

HAS BEEN CONTRACTED TO INSTALL 3 NEW DRY PIPE SPRINKLER SYSTEM IN PARKING GARAGE LEVELS 1 OF 4. ECU SPRINKLERS WILL PROTECT THE MAIN FLOOR AND WILL BE SPACED AT A MAXIMUM OF 400 S.F. A DRY, MANUAL STANDPIPE WILL PROTECT ALL FOUR LEVELS. NO WORK WILL BEGIN UNTIL PLANS HAVE BEEN APPROVED.

GENERAL INFORMATION

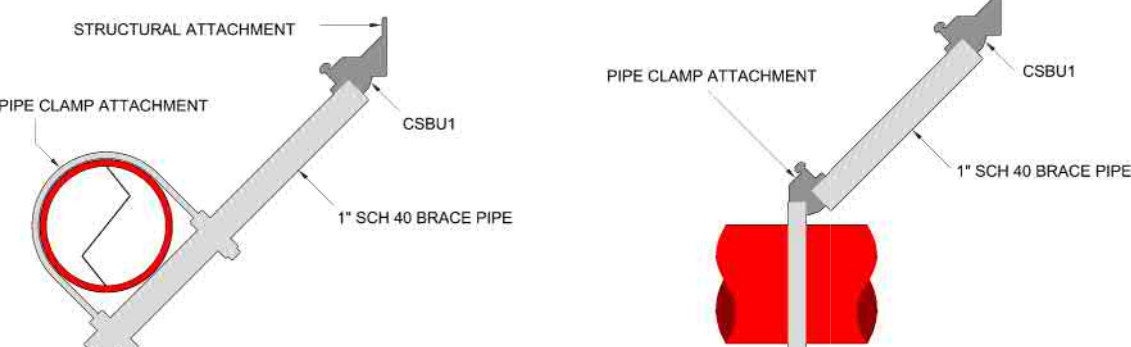
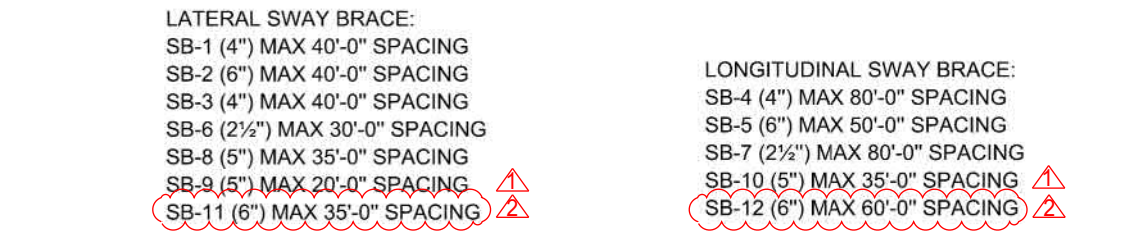
- INTERNATIONAL BUILDING CODE (2018)
- OCCUPANCY: GROUP S-2
- TYPE OF CONSTRUCTION: IA
- AUTHORITY HAVING JURISDICTION (AHJ): RENO FIRE DEPT
- SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - ZONE 1 = 51,366 S.F.
 - ZONE 2 = 47,970 S.F.
 - ZONE 3 = 50,745 S.F.
 - LEVEL 1 TOTAL = 150,081 S.F.
- NON-SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - LEVEL 1 = 25,399 S.F.
 - LEVEL 2 = 176,080 S.F.
 - LEVEL 3 = 176,080 S.F.
 - LEVEL 4 = 176,080 S.F.
- DESIGN & INSTALLATION STANDARDS: NFPA-13 (2022), NFPA-14 (2024)
- SPRINKLER PIPE TYPES:
 - DRY.
 - 1" PIPE TO BE SCHEDULE 40 BLACK STEEL W/ THREADED FITTINGS
 - 2" 1-1/4" THROUGH 4" MAINS & BRANCH LINES TO BE BLK SCHEDULE 10 W/ GROOVED FITTINGS
 - 2" MAINS & BRANCH LINES TO BE ROLL-GROOVED BLK SCHEDULE 10
 - 2" AND LARGER TO USE GROOVED SHORT RADIUS FITTINGS
- DESIGN CRITERIA:
 - 3.1 LIGHT HAZARD AREAS INCLUDE STAIRWELLS
 - 3.2 ORDINARY HAZARD GROUP I AREAS INCLUDE MECHANICAL ROOMS
 - 3.3 ORDINARY HAZARD GROUP II AREAS INCLUDE PARKING
 - 3.4 REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 19.2.3.2.3
 - 3.5 REMOTE AREA INCREASED BY 30% FOR DRY AND DOUBLE INTERLOCK PREACTION SYSTEMS PER NFPA 13 SEC. 19.2.3.2.5
- 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
 - 4.3 DRY SYSTEM REQUIREMENTS:
 - DRY SYSTEM PIPE SLOPE INSTALLATION
 - SPRINKLER MAINS TO BE 1/4" PER 10'-0" (NONREFRIGERATED AREAS)
 - SPRINKLER BRANCH LINES TO BE 1/2" PER 10'-0"
 - DRY SYSTEM CAPACITY
 - ZONE 1 = 1514 GALLONS
 - ZONE 2 = 1471 GALLONS
 - ZONE 3 = 1353 GALLONS
 - (STANDPIPE = 1710 GALLONS)
- 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 = SPRINKLER SYSTEM
 - HYDRAULIC CALCULATION JUNCTION POINT = STANDPIPE SYSTEM
 - CEILING HEIGHT
 - FIRE RATED WALL
 - DRY BLACK CROSS MAIN
 - DRY BLACK STANDPIPE
 - DRY BLACK BRANCHLINE, ARMORER, & DRAIN

SHEET INDEX

- FP1 SITE PLANDDETAILS
- FP2 FIRE PROTECTION PLAN AREA A
- FP3 FIRE PROTECTION PLAN AREA B
- FP4 FIRE PROTECTION PLAN AREA C
- FP5 FIRE PROTECTION PLAN AREA D
- FP6 STANDPIPE PLANDDETAILS

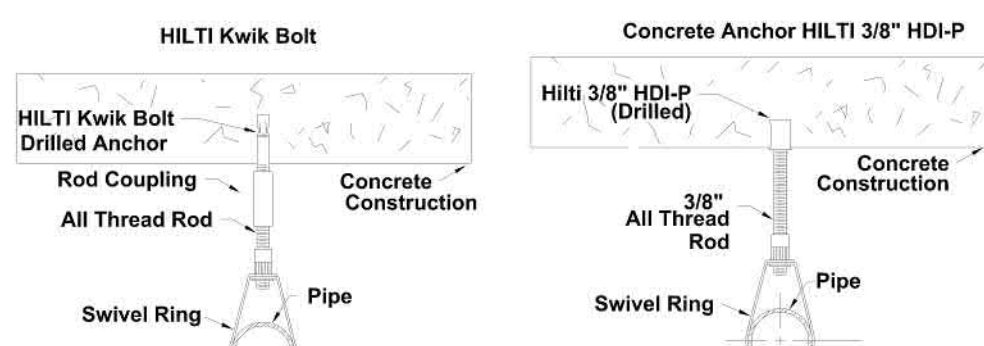
MANUAL DRY STANDPIPE

LOCATION: STAIRS + GARAGE AUX
REQUIRED FLOW: 120 GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 172.5
VOLUME = 1710 GAL



