

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND

BUILDING PERMIT

This is to certify that EASTERN FIRE PROTECTION
of PO Box 1390, 170 Kittyhawk Ave, Auburn, ME 04211

For installation at 714 STEVENS AVE
UNE - Goddard Hall

Job ID: 2011-07-1659-FAFS

CBL: 145 - - A - 003 - 001 - - - -

has permission to install an NFPA 13 automatic sprinkler system

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues 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

[Handwritten signature]

58

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

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

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.



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: 2011-07-1659-FAFS
Installation of an NFPA 13 automatic
sprinkler system

For installation at:
714 STEVENS AVE
UNE – Goddard Hall

CBL: 145 - - A - 003 - 001 - - - -

Conditions of Approval:

Fire

Application requires State Fire Marshal approval.

The sprinkler system shall be installed in accordance with NFPA 13.

Sprinkler protection shall be maintained. Where the system is to be shut down for maintenance or repair, the system shall be checked at the end of each day to insure the system has been placed back in service.

Fire department connection shall be 2 ½" siamese. The Fire Department will require Knox locking caps on all Fire Department Connections on the exterior of the building.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Installation of a sprinkler or fire alarm system requires a Knox Box to be installed per city ordinance.

The sprinkler shall be supervised by the building fire alarm system.

City of Portland, Maine - Building or Use Permit Application

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

Job No: 2011-07-1659-FAFS	Date Applied: 7/13/2011	CBL: 145 - - A - 003 - 001 - - - - -	
Location of Construction: 714 STEVENS AVE	Owner Name: SEMINARY & JUNIOR WESTBROOK	Owner Address: 716 STEVENS AVE PORTLAND, ME - MAINE 04103	Phone:
Business Name: Goddard Hall – UNE	Contractor Name: Eastern Fire Protection Co.	Contractor Address: PO Box 1390, Auburn, ME 04210	Phone: 784-1507
Lessee/Buyer's Name:	Phone:	Permit Type: Fire Suppression System	Zone: R-5
Past Use: UNE University Campus	Proposed Use: Same: UNE University Campus – to install a fire suppression system in Goddard Hall	Cost of Work: \$45,000.00	CEO District:
		Fire Dept: <input checked="" type="checkbox"/> Approved w/ conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: Type:
		Signature: <i>Bjawa</i> (58)	Signature:
Proposed Project Description: water based fire suppression		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Gayle		Zoning Approval	

<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building Permits do not include plumbing, septic or electrical work.</p> <p>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.</p>	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 <input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM	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	Historic Preservation <input 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>OK</i> <i>7/13/11</i>	Date:	Date:

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	PHON



2011 07 1659

7/13

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.

Goddard Hall

RECEIVED

Installation address: College Drive CBL: 145 A003

Exact location: (within structure) UNE Campus 714 Stevens Ave JUL 13 2011

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

Building owner: UNE College *R-5*

Dept. of Building Inspections
City of Portland Maine

Managing Supervisor (RMS): William Flynt License No: 368

Supervisor phone: 207-784-1507 ext 218 E-mail: flyntwa@teameastern.com

Installing contractor: Eastern Fire Protection Co License No: 101

Contractor phone: 207-784-1507 E-mail: flyntwa@teameastern.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 13 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.

COST OF WORK: <u>\$44,900</u>
PERMIT FEE: <u>\$480.00</u>
(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

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: Bob Beauchone Date: 6/29/11



EASTERN FIRE PROTECTION

P.O. Box 1390 408 Harlow St.
Auburn, ME 04210 Bangor, ME 04401

Phone # (207) 784-1507 Phone # (207) 942-8014
Fax # (207) 782-0566 Fax # (207) 942-5202

ELECTRONIC TRANSMITTAL

DATE	06/30/2011	JOB NO.	AU-4671-10
ATTENTION	Gayle		
RE:	GODDARD HALL		
	UNE CAMPUS		
	PORTLAND, MAINE		

TO portlandmaine.gov/fire

WE ARE SENDING ELECTRONICALLY

- Shop drawings Descriptive data Hydraulic calculations
 Copy of letter Literature LEED documents

QUANTITY	DRAWING NO.	DATE	DESCRIPTION	STATUS
1 ea	1,2,3 OF 3	6/14/11	PDF of Sprinkler Drawing 30x42	C
1			Copy of State Fire Marshal Permit	E
1			Copy of check for permit	E
1			Fire suppression system permit application form	E
1 ea			HYDRAULIC CALCULATION	C

Status code

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

RECEIVED

Please return 1 copies each indicating your approval and/or comments.

JUL 13 2011

REMARKS _____

Dept. of Building Inspections
City of Portland Maine

The electronic files are to be utilized for review or record purposes only, and cannot be copied, or sent to any other parties without the written consent of EFP.

COPY TO _____

Bob Beauchesne

ORIGINAL DOCUMENT PRINTED ON CHEMICAL REACTIVE PAPER WITH MICROPRINTED BORDER - SEE REVERSE SIDE FOR COMPLETE SECURITY FEATURES

EASTERN FIRE PROTECTION CO., INC.
AUBURN (207) 784-1507 BANGOR (207) 942-8014
P.O. BOX 1390
170 KITTYHAWK AVENUE
AUBURN, MAINE 04211-1390

EXPLANATION	AMOUNT

52-7455/2112

106877

PAY
AMOUNT
OF

480 00 DOLLARS

CHECK
AMOUNT

480 00

DATE	TO THE ORDER OF	DESCRIPTION	ACCOUNT NUMBER	CHECK NUMBER
10/29/11	City of Portland	4671 ONE Goddard Hall	106877	\$ 480 00

Man [Signature]

NORTHEAST BANK

SAFEGUARD SECURITY

THIS DOCUMENT CONTAINS HEAT SENSITIVE INK. TOUCH OR PRESS HERE - RED IMAGE DISAPPEARS WITH HEAT.

⑈ 106877 ⑈ ⑆ 211274557 ⑆ 05 95 000100 ⑈



State of Maine
Department of Public Safety



Fire Sprinkler System Permit

9552

GODDARD HALL

Located at: UNE Campus
In the Town of: Portland
Occupancy/Use: Office
Type of System: NFPA 13

Permission is hereby given to:

Eastern Fire Protection
PO Box 1390
Auburn, ME 042111390
Contractor License # 101

to begin installation according to plans submittal approved by the Office of State Fire Marshal. The submittal is filed under log # 2111212 , and no departure from the application submittal shall be made without prior approval in writing. This permit is issued under the provisions of Title 32, Chapter 20, Section 12004-I. Nothing herein shall excuse the holder of this permit from failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions. This permit shall be displayed at the construction site or be made readily available.

This permit was issued on 6/27/2011 for a fee paid of \$152.00

This permit will expire at midnight on Saturday, December 24, 2011

The expiration date applies only if the installation has not begun by that date and no permission has been granted to extend the date. Once installation begins, then the permit is valid for however long it takes to complete the installation, assuming that the work is fairly continuous.

