

SPRINKLER GENERAL NOTES

1. ALL SPRINKLER WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF N.F.P.A.-13-2019 AND ALL LOCAL AUTHORITIES.
2. ALL SPRINKLER WORK SHALL COMPLY WITH BUILDING STANDARDS AND REQUIREMENTS.
3. ALL SPRINKLER HEADS SHALL BE INSTALLED AT CENTER OF TILE IF CEILING IS PROVIDED.
4. GENERAL CONTRACTOR SHALL COORDINATE FINAL FURNITURE/EQUIPMENT HEIGHT ELEVATIONS AND LOCATIONS WITH SPRINKLER INSTALLATION. ENGINEER SHALL BE NOTIFIED WHEN FURNITURE/EQUIPMENT IS LESS THAN 18" TO UNDERSIDE OF CEILING.
5. THE SPRINKLER SYSTEMS ARE TO BE HYDROSTATIC TESTED FOR A (2) HOUR MINIMUM AT 200 PSI. PRESSURE AND ARE TO BE WITNESSED BY AUTHORIZED BUILDING PERSONNEL. COORDINATE ALL TESTING WITH BUILDING MANAGER.
6. PIPES SIZES SHOWN ARE BASED ON DESIGN PIPING LAYOUTS ONLY. ACTUAL PIPE SIZES SHALL BE DETERMINED BY CONTRACTORS HYDRAULIC CALCULATIONS BASED ON HIS INSTALLATION DRAWINGS. CONTRACTOR SHALL ALLOW FOR THIS AND INCLUDE THIS IN HIS CONTRACT PRICE.
7. DRAWING INDICATES SPRINKLER SYSTEM DESIGN ONLY. CONTRACTOR RESPONSIBLE FOR OFFSETS, DROPS AND RISES FOR COORDINATION WITH OTHER TRADES.
8. G.C. SHALL BE RESPONSIBLE FOR ALL FINAL TESTS AND INSPECTIONS OF COMPLETED WORK REQUIRED BY THE BUILDING MANAGEMENT PRIOR TO OCCUPANCY OF SPACE.
9. ALL SPRINKLER WORK SHALL BE TESTED AND MADE OPERATIONAL PRIOR TO CARPET AND FURNITURE INSTALLATION. G.C. SHALL REPAIR AND/OR REPLACE ALL FINISHES DAMAGED BY DEFECTIVE SPRINKLER WORK AT HIS EXPENSE.
10. ALL BURNING, CUTTING, SOLDERING AND WELDING SHALL BE COORDINATED WITH BUILDING FIRE SYSTEMS WITH BUILDING MANAGEMENT, AS REQUIRED.
11. G.C. SHALL BE RESPONSIBLE FOR OBTAINING PERMITS AND APPROVALS REQUIRED BY BUILDING INSPECTOR AND FIRE MARSHALL IN CONJUNCTION WITH CHANGES TO EXISTING SPRINKLER SYSTEM.
12. REFER TO ENGINEERING DRAWINGS FOR SPRINKLER HEADS, LIGHT SENSORS AND FIRE DETECTION DEVICES.
13. ALL WORK TO BE DONE DURING THE HOURS DESIGNATED BY OWNER.
14. UPON COMPLETION OF ALL SPRINKLER WORK, CONTRACTOR SHALL TEST AND INSPECT ENTIRE SPRINKLER SYSTEM. ENTIRE SYSTEM SHALL BE FULLY OPERATIONAL AND APPROVED IN COMPLIANCE WITH ALL AHJ.
15. UPON SUCCESSFUL COMPLETION OF ALL TESTING, CONTRACTOR SHALL PRIME AND PAINT ALL EXPOSED SPRINKLER PIPING. COLOR AND FINISH SHALL BE AS PER ARCHITECT.
16. CONTRACTOR SHALL INCLUDE IN HIS BID THE COST TO PROVIDE (5) FIVE ADDITIONAL SPRINKLERS INSTALLED. EXACT LOCATIONS OF THESE SPRINKLER HEADS SHALL BE DETERMINED IN FIELD.
17. FOR SPRINKLER WORK DONE IN ACCORDANCE WITH THE REQUIREMENTS OF N.F.P.A.-13-2019, HYDROSTATIC TESTS IN ACCORDANCE WITH REFERENCE STANDARD NFPA 13-2019, AS MODIFIED FOR NEW JERSEY ARE NECESSARY.
18. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND SHALL INSTALL NEW WORK TO CLEAR DUCTWORK AND LIGHTING FIXTURES.
19. ALL SPRINKLER WORK SHALL COMPLY WITH BUILDING STANDARDS AND REQUIREMENTS.
20. DRAWING INDICATES SPRINKLER SYSTEM DESIGN ONLY. CONTRACTOR RESPONSIBLE FOR OFFSETS, DROPS AND RISES FOR COORDINATION WITH OTHER TRADES.
21. PROVIDE AUXILIARY DRAINS AT TRAPPED SECTIONS OF PIPING AS REQUIRED BY NFPA.
22. COMPOSITE DRAWINGS
CONTRACTOR SHALL BE GIVEN A SEPIA TRANSPARENCIES TO IMPOSE THEIR WORK FOR A COORDINATED ALLOCATION OF SPACE. PROCEDURE SHALL INCLUDE HVAC CONTRACTOR TO INDICATE DUCT WORK, PIPING, STRUCTURAL AND ARCHITECTURAL DETAILS. SEPIAS SHALL BE GIVEN TO PLUMBING, SPRINKLER AND ELECTRICAL TRADES WHO WILL DRAW HIS WORK ON DRAWINGS. HVAC CONTRACTORS SHALL HOLD A COORDINATION MEETING WITH ALL CONTRACTORS TO ELIMINATE INTERFERENCE OR CONFLICTS IN INSTALLING WORK. IF UNABLE TO EACH AGREEMENT ISSUE, ARCHITECT SHALL MAKE BINDING DECISION.
23. CONTRACTOR SHALL COORDINATE SPRINKLER MAIN AND BRANCHES WITH NEW CONSTRUCTION TO AVOID CONFLICTS WITH CEILING HEIGHTS, DUCTWORK, LIGHTING FIXTURES, BEAMS. CONTRACTOR TO ADJUST PIPING ACCORDINGLY TO ACCOMMODATE NEW CONSTRUCTION.

SPRINKLER DRAWING LIST

- SP001.00 SPRINKLER NOTES, SYMBOLS & SPECIFICATIONS
- SP101.00 SPRINKLER PLAN
- SP201.00 SPRINKLER DETAILS

SPACING BETWEEN SPRINKLER HEADS

LIGHT HAZARD: 15' MAX.
ORDINARY HAZARD: 15' MAX

NOTE: MAXIMUM DISTANCE BETWEEN SPRINKLER HEADS & WALLS IS ½ THE DISTANCE BETWEEN HEADS.

PROTECTION AREA OF SPRINKLER HEADS

LIGHT HAZARD : 225 SQ. FT.
ORDINARY HAZARD : 130 SQ. FT.


