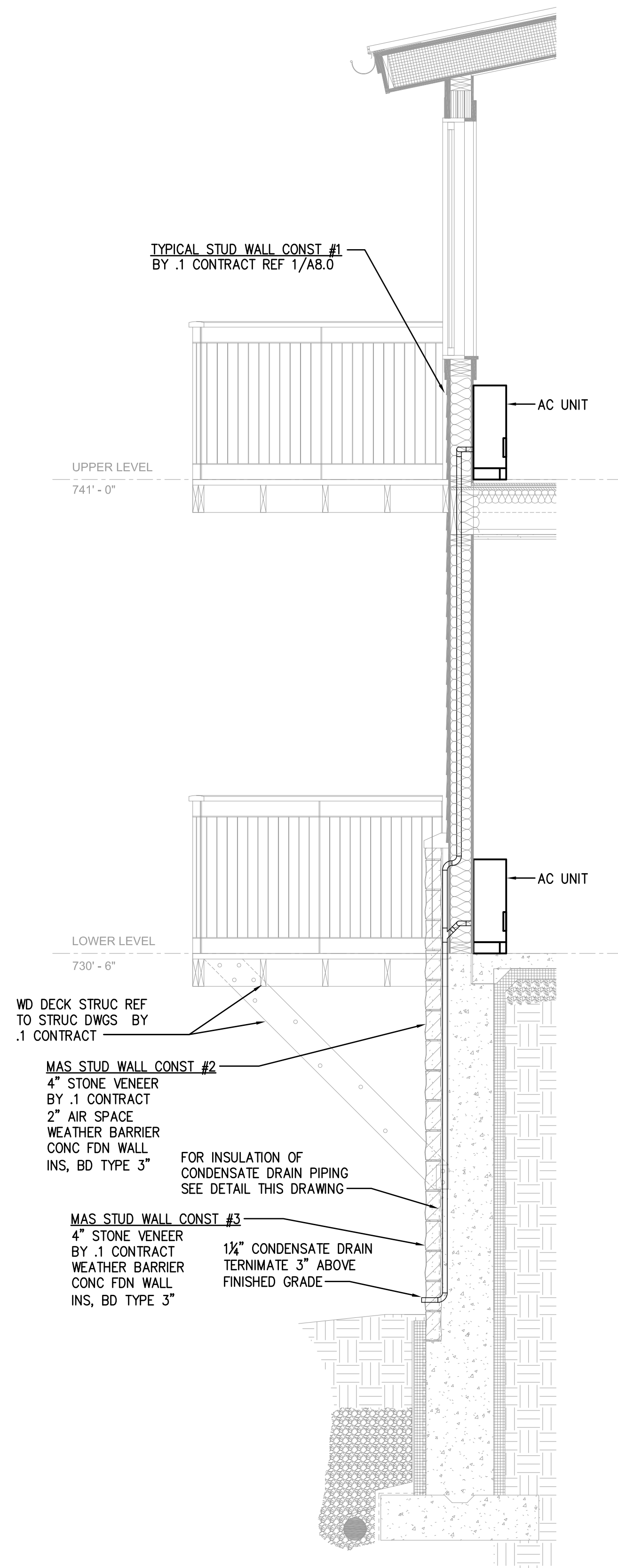
PROJECT NO: FDC-133-4494  
 APPLICABLE CONTRACT NO'S.

GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

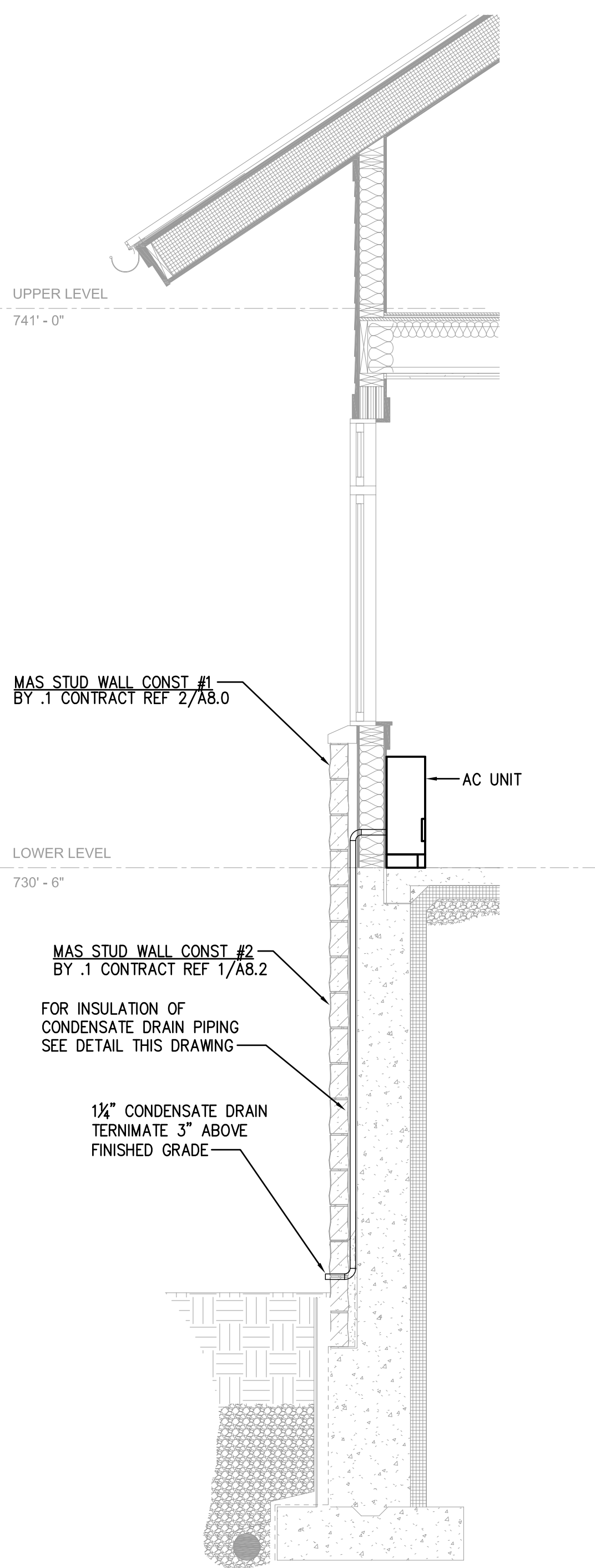
THE INN AT BALD EAGLE STATE PARK  
 HOWARD AND LIBERTY TOWNSHIP,  
 CENTRE COUNTY, PENNSYLVANIA

<b>SECTIONS</b>		
<b>HVAC</b>		
DRAWN BY: <b>JPB</b>	DATE: 09-03-08	DRAWING NO.:
CHECKED BY: <b>SRB</b>	SCALE: AS NOTED	<b>M3.2</b>

