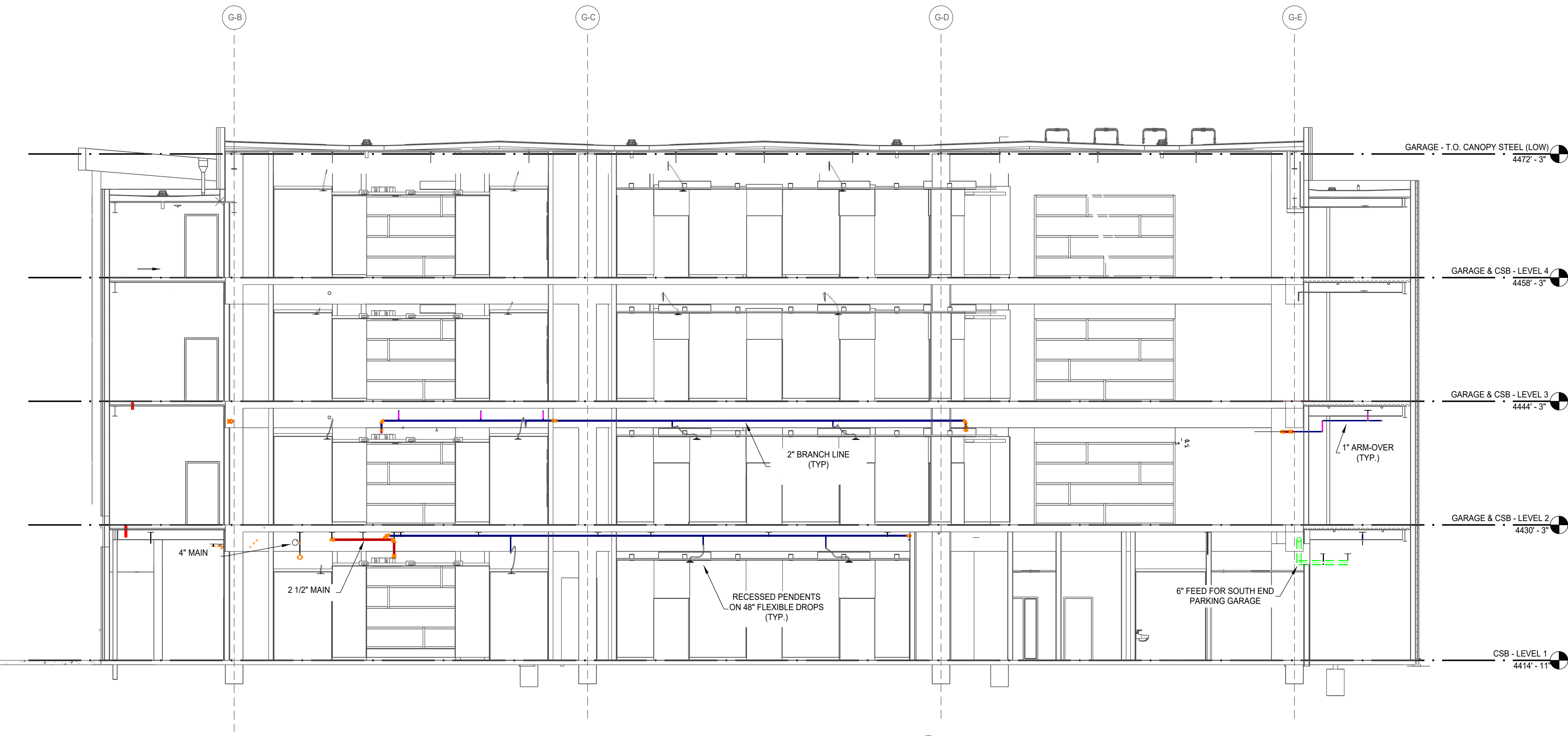
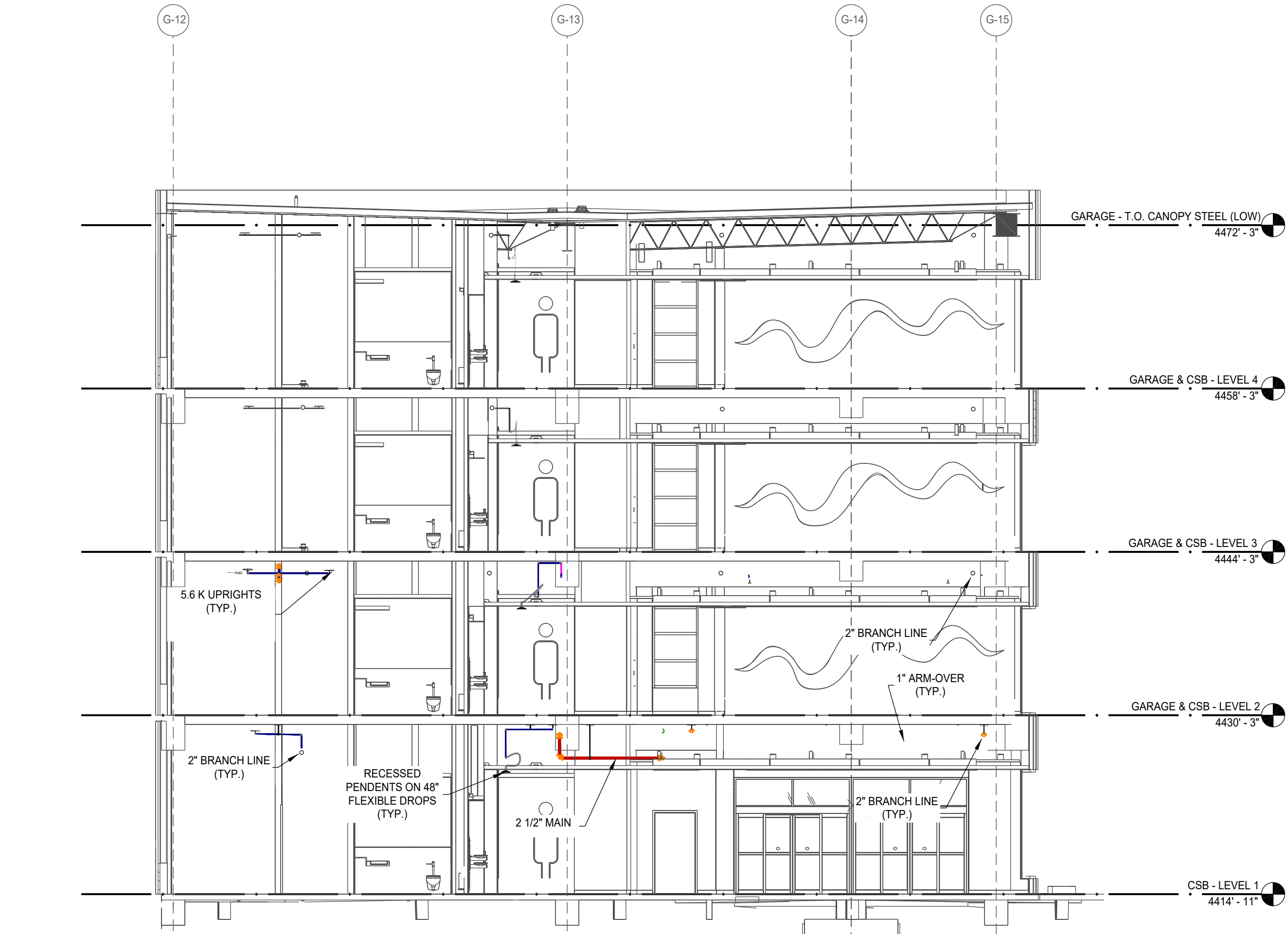
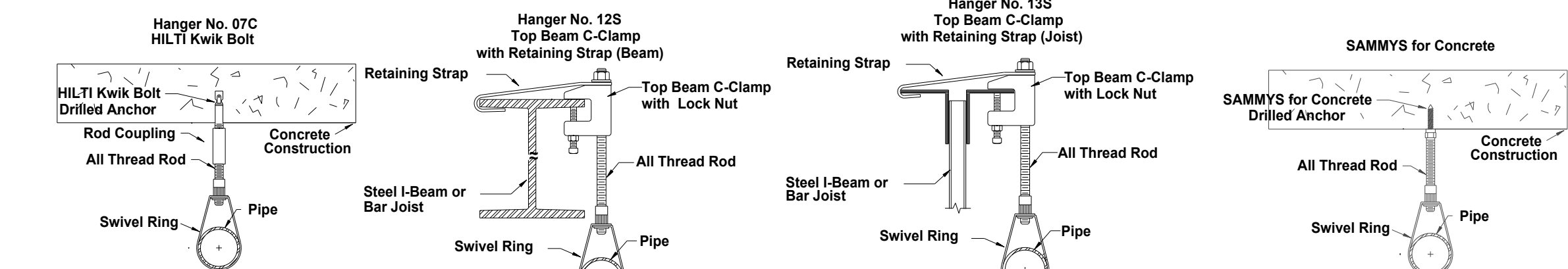




