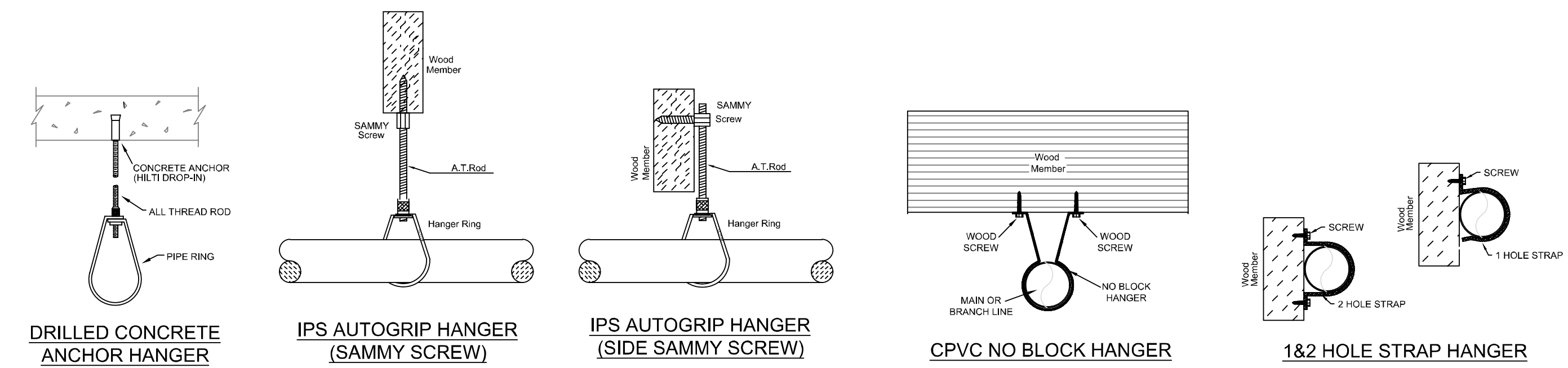


SECTION A-A
SCALE = 1/8" = 1'-0"



HANGER DETAILS

	NOMINAL PIPE SIZE (N.)							
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	NA	12-0	12-0	12-0	12-0	NA	NA	NA
BLAZEMASTER CPVC	5-6	6-0	6-6	7-0	8-0	9-0	NA	NA

NFPA 13 HANGER SPACING

COVERED AREAS

- ZONE#1: BUILDING #1 BASEMENT = 32,490 S.F.
- ZONE#2: BUILDING #2 BASEMENT = 32,960 S.F.
- ZONE#3: BUILDING #1 LEVEL 1 = 29,050 S.F.
- ZONE#4: BUILDING #2 LEVEL 1 = 32,500 S.F.
- ZONE#5: BUILDING #3 LEVEL 1 = 5,353 S.F.
- ZONE#6: BUILDING #1 LEVEL 2 = 29,050 S.F.
- ZONE#7: BUILDING #2 LEVEL 2 = 32,500 S.F.
- ZONE#8: BUILDING #1 LEVEL 3 = 29,050 S.F.
- ZONE#9: BUILDING #2 LEVEL 3 = 32,500 S.F.
- ZONE#10: BUILDING #1 LEVEL 4 = 29,050 S.F.
- ZONE#11: BUILDING #2 LEVEL 4 = 32,500 S.F.
- ZONE#12: BUILDING #1 ATTIC = 27,030 S.F.
- ZONE#13: BUILDING #2 ATTIC = 29,215 S.F.
- ZONE#14: BUILDING #3 ATTIC = 5,645 S.F.
- TOTAL S.F. = 378,893 S.F.

PIPE LEGEND

- BLACK STEEL SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING

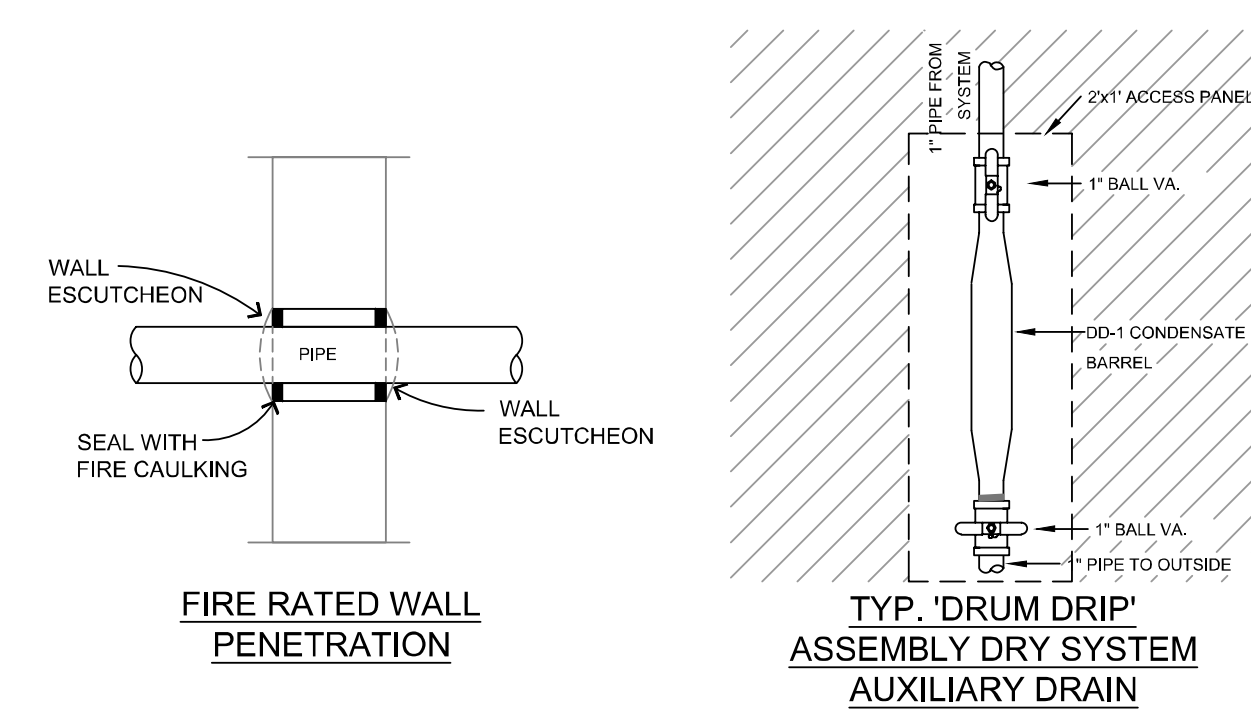
MANUAL WET STANDPIPE BUILDING #1

LOCATION: 4TH FLOOR STAIR A&B
REQUIRED FLOW: 750GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 133

MANUAL WET STANDPIPE BUILDING #2

LOCATION: 4TH FLOOR STAIR C&D
REQUIRED FLOW: 750GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 166

- NOTE:**
- PIPE SCHEDULE -**
- WET:
1" = MEGA-THREAD
1/4" & LARGER = MEGA-FLOW
1" THROUGH 3" = BLAZEMASTER CPVC
DRY:
1" = SCH. 40
1/4" & LARGER = SCH. 10
- DESIGN CRITERIA -**
- LIGHT HAZARD AREAS -
DESIGNED TO DELIVER 0.10 GPM/S.F.
OVER THE MOST DEMANDING 1500 S.F.
- ORDINARY HAZARD GROUP 1 AREAS -
DESIGNED TO DELIVER 0.15 GPM/S.F.
OVER THE MOST DEMANDING 1500 S.F.
- REMOTE AREA REDUCTIONS HAVE
BEEN TAKEN WHERE APPLICABLE PER
NFPA 13 SEC. 11.2.3.2.3
- FIRE CAULKING -**
- ALL FIRE RATED WALLS TO BE CAULKED
w/ HLT FS-ONE FIRE CAULKING AS PER
U.L. LISTING FOR WALL TYPE & RATING
- AUX. DRAINS -**
- SHALL BE PROVIDED WHERE A CHANGE IN
PIPING DIRECTION PREVENTS DRAINAGE
OF SYSTEM PIPING THROUGH THE MAIN
DRAIN VA.
- OBSTRUCTIONS -**
- ALL SPRINKLER LOCATIONS TO BE
SPACED IN ACCORDANCE w/
OBSTRUCTIONS TO MAINTAIN
CLEARANCES - PER NFPA-13 (EXIT SIGNS
& SECURITY EQUIPMENT SHALL NOT BE
OBSCURED BY FIRE PROTECTION SYSTEM)
- ELEC. EQUIP -**
- PROVIDE SHIELDS OR RAFFLES WHERE
WATER DAMAGE MAY RESULT FROM
HEADS TO CLOSE TO ELEC. PANELS
- SYMBOLS USED ON DRAWING**
- PIPE ELEVATION A.F.F.
 - PIPE ELEVATION BELOW B.O.D.
- ROOM HAZARD CLASSIFICATION (ALL
ROOMS ARE CONSIDERED LIGHT
HAZARD UNLESS NOTED)
- HYDRAULIC CALCULATION JUNCTION
POINT
- 8'-1" CEILING HEIGHT



