

1ST FLOOR FIRE SPRINKLER PLAN
SCALE: 1/4" = 1'-0"

- 1) THE FIRE SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 13D SPRINKLER SYSTEMS IN ONE- AND TWO-FAMILY DWELLINGS AND MANUFACTURED HOMES - 1996 EDITION AS ADOPTED AND MODIFIED BY THE CONTRA COSTA COUNTY FIRE PROTECTION DISTRICT. THE NUMBER OF DESIGN SPRINKLERS SHALL INCLUDE ALL SPRINKLERS IN THE HYDRAULICALLY MOST REMOTE ROOM OR AREA (AS DEFINED BY WALLS OR APPROPRIATE LINTELS)
- 2) SPRINKLERS SHALL BE PLACED A SUFFICIENT DISTANCE AWAY FROM COMMON RESIDENTIAL HEAT SOURCES THAT INCLUDE KITCHEN RANGES, WALL OVENS, FIREPLACES, STOVES, LIGHT FIXTURES, HOT WATER PIPES, WATER HEATERS, FURNACES, AND ASSOCIATED FLUES AND DUCTS. IN ADDITIONAL TO THE HEAT ZONES INDICATED ON THE PLANS, THE FOLLOWING LATERAL DISTANCES MUST BE MAINTAINED:
 - 6" FROM THE SURFACES OF FURNACES, WATER HEATERS, AND LIGHT FIXTURES.
 - 12" FROM THE SURFACES OF HOT AIR FLUE, UNINSULATED HEATING DUCTS, AND UNINSULATED WATER PIPES.
 - 18" FROM THE SURFACES OF KITCHEN RANGES AND WALL OVENS.
 - 24" FROM THE EDGES OF CEILING MOUNTED HOT AIR DIFFUSERS, AND 24" FROM THE SIDES AND 36" FROM THE FRONT OF WALL-MOUNTED HOT AIR DIFFUSERS.
 - 36" FROM THE EDGES OF FIREPLACES (60" FROM RECESSED HEARTH FIREPLACES)
 - 42" FROM THE SURFACES OF WOOD OR COAL BURNING STOVES
- 3) ALL MATERIALS SHALL BE NEW AND UL LISTED AND/OR FM APPROVED
- 4) ALL PIPING SHALL BE UL LISTED CPVC PIPING AND COMPATIBLE FITTINGS INSTALLED IN ACCORDANCE WITH THE PRODUCT LISTING CRITERIA AND MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS. ALL CPVC PIPING IS INSTALLED CONCEALED IN WALLS, ATTICS, CEILINGS, ETC.
- 5) IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEAT TO PREVENT WATER IN PIPES FROM FREEZING IN BUILDINGS PROVIDED WITH WET-PIPE SPRINKLER SYSTEMS.
- 6) HYDRAULIC CALCULATIONS DEVELOPED FOR THIS PROJECT REFLECT THE REQUIRED WATER SUPPLY CHARACTERISTICS AT THE BASE OF THE FIRE SPRINKLER RISER. THE OWNER IS RESPONSIBLE FOR DEVELOPING AND INSTALLING A WATER SUPPLY SYSTEM SUFFICIENT TO SUPPLY THE INDICATED DEMANDS. THE WATER SUPPLY SYSTEM SHALL BE IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS AND THE REQUIREMENTS OF CONTRA COSTA COUNTY FIRE PROTECTION DISTRICT. THE WATER SUPPLY SYSTEM IS NOT PART OF THIS CONTRACT (BY OTHERS).
- 7) CALCULATED SYSTEM REQUIREMENTS (AT THE BASE OF THE RISER) ARE AS FOLLOWS:
 - 13.0 GPM AT 31.2 PSI (1 SPRINKLER OPERATING AT THE LOFT) AND
 - 44.5 GPM AT 37.7 PSI (3 SPRINKLERS OPERATING AT THE 2ND FLOOR STAIR AREA) AND
 - 54.1 GPM AT 42.2 PSI (4 SPRINKLERS OPERATING IN THE LARGE GARAGE).
- 8) SPRINKLERS HAVE BEEN OMITTED FROM ATTICS AND CRAWL SPACES (NOT INTENDED FOR OCCUPANCY OR STORAGE). SPRINKLERS HAVE BEEN OMITTED FROM CLOSETS AND BATHROOMS MEETING THE REQUIREMENTS OF NFPA 13D - 1996. EXCEPTIONS TO SECTION 4-6.
- 9) ALL CEILINGS ARE FLAT WITH SOME BEAMS AND ARCHED SOFFITS AS INDICATED ON THE PLANS. ARCHED SOFFITS RESULT IN MINIMUM LINTEL DEPTHS OF APPROXIMATELY 9 INCHES.