- FLEXIBLE COUPLINGS SHALL BE INSTALLED AS FOLLOWS:
- (1) WITHIN 24" OF TOP AND BOTTOM OF ALL RISERS
 - (2) WITHIN 12" ABOVE AND WITHIN 24" BELOW THE FLOOR IN MULTISTORY BUILDINGS
 - (3) ON BOTH SIDES OF CONCRETE OR MASONRY WALLS WITHIN 1'-0" OF THE WALL SURFACE, UNLESS CLEARANCE IS PROVIDED
 - (4) WITHIN 24" OF BUILDING EXPANSION JOINTS (MORE FLEXIBILITY IS REQUIRED FOR SEISMIC JOINTS)
 - (5) 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
 - (6) WITHIN 24" ABOVE AND 24" BELOW ANY INTERMEDIATE POINTS OF SUPPORT FOR A RISER OR OTHER VERTICAL PIPE

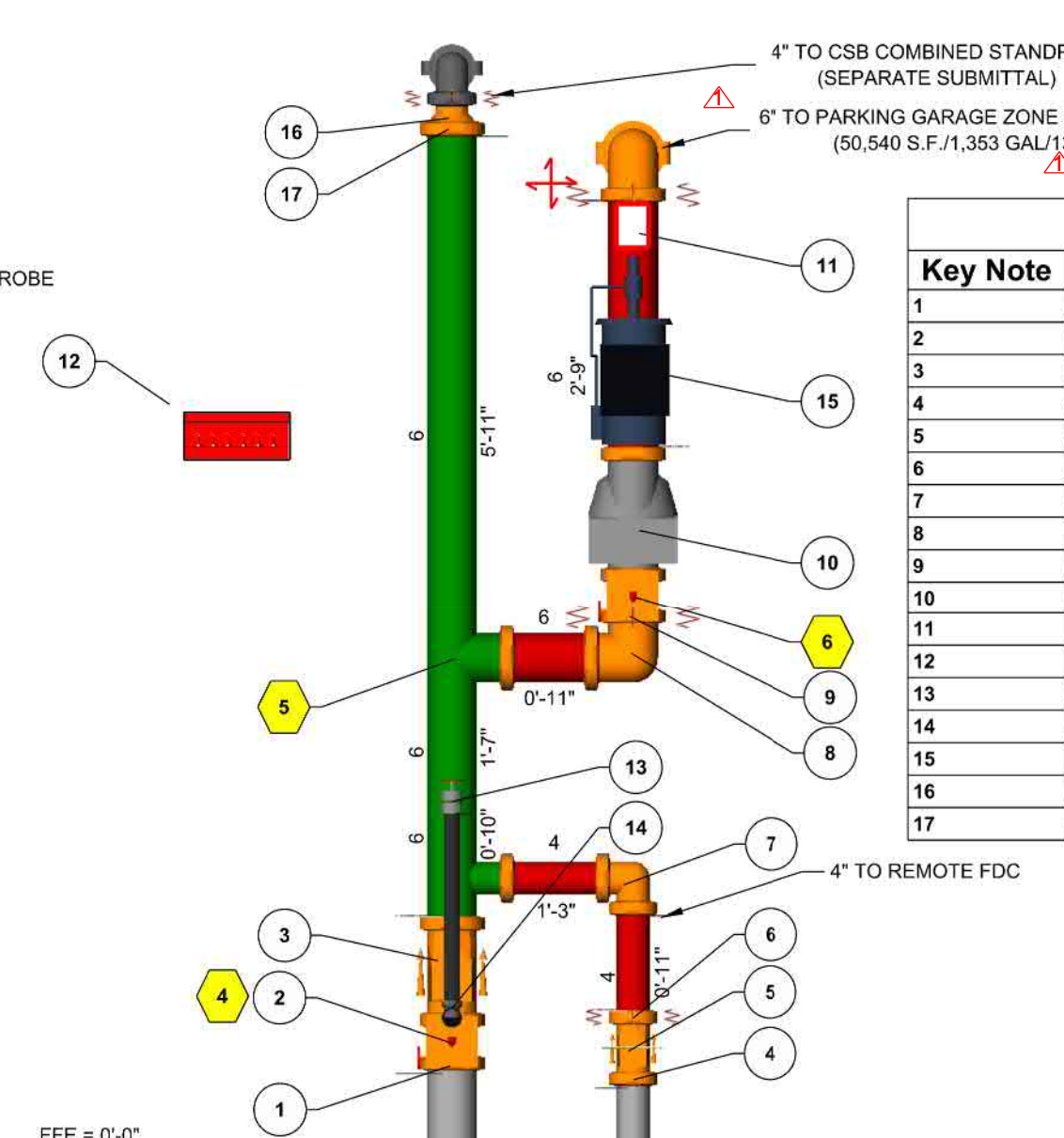
SEISMIC DETAILS



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

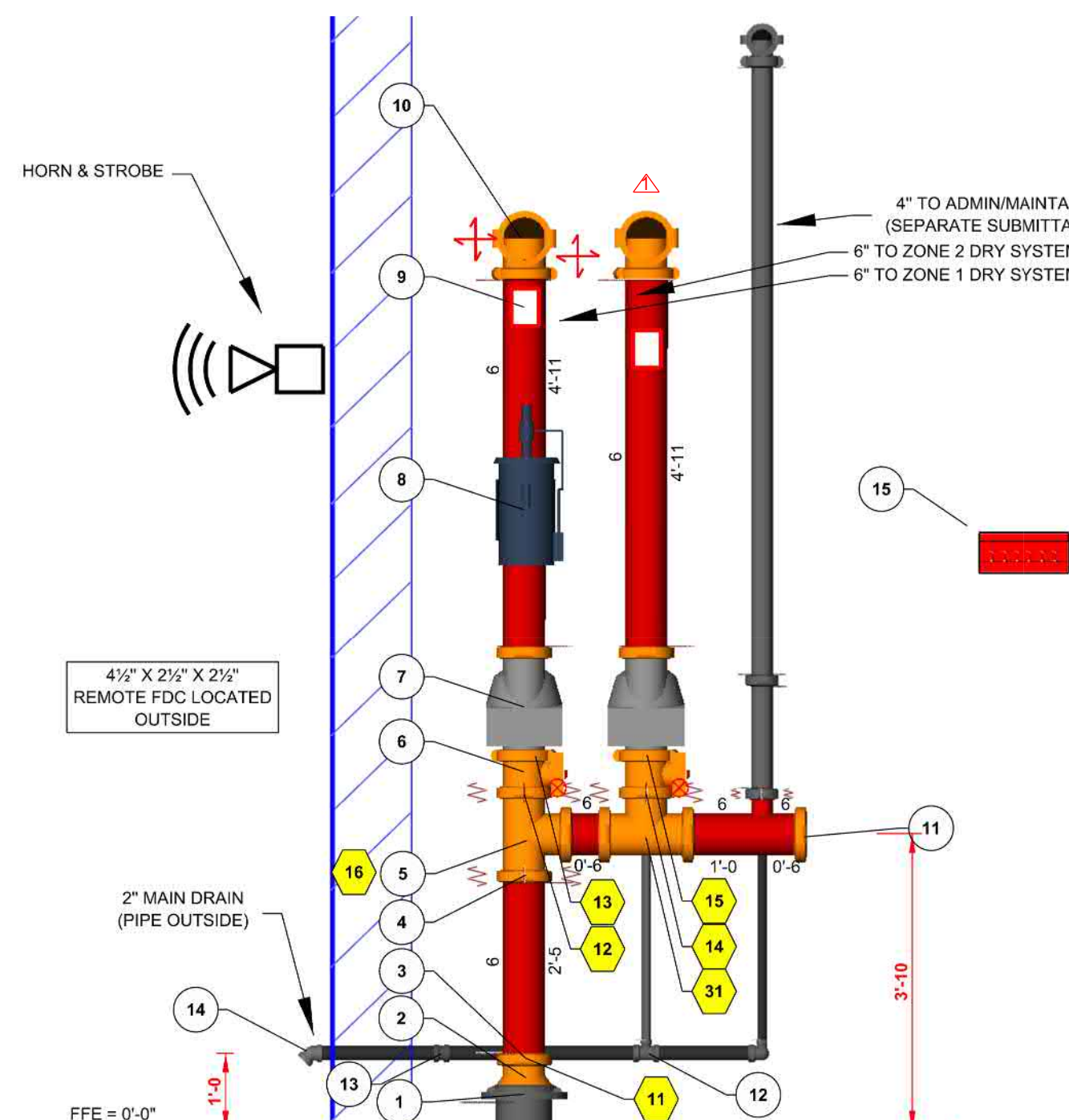


SOUTH RISER LEGEND

Key Note	Size	Description	Quantity
1	6	IBR GRVD	1
2	6	Butterfly Valve, G-G	1
3	6	Swing Check Valve, G-G	1
4	4	Rigid Coupling, Org. E Gasket	4
5	4	Swing Check Valve, G-G	1
6	4	Flexible Coupling, Org. E Gasket	1
7	4	Grooved Short Radius, 90° Elbow, DI, Org	1
8	6	Grooved Short Radius, 90° Elbow, DI, Org	2
9	6	Flexible Coupling, Org. E Gasket	2
