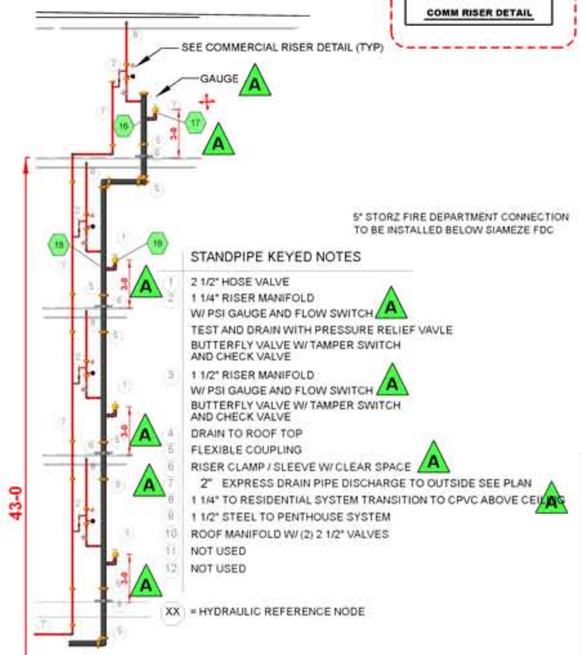


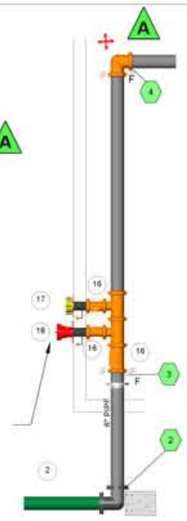
STANDPIPE KEYED NOTES

1. 2 1/2" HOSE VALVE
2. 1 1/4" RISER MANIFOLD W/ PSI GAUGE AND FLOW SWITCH TEST AND DRAIN WITH PRESSURE RELIEF VAVLE BUTTERFLY VALVE W/ TAMPER SWITCH AND CHECK VALVE
3. 1 1/2" RISER MANIFOLD W/ PSI GAUGE AND FLOW SWITCH BUTTERFLY VALVE W/ TAMPER SWITCH AND CHECK VALVE
4. DRAIN TO ROOF TOP
5. FLEXIBLE COUPLING
6. RISER CLAMP / SLEEVE W/ CLEAR SPACE
7. 2" EXPRESS DRAIN PIPE DISCHARGE TO OUTSIDE SEE PLAN
8. 1 1/4" TO RESIDENTIAL SYSTEM TRANSITION TO CPVC ABOVE CEILING
9. 1 1/2" STEEL TO PENTHOUSE SYSTEM
10. ROOF MANIFOLD W/ (2) 2 1/2" VALVES
11. NOT USED
12. NOT USED

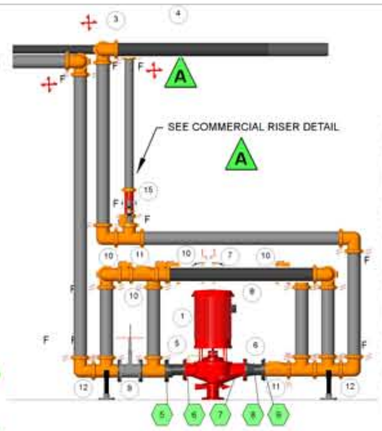
XX = HYDRAULIC REFERENCE NODE

CLASS I STANDPIPE TO BE INSTALLED IN STAIRS 1 AND 2

AT LEAST 1 TEMPORARY STANDPIPE TO BE INSTALLED WHEN CONSTRUCTION IS NOT MORE THAN 40-0 ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT ACCESS.



