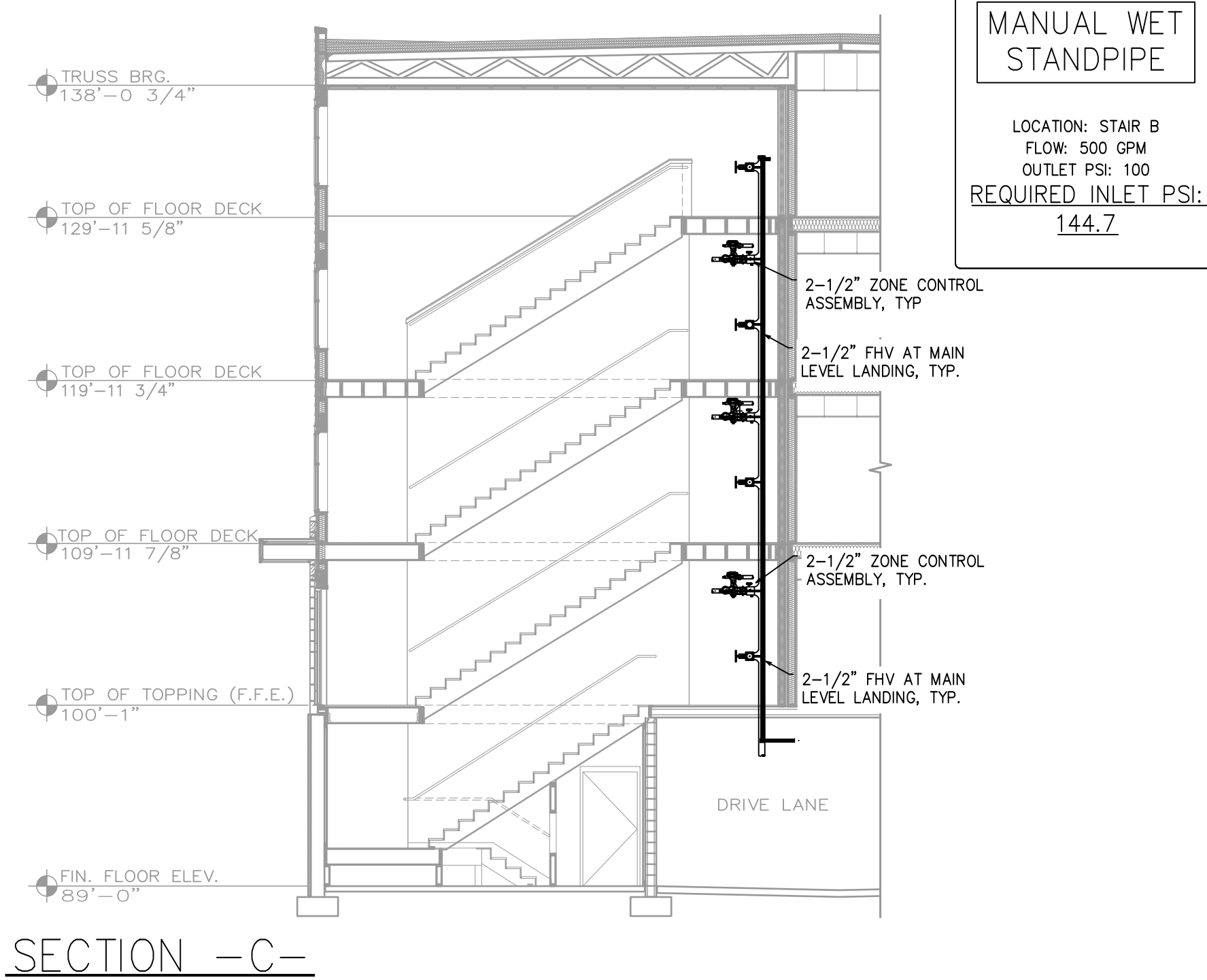


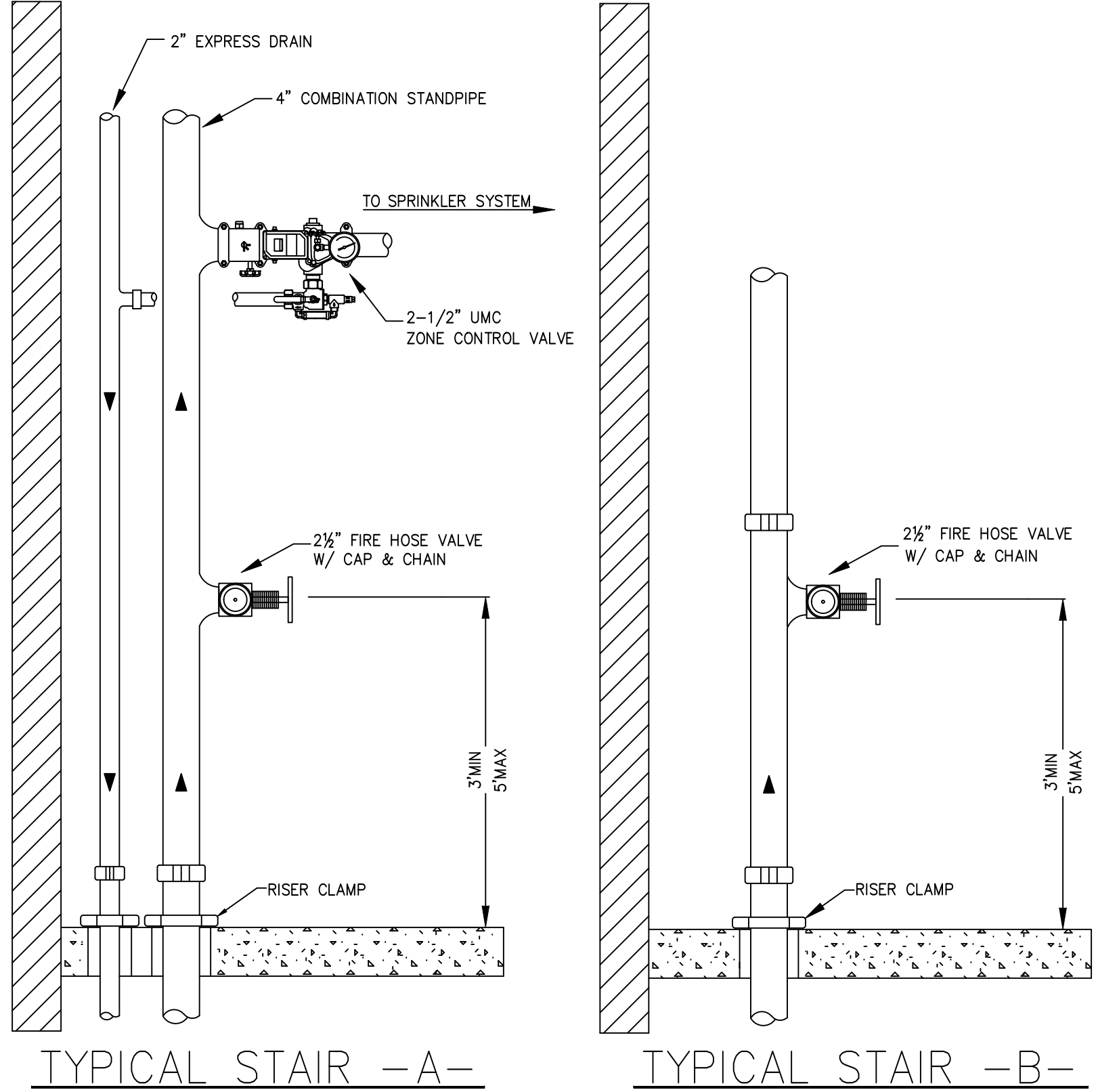
SECTION -A-
SCALE= 1/8" = 1'-0"



