

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND BUILDING PERMIT

This is to certify that
FREEDOM FIRE PROTECTION
209 QUAKER RIDGE RD
CASCO, ME 04015

For installation at
105 NEW ISLAND AVE
NEW SINGLE-FAMILY HOME

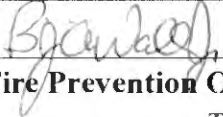
Job ID: 2011-08-2032-SF

CBL: 084-D-001-001

has permission to install NFPA 13D sprinkler system
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be



Fire Prevention Officer

(58)

Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD



PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Director of Planning and Urban Development
Penny St. Louis

Job ID: 2011-08-2032-SF
install NFPA 13D sprinkler system

For installation at:
105 NEW ISLAND AVE
NEW SINGLE-FAMILY HOME

CBL: 084- D-001-001

Conditions of Approval:

Fire

The sprinkler system shall be installed in accordance with NFPA 13D. A compliance letter is required. All control valves shall be supervised in accordance with NFPA 13D. Pad locks shall only be installed on valves designed to be secured in the open position by pad lock.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No: 2011-08-2032-SF 2012-40474-FSS	Date Applied: 2/1/2012	CBL: 084- D-001-001	
Location of Construction: 105 NEW ISLAND AVE. Peaks Island	Owner Name: STEVEN MERRILL RAPP	Owner Address: 49 ORCHARD PLACE # B GREENWICH, CT 06830	Phone:
Business Name:	Contractor Name: Freedom Fire Protection	Contractor Address: 209 Quaker Ridge Rd., Casco, ME 04015	Phone: (207) -627-4109
Lessee/Buyer's Name:	Phone:	Permit Type: FSS- FIRE SUPPRESSION	Zone: IR-2
Past Use: Single family	Proposed Use: Same - Single family – install water based fire suppression system – connected to permit #2011-08-2032	Cost of Work:	CEO District:
		Fire Dept: <input checked="" type="checkbox"/> Approved w/conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A Signature: <i>[Signature]</i> (58)	Inspection: Use Group: Type: Signature:
Proposed Project Description: Install water based fire suppression system		Pedestrian Activities District (P.A.D.)	

Permit Taken By: 1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. 2. Building Permits do not include plumbing, septic or electrical work. 3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.	Zoning Approval		
	Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan ___ Maj ___ Min ___ MM Date: <i>OK 2/1/12 ABM</i>	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	Historic Preservation <input checked="" type="checkbox"/> Not in Dist or Landmark <input type="checkbox"/> Does not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>ABM</i>

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

IR-2

main permit - 2011-08-2032
child - 202-40474



Water-Based Fire Suppression System Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

Installation address: 105 New Island Avenue, Peaks Island CBL: 84-D-001

Exact location: (within structure) Basement, First, Second & Attic Levels

Type of occupancy(s) (NFPA & ICC): Residential

Building owner: Steve & kelin Rapp

Managing Supervisor (RMS): Tim Vess License No: 348

Supervisor phone: 207/627-4109 E-mail: wwales@maine.rr.com

Installing contractor: Freedom Fire Protection License No: 295

Contractor phone: 207/627-4109 E-mail: wwales@maine.rr.com

The suppression work to be done will be: New: Renovation: Addition to existing system:

This is an amendment to an existing permit: Yes: NO: Permit no: _____

NFPA Standard this system is designed to: NFPA 13D Edition: 2010

*Non-NFPA systems are not approved for use within the City of Portland.

Download a new copy of this document from www.portlandmaine.gov/fire for every submittal. Attach all working documents and complete approved submittals as may be required by the State Fire Marshal's Office on electronic PDF's in addition to full sized plans.

Contractor shall verify location and type of all FDCs shall be approved in writing by the Fire Prevention Bureau.

<p>COST OF WORK: <u>1250.00</u></p> <p>PERMIT FEE: <u>330.00</u></p> <p>(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)</p>

Submit all information to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

Prior to acceptance of any fire protection system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with NFPA and the Fire Department Technical Standard(s).

Applicant signature: William Wales Date: January 31, 2012

Wales

Digitally signed by William Wales
DN: cn=William Wales,
o=Freedom Fire Protection, Inc.,
ou, email=wwales@maine.rr.com,
c=US
Date: 2012.01.31 07:38:47 -05'00'

RECEIVED
FEB 01 2012
City of Portland Building Inspections

Freedom Fire Protection, Inc.

