

THREE INCHES = ONE FOOT (3" = 1'-0")

ONE AND ONE HALF INCHES = ONE FOOT (1 1/2" = 1'-0")

ONE INCH = ONE FOOT (1" = 1'-0")

THREE QUARTERS INCH = ONE FOOT (3/4" = 1'-0")

ONE HALF INCH = ONE FOOT (1/2" = 1'-0")

ONE QUARTER INCH = ONE FOOT (1/4" = 1'-0")

THREE EIGHTHS INCH = ONE FOOT (3/8" = 1'-0")

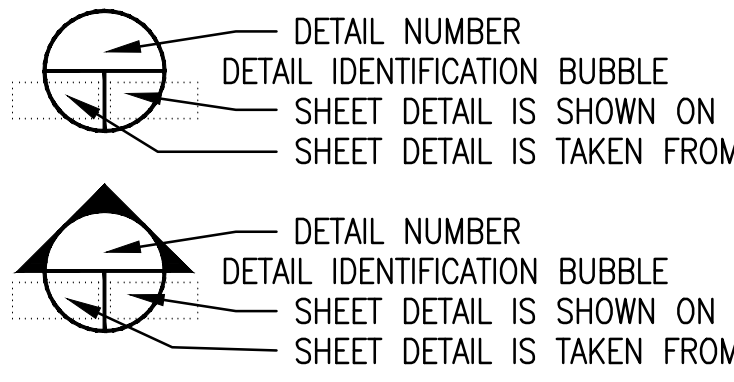
ONE EIGHTH INCH = ONE FOOT (1/8" = 1'-0")

FIRE ALARM NOTES

1. THE TERM "PROVIDE" SHALL MEAN THE CONTRACTOR SHALL FURNISH, INSTALL, AND CONNECT FOR A COMPLETE AND OPERATIONAL SYSTEM.
2. THE TERM "REMOVE" SHALL MEAN THE CONTRACTOR SHALL DISCONNECT AND CLEAR FROM SITE.
3. THE SCOPE OF THIS PROJECT INCLUDES THE REMOVAL OF THE EXISTING FIRE ALARM NOTIFICATION DEVICES, INCLUDING THE REMOVAL OF ALL OLD WIRING AND RACEWAYS WITHIN THE SPD AND SPS BUILDING 500 BASEMENT AREA RENOVATION SCOPE OF WORK.
4. THE SCOPE OF THIS PROJECT INCLUDES PROVIDING NEW, COMPLETE ADDRESSABLE, VOICE FIRE ALARM/EMERGENCY COMMUNICATIONS SYSTEMS THROUGHOUT THE SPD AND SPS BUILDING 500 BASEMENT AREA RENOVATION SCOPE OF WORK. THE NEW SYSTEM SHALL INCLUDE ALL WIRING, RACEWAYS, PULL BOXES, TERMINAL CABINETS, OUTLET AND MOUNTING BOXES, CONTROL EQUIPMENT, ALARM AND SUPERVISORY SIGNALS, INITIATION DEVICES, ALARM NOTIFICATION APPLIANCES, NOTIFICATION APPLIANCE BOOSTER PANELS, INTERFACE EQUIPMENT, AND ALL OTHER ACCESSORIES AND MISCELLANEOUS ITEMS INCLUDING SOFTWARE, SYSTEM PROGRAMMING, TESTING, AND CONSTRUCTION PERMITS REQUIRED FOR A COMPLETE OPERATING VOICE FIRE ALARM SYSTEM EVEN THOUGH EACH ITEM IS NOT SPECIFICALLY MENTIONED OR DESCRIBED. THE EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE LISTED FOR THE INTENDED PURPOSE BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
5. ALL WORK AND INSTALLATION SHALL CONFORM TO THE APPLICABLE CODES AND STANDARDS INCLUDING:
- NFPA 70: NATIONAL ELECTRIC CODE (2011)
  - NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE (2010)
  - NFPA 101: LIFE SAFETY CODE (2012)
  - DEPARTMENT OF VETERANS AFFAIRS SUPPLY, PROCESSING & DISTRIBUTION DESIGN GUIDE (FEBRUARY 2010)
  - DEPARTMENT OF VETERANS AFFAIRS FIRE PROTECTION DESIGN MANUAL, SIXTH EDITION (SEPTEMBER 2011)
6. CONTRACTOR SHALL SECURE ALL NECESSARY CONSTRUCTION PERMITS, INSPECTIONS AND FINAL SYSTEM ACCEPTANCE FROM BUILDING OFFICIALS (AHJ).
7. CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL CONFLICTS WITH LIGHT FIXTURES, HVAC DIFFUSERS, GRILLS, DUCTS, CONDUIT AND OTHER PIPING OR OTHER OBSTRUCTIONS ENCOUNTERED. COORDINATE ALL WORK WITH FIELD CONDITIONS. CONTRACTOR SHALL NOT MOUNT OR HANG ANY DEVICE OR COMPONENT FROM THE ROOF SLAB, NOR SHOULD THE CONTRACTOR DRILL INTO THE ROOF SLAB IN ANY WAY, ANY ALTERATION OR DRILLING OF THE ROOF SLAB SHALL BE AVOIDED DURING CONSTRUCTION. CONTRACTOR SHALL PROMPTLY NOTIFY THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE PRIOR TO INITIATING WORK IF ANY MOUNTING LOCATIONS ARE OBSTRUCTED AND/OR IF ANY MOUNTING CONFLICTS OR PROBLEMS ARE DISCOVERED, AS A RESULT OF ANY FIELD MODIFICATIONS.
8. WIRING SUPERVISION FOR FIRE ALARM SYSTEM SHALL BE PROVIDED AS DEFINED IN NFPA 72 AS FOLLOWS:
- INITIATING DEVICE CIRCUITS (CLASS B)
  - SIGNALING LINE CIRCUIT FOR EACH FLOOR (STYLE 4 - CLASS B)
  - FIRE ALARM NETWORK (CLASS X)
  - NOTIFICATION APPLIANCE CIRCUITS (CLASS B), SYNCHRONIZED
9. INFORMATION CONTAINED IN THESE DRAWINGS IS BASED ON EXISTING DOCUMENTS AND LIMITED FIELD MEASUREMENT VERIFICATION. THE INFORMATION CONTAINED HEREIN MAY REQUIRE ADJUSTMENTS AND/OR MODIFICATIONS TO CONFORM TO EXISTING CONDITIONS. IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE IF ANY DISCREPANCY IN EXISTING CONDITIONS SHOULD PROHIBIT EXECUTION OF THE DESIGN INTENT OF THESE DRAWINGS.
10. DRAWINGS ARE NOT TO BE SCALED. DIMENSIONS SHALL GOVERN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE CONCERNING EXISTING AND NEW WORK BEFORE PROCEEDING WITH EITHER FABRICATION OR INSTALLATION OF NEW WORK.
11. ANY INFORMATION CONFLICTS BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE'S ATTENTION. THE CONTRACTOR(S) SHALL NOT PROCEED WITH ANY WORK, EXCEPT AT THEIR OWN RISK, UNTIL CLARIFICATIONS OF THE CONFLICTS ARE ISSUED TO THE CONTRACTOR(S) BY THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE.
12. DUCTWORK, PIPING, MECHANICAL EQUIPMENT AND CEILINGS SHALL NOT BE UTILIZED AS LADDERS, SCAFFOLDING OR WORK PLATFORMS.
13. CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY AND MUST BE USED IN CONJUNCTION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. CONTRACTOR SHALL COORDINATE ALL DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING WORK. QUESTIONS REGARDING DESIGN INTENT OR SYSTEM OPERATION SHALL BE PROMPTLY BROUGHT TO OWNER OR OWNER'S REPRESENTATIVE'S ATTENTION.
14. MOUNT ALL VISUAL WARNING STROBE/AUDIBLE NOTIFICATION APPLIANCES TO ACHIEVE MAXIMUM AUDIBILITY AND VISIBILITY IN ACCORDANCE WITH NFPA 72. PROVIDE CARE IN LOCATING VISUAL WARNING STROBE APPLIANCES TO INSURE VISIBILITY AND AVOID OBSTRUCTIONS. MOST MOUNTING LOCATIONS SHALL BE OF THE WALL TYPE.
15. SPEAKERS SHALL PROVIDE A MINIMUM SOUND LEVEL OF 15 DB ABOVE AMBIENT SOUND LEVEL IN ALL SPACES. FOR OFFICE SPACES, STERILIZATION ROOMS AND HALLWAYS, CONTRACTORS SHALL PROVIDE A MINIMUM OF 75dB AS SHOWN ON THE DRAWINGS, SUPPLEMENTAL AUDIO/VISUAL NOTIFICATION DEVICES SHALL BE PROVIDED IN ROOMS SUCH AS MECHANICAL AND ELECTRICAL ROOMS, WHERE THE MINIMUM SOUND/VISUAL SIGNAL LEVELS MAY NOT BE MET. SPEAKER TAP SETTINGS SHALL BE ADJUSTED BY CONTRACTOR SO THAT REQUIRED AUDIBILITY LEVELS ARE MET IN ALL AREAS.
16. CONTRACTOR SHALL PROVIDE FINAL ADJUSTMENTS TO INTERIOR SPEAKERS INCLUDING CHANGING SPEAKER TAP CONNECTION WHERE NECESSARY TO BALANCE SYSTEM IN ORDER TO PROVIDE AN INTELLIGIBLE MESSAGE THROUGHOUT. IN ADDITION, INDIVIDUAL SPEAKER CIRCUITS SHALL NOT BE LOADED MORE THAN 70 PERCENT OF RATED AMPLIFIER POWER OUTPUT.
17. UNLESS OTHERWISE NOTED, THE PROJECT ELECTRICAL CONDUIT STANDARD IS ELECTRICAL METALLIC TUBING (EMT) AND SHALL BE PROVIDED THROUGHOUT THE PROJECT.
18. IN AREAS WITHOUT CEILINGS OR WHERE CEILINGS CANNOT BE DISTURBED DUE TO ASBESTOS, CONDUIT SHALL BE INSTALLED AS UNOBTRUSIVELY AS POSSIBLE, AS CLOSE AS POSSIBLE TO FLOOR/CEILING SLAB ABOVE AND PARALLEL AND AT RIGHT ANGLES TO STRUCTURAL STEEL OR CONCRETE ELEMENTS. THESE DRAWINGS ARE DIAGRAMMATIC TO SHOW DESIGN INTENT ONLY.
19. CONCEAL ELECTRICAL CONDUITS AND WIRING ABOVE SUSPENDED CEILINGS WHERE ABSOLUTELY NECESSARY AND BEHIND WALLS, AND SURFACE MOUNT WHERE SHOWN ON DRAWINGS. SURFACE MOUNTED DEVICES AND CONDUITS ARE DESIRED THROUGHOUT MOST OF THE BUILDING. WHERE ROUTING ABOVE SUSPENDED CEILINGS, USE PLENUM RATED CABLE.
20. PENETRATIONS IN MASONRY WALLS AND FLOOR/CEILING SLABS SHALL BE CORE DRILLED WITH MASONRY TYPE CORE BIT AND FIRESTOPPED AS SPECIFIED.
21. AFTER CONDUIT INSTALLATION, PENETRATIONS IN FIRE RESISTIVE WALLS AND FLOOR/CEILING SLABS SHALL BE PROPERLY CLEANED AND SEALED TO THE FULL THICKNESS OF THE PENETRATION WITH A LISTED AND APPROVED FIRE STOPPING MATERIAL OF EQUAL OR GREATER FIRE RESISTANCE. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RESISTANCE RATINGS OF WALLS AND CEILINGS.
22. BOTH EXPOSED AND CONCEALED CONDUIT INCLUDING RISERS UP TO 2 INCHES IN DIAMETER SHALL UTILIZE COMPRESSION TYPE STEEL FITTINGS AND CONNECTORS. UNLESS OTHERWISE NOTED ALL CONDUIT PROVIDED SHALL BE 3/4 INCH MINIMUM EMT TRADE SIZE. VERTICAL RISERS SHALL BE ONE INCH DIAMETER EMT MINIMUM. LIMITED USE OF 1/2 INCH CONDUIT IS PERMITTED ON HORIZONTAL RUNS WHEN A REDUCED DIAMETER IS REQUIRED FOR BETTER CONCEALMENT. WHERE NECESSARY, 1/2 INCH DIAMETER FLEXIBLE CONDUIT MAY BE FISHED OR USED FOR CONCEALED WORK. PLENUM RATED WIRING CONDUCTORS (TYPE FPLP) SHALL BE PROVIDED WHEN FLEX CONDUIT IS UTILIZED. PROVIDE WIRING CONDUCTORS INSTALLED IN EMT FOR THE FOLLOWING CIRCUITS EXCEPT AS OTHERWISE REQUIRED BY FIRE ALARM EQUIPMENT MANUFACTURER:
- INITIATING NO 16/2 AWG,
  - NOTIFICATION APPLIANCES - 14/2 AWG,
  - CONTROL 16/2 AWG
  - SIGNALING LINE CIRCUITS, 18/2 AWG, TWISTED PAIR
23. ELECTRICAL BOXES SHALL BE PROVIDED AS FOLLOWS: U.N.O. CAST METAL BELL TYPE BOXES WITH THREADED HUBS SHALL BE PROVIDED ON EXPOSED WORK, EXCEPT WHERE FACTORY BOXES ARE PROVIDED. CONCEALED BOXES MAY BE STAMPED STEEL BOXES. TERMINAL CABINETS SHALL BE OF SOLID WALL CONSTRUCTION WITH NO FACTORY CONDUIT KNOCK OUTS.
24. ARRANGE STROBE NAC POWER REQUIREMENTS AND CONDUCTOR SIZES NOT TO EXCEED A 10%, 2.4V VOLTAGE DROP. EACH VISUAL NOTIFICATION APPLIANCE CIRCUIT SHALL NOT EXCEED 75% OF ITS RATED OUTPUT.
25. INSTALL SMOKE DETECTORS A MINIMUM OF 3 FEET FROM AIR DIFFUSERS. SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN A 36 INCH HORIZONTAL PATH FROM THE TIP OF THE BLADE OF A CEILING-SUSPENDED PADDLE FAN.
26. IF FIRE ALARM DEVICES ARE PROVIDED IN LAT OR SUSPENDED CEILINGS, THEY SHALL BE IN CENTER OF TILE. PROVIDE STEEL TILE BRIDGE TO SUPPORT DEVICE. COORDINATE FINAL FIRE ALARM DEVICE LOCATIONS WITH CEILING GRID, LIGHTS AND DIFFUSERS.
27. CONTRACTOR SHALL PROVIDE MANUAL PULL STATIONS THROUGHOUT PER NFPA 72 REQUIREMENTS.
28. PAINT ALL FIRE ALARM JUNCTION BOXES AND COVERS RED IN UNFINISHED AREAS (E.G. ABOVE CEILINGS, MECHANICAL ROOMS, ETC.). THE INSIDE COVER OF THE JUNCTION BOX MUST BE IDENTIFIED AS "FIRE ALARM" AND THE CONDUIT MUST HAVE PAINTED RED BANDS 2 INCH WIDE AT 10 FOOT CENTERS AND AT EACH SIDE OF A FLOOR, WALL, OR CEILING PENETRATION.
29. SPOT TYPE ABATEMENT OF HAZARDOUS MATERIALS MAY BE REQUIRED IN CERTAIN LOCATIONS. CONTRACTOR SHALL AVOID WORK IN THESE SPECIFIC LOCATIONS AS MUCH AS PROVIDING A CODE COMPLIANT DESIGN WILL ALLOW.
30. ALL NEW FIRE ALARM EQUIPMENT SHALL BE COMPATIBLE WITH THE EXISTING EST 3 FIRE ALARM SYSTEM. THE EXISTING FIRE ALARM CONTROL PANEL IS LOCATED IN ROOM GA-104. THE NEW SPEAKER CIRCUIT SERVING THE AREA OF WORK SHALL BE CONNECTED TO A NEW AMPLIFIER THAT SHALL BE PROVIDED IN ROOM GA-104. POWER FOR THE AMPLIFIER SHALL BE COORDINATED WITH THE ELECTRICAL DRAWINGS. THE AMPLIFIER SHALL BE PROVIDED WITH AN INTEGRAL NOTIFICATION APPLIANCE CIRCUIT TO SERVE THE STROBES THROUGHOUT THE AREA OF WORK. THE FIRE ALARM SYSTEM ZONING SHALL BE PROGRAMMED TO MATCH THE EXISTING SMOKE BOUNDARIES FOR THE AREA.