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



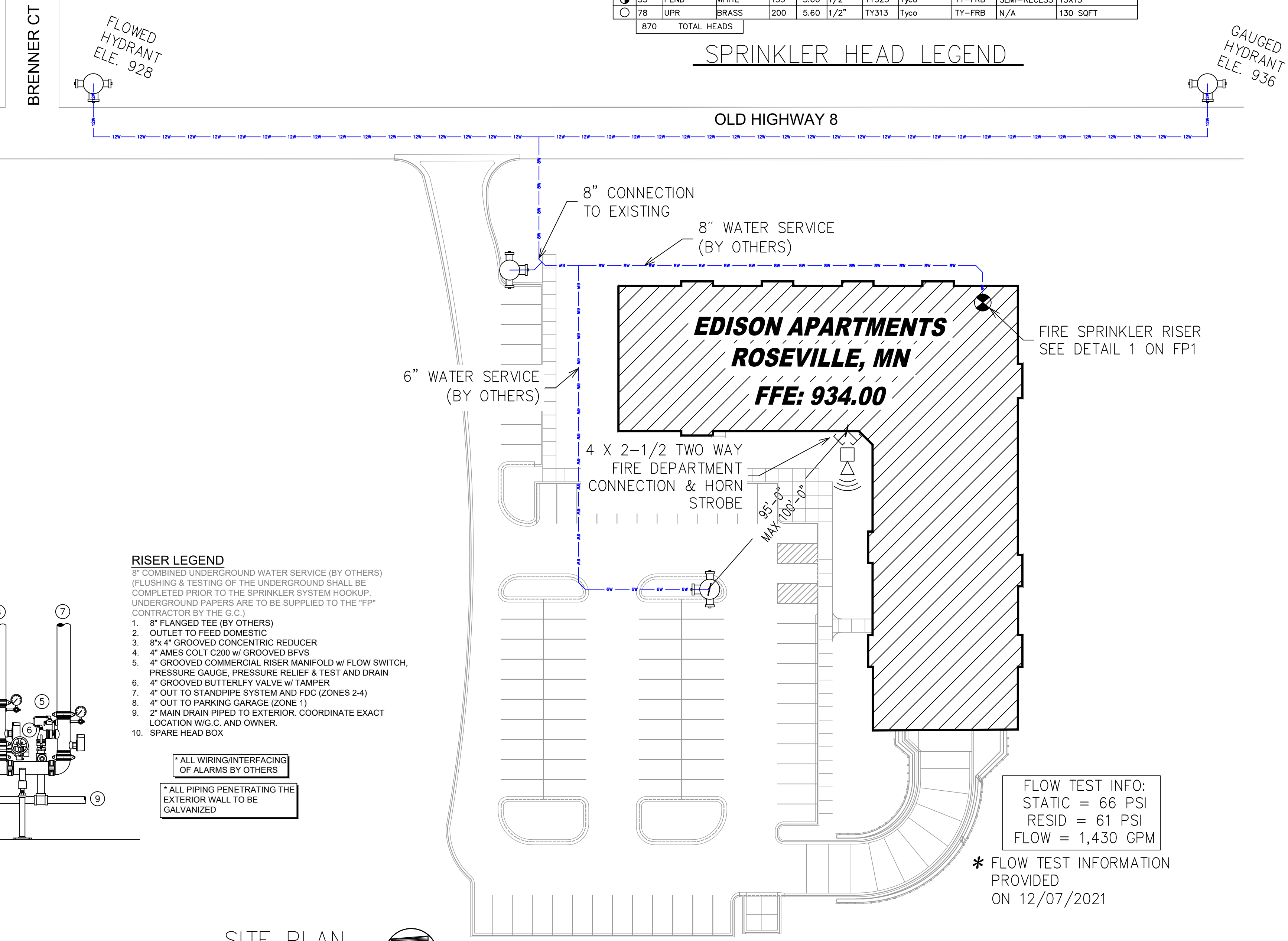
SECTION -B-
SCALE= 1/8" = 1'-0"