BUILDING SECTION A
1/8" = 1 Foot

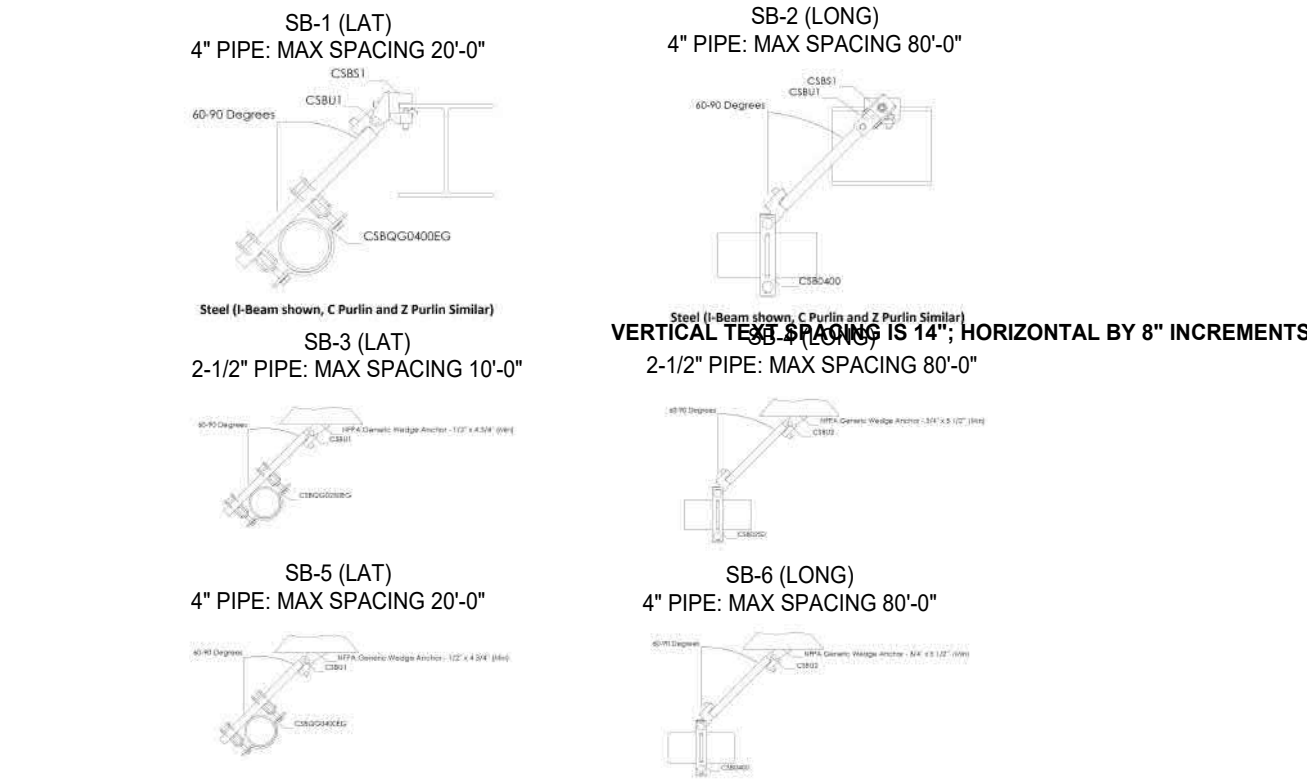


BUILDING SECTION B
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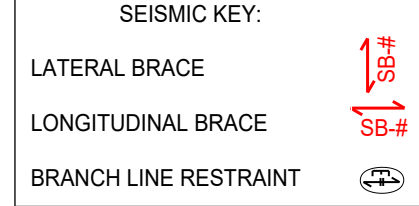


HANGER DETAILS

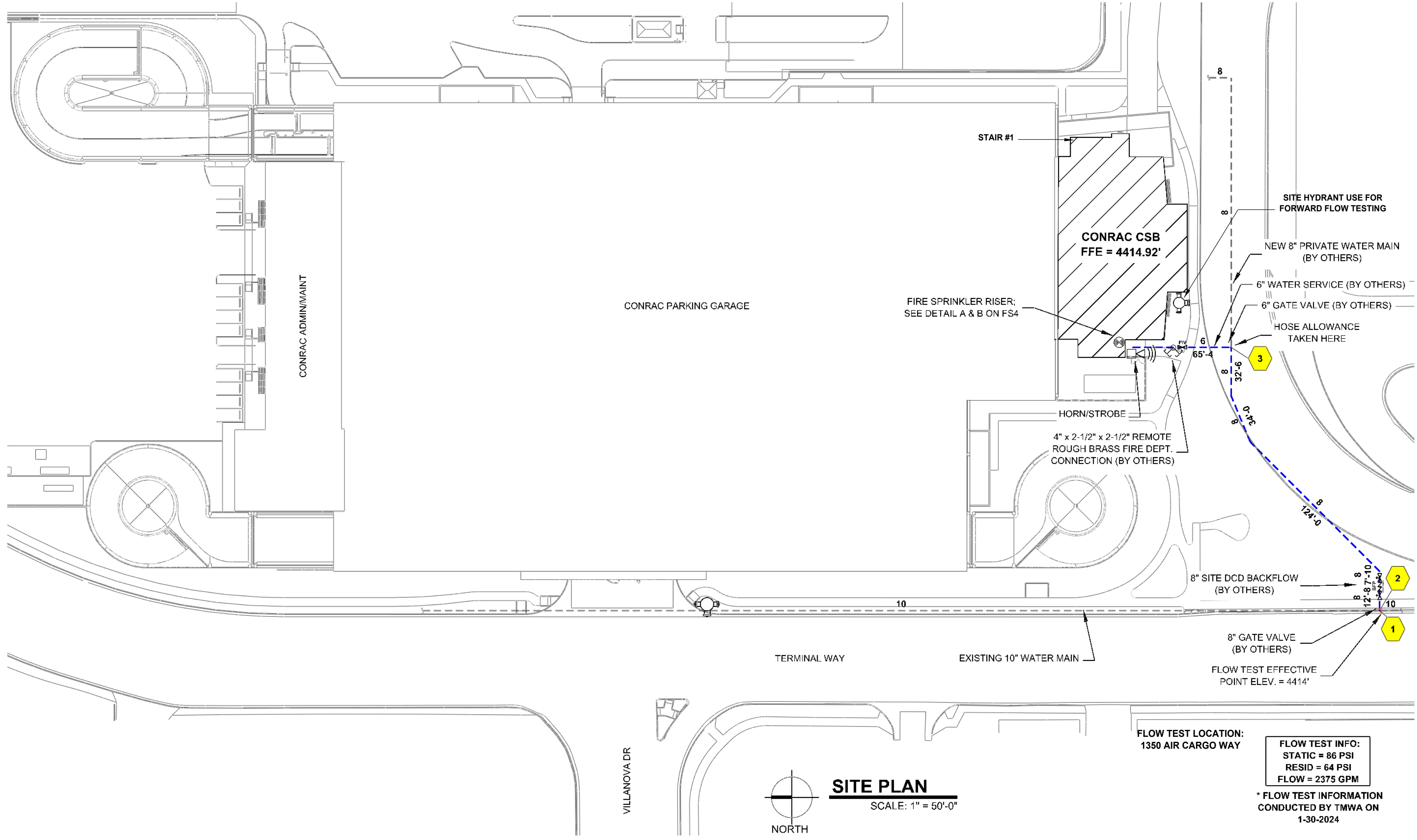
MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)										
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0



- FLEXIBLE COUPLINGS SHALL BE INSTALLED AS FOLLOWS:
- (1) WITHIN 24" OF TOP AND BOTTOM OF ALL RISERS
 - (2) ONLY ONE FLEXIBLE COUPLING ON RISERS 3'-0" TO 7'-0" IN LENGTH
 - (3) WITHIN 12" ABOVE AND WITHIN 24" BELOW THE FLOOR IN MULTISTORY BUILDINGS
 - (4) RISERS UP TO 7'-0" IN LENGTH TERMINATING ABOVE A ROOF ASSEMBLY OR TOP LANDING MAY OMIT FLEXIBLE COUPLING ABOVE LANDING OR ROOF
 - (5) ON BOTH SIDES OF CONCRETE OR MASONRY WALLS WITHIN 1'-0" OF THE WALL SURFACE, UNLESS CLEARANCE IS PROVIDED
 - (6) WITHIN 24" OF BUILDING EXPANSION JOINTS (MORE FLEXIBILITY IS REQUIRED FOR SEISMIC JOINTS)
 - (7) WITHIN 24" OF THE TOP OF DROPS EXCEEDING 15'-0" IN LENGTH TO PORTIONS OF SYSTEMS SUPPLYING MORE THAN ONE SPRINKLER, REGARDLESS OF PIPE SIZE
 - (8) WITHIN 24" ABOVE AND 24" BELOW ANY INTERMEDIATE POINTS OF SUPPORT FOR A RISER OR OTHER VERTICAL PIPE



SEISMIC DETAILS



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



VICINITY MAP
NOT TO SCALE

SCOPE OF WORK

TO INSTALL A NEW FOUR ZONE WET PIPE SPRINKLER SYSTEM FED BY A MANUAL COMBINED STANDPIPE. THE BUILDING FOOTPRINT WILL BE 36,000 SQ FT DESIGNED TO LIGHT HAZARD, ORDINARY HAZARD 1, AND ORDINARY HAZARD 2. EACH ZONE HAS A COMBINATION OF EC AND SS SPRINKLERS. AREAS WITH EXPOSED CEILINGS WILL BE PROTECTED BY UPRIGHTS. NO WORK WILL BEGIN UNTIL PLANS HAVE BEEN APPROVED.

