

GENERAL NOTES

- THIS DRAWING IS PROVIDED TO DEMONSTRATE THE CONFIGURATION OF MAJOR SYSTEM COMPONENTS INCLUDING SPRINKLER AND PIPING LOCATIONS. THE SPRINKLER CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL SPRINKLERS AND SYSTEM PIPING.
- REFER TO ATTACHED HYDRAULIC CALCULATIONS FOR DESIGN PIPE SIZES. PIPE SIZES SHALL BE NO SMALLER THAN AS INDICATED BY THE DESIGN HYDRAULIC CALCULATIONS OR DESIGN DRAWINGS UNLESS VERIFIED THROUGH APPROVED CALCULATION SUBMITTAL. THE DESIGN SPECIFICATION AND HYDRAULIC CALCULATIONS ARE PART OF THESE DESIGN DOCUMENTS.
- ACCURACY OF WALL LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR WITH REGARDS TO PIPE ROUTING AND PROXIMITY TO OBSTRUCTIONS.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL SHOP DRAWINGS. THE REQUIREMENTS FOR THE SUBMITTAL PACKAGE AND SHOP DRAWINGS ARE PROVIDED IN THE DESIGN SPECIFICATION. CHANGES IN THE LOCATIONS OF SPRINKLERS FROM THOSE SHOWN ON THE APPROVED SHOP DRAWINGS SHALL BE IDENTIFIED IN WRITING TO THE STATE FIRE MARSHAL'S OFFICE AND JENSEN HUGHES PRIOR TO INSTALLATION. ALL CHANGES SHALL BE APPROVED IN WRITING PRIOR TO INSTALLATION OR ANY RELOCATIONS OR ADDITIONAL SPRINKLERS REQUIRED FOR COMPLIANCE AS A RESULT OF THE CHANGES SHALL BE FURNISHED AND INSTALLED AT THE EXPENSE OF THE CONTRACTOR.
- THE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ANY NEW SITE SPECIFIC MODIFICATIONS THAT MAY BE MADE TO THE BUILDING DURING CONSTRUCTION SUCH AS NEW LIGHTS, DROP CEILING, ETC.
- ALL SPRINKLER PIPING SHALL BE SECURED USING U.L.F.M. PIPE HANGERS, ANCHORS AND OTHER APPROVED MEANS TO PROPERLY SECURE THE PIPE.
- ALL PIPING 1-INCH THROUGH 2-INCH SHALL BE UL/FM ASTM A53, A135, OR A795 SCHEDULE 40 WITH THREADED ENDS.
- ALL PIPING 2½-INCH AND LARGER SHALL BE UL/FM ASTM A53, A135, OR A795 SCHEDULE 10 WITH ROLLED-GROOVED ENDS.
- THE CONTRACTOR SHALL GUARANTEE IN WRITING ALL WORK AND EQUIPMENT ASSOCIATED WITH THIS PROJECT FOR ONE (1) YEAR AFTER INSTALLATION. REFER TO THE SPECIFICATION FOR ADDITIONAL WARRANTY REQUIREMENTS.