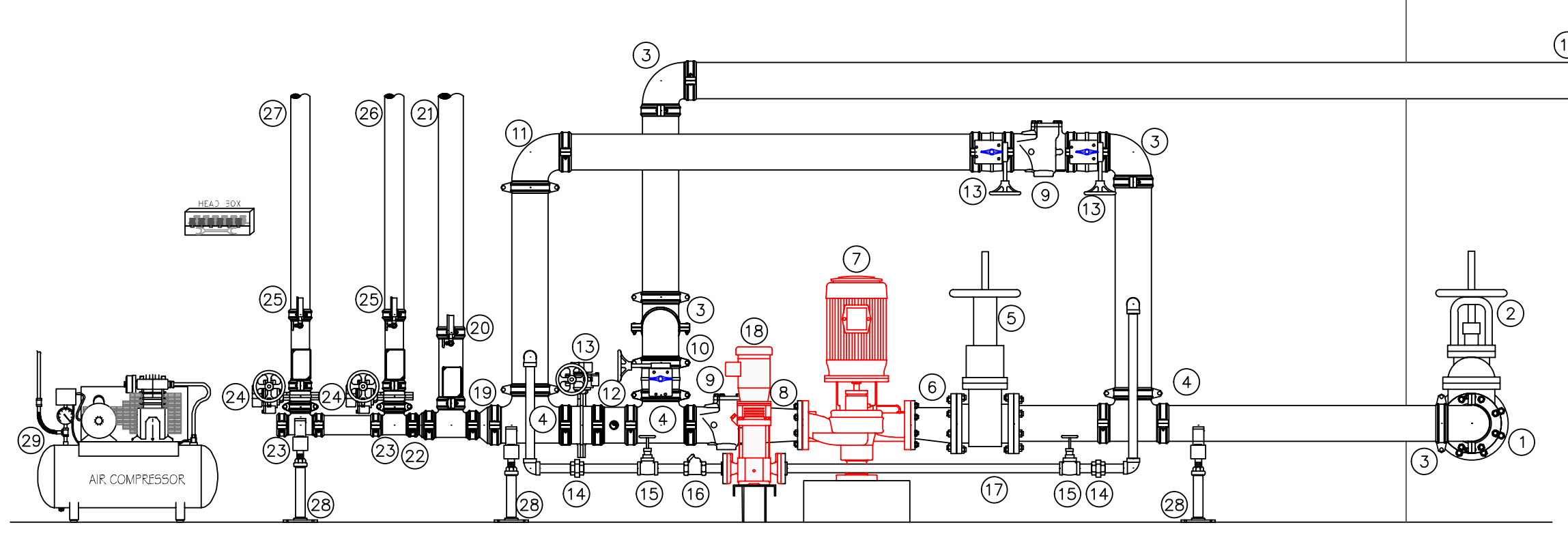
INSTALLATION DETAILS

SYM	IDENT	POSITION	FINISH	TEMP	K	NPT	SIN	MPG	MODEL#	ESCUTCHEON	HEAD BOX (2 min)
229	UPR	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	N/A	2
3	SPRNG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	N/A	N/A
112	UPR	BRASS	155	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	N/A	2
1420	PEND	WHITE	155	4.90	1/2"	TY2234	TYCO	LF1	SEMI-RECESS	2	2
175	270	PEND	WHITE	175	4.90	1/2"	TY2234	TYCO	LF1	SEMI-RECESS	2
95	PEND	WHITE	155	5.60	1/2"	RA5814	RELIABLE	LT56	SEMI-RECESS	2	2
98	PEND	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS	2	2
11	DRY	PEND	WHITE	155	5.60	1"	TY3539	TYCO	DS-ECC	CONCEALED	N/A
18	SIDE	WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESS	2	2
144	DRY	SIDE	CHROME	200	5.60	1"	TY3355	TYCO	DS-1	STANDARD	N/A
27	SIDE	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS	2	2
489	SIDE	WHITE	155	4.40	1/2"	TY2334	TYCO	LF1	SEMI-RECESS	2	2
175	90	SIDE	WHITE	175	4.40	1/2"	TY2334	TYCO	LF1	SEMI-RECESS	2
33	SIDE	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DR56	SEMI-RECESS	2	2
32	DRY	SIDE	CHROME	200	5.60	1"	TY3338	TYCO	DS-1 EC	STANDARD	N/A
5	SIDE	WHITE	155	11.20	3/4"	TY5332	TYCO	EL05W20	STANDARD	2	2
174	UPR	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	N/A	2
4	SPRNG	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	N/A	2
126	UPR	BRASS	200	8.00	1/2"	RA5692	RELIABLE	DR80-2	N/A	N/A	2
4	PEND	WHITE	155	11.20	3/4"	TY2337	TYCO	EC-11	SEMI-RECESS	2	2