GENERAL INFORMATION

1. INTERNATIONAL BUILDING CODE (2018)
1.1 OCCUPANCY: TYPE A-3, B
1.2 TYPE OF CONSTRUCTION: I-A, II-B
1.3 SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
LEVEL 1 (WET) = 9,000 SF
LEVEL 2 (WET) = 9,000 SF
LEVEL 3 (WET) = 9,000 SF
LEVEL 4 (WET) = 9,000 SF
1.4 DESIGN & INSTALLATION STANDARDS: NFPA-13 (2016), NFPA-14 (2016)

2. SPRINKLER PIPE TYPES:
WET:
2.1 1" PIPE TO BE SCHEDULE 40 BLACK STEEL W/ THREADED FITTINGS
2.2 1-1/4" THROUGH 4" MAINS & BRANCH LINES TO BE BLK SCHEDULE 10 W/ GROOVED FITTINGS
2.3 MAINS & BRANCH LINES TO BE ROLL-GROOVED BLK SCHEDULE 10
2.4 2" AND LARGER TO USE GROOVED SHORT RADIUS FITTINGS

3. DESIGN CRITERIA:
3.1 LIGHT HAZARD AREAS INCLUDE OFFICE/ADMINISTRATIVE, RESTROOMS, AND CORRIDORS
3.2 ORDINARY HAZARD GROUP 1 AREAS INCLUDE MECHANICAL AND ELECTRICAL ROOMS
3.3 ORDINARY HAZARD GROUP 2 AREAS INCLUDE SHELL SPACES
3.4 REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3

4. NOTES:
4.1 ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
4.2 HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 - SEE PLAN FOR HANGING REQUIREMENTS

5. SYMBOLS USED ON DRAWINGS:
PIPE ELEVATION ABOVE FINISH FLOOR
PIPE ELEVATION BELOW TOP OF STEEL
ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD U.N.O.)
HYDRAULIC CALCULATION JUNCTION POINT
CEILING HEIGHT
FIRE RATING WALL
WET BLACK STEEL PIPE

BRANCH LINE RESTRAINT DETAIL

SEISMIC BRANCH LINE RESTRAINT (Cp=0.79)
1" PIPE = 20'-0" MAX SPACING
2" PIPE = 31'-0" MAX SPACING

Sprinkler Legend: ENTIRE BUILDING										
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Note
●	Tyco	TY502Z	ELOC	108	11.2	Concealed Pendant	1/2"	Quick	Brass	212°F WHITE PLATE CONCEALED
○	Tyco	TY3031	Royal Flush II	68	5.6	Concealed Pendant	1/2"	Quick	Brass	200°F WHITE PLATE CONCEALED
○	Tyco	TY313	TY-FRB	13	5.6	Upright	1/2"	Quick	Brass	200°F SPRIG
○	Tyco	TY4131	TY-FRB	54	8	Upright	1/2"	Quick	Natural Brass	200°F N/A
○	Tyco	TY4131	TY-FRB	42	8	Upright	1/2"	Quick	Natural Brass	200°F SPRIG
○	Tyco	TY313	TY-FRB	24	5.6	Upright	1/2"	Quick	Brass	200°F N/A
				Total = 309						

MANUAL WET STANDPIPE
LOCATION: STAIR #1
REQUIRED FLOW: 500 GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 160

AJH APPROVAL BOX

REVISIONS	
NO.	DESCRIPTION
1	PLAN REVIEW COMMENTS

FIRE SPRINKLER PLANS

SITE PLAN & NOTES

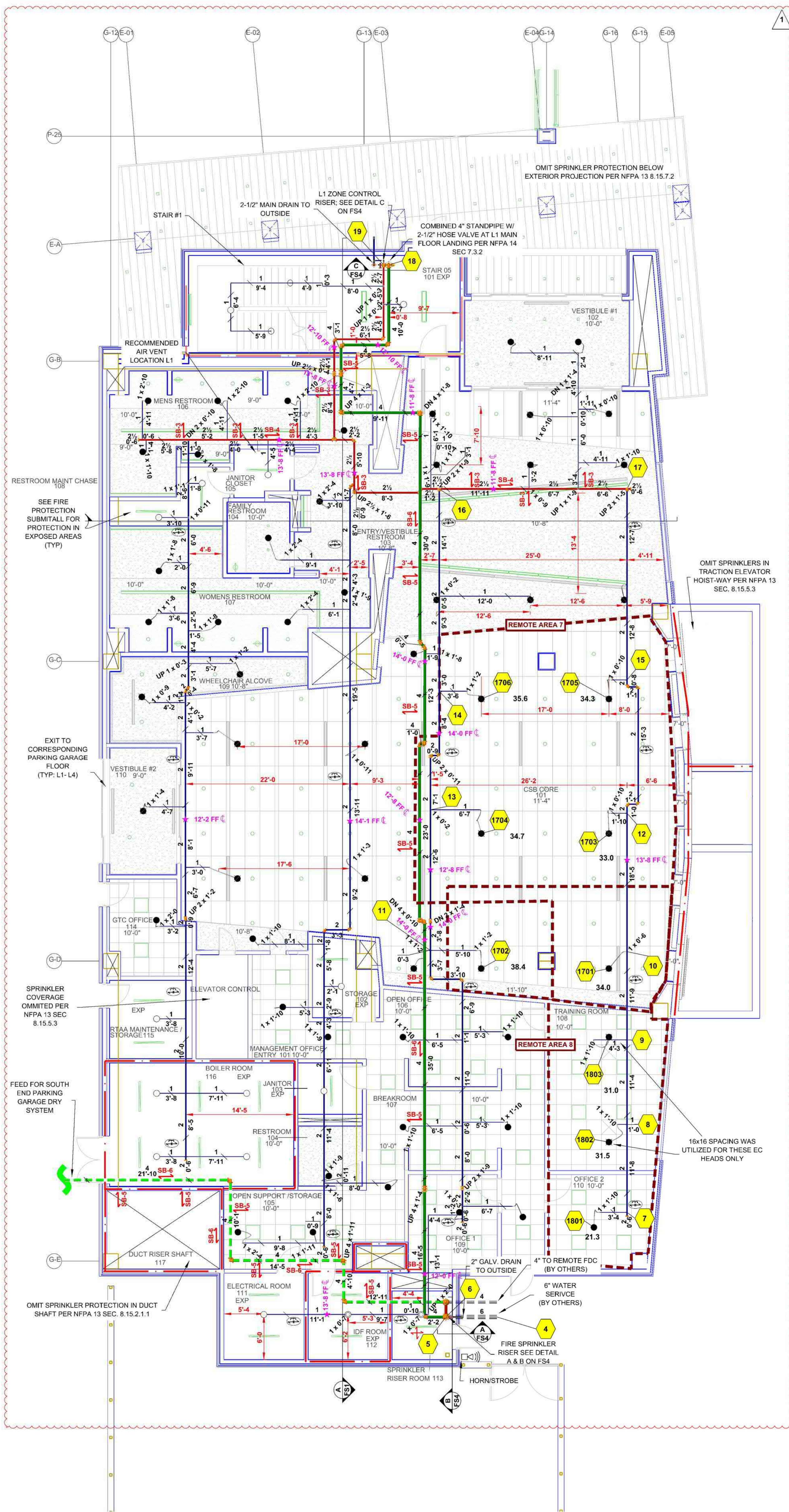
CONRAC CSB
2001 E PLUMB LANE
RENO, NV 89502
APN 015-210-34

DRAWN BY: MLM
CHECKED BY: DS
DATE: 6-27-25
PROJECT NO: 5724239

SCALE: AS NOTED

Sheet No:

FS1 of 4



LEVEL 1 FIRE SPRINKLER PLAN
1/8" = 1 Foot

1

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp	Note
●	Tyco	TY522	ELOC	108	11.2	Concealed Pendent	1/2"	Quick	Brass	212°F	WHITE PLATE CONCEALED
●	Tyco	TY531	Royal Flush II	68	5.6	Concealed Pendent	1/2"	Quick	Brass	200°F	WHITE PLATE CONCEALED
●	Tyco	TY313	TY-FRB	13	5.6	Upright	1/2"	Quick	Brass	200°F	SPRIG
●	Tyco	TY4131	TY-FRB	54	8	Upright	1/2"	Quick	Natural Brass	200°F	N/A
●	Tyco	TY4131	TY-FRB	42	8	Upright	1/2"	Quick	Natural Brass	200°F	SPRIG
●	Tyco	TY313	TY-FRB	24	5.6	Upright	1/2"	Quick	Brass	200°F	N/A
Total = 309											

