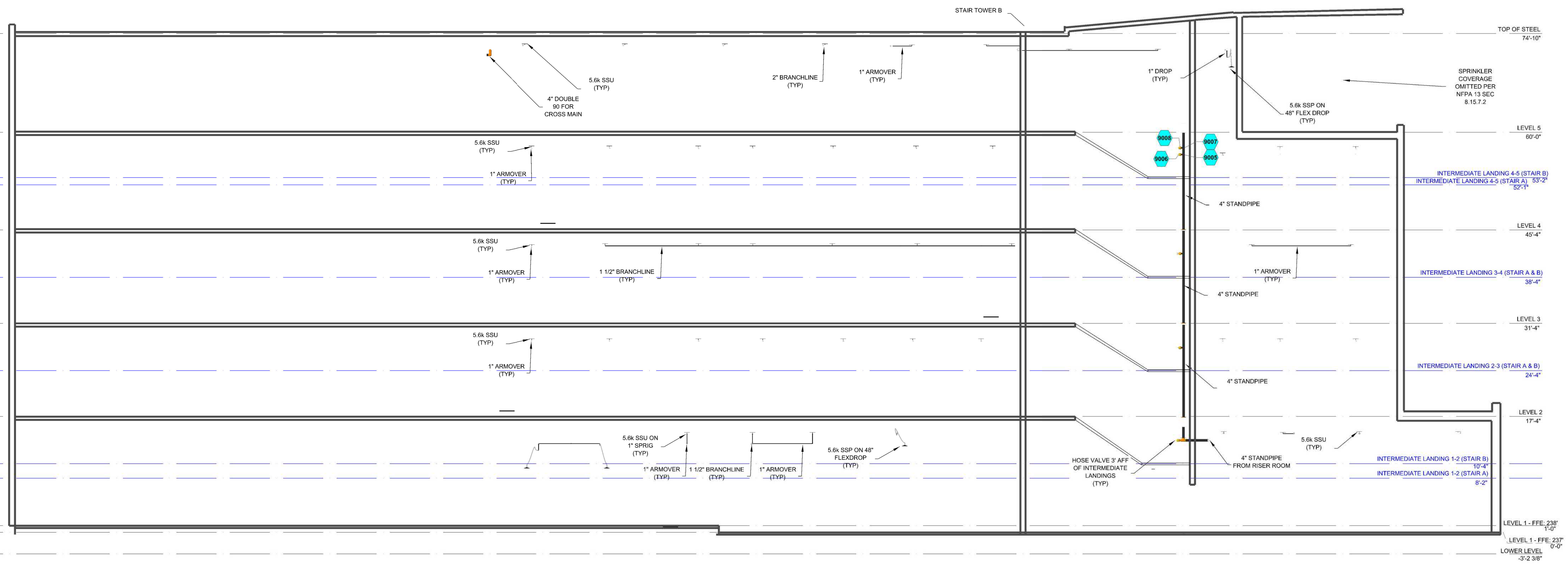
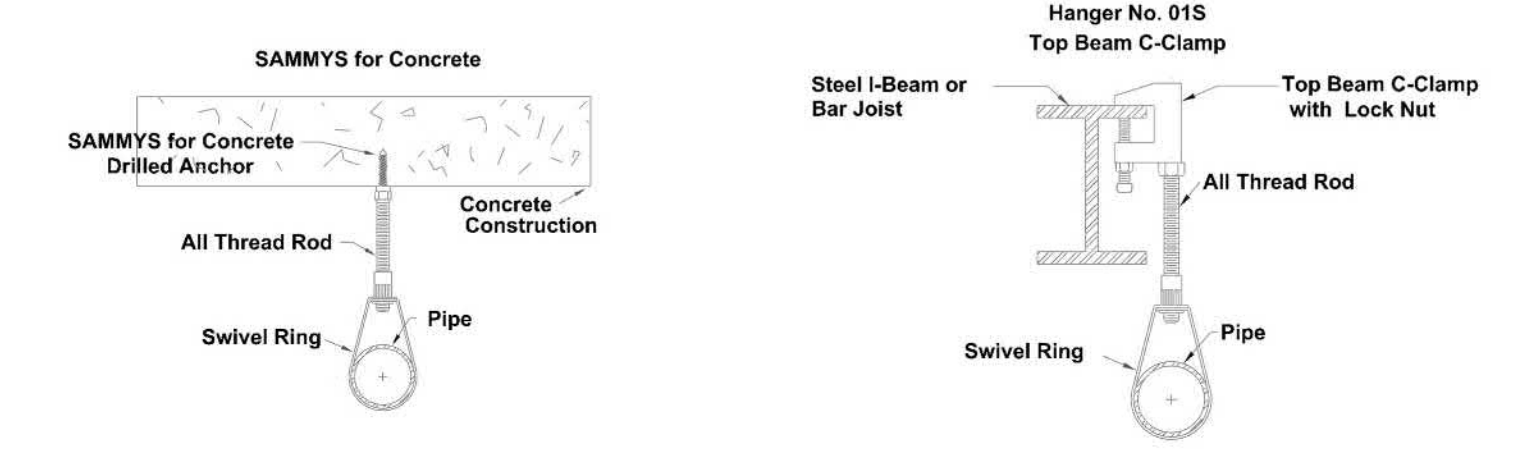


GENERAL INFORMATION

- INTERNATIONAL BUILDING CODE (2018)
 - OCCUPANCY: TYPE A-1, A-2, A-3, B, E, M, S-1
 - TYPE OF CONSTRUCTION: I-B
 - SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - LEVEL 1 = 21,335 SF (ZONE 1)
 - LEVEL 2 = 15,784 SF (ZONE 2)
 - LEVEL 3 = 15,784 SF (ZONE 3)
 - LEVEL 4 = 15,784 SF (ZONE 4)
 - LEVEL 5 = 13,238 SF (ZONE 5)
 - TOTAL = 81,933 SF
 - DESIGN & INSTALLATION STANDARDS: NFPA-13 (2016), NFPA-14 (2016)
- SPRINKLER PIPE TYPES:
 - WET-
 - 1" THROUGH 1 1/4" PIPE TO BE SCHEDULE 40 BLACK STEEL W/ THREADED FITTINGS
 - 1 1/2" THROUGH 6" MAINS & BRANCH LINES TO BE BLK SCHEDULE 10 W/ GROOVED FITTINGS
 - MAINS & BRANCH LINES TO BE ROLL-GROOVED BLK SCHEDULE 10
 - 2" AND LARGER TO USE GROOVED SHORT RADIUS FITTINGS
- DESIGN CRITERIA:
 - LIGHT HAZARD AREAS INCLUDE OFFICE/ADMINISTRATIVE, RESTROOMS, AND CORRIDORS
 - ORDINARY HAZARD GROUP I AREAS INCLUDE MECHANICAL AND ELECTRICAL ROOMS
 - ORDINARY HAZARD GROUP II AREAS INCLUDE BULK ROOMS, SHELL SPACES, HOT WORKING AREAS
 - REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.1
- NOTES:
 - ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
 - HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 - SEE PLAN FOR HANGING REQUIREMENTS
 - FDC AND HOSE VALVES TO USE CITY OF BETHLEHEM THREADS
- SYMBOLS USED ON DRAWINGS:
 - PIPE ELEVATION ABOVE FINISH FLOOR; *NOTE ELEVATION TAGS FOR L1 BASED OFF FFE = 238', FFE VARIES THROUGHOUT BUILDING SEE SITE MAP FOR APPROXIMATE LOCATIONS
 - ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD U.N.D.)
 - HYDRAULIC CALCULATION JUNCTION POINT (BLUE ARE STANDPIPE NODES)
 - CEILING HEIGHT
 - FIRE RATED WALL
 - WET BLACK STEEL PIPE
 - OVERHEAD DOORS
- SCOPE OF WORK:
 - INSTALL A COMPLETE FIVE ZONE WET FIRE SPRINKLER SYSTEM TO COVER ALL AREAS OF BUILDING, AS WELL AS COMPLETE CLASS 1 MAN. STANDPIPE FOUND IN BOTH STAIR TOWERS
 - ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13