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

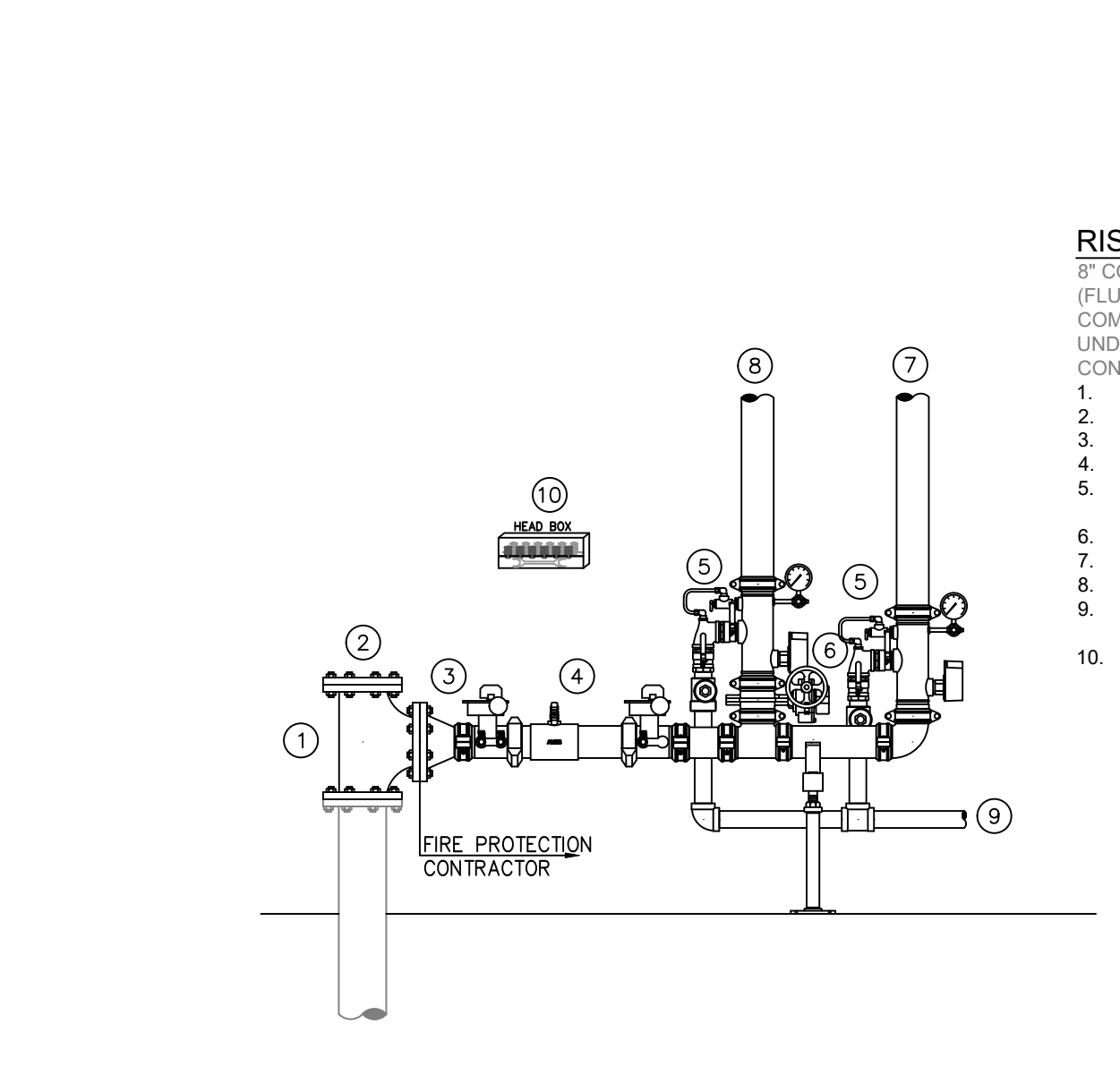
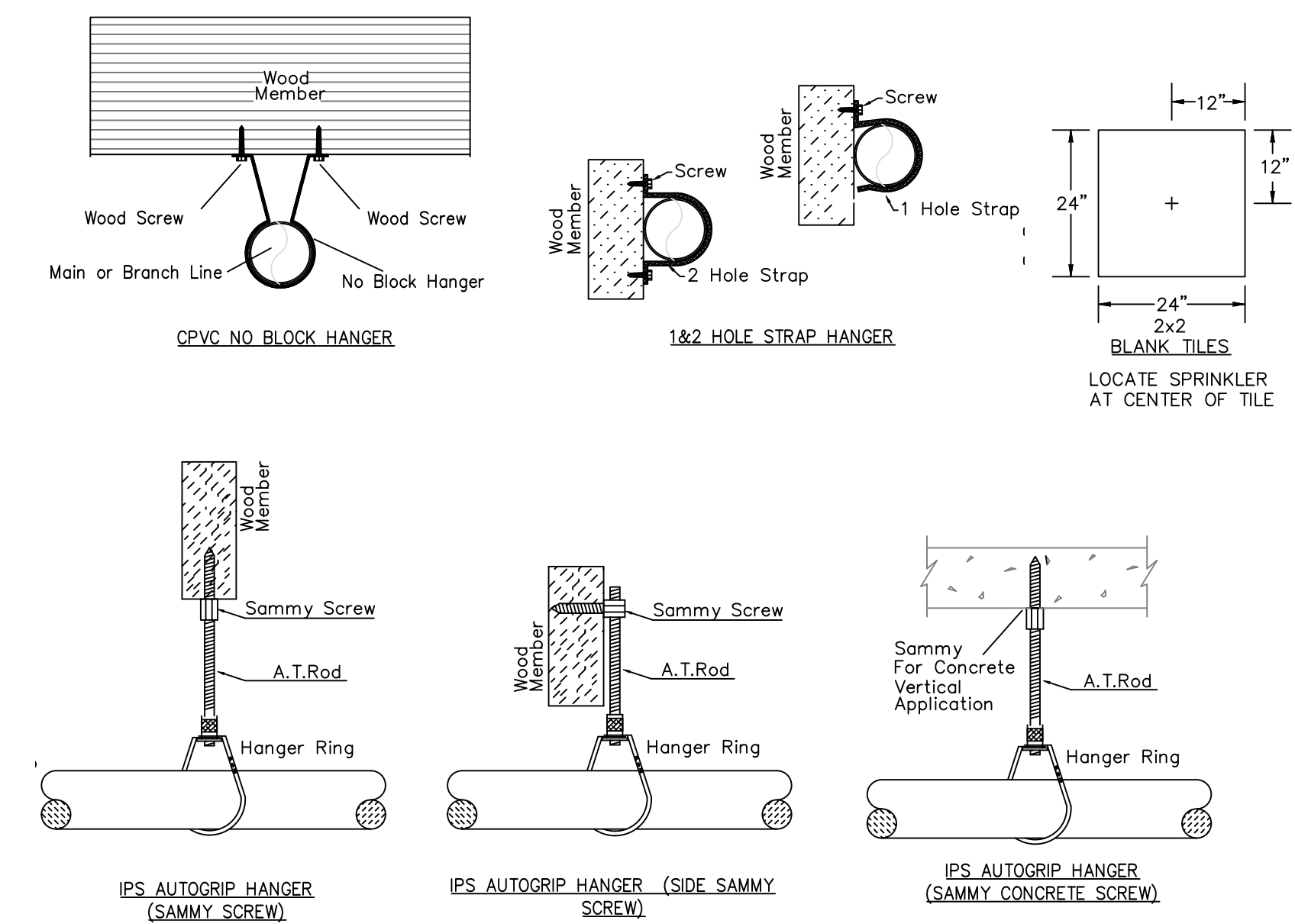
PIPE LEGEND	
—	STEEL FIRE SPRINKLER PIPING
—	CPVC BLAZEMASTER SPRINKLER PIPING
—	FDC FIRE SPRINKLER PIPING
---	UNDERGROUND PIPING

SYM	ICN	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESD/CHEON	SPACING
37	UPR	BRASS	200	11.20	3/4"		TY5137	TYco	EC-11	N/A	20X20
40	SIDE	WHITE	155	5.60	1/2"		TY3331	TYco	TY-FRB	SEMI-RECESS	14X14 U.N.O
52	PEND	WHITE	200	5.60	1/2"		TY323	TYco	TY-FRB	SEMI-RECESS	130 SQFT
423	PEND	WHITE	155	4.90	1/2"		TY2334	TYco	LFII	SEMI-RECESS	16X16 U.N.O
40	PEND	WHITE	155	8.00	3/4"		TY4282	TYco	EC-8C	SEMI-RECESS	28X8
26	SIDE	WHITE	200	5.60	1/2"		TY3331	TYco	TY-FRB	SEMI-RECESS	10X10
161	SIDE	WHITE	155	4.40	1/2"		TY2334	TYco	LFII	SEMI-RECESS	16X16 U.N.O
33	PEND	WHITE	155	5.60	1/2"		TY323	TYco	TY-FRB	SEMI-RECESS	15X15
78	UPR	BRASS	200	5.60	1/2"		TY313	TYco	TY-FRB	N/A	130 SQFT
870 TOTAL HEADS											



