

SYMBOLS

FIRE ALARM

SYMBOL	DESCRIPTION
	FIRE ALARM CONTROL PANEL
	SUB-FIRE ALARM CONTROL UNIT
	PRE-ACTION CONTROL PANEL
	REMOTE COMMAND CONSOLE
	FIRE PUMP CONTROLLER
	FIRE ALARM TERMINAL CABINET
	NOTIFICATION APPLIANCE EXTENDER PANEL
	REMOTE FIRE ALARM POWER SUPPLY
	FIRE ALARM ANNUNCIATOR
	PRINTER
	SURGE SUPPRESSOR
	POST INDICATOR VALVE
	ALARM CHECK VALVE PRESSURE SWITCH
	SPRINKLER WATER FLOW SWITCH
	SPRINKLER SUPERVISORY SWITCH
	LIQUID LEVEL INDICATOR SWITCH
	ISOLATOR MODULE
	DUCT SMOKE DETECTOR
	SMOKE DETECTOR
	BEAM TYPE SMOKE DETECTOR, CEILING MOUNTED (BT = TRANSMITTER, BR = REFLECTOR)
	HEAT DETECTOR
	MANUAL PULL STATION
	ADDRESSABLE INPUT MODULE
	ADDRESSABLE OUTPUT MODULE
	STROBE, CEILING MOUNTED
	STROBE, WALL MOUNTED
	HORN
	HORN/STROBE
	SPEAKER/STROBE
	CEILING MOUNTED HORN/STROBE
	CEILING MOUNTED SPEAKER/STROBE
	FIRE SMOKE DAMPER
	2-WAY COMMUNICATIONS SYSTEM CALL STATION, CORNELL OR APPROVED. INSTALL AT 43" AFF.
	2-WAY COMMUNICATIONS SYSTEM MASTER STATION, CORNELL OR APPROVED. INSTALL AT 43" AFF.
	2-WAY COMMUNICATIONS SYSTEM POWER SUPPLY, CORNELL OR APPROVED.
	2-WAY COMMUNICATIONS SYSTEM REMOTE STATION, CORNELL OR APPROVED. INSTALL AT 43" AFF.
	FIRE SPRINKLER BELL
	SPEAKER ONLY
	CONDUIT

FIRE ALARM NOTES

- A.** A FIRE ALARM CONTROL UNIT (FACP) SHALL BE PROVIDED TO MONITOR ALL FIRE SPRINKLER SYSTEM-RELATED FIRE PUMP SUPERVISORY SIGNALS, WATER FLOW AND VALVE TAMPER SWITCHES, MANUAL PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, AND AUTOMATIC SUPPRESSION SYSTEMS. THE NEW SYSTEM SHALL BE A FULLY FIELD PROGRAMMABLE MICROPROCESSOR-BASED SYSTEM CAPABLE OF TWO-WAY COMMUNICATION OVER SIGNALING LINE CIRCUITS BETWEEN ADDRESSABLE INTERFACING CONTROL MODULES AND THE FACP.
- B.** ALL PANELS AND PERIPHERAL DEVICES SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER AND SHALL DISPLAY THE MANUFACTURER'S NAME ON EACH COMPONENT. EQUIPMENT AND COMPONENTS SHALL BEAR THE U.L. OR FM LABEL OR MARKING, AND ALL MATERIALS SHALL BE NEW AND IN GOOD CONDITION, FREE OF DEFECTS, SCRATCHES, CORROSION AND CONTAMINATION. USED EQUIPMENT SHALL NOT BE ALLOWED.
- C.** THE FACP PRIMARY POWER SUPPLY SHALL BE PROTECTED BY A SEPARATE U.L. LISTED FAST-ACTING ELECTRICAL TRANSIENT SURGE SUPPRESSOR THAT INCORPORATES LOW Z EARTH GROUNDING. THE DEVICE SHALL MEET THE REQUIREMENTS OF U.L. 1449.
- D.** ALL LOW VOLTAGE CIRCUITS LEADING FROM THE FACP, INCLUDING INITIATING AND NOTIFICATION CIRCUITS, AS WELL AS TELEPHONE LINES, SHALL BE PROTECTED BY A SEPARATE U.L. LISTED FAST-ACTING ELECTRICAL TRANSIENT SURGE SUPPRESSOR WHICH INCORPORATES LOW Z EARTH GROUNDING. THE DEVICE SHALL MEET THE REQUIREMENTS OF U.L. 497B.
- E.** SELECTION OF CABLE TYPES AND WIRE WITH RESPECT TO CONDUCTOR SIZE, SHIELDING REQUIREMENTS, AND SEPARATION BETWEEN CIRCUITS SHALL BE IN FULL COMPLIANCE WITH THE REQUIREMENTS OF THE MANUFACTURER OF THE FACP. WITHOUT EXCEPTION, ALL CIRCUIT WIRE/CABLE SHALL BE SPECIFICALLY LISTED FOR USE WITH FIRE ALARM SYSTEMS.
- F.** THE FACP SHALL BE DESIGNED FOR FUTURE EXPANSION AND MODIFICATION. IN NO CASE SHALL CIRCUIT AND/OR MODULE LOADING EXCEED 80% PERCENT OF THE DESIGN CAPACITY AS SPECIFIED BY THE MANUFACTURER.
- G.** THE DESIGN, EQUIPMENT, MATERIALS, INSTALLATION, AND WORKMANSHIP SHALL BE IN STRICT ACCORDANCE WITH THE REQUIRED AND ADVISORY PROVISIONS OF NFPA 70 (2014 EDITION), ABADA AND WITH ALL OTHER REQUIREMENTS IDENTIFIED IN THE SPECIFICATIONS. THE ADVISORY PROVISIONS (APPENDICES) OF THE NFPA PUBLICATIONS REFERRED TO HEREIN SHALL BE CONSIDERED TO BE MANDATORY, AS THOUGH THE WORD "SHALL" HAD BEEN SUBSTITUTED FOR "SHOULD" WHEREVER IT APPEARS. IF THERE ARE ANY CONFLICTS BETWEEN THESE SPECIFICATIONS AND THE REFERENCED STANDARDS AND PUBLICATIONS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- H.** THE FIRE ALARM SUB-CONTRACTOR (CONTRACTOR) SHALL BE RESPONSIBLE FOR OBTAINING, AND PAYING FOR, ANY AND ALL PERMITS REQUIRED PRIOR TO BEGINNING WORK AT THE DIRECTION OF THE GENERAL CONTRACTOR.
- I.** THE CONTRACTOR SHALL PROVIDE, AS PART OF THE INSTALLED COST OF THIS FIRE ALARM SYSTEM, A WARRANTY AND SERVICE AGREEMENT TO COVER THE INSTALLATION OF THE COMPLETE SYSTEM FOR A PERIOD OF AT LEAST ONE YEAR FOLLOWING FINAL SYSTEM ACCEPTANCE.
- J.** ALL EQUIPMENT SHALL BE INSTALLED IN AN AESTHETIC AND SKILLED MANNER IN ACCORDANCE WITH NFPA CODES AND STANDARDS AND OTHER APPLICABLE STANDARDS REFERENCED IN THE PROJECT SPECIFICATIONS. FINAL APPEARANCE OF ALL SYSTEMS AND EQUIPMENT SHALL BE NEAT AND CLEAN.
- K.** THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SYSTEM REQUIREMENTS WITH ALL CONDITIONS OF THE BUILDING AND SITE INCLUDING, BUT NOT LIMITED TO, BLIND SPACES, SHELVING, LIGHTS, GRILLES AND DIFFUSERS, PIPING, DUCT WORK, DOORS, WINDOWS, EQUIPMENT PLATFORMS, WALLS (FIRE-RATED AND NON-FIRE-RATED), BEAMS, JOISTS, COLUMNS, HVAC EQUIPMENT, ELECTRICAL PANELS AND EQUIPMENT, CEILINGS, AREAS WITHOUT CEILINGS, WALL CONSTRUCTION, FLOORS AND ALL CONSTRUCTION, EQUIPMENT AND BUILDING APPURTENANCES.
- L.** THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING, DOCUMENTING, AND CERTIFYING REQUISITE INSPECTION AND TESTS IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS FOR ALL EQUIPMENT FURNISHED UNDER THIS PROJECT. AFTER COMPLETING HIS TESTING, THE CONTRACTOR SHALL DEMONSTRATE FULL OPERATIONAL CAPABILITY OF THE FIRE ALARM SYSTEM, AS WELL AS FULL COMPLIANCE WITH ALL DESIGN DOCUMENTS, CODES AND STANDARDS, TO THE SATISFACTION OF THE OBC/SP/IR/PP.
- M.** SEE MECHANICAL DRAWINGS, HVAC ZONE MAPS, FOR REFERENCE WHEN PROGRAMMING AND SEQUENCING OF FSD CLOSURES AND HVAC SHUT DOWN.
- N.** THIS DRAWING IS ISSUED FOR REVIEW AND IS INTENDED TO DESCRIBE THE GENERAL DESIGN INTENT BY WHICH THE FIRE ALARM PLANNER CAN CORRECTLY PLAN THE SYSTEM(S). SOME PARTS OF THE SYSTEM MAY NOT BE DEPICTED, AND ADDITIONAL DEVICES MAY BE REQUIRED. REFER TO SPECIFICATION SECTION 28.310 FOR COMPLETE PERFORMANCE REQUIREMENTS.

