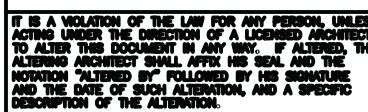


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SPRINKLER SYSTEM GENERAL NOTES:		GENERAL REQUIREMENTS		PART 1 - GENERAL - SPRINKLER SYSTEM INSTALLATION		1.6 PROJECT RECORD DOCUMENTS		© 2020 SJM ASSOCIATES	<div></div>
1. FIRE PROTECTION CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICE REQUIRED FOR THE COMPLETE DESIGN AND INSTALLATION OF THE NEW FIRE PROTECTION SYSTEM COMPONENTS AS SHOWN ON THE DRAWINGS AND DESCRIBED IN THE WRITTEN SPECIFICATIONS. INSTALLATION SHALL INCLUDE, IN GENERAL, BUT NOT LIMITED TO, PIPING, FITTINGS, HANGERS, SUPPORTS, SPRINKLER HEADS, AND OTHER ITEMS REQUIRED FOR A COMPLETE, CODE COMPLIANT, AND APPROVED SYSTEM. EQUIPMENT AND COMPONENTS SHALL HAVE FM LABEL OR MARKING. THE INTENT OF THESE NOTES IS FOR THE CONTRACTOR TO PROVIDE A COMPLETE AND FUNCTIONING SPRINKLER AND STANDPIPE SYSTEM.		THE CONTRACTOR SHALL BE PRESUMED TO HAVE FULLY APPRAISED HIMSELF OF ALL SITE CONDITIONS PERTAINING TO THE WORK; AND WILL BE RESPONSIBLE FOR THE COMPLETION OF THE PROJECT IN THE MANNER AND WITHIN THE TIME CONTEMPLATED IN THE CONTRACT DOCUMENTS.		A. DESCRIPTION: WORK UNDER THIS CONTRACT SHALL CONSIST OF, IN GENERAL, FURNISHING ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE FOLLOWING:		A. RECORD ACTUAL LOCATIONS OF SPRINKLER HEADS AND DEVIATIONS OF PIPING FROM DRAWINGS. INDICATE DRAIN AND TEST LOCATIONS.			
2. SPRINKLER WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS NFPA 13, NEW YORK STATE BUILDING CODE, NATIONAL ELECTRICAL CODE AND REGULATIONS OF ALL OTHER AUTHORITIES HAVING JURISDICTION.		THESE SPECIFICATIONS, TOGETHER WITH THE DRAWINGS AND CONTRACT DOCUMENTS, GENERALLY EXPLAIN THE WORK TO BE DONE. MINOR DETAILS NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS NOR SHOWN ON THE PLANS, BUT NECESSARY TO SECURE A WORKMANLIKE JOB AND PROPER OPERATION, SHALL BE PROVIDED BY THE CONTRACTOR.		1. REMOVAL OF EXISTING SPRINKLER HEADS, PIPING AND SUPPORTS ALONG WITH ASSOCIATED ACCESSORIES WITHIN PROJECT AREA (AND EXTENDING OUT OF PROJECT AREA AS NECESSARY TO ACCESS SUPPLY PIPE/CONNECTION TO SPRINKLER MAIN OR BRANCH PIPE), DRAINING AND REFILLING OF FIRE PROTECTION SYSTEM AS NECESSARY TO ACCOMPLISH WORK OF THIS PROJECT. ALL RESULTING OPENINGS IN PIPING, THAT WILL NOT BE REUSED SHALL BE PERMANENTLY PLUGGED OR CAPPED AS REQUIRED BY THE CONDITION. OPENINGS THAT WILL BE USED FOR NEW SPRINKLER SYSTEM SHALL BE MADE READY FOR CONNECTION OF NEW PIPING AS REQUIRED BY THE CONSTRUCTION PLANS. PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR ISOLATING FIRE SPRINKLER SYSTEM SUPPLY CONNECTION POINTS SO THAT THE FIRE PROTECTION SYSTEM REMAINS ACTIVE IN OTHER PORTIONS OF THE BUILDING.		1.7 OPERATION AND MAINTENANCE DATA			