SCOPE OF WORK

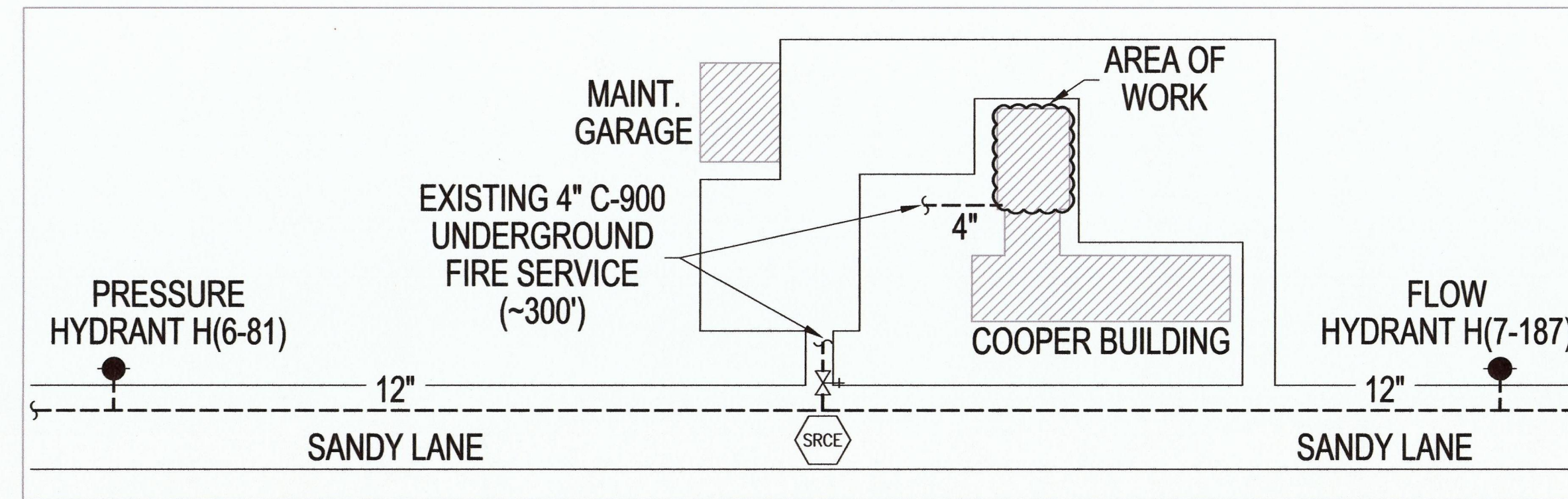
- THE SCOPE OF WORK INCLUDES THE INSTALLATION OF A WET PIPE AUTOMATIC SPRINKLER SYSTEM THROUGHOUT THE GYMNASIUM/AUDITORIUM LOCATED ON THE FIRST FLOOR OF THE COOPER BUILDING, AS INDICATED ON THE DRAWINGS AND IN THE TECHNICAL SPECIFICATIONS.
- THE SCOPE OF WORK INCLUDES THE CONNECTION OF THE NEW SPRINKLER PIPING INSIDE TO THE EXISTING 4-INCH UNDERGROUND SUPPLY PROVIDED BY THE CITY OF WARWICK. THIS CONNECTION IS TO OCCUR INSIDE THE BUILDING.
- THE WORK INCLUDES ALL SPRINKLERS, SCHEDULE 10 & 40 PIPING, HANGERS AND OTHER ASSOCIATED COMPONENTS IN AREAS OF THE BUILDING REPRESENTED ON THE DESIGN DRAWINGS.
- THE WORK INCLUDES CONNECTION OF NEW WATER FLOW VANE AND VALVE SUPERVISORY SWITCHES TO THE BUILDING'S FIRE ALARM SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THESE WIRING CONNECTIONS WITH A LICENSED FIRE ALARM TECHNICIAN/ELECTRICIAN. THE FIRE ALARM TECHNICIAN/ELECTRICIAN SHALL BE RESPONSIBLE FOR THE INSTALLATION OF RELAYS TO TRIP MASTER BOX ZONE(S) FOR SPRINKLER SYSTEM DEVICE ACTIVATION.
- THE WORK INCLUDES A BACKFLOW PREVENTER, DRAINS, SUPPORTS, AND PERMITS. THE WORK SHALL COMPLY WITH NFPA AND RIFC REQUIREMENTS.
- THE WORK INCLUDES RELOCATION OF ALL OBSTRUCTIONS TO NEW SPRINKLER PIPING. OBSTRUCTIONS INCLUDE BUT ARE NOT LIMITED TO EMERGENCY LIGHTING, BATTERY BOXES, TELECOM EQUIPMENT AND WIRING.
- THE WORK INCLUDES INSTALLATION OF DRAIN PIPING. THE DRAINS SHALL BE PIPED DIRECTLY TO THE OUTSIDE OF THE BUILDING WITH A SPLASHBLOCK IN A LOCATION APPROVED BY THE OWNER.
- THE WORK INCLUDES INSTALLATION OF INSPECTOR'S TEST CONNECTIONS, DRAIN VALVES, AND PIPING.
- THE WORK INCLUDES ALL CUTTING, DRILLING, CORE DRILLING, ETC. TO INSTALL FIRE SPRINKLER PIPING THROUGH EXISTING WALLS AND CEILINGS.
- THE WORK INCLUDES PAINTING OF ALL EXPOSED SPRINKLER PIPING TO MATCH EXISTING CONDITIONS. PIPE PAINTING SHALL BE COMPLETED BY A QUALIFIED PAINTING CONTRACTOR.