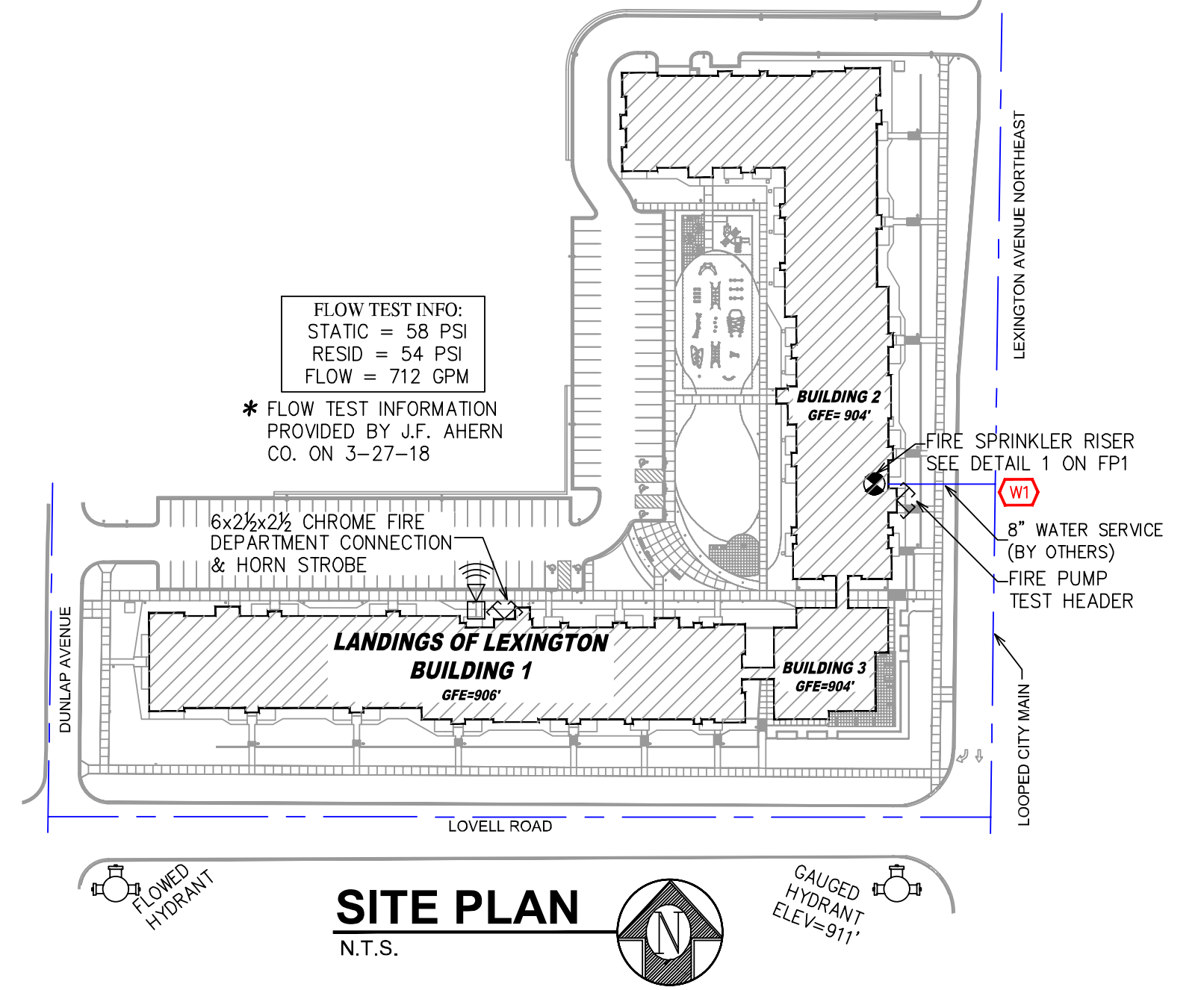
3364 TOTAL HEADS

SPRINKLER LEGEND

- FIRE PUMP & RISER LEGEND**
- 6" UNDERGROUND WATER SERVICE (BY OTHERS)
 - 6" APOLLO DCLF 4 FLANGED BACKFLOW w/ P&F GATES AND TAMPER
 - 6" GROOVED 90 ELBOW
 - 6" GROOVED TEE
 - 6" FLANGED GATE VALVE w/ TAMPER
 - 6"x6" FLANGED ECCENTRIC REDUCER
 - 100psi @ 550gpm VERTICAL IN-LINE FIRE PUMP
 - 6"x6" CONCENTRIC INCREASER
 - 6" GROOVED CHECK VALVE
 - 6" GROOVED BUTTERFLY VALVE w/ TAMPER (NORMALLY CLOSED)
 - 6" OUT TO FIRE PUMP TEST HEADER
 - 6"x6" w/ OUTLET FOR CASING RELIEF VALVE & FIRE PUMP CONTROLLER FEED LINE
 - 6" GROOVED BUTTERFLY VALVE w/ TAMPER
 - 1/2" THREADED UNION
 - 1/2" THREADED GATE VALVE
 - 1/2" THREADED CHECK VALVE
 - 1/2" JOCKEY PUMP SUPPLY
 - 1/2" JOCKEY PUMP
 - 6"x4" GROOVED CONCENTRIC REDUCER
 - 4" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, TEST AND DRAIN, PRESSURE RELIEF, & PRESSURE GAUGE
 - 4" MAIN TO FEED COMBINED AUTOMATIC STANDPIPES & FIRE DEPT. CONNECTION (SEE PIPING PLAN FOR CONTINUATION)
 - 6" GROOVED TEE
 - 3" GROOVED TEE
 - 3" GROOVED BUTTERFLY VALVE
 - 3" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, TEST AND DRAIN, PRESSURE RELIEF, & PRESSURE GAUGE
 - 3" TO PARKING GARAGE ZONE #1
 - 3" TO PARKING GARAGE ZONE #2
 - PIPE STAND
 - AIR COMPRESSOR FOR ATTIC DRY SYSTEMS

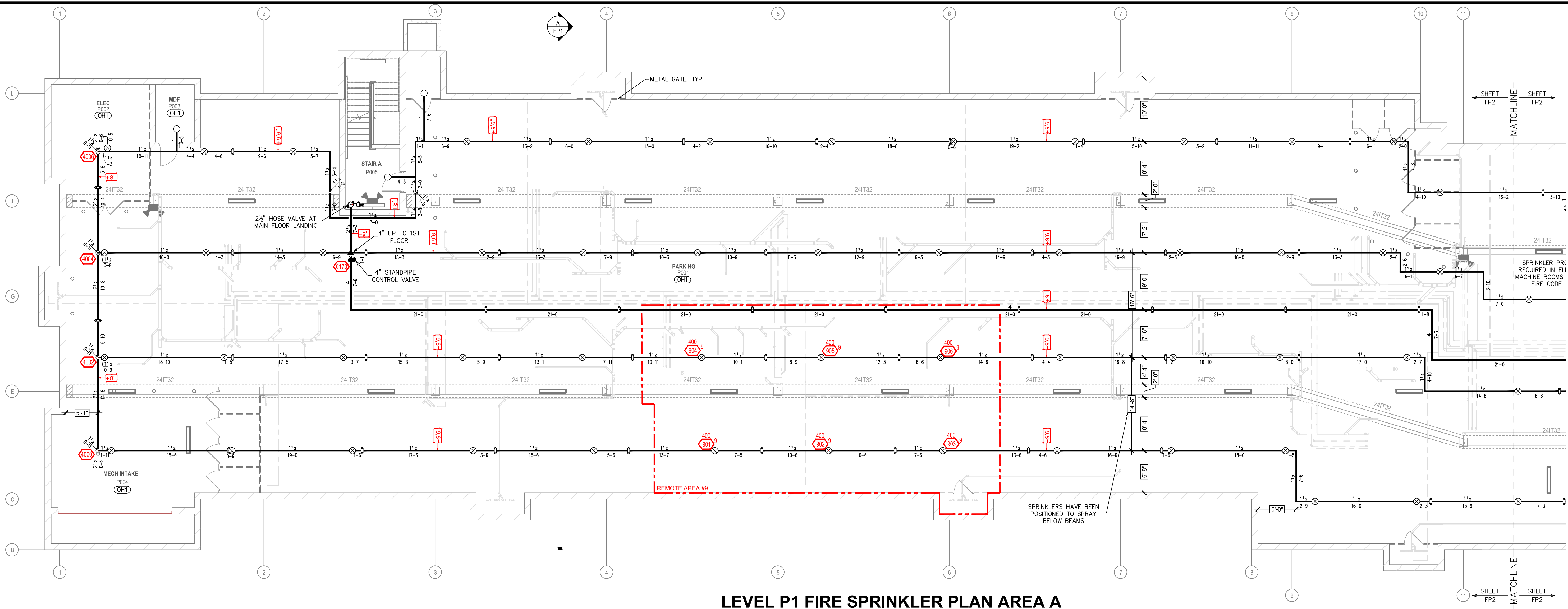


VALVE ASSEMBLY DETAIL
SCALE: 1/2" = 1'-0"



SITE PLAN
N.T.S.





LEVEL P1 FIRE SPRINKLER PLAN AREA A
SCALE = 1/8" = 1'-0"