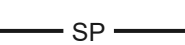


GENERAL NOTES:

1. FOR SPRINKLER WORK ONLY.
2. ALL SPRINKLER HEADS MEET DESIGN CRITERIA PER COVERAGE.

BUILDING DEPARTMENT SPRINKLER NOTES

1. THE INSTALLATION, COMPONENTS, SIZING, SPACING, CLEARANCES, POSITION AND TYPE OF SYSTEMS SHALL CONFORM TO THE NEW JERSEY UCC BUILDING SUBCODE 2021 (ADOPTS WITH AMENDMENTS INTERNATIONAL BUILDING CODE 2021), SECTION 903.
2. ONLY APPROVED MATERIALS SHALL BE USED AS PER INTERNATIONAL BUILDING CODE 2021, SECTION 104.9.
3. DIRECT CONNECTION OF SPRINKLERS TO THE PUBLIC WATER SYSTEM SHALL CONFORM TO INTERNATIONAL BUILDING CODE 2021, SECTION 903.3.5.
4. SPRINKLER SHALL BE PROTECTED AGAINST FREEZING AND INJURY AS PER NFPA 13-2019 CHAPTER 6 SECTION 6.4.2.
5. THE OCCUPANCY OF THE AREAS TO BE SPRINKLERED IN ACCORDANCE WITH 2INTERNATIONAL BUILDING CODE 2021, SECTION 903.2.
6. PIPING, FITTINGS, SPECIFICATIONS, PIPE SCHEDULES, SYSTEM TEST PIPES, PROTECTION AGAINST CORROSION, DAMAGE, VALVES, HANGERS, SPRINKLERS GUARDS AND SHIELDS SHALL BE AS PER WITH INTERNATIONAL BUILDING CODE 2021, SECTION 903.
7. STOCK OF EXTRA SPRINKLERS WILL BE FURNISHED AS PER NFPA 13-2019 SECTION 16.2.7 (REQUIRED FOR EACH TEMPERATURE RATING).
8. SPRINKLER ALARM SHALL BE IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE 2021, SECTION 907.
9. SPACING, LOCATION AND POSITION OF SPRINKLER WILL BE AS PER INTERNATIONAL BUILDING CODE 2021, SECTION 903.3.
10. ALL BLIND SPACES EXCEEDING 6" IN WIDTH OR DEPTH WHICH CONTAIN COMBUSTIBLE MATERIAL WILL BE SPRINKLERED.
11. ALL PIPE PASSING THROUGH WALLS WILL COMPLY WITH SECTION INTERNATIONAL BUILDING CODE 2021, SECTION 714.
12. THERE IS NO HIGH PILED STORAGE AS DEFINED IN INTERNATIONAL BUILDING CODE 2021, SECTION 3201.
13. DISTANCE OF SPRINKLERS FROM HEAT SOURCE SHALL BE AS PER NFPA 13-2019 SECTION 9.4.2.5.
14. THIS APPLICATION IS NOT FILED AS A RESULT OF ACTION BY THE FIRE COMMISSIONER AS AUTHORIZED BY BS & A TO MODIFY THE CERTIFICATE OF OCCUPANCY NOR IS SUCH ACTION PENDING.
15. ALL VALVES SHALL BE IDENTIFIED AS REQUIRED BY NFPA 13-2019 , SECTION 7.6.
16. A ONE PIECE REDUCING FITTING OF GOOD DESIGN SHOULD BE USED WHEREVER A CHANGE IS MADE IN THE SIZE OF PIPE, AS PER NFPA 13-2019 SECTION 16.8.5
17. ALL VALVES ON CONNECTIONS TO WATER SUPPLIES TO SPRINKLER SHALL BE APPROVED O.S. & Y. OR APPROVED INDICATOR TYPE.
18. DRAIN VALVES AND TEST VALVES SHALL BE APPROVED TYPE AS PER NFPA-13-2019 SECTION 16.9.1.
19. HANGERS SHOULD BE SUPPORTED BY WROUGHT IRON U TYPE OR APPROVED ADJUSTABLE HANGERS. HANGERS SHALL BE OF THE TYPE APPROVED FOR USE WITH THE PIPE OR TUBE INVOLVED, AS PER NFPA-13-2019 SECTION 17.
20. TEMPERATURE RATING SHALL COMPLY WITH NFPA-13-2019 SECTION 9.4.2.
21. 18" MINIMUM CLEARANCE TO BELOW SPRINKLER DEFLECTOR AS PER NFPA-13-2019 SECTION 9.5.6
24. MINIMUM BRANCH PIPE SIZE TO BE ONE INCH (1").
25. THIS APPLICATION IS MADE ONLY FOR WORK INDICATED ON THE SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
26. WET SPRINKLER SYSTEM SUBJECTED TO FREEZING SHOULD COMPLY WITH NFPA 13-2019 SEC. 8.6.
27. INSPECTION AND TESTS OF SPRINKLERS SHALL BE CONDUCTED AS PER INTERNATIONAL BUILDING CODE 2021, SECTION 904.4.

SPRINKLER LEGENDS AND ABBREVIATIONS

	NEW CONCEALED PENDENT SPRINKLER HEAD
	NEW SPRINKLER PIPING
	POINT OF CONNECTION
	NOT IN CONTRACT

HAZARD CLASSIFICATION AND DESIGN DENSITY

OCCUPANCY: LIGHT HAZARD MINIMUM DESIGN DENSITY: 0.10 GPM/SQ. FT.
OCCUPANCY: ORDINARY HAZARD MINIMUM DESIGN DENSITY: 0.15 GPM/SQ. FT.

SCOPE OF WORK

1. FOR AUTOMATIC SPRINKLER WORK, THE SPRINKLER SYSTEM IS DESIGNED AS PER NFPA 13.
2. SCOPE IS FOR FIRST FLOOR OFFICE FITOUT SPACE.

DESIGN CRITERIA SUMMARY

PROJECT DESIGNED BY HYDRAULIC CALCULATION AND NFPA13.

SPRINKLER SPECIFICATIONS

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. THE SPRINKLER CONTRACTOR SHALL BE A LICENSED, AUTHORIZED INSTALLER OF SPRINKLER SYSTEMS AND SHALL HAVE HAD A MINIMUM OF FIVE YEARS EXPERIENCE IN THE INSTALLATION OF SPRINKLER SYSTEMS IN THE CITY CODE.
- B. BEFORE SUBMITTING HIS BID, THE SPRINKLER CONTRACTOR SHALL VISIT THE SITE AND SHALL FULLY FAMILIARIZE HIMSELF WITH, AND BECOME FAMILIAR WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. CONTRACTOR SHALL PERFORM THIS PRIOR TO SUBMITTING HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
- C. UPON REVIEW OF THE DRAWINGS AND SPECIFICATIONS, PRIOR TO SUBMITTING HIS PROPOSAL, THE SPRINKLER CONTRACTOR SHALL INFORM ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES OR REQUEST CLARIFICATION IN WRITING, IF NECESSARY, CONCERNING THE INTENT OF THE PLANS AND SPECIFICATIONS TO PROVIDE A COMPLETE SPRINKLER SYSTEM INSTALLATION. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OF MATERIALS SHOULD SUCH PROCEDURE NOT BE FOLLOWED.
- D. THE SCHEDULING OF THE SPRINKLER WORK SHALL BE COORDINATED WITH BUILDING MANAGEMENT, WITH OTHER CONTRACTORS AND WITH THE ENGINEER.
- E. NECESSARY SHUT-DOWNS OF BASE BUILDING SPRINKLER SYSTEM MUST BE COORDINATED WITH BUILDING MANAGEMENT. SHUT-DOWNS OF BASE BUILDING SYSTEMS SHALL TAKE PLACE AFTER OR BEFORE NORMAL BUSINESS HOURS AND SHALL BE CONSIDERED OVERTIME WORK. THE CONTRACTOR MUST GIVE BUILDING MANAGEMENT AND CITY FIRE DEPARTMENT 48 HOURS NOTICE PRIOR TO SHUT-DOWN OF SPRINKLER, OR OTHER SYSTEMS.

