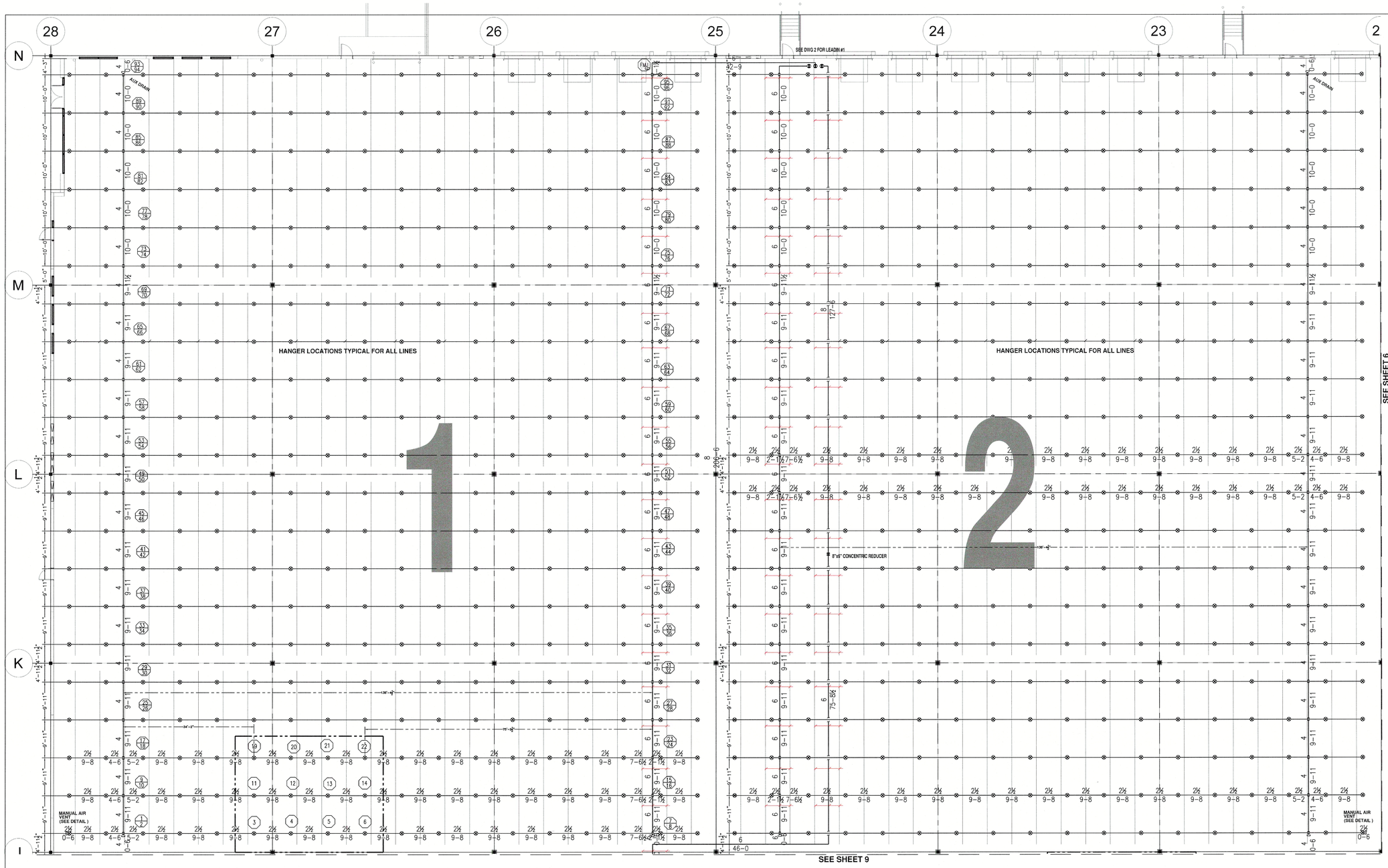
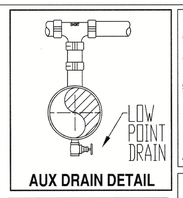
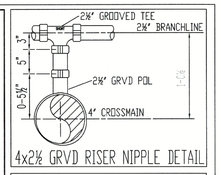
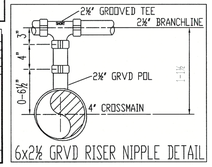




