

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND

BUILDING PERMIT

This is to certify that HIGH TECH FIRE PROTECTION
of PO Box 156, Minot, Maine 04258

For installation at 443 CONGRESS ST, FLRS 2 & 3
Clapp Building

Job ID: 2011-08-1925-FAFS

CBL: 027 - - B - 002 - 001 - - - -

has permission to install a supervised, 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


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**

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 OCCUOPIED.



PORTLAND MAINE

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

Director of Planning and Urban Development
Penny St. 1.015

Job ID: 2011-08-1925-FAFS
Installation of a supervised,
automatic sprinkler system

For installation at:
443 CONGRESS ST, FLRS 2 & 3
Clapp Building

CBL: 027 - - B - 002 - 001 - - - -

Conditions of Approval:

Fire

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.

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 Standpipe system shall be installed in accordance with NFPA 14. A signed compliance letter will be required.

City of Portland, Maine - Building or Use Permit Application

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

Job No: 2011-08-1925-FAFS	Date Applied: 8/4/2011	CBL: 027 - - B - 002 - 001 - - - -	
Location of Construction: 443 CONGRESS ST	Owner Name: 433 CONGRESS STREET LLC	Owner Address: 443 CONGRESS ST PORTLAND, ME - MAINE 04101	Phone:
Business Name:	Contractor Name: High Tech Fire Protection	Contractor Address: PO Box 156, Minot, ME 04258	Phone: 998-2551
Lessee/Buyer's Name:	Phone:	Permit Type: FAFS	Zone: B-3
Past Use: 2 nd & 3 rd floor office	Proposed Use: Same: 2 nd & 3 rd floor offices - to install fire suppression system on these floors	Cost of Work: \$25,000.00	CEO District:
		Fire Dept: <input checked="" type="checkbox"/> Approved w/ conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: Type:
Proposed Project Description: fire suppression system		Signature: <i>[Signature]</i> (SB)	
Proposed Project Description: fire suppression system		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Gayle		Zoning Approval	

Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland	<input type="checkbox"/> Variance	<input type="checkbox"/> Not in Dist or Landmark
<input type="checkbox"/> Wetlands	<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Does not Require Review
<input type="checkbox"/> Flood Zone	<input type="checkbox"/> Conditional Use	<input type="checkbox"/> Requires Review
<input type="checkbox"/> Subdivision	<input type="checkbox"/> Interpretation	<input type="checkbox"/> Approved
<input type="checkbox"/> Site Plan	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved w/Conditions
<input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM	<input type="checkbox"/> Denied	<input type="checkbox"/> Denied
Date: <i>[Signature]</i> 8/9/11	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 081925

Fire Suppression System Permit

RECEIVED

AUG - 4 2011

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.

Dept. of Building Inspections
City of Portland Maine

Installation address: 443 Congress Street CBL: 027 B002
 Exact location: (within structure) 2nd + 3rd floor
 Type of occupancy(s) (NFPA & ICC): Light Hazard "Office"
 Building owner: _____
 Managing Supervisor: Ed Poulin License No: 515
 Supervisor phone: 207-998-2551 E-mail: epoulin@fairpoint.net
 Installing contractor: High Tech Fire Protection License No: 102
 Contractor phone: 207-998-2551 E-mail: HTFP@fairpoint.net
 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: 9562
 NFPA Standard will this system is designed to: 13 2007 ed. Edition: 2007 ed.

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

Download a new copy of this document from Inspection Division on-line at www.portlandmaine.gov for every submittal. Attach all design information and complete approved submittals as may be required by the State Fire Marshal's Office on 11X17 copies or 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.

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).

COST OF WORK: 25,000
 PERMIT FEE: \$270
 (\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

Applicant signature: Edward M Poulin Date: 7-28-11

High Tech Fire Protection

Po Box 156 Minot, Maine 04258

Tel: 207-998-2551

Fax: 207-998-4187

To: Building Inspection Department
389 Congress Street Room 315
Portland, ME
04101

Letter of Transmittal

Date: 6-27-11	Job No.
Attention: Building Inspection Department	
Re: 443 Congress Street 2 nd & 3 rd Floor Planned Parenthood Tenant fit up	

We are sending you

- Owners Manuals Preliminary Plans Asbuilt Plans Hydraulic Calculations
 Product Data Permit Check _____

Copies	Date	No.	Description
1	6-27-11		Permit Application
1	6-27-11		Permit Check
1	6-27-11		Preliminary Plan
1	6-27-11		Hydraulic Calculations

These are Transmitted as checked below:

- For Approval For your use Return _____ corrected copy
 As requested For review and comment _____

Comments: No exterior building work.

