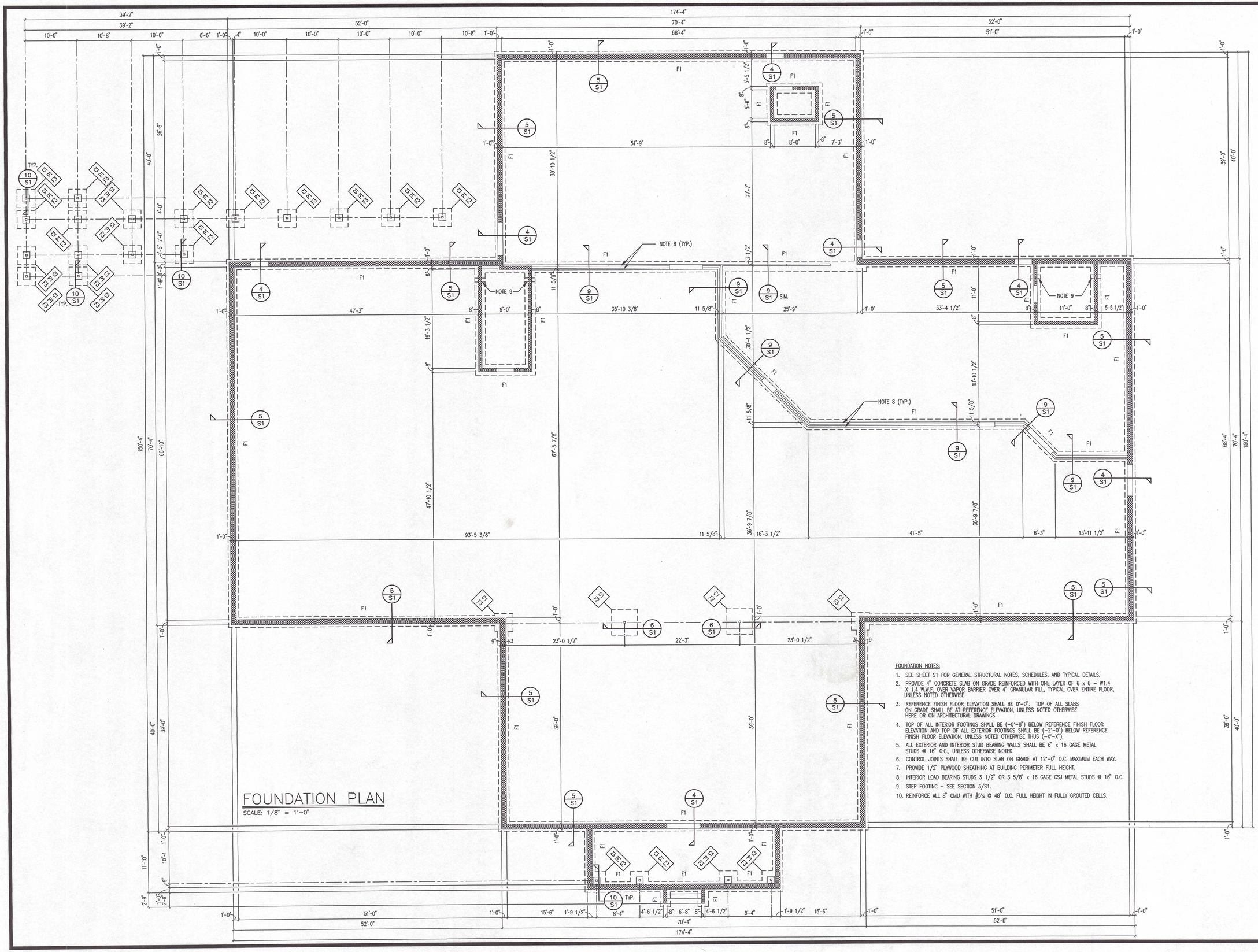

FOUNDATION PLAN

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

FOUNDATION NOTES:

1. SEE SHEET S1 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, AND TYPICAL DETAILS.
2. PROVIDE 4" CONCRETE SLAB ON GRADE REINFORCED WITH ONE LAYER OF 6 x 6 – W1.4 X 1.4 W.W.F. OVER VAPOR BARRIER OVER 4" GRANULAR FILL, TYPICAL OVER ENTIRE FLOOR, UNLESS NOTED OTHERWISE.
3. REFERENCE FINISH FLOOR ELEVATION SHALL BE 0'-0". TOP OF ALL SLABS ON GRADE SHALL BE AT REFERENCE ELEVATION, UNLESS NOTED OTHERWISE HERE OR ON ARCHITECTURAL DRAWINGS.
4. TOP OF ALL INTERIOR FOOTINGS SHALL BE (-0'-8") BELOW REFERENCE FINISH FLOOR ELEVATION AND TOP OF ALL EXTERIOR FOOTINGS SHALL BE (-2'-0") BELOW REFERENCE FINISH FLOOR ELEVATION, UNLESS NOTED OTHERWISE THUS (-X'-X").
5. ALL EXTERIOR AND INTERIOR STUD BEARING WALLS SHALL BE 6" x 16 GAGE METAL STUDS @ 16" O.C., UNLESS OTHERWISE NOTED.
6. CONTROL JOINTS SHALL BE CUT INTO SLAB ON GRADE AT 12'-0" O.C. MAXIMUM EACH WAY.
7. PROVIDE 1/2" PLYWOOD SHEATHING AT BUILDING PERIMETER FULL HEIGHT.
8. INTERIOR LOAD BEARING STUDS 3 1/2" OR 3 5/8" x 16 GAGE CSJ METAL STUDS @ 16" O.C.
9. STEP FOOTING – SEE SECTION 3/S1.
10. REINFORCE ALL 8" CMU WITH #5's @ 48" O.C. FULL HEIGHT IN FULLY GROUTED CELLS.

NO.	REVISIONS	DATE

DAY & KINDER CONSULTING ENGINEERS, PLLC
P.O. BOX 20187
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ROANOKE, VIRGINIA 24018
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COMMONWEALTH OF VIRGINIA
JAMES F. KINDER, JR.
No. 015761
7-12-07
PROFESSIONAL ENGINEER

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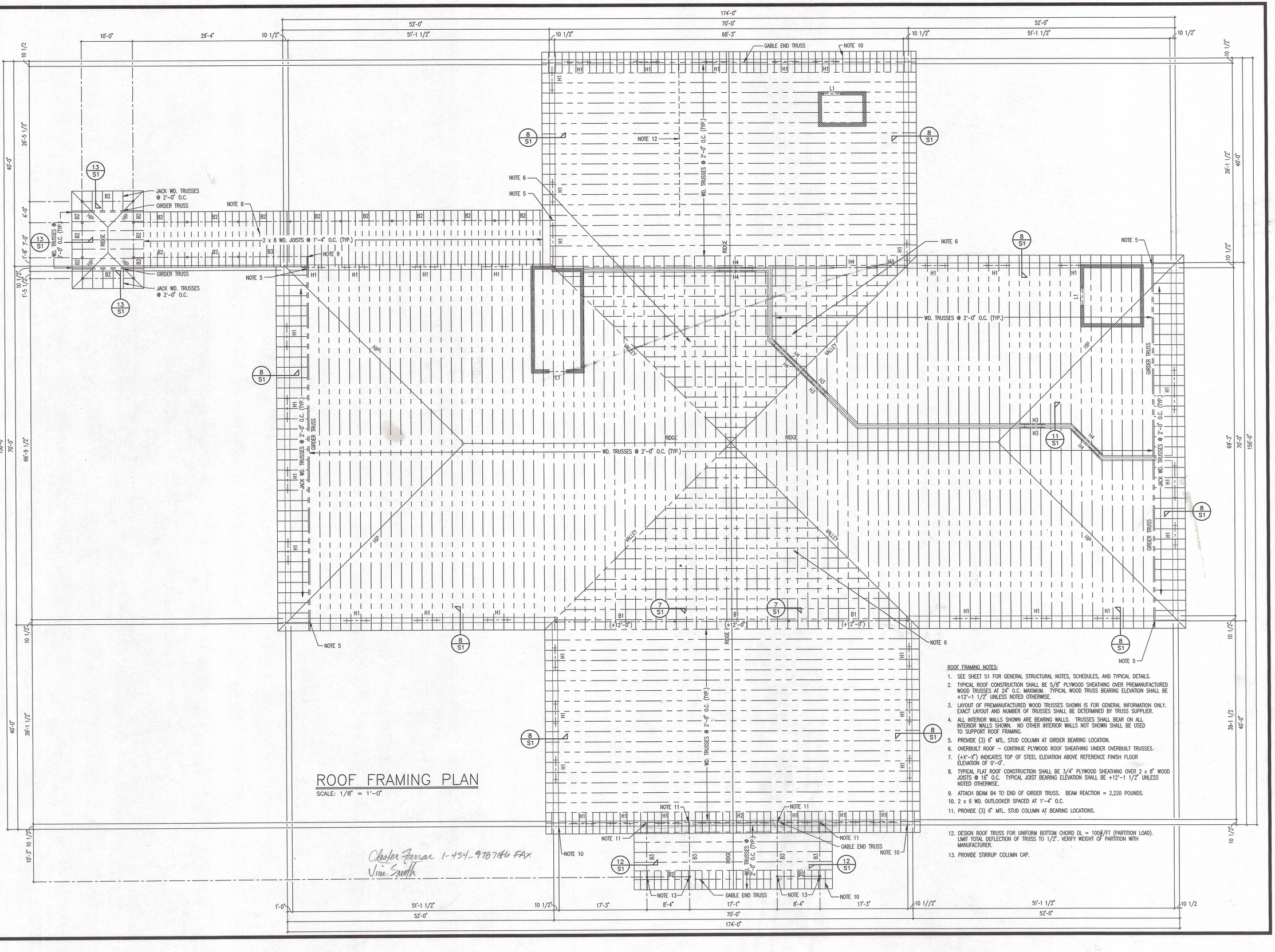
FLUVANNA COUNTY, VIRGINIA

FOUNDATION PLAN AND NOTES

REYNOLDS ARCHITECTS INCORPORATED
BLACKSBURG, VIRGINIA

DESIGNED JFK	DRAWN ABC
CHECKED JFK	APPROVED JFK
PROJECT 0422	S2
DATE 9-12-07	



ROOF FRAMING PLAN

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

ROOF FRAMING NOTES:

1. SEE SHEET S1 FOR GENERAL STRUCTURAL NOTES, SCHEDULES, AND TYPICAL DETAILS.
2. TYPICAL ROOF CONSTRUCTION SHALL BE 5/8" PLYWOOD SHEATHING OVER PREMANUFACTURED WOOD TRUSSES AT 24" O.C. MAXIMUM. TYPICAL WOOD TRUSS BEARING ELEVATION SHALL BE +12'-1 1/2" UNLESS NOTED OTHERWISE.
3. LAYOUT OF PREMANUFACTURED WOOD TRUSSES SHOWN IS FOR GENERAL INFORMATION ONLY. EXACT LAYOUT AND NUMBER OF TRUSSES SHALL BE DETERMINED BY TRUSS SUPPLIER.
4. ALL INTERIOR WALLS SHOWN ARE BEARING WALLS. TRUSSES SHALL BEAR ON ALL INTERIOR WALLS SHOWN. NO OTHER INTERIOR WALLS NOT SHOWN SHALL BE USED TO SUPPORT ROOF FRAMING.
5. PROVIDE (3) 6" MTL. STUD COLUMN AT GIRDER BEARING LOCATION.
6. OVERBUILT ROOF – CONTINUE PLYWOOD ROOF SHEATHING UNDER OVERBUILT TRUSSES.
7. (+X"–X") INDICATES TOP OF STEEL ELEVATION ABOVE REFERENCE FINISH FLOOR ELEVATION OF 0'–0".
8. TYPICAL FLAT ROOF CONSTRUCTION SHALL BE 3/4" PLYWOOD SHEATHING OVER 2 x 8" WOOD JOISTS @ 16" O.C. TYPICAL JOIST BEARING ELEVATION SHALL BE +12'–1 1/2" UNLESS NOTED OTHERWISE.
9. ATTACH BEAM B4 TO END OF GIRDER TRUSS. BEAM REACTION = 2,220 POUNDS.
10. 2 x 6 WD. OUTLOOKER SPACED AT 1'–4" O.C.
11. PROVIDE (3) 6" MTL. STUD COLUMN AT BEARING LOCATIONS.
12. DESIGN ROOF TRUSS FOR UNIFORM BOTTOM CHORD DL = 10#/FT (PARTITION LOAD). LIMIT TOTAL DEFLECTION OF TRUSS TO 1/2". VERIFY WEIGHT OF PARTITION WITH MANUFACTURER.
13. PROVIDE STIRRUP COLUMN CAP.