John E. Morris
Commissioner

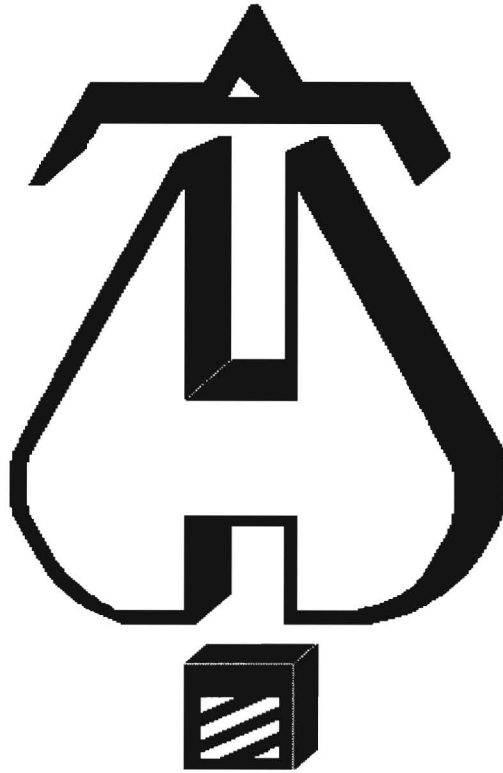
The type of Fire Department Connection and its location is to be according to the Local Fire Department

Within 30 days of the completion of a new fire sprinkler system or an addition to an existing fire sprinkler system, a fire sprinkler system contractor shall provide to the Office of State Fire Marshal a copy of this permit signed and dated by the certified Responsible Managing Supervisor representing that the fire sprinkler system has been installed according to specifications of the approved plan to the best of the supervisor's knowledge, information, and belief. This requirement is part of the sprinkler law, and neglect of this duty is grounds to not renew the contractor's license to do work in the State of Maine. All renewed sprinkler licenses are good for two years and expire on a June 30th.

Job completed, tested and verified by date of _____

RMS for this job: Flynt William A.

RMS Signature: _____



... Fire Protection by Computer Design

EASTERN FIRE PROTECTION
170 KITTY HAWK AVE
P.O. BOX 1390
AUBURN, MAINE 04210
207-784-1507

Job Name : GODDARD HALL (THIRD FLOOR)
Drawing : 2 OF 3
Location : UNE PORTLAND, MAINE
Remote Area : 2
Contract : AU-4671-11
Data File : 4671 THIRD FLR.WXF

HYDRAULIC CALCULATIONS
for

Project name: GODDARD HALL (THIRD FLOOR)
Location: UNE PORTLAND, MAINE
Drawing no: 2 OF 3
Date: 6/14/11

Design

Remote area number: 2
Remote area location: THIRD FLOOR
Occupancy classification: LIGHT
Density: .1 - Gpm/SqFt
Area of application: 952 - SqFt
Coverage per sprinkler: 148 - SqFt
Type of sprinklers calculated: TYCO TY-FRB K=5.6 WHITE PENDENT
No. of sprinklers calculated: 5
In-rack demand: - GPM
Hose streams: 100 - GPM
Total water required (including hose streams): 178.189 - GPM @ 35.54 - Psi
Type of system: WET
Volume of dry or preaction system: - Gal

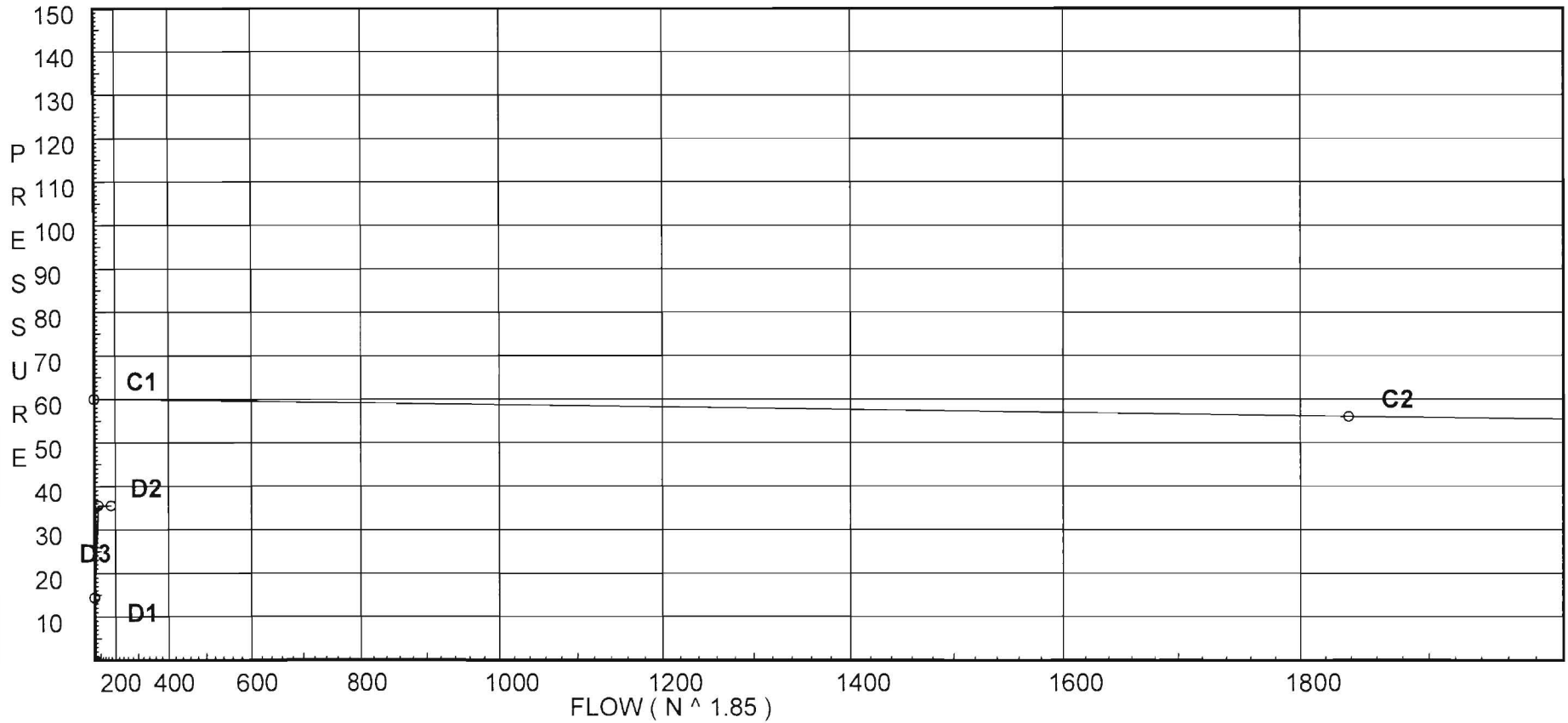
Water supply information

Date: 10/15/07
Location: STEVENS AVE.
Source: PORTLAND WATER DISTRICT

Name of contractor: EASTERN FIRE PROTECTION
Address: 170 KITTY HAWK AVE / P.O. BOX 1390 / AUBURN, MAINE 04210
Phone number: 207-784-1507
Name of designer: RCB
Authority having jurisdiction: STATE FIRE MARSHAL
Notes: (Include peaking information or gridded systems here.)
REMOTE AREA PER NFPA 13(2010) SECT. 11.2.3.3.7