Signed: Ed Poulin Ed Poulin



... Fire Protection by Computer Design

HIGH TECH FIRE PROTECTION
P.O. BOX 156 MINOT, ME 04258
84 HACKETT MILLS ROAD
POLAND, ME 04274
207-998-2551

Job Name : PLANNED PARENTHOOD 2ND FLOOR
Building : FP-01
Location : 443 Congress Street Portland, ME
System : #2
Contract : 042811-1
Data File : 2nd Floor.WXF

HYDRAULIC CALCULATIONS
for

Project name: PLANNED PARENTHOOD 2nd FLOOR
Location: 443 Congress Street Portland, ME
Drawing no: FP-01
Date: 6/24/11

Design

Remote area number: #2
Remote area location: Second Floor Waiting 205
Occupancy classification: Light Hazard
Density: .1 - Gpm/SqFt
Area of application: 900 - SqFt
Coverage per sprinkler: 196 - SqFt
Type of sprinklers calculated: Pendent Quick Response
No. of sprinklers calculated: 10
In-rack demand: N/A - GPM
Hose streams: 100 - GPM
Total water required (including hose streams): 328 - GPM @ 67 - Psi
Type of system: Wet System Zoned by Floor
Volume of dry or preaction system: N/A - Gal

Water supply information

Date: 8-11-2009
Location: Corner of Congress and Elm Street
Source: Portland Water District.

Name of contractor: HIGH TECH FIRE PROTECTION
Address: P.O. BOX 156 MINOT, ME 04258 / 84 HACKETT MILLS ROAD / POLAN
Phone number: 207-998-2551
Name of designer: Ed Poulin
Authority having jurisdiction: State of Maine & City of Portland
Notes: (Include peaking information or gridded systems here.)