- THE WORK INCLUDES FIRESTOPPING, PATCHING AND PAINTING OF ALL PENETRATIONS THAT WERE MADE FOR INSTALLATION OF SPRINKLER PIPING THROUGH INTERIOR AND EXTERIOR BUILDING WALLS. THE FIRESTOPPING SHALL BE CONDUCTED BY A MANUFACTURER'S TRAINED PERSONNEL ACCEPTABLE TO THE OWNER.
- THE WORK INCLUDES ALL FEES AND ACTIVITIES REQUIRED TO SECURE APPROVALS FOR NECESSARY STATE AND LOCAL PERMITS.
- THE WORK INCLUDES SUBMITTING DETAILED WORKING PLANS, HYDRAULIC CALCULATIONS AND PRODUCT DATA TO THE ENGINEER FOR REVIEW PRIOR TO SUBMITTING SAME TO STATE OFFICIALS FOR PERMIT. CONTRACTOR SHALL NOT FABRICATE PIPING, ASSEMBLE COMPONENTS OR BEGIN INSTALLATION UNTIL JENSEN HUGHES HAS APPROVED THE SUBMITTAL DOCUMENTS.
- THE WORK INCLUDES DEVELOPING AS-BUILT SPRINKLER PLANS. THE PLANS SHALL SHOW A MINIMUM OF PIPE ROUTING, PIPE DIAMETER, SPRINKLER LOCATION, SPRINKLER ORIENTATION, AND SPRINKLER MAKE, MODEL, K-FACTOR, TEMPERATURE RATING AND RESPONSE TYPE.
- THE WORK INCLUDES PERFORMING FIELD QUALITY CONTROL AND COMMISSIONING ACTIVITIES.
- THE WORK INCLUDES DOCUMENTING AND SUBMITTING THE RESULTS OF INTEGRITY AND FUNCTIONAL TESTING.
- THE WORK INCLUDES SUBMITTING AS-BUILT PLANS AND CLOSEOUT DOCUMENTATION TO JENSEN HUGHES FOR REVIEW PRIOR TO SCHEDULING OWNER DEMONSTRATION TRAINING.
- THE WORK INCLUDES TRAINING OWNER'S PERSONNEL ON THE OPERATION OF THE SYSTEM, REQUIRED MAINTENANCE TASKS AND FREQUENCIES, AND THE LOCATIONS OF ALL SPARE TOOLS AND EQUIPMENT, VALVES, ALARM AND SUPERVISORY SWITCHES, RISERS AND EQUIPMENT NECESSARY TO MAINTAIN AND OPERATE THE SPRINKLER SYSTEM.
- THE WORK INCLUDES SIGNS AT EACH CONTROL AND TEST VALVE.
- THE CONTRACTOR SHALL PROVIDE A RIGID PLASTIC SIGN INDICATING THE LOCATION OF ALL VALVES. THE AREA PROTECTED BY EACH CONTROL VALVE SHALL BE IDENTIFIED. THE SIGN SHALL BE LOCATED AT THE MAIN RISER.
- THE WORK INCLUDES PROVIDING A CABINET WITH SPARE SPRINKLERS AND A LIST OF SPARE SPRINKLERS PER NFPA 13-10 SECTION 6.2.9.