CALC PLACARD

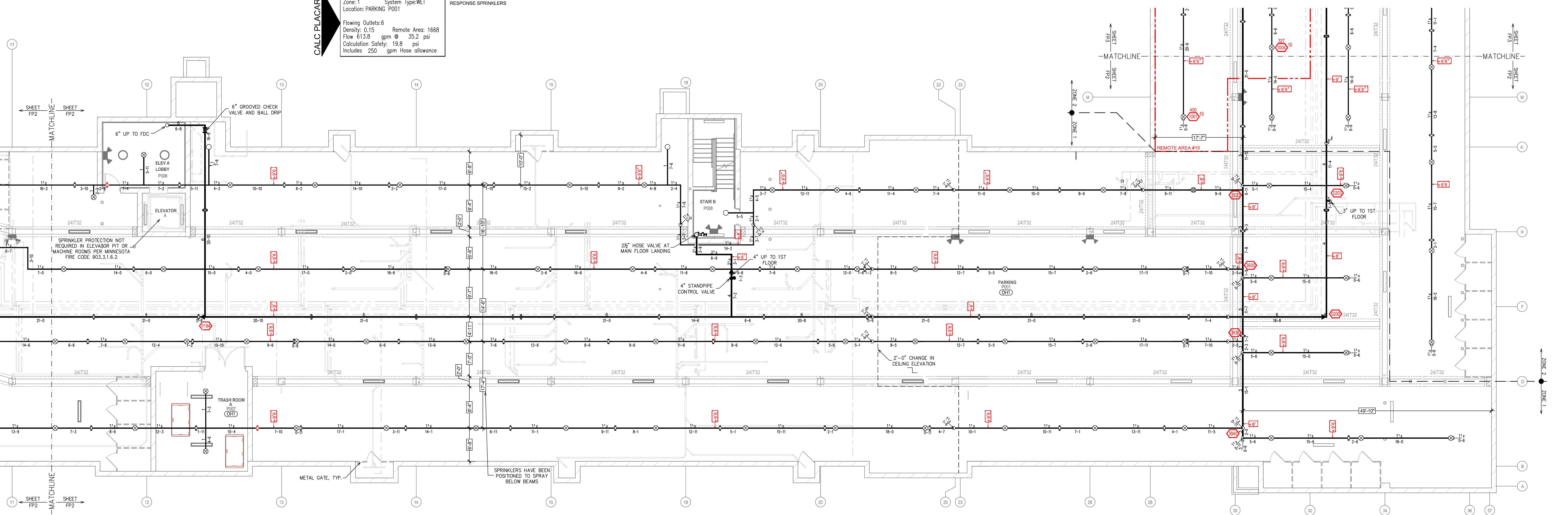
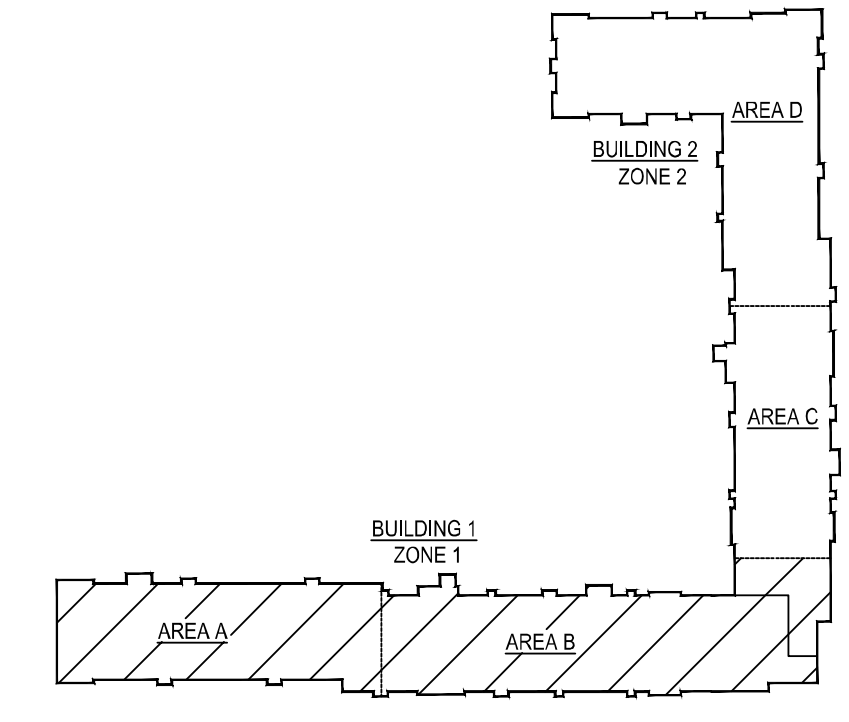
Design Area # 9 HAZARD: OH1
Zone: 1 System Type: WET
Location: PARKING P001

Flowing Outlets: 6 Remote Area: 1668
Density: 0.15 Flow: 613.8 gpm @ 35.2 psi
Calculation Safety: 19.8 pps
Includes 250 gpm Hose allowance

NOTE: 1500 S.F. NOT REDUCED DUE TO STANDARD RESPONSE SPRINKLERS

SYM	QTY	POSITION	FINISH	TEMP	K	RPT	SIN	MFG.	MODEL#	ESCU/COE/ON	HEAD BOX (2 min)
229	UPR		BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	2
3	SPRNG		BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	N/A
112	UPR		BRASS	155	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	2
1420	PEND		WHITE	155	4.90	1/2"	TY2234	TYCO	LFPI	SEMI-RECESS	2
175	PEND		WHITE	175	4.90	1/2"	TY2234	TYCO	LFPI	SEMI-RECESS	2
95	PEND		WHITE	155	5.60	1/2"	RASB14	RELIABLE	LT56	SEMI-RECESS	2
98	PEND		WHITE	155	5.60	1/2"	TY323	TYCO	LFPI	SEMI-RECESS	2
11	DRY PEND		WHITE	155	5.60	1"	TY3539	TYCO	DS-CC	CONCEALED	N/A
18	SIDE		WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESS	2
144	DRY SIDE		CHROME	200	5.60	1"	TY3355	TYCO	DS-1	STANDARD	N/A
27	SIDE		WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS	2
469	SIDE		WHITE	155	4.40	1/2"	TY3334	TYCO	LFPI	SEMI-RECESS	2
175	90	SIDE	WHITE	175	4.40	1/2"	TY3334	TYCO	LFPI	SEMI-RECESS	2
33	SIDE		WHITE	155	5.60	1/2"	RA1564	RELIABLE	DSH6	SEMI-RECESS	2
32	DRY SIDE		CHROME	200	5.60	1"	TY3338	TYCO	DS-1	STANDARD	N/A
5	SIDE		WHITE	155	11.20	3/4"	TY5332	TYCO	ELOSW20	STANDARD	2
174	UPR		BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2
4	SPRNG		BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	N/A
126	UPR		BRASS	200	8.00	1/2"	RA5692	RELIABLE	DSH6-2	N/A	2
4	PEND		WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESS	2
3364 TOTAL HEADS											