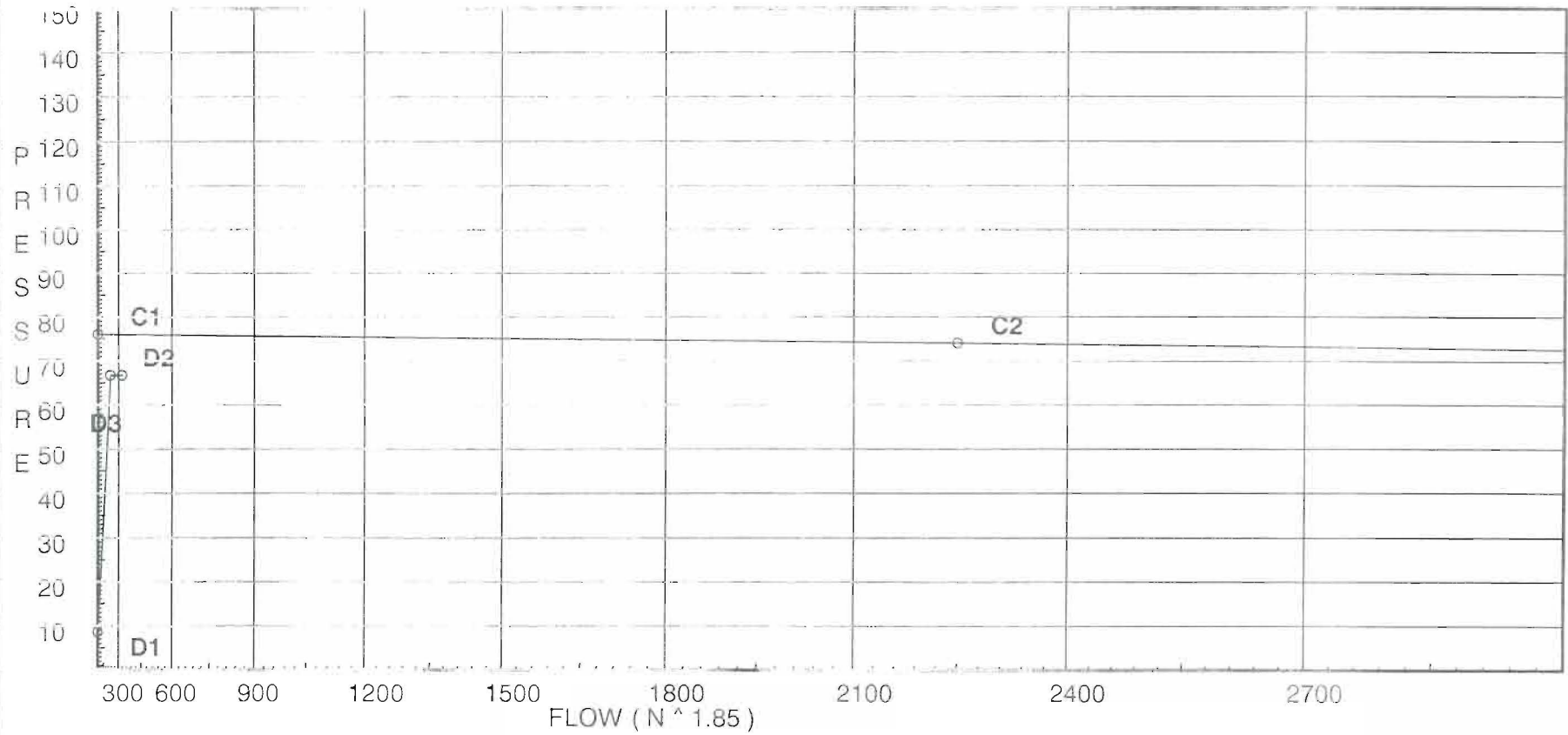
Water Supply Curve (C)

HIGH TECH FIRE PROTECTION
PLANNED PARENTHOOD 2ND FLOOR

Page 2
Date 6/24/11

City Water Supply:
C1 - Static Pressure : 76
C2 - Residual Pressure: 74
C2 - Residual Flow : 2250

Demand:
D1 - Elevation : 8.662
D2 - System Flow : 227.524
D2 - System Pressure : 66.659
Hose (Adj City) :
Hose (Demand) : 100
D3 - System Demand : 327.524
Safety Margin : 9.285



Fittings Used Summary

HIGH TECH FIRE PROTECTION
 PLANNED PARENTHOOD 2ND FLOOR

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 Date 6/24/11

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	
Abbrev.	Name																				
24																					
A	Generic Alarm Valve	0	0	0	0	0	0	7.7	21.5	0	17	17	27	29	0	0	0	0	0	0	0
B	Generic Butterfly Valve	0	0	0	0	0	0	7	10	0	12	9	10	12	19	21	0	0	0	0	0
E	90' Standard Elbow	2	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	0
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																					
N*	CPVC 90'Ell Harvel-Spears	7	7	7	8	9	11	12	13	0	0	0	0	0	0	0	0	0	0	0	0
O*	CPVC Tee - Branch	3	3	5	6	6	10	12	15	0	0	0	0	0	0	0	0	0	0	0	0
R*	CPVC Coupling Tee - Run	1	1	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
S	Generic Swing Check Valve	4	5	5	7	9	11	14	16	19	22	27	32	45	55	65	76	87	98	109	
130																					
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																					
V	90' Ell Firelock #001	0	0	0	0	0	3.5	4.3	5	0	6.8	8.5	10	13	0	0	0	0	0	0	0
Z	Generic Flow Switch	2	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	0
61																					

