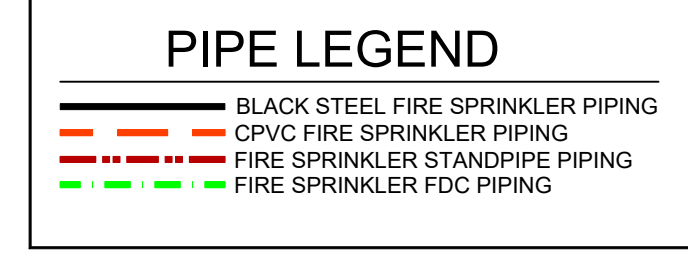


SITE PLAN
 SCALE= 1" = 50'-0"

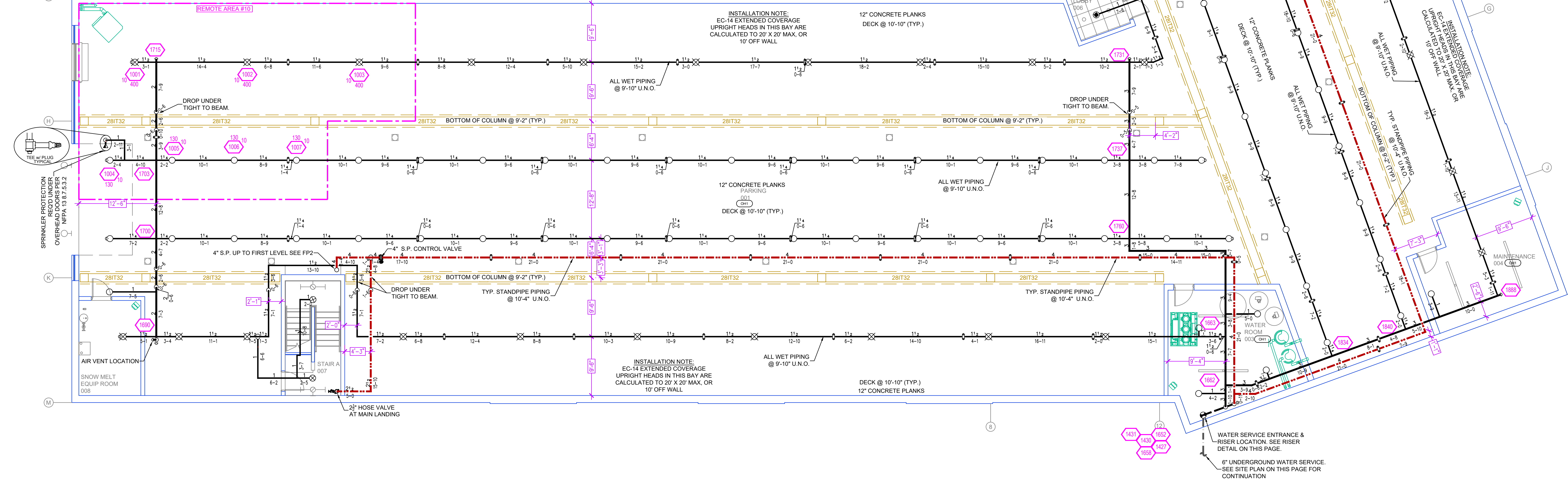


SPRINKLER HEAD LEGEND

SYM	QTY	POSITION	FINISH	TEMP	K	INPT	SN	MFG.	MODEL#	ESCU/CHEN	SPACING
1	1	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LFI	SEMI-REC	18" X 18"
2	2	SIDEWALL	WHITE	200	11.20	3/4"	TY5332	TYCO	ELOS/WD	SEMI-REC	16" X 16"
3	2	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFI	SEMI-REC	16" X 16"
4	1	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-REC	225 SF (LH) - 130 SF (OH)
5	1	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-REC	14" X 14" (LH) 10" X 10" (OH)
6	4	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	NONE	225 SF (LH) - 130 SF (OH)
7	0	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-F	NONE	225 SF (LH) - 130 SF (OH)
8	8	SIDEWALL	WHITE	175	8.00	1/2"	VK630	VIRKING	VK630	SEMI-REC	16" X 22"
9	31	UPRIGHT	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	NONE	20" X 20"
10	1	PENDENT	WHITE	288	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-REC	225 SF (LH) - 130 SF (OH)
11	852	TOTAL									

HAZARD: OH1
 Zone: 1 System Type: WET
 Location: LOWER LEVEL
PARKING
 Flowing Outlets: 7
 Density: 0.15 Remote Area: 1546
 Flow: 537.6 gpm @ 59 psi
 Calculation Safety: 8.4 psi
 Includes 250 gpm Hose allowance

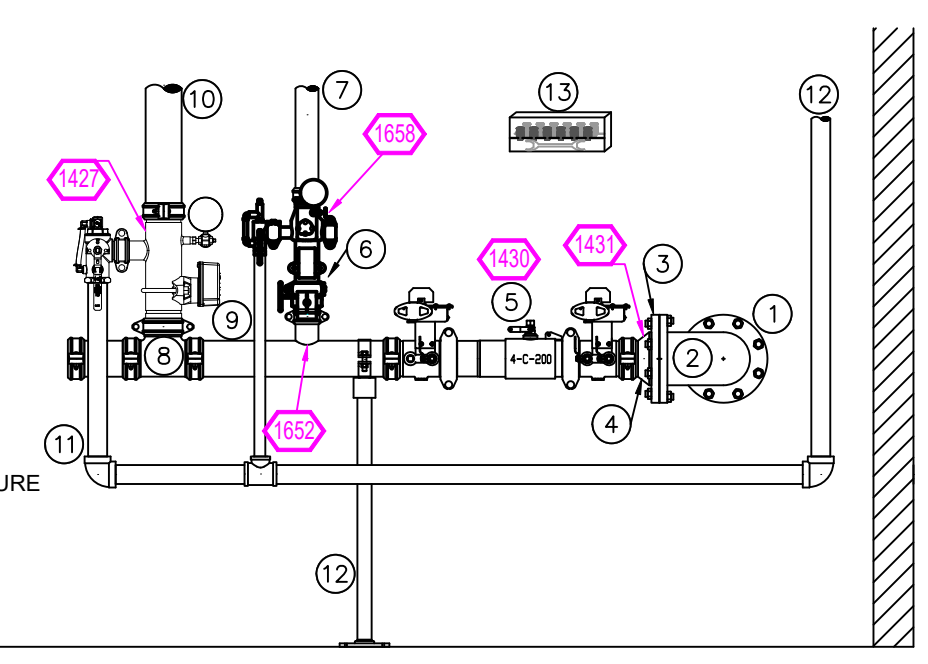
NOTE: 1500sf CALCULATED DUE TO USE OF SR SPRINKLERS



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

RISER LEGEND

- 6" UNDERGROUND WATER SERVICE (BY OTHERS)
- FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "FF" CONTRACTOR BY THE G.C.
- 6" FLANGED DR
- 6" FLANGED GROOVED ADAPTOR
- 6" x 4" GROOVED CONC. REDUCER
- 4" AMES C200 BACKFLOW GXG BFV w/ TAMPERS
- 3" UMC VALVE w/ TAMPERS
- 3" TO LEVEL PARKING (ZONE #1)
- 4" GROOVED TEE
- 4" COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, PRV & TEST AND DRAIN
- 4" TO STANDPIPE SYSTEM (ZONE #2-4)
- 2" MAIN DRAIN PIPED OUTSIDE
- PIPE STAND
- HEAD BOX & SPARE HEAD WRENCH

