

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND BUILDING PERMIT

This is to certify that
FOWLER PLUMBING & HEATING
21A BLANCHARD RD
SPRINGVALE, ME 04083

For installation at
280 PRESUMPCOT ST
SINGLE-FAMILY HOME

Job ID: **2012-07-4391-FAFS**

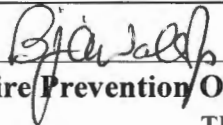
CBL: **423- A-016-001**

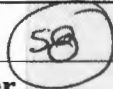
has permission to **install NFPA 13D sprinkler system**

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



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.**

Final Fire

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: 2012-07-4391-FAFS
install NFPA 13D sprinkler system

For installation at:
280 PRESUMSCOT ST
SINGLE-FAMILY HOME

CBL: 423- A-016-001

Conditions of Approval:

Fire

The sprinkler system shall be installed in accordance with NFPA 13D. A compliance letter is required.

All control valves shall be supervised in accordance with NFPA 13D. Pad locks shall only be installed on valves designed to be secured in the open position by pad lock.

Application requires State Fire Marshal approval.

City of Portland, Maine - Building or Use Permit Application

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

Job No: 2012-07-4391-FAFS	Date Applied: 7/2/2012	CBL: 423- A-016-001	
Location of Construction: 280 PRESUMPCOT ST	Owner Name: STANLEY E DOBSON	Owner Address: 276 PRESUMPCOT ST PORTLAND, ME 04103	Phone: 775-0651
Business Name:	Contractor Name: FOWLER PLUMBING & HEATING	Contractor Address: 21A BLANCHARD RD SPRINGVALE MAINE 04083	Phone: (207) 671-8180
Lessee/Buyer's Name:	Phone:	Permit Type: FAFS	Zone: I-L
Past Use: Two buildings on one lot: 278 Presumpscot = 1 DU 280 Presumpscot = 1 DU	Proposed Use: Same: two single family dwellings on one lot – to install fire suppression system in 280 Presumpscot St (doing repairs after fire on previous permit)	Cost of Work:	CEO District:
		Fire Dept: 7/11/12 <input checked="" type="checkbox"/> Approved w/ conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: Type:
Proposed Project Description: Fire/sprinkler permit: 1 family; NO CHARGE		Signature: <i>Bjandolph</i> (50) Pedestrian Activities District (P.A.D.)	
Permit Taken By: Lannie	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>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland <i>N/A</i></p> <p><input type="checkbox"/> Wetlands</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p><input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM</p> <p>Date: <i>OK</i> 7/3/12</p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date:</p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in Dist or Landmark</p> <p><input type="checkbox"/> Does not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>[Signature]</i></p>
	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

2012-07-4391 - FAFS

423 AP16

IL

One- or Two-family Fire Sprinkler Permit

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

Installation address: 280 Presumpscot Street, Portland, ME

Building owner: Stanley Dobson Phone: 207-775-0651

Installer: Fowler Plumbing and Heating Phone: 207-671-8180

Total sq/ft of building floor space per unit: 1,715 Single-family home

Sq/ft of sprinklered floor space per unit: 1,590 Two-family home

Is this a multipurpose piping system? Y / N Sprinkler piping uses Pex? Y / N

Water supply: Municipal Water Well pump Stored water Other

Include electronic copy of approved State Sprinkler Permit plans:

Additional cost to the owner for the home fire sprinkler system for each dwelling unit minus costs necessary for domestic needs (See below): **A = \$9,600**

Attachment breakdown: A City plumbing permit has been pulled:

<p>COST OF WORK: _____</p> <p>(A times number of units)</p> <p>NO FEE REQUIRED</p>
--

Additional information and Frequently asked questions about home fire sprinkler systems may be found at www.portlandmaine.gov/fireprevention.

Sprinkler system cost must deduct costs that would have been incurred if the system did not provide sprinkler service. If a well pump is installed on the system it would include the difference between the well pump to be installed and the one that would have been installed if there were no sprinkler demand on the system. Includes additional piping and valves that are required only because of NFPA Standard 13D, and not already required for domestic needs. Includes cost of sprinkler heads and additional installation costs.

RECEIVED
JUL 02 2012
Dept. of Building Inspections
City of Portland Maine



State of Maine
Department of Public Safety
Fire Sprinkler System Permit



10067

Wallace Job

Located at: 280 Presumpscot Street
 In the Town of: Portland
 Occupancy/Use: residential
 Type of System: NFPA 13D

Permission is hereby given to:

Fowler Plumbing and Heating*

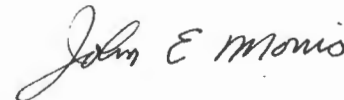
21 A Blanchard Road
 Springvale, ME 04083
 Contractor License # **714**

to begin installation according to plans submittal approved by the Office of State Fire Marshal. The submittal is filed under log # **2121256** , 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 **6/21/2012** for a fee paid of **\$25.00**

*This permit will expire at midnight on **Tuesday, December 18, 2012***

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: Killeen* Thomas J.

RMS Signature: _____



... Fire Protection by Computer Design

Viega LLC
1800 Southwood Drive

Nashua NH 03063
(603) 882-7171

Job Name : THE WALLACE RESIDENCE
Building : SINGLE FAMILY RESIDENCE – NFPA 13D_2010
Location : HEAD #8
System : “ALL”
Contract : June 8, 2012
Data File : FPTK1204-004 ME REV-2 (ONE HEAD CALCULATION)

