

SITE PLAN
1" = 30'-0"

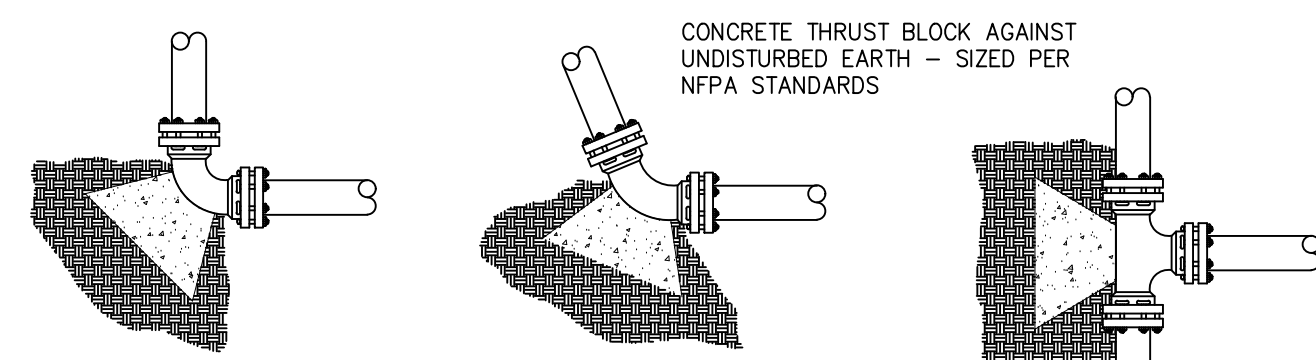
NOTE FOR ARKANSAS HEALTH DEPARTMENT:
THE MAXIMUM CALCULATED FLOW THROUGH THE 8" COLT 200 BACKFLOW PREVENTER IS 800.00 GPM.
THIS DEVICE IS APPROVED FOR A MAXIMUM FLOW OF 1600 GPM.

ARKANSAS DEPARTMENT OF HEALTH NOTES:
1. ANTIFREEZE OR OTHER FOREIGN SUBSTANCES SHALL NOT BE USED IN THIS SYSTEM.
2. THE RECOMMENDED CLEARANCES AT THE BACKFLOW PREVENTER SHOULD BE:
BOTTOM - 12" MINIMUM 36" MAXIMUM
FRONT (TEST COCK) - 24" MINIMUM
REAR - 12" MINIMUM

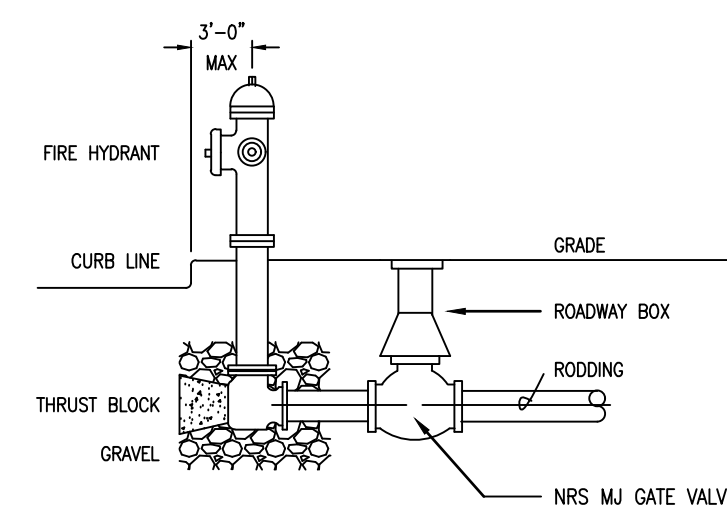
ADH Rules and Regulations Pertaining to Public Water Systems, page 25, section XIV, paragraph A:

The operating routine shall include necessary protective measures to detect and remove or destroy any contaminant of concern or regulation that might enter the distribution system. Every precaution must be taken against the possibility of sewage contamination of the water in the distribution system. Water mains and sanitary sewers shall be constructed as far apart as practicable, and shall be separated by undisturbed and compacted earth. A minimum horizontal distance of ten feet should be maintained between water lines and sewer lines or other sources of contamination. Water lines and sewers shall not be laid in the same trench except on the written approval of the Arkansas Department of Health. Water mains necessarily in close proximity to sewers must be placed so that the bottom of the water line will be at least 18 inches above the top of the sewer line at its highest point. If this distance must unavoidably be reduced, the water line or the sewer line must be encased in watertight pipe with sealed watertight ends extending at least ten feet either side of the crossing. Any joint in the encasement pipe is to be mechanically restrained. The encasement pipe may be vented to the surface if carrying water or sewer under pressure. Where a water line must unavoidably pass beneath the sewer line, at least 18 inches of separation must be maintained between the outside of the two pipes in addition to the preceding encasement requirement. Exceptions to this must be approved in writing by the Arkansas Department of Health.