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



HANGER DETAILS

MANUAL WET STANDPIPE
LOCATION: STAR #A,B
REQUIRED FLOW: 750 GPM
OUTLET PSL: 100
REQUIRED INLET PSL: 165

RISER ROOM LEGEND

Key Note	Size	Description	Quantity
1	2 1/2"	Threaded, 45° Elbow, DI	1
2	2 1/2"	Threaded Straight Tee, DI	2
3	6"	F-Grooved, Adapter, DI	1
4	N/A	Vertical BIV Wall PIV	1
5	6"	Deringer 30 GPM 6 W/ BFV	1
6	6"	Grooved Short Radius, 90° Elbow, DI, Org	3
7	6"	Rigid Coupling, Org, E Gasket	14
8	6"	Grooved Short Radius Tee Org	2
9	2 1/2"	Rigid Coupling, Org, E Gasket	2
10	2 1/2"	Hose Valve T-G	2
11	6"	Grooved Cap, DI, Org	1
12	2 1/2"	Threaded, 90° Elbow, DI	3
13	6"	Butterfly Valve, G-G	2
14	6"	Flow Switch	1
15	4"	Grooved Swing Check Valve, DI, Org	1
16	4"	Rigid Coupling, Org, E Gasket	22
17	4"	Grooved Short Radius, 90° Elbow, DI, Org	6
18	4"	RELIABLE CR COMMERCIAL RISER	1
19	6 x 4	Grooved Concentric Reducer, DI, Org	1
20	4"	Grooved Short Radius Tee Org	2
21	4"	Butterfly Valve, G-G	2

MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)

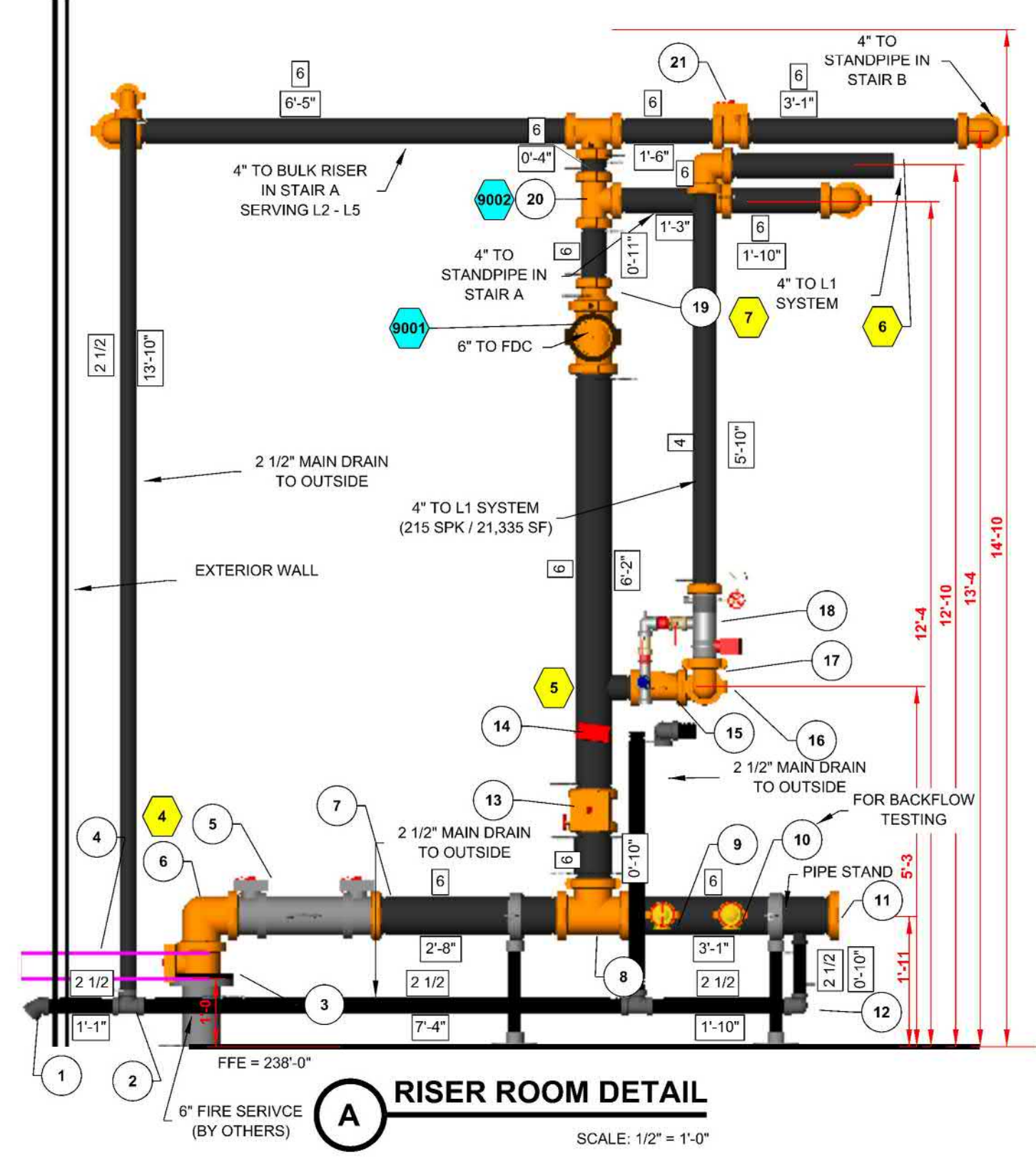
STEEL PIPE EXCEPT THREADED LIGHTWALL	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
NA	12-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0