Over 30 Years of Fire Protection Experience
209 Quaker Ridge Rd. Casco, Maine 04015
Phone 207/627-4109 Fax 207/627-7340

January 31, 2012

Portland City Hall
Third Floor Room 315
Portland, Maine 04101

Attn: Lt. Benjamin Wallace Jr.

Ref: Rapp Cottage Residence
105 New Island Avenue
Peaks Island, Maine

Subj: Fire Sprinkler Permit Review

Lt. Wallace,

Enclosed please find for your review and comment the following sprinkler information.

- Fire Suppression System Permit
- Permit Fee Check
- Full Size FFP Drawings FP-1 & FP-2
- 1 set of 8-1/2 x 11 PDF sprinkler plans.
- Hydraulic Calculations Area # 1
- CD-R disc with Drawing, Calculation Files

Regards,

William W. Wales

RECEIVED
FEB 01 2012
Dept. of Building Inspections
City of Portland, Maine



... Fire Protection by Computer Design

FREEDOM FIRE PROTECTION INC.
209 QUAKER RIDGE ROAD
CASCO, MAINE 04015
207-627-4109

Job Name : RAPP COTTAGE HC
Building : 105 NEW ISLAND AVENUE
Location : PEAKS ISLAND, MAINE 04108
System : #1 AREA #1
Contract :
Data File : Rapp Cottage HC1.WXF

HYDRAULIC DESIGN INFORMATION SHEET

Name - RAPP COTTAGE Date - 1/23/12
Location - PEAKS ISLAND, MAINE 04108
Building - 105 NEW ISLAND AVENUE System No. - #1 AREA #1
Contractor - FREEDOM FIRE PROTECTION Contract No. -
Calculated By - MICHAEL NOBLIT Drawing No. - FP-2
Construction: (X) Combustible () Non-Combustible Ceiling Height 7'-3"
OCCUPANCY - HOUSE

S Type of Calculation: (X)NFPA 13 Residential ()NFPA 13R (X)NFPA 13D
Y Number of Sprinklers Flowing: ()1 (X)2 ()4 ()
S ()Other
T ()Specific Ruling Made by Date
E
M Listed Flow at Start Point - 14 Gpm System Type
Listed Pres. at Start Point - 10.1 Psi (X) Wet () Dry
D MAXIMUM LISTED SPACING 14 x 14 () Deluge () PreAction
E Domestic Flow Added - 0 Gpm Sprinkler or Nozzle
S Additional Flow Added - 0 Gpm Make TYCO Model LFII
I Elevation at Highest Outlet - 34'-0"Feet Size 1/2" K-Factor 4.4
G Note: Temperature Rating 155
N

Calculation Gpm Required 28.288 Psi Required 94.590 At Test
Summary C-Factor Used: Overhead 150 Underground 150

W Water Flow Test: Pump Data: Tank or Reservoir:
A Date of Test - 8/19/2004 Rated Cap. Cap.
T Time of Test - @ Psi Elev.
E Static (Psi) - 98 Elev.
R Residual (Psi) - 26 Other Well
Flow (Gpm) - 787 Proof Flow Gpm
S Elevation -