SYMBOLS LIST

SYMBOL	DESCRIPTION
	EXISTING LINE TYPE
	DEMOLITION LINE TYPE
	NEW WORK LINE TYPE
	FIRE ALARM SMOKE ZONE BOUNDARY
	SMOKE DETECTOR; X=MOUNTING, XX=DEVICE INTERFACE
	HEAT DETECTOR; X=MOUNTING, XX=DEVICE INTERFACE
	DUCT SMOKE DETECTOR
	HORN APPLIANCE; X=MOUNTING
	HORN STROBE APPLIANCE; X=MOUNTING, XX=CANDELA RATING
	SPEAKER APPLIANCE; X=MOUNTING
	SPEAKER STROBE APPLIANCE; X=MOUNTING, XX=CANDELA RATING
	STROBE APPLIANCE; X=MOUNTING, XX=CANDELA RATING
	MANUAL PULL STATION
	120 VAC POWER SUPPLY
	MAGNETIC DOOR HOLD OPEN DEVICE
	FIRE ALARM CONDUIT CONTINUATION
	VALVE TAMPER SWITCH, CONNECTION ONLY
	WATER FLOW SWITCH, CONNECTION ONLY
	PRESSURE SWITCH, CONNECTION ONLY
	ADDRESSABLE INTERFACE MODULE
	ADDRESSABLE RELAY MODULE
	NON-ADDRESSABLE RELAY MODULE
	FIRE ALARM CONTROL PANEL
	FIRE ALARM TERMINAL CABINET
	FIBER OPTIC CONNECTION POINT
	NOTIFICATION BOOSTER PANEL
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	AMPLIFIER RACK
	DIGITAL ALARM COMMUNICATOR TRANSMITTER
	KEYNOTE INDICATOR
	FIRE ALARM SMOKE ZONE IDENTIFICATION



ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	LED	LIGHT EMITTING DIODE
AHU	AIR HANDLER UNIT	MC	METAL CLAD
AI	ADDRESSABLE INTERFACE	MECH	MECHANICAL
AR	ADDRESSABLE RELAY	NAC	NOTIFICATION APPLIANCE CIRCUIT
AWG	AMERICAN WIRE GAUGE	NAP	NOTIFICATION APPLIANCE PANEL
BLDG	BUILDING	NEC	NATIONAL ELECTRICAL CODE - NFPA 70
BM	BEAM	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
CKR	CIRCUIT	OA	OUTSIDE AIR
CMU	CONCRETE MASONRY UNIT	R	RETURN
CONC	CONCRETE	RCP	REMOTE CONTROL PANEL
DN	DOWN	RM	ROOM
ELEV	ELEVATOR	SLC	SIGNALING LINE CIRCUIT
EMR	ELEVATOR MACHINE ROOM	SPDT	SINGLE POLE, DOUBLE THROW
EMT	ELECTRICAL METALLIC TUBING	TC	TERMINAL CABINET
EOL	END OF LINE SUPERVISION DEVICE	TYP	TYPICAL
FACP	FIRE ALARM CONTROL PANEL	UNO	UNLESS NOTED OTHERWISE
FL	FLOOR	UON	UNLESS OTHERWISE NOTED
FT	FEET	VA	DEPARTMENT OF VETERANS AFFAIR
GYP	GYPSUM BOARD	VAC	VOLTS ALTERNATING CURRENT
IBC	INTERNATIONAL BUILDING CODE	VDC	VOLTS DIRECT CURRENT
IDC	INITIATING DEVICE CIRCUIT	WP	WEATHERPROOF
IN	INCH	ZN	ZONE

Fire Alarm System Matrix			ANNUNCIATION			ALARM STATION MONITORING		NOTIFICATION	CONTROL	
			Alarm Annunciation FACU, FAAP	Supervisory Annunciation FACU, FAAP	Trouble Annunciation FACU, FAAP	Transmit Alarm signal to Central Monitoring Station via DACT, Record events on System Printer	Transmit Supervisory signal to Central Monitoring Station via DACT, Record events on System Printer	Transmit Trouble signal to Central Monitoring Station via DACT, Record events on System Printer	Sound General Evacuation Speakers and Strobes Throughout Building	Shutdown Applicable Air Handling Unit and/or close associated dampers
INITIATING DEVICES										
Manual Station			X			X			X	
Smoke Detector			X			X			X	
Duct Smoke Detector				X			X			X
Sprinkler Flow Switch			X			X			X	
Sprinkler Tamper Switch				X			X			
Generator Running				X						
Generator Fault				X						
Fire Alarm AC Power Fail				X			X			
Fire Alarm System Low Battery					X			X		
Fire alarm panel open circuit					X			X		
Fire alarm panel ground fault					X			X		
Notification Appliance Circuit Short					X			X		
SLC/Initiating Device Circuit Short					X			X		

1 FIRE ALARM MATRIX  
FA001 SCALE: NOT TO SCALE

BID DOCUMENTS	10/10/14
100% CONSTRUCTION DOCUMENTS	10/1/14
CONSTRUCTION DOCUMENTS SUBMISSION	8/29/14
DESIGN DEVELOPMENT SUBMISSION	6/25/14
SCHEMATIC DESIGN SUBMISSION	5/21/14
Revisions:	Date

ARCHITECT / ENGINEERS / CONSULTANTS:

2 Wisconsin Circle / Suite 820  
Chevy Chase, MD 20815-7003  
Tel: (301) 718-0080  
Fax: (301) 718-9520  
www.okksstudios.com

HENRY ADAMS

Consulting Engineers

MECHANICAL ELECTRICAL & PLUMBING ENGINEERS

600 Baltimore Avenue, 4th Floor Baltimore, MD 21204  
P 410-296-6500 F 410-296-6501  
www.henryadams.com

the PROTECTION ENGINEERING GROUP

14585 Avion Parkway, Suite 150  
Chantilly, Virginia 20151  
www.PEGroup-Inc.com

PROPERTY OF THE UNITED STATES GOVERNMENT  
FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTICE.  
PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED

Stamp/Seal

Drawing Title  
REFERENCE SHEET  
FIRE ALARM PLAN  
Approved: Project Director

Project Title  
SPD and SPS Modifications,  
Phase 1  
Building Number 500  
Checked BDR  
Drawn ACJ  
Location  
MARTINSBURG, WV

Date  
10/10/2014  
VA Project Number  
613-14-106  
Drawing Number  
FA001

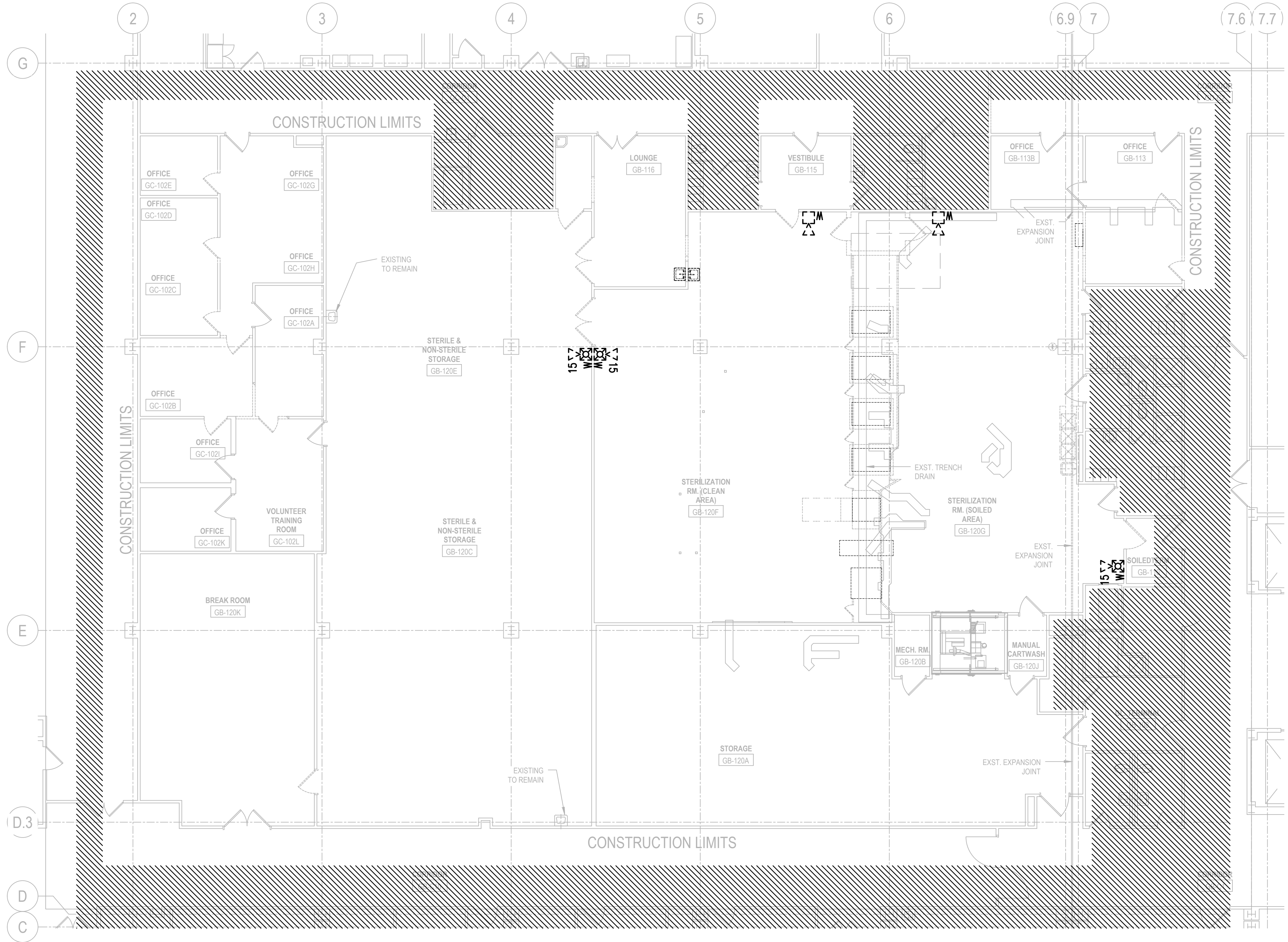
Office of Construction and Facilities Management  
Department of Veterans Affairs