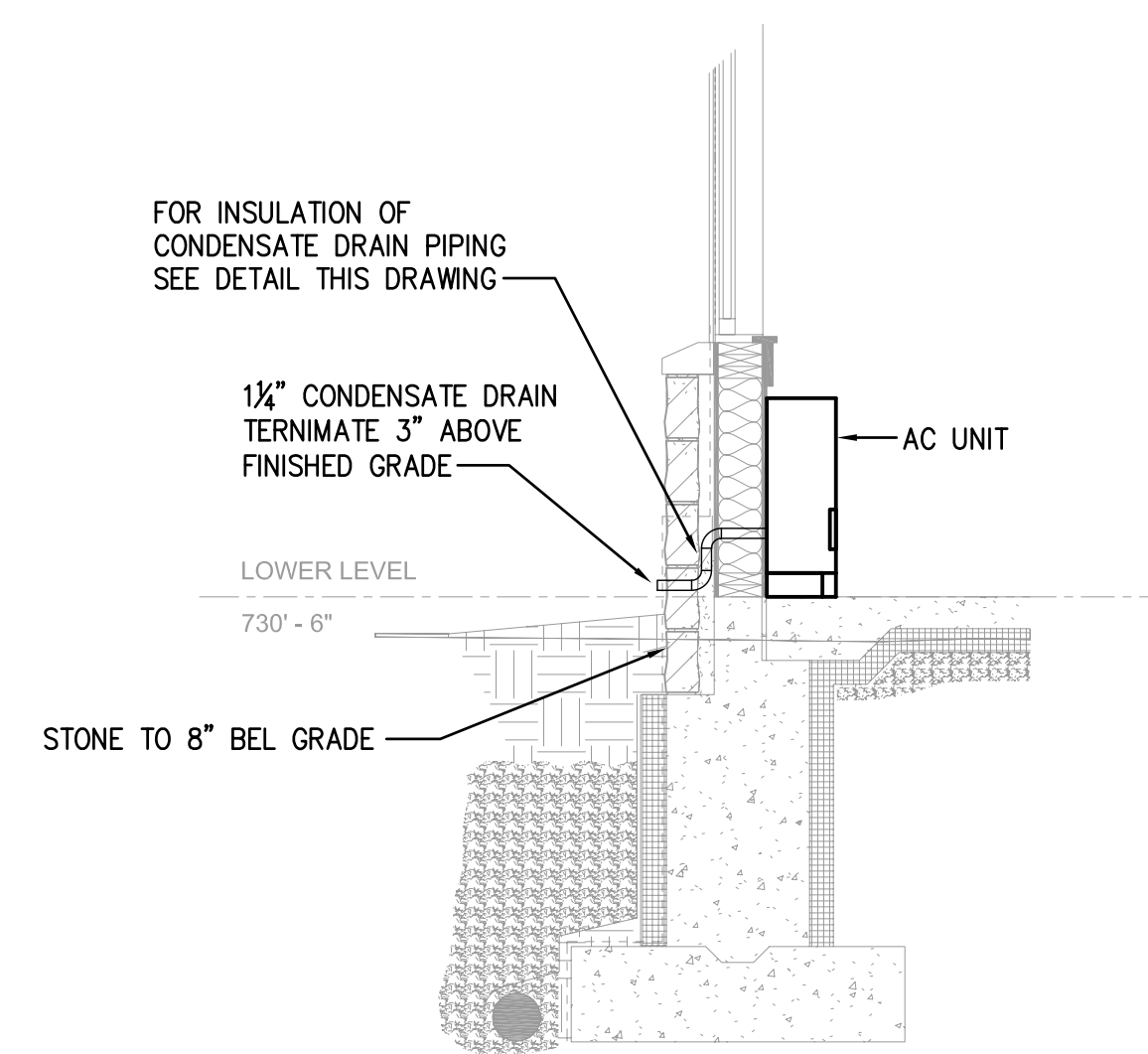




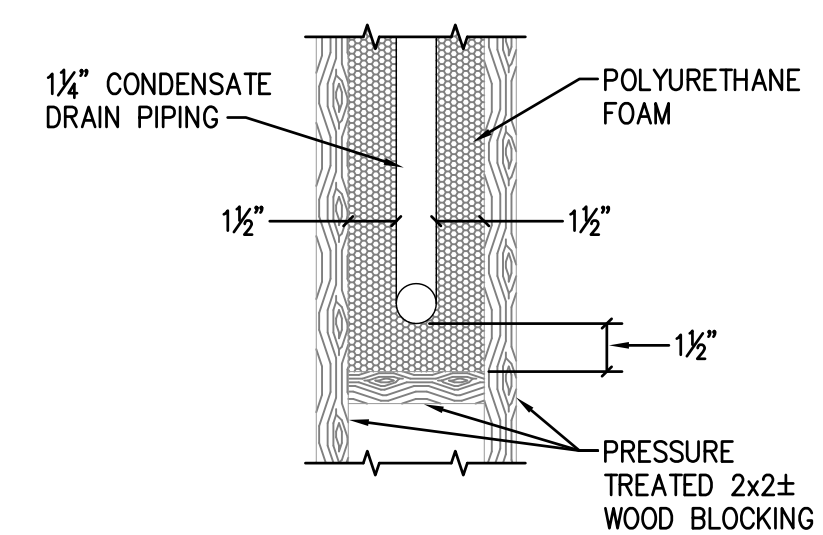
1 CONDENSATE DRAIN SECTION #1  
M3.3 SCALE: 1/2" = 1'-0"



2 CONDENSATE DRAIN SECTION #2  
M3.3 SCALE: 1/2" = 1'-0"



3 CONDENSATE DRAIN SECTION #3  
M3.3 SCALE: 1/2" = 1'-0"



4 INSULATION OF CONDENSATE DRAIN PIPING BEHIND MASONRY STUD WALL  
M3.3 SCALE: N.T.S.

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**LLI ENGINEERING**  
8000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 934-8800

PROJECT NUMBER  
20070085

150170	RECORD DRAWING		
1	ISSUED FOR CONSTRUCTION		
NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT DESIGNER		PROJECT COORDINATOR	
APPROVED			
CHIEF - DIVISION OF DESIGN			
APPROVED			
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION			

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494

APPLICABLE CONTRACT NO'S.

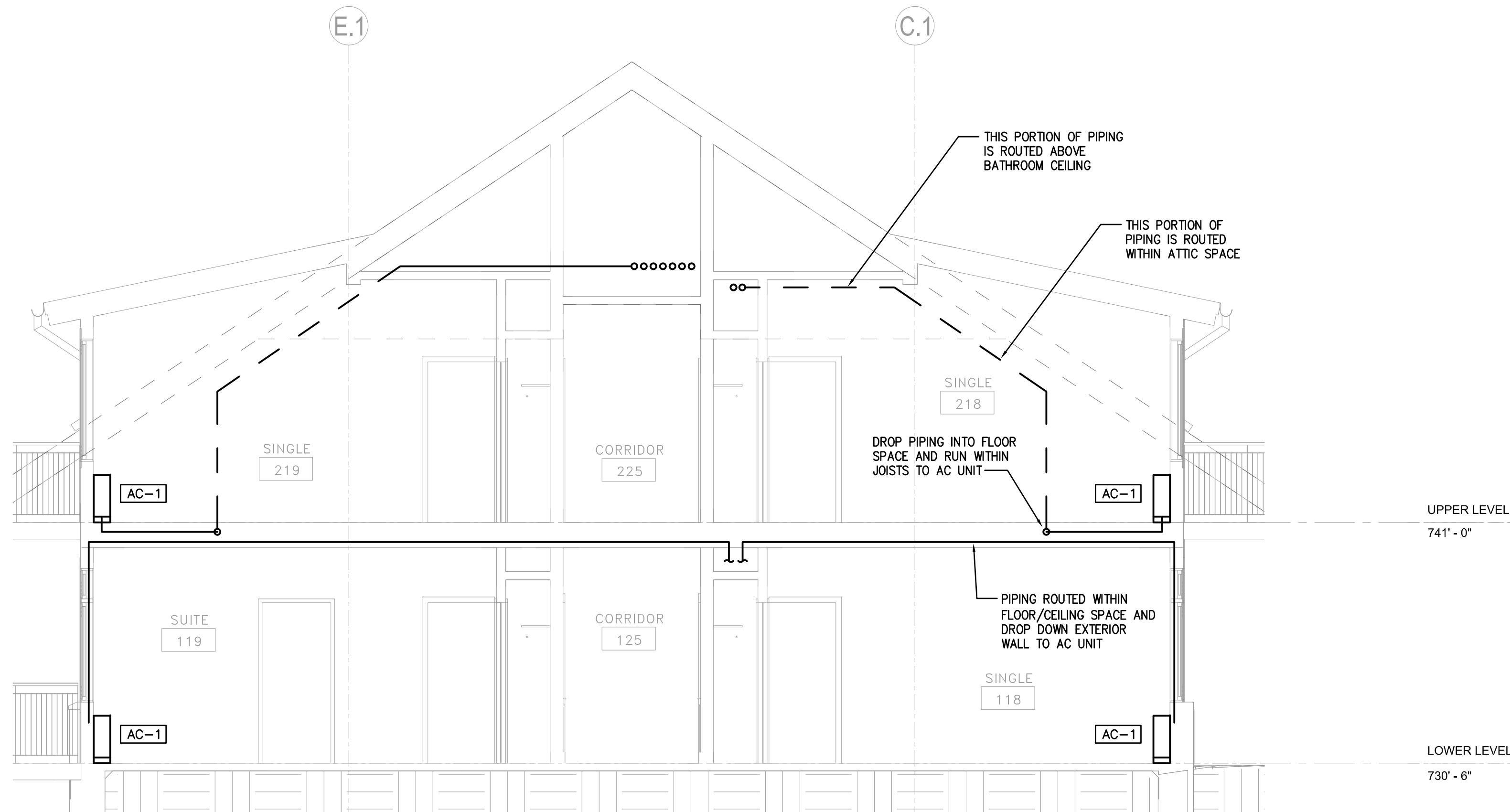
GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