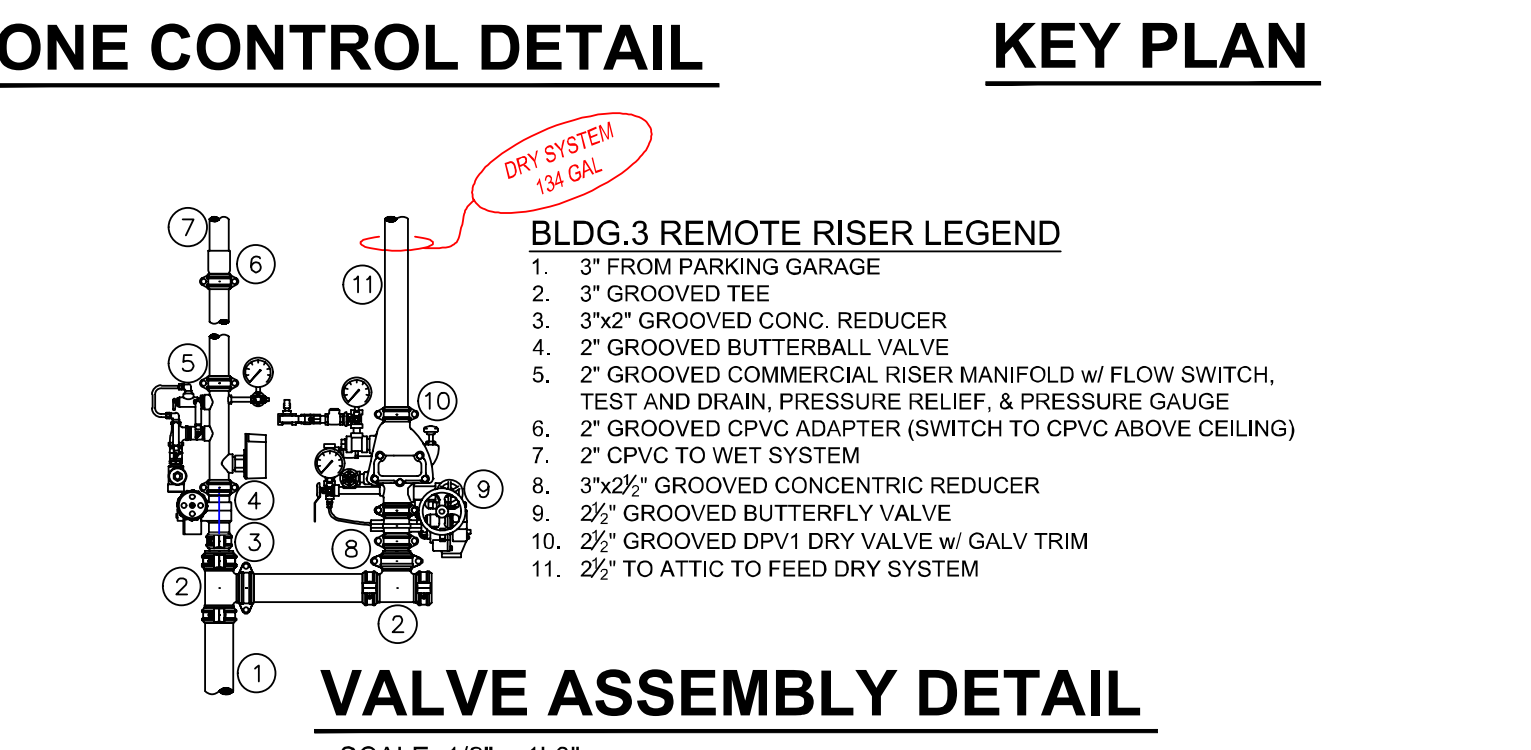
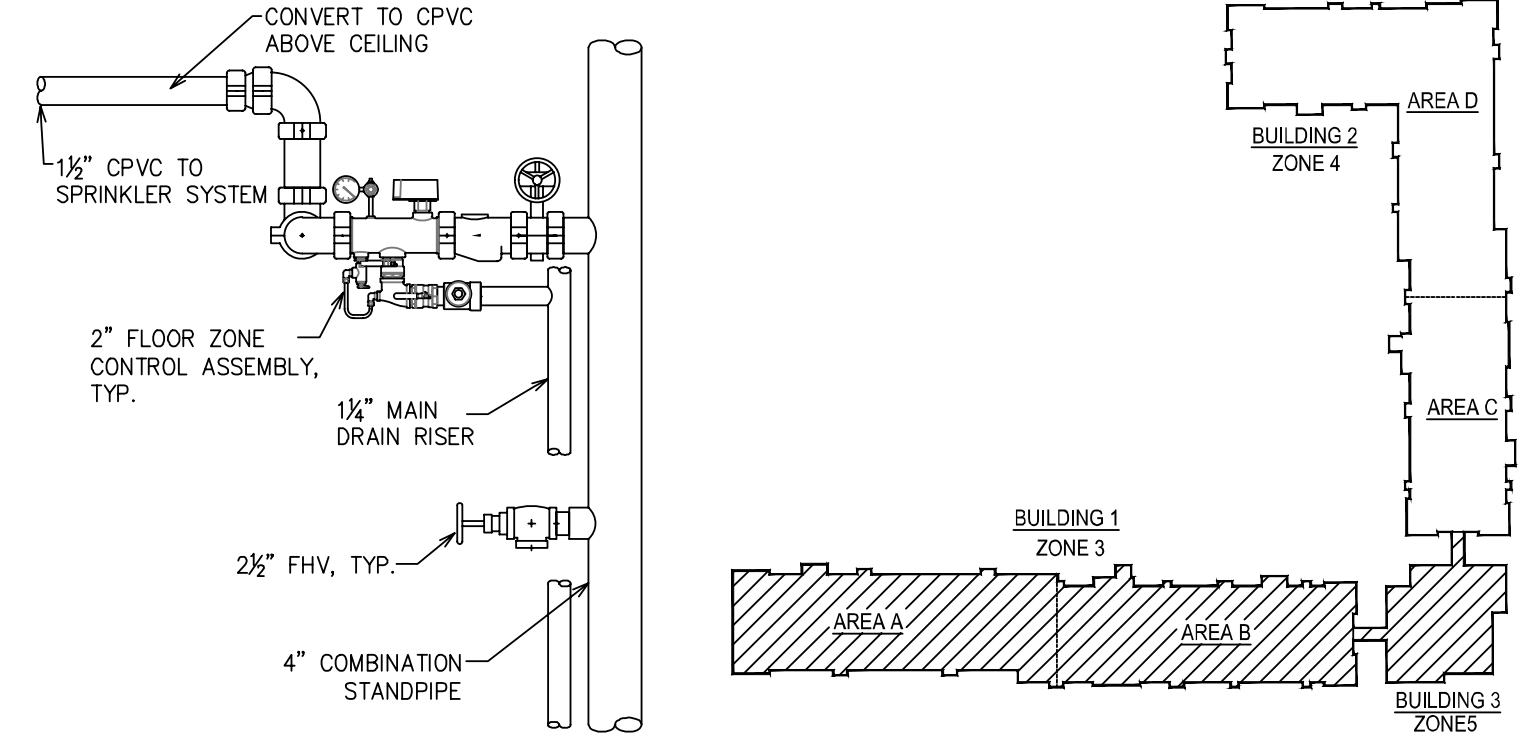
SPRINKLER LEGEND



LEVEL P1 FIRE SPRINKLER PLAN AREA B
SCALE = 1/8" = 1'-0"

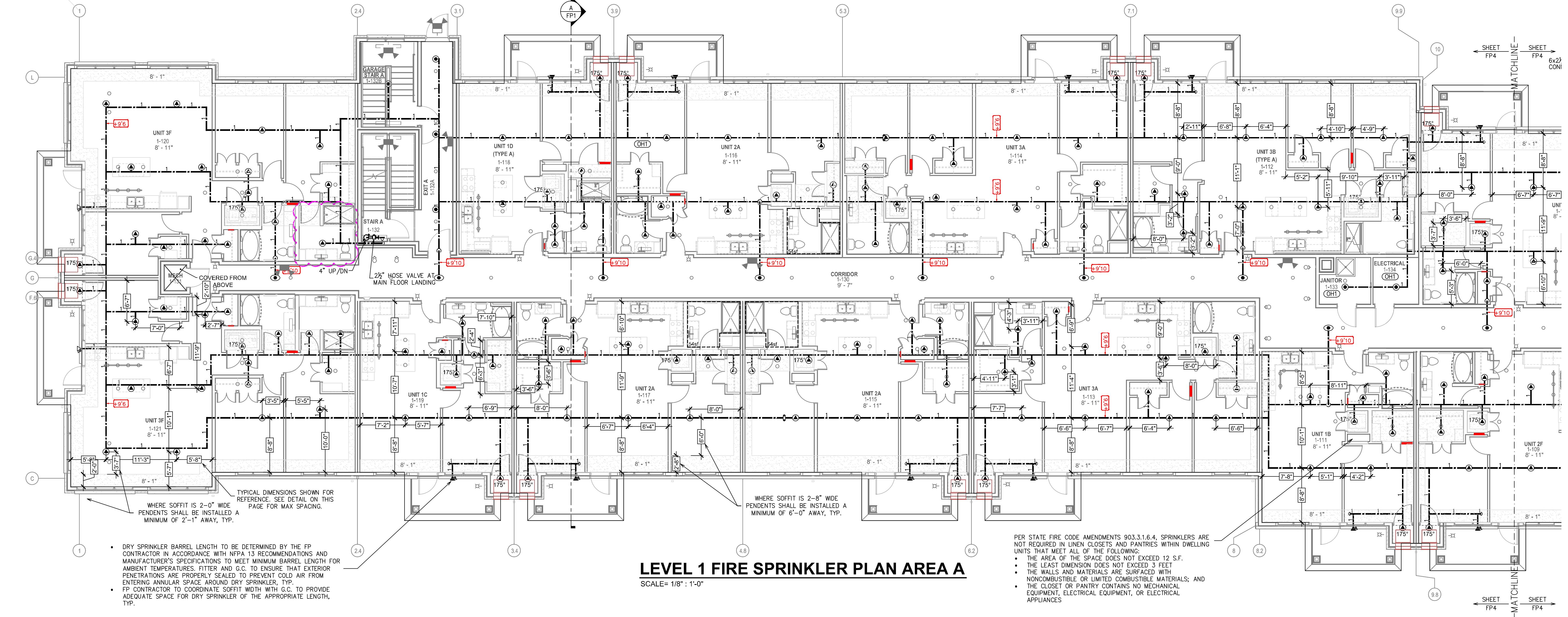
SYM	QTY	POSITION	FINISH	TEMP	K	RPT	SIN	MFG.	MODEL#	ESCUTCHEON	HEAD BOX (2 min)
229	UPR	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	N/A	2
3	SPRNG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	N/A	2
112	UPR	BRASS	155	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	N/A	2
1420	PEND	WHITE	155	4.90	1/2"	TY2234	TYCO	LFPI	SEMI-RECESS	2	2
175	PEND	WHITE	175	4.90	1/2"	TY2234	TYCO	LFPI	SEMI-RECESS	2	2
95	PEND	WHITE	155	5.60	1/2"	RA814	RELIABLE	LT56	SEMI-RECESS	2	2
98	PEND	WHITE	155	5.60	1/2"	TY2323	TYCO	TY-FRB	SEMI-RECESS	2	2
11	DRY PEND	WHITE	155	5.60	1/2"	TY3539	TYCO	DS-EC	CONCEALED	N/A	2
18	SIDE	WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESS	2	2
144	DRY SIDE	CHROME	200	5.60	1"	TY3355	TYCO	DS-1	STANDARD	N/A	2
4	SIDE	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS	2	2
469	SIDE	WHITE	155	4.40	1/2"	TY2334	TYCO	LFPI	SEMI-RECESS	2	2
90	SIDE	WHITE	175	4.40	1/2"	TY2334	TYCO	LFPI	SEMI-RECESS	2	2
33	SIDE	WHITE	155	5.60	1/2"	RA1564	RELIABLE	DS6	SEMI-RECESS	2	2
32	DRY SIDE	CHROME	200	5.60	1"	TY3338	TYCO	DS-1	STANDARD	N/A	2
5	SIDE	WHITE	155	11.20	3/4"	TY5332	TYCO	EL05W20	STANDARD	2	2
174	UPR	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2	2
4	SPRNG	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2	2
126	UPR	BRASS	200	8.00	1/2"	RA5692	RELIABLE	OD80-2	N/A	2	2
4	PEND	WHITE	155	11.20	3/4"	TY5337	TYCO	EC-11	SEMI-RECESS	2	2
3364 TOTAL HEADS											