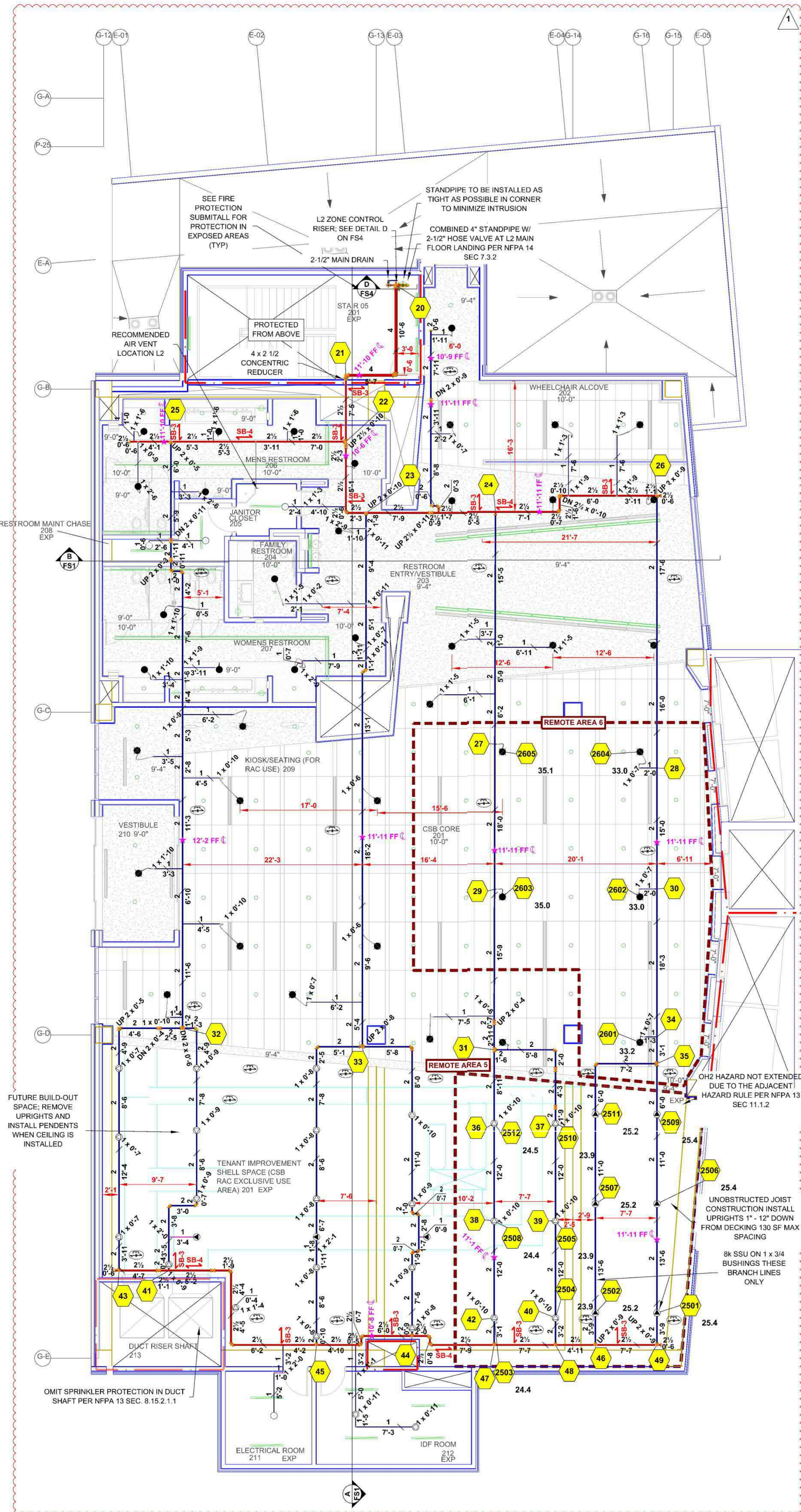
18 X 18

Remote Area 5	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft²)	0.20 for 1500R (Actual 1026R)
QUICK RESPONSE REDUCTION	14'-0" Ceiling (34.0%) 930R
TOTAL HOSE STREAMS	250.0
TOTAL HEADS FLOWING	12
K-FACTOR	8
TOTAL WATER REQUIRED	546.7
TOTAL PRESSURE REQUIRED	58.9
BASE OF RISER (gpm)	296.7
BASE OF RISER (psi)	27.4
SAFETY MARGIN (psi)	+27.1 (31.6%)
NOTE: REMOTE AREA REDUCED BY 34% DUE TO 14'-0" CEILING ELEVATION NFPA 13 SEC 11.2.3.2.2.4	

Remote Area 6	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500R (Actual 1026R)
QUICK RESPONSE REDUCTION	10'-0" Ceiling (40.0%) 930R
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	5
K-FACTOR	11.2
TOTAL WATER REQUIRED	269.4
TOTAL PRESSURE REQUIRED	50.9
BASE OF RISER (gpm)	109.4
BASE OF RISER (psi)	28.2
SAFETY MARGIN (psi)	+35.1 (40.8%)
NOTE: REMOTE AREA REDUCED BY 34% DUE TO 10'-0" CEILING ELEVATION NFPA 13 SEC 11.2.3.2.2.4; 5 SPK MIN.	

Remote Area 7	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500R (Actual 1422R)
QUICK RESPONSE REDUCTION	11'-4" Ceiling (38.0%) 930R
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	5
K-FACTOR	11.2
TOTAL WATER REQUIRED	271.6
TOTAL PRESSURE REQUIRED	61.6
BASE OF RISER (gpm)	171.6
BASE OF RISER (psi)	43.2
SAFETY MARGIN (psi)	+24.4 (28.4%)
NOTE: REMOTE AREA REDUCED BY 38% DUE TO 11'-4" CEILING ELEVATION NFPA 13 SEC 11.2.3.2.2.4; 5 SPK MIN.	

Remote Area 8	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.10 for 1500R (Actual 941R)
QUICK RESPONSE REDUCTION	11'-4" Ceiling (38.0%) 930R
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	5
K-FACTOR	11.2
TOTAL WATER REQUIRED	255.2
TOTAL PRESSURE REQUIRED	62.7
BASE OF RISER (gpm)	155.2
BASE OF RISER (psi)	45.8
SAFETY MARGIN (psi)	+23.3 (27.1%)
NOTE: REMOTE AREA REDUCED BY 38% DUE TO 11'-4" CEILING ELEVATION NFPA 13 SEC 11.2.3.2.2.4; 5 SPK MIN.	



LEVEL 2 FIRE SPRINKLER PLAN
1/8" = 1 Foot

2

AJU APPROVAL BOX

REVISIONS
DESCRIPTION
DATE
REV

FIRE SPRINKLER PLANS

LEVEL 1 & 2

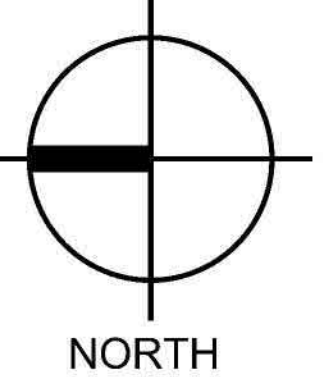
CONRAC CSB
2001 E PLUMB LANE
RENO, NV 89502
APN 015-210-34

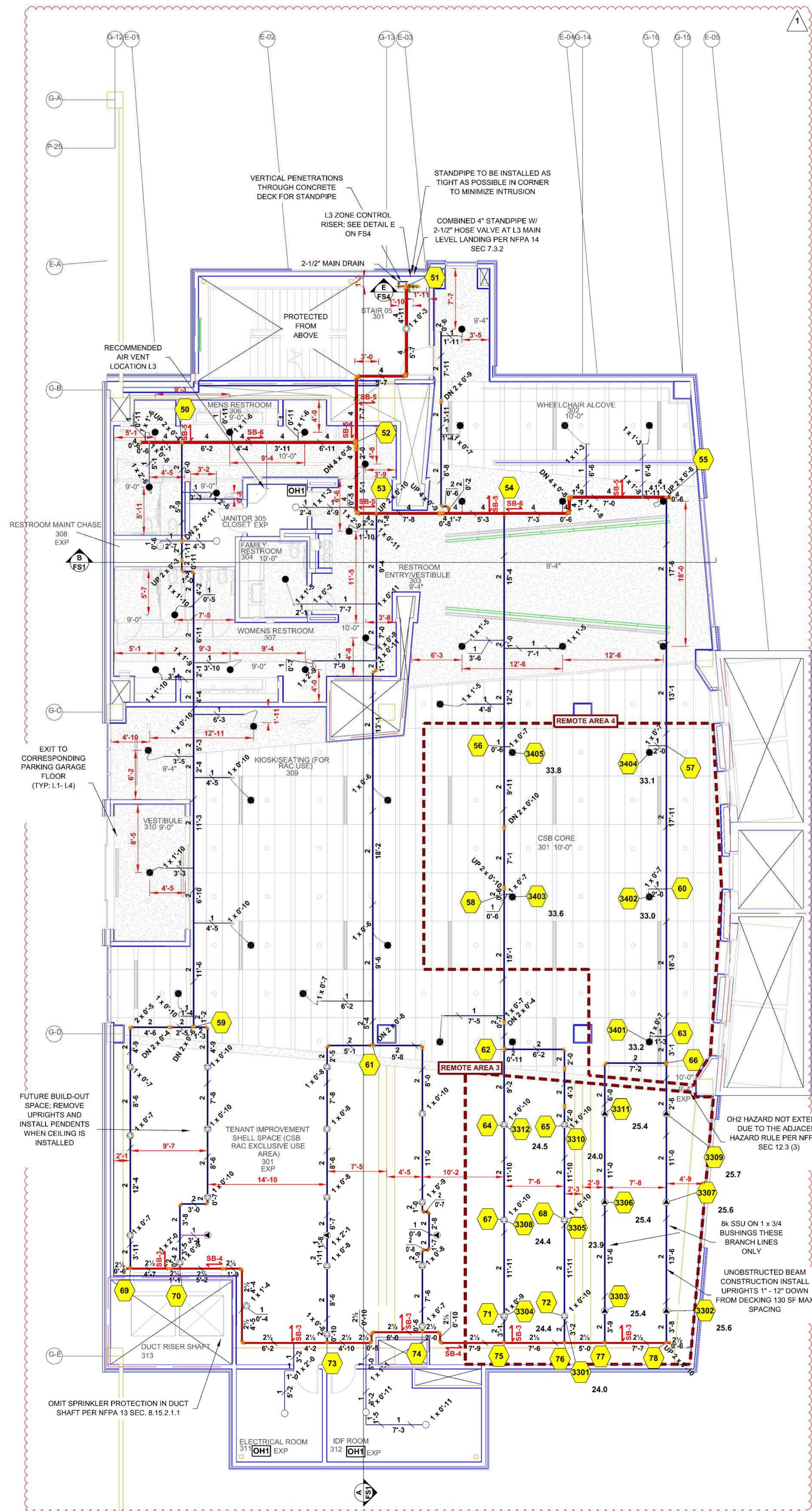
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CHECKED BY: DS
DATE: 6-25-25
PROJECT NO: 572429