- GENERAL NOTES**
- MINNESOTA STATE BUILDING CODE (2018)
 - OCCUPANCY: PARKING: S-2 LOW HAZARD STORAGE, RESIDENTIAL LEVELS: R-2 RESIDENTIAL
 - TYPE OF CONSTRUCTION: A & VA
 - SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)

PARKING LEVEL	= 20,664 S.F. (ZONE 1)
LEVEL 1	= 20,300 S.F. (ZONE 2)
LEVEL 2	= 20,300 S.F. (ZONE 3)
LEVEL 3	= 20,300 S.F. (ZONE 4)
LEVEL 4	= 17,840 S.F. (ZONE 4)
TOTAL	= 99,204 S.F.
 - INSTALLATION STANDARDS: SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2016) & NFPA 14
 - SPRINKLER PIPE TYPES:
 - 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1 1/2" THROUGH 3" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1" BRANCH LINES TO BE BLK SCHEDULE MT PIPING WITH THREADED FITTINGS
 - 1 1/2" THROUGH 4" MAIN & BRANCH LINES TO BE BLK SCHEDULE MF PIPING WITH SHORT RADIUS GROOVED FITTINGS
 - DESIGN CRITERIA
 - ROOMS, CORRIDORS, LOBBYS AND SIMILAR AREAS DESIGNED TO LIGHT HAZARD.
 - PARKING GARAGE, MECH ROOMS, STORAGE ROOMS AND SIMILAR AREAS DESIGNED TO ORDINARY HAZARD GROUP 1.
 - REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
 - NOTES:
 - ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
 - HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2016) - SEE PLAN FOR HANGING REQUIREMENTS
 - SYMBOLS USED ON DRAWINGS:
 - (ELEV) PIPE ELEVATION A.F.F.
 - (B.O.D) PIPE ELEVATION BELOW B.O.D
 - (R.H.C) ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
 - (H.A.C.P) HYDRAULIC CALCULATION JUNCTION POINT
 - 10'0" CEILING HEIGHT
 - SCOPE OF WORK:
 - NEW APARTMENT BUILDING INSTALLED BY PER THE 2018 IBC, 2018 MN STATE BUILDING CODE AND 2016 NFPA 13. TO BE ZONED BY FLOOR. ROOMS 306 & 327 TO BE INCLUDED IN ZONE 3. FLOOR 3 AND FLOOR 4 ARE COMBINED TO ONE ZONE. PARKING GARAGE IS PROTECTED TO ORDINARY HAZARD GROUP 1. RESIDENTIAL AREAS ARE PROTECTED TO LIGHT HAZARD AND RESIDENTIAL CRITERIA PER NFPA 13.
 - ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2016)



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

SITE PLAN
SCALE: 1/32" = 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 & Bddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - 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 one spare head cabinet w/ 8 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and F.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS	

Drawing Title: **FIRE PROTECTION PLAN**

Contract No: **C21-80**

Drawing Date: **??/??/????**

Scale: **1/8" = 1'-0"**

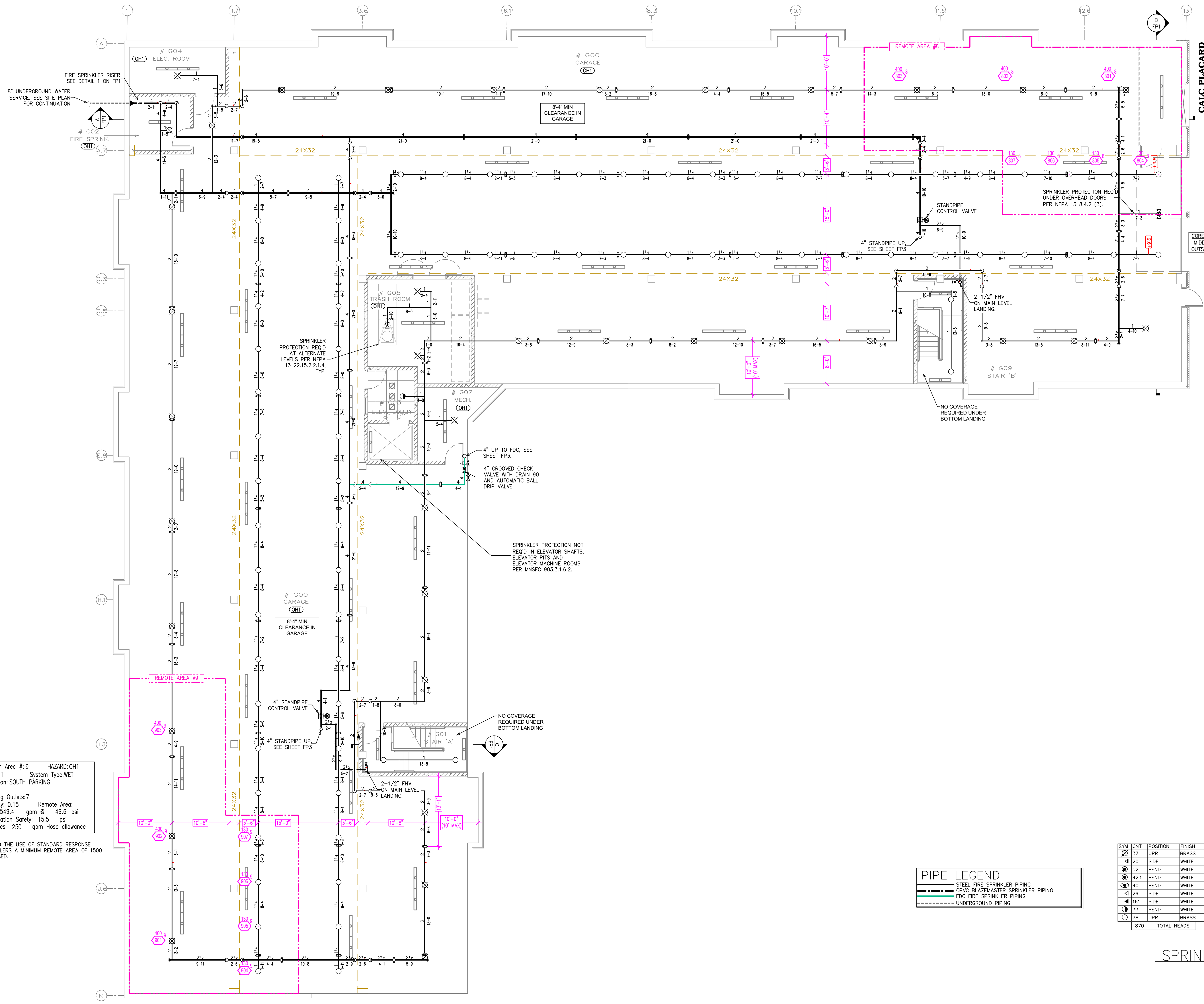
Drawn By: **JLN**

Approval By: **STATE FIRE MARSHAL DIV.**

SHEET NO. **1 of 6**

EDISON APARTMENTS
3080 OLD HIGHWAY 8
ROSEVILLE, MN 55113

Flow Test Info:
STATIC = 66 PSI
RESID = 61 PSI
FLOW = 1,430 GPM
* FLOW TEST INFORMATION PROVIDED ON 12/07/2021



Design Area # 8 HAZARD: OH1
 Zone: 1 System Type: WET
 Location: NORTH PARKING
 Flowing Outlets:
 Density: 0.15 Remote Area:
 Flow 554.2 gpm @ 56 psi
 Calculation Safety: 9.1 psi
 Includes 250 gpm Hose allowance