AUX DRAIN DETAIL



4x2½ GRVD RISER NIPPLE DETAIL

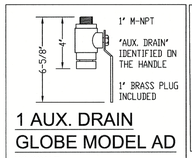


6x2½ GRVD RISER NIPPLE DETAIL

HANGER LOCATION DETAIL

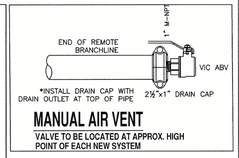
PIPE SIZE	A	B*	C
1"	3'-0" MAX.	12'-0" MAX.	3" MIN.
1¼"	4'-0" MAX.	12'-0" MAX.	3" MIN.
1½"-8"	5'-0" MAX.	15'-0" MAX.	3" MIN.

* MAXIMUM HANGER SPACING FOR THREADED LIGHTWALL STEEL PIPE IS 12'-0" FOR ALL PIPE SIZES



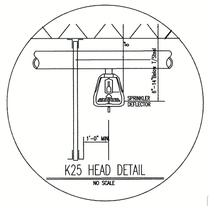
1 AUX. DRAIN GLOBE MODEL AD

NO SCALE



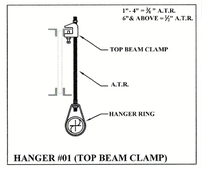
MANUAL AIR VENT

VALVE TO BE LOCATED AT APPROX. HIGH POINT OF EACH NEW SYSTEM



K25 HEAD DETAIL

NO SCALE



HANGER #01 (TOP BEAM CLAMP)

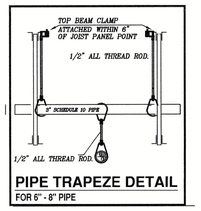
HYDRAULIC - SYSTEM

This building is protected by a Hydraulically Designed Automatic Sprinkler System.

Location	SYSTEM 1	
No. of Sprinklers	12	
Basis Of Design		
1. END HEAD PRESSURE	40	PSI
2. SPRINKLER K-FACTOR	25.2	
System Demand		
1. GPM DISCHARGE	2141	GPM
2. RESIDUAL PRESSURE AT THE BASE OF THE RISER	125	PSI
Building Information		
1. COMMODITY CLASSIFICATION	CLASS I-IV, CARTONED UNEXPANDED PLASTICS SEE SHEET 1 FOR CRITERIA DETAILS	

**MUST MAINTAIN 36" FROM DEFLECTOR TO TOP OF STORAGE

PIPE SIZES FOR SYSTEM 2 BASED ON SYSTEM 1 CALCULATION



PIPE TRAPEZE DETAIL

FOR 6" - 8" PIPE

SYSTEMS 1&2

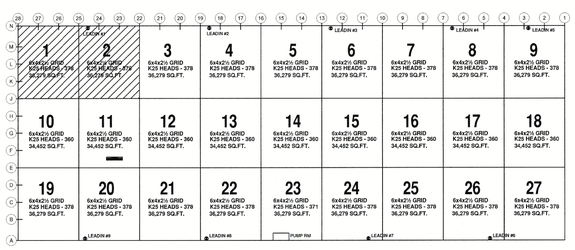
SCALE = 3/32" = 1'-0"

4' 2' 0 4' 8'
3/32" = 1'-0"

TOP OF STEEL HIGH POINT = 49'-8½" @ COL. G
TOP OF STEEL LOW POINT= 41'-7" @ COL. A&N

ALL 2½" LINES TO BE 8" FROM TOP OF STEEL UNLESS NOTED OTHERWISE
ALL 4" MAINS TO BE 1'-8½" FROM TOP OF STEEL UNLESS NOTED OTHERWISE
ALL 6" MAINS TO BE 1'-9½" FROM TOP OF STEEL UNLESS NOTED OTHERWISE