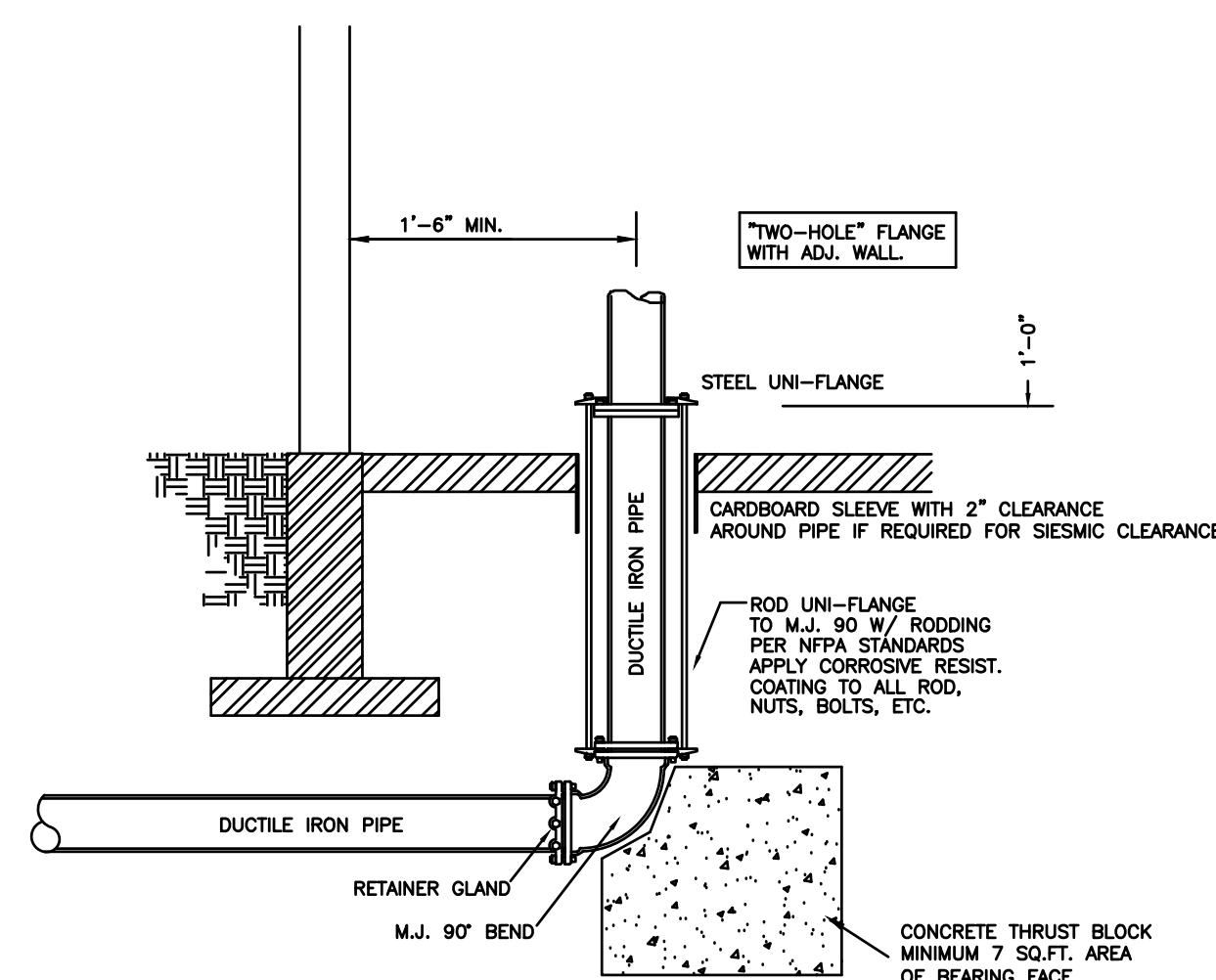
Nominal Pipe Diameter (in.)	Bearing Block Area (ft ²)
3	2.6
4	3.6
6	7.9
8	13.6
10	20.5
12	29.0



THRUST BLOCK DETAIL
N.T.S.



FIRE HYDRANT DETAIL
N.T.S.



UNDERGROUND LEAD-IN DETAIL

UNDERGROUND NOTES

U.N.O. - UNLESS NOTED OTHERWISE		MJ 90 ELL
CL - CENTERLINE		MJ TEE
IFW - INSIDE FACE WALL		FIRE DEPT. CONNECTION
OFW - OUTSIDE FACE WALL		FIRE HYDRANT
		MJ GATE VA w/ ROADWAY BOX
		POST INDICATOR GATE VALVE
		NEW UNDERGROUND PIPE
		EXISTING UNDERGROUND PIPE
		DEMO/ABANDON U.G. PIPE

SCOPE OF WORK

- INSTALL NEW 8" UNDERGROUND LEAD-IN TO PROVIDE SPRINKLER SUPPLY FOR NEW WAREHOUSE. T.S.S.C. TO BEGIN WORK 8" GATE VALVE BY OTHERS.
- WIRING OF ALL ELECTRICAL DEVICES BY OTHERS.

SYSTEM DESIGN

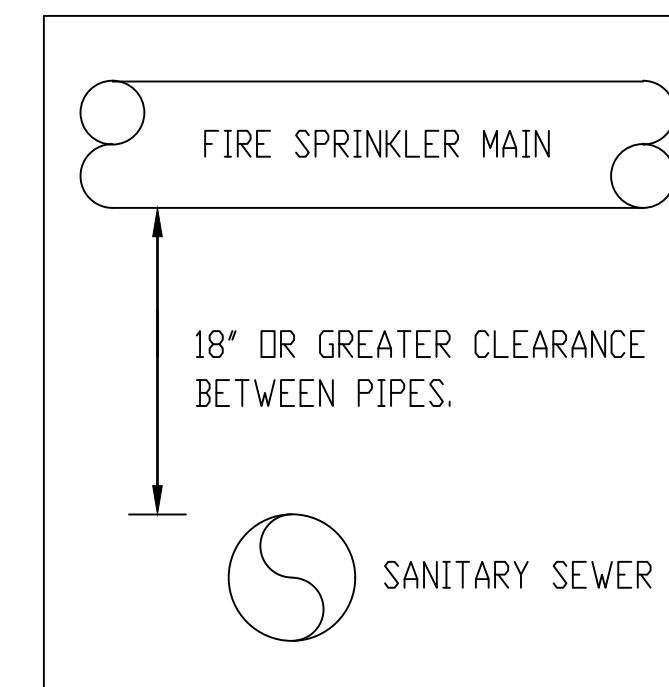
- INSTALLATION AND TESTING PER NFPA 24 (2010)
- PIPE TO HAVE A MINIMUM 3'-0" BURY
- ALL PIPING TO BE PROPERLY BLOCKED, RODDED, OR CLAMPED
- ALL RODDING PER NFPA 24
- BITUMINOUS COAT ALL BOLTS, RODS, AND CONNECTORS
- CHLORINATE ALL NEW UNDERGROUND PER M/GW REQUIREMENTS
- FLUSH ALL UNDERGROUND PER NFPA 24
- HYDRANTS TO BE LOCATED WITHIN 3'-0" OF CURB & 18" ABOVE GRADE

PIPING MATERIALS

- UNDERGROUND PIPING TO BE DR-18 PVC PIPE, U.N.O.
- UNDERGROUND PIPE PASSING UNDER FOUNDATION TO BE CLASS 350 D.I. PIPE
- ALL FITTINGS TO BE CLASS 250 SLIP ON MECH. JOINT TYPE

FLOW TEST

TEST CONDUCTED BY: JONESBORO CITY WATER AND LIGHT
TEST DATE: 8/10/21
STATIC PRESSURE: 112 PSI
RESIDUAL PRESSURE: 100 PSI
FLOW: 1,320 GPM



ARKANSAS PIPE BURY
N.T.S.