Chester Farrar 1-434-978-7146 FAX
Jim Smith

NO.	REVISIONS	DATE

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JAMES F. KINDER, JR.
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ROOF FRAMING PLAN AND NOTES

REYNOLDS ARCHITECTS INCORPORATED
BLACKSBURG, VIRGINIA

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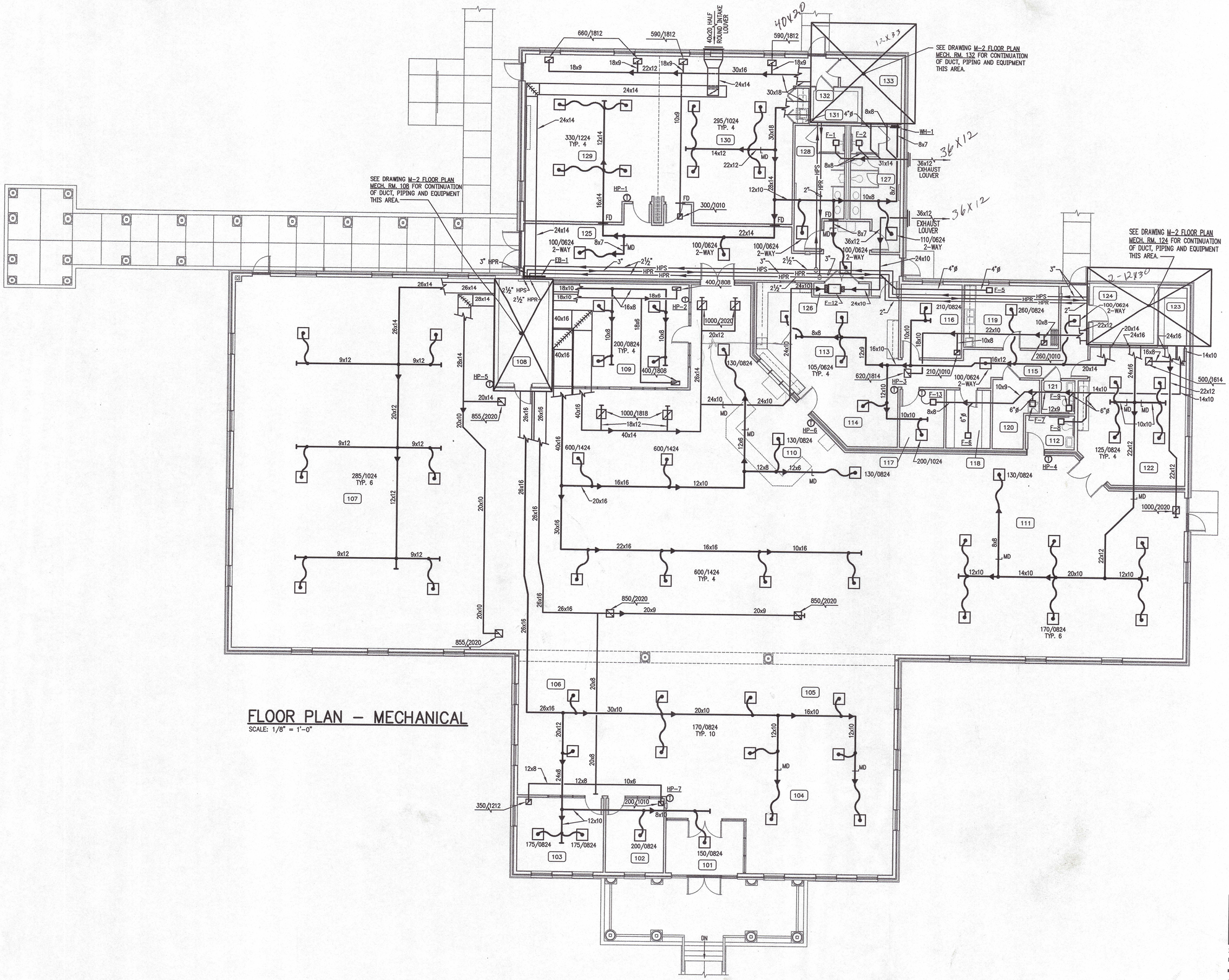
JFK	ABC
CHECKED	APPROVED
JFK	JFK
PROJECT	
0422	
DATE	
9-12-07	

S3



FLOOR PLAN – MECHANICAL

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

NO.	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
JEFFREY A. PERRY
Lic. No. 21219
PROFESSIONAL ENGINEER

FLUVANNA COUNTY PUBLIC LIBRARY
FLUVANNA COUNTY, VIRGINIA

FLOOR PLAN – MECHANICAL

REYNOLDS ARCHITECTS INCORPORATED
BLACKSBURG, VIRGINIA

Lawrence Perry & Associates, Inc.
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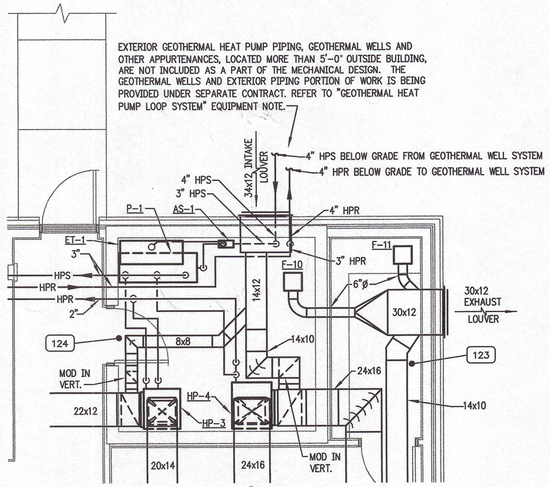
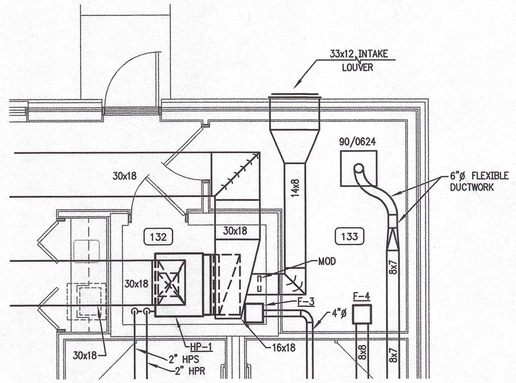
DESIGNED	DRAWN
WCC	WCC
CHECKED	APPROVED
WCC/HEK	LPA
PROJECT	
0422	
DATE	
9-12-07	

M1



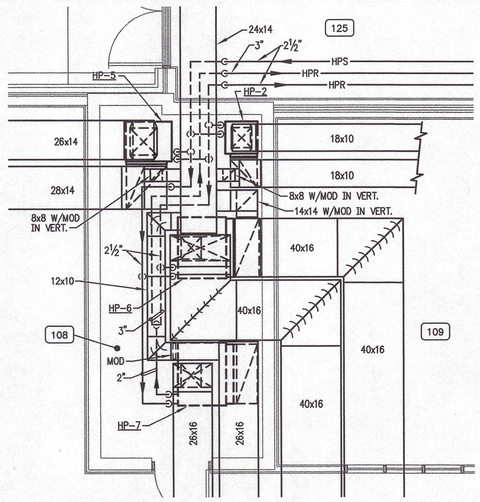
FLOOR PLAN – MECH ROOM 124

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



FLOOR PLAN – MECH ROOM 132

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



FLOOR PLAN – MECH ROOM 108

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

EQUIPMENT NOTES

WATER SOURCE HEAT PUMPS: TRANE

	SUPPLY FAN				COOLING COIL					HEATING COIL			WATER		UNIT
	TOTAL	OUTSIDE	EXT. S.P.	MAXIMUM	TOTAL	SENSIBLE	ENT. AIR DEGREE	ENT. AIR DEGREE	TOTAL HEAT REJECTED	TOTAL	ENT. AIR DRY BULB	TOTAL HEAT ABSORBED	FLOW	P. D. FEET	POWER VOLTAGE & PHASE	UNIT MODEL
MARK	AIR, CFM	AIR,CFM	IN. WATER	FAN HP	CAP., MBH	CAP., MBH	DRY BULB	WET BULB	MBH	CAP., MBH	DRY BULB	MBH	GPM	WATER		NUMBER
HP-1	3100	750	1.0	2.0	95.7	66.1	83.6	70.5	120.3	82.0	55.4	62.9	21.0	13.0	208V - 3PH	GEV-090
HP-2	800	200	1.0	0.3	26.0	18.0	83.4	70.3	34.5	24.0	56.3	18.4	6.0	9.0	208V - 3PH	GEV-024
HP-3	1150	200	1.0	0.5	36.9	26.1	82.6	69.6	46.9	32.0	59.6	23.9	9.0	12.0	208V - 3PH	GEV-036
HP-4	1730	560	1.0	1.0	60.0	40.0	83.4	70.3	77.4	57.0	56.2	42.0	16.0	16.3	208V - 3PH	GEV-060
HP-5	1730	200	1.0	1.0	49.7	36.0	81.7	68.6	67.8	44.0	63.1	32.3	12.0	12.0	208V - 3PH	GEV-048
HP-6	4000	800	1.0	5.0	126.0	87.0	83.4	70.3	160.0	111.0	56.2	84.4	30.0	15.0	208V - 3PH	GEV-120
HP-7	2400	475	1.0	1.5	77.0	62.7	83.2	70.2	96.0	67.5	55.7	52.4	18.0	13.9	208V - 3PH	GEV-072

CAPACITIES BASED ON:
COOLING: EWT 86 DEGREE F W/20% PROPYLENE GLYCOL
HEATING: EWT 45 DEGREE F W/20% PROPYLENE GLYCOL

BASEBOARD HEATERS: MARKEL OR EQUAL

	HEATING CAP.		ENCLOSURE LENGTH		HEIGHT	WIDTH	VOLTAGE	
MARK	MBH	WATTS	FEET	INCHES	INCHES	INCHES	AND PHASE	MODEL NO.
EB-1	3413	1000	4	0	6	3.5	208V - 1PH	DBF

NOTES:
1. SEE PLAN FOR UNIT QUANTITY.
2. PROVIDE UNIT-MOUNTED THERMOSTAT CONTROL AND ACCESSORIES AS REQUIRED FOR THE INDICATED MOUNTING.

WALL HEATERS: MARKEL

	HEATING CAP.		VOLTAGE		
MARK	KW	MBH	& PHASE	MODEL NO.	REMARKS
WH-1	2	6.8	208V-1PH	H-3452	RECESSED

NOTES:
1. SEE PLAN FOR UNIT QUANTITY.
2. PROVIDE UNIT-MOUNTED THERMOSTAT CONTROL AND ACCESSORIES AS REQUIRED FOR THE INDICATED MOUNTING.

FANS: GREENHECK

MARK	CAP. CFM	S.P., IN H2O	WATTS	VOLTAGE & PHASE	MAX. SONES	FAN TYPE	NOTES	MODEL NO.
F-1	225	0.38	81.0	120V - 1PH	4.0	CF	1,2,3	SP-A290
F-2	225	0.38	81.0	120V - 1PH	4.0	CF	1,2,3	SP-A290
F-3	50	0.38	60.0	120V - 1PH	3.0	CF	1,2,3	SP-B80
F-4	100	0.38	50.0	120V - 1PH	2.5	CF	1,2,3	SP-A200
F-5	60	0.38	60.0	120V - 1PH	4.0	CF	1,2,3	SP-B80
F-6	85	0.38	85.0	120V - 1PH	2.0	CF	1,2,3	SP-B110
F-7	85	0.38	85.0	120V - 1PH	2.0	CF	1,2,3	SP-B110
F-8	75	0.38	80.0	120V - 1PH	2.0	CF	1,2,3	SP-B110
F-9	75	0.38	80.0	120V - 1PH	2.0	CF	1,2,3	SP-B110
F-10	75	0.38	80.0	120V - 1PH	2.0	CF	1,2,3	SP-B110
F-11	75	0.38	80.0	120V - 1PH	2.0	CF	1,2,3	SP-B110
F-12	1100	0.38	1/4 HP	120V - 1PH	5.8	IL	1,3	BDF-100-4
F-13	225	0.38	81.0	120V - 1PH	4.0	CF	1,2,3	SP-A290

FAN TYPE: CF - CEILING CENTRIFUGAL
IL - INLINE

FAN NOTES:
1. PROVIDE GRAVITY BACKDRAFT DAMPER IN FAN DISCHARGE.
2. PROVIDE METAL CEILING GRILLE
3. PROVIDE FAN SPEED CONTROL.

