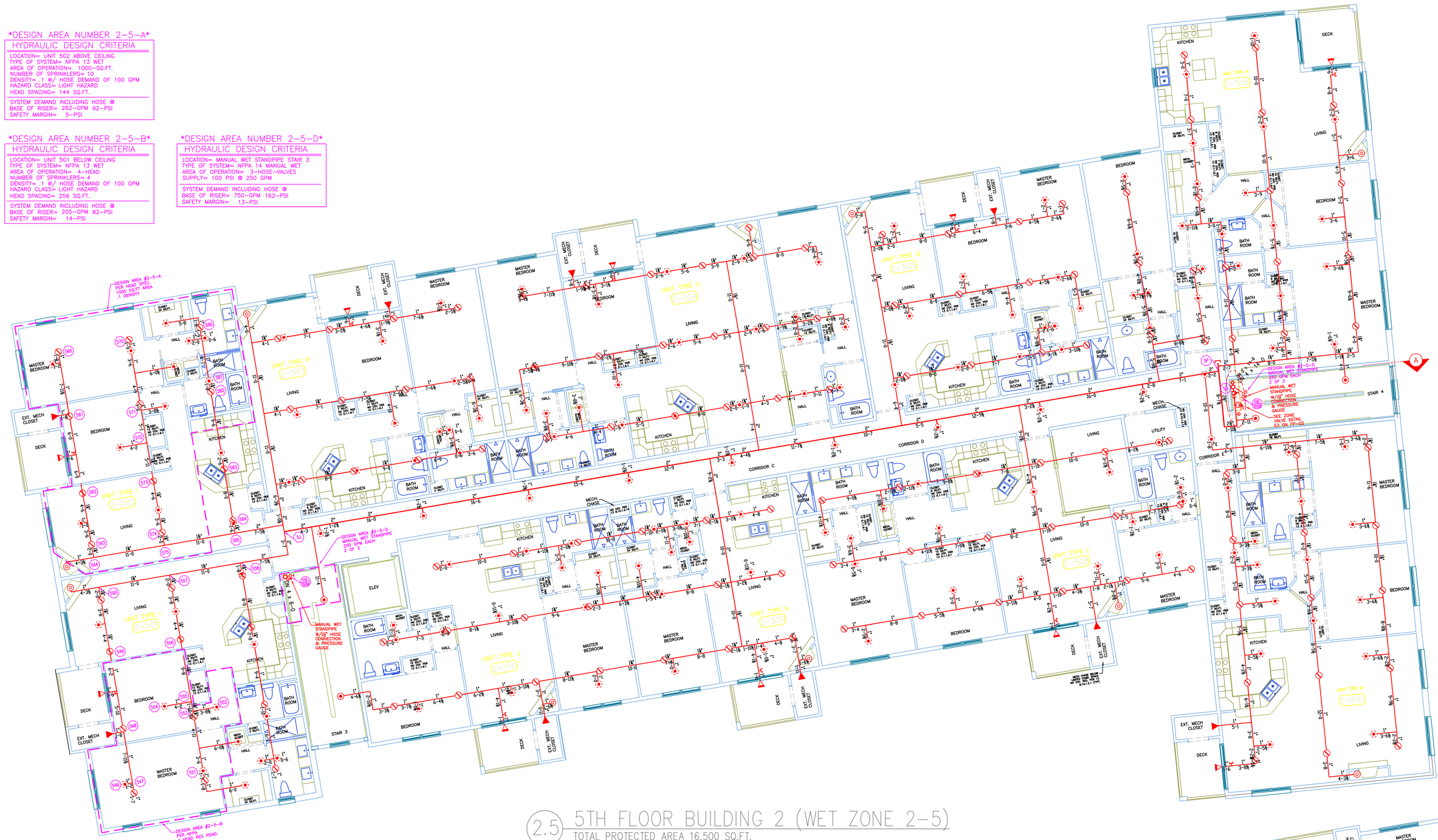
DESIGN AREA NUMBER 2-5-A
HYDRAULIC DESIGN CRITERIA
LOCATION= UNIT 502 ABOVE CEILING
TYPE OF SYSTEM= NFPA 13 WET
AREA OF OPERATION= 1000-SQ.FT.
NUMBER OF SPRINKLERS= 10
DENSITY= .1 W/ HOSE DEMAND OF 100 GPM
HAZARD CLASS= LIGHT HAZARD
HEAD SPACING= 144 SQ.FT.
SYSTEM DEMAND INCLUDING HOSE @
BASE OF RISER= 282-GPM 92-PSI
SAFETY MARGIN= 5-PSI

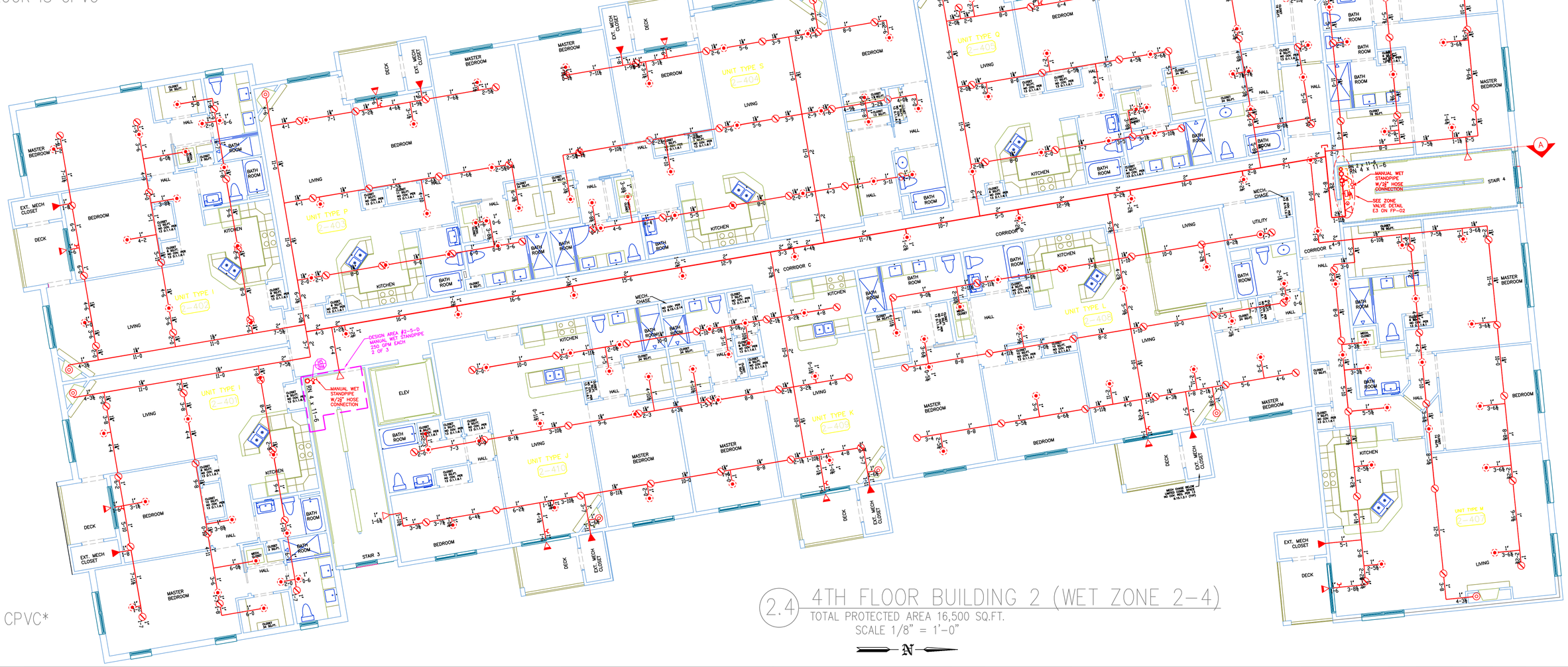
DESIGN AREA NUMBER 2-5-B
HYDRAULIC DESIGN CRITERIA
LOCATION= UNIT 501 BELOW CEILING
TYPE OF SYSTEM= NFPA 13 WET
AREA OF OPERATION= 4-HEAD
NUMBER OF SPRINKLERS= 4
DENSITY= .1 W/ HOSE DEMAND OF 100 GPM
HAZARD CLASS= LIGHT HAZARD
HEAD SPACING= 256 SQ.FT.
SYSTEM DEMAND INCLUDING HOSE @
BASE OF RISER= 205-GPM 82-PSI
SAFETY MARGIN= 14-PSI

DESIGN AREA NUMBER 2-5-D
HYDRAULIC DESIGN CRITERIA
LOCATION= MANUAL WET STANDPIPE STAIR 3
TYPE OF SYSTEM= NFPA 14 MANUAL WET
AREA OF OPERATION= 3-HOSE-VALVES
SUPPLY= 100 PSI @ 250 GPM
SYSTEM DEMAND INCLUDING HOSE @
BASE OF RISER= 750-GPM 162-PSI
SAFETY MARGIN= 13-PSI



2.5 5TH FLOOR BUILDING 2 (WET ZONE 2-5)
TOTAL PROTECTED AREA 16,500 SQ.FT.
SCALE 1/8" = 1'-0"

ALL PIPING 2" AND SMALLER ON THIS FLOOR IS CPVC



2.4 4TH FLOOR BUILDING 2 (WET ZONE 2-4)
TOTAL PROTECTED AREA 16,500 SQ.FT.
SCALE 1/8" = 1'-0"

ALL PIPING 2" AND SMALLER ON THIS FLOOR IS CPVC

NOTES FOR NFPA 13 2010ed. SYSTEM

SPRINKLERS SHALL BE INSTALLED IN ALL AREAS.

(13) 3.3.17 SMALL ROOMS
A ROOM OF LIGHT HAZARD OCCUPANCY CLASSIFICATION HAVING UNOBSTRUCTED CONSTRUCTION AND FLOOR AREAS NOT EXCEEDING 800 SQ FT THAT ARE ENCLOSED BY WALLS AND A CEILING ARE PERMITTED TO HAVE A HEAD SPACED 9' OFF ONE WALL

(13) 8.2.1 SYSTEM PROTECTION AREA
THE MAXIMUM FLOOR AREA ON ANY ONE FLOOR TO BE PROTECTED BY SPRINKLERS SUPPLIED BY ANY ONE SPRINKLER SYSTEM SHALL NOT EXCEED 52,000 SQ FT, FOR A LIGHT HAZARD OR ORDINARY HAZARD AREA.

(13) 8.15.10.3 ELECTRICAL EQUIPMENT ROOM OMISSION
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 COMB. STORAGE IS PERMITTED TO BE STORED IN THE ROOM.

(13) 8.15.5 ELEVATOR HOIST WAYS
SIDEWALL SPRAY SPRINKLERS SHALL BE INSTALLED AT THE BOTTOM OF EACH ELEVATOR HOIST WAY NOT MORE THAN 18" ABOVE THE FLOOR PIT.

(13) 8.15.1.2.1.1 SPRINKLERS SHALL NOT BE REQUIRED IN A CONCEALED SPACE EVEN WITH A SMALL OPENING SUCH AS THOSE USED AS RETURN AIR FOR A PLENUM.

(13) 8.15.1.2.14 SPRINKLERS SHALL NOT BE REQUIRED IN VERTICL PIPE CHASES UNDER 10 SQ.FT., WHERE PROVIDED IN MULTIFLOOR BUILDINGS WHERE THE CHASES ARE FIRESTOPPED AT EACH FLOOR USING MATERIALS EQUIVALENT TO THE FLOOR CONSTRUCTION, AND WHERE SUCH PIPE CHASES SHALL CONTAIN NO SOURCES OF IGNITION. PIPING SHALL BE WATER FILLED OR NONCOMBUSTIBLE AND PIPE PENETRATIONS AT EACH FLOOR SHALL BE PROPERLY SEALED.

(13) D.1.1.6.1 SPRINKLERS SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS WHEN THE AREA OF THE SPACE DOES NOT EXCEED 12 FT SQ.

CPVC CURING TIMES

FOR TFP-400, TFP-500
VICTAULIC #899 & SPEARS FS-5

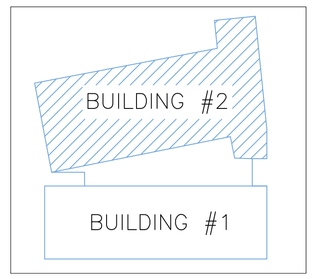
CURE TIMES WITH ONE STEP SOLVENT CEMENT
200 PSI (MAXIMUM) TEST PRESSURE

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 32°F, HOWEVER, THE SPRINKLER SYSTEM TEMPERATURE MUST BE RAISED TO A TEMPERATURE OF 32°F OR ABOVE AND ALLOWED TO CURE PER THE ABOVE RECOMMENDATIONS PRIOR TO PRESSURE TESTING.

CPVC HANGING NOTES

CPVC MAXIMUM SUPPORT SPACING (FT.)							
	NOMINAL PIPE SIZE						
PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
HANGER SPACING	5-1/2'	6'	6-1/2'	7'	8'	9'	10'



2.6 KEY PLAN
SCALE: N.T.S.

VICTAULIC*
MODEL V2704
20 /200°
K=5.6
1/2" BRASS UPRIGHT ON SPRIG OR LINE
DEFLECTORS 1" TO 6" BELOW COMBUSTIBLE MEMBERS

GLOBE*
MODEL GL5610
326 /155°
K=5.6
1/2" WHITE RESIDENTIAL PENDENT SEMI- RECESSED ESC. SPACING 16' X 16'

GLOBE*
MODEL GL5601
6 /155°
K=5.6
1/2" WHITE COMERCIAL PENDENT SEMI- RECESSED ESC. (UTILITY ROOM AND STAIRS)

VIKING*
MODEL VK900
280 /175°
K=4.2
1/2" BRASS CONCEALED SPACE UPRIGHT

GLOBE*
MODEL GL5626
24 /200°
K=5.6
1/2" CHROME HORIZONTAL SIDEWALL SEMI RECESSED
DEFLECTOR 4" TO 6" BELOW CEILING WITH HEAD CAGE

GLOBE*
MODEL GL5641
20 /200°
K=5.6
1/2" WHITE DRY HORIZONTAL SIDEWALL 4" TO 6" BELOW CEILING

GLOBE*
MODEL GL5626
4 /155°
K=5.6
1/2" WHITE HORIZONTAL SIDEWALL SEMI RECESSED
DEFLECTOR 4" TO 6" BELOW CEILING

OR APPROVED EQUAL

TOTAL HEADS ON THIS SHEET: 680

SCALE: 2 1 0 4 8 1/8"=1'-0"

REVISIONS:
NO. DATE: DESCRIPTION:

DATE: MARCH 1, 2013
DESIGNER: ED POULIN (RMS# 515)
NICET LEVEL: IV CERT # 108534
CHECKED BY: T. FORTIN / J. FOSS

LOCATION:
40 MIDDLE STREET
PORTLAND, ME

DRAWING TITLE:
THE BAY HOUSE
BLDG.2 4TH & 5TH FL.
(WET ZONE 2-4 & 2-5)
FIRE PROTECTION PLAN
(NFPA 13 2010ed.)

DRAWING NO.:
FP-06

HIGH TECH FIRE PROTECTION
P.O. BOX 156
MINOT, ME. 04258-0258
TEL:(207) 998-2551 FAX:(207) 998-4187
MAINE LICENSE # 102

GENERAL CONTRACTOR ON RECORD:
METRIC CORPORATION 55 HENSHAW STREET BOSTON, MA 02135

SPECIAL APPLICATIONS:
DRY SYSTEM IN ACCORDANCE WITH STATE OF MAINE DRY PIPE POLICY
1/2" PITCH PER 10' ON MAINS AND SPRINKLER LINES.

LEGEND:
- RM/DN PIPE RISER UP OR DOWN
- AUXILIARY DRAIN
- PROPOSED WET PIPE
- PROPOSED DRY PIPE
- PROPOSED DRAIN PIPE
- SYSTEM RISER
- HYDRAULIC CALC. POINT

DESIGN & SYSTEM NOTES:

ALL PIPING 1 1/2" & LARGER TO BE SCHEDULE 10 WITH GROOVED DUCTILE IRON FITTING U.N.O.

ALL PIPING 1 1/4" & SMALLER TO BE SCHEDULE 40 WITH APPROPRIATE FITTING U.N.O.

POSITION, LOCATION, SPACING, AND USE OF SPRINKLERS SHALL BE IN ACCORDANCE WITH NFPA 13.

POSITION, LOCATION, SPACING, AND USE OF HANGERS SHALL BE IN ACCORDANCE WITH NFPA 13.

HYDRAULIC CALCULATION PROCEDURES HAVE BEEN DONE IN ACCORDANCE WITH NFPA 13. (SEE PLANS FOR LOCATION OF REMOTE AREAS, HYDRAULIC REFERENCE POINTS, AND SYSTEM DEMANDS.)

HIGH TECH FIRE PROTECTION IS TO BEGIN WORK AT 6" UNDERGROUND INSIDE OF BUILDING.

DIMENSIONS AND LOCATIONS GIVEN FOR SPRINKLER HEADS AND PIPE MAY VARY TO ACCOMMODATE ACTUAL FIELD CONDITIONS.

OWNER TO PROVIDE ADEQUATE HEAT THROUGHOUT BUILDING TO PROTECT WATER FILLED PIPING AND EQUIPMENT FROM FREEZING TEMPERATURES.

ONLY TRI-SEAL TYPE COUPLINGS TO BE INSTALLED ON DRY AND OR PRE-ACTION SYSTEMS.

OWNER IS RESPONSIBLE TO MAINTAIN THE SPRINKLER SYSTEM IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 25, "INSPECTION, TESTING, & MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS" AND/OR ALL APPLICABLE FEDERAL, STATE, AND/OR LOCAL LAWS, CODES AND ORDINANCES.

ALL MECHANICAL, ELECTRICAL AND PLUMBING TRADES TO COORDINATE THEIR WORK WITH SPRINKLER CONTRACTOR.

ALL ELECTRIC WORK IS TO BE DONE BY OTHERS.

HEAD LEGEND:

GLOBE*
MODEL GL5610
326 /155°
K=5.6
1/2" WHITE RESIDENTIAL PENDENT SEMI- RECESSED ESC. SPACING 16' X 16'

GLOBE*
MODEL GL5601
6 /155°
K=5.6
1/2" WHITE COMERCIAL PENDENT SEMI- RECESSED ESC. (UTILITY ROOM AND STAIRS)

VIKING*
MODEL VK900
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GLOBE*
MODEL GL5626
4 /155°
K=5.6
1/2" WHITE HORIZONTAL SIDEWALL SEMI RECESSED
DEFLECTOR 4" TO 6" BELOW CEILING

OR APPROVED EQUAL

EDWARD M. POULIN
MAINE RMS #515
FIRE PROTECTION ENGINEERING TECHNOLOGY