TYPICAL ZONE CONTROL RISER DETAIL

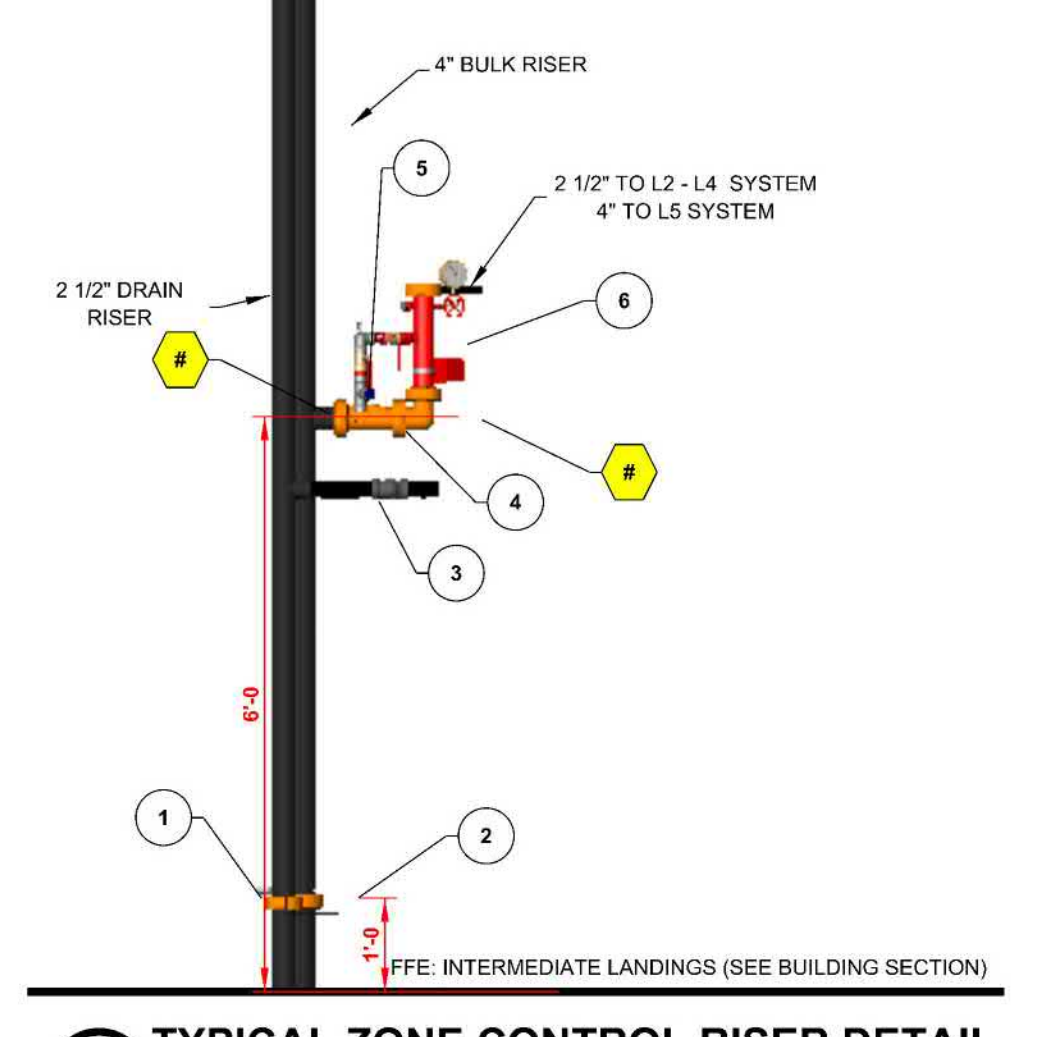
Key Note	Size	Description	Quantity
1	2 1/2"	Rigid Coupling, Org, E Gasket	1
2	4"	Grooved Short Radius, 90° Elbow, DI, Org	2
3	2"	Threaded, 90° Elbow, DI	2
4	2 1/2"	Swing Check Valve, Org, DI	1
5	2 1/2"	Rigid Coupling, Org, E Gasket	4
6	2 1/2"	RELIABLE CR COMMERCIAL RISER	1

FDC LEGEND

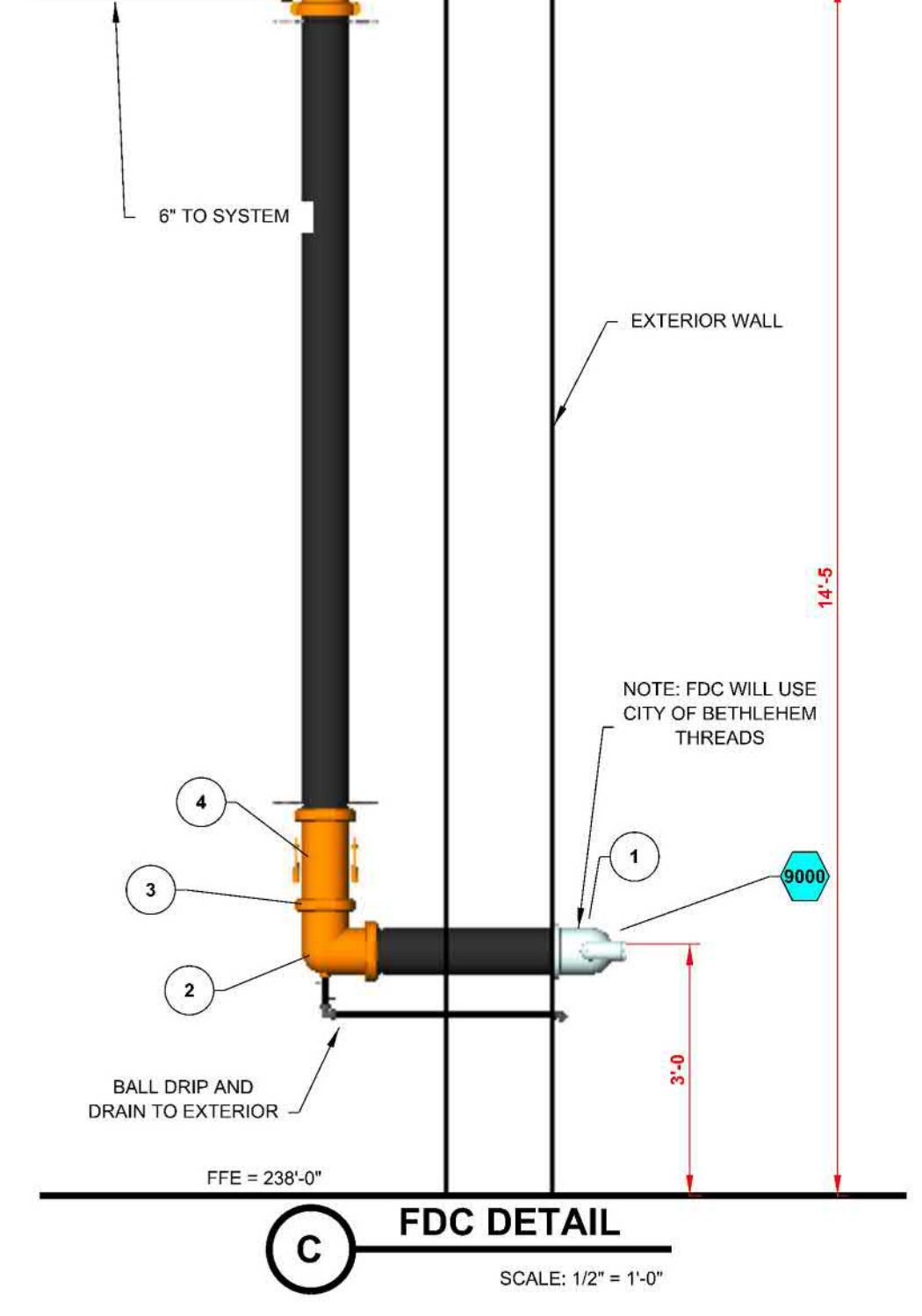
Key Note	Size	Description	Quantity
1	6x2 1/2x2 1/2	3 WAY FLUSH FDC	1
2	6"	Grooved Short Radius, 90° Elbow, DI, Org	2
3	6"	Rigid Coupling, Org, E Gasket	5
4	6"	Swing Check Valve, G-G, DI, Org	1



