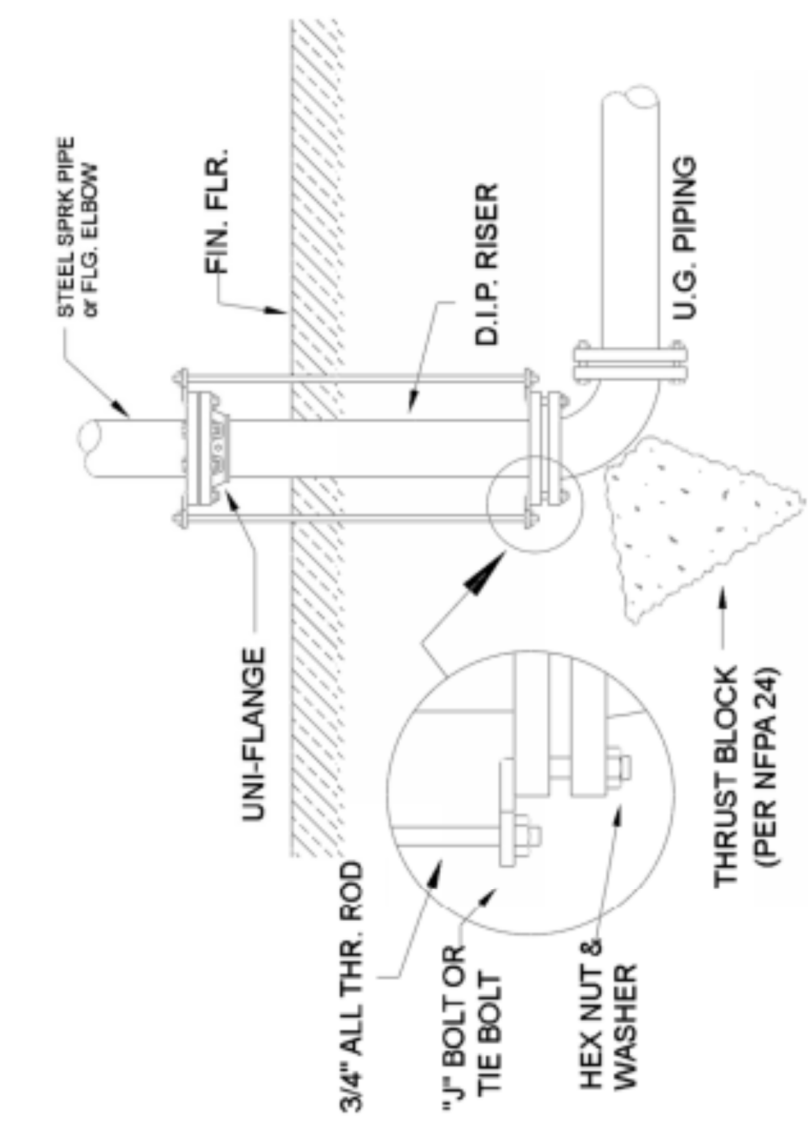


DESIGN NOTES:

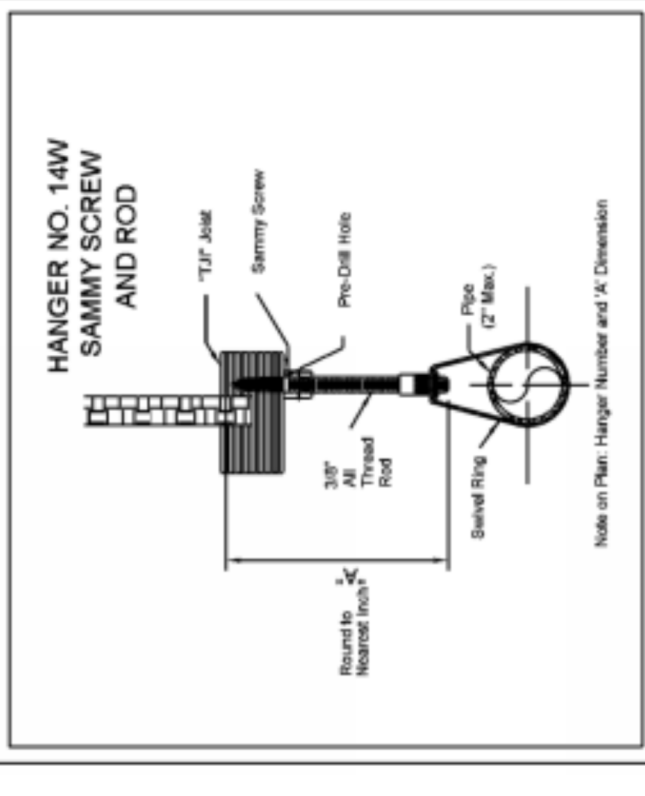
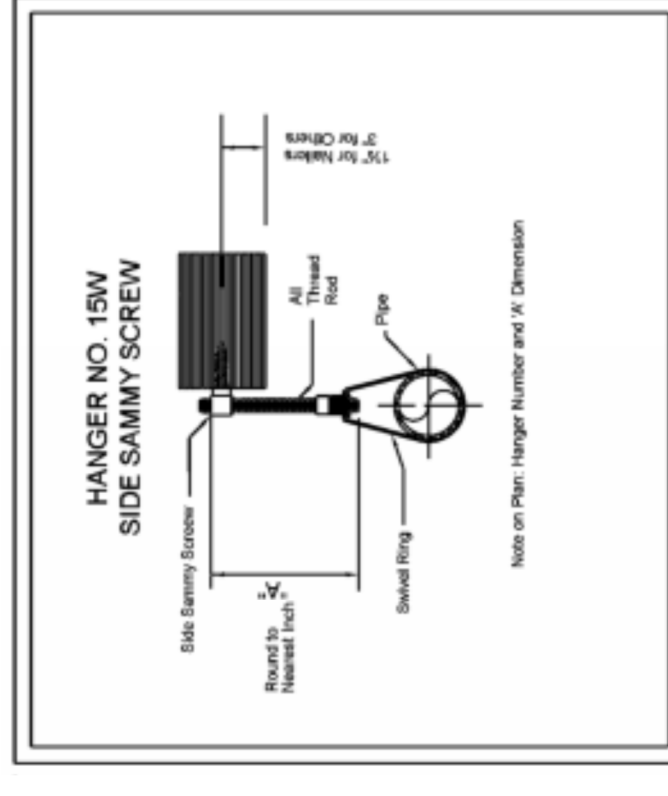
- THIS SYSTEM IS DESIGNED AS PER NFPA 13, 2013 EDITION AND NY IBC 2015.
- PIPING TO BEAS FOLLOWS:
 - ALL WET PIPING 2" AND SMALLER IS SCH. 40 BLACK STEEL WITH THREADED FITTINGS
 - ALL DRY PIPING 2" AND SMALLER IS GALVANIZED SCH. 40 WITH GALVANIZED WALLEABLE IRON FITTINGS.
 - ALL DRY PIPING 2" AND LARGER IS SCH. 10 BLACK STEEL WITH GROOVED DUCTILE IRON VICTALIC STYLE FITTINGS AND COUPLINGS.
 - ALL DRY PIPING 2-1/2" AND LARGER IS SCH. 10 GALVANIZED STEEL WITH GALVANIZED DUCTILE IRON VICTALIC STYLE FITTINGS AND COUPLINGS.
- INSTALLATION OF THE SPRINKLER SYSTEM IS THROUGHOUT OF THE NEW CONSTRUCTED COMMERCIAL BUILDING.
- THE SYSTEM IS DESIGNED AS:
 - LIGHT HAZARD IN ALL OF THE BUILDING COMMON SPACES WITH A DESIGN DENSITY OF 0.1 GPM / SQ.FT.
 - LIGHT HAZARD IN THE ATTIC AREA BY USING TYCO SPECIFIC APPLICATION ATTIC SPRINKLERS FLOWING AT THE MANUFACTURER'S RECOMMENDED PRESSURES AND CALCULATED FOR 1" SPRINKLER DISCHARGE AS PER TYCO AS PER TYCO SPECIFICATIONS OF TFR60, FIG. 20-B5.
- ORDINARY HAZARD GROUP IN KITCHEN AND MECHANICAL ROOM AREAS WITH A DESIGN DENSITY OF 0.2 GPM / SQ.FT.
- THE NEW SPRINKLER SYSTEM IS TO BE CONNECTED TO THE NEW 4" UNDERGROUND WATER SUPPLY WITH THE SPRINKLER ROOM INSTALLED AND FLUSHED BY A LICENSED PLUMBING CONTRACTOR AS PER NFPA 13, 2013.
- ALL ELECTRICAL CONNECTIONS FOR SPRINKLER COMPONENTS (ALARMS, TAMPER SWITCHES) TO BE DONE BY OTHERS.
- IN LOCALITIES SUBJECT TO FREEZING CONDITIONS, IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE HEAT THROUGHOUT WET SPRINKLER SYSTEMS AREAS AND IN ENCLOSURES FOR DRY PIPE, DELUGE AND OTHER TYPE OF VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS.
- THE SPRINKLER SPACING IS DETERMINED BY OCCUPANCY SPECIFICATIONS.
- THESE PLANS ARE INTENDED FOR SECURING WORK PERMITS. FURTHER MODIFICATIONS MAY BE REQUIRED FOR FINAL COORDINATION WITH THE HVAC EQUIPMENT OR OTHER TRADES. HOWEVER, SINCE THIS DESIGN TOOK INTO CONSIDERATION ALL AVAILABLE ARCHITECTURAL, STRUCTURAL AND MEP DATA, SUCH AS THE EXISTING CONDITIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL CONDITIONS AND THE CORRECTION OF ANY DISCREPANCIES.
- THESE DRAWINGS USE DIFFERENT COLORS TO DIFFERENTIATE BETWEEN ITEMS AND SYSTEMS USED. DRAWING REPRODUCTION SHALL BE IN COLORS.

