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Issued / Revisions: Appd. Date

Client:



Project:
Storage Facility
Country Club Rd.
Winston-Salem, NC

Title:

FIRE PROTECTION NOTES & DETAILS

Date:
Project No.: Drawn by:
Sheet:

FIRE PROTECTION GENERAL NOTES

- GENERAL REQUIREMENTS:**
- THE DESIGN, MATERIALS, AND INSTALLATION SHALL MEET OR EXCEED ALL REQUIREMENTS OF THE APPLICABLE NFPA STANDARDS, STATE FIRE MARSHALL, LOCAL FIRE MARSHALL HAVING JURISDICTION, OWNER'S INSURANCE CARRIER, AND GOVERNING CITY AND COUNTY CODES.
 - PROVIDE A COMPLETE AUTOMATIC WET PIPE SPRINKLER SYSTEM IN ALL AREAS OF THE BUILDING.
 - THE FIRE PROTECTION SYSTEM SHALL BE DESIGNED, HYDRAULICALLY SIZED, AND INSTALLED IN FULL COMPLIANCE WITH THE REQUIREMENTS OF NFPA 13, NFPA 20, OWNER'S INSURANCE UNDERWRITER, LOCAL AUTHORITIES, AND OTHER APPLICABLE CODES AND STANDARDS.
 - WARRANT THE SYSTEM LABOR, MATERIALS, AND EQUIPMENT FOR ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
 - THE INFORMATION GIVEN HEREIN AND ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED FOR BIDDING PURPOSES AND ITS ACCURACY IS NOT GUARANTEED.
 - INCLUDE ALL NECESSARY PERMITS, FEES, AND CHARGES IN THE BID.

- INSTALLATION:**
- SPRINKLER SYSTEMS SHALL BE INSTALLED BY PERSONNEL WHO HAVE FACILITIES AND EXPERIENCE IN SUCH WORK, AND WHO ARE REGULARLY EMPLOYED TO DO SUCH WORK.
 - COORDINATE THE LOCATION OF ALL INSPECTOR'S TEST VALVES AND ROUTE TO EXTERIOR. PROVIDE AND INSTALL ACCESS PANELS AS REQUIRED.
 - IN ROOMS WITH 2'x2' LAY-IN TILE CEILINGS, SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF CEILING TILES (BOTH DIRECTIONS). IN ROOMS WITH 2'x4' LAY-IN TILE CEILINGS, SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF CEILING TILES (NARROW DIRECTION), AND IN THE CENTER OR 1'-0" OFF OF CENTER OF CEILING TILES (WIDE DIRECTION). IN ROOMS WITH GYPSUM BOARD CEILINGS, SPRINKLER HEADS SHALL BE LOCATED SYMMETRICALLY WITH RESPECT TO OTHER ELEMENTS IN THE CEILING (LIGHTS, GRILLES, ETC.).
 - PROVIDE ALL REQUIRED DRAINS, TEST STATIONS, VALVES, TAMPERS, SWITCHES, FLOW SWITCHES, ETC. FOR A COMPLETE SPRINKLER SYSTEM. PROVIDE ALL REQUIRED DEVICES AND COMPONENTS FOR WATER-LOGIC WIRING WITH THE BUILDING FIRE ALARM.
 - SPRINKLER PIPING SHALL BE CONCEALED ABOVE CEILING WHERE POSSIBLE. COORDINATE ROUTING OF PIPING WITH DUCTWORK, PIPING, CONDUIT, ETC. INSTALLED BY OTHER TRADES. DO NOT INSTALL PIPING BENEATH AIR HANDLING BOXES OR WITHIN CLEARANCES REQUIRED FOR MAINTENANCE. INSTALL PIPING AT LEAST 4" ABOVE LIGHT FIXTURES TO ALLOW FOR FUTURE REMOVAL OF FIXTURES.
 - REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL SMOKE AND FIRE WALLS. PIPING WHICH PENETRATES SMOKE OR FIRE WALLS SHALL BE SEaled IN AN APPROVED MANNER. PROVIDE SLEEVES OR OTHER APPROVED MEANS AND SEAL OPENINGS IN WALLS, FLOORS, AND CEILINGS IN EACH CASE AS TO MAINTAIN THE SMOKE AND FIRE RATING.
 - THE CONTRACTOR SHALL EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC. BEFORE STARTING THE WORK. THE LOCATION OF THE SPRINKLER HEADS SHALL BE COORDINATED WITH OTHER ELEMENTS IN THE CEILING INCLUDING, BUT NOT LIMITED TO, ARCHITECTURAL FEATURES, ELECTRICAL LIGHTS AND DEVICES, AND HVAC GRILLES.