SECTION THRU PUMP
SCALE: 1/2" = 1'-0"



SECTION THRU PUMP
SCALE: 1/2" = 1'-0"
REFER TO FP8 FOR MORE DETAILS

PUMP LEGEND

1. PEERLESS 750 GPM AT 125 PSI BOOSTER PUMP
2. 6" FROM CITY SUPPLY SEE SITE PLAN FP2
3. 6" TO STANDPIPE SYSTEM
4. 4" TO GARAGE SYSTEM
5. 6 x 5 ECCENTRIC SUCTION REDUCER
6. 6 x 5 CONCENTRIC DISCHARGE INCREASER
7. 5" VENTURI AND METER, 6" TEST BYPASS LINE
8. 6" CITY SUPPLY BYPASS LINE
9. 6" OS&Y GATE VALVE WITH TAMPER SWITCH
10. 6" BUTTERFLY VALVE WITH TAMPER SWITCH
11. 6" SWING CHECK VALVE
12. PIPE STAND
13. FLEXIBLE COUPLING DESIGNATED WITH 'F'
14. ALL OTHER COUPLINGS TO BE RIGID COUPLING
15. 4" RISER MANIFOLD TO GARAGE / RETAIL SYSTEM W/ PSI GAUGE AND FLOW SWITCH TEST AND DRAIN WITH PRESSURE RELIEF VAVLE AND BUTTERFLY VALVE W/ TAMPER SWITCH
16. 6" GROOVE CHECK VALVE
17. 2-1/2x2-1/2x6 SIAMEZE FIRE DEPARTMENT CONNECTION
19. 5" STORZ FIRE DEPARTMENT CONNECTION

Flexible Couplings Shall be Installed as Follows:

Listed flexible pipe couplings joining grooved end pipe shall be provided as flexure joints to allow individual sections of piping 2 1/2 in. (64 mm) or larger to move differentially with the individual sections of the building to which it is attached. Couplings shall be arranged to coincide with structural separations within a building.

The flexible couplings shall be installed as follows:

(1) Within 24 in. of the top and bottom of all risers.
  (a) In risers less than 3 ft in length, flexible couplings are permitted to be omitted.
  (b) In risers 3 to 7 ft in length, one flexible coupling is adequate.
(2) Within 12 in. above and within 24 in. below the floor in multistory buildings. When the flexible coupling below the floor is above the tie-in main to the main supplying that floor, a flexible coupling shall be provided on the vertical portion of the tie-in piping.
(3) On both sides of concrete or masonry walls within 1 ft of the wall surface. Flexible pipe couplings are not required where clearance around the pipe is provided in accordance with NFPA 13 9.3.2
(4) Within 24 in. of building expansion joints.
(5) Within 24 in. of the top and bottom of drops to hose lines, rack sprinklers, and mezzanines, regardless of pipe size.
(6) Within 24 in. of the top of drops exceeding 15 ft in length to portions of systems supplying more than one sprinkler, regardless of pipe size.
(7) Above and below any intermediate points of support for a riser or other vertical pipe.
(8) The sprinkler piping supplying the in racks sprinklers should have a flexible coupling within 24" on the connection to the overhead pipe and within 24 in. of the initial attachment point to the racks. in addition there should be a flexible on the horizontal piping within 24 in. of the vertical drops

DESIGN CRITERIA

PER NFPA 13 (2002 EDITIONS) AND THE REQUIREMENTS OF THE BERKELEY FIRE DEPARTMENT

CLASS I AUTOMATIC WET PIPE STANDPIPE PER NFPA 14 2007 & FIRE PUMP PER NFPA 20 2003

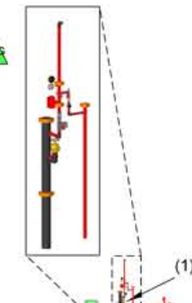
PARKING AREA, BIKE STORAGE, TRASH ROOM - WET PIPE
- NFPA 13
- ORD HAZ GRP I
- DESIGN DENSITY: .2 GPM/SQ. FT. OVER 1500 SQ. FT.

FUTURE TENANT - WET PIPE SYSTEM
- NFPA 13
- ORD HAZ GRP II
- DESIGN DENSITY: .2 GPM/SQ. FT. OVER 1500 SQ. FT.