ELECTRIC DUCT HEATING COILS: MARKEL

MARK	ASSOCIATED HEAT PUMP	CFM	CAPACITY MBH	KW	STAGES	VOLTAGE & PHASE	DUCT SIZE INCHES WIDTH	HEIGHT
EDC-1	HP-1	3100	68.3	20.0	2.0	208V - 3PH	20.0	12.0
EDC-2	HP-2	800	17.1	5.0	1.0	208V - 3PH	12.0	8.0
EDC-3	HP-3	1150	34.1	10.0	1.0	208V - 3PH	18.0	10.0
EDC-4	HP-4	1730	51.2	15.0	2.0	208V - 3PH	18.0	12.0
EDC-5	HP-5	1730	34.1	10.0	1.0	208V - 3PH	18.0	10.0
EDC-6	HP-6	4000	68.3	20.0	2.0	208V - 3PH	20.0	12.0
EDC-7	HP-7	2400	68.3	20.0	2.0	208V - 3PH	20.0	12.0

ALL HEATERS TO BE COMPLETE WITH UNIT MOUNTED DISCONNECTS.
HEATERS TO BE MOUNTED IN ASSOCIATED HEAT PUMP VERTICAL DISCHARGE DUCT AFTER TRANSITION FROM UNIT.

GEOTHERMAL HEAT PUMP LOOP SYSTEM:

1. EXTERIOR GEOTHERMAL HEAT PUMP PIPING, GEOTHERMAL WELLS AND OTHER APPURTENANCES, LOCATED MORE THAN 5'-0" OUTSIDE BUILDING, ARE NOT INCLUDED AS A PART OF THE MECHANICAL DESIGN. THE GEOTHERMAL WELLS AND EXTERIOR PIPING PORTION OF WORK IS TO BE HANDLED UNDER SEPARATE CONTRACT.
2. PUMP P-1, AIR SEPARATOR AS-1 AND EXPANSION TANK ET-1 ARE SIZED BASED ON THE FOLLOWING ASSUMPTIONS FOR THE GEOTHERMAL WELLS:
   A. FLOW RATE TOTAL 112 GPM.
   B. MAXIMUM ALLOWED PRESSURE DROP 45 FEET OF WATER.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY DIFFERENCES IN THE ABOVE DESIGN ASSUMPTIONS THAT WILL REQUIRE MODIFICATIONS AND/OR ADDITIONS TO THE EQUIPMENT SPECIFIED HEREIN.

PUMP: BELL & GOSSETT

MARK	MAX CAP. GPM	MIN. GPM	HEAD FT. H2O	HP	SIZE	MODEL
P-1	112	112	100	10	2E	1510

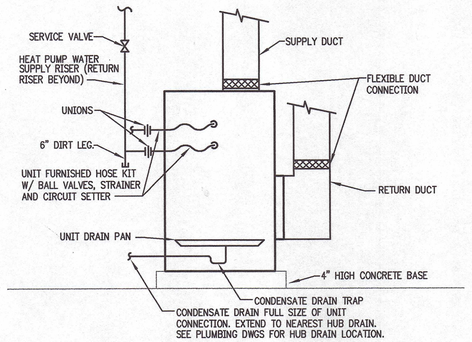
NOTE: PUMP SHALL BE SUITABLE FOR 20% PROPYLENE GLYCOL SOLUTION. SOLUTION AND MOTOR SHALL BE 1750 RPM.

EXPANSION TANK: BELL & GOSSETT

MARK	VOLUME GALLONS	DIAMETER INCHES	LENGTH INCHES	MAX. OPERATING WEIGHT LBS.	MODEL
ET-1	80	20	62.0	825.0	80

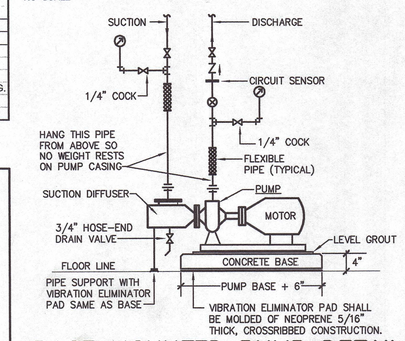
AIR SEPARATOR: BELL & GOSSETT

MARK	GPM	SIZE	MAX. P. D. FT. WATER	MODEL
AS-1	112	3	1.0	IAS-1-1/2



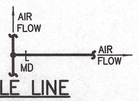
WATER SOURCE HEAT PUMP DETAIL

NO SCALE

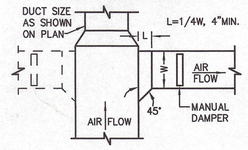


BASE MOUNTED PUMP DETAIL

SCHEMATIC



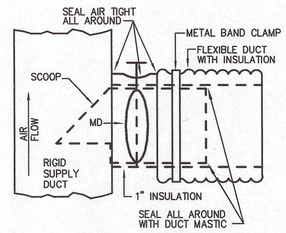
SINGLE LINE REPRESENTATION



NOTE:
PROVIDE MD ONLY WHERE INDICATED ON DRAWINGS.

LATERAL BRANCH DUCT DETAIL

SCHEMATIC



SPIN-IN FITTING DETAIL

NO SCALE

GENERAL NOTES:

1. ALL DUCTWORK AND PIPES SHALL BE COORDINATED WITH OTHER DUCTS, PIPES, LIGHTS, TRUSS SYSTEM, CEILING SUPPORTS, AND FRAMING BEFORE INSTALLATION. MINOR DUCT AND PIPE OFFSETS AND MINOR DUCT TRANSITIONS SHALL BE PROVIDED AS REQUIRED. WHERE TRANSITIONS ARE REQUIRED, CROSS SECTIONAL AREA OF DUCT SHALL NOT BE REDUCED. MEASUREMENTS FOR CLEARANCES OF DUCTWORK SHALL BE TAKEN AT THE JOB SITE BEFORE FABRICATION OF ANY DUCTWORK.
2. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.
3. MATERIALS AND INSTALLATION SHALL COMPLY WITH LOCAL CODES, APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION, LOCAL UTILITY REGULATIONS AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.
4. CONTRACTOR SHALL SEAL ALL PENETRATIONS IN WALLS.
5. VERIFY THE LOCATION OF ALL THERMOSTATS WITH THE OWNERS REPRESENTATIVE PRIOR TO ROUGH-IN.
6. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS TO COORDINATE THE EXACT LOCATIONS OF DIFFUSERS, REGISTERS, GRILLES, PIPING, AND OTHER MECHANICAL EQUIPMENT WITH CEILING GRID, LIGHTS, TRUSSES, AND OTHER BUILDING COMPONENTS.
7. CONTRACTOR SHALL PROVIDE ALL SUPPORTS REQUIRED TO MOUNT MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK.
8. PROVIDE FLEXIBLE DUCT CONNECTIONS BETWEEN THE SUPPLY AND RETURN DUCTS FROM THE AIR UNITS.
9. PROVIDE COPPER CONDENSATE DRAIN PIPING FROM HP COIL DRAIN PAN AND EXTEND TO FLOOR DRAIN. PIPING SHALL BE COPPER TUBING, THE SAME SIZE AS THE DRAIN PAN CONNECTION AND SHALL INCLUDE A 6 INCH TRAP TO PREVENT BLOW OUT BY THE SUPPLY AIR FAN. ROUTE PIPING TO AVOID CONTACT AND SECURE AS REQUIRED.
10. ALL CEILING DIFFUSERS SHALL BE 4-WAY THROW TYPE UNLESS NOTED OTHERWISE.
11. ALL SUPPLY DUCTWORK SHALL BE ACOUSTICALLY LINED.
12. RETURN DUCTWORK FROM LAST RUNOUT TO HP UNIT SHALL BE ACOUSTICALLY LINED.

HVAC LEGEND

ABOVE	ABV
AIR SEPARATOR	AS
BALANCING VALVE	
BELOW	BEL
BETWEEN	BET
CAPACITY	CAP
CEILING	CLG
CEILING DIFFUSER	CD
CEILING GRILLE	CG
CEILING REGISTER	CR
CHECK VALVE	
CIRCUIT SETTER	CS(GPM)
COOLING COIL CONDENSATE DRAIN PIPE	CCCD
CUBIC FEET PER MINUTE	CFM
DIAMETER	DIA
DOWN	DN
DUCT TRANSITION	
DUCTWORK (NEW)	
RETURN & EXHAUST	
SUPPLY	
FIRE DAMPER	FD
FLEXIBLE DUCT CONNECTION	
FLEXIBLE DUCT RUNOUT	
FLEXIBLE PIPE CONNECTION	
HEAT PUMP WATER RETURN PIPE	HPR
HEAT PUMP WATER SUPPLY PIPE	HPS
HORSEPOWER	HP
MANUAL AIR VENT	MAV
MANUAL DAMPER	MD
MOTOR OPERATED DAMPER	MOD
PIPING INDICATION WITH RESPECT TO FLOW	
BOTTOM TAKEOFF	
SIDE CONNECTION	
TOP TAKEOFF	
TURN DOWN OR FROM BELOW	
TURN UP OR DOWN	
TURN UP OR FROM ABOVE	
PRESSURE RELIEF VALVE	
SERVICE VALVE	
STRAINER	
THERMOMETER	
THERMOSTAT OR TEMPERATURE SENSOR	T'STAT
TWO-WAY CONTROL VALVE	
UNION	

SEQUENCE OF CONTROL

WATER SOURCE HEAT PUMPS: EACH SYSTEM SHALL BE CONTROLLED BY A WALL MOUNTED ELECTRONIC THERMOSTAT IN A DECORATIVE ENCLOSURE. THE PROGRAMMABLE SETBACK SHALL CONTROL THE OCCUPIED/UNOCCUPIED HOURS OF OPERATION OF EACH SYSTEM ACCORDING TO A PREDETERMINED TIME SCHEDULE SELECTED BY THE OWNER. A BUILT IN OVERRIDE AT EACH THERMOSTAT SHALL RETURN THE SYSTEM TO THE OCCUPIED MODE OF OPERATION DURING PERIODS OF TIME THAT THE THERMOSTAT HAS THE SYSTEM IN THE UNOCCUPIED MODE OF OPERATION. DURING OCCUPIED HOURS, THE UNIT FAN SHALL OPERATE CONTINUOUSLY, THE ASSOCIATED OUTDOOR AIR DAMPER SHALL OPEN AND THE THERMOSTAT SHALL CONTROL THE STAGES OF HEATING AND COOLING AS APPLICABLE. DURING UNOCCUPIED HOURS, THE OUTDOOR AIR DAMPER SHALL BE CLOSED AND THE UNIT SHALL CYCLE TO MAINTAIN THE THERMOSTAT NIGHT SETTING. THE CONTROLLER SHALL ALSO CONTROL TO ENERGIZE THE WATER SOURCE PUMP P-1 UPON ACTIVATION OF ANY OF THE WATER SOURCE HEAT PUMPS. IF THE HEAT PUMP FAILS TO PROVIDE PROPER HEAT TO THE SPACE THE ASSOCIATED ELECTRIC DUCT HEATER SHALL BE ENERGIZED TO PROVIDE BACK-UP HEAT.

EXHAUST FANS:

FANS F-1, F-2, F-4, F-6, F-7, F-8 AND F-9 SHALL BE CONTROLLED TO OPERATE THROUGH A TIME-DELAY ROOM LIGHT SWITCH. THE SWITCH SHALL TURN LIGHTS ON AND OFF AND WHEN LIGHTS ARE DEERGIZED THE SWITCH SHALL PROVIDE AN ADJUSTABLE DELAY TO DEENERGIZE THE FAN FROM ONE TO SIXTY MINUTES AFTER THE SWITCH IS POSITIONED OFF.

FAN F-3 SHALL BE CONTROLLED TO OPERATE WHENEVER ASSOCIATED HP-1 IS ENERGIZED TO OPERATE IN THE OCCUPIED MODE. FAN SHALL DE-ENERGIZE ANYTIME HP-1 IS OPERATED IN THE UNOCCUPIED MODE.

FAN F-5 SHALL BE CONTROLLED TO OPERATE WHENEVER ASSOCIATED HP-3 IS ENERGIZED TO OPERATE IN THE OCCUPIED MODE. FAN SHALL DE-ENERGIZE ANYTIME HP-3 IS OPERATED IN THE UNOCCUPIED MODE.

FANS F-10 AND F-11 SHALL BE CONTROLLED TO OPERATE WHENEVER ASSOCIATED HP-4 IS ENERGIZED TO OPERATE IN THE OCCUPIED MODE. FAN SHALL DE-ENERGIZE ANYTIME HP-4 IS OPERATED IN THE UNOCCUPIED MODE.

FAN F-12 SHALL BE CONTROLLED TO OPERATE WHENEVER ASSOCIATED HP-6 IS ENERGIZED TO OPERATE IN THE OCCUPIED MODE. FAN SHALL DE-ENERGIZE ANYTIME HP-6 IS OPERATED IN THE UNOCCUPIED MODE.