10	6	Dry Pipe Valve, G-G	1
11	NA	Hydraulic Placard	NA
12	NA	Spare Head Cabinet Per NFPA 13	NA
13	2	Angle Valve, T-T	1
14	2	Threaded, 90° Elbow, DI	1
15	NA	General OLRV500-A Riser Mount Air Compressor	1
16	6 x 4	Grooved Concentric Reducer, DI, Org	1
17	6	Rigid Coupling, Org. E Gasket	9

RISER DETAIL

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



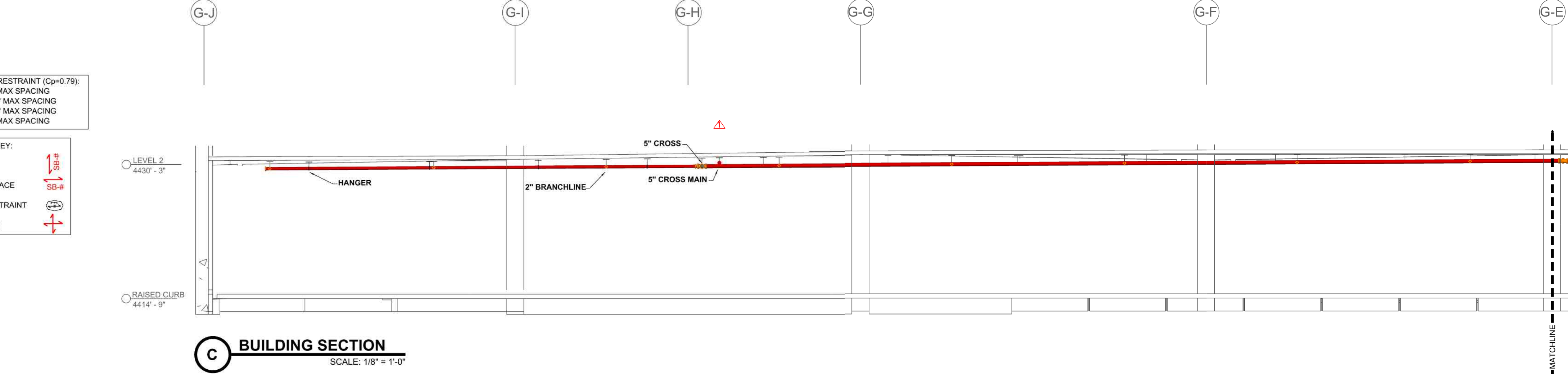
NORTH RISER LEGEND

Key Note	Size	Description	Quantity
1	6	Grooved IBR w/ Coupling	1
2	8 x 6	Grooved Concentric Reducer, DI, Org	1
3	6	Rigid Coupling, Org. E Gasket	14
4	6	Flexible Coupling, Org. E Gasket	3
5	6	Grooved Short Radius Tee, DI, Org	2
6	6	Butterfly Valve, G-G w/ Tamper	2
7	6	768N NKT, Dry Pipe Valve, G-G	2
8	NA	General OLRV500-A Riser Mount Air Compressor	1
9	NA	Hydraulic Placard	NA
10	6	Grooved Short Radius, 90° Elbow, DI, Org	1
11	6	Grooved DI Cap	1
12	2 x 2 x 1 1/4"	Threaded Reducing Tee, DI	1
13	2	Threaded Coupling, DI	1
14	2	Threaded, 45° Elbow, DI, Galv	1
15	NA	Spare Head Cabinet Per NFPA 13	NA

RISER DETAIL

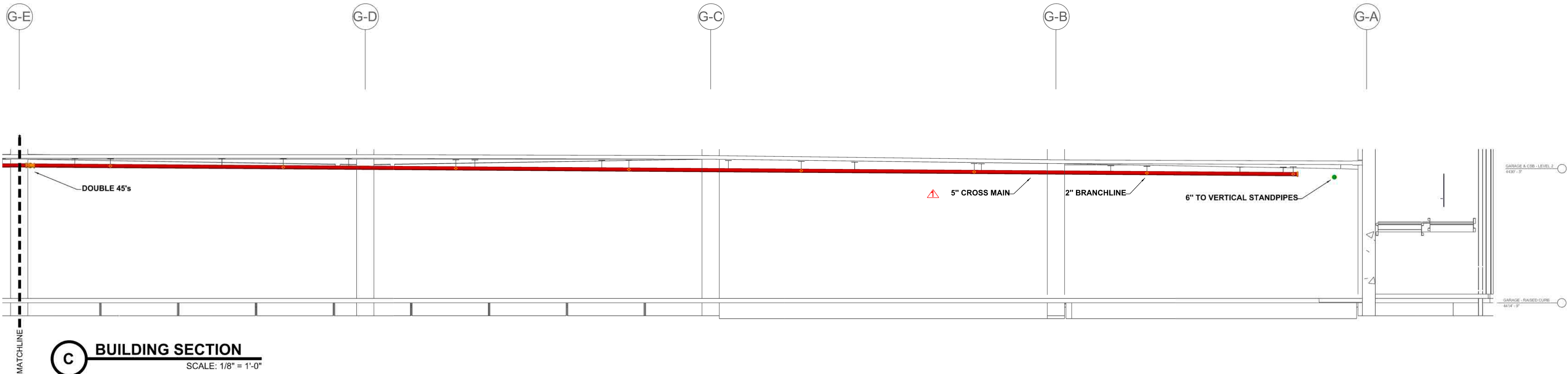
SCALE: 1/2" = 1'-0"