APARTMENTS - WET PIPE SYSTEM
- NFPA 13 RESIDENTIAL SPRINKLERS
- -THE DESIGN AREA SHALL BE THE AREA THAT INCLUDES THE FOUR ADJACENT SPRINKLERS THAT PRODUCE THE GREATEST HYDRAULIC DEMAND PER SPRINKLER HEAD LISTING
- - SPRINKLERS NOT REQUIRED IN BATHROOMS UNDER 55 SQ FT 8.14.8.1.1
- - ALL CLOSETS TO BE PROVIDED WITH SPRINKLER PROTECTION.

NOTE :
EXTENDED COVERAGE TYCO LFII RESIDENTIAL HEADS CALC'D AT 20'x20' - 400 SQ FT MAX
MAXIMUM SPACING AT 20' WITH 10' MAXIMUM OFF ANY WALL
MINIMUM SPACING BETWEEN HEADS IS 8'

FIRE PUMP CONTROL PANEL
REFER TO FP8 FOR MORE DETAILS
SHOWN FOR REFERENCE ONLY



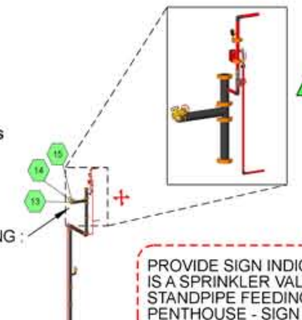
(1) 2-1/2 HOSE VALVE FLOWING : 250 GPM @ 100 PSI

MOST REMOTE STANDPIPE FLOWING: 250 GPM @ 100 PSI EACH

(1) 2-1/2 HOSE VALVE FLOWING : 250 GPM @ 100 PSI

REFER TO FP2 FOR CONTINUATION

STANDPIPE SECTIONAL CONTROL DRAIN ASSEMBLY - 2" OUTLET DOWNSTREAM OF EACH CONTROL VALVE - CONNECTING TO GANG DRAIN TO RISER ROOM FLOOR DRAIN

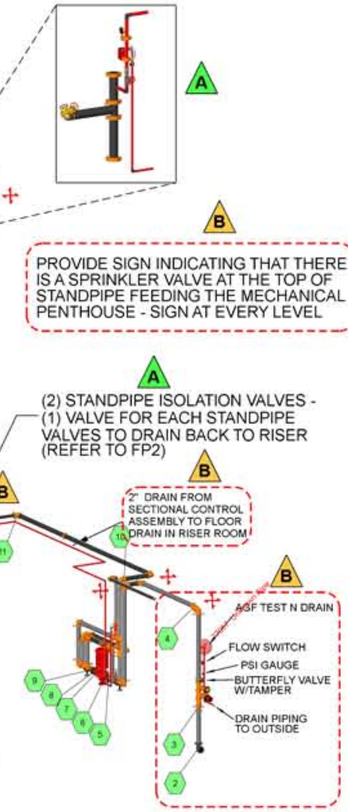


(1) 2-1/2 HOSE VALVE FLOWING : 250 GPM @ 100 PSI

PROVIDE SIGN INDICATING THAT THERE IS A SPRINKLER VALVE AT THE TOP OF STANDPIPE FEEDING THE MECHANICAL PENTHOUSE - SIGN AT EVERY LEVEL

(2) STANDPIPE ISOLATION VALVES - (1) VALVE FOR EACH STANDPIPE VALVES TO DRAIN BACK TO RISER (REFER TO FP2)

2" DRAIN FROM SECTIONAL CONTROL ASSEMBLY TO FLOOR DRAIN IN RISER ROOM



STANDPIPE HYDRAULIC DEMAND:
(3) 2-1/2 HOSE VALVES FLOWING : 250 GPM @ 100 PSI EACH
TOTAL REQUIREMENTS: 750 GPM @ 23.68 PSI
15.76 PSI UNDER CURVE (40.0% CUSHION)