FAN F-13 SHALL BE CONTROLLED BY WALL MOUNTED THERMOSTAT TO BE ENERGIZED ON A RISE IN SPACE TEMPERATURE. FAN SHALL DE-ENERGIZE WHEN SPACE TEMPERATURE FALLS BELOW THERMOSTAT SETPOINT.

WALL HEATER AND BASEBOARD HEATERS: EACH UNIT SHALL BE CONTROLLED BY UNIT-MOUNTED CONTROLS WITH ACCESSIBLE THERMOSTAT.

NO.	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
JEFFREY A. PERRY
Lic. No. 21219
PROFESSIONAL ENGINEER

FLUVANNA COUNTY PUBLIC LIBRARY
FLUVANNA COUNTY, VIRGINIA

PARTIAL MECHANICAL ROOM PLANS, LEGEND, DETAILS AND NOTES

REYNOLDS ARCHITECTS INCORPORATED
BLACKSBURG, VIRGINIA

Lawrence Perry & Associates, Inc.
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Comm. No.: 07126

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WCC	WCC
CHECKED	APPROVED
WCC/HEK	LPA
PROJECT	
0422	
DATE	
9-12-07	

M2

ROOF DRAINS AND CONNECTIONS:

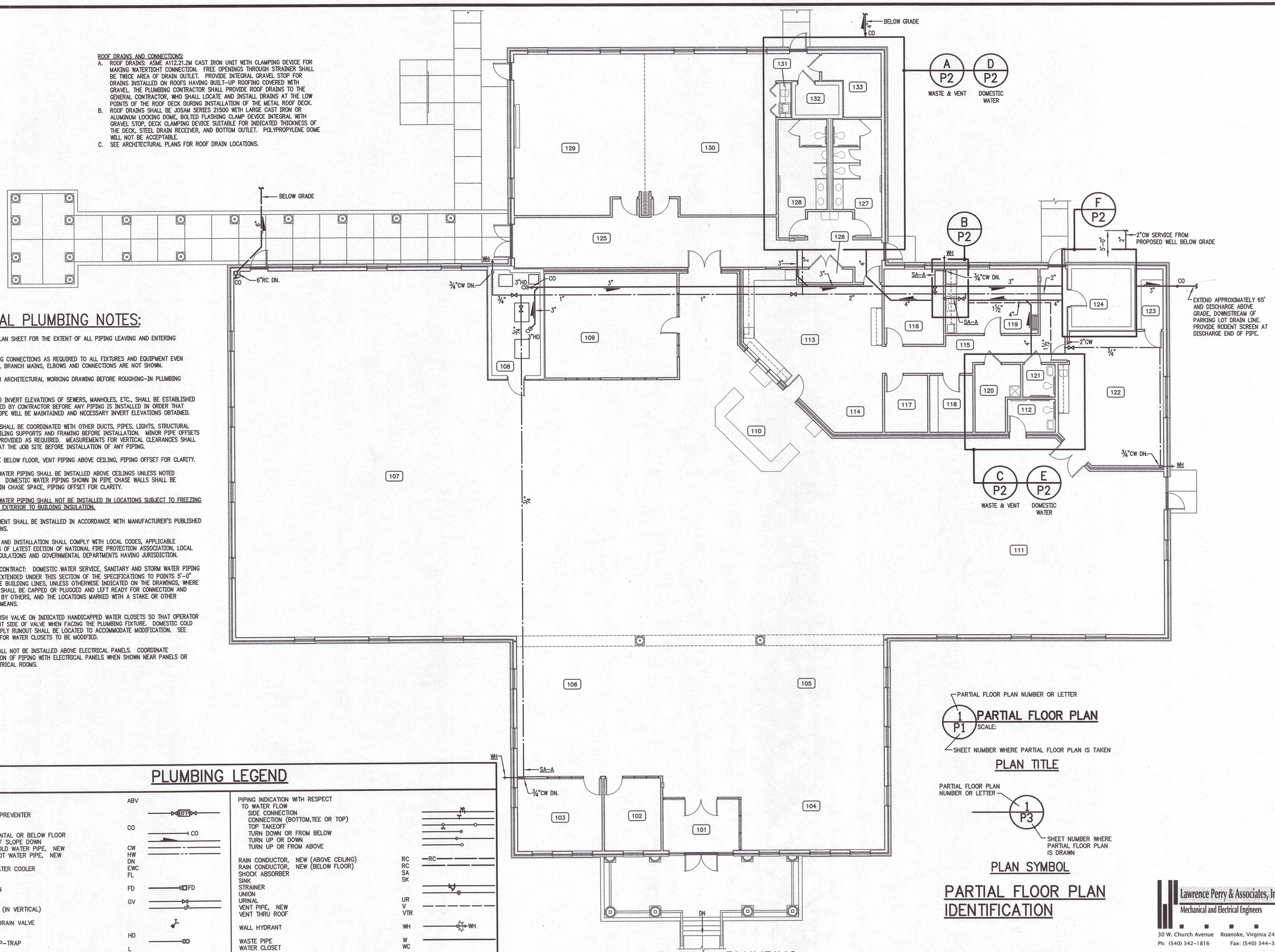
A. ROOF DRAINS: ASME A112.21.2M CAST IRON UNIT WITH CLAMPING DEVICE FOR MAKING WATERTIGHT CONNECTION. FREE OPENINGS THROUGH STRAINER SHALL BE TWICE AREA OF DRAIN OUTLET. PROVIDE INTEGRAL GRAVEL STOP FOR DRAINS INSTALLED ON ROOFS HAVING BUILT-UP ROOFING COVERED WITH GRAVEL. THE PLUMBING CONTRACTOR SHALL PROVIDE ROOF DRAINS TO THE GENERAL CONTRACTOR, WHO SHALL LOCATE AND INSTALL DRAINS AT THE LOW POINTS OF THE ROOF DECK DURING INSTALLATION OF THE METAL ROOF DECK.

B. ROOF DRAINS SHALL BE JOSAM SERIES 21500 WITH LARGE CAST IRON OR ALUMINUM LOCKING DOME, BOLTED FLASHING CLAMP DEVICE INTEGRAL WITH GRAVEL STOP, DECK CLAMPING DEVICE SUITABLE FOR INDICATED THICKNESS OF THE DECK, STEEL DRAIN RECEIVER, AND BOTTOM OUTLET. POLYPROPYLENE DOME WILL NOT BE ACCEPTABLE.

C. SEE ARCHITECTURAL PLANS FOR ROOF DRAIN LOCATIONS.

GENERAL PLUMBING NOTES:

1. SEE SITE PLAN SHEET FOR THE EXTENT OF ALL PIPING LEAVING AND ENTERING BUILDING.
2. MAKE PIPING CONNECTIONS AS REQUIRED TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAINS, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
3. CHECK WITH ARCHITECTURAL WORKING DRAWING BEFORE ROUGHING-IN PLUMBING FIXTURES.
4. SLOPES AND INVERT ELEVATIONS OF SEWERS, MANHOLES, ETC., SHALL BE ESTABLISHED AND VERIFIED BY CONTRACTOR BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPE WILL BE MAINTAINED AND NECESSARY INVERT ELEVATIONS OBTAINED.
5. ALL PIPES SHALL BE COORDINATED WITH OTHER DUCTS, PIPES, LIGHTS, STRUCTURAL SYSTEM, CEILING SUPPORTS AND FRAMING BEFORE INSTALLATION. MINOR PIPE OFFSETS SHALL BE PROVIDED AS REQUIRED. MEASUREMENTS FOR VERTICAL CLEARANCES SHALL BE TAKEN AT THE JOB SITE BEFORE INSTALLATION OF ANY PIPING.
6. WASTE PIPE BELOW FLOOR, VENT PIPING ABOVE CEILING, PIPING OFFSET FOR CLARITY.
7. DOMESTIC WATER PIPING SHALL BE INSTALLED ABOVE CEILINGS UNLESS NOTED OTHERWISE. DOMESTIC WATER PIPING SHOWN IN PIPE CHASE WALLS SHALL BE INSTALLED IN CHASE SPACE, PIPING OFFSET FOR CLARITY.
8. DOMESTIC WATER PIPING SHALL NOT BE INSTALLED IN LOCATIONS SUBJECT TO FREEZING OR SPACES EXTERIOR TO BUILDING INSULATION.
9. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.
10. MATERIALS AND INSTALLATION SHALL COMPLY WITH LOCAL CODES, APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION, LOCAL UTILITY REGULATIONS AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.
11. LIMITS OF CONTRACT: DOMESTIC WATER SERVICE, SANITARY AND STORM WATER PIPING SHALL BE EXTENDED UNDER THIS SECTION OF THE SPECIFICATIONS TO POINTS 5'-0" BEYOND THE BUILDING LINES, UNLESS OTHERWISE INDICATED ON THE DRAWINGS, WHERE THE PIPES SHALL BE CAPPED OR PLUGGED AND LEFT READY FOR CONNECTION AND EXTENSION BY OTHERS, AND THE LOCATIONS MARKED WITH A STAKE OR OTHER APPROVED MEANS.
12. MODIFY FLUSH VALVE ON INDICATED HANDICAPPED WATER CLOSETS SO THAT OPERATOR IS ON RIGHT SIDE OF VALVE WHEN FACING THE PLUMBING FIXTURE. DOMESTIC COLD WATER SUPPLY RUNOUT SHALL BE LOCATED TO ACCOMMODATE MODIFICATION. SEE DRAWINGS FOR WATER CLOSETS TO BE MODIFIED.
13. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS. COORDINATE INSTALLATION OF PIPING WITH ELECTRICAL PANELS WHEN SHOWN NEAR PANELS OR OVER ELECTRICAL ROOMS.



PLUMBING LEGEND

ABOVE	ABV	
BACK FLOW PREVENTER		BFP
CLEANOUT	CO	CO
IN HORIZONTAL OR BELOW FLOOR		
DIRECTION OF SLOPE DOWN		
DOMESTIC COLD WATER PIPE, NEW	CW	
DOMESTIC HOT WATER PIPE, NEW	HW	
DOWN	DN	
ELECTRIC WATER COOLER	EWC	
FLOOR	FL	
FLOOR DRAIN	FD	FD
GATE VALVE	GV	
GATE VALVE (IN VERTICAL)		
HOSE-END DRAIN VALVE		
HUB DRAIN	HD	
INLET WITH P-TRAP		
LAVATORY	L	
MOP SINK	MS	

PIPING INDICATION WITH RESPECT TO WATER FLOW		
SIDE CONNECTION		
CONNECTION (BOTTOM,TEE OR TOP)		
TOP TAKEOFF		
TURN DOWN OR FROM BELOW		
TURN UP OR DOWN		
TURN UP OR FROM ABOVE		
RAIN CONDUCTOR, NEW (ABOVE CEILING)	RC	RC
RAIN CONDUCTOR, NEW (BELOW FLOOR)	RC	
SHOCK ABSORBER	SA	
SINK	SK	
STRAINER		
UNION		
URINAL	UR	
VENT PIPE, NEW	V	
VENT THRU ROOF	VTR	
WALL HYDRANT	WH	WH
WASTE PIPE	W	
WATER CLOSET	WC	

FLOOR PLAN - PLUMBING

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

PARTIAL FLOOR PLAN NUMBER OR LETTER

1 / P1 PARTIAL FLOOR PLAN

SCALE:

SHEET NUMBER WHERE PARTIAL FLOOR PLAN IS TAKEN

PLAN TITLE

PARTIAL FLOOR PLAN NUMBER OR LETTER — 1 / P3 — SHEET NUMBER WHERE PARTIAL FLOOR PLAN IS DRAWN

PLAN SYMBOL

PARTIAL FLOOR PLAN IDENTIFICATION

NO.	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
JEFFREY A. PERRY
Lic. No. 21219
PROFESSIONAL ENGINEER

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FLUVANNA COUNTY, VIRGINIA

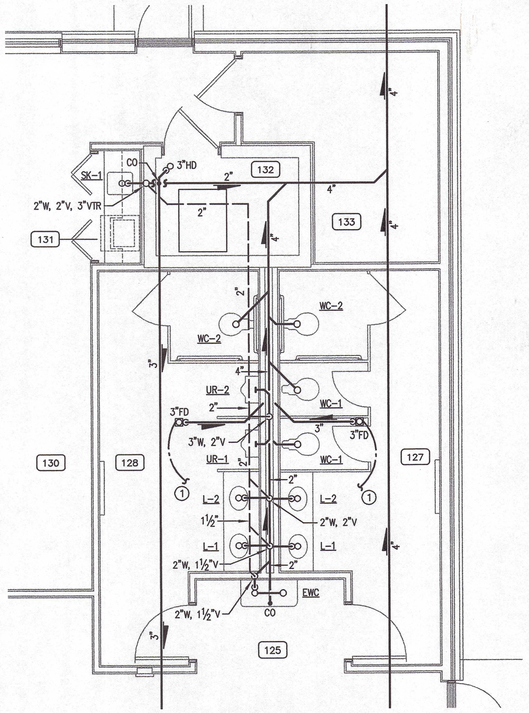
FLOOR PLAN - PLUMBING, LEGEND, DETAIL AND NOTES