ALL BAY DOORS ARE VERTICAL LIFT AND DO NOT REQUIRE ADDITIONAL HEADS



KEY PLAN

NOT TO SCALE

HYDROSTATIC TEST TO BE CONDUCTED AT 225 PSI

SEISMIC DESIGN CATEGORY 'B', SEISMIC BRACING NOT REQUIRED

USE GROUP: S-1
CONSTRUCTION TYPE: II-B
AREA OF WORK: 963,100 SQ.FT.

PROJECT NAME: NY145 BROOKFIELD SUFFERN
PROJECT LOCATION: SUFFERN NY
TIM SURMAN PROFESSIONAL ENGINEER NY PE LIC.# 107503
SIGNATURE:
DATE SIGNED: 01/11/24

STATE OF NEW YORK · TIMOTHY SURMAN · 107503 · LICENSED PROFESSIONAL ENGINEER

STANDARD DRAWING SYMBOLS

D-0	DENOTES CENTERLINE OF PIPE ABOVE FINISH FLOOR.
@ BW-2	DENOTES CENTERLINE OF PIPE BELOW TOP OF STEEL.
@ BW-0	DENOTES CENTERLINE OF PIPE BELOW BOTTOM OF JOIST
@ BWC	DENOTES CENTERLINE OF PIPE BELOW BOTTOM OF BEAM.
@ CLG	DENOTES CENTERLINE OF PIPE BELOW THE CEILING
	DENOTES HANGER
	DENOTES HANGER ROD LENGTH
CH-9	DENOTES CEILING HEIGHT
	HYDRAULIC CALC REF. POINT
	GROOVE COUPLING
	GROOVE CHECK VA.
	FIRE HOSE VALVE CABINET
	HYDRAULIC DATA STICKER
	FIRE HOSE VALVE
	FIRE HYDRANT
	ELECTRIC BELL
	RISER
	FLOW SWITCH
	FIRE DEPT. CONN.
	AUXILIARY DRAIN
	PRESSURE GAUGE

TYPICAL HANGER ASSEMBLIES BY NUMBER

01	TOP BEAM CLAMP (TBC)	08A	SAMMY SWC-20 SIDE CONCRETE
01A	WIDE MOUTH TOP BEAM CLAMP	09	SAMMY GST-20 STRAIGHT WOOD
01B	INVERTED TOP BEAM CLAMP	09A	SAMMY SWC-20 SIDE WOOD
01C	INVERTED WIDE MOUTH TBC	10	
01D	TBC w/CLEVIS RING	10B	SAMMY SWSR-516 SIDE STEEL
01E	TBC w/ 8" RETAINING STRAP	11A	EYE SOCKET
01S	TBC w/ 12" RETAINING STRAP	12	
04	ROD, RING	12A	U-HOOK HANGER
04A	ROD, RING, NUTS & WASHER	14	STRUT NUT, ROD & RING
04C	CLEVIS HANGER w/ROD	15	
06	CONCRETE/HILTI DROP IN ANCHOR	16	Z-PURLIN CLAMP
07	HILTI SHOT & STUD	17	SAMMY DSTR.75 STRAIGHT LIGHT WEIGHT STEEL
08	SAMMY CST-20 STRAIGHT CONCRETE	18	SAMMY SWSR.516 SIDE, HEAVY WEIGHT STEEL