Hydraulic Information - 1st Floor	
OCCUPANCY CLASSIFICATION	Ordinary Group I
DENSITY	0.150gpm/ft ² for 1500.00ft ² (Actual: 1683.72ft ²)
TOTAL HOSE STREAMS	295.50
DRY CAPACITY	426.57gal
TOTAL HEADS FLOWING	20
K-FACTOR	5.6
TOTAL WATER REQUIRED	759.59
TOTAL PRESSURE REQUIRED	46.189
BASE OF RISER (psf)	759.59
BASE OF RISER (psi)	46.189
SAFETY MARGIN (psi)	+15.934 (25.6%)
Hydraulic Information - 2nd Floor	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY	0.100gpm/ft ² for 1500.00ft ² (Actual: 2305.23ft ²)
TOTAL HOSE STREAMS	143.50
DRY CAPACITY	426.57gal
TOTAL HEADS FLOWING	35
K-FACTOR	5.6
TOTAL WATER REQUIRED	732.76
TOTAL PRESSURE REQUIRED	49.192
BASE OF RISER (psf)	732.76
BASE OF RISER (psi)	49.192
SAFETY MARGIN (psi)	+13.115 (21.0%)
Hydraulic Information - Attic	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY	0.100gpm/ft ² for 1500.00ft ² (Actual: 734.03ft ²)
TOTAL HOSE STREAMS	143.50
DRY CAPACITY	426.57gal
TOTAL HEADS FLOWING	11
K-FACTOR	5.6
TOTAL WATER REQUIRED	496.37
TOTAL PRESSURE REQUIRED	52.652
BASE OF RISER (psf)	496.37
BASE OF RISER (psi)	52.652
SAFETY MARGIN (psi)	+11.416 (17.8%)