Units Summary

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

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

HIGH TECH FIRE PROTECTION
PLANNED PARENTHOOD 2ND FLOOR

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
DP1	-1.0	5.6	12.25	na	19.6	0.1	196	7.0
200	20.0	K = K @ EQ01	12.8	na	19.6			
201	20.0	K = K @ EQ01	13.62	na	20.22			
202	20.0		14.11	na				
203	20.0		19.58	na				
204	20.0		20.59	na				
210	20.0	K = K @ EQ01	13.18	na	19.89			
211	20.0	K = K @ EQ01	14.42	na	20.8			
212	20.0	K = K @ EQ01	17.21	na	22.72			
213	20.0	K = K @ EQ01	19.21	na	24.01			
220	20.0	K = K @ EQ01	16.96	na	22.56			
221	20.0	K = K @ EQ01	18.23	na	23.39			
222	20.0	K = K @ EQ01	21.72	na	25.53			
230	20.0	K = K @ EQ01	27.63	na	28.8			
231	20.0		28.83	na				
205	20.0		21.13	na				
214	20.0		21.82	na				
223	20.0		23.97	na				
235	20.0		30.04	na				
240	20.0		44.96	na				
241	20.0		52.91	na				
242	20.0		53.95	na				
243	20.0		55.11	na				
250	10.0		60.03	na				
TOR	10.0		61.58	na				
BOR	4.0		64.52	na				
BASE	0.0		66.27	na				
H1	0.0		66.42	na				
H2	4.0		64.92	na	100.0			
TEST	0.0		66.66	na				

The maximum velocity is 23.17 and it occurs in the pipe between nodes 235 and 240

HIGH TECH FIRE PROTECTION
 PLANNED PARENTHOOD 2ND FLOOR

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	***** Notes *****
DP1 to EQ01	19.60 150.0 19.6 0.0 19.60	1.101 0.0655	2N 14.0 0.0	1.000 14.000 15.000	12.250 -0.433 0.983		K Factor = 5.60 Vel = 6.60
200 to 202	19.60 150.0 19.6 0.0 19.60	1.101 0.0656	1N 7.0 1R 1.0 0.0	12.000 8.000 20.000	12.800 0.0 1.311		K Factor @ node EQ01 Vel = 6.60
201 to 202	20.22 150.0 20.22 0.0 19.60	1.101 0.0694	1O 5.0 0.0 0.0	2.000 5.000 7.000	13.625 0.0 0.486		K Factor @ node EQ01 Vel = 6.81
202 to 203	19.60 150.0 39.82 0.0 1.394 150.0 39.82 0.0772	1.101 0.2432	2N 14.0 1R 1.0 0.0	7.500 15.000 22.500	14.111 0.0 5.473		Vel = 13.42
203 to 204	0.0 1.394 150.0 39.82 0.0772	1.394 0.0772	1R 1.0 0.0	12.000 1.000 13.000	19.584 0.0 1.003		Vel = 8.37
204 to 205	0.0 1.394 150.0 39.82 0.0770	1.394 0.0770	1O 6.0 0.0	1.000 6.000 7.000	20.587 0.0 0.539		Vel = 8.37
210 to 211	0.0 39.82 19.89 1.101 150.0 19.89 0.0673	1.101 0.0673	1N 7.0 1R 1.0 0.0	10.500 8.000 18.500	13.176 0.0 1.245		K Factor = 8.66 K Factor @ node EQ01 Vel = 6.70
211 to 212	20.80 150.0 40.69 0.2532	1.101 0.2532	1R 1.0 0.0	10.000 1.000 11.000	14.421 0.0 2.785		K Factor @ node EQ01 Vel = 13.71
212 to 213	22.72 150.0 63.41 0.1823	1.394 0.1823	1R 1.0 0.0	10.000 1.000 11.000	17.206 0.0 2.005		K Factor @ node EQ01 Vel = 13.33
213 to 214	24.02 150.0 87.43 0.3303	1.394 0.3303	1O 6.0 0.0	1.900 6.000 7.900	19.211 0.0 2.609		K Factor @ node EQ01 Vel = 18.38
220 to 221	0.0 87.43 22.56 1.101 150.0 22.56 0.0850	1.101 0.0850	1R 1.0 0.0	14.000 1.000 15.000	18.956 0.0 1.275		K Factor = 18.72 K Factor @ node EQ01 Vel = 7.60