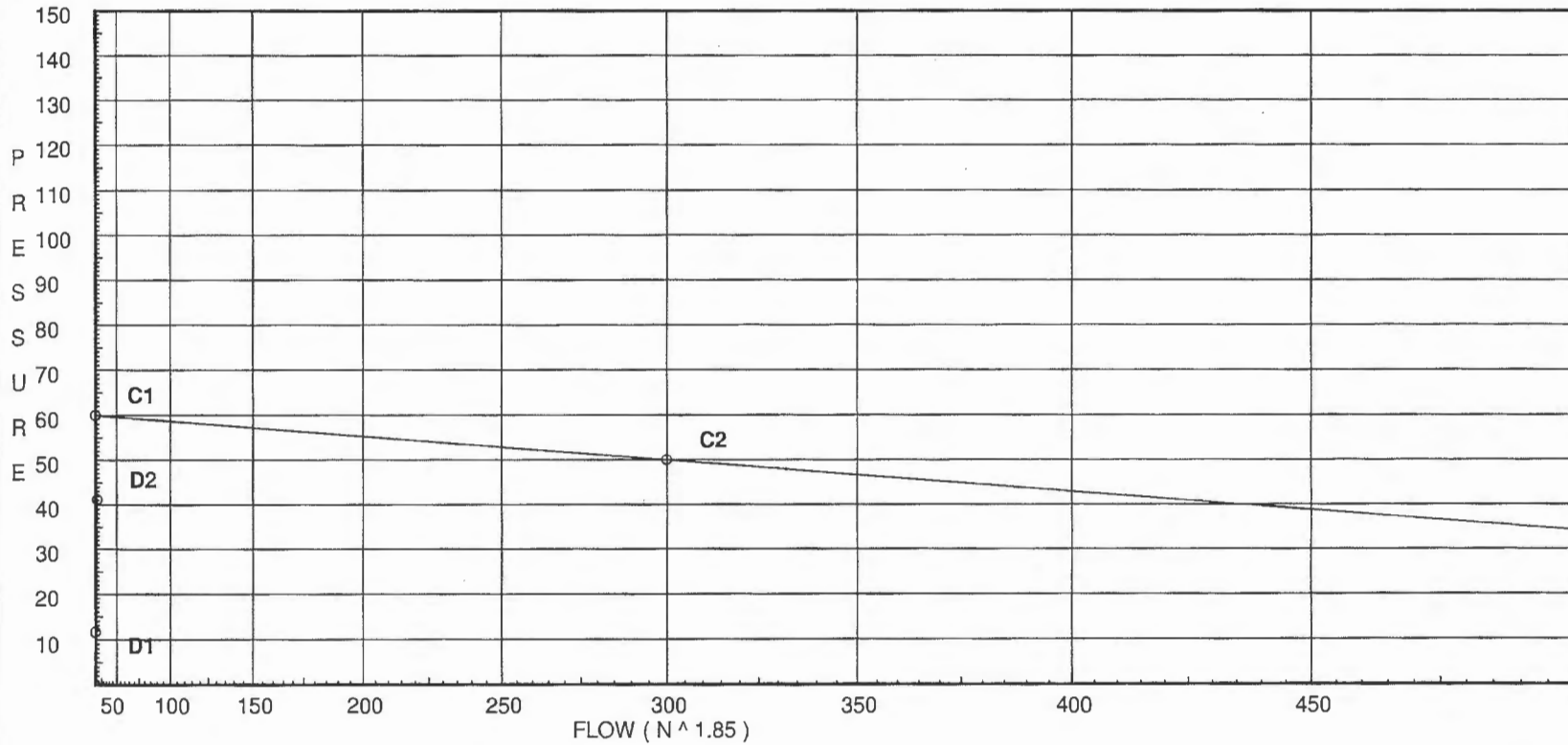
Water Supply Curve (C)

Viega LLC

Page 1
Date

City Water Supply:
C1 - Static Pressure : 60
C2 - Residual Pressure: 50
C2 - Residual Flow : 300

Demand:
D1 - Elevation : 11.694
D2 - System Flow : 14.052
D2 - System Pressure : 41.244
Hose (Demand) :
D3 - System Demand : 14.052
Safety Margin : 18.722



Fittings Used Summary

Viega LLC

Page 2
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																					
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	1	1	1	1	1	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13	
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	
Vrt *	PEX Press Tee - Run	2.2	1.9	2.3	4.8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Vtb *	PEX Press Tee - Branch	10.4	8.9	11	13	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Units Summary

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

Flow Summary - NFPA 2007

Viega LLC

Page 3
Date

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>
TANK	60.0	50	300.0	59.965	14.05	41.244

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>
H.8	127.0	4.4	10.2	14.05	
T.32	118.0		21.96		
T.34	118.0		22.62		
T.33	118.0		25.21		
T.26	109.0		29.84		
T.25	109.0		29.85		
H.1	109.0		29.93		
T.24	109.0		29.95		
T.23	109.0		29.98		
T.36	109.0		30.12		
T.37	109.0		30.17		
H.12	109.0		30.24		
T.49	109.0		30.3		
T.50	109.0		30.37		
S.1	104.0		32.71		
T.51	109.0		30.22		
T.52	109.0		30.02		
H.13	109.0		29.92		
T.39	109.0		29.85		
T.30	109.0		29.85		
T.31	109.0		29.84		
T.28	109.0		29.84		
T.27	109.0		29.84		
H.2	109.0		29.84		
H.6	118.0		22.18		
T.38	118.0		22.6		
T.42	118.0		22.78		
H.18	118.0		23.01		
T.48	118.0		23.16		
T.47	118.0		25.24		
T.35	118.0		22.7		
T.44	118.0		22.89		
T.45	118.0		22.98		
T.43	118.0		22.87		
H.20	127.0		19.03		
H.17	127.0		19.04		
H.14	118.0		22.87		
H.7	118.0		25.22		
T.41	118.0		25.22		
H.16	118.0		25.23		
T.46	118.0		25.23		
BV	100.0		40.98		

NODE ANALYSIS (cont.)