1.02 WORK INCLUDED

- A. WORK SHALL INCLUDE ALL SPRINKLER WORK FURNISHED AND INSTALLED AS INDICATED ON THE PLANS AND AS SPECIFIED HEREIN.

1. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF THE CITY BUILDING CODE, N.F.P.A. STANDARD 13-2019, NEW JERSEY FIRE DEPARTMENT AND OWNERS INSURANCE RATING ORGANIZATION.
2. PROVIDE COMPLETE NEW SPRINKLER SYSTEM CONNECTING TO EXISTING SPRINKLER SYSTEM ALARM CHECK VALVE ASSEMBLY.
3. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED, ANY DIMENSIONS NOT SHOWN SHALL BE OBTAINED FROM FIELD MEASUREMENTS.
4. PROVIDE COMPUTER GENERATED HYDRAULIC CALCULATIONS IN ACCORDANCE WITH MONTVALE, NEW JERSEY STATE BUILDING CODE OR LOCAL AHJ. BUILDING DEPARTMENT AND NFPA STANDARDS.

1.03 SHOP DRAWINGS AND SUBMITTALS

- A. THE CONTRACTOR SHALL SUBMIT, FOR APPROVAL, FULLY COORDINATED SHOP DRAWINGS, CAPACITY, DATA, AND CATALOG CUTS OF THE FOLLOWING:

1. PIPE AND FITTINGS
2. VALVES
3. HANGERS AND SUPPORTS
4. SPRINKLER PIPING LAYOUT
5. TESTS
6. SPRINKLER HEADS
7. HYDRAULIC CALCULATIONS

- A. THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED. CONTRACTOR SHALL SUBMIT CALCULATIONS WITH SHOP DRAWINGS. CALCULATIONS SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF NFPA 13-2019, AND INTERNATIONAL BUILDING CODE.

- B. ADD APPROPRIATE HOSE ALLOWANCE.

- C. THE SPRINKLER CONTRACTOR SHALL OBTAIN THE LATEST FIRE PUMP TEST AT THE SITE TO VERIFY THE AVAILABLE WATER SUPPLY.

1.04 BUILDING DEPARTMENT FILING, PERMITS AND CERTIFICATES

- A. THE SPRINKLER CONTRACTOR SHALL FILE ALL REQUIRED DRAWINGS AND HYDRAULIC CALCULATIONS WITH THE BUILDING DEPARTMENT AND BE RESPONSIBLE FOR OBTAINING FINAL APPROVAL.

- B. ARRANGE FOR INSPECTION AND TESTS OF ANY AND ALL PARTS OF THE WORK AS REQUIRED BY AUTHORITIES HAVING JURISDICTION AND PAY ALL CHARGES FOR SAME.

1.05 INSPECTION AND TESTING

- A. THE SPRINKLER SYSTEM SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY BUILDING CODE FIRE DEPARTMENT INSPECTOR.
- B. THE SPRINKLER SYSTEM SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE TEST FOR A PERIOD OF TWO HOURS AT A PRESSURE OF AT LEAST 200 PSIG OR 50 PSI IN EXCESS OF THE MAXIMUM PRESSURE TO BE MAINTAINED WHEN THE MAXIMUM PRESSURE IN THE SYSTEM IS IN EXCESS OF 150 PSI AS PER NFPA.
- C. THE BUILDING DEPARTMENT SHALL BE NOTIFIED THAT THE SYSTEM IS READY FOR REINSPECTION AND TESTING. THE BUILDING DEPARTMENT INSPECTOR SHALL WITNESS THE TEST. FINAL APPROVAL OF THE SPRINKLER SYSTEM SHALL BE OBTAINED FROM BUILDING DEPARTMENT, AND FIRE DEPARTMENT.

PART 2 - MATERIALS

2.01 GENERAL

- A. THE SPRINKLER SYSTEM SHALL BE COMPLETE WITH ALL PIPE, FITTINGS, VALVES, DRAINAGE SYSTEM AND VALVES, HANGERS AND SUPPORTS. ALSO, MISCELLANEOUS WORK ITEMS, SUCH AS, SIGNS AS REQUIRED, VALVE TAGS, ETC., AND ALL OTHER RELATED EQUIPMENT, APPARATUS AND MATERIAL ITEMS NECESSARY FOR COMPLETE, APPROVED TYPE SYSTEM, READY FOR FUTURE EXTENSION.

- B. ALL PIPE, FITTINGS, HANGERS, SUPPORTS, SPRINKLER HEADS, ETC., SHALL CONFORM TO THE CITY BUILDING CODE AND NATIONAL FIRE PROTECTION ASSOCIATION'S REQUIREMENTS AS TO TYPES OF MATERIALS, ARRANGEMENT, SIZES AND INSTALLATION. PIPING PENETRATING FIRE RATED PARTITIONS SHALL HAVE OPENING SEALED WITH U.L. APPROVED FIREPROOF SEALANT.

2.02 SPRINKLER PIPING

- A. ALL SPRINKLER PIPING SHALL BE SCHEDULE 40 IN ACCORDANCE WITH NFPA 13. PIPE SHALL BE UL/FM APPROVED.
- B. STEEL PIPE SHALL BE BETHLEHEM STEEL CO., ALLIED TUBE, BERGER INDUSTRIES OR APPROVED.
- C. AS PER NFPA 13, PIPE OR TUBE USED IN SPRINKLER SYSTEMS SHALL BE OF THE MATERIALS SPECIFIED IN SECTION 16.3.
- D. AS PER NFPA 13, FITTINGS USED IN SPRINKLER SYSTEMS SHALL BE OF THE MATERIALS LISTED IN TABLE 6.4.1. FITTING SHALL BE UL/FM APPROVED, CONTRACTOR.
- E. NONMETALLIC PIPES & FITTINGS USED IN MULTIPURPOSE PIPING SYSTEMS NOT EQUIPPED WITH A FIRE DEPARTMENT CONNECTION SHALL BE DESIGNED TO WITHSTAND A WORKING PRESSURE OF NOT LESS THAN 150 PSI AT 120°F.

2.03 CUTTING AND PATCHING

DO ALL CUTTING AND CORE DRILLING NECESSARY FOR THE INSTALLATION OF SPRINKLER WORK ACCURATELY. LAYOUT WORK FOR WHICH CUTTING IS REQUIRED. PATCH AND RESTORE ANY DAMAGE WORK TO LIKE NEW CONDITION.