HIGH TECH FIRE PROTECTION
 PLANNED PARENTHOOD 2ND FLOOR

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Fng's Total	Pt Pe Pf	Pt Pv Pn	***** Notes *****
221	23.39	1.101	1R 1.0	10.000	18.231		K Factor @ node EQ01
to		150.0	0.0	1.000	0.0		
222	45.95	0.3170	0.0	11.000	3.487		Vel = 15.48
222	25.53	1.394	1N 8.0	1.900	21.718		K Factor @ node EQ01
to		150.0	0.0	8.000	0.0		
223	71.48	0.2276	0.0	9.900	2.255		Vel = 15.03
	0.0						
	71.48				29.971		K Factor = 14.60
230	28.80	1.101	1R 1.0	8.000	27.930		K Factor @ node EQ01
to		150.0	0.0	1.000	0.0		
231	28.8	0.1336	0.0	9.000	7.202		Vel = 9.71
231	0.0	1.394	3R 3.0	19.500	28.932		
to		150.0	1O 9.0	9.000	0.0		
235	28.8	0.0423	0.0	28.500	1.206		Vel = 6.05
	0.0						
	28.80				30.038		K Factor = 5.25
205	39.82	1.394	1R 1.0	8.000	21.126		
to		150.0	0.0	1.000	0.0		
214	39.82	0.0771	0.0	9.000	0.694		Vel = 8.37
214	87.43	2.003	1O 10.0	9.000	21.920		
to		150.0	0.0	10.000	0.0		
223	127.25	0.1132	0.0	19.000	2.151		Vel = 12.96
223	71.48	2.003	1N 11.0	10.500	29.971		
to		150.0	2R 2.0	13.000	0.0		
235	198.73	0.2582	0.0	23.500	6.067		Vel = 20.23
235	28.79	2.003	2R 2.0	33.000	30.038		
to		150.0	1O 10.0	12.000	0.0		
240	227.52	0.3317	0.0	45.000	14.925		Vel = 23.17
240	0.0	2.003	1T 12.965	11.000	44.963		
to		150.0	0.0	12.965	0.0		
241	227.52	0.3317	0.0	23.965	7.248		Vel = 23.17
241	0.0	3.26	1T 20.159	2.000	50.911		
to		120.0	0.0	20.159	0.0		
242	227.52	0.0468	0.0	22.159	1.436		Vel = 8.75
242	0.0	4.26	1B 13.3	7.000	50.947		
to		120.0	1Z 13.167	84.269	0.0		
243	227.52	0.0127	1S 28.968	91.269	1.159		Vel = 5.12
			1T 26.334				
243	0.0	4.26	4V 35.814	11.000	51.06		
to		120.0	0.0	35.814	0.31		
250	227.52	0.0127	0.0	46.814	0.05		Vel = 5.12

HIGH TECH FIRE PROTECTION
 PLANNED PARENTHOOD 2ND FLOOR

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftg's Total	Pt Pv Pn	*****	Notes *****
250	0.0	4.26	8V 71.629	50.000	6.32		
to TOR	227.52	120.0 0.0127	0.0	71.629			
			0.0	121.629	6.45		Vel = 5.12
TOR	0.0	4.26	1A 22.384	5.000	6.77		
to BOR	227.52	120.0 0.0127	0.0	22.384	6.99		
			0.0	27.384	7.46		Vel = 5.12
BOR	0.0	6.065	1G 3.0	3.000	6.24		
to BASE	227.52	120.0 0.0023	0.0	3.000	6.32		
			0.0	6.000	6.14		Vel = 2.53
BASE	0.0	6.16	1G 4.304	30.000	6.70		
to H1	227.52	140.0 0.0016	1T 43.037	67.425	6.54		
			1E 20.084	97.425	6.54		Vel = 2.45
H1	0.0	6.16	1T 43.037	100.000	6.34		
to H2	227.52	140.0 0.0016	0.0	43.037	6.32		
			0.0	143.037	7.26		Vel = 2.45
H2	100.00	16.41	1T 162.959	30.000	6.32		Qa = 100
to TEST	327.52	140.0 0.0	1E 82.4	265.740	6.32		
			1G 16.48	295.740	6.09		Vel = 0.50
	0.0						
	327.52				6.89		K Factor = 40.12