3. SUBMITTALS - PRIOR TO INSTALLATION OF WORK, THE CONTRACTOR SHALL SUBMIT THE FOLLOWING INFORMATION FOR THE ENGINEERS REVIEW AND COMMENT. WORK SHALL NOT BEGIN UNTIL THE SUBMITTALS ARE REVIEWED AND APPROVED BY THE ENGINEER. SHOP DRAWINGS SHALL INCLUDE, BUT NOT BE LIMITED TO, MANUFACTURERS DATA SHEETS FOR ALL EQUIPMENT TO BE PROVIDED AND/OR INSTALLED (FOR EXAMPLE, SPRINKLER HEADS, CONTROL VALVES, CHECK VALVES, ETC.), IN ADDITION, A DETAILED PIPING DIAGRAM OF THE SPRINKLER SYSTEM SHALL BE PROVIDED INDICATING LOCATION, TYPE AND NUMBER OF SPRINKLER HEADS, VALVES AND ALL ACCESSORIES, PIPE SIZES AND MATERIAL, LOCATION AND CONSTRUCTION OF PIPE HANGERS, SHOP DRAWINGS WILL BE OF SUFFICIENT DETAIL TO PERMIT THE ENGINEER TO FULLY EVALUATE THE PROPOSED SPRINKLER SYSTEM INSTALLATION. SHOP DRAWINGS SHALL CLEARLY INDICATE THE LOCATION, SIZE AND NUMBER OF DRAINS AND DRAIN POINTS. DRAINS SHALL BE LOCATED IN ACCESSIBLE AREAS, SUBJECT TO APPROVAL BY OWNER AND THE ENGINEER. SHOP DRAWINGS SHALL ALSO CLEARLY INDICATE PIPING BRACING AND RESTRAINTS.		THE WORK ALSO INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:		2. FIRE PROTECTION CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICE REQUIRED FOR THE COMPLETE DESIGN AND INSTALLATION OF THE NEW FIRE PROTECTION SYSTEMS AS DESCRIBED HEREIN, INCLUDING, IN GENERAL, BUT NOT LIMITED TO, PIPING, FITTINGS, VALVES, HANGERS, SUPPORTS, SPRINKLER HEADS, TAMPER SWITCHES, FLOW SWITCHES, PRESSURE GAUGES, AND OTHER ITEMS REQUIRED FOR A COMPLETE AND APPROVED SYSTEM. EQUIPMENT AND COMPONENTS SHALL HAVE FM LABEL OR MARKING.		A. MAINTENANCE DATA: INCLUDE COMPONENTS OF SYSTEM, SERVICING REQUIREMENTS, RECORD DRAWINGS, INSPECTION DATA, REPLACEMENT PART NUMBERS AND AVAILABILITY, AND LOCATION AND NUMBERS OF SERVICE DEPOT.			
4. THE SPRINKLER SYSTEM SHALL BE A HYDRAULICALLY DESIGNED SYSTEM. PREPARE AND SUBMIT HYDRAULIC CALCULATIONS, FOR THE PROJECT ENGINEERS REVIEW & APPROVAL, PRIOR TO BEGINNING INSTALLATION OF SPRINKLER SYSTEM.		1. CUTTING AND PATCHING, EXCEPT AS DESCRIBED ELSEWHERE IN THE SPECIFICATIONS OR DRAWINGS, AS REQUIRED FOR INSTALLATION OF WORK OF THIS CONTRACT.		3. DESIGN AND INSTALLATION OF THE FIRE PROTECTION SPRINKLER SYSTEM SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF N.F.P.A. #13, N.F.P.A. 99, THE LIFE SAFETY CODE (NFPA 101), THE NEW YORK STATE FIRE CODE, NEW YORK STATE BUILDING CODE, INSURANCE UNDERWRITER AND OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION.		1.8 QUALITY ASSURANCE			
5. DESIGN AND INSTALLATION OF THE FIRE PROTECTION SPRINKLER SYSTEM SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF N.F.P.A. #13, N.F.P.A. 99, THE LIFE SAFETY CODE (NFPA 101), THE NEW YORK STATE FIRE CODE, NEW YORK STATE BUILDING CODE, INSURANCE UNDERWRITER AND OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION.		2. CORE DRILLING OF CONCRETE, AND ALL OTHER ITEMS REQUIRED FOR WORK OF THIS CONTRACT, EXCEPT AS DESCRIBED ELSEWHERE IN THE SPECIFICATIONS OR DRAWINGS, ANY CORE DRILLING MUST BE APPROVED BY ARCHITECT, ENGINEER AND OWNER BEFORE BEGINNING.		4. THE FIRE PROTECTION SPRINKLER SYSTEM SHALL BE A HYDRAULICALLY DESIGNED SYSTEM. PREPARE AND SUBMIT PIPING LAYOUT DRAWINGS ALONG WITH HYDRAULIC CALCULATIONS FOR THE ENGINEERS REVIEW & APPROVAL, PRIOR TO BEGINNING INSTALLATION OF SPRINKLER SYSTEM. PIPING SHALL BE RUN CONCEALED TO THE GREATEST EXTENT POSSIBLE. THE HYDRAULIC CALCULATIONS SHALL INCLUDE INSIDE AND OUTSIDE HOSE STREAM ALLOWANCES AS WELL AS THE REQUIRED SPRINKLER FLOW.		A. PERFORM WORK IN ACCORDANCE WITH NFPA 13.			