REYNOLDS ARCHITECTS INCORPORATED
BLACKSBURG, VIRGINIA

Lawrence Perry & Associates, Inc.
Mechanical and Electrical Engineers
30 W. Church Avenue Roanoke, Virginia 24011
Ph: (540) 342-1816 Fax: (540) 344-3410

Comm. No.: 07126

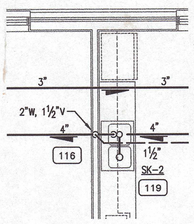
DESIGNED SGS	DRAWN SGS
CHECKED JRE	APPROVED LPA
PROJECT 0422	P1
DATE 9-12-07	



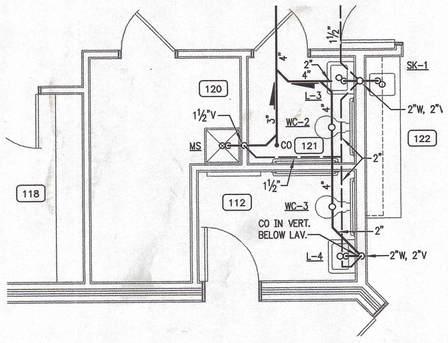
A P1 PARTIAL PLAN – PLUMBING
SCALE: 1/4" = 1'-0"

PLAN NOTE: ○

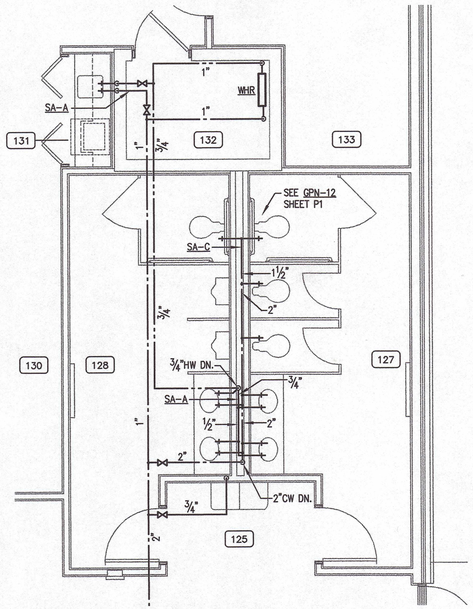
1. ½"COPPER DRAIN TO TRAP PRIMER #1 BELOW LAV.



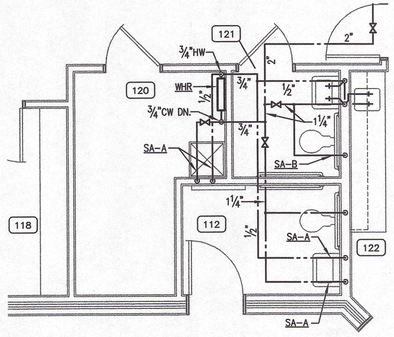
B P1 PARTIAL PLAN – PLUMBING
SCALE: 1/4" = 1'-0"



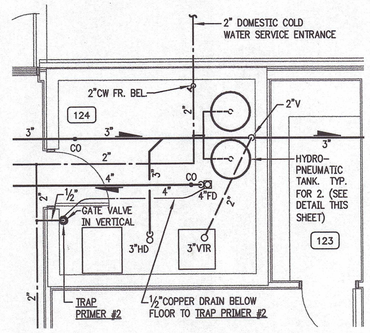
C P1 PARTIAL PLAN – PLUMBING
SCALE: 1/4" = 1'-0"



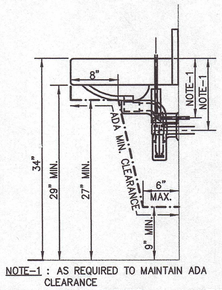
D P1 PARTIAL PLAN – PLUMBING
SCALE: 1/4" = 1'-0"



E P1 PARTIAL PLAN – PLUMBING
SCALE: 1/4" = 1'-0"

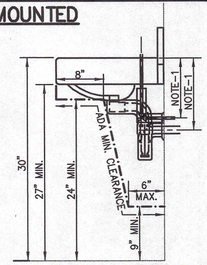


F P1 PARTIAL PLAN – PLUMBING
SCALE: 1/4" = 1'-0"



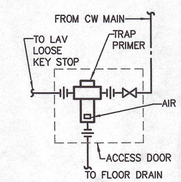
NOTE-1 : AS REQUIRED TO MAINTAIN ADA CLEARANCE

ADULT HANDICAPPED LAVATORY (L-3) INSTALLATION ADA REQUIREMENTS WALL MOUNTED
NO SCALE

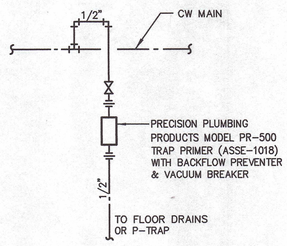


NOTE-1 : AS REQUIRED TO MAINTAIN ADA CLEARANCE

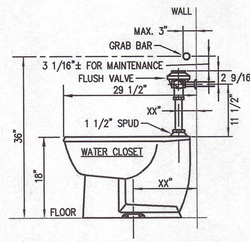
CHILD'S HANDICAPPED LAVATORY (L-4) INSTALLATION ADA REQUIREMENTS WALL MOUNTED
NO SCALE



TRAP PRIMER DETAIL
NO SCALE

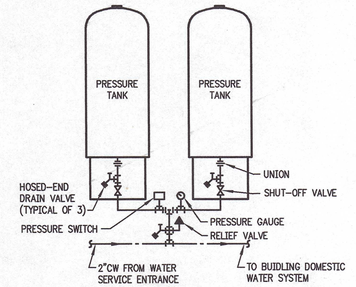


TRAP PRIMER DETAIL #2
NO SCALE

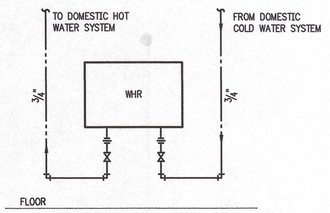


NOTE : XX" IS REQUIREMENTS OF WATER CLOSET MANUFACTURER

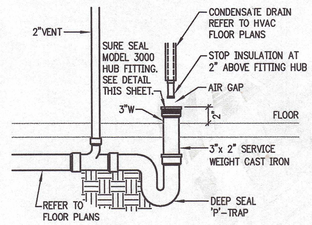
HANDICAPPED WC ROUGH-IN DETAIL
NO SCALE



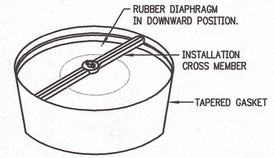
PRESSURIZED WELL TANKS DETAIL
NO SCALE



TANKLESS WATER HEATER DETAIL
NO SCALE



BELOW GRADE TRAP
HUB DRAIN DETAIL
NO SCALE



SURE SEAL FITTING DETAIL
NO SCALE

FIXTURE CONNECTION SCHEDULE						
MARK	FIXTURE	WASTE	VENT	COLD	HOT	REMARKS
WC-1	WATER CLOSET (FLUSH VALVE)	4"	2"	1"	–	FLOOR MOUNTED
WC-2	WATER CLOSET (FLUSH VALVE)	4"	2"	1"	–	FLOOR MOUNTED, ADULT HANDICAPPED#
WC-3	WATER CLOSET (FLUSH VALVE)	4"	2"	1"	–	FLOOR MOUNTED CHILD HANDICAPPED#
UR-1	URINAL	–	–	–	–	WALL MOUNTED, 24" FINISH FLOOR TO RIM
UR-2	URINAL	–	–	–	–	WALL MOUNTED, HANDICAPPED# 17" FINISH FLOOR TO RIM
L-1	LAVATORY	1 1/4"	1 1/2"	1/2"	1/2"	COUNTER TOP
L-2	LAVATORY	1 1/4"	1 1/2"	1/2"	1/2"	COUNTER TOP, HANDICAPPED*#
L-3	LAVATORY	1 1/4"	1 1/2"	1/2"	1/2"	WALL MOUNTED, HANDICAPPED# 34" FINISH FLOOR TO RIM
L-4	LAVATORY	1 1/4"	1 1/2"	1/2"	1/2"	WALL MOUNTED, HANDICAPPED# 30" FINISH FLOOR TO RIM CHILDREN'S TOILET 112
EWC	ELECTRIC WATER COOLER(HI/LOW)	1 1/4"	1 1/2"	1/2"	–	WALL MOUNTED, HANDICAPPED# LOW UNIT 36" FF TO SPOUT OUTLET
SK-1	SINK (SINGLE COMPARTMENT)	1 1/2"	1 1/2"	1/2"	1/2"	COUNTER TOP
SK-2	SINK (DOUBLE COMPARTMENT)	1 1/2"	1 1/2"	1/2"	1/2"	COUNTER TOP
MS	MOP SINK	3"	1 1/2"	1/2"	1/2"	FLOOR MOUNTED

* MOUNT TOP SURFACE OF COUNTER TOP 34" ABOVE FINISHED FLOOR AND LAVATORY INSTALLED 2" BACK FROM FRONT EDGE OF COUNTER TOP.
# INSTALLATION SHALL MEET AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.

NO.	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
JEFFREY A. PERRY
Lic. No. 21219
PROFESSIONAL ENGINEER

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FLUVANNA COUNTY, VIRGINIA

PARTIAL PLANS – PLUMBING, SCHEDULE AND DETAILS

REYNOLDS ARCHITECTS INCORPORATED
BLACKSBURG, VIRGINIA

Lawrence Perry & Associates, Inc.
Mechanical and Electrical Engineers
30 W. Church Avenue Roanoke, Virginia 24011
Ph: (540) 342-1816 Fax: (540) 344-3410

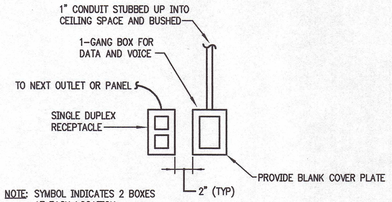
Comm. No.: 07126

DESIGNED	DRAWN
SGS	SGS
CHECKED	APPROVED
JRE	LPA
PROJECT	
0422	
DATE	
9-12-07	

P2

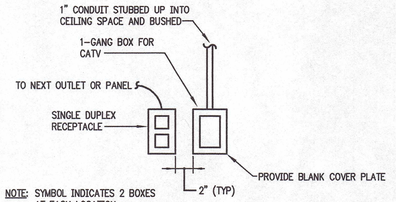
LIGHTING FIXTURE SCHEDULE

TYPE	MOUNTING	LAMP	FIXTURE VA'S	MANUFACTURER & CATALOG NO.	REMARKS
A	RECESSED	4-F32T8	138	LITHONIA #2GT8-4-32-A12125-MVOLT-GEB10	PROVIDE DUAL BALLASTS
B	RECESSED	3-F32T8	104	LITHONIA #2GT8-3-32-A12125-MVOLT-GEB10	PROVIDE DUAL BALLASTS
C	RECESSED	2-F32T8	69	LITHONIA #2GT8-2-32-A12125-MVOLT-GEB10	
D	SURFACE	2-F32T8	69	LITHONIA #C-2-32-MVOLT-GEB10	
E	RECESSED	3-F32T8	104	LITHONIA #2PM3N-G-B-3-32-18LS-MVOLT-GEB10	PROVIDE DUAL BALLASTS
F	RECESSED	1-26TRT	31	LITHONIA #LF8-1/26TRT-F801AZ-MVOLT-GEB10	
G	RECESSED	1-42TRT	51	LITHONIA #LF8-1/42TRT-F801AZ-MVOLT-GEB10	
H	RECESSED	2-42TRT	102	LITHONIA #LF8-2/42TRT-F8LTB4-MVOLT-GEB10	
J	WALL	2-F32T8	69	LITHONIA #WP-2-32-MVOLT-GEB10	MOUNT ABOVE MIRROR
JA	WALL	2-F17T8	37	LITHONIA #WP-2-17-MVOLT-GEB10	MOUNT ABOVE MIRROR
K	BUILDING	1-42TRT	51	HANOVER #B9972-BLK-CA-42-120	
L	ON SITE	1-250W MH	328	HANOVER #MH-31832R3-BLK-CP-250-208 WITH HOUSE SIDE CUT-OFF SHIELD #41MOG, POLE MODEL #776 (16') & TENON MODEL #021	TOTAL MOUNTING HEIGHT WITH BASE APPROX. = 16'-3"
LA	ON SITE	1-250W MH	328	HANOVER #MH-31832R5-BLK-CP-250-208 WITH POLE MODEL #776 (16') & TENON MODEL #021	TOTAL MOUNTING HEIGHT WITH BASE APPROX. = 16'-3"
M	RECESSED	2-F32T8	69	LITHONIA #CA-2-32-MVOLT-GEB10	
N	GROUND	1-175W MH	228	HYDREL #7100-175M-208-WFL-KM-BL	
P	RECESSED	2-F32T8	69	LITHONIA #2PM3N-G-B-2-32-12LS-MVOLT-GEB10	
X	SURFACE	LED	<5	LITHONIA #LQM-S-W-1-R-120/277-EL N	
XA	SURFACE	LED	<5	LITHONIA #LQM-S-W-3-R-120/277-EL N	



NOTE: SYMBOL INDICATES 2 BOXES AT EACH LOCATION.

