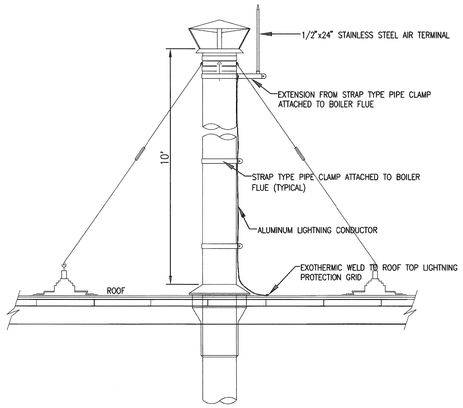
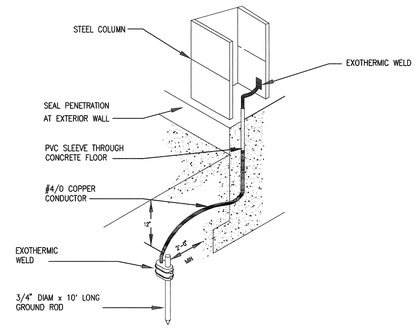


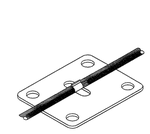
B1 TYPICAL LIGHTNING PROTECTION FOR FLUES

SCALE: NONE

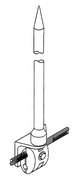


B5 TYPICAL BUILDING CONNECTION TO GROUND ROD

SCALE: NONE

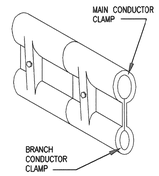


BONDING PLATE



PARAPET INSTALLATION

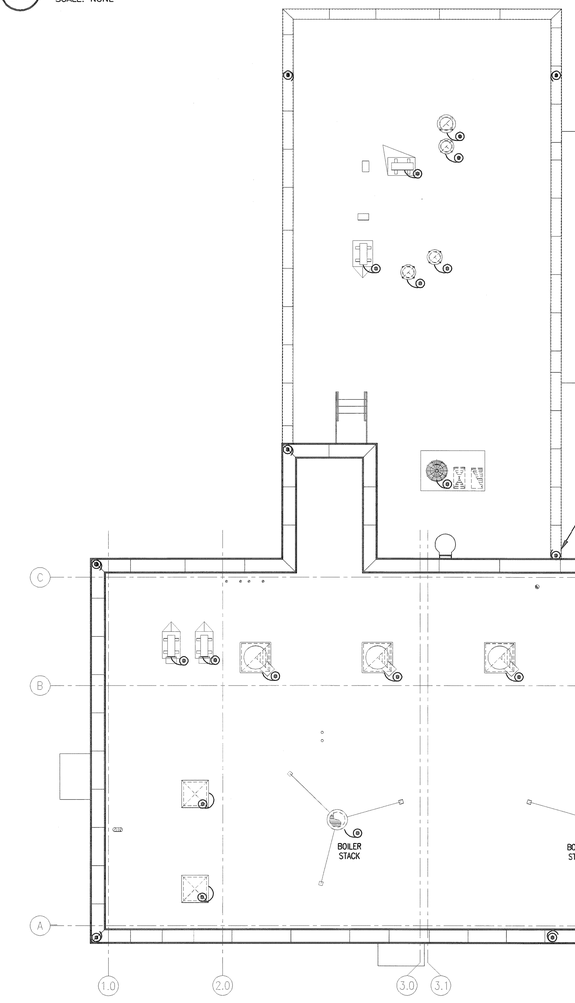
FLAT ROOF INSTALLATION



PARALLEL SPLICE

E1 TYPICAL AIR TERMINAL GROUNDING DETAILS

SCALE: NONE



F7 ROOF LIGHTNING PROTECTION PLAN

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

GENERAL NOTES

A. REFER TO DRAWING E001 FOR TYPICAL SYMBOLS AND ABBREVIATIONS USED IN THIS DRAWING.

B. THE CONTRACTOR SHALL PROVIDE A SYSTEM OF LIGHTNING PROTECTION IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS, COMPLIANT WITH THE LATEST APPLICABLE NEC, NFPA 780 "STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS", AND UL 96 "LIGHTNING PROTECTION COMPONENTS" FOR A CLASS I BUILDING TO INCLUDE ANY AND ALL CANOPIES BETWEEN OR CONNECTED TO BUILDINGS, WHETHER INDICATED ON PLANS OR NOT. THE CONTRACTOR SHALL PROVIDE A UL MASTER LABEL, SUITABLE FOR FASTENING TO THE BUILDING FOR DISPLAY, FOR THE OVERALL SYSTEM PER UL 96A. THE GROUND LOOP USED TO EQUALIZE POTENTIALS OF THE DOWNCONDUCTORS OF THE LIGHTNING PROTECTION SYSTEM SHALL BE BONDED TO THE GROUNDING SYSTEM OF THE ELECTRICAL POWER DISTRIBUTION SYSTEM FOR THE BUILDING(S) IN COMPLIANCE WITH NEC. THE OVERALL RESISTANCE OF THE GROUNDING SYSTEM TO EARTH SHALL BE 5 OHMS OR LESS.