6. COORDINATE ROUGH-IN OF EQUIPMENT WITH OTHER TRADES.		3. CONTRACTOR SHALL COORDINATE WITH THE OWNER, ARCHITECT AND OTHER TRADES, PRIOR TO START OF WORK OF THE PROJECT. ITEMS TO BE COORDINATED SHALL INCLUDE, BUT NOT BE LIMITED TO, DRAINING AND REFILLING OF SPRINKLER SYSTEM, ACCESS TO WORK AREAS, ACTIVE SERVICES THAT REMAIN, MATERIAL STORAGE AREAS, DEBRIS STORAGE AREAS, TEMPORARY BUILDING SERVICES, PROTECTION OF BUILDING/CONSTRUCTION AREAS FROM WEATHER, AND THE STRUCTURAL INTEGRITY OF THE BUILDING.		5. THE FIRE PROTECTION CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS TO FULLY FAMILIARIZE THEMSELVES WITH ALL ASPECTS OF THE PROJECT, INCLUDING BUT NOT LIMITED TO, ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING. FIRE PROTECTION SYSTEMS SHALL BE DESIGNED, AND INSTALLED, AS REQUIRED BY THE SPECIFIC USAGE, HAZARD CLASSIFICATION AND CONFIGURATION OF BUILDING, SPACES AND ROOMS.		B. EQUIPMENT AND COMPONENTS: BEAR FM LABEL OR MARKING.			
7. PROVIDE FOR ALL PIPES, CONDUIITS, AND OTHER ELEMENTS PASSING THROUGH FLOORS, WALLS, PARTITIONS AND STRUCTURAL ELEMENTS, SLEEVES OF ADEQUATE DIAMETER TO ALLOW FOR A MINIMUM OF 3/4" INCHES CLEARANCE AROUND SLEEVE AND PIPE.		4. THE SPECIFICATIONS, TOGETHER WITH THE DRAWINGS DESCRIBED THE WORK TO BE DONE IN GENERAL. MINOR DETAILS OR OTHER ITEMS NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS, BUT NECESSARY TO SECURE A FUNCTIONING SYSTEM, SHALL BE A PART OF THE WORK UNDER THE CONTRACT AND ALL COSTS IN CONNECTION THEREWITH SHALL BE INCLUDED IN THE LUMP SUM PRICE ESTABLISHED IN THE AGREEMENT.		6. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE WITH THE OWNER, ARCHITECT AND OTHER TRADES, PRIOR TO START OF WORK OF THE PROJECT. ITEMS TO BE COORDINATED SHALL INCLUDE, BUT BE LIMITED TO, WORK SEQUENCE FOR DEMOLITION, ACCESS TO WORK AREAS, ACTIVE SERVICES THAT REMAIN, MATERIAL STORAGE AREAS, DEBRIS STORAGE AREAS, TEMPORARY BUILDING SERVICES, PROTECTION OF BUILDING/CONSTRUCTION AREAS FROM WEATHER, AND THE STRUCTURAL INTEGRITY OF THE BUILDING.		1.9 DELIVERY, STORAGE, AND HANDLING			
8. ALL OPENINGS THROUGH FIRE RATED, OR SMOKE RATED, CONSTRUCTION MADE AS WORK OF THIS CONTRACT, SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE, U.L. LISTED FIRESTOPPING MATERIAL AND/OR SYSTEM, AS MANUFACTURED BY FIREMASTER, GENERAL ELECTRIC, NELSON, OR APPROVED EQUAL. SUBMIT MANUFACTURERS'DATA TO ENGINEER FOR REVIEW AND APPROVAL. MAINTAIN FIRE OR SMOKE RATING AND INTEGRITY OF ALL FIRE OR SMOKE RATED CONSTRUCTION THROUGH WHICH OPENINGS ARE MADE FOR WORK OF THIS CONTRACT. REVIEW ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE AND SMOKE RATED CONSTRUCTION.		A. THIS PROJECT IS BEING CONSTRUCTED WITHIN AN EXISTING, FUNCTIONING, HOSPITAL UTILIZING EXISTING SERVICES AND UTILITIES. IT IS A REQUIREMENT OF THIS CONTRACT THAT ALL SERVICE AND UTILITY DISRUPTIONS MUST BE SCHEDULED TO MINIMIZE DISRUPTIONS TO BUILDING OCCUPANTS AND FUNCTIONS. COOPERATE WITH OWNER TO MINIMIZE CONFLICT, AND TO FACILITATE OWNER'S OPERATIONS. SCHEDULE THE WORK TO ACCOMMODATE THIS REQUIREMENT.		7. FURTHER, IT IS THE FIRE PROTECTION CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL RELATED SUB-CONTRACTORS ARE ALSO FAMILIAR WITH ALL ASPECTS OF THE PROJECT AS STATED ABOVE.		A. STORE PRODUCTS IN SHIPPING CONTAINERS AND MAINTAIN IN PLACE UNTIL INSTALLATION. PROVIDE TEMPORARY INLET AND OUTLET CAPS. MAINTAIN CAPS IN PLACE UNTIL INSTALLATION.			