SYMBOL [A] DETAIL
NO SCALE



NOTE: SYMBOL INDICATES 2 BOXES AT EACH LOCATION.

SYMBOL [TV] DETAIL
NO SCALE

SYMBOL LEGEND

MTG. HGT.	SYMBOL	DESCRIPTION
	A	FLUORESCENT LIGHTING FIXTURE, LETTER DENOTES TYPE
		FLUORESCENT LIGHTING FIXTURE WITH EMERGENCY BALLAST
		INCANDESCENT, FLUORESCENT, OR HID LIGHTING FIXTURE, CEILING MOUNTED
		FLUORESCENT LIGHTING FIXTURE, CEILING MOUNTED WITH INTEGRAL OR REMOTE EMERGENCY BALLAST
AS INDICATED		INCANDESCENT, FLUORESCENT, OR HID LIGHTING FIXTURE, WALL MOUNTED
AS INDICATED		FLUORESCENT LIGHTING FIXTURE, WALL MOUNTED WITH INTEGRAL OR REMOTE EMERGENCY BALLAST
AS INDICATED		FLUORESCENT LIGHTING FIXTURE, WALL MOUNTED
ABOVE CEILING	B	REMOTE BATTERY UNIT FOR EMERGENCY LIGHTS
		EXIT LIGHT, CEILING MOUNTED, SHADED SIDE(S) INDICATES FACE SIDE(S) OF EXIT. PROVIDE ARROWS AS SHOWN ON DRAWINGS
ABOVE DOOR		EXIT LIGHT, WALL MOUNTED, SHADED SIDE INDICATES FACE SIDE OF EXIT. PROVIDE ARROWS AS SHOWN ON DRAWINGS.
	J	JUNCTION BOX
18"		RECEPTACLE, DUPLEX GROUNDED
18"		RECEPTACLE, DUPLEX GROUNDED, GFCI
18"		POWER, TELEPHONE, & COMPUTER OUTLETS - SEE DETAIL
18"	A_F	(2) RECEPTACLES AND (2) 4-JACK DATA PLATES IN FLOOR BOX
18"	TV	TELEVISION AND POWER OUTLETS, WALL MOUNTED - SEE DETAIL
CEILING	PS_a	DAYLIGHTING CONTROLLER PHOTOSENSOR (SUBSCRIPT INDICATES DAYLIGHT SENSING CONTROL AREA) - PROVIDE SHIELD ON SIDE INDICATED TO PREVENT ELECTRICAL LIGHT INTERFERENCE
48"	S	SWITCH, SINGLE POLE
48"	S_3	SWITCH, THREE WAY
48"	S_4	SWITCH, FOUR WAY
5'-0"	NFSS/3/30	SAFETY SWITCH - NON-FUSIBLE NFSS/3/30 AMP RATING POLES NON-FUSIBLE SAFETY SWITCH
5'-0"	FSS/3/30/20	SAFETY SWITCH - FUSIBLE FSS/3/30/20 FUSE SIZE AMP RATING POLES FUSIBLE SAFETY SWITCH
5'-0"	CMS/3/0/20	COMBINATION MAGNETIC MOTOR STARTER WITH CIRCUIT BREAKER CMS/3/0/20 CIRCUIT BREAKER AMPS NEMA SIZE POLES CIRCUIT BREAKER MAGNETIC STARTER
		MOTOR OPERATED DAMPER
		GROUND
6'-6" TOP		PANELBOARD, 208/120 VOLT
		CONDUIT CONCEALED IN CEILING OR WALL
		CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
		CONTROL OR SWITCH LEG
		HOMERUN TO PANEL BOARD, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS
48"	F	FIRE ALARM MANUAL PULL STATION
6'-8"	F	FIRE ALARM HORN/LIGHT COMBINATION
6'-8"	FSL	FIRE ALARM STROBE LIGHT
CEILING	(D) (D)	SMOKE DETECTOR (D DENOTES IN RETURN AIR DUCT OF HVAC UNIT AHEAD OF ANY BRANCHES)
	*	MOUNTED ABOVE COUNTER
	WP	WEATHERPROOF
	PC	PHOTOCELL
	TC	TIMECLOCK
	NL	NIGHTLIGHT (UNSWITCHED 24/7 OPERATION)
	C	MOUNTED ABOVE CEILING
	GEC	GROUNDING ELECTRODE CONDUCTOR
	EGC	EQUIPMENT GROUND CONDUCTOR

NO.	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
NEAL A. CRAMER
Lic. No. 41825
PROFESSIONAL ENGINEER

FLUVANNA COUNTY PUBLIC LIBRARY
FLUVANNA COUNTY, VIRGINIA

ELECTRICAL LEGEND, SCHEDULE & DETAILS

REYNOLDS ARCHITECTS INCORPORATED
BLACKSBURG, VIRGINIA

Lawrence Perry & Associates, Inc.
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30 W. Church Avenue Roanoke, Virginia 24011
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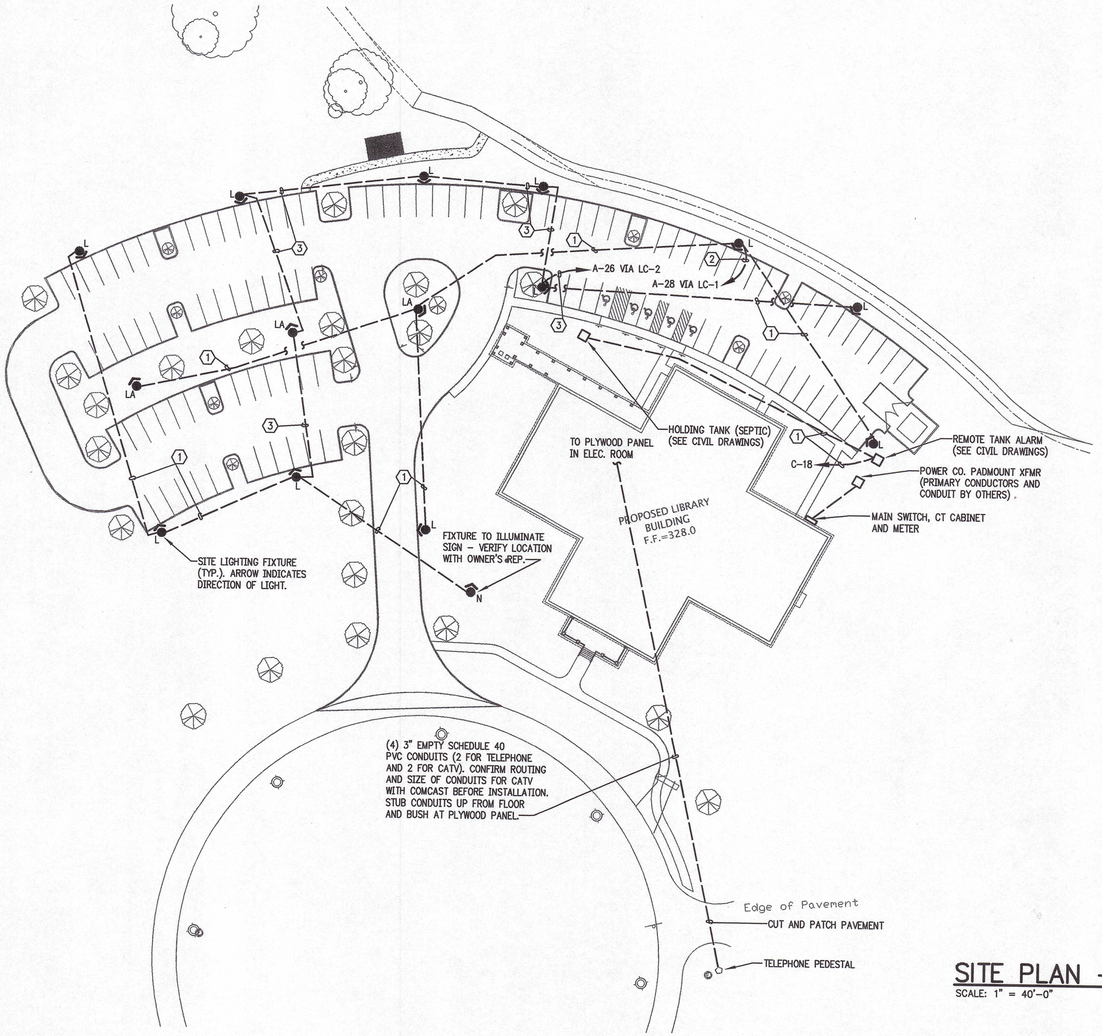
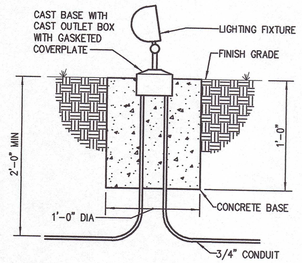


SITE PLAN – ELECTRICAL

SCALE: 1" = 40'-0"

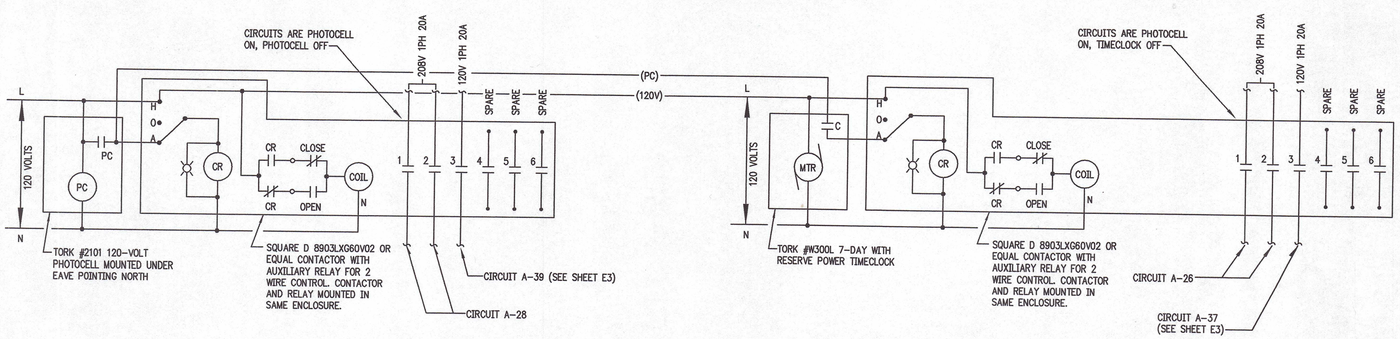


BASE DETAIL FOR FIXTURE TYPE N

NO SCALE

PLAN NOTES:⬡

1. 2 #12 AWG AND 1 #12 AWG GROUND IN 3/4" CONDUIT.
2. 2 #10 AWG AND 1 #10 AWG GROUND IN 3/4" CONDUIT.
3. 2 #8 AWG AND 1 #8 AWG GROUND IN 3/4" CONDUIT.