GENERAL SYMBOLS

SYMBOL	DESCRIPTION
	KEYED NOTE
	REVISION TRIANGLE
	EQUIPMENT TAG
	MATCHLINE
	DRAWING TITLE
	SECTION REFERENCE
	DETAIL REFERENCE
	ENLARGED PLAN REFERENCE

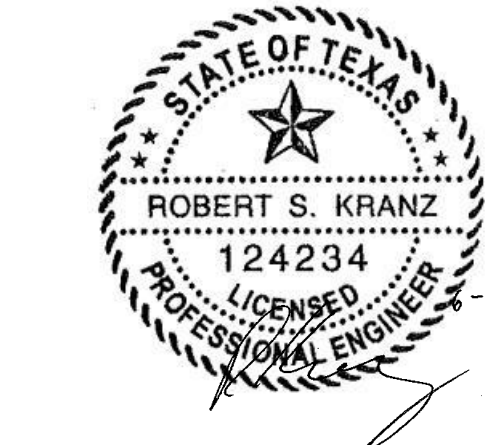
ABBREVIATIONS

ABBREV.	DESCRIPTION
AFH	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLER UNIT SHUTDOWN
AIM	ADDRESSABLE INPUT MODULE
ALT	ELEVATOR RECALL, ALTERNATE
AOM	ADDRESSABLE OUTPUT MODULE
AS	AUTOMATIC SPRINKLER
BOB	BOTTOM OF BEAM
BOD	BOTTOM OF DECK
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF RISER
BV	BUTTERFLY VALVE
C	CENTERLINE
CAC	COMPOUND ACCESS CONTROL FACILITIES
CV	CHECK VALVE
DDCV	DOUBLE DETECTOR CHECK VALVE ASSEMBLY
DIP	DUCTILE IRON PIPE
DN	DROP NIPPLE
(E)	EXISTING
EC	EXTENDED COVERAGE
EL	ELEVATION
F	FAHRENHEIT
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FFL	FLOOR FLANGE
FHC	FIRE HOSE CABINET
FHS	FIRE HOSE STATION
FLT	FIRE PUMP FAULT
FS	FLOW SWITCH
FSD	FIRE SMOKE DAMPER
FT	FEET
G	GRADE
GPM	GALLONS PER MINUTE
GSO	SUPPORT ANNEX
GV	GATE VALVE
H	HANGER
HDPE	HIGH DENSITY POLYETHYLENE
HSW	HORIZONTAL SIDE WALL
HV	HOSE VALVE
ID	INSIDE DIAMETER
IN	INCHES
IE	INVERT ELEVATION
KH	KITCHEN HOOD INTERFACE
LOW	FIRE PUMP LOW FUEL
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NAC	NOTIFICATION APPLIANCE CIRCUIT
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OBJ	OPEN BAR JOIST
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE
PIV	POST INDICATOR VALVE
PRI	ELEVATOR RECALL, PRIMARY
PRV	PRESSURE RELEASE VALVE
PS	PRESSURE SWITCH
(R)	REMOVE
(RL)	RELOCATE
RN	RISER NIPPLE
RM	ROOF MANIFOLD
RUN	FIRE PUMP RUNNING
S	SOUNDER BASE
SLC	SIGNALING LINE CIRCUIT
ST	ELEVATOR, SHUNT TRIP
STS	ELEVATOR, SHUNT TRIP SUPERVISION
TMP	LOW SPACE TEMP
TNK	WATER TANK LEVEL
UTL	UTILITY BUILDING
VT	VALVE TAMPER SWITCH
WHS	WAREHOUSE
WP	WEATHERPROOF