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

Sheet No:

FS2 of 4

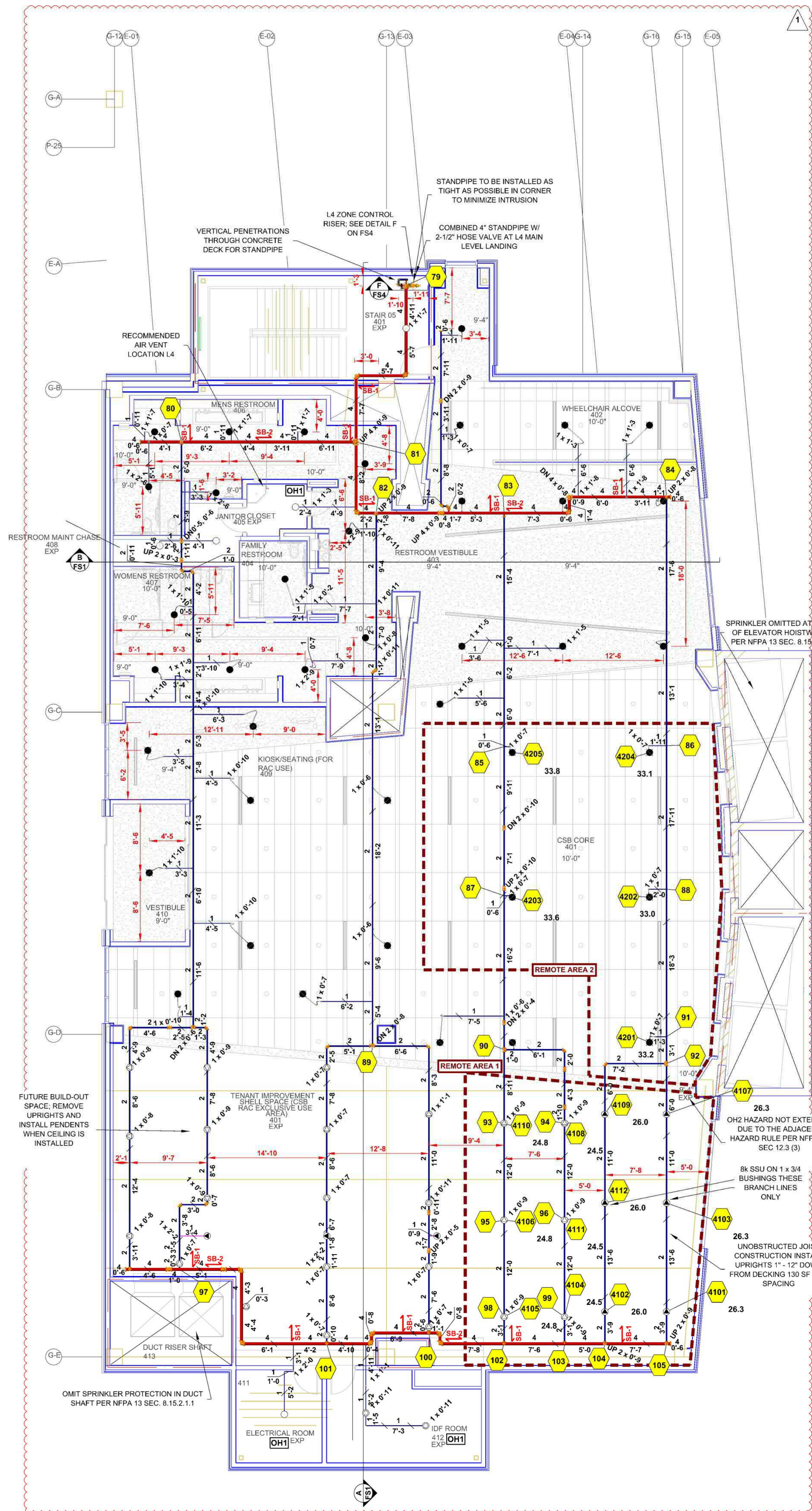




LEVEL 3 FIRE SPRINKLER PLAN
1/8" = 1 Foot

1

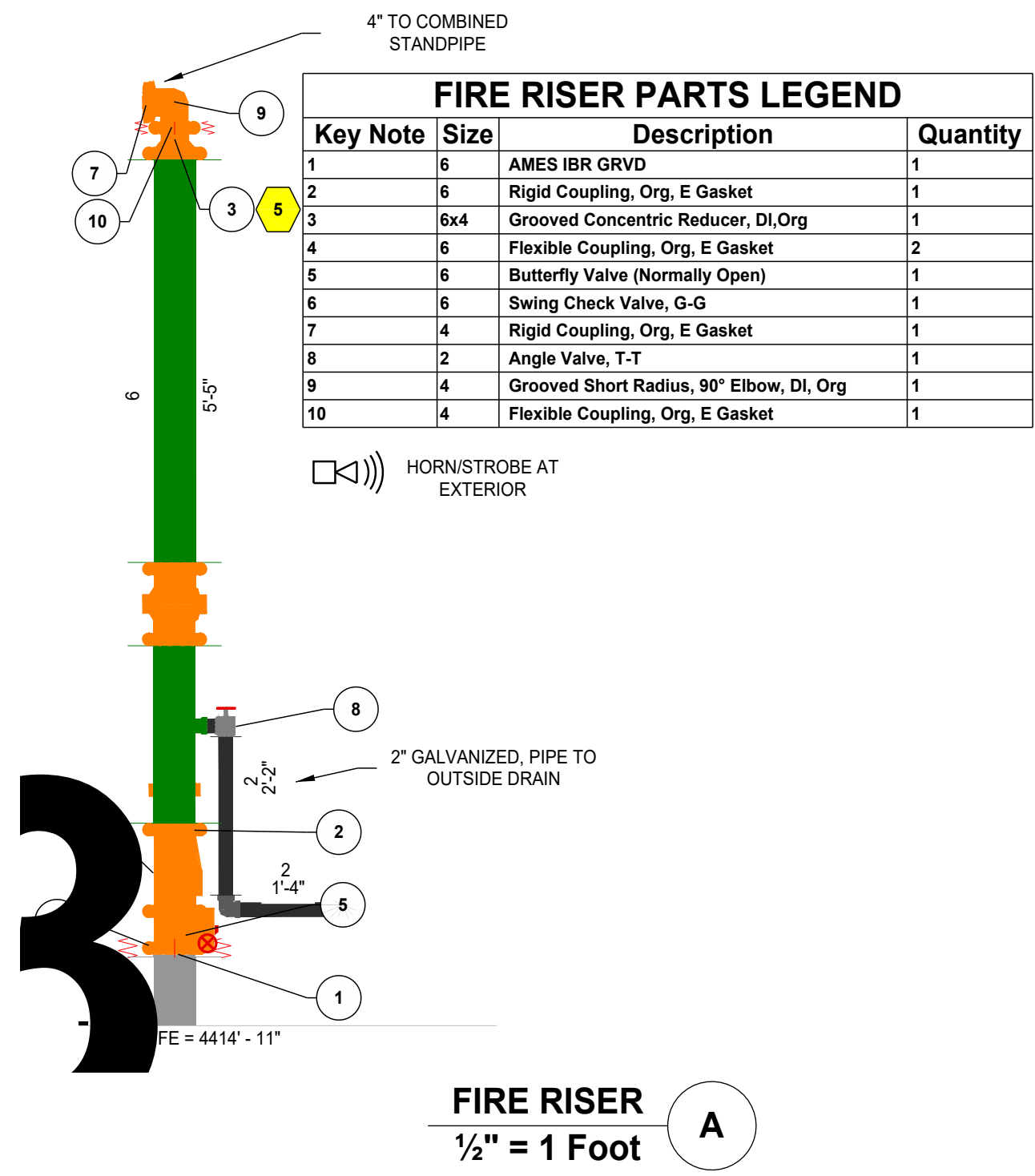
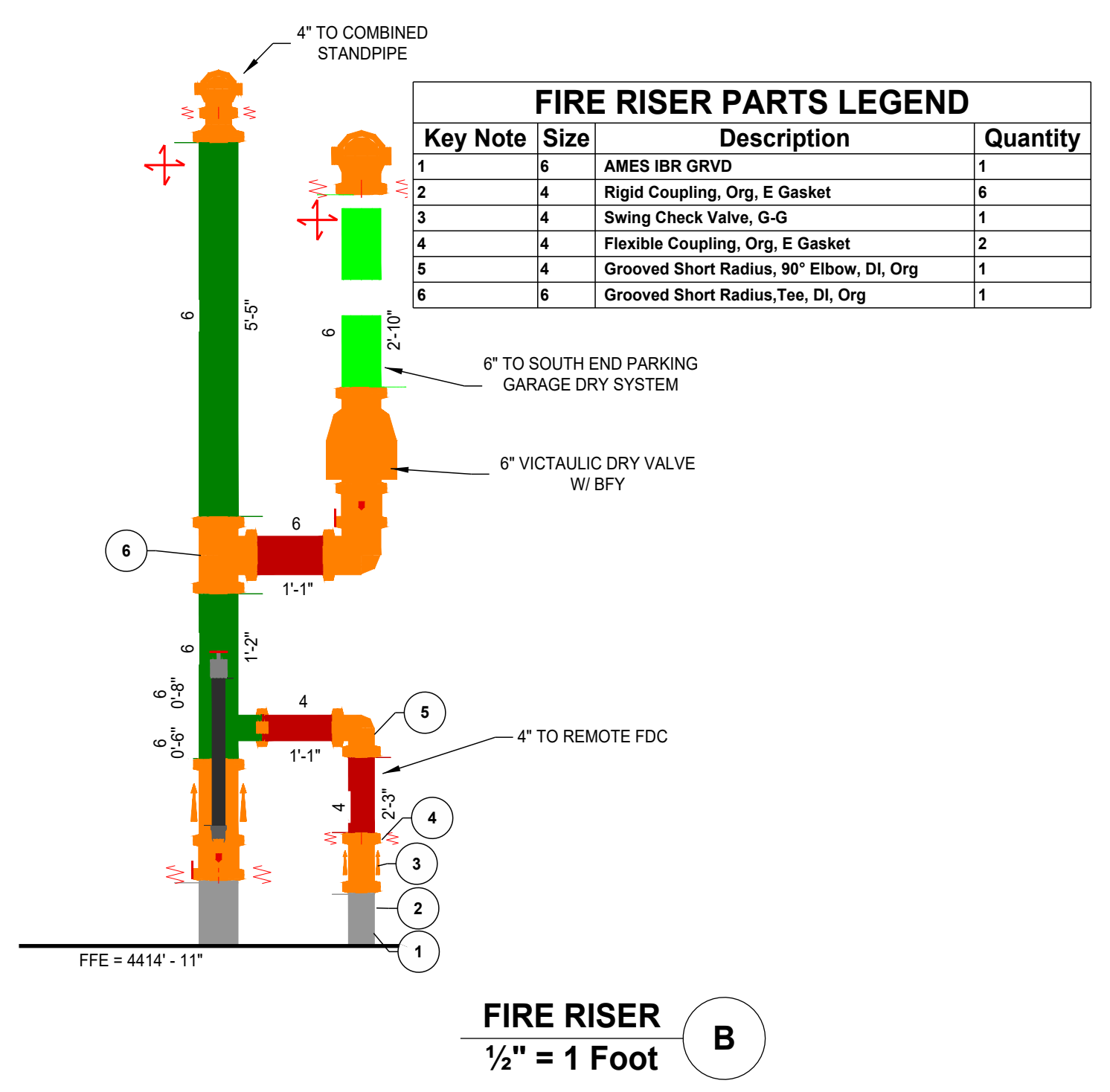
CSB SHELL 401	
Remote Area 1	Ordinary Group II
OCCUPANCY CLASSIFICATION	0.20 for 1500R ² (Actual 1026R ²)
DENSITY (gpm/ft ²)	0.20 for 1500R ² (Actual 1026R ²)
QUICK RESPONSE REDUCTION	14'-0" Ceiling (34.0%) 990R ²
TOTAL HOSE STREAMS	250.0
TOTAL HEADS FLOWING	12
K-FACTOR	8
TOTAL WATER REQUIRED	554.7
TOTAL PRESSURE REQUIRED	66.3
BASE OF RISER (gpm)	304.7
BASE OF RISER (psi)	21.5
SAFETY MARGIN (psi)	+19.7 (22.9%)
NOTE: REMOTE AREA REDUCED BY 34% DUE TO 14'-0" CEILING ELEVATION NFPA 11.2.3.2.3	
CSB CORE 401	
Remote Area 2	Light Hazard
OCCUPANCY CLASSIFICATION	0.10 for 1500R ² (Actual 1327R ²)
DENSITY (gpm/ft ²)	0.10 for 1500R ² (Actual 1327R ²)
QUICK RESPONSE REDUCTION	10'-0" Ceiling (40.0%) 990R ²
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	5
K-FACTOR	11.2
TOTAL WATER REQUIRED	266.7
TOTAL PRESSURE REQUIRED	60.2
BASE OF RISER (gpm)	166.7
BASE OF RISER (psi)	25.3
SAFETY MARGIN (psi)	+25.8 (30.0%)
NOTE: REMOTE AREA REDUCED BY 40% DUE TO 10'-0" CEILING ELEVATION NFPA 11.2.3.2.3	
CSB SHELL 301	
Remote Area 3	Ordinary Group II
OCCUPANCY CLASSIFICATION	0.20 for 1500R ² (Actual 1026R ²)
DENSITY (gpm/ft ²)	0.20 for 1500R ² (Actual 1026R ²)
QUICK RESPONSE REDUCTION	14'-0" Ceiling (34.0%) 990R ²
TOTAL HOSE STREAMS	250.0
TOTAL HEADS FLOWING	12
K-FACTOR	8
TOTAL WATER REQUIRED	548.3
TOTAL PRESSURE REQUIRED	66.7
BASE OF RISER (gpm)	298.3
BASE OF RISER (psi)	21.6
SAFETY MARGIN (psi)	+27.3 (31.7%)
NOTE: REMOTE AREA REDUCED BY 34% DUE TO 14'-0" CEILING ELEVATION NFPA 11.2.3.2.3	
CSB CORE 301	
Remote Area 4	Light Hazard
OCCUPANCY CLASSIFICATION	0.10 for 1500R ² (Actual 1327R ²)
DENSITY (gpm/ft ²)	0.10 for 1500R ² (Actual 1327R ²)
QUICK RESPONSE REDUCTION	10'-0" Ceiling (40.0%) 990R ²
TOTAL HOSE STREAMS	100.0
TOTAL HEADS FLOWING	5
K-FACTOR	11.2
TOTAL WATER REQUIRED	266.7
TOTAL PRESSURE REQUIRED	53.4
BASE OF RISER (gpm)	166.7
BASE OF RISER (psi)	25.5
SAFETY MARGIN (psi)	+32.6 (37.9%)
NOTE: REMOTE AREA REDUCED BY 40% DUE TO 10'-0" CEILING ELEVATION NFPA 11.2.3.2.3	