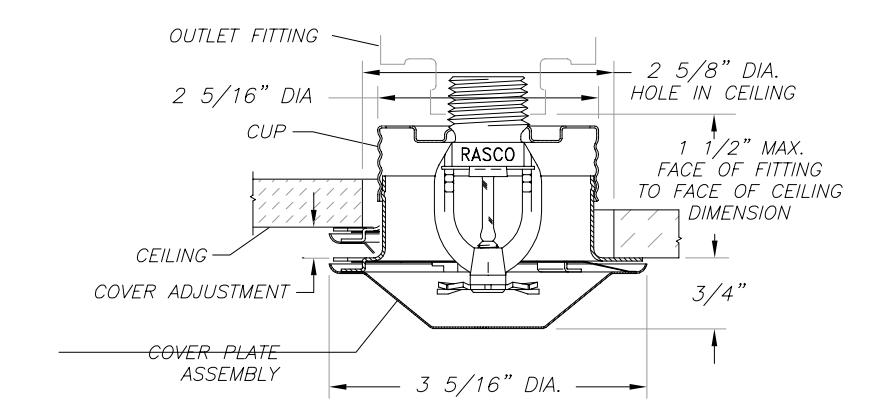
GENERAL NOTES

ALL SPRINKLERS (EXCEPT AS NOTED) SHALL BE UL-LISTED RESIDENTIAL CONCEALED SPRINKLERS, RELIABLE MODEL F1/RES/CCP, BULB TYPE, 3.8 K-FACTOR, 155F, WITH FACTORY WHITE PAINTED COVERPLATE ASSEMBLIES

UL LISTED RESIDENTIAL PROTECTION AREAS AND THEIR CORRESPONDING FLOW/PRESSURE REQUIREMENTS ARE INDICATED BELOW.

REFER TO THE MANUFACTURER'S TECHNICAL BULLETIN FOR SPECIFIC INSTALLATION REQUIREMENTS, RECOMMENDATIONS AND MAINTENANCE GUIDELINES.

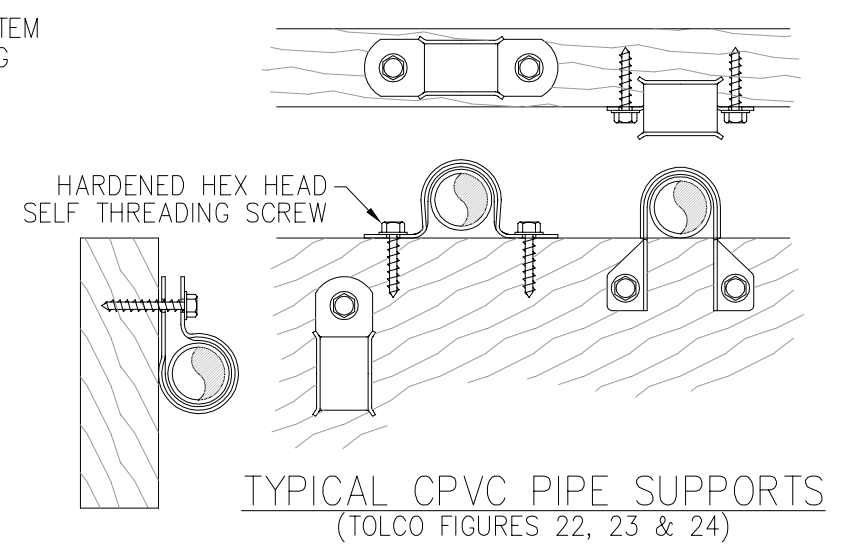
COVERAGE AREA (FTxFT)	ONE SPRINKLER	MULTIPLE SPRINKLERS
12x12 (AND LESS)	11 GPM (8.0 PSI)	10.5 GPM (7.2 PSI)
14x14	12 GPM (9.5 PSI)	10.5 GPM (7.2 PSI)
16x16	15 GPM (14.8 PSI)	12 GPM (9.5 PSI)
18x18	16 GPM (16.8 PSI)	13 GPM (11.1 PSI)
20x20	18 GPM (21.3 PSI)	14 GPM (12.9 PSI)