... Fire Protection by Computer Design

HIGH TECH FIRE PROTECTION
P.O. BOX 156 MINOT, ME 04258
84 HARRIS MILLS ROAD
ROSLAND, ME 04274
207-998-1111

Job Name : PLANNED PARENTHOOD 3rd FLOOR
Building : FP-01
Location : 443 Congress Street Portland, ME
System : #3
Contract : 042811-1
Data File : 3rd Floor.WXF

HYDRAULIC CALCULATIONS

1

Project name: PLANNED PARENTHOOD 3rd FLOOR
Location: 443 Congress Street Portland, ME
Drawing no: FP-01
Date: 6/24/11

Design

Remote area number: #3
Remote area location: Third Floor Gallery / 313 Open Room
Occupancy classification: Light Hazard
Density: .1 - Gpm/SqFt
Area of application: 900 - SqFt
Coverage per sprinkler: 196 - SqFt
Type of sprinklers calculated: Upright Class 1
No. of sprinklers calculated: 7
In-rack demand: N/A - GPM
Hose streams: 100 - GPM
Total water required (including hose streams): 254 - GPM @ 61 - Psi
Type of system: Wet System Zoned by Floor
Volume of dry or preaction system: N/A - Gal

Water supply information

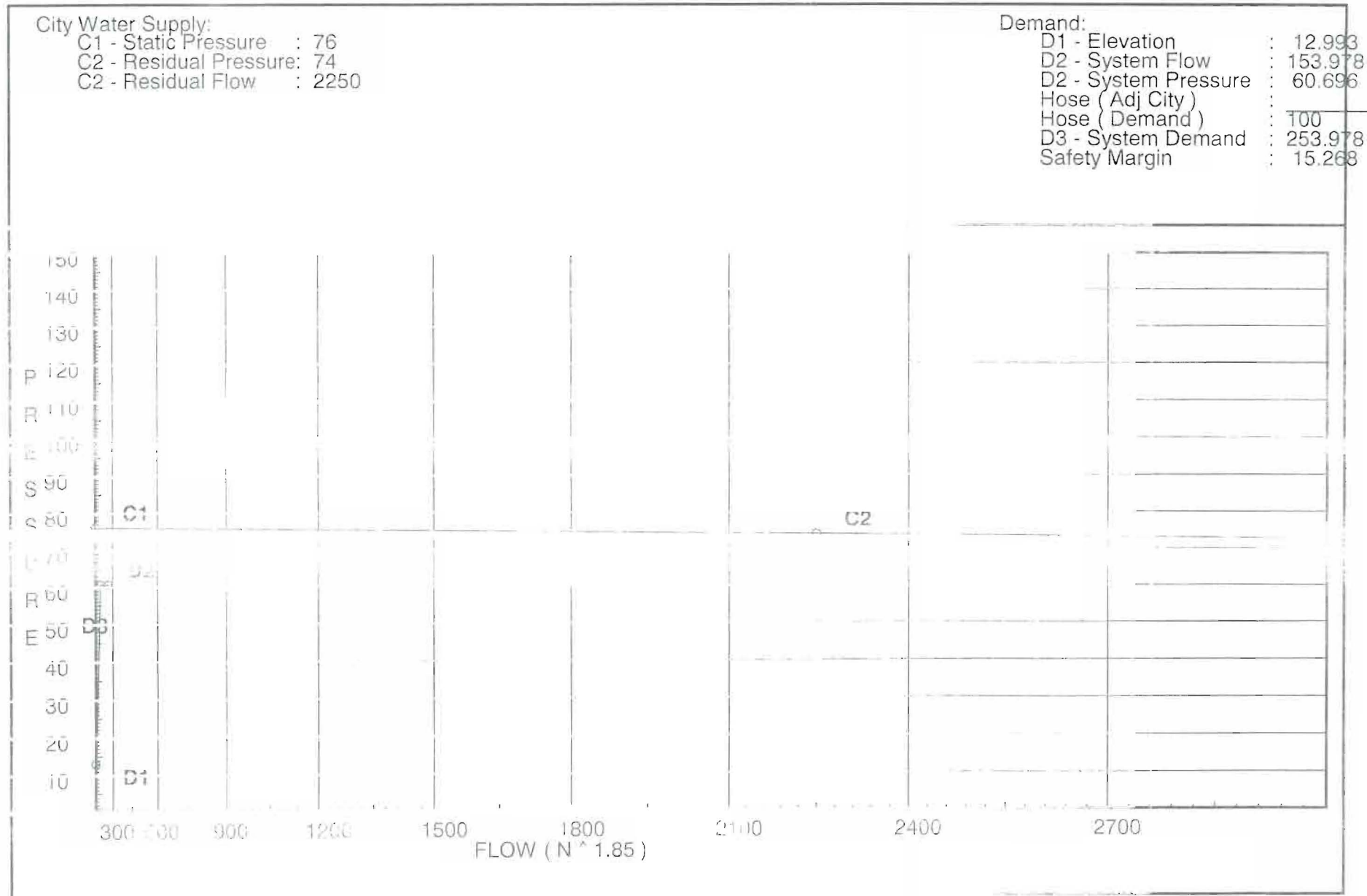
Date: 8-11-2009
Location: Corner of Congress and Elm Street
Source: Portland Water District.