STANDPIPE ISO DETAIL

GENERAL NOTES

1. ALL MATERIAL AND METHODS SHALL CONFORM TO THE REQUIREMENTS OF CITY OF BERKELEY FIRE DEPARTMENT.
2. THIS SYSTEM HAS BEEN HYDRAULICALLY CALCULATED PER THE DESIGN CRITERIA ABOVE; SEE PRINTED CALCULATION REPORT FOR DETAILS. A PLACARD INDICATING THE HYDRAULIC DESIGN CRITERIA WILL BE INSTALLED ON THE RISER.
3. ALL MATERIALS TO BE NEW AND APPROVED.

OVERHEAD PIPE FOR GARAGE / RETAIL MAIN LEVEL AND MECHANICAL PENTHOUSE:

4. OVERHEAD PIPING 2" & LARGER SHALL BE DYNA FLOW PIPE GROOVED WITH SHOP WELDED OUTLETS INSTALLED BY CERTIFIED WELDERS.
5. OVERHEAD PIPING 1 1/2" & SMALLER SHALL BE DYNA THREAD PIPE. BRANCHLINE FITTINGS, DUCTILE IRON, CAST IRON, #125#, AND THREADED. GRIDDED LINE PIPE MAY BE GROOVED DYNAFLOW.
6. CROSS/FEED MAIN PIPE FITTINGS, GROOVED WITH STANDARD GASKETS.

OVERHEAD PIPING FOR RESIDENTIAL LEVELS 2 THROUGH 5

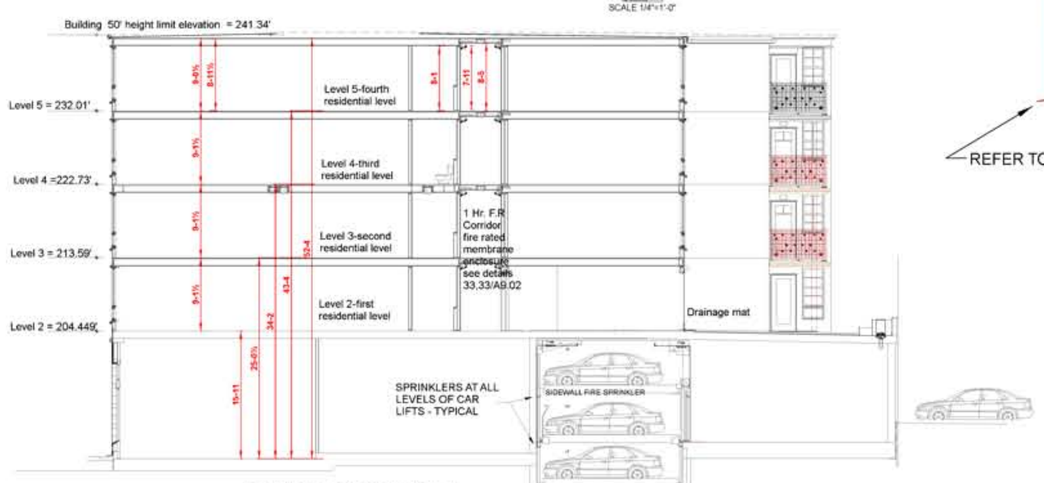
7. ALL OVERHEAD PIPE IN APARTMENTS TO BE CPVC LISTED FOR FIRE PROTECTION WITH GLUE SLIP X SLIP FITTINGS
8. ALL PIPING SHALL BE HYDROSTATICALLY TESTED PER NFPA 13, 24 HOUR NOTIFICATION REQUIRED, 200# FOR 2 HOURS.
9. A SPARE HEAD CABINET; SPRINKLERS, AND WRENCH(S) SHALL BE PROVIDED PER NFPA 13 2002.
10. PROTECTION AGAINST FREEZING OF ALL EXPOSED PIPING, SPRINKLERS, AND VALVES IS THE RESPONSIBILTY OF THE OWNER & SHALL ADHERE TO NFPA 13 2002.
11. ALARM BELL SHALL BE PROVIDED BY AQUAMATIC FIREPROTECTION INC. INSTALLATION & WIRING N.I.C.
12. THE SYSTEM ALARMS SHALL BE PROVIDED WITH 24 HR MONITORING PER UFC.
13. 18" CLEARANCE ABOVE STORAGE US REQUIRED PER NFPA 13 2002.
14. FOREMAN TO SCHEDULE WELD INSPECTION IN JURISDICTIONS WHERE REQUIRED.
15. WATER INFORMATION: DESIGN CRITERIA STATIC PSI-40, RESIDUAL PSI - 38, GPM - 1500
16. PROJECT WILL REQUIRE SEPERATE FIRE ALARM PERMIT per CFC 903.4, 907, 105.7, BFD, & 2007 NFPA 72 BY A C-10 CONTRACTOR. DETECTOR AND OTHER RELATED DEVICES (INCLUDING MAKE, MODEL, & SPACING) TO ALSO BE PROVIDED BY THE C-10 CONTRACTOR.

Level 1 PARKING GARAGE

STANDPIPE #1 EXIT STAIR NO. 1

STANDPIPE #2 EXIT STAIR NO.2

SCALE 1/4"=1'-0"



BUILDING SECTION A-A

SCALE 1/8"=1'-0"

STANDPIPE AND FIRE PUMP DETAIL PLAN

SCALE 1/8"=1'-0"

FIRE PROTECTION NOTES

1. Installation shall conform to N.F.P.A. #13.
2. All materials shall be new and U.L. listed. All piping shall be as noted on the PIPE/FITTING Table.
3. Owner shall be responsible in providing adequate heat in areas with wet pipe fire sprinkler system to prevent water in pipes and valves from freezing.
4. Fire Sprinkler Contractor shall not be responsible for the structural adequacy of the building to support the added load of the fire sprinkler piping.
5. All dimensions are +/- and are shown as guide for installation only. All dimensions need to be field verified.
6. All arm-overs 2'-0" and longer shall be hung as required by N.F.P.A. #13.

PIPE/FITTING TABLE

	Dyna-Thread	PIPE ENDS/RUN	FITTINGS
ARM-OVERS	Dyna-Thread	Threaded	Screwed CI
SPRIGS	Dyna-Thread	Threaded	Screwed CI
DROPS	Dyna-Thread	Threaded	Screwed CI
BRANCHLINES	Dyna-Thread	Threaded	Screwed CI
CROSS MAIN	Dyna-Flow	Welded/Grooved	Grooved/Welded
FLOAT MAIN	Dyna-Flow	Welded/Grooved	Grooved/Welded
STANDPIPES	SCH. 10	Welded/Grooved	Grooved/Welded
UNDERGROUND	PVC	-	PVC Fittings

* CONTACTS *
* FIRE *
* GENERAL CONTRACTOR *
* ARCHITECT *
* INSURANCE *
* OTHER *
Gerald Ebeling

REVISION

DATE	DESCRIPTION	BY

Sprinkler Legend

Symbol	Manufacturer	SIN/Model	Quantity	K-Factor	Type	Response	Orifice	Finish	Temperature	Note

HYDRAULIC DESIGN DATA

1	SEE CALC DETAILS
2	
3	

FLOW TEST INFO. Date: Time: Test By: Location: Firepump:

	Ck Size	In	Outlet	Pitot	Psi	Static	Psi	Resid	Psi	Flow	GPM	U/G Pipe
1												
2												
3												

CONTRACT NAME:
3001 Telegraph Ave.
Berkeley, Ca

1 OF 7

SCALE: AS NOTED
DRAWN BY: Gerald W. Ebeling, SET
CHECKED BY:
CONTRACT NO:
DATE: **01/06/12**
DRAWING NO: FP1
STANDPIPE / PUMP PLAN