123456789

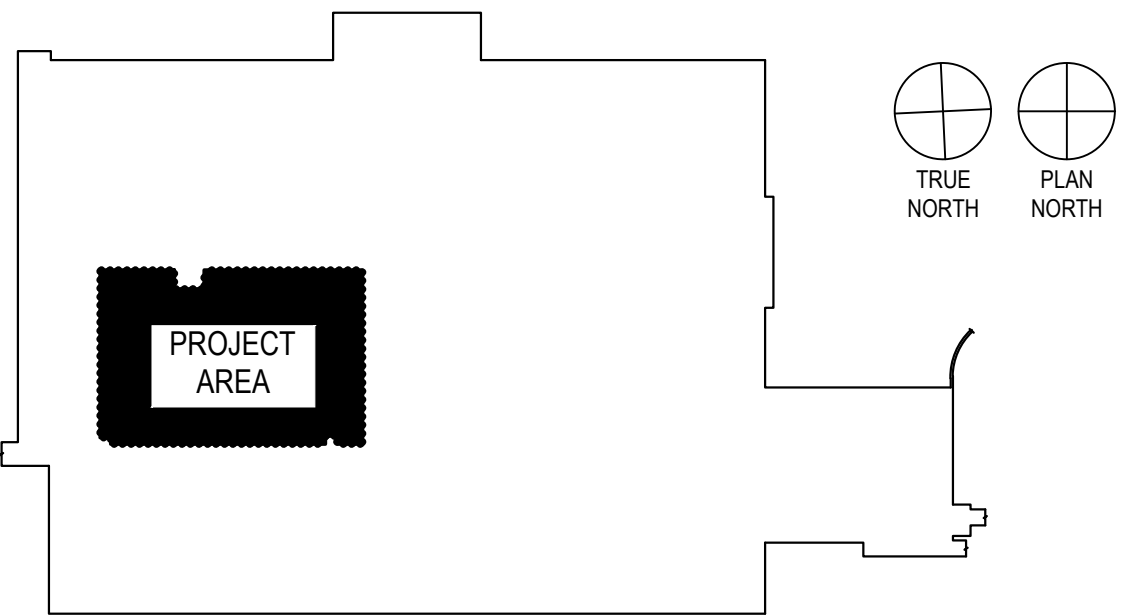


SHEET NOTES

1. REFER TO SHEET FA001 FOR SYMBOLS AND ABBREVIATIONS.
2. REMOVE ALL FIRE ALARM DEVICES AS INDICATED ON THE DRAWINGS. DISCONNECT AND REMOVE ALL WIRING AND RACEWAYS THAT SERVE EXISTING FIRE ALARM COMPONENTS.
3. PRIOR TO REMOVING FIRE ALARM DEVICES AND APPLIANCES FROM WITHIN THE PROJECT AREA, THEIR CIRCUITS MUST BE DISCONNECTED FROM DEVICES AND APPLIANCES THAT REMAIN OUTSIDE THE PROJECT AREA. WIRE MUST BE PULLED OUT OF THE PROJECT AREA BACK TO THE NEAREST DEVICE, APPLIANCE OR TERMINAL CABINET. ALL UNUSED CONDUIT SHALL BE REMOVED. DO NOT CREATE NEW SPLICES WITHIN JUNCTION BOXES (NO FIELD SPLICING).



1 BASEMENT DEMOLITION FIRE ALARM PLAN  
SCALE: 1/8" = 1'-0"



3 KEYPLAN  
SCALE: 1" = 100'-0"

0 4' 8' 12' 16'  
1/8" = 1'-0"

CAUTION: IF THIS PLAN IS A REDUCTION,  
GRAPHIC SCALE MUST BE USED

BID DOCUMENTS	10/10/14
100% CONSTRUCTION DOCUMENTS	10/1/14
CONSTRUCTION DOCUMENTS SUBMISSION	8/29/14
DESIGN DEVELOPMENT SUBMISSION	6/25/14
SCHEMATIC DESIGN SUBMISSION	5/21/14
Revisions:	Date

ARCHITECT / ENGINEERS / CONSULTANTS:



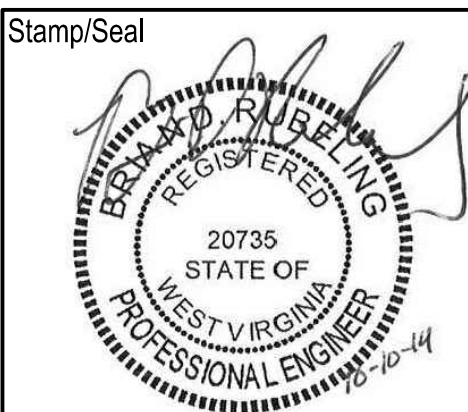
2 Wisconsin Circle / Suite 820  
Chevy Chase, MD 20815-7003  
Tel: (301) 718-0080  
Fax: (301) 718-9530  
www.okkstudios.com

**HENRY ADAMS**  
Consulting Engineers

MECHANICAL ELECTRICAL & PLUMBING ENGINEERS  
600 Baltimore Avenue, 4th Floor Baltimore, MD 21204  
P 410-296-6500 | F 410-296-6501  
www.henryadams.com

*the*  
**PROTECTION ENGINEERING GROUP**  
14585 Avion Parkway, Suite 150 703-488-9990  
Chantilly, Virginia 20151 fax: 703-488-9994  
www.PEGroup-Inc.com

**PROPERTY OF THE UNITED STATES GOVERNMENT**  
FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTICE.  
PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED



Drawing Title  
**BASEMENT DEMOLITION  
FIRE ALARM PLAN**

Approved: Project Director

Project Title  
**SPD and SPS Modifications,  
Phase 1**

Building Number  
**500**

Checked  
**BDR**

Drawn  
**ACJ**

Location  
**MARTINSBURG, WV**

Date  
**10/10/2014**  
VA Project Number  
**613-14-106**

Drawing Number  
**FK100**

Office of  
Construction  
and Facilities  
Management



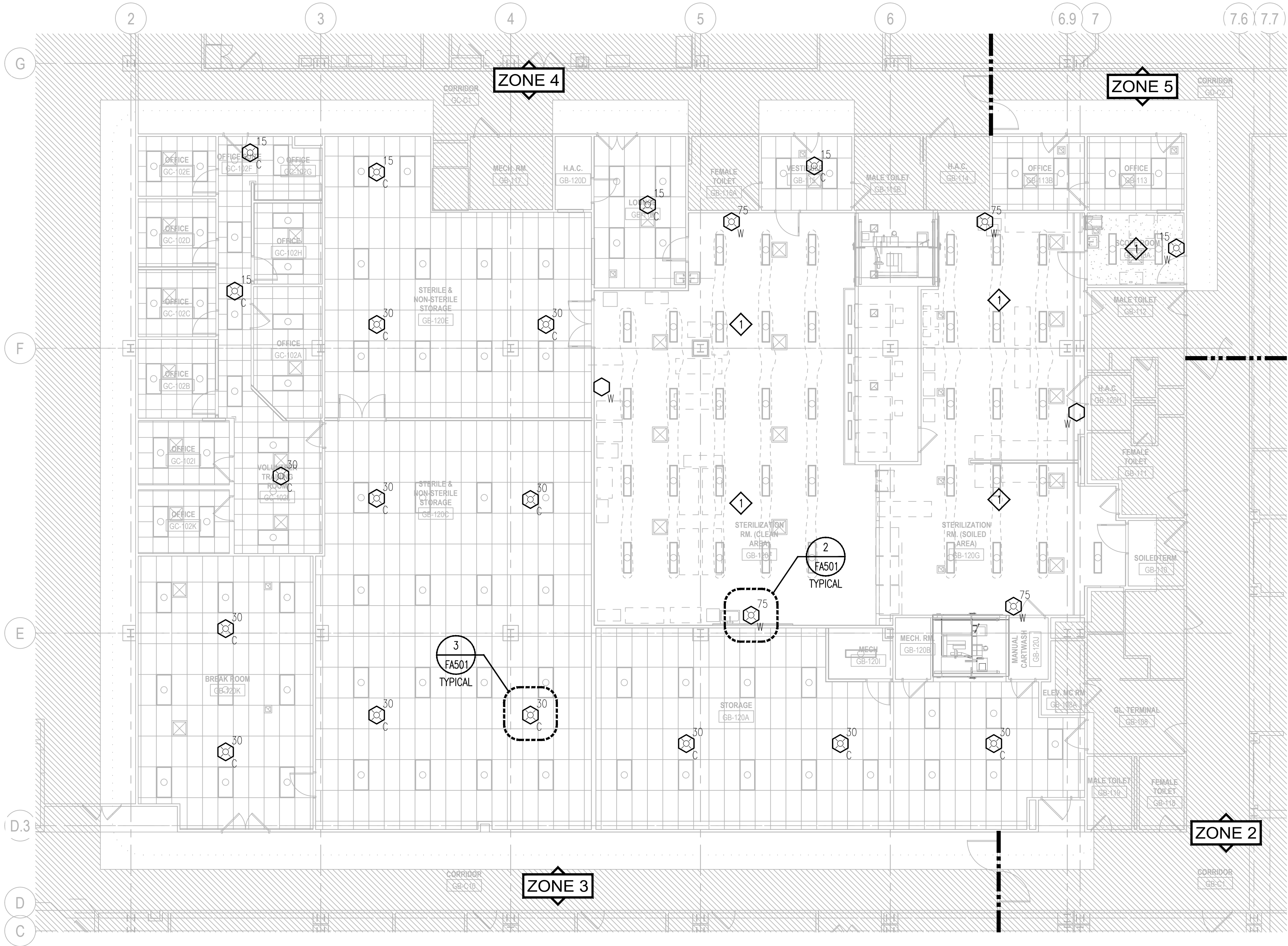


SHEET NOTES

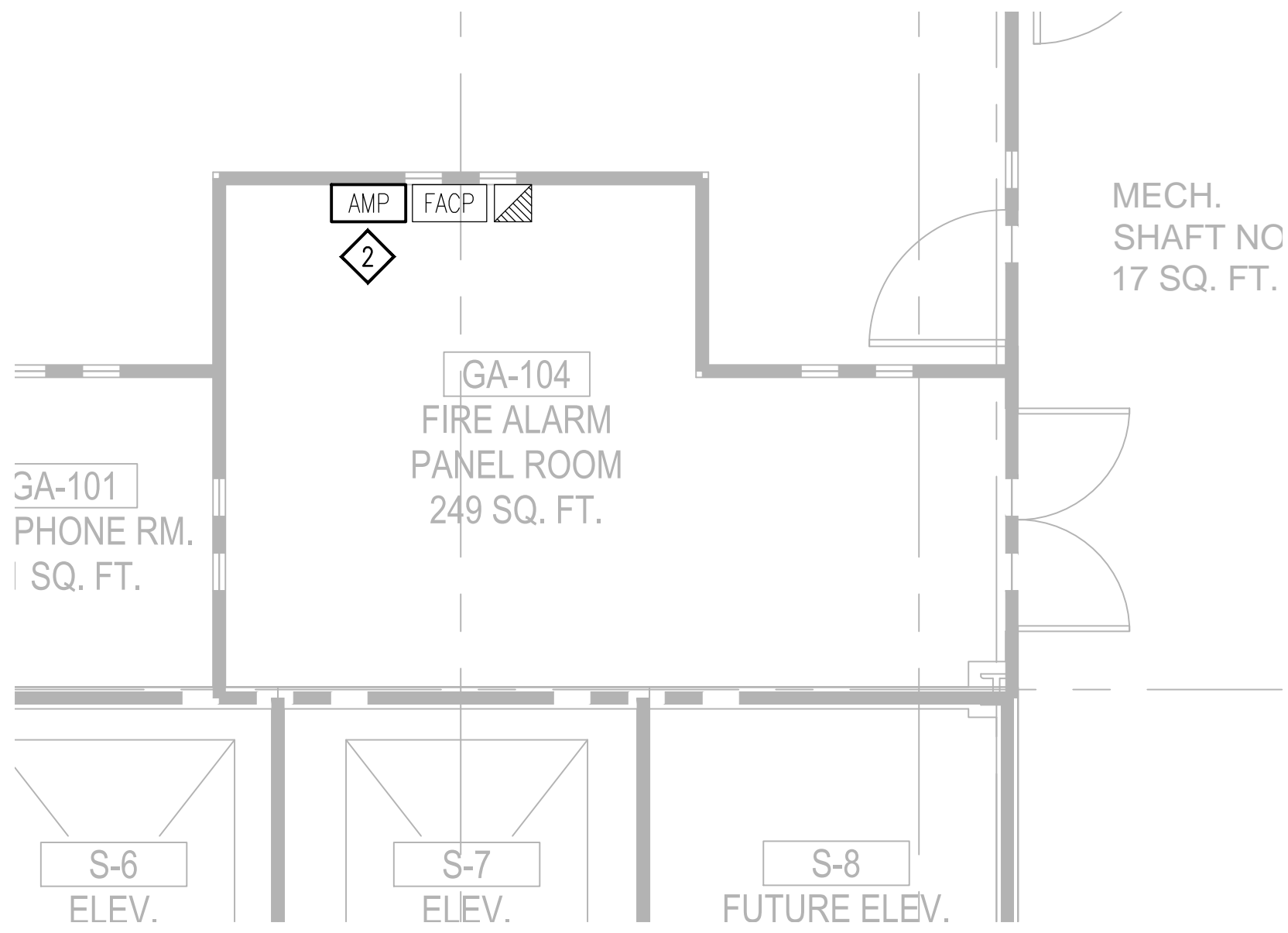
1. REFER TO SHEET FA001 FOR SYMBOLS AND ABBREVIATIONS.
2. THE EXISTING SPACE AND THE MAJORITY OF THE EXISTING BASEMENT LEVEL ARE PROVIDED WITH HORNS AND STROBES AS THE NOTIFICATION APPLIANCES FOR THE FIRE ALARM SYSTEM. THE RENOVATED SPACE WILL BE PROVIDED WITH SPEAKERS AND STROBES IN ANTICIPATION THAT THE ENTIRE BASEMENT LEVEL WILL TRANSITION TO A VOICE SYSTEM TO MATCH THE APPROACH ON THE REST OF THE MEDICAL CAMPUS. ALL NECESSARY EQUIPMENT, INCLUDING AMPLIFIERS AND SPEAKER CIRCUITS SHALL BE PROVIDED FOR THE NEW SPACE. THE NEW SPEAKER CIRCUIT SHALL BE CONNECTED TO THE EXISTING EST 3 VOICE FIRE ALARM PANEL IN ROOM GA-104.
3. THE BASEMENT LEVEL IS DIVIDED INTO MULTIPLE SMOKE ZONES. THE FIRE ALARM ZONING SHALL MATCH THE SMOKE ZONES. CONFIRM THE BOUNDARIES OF EACH OF THE SMOKE ZONES TO ENSURE THAT THE FIRE ALARM ZONES MATCH.

KEYNOTES

1. DEVICES AND CONDUIT IN THIS AREA SHALL BE SURFACE MOUNTED.
2. PROVIDE NEW AMPLIFIER IN FIRE ALARM ROOM GA-104. THE AMPLIFIER SHALL BE COMPATIBLE WITH THE EXISTING EST 3 FIRE ALARM SYSTEM. COORDINATE POWER FOR THE AMPLIFIER WITH THE ELECTRICAL DRAWINGS. THE AMPLIFIER SHALL BE PROVIDED WITH AN INTEGRAL NOTIFICATION APPLIANCE CIRCUIT TO SUPPLY THE STROBES IN THE SPACE.



1 BASEMENT NEW WORK FIRE ALARM PLAN  
SCALE: 1/8" = 1'-0"

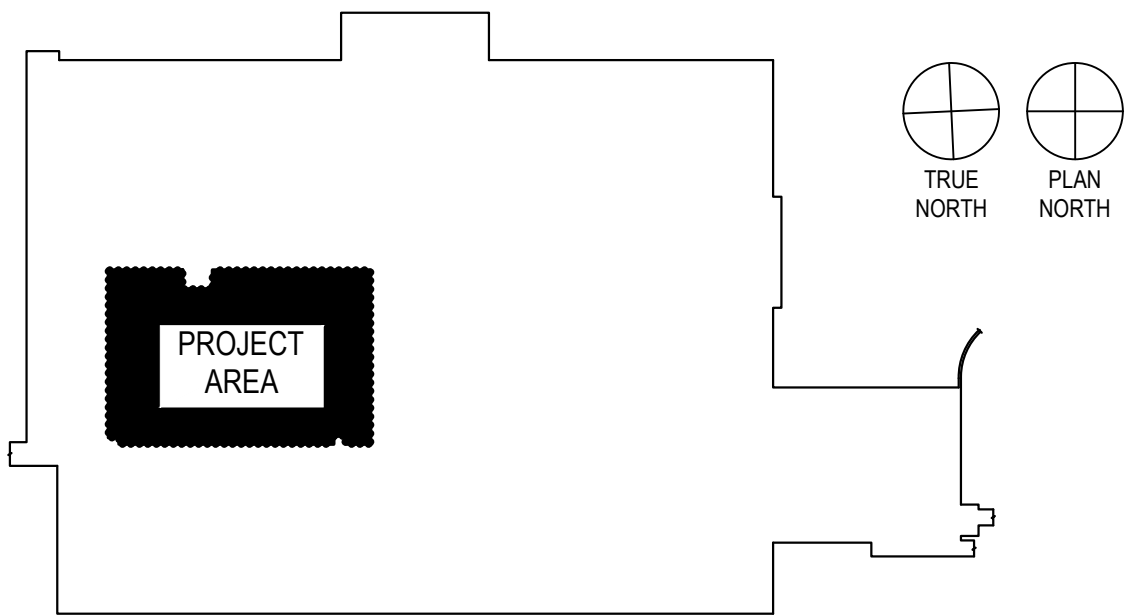


2 FIRE ALARM PANEL ROOM ENLARGED PLAN  
SCALE: 1/4" = 1'-0"

0 2' 4' 6' 8'  
1/4" = 1'-0"

0 4' 8' 12' 16'  
1/8" = 1'-0"

CAUTION: IF THIS PLAN IS A REDUCTION,  
GRAPHIC SCALE MUST BE USED



3 KEYPLAN  
SCALE: 1" = 100'-0"

BID DOCUMENTS	10/10/14
100% CONSTRUCTION DOCUMENTS	10/1/14
CONSTRUCTION DOCUMENTS SUBMISSION	8/29/14
DESIGN DEVELOPMENT SUBMISSION	6/25/14
SCHEMATIC DESIGN SUBMISSION	5/21/14
Revisions:	Date

ARCHITECT / ENGINEERS / CONSULTANTS:

**O.K.K.S. STUDIOS**  
2 Wisconsin Circle / Suite 820  
Chevy Chase, MD 20815-7003  
Tel: (301) 718-0080  
Fax: (301) 718-9530  
www.okkstudios.com

**HENRY ADAMS**  
Consulting Engineers  
MECHANICAL ELECTRICAL & PLUMBING ENGINEERS  
600 Baltimore Avenue, 4th Floor Baltimore, MD 21204  
P 410-296-6500 F 410-296-6501  
www.henryadams.com

**the PROTECTION ENGINEERING GROUP**  
14585 Avion Parkway, Suite 150 703-488-9990  
Chantilly, Virginia 20151 fax: 703-488-9994  
www.PEGroup-Inc.com

PROPERTY OF THE UNITED STATES GOVERNMENT

FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTICE.  
PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED

Stamp/Seal  
Professional Engineer  
20735  
STATE OF  
WEST VIRGINIA  
PROFESSIONAL ENGINEER

Drawing Title  
BASEMENT NEW WORK  
FIRE ALARM PLAN

Approved: Project Director

Project Title  
SPD and SPS Modifications,  
Phase 1

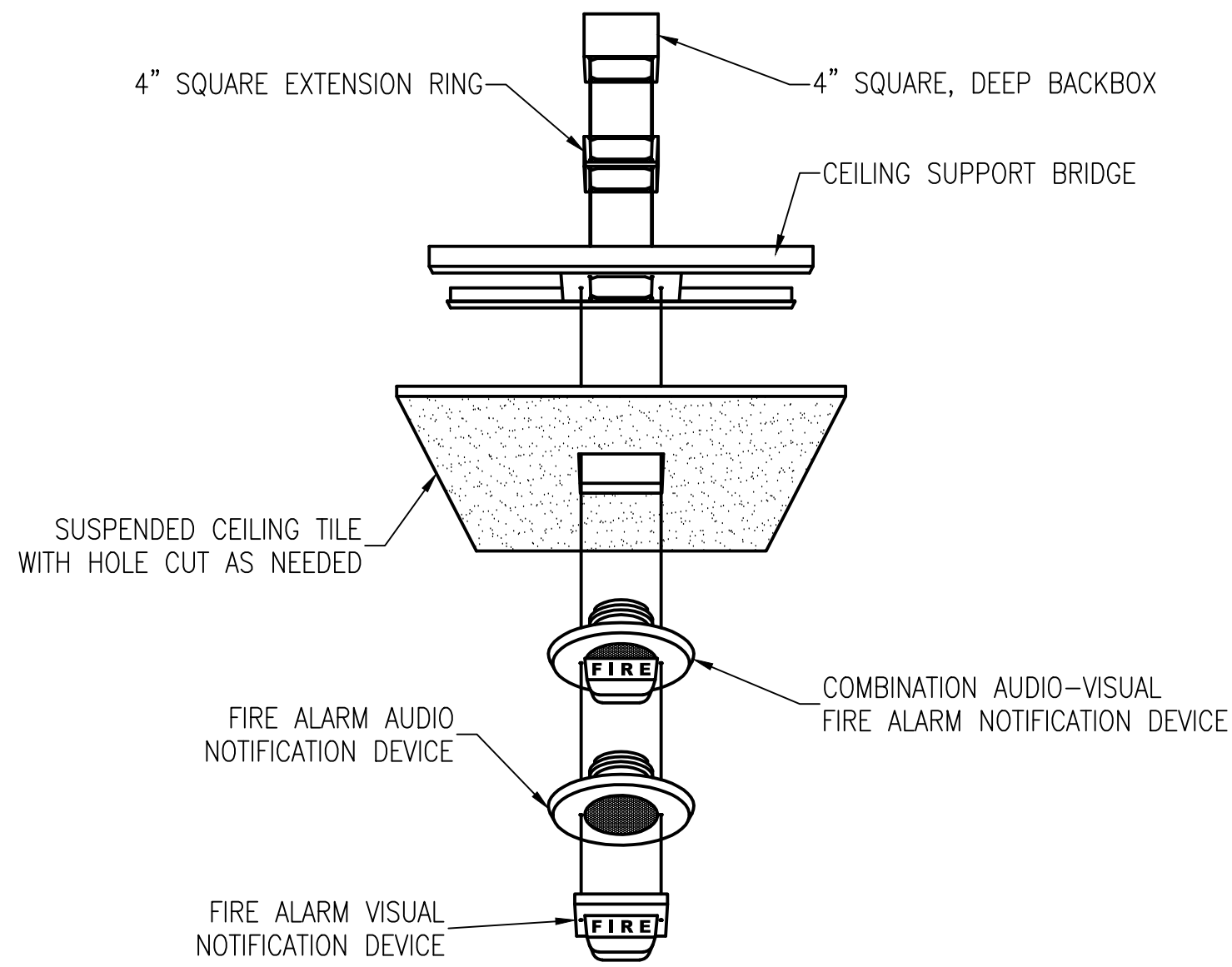
Building Number 500  
Location MARTINSBURG, WV

Date 10/10/2014  
VA Project Number 613-14-106  
Drawing Number FA100

Office of Construction and Facilities Management  
Department of Veterans Affairs