<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
TANK	100.0		41.24		

Final Calculations - Hazen-Williams

Viega LLC

Page 5
Date

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftnng's Total	Pt Pe Pf	Pt Pv Pn	***** Notes *****
H.8 to T.32	14.05 14.05	0.671 150.0 0.3950	1Vtb 8.9 0.0 0.0	11.000 8.900 19.900	10.200 3.898 7.860		K Factor = 4.40 Vel = 12.75
T.32 to T.34	-3.62 10.43	0.671 150.0 0.2276	1Vrt 1.9 0.0 0.0	1.000 1.900 2.900	21.958 0.0 0.660		Vel = 9.46
T.34 to T.33	-2.89 7.54	0.671 150.0 0.1247	2Vtb 17.8 0.0 0.0	3.000 17.800 20.800	22.618 0.0 2.594		Vel = 6.84
T.33 to T.26	-0.40 7.14	0.863 150.0 0.0331	1Vtb 11.0 0.0 0.0	11.000 11.000 22.000	25.212 3.898 0.728		Vel = 3.92
T.26 to T.25	-1.24 5.9	0.995 150.0 0.0110	0.0 0.0 0.0	1.000 0.0 1.000	29.838 0.0 0.011		Vel = 2.43
T.25 to H.1	0.0 5.9	0.995 150.0 0.0117	0.0 0.0 0.0	7.000 0.0 7.000	29.849 0.0 0.082		Vel = 2.43
H.1 to T.24	0.0 5.9	0.995 150.0 0.0115	0.0 0.0 0.0	2.000 0.0 2.000	29.931 0.0 0.023		Vel = 2.43
T.24 to T.23	0.0 5.9	0.995 150.0 0.0115	0.0 0.0 0.0	2.000 0.0 2.000	29.954 0.0 0.023		Vel = 2.43
T.23 to T.36	0.0 5.9	0.995 150.0 0.0117	1E 2.336 0.0 0.0	10.000 2.336 12.336	29.977 0.0 0.144		Vel = 2.43
T.36 to T.37	0.0 5.9	0.995 150.0 0.0118	1E 2.336 0.0 0.0	2.000 2.336 4.336	30.121 0.0 0.051		Vel = 2.43
T.37 to H.12	0.0 5.9	0.995 150.0 0.0115	1E 2.336 0.0 0.0	4.000 2.336 6.336	30.172 0.0 0.073		Vel = 2.43
H.12 to T.49	0.0 5.9	0.995 150.0 0.0116	0.0 0.0 0.0	5.000 0.0 5.000	30.245 0.0 0.058		Vel = 2.43
T.49 to T.50	0.0 5.9	0.995 150.0 0.0118	1E 2.336 0.0 0.0	3.000 2.336 5.336	30.303 0.0 0.063		Vel = 2.43
T.50 to S.1	0.0 5.9	0.995 150.0 0.0116	1T 5.841 1E 2.336 0.0	7.000 8.177 15.177	30.366 2.166 0.176		Vel = 2.43
S.1 to T.51	-14.05 -8.15	0.995 150.0 -0.0212	1T 5.841 1E 2.336 0.0	7.000 8.177 15.177	32.708 -2.166 -0.321		Vel = 3.36
T.51 to T.52	0.0 -8.15	0.995 150.0 -0.0212	1E 2.336 0.0	7.000 2.336 9.336	30.221 0.0 -0.198		Vel = 3.36

Final Calculations - Hazen-Williams

Viega LLC

Page 6
Date

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Fng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
T.52	0.0	0.995		5.000	30.023				
to		150.0	0.0	0.0	0.0				
H.13	-8.15	-0.0212		5.000	-0.106		Vel =	3.36	
H.13	0.0	0.995		3.000	29.917				
to		150.0	0.0	0.0	0.0				
T.39	-8.15	-0.0213		3.000	-0.064		Vel =	3.36	
T.39	6.91	0.995	1E	2.336	6.000	29.853			
to		150.0		0.0	2.336	0.0			
T.30	-1.24	-0.0006		0.0	8.336	-0.005	Vel =	0.51	
T.30	0.0	0.995	1E	2.336	3.000	29.848			
to		150.0		0.0	2.336	0.0			
T.31	-1.24	-0.0007		0.0	5.336	-0.004	Vel =	0.51	
T.31	0.0	0.995		0.0	4.000	29.844			
to		150.0	0.0	0.0	0.0	0.0			
T.28	-1.24	-0.0005		0.0	4.000	-0.002	Vel =	0.51	
T.28	0.0	0.995	1E	2.336	1.000	29.842			
to		150.0		0.0	2.336	0.0			
T.27	-1.24	-0.0006		0.0	3.336	-0.002	Vel =	0.51	
T.27	0.0	0.995		0.0	1.000	29.840			
to		150.0	0.0	0.0	0.0	0.0			
H.2	-1.24	-0.0010		0.0	1.000	-0.001	Vel =	0.51	
H.2	0.0	0.995		0.0	2.000	29.839			
to		150.0	0.0	0.0	0.0	0.0			
T.26	-1.24	-0.0005		0.0	2.000	-0.001	Vel =	0.51	
	0.0					29.838	K Factor =	-0.23	
T.32	3.62	0.671	1Vrt	1.9	5.000	21.958			
to		150.0		0.0	1.900	0.0			
H.6	3.62	0.0322		0.0	6.900	0.222	Vel =	3.28	
H.6	0.0	0.671	1Vrt	1.9	11.000	22.180			
to		150.0		0.0	1.900	0.0			
T.38	3.62	0.0322		0.0	12.900	0.415	Vel =	3.28	
T.38	0.0	0.671	1Vrt	1.9	4.000	22.595			
to		150.0		0.0	1.900	0.0			
T.42	3.62	0.0320		0.0	5.900	0.189	Vel =	3.28	
T.42	-1.45	0.671	1Vrt	1.9	16.000	22.784			
to		150.0		0.0	1.900	0.0			
H.18	2.17	0.0125		0.0	17.900	0.224	Vel =	1.97	
H.18	0.0	0.671		0.0	12.000	23.008			
to		150.0	0.0	0.0	0.0	0.0			
T.48	2.17	0.0125		0.0	12.000	0.150	Vel =	1.97	
T.48	4.35	0.671	2Vtb	17.8	4.000	23.158			
to		150.0		0.0	17.800	0.0			
T.47	6.52	0.0954		0.0	21.800	2.079	Vel =	5.92	
T.47	0.40	0.863	1Vtb	11.0	12.000	25.237			
to		150.0		0.0	11.000	3.898			
T.39	6.92	0.0312		0.0	23.000	0.718	Vel =	3.80	