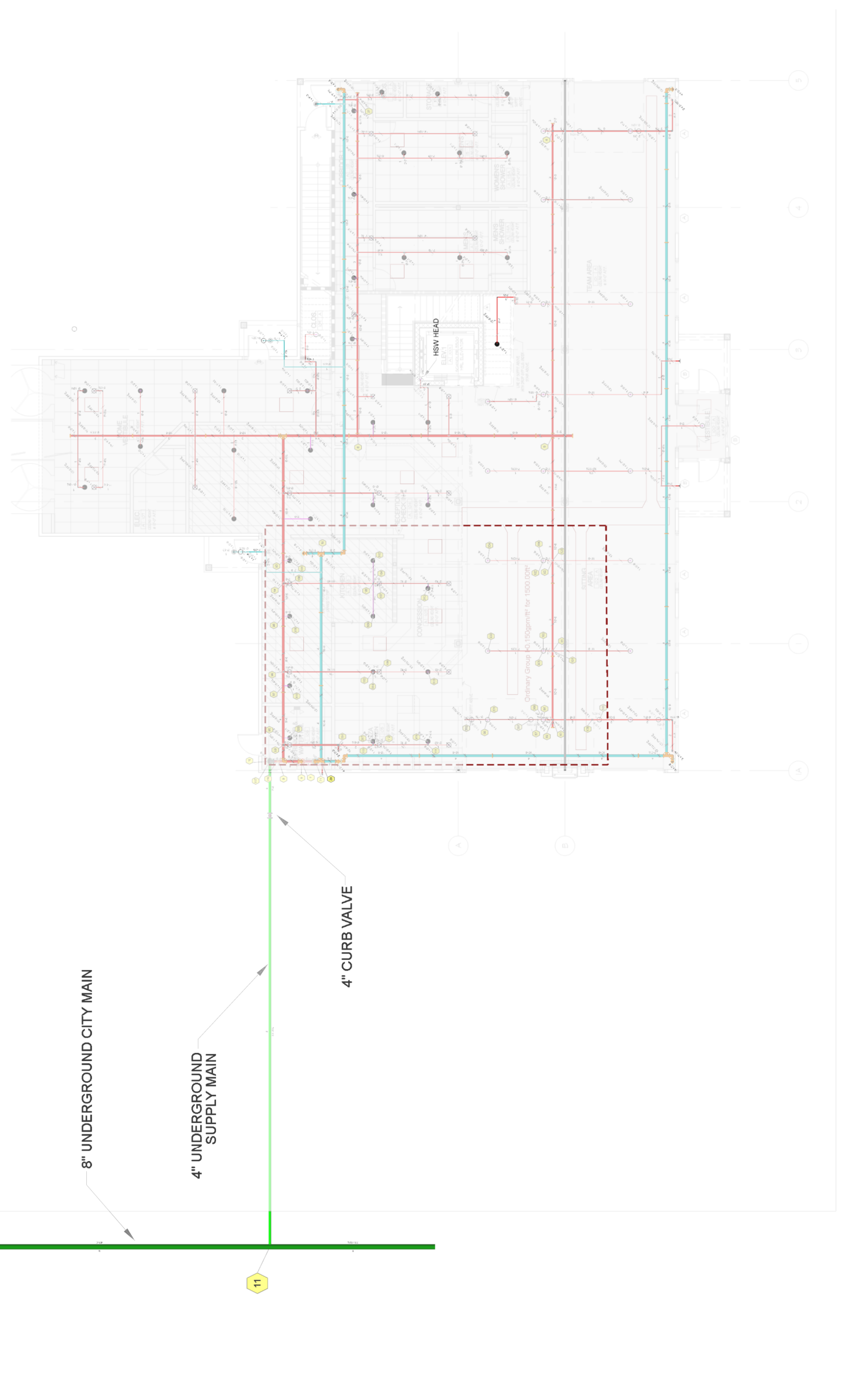
Sprinkler Legend									
Symbol/Manufacturer	SIN	Model	Quantity	k-Factor	Type	Size	Response	Finish	Temperature (Note)
Reliable	RA1414	F-FR56	39	5.6	Pendent	1/2"	Quick	Brass	155°F
Reliable	RA1425	F-FR56	61	5.6	Upright	1/2"	Quick	Brass	155°F
Reliable	R3734	Dry HSW F3QR56	2	5.6	Sidewall	1"	Quick	Brass	155°F
Wiking	V6950	Con	24	5.6	Upright	1/2"	Quick	Brass	200°F
Reliable	RA5114	Dry G5-56	51	5.6	Sidewall	1"	Quick	Brass	155°F
Globe	GL5643	Dry VSW	1	5.6	Sidewall	1"	Quick	Brass	212°F
Typo	TY3181	Attic B2	12	5.6	Upright	1/2"	Standard	Brass	200°F
Generic	TY3187	Attic H1P	12	5.6	Upright	1/2"	Standard	Brass	200°F
Typo	TY3190	Attic AP	3	5.6	Upright	1/2"	Quick	Brass	200°F
			Total =	214					