Name of contractor: HIGH TECH FIRE PROTECTION
Address: P.O. BOX 156 MINUIT, ME 04238 / 84 HACKNEY MILLS ROAD / POLAND
Phone number: 207-998-2551
Name of designer: Ed Poulin
Authority having jurisdiction: State of Maine & City of Portland
Notes: (Include peaking information or gridded systems here.)

Water Supply Curve (C)

HIGH TECH FIRE PROTECTION
 PLANNED PARENTHOOD 3rd FLOOR

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 Date 6/24/11



Fittings Used Summary

HIGH TECH FIRE PROTECTION
 PLANNED PARENTHOOD 3rd FLOOR

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 Date 6/24/11

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	
A	Generic Alarm Valve	0	0	0	0	0	0	7.7	21.5	0	17	17	27	29	0	0	0	0	0	0	0
B	Generic Butterfly Valve	0	0	0	0	0	0	7	10	0	12	9	10	12	19	21	0	0	0	0	0
E	90' Standard Elbow	2	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	
G	Generic Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	
S	Generic Swing Check Valve	4	5	5	7	9	11	14	16	19	22	27	32	45	55	65	76	87	98	109	
T	90' Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	
V	90' Ell Firelock #001	0	0	0	0	0	3.5	4.3	5	0	6.8	8.5	10	13	0	0	0	0	0	0	0
X	90'Tee-BranchFirelock002	0	0	0	0	0	8.5	10.8	13	0	16	21	25	33	0	0	0	0	0	0	0
Z	Generic Flow Control	0	0	0	0	0	5	6	7	8	10	12	14	18	22	27	35	40	45	50	

Units Summary

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

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 100 except as noted with *. The fittings marked with a * show equivalent lengths values applicable only to specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow equal	Density	Area	Press Req.
300	30.0	5.6	12.25	na	19.6	0.1	196	7.0
301	30.0	5.6	14.0	na	20.96	0.1	196	7.0
305	30.0	5.6	13.29	na	20.41	0.1	196	7.0
306	30.0	5.6	15.18	na	21.82	0.1	196	7.0
307	30.0		16.41	na				
310	30.0	5.6	17.04	na	23.12	0.1	196	7.0
311	30.0	5.6	19.42	na	24.68	0.1	196	7.0
315	30.0	5.6	17.45	na	21.39	0.1	196	7.0
316	30.0		19.88	na				
317	30.0		21.34	na				
308	30.0		22.67	na				
318	30.0		23.2	na				
320	30.0		31.87	na				
321	30.0		40.54	na				
322	30.0		42.57	na				
323	30.0		46.12	na				
243	20.0		50.63	na				
250	10.0		55.25	na				
TOR	10.0		56.0	na				
BOR	4.0		58.77	na				
BASE	0.0		60.31	na				
H1	0.0		60.58	na				
H2	4.0		58.56	na	100.0			
TEST	0.0		60.7	na				

The maximum velocity is 14.72 and it occurs in the pipe between nodes 318 and 320