0.0

Final Calculations - Hazen-Williams

Viega LLC

Page 7
Date

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
	6.92				29.853			K Factor = 1.27	
T.34 to T.35	2.90 2.9	0.671 150.0 0.0213	1Vrt 0.0	1.9 0.0 3.900	2.000 1.900 3.900	22.618 0.0 0.083		Vel = 2.63	
T.35 to T.44	0.0 2.9	0.671 150.0 0.0212	1Vrt 0.0	1.9 0.0 8.900	7.000 1.900 8.900	22.701 0.0 0.189		Vel = 2.63	
T.44 to T.45	0.72 3.62	0.671 150.0 0.0321	1Vrt 0.0	1.9 0.0 2.900	1.000 1.900 2.900	22.890 0.0 0.093		Vel = 3.28	
T.45 to T.48	0.72 4.34	0.671 150.0 0.0449	1Vrt 0.0	1.9 0.0 3.900	2.000 1.900 3.900	22.983 0.0 0.175		Vel = 3.94	
	0.0 4.34				23.158			K Factor = 0.90	
T.42 to T.43	1.45 1.45	0.671 150.0 0.0059	1Vtb 1Vrt	8.9 1.9 0.0	3.000 10.800 13.800	22.784 0.0 0.082		Vel = 1.32	
T.43 to H.20	-0.73 0.72	0.671 150.0 0.0016	1Vrt 1Vtb	1.9 8.9 0.0	27.000 10.800 37.800	22.866 -3.898 0.062		Vel = 0.65	
H.20 to H.17	0.0 0.72	0.671 150.0 0.0016	0.0	0.0 0.0 0.0	9.000 0.0 9.000	19.030 0.0 0.014		Vel = 0.65	
H.17 to T.45	0.0 0.72	0.671 150.0 0.0017	1Vrt 1Vtb	1.9 8.9 0.0	14.000 10.800 24.800	19.044 3.898 0.041		Vel = 0.65	
	0.0 0.72				22.983			K Factor = 0.15	
T.43 to H.14	0.72 0.72	0.671 150.0 0.0014	1Vrt 0.0	1.9 0.0 2.900	1.000 1.900 2.900	22.866 0.0 0.004		Vel = 0.65	
H.14 to T.44	0.0 0.72	0.671 150.0 0.0017	1Vtb 0.0	8.9 0.0 0.0	3.000 8.900 11.900	22.870 0.0 0.020		Vel = 0.65	
	0.0 0.72				22.890			K Factor = 0.15	
T.33 to H.7	0.40 0.4	0.671 150.0 0.0005	1Vrt 1Vtb	1.9 8.9 0.0	3.000 10.800 13.800	25.212 0.0 0.007		Vel = 0.36	
H.7 to T.41	0.0 0.4	0.671 150.0 0.0005	1Vrt 0.0	1.9 0.0 9.900	8.000 1.900 9.900	25.219 0.0 0.005		Vel = 0.36	
T.41 to H.16	0.0 0.4	0.671 150.0 0.0007	1Vrt 0.0	1.9 0.0 2.900	1.000 1.900 2.900	25.224 0.0 0.002		Vel = 0.36	
H.16 to T.46	0.0 0.4	0.671 150.0 0.0005	1Vrt 0.0	1.9 0.0 5.900	4.000 1.900 5.900	25.226 0.0 0.003		Vel = 0.36	

Final Calculations - Hazen-Williams

Viega LLC

Page 8
Date

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
T.46 to T.47	0.0 0.4	0.671 150.0 0.0006	1Vtb	8.9 0.0 0.0	5.215 8.900 14.115	25.229 0.0 0.008				Vel = 0.36
	0.0 0.40					25.237				K Factor = 0.08
S.1 to BV	14.05 14.05	1.265 150.0 0.0180	2E 3T 1G	5.935 17.804 0.989	5.000 24.728 29.728	32.708 7.732 0.535				* Fixed loss = 6 Vel = 3.59
BV to TANK	0.0 14.05	1.265 150.0 0.0181	1E 1T 1G	2.967 5.935 0.989	5.000 9.891 14.891	40.975 0.0 0.269				Vel = 3.59
	0.0 14.05					41.244				K Factor = 2.19

Fowler Plumbing and Heating

52 Bernice Ave
Sanford, ME 04073

Estimate

Date	Estimate No.
4/12/2012	146

Name/Address

Dusty Wallace

		Project													
		280 Presumscott Street													
Description	Qty	Rate	Total												
<p>Job Description:</p> <ol style="list-style-type: none"> 1. Installation of a 13 D fire protection system 2. This will be a sprinkler only system, this will not be connected to the domestic cold water fixtures. Maine allows us to do this. 3. All walls will have to be accessible to install this system, which you said would be done anyway. 4. Will have a 300 gallon tank in the basement with the correct size pump to achieve correct flow 5. The basement, 1st and 2nd floors will have to be sprinklered. 															
<p>Sprinkler Labor and Materials to rough in and finish the 13 D Sprinkler system</p> <p>***** Keep in mind the following fees will be also needed *****</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 150px;">1. Viega - Design Fee</td> <td style="text-align: right;">300.00</td> </tr> <tr> <td>Dollars</td> <td></td> </tr> <tr> <td>2. RMS Fee</td> <td style="text-align: right;">300.00</td> </tr> <tr> <td>Dollars (This is a person that is qualified to come and inspect my work. This is mandated by the state.)</td> <td></td> </tr> <tr> <td>3. State Fee</td> <td style="text-align: right;">50.00</td> </tr> <tr> <td>Dollars (This is for the state fire marshal to inspect the plans and give the O . K.</td> <td></td> </tr> </table>	1. Viega - Design Fee	300.00	Dollars		2. RMS Fee	300.00	Dollars (This is a person that is qualified to come and inspect my work. This is mandated by the state.)		3. State Fee	50.00	Dollars (This is for the state fire marshal to inspect the plans and give the O . K.		1	4,950.00	4,950.00
1. Viega - Design Fee	300.00														
Dollars															
2. RMS Fee	300.00														
Dollars (This is a person that is qualified to come and inspect my work. This is mandated by the state.)															
3. State Fee	50.00														
Dollars (This is for the state fire marshal to inspect the plans and give the O . K.															
		Total													

Thank You for your business !!!

