

# DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

## BUILDING DEPARTMENT

### PERMIT

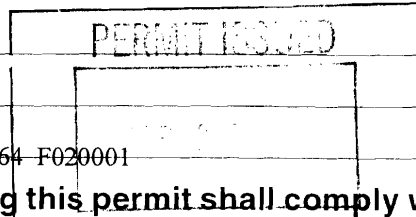
Permit Number: 090283

Please Read  
Application And  
Notes, If Any,  
Attached

This is to certify that AVESTA FLORENCE HOUSE / East Inspection Co Inc

has permission to Install a Type 13, wet design sprinkler system

AT 190 VALLEY ST City of Portland 064 F020001



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 buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and written permission procured before this building or part thereof is lath or other used-in. 2 HOUR NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

#### OTHER REQUIRED APPROVALS

Fire Dept. [Signature]  
Health Dept. [Signature]  
Appeal Board \_\_\_\_\_  
Other \_\_\_\_\_  
Department Name

[Signature] 7/22/09  
Director - Building & Inspection Services

**PENALTY FOR REMOVING THIS CARD**

**City of Portland, Maine - Building or Use Permit Application**

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

Permit No: 09-0283	Issue Date: 4/27/09	CBL: 064 F020001
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Location of Construction: 190 VALLEY ST	Owner Name: AVESTA FLORENCE HOUSE LP	Owner Address: 307 CUMBERLAND AVE	Phone:
Business Name:	Contractor Name: Eastern Fire Protection Co., Inc.	Contractor Address: 170 Kittyhawk Ave., PO Box Auburn	Phone 2077841507
Lessee/Buyer's Name	Phone:	Permit Type: Sprinkler Systems	Zone:

Past Use: Multi-Use-/Multi-Family Connected w/ permit# 081569	Proposed Use: Multi-Use-/Multi-Family - Install a Type 13, wet design sprinkler system	Permit Fee: \$430.00	Cost of Work: \$41,000.00	CEO District: 2
		FIRE DEPT: 4/27/09 w/ conditions <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: RFR-2 Type: VA IBC-2003 NFA-13	

**Proposed Project Description:**  
Install a Type 13, wet design sprinkler system

Signature: *[Signature]* (2009)  
Signature: *[Signature]*

**PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)**

Action:  Approved  Approved w/Conditions  Denied

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Permit Taken By: Ldobson  
Date Applied For: 04/07/2009

**Zoning Approval**

- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

**Special Zone or Reviews**

Shoreland  
 Wetland  
 Flood Zone  
 Subdivision  
 Site Plan *O.K.*

Maj  Minor  MM

Date: 4/27/09 *[Signature]*

**Zoning Appeal**

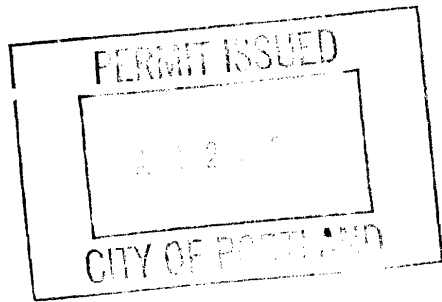
Variance  
 Miscellaneous  
 Conditional Use  
 Interpretation  
 Approved  
 Denied

Date: \_\_\_\_\_

**Historic Preservation**

Not in District or Landmark  
 Does Not Require Review  
 Requires Review  
 Approved  
 Approved w/Conditions  
 Denied

Date: *[Signature]*



**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 application 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

**City of Portland, Maine - Building or Use Permit**

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

<b>Permit No:</b> 09-0283	<b>Date Applied For:</b> 04/07/2009	<b>CBL:</b> 064 F020001
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<b>Location of Construction:</b> 190 VALLEY ST	<b>Owner Name:</b> AVESTA FLORENCE HOUSE LP	<b>Owner Address:</b> 307 CUMBERLAND AVE	<b>Phone:</b>
<b>Business Name:</b>	<b>Contractor Name:</b> Eastern Fire Protection Co., Inc.	<b>Contractor Address:</b> 170 Kittyhawk Ave., PO Box Auburn	<b>Phone</b> (207) 784-1507
<b>Lessee/Buyer's Name</b>	<b>Phone:</b>	<b>Permit Type:</b> Sprinkler Systems	

<b>Proposed Use:</b> Multi-Use-/Multi-Family - Install a Type 13, wet design sprinkler system	<b>Proposed Project Description:</b> Install a Type 13, wet design sprinkler system
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<b>Dept:</b> Zoning	<b>Status:</b> Approved	<b>Reviewer:</b> Chris Hanson	<b>Approval Date:</b> 04/27/2009
<b>Note:</b>	<b>Ok to Issue:</b> <input checked="" type="checkbox"/>		
<b>Dept:</b> Building	<b>Status:</b> Approved with Conditions	<b>Reviewer:</b> Chris Hanson	<b>Approval Date:</b> 04/27/2009
<b>Note:</b>	<b>Ok to Issue:</b> <input checked="" type="checkbox"/>		
1) All penetrations through rated assemblies must be protected by an approved firestop system installed in accordance with ASTM 814 or UL 1479, per IBC 2003 Section 712.			
2) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.			
<b>Dept:</b> Fire	<b>Status:</b> Approved with Conditions	<b>Reviewer:</b> Ben Wallace Jr.	<b>Approval Date:</b> 04/27/2009
<b>Note:</b>	<b>Ok to Issue:</b> <input checked="" type="checkbox"/>		
1) A Knox FDC is required.			
2) Application requires State Fire Marshal approval.			
3) The sprinkler system shall be installed in accordance with NFPA 13.			