- DESIGN:**
- THE SPRINKLER SYSTEM SHALL BE DESIGNED AND HYDRAULICALLY CALCULATED UTILIZING THE INFORMATION INCLUDED HEREIN AND MEET ALL NFPA STANDARDS WHETHER OR NOT INDICATED WITHIN THESE DOCUMENTS.
 - THE DESIGN, INCLUDING HYDRAULIC CALCULATIONS, MATERIALS, AND LAYOUT, SHALL BE BY A SPECIALTY DESIGNER WHO IS A NICET LEVEL-3 OR HIGHER, AS REQUIRED BY STATE LAW, AND LICENSED FOR FIRE PROTECTION DESIGN.
 - PRIOR TO PERFORMING HYDRAULIC CALCULATIONS, OBTAIN APPROVED FLOW DATA (FLOW AND PRESSURE) FROM THE NEAREST WATER SUPPLY.
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHOP DRAWINGS INCLUDING, BUT NOT LIMITED TO, ALL ITEMS WHICH APPLY TO OUTLINES NFPA 13, CHAPTER 23, "PLANS AND CALCULATIONS".
 - PROVIDE ALL NECESSARY OFFSETS, RISES, OR DROPS IN THE PIPING AND AUXILIARY DRAINS AS REQUIRED BY BUILDING CODES.
 - SPRINKLER SYSTEM DESIGN CRITERIA:
SERVICE MECHANICAL, ELECTRICAL AND STORAGE AREAS: ORDINARY HAZARD GROUP 1.
DENSITY: 15 GPM OVER AN AREA OF OPERATION OF 1500 SF.
ALL OTHER AREAS: LIGHT HAZARD.
DENSITY: 10 GPM OVER AN AREA OF OPERATION OF 1500 SF.

- TESTING:**
- ALL PIPING AND ALL ATTACHED APPURTENANCES SHALL BE HYDROSTATICALLY TESTED AT 200 PSI AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR TWO HOURS.

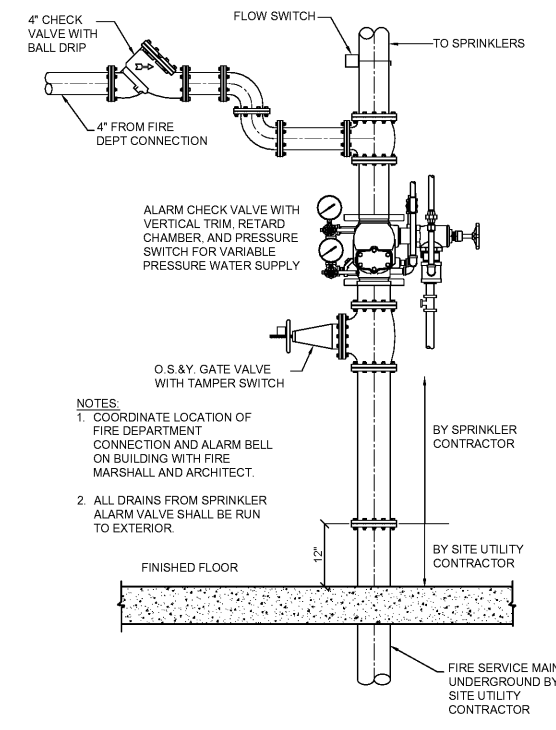
- PIPING AND COMPONENTS:**
- VALVES, SPRINKLER HEADS, FLOW SWITCHES, AND ALL OTHER COMPONENTS USED IN THE SPRINKLER SYSTEM SHALL BE UL LISTED AND SHALL CONFORM TO ALL REQUIREMENTS AS LISTED IN THE LATEST EDITION OF THE NFPA CODES.
 - ABOVE GRADE PIPE AND FITTINGS, WET PIPE SYSTEMS: MINIMUM SIZE IS 1" FOR 1" TO 2" PIPING; SCHEDULE 40 BLACK STEEL, ASTM A 53 / A 53M, WITH THREADED, WELDED, OR GROOVED-END FITTINGS AND JOINTS. FOR 2-1/2" AND LARGER PIPING: SCHEDULE 40 BLACK STEEL, ASTM A 53 / A 53M, WITH GROOVED-END FITTINGS AND JOINTS; OR THINWALL BLACK STEEL, ASTM A 135 OR ASTM A 795 / A 795M, WITH WALL THICKNESS EQUAL TO OR GREATER THAN SCHEDULE 10, WITH GROOVED-END FITTINGS AND JOINTS. SCHEDULE 5 PIPING WILL NOT BE PERMITTED.
 - PIPE HANGERS: SHALL CONFORM TO NFPA AND UL STANDARDS FOR SPACING, NUMBER, SIZE, AND TYPE. PIPE TO BE GENERALLY SUPPORTED BY CLAMPS AND RODS SECURED TO OVERHEAD CONSTRUCTION.
 - VALVES: O.S.&Y. GATE VALVES, CAST IRON BODY, WITH BRONZE TRIM, SOLID WEDGE; OR BUTTERFLY VALVES, DUCTILE IRON BODY, WITH STAINLESS STEEL STEM, DUCTILE IRON DISC. VALVES SHALL BE UL LISTED AND APPROVED FOR FIRE PROTECTION SERVICE.
 - ESCUTCHEONS: PROVIDE CHROME PLATED BRASS ESCUTCHEONS WHERE EXPOSED PIPES PASS THROUGH WALLS, FLOORS, OR CEILINGS.
 - PROVIDE FIRE DEPARTMENT CONNECTION IN COMPLIANCE WITH LOCAL FIRE DEPARTMENT REQUIREMENTS.