City Water Supply:
C1 - Static Pressure : 60
C2 - Residual Pressure: 56
C2 - Residual Flow : 1838

Demand:
D1 - Elevation : 14.370
D2 - System Flow : 78.189
D2 - System Pressure : 35.540
Hose (Adj City) :
Hose (Demand) : 100
D3 - System Demand : 178.189
Safety Margin : 24.407



Fittings Used Summary

EASTERN FIRE PROTECTION
GODDARD HALL (THIRD FLOOR)

Page 3
Date

Fitting Legend		½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	24
Abbrev.	Name																				
B	NFPA 13 Butterfly Valve	0	0	0	0	0	6	7	10	0	12	9	10	12	19	21	0	0	0	0	0
E	NFPA 13 90° Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
Fsp	Flow Switch Potter VSR	Fitting generates a Fixed Loss Based on Flow																			
G	NFPA 13 Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
I	90° Grvd-Vic Elbow #10	0	0	2	3	4	3.5	6	5	8	7	8.5	10	13	17	20	23	25	33	36	40
J	90° Tee-Branch Grv Vic #20	0	0	4.5	6	8	8.5	10.8	13	17	16	21	25	33	41	50	65	78	88	98	120
T	NFPA 13 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 Pressure</i>	<i>Static Pressure</i>	<i>Residual Pressure</i>	<i>Flow</i>	<i>Available Pressure</i>	<i>Total Demand</i>	<i>Required</i>
M2	60.0	56	1838.0	59.947	178.19	35.54

NODE ANALYSIS

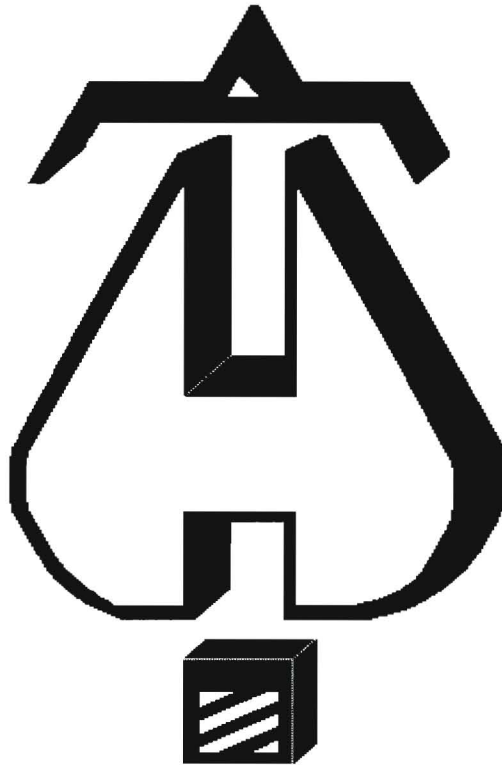
<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
DRP1	0.0	5.6	7.0	14.82	
DRP2	0.0	5.6	7.0	14.82	
60	130.18	5.4	9.87	16.96	K=K @ LIN1
61	130.18		11.26		
62	130.18		11.59		
64	130.18	5.3	7.82	14.82	K=K @ LIN2
65	130.18	5.3	8.02	15.0	K=K @ LIN2
66	130.18	5.3	8.36	15.32	K=K @ LIN2
67	130.18	5.3	9.23	16.1	K=K @ LIN2
63	130.18		11.89		
68	130.18		11.9		
69	130.18		12.32		
TOR	98.04		27.26		
HD2	93.08		32.96		
BASE	90.75		38.02		
M1	90.75		38.19		
M2	97.0		35.54	100.0	

EASTERN FIRE PROTECTION
GODDARD HALL (THIRD FLOOR)

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	*****
DRP1 to LIN1	0 0	5.60	14.82 14.82	1 1.049	3E	6.0 0.0	1.180 6.000 7.180	120	7.000 0.0 0.536			Vel = 5.50
LIN1			0.0 14.82						7.536		K Factor = 5.40	
DRP2 to LIN2	0 0	5.60	14.82 14.82	1 1.049	2E 1T	4.0 5.0	2.000 9.000 11.000	120	7.000 0.0 0.822			Vel = 5.50
LIN2			0.0 14.82						7.822		K Factor = 5.30	
60 to 61	130.180 130.180	5.4	16.96 16.96	1 1.049		0.0 0.0	14.540 0.0 14.540	120	9.870 0.0 1.394		K = K @ LIN1	Vel = 6.30
61 to 62	130.180 130.180		0.0 16.96	1.25 1.38		0.0 0.0	13.000 0.0 13.000	120	11.264 0.0 0.328			Vel = 3.64
62 to 63	130.180 130.180		0.0 16.96	1.5 1.61	1T	8.0 0.0	17.410 8.000 25.410	120	11.592 0.0 0.302			Vel = 2.67
63			0.0 16.96						11.894		K Factor = 4.92	
64 to 65	130.180 130.180	5.3	14.82 14.82	1.25 1.38		0.0 0.0	10.120 0.0 10.120	120	7.822 0.0 0.199		K = K @ LIN2	Vel = 3.18
65 to 66	130.180 130.180	5.3	15.00 29.82	1.5 1.61		0.0 0.0	10.000 0.0 10.000	120	8.021 0.0 0.338		K = K @ LIN2	Vel = 4.70
66 to 67	130.180 130.180	5.3	15.32 45.14	1.5 1.61		0.0 0.0	12.000 0.0 12.000	120	8.359 0.0 0.874		K = K @ LIN2	Vel = 7.11
67 to 68	130.180 130.180	5.3	16.09 61.23	1.5 1.61	1T	8.0 0.0	12.830 8.000 20.830	120	9.233 0.0 2.667		K = K @ LIN2	Vel = 9.65
68			0.0 61.23						11.900		K Factor = 17.75	
63 to 68	130.180 130.180		16.96 16.96	2.5 2.635		0.0 0.0	5.250 0.0 5.250	120	11.894 0.0 0.006			Vel = 1.00
68 to 69	130.180 130.180		61.23 78.19	2.5 2.635	1I	8.237 0.0	14.670 8.237 22.907	120	11.900 0.0 0.418			Vel = 4.60

EASTERN FIRE PROTECTION
GODDARD HALL (THIRD FLOOR)

