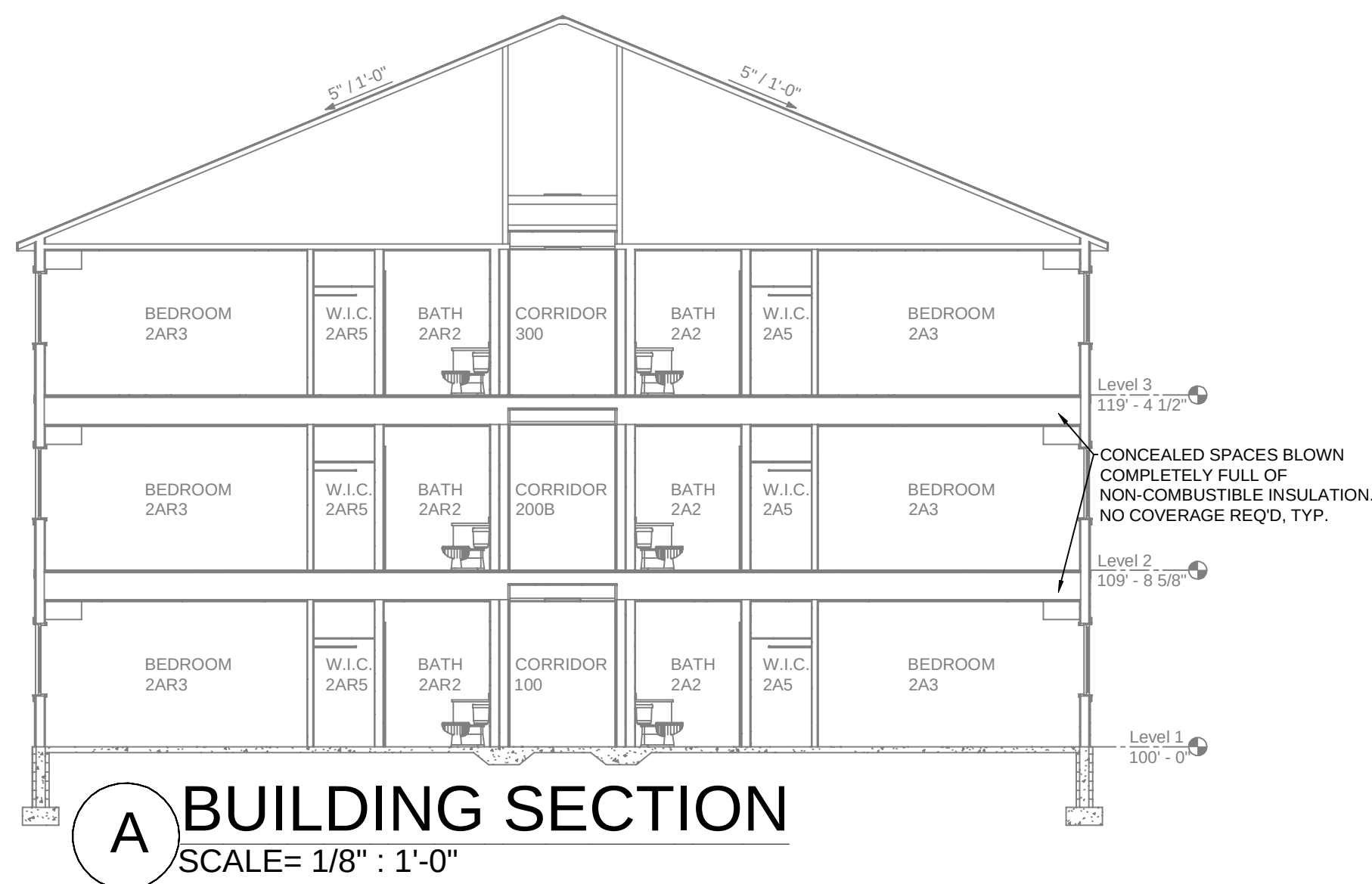




A BUILDING SECTION
SCALE= 1/8" : 1'-0"