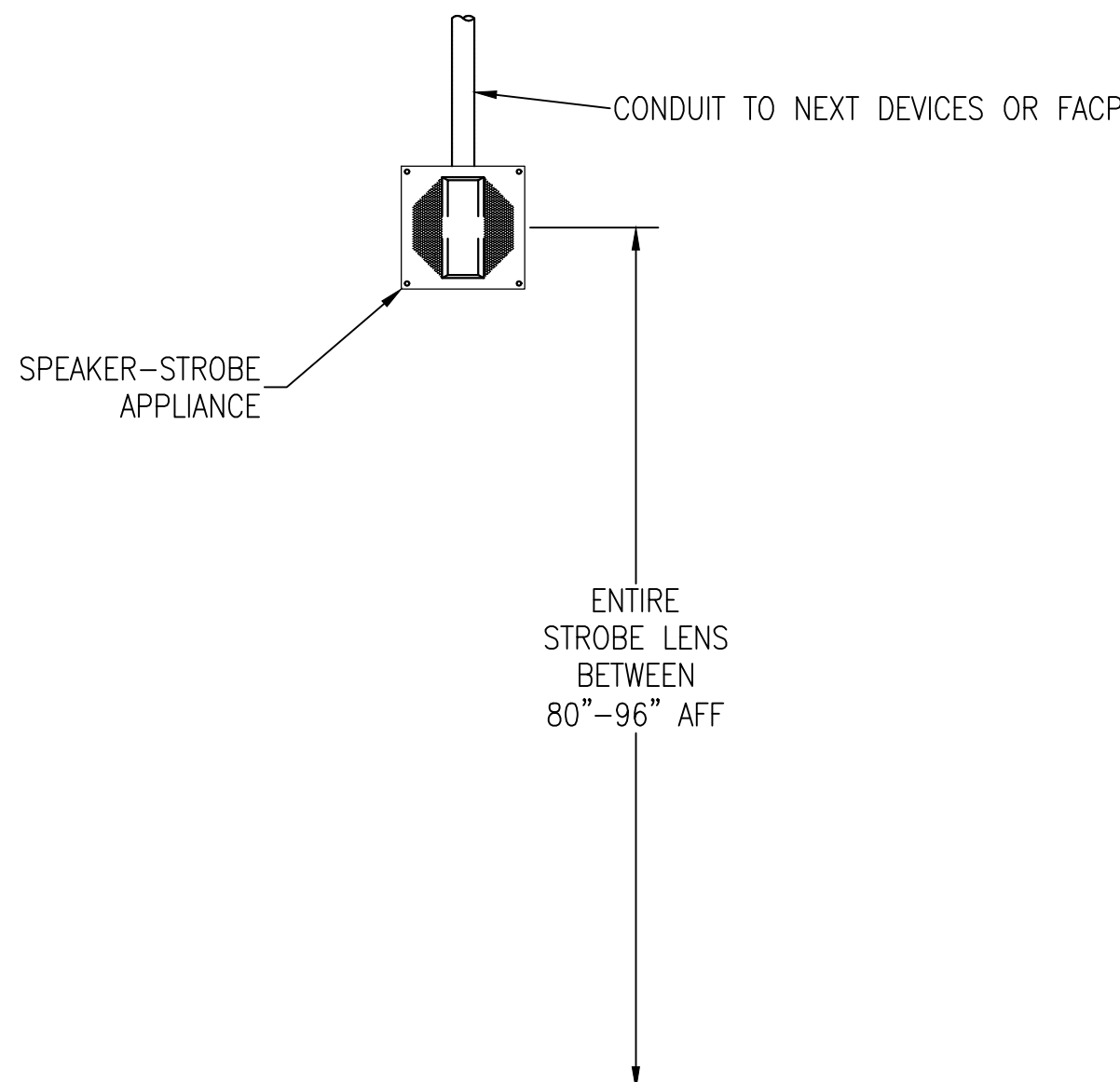
THREE INCHES = ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES = ONE FOOT (1 1/2" = 1'-0")  
ONE INCH = ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH = ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH = ONE FOOT (1/2" = 1'-0")  
THREE EIGHTHS INCH = ONE FOOT (3/8" = 1'-0")  
ONE QUARTER INCH = ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH = ONE FOOT (1/8" = 1'-0")



**MOUNTING OF NOTIFICATION APPLIANCE IN SUSPENDED CEILING**

1  
FA501

SCALE: NOT TO SCALE




**MOUNTING OF SPEAKER STROBE APPLIANCE**

2  
FA501

SCALE: NOT TO SCALE

BID DOCUMENTS	10/10/14
100% CONSTRUCTION DOCUMENTS	10/1/14
CONSTRUCTION DOCUMENTS SUBMISSION	8/29/14
DESIGN DEVELOPMENT SUBMISSION	6/25/14
SCHEMATIC DESIGN SUBMISSION	5/21/14
Revisions:	Date

**ARCHITECT / ENGINEERS / CONSULTANTS:**



2 Wisconsin Circle / Suite 820  
Chevy Chase, MD 20815-7003  
Tel: (301) 718-0080  
Fax: (301) 718-9530  
www.oksstudios.com

**HENRY ADAMS**  
Consulting Engineers

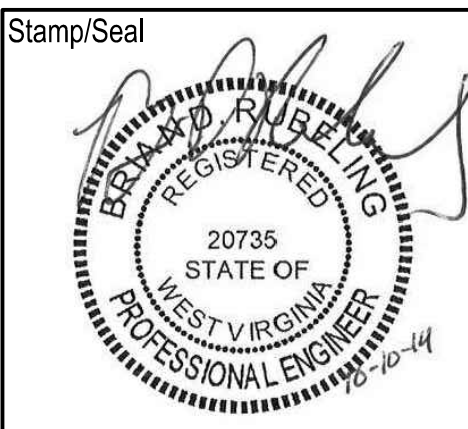
MECHANICAL ELECTRICAL & PLUMBING ENGINEERS  
600 Baltimore Avenue, 4th Floor Baltimore, MD 21204  
P 410-296-6500 | F 410-296-6501  
www.henryadams.com

**the PROTECTION ENGINEERING GROUP**

14585 Avion Parkway, Suite 150 703-488-9990  
Chantilly, Virginia 20151 fax: 703-488-9994  
www.PEGroup-Inc.com

**PROPERTY OF THE UNITED STATES GOVERNMENT**

FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTICE.  
PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED



Drawing Title  
**DETAILS  
FIRE ALARM PLAN**

Approved: Project Director

Project Title  
**SPD and SPS Modifications,  
Phase 1**

Building Number 500  
Location MARTINSBURG, WV

Date 10/10/2014  
VA Project Number 613-14-106  
Drawing Number **FA501**

Office of  
Construction  
and Facilities  
Management

Department of  
Veterans Affairs





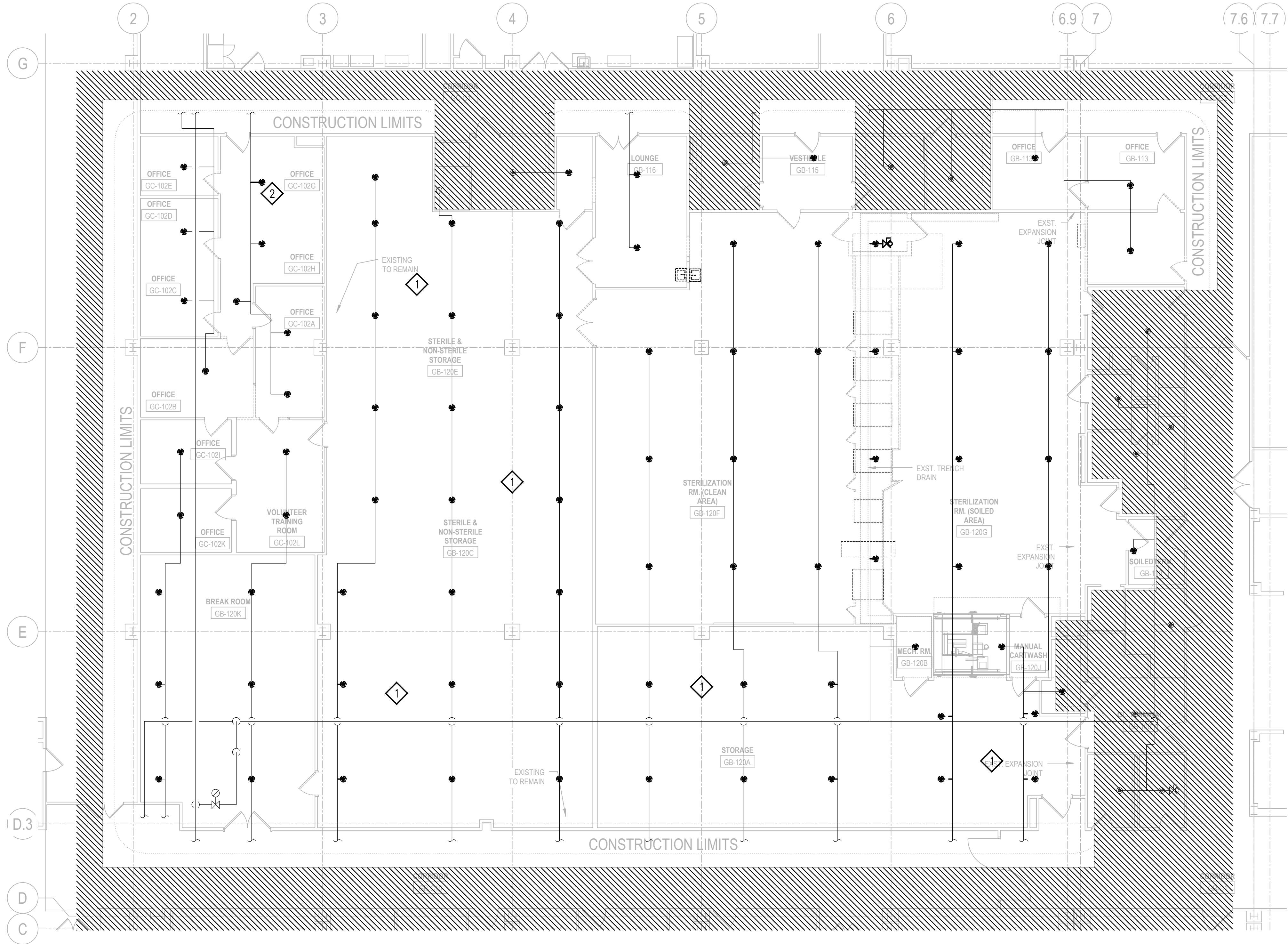


SHEET NOTES

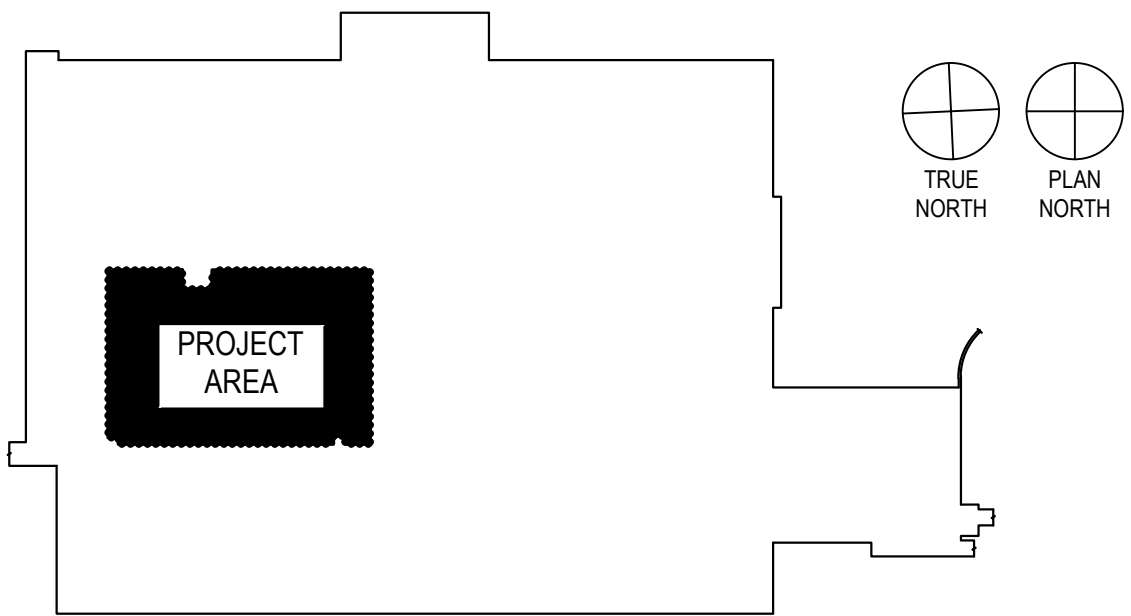
1. REFER TO SHEET FX001 FOR SYMBOLS AND ABBREVIATIONS.
2. REMOVE ALL EXISTING SPRINKLERS WITHIN THE SPD AND SPS RENOVATION AREA. EXISTING BRANCHLINES AND ARM-OVERS TO REMAIN UNLESS NOTED OTHERWISE.
3. THE SPRINKLER PIPING SERVING THE SPD AND SPS AREAS ALSO SERVE OTHER PORTIONS OF THE BUILDING OUTSIDE THE SCOPE OF WORK. SPRINKLER COVERAGE IN AREAS OUTSIDE THE SCOPE OF WORK MUST BE MAINTAINED DURING CONSTRUCTION. ALL SHUTDOWNS OF THE SPRINKLER SYSTEM MUST BE COORDINATED WITH THE VA IN ADVANCE. THE WORK SHALL BE PHASED TO MINIMIZE TIME BETWEEN DEMOLITION AND NEW CONSTRUCTION.

KEYNOTES

- 1 REMOVE EXISTING SPRINKLERS AND SPRINKLER ARM-OVERS IN THIS ROOM. EXISTING BRANCHLINE TO REMAIN.
- 2 REMOVE EXISTING SPRINKLER AND SPRINKLER ARM-OVER. SPRINKLER WILL BE RELOCATED DURING NEW WORK.