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 *****
69 to TOR	130.180 98.040		0.0 78.19	2.5 2.635	1I 1J	8.237 33.000 14.827 23.064	120 0.0183	12.318 13.920 1.024	Vel = 4.60
TOR to HD2	98.040 93.080		0.0 78.19	2.5 2.635	1B 1Fsp 1T	9.61 4.000 0.0 26.084 16.474 30.084	120 0.0183	27.262 5.148 0.550	* Fixed loss = 3 Vel = 4.60
HD2 to BASE	93.080 90.750		0.0 78.19	4 4.26	1T	26.334 3.000 0.0 26.334 0.0 29.334	120 0.0018	32.960 5.009 0.052	* Fixed loss = 4 Vel = 1.76
BASE to M1	90.750 90.750		0.0 78.19	4 4.1	1E 1T 1G	14.534 60.000 29.067 46.508 2.907106.508	140 0.0016	38.021 0.0 0.170	Vel = 1.90
M1 to M2	90.750 97		0.0 78.19	6 6.16	1G 1T	4.304205.000 43.037 47.341 0.0 252.341	140 0.0002	38.191 -2.707 0.056	Vel = 0.84
M2			100.00 178.19					35.540	Qa = 100.00 K Factor = 29.89



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

EASTERN FIRE PROTECTION
170 KITTY HAWK AVE
P.O. BOX 1390
AUBURN, MAINE 04210
207-784-1507

Job Name : GODDARD HALL (ATTIC)
Drawing : 3 OF 3
Location : UNE PORTLAND, MAINE
Remote Area : 1
Contract : AU-4671-11
Data File : 4671 ATTIC-R.WXF

HYDRAULIC CALCULATIONS
for

Project name: GODDARD HALL (ATTIC)
Location: UNE PORTLAND, MAINE
Drawing no: 3 OF 3
Date: 6/14/11

Design

Remote area number: 1
Remote area location: ATTIC
Occupancy classification: LIGHT
Density: .1 - Gpm/SqFt
Area of application: 1984 - SqFt
Coverage per sprinkler: 108 - SqFt
Type of sprinklers calculated: TYCO TY-FRB K=5.6 BRASS UPRIGHT
No. of sprinklers calculated: 23
In-rack demand: - GPM
Hose streams: 100 - GPM
Total water required (including hose streams): 500.2 - GPM @ 52.88 - Psi
Type of system: DRY
Volume of dry or preaction system: 116 - Gal

Water supply information

Date: 10/15/07
Location: STEVENS AVE.
Source: PORTLAND WATER DISTRICT

Name of contractor: EASTERN FIRE PROTECTION
Address: 170 KITTY HAWK AVE / P.O. BOX 1390 / AUBURN, MAINE 04210
Phone number: 207-784-1507
Name of designer: RCB

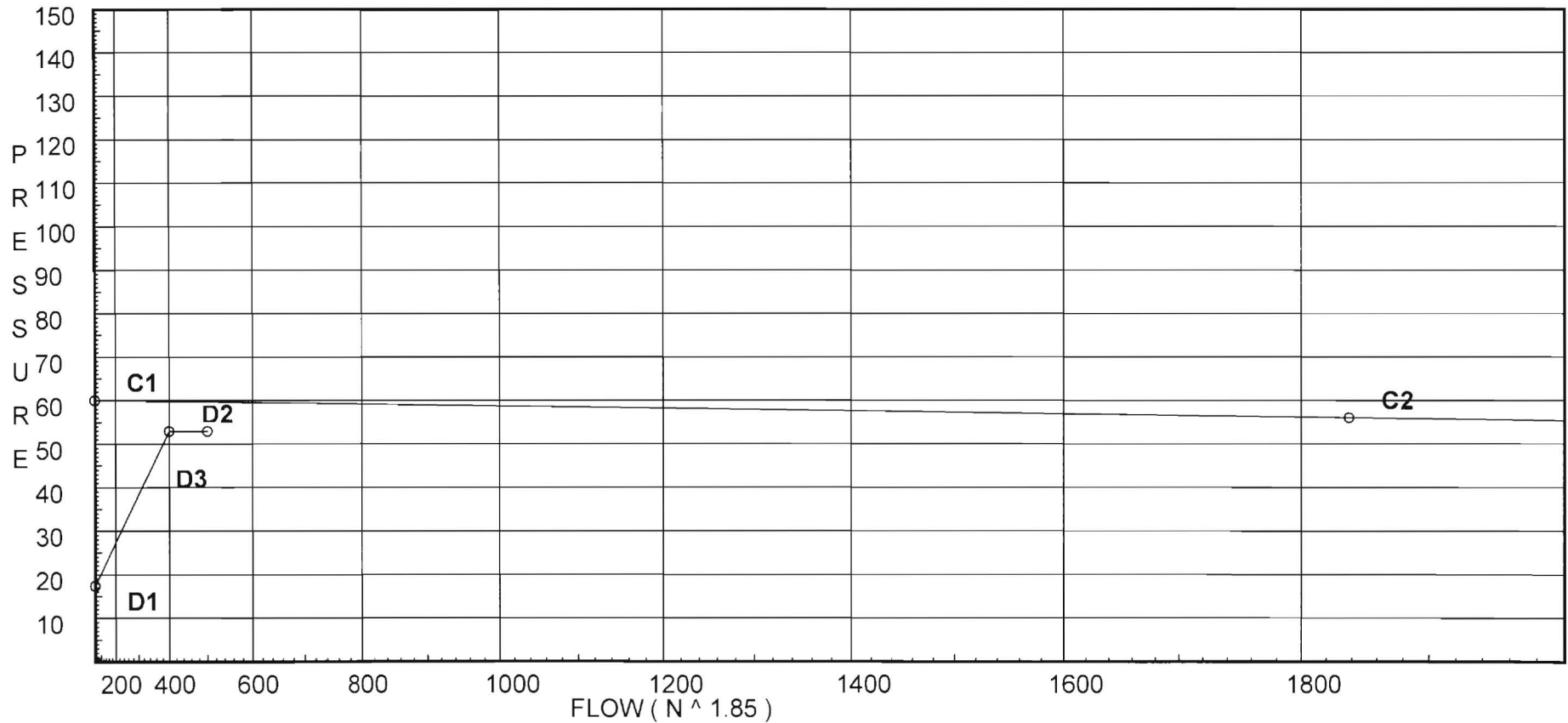
Authority having jurisdiction: STATE FIRE MARSHAL

Notes: (Include peaking information or gridded systems here.)

DESIGN AREA ADJUSTED IN ACCORDANCE WITH NFPA 13 SECT. 11.2.3.2.5
AREA INCREASED BY 30%.