P Location:
P
L Source of Information: PORTLAND WATER DISTRICT
Y

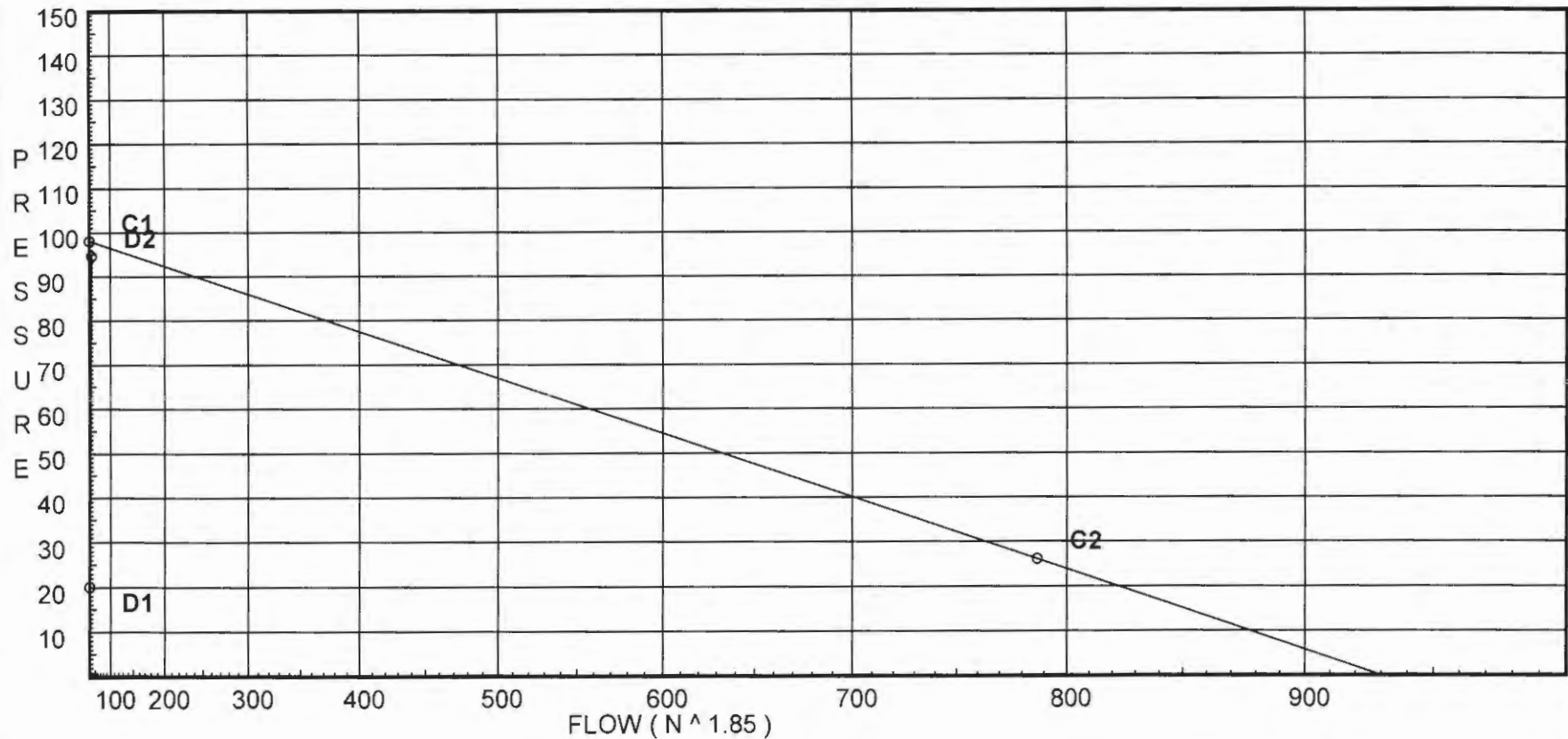
Water Supply Curve (C)

FREEDOM FIRE PROTECTION INC.
RAPP COTTAGE HC

Page 2
Date 1/23/12

City Water Supply:
C1 - Static Pressure : 98
C2 - Residual Pressure: 26
C2 - Residual Flow : 787

Demand:
D1 - Elevation : 19.923
D2 - System Flow : 28.2884
D2 - System Pressure : 94.590
Hose (Adj City) : _____
Hose (Demand) : _____
D3 - System Demand : 28.2884
Safety Margin : 3.257



Fittings Used Summary

FREEDOM FIRE PROTECTION INC.
RAPP COTTAGE HC

Page 3
Date 1/23/12

Fitting Legend		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24	
Abbrev.	Name																					
E	90° Standard Elbow	2	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61	
T	90° Flow Thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121	
Zaa	Ames 2000B	Fitting generates a Fixed Loss Based on Flow																				

Pressure / Flow Summary - STANDARD

FREEDOM FIRE PROTECTION INC.
RAPP COTTAGE HC

Page 4
Date 1/23/12

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
102	34.0	4.4	10.1	na	13.98	0.05	0.001	10.1
101	34.0	4.4	10.57	na	14.31	0.05	0.001	10.1
11	25.583		16.79	na				
10	25.583		17.76	na				
9	17.83		23.36	na				
8	17.83		25.02	na				
7	17.83		26.94	na				
6	17.83		28.93	na				
5	8.53		34.65	na				
4	8.53		36.89	na				
3	8.53		40.88	na				
2	8.53		41.99	na				
1	0.0		50.93	na				
0	0.0		89.39	na				
TEST	-12.0		94.59	na				