1 BASEMENT DEMOLITION FIRE SUPPRESSION PLAN  
SCALE: 1/8" = 1'-0"



2 KEYPLAN  
SCALE: 1" = 100'-0"

0 4' 8' 12' 16'  
1/8" = 1'-0"

CAUTION: IF THIS PLAN IS A REDUCTION,  
GRAPHIC SCALE MUST BE USED

BID DOCUMENTS	10/10/14
100% CONSTRUCTION DOCUMENTS	10/1/14
CONSTRUCTION DOCUMENTS SUBMISSION	8/29/14
DESIGN DEVELOPMENT SUBMISSION	6/25/14
SCHEMATIC DESIGN SUBMISSION	5/21/14
Revisions:	Date

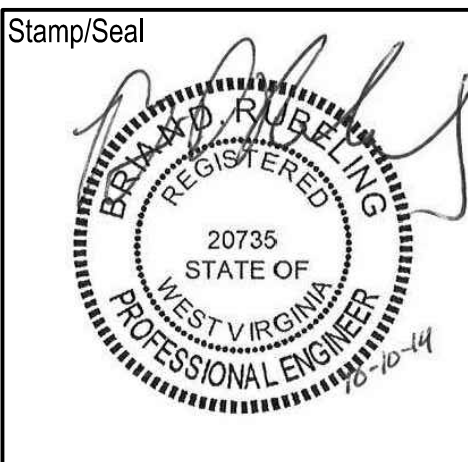
ARCHITECT / ENGINEERS / CONSULTANTS:



**HENRY ADAMS**  
Consulting Engineers  
MECHANICAL ELECTRICAL & PLUMBING ENGINEERS  
600 Baltimore Avenue, 4th Floor Baltimore, MD 21204  
P 410-296-6500 | F 410-296-6501  
www.henryadams.com

**the PROTECTION ENGINEERING GROUP**  
14585 Avion Parkway, Suite 150 703-488-9990  
Chantilly, Virginia 20151 fax: 703-488-9994  
www.PEGroup-Inc.com

**PROPERTY OF THE UNITED STATES GOVERNMENT**  
FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTICE.  
PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED



Drawing Title  
**BASEMENT DEMOLITION  
FIRE SUPPRESSION PLAN**

Approved: Project Director

Project Title  
**SPD and SPS Modifications,  
Phase 1**

Building Number  
**500**

Checked  
**BDR**

Drawn  
**ACJ**

Location  
**MARTINSBURG, WV**

Date  
**10/10/2014**  
VA Project Number  
**613-14-106**

Drawing Number  
**FJ100**

Office of  
Construction  
and Facilities  
Management










- 1 PROVIDE QUICK RESPONSE SPRINKLER COVERAGE USING ORDINARY HAZARD SPRINKLER SPACING WITHIN THIS ROOM. PROVIDE NEW SPRINKLER ARM-OVERS FROM EXISTING BRANCHLINES AS NECESSARY.
- 2 PROVIDE INTERMEDIATE TEMPERATURE SPRINKLERS WITHIN STEAM STERILIZER AREA.
- 3 PROVIDE SPRINKLER PROTECTION WITHIN CART WASH AREA.

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

SCALE: 1" = 100'-0"

		ARCHITECT / ENGINEERS / CONSULTANTS:				Stamp/Seal		Drawing Title		Project Title		Date		Office of Construction and Facilities Management	
		 2 Wisconsin Circle / Suite 820 Chevy Chase, MD 20815-7003 Tel: (301) 718-0080 Fax: (301) 718-9520 www.okksstudios.com		 Consulting Engineers MECHANICAL ELECTRICAL & PLUMBING ENGINEERS 600 Baltimore Avenue, 4th Floor Baltimore, MD 21204 P 410-296-6500 / F 410-296-6501 www.henryadams.com		 14585 Avion Parkway, Suite 150 703-488-9990 Chantilly, Virginia 20151 fax: 703-488-9994 www.PEGroup-inc.com		 PROPERTY OF THE UNITED STATES GOVERNMENT FOR OFFICIAL USE ONLY DO NOT REMOVE THIS NOTICE. PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED		BASEMENT NEW WORK FIRE SUPPRESSION PLAN		SPD and SPS Modifications, Phase 1			
BID DOCUMENTS 10/10/14 100% CONSTRUCTION DOCUMENTS 10/11/14 CONSTRUCTION DOCUMENTS SUBMISSION 8/29/14 DESIGN DEVELOPMENT SUBMISSION 6/25/14 SCHEMATIC DESIGN SUBMISSION 5/21/14 Revisions: Date		Building Number 500 Location MARTINSBURG, WV		Checked BDR Drawn ACJ		Drawing Number FX100		Approved: Project Director						 Department of Veterans Affairs	



THREE INCHES = ONE FOOT (1" = 1'-0")

ONE AND ONE HALF INCHES = ONE FOOT (1 1/2" = 1'-0")

ONE INCH = ONE FOOT (1" = 1'-0")

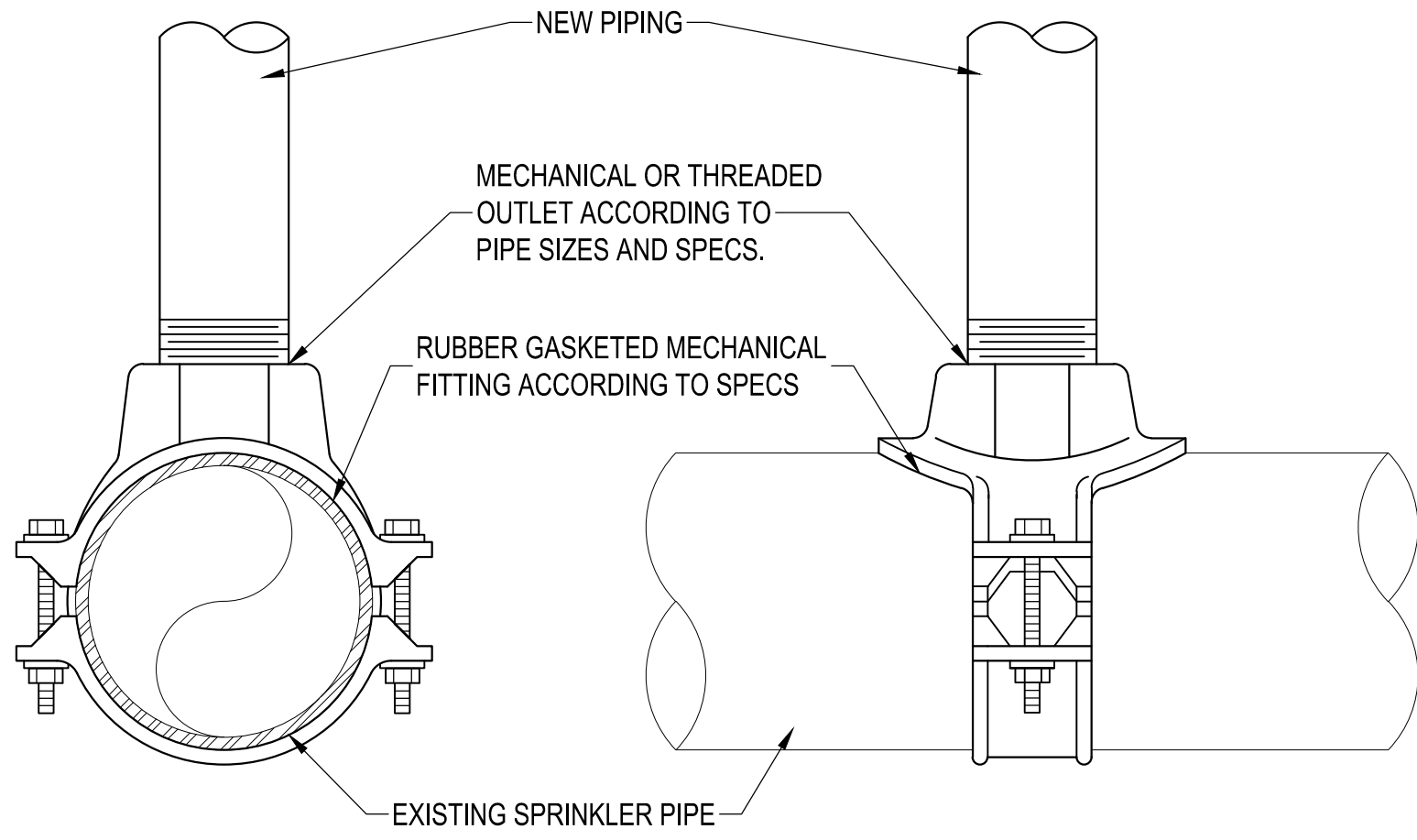
THREE QUARTERS INCH = ONE FOOT (3/4" = 1'-0")

ONE HALF INCH = ONE FOOT (1/2" = 1'-0")

ONE QUARTER INCH = ONE FOOT (1/4" = 1'-0")

THREE EIGHTHS INCH = ONE FOOT (3/8" = 1'-0")

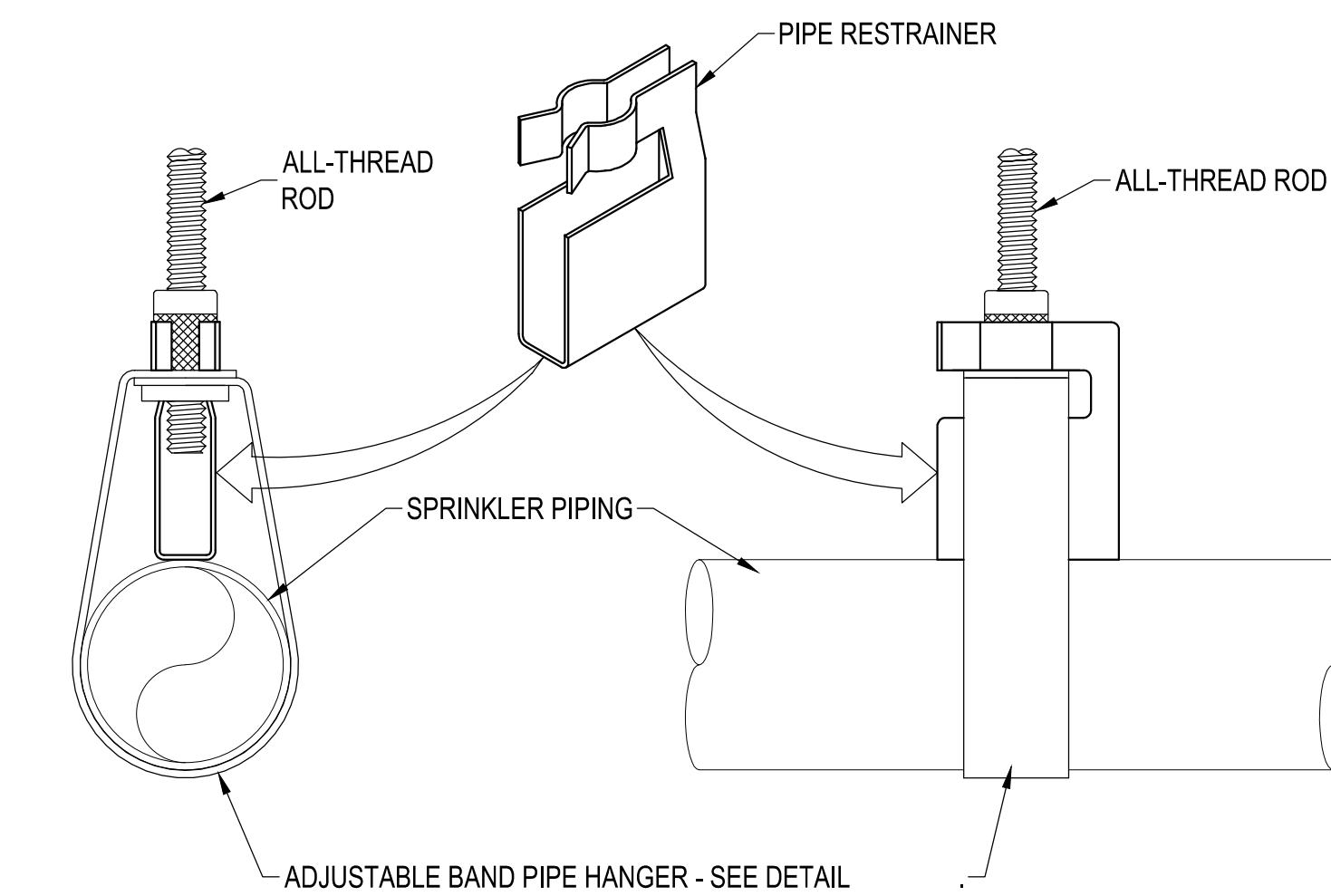
ONE EIGHTH INCH = ONE FOOT (1/8" = 1'-0")



NOTE: SEE FLOOR PLANS FOR EXISTING AND NEW PIPE SIZES.

