

## FIRE PROTECTION SYSTEM CRITERIA

- ALL MATERIALS, PIPE, VALVES AND EQUIPMENT FURNISHED UNDER THIS SECTION SHALL BE NEW AND APPROVED BY W.F.A. UNDERWRITERS LABORATORIES, INC. (U.L. FACTORY MUTUAL FPM) AND AMERICAN WATER WORKS ASSOCIATION (AWWA) WHERE APPLICABLE.
- WET SYSTEMS:  
SCHEDULE 40 WELDED OR SEAMLESS STEEL PIPE, ASTM A53, AND A135.  
A. CLASS 125, AND 250 CAST IRON THREADED FITTINGS, ANSI B16.4  
B. CLASS 150, AND 300 MALLEABLE IRON THREADED FITTINGS, ANSI B16.3  
C. GROOVED MECHANICAL COUPLINGS AND FITTINGS WITH EPDM GASKET, MALLEABLE IRON OR DUCTILE IRON, 50 PSI MINIMUM RATING, ASTM A47 AND A518, U.L. LISTED, F.M. APPROVED.  
LIGHTWALL WELDED OR SEAMLESS STEEL PIPE, ASTM A53, AND A135.  
A. GROOVED MECHANICAL COUPLINGS AND FITTINGS WITH EPDM GASKET, MALLEABLE IRON OR DUCTILE IRON, 50 PSI MINIMUM RATING, ASTM A47, AND A518, U.L. LISTED, F.M. APPROVED.  
B. LIGHTWALL, 150 PSI, BUTTWELD FITTINGS, ANSI B16.3
- AUTOMATIC SPRINKLERS SHALL BE PROVIDED AS FOLLOWS:  
A. FULLY CONCEALED TYPE SPRINKLERS, CLASS ELEMENT OR FUSIBLE LINK STYLE, FAST RESPONSE, HIGH SENSITIVITY SPRINKLERS SHALL BE PROVIDED IN PUBLIC AREAS WITH CEILING. TEMPERATURE RATING OF SPRINKLERS SHALL BE 157 - 165. CEILING COVERPLATE SHALL BE FACTORY PAINTED TO MATCH THE ADJACENT CEILING COLOR, SUBMIT PAINTED SAMPLE TO THE ARCHITECT FOR APPROVAL. SPRINKLER TO BE VIKING, HORIZON, MORGAN CONCEALED SPRINKLER OR APPROVED EQUAL.  
B. FAST RESPONSE UPRIGHT PENDENT SPRINKLERS SHALL BE PROVIDED IN ALL AREAS WITH NO CEILING, TEMPERATURE RATING IS TO BE: K-7 UNLESS CONDITIONS REQUIRE HIGHER TEMPERATURE. FINISH OF SPRINKLER TO BE BRASS. SPRINKLER TO BE VIKING MICROFAST MODEL M.  
C. ALTERNATE ACCEPTABLE MANUFACTURERS WITH EQUIVALENT SPRINKLERS ARE AUTOMATIC, CENTRAL, CROWNELL, TYCO, AND RELIABLE.
- ALL EXTERIOR SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF APPLICABLE SECTIONS OF NFPA, AND THE OWNER'S UNDERWRITER. ALL PIPE, FITTINGS, VALVES, AND SPRINKLER SYSTEM COMPONENTS SHALL BE RATED FOR WORKING PRESSURES AS REQUIRED BY SYSTEM DESIGN.
- ALL PIPE, SUPPORTS AND HANGER ASSEMBLIES SHALL BE IN ACCORDANCE WITH NFPA 13 AND SHALL BE U.L. LISTED OR F.M. APPROVED.
- THE NEW SPRINKLER SYSTEMS SHALL BE DESIGNED TO THE AVAILABLE WATER SUPPLY PRESSURE. THE CONTRACTOR SHALL CONFIRM THE SPRINKLER PIPING ARRANGEMENT WITH HYDRAULIC CALCULATIONS.
- SPRINKLER HEADS INSTALLED IN LAY IN ACOUSTICAL CEILINGS SHALL BE CENTERED IN THE CEILING TILES OR INSTALLED ON QUARTER POINTS OF THE FOUR FOOT DIMENSIONS OF 2' x 4' TILES.
- ALL PIPING ABOVE GRADE SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. HANGERS ATTACHED TO WOOD JOISTS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- ALL SPRINKLER PIPING SHALL BE ROUTED TO MAINTAIN DESIGNED CEILING HEIGHTS INDICATED ON ARCHITECTURAL DRAWINGS.
- ALL FIRE PROTECTION DRAWINGS SUBMITTALS SHALL BE AT 1/8" SCALE AS A MINIMUM.
- FIRE PROTECTION SHOP DRAWINGS SHALL INCLUDE ALL DATA REQUIRED BY N.F.P.A. SECTION 13. SHOP DRAWING PLANS SHALL INDICATE ALL LIGHTS, GRILLES, SOFFITS, ALARMS, SPEAKERS AND OTHER CEILING COMPONENTS, AS WELL AS HYDRAULIC WOOD POINTS, TO INSURE COORDINATION. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO AND SECURE APPROVAL OF THE OWNER'S UNDERWRITER, LOCAL AUTHORITY AND/OR STATE AUTHORITIES PRIOR TO SUBMISSION TO THE ENGINEER. THE CONTRACTOR SHALL NOT COMMENCE WORK, PURCHASE, OR PROVIDE ANY MATERIALS TO THE JOB SITE WITHOUT OBTAINING SHOP DRAWING APPROVAL FROM THE ABOVE AND THE ENGINEER. SHOP DRAWINGS SHALL INCLUDE COPIES OF ALL HYDRAULIC CALCULATIONS PROVIDING DESIGN DENSITIES, WHERE APPLICABLE.
- ALL DESIGN DRAWINGS AND CALCULATIONS PREPARED BY THE FIRE PROTECTION SUBCONTRACTOR SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MAINE OR EQUIVALENT FIRE SPRINKLER CONTRACTORS CERTIFICATE SEAL.