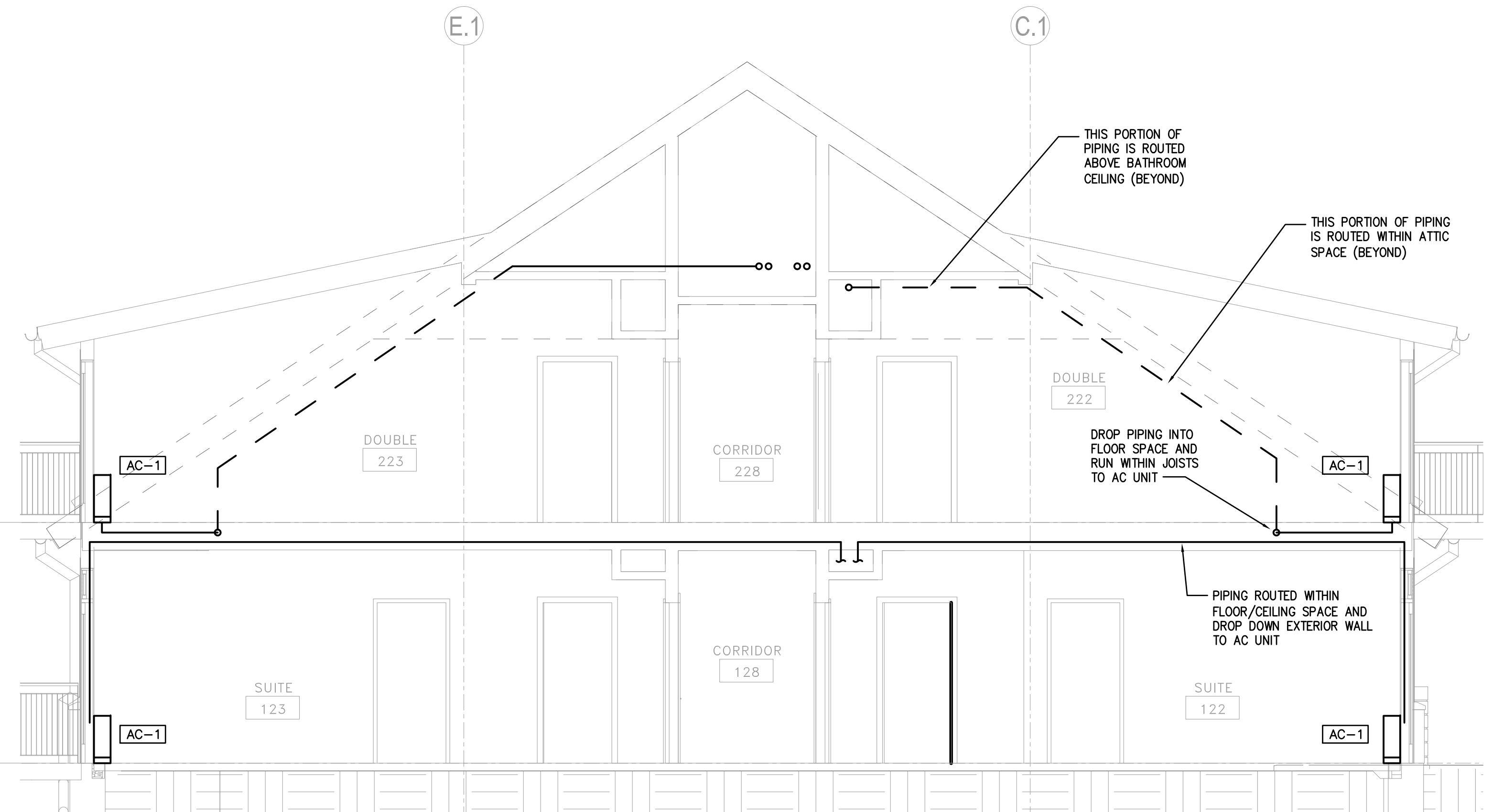
SECTIONS  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO.:
CHECKED BY: SRB	SCALE: AS NOTED	

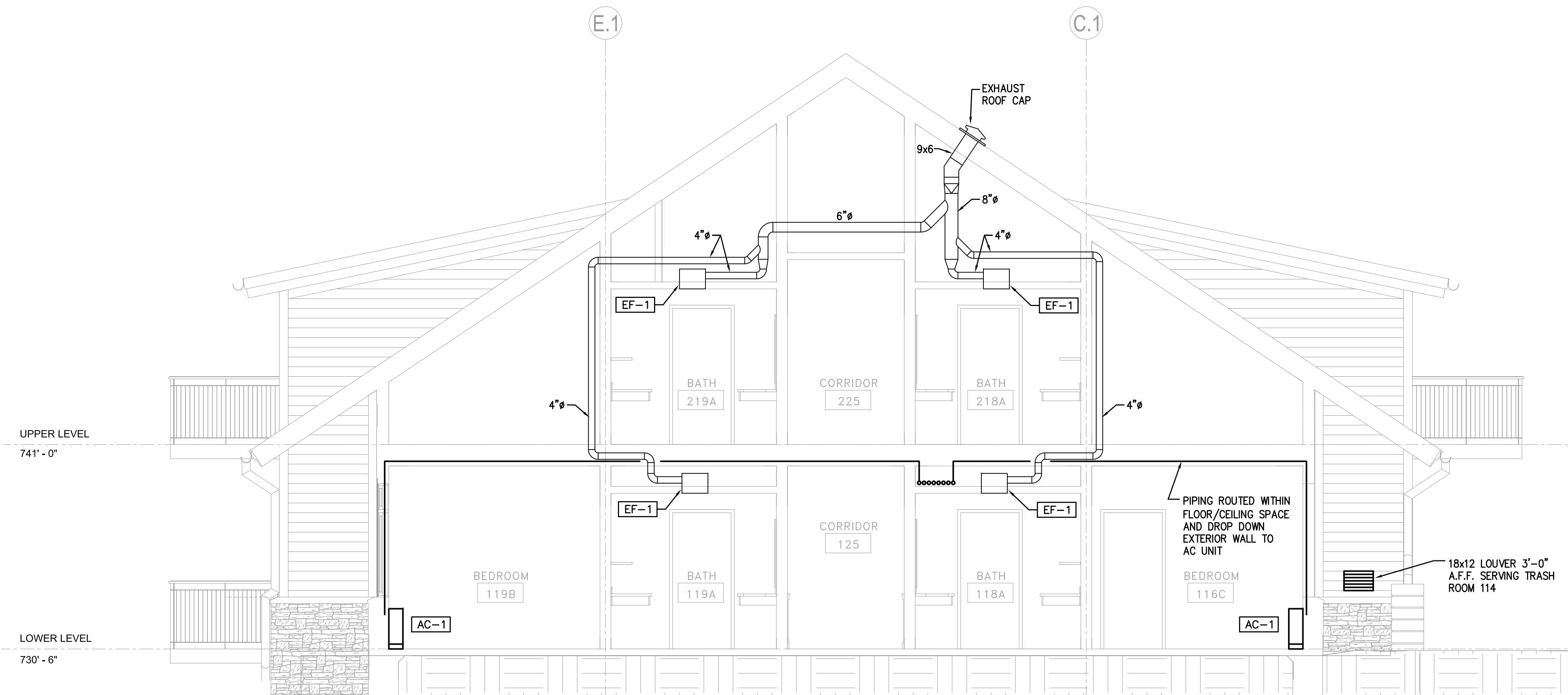
**M3.3**



**A** SECTION  
M3.4 SCALE: 1/4" = 1'-0"



**B** SECTION  
M3.4 SCALE: 1/4" = 1'-0"



**C** SECTION  
M3.4 SCALE: 1/4" = 1'-0"

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**LLI ENGINEERING** PROJECT NUMBER  
20070085  
6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 934-8800

150170	RECORD DRAWING		
1	ISSUED FOR CONSTRUCTION		
NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT DESIGNER		PROJECT COORDINATOR	
APPROVED			
CHIEF - DIVISION OF DESIGN			
APPROVED			
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION			