### 1 GROOVED MECHANICAL TEE CONNECTION WITH THREADED OUTLET

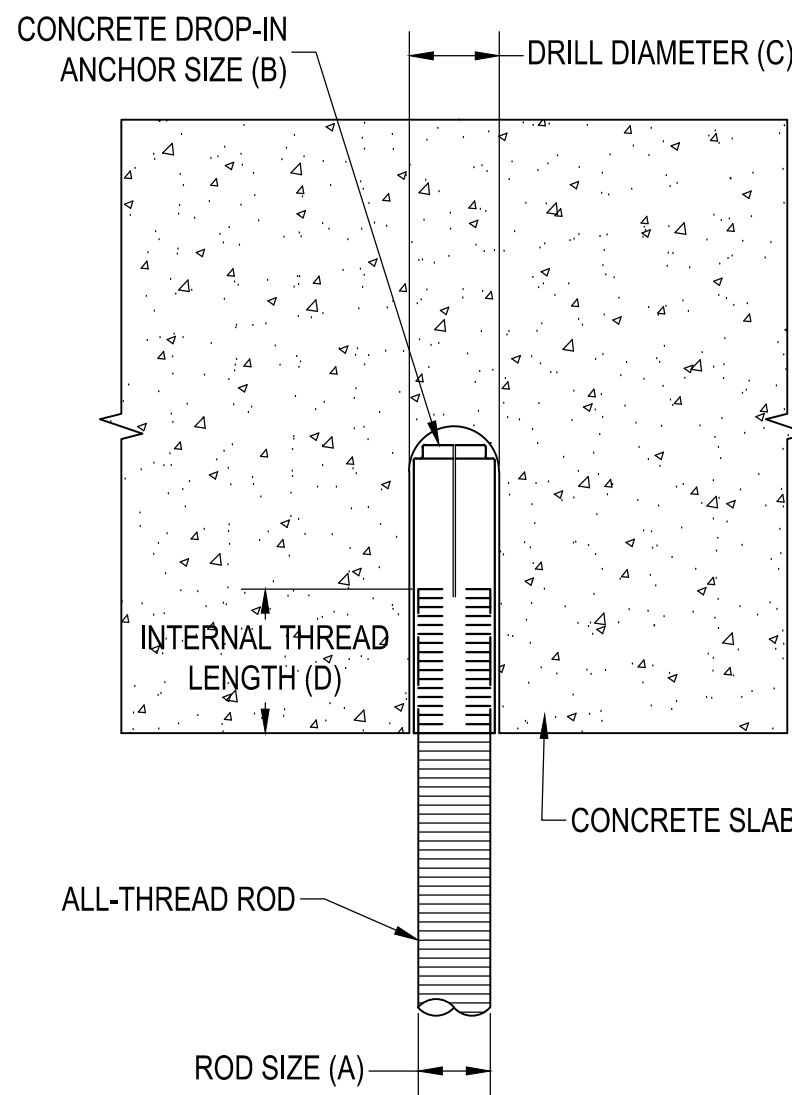
SCALE: NOT TO SCALE



NOTE: PIPE RESTRAINTERS SHALL BE PROVIDED ON ALL FIRE SUPPRESSION PIPING 2" AND SMALLER. RESTRAINTERS SHALL BE PLACED IN ACCORDANCE WITH NFPA 13.

### 5 INSTALLATION OF SURGE RESTRAINER ON ADJUSTABLE BAND HANGER

SCALE: NOT TO SCALE

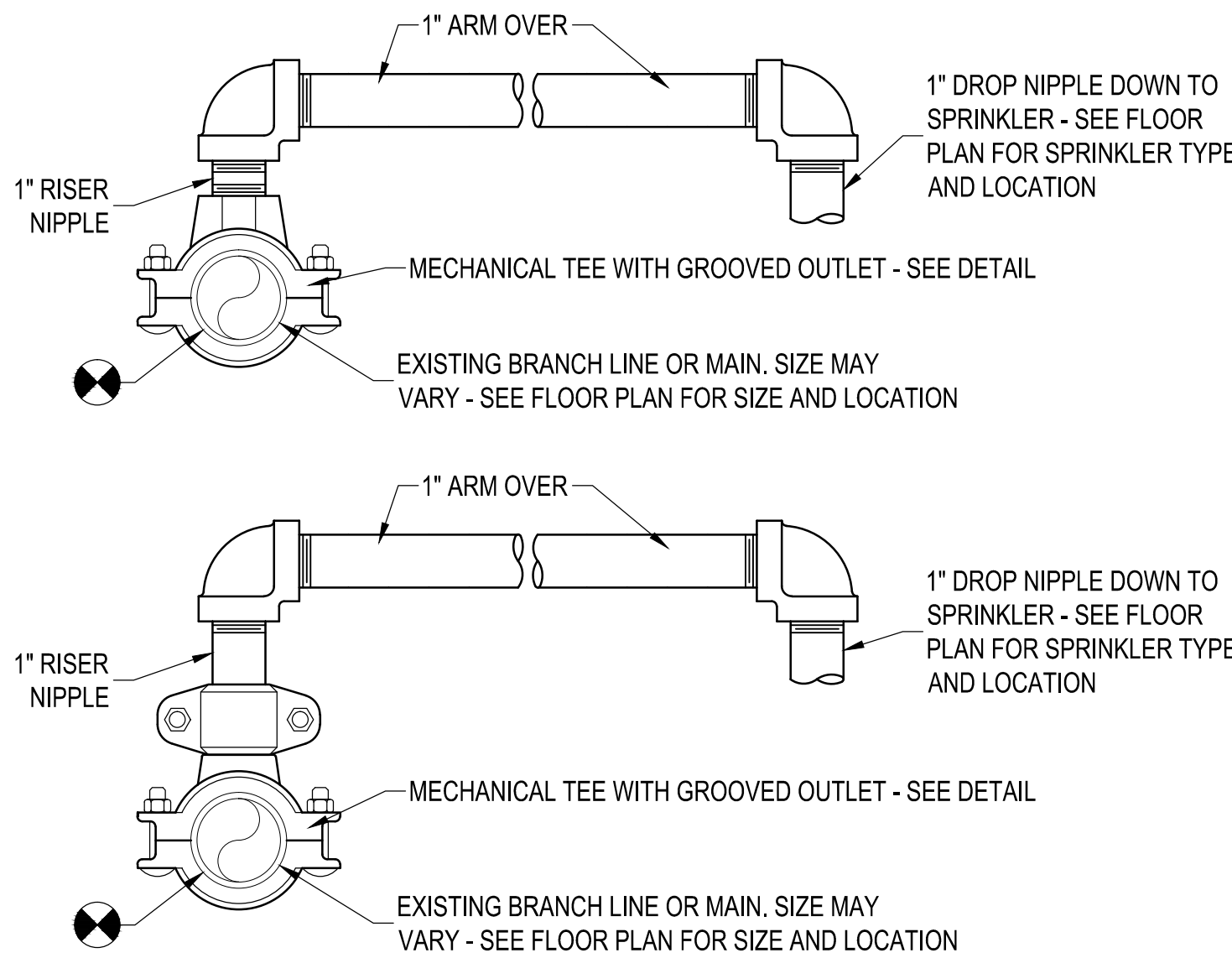


PIPE SIZE	A	B	C	D
1/2	3/8	3/8 x 1 1/8	1/2	5/8
3/4	3/8	3/8 x 1 1/8	1/2	5/8
1	3/8	3/8 x 1 1/8	1/2	5/8
1 1/4	3/8	3/8 x 1 1/8	1/2	5/8
1 1/2	3/8	3/8 x 1 1/8	1/2	5/8
2	3/8	3/8 x 1 1/8	1/2	5/8
2 1/2	3/8	3/8 x 1 1/8	1/2	5/8
3	3/8	3/8 x 1 1/8	1/2	5/8
4	3/8	3/8 x 1 1/8	1/2	5/8
5	1/2	1/2 x 2	5/8	1 1/8
6	1/2	1/2 x 2	5/8	1 1/8
8	1/2	1/2 x 2	5/8	1 1/8
10	5/8	5/8 x 2 1/4	7/32	7/8
12	5/8	5/8 x 2 3/8	7/32	7/8

ALL SIZES ARE IN INCHES

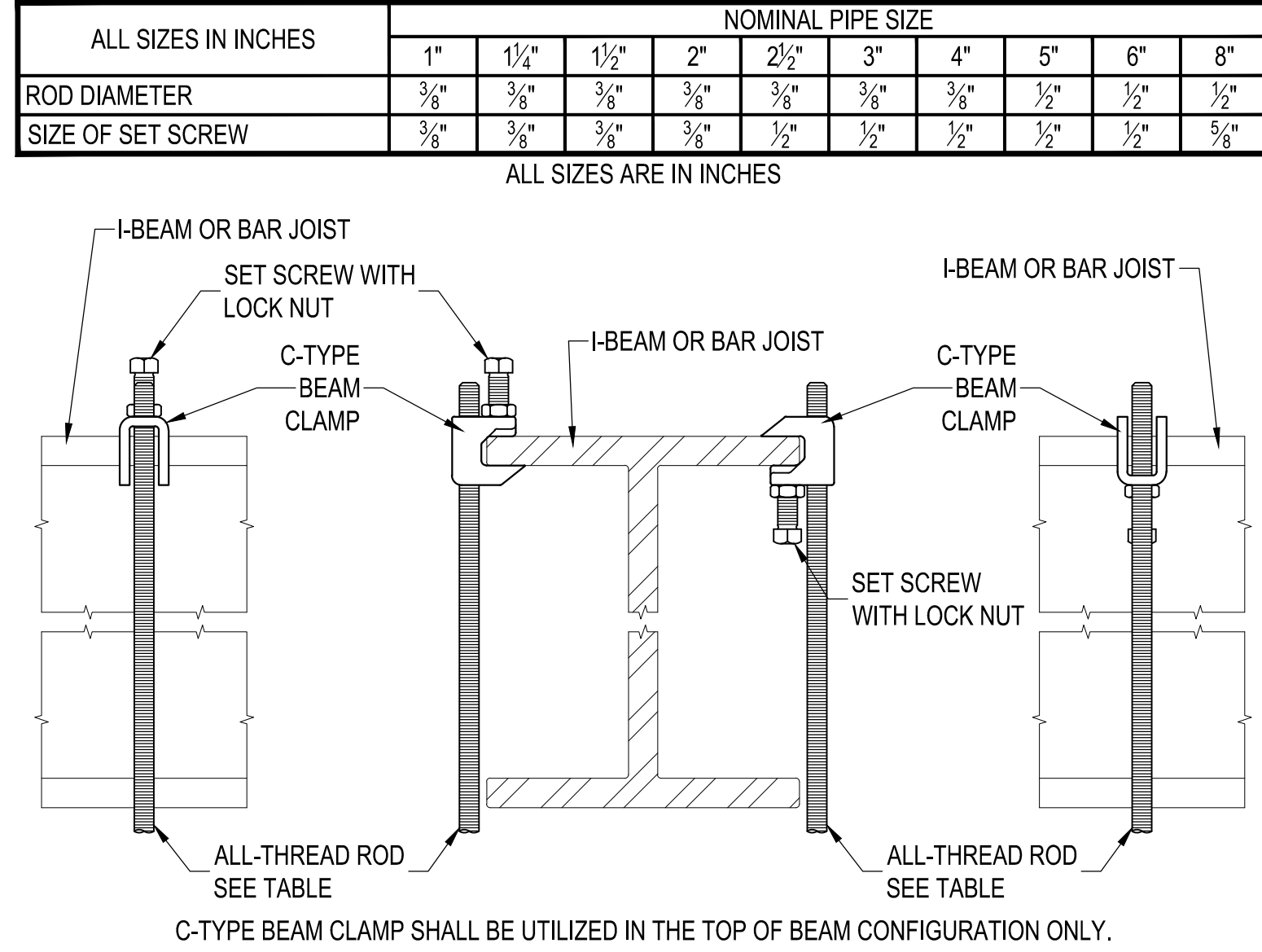
### 2 INSTALLATION OF CONCRETE ANCHOR FOR ALL-THREAD ROD