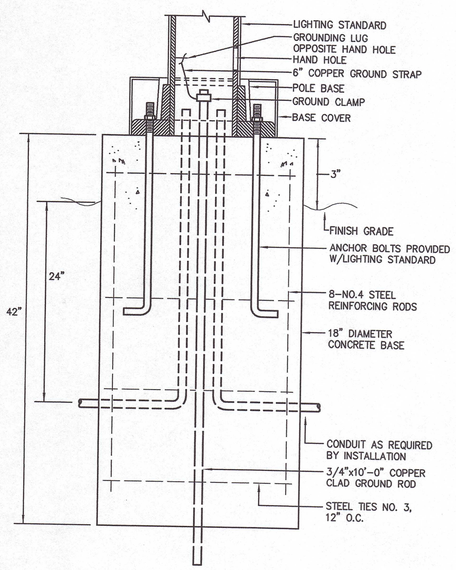


WIRING DIAGRAM FOR LIGHTING CONTACTOR LC-1

NO SCALE

WIRING DIAGRAM FOR LIGHTING CONTACTOR LC-2

NO SCALE



POLE BASE DETAIL FOR FIXTURE TYPES L & LA

NO SCALE

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ELECTRICAL SITE PLAN, DIAGRAMS, DETAILS & NOTES

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E2

DAYLIGHT SENSING CONTROL AREA SWITCH SCHEDULE

SWITCH DESIGNATION	ITEMS CONTROLLED	LABEL ON WALL ABOVE SWITCH	120V CIRCUIT
aDS	AREA 'a' DAYLIGHT SENSING	AREA 'a' D.S.	A-11
aOV	AREA 'a' DUAL BALLASTS IN LIGHTING FIXTURES	AREA 'a' OVERRIDE	
bDS	AREA 'b' DAYLIGHT SENSING	AREA 'b' D.S.	A-13
bOV	AREA 'b' DUAL BALLASTS IN LIGHTING FIXTURES	AREA 'b' OVERRIDE	
cDS	AREA 'c' DAYLIGHT SENSING	AREA 'c' D.S.	A-15
cOV	AREA 'c' DUAL BALLASTS IN LIGHTING FIXTURES	AREA 'c' OVERRIDE	
dDS	AREA 'd' DAYLIGHT SENSING	AREA 'd' D.S.	A-17
dOV	AREA 'd' DUAL BALLASTS IN LIGHTING FIXTURES	AREA 'd' OVERRIDE	
eDS	AREA 'e' DAYLIGHT SENSING	AREA 'e' D.S.	A-19
eOV	AREA 'e' DUAL BALLASTS IN LIGHTING FIXTURES	AREA 'e' OVERRIDE	
fDS	AREA 'f' DAYLIGHT SENSING	AREA 'f' D.S.	A-21
fOV	AREA 'f' DUAL BALLASTS IN LIGHTING FIXTURES	AREA 'f' OVERRIDE	

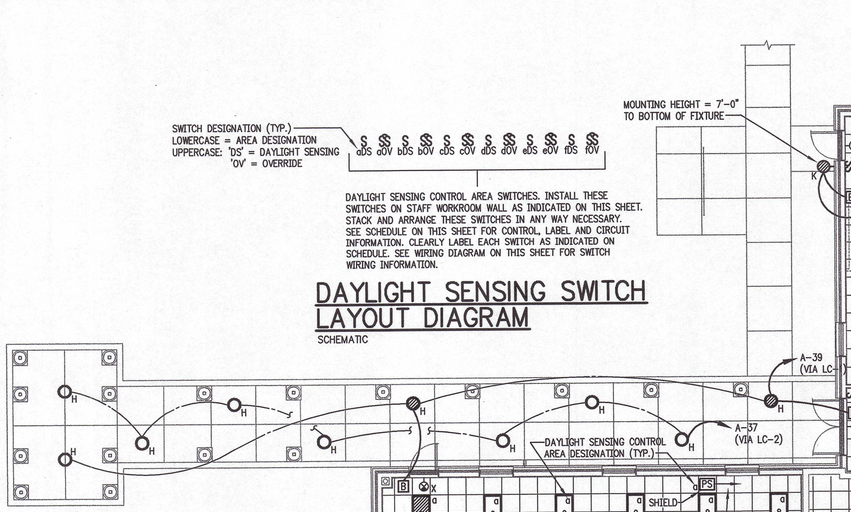
SWITCH DESIGNATION (TYP.)
LOWERCASE = AREA DESIGNATION
UPPERCASE: 'DS' = DAYLIGHT SENSING
'OV' = OVERRIDE

aDS aOV bDS bOV cDS cOV dDS dOV eDS eOV fDS fOV

DAYLIGHT SENSING CONTROL AREA SWITCHES. INSTALL THESE SWITCHES ON STAFF WORKROOM WALL AS INDICATED ON THIS SHEET. STACK AND ARRANGE THESE SWITCHES IN ANY WAY NECESSARY. SEE SCHEDULE ON THIS SHEET FOR CONTROL, LABEL AND CIRCUIT INFORMATION. CLEARLY LABEL EACH SWITCH AS INDICATED ON SCHEDULE. SEE WIRING DIAGRAM ON THIS SHEET FOR SWITCH WIRING INFORMATION.

DAYLIGHT SENSING SWITCH LAYOUT DIAGRAM

SCHEMATIC



DAYLIGHT SENSING CONTROL NOTES:

1. PHOTOSENSOR LOCATIONS, SHIELD ORIENTATIONS, AND BEAM DIRECTIONS AS SHOWN ARE NOT EXACT. INSTALL AS RECOMMENDED BY MANUFACTURER.
2. FOR EACH DAYLIGHT SENSING CONTROL AREA, PROGRAM DAYLIGHTING CONTROLLER SUCH THAT A MINIMUM OF 65 FOOTCANDLES AT FLOOR LEVEL IS MAINTAINED.
3. INSTALL ALL 6 DAYLIGHTING CONTROLLERS AND 6 POWER PACKS ON WALL IN MECH. ROOM 108 (SEE SHEET E4). CLEARLY LABEL EACH CONTROLLER AND POWER PACK TO INDICATE WHICH AREA IS CONTROLLED (a,b,c,d,e,f).
4. SEE WIRING DIAGRAM, SWITCH LAYOUT DIAGRAM, AND SWITCH SCHEDULE ON THIS SHEET FOR WIRING AND SWITCHING INFORMATION.

FLOOR PLAN – LIGHTING

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

DAYLIGHT SENSING CONTROL ONE-LINE WIRING DIAGRAM (TYP. FOR EACH AREA)

SCHEMATIC

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FLOOR PLAN – LIGHTING, DIAGRAMS, SCHEDULE & NOTES

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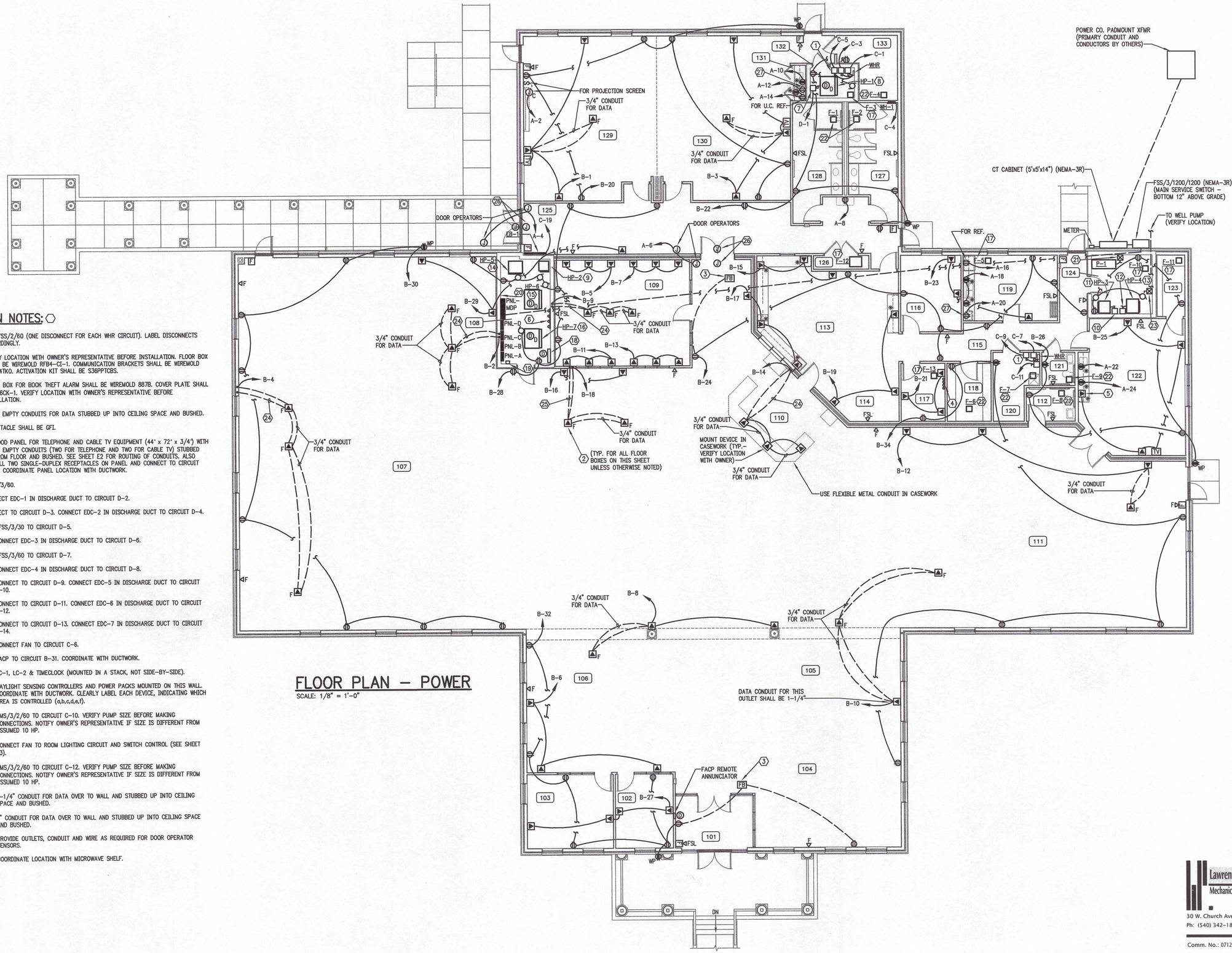
E3



PLAN NOTES:

1. (3) NFSS/2/60 (ONE DISCONNECT FOR EACH WHR CIRCUIT). LABEL DISCONNECTS ACCORDINGLY.
2. VERIFY LOCATION WITH OWNER'S REPRESENTATIVE BEFORE INSTALLATION. FLOOR BOX SHALL BE WIREMOLD RFB4-CI-1. COMMUNICATION BRACKETS SHALL BE WIREMOLD CILT-4TKO. ACTIVATION KIT SHALL BE S36PPTCBS.
3. FLOOR BOX FOR BOOK THEFT ALARM SHALL BE WIREMOLD 887B. COVER PLATE SHALL BE 898CK-1. VERIFY LOCATION WITH OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
4. (4) 3" EMPTY CONDUITS FOR DATA STUBBED UP INTO CEILING SPACE AND BUSHED.
5. RECEPTACLE SHALL BE GFI.
6. PLYWOOD PANEL FOR TELEPHONE AND CABLE TV EQUIPMENT (44" x 72" x 3/4") WITH (4) 3" EMPTY CONDUITS (TWO FOR TELEPHONE AND TWO FOR CABLE TV) STUBBED UP FROM FLOOR AND BUSHED. SEE SHEET E2 FOR ROUTING OF CONDUITS. ALSO INSTALL TWO SINGLE-DUPLEX RECEPTACLES ON PANEL AND CONNECT TO CIRCUIT B-33. COORDINATE PANEL LOCATION WITH DUCTWORK.
7. NFSS/3/60.
8. CONNECT EDC-1 IN DISCHARGE DUCT TO CIRCUIT D-2.
9. CONNECT TO CIRCUIT D-3. CONNECT EDC-2 IN DISCHARGE DUCT TO CIRCUIT D-4.
10. NFSS/3/30 TO CIRCUIT D-5.
11. CONNECT EDC-3 IN DISCHARGE DUCT TO CIRCUIT D-6.
12. NFSS/3/60 TO CIRCUIT D-7.
13. CONNECT EDC-4 IN DISCHARGE DUCT TO CIRCUIT D-8.
14. CONNECT TO CIRCUIT D-9. CONNECT EDC-5 IN DISCHARGE DUCT TO CIRCUIT D-10.
15. CONNECT TO CIRCUIT D-11. CONNECT EDC-6 IN DISCHARGE DUCT TO CIRCUIT D-12.
16. CONNECT TO CIRCUIT D-13. CONNECT EDC-7 IN DISCHARGE DUCT TO CIRCUIT D-14.
17. CONNECT FAN TO CIRCUIT C-6.
18. FACP TO CIRCUIT B-31. COORDINATE WITH DUCTWORK.
19. LC-1, LC-2 & TIMECLOCK (MOUNTED IN A STACK, NOT SIDE-BY-SIDE).
20. DAYLIGHT SENSING CONTROLLERS AND POWER PACKS MOUNTED ON THIS WALL. COORDINATE WITH DUCTWORK. CLEARLY LABEL EACH DEVICE, INDICATING WHICH AREA IS CONTROLLED (a,b,c,d,e,f).
21. CMS/3/2/60 TO CIRCUIT C-10. VERIFY PUMP SIZE BEFORE MAKING CONNECTIONS. NOTIFY OWNER'S REPRESENTATIVE IF SIZE IS DIFFERENT FROM ASSUMED 10 HP.
22. CONNECT FAN TO ROOM LIGHTING CIRCUIT AND SWITCH CONTROL (SEE SHEET E3).
23. CMS/3/2/60 TO CIRCUIT C-12. VERIFY PUMP SIZE BEFORE MAKING CONNECTIONS. NOTIFY OWNER'S REPRESENTATIVE IF SIZE IS DIFFERENT FROM ASSUMED 10 HP.
24. 1-1/4" CONDUIT FOR DATA OVER TO WALL AND STUBBED UP INTO CEILING SPACE AND BUSHED.
25. 1" CONDUIT FOR DATA OVER TO WALL AND STUBBED UP INTO CEILING SPACE AND BUSHED.
26. PROVIDE OUTLETS, CONDUIT AND WIRE AS REQUIRED FOR DOOR OPERATOR SENSORS.
27. COORDINATE LOCATION WITH MICROWAVE SHELF.