DESIGN CRITERIA

- DESIGN AND INSTALL THE SPRINKLER SYSTEMS TO MEET THE REQUIREMENTS OF:
 - THE RHODE ISLAND FIRE LAWS AND RULES-2013, WHICH INCLUDES:
 - TITLE 23-CHAPTER 28, FIRE SAFETY CODE, AND AS AMENDED UNDER THE TITLE 23-CHAPTER 28, COMPREHENSIVE FIRE SAFETY ACT OF 2003, WHICH INCLUDES:
 - THE RHODE ISLAND FIRE CODE (NFPA 1-2012), AND
 - THE RHODE ISLAND LIFE SAFETY CODE (NFPA 101-2012);
 - NFPA 13-2010, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.
- REFER TO TECHNICAL SPECIFICATIONS FOR MORE DETAILED INFORMATION AND ADDITIONAL REQUIREMENTS.
- THE SPRINKLER SYSTEM SHALL BE DESIGNED AS LIGHT HAZARD.
- THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED BY THE CONTRACTOR USING THE DENSITY/AREA DESIGN METHOD DESCRIBED IN NFPA 13-2010, AND THE MANUFACTURER'S TECHNICAL DATA SHEETS FOR EXTENDED COVERAGE AND SPECIFIC APPLICATION SPRINKLERS.
- THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED AND SIZED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
 - ALL LIGHT HAZARD OCCUPANCY AREAS SHALL MEET THE REQUIREMENTS OF NFPA 13-2010 AS FOLLOWS:
 - AREA OF DEMAND: 1500 S.F.
 - DENSITY: 0.10 GPM/S.F.
 - HOSE STREAM: 100 GPM
 - SAFETY MARGIN: 5 PSI SAFETY FACTOR