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494

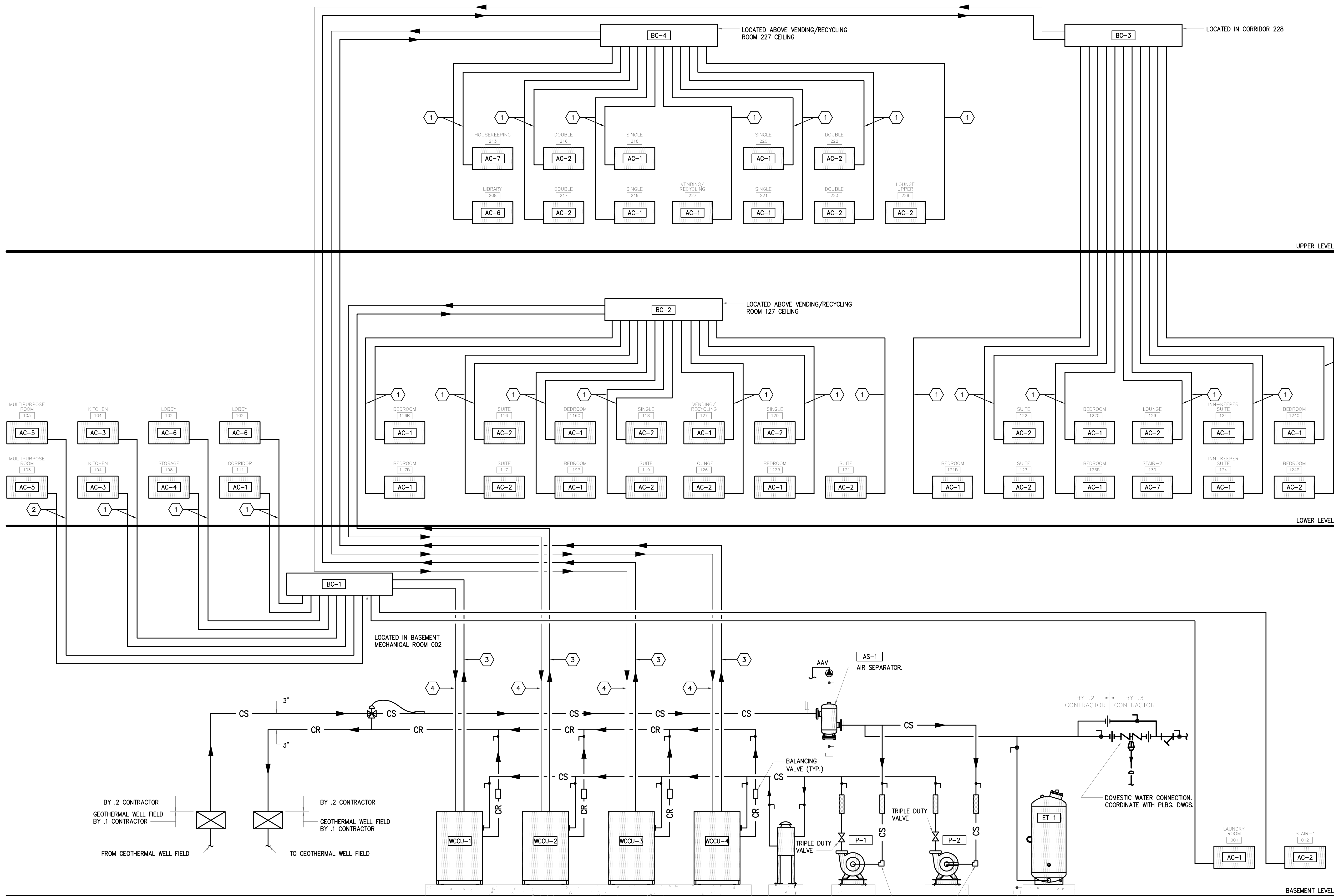
APPLICABLE CONTRACT NO'S.

GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

SECTIONS  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO:
CHECKED BY: SRB	SCALE: AS NOTED	<b>M3.4</b>



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**LI ENGINEERING**  
 6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 15084-9800  
 PROJECT NUMBER 20070085

NO.	DATE	REVISION	APPR.
1	09/03/08	ISSUED FOR CONSTRUCTION	
SUBMITTED			
PROJECT DESIGNER		PROJECT COORDINATOR	
APPROVED			
CHIEF - DIVISION OF DESIGN			
APPROVED			
DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION			

COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
 OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494  
 APPLICABLE CONTRACT NO'S.  
 GENERAL: PLUMBING:  
 HVAC: FDC-133-4494.2 ELECTRICAL:  
 ROADWAY:

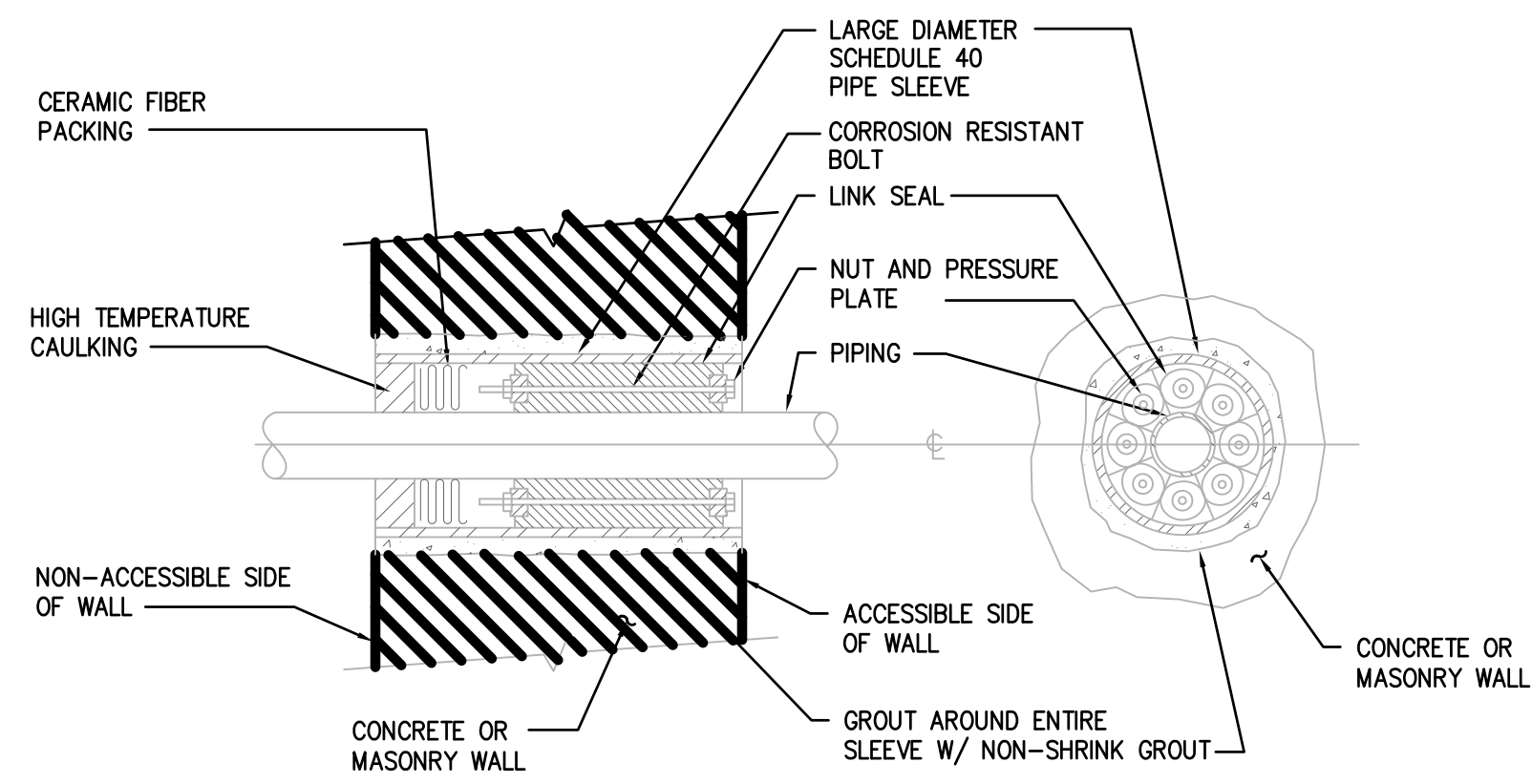
THE INN AT BALD EAGLE STATE PARK  
 HOWARD AND LIBERTY TOWNSHIP,  
 CENTRE COUNTY, PENNSYLVANIA