# PORTLAND FIRE DEPARTMENT Sprinkler Plan Review Request Form

CBL#: 64-F-20 Date: \_\_\_\_\_

Fire Marshal's Permit No: Consent

Address of Property where Alarm System will be Installed:

Property Owner: Granville Co  
 Owner's Address: P.O. Box 27  
North Burrast Ave  
Auburn, Maine

Phone No: 621-9505  
 Fax No: 621-8508  
 Email: \_\_\_\_\_

Contractor Name: Jason Penn Pro  
 Address: 170 Kenyhawk Ave  
Auburn, Maine

Phone: 734-1527  
 Fax No: 732-0586  
 Email: \_\_\_\_\_

Type of System:	<input checked="" type="checkbox"/> 13	<input type="checkbox"/> 13D	<input type="checkbox"/> 13R	<input type="checkbox"/> Life Safety	<input type="checkbox"/>
System Design:	<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Dry	<input type="checkbox"/> Pre-Action	<input type="checkbox"/> Deluge	<input type="checkbox"/>

Number and Location of Zones: 1 control valve for entire building located in BSM

System Monitoring:	<input checked="" type="checkbox"/> Water Flow	<input checked="" type="checkbox"/> Tamper	<input type="checkbox"/> Low Air
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All sprinkler plans must be reviewed and approved by the State Fire Marshal prior to submission to the Portland Fire Department.

All sprinkler systems must meet or exceed the requirements of NFPA and the Portland Fire Department Sprinkler Ordinance, Chapter 305.

*Sprinkler plans, including all applicable hydraulic calculations, must be submitted 10 days prior to scheduled meeting.*

### Fire Department Use Only

Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Fire Chief: \_\_\_\_\_ Date: \_\_\_\_\_

FD HTE #: \_\_\_\_\_



**EASTERN FIRE PROTECTION**

P.O. Box 1390  
Kittyhawk Ave.  
Auburn, ME 04210

PH # (207) 784-1507  
FAX # (207) 782-0566

**LETTER OF TRANSMITTAL**

DATE	4/3/09	JOB NO.	4336
ATTENTION	KATH CASTORANI		
RE:	FLUOROCARBON HOUSE		

TO Portland Fire Dept  
399 Commercial St.  
Portland, ME 04101

**WE ARE SENDING YOU**  Attached  Under separate cover via \_\_\_\_\_ the following items:  
 Shop drawings  Descriptive data  Hydraulic calculations  
 Copy of letter  Literature  PERMIT APP

QUANTITY	DRAWING NO.	DATE	DESCRIPTION	STATUS
1	1 OF 2	3/30/09	SPRINKLER SHIP DRAW.	B
1	2 OF 2	3/30/09	↓	↓
2			HYDRAULIC CALCULATIONS	↓
1			PERMIT APPLICATION	↓
1			PERMIT CHECK	↓

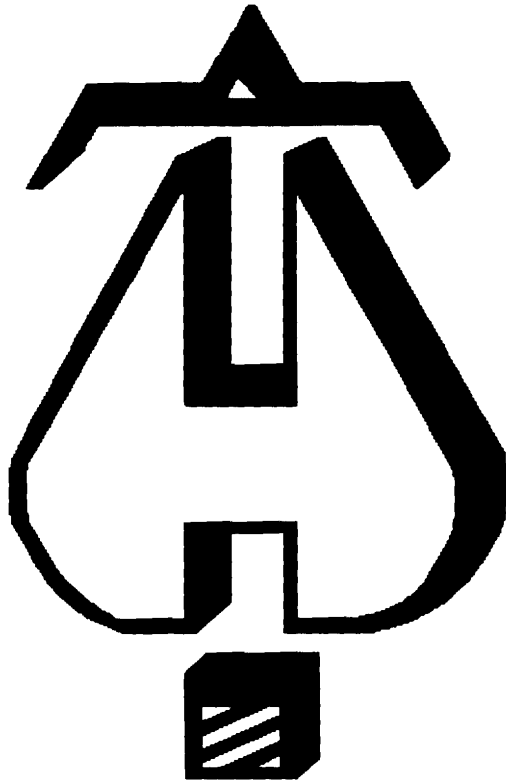
- Status code      A. Approved      D. Corrected & resubmitted  
                          B. Approved as noted      E. For your files  
                          C. Submitted for approval      F. Refer to remarks

Please return \_\_\_\_\_ copies each indicating your approval and/or comments.

**REMARKS** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**COPY TO** \_\_\_\_\_ **SIGNED** Phill [Signature]

If enclosures are not as noted, kindly notify us at once



**... Fire Protection by Computer Design**

Eastern Fire Protection  
Auburn-Lewiston Ind. Airpark  
P.O. Box 1390  
Auburn, Maine 04211-1390  
800-274-1507

Job Name : FLORENCE HOUSE KITCHEN AREA  
Building : NEW METAL WOOD CONSTRUCTION  
Location : 190 VALLEY ST PORTLAND, MAINE  
System : 1 OF 1  
Contract : AU-4336-08  
Data File : 1-4336.WX2

64720

Hydraulic Design Information Sheet

Name - FLORENCE HOUSE 1st KITCHEN Date - 03/16/09  
 Location - 190 VALLEY ST PORTLAND, MAINE  
 Building - NEW METAL WOOD CONSTRUCTION System No. - 1 OF 1  
 Contractor - EASTERN FIRE PROTECTION COMPANY INC. Contract No. - AU-4336-08  
 Calculated By - WILLIAM FLYNT Drawing No. - 1 OF 2  
 Construction: ( ) Combustible (X) Non-Combustible Ceiling Height - 11'  
 Occupancy - KITCHEN/ STORAGE AREA

S (X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. ( ) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.  
 Y ( ) NFPA 231 ( ) NFPA 231C (X) Figure 11.2.3.1.1 Curve OH I  
 S Other REMOTE AREA MODIFIED PER NFPA 13 FIG. # 11.2.3.2.3.1  
 T Specific Ruling Made By Date  
 E

M	Area of Sprinkler Operation	- 936	System Type	Sprinkler/Nozzle
	Density	- 0.15	(X) Wet	Make TYCO
D	Area Per Sprinkler	- 100	( ) Dry	Model TYCO TY-FRB
E	Elevation at Highest Outlet	- 63	( ) Deluge	Size 1/2"
S	Hose Allowance - Inside	- 0	( ) Preaction	K-Factor 5.6
I	Rack Sprinkler Allowance	- 0	( ) Other	Temp.Rat.155
G	Hose Allowance - Outside	- 250		

Note

Calculation Flow Required - 530 Press Required - 72.6 At TEST POINT  
 Summary C-Factor Used: 120 Overhead 140 Underground