INSTALLATION NOTES

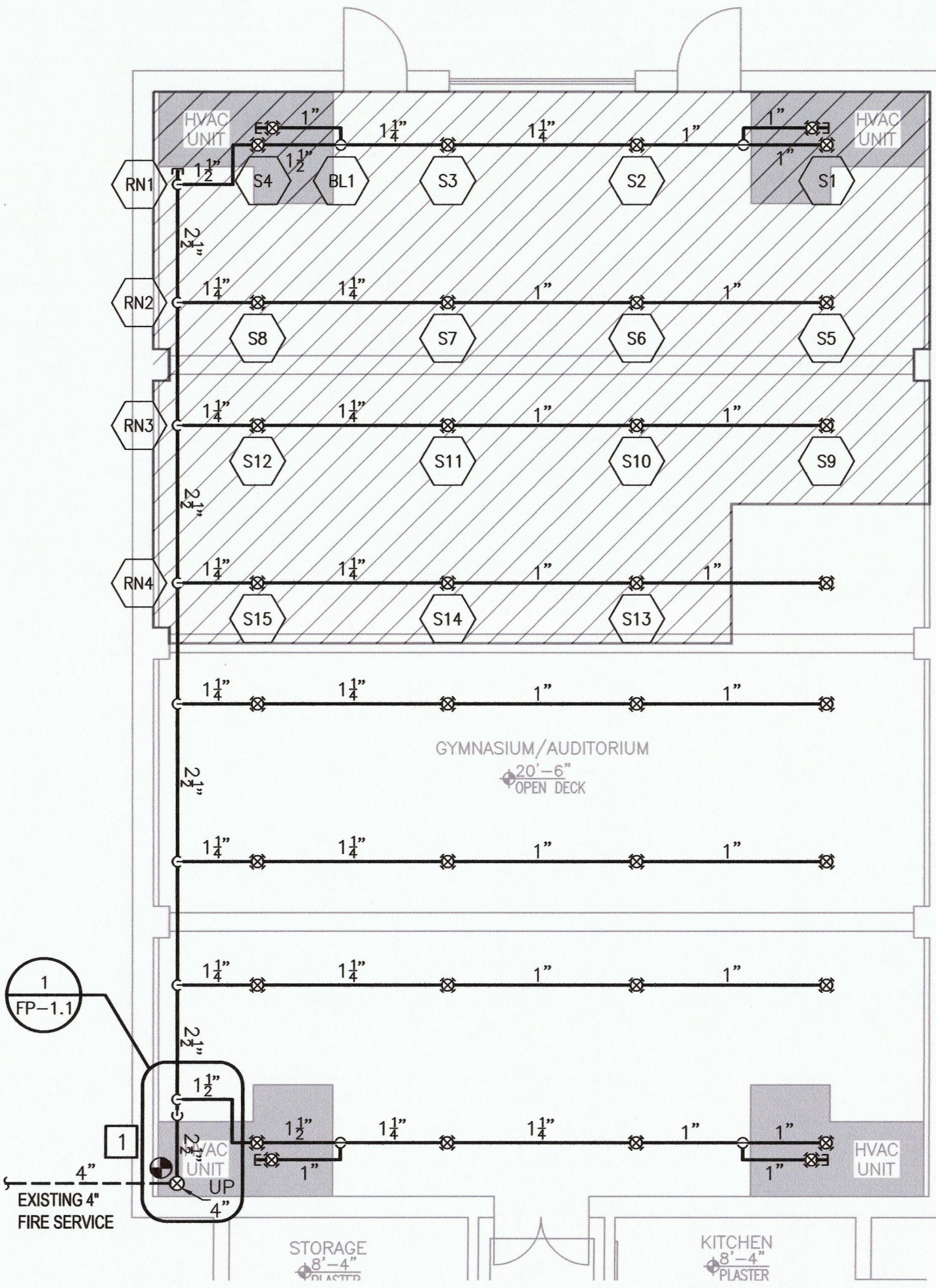
- ALL CONDUITS DISTURBED OR DAMAGED DURING THE INSTALLATION BY CORE DRILLING OR CUTTING SHALL BE RESTORED TO ORIGINAL CONDITION PRIOR TO INSTALLATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL DAMAGE INSIDE THE BUILDING UNLESS THE DAMAGE IS PREVIOUSLY DOCUMENTED TO THE OWNER PRIOR TO THE START OF THE WORK.
- WET CORE DRILLING SHALL BE USED WITH PROPER PROTECTION IN PLACE TO PREVENT DAMAGE TO THE BUILDING.
- ALL FLOORS SHALL BE COVERED WITH PLASTIC FLOOR COVERING DURING CONSTRUCTION IN THE BUILDING.



SITE PLAN
SCALE: N.T.S.

SHEET KEYNOTES

- PROVIDE NEW CHAIN-LINK FENCE ENCLOSURE FOR FIRE PROTECTION VALVES AND RISER ASSEMBLY. ENCLOSURE SHALL INCLUDE A SWINGING CHAIN-LINK DOOR TO PROVIDE ACCESS TO FIRE PROTECTION VALVES FOR INSPECTION, TESTING AND MAINTENANCE.



PARTIAL FIRST FLOOR FIRE SPRINKLER PLAN
SCALE: 1/8"=1'-0"

**REMOTE AREA #1
HYDRAULIC CALCULATION**

OCCUPANCY:	LIGHT HAZARD
DENSITY:	0.10 GPM/SQ. FT.
AREA OF OPERATION:	1805 SQ. FT.
SPRINKLER DEMAND:	282.3 GPM
AVAIL. PRESSURE (@ SOURCE):	75.2 PSI
TOTAL DEMAND (@ SOURCE):	382.3 GPM @ 57.9 PSI

SPRINKLER LEGEND

SYMBOL	MANUFACTURER	SIN	TYPE	RESPONSE	NPT	K-FACTOR	FINISH	ESCUTCHEON
○	TYCO	TY313	UPRIGHT	QUICK	1/2"	5.6	CHROME	NONE
⊗	TYCO	G1	SPRINKLER GUARD	---	---	---	---	---