FLOOR PLAN - POWER

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

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FLOOR PLAN - POWER & NOTES

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E4

PANEL MDP

VOLTAGE: 120Y/208V
SYSTEM: 3ø, 4W
SOLID NEUTRAL: YES

MAIN: 1200A MLO
BUS RATING: 1200A
GROUND BUS: YES

INTEGRAL TVSS: NO
MOUNTING: SURFACE
FEED: CONTRACTOR TO DETERMINE

CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND
1	PANEL A	175/3	#2/0	#2/0	#6	2"	2	PANEL B	100/3	#3	#3	#8	3-1/4"
	"	–	#2/0	–	–	–		"	–	#3	–	–	–
	"	–	#2/0	–	–	–		"	–	#3	–	–	–
3	PANEL C	350/3	500	500	#3	3-1/2"	4	PANEL D	600/3	350	–	#1	(2) 3"
	"	–	500	–	–	–		"	–	350	–	–	–
	"	–	500	–	–	–		"	–	350	–	–	–
5	TVSS	60/3	–	–	–	–	6	SPACE ONLY	–/3	–	–	–	–
	"	–	–	–	–	–		"	–	–	–	–	–
	"	–	–	–	–	–		"	–	–	–	–	–
7	SPACE ONLY	–/3	–	–	–	–	8	SPACE ONLY	–/3	–	–	–	–
	"	–	–	–	–	–		"	–	–	–	–	–
	"	–	–	–	–	–		"	–	–	–	–	–

INTERRUPT RATING: 65,000 AIC

PANEL A

VOLTAGE: 120Y/208V
SYSTEM: 3ø, 4W
SOLID NEUTRAL: YES

MAIN: 225A MLO
BUS RATING: 225A
GROUND BUS: YES

INTEGRAL TVSS: NO
MOUNTING: SURFACE
FEED: CONTRACTOR TO DETERMINE

CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND
1	LIGHTING	20/1	#12	#12	#12	1/2"	2	PROJECTION SCREEN MOTOR	20/1	#12	#12	#12	1/2"
3	LIGHTING	20/1	#12	#12	#12	1/2"	4	DOOR MOTORS	20/1	#12	#12	#12	1/2"
5	LIGHTING	20/1	#12	#12	#12	1/2"	6	DOOR MOTORS	20/1	#12	#12	#12	1/2"
7	LIGHTING	20/1	#12	#12	#12	1/2"	8	EWC	20/1	#12	#12	#12	1/2"
9	LIGHTING	20/1	#12	#12	#12	1/2"	10	RECEPTACLES	20/1	#12	#12	#12	1/2"
11	LIGHTING	20/1	#12	#12	#12	1/2"	12	MICROWAVE	20/1	#12	#12	#12	1/2"
13	LIGHTING	20/1	#12	#12	#12	1/2"	14	U.C. REFRIGERATOR	20/1	#12	#12	#12	1/2"
15	LIGHTING	20/1	#12	#12	#12	1/2"	16	REFRIGERATOR	20/1	#12	#12	#12	1/2"
17	LIGHTING	20/1	#12	#12	#12	1/2"	18	RECEPTACLES	20/1	#12	#12	#12	1/2"
19	LIGHTING	20/1	#12	#12	#12	1/2"	20	MICROWAVE	20/1	#12	#12	#12	1/2"
21	LIGHTING	20/1	#12	#12	#12	1/2"	22	RECEPTACLES	20/1	#12	#12	#12	1/2"
23	LIGHTING	20/1	#12	#12	#12	1/2"	24	RECEPTACLES	20/1	#12	#12	#12	1/2"
25	LIGHTING	20/1	#12	#12	#12	1/2"	26	SITE LIGHTING (ON PC, OFF TC)	20/2	#8	–	#8	3/4"
27	LIGHTING, F-4	20/1	#12	#12	#12	1/2"		"	–	#8	–	–	–
29	LIGHTING	20/1	#12	#12	#12	1/2"	28	SITE LIGHTING (ON & OFF PC)	20/2	#10	–	#10	3/4"
31	LIGHTING	20/1	#12	#12	#12	1/2"		"	–	#10	–	–	–
33	LIGHTING	20/1	#12	#12	#12	1/2"	30	LIGHTING, F-1 & F-2	20/1	#12	#12	#12	1/2"
35	LIGHTING, F-6 THRU F-9	20/1	#12	#12	#12	1/2"	32	SPARE	20/1	–	–	–	–
37	LIGHTING (ON PC, OFF TC)	20/1	#12	#12	#12	1/2"	34	SPARE	20/1	–	–	–	–
39	LIGHTING (ON & OFF PC)	20/1	#12	#12	#12	1/2"	36	SPARE	20/1	–	–	–	–
41	EXIT SIGNS	20/1	#12	#12	#12	1/2"	38	SPARE	20/1	–	–	–	–

INTERRUPT RATING: 22,000 AIC

PANEL B

VOLTAGE: 120Y/208V
SYSTEM: 3ø, 4W
SOLID NEUTRAL: YES

MAIN: 125A MLO
BUS RATING: 125A
GROUND BUS: YES

INTEGRAL TVSS: NO
MOUNTING: SURFACE
FEED: CONTRACTOR TO DETERMINE

CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND
1	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	2	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
3	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	4	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
5	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	6	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
7	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	8	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
9	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	10	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
11	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	12	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
13	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	14	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
15	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	16	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
17	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	18	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"
19	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	20	RECEPTACLES	20/1	#12	#12	#12	1/2"
21	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	22	RECEPTACLES	20/1	#12	#12	#12	1/2"
23	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	24	RECEPTACLES	20/1	#12	#12	#12	1/2"
25	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	26	RECEPTACLES	20/1	#12	#12	#12	1/2"
27	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	28	RECEPTACLES	20/1	#12	#12	#12	1/2"
29	COMPUTER RECEPTACLES	20/1	#12	#12	#12	1/2"	30	RECEPTACLES	20/1	#12	#12	#12	1/2"
31	FACP	20/1	#12	#12	#12	1/2"	32	RECEPTACLES	20/1	#12	#12	#12	1/2"
33	RECEPTACLES	20/1	#12	#12	#12	1/2"	34	RECEPTACLES	20/1	#12	#12	#12	1/2"
35	SPARE	20/1	–	–	–	–	36	SPARE	20/1	–	–	–	–
37	SPARE	20/1	–	–	–	–	38	SPARE	20/1	–	–	–	–
39	SPARE	20/1	–	–	–	–	40	SPARE	20/1	–	–	–	–
41	SPARE	20/1	–	–	–	–	42	SPARE	20/1	–	–	–	–

INTERRUPT RATING: 22,000 AIC

PANEL C

VOLTAGE: 120Y/208V
SYSTEM: 3ø, 4W
SOLID NEUTRAL: YES

MAIN: 400A MLO
BUS RATING: 400A
GROUND BUS: YES

INTEGRAL TVSS: NO
MOUNTING: SURFACE
FEED: CONTRACTOR TO DETERMINE

CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND
1	WHR (CIRCUIT 1)	60/2	#6	–	#10	3/4"	2	SPARE	20/2	–	–	–	–
	"	–	#6	–	–	–		"	–	–	–	–	–
3	WHR (CIRCUIT 2)	60/2	#6	–	#10	3/4"	4	WH-1	20/2	#12	–	#12	1/2"
	"	–	#6	–	–	–		"	–	#12	–	–	–
5	WHR (CIRCUIT 3)	60/2	#6	–	#10	3/4"	6	F-3, F-5, F-10 THRU F-13	20/1	#12	#12	#12	1/2"
	"	–	#6	–	–	–	8	SPARE	20/1	–	–	–	–
7	WHR (CIRCUIT 1)	60/2	#6	–	#10	3/4"	10	P-1	60/3	#8	–	#10	3/4"
	"	–	#6	–	–	–		"	–	#8	–	–	–
9	WHR (CIRCUIT 2)	60/2	#6	–	#10	3/4"		"	–	#8	–	–	–
	"	–	#6	–	–	–	12	WELL PUMP	60/3	#8	–	#10	3/4"
11	WHR (CIRCUIT 3)	60/2	#6	–	#10	3/4"		"	–	#8	–	–	–
	"	–	#6	–	–	–		"	–	#8	–	–	–
13	SPARE	20/2	–	–	–	–	14	SPARE	60/3	–	–	–	–
	"	–	–	–	–	–		"	–	–	–	–	–
15	SPARE	20/2	–	–	–	–		"	–	–	–	–	–
	"	–	–	–	–	–	16	SPARE	20/2	–	–	–	–
17	SPARE	20/2	–	–	–	–		"	–	–	–	–	–
	"	–	–	–	–	–	18	REMOTE TANK ALARM	20/1	#12	#12	#12	3/4"
19	EB-1	20/2	#12	–	#12	1/2"	20	SPARE	20/1	–	–	–	–
	"	–	#12	–	–	–	22	SPARE	20/1	–	–	–	–
21	SPARE	20/1	–	–	–	–	24	SPARE	20/1	–	–	–	–

INTERRUPT RATING: 22,000 AIC

PANEL D

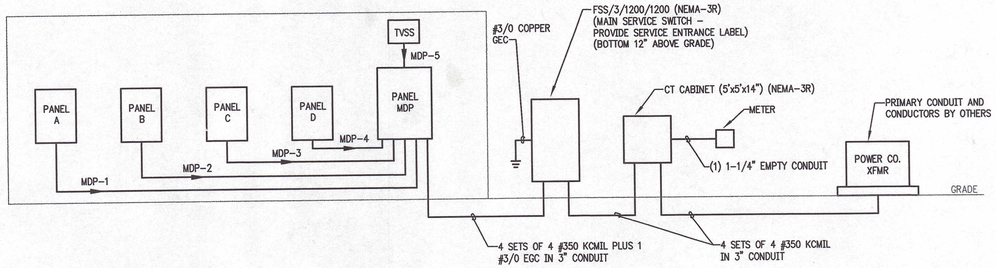
VOLTAGE: 208V
SYSTEM: 3ø, 3W
SOLID NEUTRAL: NO

MAIN: 600A MLO
BUS RATING: 600A
GROUND BUS: YES

INTEGRAL TVSS: NO
MOUNTING: SURFACE
FEED: CONTRACTOR TO DETERMINE

CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND
1	HP-1	50/3	#8	–	#10	3/4"	2	EDC-1	70/3	#4	–	#8	1"
	"	–	#8	–	–	–		"	–	#4	–	–	–
	"	–	#8	–	–	–		"	–	#4	–	–	–
3	HP-2	15/3	#12	–	#12	1/2"	4	EDC-2	20/3	#12	–	#12	1/2"
	"	–	#12	–	–	–		"	–	#12	–	–	–
	"	–	#12	–	–	–		"	–	#12	–	–	–
5	HP-3	25/3	#12	–	#12	1/2"	6	EDC-3	35/3	#10	–	#10	1/2"
	"	–	#12	–	–	–		"	–	#10	–	–	–
	"	–	#12	–	–	–		"	–	#10	–	–	–
7	HP-4	50/3	#10	–	#10	1/2"	8	EDC-4	60/3	#6	–	#10	3/4"
	"	–	#10	–	–	–		"	–	#6	–	–	–
	"	–	#10	–	–	–		"	–	#6	–	–	–
9	HP-5	35/3	#10	–	#10	1/2"	10	EDC-5	35/3	#10	–	#10	1/2"
	"	–	#10	–	–	–		"	–	#10	–	–	–
	"	–	#10	–	–	–		"	–	#10	–	–	–
11	HP-6	70/3	#6	–	#10	3/4"	12	EDC-6	70/3	#4	–	#8	1"
	"	–	#6	–	–	–		"	–	#4	–	–	–
	"	–	#6	–	–	–		"	–	#4	–	–	–
13	HP-7	35/3	#10	–	#10	1/2"	14	EDC-7	70/3	#4	–	#8	1"
	"	–	#10	–	–	–		"	–	#4	–	–	–
	"	–	#10	–	–	–		"	–	#4	–	–	–

INTERRUPT RATING: 22,000 AIC



POWER RISER DIAGRAM

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Mechanical and Electrical Engineers
30 W. Church Avenue Roanoke, Virginia 24011
Ph: (540) 342-1816 Fax: (540) 344-3410

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