FIRE PROTECTION SPECIFICATIONS

1. DO NOT SCALE DRAWING(S).
2. ALL PIPE NOTED AS: GC=GROOVED END TO CENTER, GG = GROOVED END TO GROOVED END; INDICATES ACTUAL PIPE "CUT" LENGTHS. (U.O.N.)
3. DESIGN, INSTALLATION & MATERIALS TO BE PER N.F.P.A. #13 2016
4. HANGERS & ATTACHMENTS TO BE U.L. LISTED & SPACING PER N.F.P.A. #13 2016
5. ALL NEW PIPING SHALL BE HYDROSTATICALLY TESTED AT **225** PSI FOR 2 HOURS W/ NO VISIBLE SIGN OF LEAKAGE.
6. THE OWNER SHALL PROVIDE A MINIMUM OF 40° F TO PREVENT SPRINKLER PIPE FROM FREEZING.
7. CONTRACTOR SHALL PROVIDE THE OWNER, INSURANCE CO., & THE PROPER CITY OFFICIALS WITH COPIES OF THE MATERIAL & TEST CERTIFICATES.
8. ALL FLOW AND TAMPERS SHALL BE SUPERVISED IN ACCORDANCE WITH NFPA 72. THIS WORK IS TO BE DONE BY OTHERS AND IS NOT PART OF S A COMUNALE CONTRACT.

MATERIAL SPECIFICATIONS

Note:1" Pipe is Sch 40 A53 (uno)	GRID MAIN	GRID LINE	MAIN LINES
Sch 40 A53 Black			
Sch 10 Thinwall	X		
Sch 7		X	
Sch 40 Galvanized			
Sch 10 Galvanized			
Weld-O-Lets Thrd		X	
Weld-O-Lets Gry	X		
Weld-O-Lets Buff			
Cast Iron Fittings			
Galvanized Fittings			
Malleable Fitgs 150#			
Malleable Fitgs 300#			
Cpvc			
Number of Welds			
Cut Lengths			
Center to Center	X	X	

SUPPLY THE FOLLOWING	Yes/No
American Made (Domestic)	N
Smith-Cooper Fittings	Y
Smith-Cooper Couplings	N
Firelock Fittings	Y
Firelock Couplings	Y
Standard Vic/Central Pkgs	N
Head Wrenches	Y
Spare Head Cabinet	Y
Top Beam Clamps	Y
Concrete Inserts	N
Sammy Screws	N
Pipe/Strut/Angle Iron	N
Can Heads be any brand?	Y
Fit Fittings	N
Hangers Cut Length	N
Hangers Center to Center	Y
FM Approved Material Only	N

REVISIONS

NO.	DESCRIPTION	BY	DATE

PENDENT SPRINKLERS SHALL BE INSTALLED PER THE SPACING DICTATED BY APPROPRIATE CODES AND SHALL BE ALIGNED WITHIN NORMAL FABRICATION TOLERANCES, BUT WILL NOT NECESSARILY BE CENTERED IN CEILING TILES.

SPRINKLER LEGEND

SYMBOL	QTY.	DESCRIPTION	SIN#	THD	K=	TEMP
	756	VICTAULIC FL-QR/ST/ESFR ESFR BRASS PENDENT	V4804	1"	25.2	165°
	756	TOTAL SPRINKLERS THIS PAGE	I0206	TOTAL SPRINKLERS ON ENTIRE PROJECT		

S.A. COMUNALE CO. INC.
FIRE PROTECTION CONTRACTORS
2900 NEWPARK DR BARBERTON, OHIO 44203 330-706-3040 FAX: 330-861-0860
CLEVELAND: 440-684-0325 COLUMBUS: 614-291-7001 CINCINNATI: 513-874-4268
FREMONT: 419-334-3841 PHILADELPHIA, PA: 856-848-4666 YOUNGSTOWN: 330-856-4440
MARION 740-383-6789 WASHINGTON, DC 410-768-1931 READING, PA: 610-670-3960

NY154 BROOKFIELD SUFFERN– BUILDING 1
25 OLD MILL ROAD SUFFERN, NY 20901
ESFR SYSTEMS I AND 2

DATE	SCALE	DRAWN	JOB NO.	DWG. NO.
01.11.24	3/32" = 1'-0"	SARAH CAREW	51718093	4 OF 18