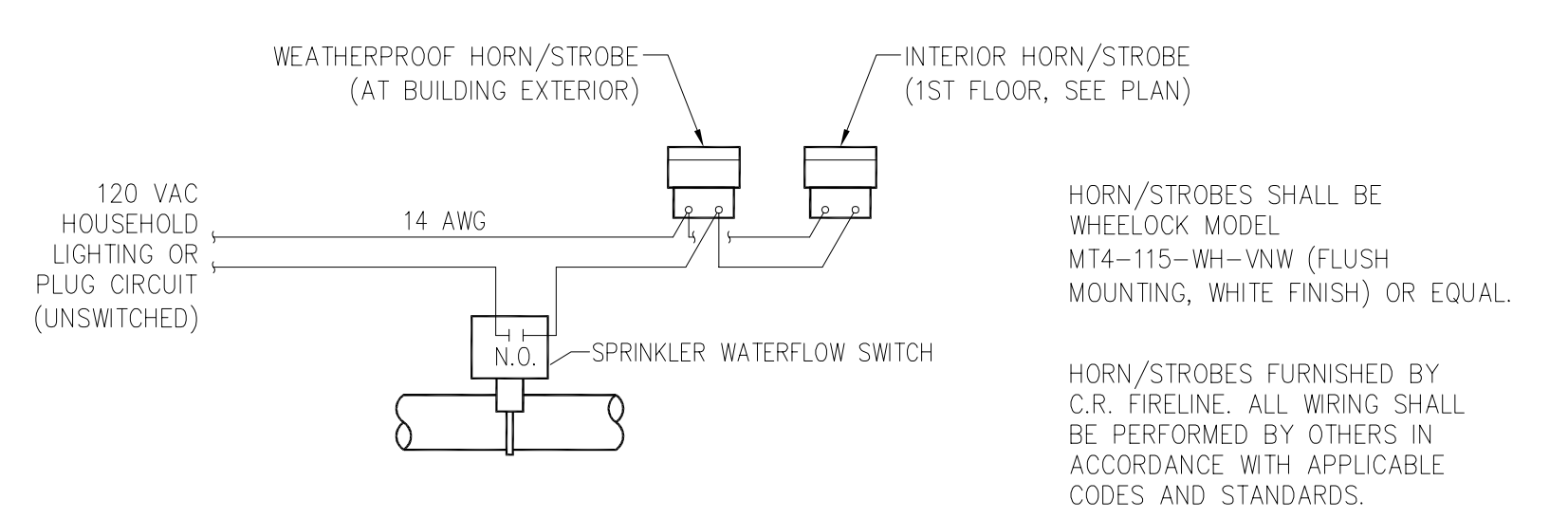
TYPICAL SPRINKLER INSTALLATION DETAIL
NO SCALE

NOTE: FIRE SPRINKLER PIPE SUPPORT LOCATIONS BEEN SCHEMATICALLY INDICATED ON THE PROJECT PLANS. ACTUAL PROJECT PIPE SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE REFERENCED STANDARDS, MANUFACTURER'S GUIDELINES, CPVC PIPING LISTING AND APPROVAL REQUIREMENTS, AND STRUCTURAL FRAMING SYSTEM MANUFACTURER'S REQUIREMENTS. TYPICAL CPVC FIRE SPRINKLER PIPING SUPPORTS ARE INDICATED BELOW FOR GENERAL REFERENCE.