Fowler Plumbing and Heating

52 Bernice Ave
Sanford, ME 04073

Estimate

Date	Estimate No.
4/12/2012	146

Name/Address

Dusty Wallace

		Project	
		280 Presumscott Street	
Description	Qty	Rate	Total
4. Local Fee 50.00 Dollars (This fee might change per town or city, but this is what it has been.) Sprinkler Fees Total from above	1	700.00	700.00
Talco Home Hydrant Pump and 300 Gallon Holding Tank	1	3,950.00	3,950.00
***** Payment Schedule ***** 1. 30 % up front (2,880.00 Dollars) 2. 60 % after rough in is finished (5,760.00 Dollars) 3. Remaining Balance (960.00 Dollars)			
***** Any changes that need to be made might incur a cost (redesign of the plans), just wanted to let you know this *****			
Thank You for your business !!!		Total	\$9,600.00



... Fire Protection by Computer Design

Viega LLC
1800 Southwood Drive

Nashua NH 03063
(603) 882-7171

Job Name : THE WALLACE RESIDENCE
Building : SINGLE FAMILY RESIDENCE – NFPA 13D_2010
Location : HEADS #20 & #17
System : “ALL”
Contract : June 8, 2012
Data File : FPTK1204-004 ME REV-2 (TWO HEAD CALCULATION)

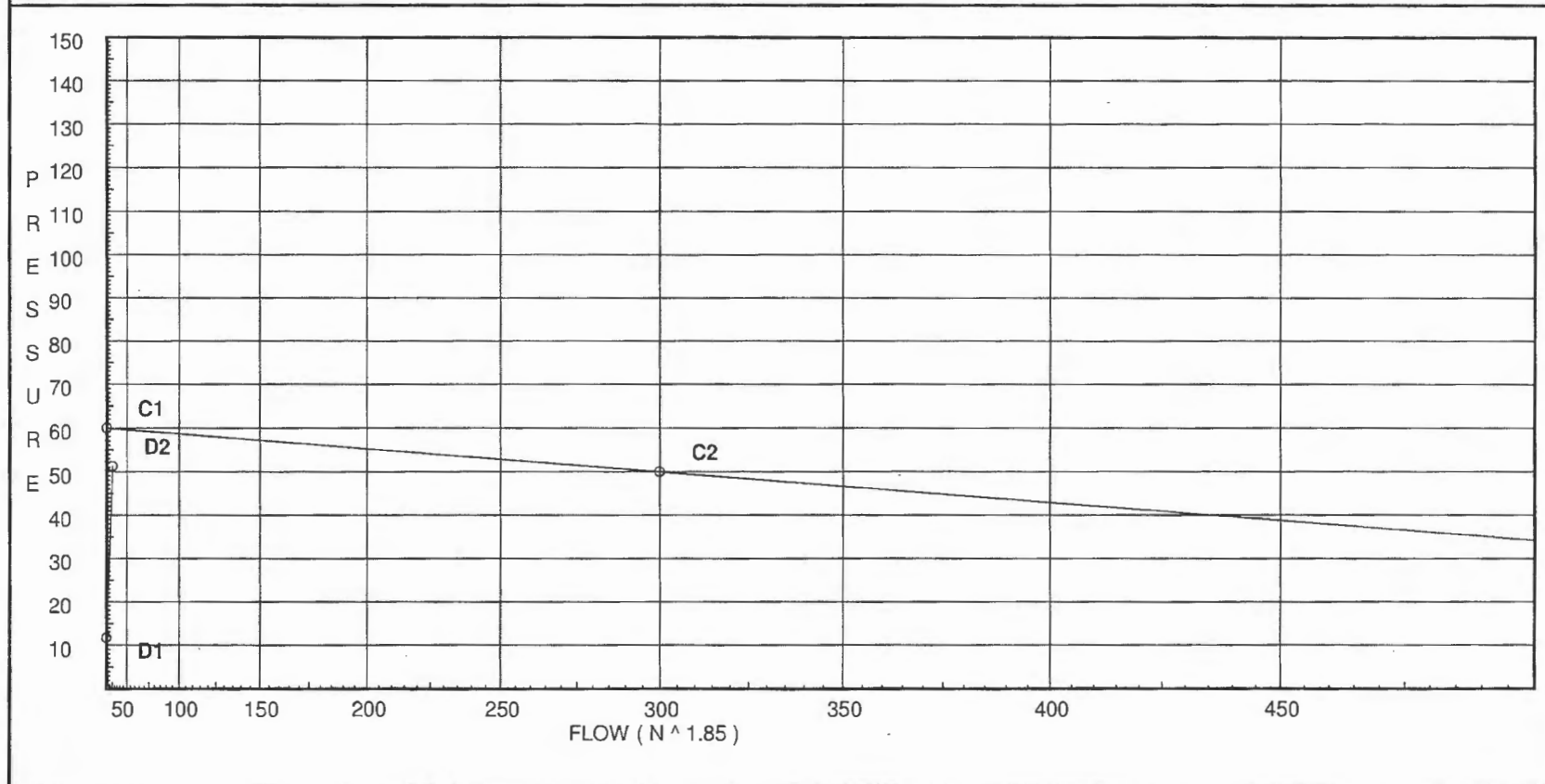
Water Supply Curve (C)

Viega LLC

Page 1
Date

City Water Supply:
 C1 - Static Pressure : 60
 C2 - Residual Pressure: 50
 C2 - Residual Flow : 300

Demand:
 D1 - Elevation : 11.694
 D2 - System Flow : 26.065
 D2 - System Pressure : 51.281
 Hose (Demand) : _____
 D3 - System Demand : 26.065
 Safety Margin : 8.611



Fittings Used Summary

Viega LLC

Page 2
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																					
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	1	1	1	1	1	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13	
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	
Vrt *	PEX Press Tee - Run	2.2	1.9	2.3	4.8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Vtb *	PEX Press Tee - Branch	10.4	8.9	11	13	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Units Summary

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

Flow Summary - NFPA 2007

Viega LLC

Page 3
Date

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>
TANK	60.0	50	300.0	59.891	26.07	51.281

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>
H.20	127.0	4.9	7.04	13.0	
T.43	118.0		20.98		
T.42	118.0		22.33		
T.38	118.0		22.61		
H.6	118.0		23.21		
T.32	118.0		23.54		
T.34	118.0		23.67		
T.33	118.0		30.52		
T.26	109.0		36.66		
T.25	109.0		36.69		
H.1	109.0		36.95		
T.24	109.0		37.02		
T.23	109.0		37.09		
T.36	109.0		37.54		
T.37	109.0		37.7		
H.12	109.0		37.93		
T.49	109.0		38.12		
T.50	109.0		38.31		
S.1	104.0		41.03		
T.51	109.0		37.85		
T.52	109.0		37.23		
H.13	109.0		36.9		
T.39	109.0		36.7		
T.30	109.0		36.68		
T.31	109.0		36.68		
T.28	109.0		36.67		
T.27	109.0		36.66		
H.2	109.0		36.66		
H.17	127.0	4.9	7.11	13.06	
T.45	118.0		21.68		
T.48	118.0		22.69		
T.47	118.0		30.5		
H.14	118.0		21.14		
T.44	118.0		21.77		
T.35	118.0		23.09		
H.18	118.0		22.55		
T.46	118.0		30.51		
H.16	118.0		30.51		
T.41	118.0		30.51		
H.7	118.0		30.52		
BV	100.0		50.44		
TANK	100.0		51.28		

Flow Summary - NFPA 2007

Viega LLC

Page 4
Date

NODE ANALYSIS (cont.)