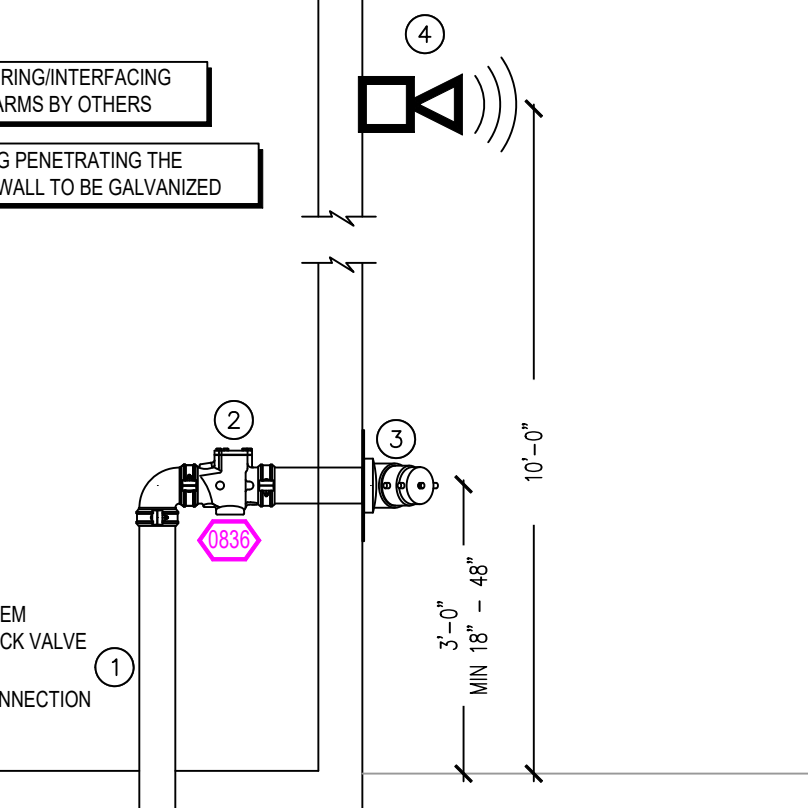


* ALL WIRING/INTERFACING OF ALARMS BY OTHERS
 * ALL PIPING PENETRATING THE EXTERIOR WALL TO BE GALVANIZED

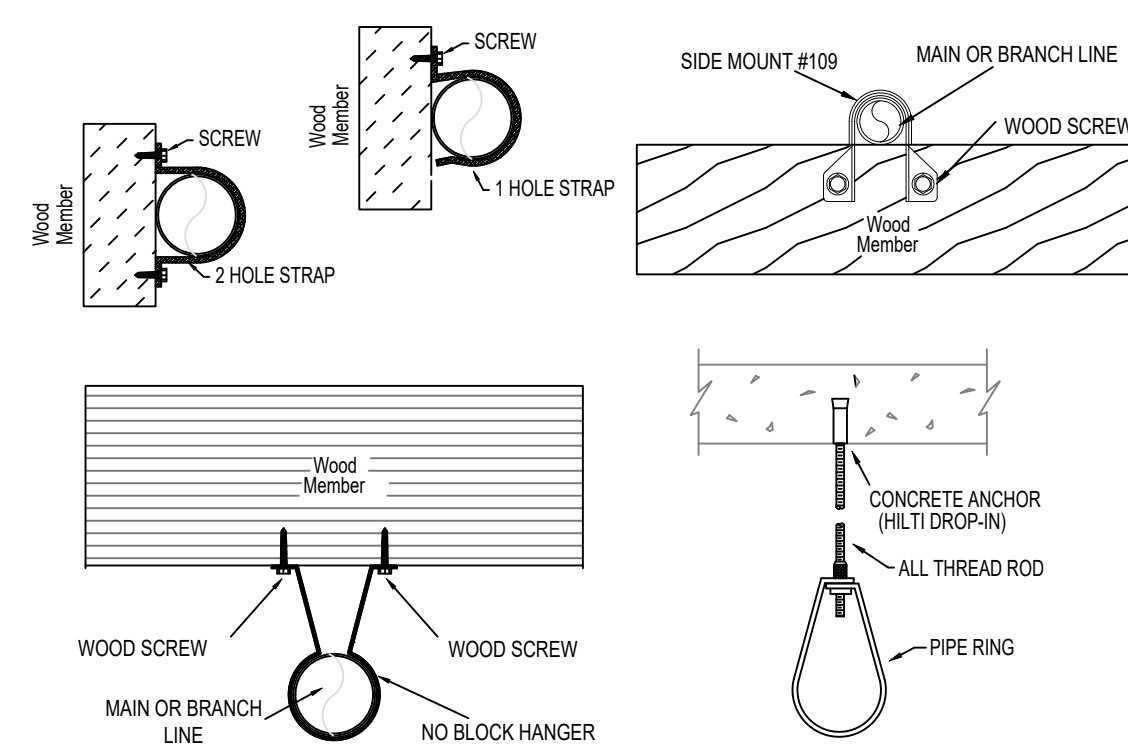
RISER DETAIL
 SCALE= 1/2" = 1'-0"

FDC LEGEND

- 4" TO FROM SYSTEM
- 4" GROOVED CHECK VALVE
- 4" x 2" x 2" FIRE DEPARTMENT CONNECTION HORN STROBE
-



FDC DETAIL
 SCALE= 1/2" = 1'-0"