GENERAL NOTES

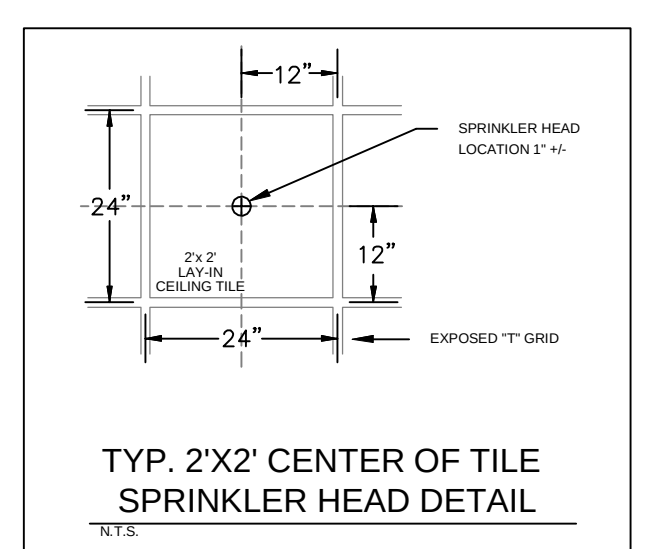
- MINNESOTA STATE BUILDING CODE (2020)
- OCCUPANCY: R-2 (RESIDENTIAL)
- TYPE OF CONSTRUCTION: VB
- SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - LEVEL 1 ZONE 1 = 13,732 S.F.
 - LEVEL 2 ZONE 1 = 13,623 S.F.
 - LEVEL 3 ZONE 1 = 13,623 S.F.
 - ATTIC ZONE 2 = 13,623 S.F.
 - TOTAL = 54,601 S.F.
- INSTALLATION STANDARDS:
SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2016)
- SPRINKLER PIPE TYPES:
 - WET:
 - 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1-1/2" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1" BRANCH LINES TO BE BLK SCHEDULE 40 PIPING WITH THREADED FITTINGS
 - 1-1/2" THROUGH 4" MAIN & BRANCH LINES TO BE BLK SCHEDULE 10 PIPING WITH SHORT RADIUS GROOVED FITTINGS
 - DRY:
 - 1" THROUGH 1-1/4" BRANCH LINES TO BE THREADED SCHEDULE 40 WITH THREADED FITTINGS
 - 1-1/2" THROUGH 4" MAIN & BRANCH LINES TO BE GROOVED SCHEDULE 10 WITH SHORT RADIUS GROOVED FITTINGS
- DESIGN CRITERIA
 - RESIDENTIAL ROOMS, CORRIDORS, LOBBYS, AND SIMILAR AREAS DESIGNED TO LIGHT HAZARD
 - 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
 - DRY SYSTEM PIPE SLOPE INSTALLATION:
 - SPRINKLER MAINS TO BE 1" PER 10 FEET
 - SPRINKLER BRANCH LINES TO BE 1/2" PER 10 FEET
 - DRY SYSTEM CAPACITY: 253.1 GAL
- SYMBOLS USED ON DRAWINGS:
 - 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
 - CEILING HEIGHT
- SCOPE OF WORK:
 - TO INSTALL A NEW SPRINKLER SYSTEM IN VOYAGEUR HEIGHTS APARTMENT BUILDING 1. THE SYSTEM SHALL HAVE 2 ZONES; ZONE 1 FEEDING ALL THREE RESIDENTIAL LEVELS AND ZONE 2 FEEDING THE ATTIC
 - ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2016)
 - 1-1/2" CLEANUP STANDPIPES WILL BE PROVIDED IN EACH STAIR WITH HOSE VALVES LOCATED AT THE MAIN FLOOR LANDING