- SPRINKLER HEADS:**
- SPRINKLER HEAD LOCATIONS ARE SHOWN AS A BASIS OF DESIGN ONLY. FINAL SPRINKLER HEAD LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON HYDRAULIC CALCULATIONS AND NFPA 13 REQUIREMENTS.
 - SPRINKLERS IN AREAS WITH CEILINGS SHALL BE RECESSED PENDENT TYPE, WITH TWO-PIECE ESCUTCHEON, CHROME PLATED OR WHITE FACTORY FINISH.
 - SPRINKLERS IN AREAS WITHOUT CEILINGS SHALL BE BRASS UPRIGHT TYPE OR SIDEWALL TYPE.
 - INSTALL WIRE CAGE SPRINKLER GUARDS ON ALL EXPOSED SPRINKLERS IN STORAGE AREAS, UTILITY/SERVICE ROOMS, AND IN MECHANICAL AND ELECTRICAL ROOMS.

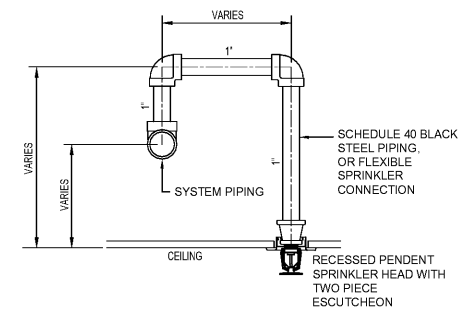
- APPROVALS:**
- THE DESIGN SHALL BE SUBMITTED TO AND APPROVED BY THE AUTHORITY HAVING JURISDICTION, AND THE OWNER'S INSURANCE COMPANY, PRIOR TO FABRICATION OR INSTALLATION.
 - BEFORE STARTING INSTALLATION OF THE WORK, THE CONTRACTOR SHALL SUBMIT EQUIPMENT DATA, PIPING DRAWINGS, AND HYDRAULIC CALCULATIONS OF THE PROPOSED LAYOUT TO THE ARCHITECT FOR REVIEW. NUMBER OF COPIES AS SPECIFIED BY THE ARCHITECT.

FIRE PROTECTION LEGEND

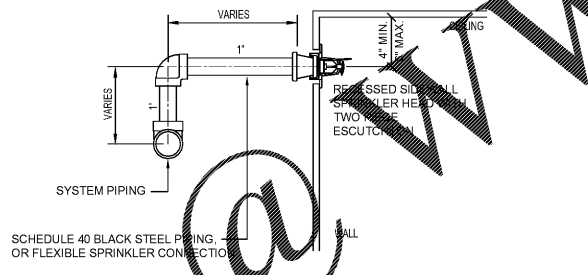
PIPING	
— F —	FIRE MAIN
—	PIPE CONTINUES
— OR —	PIPE DOWN
— OR —	PIPE UP
SYMBOLS	
⊙	ALARM BELL
— F —	FIRE DEPARTMENT INLET CONNECTION (FDC)
⊙	FIRE SERVICE ENTRANCE RISER
— F —	FLOW SWITCH
— F —	OS&Y GATE VALVE WITH TAMPERS SWITCH
⊙	PRESSURE GAUGE
SPRINKLER HEADS	
⊙	PENDENT SPRINKLER HEAD
◀	SIDEWALL SPRINKLER HEAD
⊙	UPRIGHT SPRINKLER HEAD



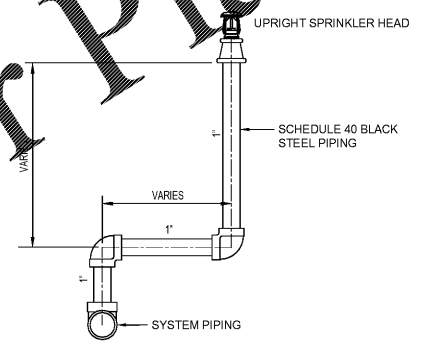
1 FIRE SERVICE ENTRANCE RISER DETAIL
FP-001 NOT TO SCALE



2 TYPICAL RECESSED PENDENT SPRINKLER HEAD DETAIL
FP-001 NOT TO SCALE



3 TYPICAL SIDEWALL SPRINKLER HEAD DETAIL
FP-001 NOT TO SCALE



4 TYPICAL UPRIGHT SPRINKLER HEAD DETAIL
FP-001 NOT TO SCALE

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