City Water Supply:
 C1 - Static Pressure : 60
 C2 - Residual Pressure: 56
 C2 - Residual Flow : 1838

Demand:
 D1 - Elevation : 17.359
 D2 - System Flow : 400.2
 D2 - System Pressure : 52.884
 Hose (Adj City) :
 Hose (Demand) : 100
 D3 - System Demand : 500.2
 Safety Margin : 6.755



Fittings Used Summary

EASTERN FIRE PROTECTION
GODDARD HALL (ATTIC)

Page 3
Date

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																				
B	NFPA 13 Butterfly Valve	0	0	0	0	0	6	7	10	0	12	9	10	12	19	21	0	0	0	0	0
Dge	Dry Gem DPV-1							2.2	4.9		8.9		22								
E	NFPA 13 90° Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
G	NFPA 13 Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
I	90° Grvd-Vic Elbow #10	0	0	2	3	4	3.5	6	5	8	7	8.5	10	13	17	20	23	25	33	36	40
T	NFPA 13 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 Pressure</i>	<i>Static Pressure</i>	<i>Residual Pressure</i>	<i>Flow</i>	<i>Available Pressure</i>	<i>Total Demand</i>	<i>Required</i>
M2	60.0	56	1838.0	59.64	500.2	52.884

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>
1	136.21	5.6	10.96	18.54	
9A	136.21		10.84		
27A	136.21		10.99		
3	136.21	5.6	7.73	15.57	
4	136.21	5.6	7.73	15.57	
5	136.21	5.6	7.92	15.76	
6	136.21	5.6	8.63	16.45	
7	136.21	5.6	10.13	17.82	
2	136.21		11.56		
9	137.08	5.6	9.85	17.57	
10	137.08	5.6	9.72	17.46	
11	137.08	5.6	10.2	17.88	
13	137.08	5.6	7.1	14.92	
14	137.08	5.6	7.52	15.36	
15	137.08	5.6	8.83	16.64	
12	137.08		11.52		
17	138.0	5.6	11.64	19.11	
19	138.0	5.6	10.99	18.57	
20	138.0	5.6	11.51	19.0	
18	138.0		12.33		
22	138.0	5.6	11.75	19.2	
24	138.0	5.6	11.1	18.66	
25	138.0	5.6	11.62	19.09	
23	138.0		12.45		
27	137.08	5.6	9.98	17.69	
28	137.08	5.6	11.75	19.19	
29	137.08	5.6	12.31	19.65	
31	137.08	5.6	7.0	14.82	
32	137.08		13.89		
30	137.08		13.89		
34	136.21	5.6	7.85	15.69	
35	136.21		9.04		
37	136.21		13.29		

NODE ANALYSIS (cont.)

Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
8	134.58		15.12		
16	134.58		15.15		
21	134.58		15.24		
26	134.58		15.37		
33	134.58		15.6		
38	134.58		15.83		
39	98.08		33.57		
40	98.08		35.75		
TDR	98.08		36.57		
DPV	95.08		38.02		
HD1	93.08		40.9		
BASE	90.75		50.97		
M1	90.75		54.45		
M2	97.0		52.88	100.0	

EASTERN FIRE PROTECTION
GODDARD HALL (ATTIC)

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	*****
1 to 9A	136.210 136.210		-6.88 -6.88	1.5 1.61	1E 0.0	2.855 2.855 35.935	100 -0.0031	10.955 0.0 -0.113		Vel = 1.08	
9A to 27A	136.210 136.210		17.57 10.69	1.25 1.38	0.0 0.0	9.710 0.0 9.710	100 0.0150	10.842 0.0 0.146		Vel = 2.29	
27A to 37	136.210 136.210		17.69 28.38	1.5 1.61	1E 1T 0.0	2.855 5.71 53.105	100 0.0433	10.988 0.0 2.298		Vel = 4.47	
37			0.0 28.38					13.286		K Factor = 7.79	
1 to 2	136.210 136.210	5.60	25.42 25.42	1.5 1.61	1T 0.0	5.71 5.710 17.170	100 0.0353	10.955 0.0 0.606		Vel = 4.01	
2			0.0 25.42					11.561		K Factor = 7.48	
3 to 4	136.210 136.210	5.60	1.50 1.5	1.5 1.61	0.0 0.0	12.000 0.0 12.000	100 0.0002	7.732 0.0 0.002		Vel = 0.24	
4 to 5	136.210 136.210	5.60	15.58 17.08	1.5 1.61	1E 0.0	2.855 2.855 10.855	100 0.0170	7.734 0.0 0.184		Vel = 2.69	
5 to 6	136.210 136.210	5.60	15.76 32.84	1.5 1.61	0.0 0.0	12.500 0.0 12.500	100 0.0566	7.918 0.0 0.708		Vel = 5.18	
6 to 7	136.210 136.210	5.60	16.44 49.28	1.5 1.61	0.0 0.0	12.500 0.0 12.500	100 0.1200	8.626 0.0 1.500		Vel = 7.77	
7 to 2	136.210 136.210	5.60	17.82 67.1	1.5 1.61	1T 0.0	5.71 1.040 5.710 6.750	100 0.2126	10.126 0.0 1.435		Vel = 10.57	
2 to 8	136.210 134.580		25.42 92.52	1.5 1.61	1T 0.0	5.71 1.710 5.710 7.420	100 0.3849	11.561 0.706 2.856		Vel = 14.58	
8			0.0 92.52					15.123		K Factor = 23.79	
9 to 9A	137.080 136.210	5.60	17.57 17.57	1.25 1.38	1E 1T 0.0	2.141 4.282 6.423 16.423	100 0.0377	9.846 0.377 0.619		Vel = 3.77	
9A			0.0 17.57					10.842		K Factor = 5.34	

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	*****
10 to 11	137.080 137.080	5.60	17.46	1.25		12.710 0.0	100	9.723 0.0			
11 to 12	137.080 137.080	5.60	17.88	1.25	1T	4.282 0.0	100	10.198 0.0		Vel = 3.75	
12			35.34	1.38		0.0	0.1374	1.321		Vel = 7.58	
12			0.0 35.34					11.519		K Factor = 10.41	
13 to 14	137.080 137.080	5.60	14.92	1.25	1E 1T	2.141 4.282	100	7.102 0.0			
14 to 15	137.080 137.080	5.60	15.36	1.25		0.0 0.0	100	7.519 0.0		Vel = 3.20	
15 to 12	137.080 137.080	5.60	16.64	1.25	1T	4.282 0.0	100	8.832 0.0		Vel = 6.50	
12 to 16	137.080 134.580	5.60	46.92	1.38		0.0	0.2322	2.687		Vel = 10.06	
12			35.35	1.5	1T	5.71	100	11.519			
16			0.0 82.27	1.61		0.0	0.3097	2.543		Vel = 12.97	
16			0.0 82.27					15.145		K Factor = 21.14	
17 to 18	138 138	5.60	19.11	1.25	1T	4.282 0.0	100	11.640 0.0			
18 to 18	138 138		19.11	1.38		0.0	0.0440	0.691		Vel = 4.10	
18			0.0 19.11					12.331		K Factor = 5.44	
19 to 20	138 138	5.60	18.57	1.25		0.0 0.0	100	10.993 0.0			
20 to 18	138 138	5.60	19.00	1.25	1T	4.282 0.0	100	11.512 0.0		Vel = 3.98	
18 to 21	138 134.580		37.57	1.38		0.0	0.1539	0.819		Vel = 8.06	
18			19.10	1.5	1T	5.71	100	12.331			
21			0.0 56.67	1.61		0.0	0.1555	1.426		Vel = 8.93	
21			0.0 56.67					15.238		K Factor = 14.52	
22 to 23	138 138	5.60	19.20	1.25	1T	4.282 0.0	100	11.751 0.0			
23			19.2	1.38		0.0	0.0445	0.698		Vel = 4.12	