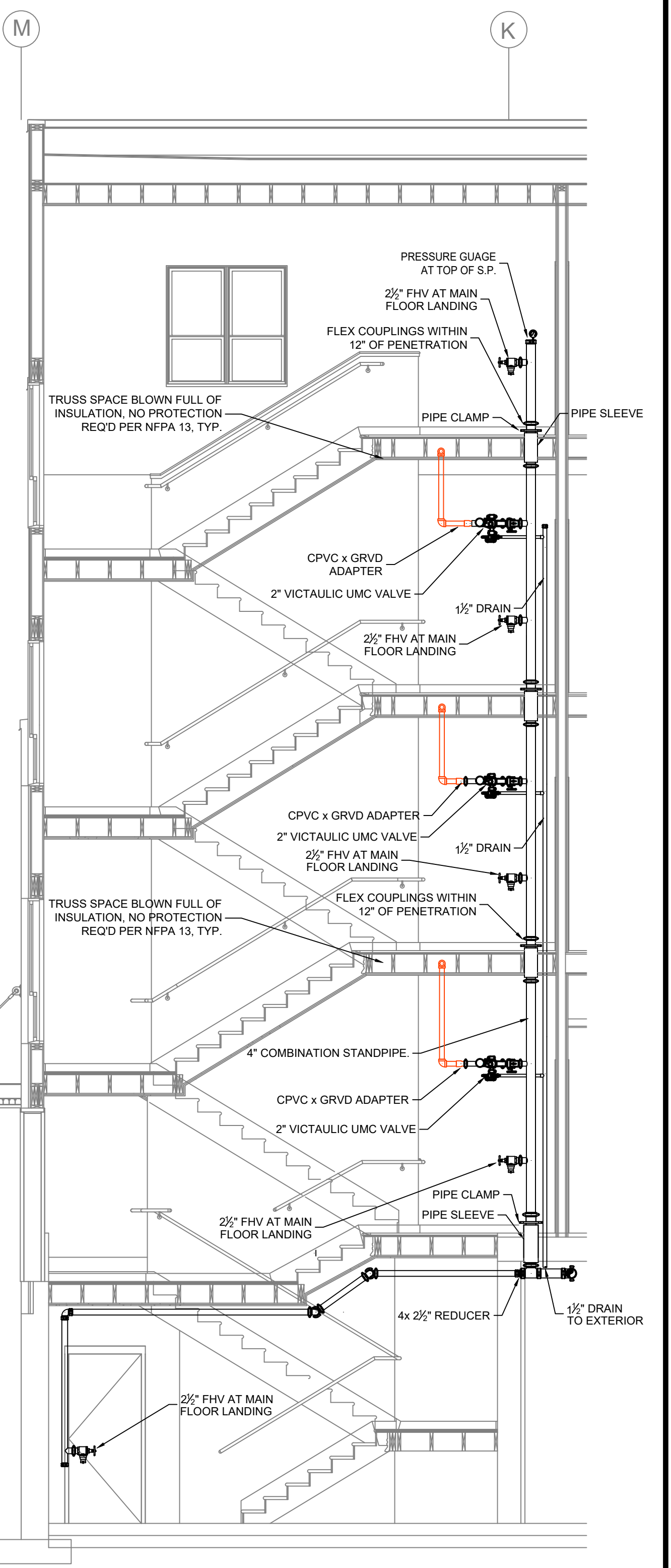
HANGER DETAILS

NFPA 13 STEEL PIPE HANGER SPACING		NFPA 13 CPVC PIPE HANGER SPACING	
NOMINAL SIZE inches	MAX SPACING feet	NOMINAL SIZE inches	MAX SPACING feet
1"	12'-0"	3/4"	5'-6"
1-1/4"	12'-0"	1"	6'-0"
1-1/2"	15'-0"	1-1/4"	6'-6"
2"	15'-0"	1-1/2"	7'-0"
2-1/2"	15'-0"	2"	8'-0"
3"	15'-0"	2-1/2"	9'-0"
4"	15'-0"	3"	10'-0"

GENERAL NOTES

- MINNESOTA BUILDING CODE (2020)
- OCCUPANCY: TYPE S-2, R-2, B, & A-3
- TYPE OF CONSTRUCTION: V-A (HR RATED PROTECTED, COMBUSTIBLE CONSTRUCTION) & IA
- SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - GARAGE = 18,530 S.F. - ZONE #1
 - 1ST FLOOR = 16,886 S.F. - ZONE #2
 - 2ND FLOOR = 26,780 S.F. - ZONE #3
 - 3RD FLOOR = 16,527 S.F. - ZONE #4
 - 4TH FLOOR = 16,532 S.F. - ZONE #4
 - TOTAL = 91,055 S.F.
- INSTALLATION STANDARDS: SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13, NFPA-14 (2016)
- SPRINKLER PIPE TYPES:
 - 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 2" 1/2" THROUGH 2" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 3" 1" BRANCH LINES TO BE BLK MEGA-THREAD PIPING WITH THREADED FITTINGS
 - 4" 1/2" THROUGH 4" MAIN & BRANCH LINES TO BE BLK MEGA-FLOW PIPING WITH GROOVED FITTINGS
- DESIGN CRITERIA
 - 1. UNITS & OTHER COMMON AREAS ARE DESIGNATED TO LIGHT HAZARD.
 - 2. L.I. GARAGE, MECHANICAL, ELECTRICAL, STORAGE, JANITOR, & TRASH ROOMS ARE DESIGNATED TO ORDINARY HAZARD GROUP 1
 - 3. REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
- NOTES:
 - 4.1. ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
 - 4.2. HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2016) - SEE PLAN FOR HANGING REQ.
- SYMBOLS USED ON DRAWINGS:
 - 10'-0" PIPE ELEVATION A.F.F
 - 12'-0" PIPE ELEVATION BELOW B.O.D
 - 0.00 ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
 - 100 HYDRALIC CALCULATION JUNCTION POINT
 - 0'-0" CEILING HEIGHT
- SCOPE OF WORK:
 - 6.1. TO INSTALL A NEW FIRE SPRINKLER AND STANDPIPE SYSTEM IN THE WANGSTAD COMMONS BUILDING. THE NEW SYSTEM WILL INCLUDE A WET SYSTEM WITH A STANDPIPE AND WILL BE ZONED PER FLOOR. BLACK STEEL IN THE LOWER LEVEL PARKING, & DESIGNED TO NFPA 13 RESIDENTIAL FLOORS ARE FED WITH CPVC & DESIGNED TO NFPA 13. THE TOP 2 FLOORS WILL BE ZONED TOGETHER. PENDENT SPRINKLERS WILL BE INSTALLED ON 1ST - 3RD FLOORS. THE 4TH FLOOR WILL BE "BIRDCAGED" UP THROUGH INTERIOR WALLS WITH SIDEWALLS ON THE 4TH FLOOR.
 - 6.2. ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 & 14 (2016)

MANUAL WET STANDPIPE
 LOCATION: 4th FLOOR STAIR B
 REQUIRED FLOW: 500GPM
 OUTLET PSI: 100
 REQUIRED INLET PSI: 129.7



B STAIR SECTION
 SCALE= 1/4" = 1'-0"

GENERAL NOTES

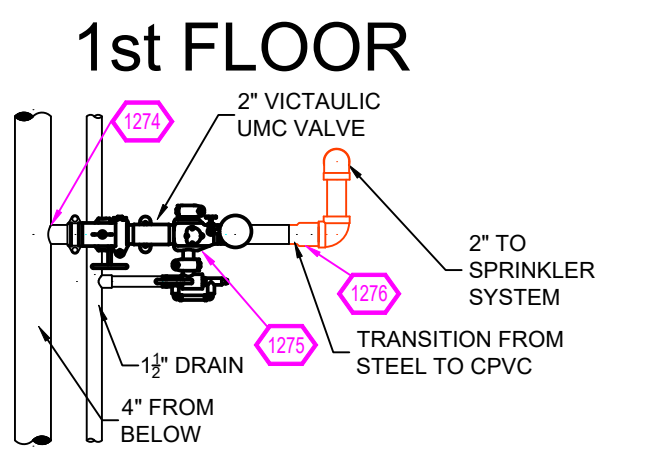
- SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL
- ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
- MINIMUM PIPE SIZE SHALL BE 1" NOMINAL PIPE
- ALL SCH-10 & LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED SHORT RADIUS FITTINGS
- ALL WELDING PER NFPA 33(4.2)
- NO INSTALLATION OR FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS
- ALL PIPE LOCATIONS ARE TO BE FIELD MEASURED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR
- ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
- HIGH TEMPERATURE HEADS ARE TO BE FIELD LOCATED WHERE REQUIRED
- PROVIDE ON SPARE HEAD CABINET WITH HEADS & HEAD WRENCH
- HANGERS ARE TO BE U.L. LISTED AND M. APPROVED
- ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
- OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

NO	REVISIONS	DATE	APPROVAL STAMPS

Drawing Title: FIRE PROTECTION PLAN

WANGSTAD COMMONS
 61ST AVE N & BROOKLYN BLVD
 BROOKLYN CENTER, MN 55429

Contract No: C23-95
 Drawing Date: 02-08-24
 Scale: 1/8" = 1'-0"
 Drawn By: BCJ
 Approved By: STATE FIRE MARSHAL DIV.
 SHEET NO: FP 1 of 5