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temp	Note
Y	Typo	TY6137	EC-14	330	14	Upright	1/2"	Quick	Brass	200°F	20 X 20
Y	Typo	TY6137	EC-14	80	14	Upright	1/2"	Quick	Brass	200°F	16 X 16
Y	Typo	TY1311	TY-FRB	33	5.6	Upright	1/2"	Quick	Natural Brass	200°F	NA
Total = 443											



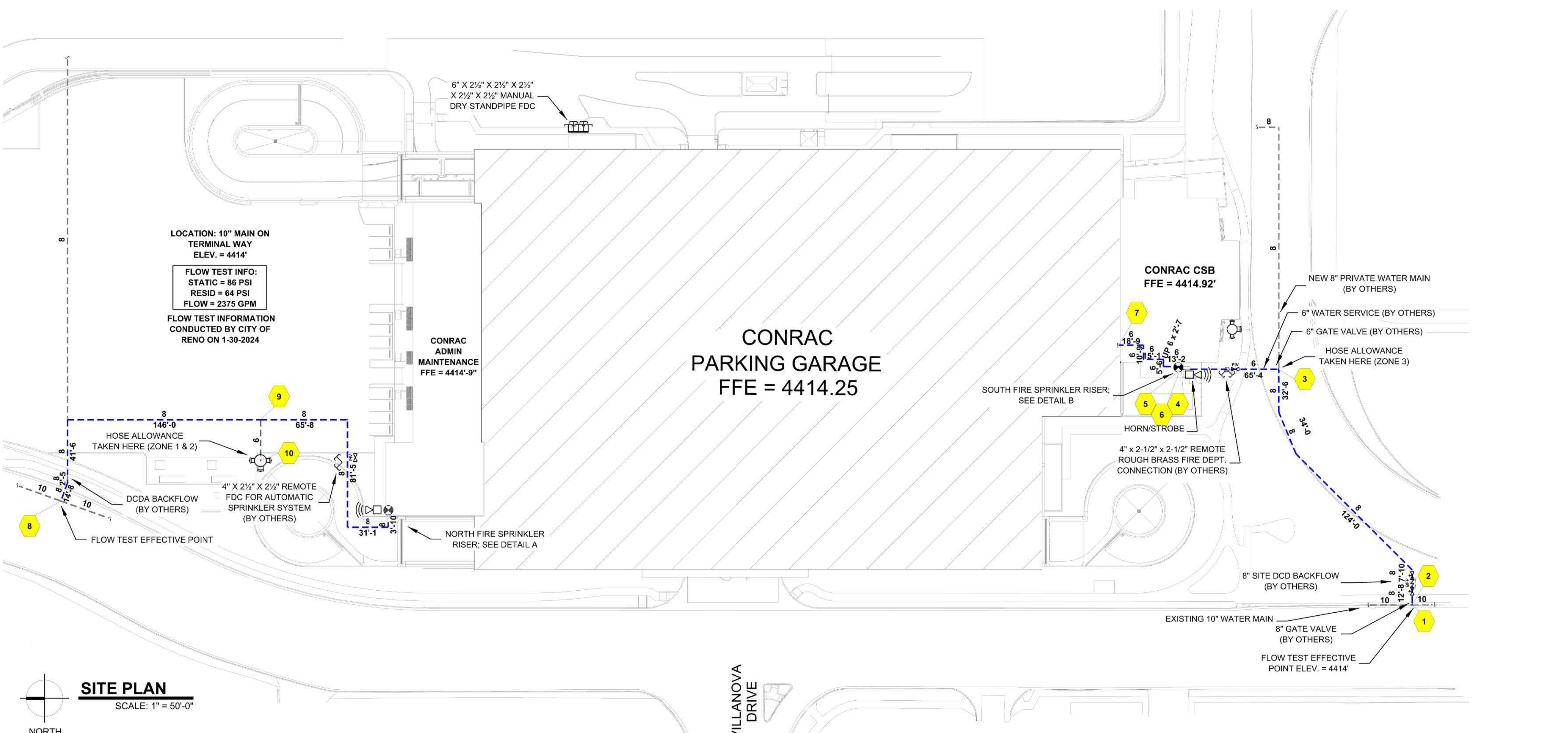
BUILDING SECTION

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



BUILDING SECTION

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



FIRE SPRINKLER PLANS

FIRE SPRINKLER SITE PLAN & DETAILS

CONRAC PARKING GARAGE

1500 TERMINAL WAY

RENO, NV 89502

APN 015-210-34

DRAWN BY:

CHECKED BY:

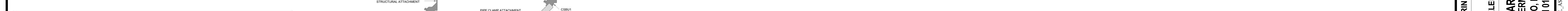
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PROJECT NO.

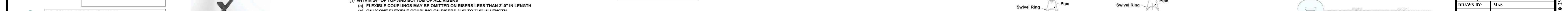
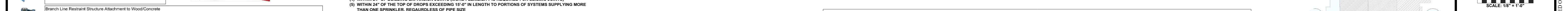
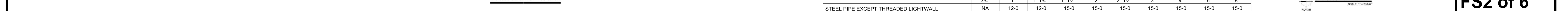
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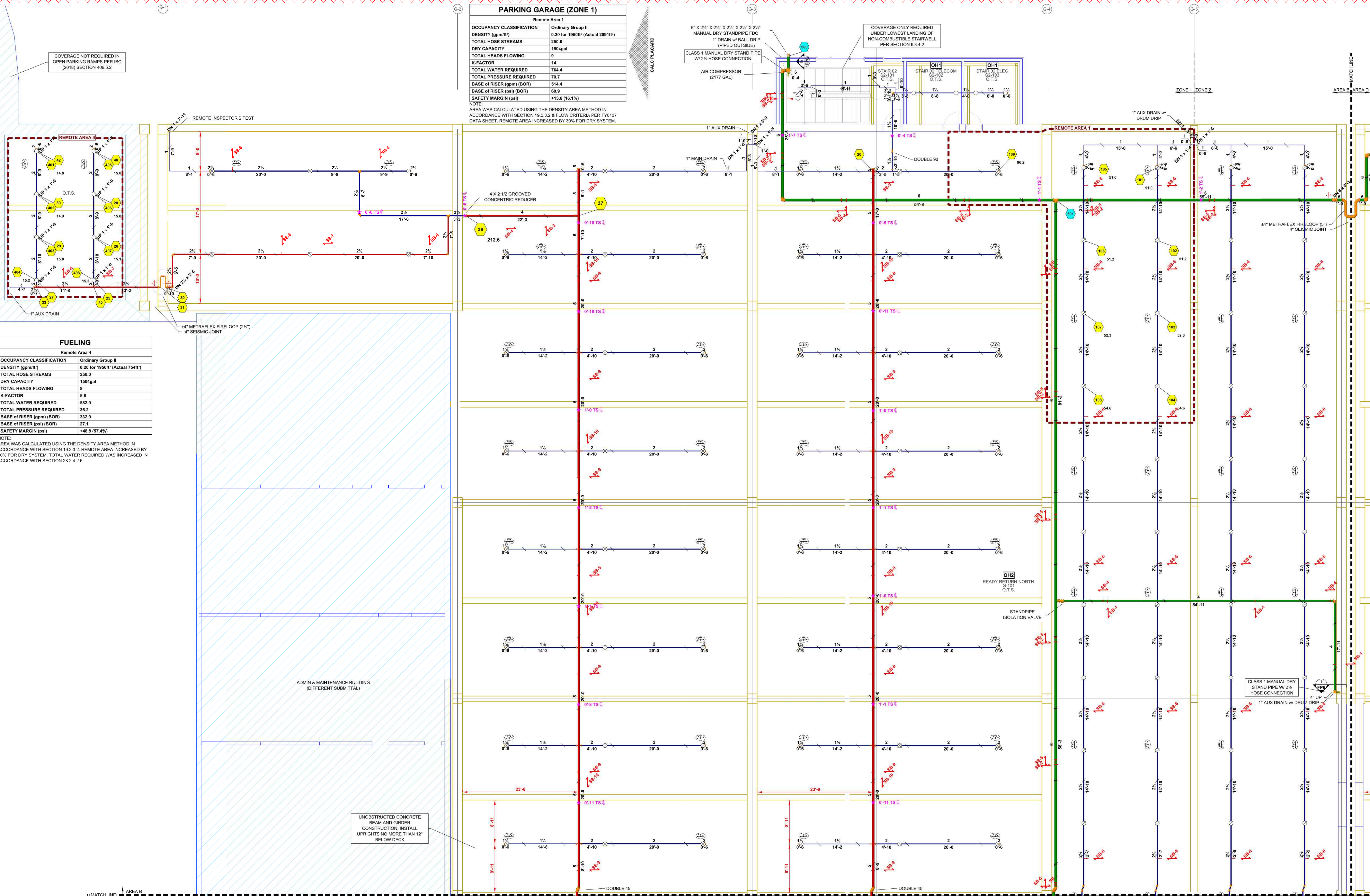
Sheet No:

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2" PIPE = 31'-0" MAX SPACING





FIRE SPRINKLER PIPING PLAN - AREA B
SCALE: 1/8" = 1'-0"

ConRAC Parking Garage Sprinkler Legend									
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Finish	Temp
	Tyco	TY6137	EC-14	330	14	Upright	3/4"	Brass	200°F
	Tyco	TY6137	EC-14	80	14	Upright	3/4"	Brass	200°F
	Tyco	TY6137	EC-14	33	5.6	Upright	3/4"	Natural Brass	200°F
Total = 443									

CADDY BRANCH LINE RESTRAINT

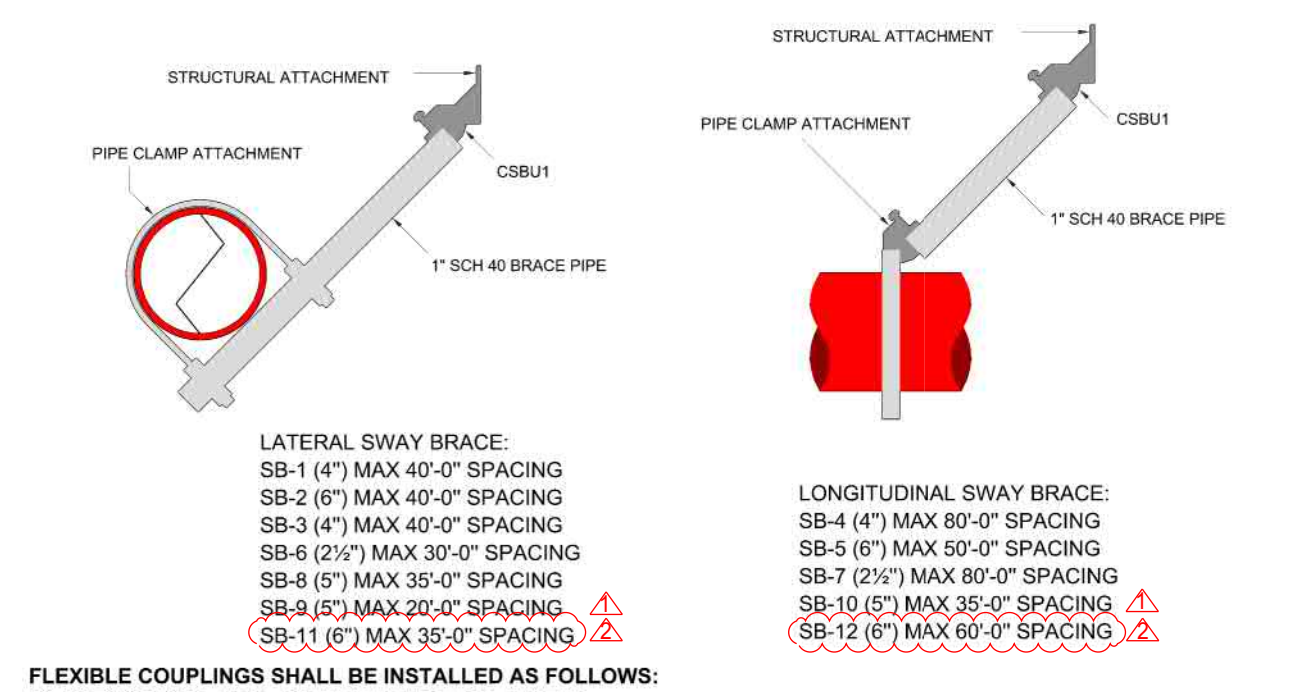
Finish: Electro-galvanized
Pipe Size: 1 1/2", 2"
Rod Size: 3/8"

Branch Line Restraint Pipe Attachment

Part Number	Pipe Size	Rod Size
CSBRP1010EG	1 1/2"	3/8"
CSBRP2002EG	2"	3/8"

Branch Line Restraint Attachment to Wood/Concrete

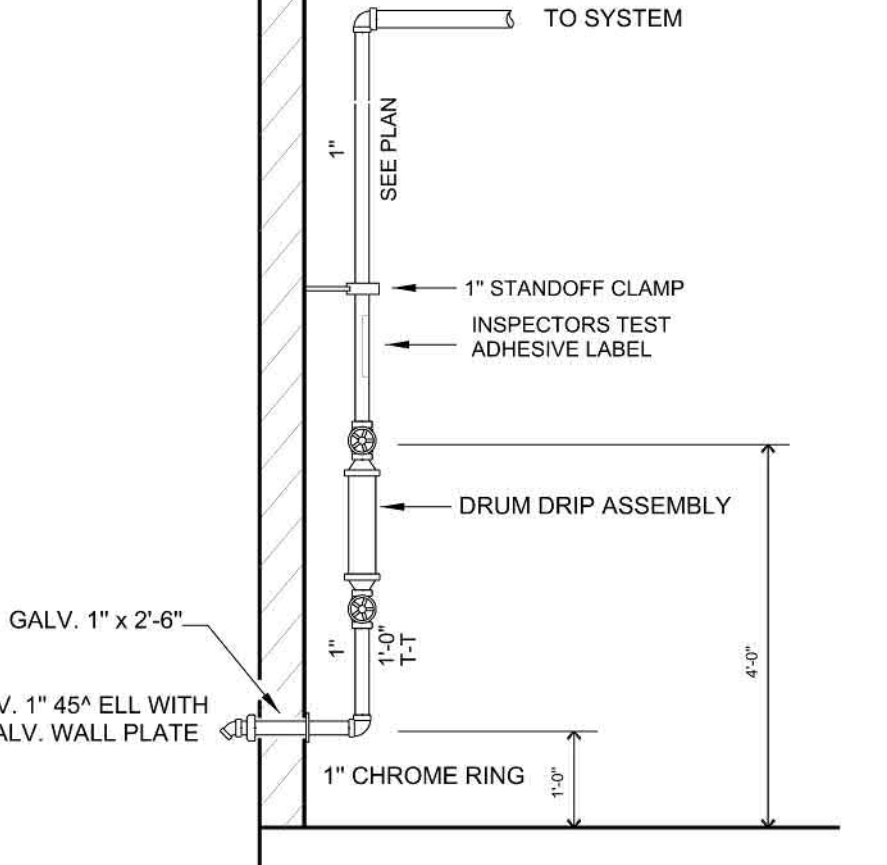
Part Number	Rod Size	Screw Diameter	Screw Length	Drill Bit Diameter
CSBRP1010EG	3/8"	1/4"	1 3/4"	3/16"