SPRINKLER LEGEND

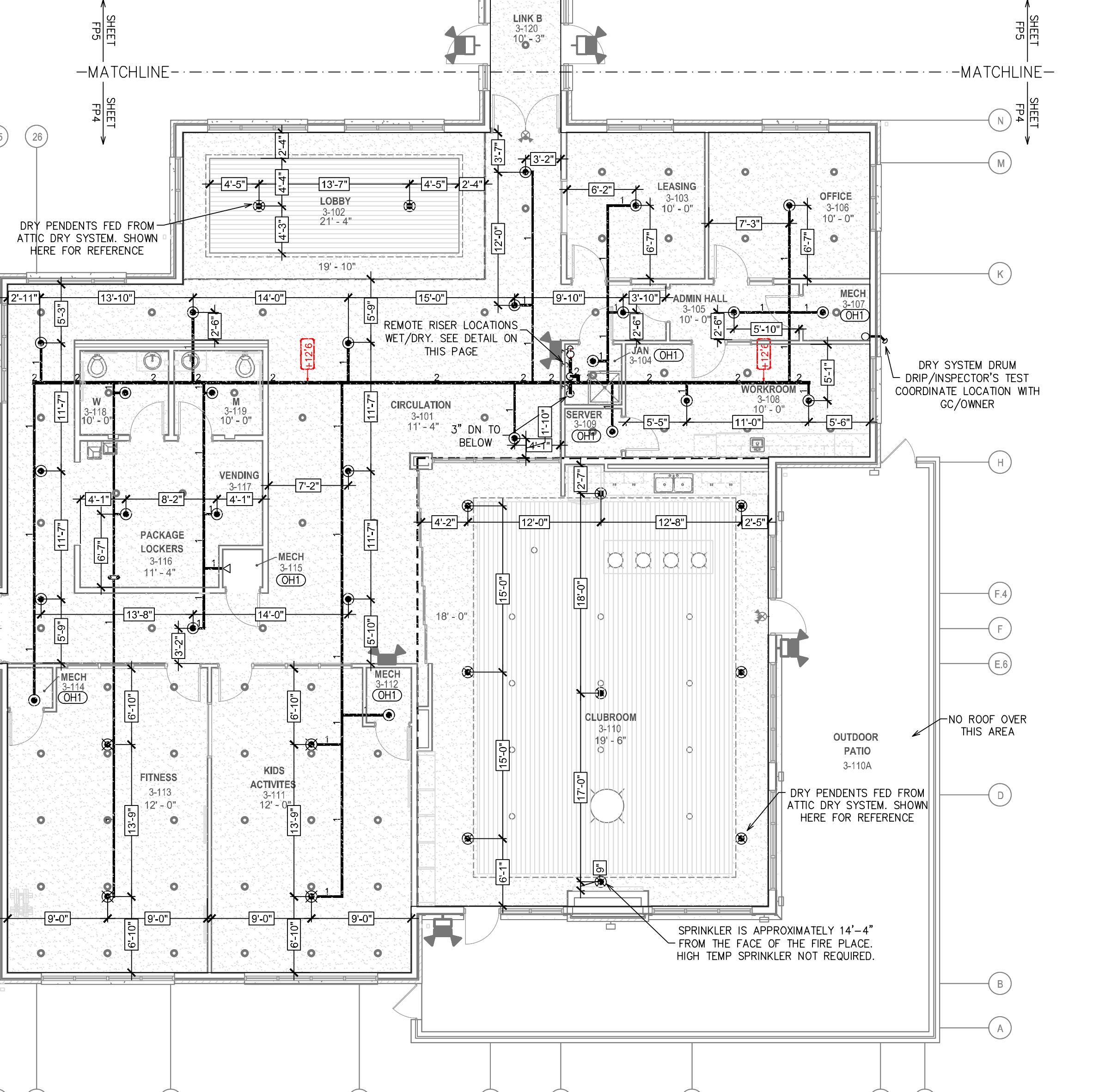
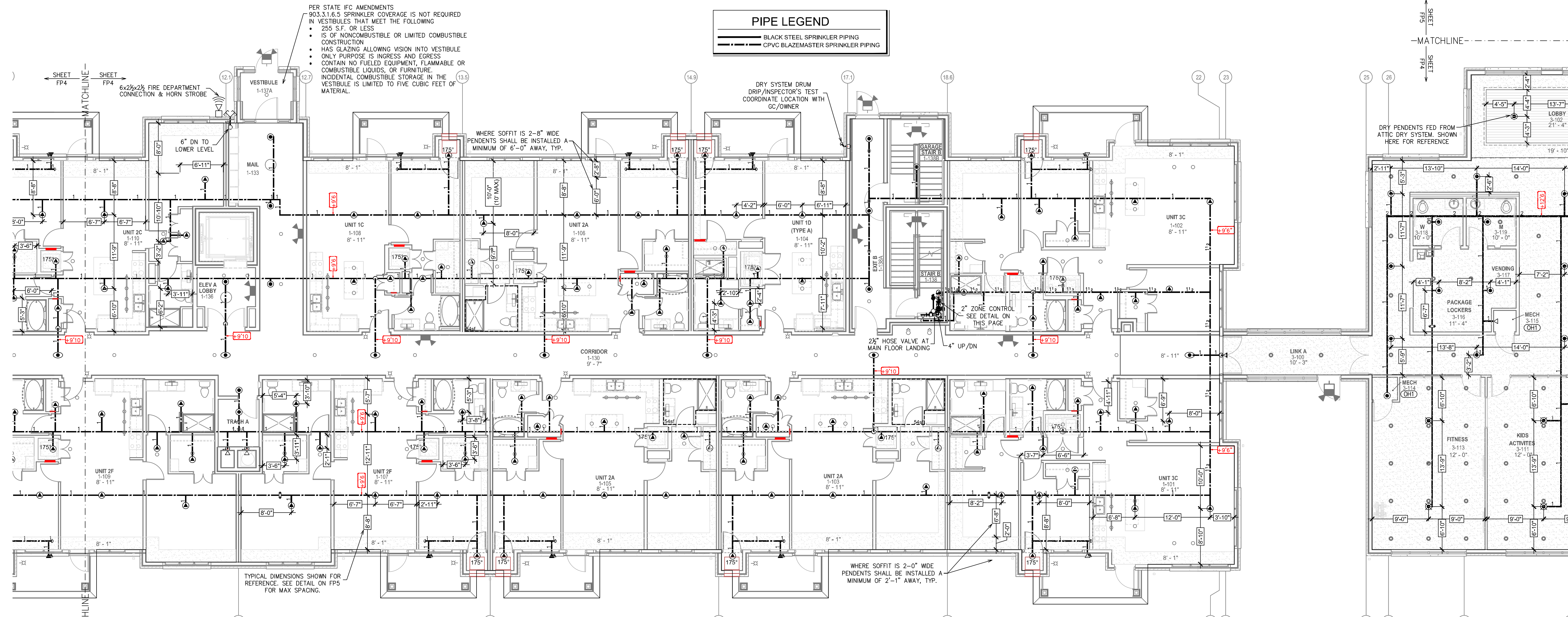