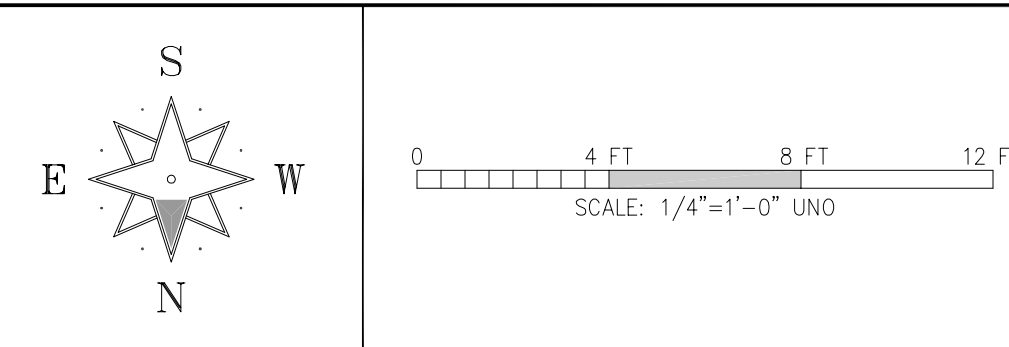
TYPICAL CPVC MAXIMUM SUPPORT SPACING DISTANCE	END OF BRANCHLINE TO SUPPORT	BETWEEN SUPPORTS
3/4"	6 INCHES	5 1/2 FEET
1"	9 INCHES	6 FEET
1-1/4"	12 INCHES	6 1/2 FEET
1-1/2" & 2"	12 INCHES	8 FEET



TYPICAL PIPE SUPPORT DETAILS
NO SCALE



TYPICAL ALARM DEVICE WIRING DETAIL
NO SCALE



WATER SUPPLY INFORMATION - WATER MAINS				REVISIONS:		NEW PIPE UNLESS MARKED OTHERWISE				SPRINKLER HEADS										
STATIC	RESIDUAL	FLOW	DATE	DATE	DESCRIPTION	DIAMETER	TYPE	DIAMETER	TYPE	SYMBOL	TYPE	METAL	TEMP	K	ORIFICE	NPT	MAKER	MODEL	COUNT	ESCLUTCHEON
						1-1/4"	40	2-1/2"	10/40	○	(N) Upright	Brass	286	17.5	.775"	3/4"	Central	K17-231	--	
						1-1/4"	40	3"	10	○	(E) Upright	Brass	212	5.6	1/2"	1/2"	GEM	F950	--	
						1-1/2"	40	4"	10	⊗	Upright	Brass	286	5.6	1/2"	1/2"	Central	GB	--	
						2"	40	6"	10											
								8"	10											