NOTES:
 DUE TO THE USE OF STANDARD RESPONSE
 SPRINKLERS A MINIMUM REMOTE AREA OF 1500
 S.F. USED.

Design Area # 9 HAZARD: OH1
 Zone: 1 System Type: WET
 Location: SOUTH PARKING
 Flowing Outlets: 7
 Density: 0.15 Remote Area:
 Flow 549.4 gpm @ 49.6 psi
 Calculation Safety: 15.5 psi
 Includes 250 gpm Hose allowance

NOTES:
 DUE TO THE USE OF STANDARD RESPONSE
 SPRINKLERS A MINIMUM REMOTE AREA OF 1500
 S.F. USED.

PIPE LEGEND

- STEEL FIRE SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING
- FDC FIRE SPRINKLER PIPING
- UNDERGROUND PIPING

SPRINKLER HEAD LEGEND

SYM	TYPE	POSITION	FINISH	TEMP	K	INPT	SIN	MPG	MODEL#	ESCUTCHEON	SPACING
37	UPR	BRASS	200	11.20	3/4"		TY5137	TYco	EC-11	N/A	20X20
40	SIDE	WHITE	155	5.60	1/2"		TY3331	TYco	TY-FRB	SEMI-RECESS	14X14 U.N.O
52	PEND	WHITE	200	5.60	1/2"		TY323	TYco	TY-FRB	SEMI-RECESS	130 SQFT
423	PEND	WHITE	155	4.90	1/2"		TY2234	TYco	LFH	SEMI-RECESS	16X16 U.N.O
40	PEND	WHITE	155	8.00	3/4"		TY4282	TYco	EC-8C	SEMI-RECESS	28X8
26	SIDE	WHITE	200	5.60	1/2"		TY3331	TYco	TY-FRB	SEMI-RECESS	10X10
161	SIDE	WHITE	155	4.40	1/2"		TY2334	TYco	LFH	SEMI-RECESS	16X16 U.N.O
33	PEND	WHITE	155	5.60	1/2"		TY2334	TYco	TY-FRB	SEMI-RECESS	15X15
78	UPR	BRASS	200	5.60	1/2"		TY313	TYco	TY-FRB	N/A	130 SQFT
870 TOTAL HEADS											

FIRE PROTECTION PLAN – PARKING LEVEL
 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 Sch-10 & Bddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - 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 one spare head cabinet w/ 8 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and P.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

Drawing Title: **FIRE PROTECTION PLAN**

Contract No: **C21-80**

Drawing Date: **??/??/????**

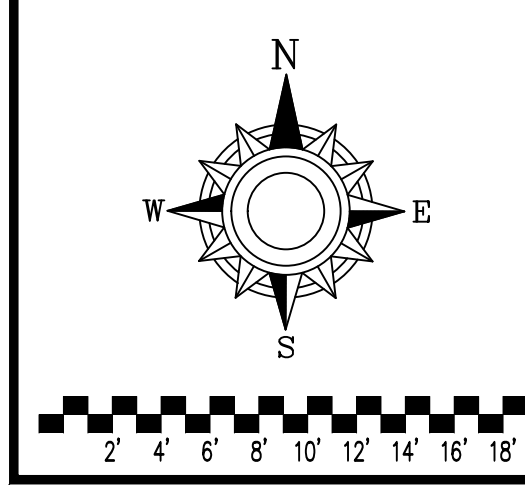
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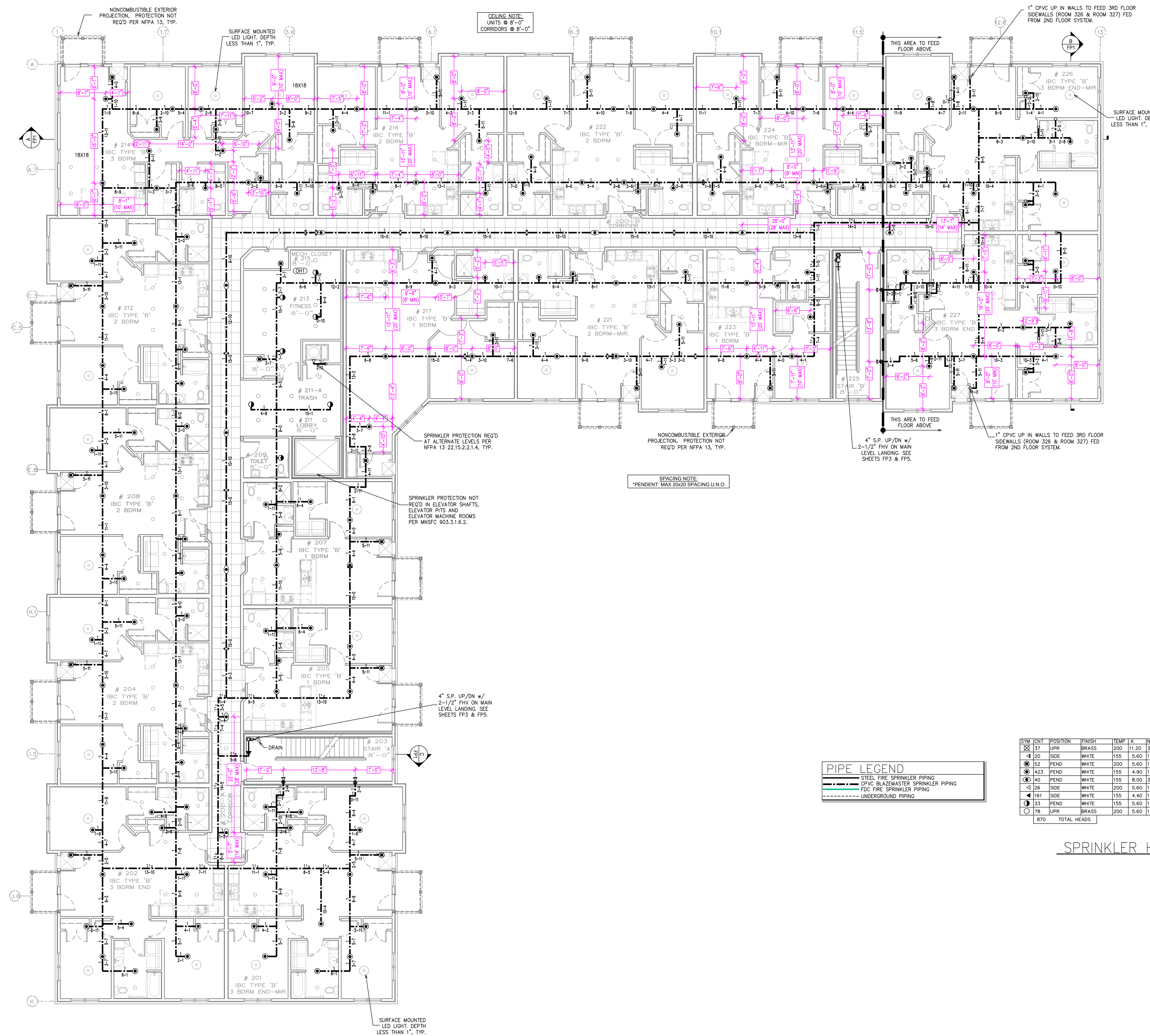
Drawn By: **JLN**