2.04 CUTTING AND PATCHING

1. DO ALL CUTTING AND CORE DRILLING NECESSARY FOR THE INSTALLATION OF SPRINKLER WORK. ACCURATELY LAYOUT WORK FOR WHICH CUTTING IS REQUIRED. PATCH AND RESTORE ANY DAMAGE WORK TO LIKE NEW CONDITION.
2. FOR REPLACEMENT OF THE WORK REMOVED, MATCH EXISTING IN NATURE, CONSTRUCTION AND FINISH.
3. MAINTAIN THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH COVERED BY THE WORK, REMOVE ALL SURPLUS MATERIALS, TOOLS ETC. AND LEAVE PREMISES CLEAN.

2.05 FIRE STOPPING

INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURERS PUBLISHED DIRECTIONS AND PER FIRE TESTED DESIGNS THAT HAVE BEEN ACCEPTED BY THE APPROPRIATE CODE AUTHORITY HAVING JURISDICTION.

2.06 PHASING

PHASING SHALL BE COORDINATED BETWEEN THE SPRINKLER CONTRACTOR AND GENERAL CONTRACTOR. SPRINKLER INSTALLATION SHALL BE PHASED IN A MANNER WHICH WILL ALLOW FULL OCCUPANCY OF THE EXISTING FACILITY WHILE THE INSTALLATION IS IN PROGRESS.

2.06 ALTERNATES/SUBSTITUTIONS

CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY CONTRACTOR PROPOSED SUBSTITUTIONS OF THE MATERIALS OR METHODS OF INSTALLATION FROM THAT SPECIFIED. THESE ALTERATIONS SHALL BE LISTED ON THE PROPOSAL AS CONTRACTOR ALTERNATIVE.

2.07 LEAK DAMAGE

THE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE DURING THE INSTALLATION AND TESTING PERIODS OF THE SPRINKLER SYSTEM FOR ANY LOSS OR DAMAGE TO THE WORK OF OTHERS, TO THE BUILDING, IT'S CONTENTS ETC. CAUSED BY LEAKS IN THE EQUIPMENT. BY UNPLUGGED OR DISCONNECTED PIPES, FITTINGS ETC. OR BY OVERFLOW, AND SHALL PAY FOR THE NECESSARY REPLACEMENTS OR REPAIRS TO THE WORK OF OTHERS, DAMAGED BY SUCH LEAKAGE.

2.08 INSERTS, HANGERS, ETC.

- A. ALL SPRINKLER PIPING SHALL BE SUBSTANTIALLY SUPPORTED AND SHALL COMPLY WITH THE STANDARDS FOR THE NATIONAL FIRE PROTECTION ASSOCIATION FOR THE INSTALLATION OF SPRINKLER SYSTEMS AND AS REQUIRED BY THE CITY BUILDING CODE.

- B. HANGERS AND THEIR COMPONENTS SHALL BE FERROUS. HANGERS SHALL BE ADJUSTABLE FLAT IRON TYPE OF CLEVIS TYPE.

- C. SPRINKLER PIPING OR HANGERS SHALL NOT BE USED TO SUPPORT NON-SYSTEM COMPONENTS.

- D. SPRINKLER PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE WHICH MUST SUPPORT THE ADDED LOAD OF THE WATER-FILLED PIPE PLUS A MINIMUM OF 250 LBS. APPLIED AT THE POINT OF HANGING. CONTRACTOR SHALL SUBMIT DETAIL OF SUPPORT FOR REVIEW AND APPROVAL.

- E. SPRINKLER PIPING SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING SHEATHING.

- F. WHEN SPRINKLER PIPING IS INSTALLED BELOW DUCTWORK, PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE, NOT FROM THE DUCTWORK.

- G. MAXIMUM DISTANCE BETWEEN HANGERS SHALL NOT EXCEED 12 FT. FOR 1 AND 1-1/4" SIZES NOR 15' FOR SIZES 1-1/2" AND LARGER.

- H. EXPANSION SHIELDS FOR SUPPORTING PIPES UNDER CONCRETE CONSTRUCTION MAYBE USED IN A HORIZONTAL POSITION IN THE SIDES OF BEAMS. IN CONCRETE HAVING GRAVEL OR CRUSHED STONE AGGREGATE, EXPANSION SHIELDS MAY BE USED IN THE VERTICAL POSITION TO SUPPORT PIPES 4" OR LESS IN DIAMETER.

2.09 ESCUTCHEONS

PROVIDE ESCUTCHEONS ON ALL EXPOSED PIPING PASSING THROUGH WALLS, PARTITIONS, FLOORS AND CEILINGS. ESCUTCHEON SHALL BE HELD IN PLACE BY INTERNAL TENSION OR SET SCREW.

2.10 AS-BUILT DRAWINGS

PREPARE AND SUBMIT "AS BUILT" DRAWINGS AT THE COMPLETION OF THE PROJECT.

2.11 SPRINKLER HEADS

- A. SPRINKLERS SHALL BE RATED FOR ORDINARY TEMPERATURES (155 DEG. F) EXCEPT AS REQUIRED NEAR HEATERS OR LOCATIONS WHERE ELEVATED TEMPERATURES MAY NORMALLY BE EXPECTED OR AS OTHERWISE INDICATED ON THE CONTRACT DRAWINGS.
- B. SPRINKLER HEADS SHALL BE BY TYCO SPRINKLER CO., INC. MANUFACTURE OR APPROVED EQUAL, UL AND FM APPROVED, AS FOLLOWS:

1. SPRINKLER HEADS IN FINISHED CEILINGS WITH CONCEALED PIPING SHALL BE SAME AS EXISTING SPRINKLER MODEL.
2. CONCEALED SPRINKLER HEADS SHOULD BE AUTOMATIC TYCO MODEL TY3531.
3. UPRIGHT SPRINKLER HEADS SHOULD BE AUTOMATIC TYCO MODEL TY3121.
4. PROVIDE SPARE SPRINKLER EMERGENCY CABINETS CONFORMING TO NFPA 13.
5. SPRINKLER EMERGENCY CABINETS SHALL BE OF TYCO SPRINKLER CO., INC. OR APPROVED EQUAL, UL AND FM APPROVED.
6. CABINET SHALL BE CONSTRUCTED OF 22 GAUGE STEEL WITH PRIME COAT AND MANUFACTURER'S BAKED ENAMEL FINISH IN COLOR SELECTED BY THE ARCHITECT.
7. CABINET SHALL CONTAIN A MINIMUM OF 6 SPRINKLER HEADS OF EACH TYPE EMPLOYED.

2.12 PRESSURE GAUGE

- A. ASHCROFT SERIES 1079, OR APPROVED OTHER, 4-1/2" DIAMETER, 0-300 P.S.I. RANGE, 5 P.S.I. INTERVALS.

PART 3 - EXECUTION

3.01 GUARANTEE

- A. GUARANTEE FOR A PERIOD OF ONE (1) YEAR FORM THE DATE OF ACCEPTANCE BY THE OWNER, ALL MATERIALS, APPARATUS AND WORKMANSHIP WHETHER FURNISHED BY HIMSELF OR BY HIS SUBCONTRACTORS AND HE SHALL REPLACE OR REPAIR IN A MANNER APPROVED BY THE ARCHITECTS, WITHOUT COST TO THE OWNER, ANY PART OR PARTS OF THE WORK WHICH MAY PROVE DEFECTIVE OR UNSATISFACTORY WITH IN THE PERIOD OF THE GUARANTEE.