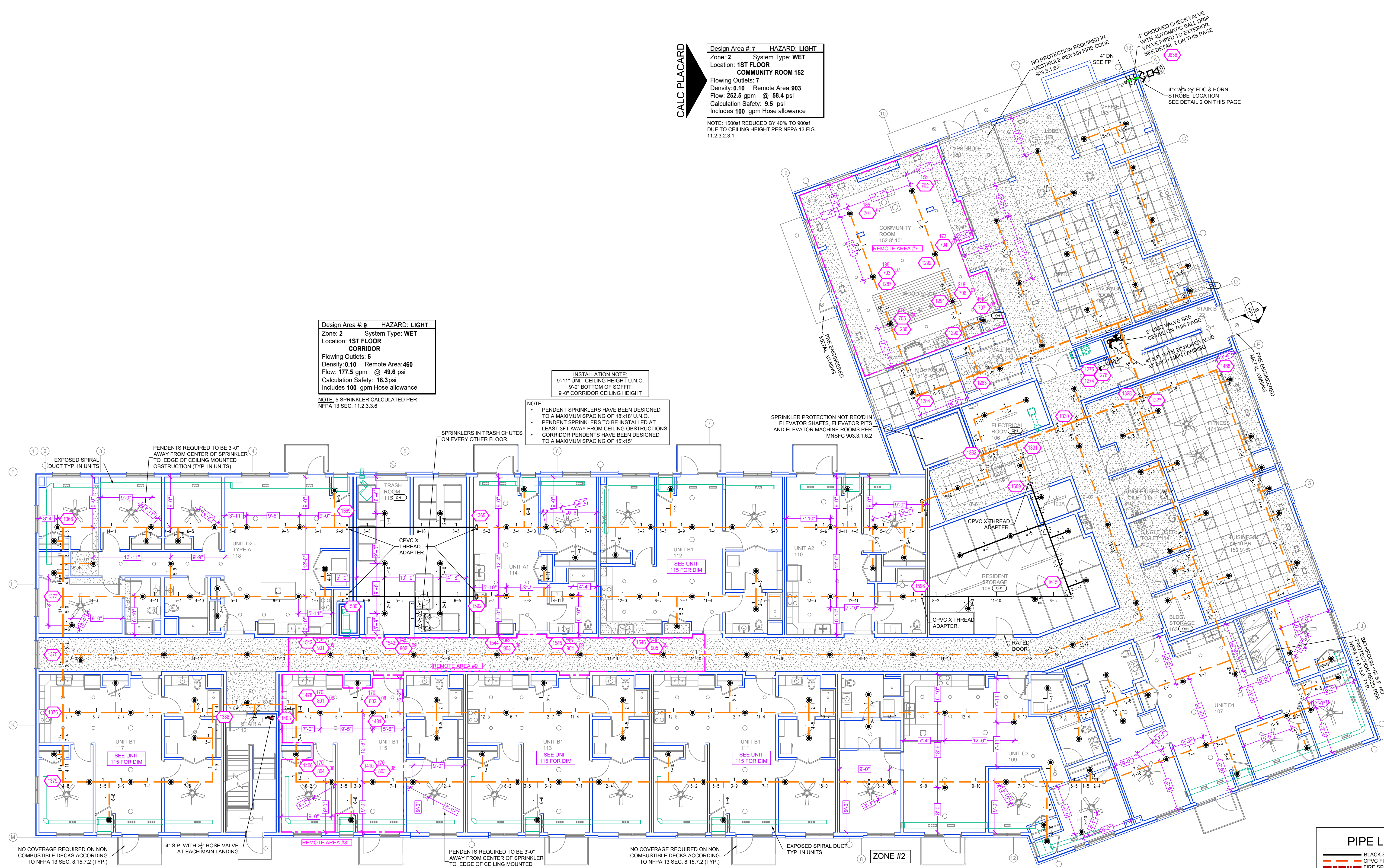


ZONE CONTROL DETAIL
SCALE= 1/2" : 1'-0"

Design Area # 7 HAZARD: LIGHT
Zone: 2 System Type: WET
Location: 1ST FLOOR
COMMUNITY ROOM 152
Flowing Outlets: 7
Density: 0.10 Remote Area: 903
Flow: 252.5 gpm @ 58.4 psi
Calculation Safety: 9.5 psi
Includes 100 gpm Hose allowance
NOTE: 1500sf REDUCED BY 40% TO 900sf DUE TO CEILING HEIGHT PER NFPA 13 FIG. 11.2.3.2.1

Design Area # 8 HAZARD: LIGHT
Zone: 2 System Type: WET
Location: 1ST FLOOR
CORRIDOR
Flowing Outlets: 5
Density: 0.10 Remote Area: 460
Flow: 177.5 gpm @ 49.6 psi
Calculation Safety: 18.3 psi
Includes 100 gpm Hose allowance
NOTE: 5 SPRINKLER CALCULATED PER NFPA 13 SEC. 11.2.3.3.6

INSTALLATION NOTE:
9'-11" UNIT CEILING HEIGHT U.N.O.
9'-0" BOTTOM OF SPOFFIT
9'-0" CORRIDOR CEILING HEIGHT
NOTE:
• PENDENT SPRINKLERS HAVE BEEN DESIGNED TO A MAXIMUM SPACING OF 18'18" U.N.O.
• PENDENT SPRINKLERS TO BE INSTALLED AT LEAST 3' AWAY FROM CEILING OBSTRUCTIONS
• CORRIDOR PENDENTS HAVE BEEN DESIGNED TO A MAXIMUM SPACING OF 15'15"



PIPE LEGEND

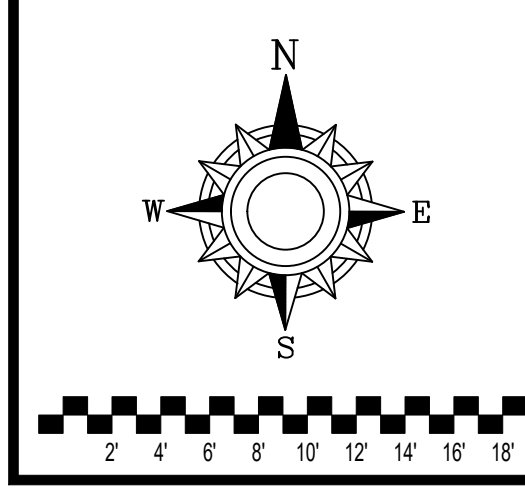
- BLACK STEEL FIRE SPRINKLER PIPING
- CPVC FIRE SPRINKLER PIPING
- FIRE SPRINKLER STANDPIPE PIPING
- FLEXIBLE FIRE PIPING

SPRINKLER HEAD LEGEND

SYM	ORI	POSITION	FINISH	TEMP	K	NFP	SR	MFG	MODEL#	ESCUTCHEON	SPACING
1	P	PENDENT	WHITE	155	4.90	12"	TY2236	TYCOO	LFH	SEM-REC	18' X 18'
2	S	SIDEWALL	WHITE	200	11.20	34"	TY3332	TYCOO	ELOBW20	SEM-REC	16' X 16'
3	S	SIDEWALL	WHITE	155	4.40	12"	TY2334	TYCOO	LFH	SEM-REC	16' X 16'
4	P	PENDENT	WHITE	200	5.80	12"	TY2323	TYCOO	TY-FRB	SEM-REC	225 SF (LH) - 130 SF (OH)
5	S	SIDEWALL	WHITE	200	5.80	12"	TY3331	TYCOO	TY-FRB	SEM-REC	14' X 14' (LH) 10' X 10' (OH)
6	U	UPRIGHT	BRASS	286	9.80	12"	TY3131	TYCOO	TY-FRB	NONE	225 SF (LH) - 130 SF (OH)
7	U	UPRIGHT	BRASS	286	5.80	12"	TY3151	TYCOO	TY-B	NONE	225 SF (LH) - 130 SF (OH)
8	S	SIDEWALL	WHITE	175	8.80	12"	VK630	Viking	VK630	SEM-REC	16' X 22'
9	U	UPRIGHT	BRASS	286	14.00	34"	TY6137	TYCOO	EC-14	NONE	20' X 20'
10	P	PENDENT	WHITE	286	9.80	12"	TY323	TYCOO	TY-FRB	SEM-REC	225 SF (LH) - 130 SF (OH)
102		TOTAL									

Design Area # 8 HAZARD: RES
Zone: 2 System Type: WET
Location: 1ST FLOOR
UNIT B1 115
Flowing Outlets: 4
Density: 0.10 Remote Area: 571
Flow: 168.9 gpm @ 42.5 psi
Calculation Safety: 25.5psi
Includes 100 gpm Hose allowance
NOTE: 4 SPRINKLER CALCULATED PER NFPA 13 SEC. 11.3.1.1

FIRST LEVEL FIRE SPRINKLER PLAN
SCALE= 1/8" : 1'-0"