9. ALL OPENINGS THROUGH NON-FIRE OR SMOKE RATED CONSTRUCTION MADE AS WORK OF THIS CONTRACT, SHALL BE SEALED AIR AND SOUND TIGHT WITH AN APPROPRIATE, SEALANT, APPROVED BY THE ENGINEER. SUBMIT MANUFACTURERS' DATA TO ENGINEER FOR REVIEW AND APPROVAL.		B. PROVIDE A MINIMUM OF FIVE (5) DAYS WRITTEN NOTICE PRIOR TO ANY DISRUPTIONS IN BUILDING SERVICES OR UTILITIES. DO NOT PROCEED WITH ANY SERVICE OR UTILITY SHUTDOWN WITHOUT WRITTEN PERMISSION FROM THE OWNER. ALL COSTS FOR UNOCCUPIED HOURS AND/OR WEEKEND WORK (IF ANY) SHALL BE A PART OF THE WORK UNDER THE CONTRACT AND ALL COSTS IN CONNECTION THEREWITH SHALL BE INCLUDED IN THE LUMP SUM PRICE ESTABLISHED IN THE AGREEMENT.		8. PIPING SHALL BE RUN CONCEALED TO THE GREATEST EXTENT POSSIBLE.		B. DELIVER AND STORE VALVES IN SHIPPING CONTAINERS, WITH LABELING IN PLACE.			
10. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL PERMIT APPLICATIONS, OBTAINING AND PAYING ALL FEES FOR ANY NECESSARY PERMITS AND APPROVALS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION, PRIOR TO BEGINNING WORK.		C. SCHEDULE WORK TO ENSURE EQUIPMENT IS INSTALLED AND SYSTEMS TESTED AND CERTIFIED PRIOR TO SUBSTANTIAL COMPLETION.		9. COORDINATE ROUGH-IN AND INSTALLATION OF EQUIPMENT, PIPING AND SPRINKLER HEADS WITH OTHER TRADES.		C. PROVIDE TEMPORARY PROTECTIVE COATING ON CAST IRON AND STEEL VALVES.			
11. PROVIDE AUXILIARY DRAINS AS NECESSARY TO DRAIN LOW SPOTS IN PIPING OR OTHER AREAS WHICH CANNOT BE DRAINED TO THE MAIN DRAIN DUE TO, FOR EXAMPLE, CHANGES IN PIPE DIRECTION.		2. CODES & STANDARDS		10. ALL OPENINGS THROUGH FIRE RATED CONSTRUCTION MADE AS WORK OF THIS CONTRACT, SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE, U.L. LISTED FIRESTOPPING MATERIAL AND/OR SYSTEM, AS MANUFACTURED BY FIREMASTER, GENERAL ELECTRIC, NELSON, OR APPROVED EQUAL. SUBMIT MANUFACTURERS' DATA TO ENGINEER FOR REVIEW AND APPROVAL.		D. PROVIDE TEMPORARY END CAPS AND CLOSURES ON PIPING AND FITTINGS. MAINTAIN IN PLACE UNTIL INSTALLATION.			
12. FIRE SPRINKLER WORK SHALL BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, TELEPHONE, FIRE ALARM, SANITARY AND DOMESTIC WATER SERVICES.		ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF FEDERAL, STATE AND LOCAL AGENCIES; PUBLIC UTILITY COMPANIES AND UNDERWRITER'S LABORATORIES, AND SHALL COMPLY WITH LOCAL CODES. WHERE A CONFLICT IN CODE REQUIREMENTS IS ENCOUNTERED, THE MOST STRINGENT SHALL APPLY. A SAMPLE OF THE MORE EXPLICIT CODES FOLLOWS:		11. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL PERMIT APPLICATIONS, OBTAINING AND PAYING ALL FEES FOR ANY NECESSARY PERMITS AND APPROVALS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION, PRIOR TO BEGINNING WORK.		1.10 EXTRA MATERIALS			
13. PIPING AND/OR ANY OTHER EQUIPMENT OR MATERIALS SHALL BE ADEQUATELY SUPPORTED, DIRECT SUSPENSION OR SUPPORT TO PLASTER AND OR LAY-IN CEILING CONSTRUCTION IS NOT ACCEPTABLE. ALL OTHER MATERIALS AND EQUIPMENT SHALL BE DIRECTLY ATTACHED TO THE BUILDING STRUCTURAL SYSTEM. PROVIDE APPROVED FASTENERS AND OTHER MEMBERS AS REQUIRED TO SUPPORT MATERIALS AND EQUIPMENT WHICH MAY NOT BE DIRECTLY ATTACHABLE TO THE STRUCTURAL SYSTEM.		- NFPA 13, NFPA 101, NFPA 99 - OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) - NEW YORK STATE BUILDING & FIRE CODES		12. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR DRAINING OF THE EXISTING FIRE PROTECTION SYSTEM, AS REQUIRED TO PERFORM WORK OF THIS CONTRACT, AND COORDINATING THIS WORK WITH THE BUILDING OWNER, FIRE DEPARTMENT AND OTHER AGENCIES HAVING JURISDICTION.		B. PROVIDE EXTRA SPRINKLER HEADS UNDER PROVISIONS OF NFPA 13.			