The maximum velocity is 23.25 and it occurs in the pipe between nodes 1 and 0

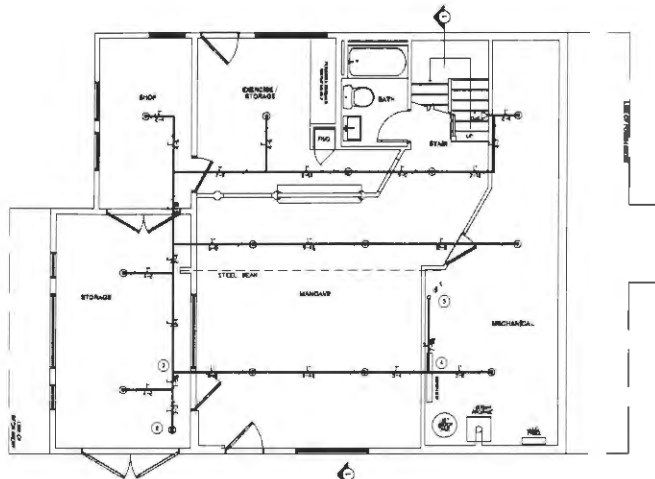
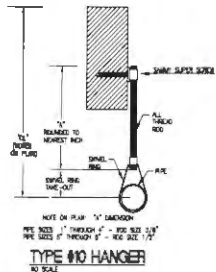
Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftg's Total	Pt Pe Pf	Pt Pv Pn	***** Notes *****
102 to 101	13.98	1.049 120	3E 6.0 0.0	1.000 6.000	10.100 0.0		K Factor = 4.40 Vel = 5.19
101 to 11	14.31	1.049 120	1E 2.0 0.0	8.416 2.000	10.570 3.645		K Factor = 4.40 Vel = 10.50
11 to 10	28.29	0.2472	0.0	10.416	2.575		Vel = 9.53
10 to 9	0.0	1.101 150	1E 3.825 0.0	3.708 3.825	16.790 0.0		Vel = 9.53
9 to 8	28.29	0.1292	0.0	7.533	0.973		Vel = 9.53
8 to 7	0.0	1.101 150	1T 9.563 0.0	7.750 9.562	17.763 3.358		Vel = 9.53
7 to 6	28.29	0.1292	0.0	17.312	2.237		Vel = 9.53
6 to 5	0.0	1.101 150	1T 9.563 0.0	3.330 9.562	23.358 0.0		Vel = 9.53
5 to 4	28.29	0.1292	0.0	12.892	1.666		Vel = 9.53
4 to 3	0.0	1.101 150	1T 9.563 0.0	5.250 9.562	25.024 0.0		Vel = 9.53
3 to 2	28.29	0.1292	0.0	14.812	1.914		Vel = 9.53
2 to 1	0.0	1.101 150	1T 9.563 0.0	5.875 9.562	26.938 0.0		Vel = 9.53
1 to 0	28.29	0.1292	0.0	15.437	1.995		Vel = 9.53
0 to TEST	0.0	1.101 150	1E 3.825 0.0	9.250 3.825	28.933 4.028		Vel = 9.53
TEST	28.29	0.1292	0.0	13.075	1.689		Vel = 9.53
1 to 0	0.0	1.101 150	1T 9.563 0.0	7.750 9.562	34.650 0.0		Vel = 9.53
0 to TEST	28.29	0.1292	0.0	17.312	2.237		Vel = 9.53
3 to 2	0.0	1.101 150	1T 9.563 0.0	21.375 9.562	36.887 0.0		Vel = 9.53
2 to 1	28.29	0.1292	0.0	30.937	3.998		Vel = 9.53
1 to 0	0.0	1.101 150	1E 3.825 0.0	4.750 3.825	40.885 0.0		Vel = 9.53
0 to TEST	28.29	0.1292	0.0	8.575	1.108		Vel = 9.53
2 to 1	0.0	1.049 150	1Zaa 0.0 0.0	7.583 0.0	41.993 7.694		* Fixed loss = 4 Vel = 10.50
1 to 0	28.29	0.1637	0.0	7.583	1.241		Vel = 10.50
0 to TEST	0.0	0.705 150	1T 2.828 1E 1.414	20.000 4.242	50.928 11.000		* Fixed loss = 11 Vel = 23.25
TEST	28.29	1.1328	0.0	24.242	27.462		Vel = 23.25
0 to TEST	0.0	8.27 140	0.0	325.000 0.0	89.390 5.197		Vel = 0.17
TEST	28.29	0.0	0.0	325.000	0.003		Vel = 0.17

Final Calculations - Standard

FREEDOM FIRE PROTECTION INC.
RAPP COTTAGE HC

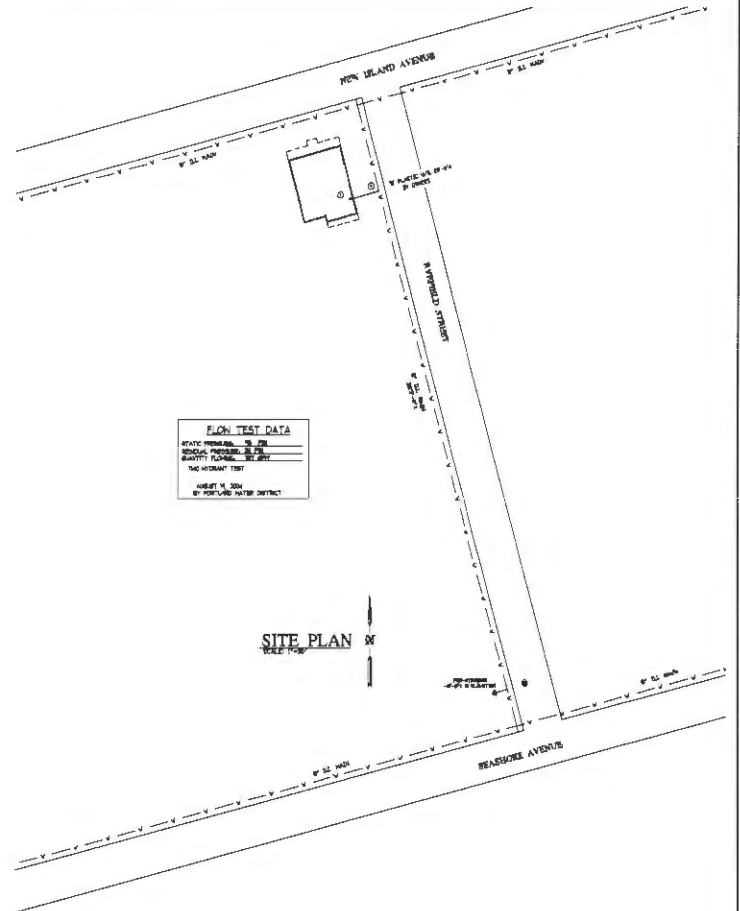
Page 6
Date 1/23/12

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
	0.0 28.29				94.590			K Factor = 2.91	



BASEMENT FIRE PROTECTION

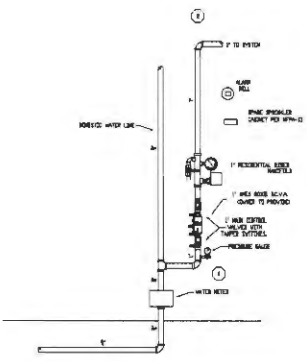
1/2" = 1'-0" QUANTITY @ 0.13
SCALE DIFF. = 1