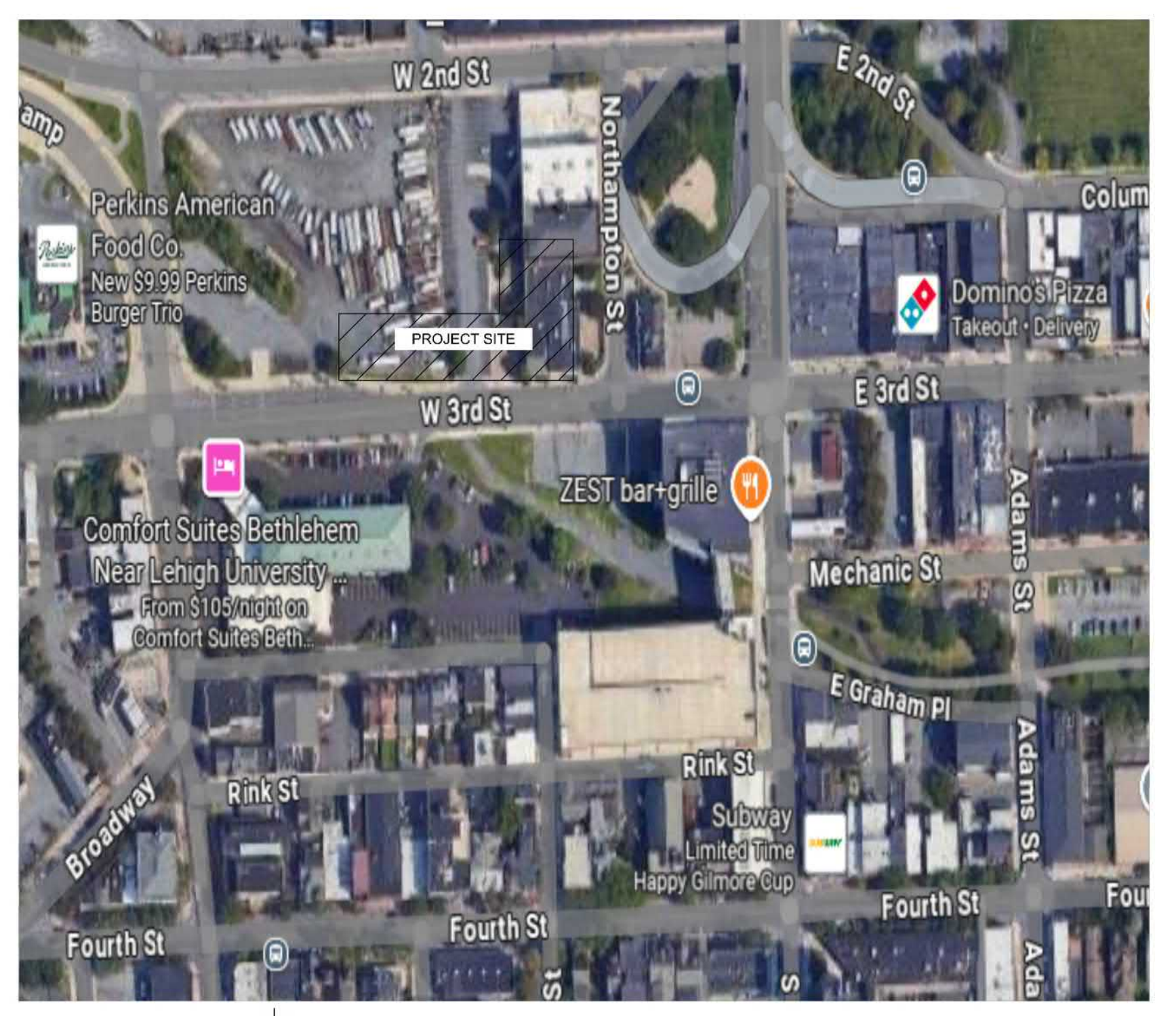
A RISER ROOM DETAIL
SCALE: 1/2" = 1'-0"



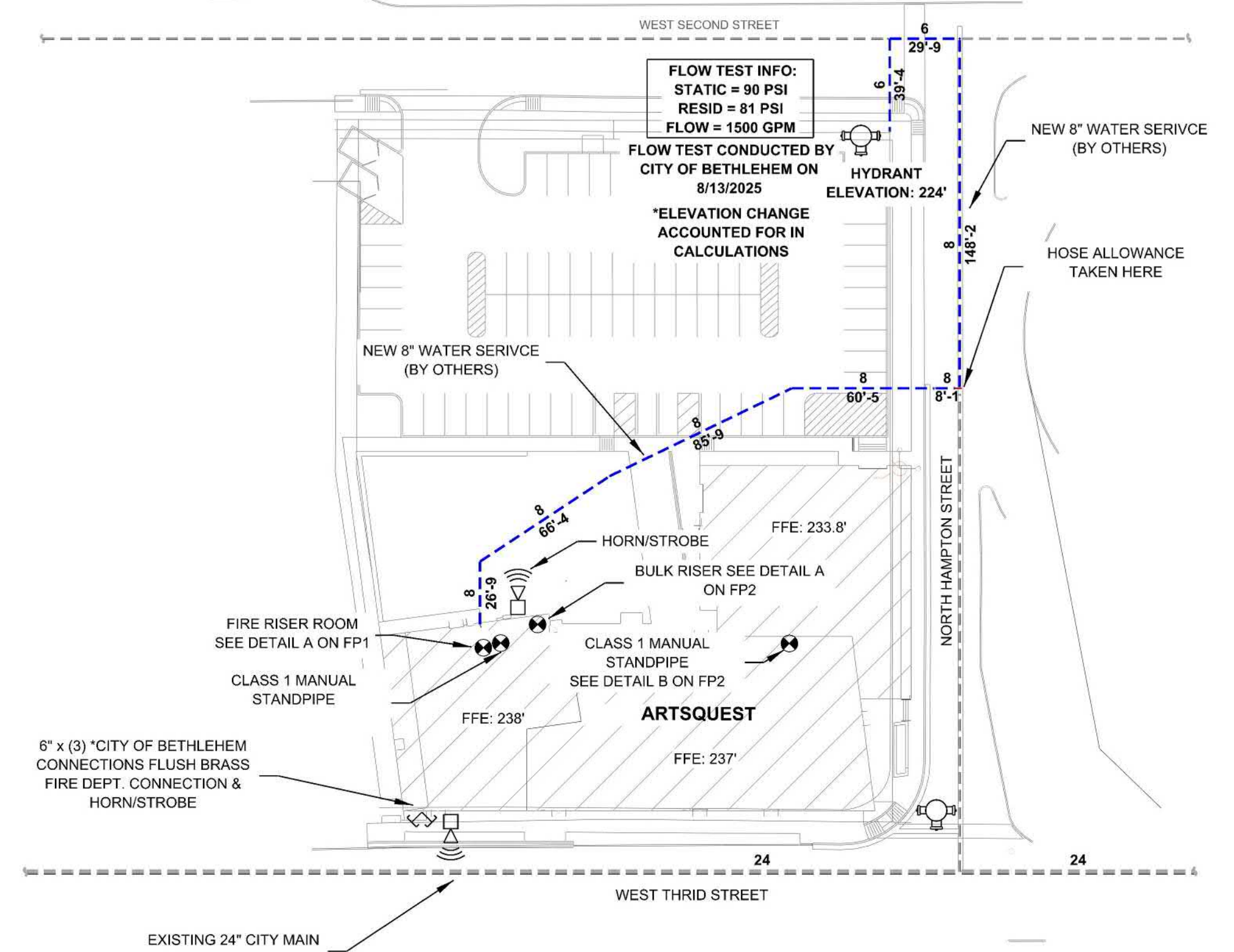
B TYPICAL ZONE CONTROL RISER DETAIL
SCALE: 1/2" = 1'-0"