## FIRE PROTECTION NOTES

- THE FIRE PROTECTION SYSTEMS, DESIGN, INSTALLATION, AND MATERIALS SHALL MEET ALL REQUIREMENTS FOR AN NFPA13 SPRINKLER SYSTEM AND 2012 INTERNATIONAL FIRE CODE.
- ALL FIRE PROTECTION WORK SHALL COMPLY WITH ALL APPLICABLE SECTIONS OF NFPA STANDARDS AND SHALL MEET THE APPROVAL OF THE OWNER'S INSURANCE UNDERWRITER, AND LOCAL AUTHORITIES HAVING JURISDICTION.
- SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY FIRE PROTECTION EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE: SPRINKLER DRAWINGS AND CALCULATIONS BEARING THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER OR V.E.T.I. OR IN CONTRACTOR'S FIRE SPRINKLER CERTIFICATE SEAL AND APPROVAL STAMPS OF THE LOCAL CODE AUTHORITY AND OWNER'S INSURANCE UNDERWRITER, SPRINKLER PIPING, SPRINKLER HEADS, AND ACCESSORIES.
- CONTRACTOR SHALL COORDINATE THE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL FIRE PROTECTION EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN THEREIN.
- ALL FIRE PROTECTION EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.
- ALL PIPING ABOVE GRADE SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. PIPING HUNG FROM JOISTS SHALL BE HUNG FROM THE TOP CHORDS OF THE JOISTS.
- HYDRAULIC CALCULATIONS SHALL INCLUDE AN ALLOWANCE FOR INSIDE AND OUTSIDE HOSE STREAMS AND A 10% PRESSURE CUSHION.
- ALL VALVES SHALL HAVE U.L. LISTED SUPERVISORY SWITCHES WIRED FOR ANNUNCIATION AT THE OWNER'S CENTRAL ALARM SYSTEM. WIRING OF THE SWITCHES SHALL BE BY OTHERS.
- GROOVED (DUCTILE) COUPLINGS SHALL NOT BE USED OVER OR NEAR ELECTRICAL SWITCHGEAR, PANELS, TRANSFORMERS, ETC.
- ALL SPRINKLER PIPING SHALL BE ROUTED TO MAINTAIN MINIMUM CLEAR HEIGHTS INDICATED ON ARCHITECTURAL DRAWINGS.

## RENOVATION AND DEMOLITION NOTES

- ATTENTION IS DRAWN TO THE FACT THAT THIS PROJECT INVOLVES RENOVATION OF AN EXISTING FACILITY.
- CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, VERIFY LOCATIONS, DOMESTIC WATER, SANITARY, VENT, GAS AND STORM ROUTING, SYSTEM COMPONENTS ETC. BEFORE SUBMITTING A BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT BEFORE THE BID DATE.
- SCHEDULING FOR REQUIRED SHUTDOWNS AND OTHER DISTURBANCES TO THE BUILDING SHALL BE COORDINATED WITH THE OWNER OR BUILDING MANAGEMENT PRIOR TO BEGINNING WORK.
- ANY EQUIPMENT AND/OR MATERIALS REMOVED FROM SERVICE BECOMES THE PROPERTY OF THE CONTRACTOR UNTIL IT HAS BEEN PLACED BACK INTO SERVICE OR UNTIL IT HAS BEEN DISPOSED OF. EQUIPMENT PLACED BACK INTO SERVICE SHALL BE IN GOOD WORKING CONDITION. TRANSPORTATION AND DISPOSAL OF DEMOLISHED EQUIPMENT AND MATERIALS SHALL BE TO AN APPROPRIATE DISPOSAL LOCATION OFF PROJECT SITE.
- OWNER SHALL BE GIVEN THE FIRST RIGHT OF REFUSAL FOR DEMOLISHED MATERIALS AND EQUIPMENT.
- CONTRACTOR SHALL PATCH AND PREPARE WALLS FOR SCHEDULED FINISH WHERE EQUIPMENT AND DEVICES ARE REMOVED FROM WALLS THAT ARE TO BE RETAINED.

### DESIGN CRITERIA

AREA	HAZARD CLASSIFICATION	DENSITY GPM/SQ. FT.	REMOTE AREA, SQ. FT.	MAX. HEAD SPACING, SQ. FT.	INTERIOR HOSE STREAM
OFFICE SPACE	LIGHT	0.10	1500	225	100

### FIRE PROTECTION LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
⊙ <sub>E</sub>	PD	EXISTING SPRINKLER HEAD
⊙ <sub>R</sub>	PD	RELOCATED SPRINKLER HEAD
⊙ <sub>N</sub>	PD	NEW SPRINKLER HEAD