PIPE LEGEND									

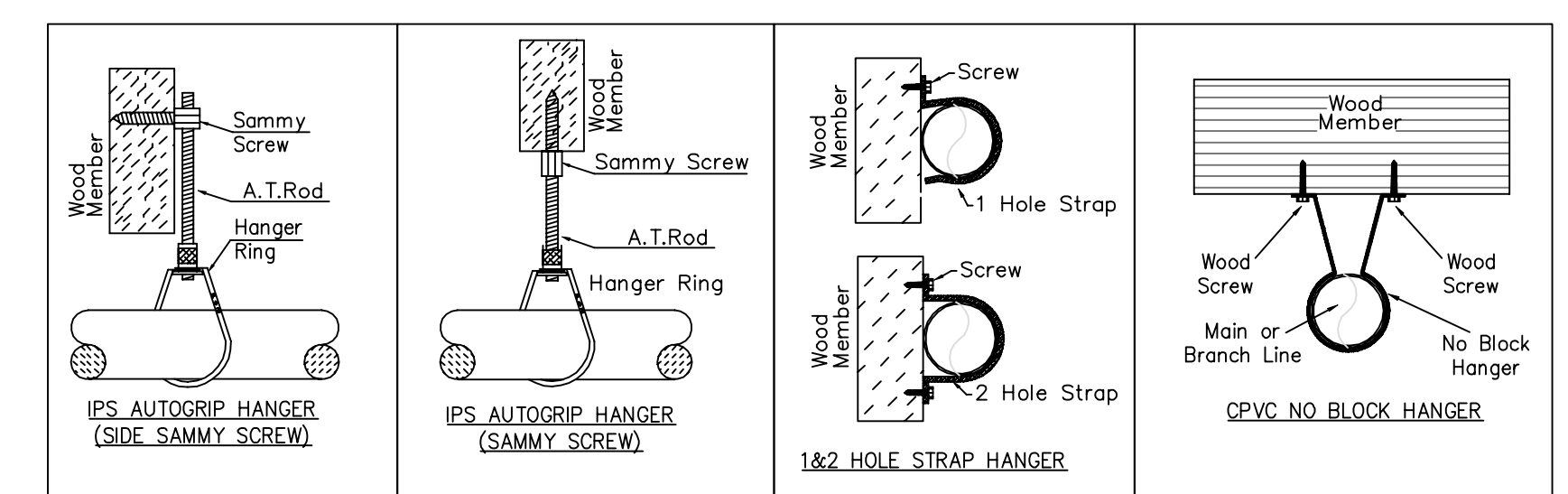
SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SN	MFG.	MODEL#	ESCU/CHRON	MAX SPACING
208	PENDENT	WHITE	155	4.90	1/2"	V2740	VICTAULIC	FL-RES	SEMI-RECESS	18" x 18" UNO	
80	PENDENT	WHITE	200	5.60	1/2"	V2708	VICTAULIC	FL-QR	SEMI-RECESS	225 SF (LH) - 130 SF (OH)	
38	SIDEWALL	WHITE	200	5.60	1/2"	V2710	VICTAULIC	FL-QWSW	401	106 SF (LH) - 100 SF (OH)	
116	SIDEWALL	WHITE	155	4.00	1/2"	VK466	VIKING	FREEDDOM	401	10" x 16" UNO	
75	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	10" x 15"	
28	UPRIGHT	BRASS	200	5.60	1/2"	RA5624	RELIABLE	DO56-6	N/A	6" x 40"	
24	UPRIGHT	BRASS	200	8.00	3/4"	RA5622	RELIABLE	DO80-6	N/A	6" x 40"	
37	SIDEWALL	CHROME	200	5.60	1"	RS734	RELIABLE	F3QR	401	14" x 14"	
693 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND

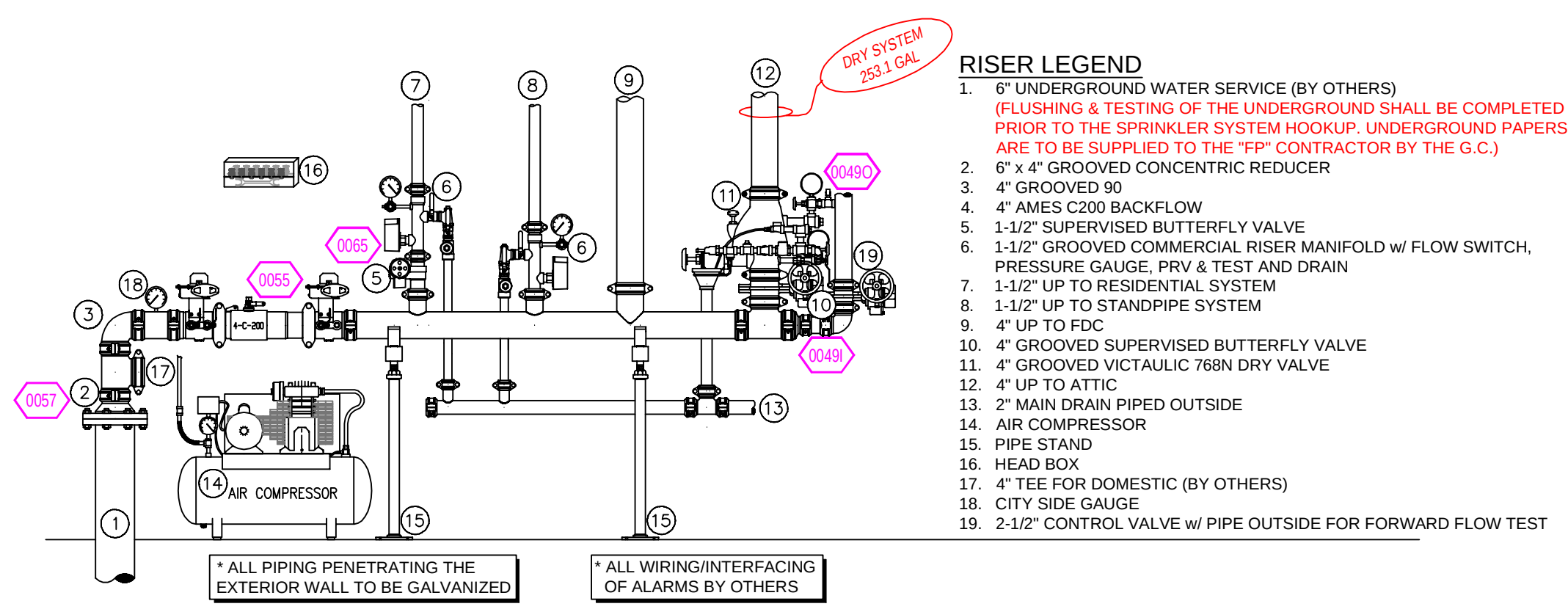
NFPA 13 STEEL PIPE HANGER SPACING		NFPA 13 CPVC PIPE HANGER SPACING	
NOMINAL SIZE INCHES	MAX SPACING feet	NOMINAL SIZE INCHES	MAX SPACING feet
1"	12'-0"	3/4"	5'-6"
1-1/4"	12'-0"	1"	6'-6"
1-1/2"	15'-0"	1-1/4"	6'-6"
2"	15'-0"	1-1/2"	7'-0"
2-1/2"	15'-0"	2"	8'-0"
3"	15'-0"	2-1/2"	9'-0"
4" & LARGER	15'-0"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