<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
-----------------	------------------	------------------	-----------------------------	------------------------------	--------------

Final Calculations - Hazen-Williams

Viega LLC

Page 5
Date

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftnng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
H.20 to T.43	11.34	0.671 150.0 0.2658	1Vrt 1Vtb	1.9 8.9 0.0	27.000 10.800 37.800	7.040 3.898 10.046			K Factor = 4.90 Vel = 10.29	
T.43 to T.42	-4.75 6.59	0.671 150.0 0.0974	1Vtb 1Vrt	8.9 1.9 0.0	3.000 10.800 13.800	20.984 0.0 1.344			Vel = 5.98	
T.42 to T.38	-2.14 4.45	0.671 150.0 0.0471	1Vrt	1.9 0.0 0.0	4.000 1.900 5.900	22.328 0.0 0.278			Vel = 4.04	
T.38 to H.6	0.0 4.45	0.671 150.0 0.0470	1Vrt	1.9 0.0 0.0	11.000 1.900 12.900	22.606 0.0 0.606			Vel = 4.04	
H.6 to T.32	0.0 4.45	0.671 150.0 0.0471	1Vrt	1.9 0.0 0.0	5.000 1.900 6.900	23.212 0.0 0.325			Vel = 4.04	
T.32 to T.34	0.0 4.45	0.671 150.0 0.0472	1Vrt	1.9 0.0 0.0	1.000 1.900 2.900	23.537 0.0 0.137			Vel = 4.04	
T.34 to T.33	8.29 12.74	0.671 150.0 0.3292	2Vtb	17.8 0.0 0.0	3.000 17.800 20.800	23.674 0.0 6.848			Vel = 11.56	
T.33 to T.26	0.35 13.09	0.863 150.0 0.1017	1Vtb	11.0 0.0 0.0	11.000 11.000 22.000	30.522 3.898 2.237			Vel = 7.18	
T.26 to T.25	-2.16 10.93	0.995 150.0 0.0360		0.0 0.0 0.0	1.000 0.0 1.000	36.657 0.0 0.036			Vel = 4.51	
T.25 to H.1	0.0 10.93	0.995 150.0 0.0364		0.0 0.0 0.0	7.000 0.0 7.000	36.693 0.0 0.255			Vel = 4.51	
H.1 to T.24	0.0 10.93	0.995 150.0 0.0365		0.0 0.0 0.0	2.000 0.0 2.000	36.948 0.0 0.073			Vel = 4.51	
T.24 to T.23	0.0 10.93	0.995 150.0 0.0365		0.0 0.0 0.0	2.000 0.0 2.000	37.021 0.0 0.073			Vel = 4.51	
T.23 to T.36	0.0 10.93	0.995 150.0 0.0365	1E	2.336 0.0 0.0	10.000 2.336 12.336	37.094 0.0 0.450			Vel = 4.51	
T.36 to T.37	0.0 10.93	0.995 150.0 0.0364	1E	2.336 0.0 0.0	2.000 2.336 4.336	37.544 0.0 0.158			Vel = 4.51	
T.37 to H.12	0.0 10.93	0.995 150.0 0.0365	1E	2.336 0.0 0.0	4.000 2.336 6.336	37.702 0.0 0.231			Vel = 4.51	
H.12 to T.49	0.0 10.93	0.995 150.0 0.0364		0.0 0.0 0.0	5.000 0.0 5.000	37.933 0.0 0.182			Vel = 4.51	

Final Calculations - Hazen-Williams

Viega LLC

Page 6
Date

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftn'g's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
T.49	0.0	0.995	1E 2.336	3.000	38.115				
to		150.0	0.0	2.336	0.0				
T.50	10.93	0.0365	0.0	5.336	0.195		Vel = 4.51		
T.50	0.0	0.995	1T 5.841	7.000	38.310				
to		150.0	1E 2.336	8.177	2.166				
S.1	10.93	0.0364	0.0	15.177	0.552		Vel = 4.51		
S.1	-26.06	0.995	1T 5.841	7.000	41.028				
to		150.0	1E 2.336	8.177	-2.166				
T.51	-15.13	-0.0665	0.0	15.177	-1.009		Vel = 6.24		
T.51	0.0	0.995	1E 2.336	7.000	37.853				
to		150.0	0.0	2.336	0.0				
T.52	-15.13	-0.0665	0.0	9.336	-0.621		Vel = 6.24		
T.52	0.0	0.995	0.0	5.000	37.232				
to		150.0	0.0	0.0	0.0				
H.13	-15.13	-0.0664	0.0	5.000	-0.332		Vel = 6.24		
H.13	0.0	0.995	0.0	3.000	36.900				
to		150.0	0.0	0.0	0.0				
T.39	-15.13	-0.0667	0.0	3.000	-0.200		Vel = 6.24		
T.39	12.97	0.995	1E 2.336	6.000	36.700				
to		150.0	0.0	2.336	0.0				
T.30	-2.16	-0.0018	0.0	8.336	-0.015		Vel = 0.89		
T.30	0.0	0.995	1E 2.336	3.000	36.685				
to		150.0	0.0	2.336	0.0				
T.31	-2.16	-0.0017	0.0	5.336	-0.009		Vel = 0.89		
T.31	0.0	0.995	0.0	4.000	36.676				
to		150.0	0.0	0.0	0.0				
T.28	-2.16	-0.0020	0.0	4.000	-0.008		Vel = 0.89		
T.28	0.0	0.995	1E 2.336	1.000	36.668				
to		150.0	0.0	2.336	0.0				
T.27	-2.16	-0.0018	0.0	3.336	-0.006		Vel = 0.89		
T.27	0.0	0.995	0.0	1.000	36.662				
to		150.0	0.0	0.0	0.0				
H.2	-2.16	-0.0010	0.0	1.000	-0.001		Vel = 0.89		
H.2	0.0	0.995	0.0	2.000	36.661				
to		150.0	0.0	0.0	0.0				
T.26	-2.16	-0.0020	0.0	2.000	-0.004		Vel = 0.89		
	0.0								
	-2.16				36.657		K Factor = -0.36		
H.20	1.66	0.671	0.0	9.000	7.040				
to		150.0	0.0	0.0	0.0				
H.17	1.66	0.0076	0.0	9.000	0.068		Vel = 1.51		
H.17	13.06	0.671	1Vrt 1.9	14.000	7.108		K Factor = 4.90		
to		150.0	1Vtb 8.9	10.800	3.898				
T.45	14.72	0.4305	0.0	24.800	10.676		Vel = 13.36		
T.45	-3.53	0.671	1Vrt 1.9	2.000	21.682				
to		150.0	0.0	1.900	0.0				
T.48	11.19	0.2590	0.0	3.900	1.010		Vel = 10.15		
T.48	2.14	0.671	2Vtb 17.8	4.000	22.692				
to		150.0	0.0	17.800	0.0				
T.47	13.33	0.3582	0.0	21.800	7.809		Vel = 12.09		

Final Calculations - Hazen-Williams

Viega LLC

Page 7
Date

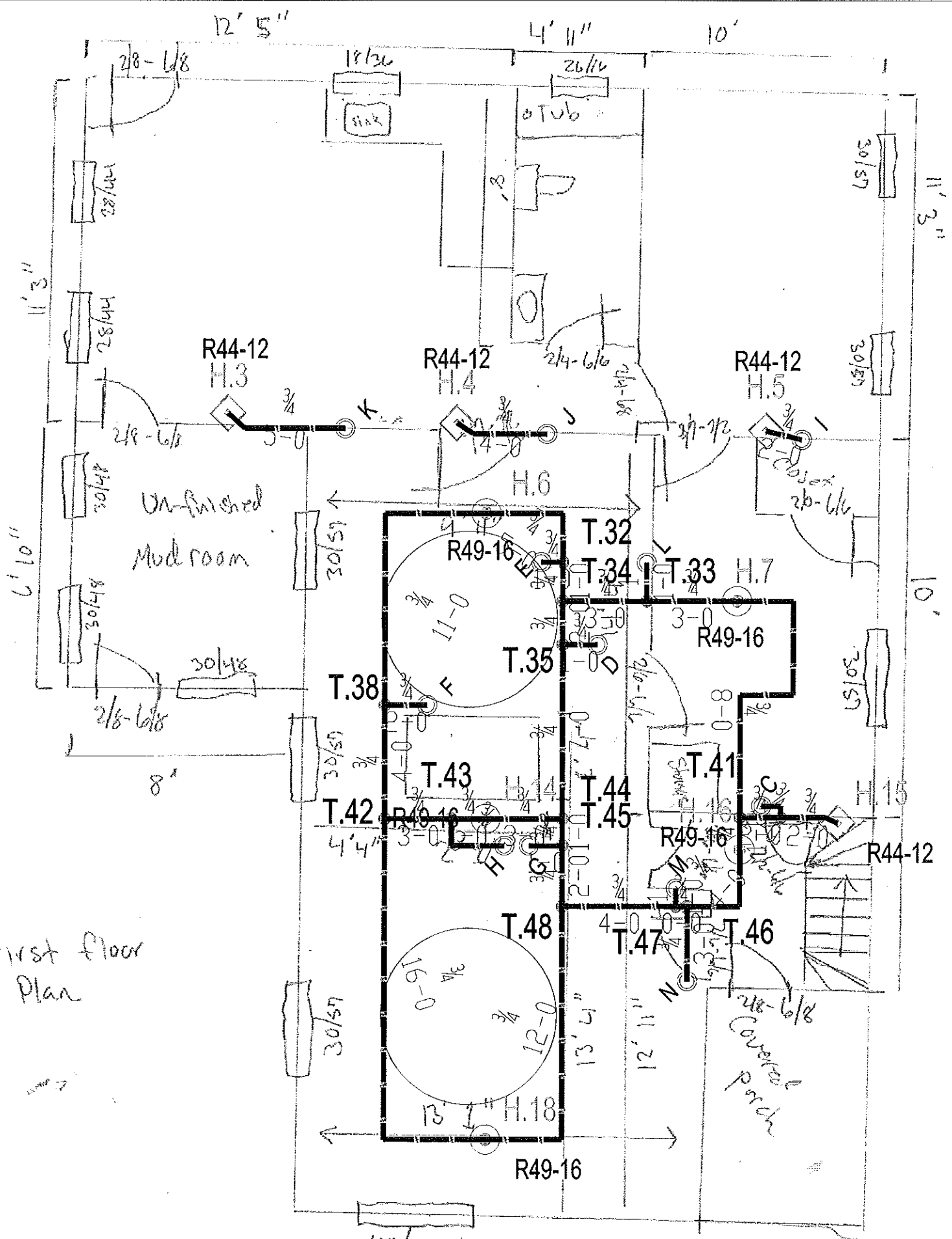
Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftnng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
T.47 to T.39	-0.35 12.98	0.863 150.0 0.1000	1Vtb	11.0 0.0 0.0	12.000 11.000 23.000	30.501 3.898 2.301			Vel = 7.12	
	0.0 12.98					36.700			K Factor = 2.14	
T.43 to H.14	4.75 4.75	0.671 150.0 0.0531	1Vrt	1.9 0.0 0.0	1.000 1.900 2.900	20.984 0.0 0.154			Vel = 4.31	
H.14 to T.44	0.0 4.75	0.671 150.0 0.0532	1Vtb	8.9 0.0 0.0	3.000 8.900 11.900	21.138 0.0 0.633			Vel = 4.31	
T.44 to T.35	3.54 8.29	0.671 150.0 0.1487	1Vrt	1.9 0.0 0.0	7.000 1.900 8.900	21.771 0.0 1.323			Vel = 7.52	
T.35 to T.34	0.0 8.29	0.671 150.0 0.1487	1Vrt	1.9 0.0 0.0	2.000 1.900 3.900	23.094 0.0 0.580			Vel = 7.52	
	0.0 8.29					23.674			K Factor = 1.70	
T.45 to T.44	3.53 3.53	0.671 150.0 0.0307	1Vrt	1.9 0.0 0.0	1.000 1.900 2.900	21.682 0.0 0.089			Vel = 3.20	
	0.0 3.53					21.771			K Factor = 0.76	
T.42 to H.18	2.14 2.14	0.671 150.0 0.0122	1Vrt	1.9 0.0 0.0	16.000 1.900 17.900	22.328 0.0 0.218			Vel = 1.94	
H.18 to T.48	0.0 2.14	0.671 150.0 0.0122		0.0 0.0 0.0	12.000 0.0 12.000	22.546 0.0 0.146			Vel = 1.94	
	0.0 2.14					22.692			K Factor = 0.45	
T.47 to T.46	0.36 0.36	0.671 150.0 0.0004	1Vtb	8.9 0.0 0.0	5.215 8.900 14.115	30.501 0.0 0.006			Vel = 0.33	
T.46 to H.16	0.0 0.36	0.671 150.0 0.0005	1Vrt	1.9 0.0 0.0	4.000 1.900 5.900	30.507 0.0 0.003			Vel = 0.33	
H.16 to T.41	0.0 0.36	0.671 150.0 0.0003	1Vrt	1.9 0.0 0.0	1.000 1.900 2.900	30.510 0.0 0.001			Vel = 0.33	
T.41 to H.7	0.0 0.36	0.671 150.0 0.0005	1Vrt	1.9 0.0 0.0	8.000 1.900 9.900	30.511 0.0 0.005			Vel = 0.33	
H.7 to T.33	0.0 0.36	0.671 150.0 0.0004	1Vrt 1Vtb	1.9 8.9 0.0	3.000 10.800 13.800	30.516 0.0 0.006			Vel = 0.33	