FIRE PROTECTION

GENERAL NOTES	ABBREVIATIONS
<p>1. PROVIDE 100% FIRE SPRINKLER COVERAGE FOR BUILDING AREA SHOWN ON CONTRACT DOCUMENTS. FIRE SPRINKLER PIPING SHALL BE DESIGNED IN ACCORDANCE WITH LOCAL BUILDING CODES, NFPA 13 AND OWNERS INSURANCE UNDERWRITERS.</p> <p>2. THE FIRE SUPPRESSION SYSTEM, AS SHOWN ON THE CONTRACT DOCUMENTS, IS SCHEMATIC IN NATURE AND INDICATES THE AREAS TO BE COVERED BY THE SUPPRESSION SYSTEMS. THE FINAL DESIGN OF THE SYSTEM SHALL BE PERFORMED BY A LICENSED INDIVIDUAL CERTIFIED TO A MAXIMUM LEVEL III, IN THE SUB-FIELD OF "AUTOMATIC SPRINKLER SYSTEM LAYOUT," THROUGH THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NIET).</p> <p>3. PIPE SIZES SHOWN ARE SUBJECT TO CHANGE BASED ON HYDRAULIC CALCULATIONS PERFORMED BY FIRE PROTECTION CONTRACTOR. FINAL PIPING LAY-OUT & SIZE SHALL BE DETERMINED BY FIRE PROTECTION CONTRACTOR.</p> <p>4. COORDINATE WORK WITH ALL OTHER TRADES.</p> <p>5. ONLY PIPING SERVING SPRINKLERS WITHIN ELECTRICAL ROOMS SHALL BE ROUTED THROUGH SUCH ROOMS. PIPING WITHIN SHALL NOT SERVE SPRINKLERS OUTSIDE OF THESE ROOMS.</p> <p>6. ROUTE PIPING CONCEALED THROUGHOUT EXCEPT WHERE INDICATED.</p> <p>7. ALL HORIZONTAL PIPING IS ABOVE CEILING UNLESS NOTED OTHERWISE.</p> <p>8. WHERE HEADS ARE NOT SHOWN, CONTRACTOR SHALL DETERMINE LOCATION, CENTER IN CEILING TILES IN LAY-IN CEILING AREAS, ALIGN WITH LIGHTS AND OTHER CEILING ELEMENTS IN HARD CEILING AREAS. COORDINATE EXACT LOCATION WITH ARCHITECT DURING SHOP DRAWINGS SUBMITTAL PROCESS.</p> <p>9. WHERE NOT SHOWN, PIPING LAYOUT AND SIZE SHALL BE DETERMINED BY FIRE PROTECTION CONTRACTOR. ALL PIPING TO BE ROUTED CONCEALED, UNLESS OTHERWISE INDICATED.</p> <p>10. SHOW ALL DUCTWORK AND OTHER OBSTRUCTIONS IN ROOMS THAT ARE WITHOUT CEILINGS ON SHOP DRAWINGS. PROVIDE COVERAGE AROUND AND UNDER ALL OBSTRUCTIONS AS REQUIRED BY NFPA 13, (AND 72) INCLUDING BUT NOT LIMITED TO COVERAGE UNDER DUCTWORK 4" AND UNDER HEADS THAT ARE BELOW OBSTRUCTIONS SHALL BE PROVIDED WITH WIRE CAGE PROTECTORS.</p> <p>11. CONTRACTOR SHALL VERIFY LOCATION OF ANY PIPING THAT MAY CONFLICT WITH ROUTING OF FIRE PROTECTION PIPING PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL SUBMIT REPORT OF CONFLICT DIRECTLY TO ENGINEER.</p> <p>12. NOTIFY AND COORDINATE WITH OWNERS REPRESENTATIVE PRIOR TO SHUT-DOWN OF ANY FIRE PROTECTION UTILITY. SHUT-DOWN TIME TO BE MINIMUM. NOTIFICATION SHALL BE IN WRITING A MINIMUM OF 48 HOURS PRIOR TO SHUT-DOWN.</p>	<p>AD AREA DRAIN</p> <p>AFF ABOVE FINISHED FLOOR</p> <p>AHU AIR HANDLING UNIT</p> <p>APPROX APPROXIMATE</p> <p>AVG AVERAGE</p> <p>BA BREATHING AIR</p> <p>BLDG BUILDING</p> <p>BOP BOTTOM OF PIPE</p> <p>BYP BY-PASS</p> <p>C CELSIUS</p> <p>CA COMPRESSED</p> <p>CO AIR</p> <p>CONN CLEANOUT</p> <p>CW CONNECTION</p> <p>COLD WATER</p> <p>DCW DOMESTIC COLD WATER</p> <p>DWV DRAIN, WASTE & VENT</p> <p>EL ELEVATION</p> <p>EX EXISTING</p> <p>F FIRE LINE</p> <p>G.C.O. GRADE CLEANOUT</p> <p>HD HYDRAULIC DRAIN</p> <p>HP HORSE POWER</p> <p>HW HOT WATER</p> <p>HWCP HOT WATER CIRCULATING PUMP</p> <p>HWR HOT WATER RETURN</p> <p>HWS HOT WATER SUPPLY</p> <p>IN WC INCHES, WATER COLUMN</p> <p>INW INVERT</p> <p>KW KILOWATT</p> <p>LB POUNDS</p> <p>LF LINEAR FEET</p> <p>LP LOW PRESSURE</p> <p>MAX MAXIMUM</p> <p>MIN MINIMUM</p> <p>NA NOT APPLICABLE</p> <p>NC NORMALLY CLOSED</p> <p>NIC NOT IN CONTRACT</p> <p>NPW NON-POTABLE WATER</p> <p>NO NORMALLY OPEN</p> <p>NTS NOT TO SCALE</p> <p>OS&Y OUTSIDE SCREW AND YOKE</p> <p>PDI PLUMBING DRAINAGE INSTITUTE</p> <p>PDISCH PUMP DISCHARGE</p> <p>PRV PRESSURE REDUCING VALVE</p> <p>PLBG PLUMBING</p> <p>PRESS PRESSURE</p> <p>PTIRV PRESSURE TEMPERATURE RELIEF VALVE</p> <p>PW PROTECTED WATER</p> <p>REF REFERENCE</p> <p>REFRIG REFRIGERATOR</p> <p>RPZA REDUCED PRESSURE ZONE ASSEMBLY</p> <p>SAN SANITARY</p> <p>SPEC SPECIFICATION</p> <p>SPK SPRINKLER</p> <p>T TEMPERATURE SENSOR</p> <p>T&P TEMPERATURE AND PRESSURE</p> <p>TEMP VALVE</p> <p>TOP TEMPERATURE</p> <p>TP TOP OF PIPE</p> <p>TSTA TRAP PRIMER OR TRAP PRIMER LINE</p> <p>T THERMOSTAT</p> <p>V VENT</p> <p>VERT VERTICAL</p> <p>VTR VENT THROUGH ROOF</p> <p>WG WATER GAGE</p> <p>WHA WATER HAMMER ARRESTER</p>
FIRE PROTECTION SYMBOLS	MISC SYMBOLS
<p> PENDANT SPRINKLER HEAD PLAN (STAINLESS STEEL)</p> <p> PENDANT SPRINKLER HEAD</p> <p> PRE-ACTION MANUAL PULL STATION</p> <p> PRE-ACTION VISUAL & FIRE ALARM HORN & STROBE</p> <p> PRE-ACTION VALVE RELEASE CONTROL PANEL</p> <p> FLOW SWITCH</p> <p> DRY PIPE VALVE</p> <p> SUPERVISED CONTROL VALVE</p> <p> GATE VALVE</p> <p> 2 1/2" FIRE VALVE (AT STANDPIPES)</p> <p> PIPE CAP</p> <p> FIRE LINE (WET SYSTEM)</p> <p> SPRINKLER LINE (DRY SYSTEM)</p> <p> PIPE DOWN</p> <p> PIPE UP</p> <p> POINT OF CONNECTION NEW TO EXISTING</p> <p> FIRE STANDPIPE RISER</p> <p> FIRE PROTECTION DRY PIPE HEADER RISER</p>	<p> EQUIPMENT DESIGNATIONS</p> <p> PIPE BREAK CONTINUATION</p> <p> KEY NOTE</p> <p> POINT OF DISCONNECTION</p> <p> POINT OF CONNECTION</p> <p> EXISTING PIPE TO REMAIN</p> <p> LIMIT OF PIPE TO BE REMOVED NEW PIPING</p> <p> EXISTING PIPING TO NEW PIPING CONNECTION</p> <p> INDICATES ROOF AREA IN SQUARE FEET SERVED BY ROOF DRAIN</p>
MULTI-LINE DESIGNATION	
<p>HORIZONTAL RUN ON PLAN READ TOP TO BOTTOM</p> <p>INDICATES FUTURE PIPING ON THE RACK</p> <p>4" CW 2" HW 3/4" HW 2" NG</p> <p>BOP 12'-6" LOWER PIPE RACK</p> <p>BOP 13'-6" UPPER PIPE RACK</p> <p>HA(F) 2" A 2" W 2" DS 2" DR</p> <p>HA(F) 2" A 2" W 2" DS 2" DR</p> <p>VERTICAL RUN ON PLAN READ LEFT TO RIGHT</p> <p>4" CW 2" HW 3/4" HW 2" NG</p> <p>BOP 12'-6" LOWER PIPE RACK</p> <p>BOP 13'-6" UPPER PIPE RACK</p> <p>HA(F) 2" A 2" W 2" DS 2" DR</p> <p>HA(F) 2" A 2" W 2" DS 2" DR</p>	

Revision #		Date	
CONSULTANTS		ARCHITECT	
STRUCTURAL / CIVIL ENGINEER		FIRE PROTECTION / TELECOM ENGINEER	
H2B, INC. 1225 N. LOOP WEST, SUITE 900 HOUSTON, TX 77008 (713) 864-2900		PAGE 400 W. CESAR CHAVEZ STREET, SUITE 500 AUSTIN, TX 78701 (512) 472-6721	
M.E.P. ENGINEER		300 NW 50th St. SUITE A Oklahoma City, OK 73103 ogor-design.com	
SPUR DESIGN 1511 WESTPORT ROAD KANSAS CITY, MO 64111 (405) 642-6100		1511 Westport Road Kansas City, MO 64111 ogor-design.com	
APPROVED: DIRECTOR		APPROVED: CHIEF ENGINEER	
APPROVED: ASSOCIATE DIRECTOR		APPROVED: CHIEF ENGINEER	
APPROVED: ASSISTANT DIRECTOR		APPROVED: CHIEF ENGINEER	
APPROVED: CHIEF ENGINEER		APPROVED: CHIEF ENGINEER	
SHEET TITLE FIRE ALARM & SUPPRESSION SYMBOLS & ABBREVIATIONS LEGEND		PROJECT TITLE NEW ADMINISTRATION BUILDING	
PROJECT LOCATION 2002 HOLCOMBE BOULEVARD, HOUSTON, TX 77030		VA PROJECT NUMBER	
DATE 06-27-2017		BUILDING NUMBER	
CHECKED RSK		DRAWING NUMBER FP-001	
DRAWN JDS		Dwg.	
		Office of Construction and Facilities Management	
		VA U.S. Department of Veterans Affairs	



BID DOCUMENTS

		Control Unit Annunciation						Notification				Emergency Function					
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
		Actuate common alarm signal indicator	Actuate audible alarm signal	Actuate common supervisory signal indicator	Actuate common supervisory signal	Actuate common trouble signal indicator	Actuate audible common trouble signal	Display/print change of status	Actuate evacuation signals	Transmit fire alarm signal to supervising station	Transmit supervisory signal to supervising station	Transmit trouble signal to supervising station	Recall elevators to primary recall floor	Elevator disconnect switch	Close smoke/fire dampers	HVAC shut-down	Unlock stairwell entrance
Duct smoke detector	1			X	X			X	X	X					X	X	
Smoke detector	2	X	X					X	X	X					X		X
Smoke detector (hoistway, machine room, lobby)	3	X	X					X	X	X			X		X		X
Manual fire alarm pull station	4	X	X					X	X	X			X	X	X		X
Heat detector (hoistway and machine room)	5	X	X					X	X	X				X	X		X
Alarm check valve pressure switch	6	X	X					X	X	X					X		X
Sprinkler control valve tamper switch	7			X	X			X			X						
Fire alarm AC power failure	8					X	X					X					
Fire alarm system low battery	9					X	X					X					
Open circuit	10					X	X					X					
Ground fault	11					X	X					X					
Notification appliance circuit fault	12					X	X					X					

BID DEDUCT ALTERNATE #3 NOTES:

CONVERT SUITE C TO CONDITIONED STORAGE SPACE:
IN SUITE C 209, BREAK ROOM 205, & COPIER ROOM 213

1. INSTALL CEILING MOUNTED NOTIFICATION DEVICES TO MATCH NEW FLOOR CONFIGURATION.
2. PROVIDE CEILING MOUNTED NOTIFICATION DEVICE IN AREA WITHOUT DROP CEILING.
3. INSTALL SMOKE DETECTOR IN FRONT OF ELEVATOR DOORS TO ACTIVATE ELEVATOR RECALL.
4. INSTALL SMOKE DETECTORS IN ELECTRICAL ROOM AND IT CLOSET.

BID DEDUCT ALTERNATE #5 NOTES:

ALTERNATE SECOND FLOOR COMMON SPACE:
IN ENCLAVE 200, ELECTRICAL ROOM 216, IT CLOSET 216,
CONFERENCE ROOM 217, RESTROOMS 218, 219, 220, 221,
STORAGE 222, AND CORRIDORS 223, 224, 225, 226

1. INSTALL CEILING MOUNTED NOTIFICATION DEVICES TO MATCH NEW FLOOR CONFIGURATION.
2. PROVIDE CEILING MOUNTED NOTIFICATION DEVICE IN AREA WITHOUT DROP CEILING.
3. INSTALL SMOKE DETECTOR IN FRONT OF ELEVATOR DOORS TO ACTIVATE ELEVATOR RECALL.
4. INSTALL SMOKE DETECTORS IN ELECTRICAL ROOM AND IT CLOSET.

BID DEDUCT ALTERNATE #4 NOTES:

CONVERT SUITE D TO CONDITIONED STORAGE SPACE:
IN SUITE D 210, BREAK ROOM 206, & COPIER ROOM 214

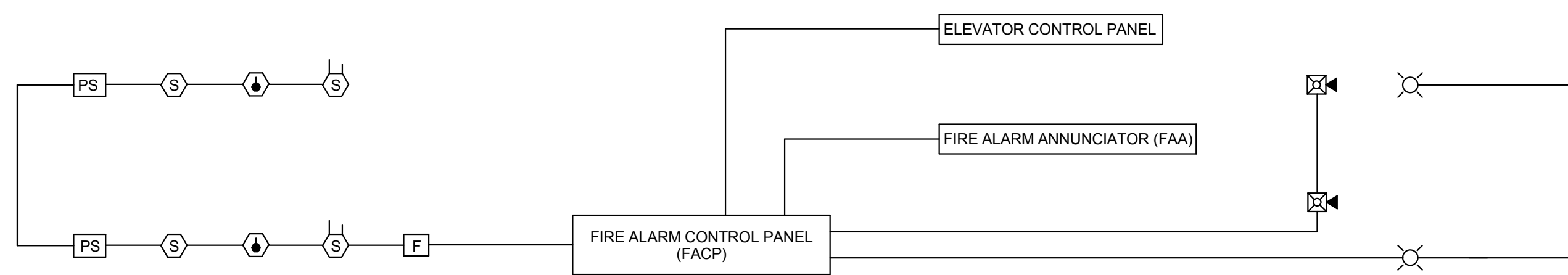
1. INSTALL CEILING MOUNTED NOTIFICATION DEVICES TO MATCH NEW FLOOR CONFIGURATION.
2. PROVIDE CEILING MOUNTED NOTIFICATION DEVICE IN AREA WITHOUT DROP CEILING.
3. INSTALL SMOKE DETECTOR IN FRONT OF ELEVATOR DOORS TO ACTIVATE ELEVATOR RECALL.
4. INSTALL SMOKE DETECTORS IN ELECTRICAL ROOM AND IT CLOSET.

BID DEDUCT ALTERNATE #6 NOTES:

1. REMOVE HEAT AND SMOKE DETECTORS RELATED TO ELEVATOR RECALL.

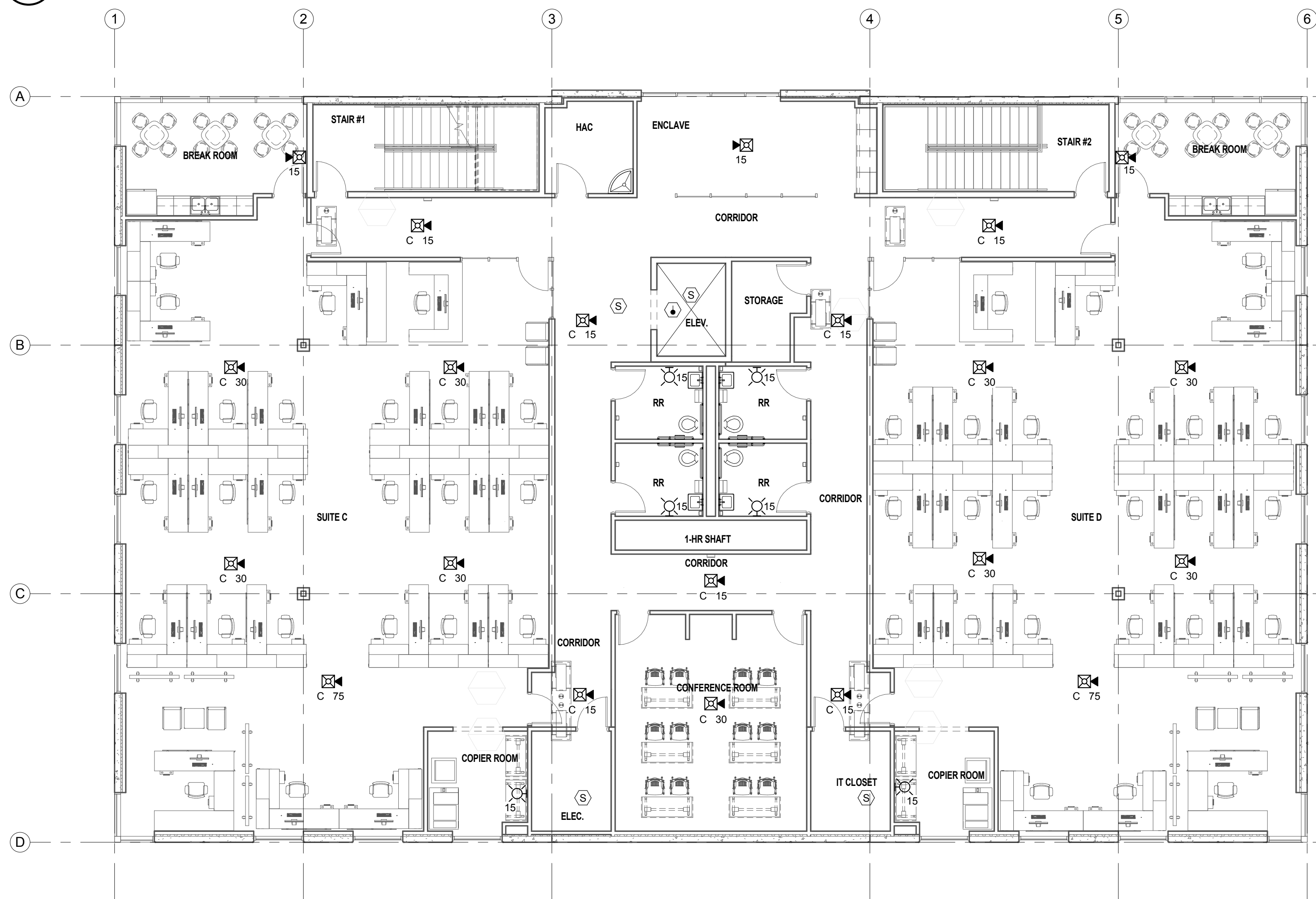
GENERAL NOTES

1. THIS DRAWING IS ISSUED FOR PERMIT AND IS INTENDED TO DESCRIBE THE GENERAL DESIGN INTENT BY WHICH THE FIRE ALARM PLANNER CAN CORRECTLY PLAN THE SYSTEM(S). SOME PARTS OF THE SYSTEM MAY NOT BE DEPICTED, AND ADDITIONAL DEVICES MAY BE REQUIRED. REFER TO SPECIFICATION SECTION 28.3111 FOR COMPLETE PERFORMANCE REQUIREMENTS.
2. DUCT SMOKE DETECTORS ARE TO BE INSTALLED IN SUPPLY AND RETURN AIR SYSTEMS WITH A CAPACITY GREATER THAN 2000 CFM, PER IMC AND NFPA 90A. SEE HVAC CONTROLS DRAWING(S) FOR RELATED INFORMATION.
3. LOCATION OF PULL STATION SUBJECT TO APPROVAL OF AHJ
4. IF BID DEDUCT ALTERNATE #3, #4, OR #5 IS SELECTED, THE SPACE MUST COMPLY WITH THE VA FIRE PROTECTION DESIGN MANUAL, INTERNATIONAL BUILDING CODE, AND APPLICABLE NFPA CODES. PROVIDE ADEQUATE COVERAGE OF NOTIFICATION DEVICES THROUGHOUT. REFER TO SHEET AS-103 FOR FLOOR PLANS AND AS-201 FOR CEILING PLANS.



4 FIRE ALARM MATRIX

SCALE: NONE

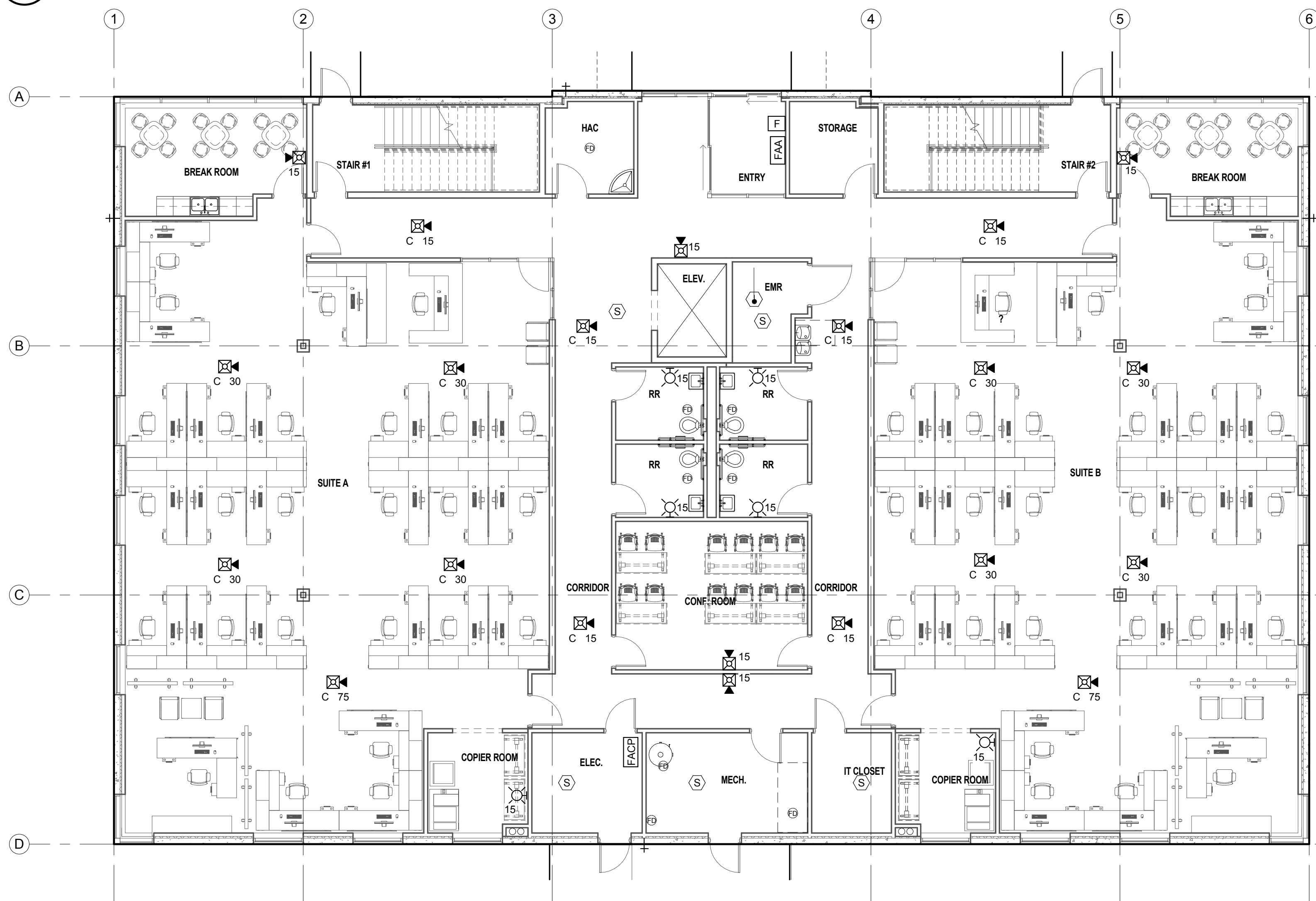


2 FIRE ALARM - SECOND LEVEL

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

3 FIRE ALARM RISER DIAGRAM

SCALE: NONE

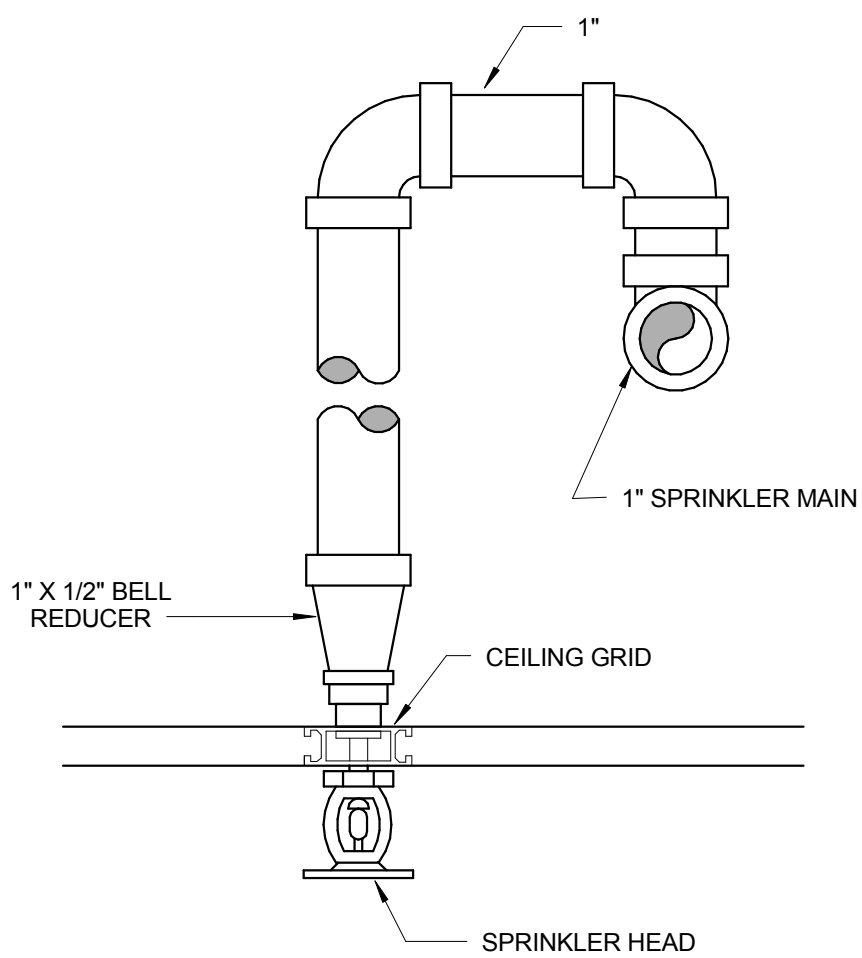


1 FIRE ALARM - GROUND LEVEL

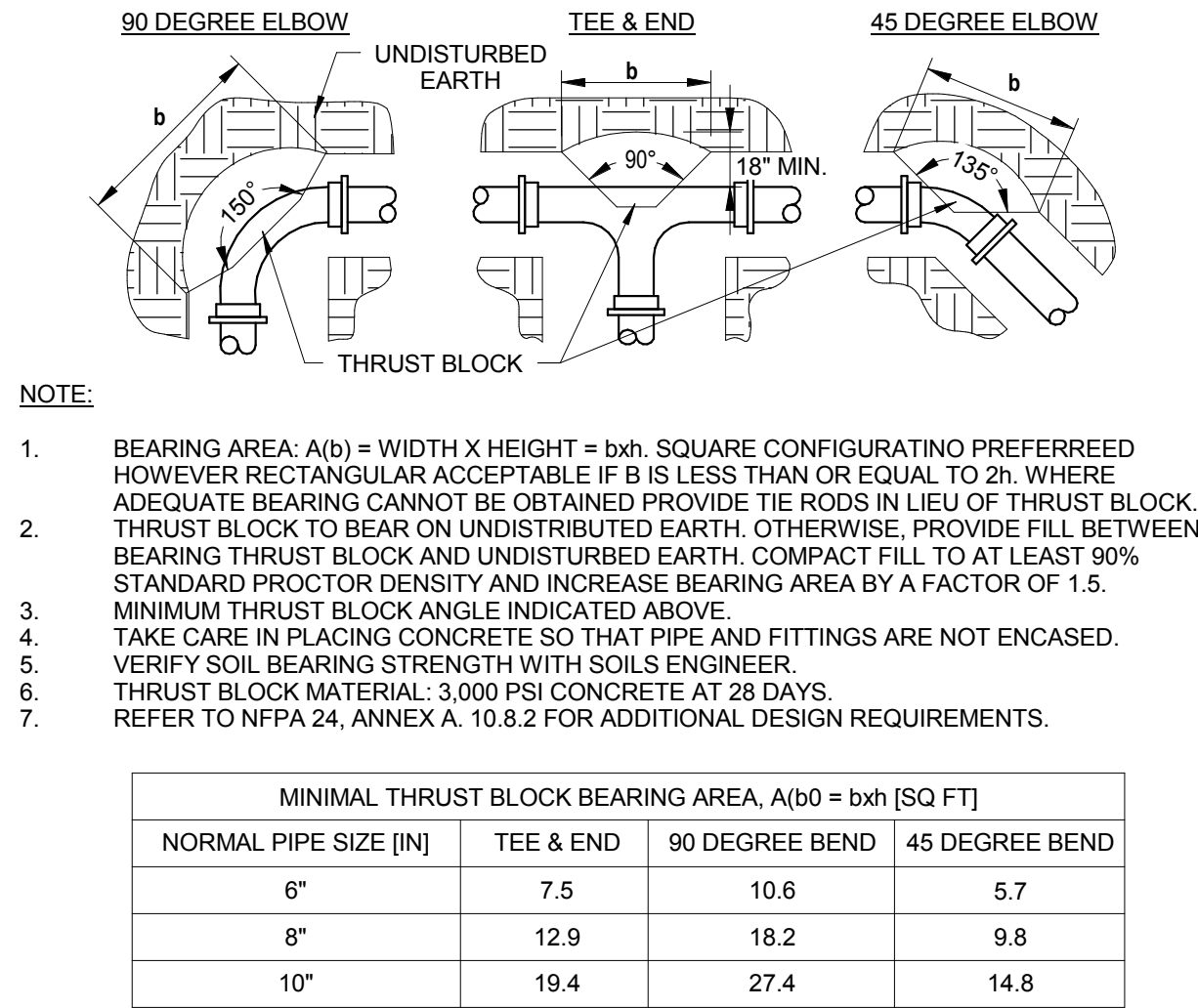
SCALE: 1/8" = 1'-0"

CONSULTANTS		ARCHITECT		APPROVED: DIRECTOR		SHEET TITLE FIRE ALARM - FLOOR PLAN & RISER DIAGRAM		PROJECT TITLE NEW ADMINISTRATION BUILDING		VA PROJECT NUMBER		Office of Construction and Facilities Management	
STRUCTURAL / CIVIL ENGINEER H2B, INC. 1225 N. LOOP WEST, SUITE 900 HOUSTON, TX 77008 (713) 864-2900		M.E.P. ENGINEER SPUR DESIGN 1511 WESTPORT ROAD KANSAS CITY, MO 64111 (405) 642-6100		FIRE PROTECTION / TELECOM ENGINEER PAGE 400 W. CESAR CHAVEZ STREET, SUITE 500 AUSTIN, TX 78701 (512) 472-6721		APPROVED: ASSOCIATE DIRECTOR		PROJECT LOCATION 2002 HOLCOMBE BOULEVARD, HOUSTON, TX 77030		BUILDING NUMBER			
Revision #		Date		300 NW 10th St, SUITE A Oklahoma City, OK 73103 spur-design.com		1511 Westport Road Kansas City, MO 64111 spur-design.com		APPROVED: ASSISTANT DIRECTOR		DRAWING NUMBER FA-101		U.S. Department of Veterans Affairs	
						APPROVED: CHIEF ENGINEER		DATE 06-27-2017		CHECKED RSK			

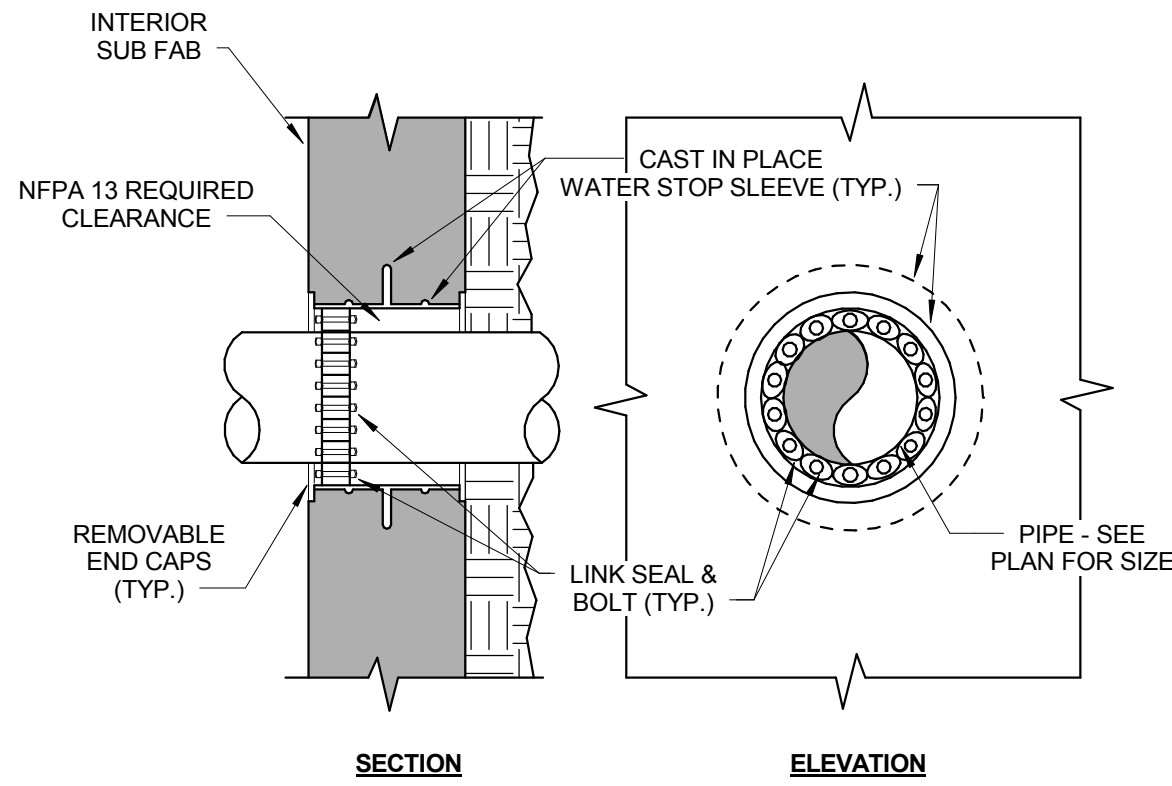




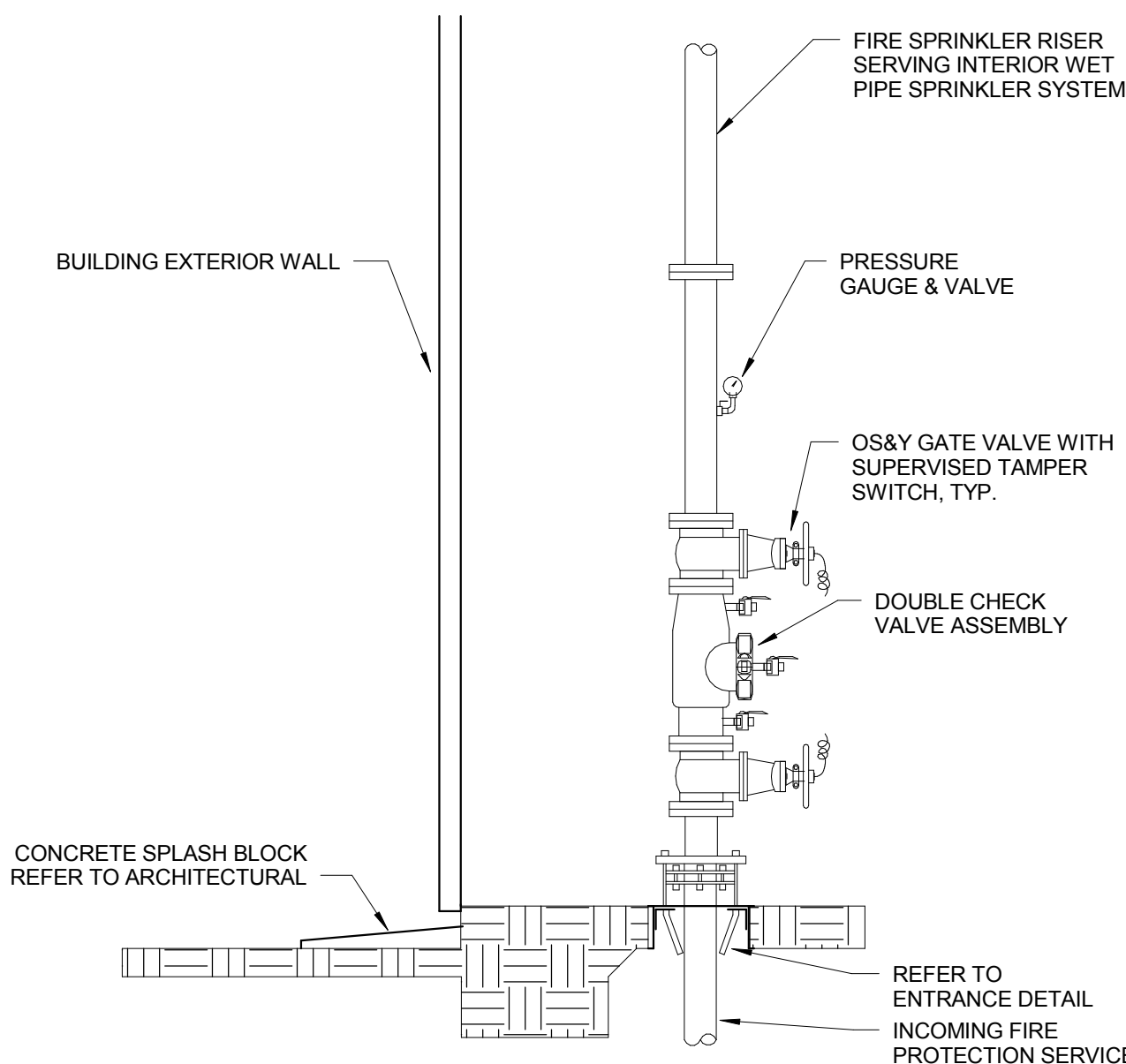
1 **ARM-OVER SPRINKLER DETAIL**
SCALE: NONE