DETECTO WIRE SHALL BE INSTALLED WITH UNDERGROUND PIPE

FIRE MAIN TO BE INSTALLED WITH 18" OF CLEARANCE ABOVE THE SANITARY SEWER LINE PER ARKANSAS DEPT OF HEALTH & HUMAN SVCS.

REVISIONS

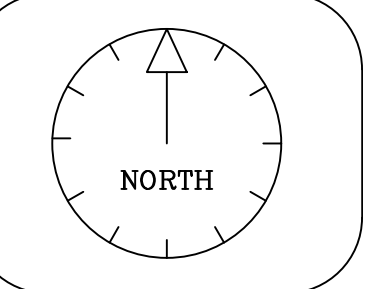
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1	01/10/21	Underground Comments and Floor Revisions

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SCALE
1/8" = 1'-0"

DATE
09/07/2021

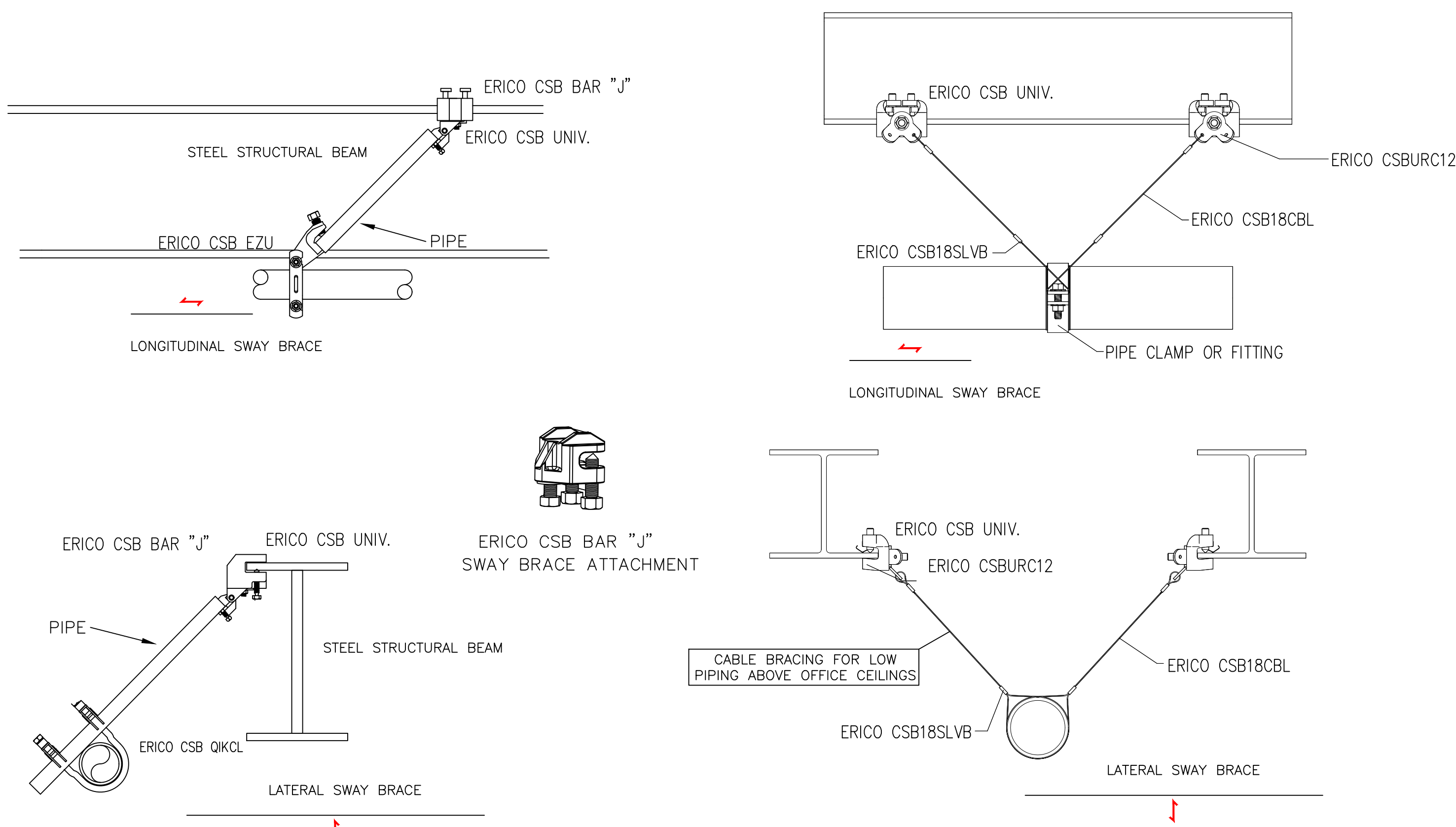
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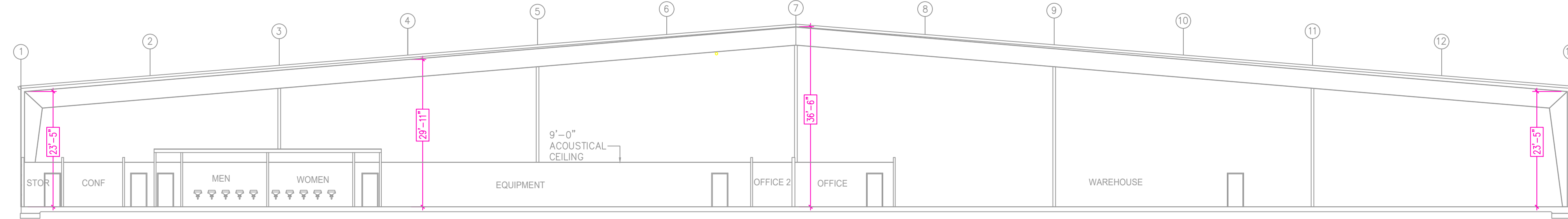
SPIRIT MANUFACTURING WAREHOUSE
2211 BARNHILL ROAD
JONESBORO, AR 72401