PIPING DIAGRAM  
 HVAC

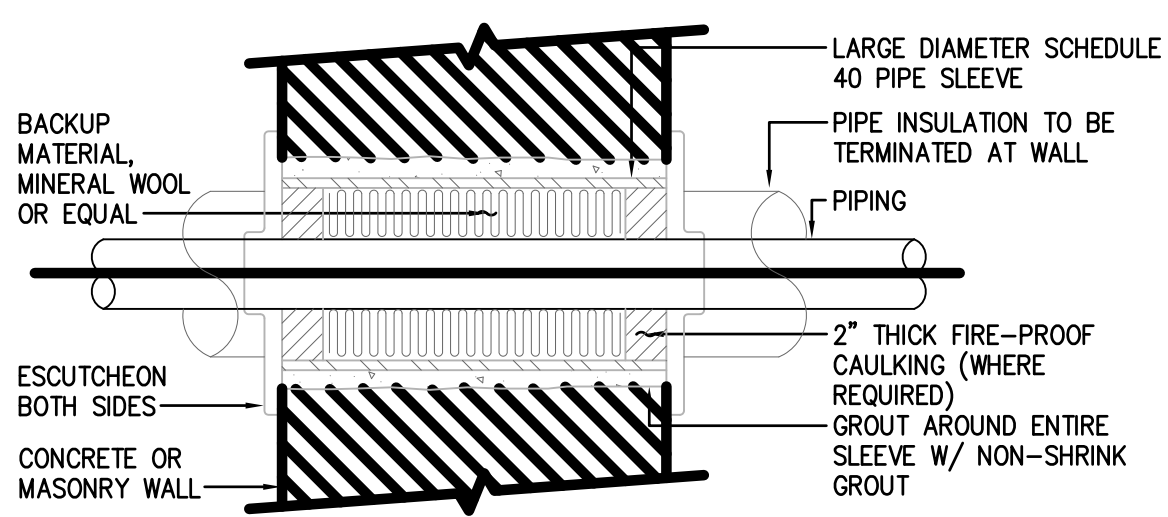
DRAWN BY: JPB DATE: 09-03-08 DRAWING NO:  
 CHECKED BY: SRB SCALE: AS NOTED **M4.0**

- KEY NOTES:**
- ① LINE REPRESENTS (1) 1/4" REFRIGERANT LIQUID LINE AND (1) 1/2" REFRIGERANT GAS LINE.
  - ② LINE REPRESENTS (1) 3/8" REFRIGERANT LIQUID LINE AND (1) 1" REFRIGERANT GAS LINE.
  - ③ 1/2" REFRIGERANT LIQUID LINE
  - ④ 3/4" REFRIGERANT GAS LINE

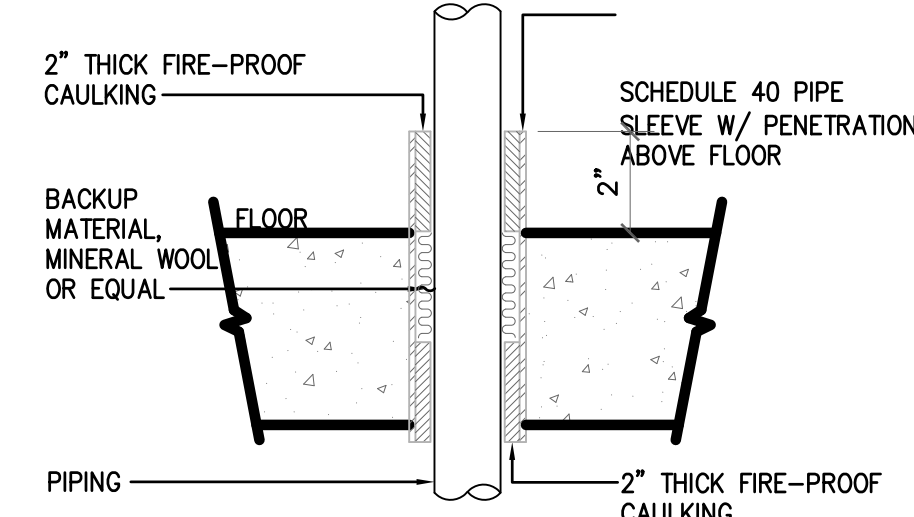
**PIPING SCHEMATIC DIAGRAM**  
 SCALE: N.T.S.



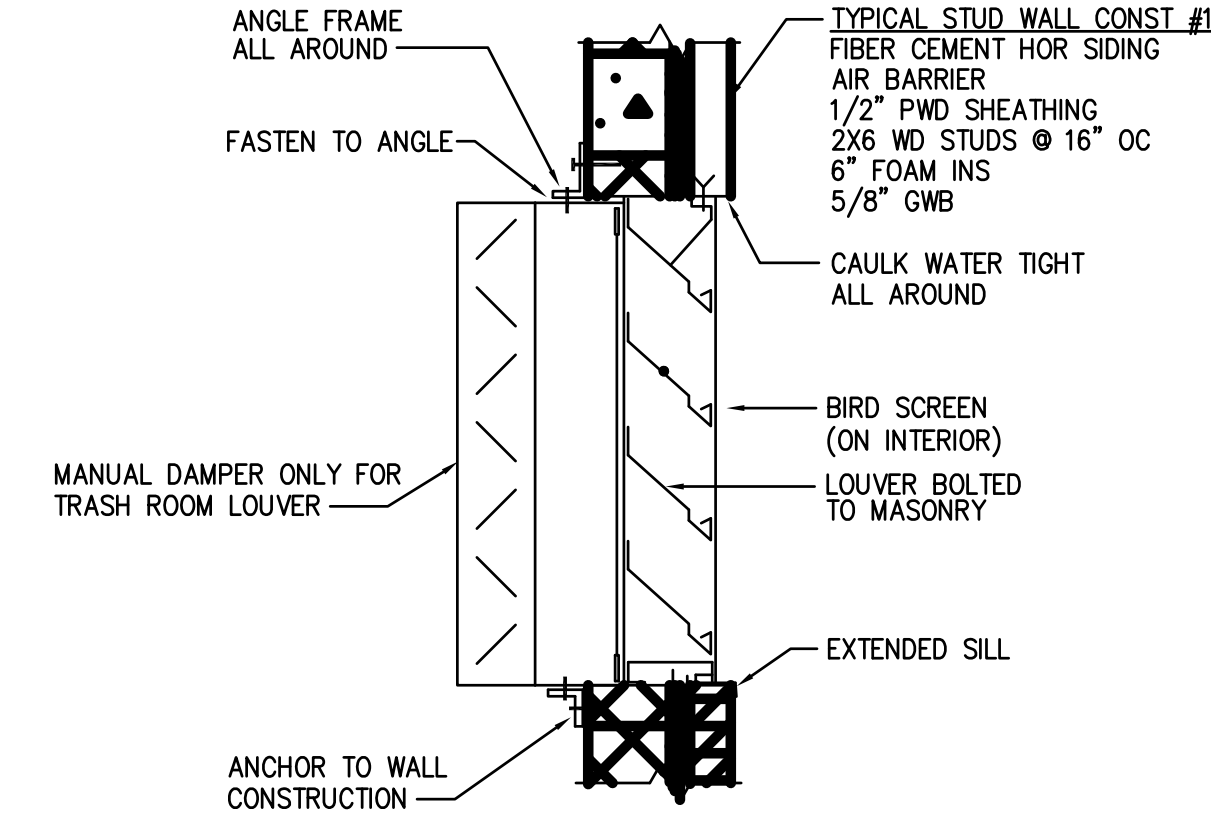
EXTERIOR WALL PIPE SLEEVE DETAIL  
SCALE: N.T.S.