INSTALLATION DETAILS

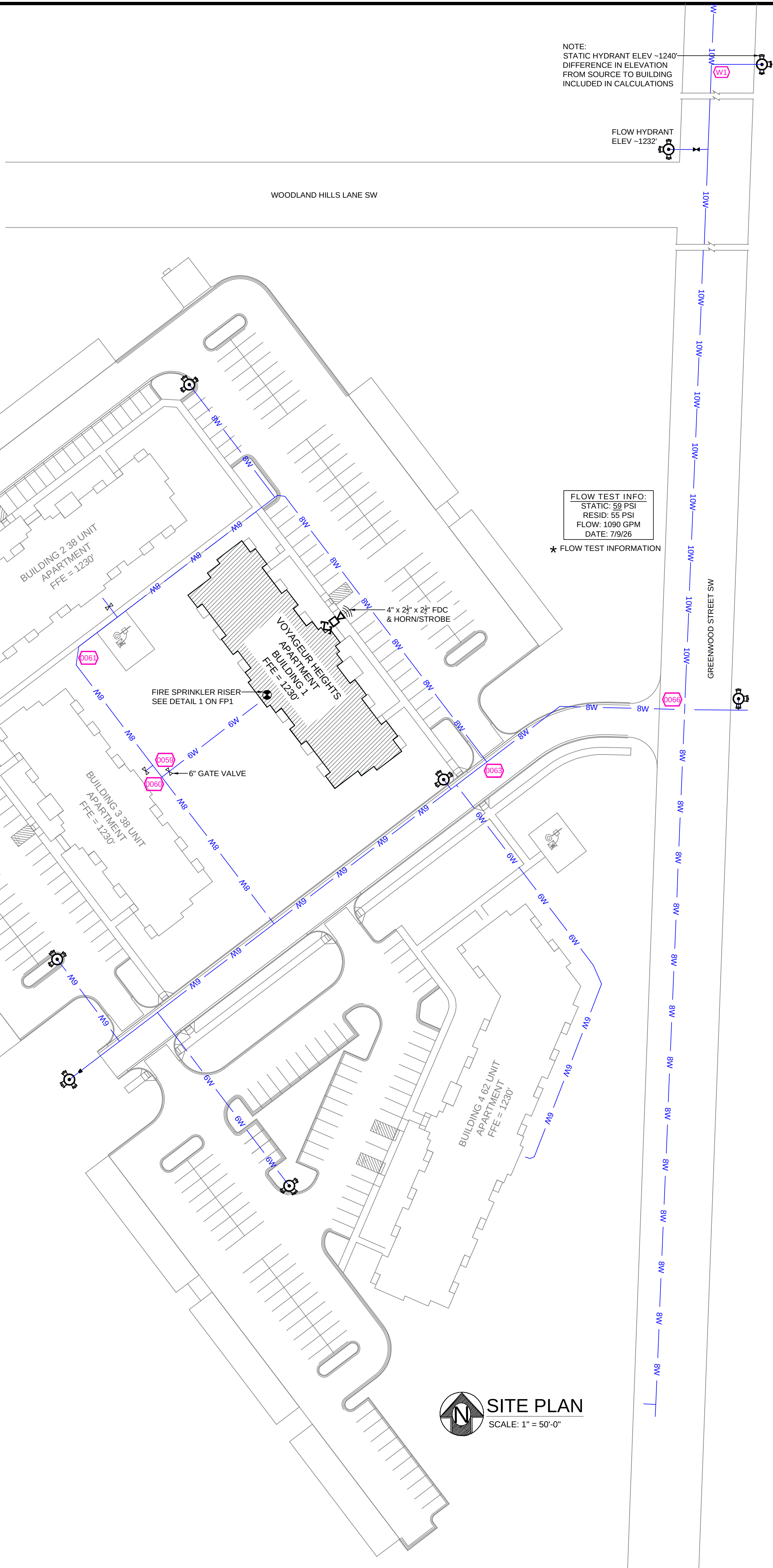


HANGER DETAILS



1 RISER DETAIL
SCALE= 1/2" : 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 "P" CONTRACTOR BY THE G.C.
 - 6" x 4" GROOVED CONCENTRIC REDUCER
 - 4" GROOVED 90
 - 4" AMES C200 BACKFLOW
 - 1-1/2" SUPERVISED BUTTERFLY VALVE
 - 1-1/2" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, PRV & TEST AND DRAIN
 - 1-1/2" UP TO RESIDENTIAL SYSTEM
 - 1-1/2" UP TO STANDPIPE SYSTEM
 - 4" UP TO FDC
 - 4" GROOVED SUPERVISED BUTTERFLY VALVE
 - 4" GROOVED VICTAULIC 788N DRY VALVE
 - 4" UP TO ATTIC
 - 2" MAIN DRAIN PIPED OUTSIDE
 - AIR COMPRESSOR
 - PIPE STAND
 - HEAD BOX
 - 4" TEE FOR DOMESTIC (BY OTHERS)
 - CITY SIDE GAUGE
 - 2-1/2" CONTROL VALVE w/ PIPE OUTSIDE FOR FORWARD FLOW TEST