- GENERAL NOTES**
- SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL
 - ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
 - MINIMUM PIPE SIZE SHALL BE 1" NOMINAL PIPE
 - ALL LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED SHORT RADIUS FITTINGS
 - ALL WELDING PER NFPA-354-2
 - NO INSTALLATION OR FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS
 - ALL PIPE LOCATIONS ARE TO BE FIELD MEASURED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR
 - ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
 - HIGH TEMPERATURE HEADS ARE TO BE FIELD LOCATED WHERE REQUIRED
 - PROVIDE ON SPINE HEAD CABINET WITH HEADS & HEAD WRENCH
 - HANGERS ARE TO BE U.L. LISTED AND I.M. APPROVED
 - ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
 - OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

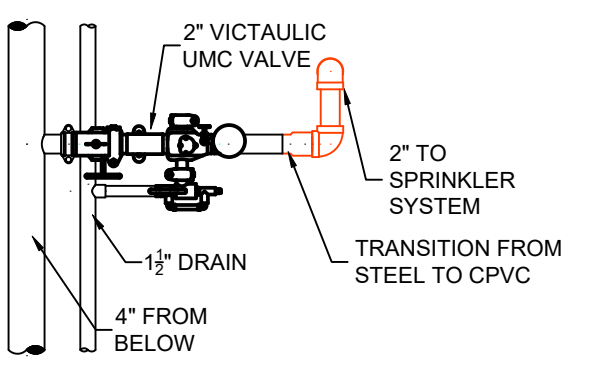
NO	REVISIONS	DATE	APPROVAL STAMPS

Drawing Title: FIRE PROTECTION PLAN

WANGSTAD COMMONS
61ST AVE N & BROOKLYN BLVD
BROOKLYN CENTER, MN 55429

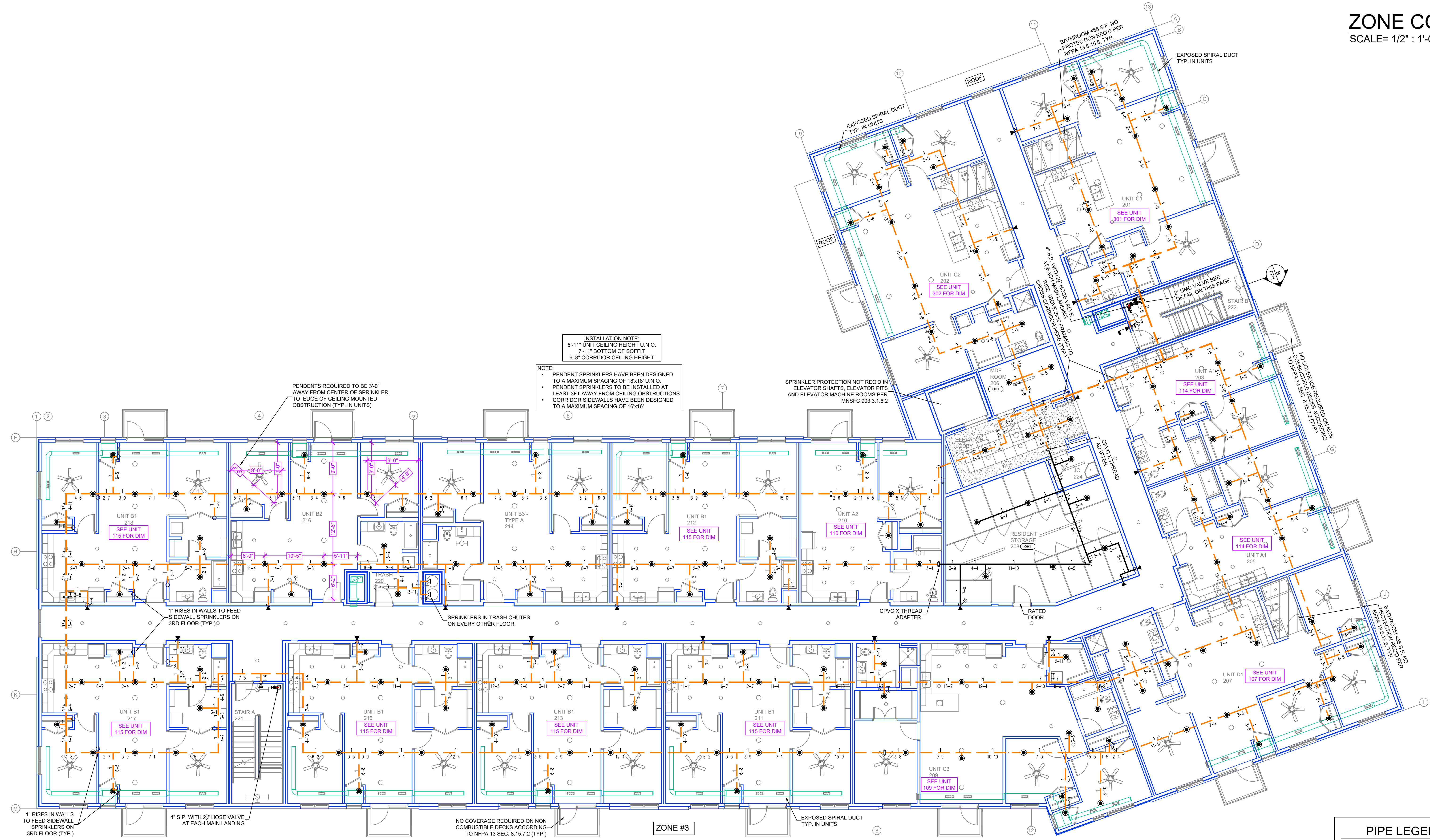
Contract No: **C23-95**
Drawing Date: 02-08-24
Scale: 1/8" = 1'-0"
Drawn By: BCJ
Approval By: STATE FIRE MARSHAL DIV.
SHEET NO: **FP 2 of 5**

2nd FLOOR



ZONE CONTROL DETAIL

SCALE= 1/2" : 1'-0"



INSTALLATION NOTE
 8'-11" UNIT CEILING HEIGHT U.N.O.
 7'-11" BOTTOM OF SOFFIT
 9'-8" CORRIDOR CEILING HEIGHT

NOTE:
 • PENDENT SPRINKLERS HAVE BEEN DESIGNED TO A MAXIMUM SPACING OF 18'X18' U.N.O.
 • PENDENT SPRINKLERS TO BE INSTALLED AT LEAST 3' AWAY FROM CEILING OBSTRUCTIONS
 • CORRIDOR SIDEWALLS HAVE BEEN DESIGNED TO A MAXIMUM SPACING OF 18'X18'

SPRINKLER PROTECTION NOT REQ'D IN ELEVATOR SHAFTS, ELEVATOR PITTS AND ELEVATOR MACHINE ROOMS PER MNSFC 903.3.1.6.2

PENDENTS REQUIRED TO BE 3'-0" AWAY FROM CENTER OF SPRINKLER TO EDGE OF CEILING MOUNTED OBSTRUCTION (TYP. IN UNITS)

1" RISES IN WALLS TO FEED SIDEWALL SPRINKLERS ON 3RD FLOOR (TYP.)

SPRINKLERS IN TRASH CHUTES ON EVERY OTHER FLOOR

1" RISES IN WALLS TO FEED SIDEWALL SPRINKLERS ON 3RD FLOOR (TYP.)

4" S.P. WITH 2" HOSE VALVE AT EACH MAIN LANDING

NO COVERAGE REQUIRED ON NON COMBUSTIBLE DECKS ACCORDING TO NFPA 13 SEC. 6.15.7.2 (TYP.)