SCALE: NOT TO SCALE



### 6 CONNECTION OF NEW SPRINKLER ARM-OVER TO EXISTING PIPING

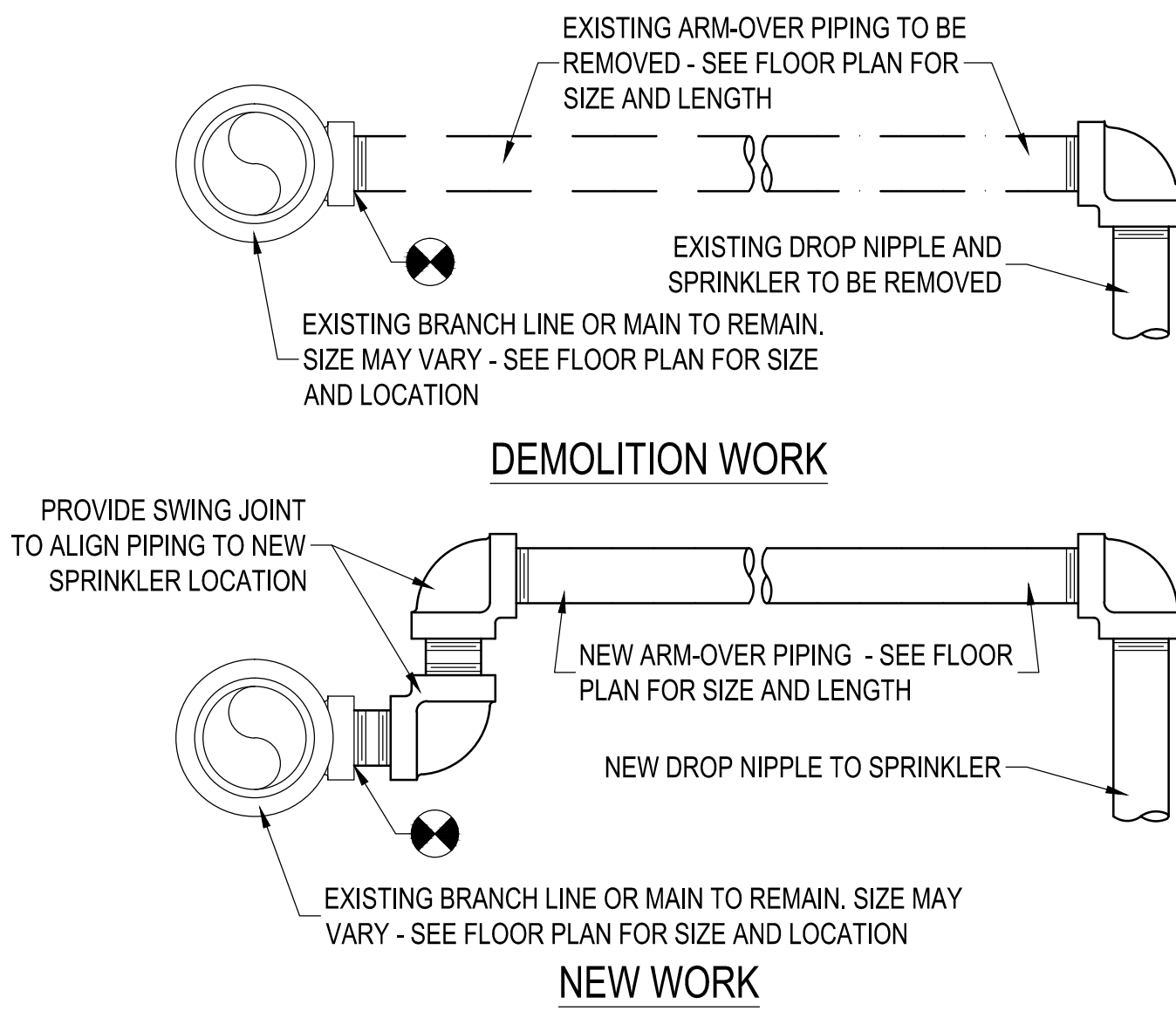
SCALE: NOT TO SCALE



C-TYPE BEAM CLAMP SHALL BE UTILIZED IN THE TOP OF BEAM CONFIGURATION ONLY.

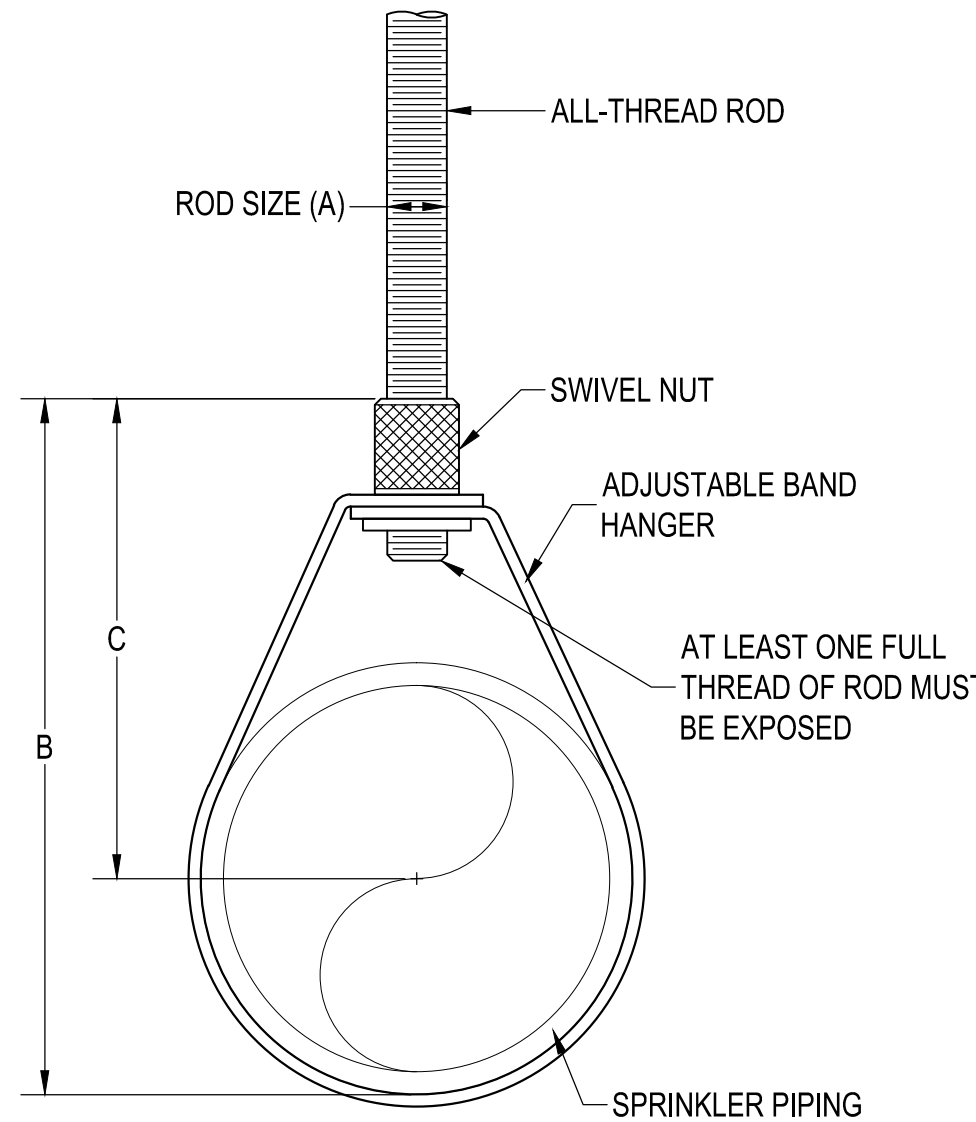
### 3 INSTALLATION OF REVERSABLE STEEL C-CLAMP WITH LOCKNUT

SCALE: NOT TO SCALE



### 7 CONNECTION OF NEW SPRINKLER ARM-OVER FOR RELOCATION OF SPRINKLER

SCALE: NOT TO SCALE

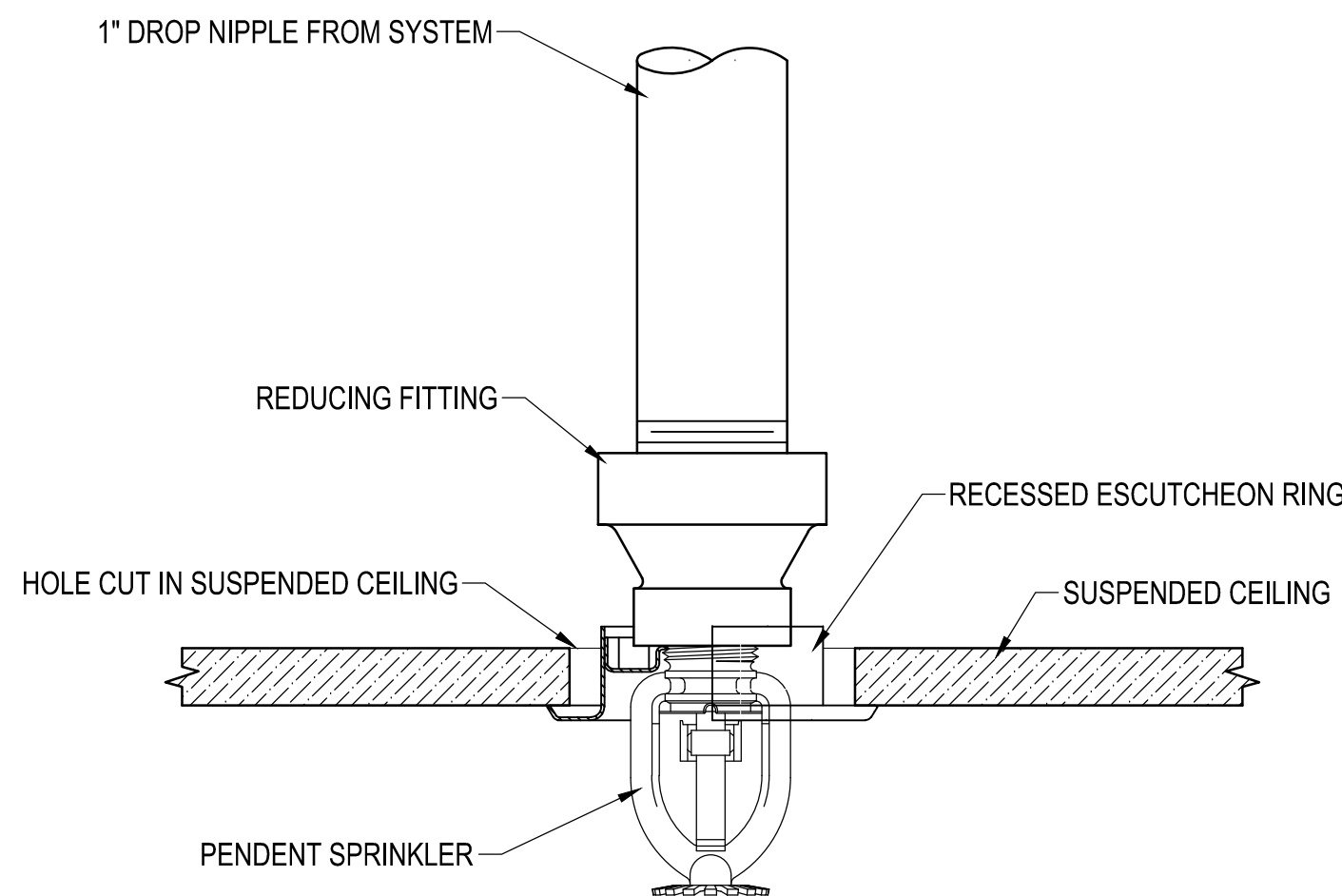


PIPE SIZE	A	B	C
1/2	3/8	3/8	2 1/8
3/4	3/8	3/8	2 1/2
1	3/8	3/8	2 5/8
1 1/4	3/8	3/4	2 7/8
1 1/2	3/8	3/4	2 7/8
2	3/8	4 1/2	3
2 1/2	3/8	5 1/8	4 1/8
3	3/8	5 7/8	4
4	3/8	7 3/8	5
5	1/2	9 1/8	6 1/4
6	1/2	10 1/8	6 3/4
8	1/2	13 3/8	8 3/4

ALL SIZES ARE IN INCHES

### 4 INSTALLATION OF ADJUSTABLE BAND HANGER

SCALE: NOT TO SCALE



### 8 RECESSED PENDENT SPRINKLER IN SUSPENDED CEILING

SCALE: NOT TO SCALE

BID DOCUMENTS	10/10/14
100% CONSTRUCTION DOCUMENTS	10/1/14
CONSTRUCTION DOCUMENTS SUBMISSION	8/29/14
DESIGN DEVELOPMENT SUBMISSION	6/25/14
SCHEMATIC DESIGN SUBMISSION	5/21/14
Revisions:	Date

ARCHITECT / ENGINEERS / CONSULTANTS:

**O-K-K-S STUDIOS**

2 Wisconsin Circle / Suite 820  
Chevy Chase, MD 20815-7003  
Tel: (301) 718-0080  
Fax: (301) 718-9530  
www.oksstudios.com

**HENRY ADAMS**  
Consulting Engineers

MECHANICAL, ELECTRICAL & PLUMBING ENGINEERS

600 Baltimore Avenue, 4th Floor Baltimore, MD 21204  
P 410-296-6500 | F 410-296-6501  
www.henryadams.com

**the PROTECTION ENGINEERING GROUP**

14585 Avion Parkway, Suite 150  
Chantilly, Virginia 20151  
www.PEGroup-Inc.com

PROPERTY OF THE UNITED STATES GOVERNMENT

FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTICE.  
PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED

Stamp/Seal

20735  
STATE OF  
WEST VIRGINIA  
REGISTERED PROFESSIONAL ENGINEER

Drawing Title

**DETAILS  
FIRE SUPPRESSION PLAN**

Approved: Project Director

Project Title

**SPD and SPS Modifications,  
Phase 1**

Building Number: 500  
Location: MARTINSBURG, WV

Date

10/10/2014  
VA Project Number  
613-14-106

Drawing Number

**FX501**

Office of Construction and Facilities Management

Department of Veterans Affairs