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftg's Total	Pt Pa Pb	Pt Pv Pn	***** Notes *****
300 to 301	19.60 19.6	1.049 0.1254	0.0 0.0	14.000 14.000	12.250 11.735		K Factor = 5.60 Vel = 7.28
301 to 307	20.96 40.56	1.38 0.1266	1E 3.0 0.0	16.000 19.000	14.905 13.445		K Factor = 5.60 Vel = 8.70
0.0 to 305	40.56 20.41				16.410 12.250		K Factor = 10.01 K Factor = 5.60
305 to 306	20.41	1.049 0.1351	0.0 0.0	14.000 14.000	12.250 11.735		Vel = 7.53
306 to 307	21.82 42.23	1.38 0.1364	1T 3.0 0.0	3.000 9.000	13.132 11.228		K Factor = 5.60 Vel = 9.06
307 to 308	40.56 82.79	1.61 0.2237	3E 12.0 1T 3.0	8.000 20.000	11.400 11.400		Vel = 13.05
0.0 to 310	82.79 23.12				17.400 12.250		K Factor = 17.39 K Factor = 5.60
310 to 311	23.12	1.049 0.1701	0.0 0.0	14.000 14.000	11.735 11.319		Vel = 8.58
311 to 317	24.68 47.8	1.38 0.1715	1T 3.0 0.0	5.200 11.200	11.319 11.319		K Factor = 5.60 Vel = 10.25
0.0 to 315	47.80 23.39				12.250 11.735		K Factor = 10.35 K Factor = 5.60
315 to 316	23.39	1.049 0.1739	0.0 0.0	14.000 14.000	11.735 11.319		Vel = 6.68
316 to 317	0.0 23.39	1.38 0.0457	2E 3.0 1T 3.0	20.000 32.000	11.319 11.319		Vel = 5.02
317 to 318	47.80 71.19	1.61 0.1692	1T 3.0 0.0	3.000 10.000	11.319 11.319		Vel = 11.2
0.0 to 308	71.19 82.79				11.319 11.319		K Factor = 14.78
308 to 318	82.79 82.79	2.067 0.0662	0.0 0.0	8.000 8.000	11.319 11.319		Vel = 7.92

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Lft.	Pipe Ftrng's Total	Pt Pv Pn	***** Notes *****
318 to 320	71.19 153.98	2.067 0.2088	3E 15.0 1T 10.0	16.500 25.000		el = 14.72
320 to 321	0.0 153.98	2.157 0.1697	2V 3.315 1X 10.461	32.000 19.076		el = 13.52
321 to 322	0.0 153.98	2.635 0.0640	3V 17.71 0.0	14.000 17.710		el = 5.03
322 to 323	0.0 153.98	2.635 0.0640	1B 3.31 1Z 8.237	20.000 53.311		el = 9.06
323 to 243	0.0 153.98	4.26 0.0062	2V 17.907 0.0	11.000 17.907		el = 3.47
243 to 250	0.0 153.98	4.26 0.0062	4V 35.314 0.0	11.000 35.314		el = 3.47
250 to TOR	0.0 153.98	4.26 0.0062	8V 71.629 0.0	50.000 71.629		el = 3.47
TOR to BOR	0.0 153.98	4.26 0.0062	1A 21.784 0.0	11.000 21.784		el = 3.47
BOR to BASE	0.0 153.98	6.065 0.0010	1G 11.000 0.0	11.000 11.000		el = 3.47
BASE to H1	0.0 153.98	6.16 0.0008	1G 3.304 1T 41.337	30.000 67.641		el = 3.47
H1 to H2	0.0 153.98	6.16 0.0008	1F 41.337 0.0	100.000 41.337		el = 3.47
H2 to TEST	100.00 253.98	16.41 0.0	1T 16.59 1E 8.8	3.000 28.390		el = 3.47
	0.0 253.98		1G 11.8	21.800		Factor = 32.60



CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

Aug. 9 2011

Received from Mr. & Mrs. Fred Peterson

Location of Work 440 Congress St

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: 097 P.007

Check #: 15507

Total Collected \$ 210.00

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

Taken by: [Signature]

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