NOTE:
STATIC HYDRANT ELEV -1240'
DIFFERENCE IN ELEVATION
FROM SOURCE TO BUILDING
INCLUDED IN CALCULATIONS

FLOW HYDRANT
ELEV -1232'

FLOW TEST INFO:
STATIC: 58 PSI
RESID: 55 PSI
FLOW: 1000 GPM
DATE: 7/9/26

★ FLOW TEST INFORMATION

SITE PLAN
SCALE: 1" = 50'-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-40 PIPING HAS WELDED OUTLETS & GROOVED SHORT RADIUS FITTINGS 5. ALL WELDING PER NFPA 554-5.2 6. NO INSTALLATION OR FABRICATION TO BEGIN 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 w/8 HEADS & 1 HEAD WRENCH 11. HANGERS ARE TO BE U.L. LISTED AND F.M. APPROVED 12. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER 13. OWNERS RESPONSIBILITY TO PROVIDE ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.	NO	REVISIONS	DATE	APPROVAL STAMPS	Contract No. C26-45 Drawing Date: 8/17/2026 Scale: 1/8" = 1'-0" Drawn By: DVG Approval By: STATE FIRE MARSHAL DIV. SHEET NO. FP 1 of 3



SYM	CON	POSITION	FIBRE	TEMP	K	NPT	SIN	MTC	MODEL	ESYCHRON	MAX SPACING
☐	208	PENDANT	WHITE	155	4.50	12"	V2740	VEGIC	FL-RES	RE-SS	18" x 18" UNO
☐	80	PENDANT	WHITE	200	5.60	12"	V2708	VEGIC	FL-QR	RE-SS	RECESS 235 (LF) 130" (OH)
☐	110	SIDEWALL	WHITE	155	4.50	12"	V2740	VEGIC	FL-RES	RE-SS	18" x 18" UNO 130" SF (OH)
☐	116	SIDEWALL	WHITE	155	4.50	12"	VK466	VNAC	FL-FR	RE-SS	18" x 18" UNO
☐	75	UPRIGHT	BRASS	212	5.60	12"	RA5626	RELIABLE	N/A	N/A	10' x 15'
☐	28	UPRIGHT	BRASS	200	5.60	12"	RA5626	RELIABLE	N/A	N/A	6' x 40'
☐	24	UPRIGHT	BRASS	200	8.00	34"	RA5622	RELIABLE	DD60-6	N/A	6' x 40'
☐	37	SIDEWALL	CHROME	200	5.60	1"	RS734	RELIABLE	F3QR	401	14' x 14'

1. SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL
2. ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.S. LISTED
3. MINIMUM PIPE SIZE SHALL BE 1" NOMINAL PIPE
4. ALL SCH 40 PIPING HAS WELDED OUTLETS & GROUNDED SHORT RADIIUS FITTINGS
5. ALL WELDING PER NFPA-33(2.4.6)
6. NO INSTALLATION OR FABRICATION TO BEGIN 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 AND WHEN REQUIRED
10. PROVIDE ON SPARE HEAD CABINET w/6 HEADS & 1 HEAD WRENCH
11. HANGERS ARE TO BE U.S. LISTED AND APPROVED
12. ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
13. OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEADS TO PREVENT WET SYSTEM PIPING FROM FREEZING.

[illegible]

VOYAGEUR HEIGHTS
APARTMENTS BLDG 1
8974 VOYAGEUR DR
BRainerd, MN 56401

Contract No.	
C26-45	
Drawing Date:	8/17/2026
Scale:	1/8" = 1'-0"
Drawn By:	DVG
Approval By:	STATE FIRE MARSHAL DIV.
SHEET NO.	FP 3 of 3