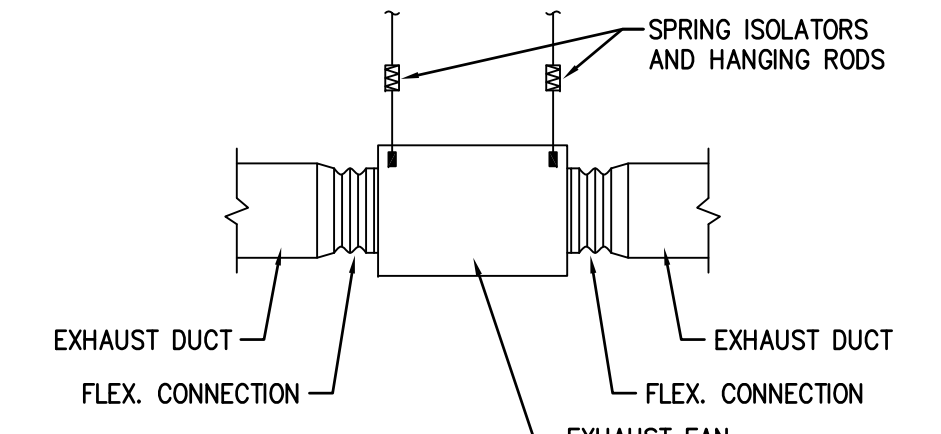
PIPE SLEEVE THRU WALL DETAIL  
SCALE: N.T.S.



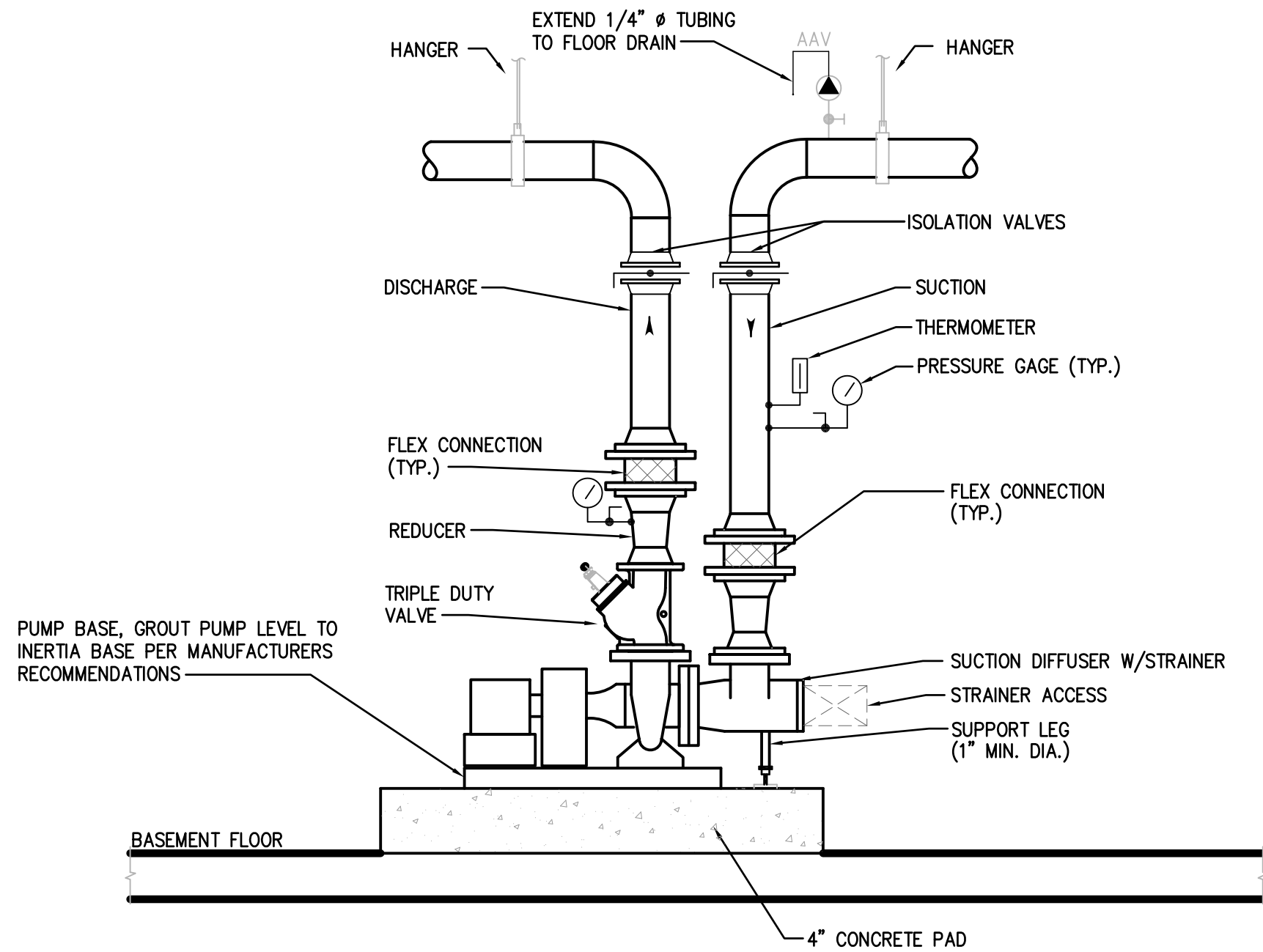
PIPE SLEEVE THRU FLOOR DETAIL  
SCALE: N.T.S.



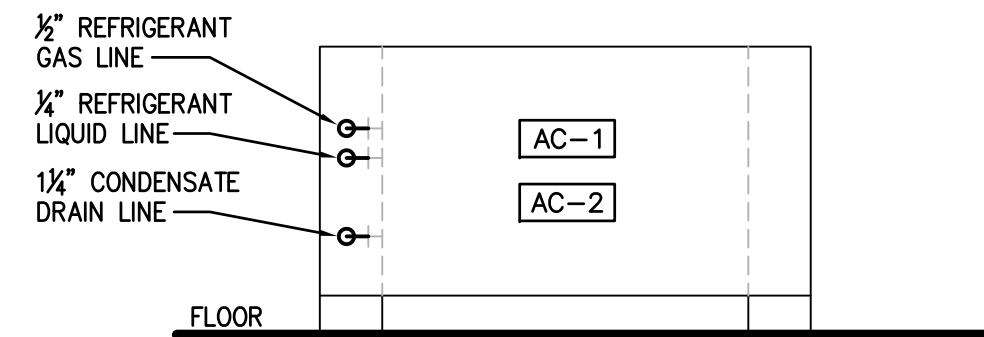
WALL LOUVER DETAIL  
SCALE: N.T.S.



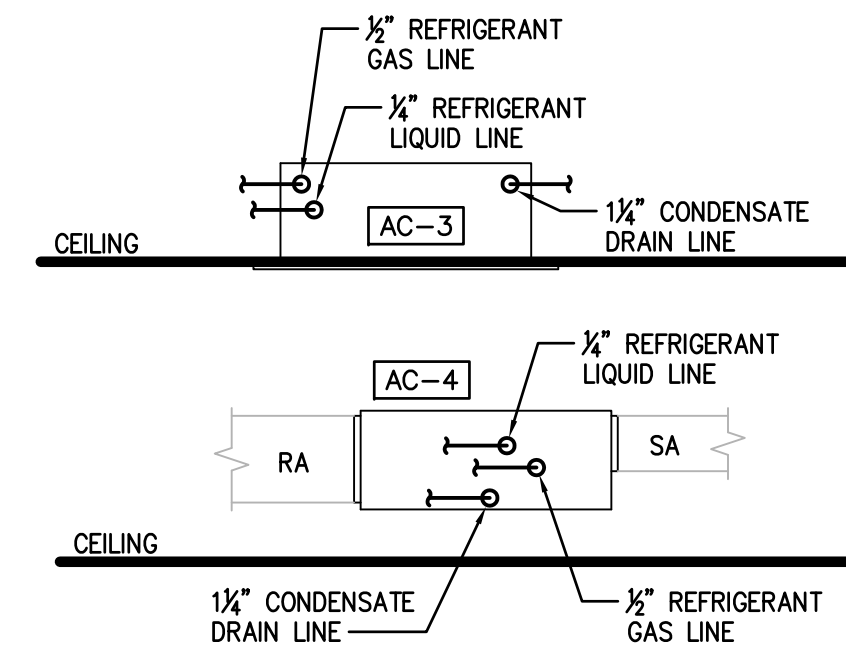
IN-LINE EXHAUST FAN MOUNTING DETAIL  
SCALE: N.T.S.