ZONE #3

PIPE LEGEND

- BLACK STEEL FIRE SPRINKLER PIPING
- CPVC FIRE SPRINKLER PIPING
- FIRE SPRINKLER STANDPIPE PIPING
- FIRE SPRINKLER FDC PIPING

SPRINKLER HEAD LEGEND

SYM	QTY	POSITION	FINISH	TEMP	K	RPT	SIN	MPG	MODEL#	ES/OUT/CHON	SPACING
●	359	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LPII	SEMI-REC	18' X 18'
◄	2	SIDEWALL	WHITE	200	11.20	3/4"	TY3332	TYCO	ELOS920	SEMI-REC	16' X 16'
◄	207	SIDEWALL	WHITE	155	4.60	1/2"	TY2334	TYCO	LPII	SEMI-REC	16' X 16'
◄	139	PENDENT	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-REC	225 SF (LH) - 130 SF (OH)
◄	31	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-REC	14' X 14' (LH) 10' X 10' (OH)
○	4	UPRIGHT	BRASS	286	5.60	1/2"	TY3131	TYCO	TY-FRB	NONE	225 SF (LH) - 130 SF (OH)
○	70	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-FRB	NONE	225 SF (LH) - 130 SF (OH)
◄	8	SIDEWALL	WHITE	175	8.00	1/2"	VM930	VMING	VM930	SEMI-REC	16' X 22'
◄	31	UPRIGHT	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	NONE	20' X 20'
●	1	PENDENT	WHITE	286	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-REC	225 SF (LH) - 130 SF (OH)
●	852	TOTAL									

SECOND LEVEL FIRE SPRINKLER PLAN
 SCALE= 1/8" : 1'-0"

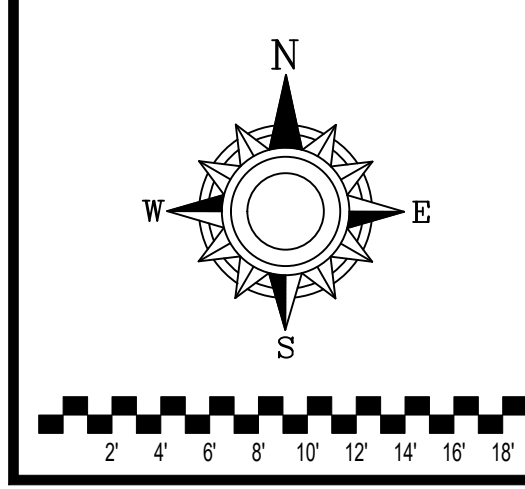
- GENERAL NOTES**
- SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL
 - ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
 - MINIMUM PIPE SIZE SHALL BE 1" NOMINAL PIPE
 - ALL LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED SHORT RADIIUS FITTINGS
 - ALL WELDING PER NFPA-54(4.2)
 - NO INSTALLATION OR FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS
 - ALL PIPE LOCATIONS ARE TO BE FIELD MEASURED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR
 - ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
 - HIGH TEMPERATURE HEADS ARE TO BE FIELD LOCATED WHERE REQUIRED
 - PROVIDE ON SPINE HEAD CABINET W/ HEADS & HEAD WRENCH
 - HANGERS ARE TO BE U.L. LISTED AND I.M. APPROVED
 - ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
 - OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

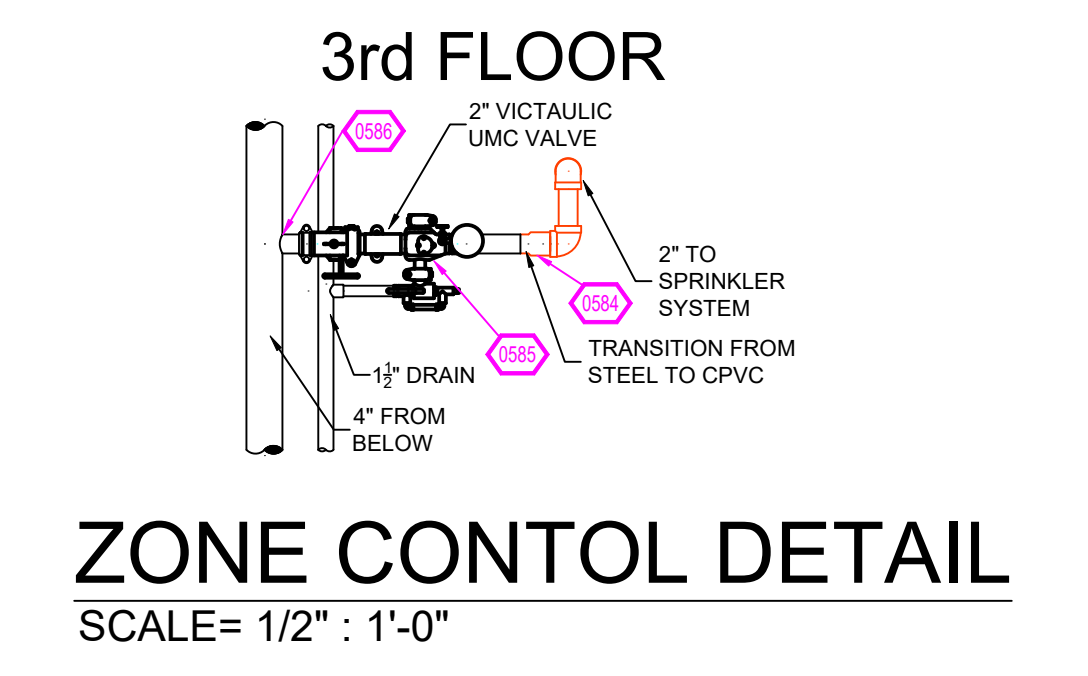
NO	REVISIONS	DATE	APPROVAL STAMPS

Drawing Title: FIRE PROTECTION PLAN

WANGSTAD COMMONS
 61ST AVE N & BROOKLYN BLVD
 BROOKLYN CENTER, MN 55429

Contract No: C23-95
 Drawing Date: 02-08-24
 Scale: 1/8" = 1'-0"
 Drawn By: BCJ
 Approval By: STATE FIRE MARSHAL DIV.
 SHEET NO: FP 3 of 5