Approval By: **STATE FIRE MARSHAL DIV.**

SHEET NO. **2 of 6**

EDISON APARTMENTS
3080 OLD HIGHWAY 8
ROSEVILLE, MN 55113





FIRE PROTECTION PLAN - 2ND FLOOR
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 Sch-10 & Rody Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 5. No installation or fabrication to begin without approved shop dwgs.
 6. All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
 7. All Dimensions Show as Center to Center.
 8. High Temperature Heads are to be Field Located Where Required.
 9. Provide one spare head cabinet w/ 8 hds. & one hd wrench.
 10. Hangers are to be U.L. Listed and P.M. Approved.
 11. Electrical wiring, alarm, detection and supervisory by owner.
 12. Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

Drawing Title: **FIRE PROTECTION PLAN**

Contract No: **C21-80**

Drawing Date: **??/??/????**

Scale: **1/8" = 1'-0"**

Drawn By: **JLN**

Approval By: **STATE FIRE MARSHAL DIV.**

SHEET NO. **4 of 6**

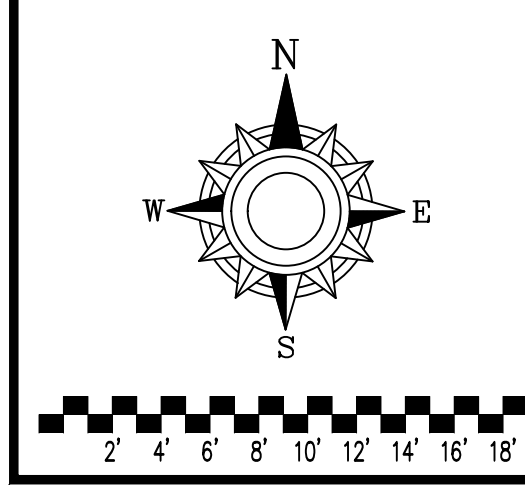
EDISON APARTMENTS
3080 OLD HIGHWAY 8
ROSEVILLE, MN 55113

SYM	QTY	POSITION	FINISH	TEMP	K	INPT	SIN	MPG.	MODEL#	ESCU/CHCN	SPACING
37	UPR		BRASS	200	11.20	3/4"	TY937	TYco	EC-11	N/A	20X20
40	SIDE		WHITE	155	5.60	1/2"	TY331	TYco	TY-FRB	SEMI-RECESS	14X14 U.N.O
42	PEND		WHITE	200	5.60	1/2"	TY323	TYco	TY-FRB	SEMI-RECESS	130 SQFT
423	PEND		WHITE	155	4.90	1/2"	TY2234	TYco	LFII	SEMI-RECESS	16X16 U.N.O
40	PEND		WHITE	155	8.00	3/4"	TY4282	TYco	EC-8C	SEMI-RECESS	28X8
28	SIDE		WHITE	200	5.60	1/2"	TY331	TYco	TY-FRB	SEMI-RECESS	10X10
181	SIDE		WHITE	155	4.40	1/2"	TY2334	TYco	LFII	SEMI-RECESS	16X16 U.N.O
33	PEND		WHITE	155	5.60	1/2"	TY323	TYco	TY-FRB	SEMI-RECESS	15X15
78	UPR		BRASS	200	5.60	1/2"	TY313	TYco	TY-FRB	N/A	130 SQFT
870 TOTAL HEADS											