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



VICINITY MAP
NOT TO SCALE



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

REVISIONS

NO.	DATE	JOB NO.	DESCRIPTION
0	10/1/2025	25-5941	RELEASED FOR APPROVAL

Sprinkler Legend

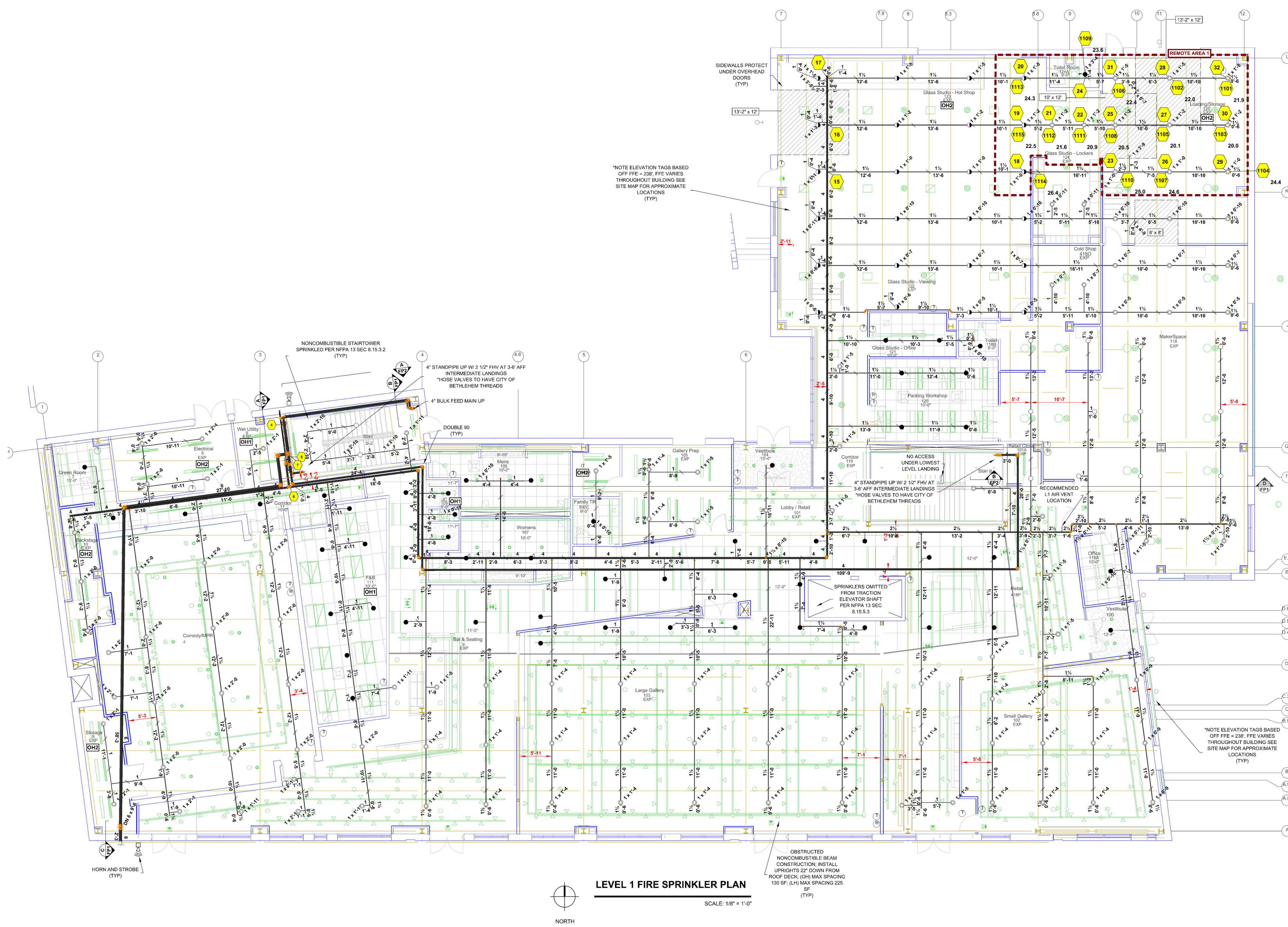
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp	Note	
●	Reliable	RA3415	GS-56	228	5.6	Concealed Pendant	1/2"	Quick	Brass	212°F	WHITE PLATE CONCEALED	
○	Reliable	RA1425	F1FR56	123	5.6	Upright	1/2"	Quick	Brass	200°F	SPRIG	
○	Reliable	RA1425	F1FR56	291	5.6	Upright	1/2"	Quick	Brass	200°F	N/A	
○	Reliable	RA1425	F1FR56	31	5.6	Upright	1/2"	Quick	Brass	200°F	N/A	
○	Reliable	RA5035	GS-56	7	5.6	Horizontal Sidewall	1/2"	Quick	Brass	165°F	N/A	
				Total = 680								

OWNER TO SUPPLY ADEQUATE HEAT IN ALL AREAS WHERE SPRINKLER PIPING MAY FREEZE.

ARTSQUEST
25 WEST THIRD STREET
BETHLEHEM, PA 18015

SCALE: AS NOTED
DRAWN BY: MLM
DATE: 10/01/25
JOB NUMBER: 25-5941

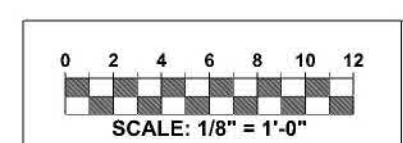
INS. REVIEW: XXX
CHECKED: ADK
AREA SHOWN: SITE PLAN AND DETAILS
SHEET NO: FF-1



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

LOADING 125	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (ppm/ft ²)	0.20 for 1500ft ² (Actual 1134ft ²)
QUICK RESPONSE REDUCTION	18'-0" Ceiling (28.0%) 1000ft ²
TOTAL HOSE STREAMS	258.0
TOTAL HEADS FLOWING	15
K-FACTOR	5.6
TOTAL WATER REQUIRED	590.1
TOTAL PRESSURE REQUIRED	62.6
BASE of RISER (ppm)	348.1
BASE of RISER (psi)	43.5
SAFETY MARGIN (psi)	+25.8 (29.2%)