14. ROUGH ALL PIPING TO MAXIMUM EXTENT PERMISSIBLE AS HIGH AS POSSIBLE. MAINTAIN MAXIMUM CLEARANCE ON SIDES OF EQUIPMENT, ADJUST INSTALLATION OF PIPING ACCORDINGLY.		3. PERMITS		13. CUTTING, FIRESTOPPING AND PATCHING AS REQUIRED FOR INSTALLATION OF WORK OF THIS CONTRACT.		C. PROVIDE SUITABLE WRENCHES FOR EACH HEAD TYPE.			
15. TEST ALL PIPING AS REQUIRED PRIOR TO CONCEALMENT INTO GENERAL CONSTRUCTION.		THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY LOCAL AUTHORITIES.		14. SAWCUTTING OF CONCRETE, CORE DRILLING OF CONCRETE AND ALL OTHER RELATED ITEMS REQUIRED FOR WORK OF THIS CONTRACT ARE INCLUDED, EXCEPT AS DESCRIBED ELSEWHERE IN THE SPECIFICATIONS OR DRAWINGS. ANY CORE DRILLING, SAWCUTTING MUST BE APPROVED BY ARCHITECT, ENGINEER AND OWNER BEFORE BEGINNING.		D. PROVIDE METAL STORAGE CABINET IN LOCATION DESIGNATED.			
16. OFFSET SPRINKLER PIPING AS NECESSARY TO AVOID WORK OF OTHER TRADES AND AS REQUIRED TO ACCOMMODATE EXISTING & NEW PIPING, EQUIPMENT, DUCTWORK, ETC.		THE CONTRACTOR SHALL PAY FOR ALL PERMITS AND ALL INSPECTION FEES RELATED TO WORK OF THIS CONTRACT. THE CONTRACTOR SHALL OBTAIN AND PAY FOR A CERTIFICATE OF COMPLETED WORK FROM THE FIREMANS UNDERWRITERS.		15. PROVIDE ACCESS DOORS FOR ALL VALVES, AND OTHER EQUIPMENT, INSTALLED BEHIND CONSTRUCTION. REVIEW ARCHITECTURAL DRAWINGS FOR TYPE OF CONSTRUCTION. ACCESS DOOR SHALL BE SUITABLE FOR THE TYPE OF CONSTRUCTION THEY ARE INSTALLED IN (SHEETROCK, FIRE-RATING, ETC.). SUBMIT LOCATION DRAWING FOR APPROVAL.		PART 2 - PRODUCTS			
17. COORDINATE AND PERFORM ALL WORK OF THIS CONTRACT IN ACCORDANCE WITH REGULATIONS OF LOCAL AUTHORITY AND OTHER AGENCIES HAVING JURISDICTION.		4. SHOP DRAWINGS		16. IDENTIFY PIPING, CONCEALED OR EXPOSED, WITH PLASTIC TAPE PIPE MARKERS. USE TAGS ON PIPING 3/4 INCH DIAMETER AND SMALLER. IDENTIFY SERVICE AND FLOW DIRECTION. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND TEE, AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.		2.1 MANUFACTURERS			
18. LOCATIONS OF SPRINKLER HEADS SHOWN ON THESE DRAWINGS ARE APPROXIMATE. REVIEW ARCHITECTURAL DRAWINGS FOR ACTUAL LOCATIONS OF SPRINKLER HEADS.		PROVIDE SHOP DRAWINGS OF ALL SYSTEMS AND EQUIPMENT, UNLESS OTHERWISE SPECIFIED. THE TERM "SHOP DRAWINGS," AS USED HEREIN, SHALL MEAN ALL MANUFACTURERS' BROCHURES, CATALOG CUTS, WIRING DIAGRAMS, INSTALLATION MANUALS, SHOP FABRICATION DRAWINGS, OR ANY SUCH MATERIALS USED TO DESCRIBE THE SYSTEM OR EQUIPMENT BEING SUBMITTED FOR APPROVAL.		17. PREPARE LIST OF ALL TAGGED VALVES FOR THE SPRINKLER SYSTEM. LISTS SHALL INCLUDE VALVE NUMBER, VALVE LOCATION, FLOOR LEVEL, PIPING SYSTEM, AND USE. LISTS SHALL BE TYPEWRITTEN AND MOUNTED IN A SUITABLE FRAME. THE FRAMED LIST SHALL BE LOCATED WHERE DIRECTED BY THE OWNER. INCLUDE A COPY OF THE VALVE LIST(S) IN THE MAINTENANCE MANUAL.		A. ACCEPTABLE MANUFACTURERS: GRINNELL, VIKING, STAR OR OTHER MANUFACTURER PROVIDING EQUIVALENT PRODUCTS.			