W	Water Flow Test:	Pump Data:	Tank or Reservoir:
A	Date of Test - 12/13/2002		Cap. -
T	Time of Test - NA	Rated Cap.-	Elev.-
E	Static Press - 96	@ Press -	
R	Residual Press - 58	Elev. -	Well
	Flow - 1277		Proof Flow
S	Elevation - 47'-0"		

Location - AT 8" CIRCULATING MAIN IN VALLEY STREET

Source of Information - PORTLAND WATER DISTRICT

C	Commodity	Class	Location
O	Storage Ht.	Area	Aisle W.
M	Storage Method:	% Palletized	% Rack
M	( ) Single Row	( ) Conven. Pallet	( ) Auto. Storage
S	( ) Double Row	( ) Slave Pallet	( ) Solid Shelf
R	( ) Mult. Row		( ) Open Shelf
T			( ) Encap.
A			( ) Non
O			
C			

R K Flue Spacing Clearance:Storage to Ceiling  
 A Longitudinal Transverse

E Horizontal Barriers Provided:

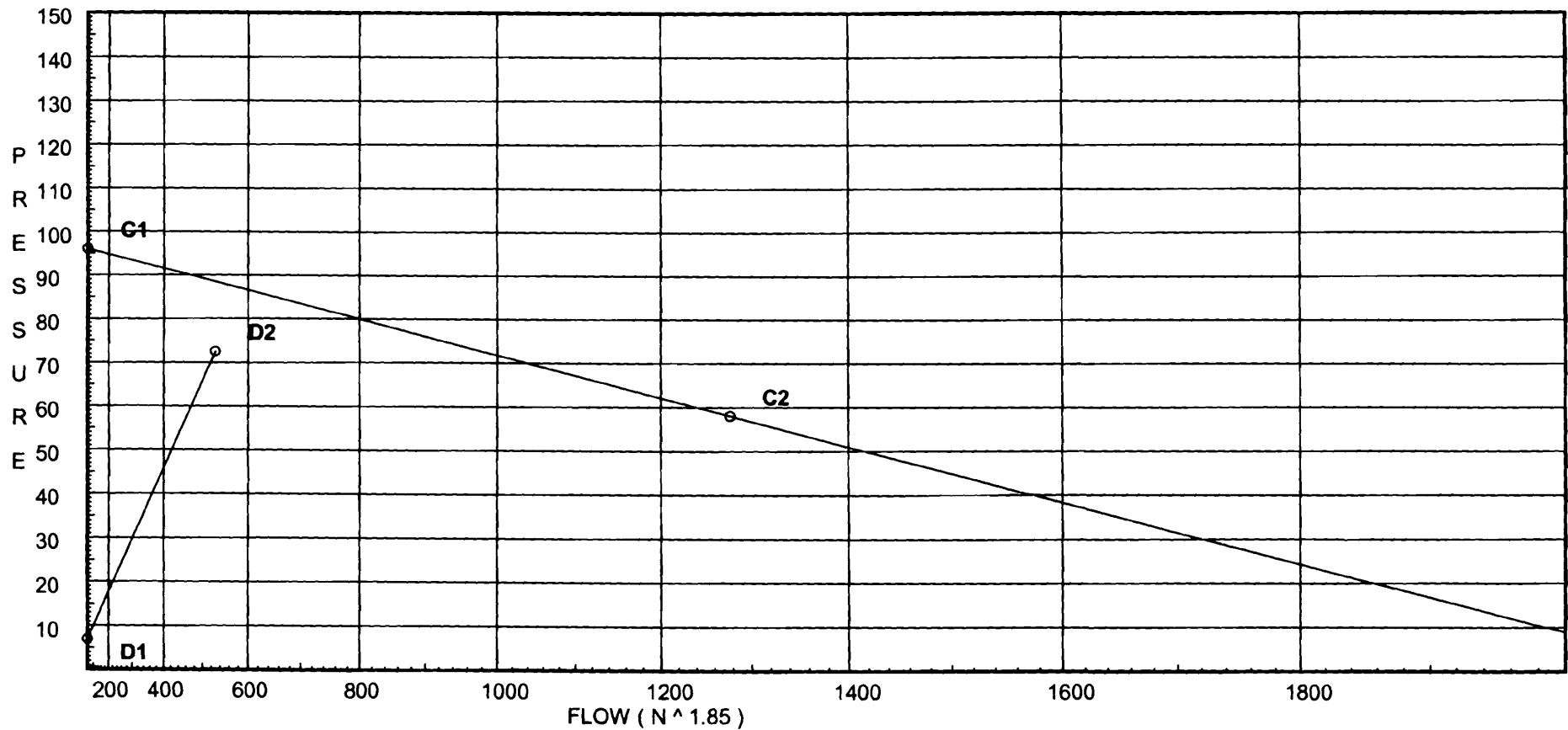
# Water Supply Curve (C)

Eastern Fire Protection  
FLORENCE HOUSE KITCHEN AREA

Page 2  
Date 3/16/09

City Water Supply:  
C1 - Static Pressure : 96  
C2 - Residual Pressure: 58  
C2 - Residual Flow : 1277

Demand:  
D1 - Elevation : 6.930  
D2 - System Flow : 529.998  
D2 - System Pressure : 72.562  
Hose ( Adj City ) : \_\_\_\_\_  
Hose ( Demand ) : \_\_\_\_\_  
D3 - System Demand : 529.998  
Safety Margin : 15.969





# Fittings Used Summary

Eastern Fire Protection  
FLORENCE HOUSE KITCHEN AREA

Page 3  
Date 3/16/09

## Fitting Legend

Abbrev.	Name	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
E	90' Standard Elbow	2	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
G	Generic Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
L	Long Turn Elbow	1	1	2	2	2	3	4	5	5	6	8	9	13	16	18	24	27	30	34	40
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

## Units Summary

Diameter Units           Inches  
Length Units               Feet  
Flow Units                 US Gallons per Minute  
Pressure Units             Pounds per Square Inch