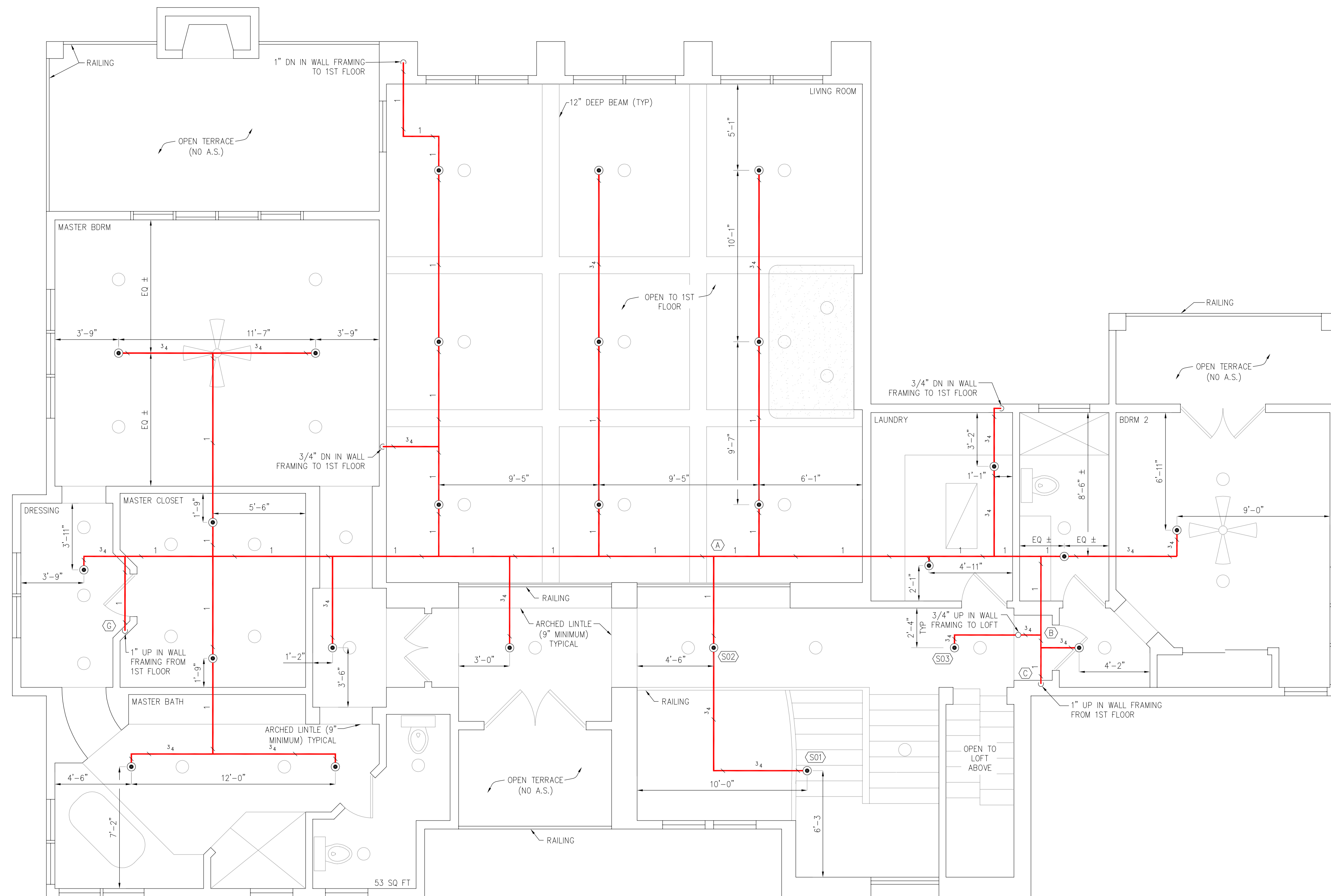
Private Residence
Contra Costa County

Residential Fire Sprinkler System - 1st Floor

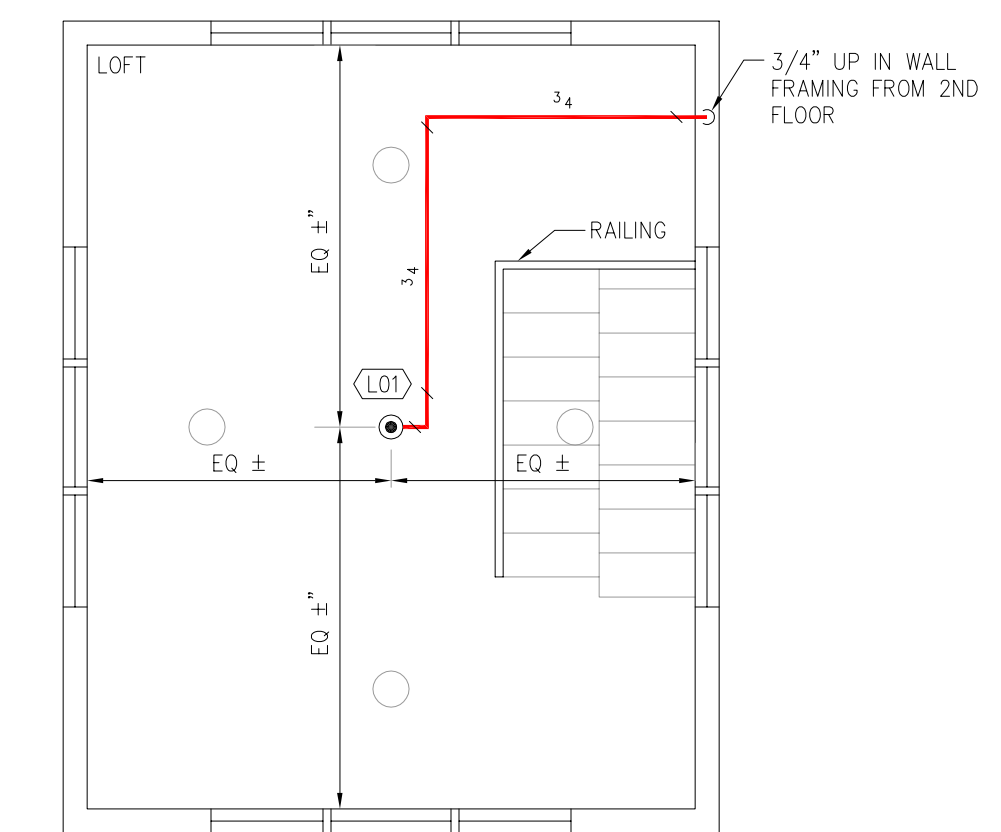
Project: 11/17/00
Date: 11/17/00
SCALE: AS NOTED

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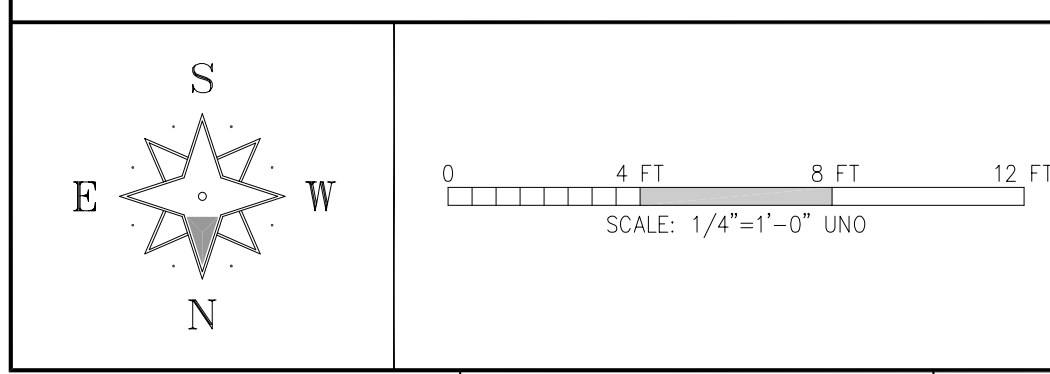
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2ND FLOOR FIRE SPRINKLER PLAN
SCALE: 1/4"=1'-0"



LOFT FIRE SPRINKLER PLAN
SCALE: 1/4"=1'-0"



WATER SUPPLY INFORMATION - WATER MAINS			
STATIC	RESIDUAL	FLOW	DATE
LOCATION OF TEST	ELEVATION OF WATER SOURCE (OR TEST)	0	
SOURCE OF INFORMATION			
REVIEWING AUTHORITY	CCCFFD	OCCUPANCY	Residential

REVISIONS:	
DATE	DESCRIPTION

NEW PIPE UNLESS MARKED OTHERWISE			
DIAMETER	TYPE	DIAMETER	TYPE
1"	40	2-1/2"	10/40
1-1/4"	40	3"	10
1-1/2"	40	4"	10
2"	40	6"	10
		8"	10

SPRINKLER HEADS										
SYMBOL	TYPE	METAL	TEMP	K	ORIFICE	NPT	MAKER	MODEL	COUNT	ESCUICHEON
○ (N)	Upright	Brass	286	17.5	.775"	3/4"	Central	K17-231	--	
○ (E)	Upright	Brass	212	5.6	1/2"	1/2"	GEM	F950	--	
⊗	Upright	Brass	286	5.6	1/2"	1/2"	Central	GB	--	

Private Residence
Contra Costa County
Residential Fire Sprinkler System - 2nd Floor

Project: _____
Date: 11/17/00
SCALE: AS NOTED
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