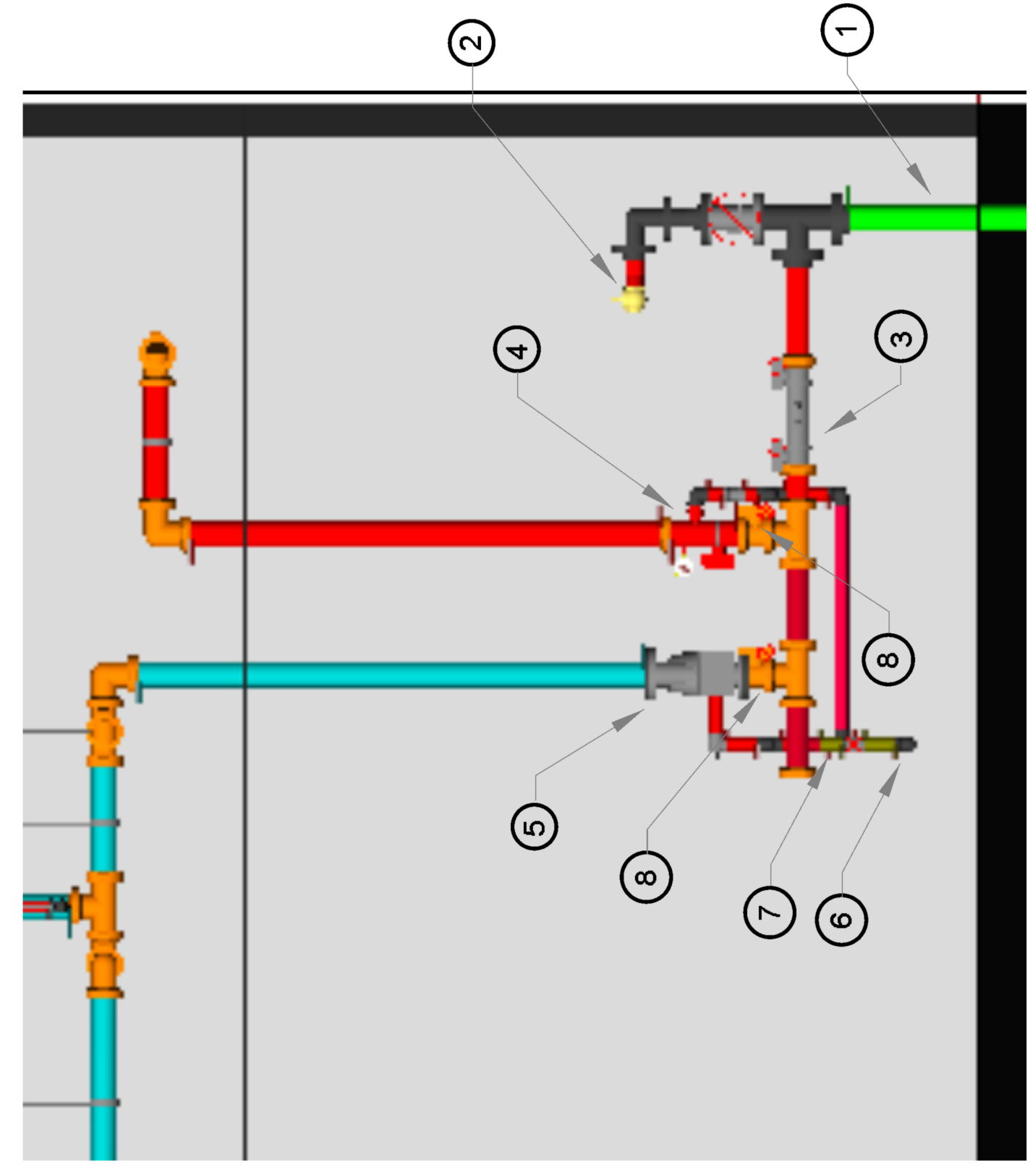
UNDERGROUND CONNECTION DETAIL
NTS



HANGER DETAILS
NTS



UNDERGROUND SUPPLY
SCALE: 1/16" = 1'-0"



SPRINKLER RISER SECTION
NTS

- ① - 4" UNDERGROUND SUPPLY
- ② - CONNECTION TO DOMESTIC WATER SYSTEM
- ③ - 4" DOUBLE CHECK DETECTOR ASSEMBLY WITH BY-PASS METER
- ④ - 4" RISER MANIFOLD
- ⑤ - 4" DRY PIPE VALVE
- ⑥ - 2" DRAIN PIPE
- ⑦ - 2" MAIN DRAIN
- ⑧ - 4" BUTTERFLY VALVE