**SUPPLY ANALYSIS**

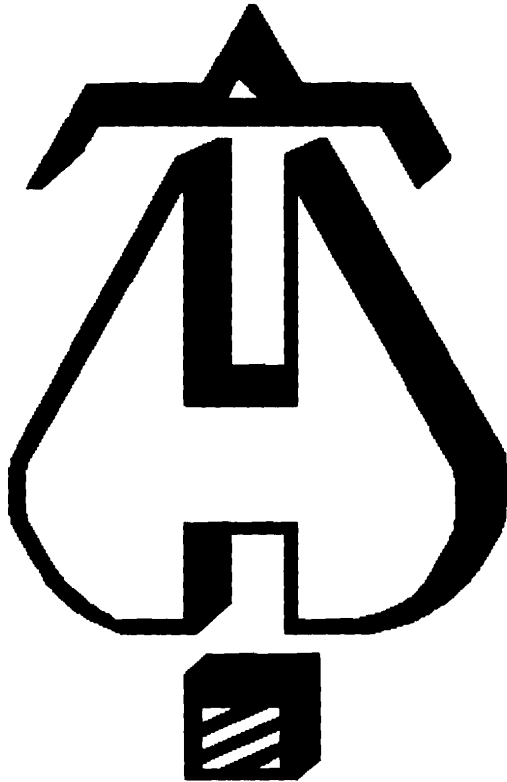
<b>Node at Source</b>	<b>Static Pressure</b>	<b>Residual Pressure</b>	<b>Flow</b>	<b>Available Pressure</b>	<b>Total Demand</b>	<b>Required Pressure</b>
TEST	96.0	58	1277.0	88.531	530.0	72.562

**NODE ANALYSIS**

<b>Node Tag</b>	<b>Elevation</b>	<b>Node Type</b>	<b>Pressure at Node</b>	<b>Discharge at Node</b>	<b>Notes</b>
45	63.0	5.6	11.64	19.1	
44	63.0	5.6	12.11	19.48	
43	63.0	5.6	16.43	22.7	
42	63.0	5.6	9.34	17.11	
40	63.0	5.6	13.06	20.24	
41	63.0		13.19		
33	63.0	5.6	10.48	18.13	
34	63.0	5.6	11.69	19.15	
35	63.0		12.83		
36	63.0	5.6	13.59	20.64	
37	63.0		19.5		
38	63.0	5.6	20.51	25.36	
39	63.0		25.92		
21	63.0	5.6	7.17	15.0	
22	63.0	5.6	7.48	15.31	
23	63.0		10.57		
24	63.0	5.6	11.92	19.33	
25	63.0		16.37		
26	63.0	5.6	16.73	22.9	
27	63.0	5.6	20.79	25.54	
28	63.0		26.95		
28A	63.0		38.84		
28B	63.0		44.83		
FLG	40.0		73.05		
68	47.0		70.22	250.0	
EX6	47.0		70.41		
TEST	47.0		72.56		

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
45 to 41	63.00 63.00	5.60	19.10 19.1	1 1.049	1T	5.0 0.0 0.0	8.000 5.000 13.000	120 0.1195	11.636 0.0 1.554		Vel = 7.09	
41			0.0 19.10						13.190		K Factor = 5.26	
44 to 35	63.00 63.00	5.60	19.48 19.48	1 1.049	1T	5.0 0.0 0.0	0.830 5.000 5.830	120 0.1238	12.106 0.0 0.722		Vel = 7.23	
35			0.0 19.48						12.828		K Factor = 5.44	
43 to 37	63.00 63.00	5.60	22.70 22.7	1 1.049	2E 1T	4.0 5.0 0.0	9.660 9.000 18.660	120 0.1645	16.435 0.0 3.069		Vel = 8.43	
37			0.0 22.70						19.504		K Factor = 5.14	
42 to 23	63.00 63.00	5.60	17.11 17.11	1 1.049	1E 1T	2.0 5.0 0.0	5.620 7.000 12.620	120 0.0975	9.336 0.0 1.230		Vel = 6.35	
23			0.0 17.11						10.566		K Factor = 5.26	
40 to 41	63.00 63.00	5.60	20.24 20.24	1 1.049		0.0 0.0 0.0	1.000 0.0 1.000	120 0.1330	13.057 0.0 0.133		Vel = 7.51	
41 to 25	63.00 63.00		19.10 39.34	1 1.049		0.0 0.0 0.0	7.000 0.0 7.000	120 0.4549	13.190 0.0 3.184		Vel = 14.60	
25			0.0 39.34						16.374		K Factor = 9.72	
33 to 34	63.00 63.00	5.60	18.13 18.13	1 1.049	2E	4.0 0.0 0.0	7.100 4.000 11.100	120 0.1086	10.483 0.0 1.205		Vel = 6.73	
34 to 35	63.00 63.00	5.60	19.15 37.28	1 1.049		0.0 0.0 0.0	2.770 0.0 2.770	120 0.4116	11.688 0.0 1.140		Vel = 13.84	
35 to 36	63.00 63.00		19.48 56.76	1.25 1.38		0.0 0.0 0.0	3.220 0.0 3.220	120 0.2360	12.828 0.0 0.760		Vel = 12.18	
36 to 37	63.00 63.00	5.60	20.64 77.4	1.25 1.38	1E	3.0 0.0 0.0	11.140 3.000 14.140	120 0.4184	13.588 0.0 5.916		Vel = 16.60	
37 to 38	63.00 63.00		22.70 100.1	1.5 1.61		0.0 0.0 0.0	3.160 0.0 3.160	120 0.3180	19.504 0.0 1.005		Vel = 15.78	
38 to 39	63.00 63.00	5.60	25.37 125.47	1.5 1.61	1T	8.0 0.0 0.0	3.210 8.000 11.210	120 0.4827	20.509 0.0 5.411		Vel = 19.77	
39 to 28	63.00 63		0.0 125.47	2 2.067		0.0 0.0 0.0	7.200 0.0 7.200	120 0.1429	25.920 0.0 1.029		Vel = 12.00	