3.02 INSTALLATION

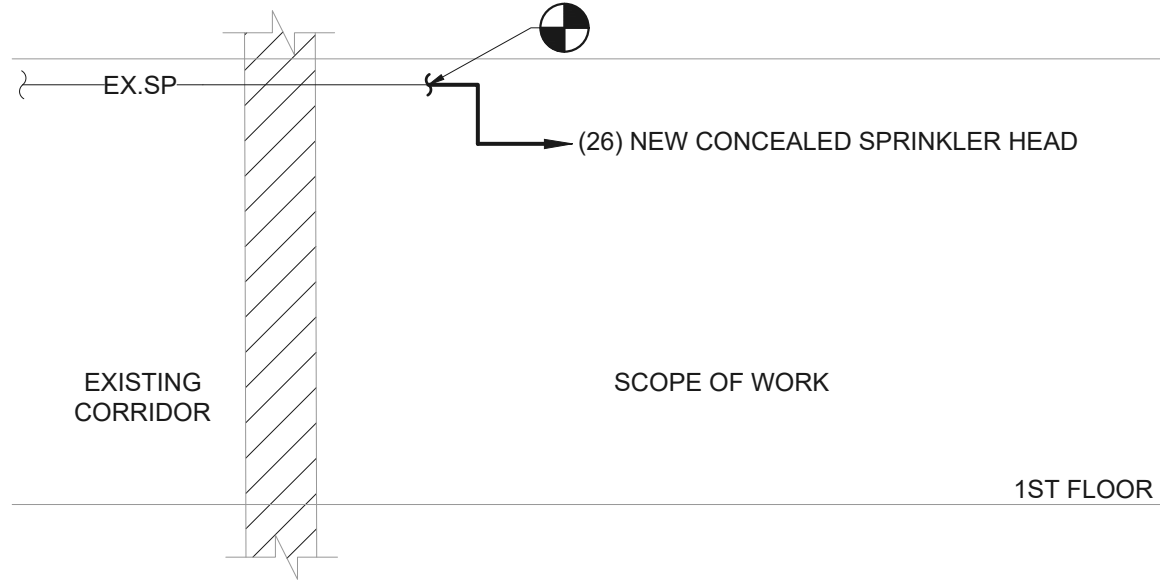
A. PIPING

3. INSTALL PIPING AS SHOWN ON THE CONTRACT DRAWINGS AND STRAIGHT AND DIRECT AS POSSIBLE, FORMING RIGHT ANGLES OR PARALLEL LINES WITH BUILDING WALLS, NEATLY SPACED, WITH RISERS PLUMB AND TRUE.
4. SPRINKLER PIPING SHALL BE INSTALLED SO THAT THE SYSTEM CAN BE DRAINED.
5. PIPE SHALL BE REMOVED BY REAMING.
6. BEFORE INSTALLING PIPE, THOROUGHLY CLEAN THE INSIDE FREE OF CUTTING AND FOREIGN MATTER. CUT ALL PIPE SQUARE AND SMOOTH AND MAKE UP ALL JOINTS TO REQUIRED LIMITS.


B. PIPE JOINTS

1. THREADED JOINTS SHALL BE MADE UP OF TIGHT USING PIPE JOINT TEFLON COMPOUND OR TAPE, APPLIED ON THE MALE THREADS ONLY.

SPRINKLER RISER DIAGRAM



SPRINKLER SCHEDULE

SYMBOL	NAME	COVERAGE	AREA	METAL	TEMPERATURE (°F)	RESPONSE	K-FACTOR	NPT	MFG	MODEL#	APPROVALS
	CONCEALED PENDENT	STANDARD	L/H/OH CEILING	BRASS	155	QUICK	5.6	½"	TYCO	SERIES RF-II TY3531	FM APPROVED

NOTE: 1. COORDINATE ALL SPRINKLER COLOR FINISHES WITH ARCHITECT.



GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY TO INSTALL ALL SPRINKLER HEADS TO BE MAX. 12" FROM CEILING.
2. ALL NEW SPRINKLER HEADS LOCATION TO BE COORDINATED WITH LIGHTING AND DIFFUSERS TO AVOID CONFLICT.
3. ALL SPRINKLER HEADS & PIPING TO BE COORDINATED OTHER TRADES.
4. ANY WORK SHOWN ON THE DRAWINGS AND NOT PARTICULARLY DESCRIBED IN THE SPECIFICATIONS OR DETAILS, OR ANY WORK WHICH MAY BE DEEMED NECESSARY TO COMPLETE THE CONTRACT SHALL BE PROVIDED BY THE CONTRACTOR AS PART OF THIS CONTRACT.
5. FOR PURPOSES OF CLEARNESS AND LEGIBILITY, SPRINKLER DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND SIZE AND LOCATION OF EQUIPMENT ARE DRAWN TO SCALE WHEREVER POSSIBLE. THE DRAWING INDICATE SIZE, CONNECTION POINTS, AND ROUTED OF PIPES. IT IS NOT INTENDED, HOWEVER, THAT ALL OFFSETS, RISES AND DROPS ARE SHOWN. PROVIDE PIPING AS REQUIRED TO FIT STRUCTURE, AVOID OBSTRUCTIONS, AND RETAIN CLEARANCES, HEADROOM OPENINGS AND PASSAGEWAYS. ALL PENDANT SPRINKLERS MUST BE SPACED AS FOLLOWS -

MAXIMUM 7.5' FROM WALL
MAXIMUM DISTANCE BETWEEN 2 SPRINKLER HEADS IS 15'.
MINIMUM DISTANCE BETWEEN 2 SPRINKLER HEADS IS 6'.
6. COVERAGE AREA PER SPRINKLER SHALL BE MAX. 225 SQ.FT FOR LIGHT HAZARD AND 130 SQ.FT. FOR ORDINARY HAZARD.
7. ALL SPRINKLER HEADS MEET DESIGN CRITERIA PER COVERAGE.
8. AUXILIARY DRAIN SHALL BE PROVIDED AT THE TRAPPED SECTIONS.
9. FOR SPRINKLER WORK ONLY.
10. ALL BRANCH TAKE-OFF FOR EACH SPRINKLER TO BE MIN. 1".
11. ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE RULES, REGULATIONS, AND ALTERATION GUIDELINES REQUIREMENTS.
12. 'AS-BUILT' DRAWINGS MUST BE SUBMITTED TO THE BUILDING MANAGEMENT IN BOTH HARD COPY AND AUTOCAD FORMAT.
13. ALL WORK TO BE LOCATED OUTSIDE OF THE SCOPE SPACE SHALL BE REVIEWED AND APPROVED BY BUILDING MANAGEMENT PRIOR TO INSTALLATION

KEYED NOTES:

- 1 NEW SPRINKLER PIPE CONNECT TO EXISTING SPRINKLER PIPING IN THE CORRIDOR. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION & SIZES OF EXISTING SPRINKLER PIPING UPGRADE IF REQUIRED.
- 2 CONTRACTOR TO PROVIDE NEW SPRINKLER PIPING AS PER SPRINKLER HEAD LOCATION SHOWN ON THE PLAN. CONTRACTOR TO MAKE SURE SPRINKLER PIPE SIZING AS PER NFPA 13.
- 3 CONTRACTOR SHALL ENSURE THERE ARE NO COMBUSTIBLE MATERIALS IN THE ABOVE CEILING SPACE TO PREVENT THE NEED FOR SPRINKLERS IN THAT AREA AS PER NFPA 13.