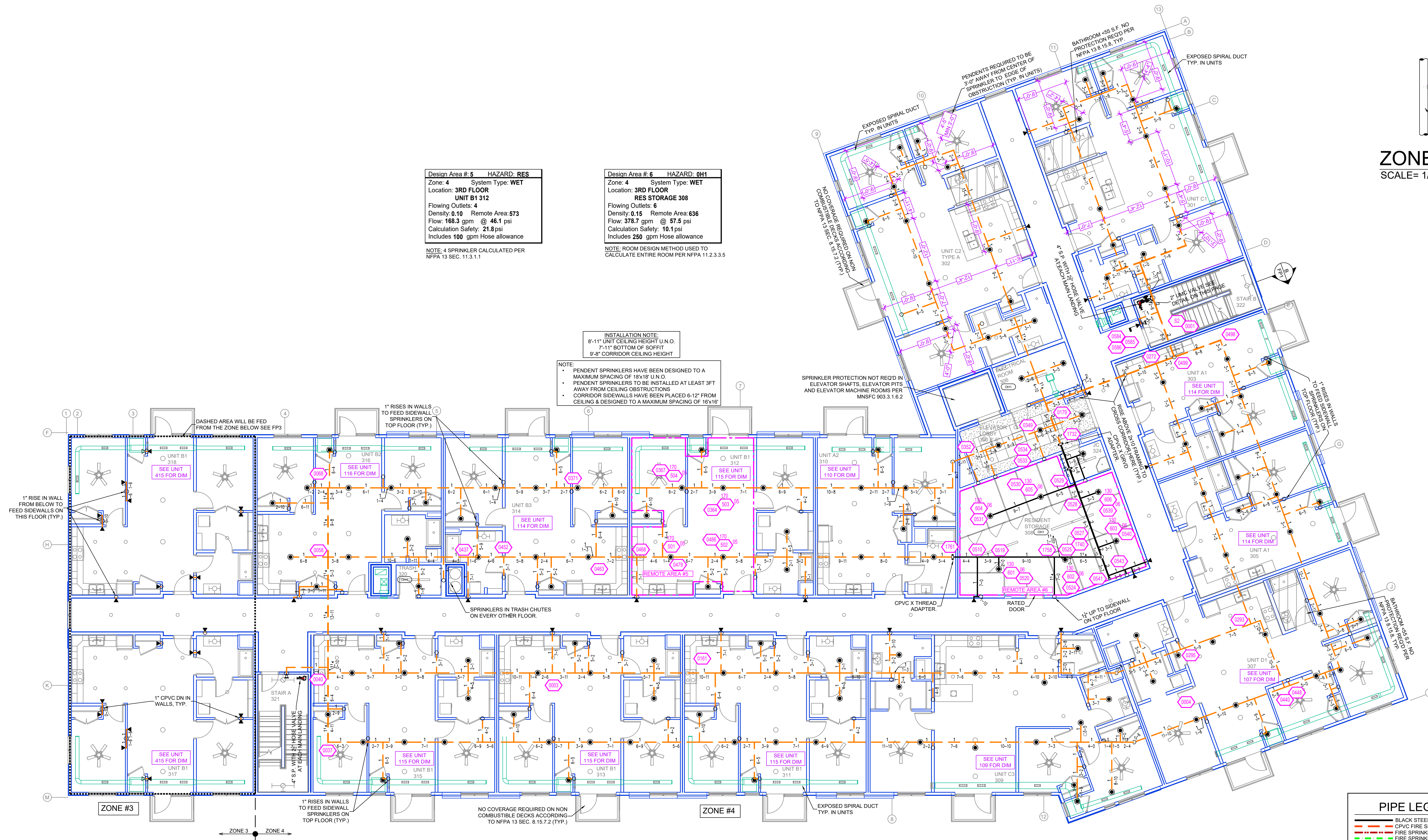


Design Area #5 HAZARD: RES
Zone: 4 System Type: WET
Location: 3RD FLOOR
UNIT B1 312
Flowing Outlets: 4
Density: 0.10 Remote Area: 573
Flow: 168.3 gpm @ 46.1 psi
Calculation Safety: 21.8 psi
Includes 100 gpm Hose allowance
NOTE: 4 SPRINKLER CALCULATED PER NFPA 13 SEC. 11.3.1.1

Design Area #6 HAZARD: OH1
Zone: 4 System Type: WET
Location: 3RD FLOOR
RES STORAGE 308
Flowing Outlets: 6
Density: 0.15 Remote Area: 636
Flow: 378.7 gpm @ 57.5 psi
Calculation Safety: 10.1 psi
Includes 250 gpm Hose allowance
NOTE: ROOM DESIGN METHOD USED TO CALCULATE ENTIRE ROOM PER NFPA 11.2.3.3.5

INSTALLATION NOTE
8'-11" UNIT CEILING HEIGHT U.O.
7'-11" BOTTOM OF SOFFIT
9'-8" CORRIDOR CEILING HEIGHT

NOTE:
PENDENT SPRINKLERS HAVE BEEN DESIGNED TO A MAXIMUM SPACING OF 15' X 15' U.O.
PENDENT SPRINKLERS TO BE INSTALLED AT LEAST 3FT AWAY FROM CEILING OBSTRUCTIONS
CORRIDOR SIDEWALLS HAVE BEEN PLACED 6'-2" FROM CEILING & DESIGNED TO A MAXIMUM SPACING OF 16' X 16'



PIPE LEGEND

- BLACK STEEL FIRE SPRINKLER PIPING
- CPVC FIRE SPRINKLER PIPING
- FIRE SPRINKLER STANDPIPE PIPING
- FIRE SPRINKLER FDC PIPING

SPRINKLER HEAD LEGEND

SYM	ENT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG	MODEL#	DESCRIPTION	SPACING
●	309	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LFII	SEMI-REC	18' X 16'
◄	2	SIDEWALL	WHITE	200	11.20	3/4"	TY3332	TYCO	ELOS220	SEMI-REC	16' X 16'
◄	207	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFII	SEMI-REC	16' X 16'
●	139	PENDENT	WHITE	200	5.60	1/2"	TY2323	TYCO	TY-FRB	SEMI-REC	225 SF (LH) - 130 SF (OH)
◄	31	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-REC	14' X 14' (LH) 10' X 10' (OH)
◄	4	UPRIGHT	BRASS	286	5.60	1/2"	TY313	TYCO	TY-FRB	NONE	225 SF (LH) - 130 SF (OH)
○	70	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-B	NONE	225 SF (LH) - 130 SF (OH)
◄	8	SIDEWALL	WHITE	175	8.00	1/2"	VK630	VIKING	VK630	SEMI-REC	16' X 22'
◄	31	UPRIGHT	BRASS	286	14.00	3/4"	TY6137	TYCO	EC-14	NONE	20' X 20'
●	1	PENDENT	WHITE	286	5.60	1/2"	TY2323	TYCO	TY-FRB	SEMI-REC	225 SF (LH) - 130 SF (OH)
652		TOTAL									

THIRD LEVEL FIRE SPRINKLER PLAN
SCALE= 1/8" : 1'-0"

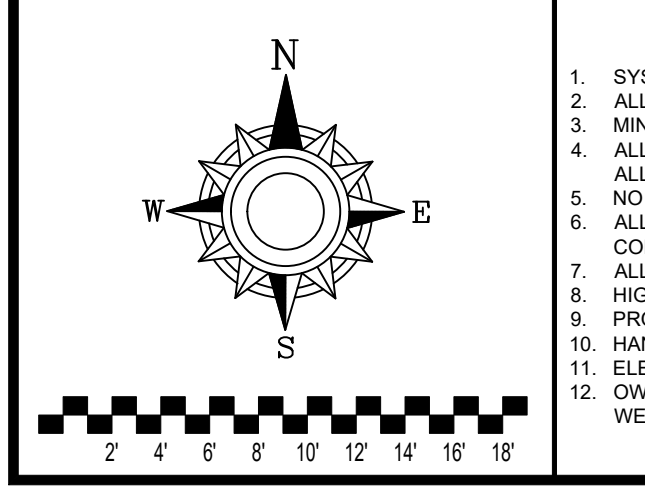
- GENERAL NOTES**
- SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL
 - ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
 - MINIMUM PIPE SIZE SHALL BE 1" NOMINAL PIPE
 - ALL LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED SHORT RADIUS FITTINGS
 - ALL WELDING PER NFPA-54(2)
 - NO INSTALLATION OR FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS
 - ALL PIPE LOCATIONS ARE TO BE FIELD MEASURED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR
 - ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
 - HIGH TEMPERATURE HEADS ARE TO BE FIELD LOCATED WHERE REQUIRED
 - PROVIDE ON SPINE HEAD CABINET W/ HEADS & HEAD WRENCH
 - HANGERS ARE TO BE U.L. LISTED AND I.M. APPROVED
 - ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
 - OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

NO	REVISIONS	DATE	APPROVAL STAMPS

Drawing Title: FIRE PROTECTION PLAN

WANGSTAD COMMONS
61ST AVE N & BROOKLYN BLVD
BROOKLYN CENTER, MN 55429

Contract No: C23-95
Drawing Date: 02-08-24
Scale: 1/8" = 1'-0"
Drawn By: BCJ
Approved By: STATE FIRE MARSHAL DIV.
SHEET NO: FP 4 of 5



PIPE LEGEND

- BLACK STEEL FIRE SPRINKLER PIPING
- CPVC FIRE SPRINKLER PIPING
- FIRE SPRINKLER STANDPIPE PIPING
- FIRE SPRINKLER FDC PIPING