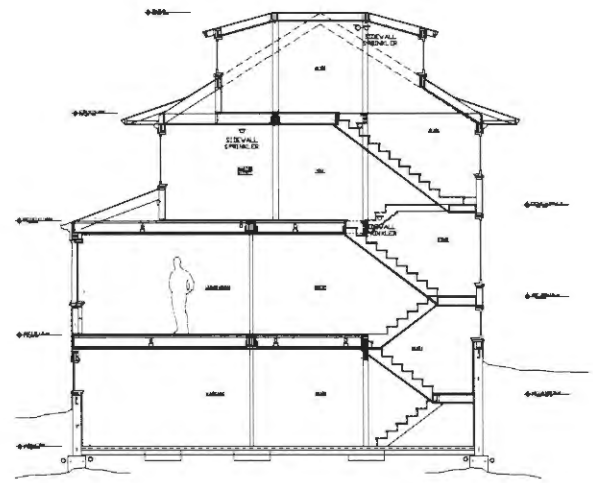
FLOW TEST DATA

STATIC HEAD, IN. PSI	
MINIMUM PRESSURE, IN. PSI	
QUANTITY FLOWING, GPM	
TEST	
DATE	
BY	

SITE PLAN



FIRE SPRINKLER RISER DETAIL



SECTION VIEW

GENERAL NOTES

- 1) SYSTEM TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA-13. SPRINKLER HEADS TO BE CONSIDERED AS BLACK STEEL, 5/8\"/>
- 2) SPACING OF RESIDENTIAL PENDANT SPINKERS TO BE 14' MAX. ALL SPINKERS TO BE 14' MAX. SPINKER SPACING OF EACH TYPE SHALL BE PROVIDED PER NFPA 13.
- 3) SPINKERS MAY BE OMITTED FROM THE FOLLOWING:
 - a) BATHROOMS WHERE THE AREA DOES NOT EXCEED 50 SQ. FT. AND THE WALLS ARE CEILING, INCLUDING BORDO FEATURES, ARE OF NON-COMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS PROVIDING A 15 MINUTE THERMAL BARRIER.
 - b) CLOSET, CLOSET, LINEN CLOSET, AND PANTRIES WITHIN THE DWELLING UNITS WHERE THE AREA OF THE SPACE DOES NOT EXCEED 64 SQ. FT. AND THE CEILING IS NOT EXCEED 3 FT. AND THE WALLS AND CEILING ARE FINISHED WITH NON-COMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS AS DETAIL PER NFPA.
 - c) ANY PORCHES, BALCONIES, TERRACES, AND STAIRS THAT ARE OPEN AND ATTACHED.
 - d) ATTIC, PORCHES, EQUIPMENT ROOMS, CRANK SPACES, FLOOR/CILING SPACES, ELEVATOR SHAFTS, AND OTHER CONCEALED SPACES THAT ARE NOT USED OR INTENDED FOR LIVABLE PURPOSES OR STORAGE.
- 4) MAINTENANCE OF THE SPINKER SYSTEM IS THE RESPONSIBILITY OF THE OWNER. PROTECTION OF THE SPINKER SYSTEM AGAINST FREEZING IS THE RESPONSIBILITY OF THE OWNER.

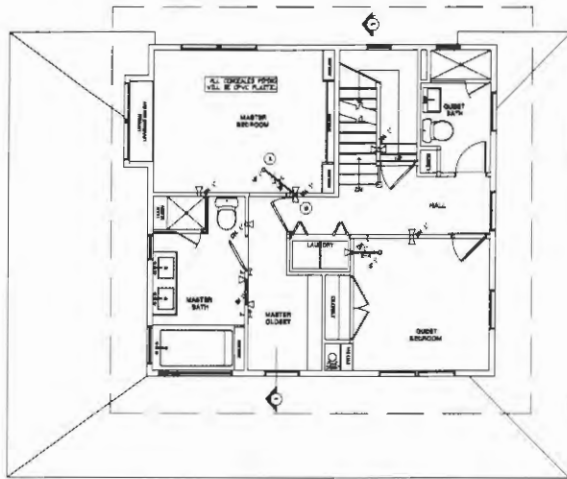
REVISIONS	NOTES	SPINKER TYPE	IDENTIFICATION NO.	SPR	ORIG.	MODEL	FINISH	OFFICE	TEMP.	SYMBOL	QUANT.	STANDARD SYMBOLS	STANDARD SYMBOLS	INSPECTIONS	JOB NO.	DATE	DRAWN BY	SCALE	SHEET NO.	
		ESD	ESD	ESD	ESD	ESD	ESD	ESD	ESD	ESD	ESD	ESD	ESD	ESD	FP-1012	7/24/12	ALM	AS NOTED	FP-1012	

RAPP COTTAGE
105 NEW ISLAND AVENUE
PEAKS ISLAND, MAINE 04108

FIRE PROTECTION PLAN

FREEDOM FIRE PROTECTION, INC.
209 QUAKER RIDGE ROAD
CASCO, MAINE 04015

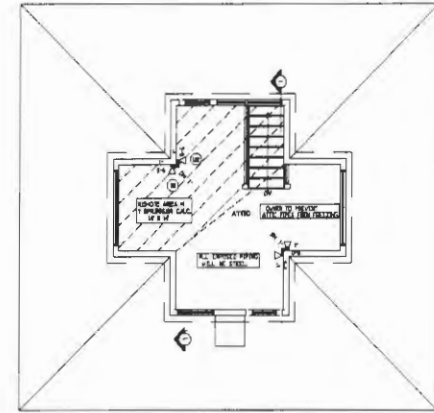
JOB NO. 1012
DATE 7/24/12
DRAWN BY ALM
SCALE AS NOTED
SHEET NO. FP-1012