CONTRACTOR'S NOTE:

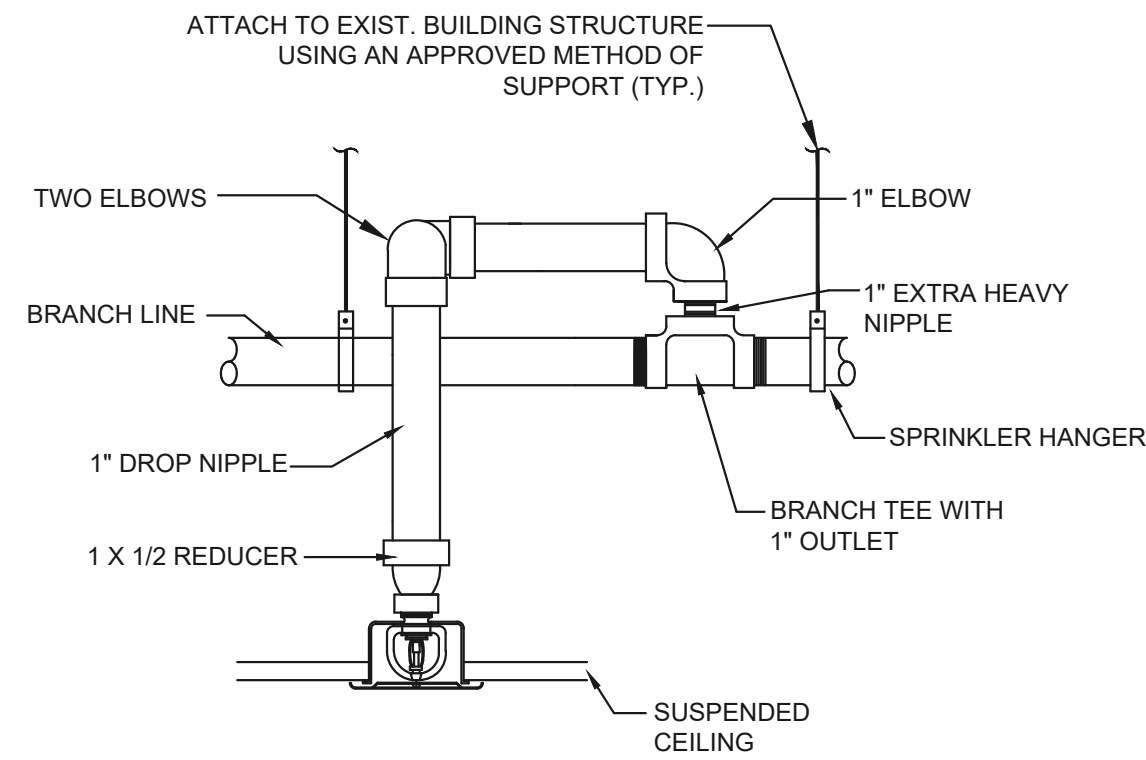
THE SPRINKLER SUBCONTRACTOR IS REQUIRED TO VISIT THE SITE DURING BIDDING AND VERIFY LOCATION(S) OF WHERE SPRINKLER PIPING/EQUIPMENT IS INDICATED TO BE PLACED, THEIR ROUTE(S) AND POSSIBLE INTERSECTION(S) WITH OTHER EQUIPMENT / WORK / STRUCTURE (I.E. STEEL BEAMS, ETC.) TO BE INSTALLED AND/OR 'EXISTING TO REMAIN'. THIS SUBCONTRACTOR IS TO VERIFY HEIGHTS 'TO BE INSTALLED' TO MAINTAIN DESIGNED CEILING HEIGHTS AND HEAD ROOM. ANY DISCREPANCIES BETWEEN DESIGNED AND ACTUAL TO BE TOLD TO THE GENERAL CONTRACTOR AND INDICATED ON THE BID FORM.

HAZARD CLASSIFICATION AND DESIGN DENSITY

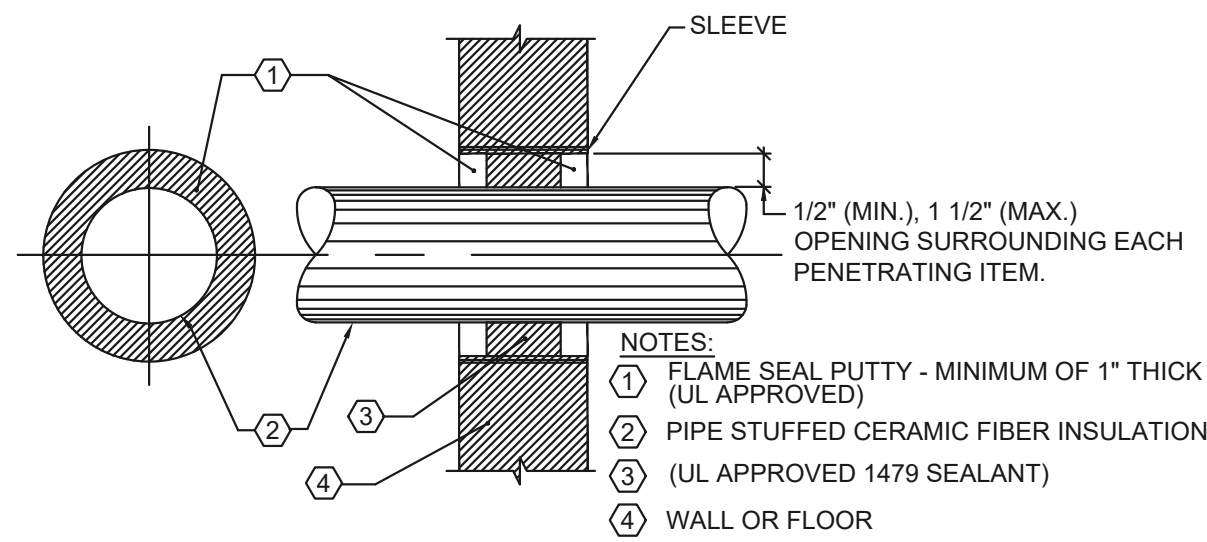
OCCUPANCY:	LIGHT HAZARD
MINIMUM DESIGN DENSITY:	0.10 GPM/SQ. FT.
OCCUPANCY:	ORDINARY HAZARD
MINIMUM DESIGN DENSITY:	0.15 GPM/SQ. FT.