NOTE: REMOTE AREA HAS REDUCED BY 28% PER NFPA 13 SEC 11.2.3.3.1
*SIDEWALLS EXCLUDED FROM CALCS



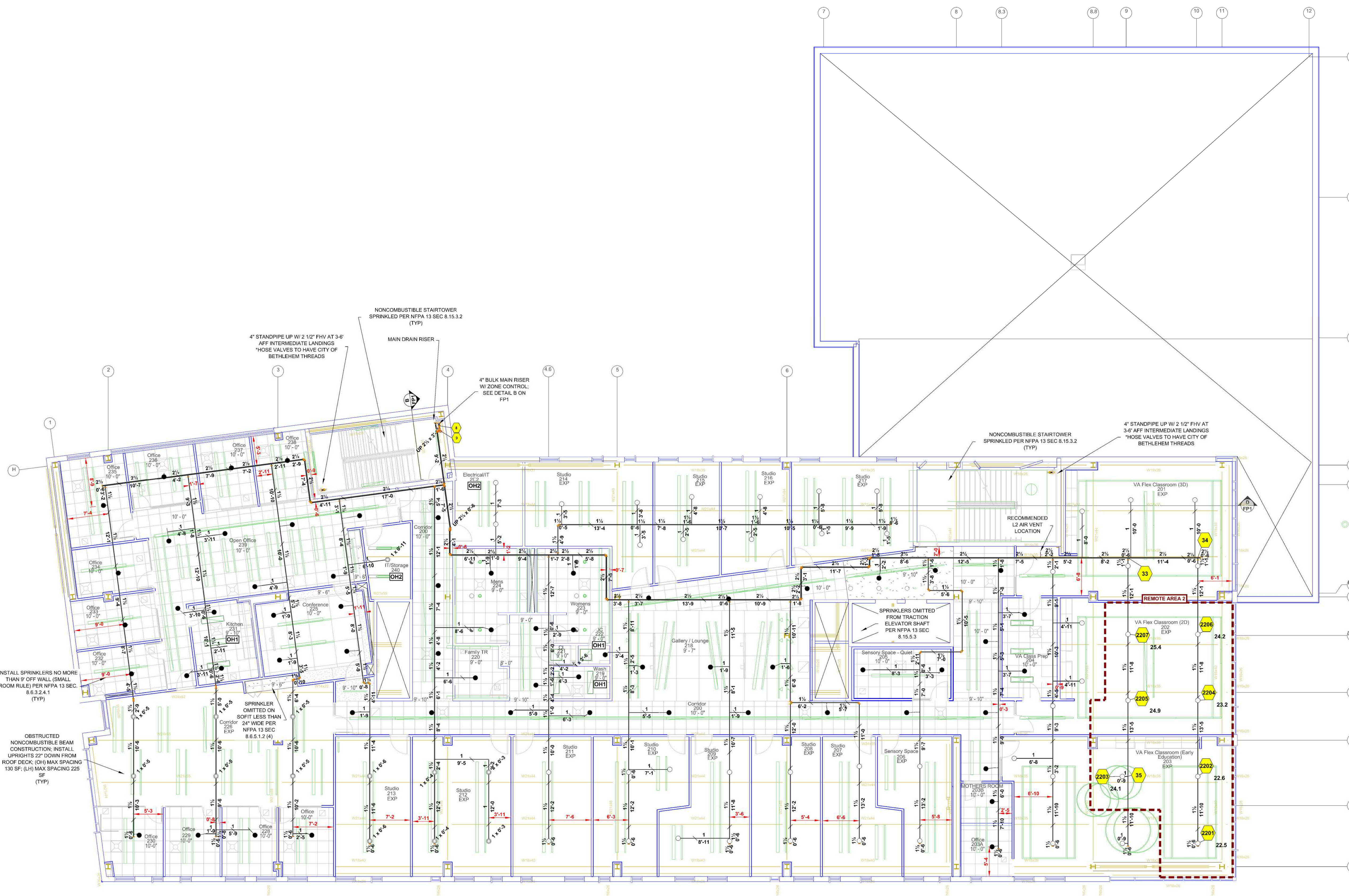
OWNER TO SUPPLY ADEQUATE HEAT IN ALL AREAS WHERE SPRINKLER PIPING MAY FREEZE.

REVISIONS			
NO.	DATE	JOB NO.	DESCRIPTION
0	10/1/2025	25-5941	RELEASED FOR APPROVAL

Sprinkler Legend												
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp	Note	
●	Reliable	RA3415	G5-56	228	5.6	Concealed Pendant	1/2"	Quick	Brass	212°F	WHITE PLATE CONCEALED	
○	Reliable	RA1425	F1FR56	123	5.6	Upright	1/2"	Quick	Brass	200°F	SPRIG	
○	Reliable	RA1425	F1FR56	291	5.6	Upright	1/2"	Quick	Brass	200°F	NA	
○	Reliable	RA1425	F1FR56	31	5.6	Upright	1/2"	Quick	Brass	288°F	NA	
○	Reliable	RA1435	F1FR56	7	5.6	Horizontal Sidewall	1/2"	Quick	Brass	200°F	NA	
				Total = 680								

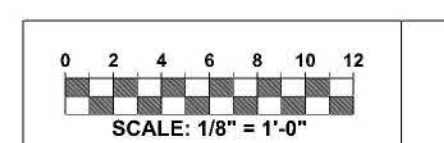
ARTSQEST
25 WEST THIRD STREET
BETHLEHEM, PA 18015

SCALE: AS NOTED	DRAWN BY: MLM	DATE: 10/01/25	JOB NUMBER: 25-5941
INS. REVIEW: XXX	CHECKED: ADK	AREA SHOWN: LEVEL 1 FIRE PROTECTION PLAN	SHEET NO: FF-3



LEVEL 2 FIRE SPRINKLER PLAN
 SCALE: 1/8" = 1'-0"
 NORTH

VA FLEX 203	
Remote Area 2	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (sq/ft)	0.19 for 1500' (Actual 1020')
QUICK RESPONSE REDUCTION	13'-7" Ceiling (34.6%) 981ft ²
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	7
K-FACTOR	5.6
TOTAL WATER REQUIRED	266.9
TOTAL PRESSURE REQUIRED	69.6
BASE OF RISER (gpm)	166.9
BASE OF RISER (psi)	44.7
SAFETY MARGIN (psi)	+20.9 (23.3%)
NOTE: REMOTE AREA HAS REDUCED BY 34.6% PER NFPA 13 SEC 11.2.3.2.1	



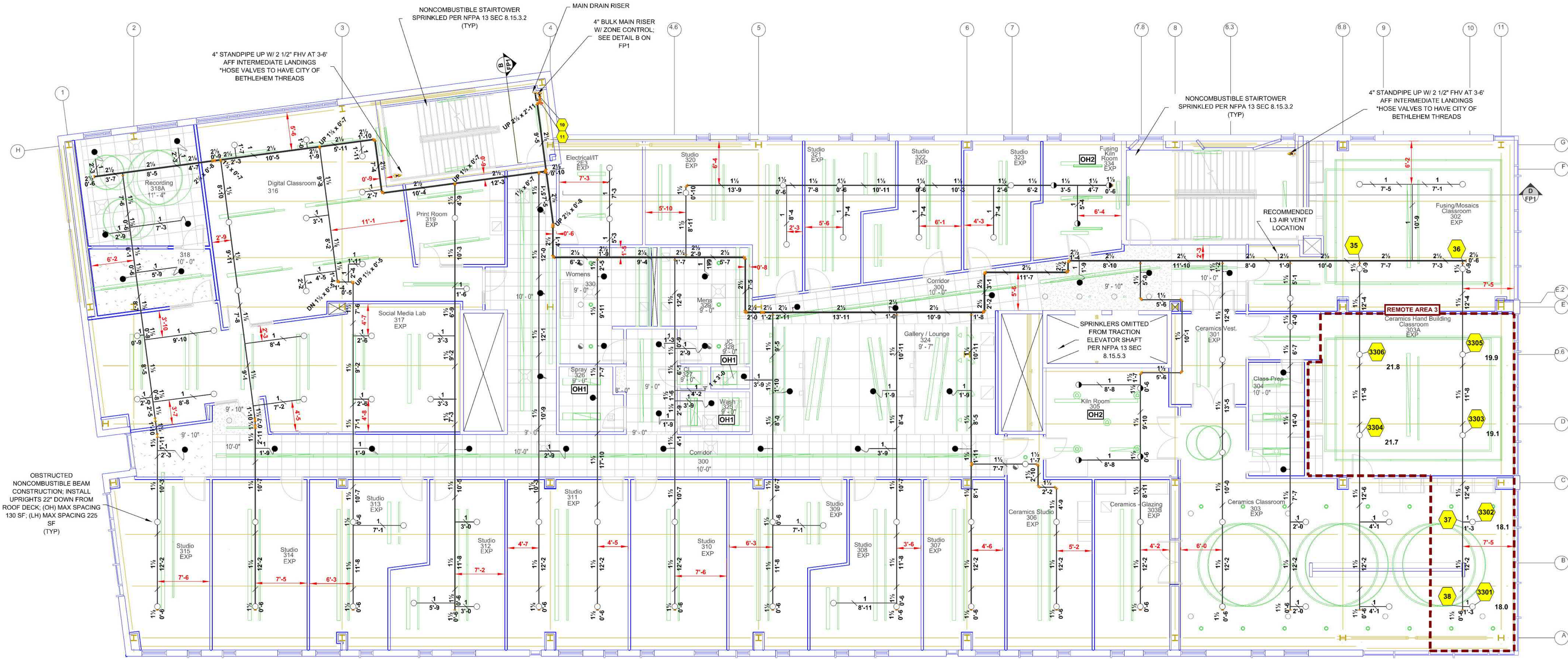
OWNER TO SUPPLY ADEQUAT HEAT IN ALL AREAS WHERE SPRINKLER PIPING MAY FREE;