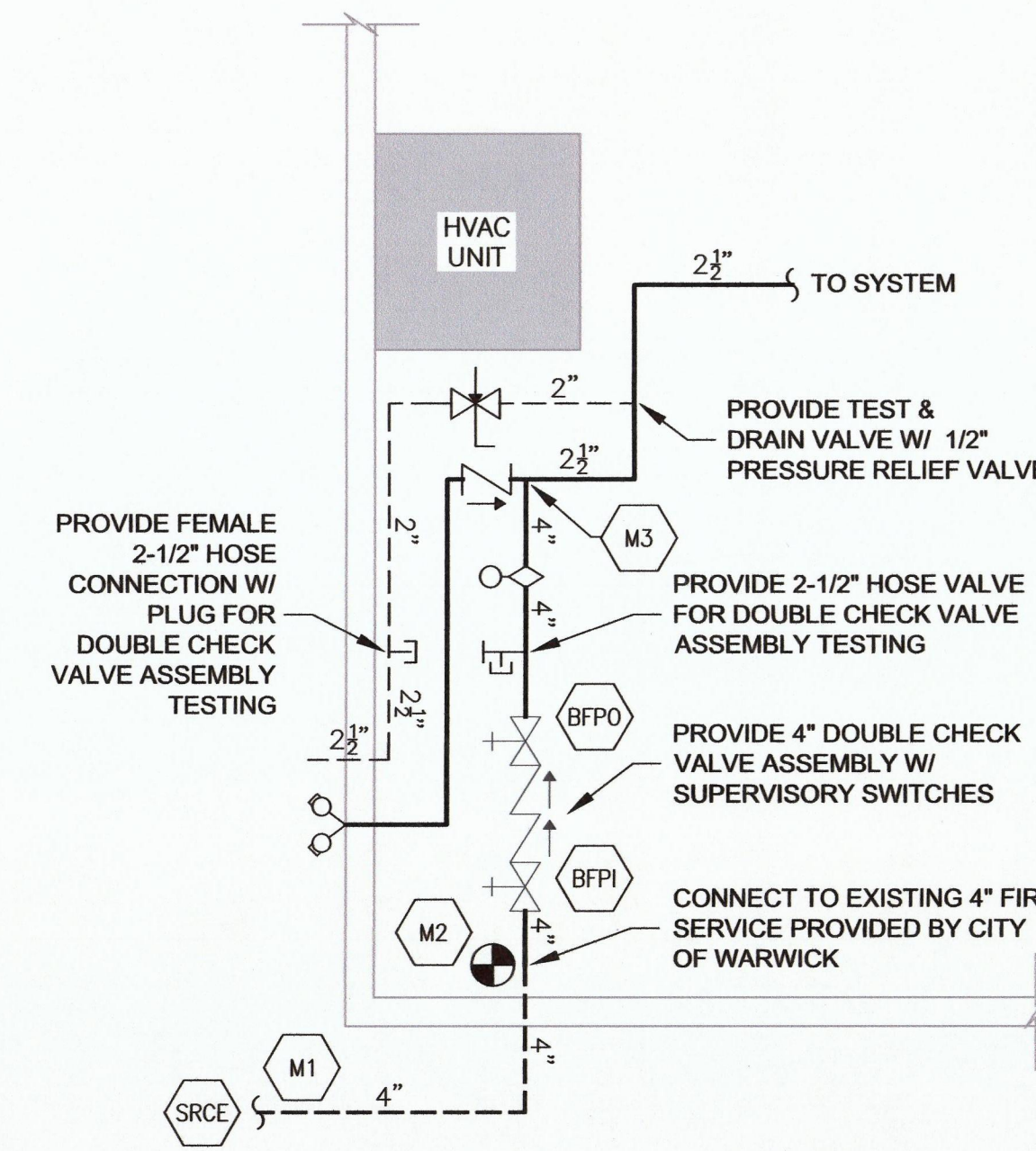
CONTRACTOR SHALL USE THE ABOVE SPECIFIED SPRINKLERS OR EQUAL.