C. THE CONTRACTOR SHALL PROVIDE AIR TERMINALS ON EACH PIECE OF MECHANICAL EQUIPMENT ADDED TO ROOF AREA AND CONNECT ALL TO THE EXISTING LIGHTNING PROTECTION SYSTEM. THE COMPLETED SYSTEM SHALL BE IN COMPLETE COMPLIANCE WITH THE PROJECT SPECIFICATIONS, COMPLIANT WITH THE LATEST APPLICABLE NEC, NFPA 780 "STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS", AND UL 96 "LIGHTNING PROTECTION COMPONENTS" FOR A CLASS I BUILDING. THE CONTRACTOR SHALL PROVIDE A UL MASTER LABEL, SUITABLE FOR FASTENING TO THE BUILDING FOR DISPLAY, FOR THE OVERALL SYSTEM PER UL 96A. THE GROUND LOOP USED TO EQUALIZE POTENTIALS OF THE DOWNCONDUCTORS OF THE LIGHTNING PROTECTION SYSTEM SHALL BE BONDED TO THE GROUNDING SYSTEM OF THE ELECTRICAL POWER DISTRIBUTION SYSTEM FOR THE BUILDING(S) IN COMPLIANCE WITH NEC. THE OVERALL RESISTANCE OF THE GROUNDING SYSTEM TO EARTH SHALL BE 5 OHMS OR LESS.

D. ALL MATERIALS SHALL BE UNDERWRITER'S LABORATORIES APPROVED. COMPLETED SYSTEM SHALL BEAR U.L. MASTER LABEL.

E. MAINTAIN HORIZONTAL OR DOWNWARD COURSING OF MAIN CONDUCTOR AND INSURE THAT ALL BENDS HAVE AT LEAST AN 8" RADIUS AND DO NOT EXCEED 90 DEGREES.

F. SUPPORT ALL CONDUCTORS AT 3'-0" INTERVALS MAXIMUM.

G. GROUND ELECTRODES SHALL BE INSTALLED AS SHOWN BUT IN NO INSTANCE SHALL THEY BE LESS THAN 1' BELOW FINISHED GRADE AND 2' FROM FOUNDATION WALL. DRIVEN RODS SHALL PENETRATE EARTH AT LEAST 10'-0" VERTICAL.

H. BOND TO METAL BODIES OF CONDUCTANCE ON ROOF WITH MAIN SIZE CONDUCTORS AS SHOWN AND AS REQUIRED BY U.L. STANDARDS. THESE BONDS INCLUDE BUT ARE NOT LIMITED TO: EXHAUST FANS, VENTS, HANDRAILS, LADDERS, HVAC UNITS, SKYLIGHTS, ETC. OR ANY LARGE BODY SUBJECT TO DIRECT STROKE OR WHICH EXCEEDS THE HEIGHT OF ADJACENT AIR TERMINALS.

I. BOND TO METAL BODIES OF INDUCTANCE LOCATED WITHIN 6'-0" OF MAIN CONDUCTOR OR OTHER BONDED OBJECT WITH APPROVED SECONDARY BONDING CONDUCTOR AS SHOWN AND AS REQ'D BY U.L. STANDARDS. THESE OBJECTS INCLUDE BUT ARE NOT LIMITED TO: FASCIAS, FLASHINGS, METAL COPINGS, GRAVEL GUARDS, ROOF DRAINS, DOWNSPOUTS, ETC. OR ANY METAL BODY AT OR BELOW THE ROOF SUBJECT TO INDUCTANCE AND WITHIN 6'-0" OF THE LIGHTNING PROTECTION SYSTEM.

J. SYSTEM SHALL BE INSTALLED AS NEEDED TO INSURE PROPER CODE COMPLIANCE AND SYSTEM CERTIFICATION. ANY MAJOR VARIANCE SHALL ENTAIL RE-SUBMITTAL AND NEW APPROVAL. COMPLETED SYSTEM SHALL BE INSPECTED BY U.L. AND THE U.L. "LETTER OF FINDINGS" SHALL BE SUBMITTED TO THE OWNER SHOWING CODE COMPLIANCE.

