

FIRE SPRINKLER PLAN - SECOND FLOOR

SCALE: 1/8"=1'-0"
 AREA PROTECTED: 3,000 SQ.FT.
 FINISH FLOOR ELEVATION : 110.5'
 COLOR CODE: WHITE

SECOND FLOOR Sprinkler Head Schedule

Symbol	Count	Thread	K-Factor	Description	Note
●	12	1/2"	4.9	RELIABLE RFC49 WHITE RESIDENTIAL CONCEALED PENDENT SIN#RA0616 165'	on Drop
◀	12	1/2"	4.2	RELIABLE RFS42 WHITE RESIDENTIAL CONCEALED SIDEWALL SIN#RA4835 165'	on Line

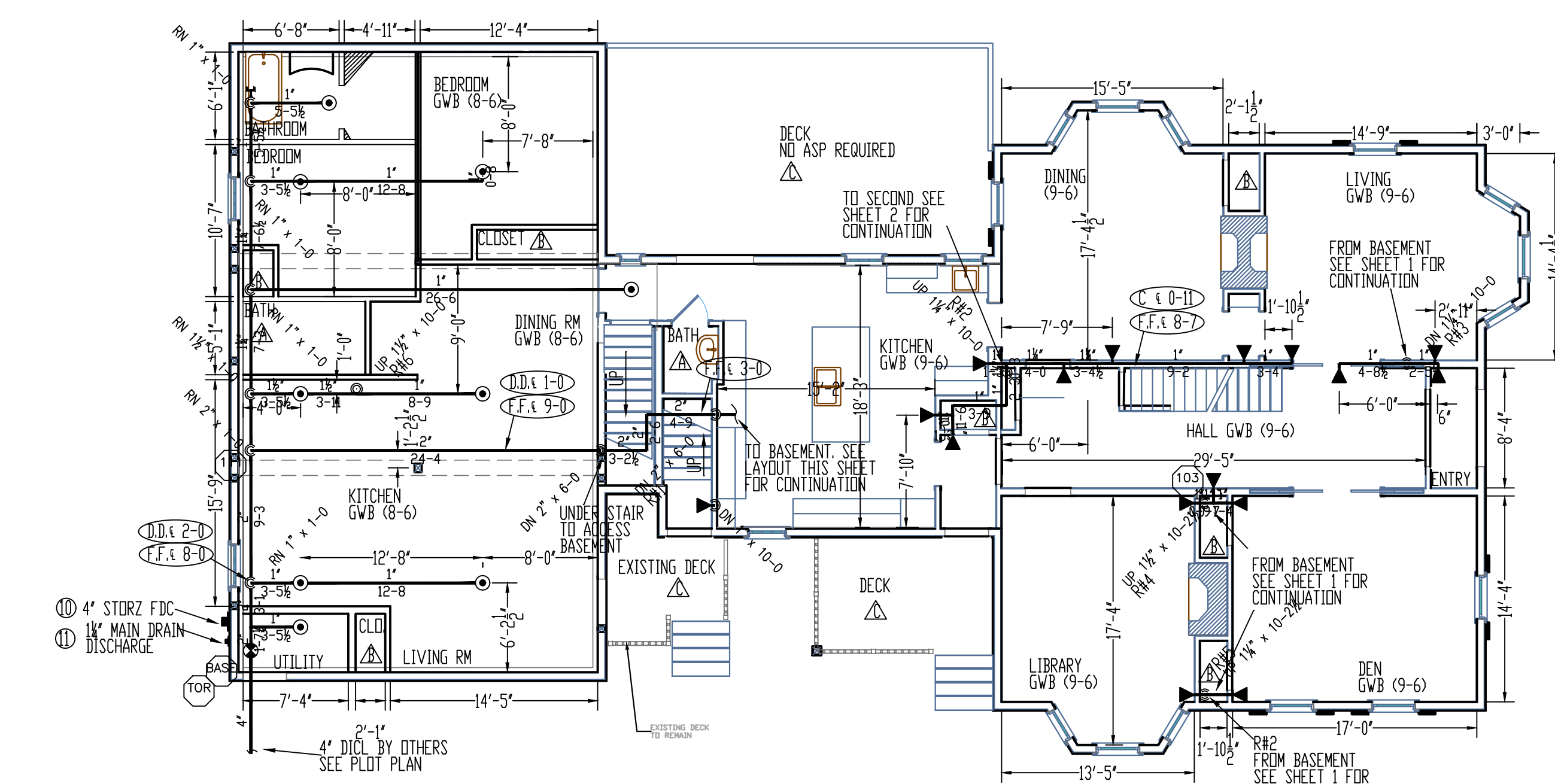
24 = Total Number of Heads This Floor

THIRD FLOOR Sprinkler Head Schedule

Symbol	Count	Thread	K-Factor	Description	Note
◀	11	1/2"	4.2	RELIABLE RFS42 WHITE RESIDENTIAL CONCEALED SIDEWALL SIN#RA4835 165'	on Line
●	1	1/2"	4.9	RELIABLE RFC49 WHITE RESIDENTIAL CONCEALED PENDENT SIN#RA0616 165'	on Drop

FIRE SPRINKLER PLAN - THIRD FLOOR

SCALE: 1/8"=1'-0"
 AREA PROTECTED: 3,000 SQ.FT.
 FINISH FLOOR ELEVATION : 121.0'
 COLOR CODE: WHITE



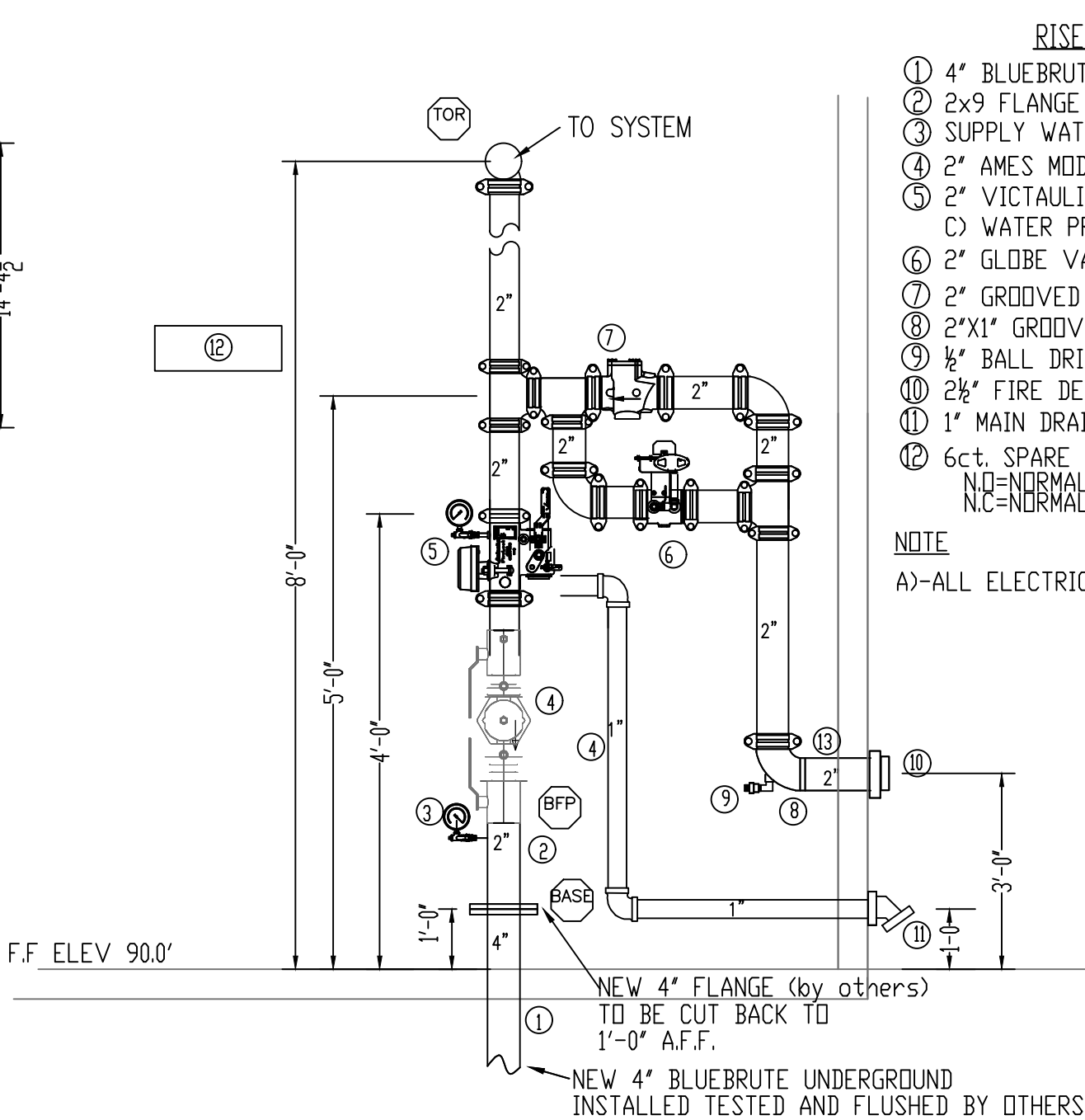
FIRE SPRINKLER PLAN - FIRST FLOOR

SCALE: 1/8"=1'-0"
 AREA PROTECTED: 3,000 SQ.FT.
 FINISH FLOOR ELEVATION : 100.0'
 COLOR CODE: WHITE

FIRST FLOOR Sprinkler Head Schedule

Symbol	Count	Thread	K-Factor	Description	Note
●	9	1/2"	4.9	RELIABLE RFC49 WHITE RESIDENTIAL CONCEALED PENDENT SIN#RA0616 165'	on Drop
◀	16	1/2"	4.2	RELIABLE RFS42 WHITE RESIDENTIAL CONCEALED SIDEWALL SIN#RA4835 165'	on Line

25 = Total Number of Heads This Floor



SYSTEM RISER DETAIL "WR"

SCALE: N.T.S.

HYDRAULIC-SYSTEM

THIS BUILDING IS PROTECTED BY A HYDRAULICALLY DESIGNED AUTOMATIC SPRINKLER SYSTEM.

LOCATION: 3rd FLOOR BEDROOM

NEPA #13R

BASIS OF DESIGN:

1. GPM PER HEAD	18.4
2. NUMBER OF HEADS CALCULATED	4

SYSTEM DEMAND AT PUMP:

1. WATER FLOW RATE	76.364 (GPM)
2. RESIDUAL PRESSURE AT PUMP	71.632 (PSI)

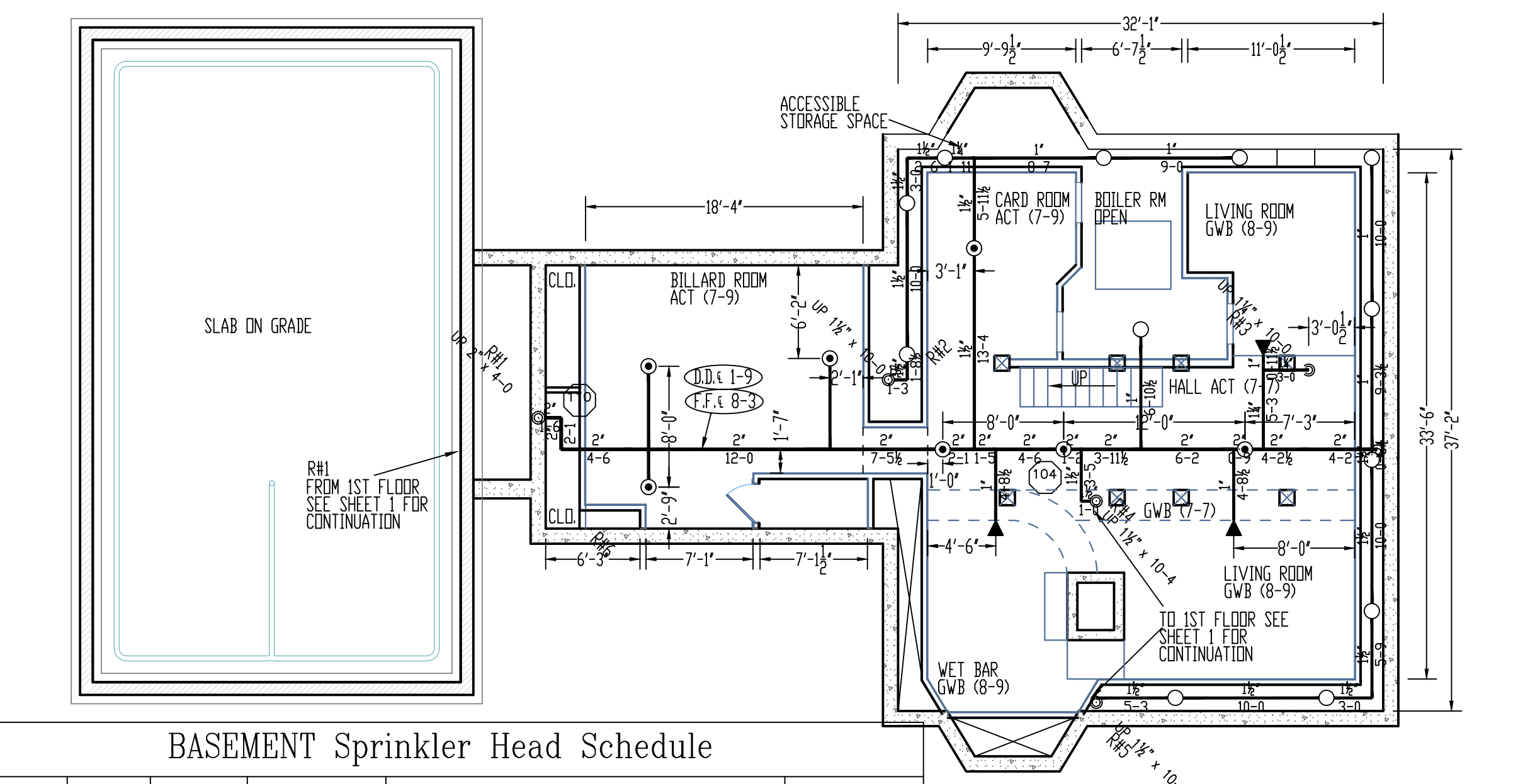
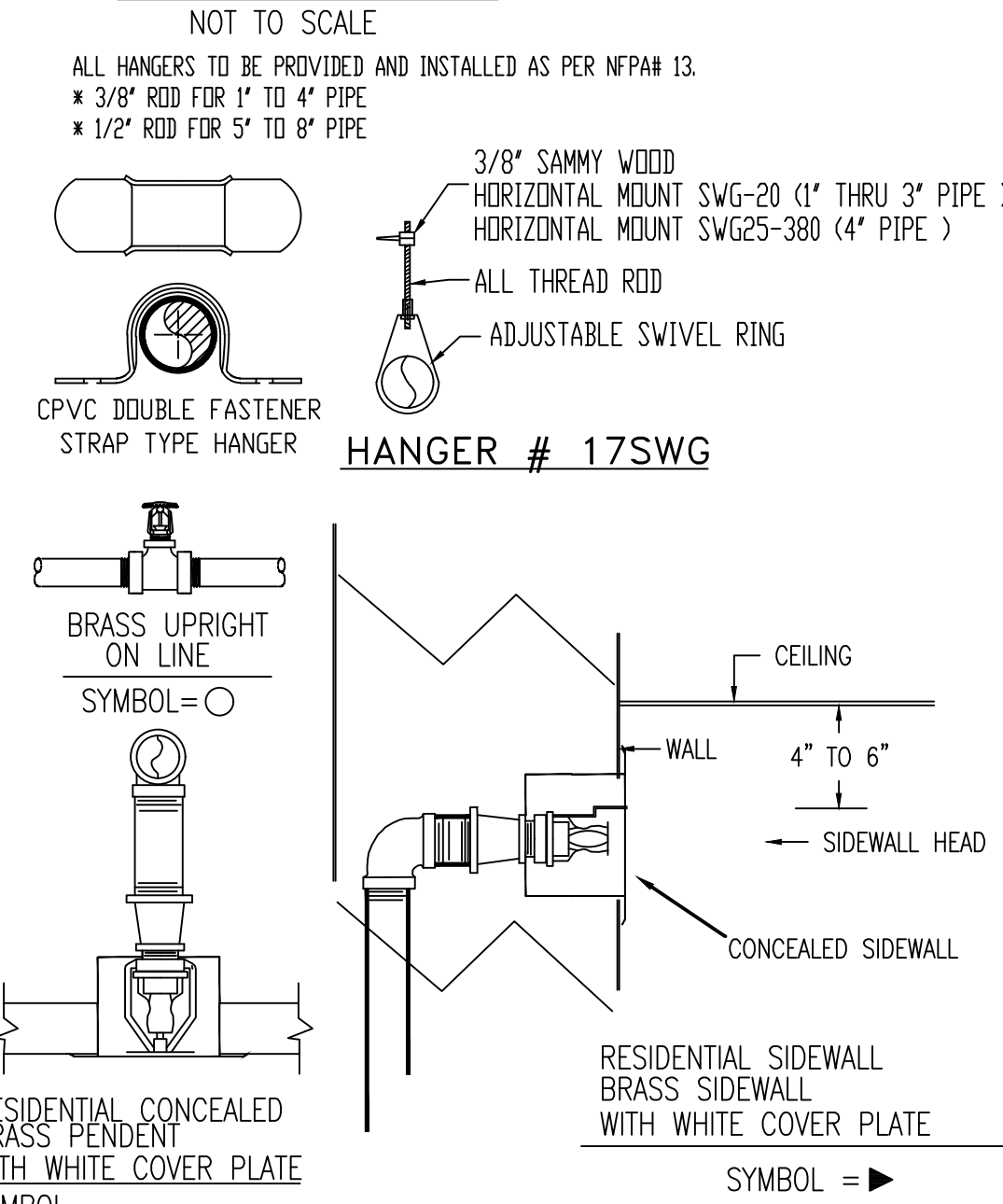
HYDRAULIC DATA NAMEPLATE

TO BE MOUNTED AT SYSTEM RISER

NOTE: HIGHEST SPRINKLER IS 135'

○ = HYDRAULIC REFERENCE POINT

HANGER DETAILS



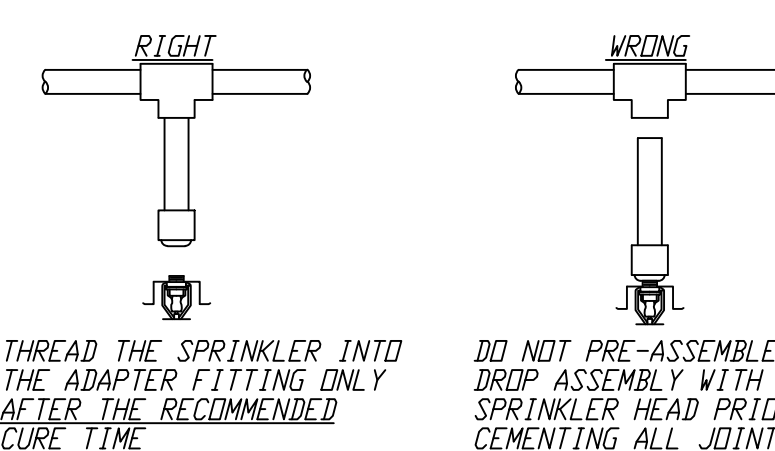
FIRE SPRINKLER PLAN - BASEMENT

SCALE: 1/8"=1'-0"
 AREA PROTECTED: 1650 SQ.FT.
 FINISH FLOOR ELEVATION : 90.0'
 COLOR CODE: WHITE

BASEMENT Sprinkler Head Schedule

Symbol	Count	Thread	K-Factor	Description	Note
●	12	1/2"	4.9	RELIABLE RFC49 WHITE RESIDENTIAL CONCEALED PENDENT SIN#RA0616 165'	on Drop
○	12	1/2"	5.6	RELIABLE F1FR56 OR BRASS UPRIGHT SIN#RA1425 200'	on Line
◀	3	1/2"	4.2	RELIABLE RFS42 WHITE RESIDENTIAL CONCEALED SIDEWALL SIN#RA4835 165'	on Line

27 = Total Number of Heads This Floor



DO NOT USE ANY THREAD SEALANT

CPVC TORQUESAFE SPRINKLER HEAD INSTALLATION DETAIL

- HAND INSTALL UNTIL SNUG
- WITH WRENCH ON SPRINKLER HEAD ROTATE HEAD CLOCKWISE UNTIL FRAME IS PROPERLY ALIGNED. BRASS INSERT AND HEAD WILL ROTATE TOGETHER
- NEVER REVERSE OR BACKUP THREADED ASSEMBLY. NOTE: BACKUP WRENCH MAY BE APPLIED TO BRASS INSERT FLATS ONLY FOR REMOVAL OF SPRINKLER HEAD.

USE SPEARS BLUE 75 PIPE JOINT COMPOUND OR TEFLON TAPE ON ALL STEEL OR BRASS PIPE THREADS.

FIRESTOP SYSTEMS SUCH AS HILTI FS-DNE HAVE BEEN FOUND TO BE COMPATIBLE WITH CPVC FIRE SPRINKLER PRODUCTS. A LIST OF THESE FIRESTOP SYSTEMS CAN BE FOUND ALONG WITH APPROVED THREAD SEALANTS ON-LINE AT WWW.BLAZEMASTER.COM. USE ONLY THOSE PRODUCTS THAT HAVE BEEN APPROVED. WWW.SPEARSMFG.COM/FLAMEGUARD/FGAPL-7

GROOVED COUPLING ADAPTERS ARE DESIGNED FOR USE WITH FLEXIBLE COUPLINGS. THE USE OF RIGID STYLE COUPLINGS WILL DAMAGE THE COUPLING ADAPTERS.

CURE TIMES WITH ONE STEP SOLVENT CEMENT

200 PSI (MAXIMUM) TEST PRESSURE

PIPE SIZE inches	Ambient Temperature During Cure Period		
	60°F to 120°F	40°F to 59°F	0°F to 39°F
3/4"	45 min.	1.5 hr.	24 hr.
1"	45 min.	1.5 hr.	24 hr.
1-1/4"	1.5 hr.	16 hr.	120 hr.
1-1/2"	1.5 hr.	16 hr.	120 hr.
2"	6 hr.	36 hr.	See Note 1
2-1/2"	8 hr.	72 hr.	See Note 1
3"	8 hr.	72 hr.	See Note 1

Note 1 For these sizes, the solvent cement can be applied at temperatures below 40°F. However, the sprinkler system temperature must be raised to a temperature of 40°F or above and allowed to cure per the above recommendations prior to pressure testing.

SCOPE OF WORK

INSTALLATION OF NEW WET FIRE SPRINKLER SYSTEM THROUGHOUT THE EXISTING BUILDING AT 22 EASTERN PROM IN PORTLAND. ALL SPRINKLER DESIGN, MATERIALS, FABRICATION, INSTALLATION, AND TESTING TO BE IN ACCORDANCE WITH NFPA 13R, 2016.

- NOT INCLUDED:
- INSTALLATION OF UNDERGROUND SPRINKLER WATER ENTRANCE (BY OTHERS)
 - ANY SOFFITS OR CHASES REQUIRED TO CONCEAL SPRINKLER PIPE.
 - ANY DEMO OF EXISTING WALLS OR CEILINGS TO CONCEAL SPRINKLER PIPE.
 - WIRING OF SPRINKLER COMPONENTS (BY OTHERS)
 - CUTTING AND PATCHING OF GWB CEILING TO ACCESS PIPE FOR BOX CONNECTIONS
- OWNER TO PROVIDE SUFFICIENT HEAT (min 40° F) IN ALL AREAS WHERE WATER FILLED PIPING IS INSTALLED.

GENERAL NOTES

ALL DIMENSIONS ARE SHOWN FOR GENERAL LOCATION OF SPRINKLER HEADS. PIPING MAY VARY TO SUIT ACTUAL FIELD CONDITIONS.

OCCUPANCY DESCRIPTION AND CLASSIFICATION: ALL LIVING AREAS, RESIDENTIAL LIGHT HAZARD, STORAGE ROOMS ORDINARY HAZARD GROUP I

MAXIMUM HEIGHT OF STORAGE 8'-0" AFF.

THE CLEARANCE BETWEEN DEFLECTOR AND TOP OF STORAGE SHALL BE GREATER THAN 18"

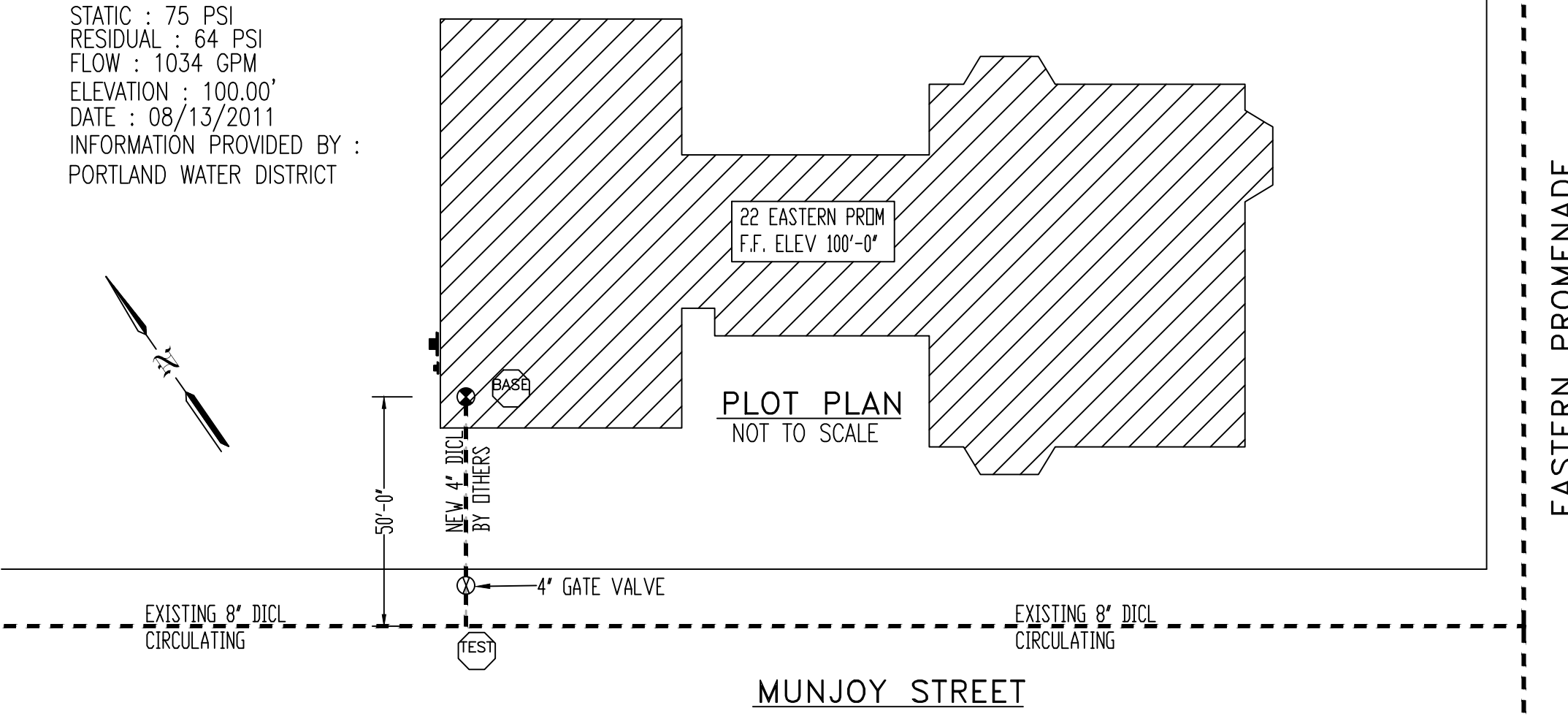
F.F. X'-X" INDICATES FINISH FLOOR UP TO PIPE CENTERLINE
 B.L. X'-X" INDICATES BOTTOM OF JOISTS DOWN TO PIPE CENTERLINE
 ○ INDICATES HYDRAULIC REFERENCE POINTS
 ALL PIPE TO BE CPVC PIPE W/ PVC FITTINGS. OWNER TO BUILD CHASE AND SOFFITS TO CONCEAL ALL CPVC PIPE.

= CONCEALED CPVC PIPE

= EXPOSED WET PIPE

WATER DATA

STATIC : 75 PSI
 RESIDUAL : 64 PSI
 FLOW : 1034 GPM
 ELEVATION : 100.00'
 DATE : 08/13/2011
 INFORMATION PROVIDED BY : PORTLAND WATER DISTRICT



MUNJOY STREET

NOTE: THE UNDERGROUND PIPING IS TO BE INSTALLED, TESTED AND FLUSHED BY OTHERS IN ACCORDANCE WITH NFPA 24 2013 EDITION. EASTERN FIRE PROTECTION INC. TO START AT THE UNDERGROUND ENTRANCE FLANGE PROVIDED BY OTHERS.

GENERAL NFPA #13R NOTES

SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PAMPHLET # 13R-2016.
 SYSTEM ENTRANCE RISER PIPING AT LOWER LEVEL TO BE BLACK SCHEDULE 40, JOINED W/ THREADED DUCTILE IRON FITTINGS. (C = 12D).
 LOWER AND UPPER LEVEL PIPING TO BE CPVC PLASTIC PIPE, JOINED WITH GLOUED CPVC FITTINGS.
 OWNER TO PROVIDE SUFFICIENT HEAT THROUGHOUT BUILDING TO PREVENT FREEZING OF WATER FILLED SPRINKLER PIPING AND EQUIPMENT (40°F MIN).
 ALL WIRING TO BE DONE BY OTHERS.

SPRINKLERS ARE NOT REQUIRED IN THE FOLLOWING AREAS AS PER NFPA 13R: 2016

- BATHROOMS NOT EXCEEDING 55 SQ. FT. WITH NON-COMBUSTIBLE CONSTRUCTION & FIXTURES
- CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS WHERE THE AREA OF THE SPACE DOES NOT EXCEED 24 SQ. FT. WITH WALLS AND CEILINGS SURFACED WITH NON-COMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS AS DEFINED BY NFPA 220.

- ANY PORCHES, BALCONIES, CORRIDORS, AND STAIRS THAT ARE OPEN AND ATTACHED.
- ATTICS, PENTHOUSES, EQUIPMENT ROOMS, CRAWL SPACES, FLOOR/CEILING SPACES, ELEVATOR SHAFTS, AND ANY OTHER CONCEALED SPACES THAT ARE NOT USED OR INTENDED FOR FOR LIVING PURPOSES OR STORAGE.
- CLOSETS ON EXTERIOR BALCONIES REGARDLESS OF SIZE AS LONG AS THERE ARE NO DOORS OR UNPROTECTED PENETRATIONS FROM THE CLOSET DIRECTLY INTO THE DWELLING.

REQUIRED APPROVALS	OWNER / ARCHITECT STATE FIRE MARSHAL PORTLAND FIRE DEPARTMENT	FIRE SPRINKLER PLANS & DETAILS	DWG. NO. 1 OF 1		
DRAWN BY	SEC	CONTRACT WITH:	OWNER		
CHECKED BY	CERT # 141357	 EASTERN FIRE PROTECTION AUBURN/LEWISTON INDUSTRIAL AIRPARK, AUBURN, MAINE 04210			
CHECKED BY	CERT # 090388			JOB NUMBER	1-0529-SP-17
CONTRACTOR LICENSE #	101			SCALE	AS NOTED
CONTRACTOR RMS #	291	DATE	1/17/2018		