SYMBOLS LEGEND

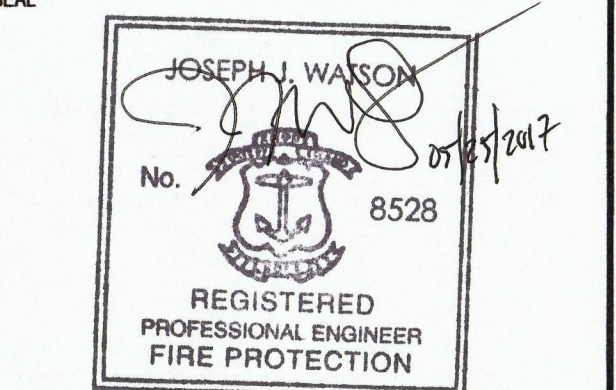
—	NEW SPRINKLER PIPE	⊗	DOUBLE CHECK VALVE BACKFLOW PREVENTER
- - -	EXISTING UNDERGROUND PIPING	⊕	PIPE ELBOW FITTING
- - -	DRAIN PIPING	⊕	PIPE TEE FITTING
⊕	FIRE DEPARTMENT CONNECTION	⊕	PIPE CONTINUATION
⊕	FLUSHING CONNECTION	⊕	PIPE RISER
⊕	CONNECT TO EXISTING	⊕	HOSE CONNECTION
⊕	WATERFLOW DETECTION DEVICE	⊕	HYDRAULIC REFERENCE NODE
⊕	OSKY GATE VALVE	⊕	HYDRAULIC DESIGN AREA
⊕	TEST & DRAIN W/ 1/2" PRESSURE RELIEF VALVE	⊕	CHECK VALVE

FLOW TEST RESULTS

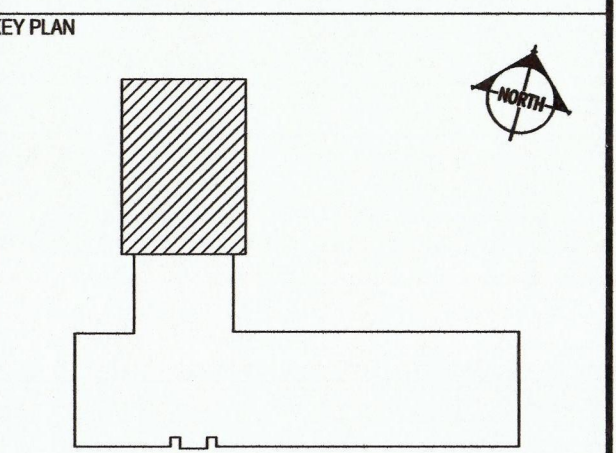
TEST DATE:	MARCH 27, 2017	"TEST GAUGE" LOCATION:	SANDY LANE & WHITFORD STREET
PERFORMED BY:	CITY OF WARWICK		HYDRANT # H(6-81)
	WATER DIVISION		
STATIC:	78 PSI	"FLOW" LOCATION:	SANDY LANE & STETSON STREET
RESIDUAL:	50 PSI		HYDRANT # H(7-187)
FLOW:	1319 GPM		



MAIN SPRINKLER RISER DETAIL
SCALE: N.T.S.



IT IS A VIOLATION OF STATE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DRAWING IN ANY WAY. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS/HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



NO.	REVISION	DATE

**FIRE SPRINKLER DESIGN
COOPER BUILDING**

ADDRESS
885 SANDY LANE
WARWICK, RI

PROJECT NO
1JW00218.002

DATE
MAY 26, 2017

DESIGN
EBJ

DRAWN BY
EBJ

CHECKED BY
JJW

SCALE
0 4' 8' 16'
1/8"=1'-0"

**FIRE PROTECTION GENERAL NOTES,
SYMBOLS LEGEND,
SITE PLAN, DETAILS &
PARTIAL FIRST FLOOR PLAN**

NUMBER
FP-1.1

SHEET
1 OF 1