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
			0.0 125.47						26.949		K Factor = 24.17	
21 to 22	63.00 63.00	5.60	15.00	1	1E	2.0 0.0	1.950 2.000	120	7.175 0.0			
			15.0	1.049		0.0	3.950	0.0765	0.302		Vel = 5.57	
22 to 23	63.00 63.00	5.60	15.31	1	1E 1T	2.0 5.0	4.000 7.000	120	7.477 0.0			
			30.31	1.049		0.0	11.000	0.2808	3.089		Vel = 11.25	
23 to 24	63.00 63.00		17.11	1.25		0.0 0.0	8.000 0.0	120	10.566 0.0			
			47.42	1.38		0.0	8.000	0.1690	1.352		Vel = 10.17	
24 to 25	63.00 63.00	5.60	19.34	1.25	1T	6.0 0.0	8.000 6.000	120	11.918 0.0			
			66.76	1.38		0.0	14.000	0.3183	4.456		Vel = 14.32	
25 to 26	63.00 63.00		39.33	1.5		0.0 0.0	1.000 0.0	120	16.374 0.0			
			106.09	1.61		0.0	1.000	0.3540	0.354		Vel = 16.72	
26 to 27	63.00 63	5.60	22.91	1.5		0.0 0.0	8.000 0.0	120	16.728 0.0			
			129.0	1.61		0.0	8.000	0.5081	4.065		Vel = 20.33	
27 to 28	63 63	5.60	25.53	2	2T	20.0 0.0	9.290 20.000	120	20.793 0.0			
			154.53	2.067		0.0	29.290	0.2102	6.156		Vel = 14.77	
28 to 28A	63 63		125.47	2.5	2E 1T	16.474 16.474	28.500 32.948	120	26.949 0.0			
			280.0	2.635		0.0	61.448	0.1935	11.891		Vel = 16.47	
28A to 28B	63 63		0.0	2.5	1T	16.474 0.0	14.500 16.474	120	38.840 0.0			
			280.0	2.635		0.0	30.974	0.1935	5.993		Vel = 16.47	
28B to FLG	63 40		0.0	3	7L 3T	47.038 60.478	71.000 107.516	120	44.833 15.961		* Fixed loss = 6	
			280.0	3.26		0.0	178.516	0.0686	12.252		Vel = 10.76	
FLG to 68	40 47		0.0	6	1G 1T	4.304 43.037	40.000 47.341	140	73.046 -3.032			
			280.0	6.16		0.0	87.341	0.0023	0.204		Vel = 3.01	
68 to EX6	47 47	+ 250.00	250.00	8	2G	12.652 0.0	95.000 12.652	140	70.218 0.0			
			530.0	8.27		0.0	107.652	0.0018	0.194		Vel = 3.17	
EX6 to TEST	47 47		0.0	6	1G	2.309 0.0	150.000 2.309	100	70.412 0.0			
			530.0	6.16		0.0	152.309	0.0141	2.150		Vel = 5.71	
TEST			0.0 530.00						72.562		K Factor = 62.22	



**... Fire Protection by Computer Design**

Eastern Fire Protection  
Auburn-Lewiston Ind. Airpark  
P.O. Box 1390  
Auburn, Maine 04211-1390  
800-274-1507

Job Name : FLORENCE HOUSE ATTIC AREA  
Building : NEW METAL AND WOOD CONSTRUCTION  
Location : 190 VALLEY ST PORTLAND, MAINE  
System : 1 OF 1  
Contract : AU-4336-08  
Data File : 1-4336.WX1

Hydraulic Design Information Sheet

Name - FLORENCE HOUSE ATTIC AREA Date - 3/16/09  
 Location - 190 VALLEY ST PORTLAND, MAINE  
 Building - NEW METAL AND WOOD CONSTRUCTION System No. - 1 OF 1  
 Contractor - EASTERN FIRE PROTECTION COMPANY INC. Contract No. - AU-4336-08  
 Calculated By - WILLIAM FLYNT Drawing No. - 1&2 OF 2  
 Construction: (X) Combustible ( ) Non-Combustible Ceiling Height - VARIES  
 Occupancy - LIGHT HAZARD REMOTE AREA .1 DENSITY OVER 1034 SQ FT

S (X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. ( ) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.  
 Y ( ) NFPA 231 ( ) NFPA 231C (X) Figure 11.2.3.1.1 Curve LIGHT  
 S Other REMOTE AREA PER TYCO DATASHEET TFP 632  
 T Specific Ruling Made By Date

E  
 M Area of Sprinkler Operation - 1034 System Type Sprinkler/Nozzle  
 Density - 0.1 (X) Wet Make TYCO  
 D Area Per Sprinkler - 120 ( ) Dry Model TYCO CC2  
 E Elevation at Highest Outlet - 87.5 ( ) Deluge Size 1/2"  
 S Hose Allowance - Inside - 0 ( ) Preaction K-Factor 4.2  
 I Rack Sprinkler Allowance - 0 ( ) Other Temp.Rat.175  
 G Hose Allowance - Outside - 100

N Note ATTIC LEVEL MOST REMOTE AREA .1 DENSITY OVER 1034 SQ FT

Calculation Flow Required - 270 Press Required - 72 At TEST POINT  
 Summary C-Factor Used: 150 Overhead 140 Underground

W Water Flow Test: Pump Data: Tank or Reservoir:  
 A Date of Test - 12/13/2002 Cap. -  
 T Time of Test - NA Rated Cap.- Elev.-  
 E Static Press - 96 @ Press -  
 R Residual Press - 58 Elev. - Well  
 Flow - 1277 Proof Flow  
 S Elevation - 47'-0"

U Location - AT 8" CIRCULATING MAIN IN VALLEY STREET

P Source of Information - PORTLAND WATER DISTRICT

C Commodity Class Location  
 O Storage Ht. Area Aisle W.  
 M Storage Method: Solid Piled % Palletized % Rack  
 M  
 ( ) Single Row ( ) Conven. Pallet ( ) Auto. Storage ( ) Encap.  
 S R ( ) Double Row ( ) Slave Pallet ( ) Solid Shelf ( ) Non  
 T A ( ) Mult. Row ( ) Open Shelf

O C  
 R K Flue Spacing Clearance:Storage to Ceiling  
 A Longitudinal Transverse

G  
 E Horizontal Barriers Provided:

# Water Supply Curve (C)

Eastern Fire Protection  
FLORENCE HOUSE ATTIC AREA

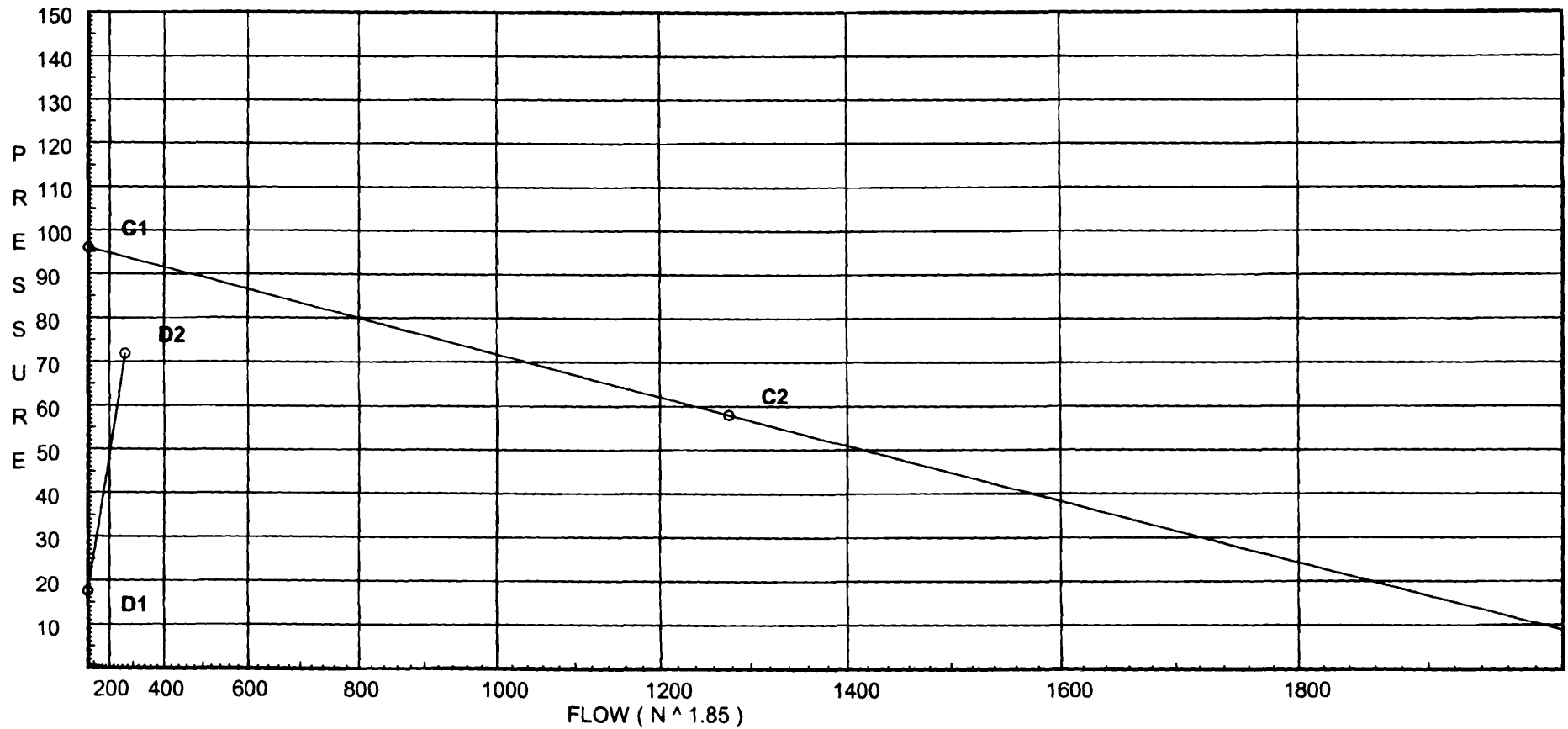
Page 2  
Date 3/16/09

### City Water Supply:

C1 - Static Pressure : 96  
C2 - Residual Pressure: 58  
C2 - Residual Flow : 1277

### Demand:

D1 - Elevation : 17.541  
D2 - System Flow : 270.314  
D2 - System Pressure : 71.823  
Hose ( Adj City ) : \_\_\_\_\_  
Hose ( Demand ) : \_\_\_\_\_  
D3 - System Demand : 270.314  
Safety Margin : 22.028



# Fittings Used Summary

Eastern Fire Protection  
FLORENCE HOUSE ATTIC AREA

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Date 3/16/09

## Fitting Legend

Abbrev.	Name	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	24
E	90' Standard Elbow	2	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
G	Generic Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
L	Long Turn Elbow	1	1	2	2	2	3	4	5	5	6	8	9	13	16	18	24	27	30	34	40
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

## Units Summary

Diameter Units           Inches  
Length Units               Feet  
Flow Units                 US Gallons per Minute  
Pressure Units             Pounds per Square Inch



**SUPPLY ANALYSIS**

<i>Node at Source</i>	<i>Static Pressure</i>	<i>Residual Pressure</i>	<i>Flow</i>	<i>Available Pressure</i>	<i>Total Demand</i>	<i>Required Pressure</i>
TEST	96.0	58	1277.0	93.851	270.31	71.823

**NODE ANALYSIS**

<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
S001	87.5	4.2	8.16	12.0	
S002	87.5	4.2	8.16	12.0	
S003	87.5	4.2	8.16	12.0	
12	87.5	4.17	8.54	12.18	K=K @ EQ02
13	87.5	4.13	8.85	12.29	K=K @ EQ01
14	87.5	4.13	9.64	12.82	K=K @ EQ01
15	87.5	4.13	11.37	13.92	K=K @ EQ01
16	87.5	4.13	15.24	16.12	K=K @ EQ01
16A	87.5		20.38		
9	87.5	4.13	19.31	18.15	K=K @ EQ03
10	87.5	4.13	19.99	18.47	K=K @ EQ03
1	87.5	4.17	8.29	12.0	K=K @ EQ02
2	87.5	4.13	8.59	12.11	K=K @ EQ01
3	87.5	4.13	9.36	12.64	K=K @ EQ01
4	87.5	4.13	11.04	13.72	K=K @ EQ01
5	87.5	4.13	14.81	15.89	K=K @ EQ01
5A	87.5		19.81		
6	87.5		26.06		
7	87.5		26.81		
8	87.5		27.82		
8A	87.5		44.0		
FLG	40.0		74.1		
68	47.0		71.15	100.0	
EX6	47.0		71.2		
TEST	47.0		71.82		