DRAWING TITLE
FIRE PROTECTION SITE PLAN

SHEET
1 of 6

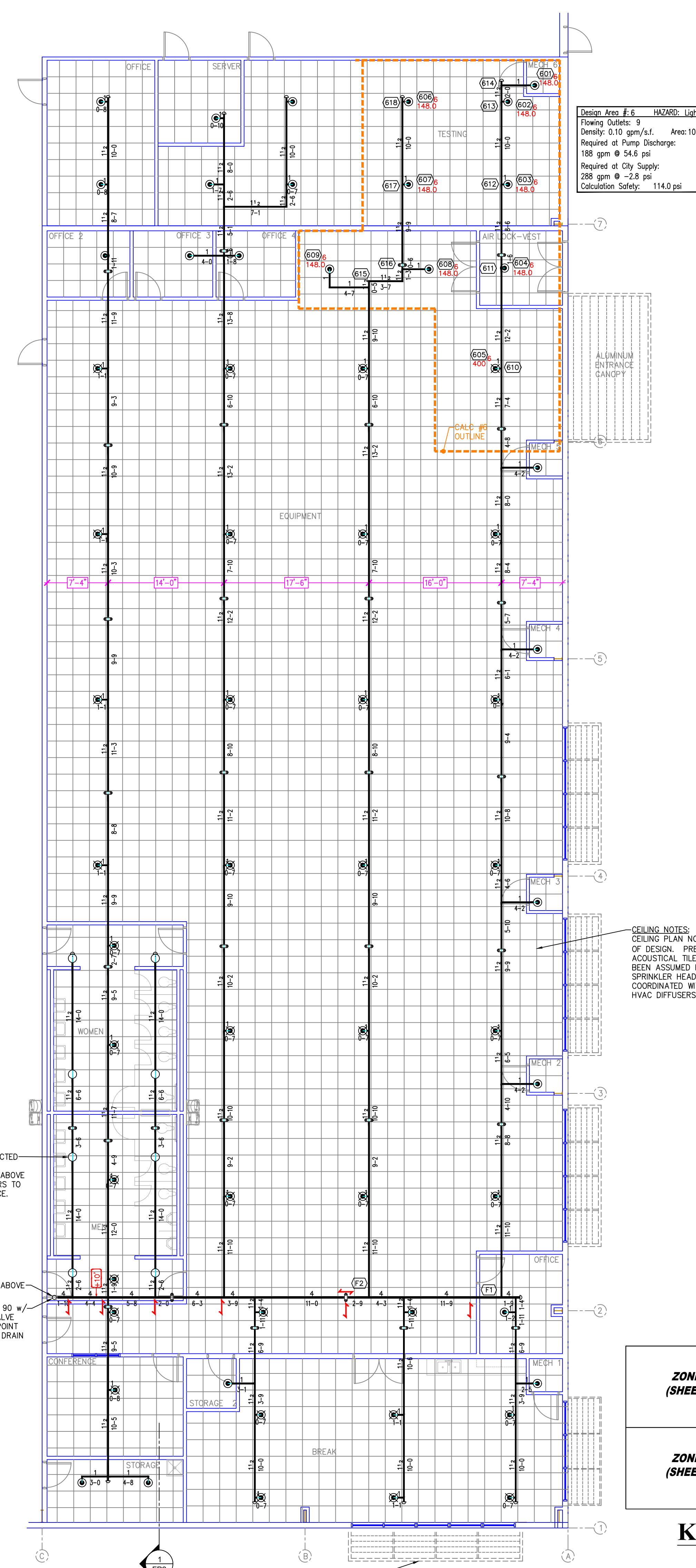


SEISMIC BRACING DETAILS



1
1/16" = 1'-0"

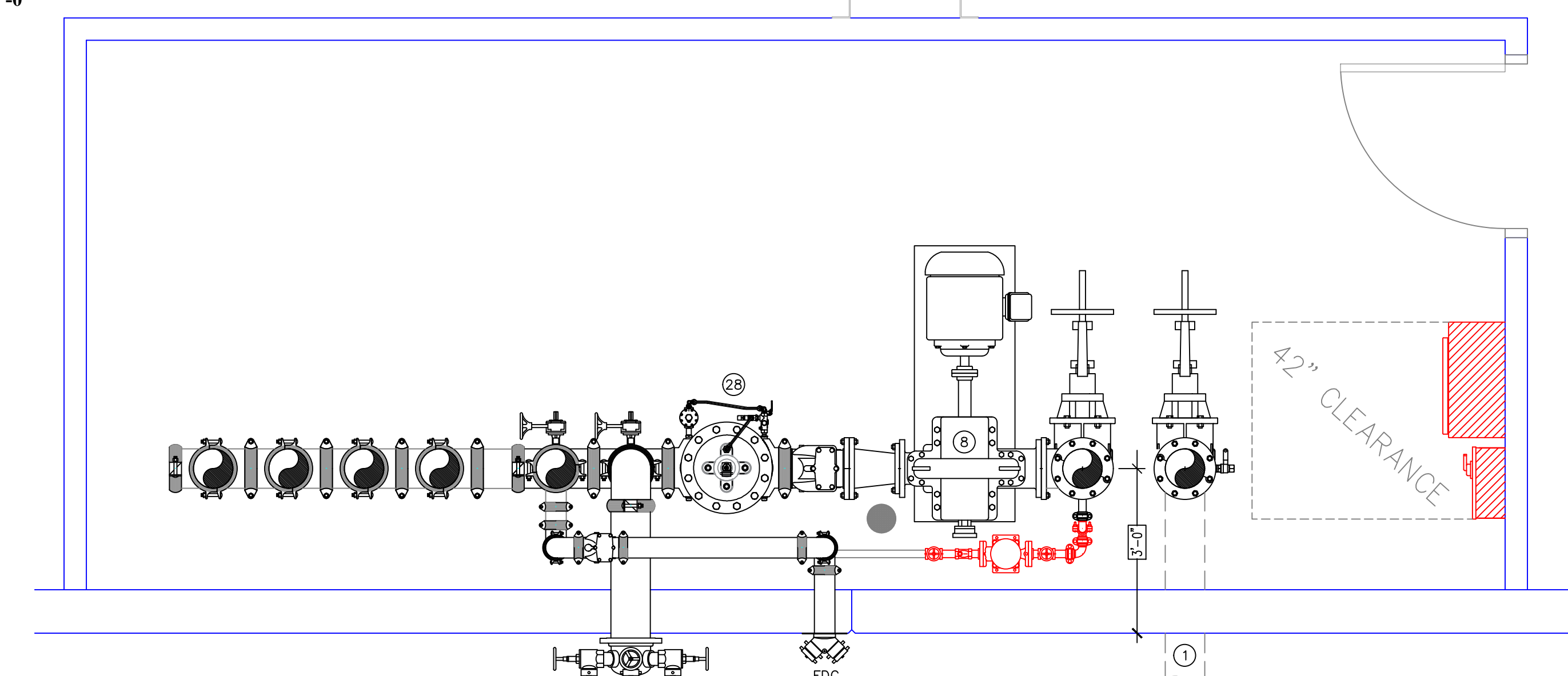
GENERAL NOTES
 OCCUPANCY: STORAGE S-1
 TYPE OF CONSTRUCTION: BEAM & PURLIN
 SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 ZONE 1: 39,340 S.F.
 OFFICES: 10,990 S.F.
 ZONE 2: 38,390 S.F.
 ZONE 3: 36,100 S.F.
 ZONE 4: 35,150 S.F.
 TOTAL: 159,970 S.F.
INSTALLATION STANDARDS:
 • SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA 13 (2016)
 • FIRE PUMP SYSTEM DESIGNED AND INSTALLED PER NFPA 20 (2016)
SPRINKLER PIPE TYPES:
 • 1" BRANCH LINES TO BE BLACK STEEL MEGATHREAD WITH THREADED FITTINGS
 • 1/2" THROUGH 6" MAIN & BRANCH LINES TO BE BLACK STEEL MEGAFLOW WITH WELDED OUTLETS & GROOVED FITTINGS
 • 8" MAINS TO BE SCHEDULE 10 WITH WELDED OUTLETS & GROOVED FITTINGS
DESIGN CRITERIA:
 OFFICE AREAS AND RESTROOMS DESIGNED TO LIGHT HAZARD
 WAREHOUSE AREA DESIGNED TO HIGH PILED RACK STORAGE CRITERIA IN A 40' MAX HEIGHT BUILDING:
 • MAX 35' OF CLASS I-IV COMMODITIES
 • MAX 35' OF CARTONED UNEXPANDED PLASTICS
 • NO EXPOSED GROUP A PLASTICS
 • NO EXPANDED GROUP A PLASTICS
 • NO SOLID SHELVES
 • NO OPEN-TOP CONTAINERS
NOTES:
 • ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
 • HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13
SYMBOLS USED ON DRAWINGS:
 -E-2.0 PIPE ELEVATION A.F.F.
 -E-1.2 PIPE ELEVATION BELOW B.O.D.
 (12) HYDRAULIC CALCULATION JUNCTION POINT
SCOPE OF WORK:
 • PROVIDE AND INSTALL FOUR WET PIPE SPRINKLER SYSTEMS AND ONE FIRE PUMP SYSTEM IN THE NEW WAREHOUSE BUILDING SHOWN ON THESE PLANS