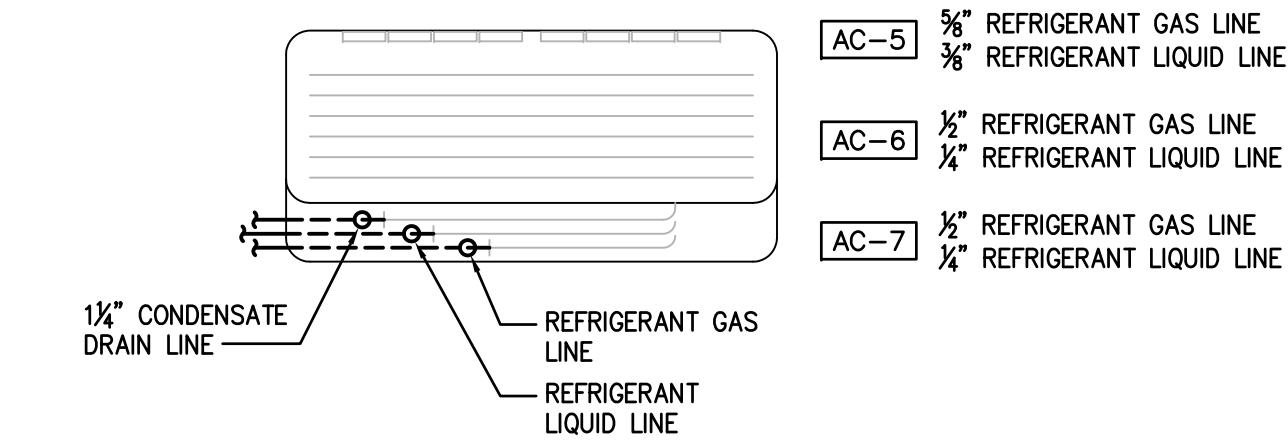
END SUCTION PUMP DETAIL  
SCALE: N.T.S.



FLOOR MOUNTED UNITS



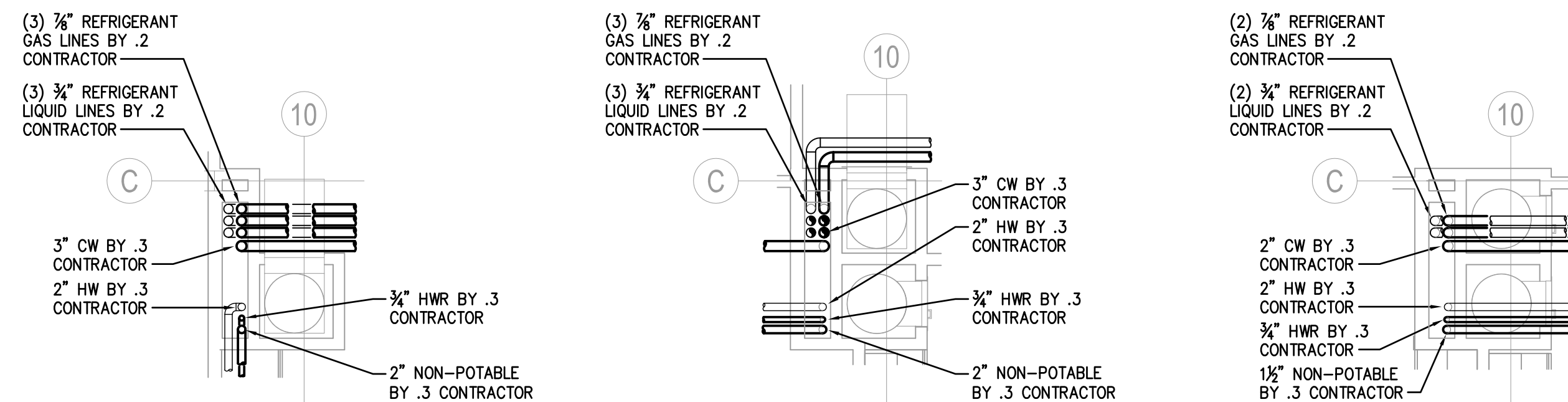
CEILING MOUNTED UNITS



WALL MOUNTED UNITS

- NOTES: (FLOOR MOUNTED AND WALL MOUNTED)
- REFRIGERANT PIPING LOCATED WITHIN WALL AND PENETRATES THRU BACK OF UNIT INTO PIPING SPACE TO MAKE FINAL CONNECTION TO UNIT.
  - CONDENSATE DRAIN LINE SHALL PENETRATE BACK OF UNIT AND ROUTE WITHIN WALL TO TERMINATION POINT INDICATED ON PLAN DRAWINGS.

AIR CONDITIONING UNIT PIPING DETAILS  
SCALE: N.T.S.