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
S001 to EQ01	87.50 87.50	4.20	12.00 12.0	1 1.109	1T	9.906 0.0	1.000 9.905	150	8.163 0.0			
			0.0			0.0	10.905	0.0256	0.279		Vel = 3.99	
EQ01			12.00						8.442		K Factor = 4.13	
S002 to EQ02	87.50 87.50	4.20	12.00 12.0	1 1.109	1E	3.962 0.0	1.000 3.962	150	8.163 0.0			
			0.0			0.0	4.962	0.0256	0.127		Vel = 3.99	
EQ02			12.00						8.290		K Factor = 4.17	
S003 to EQ03	87.50 87.50	4.20	12.00 12.0	1 1.109	1T	9.906 0.0	1.000 9.905	150	8.163 0.0			
			0.0			0.0	10.905	0.0256	0.279		Vel = 3.99	
EQ03			12.00						8.442		K Factor = 4.13	
12 to 13	87.50 87.50	4.17	12.18 12.18	1 1.101		0.0 0.0	11.410 0.0	150	8.541 0.0		K = K @ EQ02	
						0.0	11.410	0.0273	0.311		Vel = 4.10	
13 to 14	87.50 87.50	4.13	12.29 24.47	1 1.101		0.0 0.0	8.000 8.000	150	8.852 0.0		K = K @ EQ01	
						0.0	8.000	0.0988	0.790		Vel = 8.25	
14 to 15	87.50 87.50	4.13	12.82 37.29	1 1.101		0.0 0.0	8.000 8.000	150	9.642 0.0		K = K @ EQ01	
						0.0	8.000	0.2155	1.724		Vel = 12.57	
15 to 16	87.50 87.50	4.13	13.93 51.22	1 1.101		0.0 0.0	10.000 0.0	150	11.366 0.0		K = K @ EQ01	
						0.0	10.000	0.3875	3.875		Vel = 17.26	
16 to 16A	87.50 87.500	4.13	16.12 67.34	1 1.101		0.0 0.0	8.000 8.000	150	15.241 0.0		K = K @ EQ01	
						0.0	8.000	0.6430	5.144		Vel = 22.69	
16A to 7	87.500 87.50		0.0 67.34	1.25 1.394	1T	9.523 0.0	22.000 9.523	150	20.385 0.0			
			0.0			0.0	31.523	0.2038	6.423		Vel = 14.16	
7			67.34						26.808		K Factor = 13.01	
9 to 10	87.50 87.50	4.13	18.15 18.15	1 1.101		0.0 0.0	12.000 0.0	150	19.309 0.0		K = K @ EQ03	
						0.0	12.000	0.0569	0.683		Vel = 6.12	
10 to 8	87.50 87.5	4.13	18.47 36.62	1 1.101	1T	9.563 0.0	28.000 9.562	150	19.992 0.0		K = K @ EQ03	
			0.0			0.0	37.562	0.2083	7.823		Vel = 12.34	
8			36.62						27.815		K Factor = 6.94	
1 to 2	87.50 87.50	4.17	12.00 12.0	1 1.101		0.0 0.0	11.410 0.0	150	8.290 0.0		K = K @ EQ02	
						0.0	11.410	0.0265	0.302		Vel = 4.04	
2 to 3	87.50 87.50	4.13	12.11 24.11	1 1.101		0.0 0.0	8.000 8.000	150	8.592 0.0		K = K @ EQ01	
						0.0	8.000	0.0961	0.769		Vel = 8.12	

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	***** Notes *****
3 to 4	87.50 87.50	4.13	12.63 36.74	1 1.101		0.0 0.0	8.000 0.0	150 0.2096	9.361 0.0 1.677	K = K @ EQ01 Vel = 12.38
4 to 5	87.50 87.50	4.13	13.72 50.46	1 1.101		0.0 0.0	10.000 0.0	150 0.3770	11.038 0.0 3.770	K = K @ EQ01 Vel = 17.00
5 to 5A	87.50 87.500	4.13	15.90 66.36	1 1.101		0.0 0.0	8.000 8.000	150 0.6256	14.808 0.0 5.005	K = K @ EQ01 Vel = 22.36
5A to 6	87.500 87.50		0.0 66.36	1.25 1.394	1T	9.523 0.0	22.000 9.523	150 0.1983	19.813 0.0 6.251	Vel = 13.95
6 to 7	87.50 87.50		0.0 66.36	2 2.003	2E	12.965 0.0	8.950 12.965	150 0.0339	26.064 0.0 0.744	Vel = 6.76
7 to 8	87.50 87.5		67.34 133.7	2 2.003		0.0 0.0	8.120 0.0	150 0.1240	26.808 0.0 1.007	Vel = 13.61
8 to 8A	87.5 87.5		36.61 170.31	2 2.003	2T 1E	25.929 6.482	51.000 32.411	150 0.1941	27.815 0.0 16.189	Vel = 17.34
8A to FLG	87.5 40		0.0 170.31	3 3.26	5L 1T	33.599 20.159	75.000 53.758	120 0.0274	44.004 26.572 3.523	* Fixed loss = 6 Vel = 6.55
FLG to 68	40 47		0.0 170.31	6 6.16	1G 1T	4.304 43.037	40.000 47.341	140 0.0009	74.099 -3.032 0.081	Vel = 1.83
68 to EX6	47 47	+ 100.00	100.00 270.31	8 8.27	2G	12.652 0.0	95.000 12.652	140 0.0005	71.148 0.0 0.056	Vel = 1.61
EX6 to TEST	47 47		0.0 270.31	6 6.16	1G	2.309 0.0	150.000 2.309	100 0.0041	71.204 0.0 0.619	Vel = 2.91
TEST			0.0 270.31						71.823	K Factor = 31.90



# Certificate of Design Application

From Designer: Winton Scott Architects  
 Date: 4.16.09  
 Job Name: Crescent Heights  
 Address of Construction: 25 Crescent St.