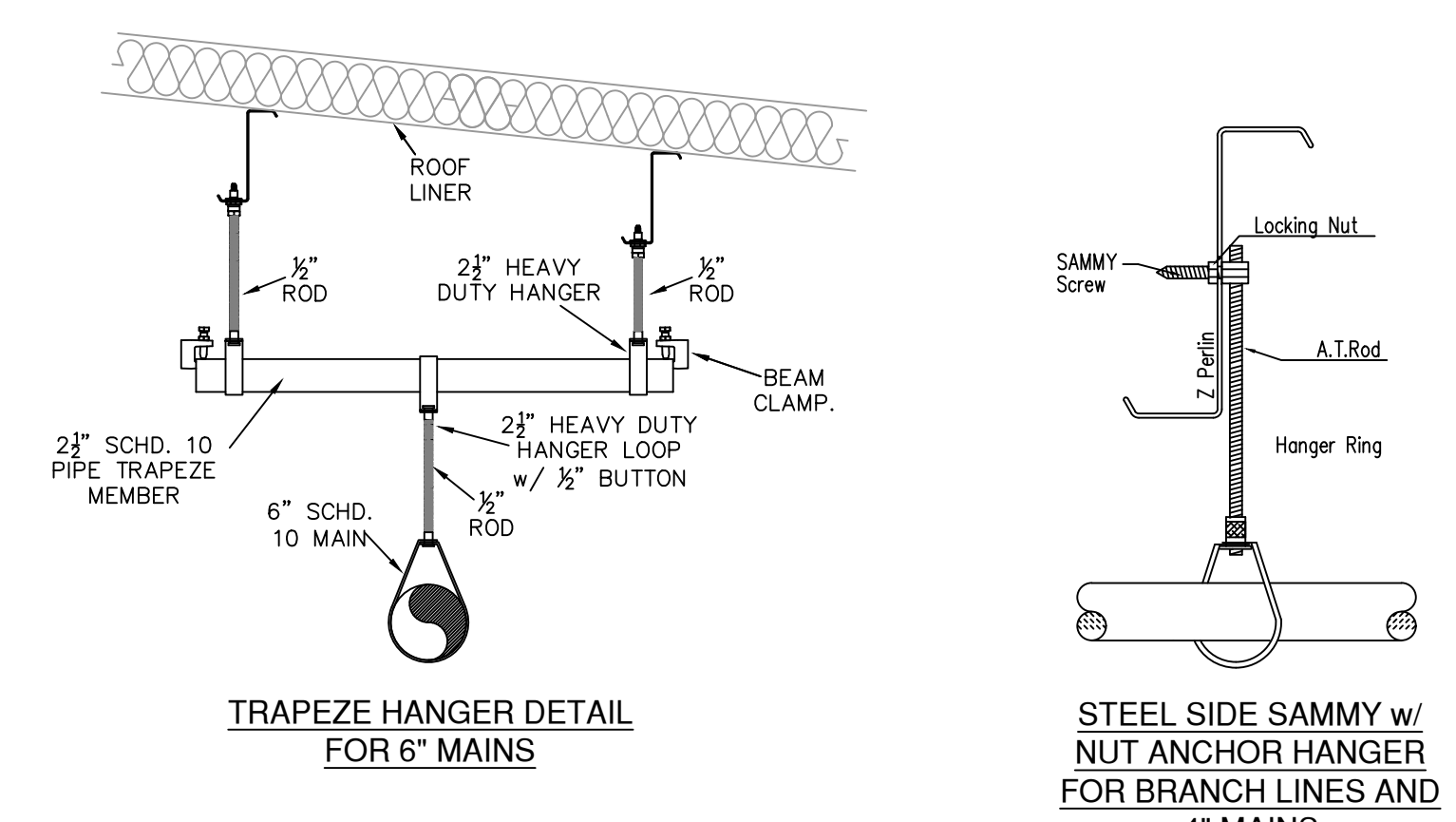
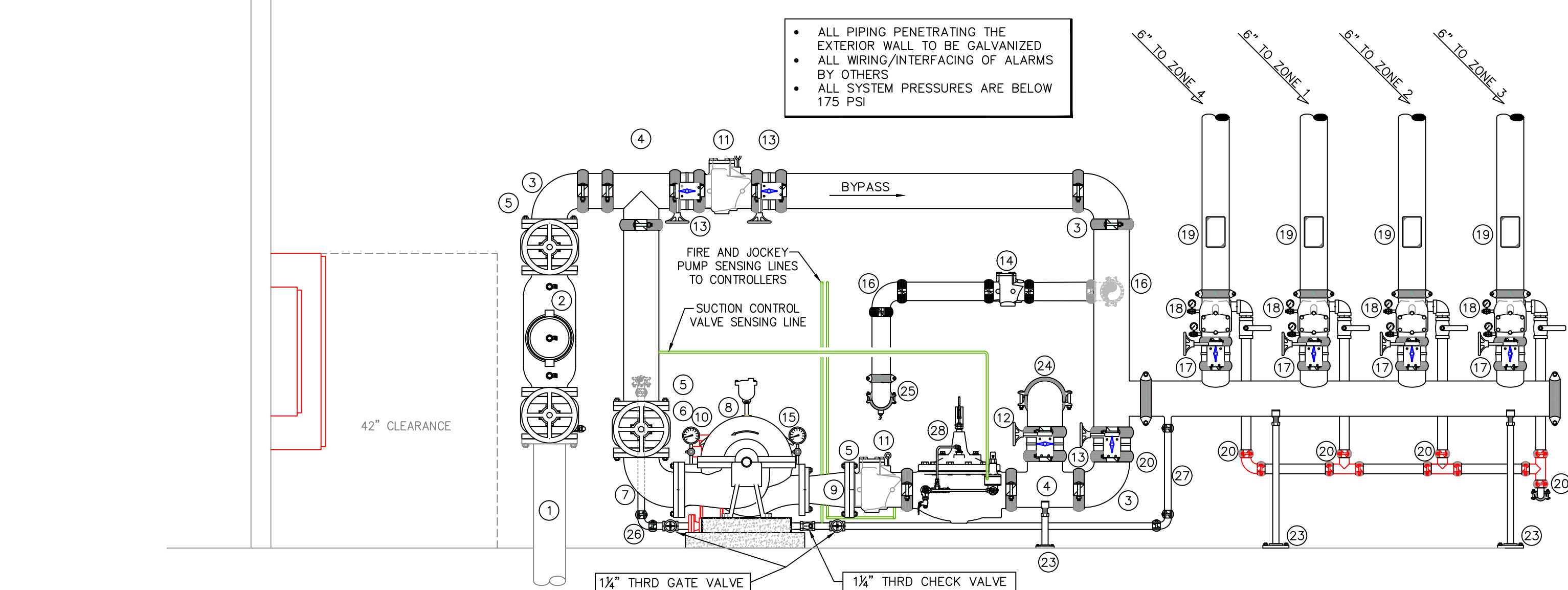
Design Area # 6 HAZARD: Light
 Flowing Orifice: 9
 Density: 0.10 gpm/s.f. Area: 1046 s.f.
 Required at Pump Discharge:
 188 gpm @ 54.5 psi
 Required at City Supply:
 288 gpm @ -2.8 psi
 Calculation Safety: 114.0 psi