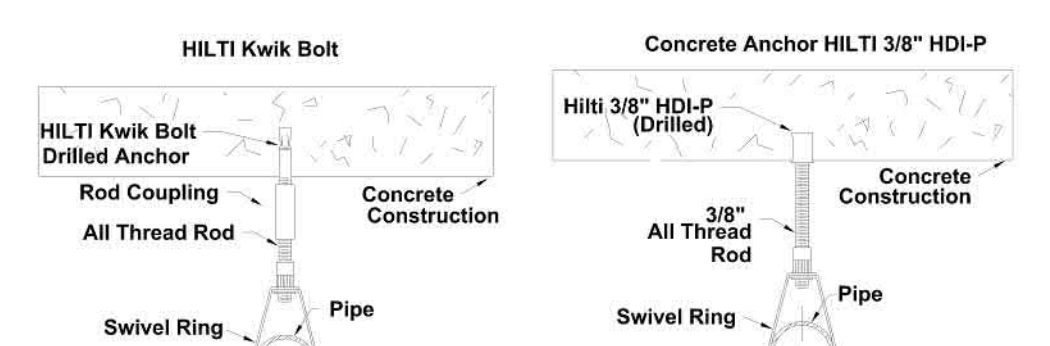
- SEISMIC DETAILS**
- (1) WITHIN 24" OF TOP AND BOTTOM OF ALL RISERS
- (2) FLEXIBLE COUPLINGS MAY BE OMITTED ON RISERS LESS THAN 3'-0" IN LENGTH
- (3) ONLY ONE FLEXIBLE COUPLING ON RISERS 3'-0" TO 7'-0" IN LENGTH
- (4) WITHIN 12" ABOVE AND WITHIN 24" BELOW THE FLOOR IN MULTISTORY BUILDINGS
- (5) RISERS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

SEISMIC BRANCH LINE RESTRAINT (C=0.79):
1" PIPE = 26'-0" MAX SPACING
1-1/4" PIPE = 27'-0" MAX SPACING
1-1/2" PIPE = 28'-0" MAX SPACING
2" PIPE = 31'-0" MAX SPACING

SEISMIC KEY:
LATERAL BRACE
LONGITUDINAL BRACE
BRANCH LINE RESTRAINT
FOUR-WAY BRACE



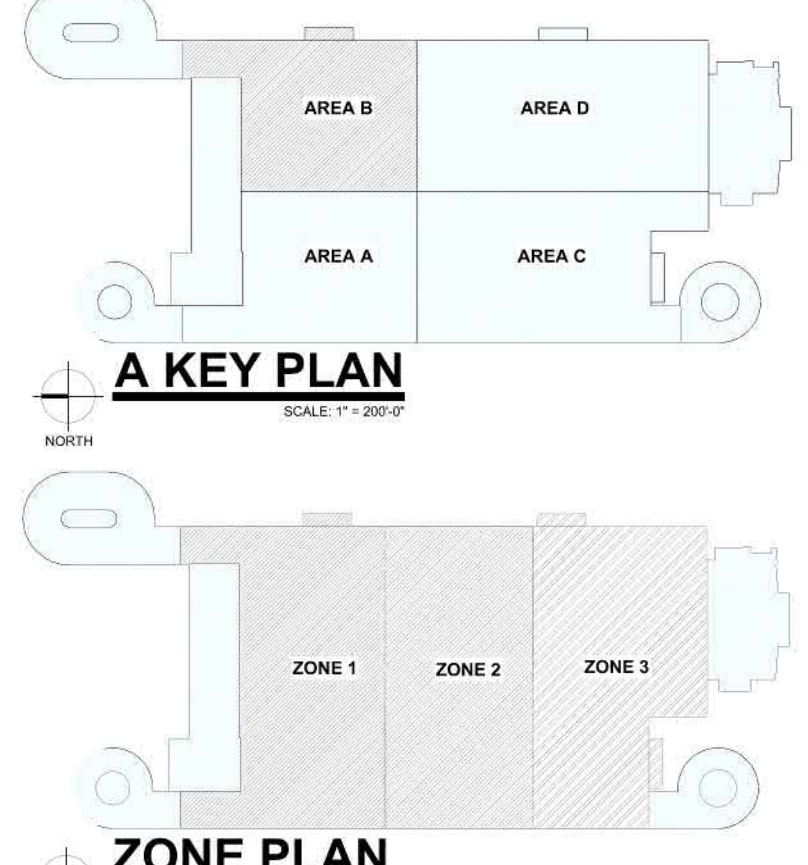
DRY SYSTEM INSPECTORS TEST DETAIL
NOT TO SCALE



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"
NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0

STEEL PIPE EXCEPT THREADED LIGHTWALL



A KEY PLAN
SCALE: 1" = 20'-0"

ZONE PLAN
SCALE: 1" = 20'-0"