LEVEL 4 FIRE SPRINKLER PLAN
1/8" = 1 Foot

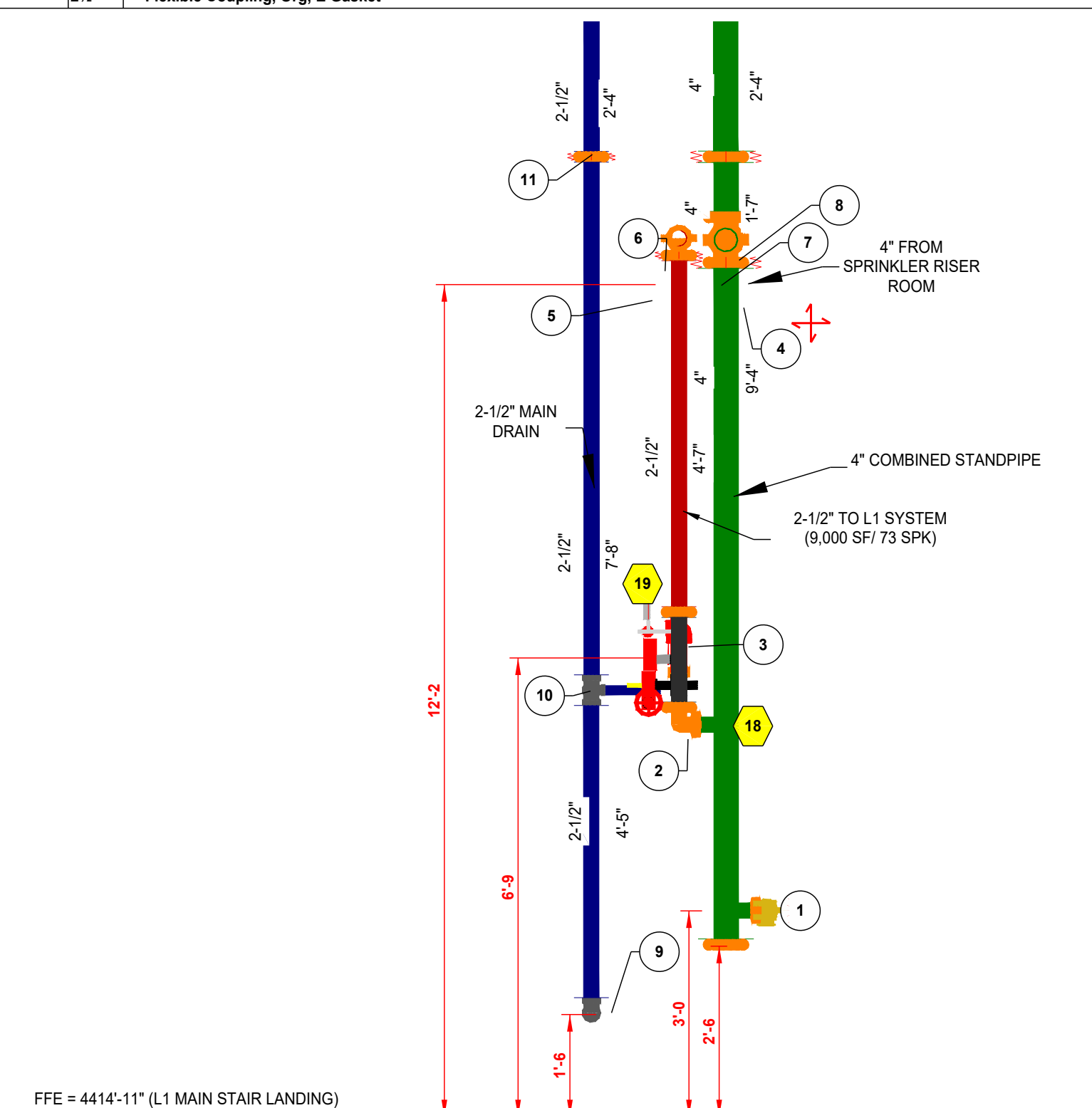
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Sprinkler Legend: ENTIRE BUILDING										
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Note
	Tyco	TY522	ELOC	108	11.2	Concealed Pendant	3/4"	Quick	Brass	212°F WHITE PLATE CONCEALED
	Tyco	TY531	Royal Flush II	68	5.6	Concealed Pendant	3/4"	Quick	Brass	200°F WHITE PLATE CONCEALED
	Tyco	TY4131	TY-FRB	13	5.6	Upright	3/4"	Quick	Brass	200°F SPRIG
	Tyco	TY4131	TY-FRB	54	8	Upright	3/4"	Quick	Natural Brass	200°F N/A
	Tyco	TY4131	TY-FRB	42	8	Upright	3/4"	Quick	Natural Brass	200°F SPRIG
	Tyco	TY4131	TY-FRB	24	5.6	Upright	3/4"	Quick	Brass	200°F N/A
				Total = 308						



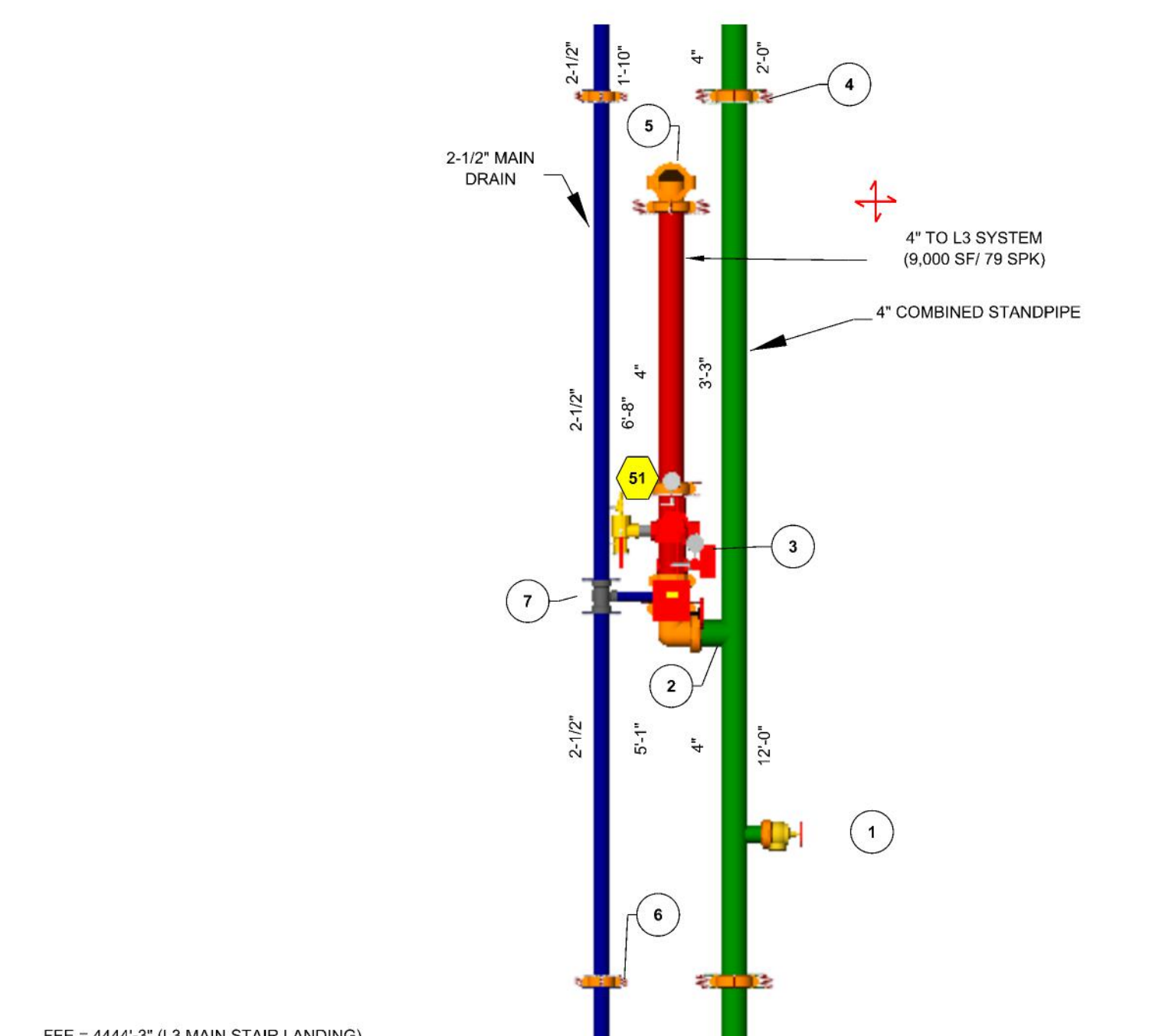
L1 ZONE CONTROL PARTS LEGEND

Key Note	Size	Description	Quantity
1	2 1/2"	Hose Valve T-G	1
2	2 1/2"	Rigid Coupling, Org. E Gasket	4
3	2 1/2"	Victaulic UMC (BFYLY W/ TAMPER, FLOW SWITCH, GAUGE, PREURE RELIEF, TEST & DRAIN, AND CHECK VALVE)	1
4	4"	Flexible Coupling, Org. E Gasket	2
5	2 1/2"	Flexible Coupling, Org. E Gasket	1
6	2 1/2"	Grooved Short Radius, 90° Elbow, DI, Org	2
7	4"	Grooved Short Radius Tee, Org	1
8	4"	Rigid Coupling, Org. E Gasket	3
9	2 1/2"	Threaded, 90° Elbow, DI, Gal	2
10	2 1/2"	Threaded, Tee, Gal	1
11	2 1/2"	Flexible Coupling, Org. E Gasket	1



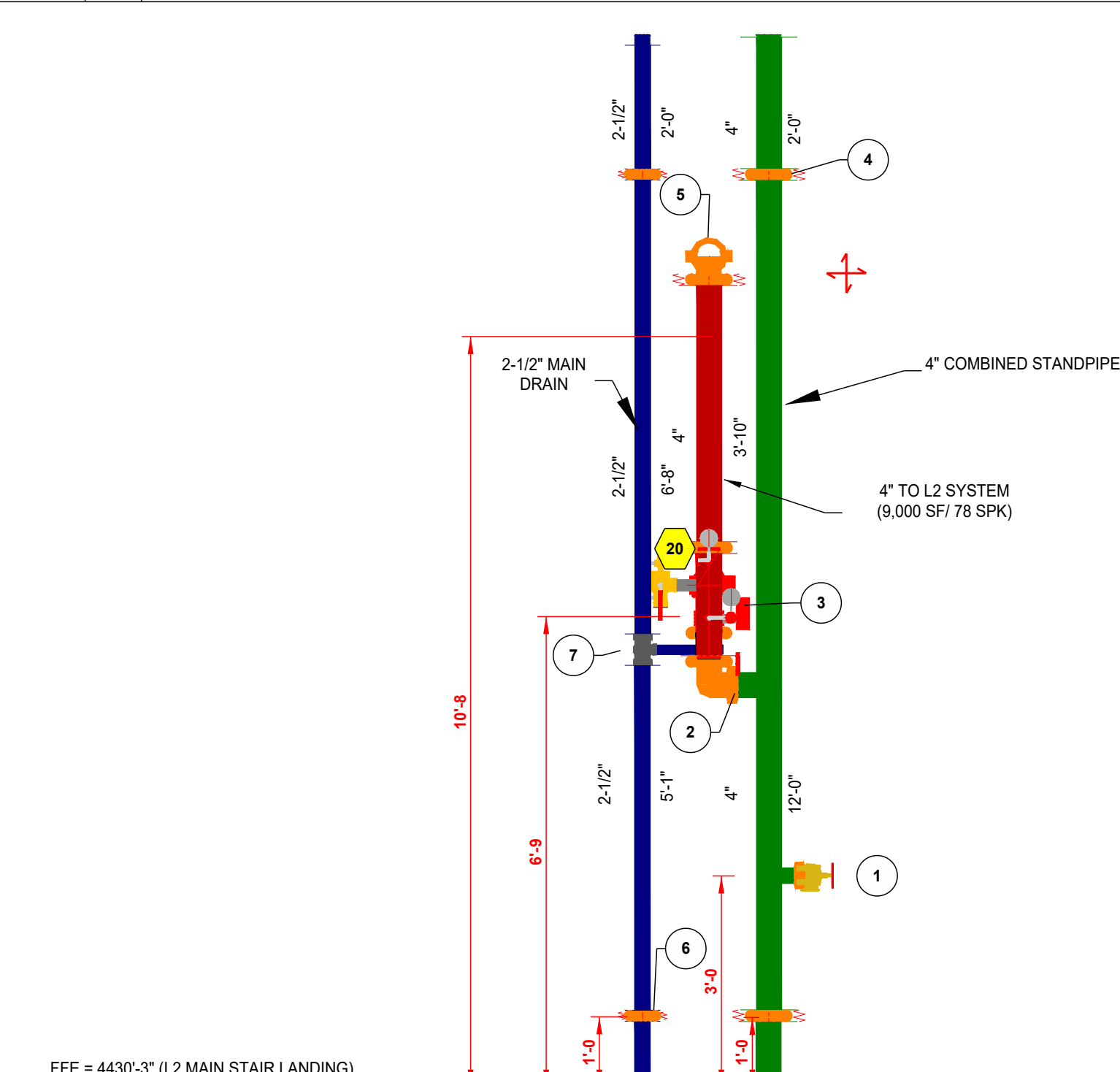
L3 ZONE CONTROL PARTS LEGEND

Key Note	Size	Description	Quantity
1	2 1/2"	Hose Valve T-G	1
2	4"	Rigid Coupling, Org. E Gasket	4
3	4"	Victaulic UMC (BFYLY W/ TAMPER, FLOW SWITCH, GAUGE, PREURE RELIEF, TEST & DRAIN, AND CHECK VALVE)	1
4	4"	Flexible Coupling, Org. E Gasket	3
5	4"	Grooved Short Radius, 90° Elbow, DI, Org	2
6	2 1/2"	Flexible Coupling, Org. E Gasket	2
7	2 1/2"	Threaded, Tee, Gal	1



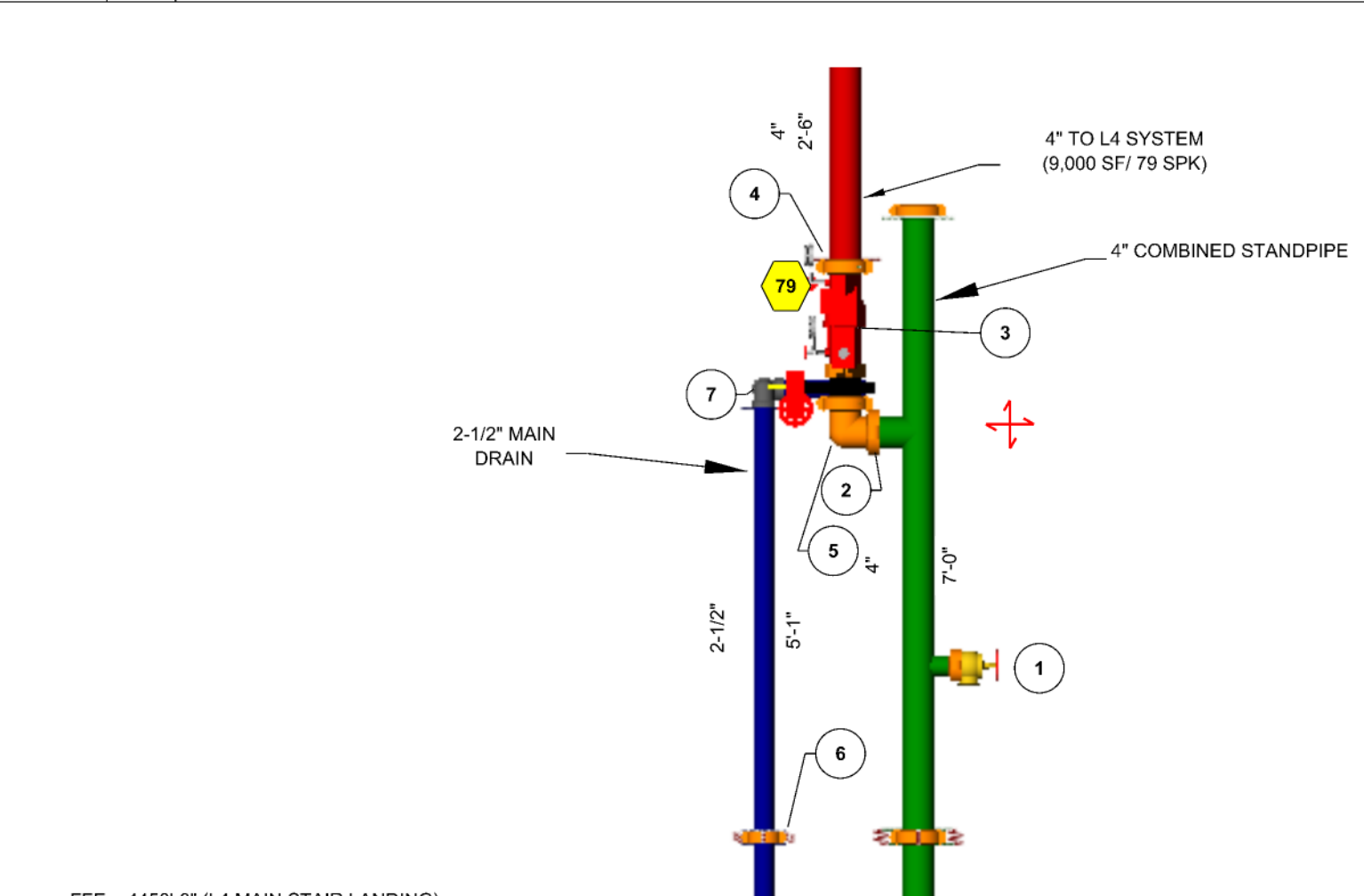
L2 ZONE CONTROL PARTS LEGEND

Key Note	Size	Description	Quantity
1	2 1/2"	Hose Valve T-G	1
2	4"	Rigid Coupling, Org. E Gasket	4
3	4"	Victaulic UMC (BFYLY W/ TAMPER, FLOW SWITCH, GAUGE, PREURE RELIEF, TEST & DRAIN, AND CHECK VALVE)	1
4	4"	Flexible Coupling, Org. E Gasket	3
5	4"	Grooved Short Radius, 90° Elbow, DI, Org	2
6	2 1/2"	Flexible Coupling, Org. E Gasket	2
7	2 1/2"	Threaded, Tee, Gal	1



L4 ZONE CONTROL PARTS LEGEND

Key Note	Size	Description	Quantity
1	2 1/2"	Hose Valve T-G	1
2	4"	Rigid Coupling, Org. E Gasket	3
3	4"	Victaulic UMC (BFYLY W/ TAMPER, FLOW SWITCH, GAUGE, PREURE RELIEF, TEST & DRAIN, AND CHECK VALVE)	1
4	4"	Flexible Coupling, Org. E Gasket	2
5	4"	Grooved Short Radius, 90° Elbow, DI, Org	1
6	2 1/2"	Flexible Coupling, Org. E Gasket	2
7	2 1/2"	Threaded, 90° Elbow, Gal	2



REVISIONS

REV	DATE	DESCRIPTION
1	2/2/25	PLAN REVIEW COMMENTS

FIRE SPRINKLER PLANS

STANDPIPE AND RISER DETAILS

CONRAC CSB
2001 E PLUMB LANE
RENO, NV 89502
APN 015-210-34

PRINTED ON 02/25/25 AT 10:45:50 AM CONRAC CSB - Floor 12 - Rev 1_A5024