- RISER LEGEND**
- 8" WATER UNDERGROUND SERVICE (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM WORKUP)
 - 8" AMES 2000SS BACKFLOW w/ OS&Y (TAMPERS)
 - 8" GROOVED 90 ELBOW
 - 8" GROOVED TEE
 - 8" FLANGED x GROOVED ADAPTER
 - 8" FLANGED OS&Y GATE VALVE (TAMPERS)
 - 8" FLANGED 90 ELBOW
 - AURORA FIRE PUMP 1,500gpm @ 60psi (100HP, 480V/3 PHASE)
 - 6" x 8" CONCENTRIC INCREASER
 - AURORA JOCKEY PUMP (1.5HP)
 - 8" GROOVED CHECK VALVE
 - 8" BUTTERFLY VALVE w/ TAMPER (NORMALLY CLOSED)
 - 6" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
 - 4" GROOVED CHECK VALVE
 - 4" GROOVED DRAIN 90 ELBOW w/ 1" x 1/2" BUSHING & BALL DRIP
 - 4" GROOVED 90
 - 6" BUTTERFLY VALVE w/ TAMPER NORMALLY OPEN
 - 6" EASY RISER CHECK VALVE
 - FLOW SWITCH
 - MAIN DRAIN PIPED TO EXTERIOR
 - FIRE PUMP CONTROLLER
 - JOCKEY PUMP CONTROLLER
 - PIPE STAND
 - 8" TEST HEADER
 - 4" x 2 1/2" x 2 1/2" EXPOSED ROUGH BRASS F.D.C.
 - 1 1/2" JOCKEY PUMP SUPPLY PIPING
 - 1 1/2" JOCKEY PUMP DISCHARGE PIPING
 - 8" SUCTION CONTROL VALVE

FIRE PUMP ELEVATION
1/2" = 1'-0"

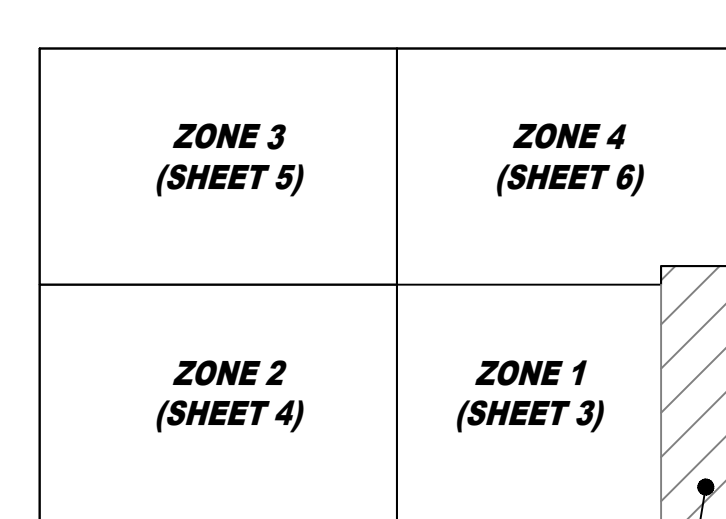


PUMP ROOM PLAN VIEW
1/2" = 1'-0"



HANGER NOTES
 6" MAINS PARALLEL WITH PURLINS: TRAPEZE
 6" MAINS PERPENDICULAR TO PURLINS: NO TRAPEZE - HANG EVERY PURLIN
 4" MAINS PARALLEL WITH PURLINS: NO TRAPEZE - HANG EVERY 15' MAX
 4" MAINS PERPENDICULAR TO PURLINS: NO TRAPEZE - HANG EVERY OTHER PURLIN

HANGER DETAILS



KEY PLAN

ZONE 1 OFFICE AREA
1/8" = 1'-0"

SPRINKLER SYMBOL DESCRIPTION											
Symbol	Make	Model	S.I.N.	K-Factor	Temp.	Style	Response	Finish	Coverage	NPT Size	Total
■	VKING	VK510	VK510	25.2	205	PEND	FAST	BRASS	ESFR	1"	1612
⊗	VKING	VK532	VK532	11.2	175	UPRIGHT	QR	BRASS	18x18	3/4"	46
○	VKING	VK950	VK950	5.6	200	UPRIGHT	QR	BRASS	16x16	1/2"	8
●	VKING	VK302	VK302	5.6	200	PEND	QR	CHROME	SS	1/2"	26
⊗	VKING	VK608	VK608	11.2	175	PEND	QR	CHROME	20x20	3/4"	36
Total Sprinklers Shown on This Sheet											70
Total Sprinklers Required on This Contract											1728

REVISIONS

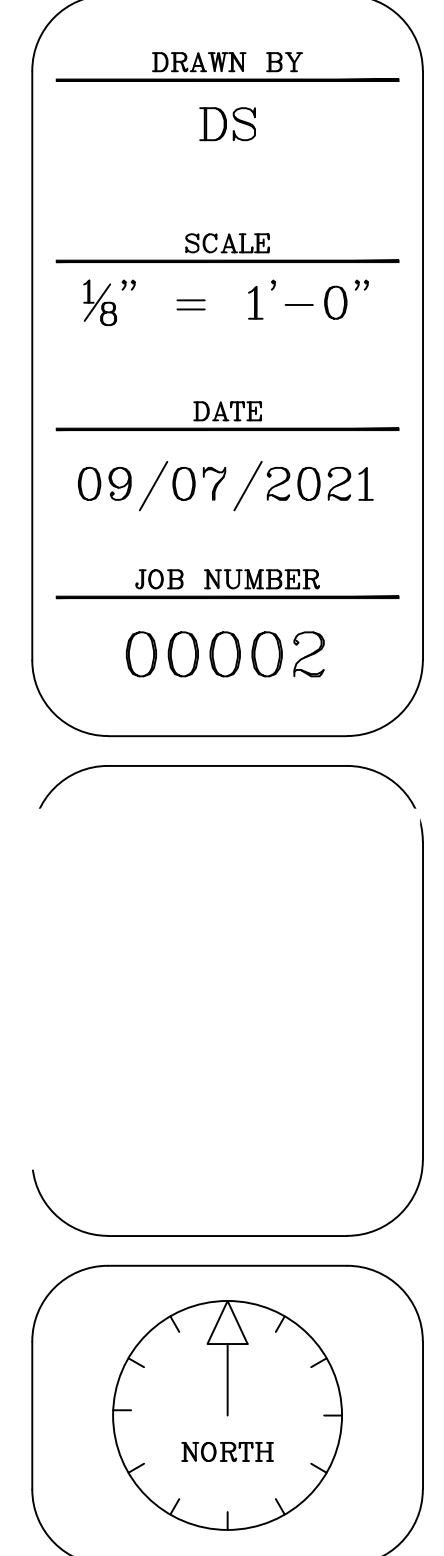
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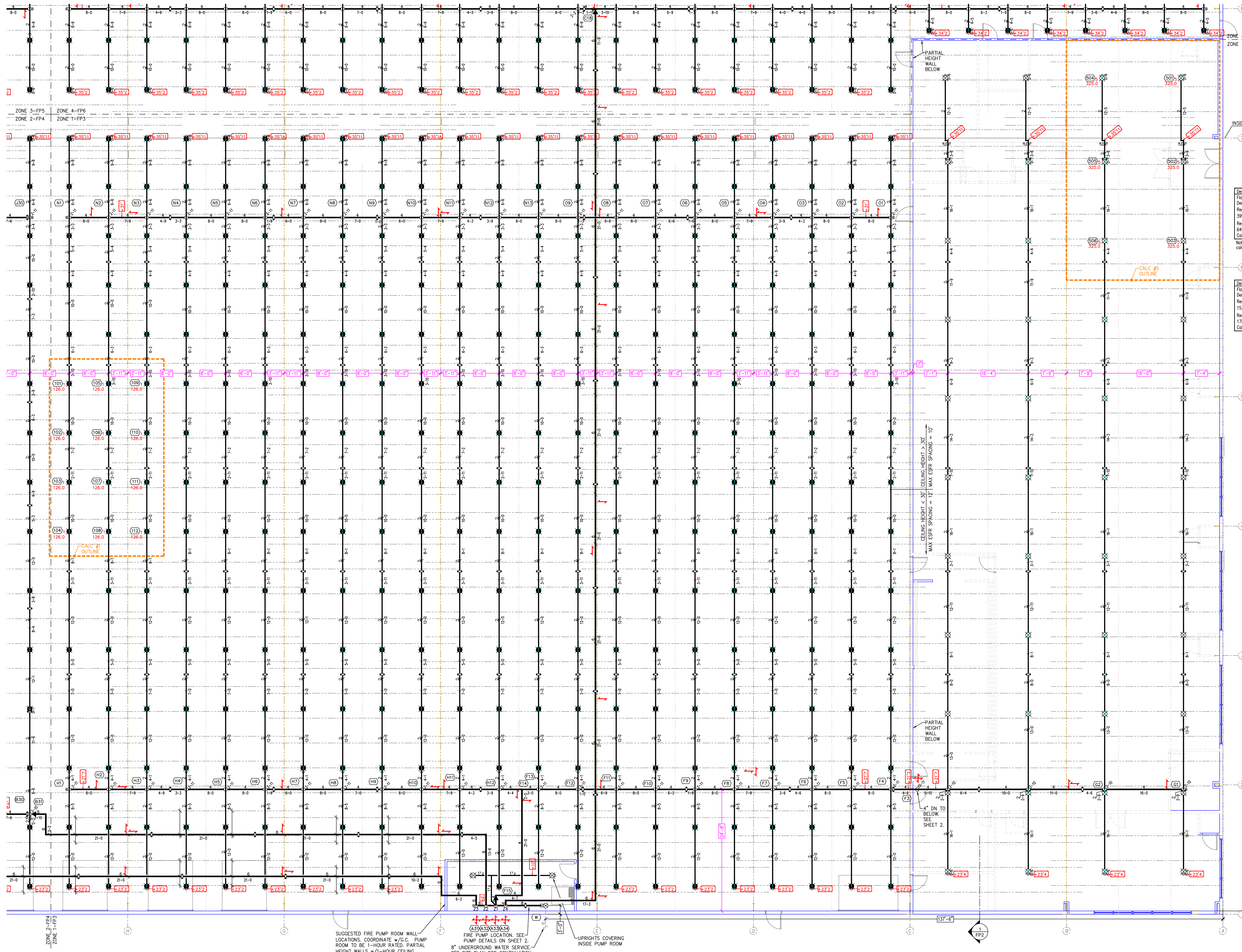
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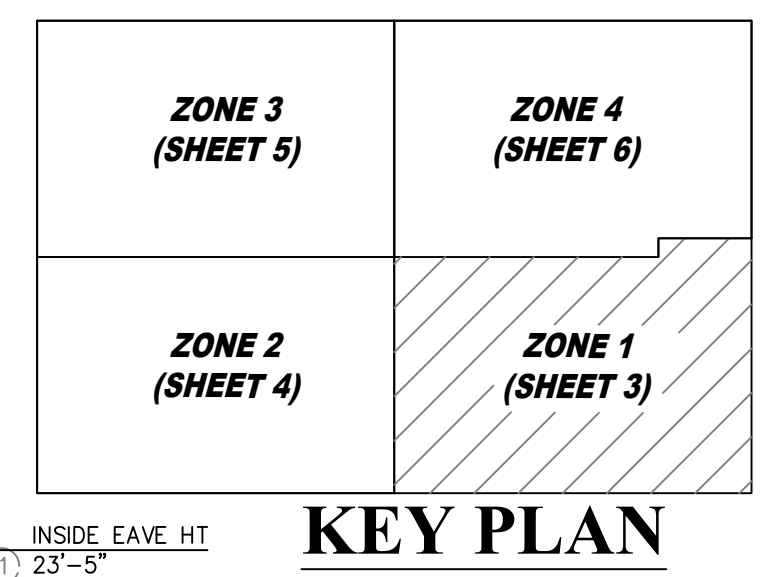
SPIRIT MANUFACTURING WAREHOUSE
 2211 BARNHILL ROAD
 JONESBORO, AR 72401