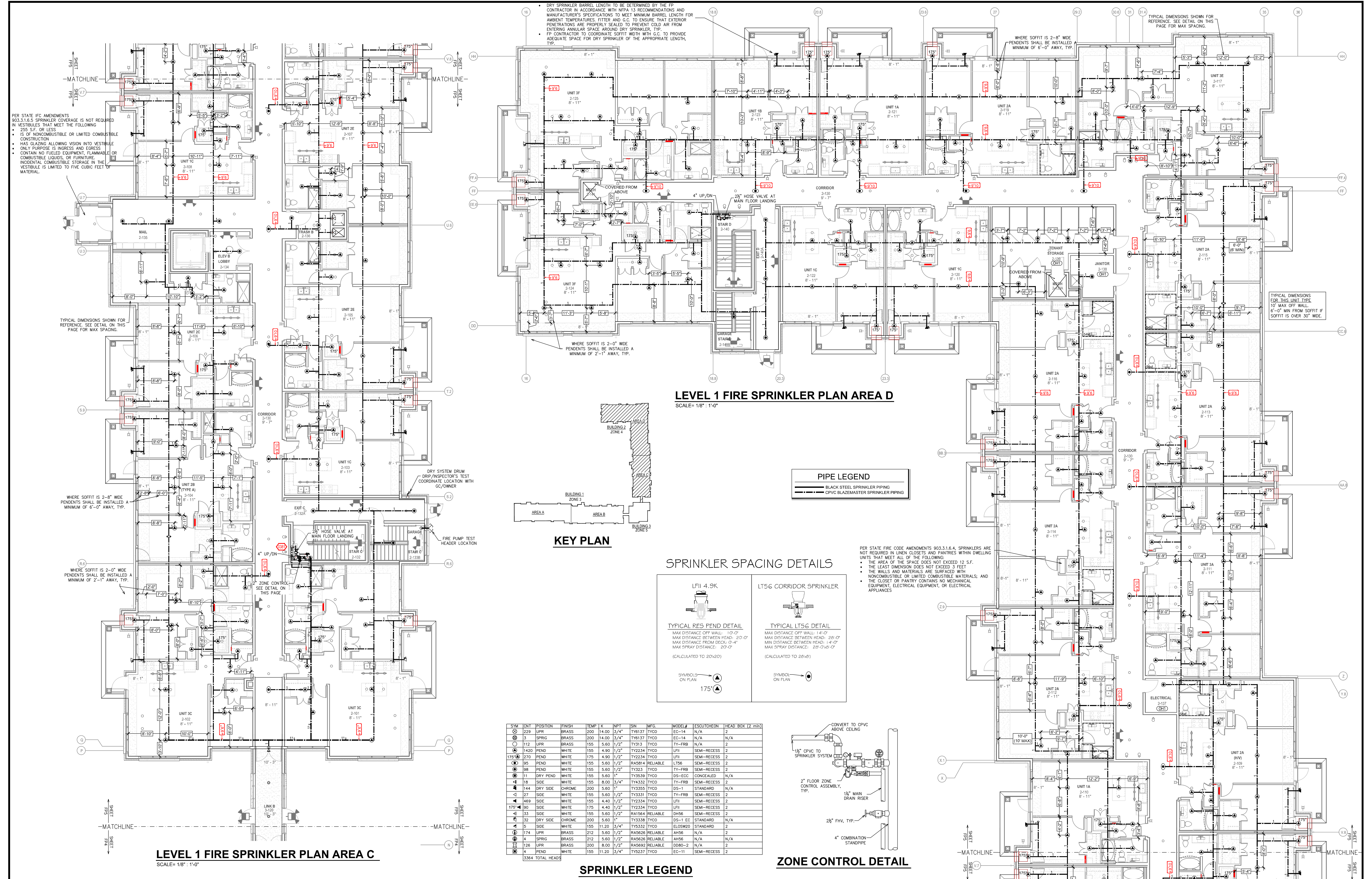
LEVEL 1 FIRE SPRINKLER PLAN AREA A

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



- PER STATE FIRE CODE AMENDMENTS 903.3.1.6.5 SPRINKLER COVERAGE IS NOT REQUIRED IN VESTIBULES THAT MEET THE FOLLOWING:
- 255 S.F. OR LESS
 - IS OF NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE CONSTRUCTION
 - HAS GLAZING ALLOWING VISION INTO VESTIBULE
 - ONLY PURPOSE IS INGRESS AND EGRESS
 - CONTAIN NO FUELED EQUIPMENT, FLAMMABLE OR COMBUSTIBLE LIQUIDS, OR FURNITURE
 - INCIDENTAL COMBUSTIBLE STORAGE IN THE VESTIBULE IS LIMITED TO FIVE CUBIC FEET OF MATERIAL.





PER STATE IFC AMENDMENTS 903.3.1.6.5 SPRINKLER COVERAGE IS NOT REQUIRED IN VESTIBULES THAT MEET THE FOLLOWING:

- 250 S.F. OR LESS
- IS OF NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE CONSTRUCTION
- HAS GLAZING ALLOWING VISION INTO VESTIBULE
- ONLY PURPOSE IS INGRESS AND EGRESS
- CONTAIN NO FUELED EQUIPMENT, FLAMMABLE OR COMBUSTIBLE LIQUIDS, OR FURNITURE
- INCIDENTAL COMBUSTIBLE STORAGE IN THE VESTIBULE IS LIMITED TO FIVE CUBIC FEET OF MATERIAL

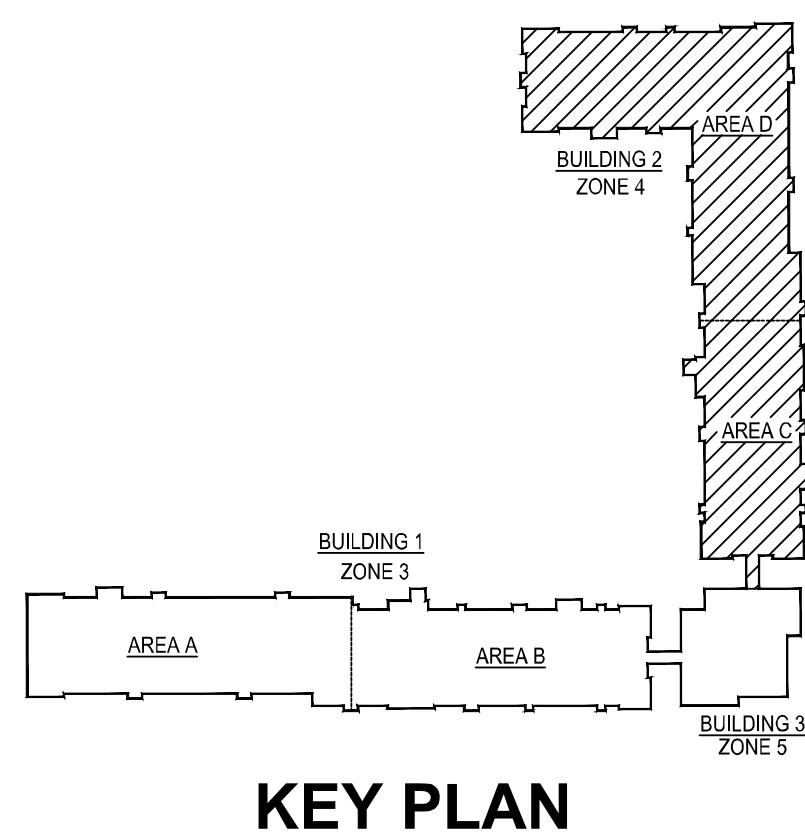
TYPICAL DIMENSIONS SHOWN FOR REFERENCE. SEE DETAIL ON THIS PAGE FOR MAX SPACING.