		ALL DRAWINGS SHALL BE SUBMITTED SUFFICIENTLY IN ADVANCE OF FIELD REQUIREMENTS TO ALLOW REASONABLE TIME FOR CHECKING; AND NO CLAIM FOR EXTENSION OF THE CONTRACT TIME WILL BE GRANTED BY REASON OF FAILURE IN THIS RESPECT. ALL SUBMITTALS SHALL BE COMPLETE; AND SHALL CONTAIN ALL REQUIRED AND DETAILED INFORMATION.		18. INCLUDE, AS PART OF THIS WORK, FURNISHING AND INSTALLING ALL ELECTRICAL WORK (INCLUDING, BUT NOT LIMITED TO, WIRING TO TAMPER SWITCHES AND FLOW SWITCHES) REQUIRED FOR THE OPERATION OF FIRE PROTECTION SPRINKLER SYSTEM. COORDINATE ALL REQUIRED ELECTRICAL CONNECTIONS AND FIRE ALARM SYSTEM CONNECTIONS WITH THE ELECTRICAL CONTRACTOR, INCLUDING, BUT NOT LIMITED TO, TAMPER SWITCHES, FLOW SWITCHES, CONTROL PANELS, OUTSIDE ALARM BELLS. ALL ELECTRICAL POWER FOR FIRE PROTECTION SYSTEMS SHALL BE TAKEN FROM THE EMERGENCY POWER SYSTEM.		2.2 SPRINKLER PIPING			
		ALL SUBMITTALS SHALL BE MADE IN ELECTRONIC FORMAT IN PDF FILES, AUTOCAD DWG FILES OR OTHER FILE FORMAT ACCEPTABLE TO THE DESIGN TEAM.		19. REFER TO FIRE PROTECTION SYSTEM REMOVAL NOTES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.		A. STEEL PIPE: ASTM A53; ASTM A795; ANSI/ASTM A135; ASTM A795; ANSI/ASME B36.10; SCHEDULE 40 BLACK OR SCHEDULE 10 FOR 2" DIAMETER AND ABOVE.			
		5. RECORD DRAWINGS		1.2 REFERENCES		1. STEEL FITTINGS: ANSI/ASME B16.9, WROUGHT STEEL, ASTM A234, WROUGHT CARBON STEEL AND ALLOY STEEL; ANSI/ASME B16.5, STEEL FLANGES AND FITTINGS; ANSI/ASME B16.11, FORGED STEEL SOCKET WELDED AND THREADED.			
		DURING THE PROGRESS OF WORK, A CAREFUL RECORD WILL BE KEPT OF ALL CHANGES WHERE THE ACTUAL INSTALLATION DIFFERS FROM THAT SHOWN ON THE DRAWINGS.		1.3. CODES AND APPROVALS		2. CAST IRON FITTINGS: ANSI/ASME B16.1, FLANGES AND FITTINGS; ANSI/ASME B16.4, SCREWED FITTINGS.			
		ON COMPLETION OF THE JOB, THE FIRE PROTECTION SYSTEM CONTRACTOR SHALL FURNISH TO THE OWNER HIS ORIGINAL TRACINGS OR REPRODUCIBLE TRANSPARENCIES OF ALL PIPING SHOP DRAWINGS. HE SHALL NOTE ON THE AS-BUILT DRAWINGS, FURNISHED BY HIM, THE CORRESPONDING NUMBERS OF APPLICABLE SHOP DRAWINGS, WHERE SHOP DRAWINGS ARE NOT AVAILABLE, HE SHALL NEATLY INDICATE THE CHANGE ON THE AS-BUILT DRAWINGS. DRAWINGS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL. AFTER APPROVAL, THEY SHALL BECOME THE PROPERTY OF THE OWNER.		A. NFPA 13 - INSTALLATION OF SPRINKLER SYSTEMS.		3. MALLEABLE IRON FITTINGS: ANSI/ASME B16.3, SCREWED TYPE.			
		2. GUARANTEE PERIOD.		A. THE INSTALLATION OF THE SPRINKLER SYSTEM SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF N.F.P.A. #13 AND THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, INSURANCE UNDERWRITER AND ALL OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION.		4. MECHANICAL GROOVED COUPLINGS: MALLEABLE IRON HOUSING CLAMPS TO ENGAGE AND LOCK, "C" SHAPED COMPOSITION SEALING GASKET, STEEL BOLTS, NUTS, AND WASHERS; GALVANIZED FOR GALVANIZED PIPE.			