## 2003 International Building Code

Construction project was designed to the building code criteria listed below:

\* STRUCTURAL PER IBC 03

Building Code & Year IBC 06 Use Group Classification (s) R-2 Boarding House (Not Transient)

Type of Construction IA

Is the Structure mixed use? No If yes, separated or non separated or non separated (section 302.3) \_\_\_\_\_

Geotechnical/Soils report required? (See Section 1802.2) COMPLETED

### Structural Design Calculations

COMPLETED Submitted for all structural members (106.1 - 106.11)

#### Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown
<u>MULTIFAMILY -</u>	
<u>PRIVATE ROOMS &amp; CORRIDORS</u>	<u>40 PSF</u>
<u>STAIRS</u>	<u>100 PSF</u>

#### Wind loads (1603.1.4, 1609)

\_\_\_\_\_ Design option utilized (1609.1.1, 1609.6)  
100 MPH Basic wind speed (1809.3)  
II, 1.0 Building category and wind importance Factor,  $I_w$   
table 1604.5, 1609.5)  
B Wind exposure category (1609.4)  
±0.18 Internal pressure coefficient (ASCE 7)  
25 PSF Component and cladding pressures (1609.1.1, 1609.6.2.2)  
17 PSF Main force wind pressures (7603.1.1, 1609.6.2.1)

#### Earth design data (1603.1.5, 1614-1623)

EQUIV FORCE Design option utilized (1614.1)  
I Seismic use group ("Category")  
.371, .150 Spectral response coefficients,  $S_D$ s &  $S_{D1}$  (1615.1)  
D Site class (1615.1.5)

N/A Live load reduction  
20 PSF Roof live loads (1603.1.2, 1607.11)  
40 PSF + DRIFT Roof snow loads (1603.7.3, 1608)  
60 PSF Ground snow load,  $P_g$  (1608.2)  
40 PSF If  $P_g > 10$  psf, flat-roof snow load  $P_f$   
1.0 If  $P_g > 10$  psf, snow exposure factor,  $C_e$   
1.0 If  $P_g > 10$  psf, snow load importance factor,  $I_s$   
1.1 Roof thermal factor,  $C_t$  (1608.4)  
N/A Sloped roof snowload,  $P_s$  (1608.4)  
C Seismic design category (1616.3)

LIGHT-FRAMED SHEAR PANELS Basic seismic force resisting system (1617.6.2)  
6.5 Response modification coefficient,  $R$ , and deflection amplification factor,  $C_d$  (1617.6.2)

EQUIV FORCE Analysis procedure (1616.6, 1617.5)  
26k Design base shear (1617.4, 1617.5.1)

#### Flood loads (1803.1.6, 1612)

N/A Flood Hazard area (1612.3)  
N/A Elevation of structure

#### Other loads

N/A Concentrated loads (1607.4)  
N/A Partition loads (1607.5)  
N/A Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)



# Certificate of Design

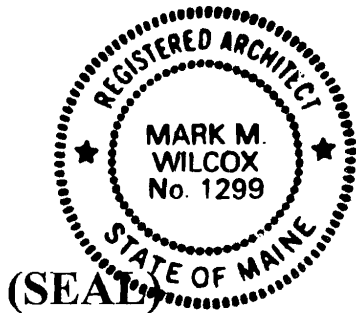
Date: 4.16.09

From: MARK M. WILCOX

These plans and / or specifications covering construction work on:

CRESSENT HEIGHTS

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the *2003 International Building Code* and local amendments.



Signature: *Mark M. Wilcox*

Title: PRINCIPAL

Firm: WINTON SCOTT ARCHITECTS

Address: 5 MILK ST

PORTLAND, ME 04101

Phone: 724.4811 EXT 2#

For more information or to download this form and other permit applications visit the Inspections Division on our website at [www.portlandmaine.gov](http://www.portlandmaine.gov)



# Accessibility Building Code Certificate

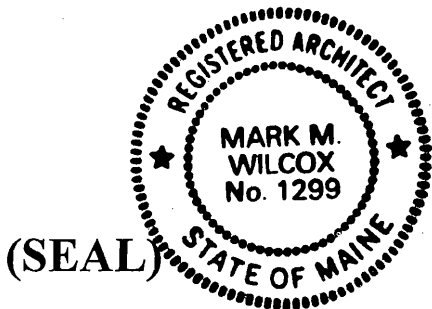
Designer: MARK M. WILCOX

Address of Project: 25 CRESCENT ST

Nature of Project: BOARDING HOUSE

\_\_\_\_\_  
\_\_\_\_\_

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act. Residential Buildings with 4 units or more must conform to the Federal Fair Housing Accessibility Standards. Please provide proof of compliance if applicable.



Signature: *[Handwritten Signature]*

Title: PRINCIPAL

Firm: WINTON SCOTT ARCHITECTS

Address: 5 MILK ST.

PORTLAND, ME 04101

Phone: 774-4811 EXT 2#

For more information or to download this form and other permit applications visit the Inspections Division on our website at [www.portlandmaine.gov](http://www.portlandmaine.gov)



*State of Maine*  
*Department of Public Safety*  
**Construction Permit**



Reviewed  
for Barrier  
Free

# 18328

Sprinkled  
Sprinkler Supervised

**CRESCENT HEIGHTS**

Located at: 22 CRESCENT ST.

**PORTLAND**

Occupancy/Use: HOTEL/MOTEL

**Permission is hereby given to:**

DEVELOPERS COLLABORATIVE

17 CHESTNUT ST.  
PORTLAND, ME 04101

to construct or alter the afore referenced building according to the plans hitherto filed with the Commisioner and now approved.

No departure from application form/plans shall be made without prior approval in writing. This permit is issued under the provision of Title 25, Chapter 317, Section 2448 and the provisions of Title 5, Section 4594 - F.

Nothing herein shall excuse the holder of this permit for failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions. Each permit issued shall be displayed/available at the site of construction.

*This permit will expire at midnight on the 7 th of October 2009*

Dated the 8 th day of April A.D. 2009

Commissioner

**Copy-2 Architect**

Comments:

MARK WILCOX  
WINTON SCOTT ARCHITETCS  
5 MILK STREET  
PORTLAND, ME 04101