2 **BEARING THRUST BLOCK DETAIL**
SCALE: NONE



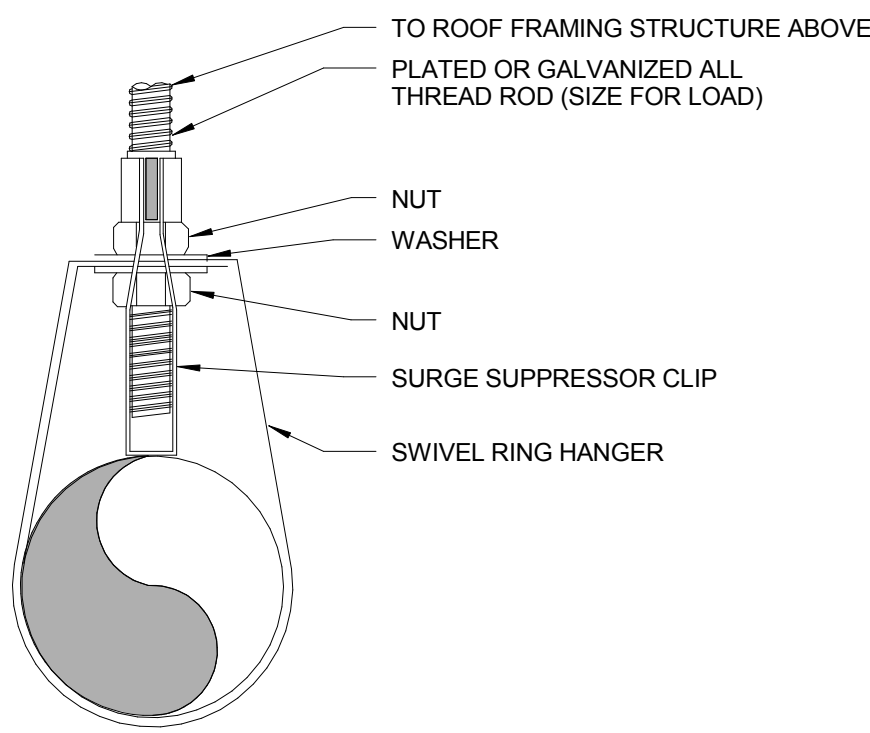
3 **CAST-IN-PLACE LINK SEAL WALL PENETRATION (TYP.) DETAIL**
SCALE: NONE



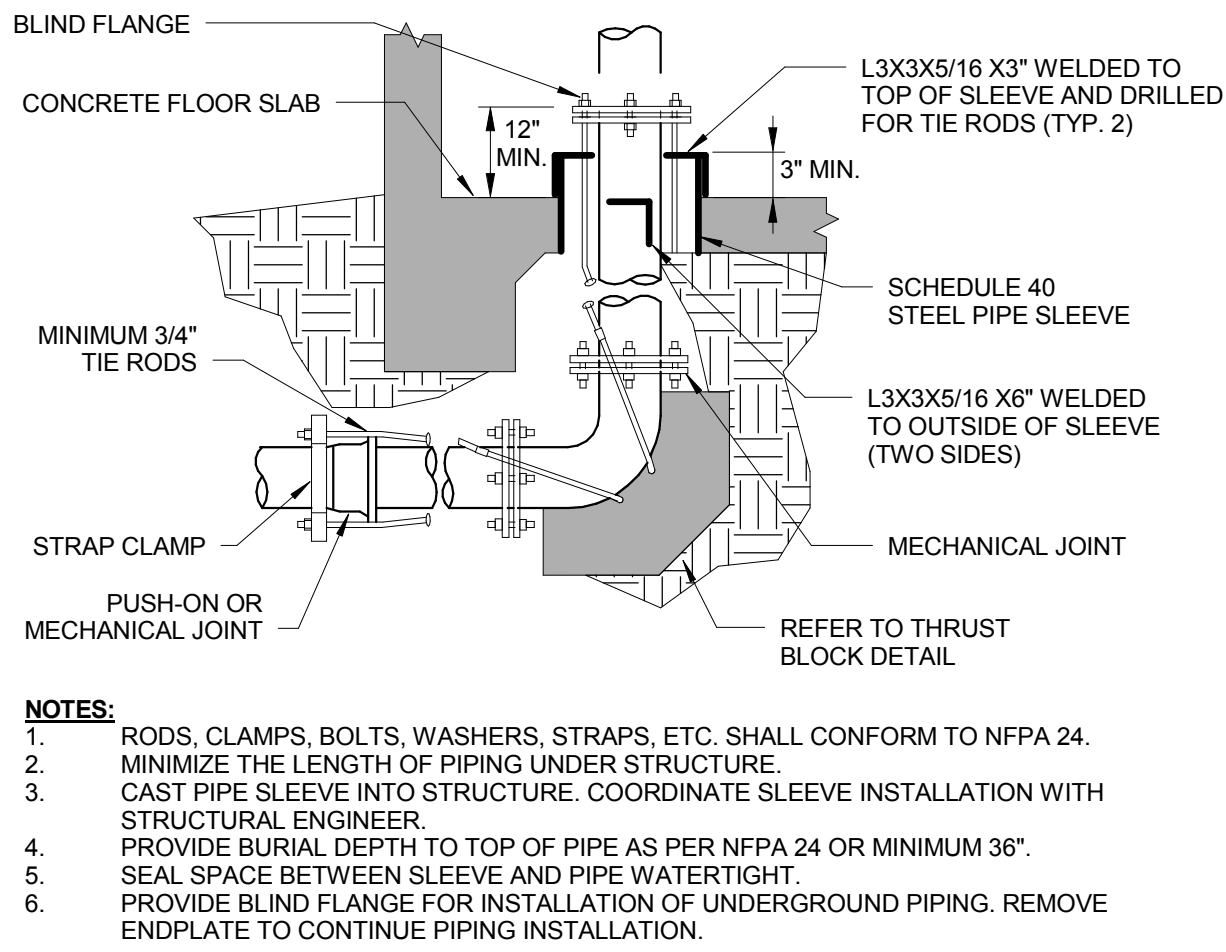
NOTE:

1. INSTALL WITH ALL APPURTENANCES REQUIRED BY AND IN COMPLIANCE WITH NFPA 13.
2. PIPING IS SHOWN SCHEMATICALLY.
3. COORDINATE INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, AND OTHER EQUIPMENT.
4. REFER TO PLAN FOR LOCATIONS OF DRAINS AND FIRE DEPARTMENT CONNECTIONS.
5. SLEEVE ALL WALL AND FLOOR PENETRATIONS PER CODE.
6. PROVIDE 36" HORIZONTAL SPOOL PIECE FOR FUTURE FIRE PUMP.

4 **FIRE PROTECTION BUILDING ENTRANCE DETAIL**
SCALE: NONE



5 **SWIVEL RING HANGER WITH SURGE SUPPRESSOR (TYP.) DETAIL**
SCALE: NONE



NOTES:

1. RODS, CLAMPS, BOLTS, WASHERS, STRAPS, ETC. SHALL CONFORM TO NFPA 24.
2. MINIMIZE THE LENGTH OF PIPING UNDER STRUCTURE.
3. CAST PIPE SLEEVE INTO STRUCTURE. COORDINATE SLEEVE INSTALLATION WITH STRUCTURAL ENGINEER.
4. PROVIDE BURIAL DEPTH TO TOP OF PIPE AS PER NFPA 24 OR MINIMUM 36".
5. SEAL SPACE BETWEEN SLEEVE AND PIPE WATERTIGHT.
6. PROVIDE BLIND FLANGE FOR INSTALLATION OF UNDERGROUND PIPING. REMOVE ENDPLATE TO CONTINUE PIPING INSTALLATION.

6 **UTILITY ENTRANCE DETAIL**
SCALE: NONE



BID DOCUMENTS



CONSULTANTS			ARCHITECT			APPROVED: DIRECTOR		SHEET TITLE		PROJECT TITLE		VA PROJECT NUMBER	
STRUCTURAL / CIVIL ENGINEER			FIRE PROTECTION / TELECOM ENGINEER			APPROVED: ASSOCIATE DIRECTOR		FIRE PROTECTION DETAILS		NEW ADMINISTRATION BUILDING		BUILDING NUMBER	
H2B, INC. 1225 N. LOOP WEST, SUITE 900 HOUSTON, TX 77008 (713) 864-2900			PAGE 400 W. CESAR CHAVEZ STREET, SUITE 500 AUSTIN, TX 78701 (512) 472-6721			APPROVED: ASSISTANT DIRECTOR		APPROVED: CHIEF ENGINEER		PROJECT LOCATION 2002 HOLCOMBE BOULEVARD, HOUSTON, TX 77030		DRAWING NUMBER FP-401	
M.E.P. ENGINEER SPUR DESIGN 1511 WESTPORT ROAD KANSAS CITY, MO 64111 (405) 642-6100			320 NW 10th St, SUITE A OKlahoma City, OK 73103 spur-design.com			APPROVED: CHIEF ENGINEER		DATE 06-27-2017		CHECKED RSK		DRAWN JDS	
Revision #			Date									Dwg.	