PIPE LEGEND

- STEEL FIRE SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING
- FDC FIRE SPRINKLER PIPING
- UNDERGROUND PIPING

SPRINKLER HEAD LEGEND



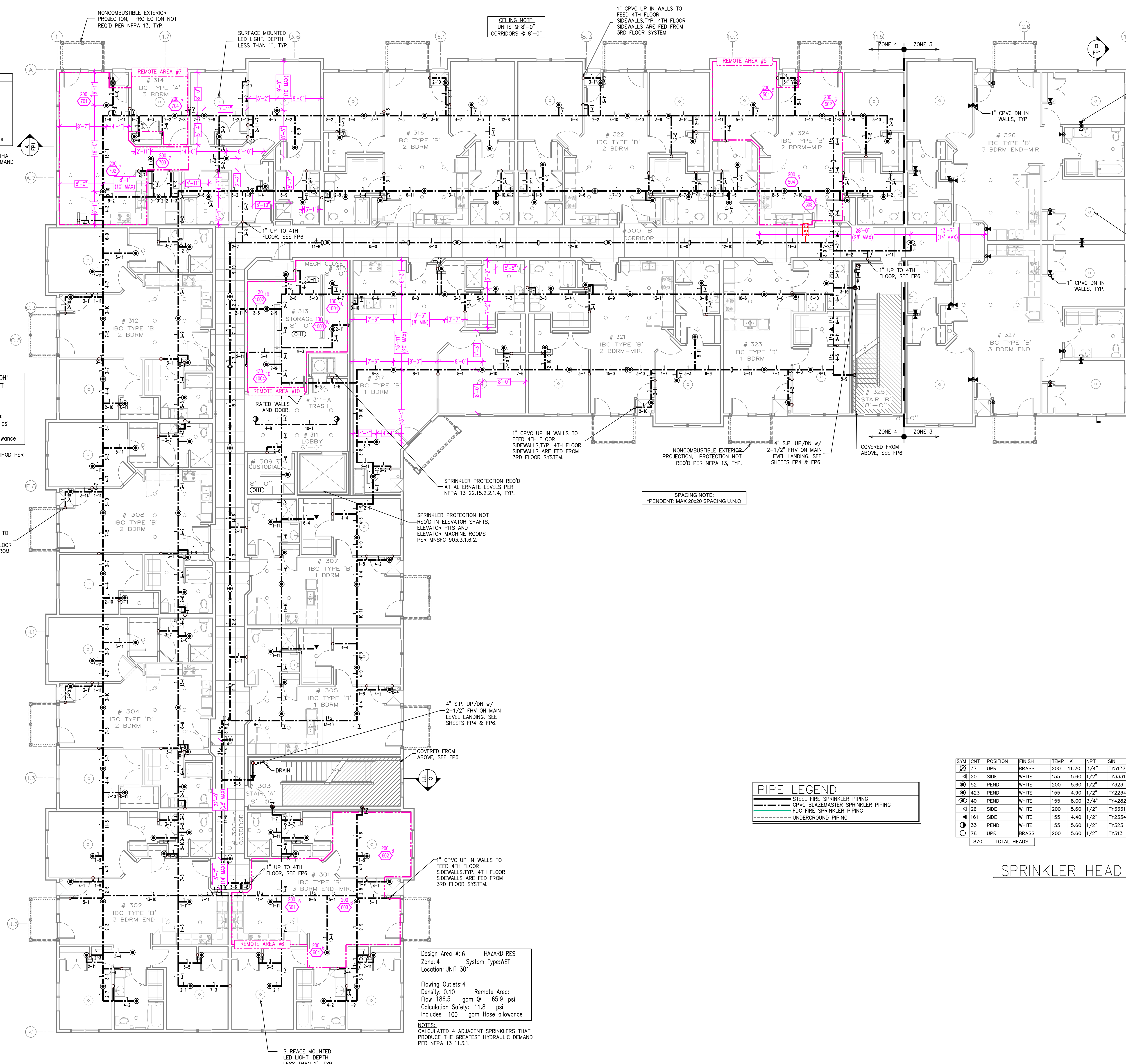
CALC PLACARD

Design Area # 7 HAZARD: RES
 Zone: 4 System Type: WET
 Location: UNIT 314
 Flowing Outlets: 4
 Density: 0.10 Remote Area:
 Flow 183.3 gpm @ 54.7 psi
 Calculation Safety: 11.2 psi
 Includes 100 gpm Hose allowance
 NOTES:
 CALCULATED 4 ADJACENT SPRINKLERS THAT
 PRODUCE THE GREATEST HYDRAULIC DEMAND
 PER NFPA 13 11.3.1.

Design Area # 10 HAZARD: CH1
 Zone: 4 System Type: WET
 Location: 3RD FLOOR STORAGE
 Flowing Outlets: 4
 Density: 0.15 Remote Area:
 Flow 330.4 gpm @ 43.6 psi
 Calculation Safety: 22.1 psi
 Includes 250 gpm Hose allowance
 NOTES:
 CALCULATED TO ROOM DESIGN METHOD PER
 NFPA 11.2.3.3.

Design Area # 6 HAZARD: RES
 Zone: 4 System Type: WET
 Location: UNIT 301
 Flowing Outlets: 4
 Density: 0.10 Remote Area:
 Flow 186.5 gpm @ 65.9 psi
 Calculation Safety: 11.8 psi
 Includes 100 gpm Hose allowance
 NOTES:
 CALCULATED 4 ADJACENT SPRINKLERS THAT
 PRODUCE THE GREATEST HYDRAULIC DEMAND
 PER NFPA 13 11.3.1.

Design Area # 5 HAZARD: RES
 Zone: 4 System Type: WET
 Location: UNIT 324
 Flowing Outlets: 4
 Density: 0.10 Remote Area:
 Flow 181.4 gpm @ 50.9 psi
 Calculation Safety: 15 psi
 Includes 100 gpm Hose allowance
 NOTES:
 CALCULATED 4 ADJACENT SPRINKLERS THAT
 PRODUCE THE GREATEST HYDRAULIC DEMAND
 PER NFPA 13 11.3.1.



PIPE LEGEND

—	STEEL FIRE SPRINKLER PIPING
—	CPCV BLAZEMASTER SPRINKLER PIPING
—	FDC FIRE SPRINKLER PIPING
---	UNDERGROUND PIPING

SPRINKLER HEAD LEGEND

SYM	CONT	POSITION	FINISH	TEMP	K	INPT	SIN	MPG	MODEL#	ESCU/CECHON	SPACING
⊙	37	UPR	BRASS	200	11.20	3/4"	TY937	Typo	EC-11	N/A	20x20
⊙	20	SIDE	WHITE	155	5.60	1/2"	TY331	Typo	TY-FRB	SEMI-RECESS	14x14 U.N.O
⊙	52	PEND	WHITE	200	5.60	1/2"	TY323	Typo	TY-FRB	SEMI-RECESS	130 SQFT
⊙	423	PEND	WHITE	155	4.90	1/2"	TY2234	Typo	LFII	SEMI-RECESS	16x16 U.N.O
⊙	40	PEND	WHITE	155	8.00	3/4"	TY4282	Typo	EC-8C	SEMI-RECESS	28x8
⊙	26	SIDE	WHITE	200	5.60	1/2"	TY331	Typo	TY-FRB	SEMI-RECESS	10x10
⊙	181	SIDE	WHITE	155	4.40	1/2"	TY2334	Typo	UPII	SEMI-RECESS	16x16 U.N.O
⊙	13	PEND	WHITE	155	5.60	1/2"	TY323	Typo	TY-FRB	SEMI-RECESS	15x15
⊙	78	UPR	BRASS	200	5.60	1/2"	TY313	Typo	TY-FRB	N/A	130 SQFT
870 TOTAL HEADS											

FIRE PROTECTION PLAN - 3RD FLOOR
 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 Sch-10 & Bddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - 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 one spare head cabinet w/ 8 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and P.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