K. ALL DIAGRAMS ARE TYPICAL AND ARE NOT ALL INCLUSIVE.

DRAWING KEYNOTES ⟨X⟩

COORDINATION DRAWINGS

THE MECHANICAL CONTRACTOR SHALL TAKE THE LEAD IN PREPARATION OF COORDINATION DRAWINGS. SUCH DRAWINGS SHALL BE ARRANGED AND DESIGNED THROUGH AND FROM COORDINATION WITH ALL OTHER MAJOR AND MINOR SUBCONTRACTORS AND THE GENERAL CONTRACTOR. PROVIDE PLAN VIEWS, SECTIONS AND ELEVATIONS AS REQUIRED TO FULLY COORDINATE ALL NEW WORK WITH ITSELF AND EXISTING CONDITIONS. DRAW TO SCALE (AT NOT LESS THAN 3/8" = 1'-0"). DRAWINGS SHALL SHOW, BUT NOT BE LIMITED TO: ALL WALL RATINGS; ALL DUCTWORK; ALL AIR DISTRIBUTION; MECHANICAL EQUIPMENT; MECHANICAL PIPING; FIRE PROTECTION PIPING; ALL PLUMBING PIPING; CABLE TRAYS (WITH ELEVATIONS NOTED); LIGHTING FIXTURES (WHEN CEILING MOUNTED); CEILING GRID AND CEILING HEIGHT; MAJOR BEAMS AND JOISTS (WITH ELEVATIONS MARKED); FIRE ALARM DEVICES AND SPEAKERS (WHERE CEILING MOUNTED); ELECTRICAL CONDUITS LARGER THAN 2-INCH DIAMETER; ELECTRICAL BUSWAY AND REQUIRED CLEARANCES; EQUIPMENT PROVIDED BY OTHERS THAT PROTRUDE INTO CEILING CAVITIES OR IMPEDE THE LOCATION OR ACCESS TO ABOVE CEILING PIPING, DUCTWORK OF OTHER EQUIPMENT. SECTIONS SHALL BE CUT THROUGH AREAS SHOWING MATERIALS AND SYSTEMS OF ALL CONTRACTS. IF THERE ARE ANY OUTSTANDING ISSUES THAT CANNOT BE RESOLVED, CONSULT WITH THE ARCHITECT AND/OR ENGINEER (THROUGH THE VA COTR) FOR GUIDANCE AND MAKE CORRECTIONS IN ACCORDANCE WITH DIRECTIONS GIVEN. IT IS IMPORTANT TO NOTE THAT FABRICATION CANNOT BEGIN UNTIL COORDINATION DRAWINGS HAVE BEEN APPROVED. ANY MATERIAL, EQUIPMENT, SYSTEMS, ETC., PROCUREMENT OR INSTALLATION COMMENCED PRIOR TO APPROVAL IS TAKEN AT THE CONTRACTORS OWN RISK AND MAY HAVE TO BE MODIFIED, MOVED AND/OR RECONFIGURED AT THE CONTRACTORS COST.

100% CONSTRUCTION DOCUMENTS

REVISION NO.	REVISION DESCRIPTION	By	Date

Department of Veterans Affairs
William Jennings Bryan Dorn
VA Medical Center
6439 Garners Ferry Road
Columbia, SC 29209

JOHN G. ROPER No. 3300 SOUTH CAROLINA PROFESSIONAL ENGINEER
4-30-12
SEAL

Architect/Engineer Address
Harrell, Saltrick & Hopper
Design & Management Solutions for the Built Environment
8016 TOWER POINT DRIVE
CHARLOTTE, NC 28227
P 704.814.1320
F 704.321.0833
WWW.HSHPC.COM

HSH PROJECT # 11015

Recommended Approvals:	
1. MEDICAL DIRECTOR	6. OPERATIONS SERVICE LINE MANAGER
2. ASSOCIATE DIRECTOR	7. INFECTION CONTROL MANAGER
3. CHIEF OF STAFF	8. SAFETY MANAGER
4. ASSOC. DIRECTOR	9. GENERAL ENGINEER
5. SERVICE LINE MGRS.	10. COTR

Drawing Title: ROOF LIGHTNING PROTECTION PLAN

★BUILDING IS FULLY SPRINKLERED ★

Project Title: REPLACE BOILER PLANT/ COGEN/CHP

Date: APRIL 30, 2012
Project Number: 544-11-101

Drawn	Building Number	AutoCAD File Name
DC	21	
Checked	Reviewed	Const. Contract No.

DRAWING No. EP106

Veterans Affairs