SPRINKLER HEAD COUNT

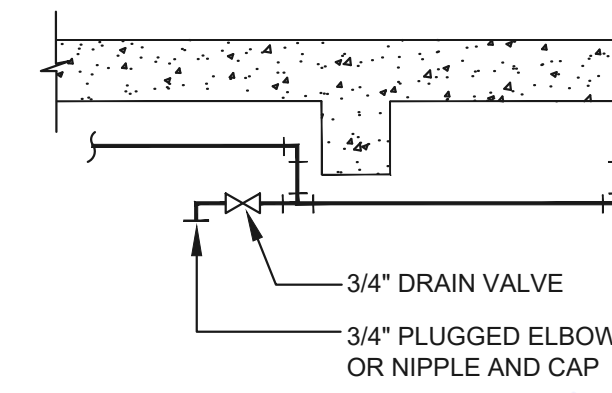
NEW CONCEALED SPRINKLER	26
TOTAL SPRINKLER	26



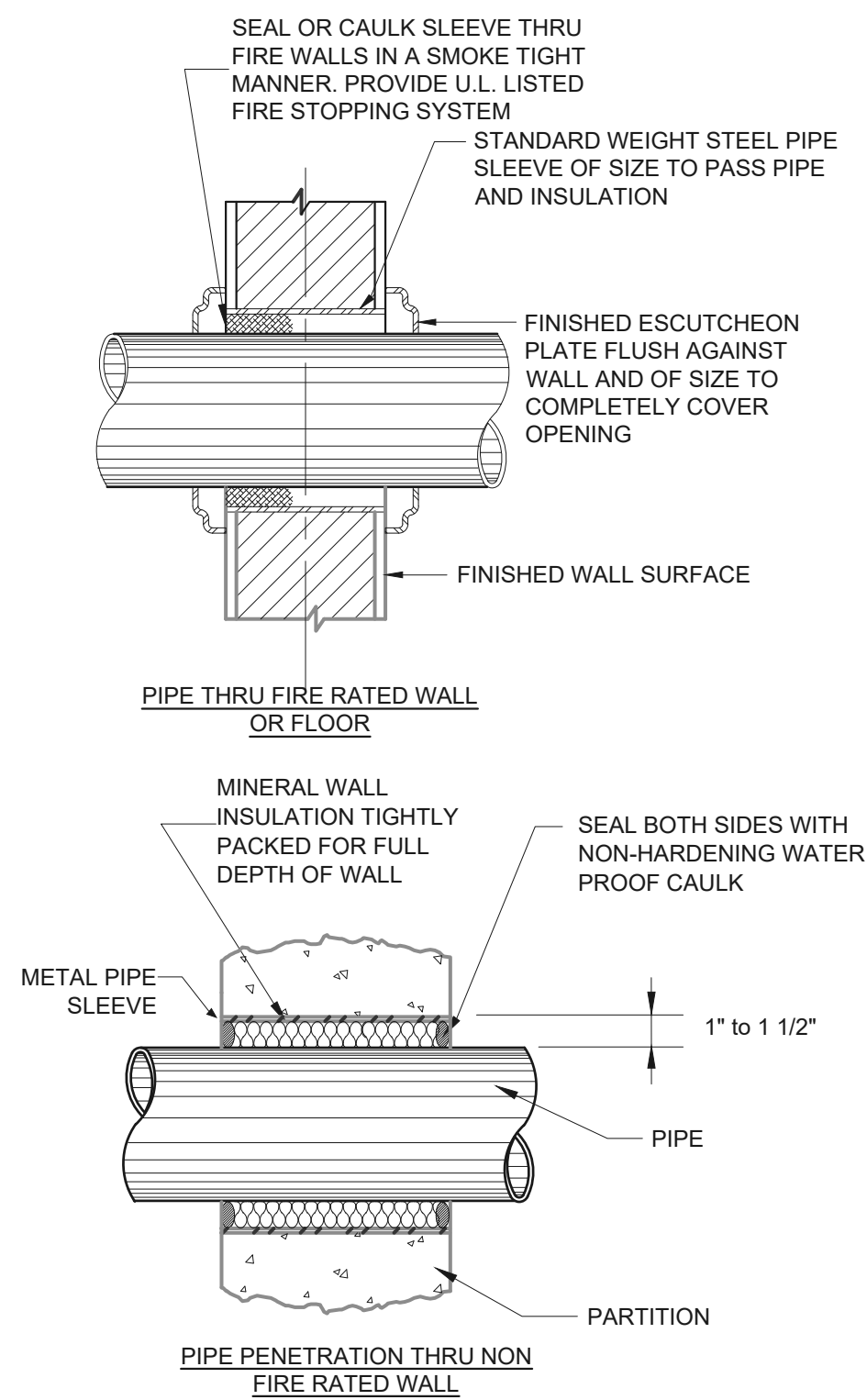
1 CONCEAL PENDENT SPRINKLER DETAIL
N.T.S