		UPON NOTICE OF THE OWNER OF FAILURE OF ANY PART OF THE GUARANTEED EQUIPMENT OR SYSTEMS DURING THE GUARANTEE PERIOD, THE AFFECTED PART OR PARTS AND DAMAGES RESULTING THEREFROM SHALL BE REPLACED OR REPAIRED PROMPTLY BY AND AT THE EXPENSE OF THE CONTRACTOR AND AT THE CONVENIENCE OF THE OWNER.		B. THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL, DETAILED LAYOUT DRAWINGS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL APPROVALS FROM THESE AGENCIES HAVE BEEN OBTAINED.		B. FLEXIBLE STAINLESS STEEL HOSE			
		3. GUARANTEE RESPONSIBILITY.		C. THE CONTRACTOR SHALL GIVE ALL NOTICES, OBTAIN ALL REQUIRED PERMITS, PERFORM ALL TESTS, AND PAY ALL LOCAL, STATE AND FEDERAL TAXES, FEES, ROYALTIES AND OTHER COSTS; FILE ALL NECESSARY DRAWINGS AND OBTAIN ALL APPROVALS OF ALL MUNICIPAL AND STATE AUTHORITIES HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION; FURNISH THE OWNER WITH FINAL CERTIFICATES BEFORE FINAL PAYMENT OF THE CONTRACT.		1. ONE PIECE TYPE 304 STAINLESS STEEL HOSE WITH CONNECTION FOR SPRINKLER HEAD AND CONNECTION TO SUPPLY PIPE. HOSES SHALL BE AVAILABLE IN LENGTHS OF 2 FEET THROUGH 6 FEET.			
		UPON NOTICE OF THE OWNER OF FAILURE OF ANY PART OF THE GUARANTEED EQUIPMENT OR SYSTEMS DURING THE GUARANTEE PERIOD, THE AFFECTED PART OR PARTS AND DAMAGES RESULTING THEREFROM SHALL BE REPLACED OR REPAIRED PROMPTLY BY AND AT THE EXPENSE OF THE CONTRACTOR AND AT THE CONVENIENCE OF THE OWNER.		1.4 TESTS		2. HOSE SHALL BE PROVIDED WITH A TIE-ON BRACKET SUITABLE FOR USE WITH SUSPENDED OR SHEET ROCK CEILING AS REQUIRED BY THE SPECIFIC LOCATION.			
		2. WORK & MATERIALS		A. PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT AND TEST THE SPRINKLER SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE N.F.P.A. 13, THE INSURANCE UNDERWRITERS, AND/OR ALL OTHER AUTHORITIES HAVING JURISDICTION.		3. THE HOSE ASSEMBLY SHALL BE LEAK AND PRESSURE TESTED BY THE MANUFACTURER.			
		PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT AS HEREINAFTER SPECIFIED, AS SHOWN ON THE ACCOMPANYING DRAWINGS, AS REASONABLY IMPLIED AS USUALLY PROVIDED, AND AS REQUIRED FOR THE DELIVERY, THE ERECTION, THE PROPER WORKING, AND THE COMPLETE FINISH OF THE WORK OF THIS CONTRACT.		B. THE TESTS SHALL BE CONDUCTED IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER AND/ OR OTHER AUTHORITIES HAVING JURISDICTION AS REQUIRED.		4. THE SYSTEM SHALL BE FACTORY MUTUAL (FM) APPROVED AND UL LISTED. THEY SHALL BE MANUFACTURED IN AN FM/UL/ULCIFIED FACILITY.			
		IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON THE DRAWINGS; AND THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.		C. ALL LEAKS FOUND AFTER TESTING SHALL BE CORRECTED IN A MANNER ACCEPTABLE TO THE AUTHORITIES HAVING JURISDICTION. WHERE DIRECTED, JOINTS SHALL BE TAKEN APART AND RE-MADE WITH NEW MATERIALS. AFTER LEAKS ARE CORRECTED PIPING SHALL BE RETESTED UNTIL ACCEPTABLE TO THE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL MAKE GOOD AND PAY FOR ALL DAMAGES RESULTING FROM TESTS.		5. ASSEMBLY SHALL BE AS MANUFACTURED BY FLEXHEAD INDUSTRIES, OR EQUIVALENT PRODUCT OF ANOTHER MANUFACTURER.			
		2. PRODUCT HANDLING		1.5 SUBMITTALS		6. COVER FINISH, WHETHER AS SELECTED BY THE ARCHITECT.			
		USE ALL MEANS NECESSARY TO PROTECT THE MATERIALS OF THIS SECTION BEFORE, DURING AND AFTER INSTALLATION AND TO PROTECT THE WORK AND MATERIALS OF ALL OTHER TRADES.		A. PRELIMINARY SHOP DRAWINGS: PRIOR TO DETAILED SUBMISSION, SUBMIT PRELIMINARY LAYOUT OF FINISHED CEILING AREAS INDICATING ONLY HEAD LOCATIONS COORDINATED WITH CEILING INSTALLATION.		9. QUICK RESPONSE CONCEALED PENDENT SPRINKLERS SHALL BE RELIABLE MODEL G4A, OR EQUIVALENT PRODUCT OF ANOTHER MANUFACTURER.			
		IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.		B. SHOP DRAWINGS: INDICATE DETAILED PIPE LAYOUT, HANGERS AND SUPPORTS, COMPONENTS AND ACCESSORIES. INDICATE PIPE MATERIALS USED, JOINTING METHODS, SUPPORTS, FLOOR AND WALL PENETRATION SEALS. INDICATE INSTALLATION, LAYOUT, WEIGHTS, MOUNTING AND SUPPORT DETAILS, AND PIPING CONNECTIONS. INDICATE SYSTEM CONTROLS.		A. LOCATE WHERE DIRECTED BY THE ARCHITECT, A BAKED ENAMELED STEEL CABINET WITH SPARE SPRINKLER HEADS AND WRENCHES. PROVIDE SIX (6) HEADS FOR EACH TYPE INSTALLED IN BUILDING.			