Drawing Title: **FIRE PROTECTION PLAN**

Contract No: **C21-80**

Drawing Date: **??/??/????**

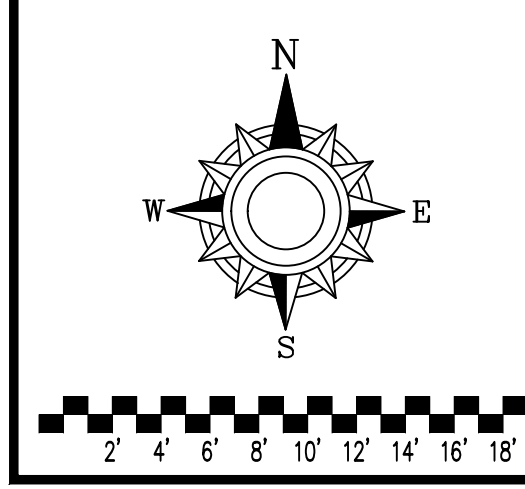
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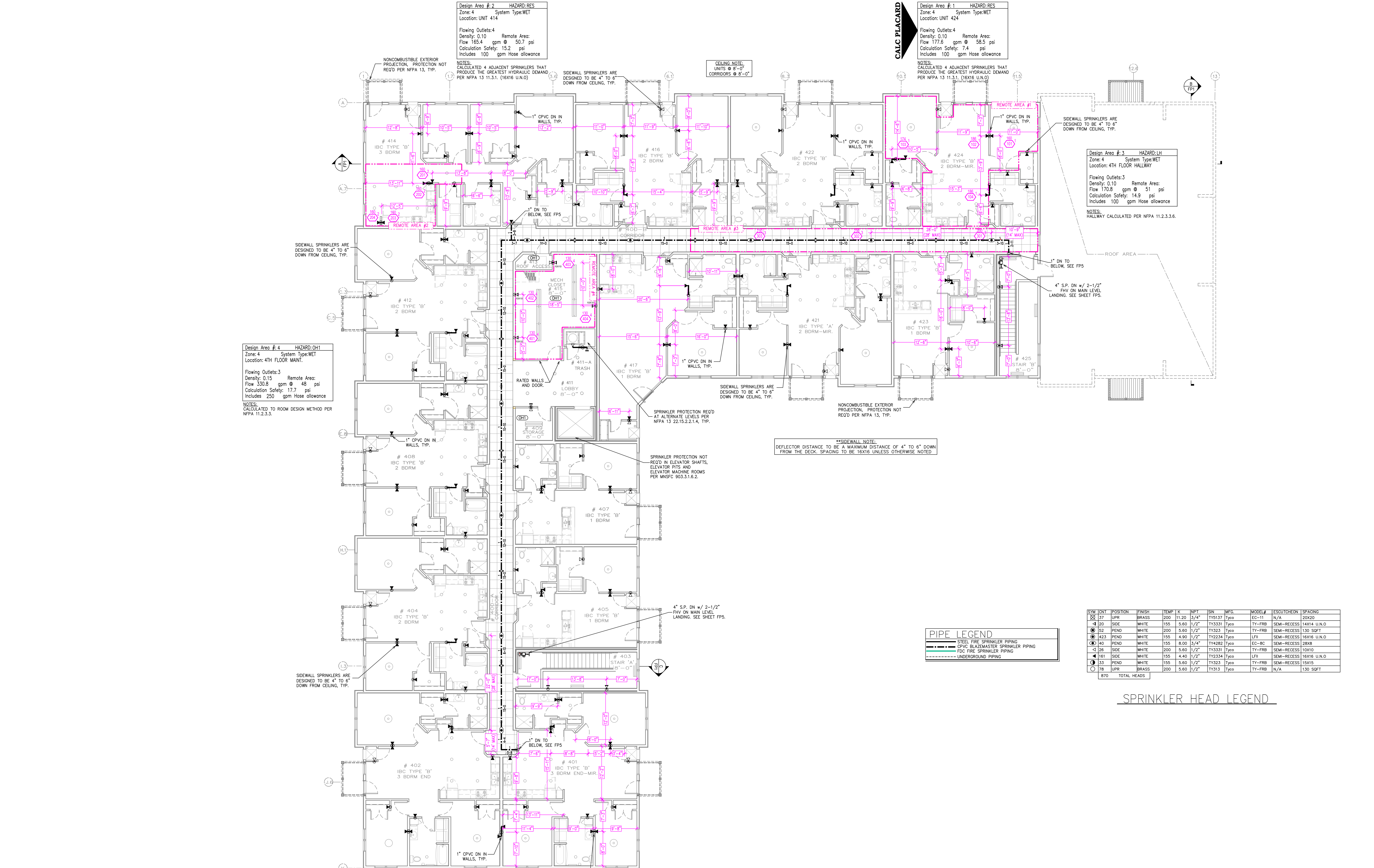
Drawn By: **JLN**

Approval By: **STATE FIRE MARSHAL DIV.**

SHEET NO: **5 of 6**

EDISON APARTMENTS
3080 OLD HIGHWAY 8
ROSEVILLE, MN 55113





FIRE PROTECTION PLAN - 4TH FLOOR
 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 Sch-10 & Rddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - 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 one spare head cabinet w/ 8 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and F.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

Drawing Title: **FIRE PROTECTION PLAN**

Contract No: **C21-80**

Drawing Date: **??/??/????**

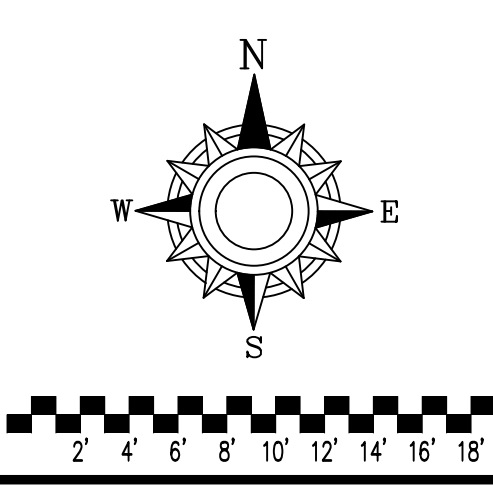
Scale: **1/8" = 1'-0"**

Drawn By: **JLN**

Approval By: **STATE FIRE MARSHAL DIV.**

SHEET NO: **6 of 6**

EDISON APARTMENTS
3080 OLD HIGHWAY 8
ROSEVILLE, MN 55113



SYM	CONT	POSITION	FINISH	TEMP	K	NPT	SIN	MPG.	MODEL#	ESQUICHEON	SPACING
137	UPR		BRASS	200	11.20	3/4"	TY937	TYco	EC-11	N/A	20X20
120	SIDE		WHITE	155	5.60	1/2"	TY331	TYco	TY-FRB	SEMI-RECESS	14X14 U.N.O
132	PEND		WHITE	200	5.60	1/2"	TY323	TYco	TY-FRB	SEMI-RECESS	130 SQFT
123	PEND		WHITE	155	4.90	1/2"	TY2234	TYco	LF71	SEMI-RECESS	16X16 U.N.O
140	PEND		WHITE	155	8.00	3/4"	TY4282	TYco	EC-8C	SEMI-RECESS	28X8
128	SIDE		WHITE	200	5.60	1/2"	TY331	TYco	TY-FRB	SEMI-RECESS	10X10
181	SIDE		WHITE	155	4.40	1/2"	TY2334	TYco	LF71	SEMI-RECESS	16X16 U.N.O
133	PEND		WHITE	155	5.60	1/2"	TY323	TYco	TY-FRB	SEMI-RECESS	15X15
178	UPR		BRASS	200	5.60	1/2"	TY313	TYco	TY-FRB	N/A	130 SQFT
870 TOTAL HEADS											

PIPE LEGEND	
	STEEL FIRE SPRINKLER PIPING
	CPVC BLAZEMASTER SPRINKLER PIPING
	FDC FIRE SPRINKLER PIPING
	UNDERGROUND PIPING

SPRINKLER HEAD LEGEND