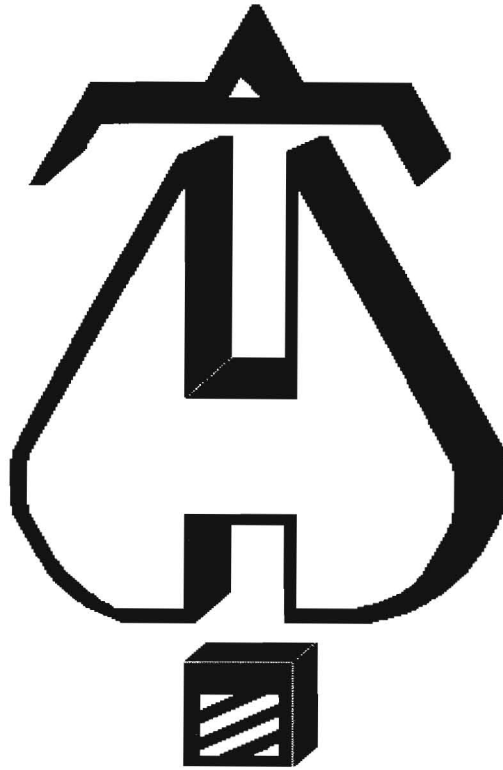
Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	***** Notes *****
23			0.0 19.20						12.449	K Factor = 5.44
24 to 25	138 138	5.60	18.66	1.25 1.38		0.0 0.0	12.420 0.0	100 0.0421	11.099 0.523	Vel = 4.00
25 to 23	138 138	5.60	19.09	1.25 1.38	1T	4.282 0.0	1.040 4.282	100 0.1554	11.622 0.827	Vel = 8.10
23 to 26	138 134.580		19.19	1.5 1.61	1T	5.71 0.0	3.460 5.710	100 0.1568	12.449 1.481	Vel = 8.97
26			0.0 56.94						15.368	K Factor = 14.52
27 to 27A	137.080 136.210	5.60	17.69	1.25 1.38	1E 1T	2.141 4.282	10.000 6.423	100 0.0382	9.984 0.377	Vel = 3.79
27A			0.0 17.69						10.988	K Factor = 5.34
28 to 29	137.080 137.080	5.60	19.19	1.25 1.38		0.0 0.0	12.710 0.0	100 0.0445	11.747 0.565	Vel = 4.12
29 to 30	137.080 137.080	5.60	19.65	1.25 1.38	1T	4.282 0.0	5.330 4.282	100 0.1638	12.312 1.574	Vel = 8.33
30			0.0 38.84						13.886	K Factor = 10.42
31 to 34	137.080 136.210	5.60	14.82	1.25 1.38	2E 1T	4.282 4.282	8.500 8.564	100 0.0275	7.000 0.377	Vel = 3.18
34			0.0 14.82						7.847	K Factor = 5.29
32 to 30	137.080 137.080		0.0	1.25 1.38	1T	4.282 0.0	20.000 4.282	100 0	13.886 0.0	Vel = 0
30 to 33	137.080 134.580		38.84	1.5 1.61	1T	5.71 0.0	2.500 5.710	100 0.0772	13.886 1.083	Vel = 6.12
33			0.0 38.84						15.603	K Factor = 9.83
3 to 34	136.210 136.210		14.07	1.5 1.61		0.0 0.0	9.710 0.0	100 0.0118	7.732 0.0	Vel = 2.22

EASTERN FIRE PROTECTION
GODDARD HALL (ATTIC)

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	*****
34 to 35	136.210 136.210	5.60	30.50	1.5		0.0	12.000	100	7.847			
						0.0	0.0		0.0			
35 to 37	136.210 136.210		44.57	1.61		0.0	12.000	0.0997	1.196	Vel =	7.02	
			0.0	1.5	1E	2.855	34.000	100	9.043			
					1T	5.71	8.565		0.0			
37 to 38	136.210 136.210		44.57	1.61		0.0	42.565	0.0997	4.243	Vel =	7.02	
			28.38	1.5	1T	5.71	1.710	100	13.286			
						0.0	5.710		0.706			
38 to 38	134.580 134.580		72.95	1.61		0.0	7.420	0.2480	1.840	Vel =	11.50	
			0.0									
			72.95						15.832	K Factor =	18.33	
8 to 16	134.580 134.580		92.52	4		0.0	6.580	100	15.123			
						0.0	0.0		0.0			
16 to 21	134.580 134.580		92.52	4.26		0.0	6.580	0.0033	0.022	Vel =	2.08	
			82.26	4		0.0	8.500	100	15.145			
						0.0	0.0		0.0			
21 to 26	134.580 134.580		174.78	4.26		0.0	8.500	0.0109	0.093	Vel =	3.93	
			56.68	4		0.0	7.080	100	15.238			
						0.0	0.0		0.0			
26 to 33	134.580 134.580		231.46	4.26		0.0	7.080	0.0184	0.130	Vel =	5.21	
			56.94	4		0.0	8.500	100	15.368			
						0.0	0.0		0.0			
33 to 38	134.580 134.580		288.4	4.26		0.0	8.500	0.0276	0.235	Vel =	6.49	
			38.84	4		0.0	6.580	100	15.603			
						0.0	0.0		0.0			
38 to 39	134.580 98.080		327.24	4.26		0.0	6.580	0.0348	0.229	Vel =	7.37	
			72.96	4	2I	13.156	24.980	100	15.832			
						0.0	13.157		15.808			
39 to 40	98.080 98.080		400.2	4.26		0.0	38.137	0.0506	1.930	Vel =	9.01	
			0.0	4	1I	6.578	36.500	100	33.570			
						0.0	6.578		0.0			
40 to TDR	98.080 98.080		400.2	4.26		0.0	43.078	0.0506	2.180	Vel =	9.01	
			0.0	4	2I	13.156	3.000	100	35.750			
						0.0	13.157		0.0			
TDR to DPV	98.080 95.080		400.2	4.26		0.0	16.157	0.0506	0.817	Vel =	9.01	
			0.0	4		0.0	3.000	100	36.567			
						0.0	0.0		1.299			
DPV to HD1	95.080 93.080		400.2	4.26		0.0	3.000	0.0507	0.152	Vel =	9.01	
			0.0	4	1Dge	11.719	2.000	120	38.018			
					1B	15.8	53.853		0.866			
			400.2	4.26	1T	26.334	55.853	0.0361	2.017	Vel =	9.01	

EASTERN FIRE PROTECTION
 GODDARD HALL (ATTIC)