DRAWING TITLE
FIRE SPRINKLER PLAN DETAILS



Design Area # 5 HAZARD: CH2
 Flowing Orifices: 6
 Density: 0.20 gpm/s.f. Area: 1512 s.f.
 Required at Pump Discharge:
 399 gpm @ 95.1 psi
 Required at City Supply:
 649 gpm @ 40.5 psi
 Calculation Safety: 68.5 psi
 Note: Light hazard area above ceiling
 calculated to CH2 for conservatism

Design Area # 1 HAZARD: Storage
 Flowing Orifices: 12
 Density: 12 spk @ 25 psi Area: 928 s.f.
 Required at Pump Discharge:
 1536 gpm @ 120.9 psi
 Required at City Supply:
 1786 gpm @ 74.3 psi
 Calculation Safety: 16.7 psi



SUGGESTED FIRE PUMP ROOM WALL LOCATIONS. COORDINATE w/G.C. PUMP ROOM TO BE 1-HOUR RATED. PARTIAL HEIGHT WALLS w/1-HOUR CEILING.

FIRE PUMP LOCATION. SEE PUMP DETAILS ON SHEET 2.

8" UNDERGROUND WATER SERVICE. SEE SITE PLAN FOR CONTINUATION.

UPRIGHTS COVERING INSIDE PUMP ROOM

FIRE PROTECTION PLAN - ZONE 1
 1/8" = 1'-0"

REVISIONS

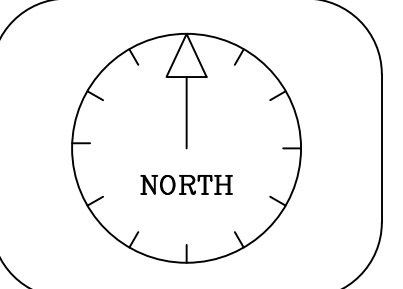
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SPIRIT MANUFACTURING WAREHOUSE
 2211 BARNHILL ROAD
 JONESBORO, AR 72401

DRAWING TITLE
FIRE SPRINKLER PLAN
 ZONE 1

SHEET
3 of 6

SPRINKLER SYMBOL DESCRIPTION

Symbol	Make	Model	S.I.N.	K-Factor	Temp.	Style	Response	Finish	Coverage	NPT Size	Total
■	VKING	VK510	VK510	25.2	205	PEND	FAST	BRASS	ESFR	1"	1612
⊗	VKING	VK532	VK532	11.2	175	UPRIGHT	QR	BRASS	18x18	3/4"	46
○	VKING	VK950	VK950	5.6	200	UPRIGHT	QR	BRASS	16x16	1/2"	8
●	VKING	VK302	VK302	5.6	200	PEND	QR	CHROME	SS	1/2"	26
⊗	VKING	VK608	VK608	11.2	175	PEND	QR	CHROME	20x20	3/4"	36
Total Sprinklers Shown on This Sheet											376
Total Sprinklers Required on This Contract											1728