WHERE SOFFIT IS 2'-8" WIDE PENDENTS SHALL BE INSTALLED A MINIMUM OF 6'-0" AWAY, TYP.

WHERE SOFFIT IS 2'-0" WIDE PENDENTS SHALL BE INSTALLED A MINIMUM OF 2'-1" AWAY, TYP.

LEVEL 1 FIRE SPRINKLER PLAN AREA C
SCALE= 1/8" = 1'-0"

LEVEL 1 FIRE SPRINKLER PLAN AREA D
SCALE= 1/8" = 1'-0"

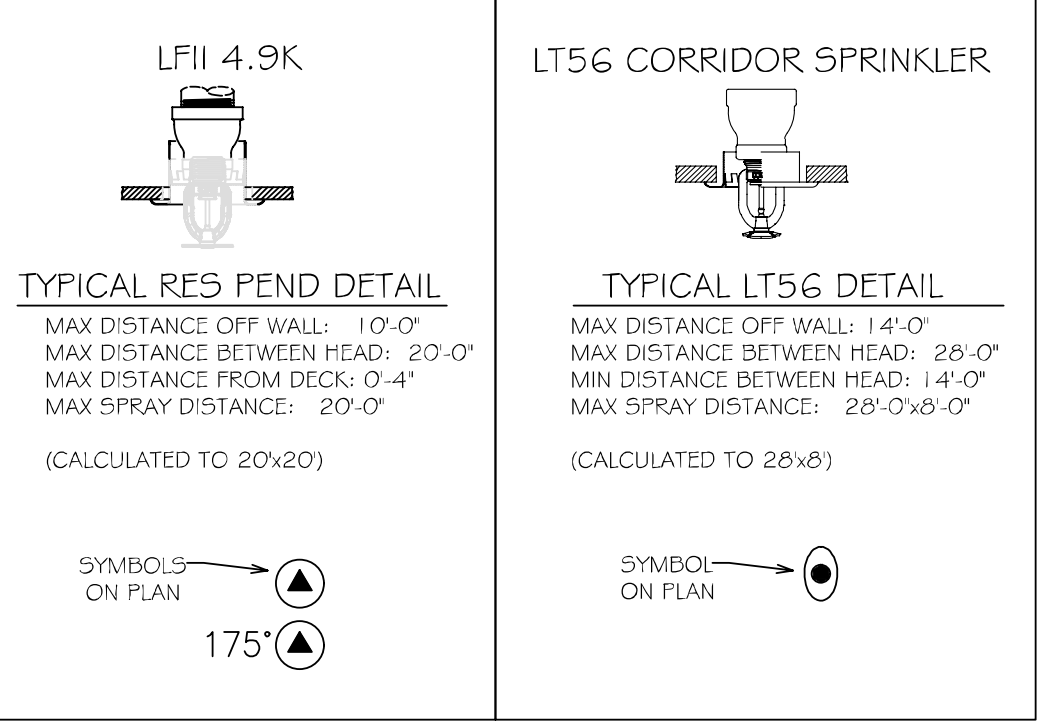


KEY PLAN

PIPE LEGEND

- BLACK STEEL SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING

SPRINKLER SPACING DETAILS



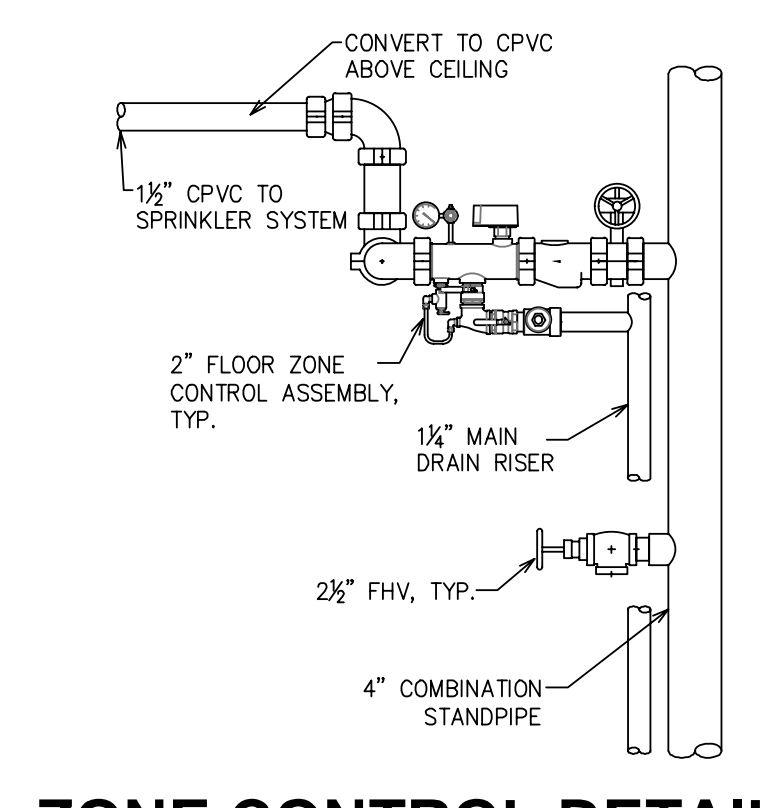
PER STATE FIRE CODE AMENDMENTS 903.3.1.6.4, SPRINKLERS ARE NOT REQUIRED IN LINEN CLOSETS AND PANTRIES WITHIN DWELLING UNITS THAT MEET ALL OF THE FOLLOWING:

- THE AREA OF THE SPACE DOES NOT EXCEED 12 S.F.
- THE LEAST DIMENSION DOES NOT EXCEED 3 FEET
- THE WALLS AND MATERIALS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS; AND
- THE CLOSET OR PANTRY CONTAINS NO MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, OR ELECTRICAL APPLIANCES

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCAUTHEON	HEAD BOX (2 min)	
229	UPR	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	N/A	2	
3	SPRIG	BRASS	200	14.00	3/4"	TY6137	TYCO	EC-14	N/A	N/A	N/A	
112	UPR	BRASS	155	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	N/A	2	
1420	PEND	WHITE	155	4.90	1/2"	TY2234	TYCO	LFI	SEMI-RECESS	2	2	
175	270	PEND	WHITE	175	4.90	1/2"	TY2234	TYCO	LFI	SEMI-RECESS	2	2
95	PEND	WHITE	155	5.60	1/2"	RA5814	RELIABLE	LTS6	SEMI-RECESS	2	2	
98	PEND	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESS	2	2	
11	DRY PEND	WHITE	155	5.60	1"	TY3539	TYCO	DS-ECC	CONCEALED	N/A	N/A	
18	SIDE	WHITE	155	8.00	3/4"	TY4332	TYCO	TY-FRB	SEMI-RECESS	2	2	
144	DRY SIDE	CHROME	200	5.60	1"	TY3355	TYCO	DS-1	STANDARD	N/A	N/A	
27	SIDE	WHITE	155	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESS	2	2	
489	SIDE	WHITE	155	4.40	1/2"	TY2334	TYCO	LFI	SEMI-RECESS	2	2	
175	90	SIDE	WHITE	175	4.40	1/2"	TY2334	TYCO	LFI	SEMI-RECESS	2	2
33	SIDE	WHITE	155	5.60	1/2"	RA1964	RELIABLE	DH56	SEMI-RECESS	2	2	
32	DRY SIDE	CHROME	200	5.60	1"	TY3338	TYCO	DS-1 EC	STANDARD	N/A	N/A	
5	SIDE	WHITE	155	11.20	3/4"	TY3332	TYCO	ELOSWOOD	STANDARD	N/A	N/A	
174	UPR	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	N/A	2	
4	SPRIG	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	N/A	N/A	
126	UPR	BRASS	200	8.00	1/2"	RA5692	RELIABLE	DB80-2	N/A	N/A	2	
4	PEND	WHITE	115	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESS	2	2	

3364 TOTAL HEADS

SPRINKLER LEGEND



ZONE CONTROL DETAIL