REVISIONS			
NO.	DATE	JOB NO.	DESCRIPTION
0	10/1/2025	25-5941	RELEASED FOR APPROVAL

Sprinkler Legend												
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp	Note	
●	Reliable	RA3415	GS-56	228	5.6	Concealed Pendent	1/2"	Quick	Brass	212°F	WHITE PLATE CONCEALED	
○	Reliable	RA1425	F1FR56	123	5.6	Upright	1/2"	Quick	Brass	200°F	SPRIG	
○	Reliable	RA1425	F1FR56	291	5.6	Upright	3/4"	Quick	Brass	200°F	N/A	
○	Reliable	RA1435	F1FR56	31	5.6	Upright	3/4"	Quick	Brass	200°F	N/A	
○	Reliable	RA1435	F1FR56	7	5.6	Horizontal Sidewall	1/2"	Quick	Brass	200°F	N/A	
				Total = 680								

ARTSQEST
 25 WEST THIRD STREET
 BETHLEHEM, PA 18015

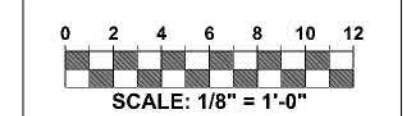
SCALE: AS NOTED	DRAWN BY: MLM	DATE: 10/01/25	JOB NUMBER: 25-5941
INS. REVIEW: XXX	CHECKED: ADK	AREA SHOWN: LEVEL 2 FIRE PROTECTION PLAN	SHEET NO: FF-4



CLASSROOM 303A	
Remote Area 3	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (person/ft ²)	5.10 for 1500ft ² (Actual 985ft ²)
QUICK RESPONSE REDUCTION	13'-7" Ceiling (34.6%) 981ft ²
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	6
K-FACTOR	5.6
TOTAL WATER REQUIRED	218.6
TOTAL PRESSURE REQUIRED	58.9
BASE OF RISER (gpm)	118.6
BASE OF RISER (psi)	28.1
SAFETY MARGIN (psi)	+30.8 (24.3%)
NOTE: REMOTE AREA HAS REDUCED BY 34.6% PER NFPA 13 SEC 11.2.3.2.3.1	

LEVEL 3 FIRE SPRINKLER PLAN

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



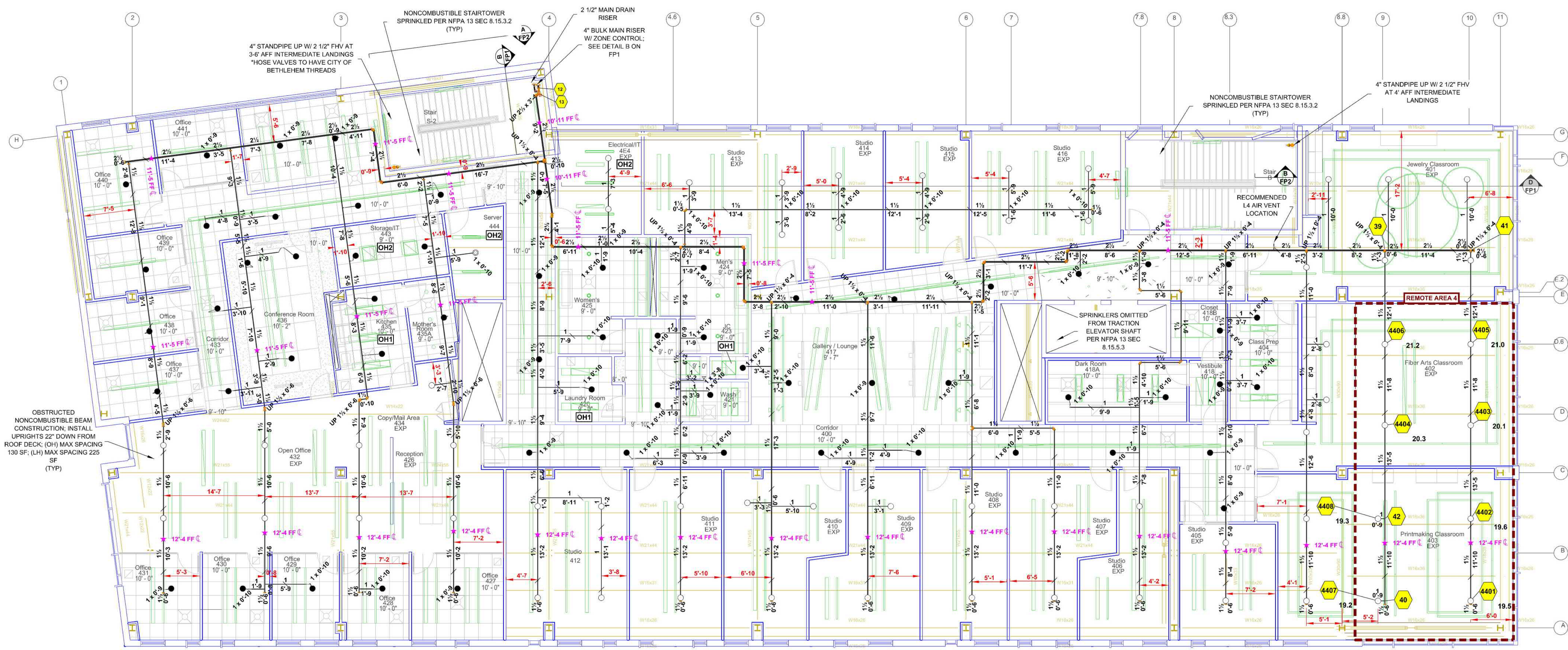
OWNER TO SUPPLY ADEQUATE HEAT IN ALL AREAS WHERE SPRINKLER PIPING MAY FREEZE.

REVISIONS			
NO.	DATE	JOB NO.	DESCRIPTION
0	10/1/2025	25-5941	RELEASED FOR APPROVAL

Sprinkler Legend												
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp	Note	
●	Reliable	RA3415	GS-56	228	5.6	Concealed Pendent	1/2"	Quick	Brass	212°F	WHITE PLATE CONCEALED	
○	Reliable	RA1425	F1FR56	123	5.6	Upright	1/2"	Quick	Brass	200°F	SPRIG	
○	Reliable	RA1425	F1FR56	291	5.6	Upright	1/2"	Quick	Brass	200°F	N/A	
○	Reliable	RA1425	F1FR56	31	5.6	Upright	1/2"	Quick	Brass	286°F	N/A	
○	Reliable	RA1435	F1FR56	7	5.6	Horizontal Sidewall	1/2"	Quick	Brass	200°F	N/A	
				Total = 680								

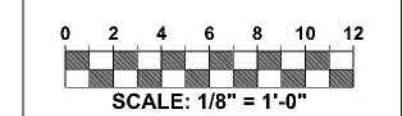
ARTSQUEST
25 WEST THIRD STREET
BETHLEHEM, PA 18015

SCALE: AS NOTED	DRAWN BY: MLM	DATE: 10/01/25	JOB NUMBER: 25-5941
INS. REVIEW: XXX	CHECKED: ADK	AREA SHOWN: LEVEL 3 FIRE PROTECTION PLAN	SHEET NO: FF-5



LEVEL 4 FIRE SPRINKLER PLAN
SCALE: 1/8" = 1'-0"