FIRE SPRINKLER PLANS

FIRE SPRINKLER PLAN - AREA B

CONRAC PARKING GARAGE

1500 TERMINAL WAY

RENO, NV 89502

APN 015-210-34

DRAWN BY: MAS

CHECKED BY: ADK

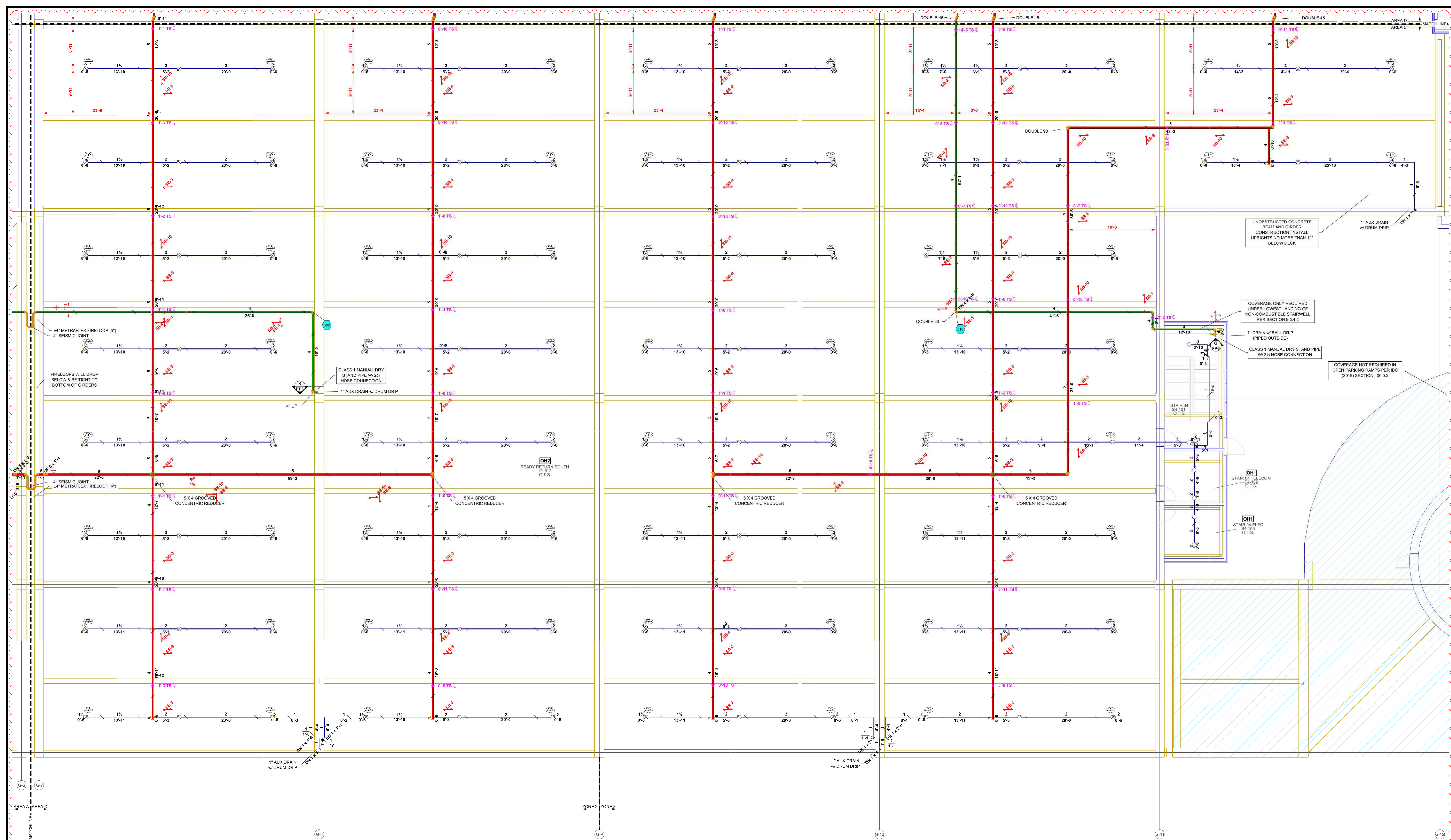
DATE: 9-17-25

PROJECT NO: 5724240

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

Sheet No:

FS3 of 6



FIRE SRPINKLER PIPING PLAN - AREA C

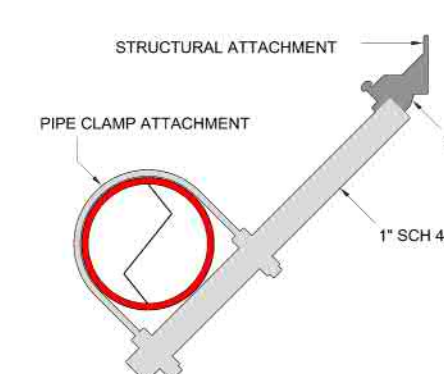
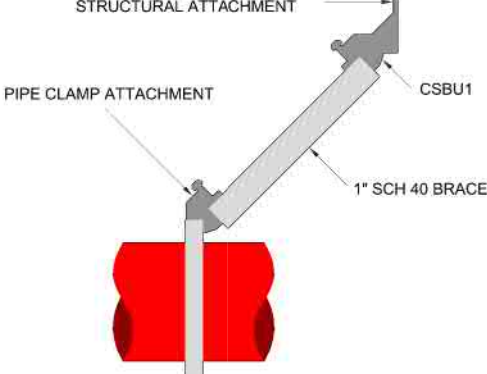
SCALE: 1/8" = 1'-0"

ConRAC Parking Garage Sprinkler Legend									
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Finish	Temp
	TY6137	EC-14	33	14	Upright	1/2"	Quick	Brass	200°F
	TY6137	EC-14	80	14	Upright	1/2"	Quick	Brass	200°F
	TY3131	TY-FRB	33	5.6	Upright	1/2"	Quick	Natural Brass	200°F
Total = 443									

CADDY BRANCH LINE RESTRAINT			
Finish:	Electro-galvanized		
Pipe Size:	1 1/2", 2"		
Rod Size:	3/8"		

Branch Line Restraint Pipe Attachment			
Part Number	Pipe Size	Rod Size	
CSBRP0105EG	1 1/2"	3/8"	
CSBRP0200EG	2"	3/8"	

Branch Line Restraint Structure Attachment to Wood/Concrete			
Part Number	Rod Size	Screw Diameter	Screw Length
CSBRHS1EG	3/8"	1/4"	1 3/4"



LATERAL SWAY BRACE:
SB-1 (4") MAX 40'-0" SPACING
SB-2 (6") MAX 40'-0" SPACING
SB-3 (4") MAX 60'-0" SPACING
SB-4 (2 1/2") MAX 30'-0" SPACING
SB-5 (2 1/2") MAX 30'-0" SPACING
SB-6 (5") MAX 30'-0" SPACING
SB-7 (5") MAX 30'-0" SPACING
SB-8 (5") MAX 30'-0" SPACING
SB-9 (5") MAX 30'-0" SPACING
SB-10 (5") MAX 30'-0" SPACING
SB-11 (5") MAX 30'-0" SPACING
SB-12 (5") MAX 30'-0" SPACING

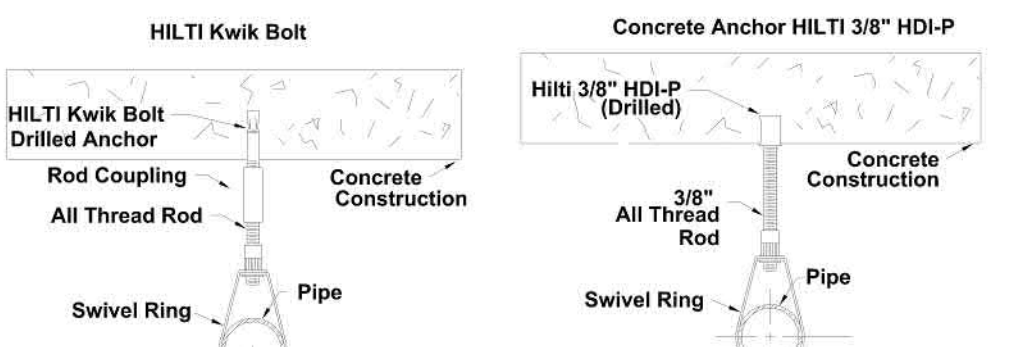
LONGITUDINAL SWAY BRACE:
SB-1 (4") MAX 40'-0" SPACING
SB-2 (6") MAX 40'-0" SPACING
SB-3 (4") MAX 60'-0" SPACING
SB-4 (2 1/2") MAX 30'-0" SPACING
SB-5 (2 1/2") MAX 30'-0" SPACING
SB-6 (5") MAX 30'-0" SPACING
SB-7 (5") MAX 30'-0" SPACING
SB-8 (5") MAX 30'-0" SPACING
SB-9 (5") MAX 30'-0" SPACING
SB-10 (5") MAX 30'-0" SPACING
SB-11 (5") MAX 30'-0" SPACING
SB-12 (5") MAX 30'-0" SPACING