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 *****
HD1 to BASE	93.080 90.750		0.0 400.2	4 4.26	1T	26.334	3.000 0.0 26.334 29.334	120 0.0361	40.901 9.009 1.060	* Fixed loss = 8 Vel = 9.01
BASE to M1	90.750 90.750		0.0 400.2	4 4.1	1E 1T 1G	14.534 29.067 2.907	60.000 46.508 106.508	140 0.0327	50.970 0.0 3.484	Vel = 9.73
M1 to M2	90.750 97		0.0 400.2	6 6.16	1T 1G	43.037 4.304	205.000 47.341 252.341	140 0.0045	54.454 -2.707 1.137	Vel = 4.31
M2			100.00 500.20						52.884	Qa = 100.00 K Factor = 68.78



... Fire Protection by Computer Design

EASTERN FIRE PROTECTION
170 KITTY HAWK AVE
P.O. BOX 1390
AUBURN, MAINE 04210
207-784-1507

Job Name : GODDARD HALL (LOWER LEVEL)
Drawing : 1 OF 3
Location : UNE PORTLAND, MAINE
Remote Area : 3
Contract : AU-4671-11
Data File : 4671 LOWER LEVEL.WXF

HYDRAULIC CALCULATIONS
for

Project name: GODDARD HALL (LOWER LEVEL)
Location: UNE PORTLAND, MAINE
Drawing no: 1 OF 3
Date: 6/14/11

Design

Remote area number: 3
Remote area location: LOWER LEVEL
Occupancy classification: LIGHT
Density: .1 - Gpm/SqFt
Area of application: 950 - SqFt
Coverage per sprinkler: 168 - SqFt
Type of sprinklers calculated: TYCO TY-FRB K=5.6 WHITE PENDENT
No. of sprinklers calculated: 8
In-rack demand: - GPM
Hose streams: 100 - GPM
Total water required (including hose streams): 242 - GPM @ 29.765 - Psi
Type of system: WET
Volume of dry or preaction system: - Gal

Water supply information

Date: 10/15/07
Location: STEVENS AVE.
Source: PORTLAND WATER DISTRICT

Name of contractor: EASTERN FIRE PROTECTION
Address: 170 KITTY HAWK AVE / P.O. BOX 1390 / AUBURN, MAINE 04210
Phone number: 207-784-1507
Name of designer: RCB
Authority having jurisdiction: STATE FIRE MARSHAL
Notes: (Include peaking information or gridded systems here.)
REMOTE AREA PER NFPA 13(2010) SECT. 11.2.3.2.3.1

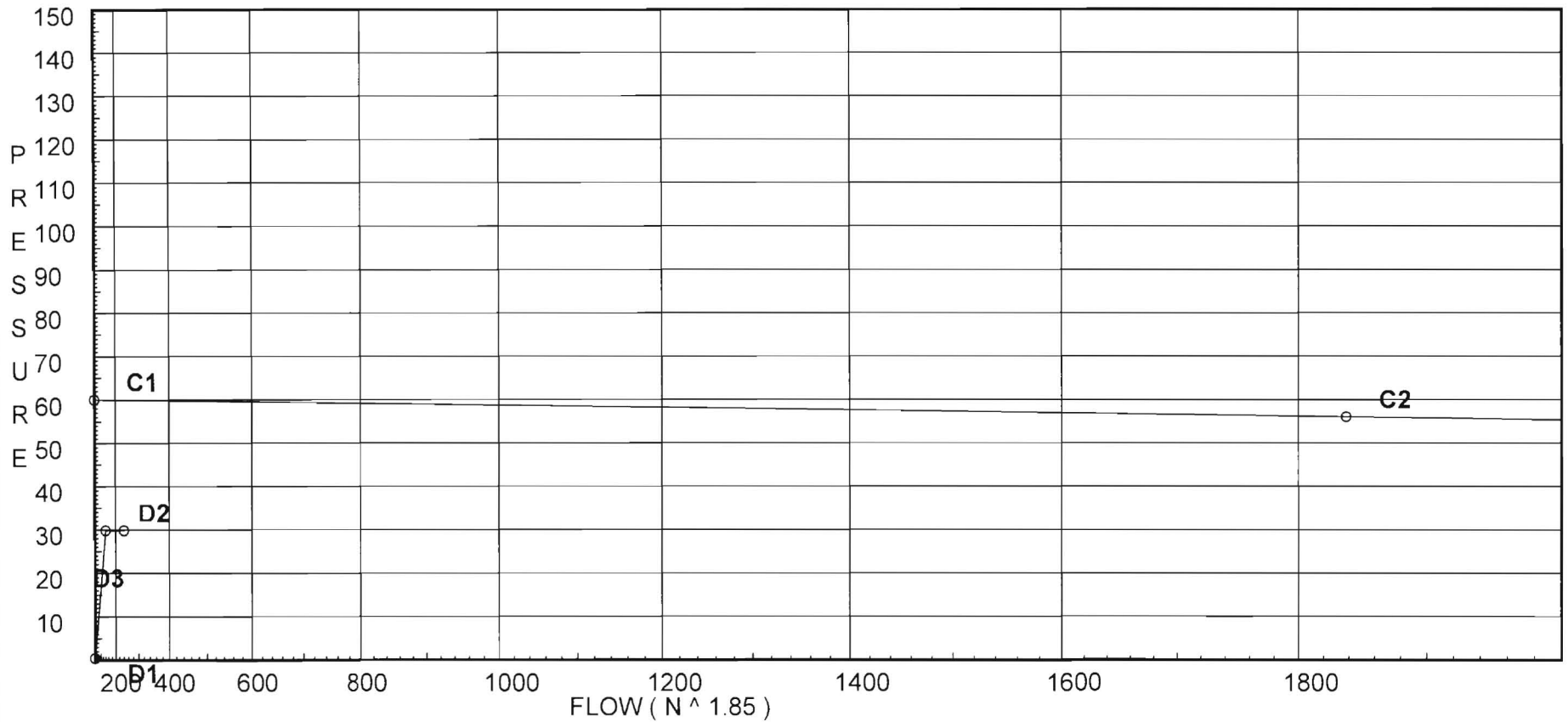
Water Supply Curve (C)

EASTERN FIRE PROTECTION
GODDARD HALL (LOWER LEVEL)

Page 2
Date

City Water Supply:
C1 - Static Pressure : 60
C2 - Residual Pressure: 56
C2 - Residual Flow : 1838

Demand:
D1 - Elevation : 0.450
D2 - System Flow : 142.092
D2 - System Pressure : 29.765
Hose (Adj City) :
Hose (Demand) : 100
D3 - System Demand : 242.092
Safety Margin : 30.141



Fittings Used Summary

EASTERN FIRE PROTECTION
 GODDARD HALL (LOWER LEVEL)

Page 3
 Date

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
B	NFPA 13 Butterfly Valve	0	0	0	0	0	6	7	10	0	12	9	10	12	19	21	0	0	0	0	0
E	NFPA 13 90' Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
Fsp	Flow Switch Potter VSR	Fitting generates a Fixed Loss Based on Flow																			
G	NFPA 13 Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
I	90' Grvd-Vic Elbow #10	0	0	2	3	4	3.5	6	5	8	7	8.5	10	13	17	20	23	25	33	36	40
T	NFPA 13 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 Pressure</i>	<i>Static Pressure</i>	<i>Residual Pressure</i>	<i>Flow</i>	<i>Available Pressure</i>	<i>Total Demand</i>	<i>Required</i>
M2	60.0	56	1838.0	59.906	242.09	29.765