CLASSROOM 402	
Remote Area 4	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft)	0.10 for 1500ft ² (Actual 1103ft ²)
QUICK RESPONSE REDUCTION	14'-3" Ceiling (33.6%) 996ft ²
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	8
K-FACTOR	5.6
TOTAL WATER REQUIRED	266.3
TOTAL PRESSURE REQUIRED	75.8
BASE OF RISER (gpm)	160.3
BASE OF RISER (psi)	38.8
SAFETY MARGIN (psi)	+13.8 (15.4%)
NOTE: REMOTE AREA HAS REDUCED BY 33.6% PER NFPA 13 SEC 11.2.3.2.3.1	



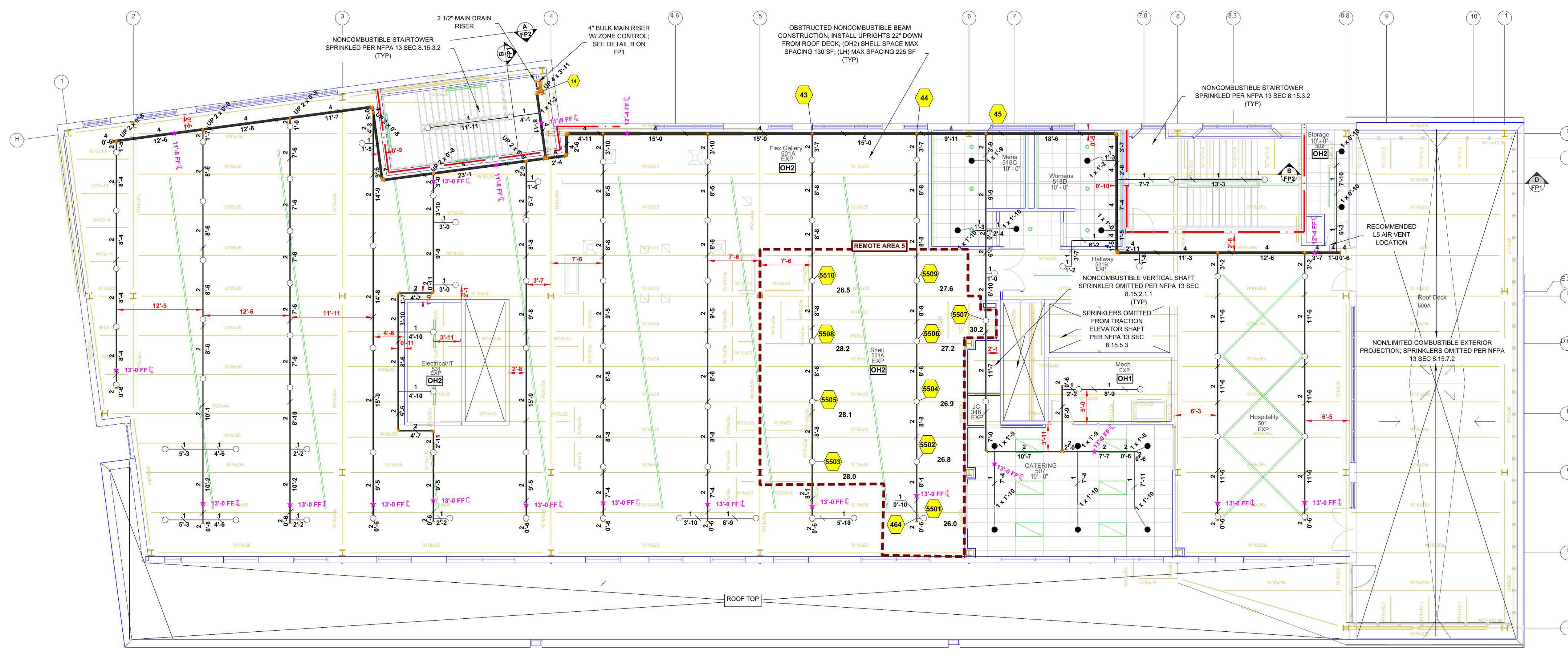
OWNER TO SUPPLY ADEQUATE HEAT IN ALL AREAS WHERE SPRINKLER PIPING MAY FREEZE.

REVISIONS			
NO.	DATE	JOB NO.	DESCRIPTION
0	10/1/2025	25-5941	RELEASED FOR APPROVAL

Sprinkler Legend										
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish Temp	Note
●	Reliable	RA3415	G5-56	228	5.6	Concealed Pendent	1/2"	Quick	Brass 212°F	WHITE PLATE CONCEALED
○	Reliable	RA1425	F1FR56	123	5.6	Upright	1/2"	Quick	Brass 200°F	SPRIG
○	Reliable	RA1425	F1FR56	291	5.6	Upright	1/2"	Quick	Brass 200°F	N/A
○	Reliable	RA1425	F1FR56	31	5.6	Upright	1/2"	Quick	Brass 288°F	N/A
○	Reliable	RA1435	F1FR56	7	5.6	Horizontal Sidewall	1/2"	Quick	Brass 200°F	N/A
				Total = 680						

SCALE:	AS NOTED	DRAWN BY:	MLM	DATE:	10/01/25	JOB NUMBER:	25-5941
INS. REVIEW:	XXX	CHECKED:	ADK	AREA SHOWN:	LEVEL 4 FIRE PROTECTION PLAN	SHEET NO.:	FF-6

ARTSQEST
25 WEST THIRD STREET
BETHLEHEM, PA 18015



LEVEL 5 FIRE SPRINKLER PLAN
SCALE: 1/8" = 1'-0"

SHELL 501A	
Remote Area 5	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (ppm/ft ²)	0.20 for 1500ft ² (Actual 1137ft ²)
QUICK RESPONSE REDUCTION	14'-10 Ceiling (32.8%) 1009ft ²
TOTAL HOSE STREAMS	250.0
TOTAL HEADS FLOWING	10
K-FACTOR	5.6
TOTAL WATER REQUIRED	527.4
TOTAL PRESSURE REQUIRED	78.5
BASE OF RISER (psig)	277.4
BASE OF RISER (psi)	34.7
SAFETY MARGIN (psi)	+10.2 (11.5%)
NOTE: REMOTE AREA HAS REDUCED BY 32.8% PER NFPA 13 SEC 11.2.3.2.1	

OWNER TO SUPPLY ADEQUATE HEAT IN ALL AREAS WHERE SPRINKLER PIPING MAY FREEZE

REVISIONS			
NO.	DATE	JOB NO.	DESCRIPTION
0	10/1/2025	25-5941	RELEASED FOR APPROVAL

Sprinkler Legend										
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish Temp	Note
●	Reliable	RA3415	G5-56	228	5.6	Concealed Pendant	1/2"	Quick	Brass 212°F	WHITE PLATE CONCEALED
○	Reliable	RA1425	F1FR56	123	5.6	Upright	1/2"	Quick	Brass 200°F	SPRIG
○	Reliable	RA1425	F1FR56	291	5.6	Upright	1/2"	Quick	Brass 200°F	N/A
○	Reliable	RA1425	F1FR56	31	5.6	Upright	1/2"	Quick	Brass 200°F	N/A
○	Reliable	RA1435	F1FR56	7	5.6	Horizontal Sidewall	1/2"	Quick	Brass 200°F	N/A
				Total = 680						

ARTSQEST
25 WEST THIRD STREET
BETHLEHEM, PA 18015

SCALE: AS NOTED	DRAWN BY: MLM	DATE: 10/01/25	JOB NUMBER: 25-5941
INS. REVIEW: XXX	CHECKED: ADK	AREA SHOWN: LEVEL 5 FIRE PROTECTION PLAN	SHEET NO: FF-7