SPRINKLER HEAD LEGEND

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SIN	MFG	MODEL#	ESCUTCHEON	SPACING
●	359	PENDENT	WHITE	155	4.90	1/2"	TY2236	TYCO	LF8	SEM-REC	18" X 18"
◐	2	SIDEWALL	WHITE	200	11.25	3/4"	TY3332	TYCO	ELOS220	SEM-REC	18" X 18"
◑	207	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	L78	SEM-REC	16" X 16"
◒	139	PENDENT	WHITE	200	5.60	1/2"	TY3323	TYCO	TY-FRB	SEM-REC	225 SF (LH) - 130 SF (OH)
◓	31	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEM-REC	14" X 14" (LH) - 10" X 10" (OH)
◔	4	UPRIGHT	BRASS	286	5.60	1/2"	TY3113	TYCO	TY-FRB	NONE	225 SF (LH) - 130 SF (OH)
◕	70	UPRIGHT	BRASS	286	5.60	1/2"	TY3151	TYCO	TY-B	NONE	225 SF (LH) - 130 SF (OH)
◖	8	SIDEWALL	WHITE	175	8.30	1/2"	W630	WING	W630	SEM-REC	16" X 22"
◗	31	UPRIGHT	BRASS	286	14.00	3/4"	TY6137	TYCO	EG-14	NONE	20" X 20"
◘	1	PENDENT	WHITE	286	5.60	1/2"	TY3323	TYCO	TY-FRB	SEM-REC	225 SF (LH) - 130 SF (OH)
●	852	TOTAL									

Design Area # 1 HAZARD: LIGHT
 Zone: 4 System Type: WET
 Location: 4TH FLOOR
 CORRIDOR
 Flowing Outlets: 4
 Density: 0.10 Remote Area: 374
 Flow: 169 gpm @ 55.7 psi
 Calculation Safety: 12.2 psi
 Includes 100 gpm Hose allowance

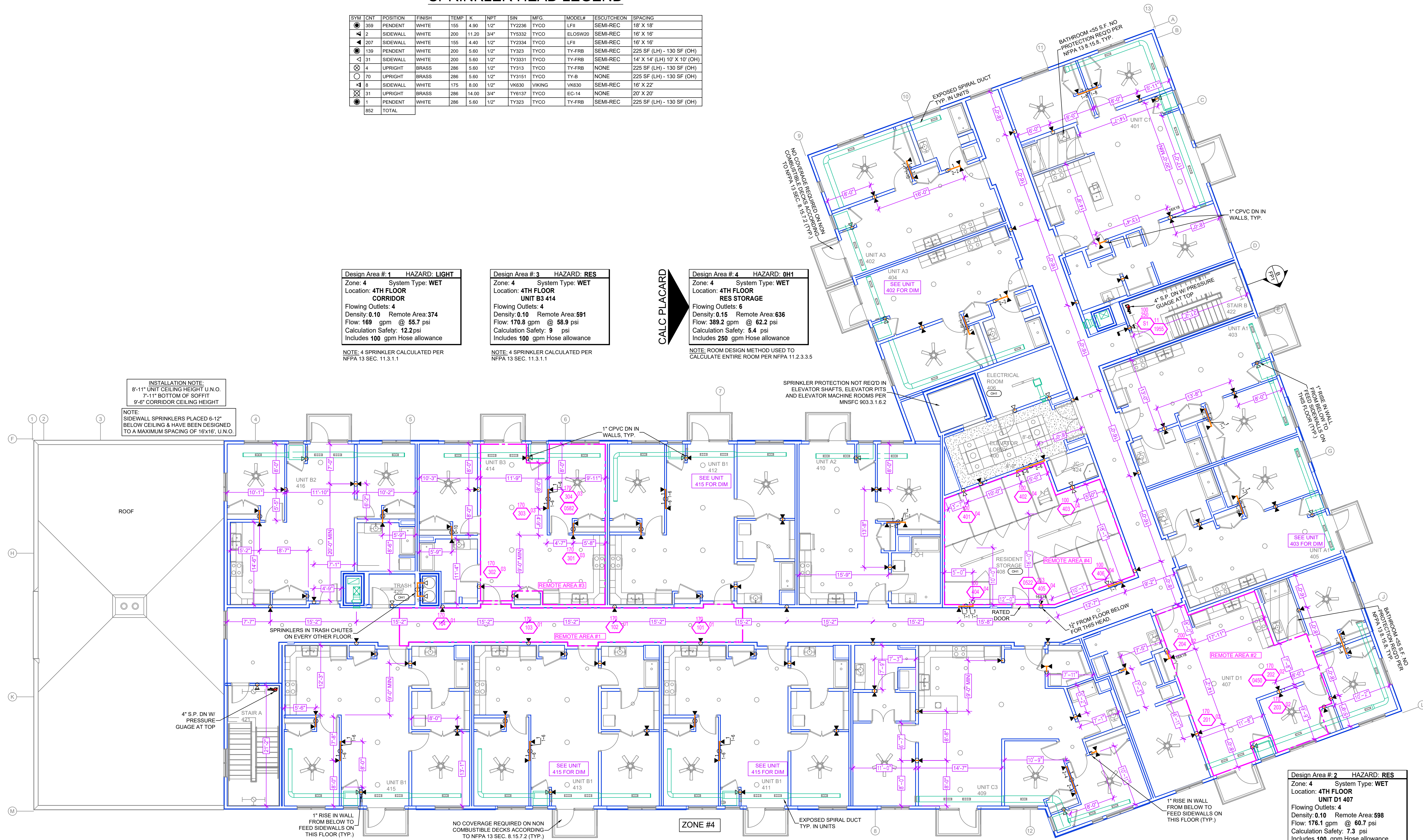
NOTE: 4 SPRINKLER CALCULATED PER NFPA 13 SEC. 11.3.1.1

Design Area # 3 HAZARD: RES
 Zone: 4 System Type: WET
 Location: 4TH FLOOR
 UNIT B3 414
 Flowing Outlets: 4
 Density: 0.10 Remote Area: 591
 Flow: 170.8 gpm @ 59.2 psi
 Calculation Safety: 9 psi
 Includes 100 gpm Hose allowance

NOTE: 4 SPRINKLER CALCULATED PER NFPA 13 SEC. 11.3.1.1

Design Area # 4 HAZARD: OH1
 Zone: 4 System Type: WET
 Location: 4TH FLOOR
 RES STORAGE
 Flowing Outlets: 6
 Density: 0.15 Remote Area: 636
 Flow: 389.2 gpm @ 62.2 psi
 Calculation Safety: 5.4 psi
 Includes 250 gpm Hose allowance

NOTE: ROOM DESIGN METHOD USED TO CALCULATE ENTIRE ROOM PER NFPA 11.2.3.3.5



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

GENERAL NOTES

1. SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL
2. ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
3. MINIMUM PIPE SIZE SHALL BE 1" NOMINAL PIPE
4. ALL LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED SHORT RADIUS FITTINGS
5. ALL WELDING PER NFPA-54(2)
6. NO INSTALLATION OR FABRICATION TO BEGAIN WITHOUT APPROVED SHOP DRAWINGS
7. ALL PIPE LOCATIONS ARE TO BE FIELD MEASURED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR
8. ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
9. HIGH TEMPERATURE HEADS ARE TO BE FIELD LOCATED WHERE REQUIRED
10. PROVIDE ON SPARE HEAD CABINET WITH HEADS & HEAD WRENCH
11. HANGERS ARE TO BE U.L. LISTED AND I.M. APPROVED
12. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
13. OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

NO	REVISIONS	DATE	APPROVAL STAMPS

Contract No. **C23-95**
 Drawing Title: **FIRE PROTECTION PLAN**
WANGSTAD COMMONS
 61ST AVE N & BROOKLYN BLVD
 BROOKLYN CENTER, MN 55429
 Drawing Date: 02-08-24
 Scale: 1/8" = 1'-0"
 Drawn By: BCJ
 Approval By: STATE FIRE MARSHAL DIV.
 SHEET NO. **FP 5 of 5**