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>
DRP1	0.0	5.6	7.0	14.82	
DRP2	0.0	5.6	9.0	16.8	
DRP3	0.0	5.6	7.0	14.82	
L1	98.04	5.4	7.9	15.17	K=K @ LIN1
L2	98.04	5.6	7.34	15.17	
L3	98.04		7.98		
L4	98.04	5.32	10.51	17.24	K=K @ LIN2
L5	98.04	5.32	12.89	19.1	K=K @ LIN2
L7	98.04	5.32	9.97	16.8	K=K @ LIN2
L8	98.04	5.32	11.29	17.88	K=K @ LIN2
L9	98.04		15.62		
L11	98.04	5.3	14.45	20.14	K=K @ LIN3
L12	98.04	5.3	15.11	20.59	K=K @ LIN3
L6	98.04		16.25		
L10	98.04		16.41		
L13	98.04		16.8		
TOR	98.04		19.82		
HD2	93.08		26.63		
BASE	90.75		31.79		
M1	90.75		32.3		
M2	97.0		29.76	100.0	

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 *****
DRP1 to LIN1	0 0	5.60	14.82 14.82	1 1.049	3E	6.0 0.0	1.180 6.000 7.180	120	7.000 0.0 0.536	Vel = 5.50
LIN1			0.0 14.82						7.536	K Factor = 5.40
DRP2 to LIN2	0 0	5.60	16.80 16.8	1 1.049	2E 1T	4.0 5.0 0.0	1.330 9.000 10.330	120	9.000 0.0 0.974	Vel = 6.24
LIN2			0.0 16.80						9.974	K Factor = 5.32
DRP3 to LIN3	0 0	5.60	14.82 14.82	1 1.049	2E 1T	4.0 5.0 0.0	2.000 9.000 11.000	120	7.000 0.0 0.822	Vel = 5.50
LIN3			0.0 14.82						7.822	K Factor = 5.30
L1 to L3	98.040 98.040	5.4	15.17 15.17	1 1.049		0.0 0.0 0.0	1.000 0.0 1.000	120	7.897 0.0 0.078	K = K @ LIN1 Vel = 5.63
L3			0.0 15.17						7.975	K Factor = 5.37
L2 to L3	98.040 98.040	5.60	15.17 15.17	1 1.049		0.0 0.0 0.0	8.120 0.0 8.120	120	7.342 0.0 0.633	Vel = 5.63
L3 to L4	98.040 98.040		15.17 30.34	1 1.049		0.0 0.0 0.0	9.000 0.0 9.000	120	7.975 0.0 2.532	Vel = 11.26
L4 to L5	98.040 98.040	5.32	17.24 47.58	1.25 1.38		0.0 0.0 0.0	14.000 0.0 14.000	120	10.507 0.0 2.382	K = K @ LIN2 Vel = 10.21
L5 to L6	98.040 98.040	5.32	19.10 66.68	1.5 1.61	1T	8.0 0.0 0.0	14.420 8.000 22.420	120	12.889 0.0 3.361	K = K @ LIN2 Vel = 10.51
L6			0.0 66.68						16.250	K Factor = 16.54
L7 to L8	98.040 98.040	5.32	16.80 16.8	1 1.049		0.0 0.0 0.0	14.000 0.0 14.000	120	9.974 0.0 1.319	K = K @ LIN2 Vel = 6.24
L8 to L9	98.040 98.040	5.32	17.88 34.68	1 1.049		0.0 0.0 0.0	12.000 0.0 12.000	120	11.293 0.0 4.323	K = K @ LIN2 Vel = 12.87
L9 to L10	98.040 98.040		0.0 34.68	1.25 1.38	1T	6.0 0.0 0.0	2.420 6.000 8.420	120	15.616 0.0 0.797	Vel = 7.44

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	*****
L10			0.0 34.68						16.413		K Factor = 8.56	
L11 to L12	98.040 98.040	5.3	20.14	1.25	1E	3.0	16.000 0.0 3.000	120	14.452 0.0		K = K @ LIN3	
L12 to L13	98.040 98.040	5.3	20.59	1.5	1E 1T	4.0 8.0	16.120 12.000	120	15.111 0.0		K = K @ LIN3	
L13			40.73	1.61		0.0	28.120	0.0602	1.693		Vel = 6.42	
L13			0.0 40.73						16.804		K Factor = 9.94	
L6 to L10	98.040 98.040		66.68	2.5		0.0	12.000 0.0 0.0	120	16.250 0.0			
L10 to L13	98.040 98.040		66.68	2.635		0.0	12.000 0.0 8.237	0.0136	0.163		Vel = 3.92	
L10 to L13	98.040 98.040		34.68	2.5	1I	8.237	5.000 0.0 8.237	120	16.413 0.0			
L13 to TOR	98.040 98.040		101.36	2.635		0.0	13.237	0.0295	0.391		Vel = 5.96	
L13 to TOR	98.040 98.040		40.73	2.5	3I	24.711	29.920 0.0 24.711	120	16.804 0.0			
TOR to HD2	98.040 93.080		142.09	2.635		0.0	54.631	0.0552	3.014		Vel = 8.36	
TOR to HD2	98.040 93.080		0.0	2.5	1B 1Fsp	9.61	4.000 0.0 26.084	120	19.818 5.148		* Fixed loss = 3	
HD2 to BASE	93.080 90.750		142.09	2.635	1T	16.474	30.084 0.0 26.334	0.0552	1.660		Vel = 8.36	
HD2 to BASE	93.080 90.750		0.0	4	1T	26.334	3.000 0.0 26.334	120	26.626 5.009		* Fixed loss = 4	
BASE to M1	90.750 90.750		142.09	4.26		0.0	29.334	0.0053	0.156		Vel = 3.20	
BASE to M1	90.750 90.750		0.0	4	1E 1T	14.534	60.000 29.067 46.508	140	31.791 0.0			
M1 to M2	90.750 97		142.09	4.1	1G 1T	2.907	106.508 43.037 47.341	0.0048	0.513		Vel = 3.45	
M1 to M2	90.750 97		0.0	6	1G 1T	4.304	205.000 43.037 47.341	140	32.304 -2.707			
M2			142.09	6.16		0.0	252.341	0.0007	0.168		Vel = 1.53	
M2			100.00 242.09						29.765		Qa = 100.00 K Factor = 44.37	



CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

July 13 2011

Received from Eastern Fire Protection Co.

Location of Work 414 Stevens Ave

Cost of Construction \$ _____ Building Fee: _____

Permit Fee \$ _____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: _____

Building (IL) Plumbing (I5) _____ Electrical (I2) _____ Site Plan (U2) _____

Other _____

CBL: 145 A003

Check #: 1068997 Total Collected \$ 480.00

**No work is to be started until permit issued.
Please keep original receipt for your records.**

Taken by: Heyle

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy