NEW YORK CITY SPRINKLER NOTES

- BUILDING CODE, 2022 EDITION AND NFPA-13 (2016 EDITION) AS MODIFIED BY THE BUILDING CODE APPENDIX Q, SECTION BC Q102
- 1. THE INSTALLATION COMPONENTS, SPACING, LOCATION, CLEARANCES, POSITION AND TYPE OF SYSTEMS SHALL CONFORM TO APPENDIX Q BC Q102 AND BC 903.
- 2. AS PER PARAGRAPH BC 903.2 AND CHAPTER 6 OF APPENDIX Q SECTION BC Q102 ONLY APPROVED MATERIALS WILL BE USED.
- 3. DIRECT CONNECTION OF SPRINKLERS TO THE PUBLIC WATER SYSTEM SHALL CONFORM TO APPENDIX Q BC Q102 SECTIONS 23.1.1(d), 23.1.8 & 23.2.1.
- 4. SPRINKLERS WILL BE PROTECTED AGAINST FREEZING AND INJURY AS PER SECTIONS 6.2.8 AND 8.16.4 OF APPENDIX Q BC Q102.
- 5. INSPECTION AND TESTS OF SPRINKLER SYSTEM SHALL BE CONDUCTED AS SPECIFIED IN BC 901.5 AND APPENDIX Q SECTION BC Q102 CHAPTER 24.
- 6. THE OCCUPANCY OF THE AREAS TO BE SPRINKLERED IN ACCORDANCE WITH CHAPTER 5 OF
- APPENDIX Q SECTION BC Q102 SHALL BE THOSE SPECIFIED ON THE PLANS.
- 7. WATER SUPPLY TEST PIPES AND GAUGES PROVIDED AS SPECIFIED IN SECTION 8.17.3 AND 8.17.4 OF APPENDIX Q BC Q102.
- 8. PIPING SPECIFICATIONS. SYSTEM TEST PIPES. PROTECTION AGAINST CORROSION. DAMAGE. FITTINGS, VALVES, HANGERS, SPRINKLERS, GUARDS AND SHIELDS SHALL BE IN ACCORDANCE WITH CHAPTERS 6 AND 9 OF APPENDIX Q SECTION BC Q102.
- 9. STOCK OF EXTRA SPRINKLERS WILL BE FURNISHED AS PER SECTION 6.2.9 OF APPENDIX Q BC Q102 (REQUIRED FOR EACH TEMPERATURE RATING).
- 10. SPRINKLER ALARMS IN ACCORDANCE WITH SECTION 8.17.1 OF APPENDIX Q BC Q102.
- 11. SPACING, LOCATION AND POSITION OF SPRINKLERS WILL BE IN ACCORDANCE WITH CHAPTER 8 OF APPENDIX Q SECTION BC Q102.
- 12. ALL BLIND SPACES EXCEEDING 6 IN. IN WIDTH OR DEPTH WHICH CONTAIN COMBUSTIBLE MATERIALS WILL BE SPRINKLERED.
- 13. ALL PIPING PASSING THROUGH RATED CONSTRUCTION WILL COMPLY WITH BC 713.
- 14. THERE IS NO PILED HIGH STORAGE AS DEFINED IN SECTION 3.9.1.13 OF APPENDIX Q BC
- 15. DISTANCE OF SPRINKLERS FROM HEAT SOURCES SHALL BE IN ACCORDANCE WITH TABLES 8.3.2.5(A), (B), AND (C) OF APPENDIX Q BC Q102.
- 16. AS PER SECTION BC 903.1.2 PROVIDE DEPARTMENT OF ENVIRONMENTAL PROTECTION WATER SUPPLY LETTER WITH FLOW TEST DATA IF THERE IS DIRECT CONNECTION TO THE STREET
- 17. ALL PIPES PASSING THROUGH FOUNDATION WALLS TO BE PROTECTED AS PROVIDED BY SECTION PC 305.5 OF THE PLUMBING CODE.
- 18. THIS APPLICATION IS NOT FILED AS A RESULT OF ACTIONS BY THE FIRE COMMISSIONER AS AUTHORIZED BY THE BUILDING DEPARTMENT TO MODIFY THE CERTIFICATE OF OCCUPANCY NOR IS SUCH ACTION PENDING.
- 19. ALL VALVES SHALL BE IDENTIFIED AS REQUIRED BY SECTION 6.6.4 OF APPENDIX Q BC
- 20. DRAINAGE TO CONFORM TO SECTION 8.16.2 OF APPENDIX Q BC Q102.

WATER SUPPLY.

- 21. A ONE PIECE REDUCING FITTING OF GOOD DESIGN SHALL BE USED WHEREVER A CHANGE IS MADE IN THE SIZE OF PIPE AS PER SECTION 6.4.7 OF APPENDIX Q BC Q102.
- 22. ALL VALVES ON CONNECTIONS TO WATER SUPPLIES AND IN SUPPLY TO SPRINKLERS SHALL BE APPROVED OS&Y OR APPROVED INDICATOR TYPE.
- 23. DRAIN VALVES AND TEST VALVES SHALL BE APPROVED TYPE AS PER SECTION 6.6.3 OF APPENDIX Q BC Q102.
- 24. HANGERS SHALL BE OF A TYPE APPROVED FOR USE WITH THE PIPE OR TUBE INVOLVED, SPRINKLER PIPING SHALL BE SUPPORTED BY WROUGHT IRON U-TYPE OR APPROVED ADJUSTABLE HANGERS AS PER CHAPTER 9 OF APPENDIX Q SECTION BC Q102.
- 25. PROVISIONS SHALL BE MADE TO FACILITATE FLUSHING SYSTEM PIPING BY PROVIDING FLUSHING CONNECTIONS CONSISTING OF A CAPPED NIPPLE 4" LONG ON THE END OF THE CROSS MAIN AS PER SECTION 8.16.3 OF APPENDIX Q BC Q102.
- 26. SPRINKLER HEADS SHALL BE OF APPROVED TYPE AS PER SECTION 8.3 OF APPENDIX Q BC
- 27. TEMPERATURE RATING SHALL COMPLY WITH SECTION 8.3.2 OF APPENDIX Q BC Q102.
- 28. 18" MINIMUM CLEAR TO BELOW SPRINKLER DEFLECTOR AS PER SECTION 8.5.6.4 OF APPENDIX Q BC Q102.
- 29. SPACING AND LOCATION OF SPRINKLERS SHALL COMPLY WITH SECTION 8.5 OF APPENDIX Q BC Q102.
- 30. SPRINKLER SYSTEM COMPLIES WITH NFPA 13, 2016 AS MODIFIED BY THE NEW YORK CITY BUILDING CODE, APPENDIX Q SECTION BC Q102.
- 31. SOURCES OF WATER SUPPLY FOR SPRINKLER SYSTEMS AS PER CHAPTER 24 OF APPENDIX Q SECTION BC Q102.
- 32. PIPE SCHEDULES SHALL BE IN ACCORDANCE WITH SECTION 23.7 OF APPENDIX Q BC Q102.
- 33. AUTOMATIC INTERLOCK CUTOFF SWITCH FOR VENTILATION WILL CONFORM TO CHAPTER 6 OF THE MECHANICAL CODE (APPLICABLE ONLY IF THERE IS AN AIR SYSTEM UTILIZING RECIRCULATED AIR AND REQUIRING A THERMOSTATIC DEVICE).
- 34. HYDRAULICALLY DESIGNED SPRINKLER SYSTEMS SHALL BE IN ACCORDANCE WITH CHAPTER 23 OF APPENDIX Q SECTION BC Q102.
- 35. MINIMUM BRANCH PIPE SIZE TO BE ONE INCH (1").
- 36. 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.

NEW YORK CITY ENERGY CONSERVATION CODE (NYCECC)

THIS SECTION OF THE PROJECT CONSISTS OF WORK PERTAINING SOLELY TO THE LIFE SAFETY SYSTEMS OF THE BUILDING AND THEREFORE IS NOT REQUIRED TO COMPLY WITH THE NEW YORK CITY ENERGY CONSERVATION CODE ACCORDING TO CHAPTER 1 PARAGRAPH 101.3 OF THE NEW YORK CITY ENERGY CONSERVATION CODE.

SHOP DRAWING REQUIREMENTS

PRIOR TO FABRICATION AND INSTALLATION, THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE ENGINEER-OF- RECORD'S APPROVAL IN FULL COMPLIANCE WITH THE REQUIREMENTS FOR "WORKING DRAWINGS" IN ACCORDANCE WITH NYC BUILDING CODE (2022 EDITION) APPENDIX Q SECTIONS Q102-23.1 & Q105-8.1. A COMPLETE SET OF SHOP DRAWINGS STAMPED AS APPROVED BY THE ENGINEER-OF-RECORD SHALL BE MAINTAINED ON THE JOB SITE PRIOR TO THE COMMENCEMENT OF THE FIRE PROTECTION SYSTEM INSTALLATION. THESE SHOP DRAWINGS SHALL BE AVAILABLE FOR USE BY SPECIAL INSPECTORS AND BUILDING DEPARTMENT INSPECTORS AT ALL TIMES UNTIL THE JOB IS SIGNED OFF.

POST-INSTALLED ANCHORS

ALL ANCHORS USED TO SUPPORT EQUIPMENT, PIPING, ETC. SHALL BE ICC-ES APPROVED IN ACCORDANCE WITH NYC DOB BUILDINGS BULLETIN 2022-018. SUBMIT ALL ANCHORS FOR ENGINEER'S APPROVAL PRIOR TO INSTALLATION.

NEW YORK CITY SPRINKLER DEMOLITION NOTES

- 1. SCOPE OF WORK UNDER THIS CONTRACT SHALL INCLUDE THE REMOVAL OF ALL EXISTING SPRINKLER HEADS. BRANCHES AND MAINS IN AREA OF WORK.
- PROVIDE ALL LABOR APPARATUS, ETC, FOR THE REMOVAL OF ALL EXISTING SPRINKLER HEADS, PIPING, HANGERS, ETC. EXCEPT AS INDICATED.
- MAINTAIN CONTINUOUS OPERATION OF EXISTING RISERS SO AS NOT TO INCONVENIENCE OTHER BUILDING TENANTS.
- 4. REMOVE ALL DEMOLITION MATERIALS FROM PROJECT SITE, EXCEPT ITEMS DESIGNATED BY ARCHITECT/OWNER TO REMAIN OWNER'S PROPERTY AND BE STORED.
- 5. NO DEAD ENDS SHALL BE LEFT ON PIPING.
- 6. EXISTING EXPOSED PIPING NOT BEING REUSED. AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWING TO BE ABANDONED SHALL BE COMPLETELY REMOVED.
- 7. NO REMOVED EXISTING PIPING SHALL BE REUSED.
- EXISTING PIPING SERVING ADJACENT AREAS NOT IN AREA OF WORK SHALL REMAIN ACTIVE AND WITHOUT DISTURBANCE.
- 9. CONTRACTORS SHALL TAKE SPECIAL CARE TO DEMOLISH ONLY THAT WORK WHICH IS REQUIRED TO BE DEMOLISHED AND NOT TO DISTURB ANY WORK WHICH IS TO REMAIN. IF IN THE COURSE OF THE DEMOLITION, THE CONTRACTOR DESTROYS OR DISTURBS ANY WORK WHICH IS TO REMAIN, THEN HE SHALL, AT HIS OWN EXPENSE, REPAIR OR REPLACE SUCH WORK AS NECESSARY.
- 10. EXISTING PIPING SERVING ADJACENT AREAS NOT IN AREA OF WORK SHALL REMAIN ACTIVE AND WITHOUT DISTURBANCE.
- 11. CONFORM WITH NYC DOB BUILDINGS BULLETIN NO. 2020-012 REGARDING TEMPORARY SPRINKLER INSTALLATION AND/OR COMPARTMENTATION TO PROTECT THE FACILITY DURING REMOVALS AND SUBSEQUENT CONSTRUCTION ACTIVITIES AND REMOVAL OF THE SAME AFTER ENTIRE FLOOR IS COMPLETELY SPRINKLERED AND ACTIVATED.
- 12. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS REGARDING "OUT OF SERVICE" SYSTEMS IN ACCORDANCE WITH NYC FIRE CODE SECTION 901.7.

NYC FIRE PROTECTION PIPING PAINTING NOTES

- REFERENCES: NYC BUILDING CODE (2022 EDITION) SECTIONS 903.6 & 905.11
- 1. FIRE STANDPIPE AND SPRINKLER PIPING SHALL BE PAINTED IN ACCORDANCE WITH NYCBC SECTIONS 903.6 & 905.11 PRIOR TO ANY REQUIRED HYDROSTATIC TEST.
- PROVIDE BEST GRADE OF PAINT FOR ITS PURPOSE. ALL PAINT SHALL BE DELIVERED IN ORIGINAL SEALED CONTAINERS.
- 3. PRIMER SHALL BE ALKYD, ANTI-CORROSIVE FOR METAL (MPI #79), OR ALKYD, QUICK DRY FOR METAL (MPI #76). PAINT SHALL BE ALKYD, INTERIOR GLOSS (MPI #48), OR ALKYD, QUICK DRY GLOSS (MPI #96).
- WHERE DIFFERENT COLOR CODING MAY BE REQUIRED BY THE FIRE CODE FOR FACILITIES STORING, HANDLING AND USING FLAMMABLE AND COMBUSTIBLE LIQUIDS IN CONNECTION WITH SPECIAL OPERATIONS.
- 5. ALL BUILDINGS WHERE THE STANDPIPE, SPRINKLER OR COMBINED SYSTEMS ARE NOT SUBJECT TO SPECIAL INSPECTIONS, A LICENSED MASTER PLUMBER, LICENSED FIRE SUPPRESSION PIPING CONTRACTOR, REGISTERED DESIGN PROFESSIONAL OR SOMEONE WITH AN APPROPRIATE CERTIFICATE OF FITNESS FROM THE FIRE DEPARTMENT SHALL CERTIFY THAT ALL REQUIRED PAINTING HAS BEEN COMPLETED IN ACCORDANCE WITH THE CODE. THIS CERTIFICATION SHALL REMAIN ON THE PREMISES FOR INSPECTION BY THE BUILDING AND FIRE DEPARTMENTS.

NEW YORK CITY LIST OF REQUIRED SPECIAL **INSPECTIONS**

"/O3 _Y			DESCRIPTION
*		1704.27	FIRE RESISTANCE PENETRATIONS & JOINTS
	*	1707.7	SPECIAL INSPECTION FOR SEISMIC RESISTANCE — MECHANICAL, PLUMBING, FUEL GAS AND ELECTRICAL COMPONENTS
*		1704.23	SPRINKLER SYSTEM SPECIAL INSPECTION
*		1704.32	POST-INSTALLED ANCHORS

POST-INSTALLED ANCHORS - (TO BE PERFORMED DURING ACTUAL INSTALLATION): THIS INSPECTION SHOULD BE PERFORMED DURING ACTUAL INSTALLATION. IF NOT PERFORMED DURING THE INSTALLATION, THE INSTALLING CONTRACTOR IS RESPONSIBLE (ON HIS OWN EXPENSE) TO ENGAGE THE LICENSED STRUCTURAL ENGINEER WHO WILL ESTABLISH THE TEST LOAD CRITERIA. THE SPECIAL INSPECTOR IS TO ESTABLISH THE AMOUNT OF TEST POINTS. THE SPECIAL INSPECTOR IS TO BE PRESENT ON THE SITE DURING TESTING AND SIGN OFF IF SATISFIED.

APPLICABLE CODES AND REFERENCE STANDARDS

- 2022 NYC BUILDING CODE
- 2016 NFPA 13
- 2016 NFPA 14 2022 NYC BUILDING CODE APPENDIX Q
- 2022 FGI FACILITY GUIDELINES INSTITUTE FOR HOSPITALS

GENERAL NOTES:

- 1. MINIMUM SPRINKLER PIPE SIZE SHALL BE 1" DIAMETER
- 2. SPRINKLER HEADS SHALL BE LISTED, FUSIBLE-ELEMENT OR GLASS-BULB, SPRAY TYPE WITH ½"DISCHARGE ORIFICE.
- 3. ALL PENDENT TYPE SPRINKLER HEADS SHALL BE PLACED IN CENTER OF TILES.
- 4. SPRINKLER CONTRACTOR SHALL PARTICIPATE IN THE PREPARATION OF A OVERALL COORDINATED CEILING PLAN WITH THE MECHANICAL CONTRACTOR WHICH WOULD INDICATE ALL CEILING COMPONENTS SUCH AS DUCTWORK, LIGHTING FIXTURES AND ASSOCIATED SUSPENSION GRID, PLUMBING PIPING, SPRINKLER HEADS AND ASSOCIATED PIPING.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE OBTAINING ALL PERMITS, INSPECTIONS, TESTS AND SIGN-OFFS.
- 6. ALL WORK SHALL CONFORM TO THE BUILDING STANDARDS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MEET WITH BUILDING CONSTRUCTION MANAGER IN ORDER TO BECOME TOTALLY FAMILIAR WITH BUILDING CONSTRUCTION RULES. THERE SHALL BE NO DEVIATION FROM THE BUILDING STANDARDS WITHOUT PRIOR WRITTEN APPROVAL FROM THE CONSTRUCTION MANAGER.
- 7. HYDROSTATIC TESTS
- A. ALL HYDROSTATIC TESTS SHALL BE PERFORMED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE AND ITS REFERENCE STANDARDS. CONTRACTOR SHALL SUBMIT
- RESULTS OF THE TESTS TO THE OWNER. B. UNLESS OTHERWISE NOTED BELOW TEST ENTIRE SYSTEM PIPING HYDROSTATICALLY FOR
- ONE HOUR AT 200 PSI. C. PORTIONS OF SYSTEMS NORMALLY SUBJECTED TO SYSTEM WORKING PRESSURES IN EXCESS OF 200 PSI SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF 50 PSI IN EXCESS OF SYSTEM WORKING PRESSURE FOR ONE HOUR.
- D. WHERE COLD WEATHER WILL NOT PERMIT TESTING WITH WATER, AN INTERIM AIR TEST SHALL BE PERMITTED TO BE CONDUCTED AS DESCRIBED IN NYC BLDG CODE APPENDIX Q SECTION Q102-24.2.2. THIS PROVISION SHALL NOT REMOVE OR REPLACE THE REQUIREMENT FOR CONDUCTING THE HYDROSTATIC TEST AS DESCRIBED
- E. MODIFICATIONS AFFECTING 20 OR FEWER SPRINKLERS SHALL NOT REQUIRE TESTING IN EXCESS OF SYSTEM WORKING PRESSURE.
- F. WHERE THE ADDITION OR MODIFICATION IS MADE TO AN EXISTING SYSTEM IS AFFECTING MORE THAN 20 SPRINKLERS, THE NEW PORTION SHALL BE ISOLATED AND TESTED AT NOT LESS THAN 200 PSI FOR ONE HOUR.
- G. MODIFICATIONS THAT CANNOT BE ISOLATED. SUCH AS RELOCATED DROPS. SHALL NOT REQUIRE TESTING IN EXCESS OF SYSTEM WORKING PRESSURE.
- 8. CONTRACTOR SHALL UTILIZE CAPPED PIPING FOR CONNECTION OF NEW BRANCHES.
- 9. SPRINKLER CONTRACTOR SHALL VISIT THE PREMISES PRIOR TO SUBMITTING ITS PROPOSAL AND EXAMINE THE AREAS EFFECTED BY THIS WORK. HE IS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH POSSIBLE DIFFICULTIES THAT MAY ATTEND THE EXECUTION
- 10. PERFORM THIS WORK SIMULTANEOUSLY WITH THAT OF OTHER TRADES SO AS NOT TO DELAY OVERALL PROGRESS OF WORK.
- 11. OWNER'S OCCUPANCY REGULATIONS MAY REQUIRED THAT CERTAIN PORTIONS OF WORK BE DONE AFTER REGULAR WORKING HOURS. COORDINATE WITH BUILDING MANAGEMENT. COST OF OVERTIME IS TO BE INCLUDED IN THE CONTRACTOR'S PROPOSAL.
- 12. THE EXISTING SYSTEM SHALL BE LEFT IN PERFECT WORKING ORDER AT COMPLETION OF NEW WORK.
- 13. DO NOT USE ANY PART OF THE BUILDING AS A SHOP EXCEPT PARTS DESIGNATED FOR SUCH PURPOSES.
- 14. REROUTE OR REMOVE ALL EXISTING PIPING EXPOSED TO VIEW WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL OR MASONRY WORK AS REQUIRED BY THE PROPOSED
- 15. ALL SPRINKLER WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF APPLICABLE VERSION OF N.F.P.A. - 13 AND ALL LOCAL AUTHORITIES.
- 16. CONTRACTOR SHALL FIELD VERIFY EXACT ELEVATION, LOCATION AND PIPE SIZES OF EXISTING SPRINKLER HEADS AND PIPING BEFORE INSTALLATION OF NEW WORK.
- 17. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND SHALL INSTALL NEW WORK TO CLEAR DUCTWORK AND LIGHTING FIXTURES.
- 18. ALL SPRINKLER WORK SHALL COMPLY WITH BUILDING STANDARDS AND REQUIREMENTS. 19. 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. 20. A FIRE WATCH GUARD WITH A CERTIFICATE OF FITNESS SHALL BE MAINTAINED DURING
- SHUT DOWNS.
- 21. PIPE SIZES SHOWN ARE BASED ON DESIGN PIPING LAYOUT 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.
- 22. DRAWING INDICATES SPRINKLER SYSTEM DESIGN ONLY. CONTRACTOR IS RESPONSIBLE FOR OFFSETS, DROPS AND RISES FOR COORDINATION WITH OTHER TRADES.
- 23. PROVIDE AUXILIARY DRAINS AT TRAPPED SECTIONS OF PIPING AS REQUIRED BY APPLICABLE VERSION OF N.F.P.A. - 13.
- 24. ALL SERVICE SHUTDOWNS SHALL BE BY BASE BUILDING ENGINEERS. MINIMUM OF 48 HOURS NOTICE IS REQUIRED TO THE BUILDING OFFICE PRIOR TO SHUT DOWN.
- 25. ALL WORK TO BE DONE DURING THE HOURS DESIGNATED BY OWNER.

ELECTRICAL EQUIPMENT ROOMS

CONTRACTOR SHALL AVOID INSTALLING PIPING OVER ELECTRICAL EQUIPMENT ROOMS. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO LOCATING PIPING OVER THESE SPACES.

- IN ACCORDANCE WITH 2022 NYC BUILDING CODE SECTION BC 903.2, SPRINKLERS SHALL NOT BE REQUIRED IN ELECTRICAL EQUIPMENT ROOMS WHERE ALL OF THE FOLLOWING CONDITIONS ARE MET:
- 1. THE ROOM IS DEDICATED TO ELECTRICAL EQUIPMENT ONLY. 2. ONLY DRY-TYPE ELECTRICAL EQUIPMENT IS USED. 3. EQUIPMENT IS INSTALLED IN A 2-HOUR FIRE-RATED ENCLOSURE INCLUDING PROTECTION FOR PENETRATIONS.
- 4. NO COMBUSTIBLE STORAGE IS PERMITTED TO BE STORED IN THE ROOM. WHEN SPRINKLERS ARE INSTALLED IN ELECTRICAL EQUIPMENT ROOMS, ONLY THE SPRINKLER BRANCH LINE TO THE SPRINKLER HEAD(S) PROTECTING THAT ROOM SHALL BE

PERMITTED TO RUN OVER THAT SPACE. THIS BRANCH LINE SHALL NOT RUN DIRECTLY OVER ANY ELECTRICAL PANELS AND/OR SWITCHBOARDS.

FLOOD HAZARD AREA NOTE:

THIS PROPERTY IS NOT IN A SPECIAL FLOOD HAZARD AREA (SFHA).

OUT OF SERVICE NOTIFICATION

OWNER SHALL NOTIFY FDNY OF SPRINKLER SYSTEM DISCONNECTION IN ACCORDANCE WITH NYC DOB BUILDINGS BULLETIN 2020-012 PARAGRAPH I.F.1.a & 2022 NYC FIRE CODE SECTION FC 901.7.

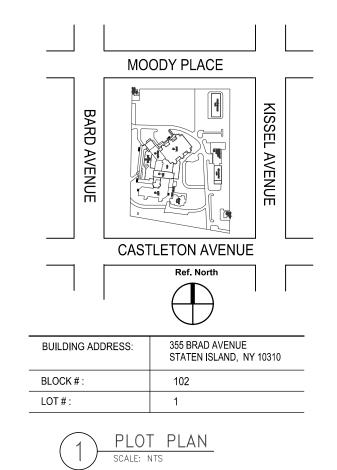
DESIGN CRITERIA

ENTIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO MEET FOLLOWING

- 1. ORDINARY (GROUP1) HAZARD OCCUPANCY MAIN LOBBY AND LOUNGE. STORAGE ROOMS. PARKING GARAGES, MECHANICAL AND ELECTRICAL ROOMS. DENSITY 0.15 GPM PER SQ. FT. OVER MOST HYDRAULICALLY REMOTE 1500 SQ. FT., MAXIMUM COVERAGE PER SPRINKLER HFAD 130 SQ. FT.
- 2. ORDINARY (GROUP2) HAZARD OCCUPANCY STORAGE AREAS, >12FT. DENSITY 0.20 GPM PER SQ. FT. OVER MOST HYDRAULICALLY REMOTE 1500 SQ. FT., MAXIMUM COVERAGE PER SPRINKLER HEAD 130 SQ. FT.
- 3. LIGHT HAZARD OCCUPANCY ALL OTHER AREAS. DENSITY .10 GPM PER SQ.FT. OVER MOST HYDRAULICALLY REMOTE 1500 SQ. FT., MAXIMUM COVERAGE PER STANDARD SPRINKLER HEAD 225 SQ. FT. FOR EXTENDED COVERAGE SPRINKLERS REFER TO MANUFACTURER'S
- 4. MINIMUM PRESSURE AT STANDARD SPRINKLER HEAD 7 PSI.
- 5. WHENEVER ROLL GROOVED CONNECTIONS ARE USED, ALLOWANCE FOR ADDITIONAL PRESSURE LOSS AT GROOVES SHALL BE MADE AS FOLLOWS:
- A. FOR EACH COUPLING ON STRAIGHT RUN INCLUDING STRAIGHT FLOW THROUGH TEE OR CROSS: ADD 1 EQUIVALENT FOOT OF PIPE.
- B. FOR EACH COUPLING AT ELBOW, TEE OR CROSS WHERE DIRECTION OF FLOW CHANGES: ADD 2 EQUIVALENT FEET OF PIPE.
- 6. EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA-13 (2016 EDITION), AS MODIFIED BY NYC BUILDING CODE APPENDIX Q. A. WHEREVER FITTINGS ARE USED IN CONJUNCTION WITH LIGHTWALL PIPE, EQUIVALENT
- FITTING LENGTHS INDICATED IN NFPA-13 (2016 EDITION). AS MODIFIED BY NYC BUILDING CODE APPENDIX Q, SHALL BE INCREASED IN ACCORDANCE WITH PARAGRAPH
- 7. DISCHARGE FROM EACH SPRINKLER HEAD SHALL NOT BE LESS THAN REQUIRED FOR AREA COVERED BY THIS HEAD. AREA COVERAGE PER HEAD SHALL BE DETERMINED IN ACCORDANCE WITH NFPA-13 (2016 EDITION), AS MODIFIED BY NYC BUILDING CODE APPENDIX Q.
- 8. HYDRAULIC CALCULATIONS SHALL BE BROUGHT BACK TO CONNECTION TO WATER SUPPLY.
- 9. RESULT OF HYDRAULIC CALCULATIONS SHALL INDICATE A 5% TO 10% PRESSURE SAFETY MARGIN (I.E. EXCESS OF PRESSURE AVAILABLE OVER PRESSURE REQUIRED) WHILE MAINTAINING THE WATER SUPPLY REQUIREMENTS STATED IN 2022 NYC BUILDING CODE APPENDIX Q SECTIONS BC Q102-11.1.4.2 and BC Q102-11.2.2
- 10. THE ADEQUACY OF THE WATER SUPPLY FOR ALL PIPE SCHEDULE SYSTEMS FED BY WATER STORAGE TANK(S) SHALL BE VERIFIED BY HYDRAULIC CALCULATIONS IN ACCORDANCE WITH 2022 NYC BUILDING CODE APPENDIX Q SECTION BC Q102-11.2.2.10.

<u>S</u>	PRINKI	ER DRAWING LIST
	DRAWING #	TITLE
1	SP-001.00	SPRINKLER NOTES AND PLOT PLAN
2	SP-002.00	SPRINKLER SCHEDULES, SYMBOL LIST, & ABBREVIATIONS
3	SP-101.00	SPRINKLER 1ST FLOOR DEMOLITION PLAN
4	SP-200.00	SPRINKLER 1ST FLOOR TEMPORARY PROTECTION PLAN
5	SP-201.00	SPRINKLER 1ST FLOOR CONSTRUCTION PLAN
6	SP-301.00	SPRINKLER RISER DIAGRAM
7	SP-401.00	SPRINKLER DETAILS SHEET 1
8	SP-402.00	SPRINKLER DETAILS SHEET 2
9	SP-501.00	SPRINKLER SPECIFICATIONS

PHASING NOTE: THIS PROJECT WILL BE CONSTRUCTED IN 3 PHASES. REFER TO THE ARCHITECTURAL PHASING PLAN FOR MORE INFORMATION.



THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE

APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN

BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER

SCHUNKEWITZ

ARCHITECTURE

INTERIORS PROJECT MANAGEMENT

> DANIEL SCHUNKEWITZ, ARCHITECT 1015 BENDERMERE AVENUE WANAMASSA NJ, 07712 917-848-2350 DS@DSAHEALTHCARE.COM

Seal & Signature

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05/23/2023 Issued for 100% CD's 04/28/2023 Issued for 50% CD's 03/31/2023 DD Review Set date description

RICHMOND UNIVERSITY

Client Name:

Project Name & Location:

BI-PLANE EP LAB 355 BARD AVENUE STATEN ISLAND NY

MEDICAL CENTER

Drawing Title: SPRINKLER NOTES & PLOT PLAN

LP 05/23/2023 Checked By: NO SCALE

Issued To, For: CONSTRUCTION DOCUMENTS

File No.: R2000 Drawing No. SP-001.00

OF 9

FIRE PROTECTION	1	M	Α.	TI	E	RI	Α	L		S	C	; -	E	ED)(Jl	_ E									
	\Box		Р	IPE									FI.	TTIN	GS								JOI	NTS		
NOTES: 1. FOR REQUIRED PRESSURE RATINGS REFER TO RISER DIAGRAM. 2. ALL MATERIALS SELECTED ON THIS SCHEDULE MUST BE APPROVED BY THE LOCAL AUTHORITIES HAVING JURISDICTION. 3. TO BE USED DOWNSTREAM OF SPRINKLER FLOOR/SECTIONAL CONTROL VALVE ON PIPING FROM 2-1/2" TO 6" (ROLLED GROOVED PIPING ONLY; CUT GROOVED & THREADED NOT PERMITTED). 4. TO BE USED DOWNSTREAM OF SPRINKLER FLOOR/SECTIONAL CONTROL VALVE ON PIPING 2" & SMALLER. 5. HIGH PRESSURE PIPING INCLUDES PIPING FROM HIGH PRESSURE	51/A21.51 CLASS 56	795M TYPE E, GRADE A	TYPE E, GRADE B	TYPE E, GRADE A			F	ASIM B/5 OR ASIM B88	MI CA N	5 150 & 300 ASME B16.3	ASIME DIO:4	4 (404 /			1,17,1	_	SASTING ASTM A536	/A21.10	ANSI/ASME B16.9	22				CASTING ASTM A47/A47M	⋖	GASKET ANSI/AWWA C111/A21.11
RATED FDC AND ALL SYSTEMS EXPOSED TO 300 PSI OR GREATER. MINIMUM WORKING PRESSURE RATING SHALL BE 800 PSI. ALL JOINTS SHALL BE WELDED (WITH THE EXCEPTION OF FLEXIBLE COUPLINGS FOR SEISMIC REQUIREMENTS). ALTERNATE DESIGN: SCHEDULE 40 BLACK STEEL PIPE WITH VICTAULIC RIGID COUPLINGS STYLE HP-70 IN LIEU OF WELDED JOINTS.	DUCTILE IRON - ANSI/AWWA C151	SCH 10 - ASTM	SCH 40 - ASTM	STEEL SCH 80 - ASTM A53/A53M	BLACK		≶	TYPE "K" COPPER TUBE - ASIM	L CUPPER IUBE -	MALLEABLE IRON - CLASS 150 OCAST TOOM OF ASS 126 OCAST TOOM OCASS 126 OCAST TOOM OCASS 126 OCAST TOOM OCAT TOOM OCAST TOOM OCAST TOOM OCAST TOOM OCAST TOOM OCAST TOO	- CLASS 123	¥	CEMEIN LINED - ANSI/AWWA CIO4/AZI.4	BLACK CAI VANIZED (DRAINAGE-TYDE)	SACVANIZED (DIVAINABLE IFC)	GROOVED-JOIN! MALLEABLE-IRON CASTING	GROOVED-JOINT DUCTILE IRON CASTING		- OED	빙	THREADED - ANSI/ASME B1.20.1		STEEL FLANGED ANSI/ASME B16.5	GROOVED-JOINT MALLEABLE-IRON		PUSH-ON W/ FIELD-LOCK BRAZED - AWS A5.8
SYSTEM BURIED BUILDING FIRE SERVICE	•			+			•			+	+						+	•				\dashv				•
FIRE STANDPIPE	+		•	+	•				+	•					+	•	•	-				•	•	•	•	+
SPRINKLER WET (SEE NOTE 3)	+	•	•	+	•				+	•	+				-	-	•					\dashv			•	+
SPRINKLER WET (SEE NOTE 4)			•	\top	•				1	• •					\dagger		\top				•	\exists				$\dashv \dashv$
SPRINKLER DRY PIPE (SEE NOTE 3)			•			•			1	• •						•	•							•	•	
SPRINKLER DRY PIPE (SEE NOTE 4)			•			•				• •											•					
SPRINKLER DRAIN PIPE (TEST & DRAIN)	$\perp \rfloor$		•	1		•				• •				•			\perp				•	ightharpoons				
HIGH PRESSURE FIRE PIPE (SEE NOTE 5)	$\perp \!\!\! \perp \!\!\! \perp$		•	•	•					\perp	\perp						_		•			\dashv	•			
MRI SPRINKLER WET (SEE NOTE 4)								•												•						•

	FIRE PROTECTION VALVE SCHEDULE																						
	VALVE SPECIFICATION LOCATION JOINT STEM MATERIAL RATING																						
					JOI	ΝT		S	STE	М	1	MA	TER	IAL		RA	ΠN	G					
TYPE	MANUFACTURER	FIG. NO.	SIZE	FLANGED	THREADED	MECHANICAL JOINT	GROOVED		U.S.&Y.	N.K.S.		BRONZE		DUCTILE IRON	175# WWP	300# WWP	350# WWP	400# WWP	BURIED SERVICE	TO 175	FIRE ZONE (UP TO 300 PSI)	STSTEM URALIN	SPRINKLER (SEE NOTE 2)
	N	M-609	4"-12"			•	\dashv	+	+		+		•	+	-	+			•			+	+
GATE VALVES	N N	F-607-0TS F-697-0	2 1/2"-12" 2 1/2"-10"	•					•				•		•		•			•	•	_	•
BALL VALVES	N N	KT-585-70-UL KT-580-70-UL	3/4"-1" 1 1/4"- 2"		•							•				•				•	•	+	
CHECK VALVES	N N	F-908-W F-968-B	2 1/2"-12" 2 1/2"- 6"	•									•		•	•	•			•	•		•
GLOBE & ANGLE VALVES	N N	T-211-B T-235-Y	1/2"-3"		•							•				•	•					D	<u>+</u>
BUTTERFLY VALVES	N	GD-4765-8N	2 1/2"-8"				•							•		•						+	•
VALVES	N	GD-6765-8N	2 1/2"-10"				•		+		+			•			•	-				+	—
PRESSURE REDUCING VALVES (PRV)	С	90G-21P	1 1/2" 2" 2 1/2"-4"		•		•					•		•		•						•	•
PRESSURE	С	55L-60	6"-8" 1/2"-1"		•		•		+			•		•		•		•				+	•
RELIEF VALVES (USED W/ PRV)																						<u>+</u>	

ABD	AUTOMATIC BALL DRIP
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ВОР	BOTTOM OF PIPE
CFM	CUBIC FEET PER MINUTE
CHV	CHECK VALVE
DIA	DIAMETER
DR	DRAIN
DN	DOWN (PENETRATES FLOOR SLAB)
DSP	DRY SPRINKLER
EXIST	EXISTING
F	FIRE LINE (COMBINED)
FDC	FIRE DEPARTMENT CONNECTION
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
AFHV	AUXILIARY FIRE HOSE VALVE
FD	FLOOR DRAIN
FL	FLOOR
FSP	FIRE STANDPIPE
FT	FEET
GV	GATE VALVE
GAL	GALLONS
GPM	GALLONS PER MINUTE
IN	INCH
NTS	NOT TO SCALE
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
PSI	POUNDS PER SQUARE INCH (GAUGE)
PRV	PRESSURE REGULATING VALVE
SP	SPRINKLER
TOP	TOP OF PIPE
TS	TAMPER SWITCH
VIV	VALVE IN VERTICAL
WFS	WATER FLOW SWITCH

	SYMBOLS LIST									
⊙ ●	(REFER TO SCHEDULE FOR SPRINKLER HEAD SYMBOLS)									
0	EXISTING SPRINKLER HEAD									
×	SPRINKLER HEAD TO BE REMOVED									
⊗ —⊙	SPRINKLER HEAD TO BE RELOCATED WITH NEW									
OBD	SPRINKLER HEAD BELOW DUCT									
—FSP—	FIRE STANDPIPE PIPING									
DR	DRAIN PIPING									
——SP——	SPRINKLER PIPING									
— DSP—	DRY SPRINKLER PIPING									
— F —	FIRE SERVICE (COMBINED) PIPING									
	SPRINKLER FLOOR CONTROL VALVE ASSEMBLY W/ DRAIN									
<u>—</u>	FIRE DEPARTMENT CONNECTION									
	BOTTOM PIPE CONNECTION (DROP)									
	PIPE DROP OR DOWN									
	TOP PIPE CONNECTION (RISE OR UP)									
3,	VALVE IN VERTICAL									
7	CHECK VALVE W/AUTO BALL DRIP									
- -◆-	OS&Y (OUTSIDE SCREW & YOKE) VALVE									
-	DRAIN VALVE									
1/2	CHECK VALVE									
<u> </u>	AUTOMATIC BALL DRIP									
	PUMP									
X	RISER DESIGNATION (X=F, FSP, OR SP) RISER SERVICE TYPE RISER NUMBER									
TS	TAMPER SWITCH (TS)									
FS	WATER FLOW SWITCH (WFS)									
	FIRE HOSE VALVE									
•	POINT OF CONNECTION NEW PIPE TO EXISTING									
	POINT OF DISCONNECTION FOR EXISTING/DEMO WORK									

NOTES: 1. FOR PRESSURE RATING OF VALVES, REFER TO RISER DIAGRAM. 2. LOCATED AT OR ABOVE THE DESIGN FLOOD ELEVATION SPECIFIED IN ASCE 24 TABLE 7-1, ONLY. NIS NOT 10 SCALE OS&Y OUTSIDE SCREW & YOKE GATE VALVE PSIA POUNDS PER SQUARE INCH (ABSOLUTE) PRV PRESSURE REGULATING VALVE SP SPRINKLER TOP TAMPER SWITCH (TS) WATER FLOW SWITCH (WFS) FIRE HOSE VALVE POINT OF CONNECTION NEW PIPE TO EXISTING POINT OF DISCONNECTION FOR EXISTING/DEMO WORK

SPRINKLER HEAD SCHEDULE

 $\frac{MANUFACTURER KEY}{N = NIBCO}$

NOTE: APPROVED EQUAL ALSO ACCEPTABLE

C = CLA-VAL

NOTES:

- 1. ALL TYPES OF SPRINKLER HEADS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
- 2. THE SPRINKLERS IN ROOMS, ELECTRICAL & TELECOM (I.T.) CLOSETS & UPS ROOMS SHALL BE PROVIDED WITH SPRINKLER GUARDS. ALSO PROVIDE SPRINKLER GUARDS WHERE SPRINKLERS
- MAY BE SUBJECT TO ACCIDENTAL DAMAGE. (LOCATED WITHIN 7'-0" A.F.F.)

 3. ALL SPRINKLER HEADS THROUGHOUT SHALL BE OF THE FOLLOWS:
- ORDINARY TEMPERATURE RATING (135 170 DEG. F), WITH THE FOLLOWING EXCEPTIONS –
- A. SPRINKLER HEADS LOCATED UNDER SKYLIGHTS SHALL BE OF THE INTERMEDIATE TEMPERATURE RATING (175 225 DEG. F).
- B. SPRINKLER HEADS LOCATED CLOSE TO THE HEATER, STEAM PIPE OR LOW-PRESSURE BLOW-OFF VALVE SHALL BE OF THE TEMPERATURE RATING AS REQUIRED BY APPLICABLE
- EDITION OF NFPA 13. THE DRAWINGS, PREPARED BY THE CONTRACTOR, SHALL BE COORDINATED WITH THE HVAC CONTRACTOR AND ALL HVAC EQUIPMENT WHICH CAN AFFECT THE RATING OF THE SPRINKLER HEADS SHALL BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS PRIOR TO SUBMISSION FOR APPROVAL.
- 4. SPRINKLERS IN ELECTRICAL, TELECOM (IT) CLOSETS AND UPS ROOMS SHALL BE PROVIDED WITH SPRINKLER GUARDS. GUARDS SHALL ALSO BE PROVIDED WHERE SPRINKLERS MAY BE SUBJECT TO ACCIDENTAL DAMAGE (LOCATED WITHIN 7'-0" A.F.F.).
- SUBJECT TO ACCIDENTAL DAMAGE (LOCATED WITHIN 7'-0" A.F.F.).

 5. ALL SPRINKLER HEAD SYMBOLS NOT SHOWN ON PLANS. REFER TO "GENERAL LOCATION" COLUMN FOR ESTIMATING.
- 6. SHOP DRAWING PLANS PREPARED BY THE CONTRACTOR SHALL BE COORDINATED WITH THE HVAC CONTRACTOR AND ALL HVAC EQUIPMENT WHICH CAN AFFECT THE RATING OF THE SPRINKLER HEADS AND SHALL BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS PRIOR TO

3. FOR FIRE HOSE VALVES REFER TO FIRE PROTECTION

EQUIPMENT SCHEDULE.

- SUBMISSION FOR APPROVAL.
 7. SPRINKLER SELECTIONS ARE BASED ON PRODUCTS MANUFACTURED BY RELIABLE. VIKING AND/OR TYCO PRODUCTS SHALL BE CONSIDERED APPROVED EQUAL PRODUCTS AND ARE
- SUBJECT TO THE APPROVAL OF THE ENGINEER AND ARCHITECT.

 8. SPRINKLER CONTRACTOR SHALL COORDINATE THE LOCATIONS OF SPRINKLER HEADS WITH
- STRUCTURAL ELEMENTS AND HVAC DUCTWORK.

 9. MAXIMUM WORKING PRESSURE OF EACH SPRINKLER HEAD SHALL BE 175 PSI UNLESS OTHERWISE NOTED.

MANUFACTURER	MODEL NO.	SYMBOL	K-FACTOR	STANDARD (SR) OR QUICK RESPONSE (QR)	UPRIGHT	PENDENT	RECESSED	CONCEALED	EXTENDED COVERAGE	HORIZONTAL SIDEWALL	VERTICAL SIDEWALL	DRY	INSTITUTIONAL	UL-LISTED	FM-APPROVED	GENERAL LOCATION OF SPRINKLER HEADS (REFER TO DRAWINGS FOR ACTUAL LOCATIONS)	* <u>NOTE</u> : ALL FINISHES ARE SUBJECT TO APPROVAL BY ARCHITECT. FINISH*	SIN NUMBER	REMARKS
RELIABLE	G5-56	-	5.6	QR				•						•	•	SPACES & CORRIDORS WITH HUNG CEILINGS	SPRINKLER HEAD COVER PLATE FACTORY—PAINTED WHITE. SPRINKLER HEAD COVER PLATE WITH QR GASKET	RA3415	LIGHT & ORDINARY HAZARD
RELIABLE	F1FR56	-	5.6	QR	•									•	•	SPACES & CORRIDORS WITHOUT HUNG CEILINGS	BRONZE OR FACTORY PAINTED PER ARCHITECT	RA1425	LIGHT & ORDINARY HAZARD

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Client Name:

RICHMOND UNIVERSITY MEDICAL CENTER

Project Name & Location:

BI-PLANE EP LAB 355 BARD AVENUE STATEN ISLAND NY

SPRINKLER
SCHEDULES, SYMBOL
LIST, & ABBREVIATIONS

 LP
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 Checked By:
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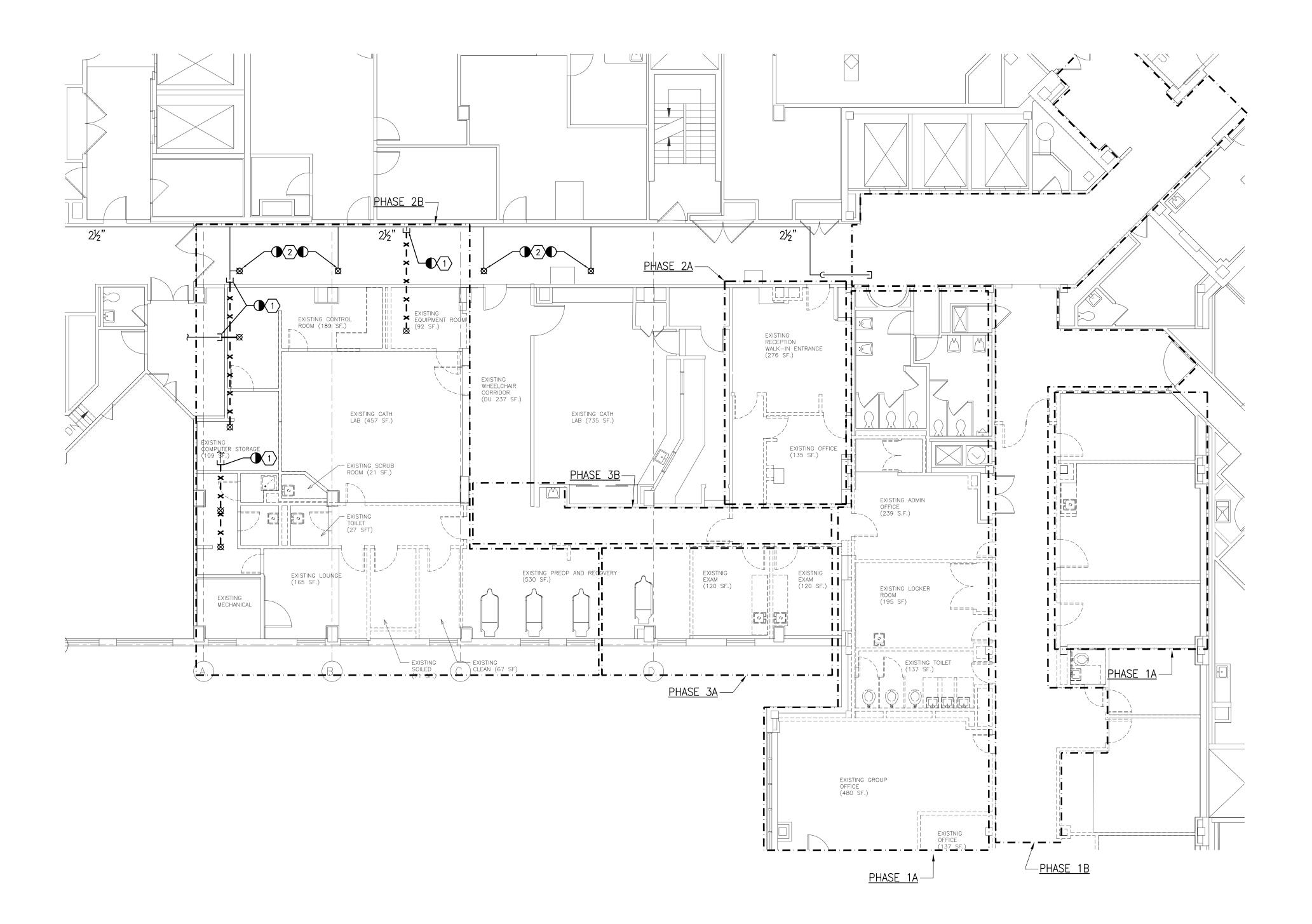
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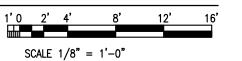
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Drawing No.:

Drawing No.: SP-002.00

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1 SPRINKLER 1ST FLOOR DEMOLITION PLAN SCALE: 1/8" = 1'-0"



SPRIKLER KEY NOTES:

- DISCONNECT AND REMOVE EXISTING SPRINKLER HEAD AND ASSOCIATED PIPING INCLUDE ALL HANGERS AND SUPPORTS BACK TO ACTIVE LINE AND CAP PIPING
- REMOVE EXISTING SPRINKLER HEAD AND REPLACE WITH NEW SPRINKLER HEAD, CONTRACTOR TO OFFSET PIPING AS REQUIRED FOR NEW RCP

SPRINKLER GENERAL NOTES:

- 1. COORDINATE ALL SHUTDOWNS WITH BUILDING MANAGEMENT PRIOR
- TO COMMENCEMENT OF WORK.

 2. COORDINATE WITH ARCHITECTURAL PHASING AND OVERTIME
- REQUIREMENTS FOR CONSTRUCTION, AS REQUIRED.
- 3. ALL SPRINKLER OUTSIDE OF THIS PROJECT SCOPE OF WORK AREA, SHALL REMAIN ACTIVE. ALL SP PIPING WHICH SUPPLIES OUTSIDE THE AREA OF WORK SHALL REMAIN.
- 4. THE NEW ULTRASUITE CLEAN CEILING SYSTEM SHALL BE PROVIDED BY CM AND INSTALLED BY OTHERS. THE SYSTEM SHALL BE EQUIPPED WITH LAMINAR FLOW DIFFUSERS, HEPA FILTERS, LIGHTING, ETC. REFER TO THE ARCHITECTURAL DRAWINGS FOR DETAILS. SPRINKLER CONTRACTOR TO COORDINATE ALL SPRINKLER PIPING AT CEILING WITH THE ULTRASUITE CLEAN CEILING SYSTEM.

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no. date description

Client Name:

RICHMOND UNIVERSITY
MEDICAL CENTER

Project Name & Location:

BI-PLANE EP LAB 355 BARD AVENUE STATEN ISLAND NY

Drawing Title:

SPRINKLER

1ST FLOOR DEMOLITION

PLAN

 PLAN

 Drawn By:
 Date:

 LP
 05/23/2023

 Checked By:
 Scale:

Checked By:

LP

Scale:

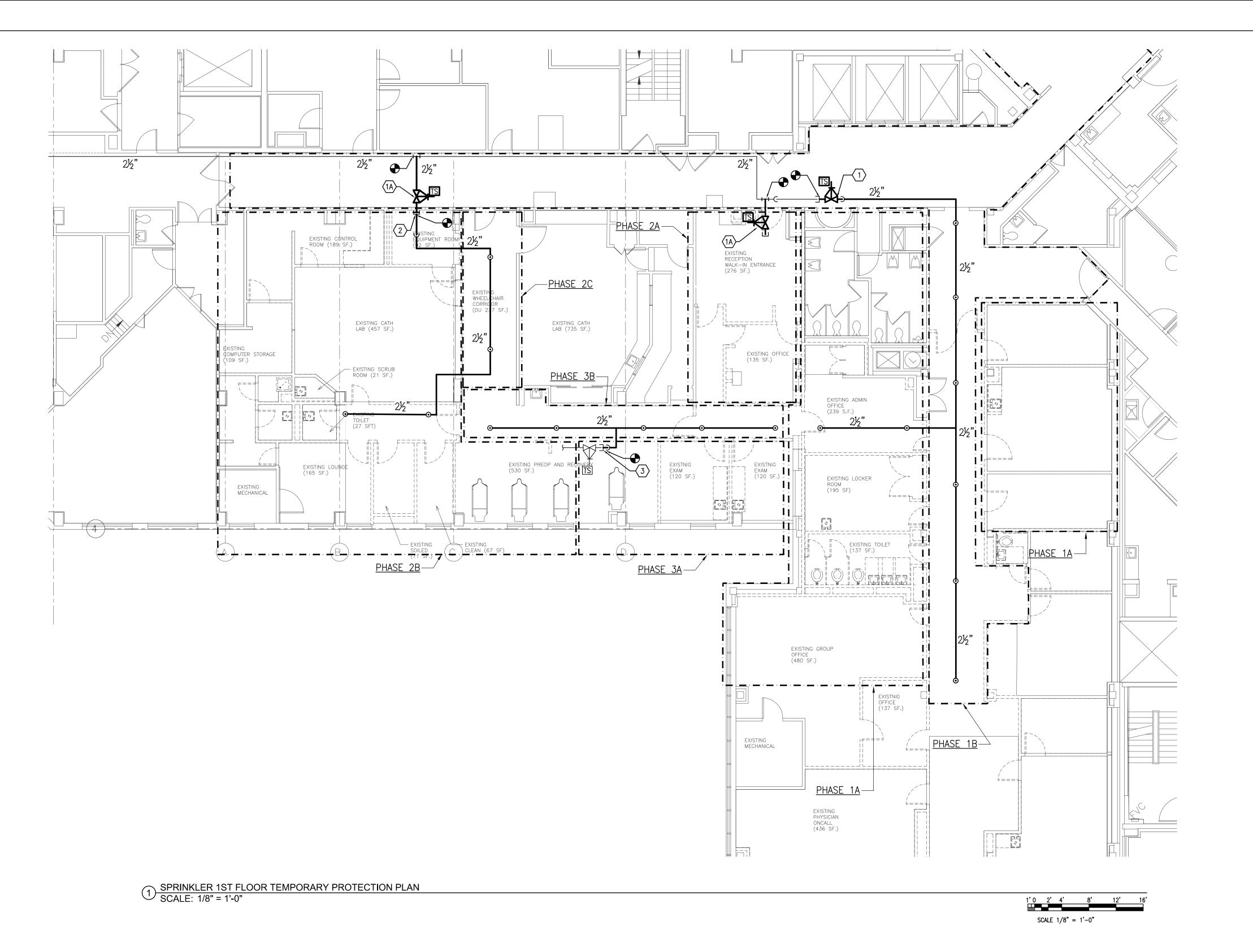
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SPRIKLER KEY NOTES:

- PROVIDE 2½" OS&Y VALVE WITH TAMPER SWITCH ABOVE CEILING FOR CONNECTION TO NEW SPRINKLER SYSTEM IN PHASE 1. ONCE PHASE 1 SPRINKLER SYSTEM IS OPERATIONAL THE TEMP SPRINKLERS CAN BE
- PROVIDE 2½" OS&Y VALVE WITH TAMPER SWITCH ABOVE CEILING FOR CONNECTION TO NEW SPRINKLER SYSTEM IN PHASE 2.
- CONNECT TO 2½" OS&Y VALVE WITH TAMPER SWITCH ABOVE CEILING INSTALLED DURING PHASE 1 FOR CONNECTION TO TEMP SPRINKLER SYSTEM FOR PHASE 2. ONCE PHASE 2 SPRINKLER SYSTEM IS INSTALLED AND TESTED CONTRACTOR TO TIE INTO OS&Y VALVE ABOVE THE CEILING AND THE TEMP SPRINKLERS CAN BE REMOVED
- CONNECT TO 2½" OS&Y VALVE WITH TAMPER SWITCH ABOVE CEILING INSTALLED DURING PHASE 2 FOR CONNECTION TO TEMP SPRINKLER SYSTEM FOR PHASE 3. ONCE PHASE 3 SPRINKLER SYSTEM IS INSTALLED AND TESTED CONTRACTOR TO TIE INTO OS&Y VALVE ABOVE THE CEILING AND THE TEMP SPRINKLERS CAN BE REMOVED

SPRINKLER GENERAL NOTES:

- 1. COORDINATE ALL SHUTDOWNS WITH BUILDING MANAGEMENT PRIOR TO COMMENCEMENT OF WORK.
- 2. COORDINATE WITH ARCHITECTURAL PHASING AND OVERTIME
- REQUIREMENTS FOR CONSTRUCTION, AS REQUIRED.
- 3. ALL SPRINKLER OUTSIDE OF THIS PROJECT SCOPE OF WORK AREA, SHALL REMAIN ACTIVE. ALL SP PIPING WHICH SUPPLIES OUTSIDE THE AREA OF WORK SHALL REMAIN. 4. THE NEW ULTRASUITE CLEAN CEILING SYSTEM SHALL BE PROVIDED
- BY CM AND INSTALLED BY OTHERS. THE SYSTEM SHALL BE EQUIPPED WITH LAMINAR FLOW DIFFUSERS, HEPA FILTERS, LIGHTING, ETC. REFER TO THE ARCHITECTURAL DRAWINGS FOR DETAILS. SPRINKLER CONTRACTOR TO COORDINATE ALL SPRINKLER PIPING AT CEILING WITH THE ULTRASUITE CLEAN CEILING SYSTEM.

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04/28/2023 Issued for 50% CD's 03/31/2023 date description

Client Name:

RICHMOND UNIVERSITY MEDICAL CENTER

Project Name & Location:

BI-PLANE EP LAB 355 BARD AVENUE STATEN ISLAND NY

Drawing Title: SPRINKLER 1ST FLOOR TEMPORARY

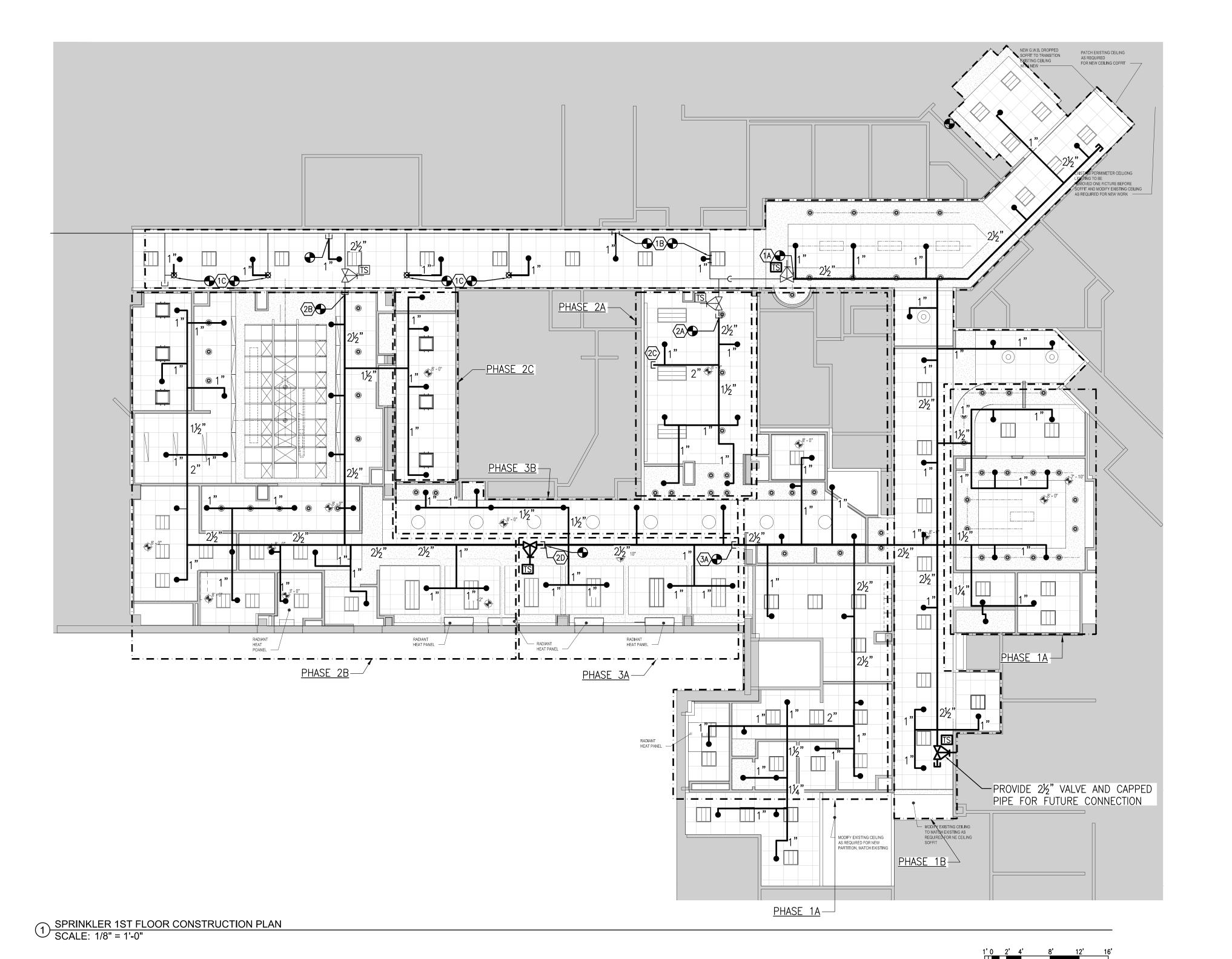
PROTECTION PLAN 05/23/2023 Checked By:

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AS NOTED CONSTRUCTION DOCUMENTS

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SPRIKLER KEY NOTES:

- CONNECT NEW 2½"SP. PIPE TO 2½"SP OS&Y VALVE INSTALLED DURING TEMP SPRINKLER PHASE.
- (1B) CUT AND CONNECT NEW 1"SP PIPE TO EXISTING 21/2"SP PIPE
- REMOVE EXISTING SPRINKLER HEAD AND REPLACE WITH NEW SPRINKLER HEAD, CONTRACTOR TO OFFSET PIPING AS REQUIRED FOR NEW RCP
- (2A) CONNECT NEW 2½"SP. PIPE TO 2½"SP CAPPED OUTLET
- ONCE PHASE 2 SPRINKLER SYSTEM IS INSTALLED AND TESTED CONTRACTOR TO TIE INTO OS&Y VALVE ABOVE THE CEILING AND THE TEMP SPRINKLERS CAN BE REMOVED
- 2C PROVIDE CAPPED 2"SP OUTLET FOR FUTURE CONNECTION
- PROVIDE 2½" OS&Y VALVE WITH TAMPER SWITCH ABOVE CEILING DURING PHASE 2 FOR CONNECTION TO TEMP SPRINKLER SYSTEM FOR PHASE 3. ONCE PHASE 3 SPRINKLER SYSTEM IS INSTALLED AND TESTED CONTRACTOR TO TIE INTO OS&Y VALVE ABOVE THE CEILING AND THE TEMP SPRINKLERS CAN BE REMOVED

SPRINKLER GENERAL NOTES:

- 1. COORDINATE ALL SHUTDOWNS WITH BUILDING MANAGEMENT PRIOR
- TO COMMENCEMENT OF WORK.
- 2. COORDINATE WITH ARCHITECTURAL PHASING AND OVERTIME REQUIREMENTS FOR CONSTRUCTION, AS REQUIRED.
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Project Name & Location:

BI-PLANE EP LAB 355 BARD AVENUE STATEN ISLAND NY

SPRINKLER
1ST FLOOR

 CONSTRUCTION PLAN

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 Date:

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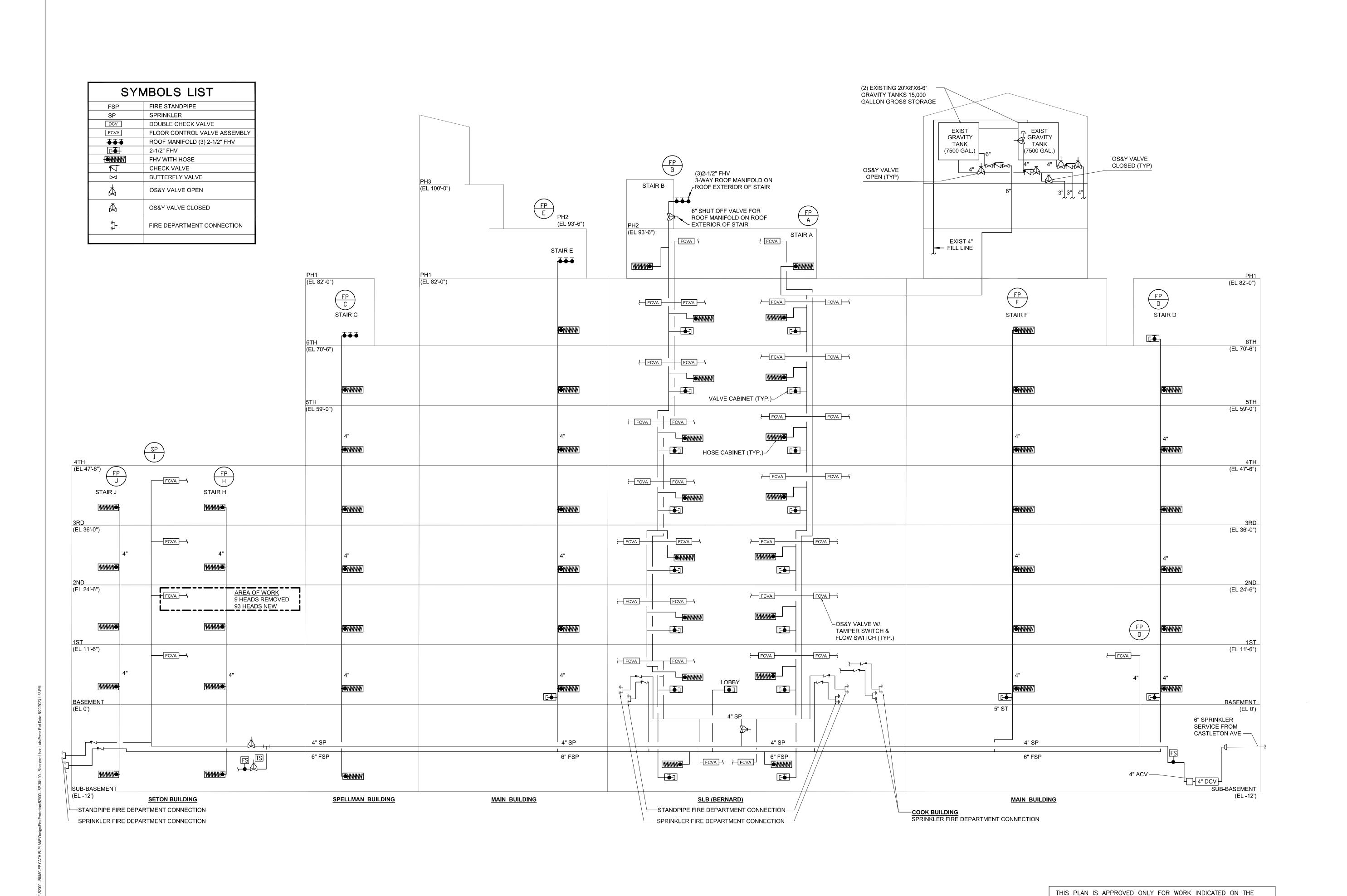
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SCALE 1/8" = 1'-0"



SCHUNKEWITZ

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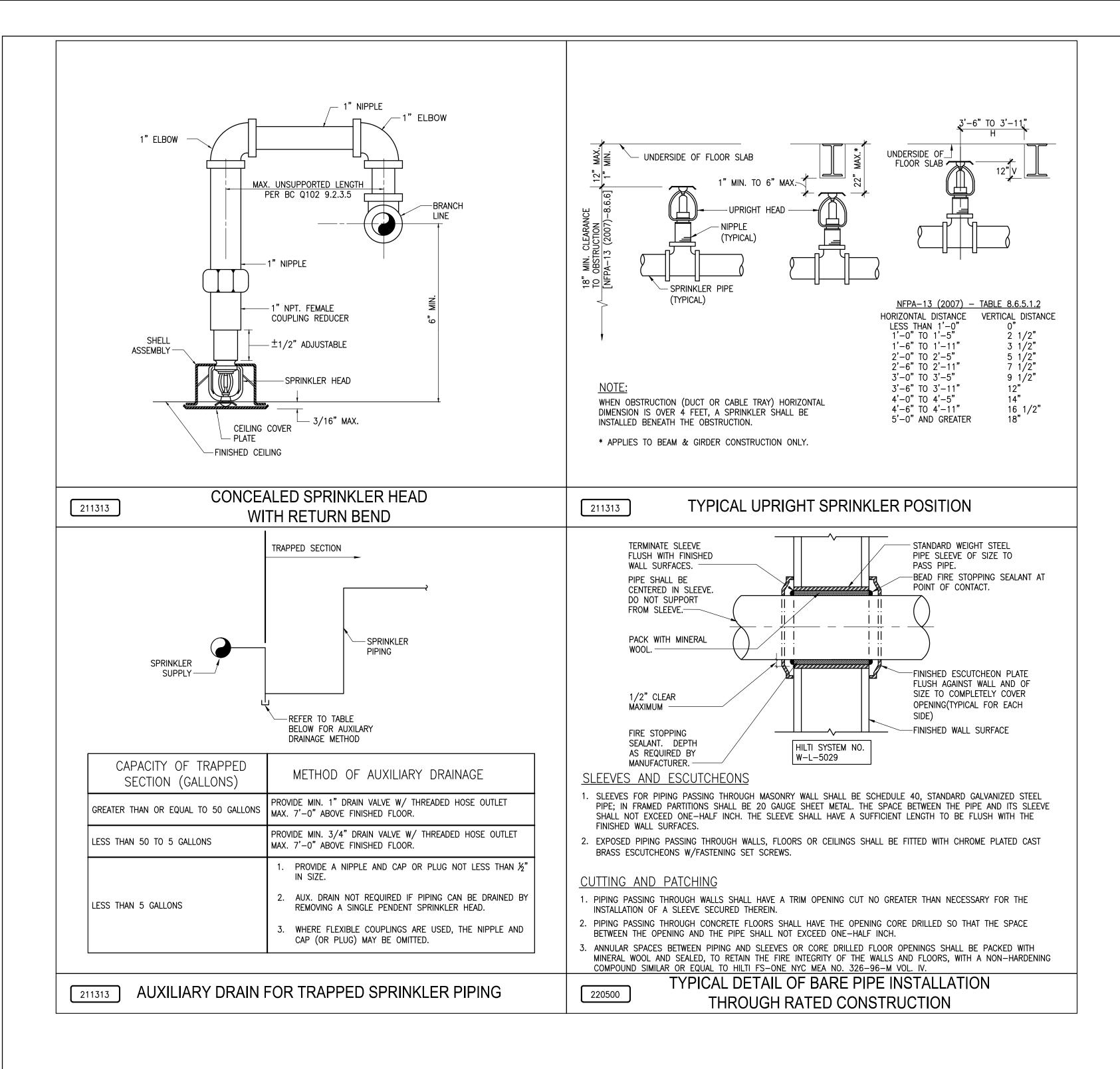
Drawing Title: SPRINKLER RISER DIAGRAM

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File No.: R2000 Drawing No.:

APPLICATION 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. SP-301.00 6 OF 9



SCHUNKEWITZ

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Drawing Title:
SPRINKLER
DETAILS SHEET 1

 Drawn By:
 Date:

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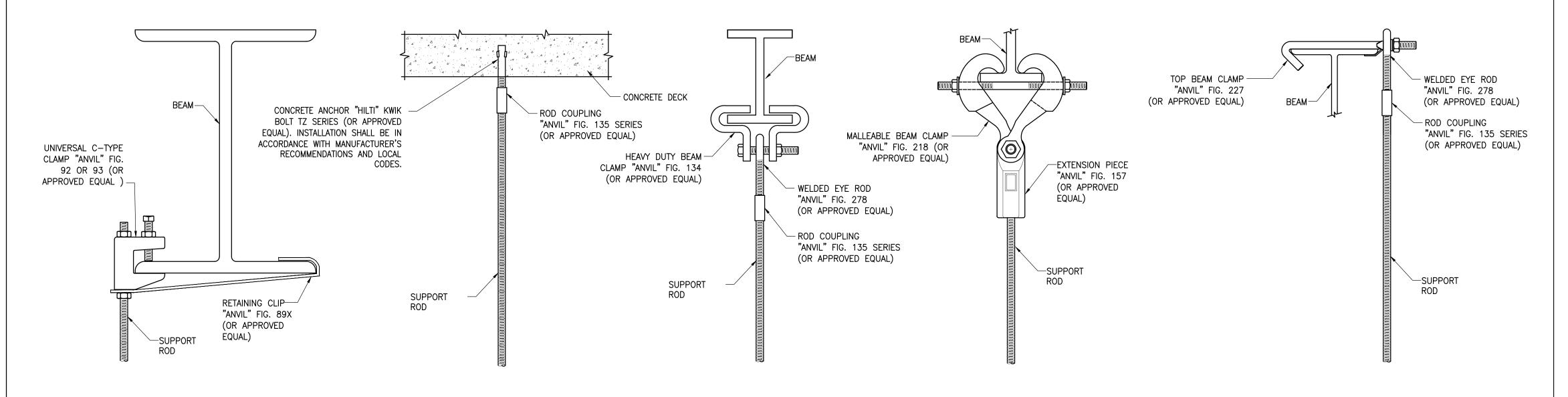
CONSTRUCTION DOCUMENTS

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OF 9

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Drawing No.:

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C-TYPE CLAMP WITH RETAINING CLIP

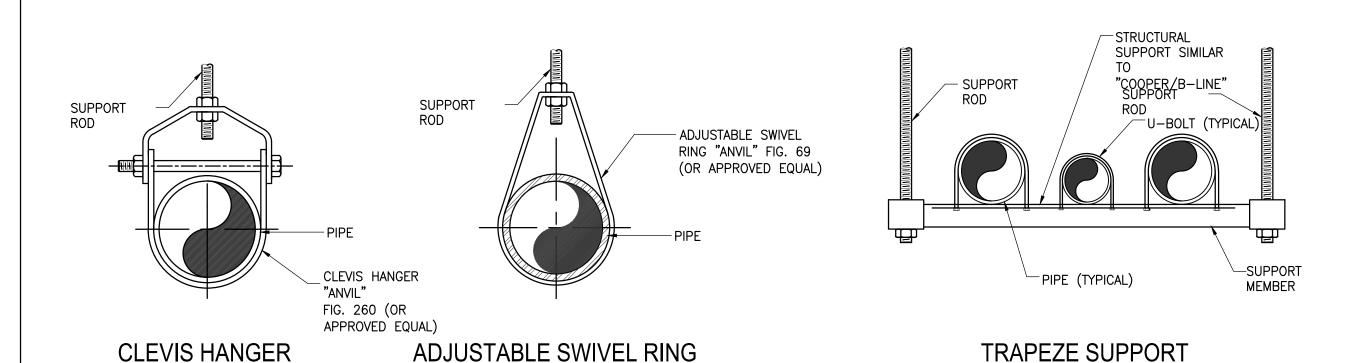
CONCRETE ANCHOR

BEAM CLAMP

MALLEABLE BEAM CLAMP

TOP BEAM CLAMP

METHODS OF ATTACHMENT



TYPES OF HANGERS

NOT TO SCALE

MAXIMUM DISTANCE BETWEEN HANGERS (FT)*															
PIPE MATERIAL		NOMINAL PIPE SIZE													
FIFE MATERIAL	1"	1 1/4"	1 1/2"	1"	2 1/2"	3"	4"	5"	6"	8"					
STEEL	12	12	12	12	12	12	15	15	15	15					
COPPER	8	10	10	12	12	12	15	15	15	15					

*NOTE FOR TERRACOTTA CONSTRUCTION:

MAXIMUM SPACING OF ANCHORS (HANGERS) SHALL BE 4FT. ON CENTER FOR LOADING OR SPACING CONDITIONS CONSULT STRUCTURAL ENGINEER. ANCHOR SHALL NOT BE INSTALLED IN DAMAGED TILES OR WITHIN 3" OF THE EDGE OF A TILE. INSTALL ANCHOR AT CENTER OF CELL.

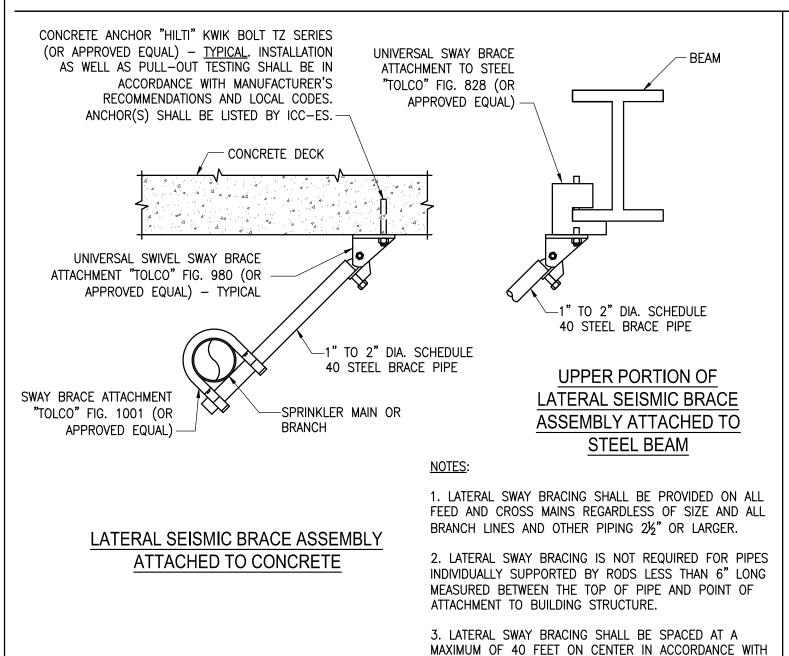
SUPPORT ROD	SIZES
NOMINAL PIPE SIZE	ROD SIZE
1"-4"	3/8"
5", 6", 8"	1/2"
10", 12"	5/8"

NOTES:

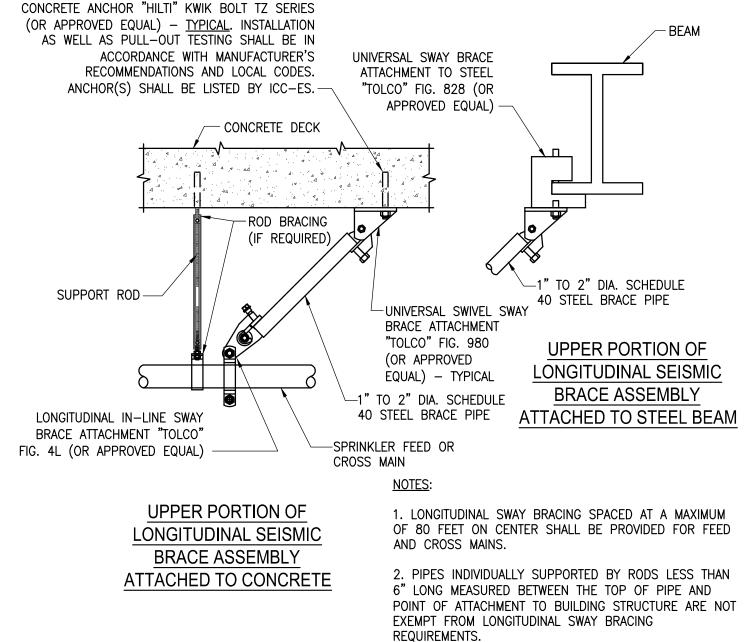
- 1. GENERAL CONTRACTOR AND TRADE SUBCONTRACTOR SHALL REVIEW SITE CONDITIONS WITH PROPERTY OWNER AND/OR STRUCTURAL ENGINEER AS WELL AS MANUFACTURER'S REPRESENTATIVE TO FINALIZE APPROPRIATE ANCHORING AND HANGER DESIGN.
- 2. PULL-OUT TESTING FOR CONCRETE AND TERRACOTTA INSERT/ANCHORS SHALL BE AS PER LOCAL CODES AND MANUFACTURER'S RECOMMENDATIONS. SUBMIT RESULTS OF PULL-OUT TESTS TO STRUCTURAL ENGINEER FOR APPROVAL. SUBMIT PROOF OF ANCHOR'S ICC-ES LISTING TO ENGINEER
- 3. WHEN HANGER ROD COUPLINGS ARE REQUIRED, THEY SHALL BE LISTED. PROVIDE "ANVIL" FIG. 136 (OR APPROVED EQUAL)
- 4 HANGER AND SUPPORT ASSEMBLIES SHALL BE IN ACCORDANCE I

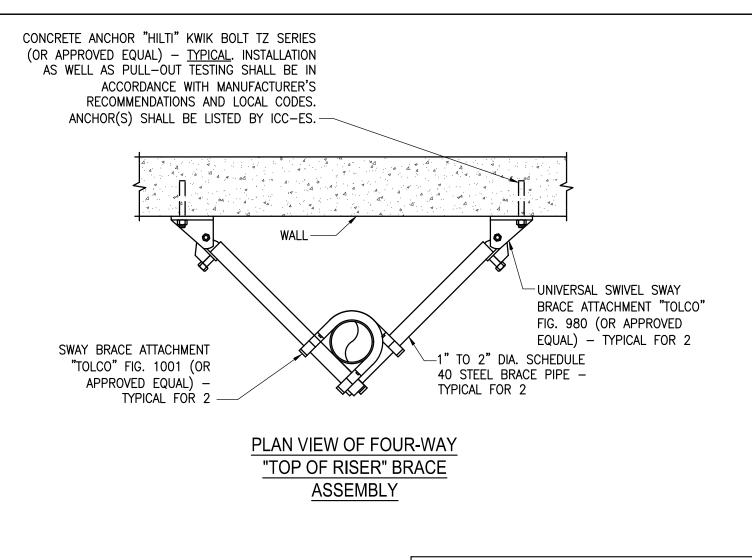
4. HANGER AND SUPPORT ASSEMBLIES SHALL BE IN ACCORDANCE WITH APPLICABLE VERSION OF NFPA-13.

PIPE HANGERS AND METHODS OF ATTACHMENT



APPLICABLE VERSION OF NFPA-13.





NOTE:

1. TOPS OF RISERS EXCEEDING 3'-0" IN LENGTH SHALL BE PROVIDED WITH A FOUR-WAY BRACE.

NOTE: CONTRACTOR SHALL PROVIDE SHOP DRAWINGS & CALCULATIONS FOR ALL SEISMIC SUPPORT ASSEMBLIES, SIGNED & SEALED BY A PROFESSIONAL ENGINEER LICENSED IN NEW YORK STATE RETAINED BY THEM, FOR THE REVIEW & APPROVAL OF THE PROJECT STRUCTURAL ENGINEER, ENGINEER OF RECORD, AND OWNER. SEISMIC SUPPORT SYSTEMS SHALL COMPLY WITH APPLICABLE VERSION OF NFPA-13 REFERENCED BY LOCAL CODES.

SEISMIC BRACE ASSEMBLIES

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION 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.

SCHUNKEWITZ

ARCHITECTURE

PROJECT MANAGEMENT

INTERIORS

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Project Name & Location:

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Drawing Title:
SPRINKLER
DETAILS SHEET 1

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 Scale:

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Issued To, For:

CONSTRUCTION DOCUMENTS

File No.: R2000
Drawing No.:

SP-402.00 8 OF 9

EQUIPMENT FROM COMBUSTIBLE MATERIALS.

COST SHALL NOT BE MADE WITHOUT APPROVAL.

DETERMINED BY THE ARCHITECT AND/OR OWNER.

OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.

SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.

MORE STRINGENT REQUIREMENT SHALL APPLY.

REVIEW BY THE ARCHITECT AND ENGINEER.

U. CODES, PERMITS AND INSPECTIONS:

OWNER AT JOB COMPLETION.

BUSINESS HOURS.

X. CUTTING AND PATCHING:

Y. GUARANTEE/WARRANTY

OF AUTHORITIES HAVING JURISDICTION.

CONDITION. FINISH SHALL MATCH EXISTING.

MINIMUM OPENING REQUIRED FOR PIPE, SLEEVE AND INSULATION.

FOLLOWING ACCEPTANCE OF ENTIRE PROJECT BY THE OWNER.

W. DEFINITIONS

FILING ENGINEER.

T. SCOPE OF WORK:

1. PERMITS

BREAKER SIZE AND CONTROL.

LINK-SEALS, MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL

N. ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED.

PROPOSED BUILDING SYSTEM ELECTRIC PRIOR TO ORDERING EQUIPMENT.

OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO ARCHITECT'S APPROVAL

COORDINATE WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE.

THIS SPECIFICATION AS APPLICABLE ARE PART OF THIS CONTRACT.

BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE TENANT.

TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.

STANDARDS. RULES AND REGULATIONS FROM THE BUILDING MANAGEMENT.

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA DOCUMENT A201-2007, AND

B. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING

C. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS

WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR

EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING

THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT

E. SUPPORT ALL PIPING AND EQUIPMENT FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED

F. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR

G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE

THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE COST FOR ALL REQUIRED CHANGES THE

H. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF

THE PORTION OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK AND THE

ACCESS TO THESE SPACES HAS BEEN MADE, AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING

CONDITIONS AND DIFFICULTIES ENCOUNTERED THAT COULD HAVE BEEN FORESEEN DURING SUCH AN

BECAUSE OF DIFFICULTIES ENCOUNTERED THAT COULD HAVE BEEN FORESEEN DURING SUCH AN

EXAMINATION. THESE DRAWINGS ARE ISSUED TO GIVE CONTRACTOR GENERAL SCOPE OF WORK.

THAT HAS BEEN DISTURBED WHILE INSTALLING NEW WORK TO AN ACCEPTABLE CONDITION AS

EXAMINATION. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED

CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK

J. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED

CONCEALED VALVES WHICH MUST BE ACCESSIBLE FOR MAINTENANCE AND REQUIRE REMOVABLE CEILING

INTEGRITY OF THIS BUILDING AS REQUIRED FOR THE INSTALLATION OF PIPES, CONDUIT, AND EQUIPMENT

REGULATIONS AND SHALL INCLUDE IN THE BID PRICE ALL ITEMS, MATERIAL, CHARGES AND/OR LABOR

REQUIRED TO FULLY COMPLY WITH BUILDING STANDARDS. ALL DRAIN-DOWNS OR SYSTEM OUTAGES

P. THE CONTRACTOR SHALL BE RESPONSIBLE TO ARRANGE AND PAY FOR ALL SPECIAL INSPECTIONS AS

ORIGINAL FILING ENGINEER TO THE SPECIAL INSPECTION ENGINEER MUST BE COORDINATED WITH AND

APPROVED BY THE ORIGINAL FILING ENGINEER. SPECIAL INSPECTIONS MUST BE APPROVED BY ORIGINAL

REQUIRED BY AUTHORITIES HAVING JURISDICTION. THE TRANSFER OF RESPONSIBILITY FROM THE

Q. VERIFY THAT ELECTRICAL CHARACTERISTICS OF EQUIPMENT ARE COMPATIBLE TO EXISTING AND/OR

R. PRIOR TO ORDERING EQUIPMENT, VERIFY THAT ELECTRICAL CHARACTERISTICS OF EQUIPMENT ARE THE

SAME AS THE EQUIPMENT USED AS THE BASIS OF DESIGN, INCLUDING LOAD, REQUIRED WIRE SIZE,

1. ALL PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF

FABRICATION AND INSTALLATION SHOP DRAWINGS, NOR DO THEY RELIEVE THE RESPONSIBILITY TO

4. IF A DISCREPANCY OR CONFLICT OCCURS IN THE SPECIFICATIONS AND/OR ON THE DRAWINGS, THE

5. THERE MAY BE EXISTING SERVICES NOT INDICATED ON THESE DRAWINGS THAT ARE LOCATED IN THE

1. THE WORK UNDER THIS CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY

FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF

COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING PIPING AND ALL NEW EQUIPMENT FOR

3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL DEPARTMENT OF BUILDING AND/OR FIRE

a. OBTAIN PERMITS. PAY FEES AND ISSUE NOTICES. REQUIRED BY STATE AND LOCAL CODES.

c. PROVIDE COPIES OF PERMITS, CERTIFICATES, AND TEST REPORTS TO THE ENGINEER.

1. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE NO

2. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER

AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER.

POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.

PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

b. PROVIDE REQUIRED DRAWINGS, CALCULATIONS, AND TESTING ALL PERFORMED BY A LICENSED

2. THIS CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS AS REQUIRED AND OBTAIN ALL

INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS

SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST

3. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF

4. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING.

EXTERIOR SPACES, ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND

DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE

5. ASSUME THAT BASE BUILDING INTERRUPTIONS ARE TO BE PERFORMED OUTSIDE NORMAL BUSINESS

AFTER PROVIDING TEMPORARY UTILITY SERVICES ACCORDING TO THE BUILDINGS REQUIREMENTS.

OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED IN WRITING BY THE OWNER AND THEN ONLY

INTERRUPTIONS. MINIMUM OF 48 HOURS NOTICE IS REQUIRED TO THE BUILDING OFFICE PRIOR TO

BUT NOT LIMITED TO: CHOPPING, CORE DRILLING, ETC.), ODORS, OR OTHER DISRUPTION TO BUILDING

7. COORDINATE OPERATIONS THAT MAY RESULT IN HIGH LEVELS OF NOISE AND VIBRATION (INCLUDING

OCCUPANTS WITH OWNER. ASSUME ALL SUCH WORK SHALL BE PERFORMED OUTSIDE NORMAL

1. "EXPERIENCED" SHALL MEAN HAVING SUCCESSFULLY COMPLETED A MINIMUM OF SEVEN YEARS OF

1. INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER

EXPERIENCE WITH PREVIOUS PROJECTS SIMILAR IN NATURE, SIZE, AND EXTENT TO THIS PROJECT;

MATERIALS IN THE EXISTING BUILDING, CONTRACTOR SHALL RESTORE DAMAGED AREAS TO ORIGINAL

2. ALL HOLES CUT THROUGH CONCRETE SLAB OR WALLS SHALL BE "DIAMOND CORE" DRILLED WITH

1. CONTRACTOR SHALL GUARANTEE THE INSTALLATION OF HIS WORK FOR A PERIOD OF ONE (1) YEAR

ACCESS TO WORK SPACES, FOR DELIVERY INTO THE BUILDING, AND FOR THE SETTING IN PLACE OF

1. CONTRACTOR SHALL PROVIDE ALL RIGGING, HOISTING, LADDERS, AND SERVICES NECESSARY FOR

2. WHERE NECESSARY TO USE THE BUILDING ELEVATOR TO MOVE EQUIPMENT, FIELD VERIFY EXISTING

ELEVATOR CAB SIZE AND WEIGHT RESTRICTIONS PRIOR TO BID AND AGAIN PRIOR TO BRINGING

ANY MATERIAL. EQUIPMENT OR APPARATUS TO BE FURNISHED AND/OR INSTALLED.

EQUIPMENT TO THE SITE. COORDINATE ELEVATOR USE WITH BUILDING MANAGEMENT.

BEING FAMILIAR WITH SPECIAL REQUIREMENTS INDICATED; AND HAVING COMPLIED WITH REQUIREMENTS

HOURS. EXISTING UTILITY INTERRUPTIONS: DO NOT INTERRUPT UTILITIES SERVING FACILITIES

6. NOTIFY ENGINEER AND OWNER NOT LESS THAN (7) DAYS IN ADVANCE OF PROPOSED UTILITY

SHUT DOWN. ALL WORK TO BE DONE DURING THE HOURS DESIGNATED BY OWNER.

INTERRUPTIONS. OBTAIN OWNER'S WRITTEN PERMISSION BEFORE PROCEEDING WITH UTILITY

THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR

SHALL INSTALL WORK ON OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL

PERMITS AS REQUIRED BY STATE AND LOCAL AUTHORITIES. PERMITS SHALL BE TURNED OVER TO

ENGINEER IN THE STATE WHERE THE WORK SHALL TAKE PLACE, INCLUDE COSTS IN BID PRICE.

CONTRACT DEMOLITION AREA THAT SHALL BE REMOVED UNDER THIS CONTRACT. PROMPTLY NOTIFY

RUNS. CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF PIPING IN ORDER TO AVOID

2. CONTRACT DOCUMENTS SHALL INCLUDE BUT NOT LIMITED TO DRAWINGS, SPECIFICATIONS AND

3. PLANS ARE NOT SHOP DRAWINGS AND DO NOT DISMISS THE REQUIREMENTS TO PREPARE

ENGINEER OF DISCREPANCIES IN FIELD CONDITIONS FROM CONSTRUCTION DOCUMENTS.

2. PRIOR TO THE PROCUREMENT AND INSTALLATION OF ANY WORK PROVIDE COMPLETE SET OF

THE SYSTEMS. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.

DEPARTMENT SIGN-OFFS. INCLUDING CERTIFICATES OF COMPLIANCE.

MUNICIPALITIES AND AUTHORITIES HAVING JURISDICTION.

V. BUILDING RULES, REGULATIONS AND WORK RESTRICTIONS

BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

SHALL BE COORDINATED WITH BUILDING MANAGEMENT IN ADVANCE AND ALL APPLICABLE CHARGES

K. SEAL OPENINGS AROUND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH

L. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF

TILES, ACCESS DOORS, OR ACCESS PANELS. FURNISH REQUIREMENTS TO GENERAL CONTRACTOR.

M. PROVIDE ALL NECESSARY FLASHING AND COUNTER-FLASHING TO MAINTAIN THE WATERPROOFING

O. PRIOR TO SUBMITTING A BID, CONTRACTOR SHALL OBTAIN A COPY OF THE BUILDING RULES AND

OF GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS.

DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA

MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR

EQUIPMENT, FURNISH ADDITIONAL STEEL FRAMING AS NECESSARY. DO NOT SUPPORT PIPING AND

D. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY

STANDARDS, LOCAL CODES AND/OR AS SPECIFIED, WHICH EVER IS MOST STRINGENT. OBTAIN BUILDING

PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO

SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND

REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED

B. USE FIRE STOPPING MATERIALS AND ASSEMBLIES THAT ARE UL LISTED AND HAVE A

RATING EQUAL TO THE BARRIER OR ASSEMBLY WHICH IS PENETRATED. C. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE

PRODUCTS BY ONE OF THE FOLLOWING: a. HILTI, INC. b. RECTORSEAL CORPORATION. c. 3M FIRE PROTECTION PRODUCTS.

MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED. 1. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: RATINGS DETERMINED PER ASTM E 814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH WC. F-RATING: NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED. 2. PENETRATIONS IN HORIZONTAL ASSEMBLIES: RATINGS DETERMINED PER ASTM E

814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH WC. F-RATING: AT LEAST 1 HOUR, BUT NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED. T-RATING: AT LEAST 1 HOUR, BUT NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED EXCEPT FOR FLOOR PENETRATIONS WITHIN THE

D. PENETRATION FIRESTOPPING: RESIST PASSAGE OF SMOKE AND OTHER GASES, AND

CAVITY OF A WALL. 3. PENETRATIONS IN SMOKE BARRIERS: PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER UL 1479. L-RATING: NOT EXCEEDING 5.0 CFM/SQ. FT. OF PENETRATION OPENING AT 0.30-INCH WC AT BOTH AMBIENT AND ELEVATED TEMPERATURES.

4. ACCESSORIES: PROVIDE COMPONENTS FOR EACH PENETRATION FIRESTOPPING SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS AND TO MAINTAIN RATINGS REQUIRED. USE ONLY THOSE COMPONENTS SPECIFIED BY PENETRATION FIRESTOPPING MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOPPING INDICATED.

E. INSTALLATION 1. INSTALL PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.

2. INSTALL FILL MATERIALS FOR FIRESTOPPING BY PROVEN TECHNIQUES TO FILL

VOIDS AND CAVITIES FORMED BY OPENINGS, FORMING MATERIALS, ACCESSORIES, AND PENETRATING ITEMS AS REQUIRED TO ACHIEVE FIRE-RESISTANCE RATINGS 3. IDENTIFY PENETRATION FIRESTOPPING WITH PREPRINTED METAL OR PLASTIC LABELS. ATTACH LABELS PERMANENTLY TO SURFACES ADJACENT TO AND WITHIN

6 INCHES OF FIRESTOPPING EDGE SO LABELS WILL BE VISIBLE TO ANYONE SEEKING TO REMOVE PENETRATING ITEMS OR FIRESTOPPING. INCLUDE THE FOLLOWING INFORMATION ON LABELS: a. THE WORDS "WARNING — PENETRATION FIRESTOPPING — DO NOT DISTURB.

b. CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER. c. DESIGNATION OF APPLICABLE TESTING AND INSPECTING AGENCY.

d. DATE OF INSTALLATION.

NOTIFY BUILDING MANAGEMENT OF ANY DAMAGE."

e. MANUFACTURER'S NAME. f. INSTALLER'S NAME.

F. FIELD QUALITY CONTROL

1. OWNER WILL ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS. WHERE DEFICIENCIES ARE FOUND OR PENETRATION FIRESTOPPING IS DAMAGED OR REMOVED BECAUSE OF TESTING, REPAIR OR REPLACE PENETRATION FIRESTOPPING TO COMPLY WITH REQUIREMENTS. PROCEED WITH ENCLOSING PENETRATION FIRESTOPPING WITH OTHER CONSTRUCTION ONLY AFTER INSPECTION REPORTS ARE ISSUED AND INSTALLATIONS COMPLY WITH REQUIREMENTS.

SECTION 210000 - FIRE PROTECTION GENERAL REQUIREMENTS

1. PROVIDE NEW PIPING AND SPRINKLERS AS INDICATED ON DRAWINGS AND SPECIFIED HEREIN. ALL SPRINKLER WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL LOCAL CODES, APPLICABLE VERSION OF NFPA-13, AND ALL LOCAL AUTHORITIES. 2. CUTTING AND PATCHING SHALL BE INCLUDED.

B. UNIT PRICING AND ALLOWANCES: 1. THE CONTRACTOR SHALL PROVIDE UNIT PRICING FOR THE FOLLOWING:

a. EACH ADDITIONAL SPRINKLER HEAD. b. ADDITIONAL PIPING IN EACH SIZE UTILIZED IN THE PROJECT.

2. THE CONTRACTOR SHALL INCLUDE AN ALLOWANCE IN THEIR CONTRACT FOR THE INSTALLATION OF MATERIALS WHICH ARE NOT INDICATED ON THE CONTRACT DRAWINGS BUT WHICH MAY BE REQUIRED DUE TO UNFORESEEN FIELD CONDITIONS. THE AMOUNT OF THE ALLOWANCE SHALL INCLUDE:

a. SPRINKLER HEADS-5% OF TOTAL, BUT NOT LESS THAN 4 ADDITIONAL b. BRANCH PIPING-40 FT OF 1" PIPE, 20 FT OF 1¼", 10FT OF 1½"PIPE, INCLUDING ALL REQUIRED TIE-INS, FITTINGS, HANGERS. AND APPURTENANCES.

C. MATERIAL AND SYSTEM COMPLIANCE: 1. SYSTEM AS INSTALLED SHALL MEET REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION AND OWNER'S INSURANCE UNDERWRITERS AND RECEIVE APPROVAL OF

SAME BEFORE FINAL PAYMENT. 2. TYPE AND SIZE OF MATERIALS APPROVED BY FACTORY MUTUAL, LOCAL FIRE DEPARTMENT, AND OWNER'S INSURANCE UNDERWRITERS. ALL MATERIALS AND EQUIPMENT

IN THE PROJECT SHALL BE LISTED BY U.L. D. SUBMITTALS: 1. SEE SECTION 011000 FOR SUBMITTAL REQUIREMENTS. SUBMIT FOR REVIEW THE FIRE PROTECTION WORK INCLUDING:

a. MATERIALS: VALVES, PIPING, SPRINKLERS, HANGERS, ETC. b. SPRINKLER SHOP DRAWINGS IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF WORKING DRAWINGS INDICATED IN APPLICABLE VERSIONS OF NFPA-13 AND NFPA-14.

c. HYDRAULIC CALCULATIONS FOR EACH SYSTEM INSTALLED. E. EXECUTION: 1. ALL SPRINKLER WORK SHALL COMPLY WITH ALL LOCAL CODES AS WELL AS BUILDING

STANDARDS AND REQUIREMENTS. 2. CONTRACTOR SHALL FIELD VERIFY EXACT ELEVATION, LOCATION AND PIPE SIZES OF EXISTING SPRINKLER HEADS AND PIPING BEFORE INSTALLATION OF NEW WORK. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND SHALL INSTALL NEW WORK

TO CLEAR DUCTWORK AND LIGHTING FIXTURES. 3. CONTRACTOR SHALL COORDINATE FINAL FURNITURE/EQUIPMENT HEIGHT ELEVATIONS AND LOCATIONS WITH SPRINKLER INSTALLATION. ENGINEER SHALL BE NOTIFIED IN THE EVENT THAT FURNITURE OR EQUIPMENT IS LESS THAN 18" TO UNDERSIDE OF CEILING OR SPRINKLER HEAD.

4. PIPE SIZES SHOWN ARE BASED ON CONCEPTUAL DESIGN PIPING LAYOUT ONLY. ACTUAL PIPE SIZES SHALL BE DETERMINED BY CONTRACTORS HYDRAULIC CALCULATIONS BASED ON HIS INSTALLATION DRAWINGS. CONTRACTOR SHALL ALLOW FOR THIS AND INCLUDE IN THE CONTRACT PRICE ALL REQUIRED CALCULATIONS AND MODIFICATIONS SUCH AS PIPE SIZE, VALVES, ADDITIONAL HEADS, ETC AS REQUIRED TO CONSTRUCT THE SYSTEMS IN COMPLIANCE WITH LOCAL CODES AND JURISDICTION LISTED HEREIN. CONTRACTOR IS RESPONSIBLE FOR OFFSETS, DROPS AND RISES FOR COORDINATION WITH OTHER TRADES. MINIMUM PIPE SIZE TO BE ONE INCH (1"). CONTRACTOR SHALL UTILIZE CAPPED PIPING FOR CONNECTION OF NEW BRANCHES. NO DEAD ENDS SHALL BE LEFT ON PIPING.

5. PITCH PIPING TO THE MAIN SYSTEM DRAIN TO THE EXTENT POSSIBLE. PROVIDE AUXILIARY DRAINS AT TRAPPED SECTIONS OF PIPING AS REQUIRED BY APPLICABLE VERSION OF NFPA-13.

6. DO NOT USE ANY AREA OF THE BUILDING AS A SHOP EXCEPT AREAS DESIGNATED FOR SUCH PURPOSES. 7. A FIRE WATCH GUARD WITH A CERTIFICATE OF FITNESS SHALL BE MAINTAINED DURING

SHUT DOWN OF THE SPRINKLER OR STANDPIPE SYSTEM. 8. THE FIRE PROTECTION SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER AT COMPLETION OF NEW WORK.

F. DEMOLITION: 1. SCOPE OF WORK UNDER THIS CONTRACT SHALL INCLUDE THE REMOVAL OF ALL EXISTING SPRINKLER HEADS, BRANCH AND MAIN PIPING, HANGERS, ETC. IN THE AREA OF WORK, EXCEPT AS INDICATED. PROVIDE ALL LABOR APPARATUS, ETC, FOR THE

REMOVAL OF ALL EXISTING MATERIALS. 2. CONTRACTORS SHALL TAKE SPECIAL CARE TO DEMOLISH ONLY THAT WORK WHICH IS REQUIRED TO BE DEMOLISHED AND NOT TO DISTURB ANY WORK WHICH IS TO REMAIN. IF IN THE COURSE OF THE DEMOLITION, THE CONTRACTOR DESTROYS OR DISTURBS ANY WORK WHICH IS TO REMAIN, THEN HE SHALL, AT HIS OWN EXPENSE, REPAIR OR REPLACE SUCH WORK AS NECESSARY, EXISTING PIPING SERVING ADJACENT AREAS

WHICH ARE NOT IN AREA OF WORK SHALL REMAIN ACTIVE AND WITHOUT DISTURBANCE. 3. REROUTE OR REMOVE ALL EXISTING PIPING EXPOSED TO VIEW. AND WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL OR MASONRY WORK AS REQUIRED BY THE PROPOSED ALTERATIONS. EXISTING EXPOSED PIPING NOT BEING REUSED SHALL BE COMPLETELY REMOVED UNLESS SPECIFICALLY NOTED OR SHOWN ON DRAWING TO

4. DEMOLITION MATERIALS SHALL BE REMOVED FROM PROJECT SITE AND DISPOSED OF IN A LEGAL MANNER IN ACCORDANCE WITH STATE, LOCAL AND FEDERAL LAW, EXCEPT ITEMS DESIGNATED BY ARCHITECT/OWNER TO REMAIN OWNER'S PROPERTY AND BE STORED. EXISTING PIPING REMOVED SHALL NOT BE REUSED.

SECTION 210500 - COMMON WORK REQUIREMENTS

A. PIPING, FITTINGS AND VALVES:

1. REFER TO SCHEDULES ON DRAWINGS. 2. PROVIDE FLANGES AT ALL VALVES WHERE REQUIRED.

3. FITTINGS ON STANDPIPE SYSTEMS SHALL BE RATED AT 350 WWP 4. REDUCERS AND INCREASERS SHALL BE TAPERED TYPE. BUSHINGS ARE NOT PERMITTED.

1. GENERAL: ALARM-DEVICE TYPES SHALL MATCH PIPING AND EQUIPMENT CONNECTIONS.

2. WATER FLOW INDICATOR: UL 346, ELECTRICAL SUPERVISION, PADDLE OPERATED TYPE, WATER FLOW DETECTOR WITH 250 PSIG PRESSURE RATING AND DESIGNED FOR HORIZONTAL OR VERTICAL INSTALLATION. INCLUDE TWO SINGLE POLE, DOUBLE THROW CIRCUIT SWITCHES FOR ISOLATED ALARM AND AUXILIARY CONTACTS, 7A, 125 VAC AND .25A, 24-V DC; COMPLETE WITH FACTORY-SET. FIELD ADJUSTABLE RETARD DEVICE TO PREVENT FALSE SIGNALS AND TAMPERPROOF COVER THAT SENDS SIGNAL IF REMOVED

MANUFACTURERS: a. POTTER ELECTRICAL SIGNAL COMPANY. b. NOTIFIER. 3. VALVE SUPERVISORY SWITCH: UL 753, ELECTRICAL, SINGLE POLE, DOUBLE THROW SWITCH WITH NORMALLY CLOSED CONTACTS. INCLUDE DESIGN THAT SIGNALS CONTROLLED VALVE IS IN OTHER THAN FULL OPEN POSITION. MANUFACTURERS: a. POTTER ELECTRIC SIGNAL COMPANY. b. NOTIFIER.

C. PRESSURE GAUGES: UL 393, 3 1/2 TO 4 1/2 INCH DIAMETER, DIAL PRESSURE GAUGE WITH RANGE OF 0-250 PSIG MINIMUM. MANUFACTURERS: a. AMETEK, INC. b. U.S. GAUGE.

D. ESCUTCHEONS: FOR PIPING PASSING FLOORS, CEILINGS, WALL OR PARTITIONS: PROVIDE CAST BRASS OR CAST IRON ESCUTCHEONS, CHROME PLATED, FIRMLY HELD

E. SLEEVES: FOR PIPING PASSING FLOORS, CEILINGS, WALL OR PARTITIONS: PROVIDE NO. 22 USSG GALVANIZED IRON SLEEVES EXTENDED THROUGH CONSTRUCTION. 1. FOR INSULATED PIPING, SIZE TO ALLOW INSULATION TO PASS THROUGH SLEEVE 2. PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE COMPLETELY FIRE STOPPED IN ACCORDANCE WITH SECTION 078413.

PROPERLY SUPPORTED AND MADE WATERTIGHT. PROVIDE ENCLOSED TYPE FOR

1. PROVIDE UNDER PIPING WHEN INSTALLED OVER OR WITHIN 5 FEET OF ELECTRICAL APPARATUS OR IN ROOMS CONTAINING ELECTRICAL EQUIPMENT OR UNDER DRAINAGE FOR PIPING AT CEILINGS OF FOOD PREPARATION AREAS. 2. PAN SHALL BE 18 GAUGE, NON-FERROUS, SHEET METAL, REINFORCED,

PRESSURE PIPING. 3. EXTEND 1-1/4 INCH DRAIN FROM PAN TO SPILL OVER NEAREST FUNNEL.

<u>SECTION 210508 - TESTING, ADJUSTING, AND BALANCING</u>

1. DEFECTS DISCLOSED BY THE TESTS SHALL BE REPAIRED OR REPLACED. TESTS SHALL BE REPEATED AS DIRECTED UNTIL ALL WORK IS PROVEN SATISFACTORY

2. TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE BUILDING AND ITS CONTENTS AS A RESULT OF SUCH TESTS. REPAIR ANY DAMAGE CAUSED. B. MATERIALS: PROVIDE ALL MATERIALS AS REQUIRED TO PERFORM TESTING.

1. FIELD QUALITY CONTROL: PERFORM THE FOLLOWING FIELD TESTS AND INSPECTIONS AND PREPARE TEST REPORTS: a. TEST ENTIRE SYSTEM PIPING HYDROSTATICALLY WITHOUT LEAKAGE IN ACCORDANCE WITH ALL REQUIREMENTS OF THE LOCAL BUILDING CODE AND APPLICABLE VERSIONS

OF NFPA-13, -14, -20, AND OTHER SECTIONS AS APPLICABLE. THIS CRITERIA MAY BE SUPERCEDED BY THE OWNER'S UNDERWRITER IF THEIR REQUIREMENTS ARE MORE STRINGENT. REPAIR LEAKS AND RETEST UNTIL NO LEAKS EXIST. b. FLUSH, TEST, AND INSPECT SPRINKLER SYSTEMS ACCORDING TO LOCAL CODES

AND NFPA-13, "SYSTEMS ACCEPTANCE" CHAPTER. c. FLUSH, TEST, AND INSPECT STANDPIPE SYSTEMS ACCORDING TO LOCAL CODES "SYSTEM ACCEPTANCE" CHAPTER.

d. COORDINATE WITH FIRE ALARM TESTS. OPERATE AS REQUIRED. 2. REPORT TEST RESULTS PROMPTLY AND IN WRITING TO ARCHITECT AND

AUTHORITIES HAVING JURISDICTION.

3. CLEANING AND PROTECTION: a. CLEAN DIRT AND DEBRIS FROM SPRINKLERS.

b. REMOVE AND REPLACE SPRINKLERS WITH PAINT OTHER THAN FACTORY FINISH. PROTECT SPRINKLERS FROM DAMAGE UNTIL SUBSTANTIAL COMPLETION.

SECTION 210548 - HANGERS, SUPPORTS, ANCHORS, AND GUIDES

A. GENERAL: 1. EQUIPMENT AND PIPING: SECURE TO BUILDING STRUCTURE IN ACCORDANCE WITH ALL LOCAL CODE REQUIREMENTS AND ALL APPLICABLE LOADS, SUCH AS DEAD

WEIGHT, DYNAMIC AND/OR THRUST LOADS. 2. BRACE FOR SEISMIC, WIND, AND/OR FLOOD LOADS IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.

3. PROVIDE BRACING TO PREVENT SWAY FOR ALL PIPING LOWER THAN 6" BELOW SLAB OR STRUCTURAL ATTACHMENT, OR WHERE PIPING IS SUBJECT TO THRUST LOADING (BASE OF RISER, PUMP DISCHARGE, ETC.). 4. REFER TO DETAILS ON THE CONTRACT DRAWINGS FOR ADDITIONAL INFORMATION.

B. MATERIAL: 1. SUPPORT MATERIALS: TO MATCH PIPING MATERIALS. PROVIDE COPPER PLATED

SUPPORTS FOR COPPER PIPING 2. PIPING, INSULATED: PROVIDE METAL PROTECTION SHIELDS ON HANGER. HANGERS

TO BE INSTALLED OVER INSULATION AND SHIELDS. 3. INSERTS: EXPANSION SHIELD TYPE SUITABLE FOR USE WITH EXISTING CONCRETE STRUCTURE. EXPANSION SHIELDS SHALL NOT BE INSTALLED WITHIN THE EXISTING CONCRETE FIREPROOFING ON BEAMS.

4. EXPANSION ANCHORS: a. PROVIDE SMOOTH WALL, NON-DRILLING INTERNAL PLUG EXPANSION TYPE ANCHORS CONSTRUCTED OF AISC 12L14 STEEL AND ZINC PLATED IN ACCORDANCE WITH FED. SPEC. QQ-A-325 TYPE 1, CLASS 3. b. DO NOT EXCEED 1/4 OF AVERAGE VALUES FOR A SPECIFIC ANCHOR SIZE.

USE 2000 PSIG (13,800 KPA) CONCRETE MAXIMUM WORKING LOADS. c. PROVIDE SPACING AND INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. d. EXPANSION ANCHORS SHALL BE U.L. LISTED, SIMILAR TO HILTI.

5. SEISMIC, BRACING: TOLCO OR APPROVED EQUAL. SYSTEM SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL SEISMIC OR STRUCTURAL ENGINEER. CONTRACTOR SHALL FURNISH SIGNED AND SEALED (BY PROFESSIONAL STRUCTURAL ENGINEER) SEISMIC SYSTEM SUBMITTAL TO ENGINEER. C. EXECUTION:

1. THE CONTRACTOR SHALL PROVIDE SUPPORTS AND SEISMIC RESTRAINING SYSTEMS FOR EQUIPMENT AND PIPING INSTALLED AS PART OF THIS CONTRACT AS REQUIRED BY LOCAL CODE. APPLICABLE VERSION OF NFPA-13. AND THE BUILDING STANDARDS. SEISMIC RESTRAINING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING CODE AND ALL SECTIONS OF THE SPECIFICATION.

2. SEISMIC PERFORMANCE: FIRE-SUPPRESSION PIPING SHALL BE CAPABLE OF WITHSTANDING THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ALL CODE REQUIREMENTS AND APPLICABLE VERSION OF NFPA-13.

3. INSTALL ALL HANGERS, SUPPORTS IN ACCORDANCE WITH THE BUILDING STANDARDS. INSTALLATION OF NEW HANGERS SHALL BE DRILLED, NOT CHOPPED. 4. IN TERRA COTTA SLAB, REUSE APPROVED EXISTING HANGERS WHERE POSSIBLE.

WHERE ADDITIONAL HANGERS ARE REQUIRED, PROVIDE AN ADHESIVE ANCHOR SYSTEM SIMILAR TO HILTI. ANCHORING METHOD SUBJECT TO BUILDING OWNERSHIP APPROVAL. ALL ANCHORS SHALL BE SUBJECT TO PULL-OUT AND SUSTAINABLE LOAD TESTS. THESE TESTS ARE SUBJECT TO STRUCTURAL ENGINEER'S AND BUILDING OWNERSHIP APPROVAL.

5. PROVIDE 12" HIGH CONCRETE BASE FOR FIRE PUMPS.

<u> SECTION 210553 – IDENTIFICATION</u>

A. GENERAL:

1. PROVIDE TAGS ON VALVES AT THE BASE BUILDING MAIN AND RISER CONNECTION; INDICATE THE TENANTS NAME, SYSTEM TYPE, AND FLOOR SERVED. INCLUDE HYDRAULIC INFORMATION AT EACH SPRINKLER CONTROL VALVE AS REQUIRED BY APPLICABLE VERSION OF NFPA-13 AND THE LOCAL AUTHORITY HAVING JURISDICTION. 2. PAINT AND LABEL ALL PIPING IN THE PROJECT AREA AS REQUIRED BY APPLICABLE VERSION OF NFPA-13 AND THE LOCAL AUTHORITY HAVING JURISDICTION.

B. MATERIALS: 1. VALVE TAGS: METAL; RED BACKGROUND; BLACK LETTERING. FASTEN WITH BRASS HOOK OR CHAIN. COORDINATE WITH EXISTING BUILDING VALVE CHART. 2. PIPE LABELS: VINYL; SELF-ADHESIVE; COLOR PER ANSI STANDARDS; SETON OR EQUAL. RED BACKGROUND;

C. EXECUTION: 1. COORDINATE ALL VALVE TAGS AND LABELS WITH THE EXISTING BUILDING STANDARDS, APPLICABLE VERSION OF

NFPA-13 AND THE LOCAL AUTHORITY HAVING JURISDICTION. 2. PROVIDE VALVE CHART TO OWNER; LIST VALVE TAGS & SERVICE; INDICATE LOCATIONS ON PLAN.

<u>SECTION 211300 - SPRINKLER SYSTEMS</u>

1. PROVIDE WORKMANSHIP OF HIGHEST GRADE. INSTALL ALL PIPING AND SPRINKLER HEADS IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATION AND LISTING, THE AUTHORITY HAVING JURISDICTION, APPLICABLE VERSION OF NFPA-13, OWNER'S INSURANCE UNDERWRITERS, AND LOCAL FIRE AND BUILDING CODES. 2. SHOP DRAWING SUBMITTALS:

a. WORKING PLANS AND HYDRAULIC CALCULATIONS SHALL BE PREPARED IN STRICT ACCORDANCE WITH APPLICABLE VERSION OF NFPA-13, SUBMITTED, AND APPROVED PRIOR TO INSTALLATION, BY THE FIRE PROTECTION CONTRACTOR.

b. THE CONTRACTOR SHALL PERFORM AND PROVIDE HYDRAULIC CALCULATIONS BASED ON THE SHOP DRAWINGS AND ACTUAL AS-BUILT SPRINKLER ARRANGEMENT. ANY REQUIRED CHANGES FOR THE PIPE SIZE OR QUANTITY TO ACCOMMODATE THE COORDINATION AND HYDRAULIC PERFORMANCE SHALL NOT BE CONSIDERED A CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL BRING TO THE ENGINEER'S ATTENTION ANY PROPOSED REDUCTION OF THE PIPE SIZING SHOWN ON THE CONTRACT DOCUMENTS.

c. SPRINKLER CONTRACTOR SHALL BASE ALL HYDRAULIC CALCULATIONS ON AVAILABLE PRESSURE AT CONNECTION

TO CITY MAIN, TANK OR OTHER APPROVED CERTIFIED WATER SUPPLY. d. RESULT OF HYDRAULIC CALCULATIONS SHALL INDICATE MINIMUM 5% PRESSURE

SAFETY MARGIN, I.E. EXCESS OF PRESSURE AVAILABLE OVER PRESSURE REQUIRED, AND A MINIMUM SUPPLY OF 30-MINUTE FOR LIGHT HAZARD, 60-MINUTE FOR ORDINARY HAZARD OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND THE OWNERS INSURANCE UNDERWRITER.

1. PRESSURE RATING: 175 PSIG OR AS REQUIRED BY SYSTEM PRESSURE. 2. PIPE: REFER TO SCHEDULE ON DRAWINGS.

a. MINIMUM SPRINKLER PIPE SIZE SHALL BE 1" DIAMETER. 3. FITTINGS: REFER TO SCHEDULE ON DRAWINGS.

a. REDUCERS: TAPERED TYPE FITTING. NO BUSHINGS PERMITTED. b. CONNECTIONS TO EXISTING PIPING MAY BE MALLEABLE IRON OR DUCTILE IRON MECHANICAL T-OUTLETS, SIMILAR TO VICTAULIC STYLE 920.

c. PROVIDE FLANGES AT ALL VALVES AND WHERE REQUIRED. 4. SPRINKLER SPECIALTY FITTINGS:

a. SPRINKLER SPECIALTY FITTINGS: UL LISTED OR FMG APPROVED AND MADE OF MATERIALS COMPATIBLE WITH

b. SPRINKLER SYSTEM CONTROL VALVES: REFER TO SCHEDULE ON DRAWINGS. c. OUTLET SPECIALTY FITTINGS:

1) MANUFACTURERS: VICTAULIC COMPANY OF AMERICA

2) MECHANICAL TEE AND CROSS FITTINGS: UL 213, DUCTILE IRON HOUSING WITH GASKETS, BOLTS AND NUTS, AND THREADED LOCKING-LUG, OR GROOVED OUTLETS.

3) SNAP-ON AND STRAPLESS OUTLET FITTINGS: UL 213, DUCTILE IRON HOUSING OR CASTING WITH GASKET AND THREADED OUTLET.

d. SPRINKLER DRAIN AND ALARM TEST FITTINGS: CAST- OR DUCTILE IRON BODY; WITH THREADED OR LOCKING-LUG INLET AND OUTLET, TEST VALVE AND ORIFICE AND SIGHT GLASS. MANUFACTURER: VICTAULIC COMPANY OF AMERICA

e. SPRINKLER INSPECTORS TEST FITTING: CAST- OR DUCTILE-IRON HOUSING WITH THREADED INLET AND DRAIN OUTLET AND SIGHT GLASS. MANUFACTURER: VICTAULIC COMPANY OF AMERICA, ANVIL INTERNATIONAL AND TYCO. 5. SPRINKLER HEADS: a. REFER TO SCHEDULE ON DRAWINGS FOR MAKE AND MODELS.

b. PROVIDE A METAL CABINET CONTAINING A SPARE STOCK OF SPRINKLERS OF ALL INSTALLED RATINGS AND TYPES IN ACCORDANCE WITH APPLICABLE VERSION OF NFPA-13. FURNISH SPECIAL SPRINKLER HEAD WRENCHES. CABINET SHALL BE WALL MOUNTED WITH RED ENAMEL FINISH AND MARKED "AUTOMATIC SPRINKLERS - RESERVE SUPPLY". CABINETS SHALL ALSO CONTAIN INSTRUCTIONS AND OTHER NECESSARY INFORMATION ATTACHED ON THE INSIDE OF THE CABINET DOOR.

1. PROVIDE WITH WIRE GUARDS FOR EXPOSED PENDENT HEADS IN STORAGE ROOMS, MER'S, AND SIMILAR AREAS OR WHERE INSTALLED BELOW 7'-0"AFF OR OTHERWISE SUBJECT TO MECHANICAL DAMAGE.

2. ALL PENDENT TYPE SPRINKLER HEADS SHALL BE PLACED IN CENTER OF TILE. 3. FOR EXACT LOCATION OF SPRINKLER HEADS SEE ARCHITECTURAL DRAWINGS. COORDINATE LOCATION OF SPRINKLERS WITH ARCHITECT.

4. JOINT CONSTRUCTION: a. THREADED JOINTS: IN COMPLIANCE WITH NFPA-13 FOR PIPE THICKNESS AND THREADS. DO NOT THREAD PIPE WITH WALL THICKNESS LESS THAN SCH 40.

b. GROOVED JOINTS: ASSEMBLE JOINTS WITH LISTED COUPLING AND GASKET, LUBRICANT, AND BOLTS. ROLL-GROOVE PIPING AS INDICATED. USE GROOVED-END FITTINGS AND RIGID, GROOVED END PIPE COUPLINGS UNLESS OTHERWISE INDICATED.

c. DRY—PIPE OR PRE—ACTION SYSTEMS: USE FITTINGS AND GASKETS LISTED FOR DRY PIPE SERVICE. 5. DO NOT INSTALL PENDENT OR SIDEWALL, WET-TYPE SPRINKLERS IN AREAS SUBJECT TO FREEZING. USE DRY-TYPE SPRINKLERS WITH WATER SUPPLY FROM HEATED SPACE.

6. FLUSH, TEST, AND INSPECT SPRINKLER SYSTEMS ACCORDING TO LOCAL CODES AND APPLICABLE VERSION OF 7. CLEAN DIRT AND DEBRIS FROM SPRINKLERS. REMOVE AND REPLACE SPRINKLERS WITH PAINT OTHER THAN FACTORY FINISH. PROTECT SPRINKLERS FROM DAMAGE UNTIL SUBSTANTIAL COMPLETION.

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Drawing Title: SPRINKLER **SPECIFICATIONS**

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