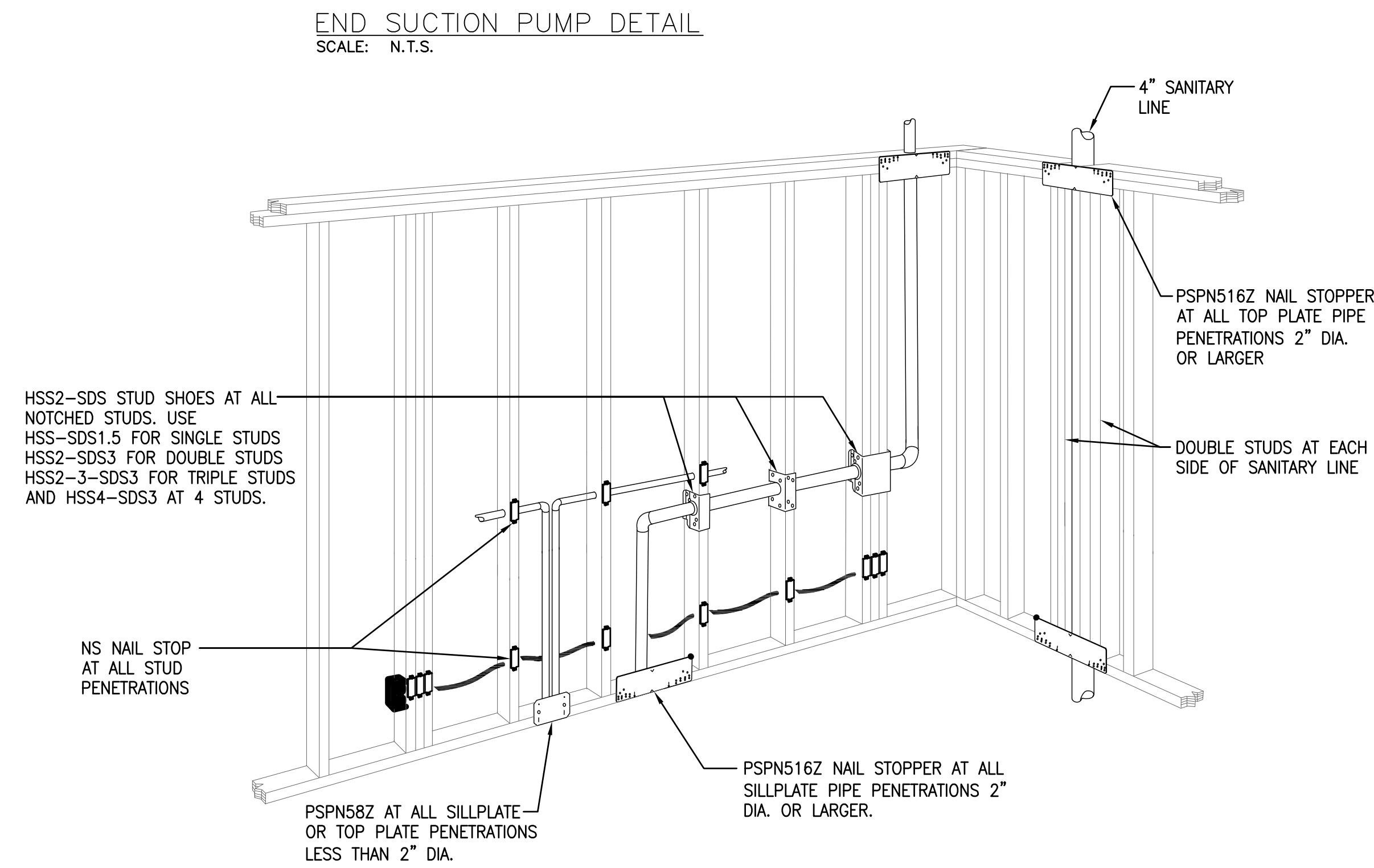


BASEMENT PLAN

LOWER LEVEL PLAN

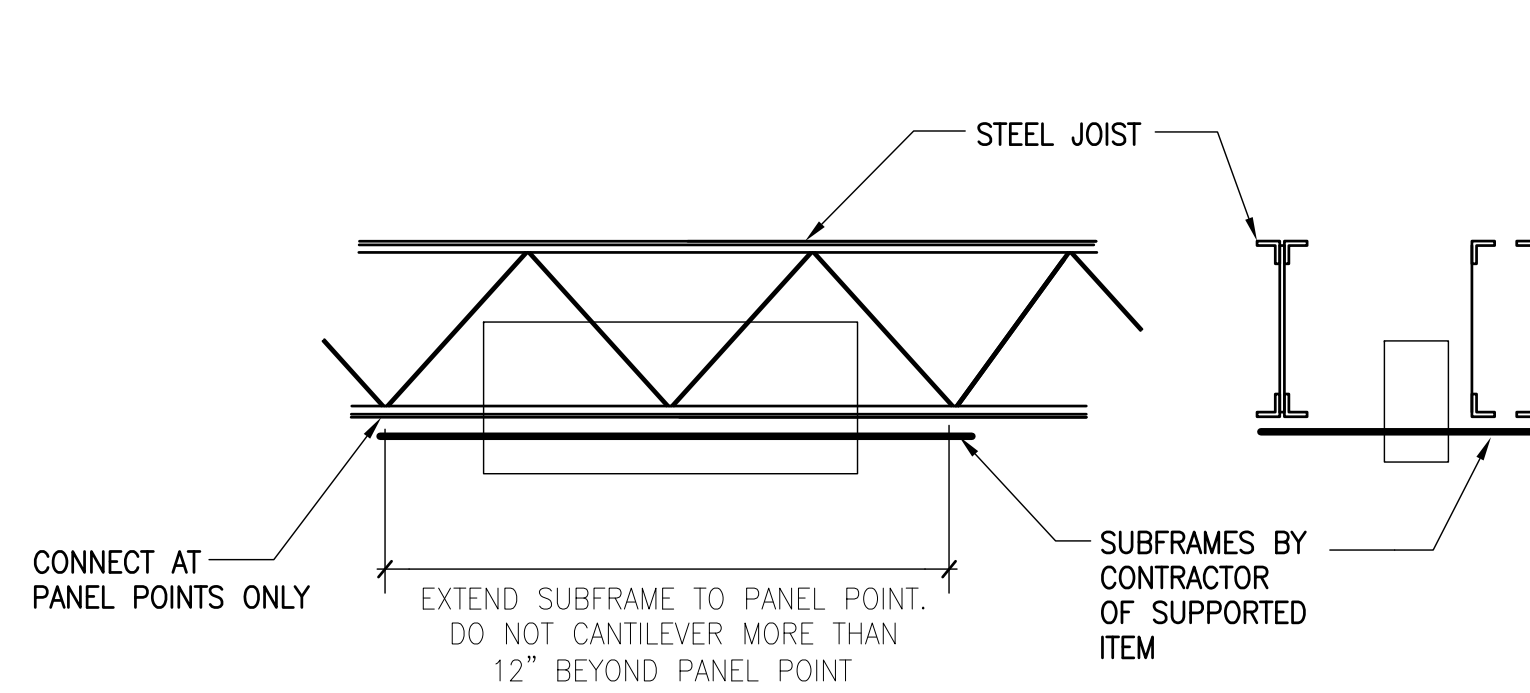
UPPER LEVEL PLAN

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

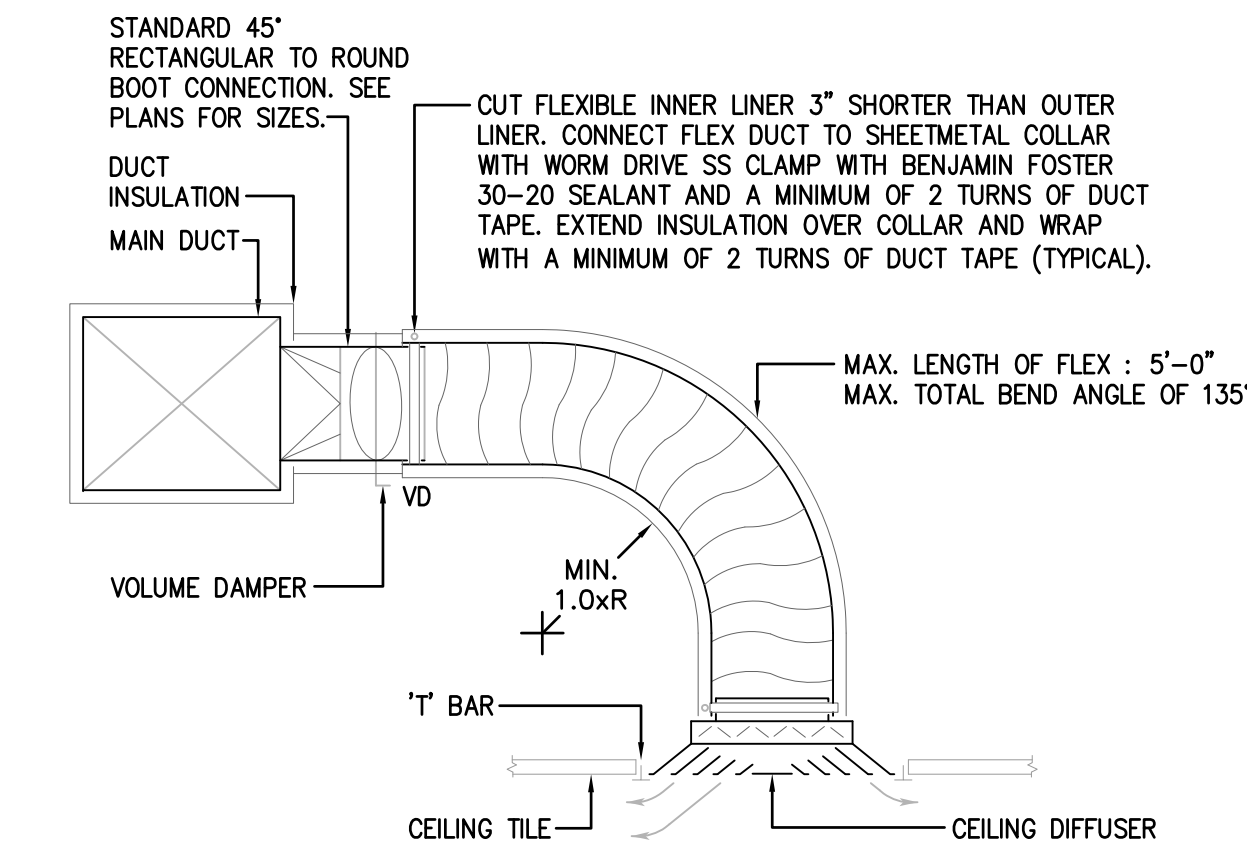


TYPICAL WALL PENETRATION REINFORCEMENT DETAIL  
SCALE: N.T.S.

- NOTES:
- ALL STRAPS, & SHOES BY SIMPSON STRONG-TIE OR EQUAL.



TYPICAL LOAD SUSPENSION DETAILS AT JOISTS  
SCALE: N.T.S.



DIFFUSER CONNECTION DETAIL  
SCALE: N.T.S.

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PROJECT NUMBER 20070085

LLI ENGINEERING  
6000 BROOKTREE ROAD, SUITE 300 WEXFORD, PA 724 934-8800

NO.	DATE	REVISION	APPR.
1	08/08/08	ISSUED FOR CONSTRUCTION	

RECORD DRAWING

PROJECT DESIGNER: \_\_\_\_\_ PROJECT COORDINATOR: \_\_\_\_\_

APPROVED: \_\_\_\_\_

CHIEF - DIVISION OF DESIGN

APPROVED: \_\_\_\_\_

DIRECTOR - BUREAU OF FACILITY DESIGN AND CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
OFFICE OF PARKS AND FORESTRY

PROJECT NO: FDC-133-4494  
APPLICABLE CONTRACT NO'S.

GENERAL:	PLUMBING:
HVAC: FDC-133-4494.2	ELECTRICAL:
ROADWAY:	

THE INN AT BALD EAGLE STATE PARK  
HOWARD AND LIBERTY TOWNSHIP,  
CENTRE COUNTY, PENNSYLVANIA

DETAILS  
HVAC

DRAWN BY: JPB	DATE: 09-03-08	DRAWING NO:
CHECKED BY: SRB	SCALE: AS NOTED	M5.0