		9. CUTTING, PATCHING & PAINTING		C. PRODUCT DATA: PROVIDE DATA ON SPRINKLER HEADS, VALVES, AND SPECIALTIES, INCLUDING MANUFACTURERS CATALOGUE INFORMATION, PERFORMANCE RATINGS, ROUGH-IN DETAILS, WEIGHTS, SUPPORT REQUIREMENTS, AND PIPING CONNECTIONS.		2.4 FIRE BARRIER PENETRATIONS			
		ALL CUTTING AND PATCHING REQUIRED TO PERFORM WORK SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR.		D. SAMPLES: SUBMIT TWO OF EACH STYLE OF SPRINKLER HEAD SPECIFIED.		A. FIRE BARRIER PENETRATION SEALS: PROVIDE SEALS FOR ANY OPENING THROUGH FIRE RATED WALLS, FLOORS OR CEILINGS USED AS PASSAGE FOR MECHANICAL COMPONENTS SUCH AS PIPING OR DUCTWORK.			
		THE CONTRACTOR SHALL CORE DRILL, SAWCUT OR CUT EXISTING CONSTRUCTION IN MANNER, APPROVED BY THE ARCHITECT, ENGINEER AND OWNER. STRUCTURAL ELEMENTS MUST NOT BE CUT WITHOUT APPROVAL FROM THE ARCHITECT.		E. SUBMIT SHOP DRAWINGS, PRODUCT DATA, HYDRAULIC CALCULATIONS TO ENGINEER FOR APPROVAL.		1. CRACKS, VOIDS, OR HOLES UP TO 4" DIAMETER: USE PUTTY OR CAULKING, ONE PIECE INTUMESCENT ELASTOMER, NON-CORROSIVE TO METAL, COMPATIBLE WITH SYNTHETIC CABLE JACKETS. INSTALL AS PER MANUFACTURERS INSTRUCTIONS, ALONG WITH RECOMMENDED BACKING MATERIAL. PRODUCTS SHALL BE UL LISTED. ACCEPTABLE MANUFACTURER: HILTI.			
		REVIEW THE GENERAL CONSTRUCTION PLANS, SPECIFICATIONS AND ROOM FINISH SCHEDULE FOR WORK THAT IS TO BE PERFORMED BY THE GENERAL CONTRACTOR.		F. MANUFACTURER'S CERTIFICATE: CERTIFY THAT SYSTEM HAS BEEN TESTED AND MEETS OR EXCEEDS CODE REQUIREMENTS.		2. OPENINGS 4" OR GREATER: USE SEALING SYSTEM CAPABLE OF PASSING 3 HOUR FIRE TEST IN ACCORDANCE WITH ASTM E-814, CONSISTING OF WALL WRAP OR LINER, PARTITIONS AND END CAPS CAPABLE OF EXPANDING WHEN EXPOSED TO TEMPERATURES OF 250 TO 350 DEGREES F. SEALING SYSTEM SHALL BE UL LISTED. ACCEPTABLE MANUFACTURER: HILTI.			
		PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRESTOPPED WITH A UL LISTED SYSTEM CONSISTING OF MINERAL WOOL AND LISTED MASTIC COMPOUND, AS MANUFACTURED BY HILTI, OR OTHER MANUFACTURER PROVIDING EQUIVALENT PRODUCTS.		G. THE FOLLOWING SHOP DRAWING LIST IS MEANT TO BE USED A GUIDELINE, IT IS NOT MEANT TO BE ALL INCLUSIVE:		A. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.			
		20. INSERTS AND/OR SUPPORTS		1. VALVES AND APPURTENANCES 2. SPRINKLER HEADS 3. PIPING MATERIALS 4. PIPE FITTINGS 5. HANGERS AND SUPPORTS		B. THE CONTRACTOR SHALL COORDINATE THE SPRINKLER AND SYSTEM INSTALLATION WITH THE LOCATION OF LIGHTING FIXTURES, DUCTWORK, PIPING AND WORK OF ALL OTHER TRADES. OBTAIN FROM THE OTHER CONTRACTORS COPIES OF THEIR APPROVED SHOP DRAWINGS REGARDING SYSTEMS AND EQUIPMENT THAT MUST BE COORDINATED WITH THE SPRINKLER AND STANDPIPE INSTALLATION.			
		IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER OF A PARTICULAR PIECE OF				C. WHEN INSTALLING ANY OF THE APPARATUS HEREIN SPECIFIED SUFFICIENT CLEARANCE SHALL BE PROVIDED TO ALLOW THE REMOVAL OF EQUIPMENT FOR REPAIRS OR REPLACEMENT.			

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