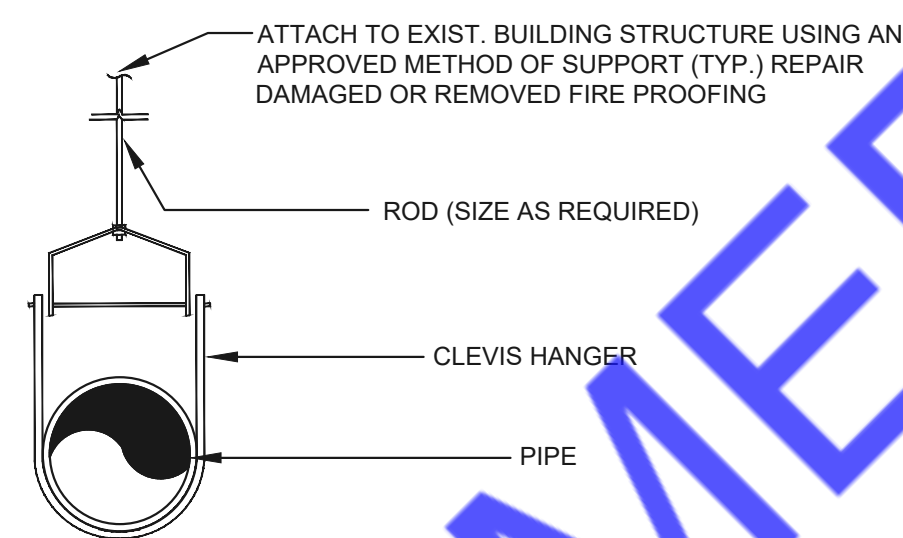
2 FIRE STOPPING DETAIL FOR FIRE/ SMOKE RATED WALL/FLOOR OPENINGS
N.T.S



3 TYPICAL DRAIN CONNECTION FOR TRAPPED LINES ON WET PIPE SPRINKLER SYSTEMS
N.T.S

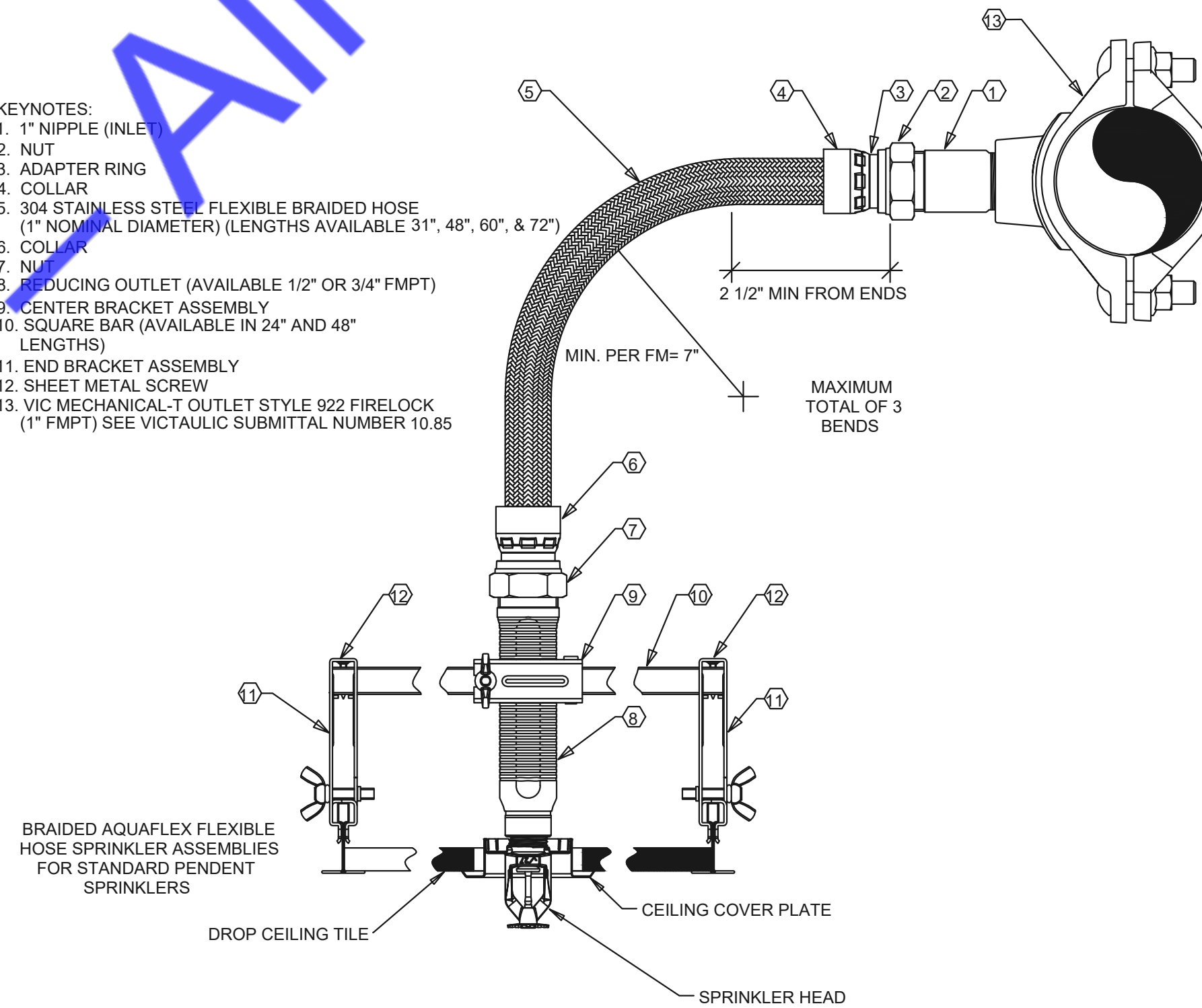


4 PIPE SLEEVE THRU WALL SECTION
N.T.S

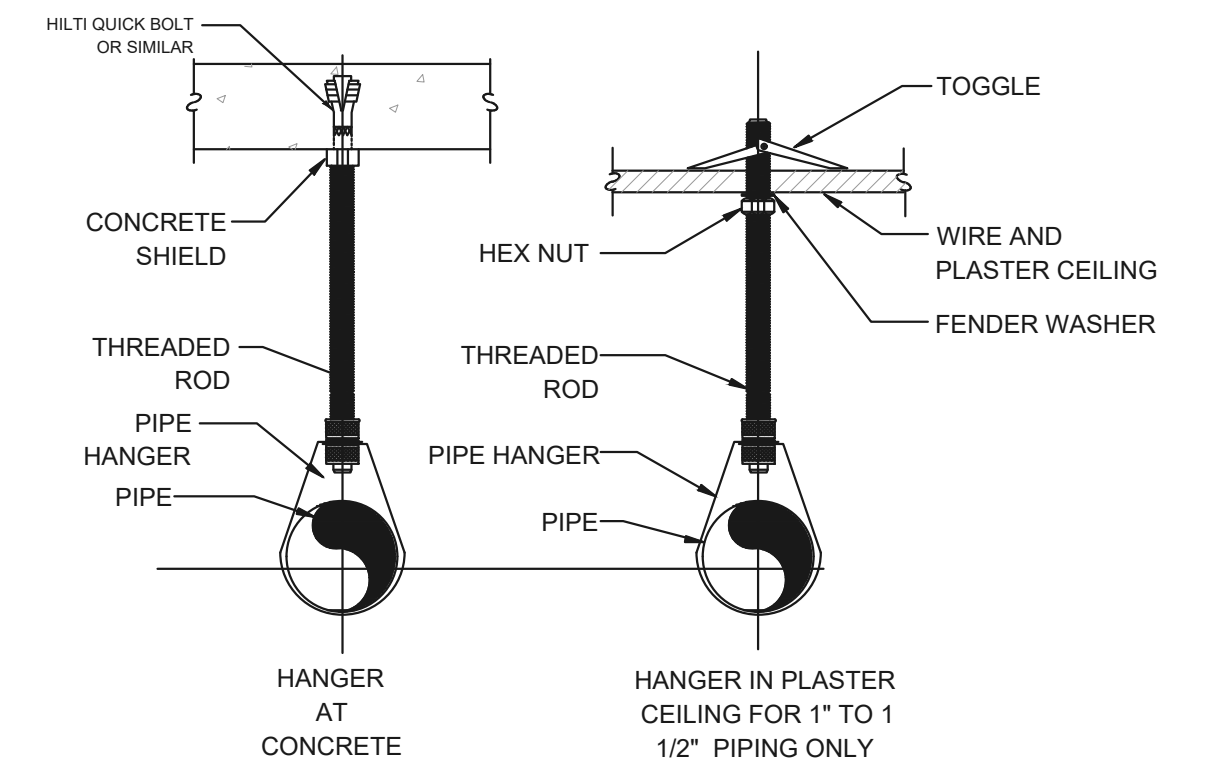


5 HANGER DETAILS TYPICAL
N.T.S

- KEYNOTES:
 1. 1" NIPPLE (INLET)
 2. NUT
 3. ADAPTER RING
 4. COLLAR
 5. 304 STAINLESS STEEL FLEXIBLE BRAIDED HOSE (1" NOMINAL DIAMETER) (LENGTHS AVAILABLE 31", 48", 60", & 72")
 6. COLLAR
 7. NUT
 8. REDUCING OUTLET (AVAILABLE 1/2" OR 3/4" FMPT)
 9. CENTER BRACKET ASSEMBLY
 10. SQUARE BAR (AVAILABLE IN 24" AND 48" LENGTHS)
 11. END BRACKET ASSEMBLY
 12. SHEET METAL SCREW
 13. VIC MECHANICAL-T OUTLET STYLE 922 FIRELOCK (1" FMPT) SEE VICTAULIC SUBMITTAL NUMBER 10.85



6 FLEXIBLE HOSE SPRINKLER ASSEMBLY DETAIL
N.T.S



ROD SCHEDULE		
PIPE SIZE	ROD SIZE	SPACING
1"	3/8"	5'-8'
1 1/4"	3/8"	6'-10'
1 1/2"	3/8"	8'-10'
2"	3/8"	10'-12'

7 TYPICAL HANGER DETAIL AND ROD SCHEDULE
N.T.S