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

SEISMIC DETAILS

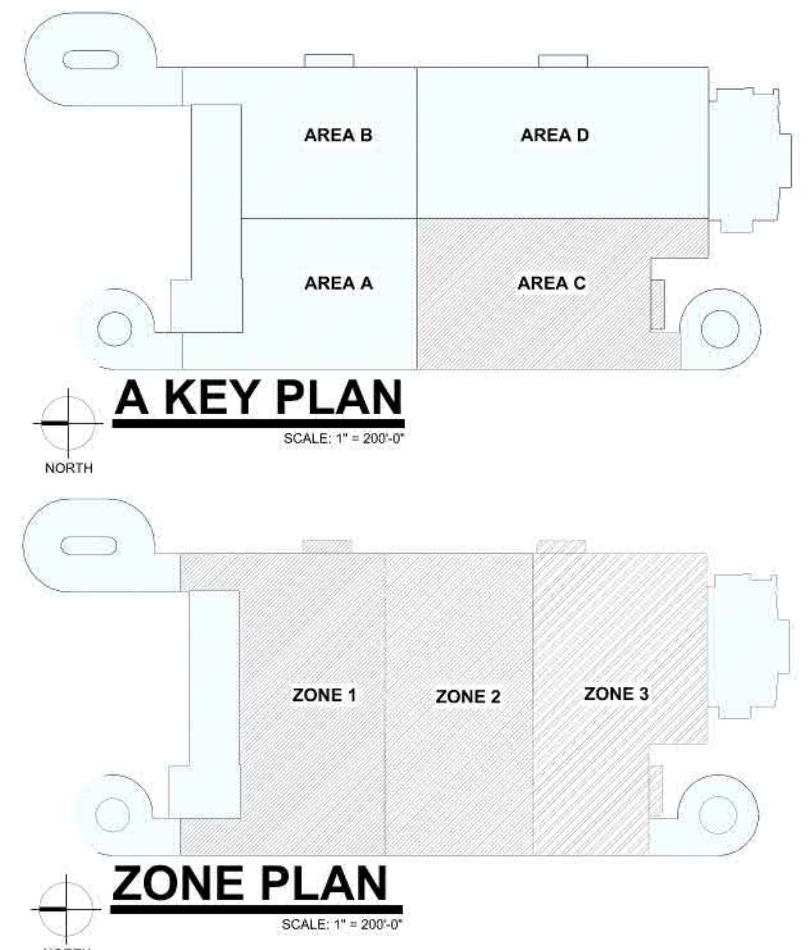
SEISMIC BRANCH LINE RESTRAINT (Cp=0.79):
1" PIPE = 26'-0" MAX SPACING
1-1/4" PIPE = 27'-0" MAX SPACING
1-1/2" PIPE = 28'-0" MAX SPACING
2" PIPE = 31'-0" MAX SPACING

SEISMIC KEY:
LATERAL BRACE
LONGITUDINAL BRACE
BRANCH LINE RESTRAINT
FOUR-WAY BRACE



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



A KEY PLAN

ZONE PLAN

FIRE SPRINKLER PLANS

FIRE SPRINKLER PLAN - AREA C

CONRAC PARKING GARAGE

1500 TERMINAL WAY

RENO, NV 89502

APN 015-210-34

Sheet Title: Project: Zone 1 Zone 2 Zone 3

DRAWN BY: MAS

CHECKED BY: ADK

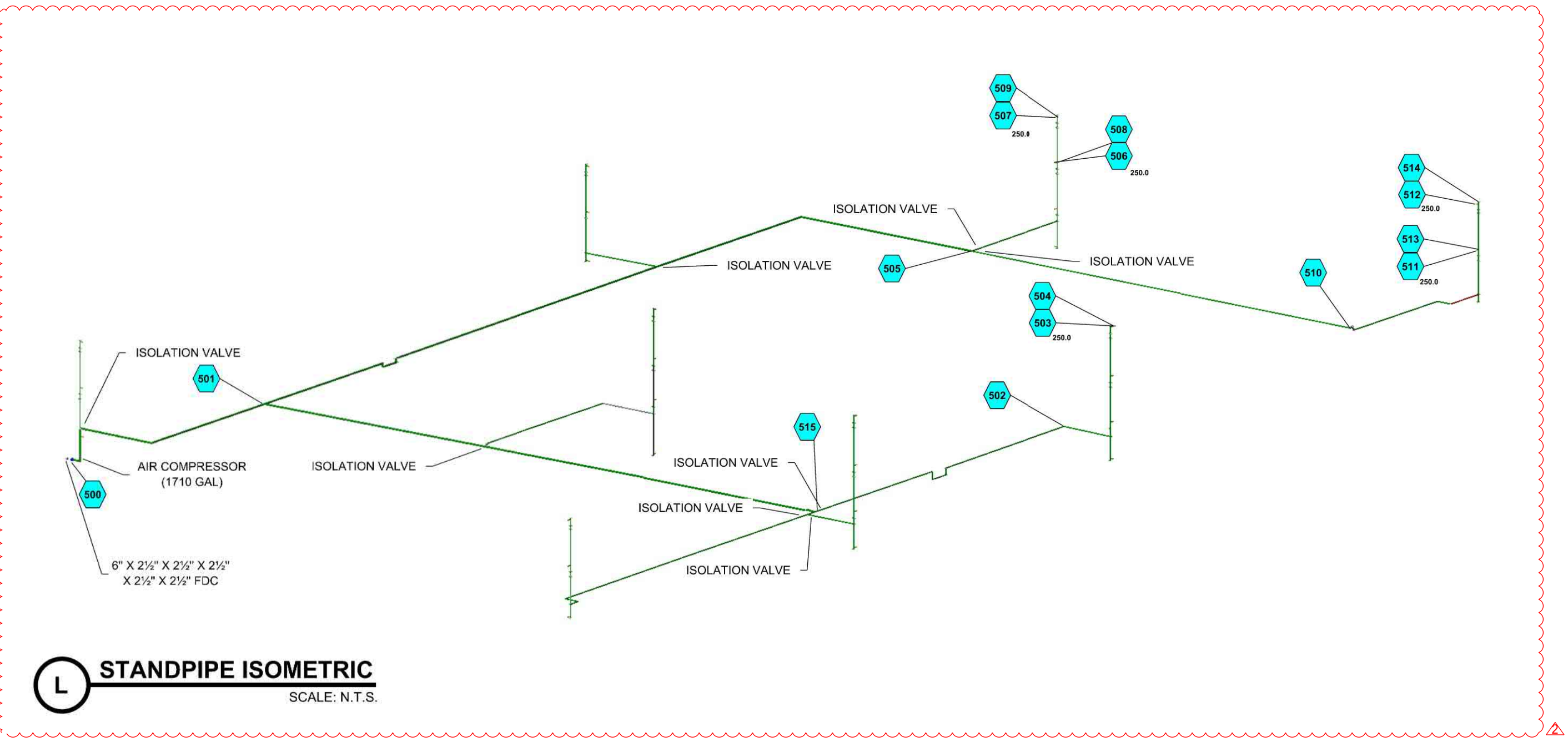
DATE: 9-17-25

PROJECT NO. 5724240

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

Sheet No:

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MANUAL DRY STANDPIPE

LOCATION: STAIRS + GARAGE AUX
REQUIRED FLOW: 1250 GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 172.5
VOLUME = 1710 GAL