SECOND FLOOR FIRE PROTECTION

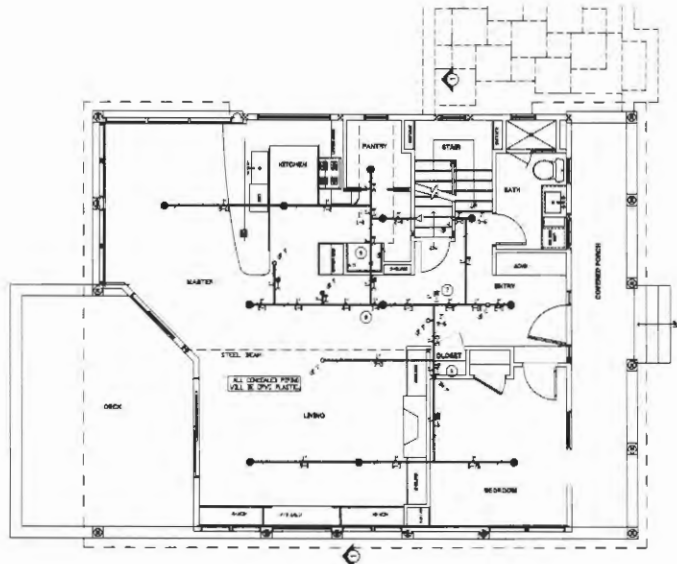
SCALE: 1/8" = 1'-0" QUANTITY: 1-11
 QUANTITY: 1-11
 SCALE: 1/8" = 1'-0"

HYDRAULIC DESIGN	
WATER	100 GPM
MAXIMUM PRESSURE	175 PSI
MINIMUM PRESSURE	100 PSI
MAXIMUM FLOW	100 GPM
MINIMUM FLOW	10 GPM
MAXIMUM HEIGHT	100 FT
MINIMUM HEIGHT	10 FT
MAXIMUM DISTANCE	100 FT
MINIMUM DISTANCE	10 FT



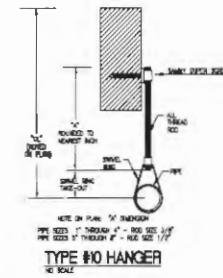
ATTIC FIRE PROTECTION

SCALE: 1/8" = 1'-0" QUANTITY: 1-11
 QUANTITY: 1-11
 SCALE: 1/8" = 1'-0"



GROUND FLOOR FIRE PROTECTION

SCALE: 1/8" = 1'-0" QUANTITY: 1-11
 QUANTITY: 1-11
 SCALE: 1/8" = 1'-0"



TYPE NO HANGER
 1/8" SCALE

REVISIONS	NOTES	SPRINKLER TYPE	IDENTIFICATION NO.	MFR.	DESC.	MODEL	FRASH.	DEVICE	TEMP.	SYMBOL	QUANT.
		RED RESP. POINT	1-11	TYSON	TYPE	ORSHAD	LIFE	VENTE	LVP	107	11
		BLACK RESP. POINT	1-11	TYSON	TYPE	R. PIERCE	LIFE	VENTE	LVP	107	11
		TOTAL SPRINKLERS THIS DRAWING									

STANDARD SYMBOLS	STANDARD SYMBOLS
- ROOF HOODER VALVE	ALARM BELL VALVE
- KEE VALVE	- ROOM R/W/DR. VALVE
- FIRE HOSEBOX	- ROOM W/DR. VALVE
- FIRE SOFT CONNECTION	- ROOM R/W/DR. FLOW SWITCH
- 0.5 & 1" SOFT VALVE	- ROOM R/W/COLL. VALVE
- SWING CHECK VALVE	- WATER MOTOR BELL
- NON UNDERGROUND	- ELECTRIC BELL
- - - - - - - - - - -	- FLUSH FIRE SOFT CONNECTION

INSPECTIONS
1.
2.
3.
4.

RAPP COTTAGE 105 NEW ISLAND AVENUE PEAKS ISLAND, MAINE 04108 FIRE PROTECTION PLAN	JOB NO. 4108 DATE 1/24/72 DRAWN BY JAN SCALE 1/8" = 1'-0" SHEET NO.
FREEDOM FIRE PROTECTION, INC. 209 QUAKER RIDGE ROAD CASCO, MAINE 04015	RESPONSIBLE MANAGER SUPERVISOR AND CONTRACTOR LICENSE #18 FP-2 of 2