Final Calculations - Hazen-Williams

Viega LLC

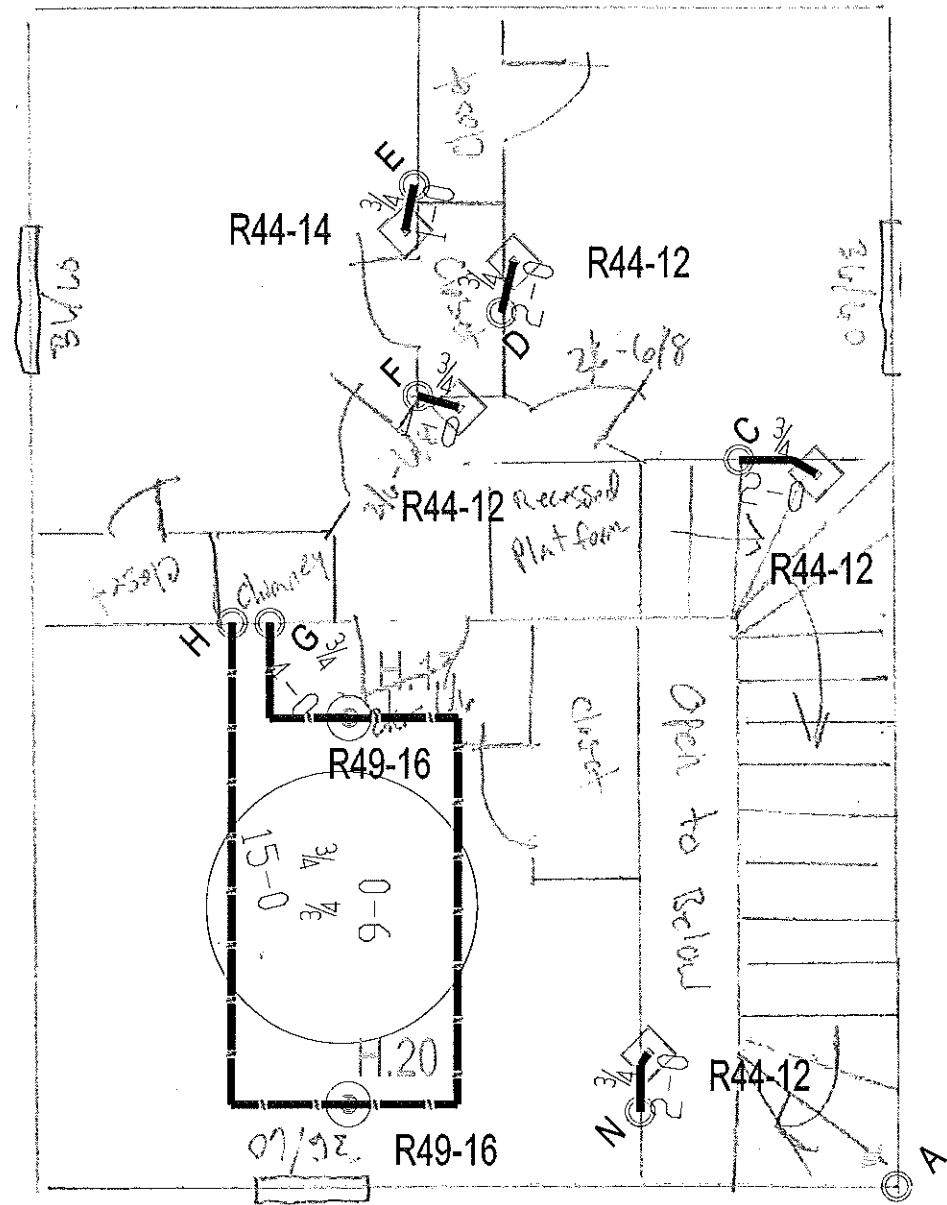
Page 8
Date

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
	0.0 0.36						30.522	K Factor = 0.07	
S.1 to BV	26.06	1.265 150.0	2E 3T	5.935 17.804	5.000 24.728	41.028 7.732		* Fixed loss = 6 Vel = 6.65	
BV to TANK	26.06	0.0565	1G	0.989	29.728	1.680			
	0.0 26.06	1.265 150.0	1E 1T	2.967 5.935	5.000 9.891	50.440 0.0		Vel = 6.65	
	26.06	0.0565	1G	0.989	14.891	0.841			
	0.0 26.06						51.281	K Factor = 3.64	



1st floor Plan

1st Floor 9 Sprinklers



2nd Floor 7 Sprinklers

Front Street Side



Provided only for general guidance purposes. No representation, warranty, or guarantee is made as to the suitability of the drawing to meet code requirements for any particular project nor to the accuracy of the content of any project based upon the drawing. The user must determine the suitability of the drawing and its content for use. Included use and shall assume all risk and liability in connection therewith, including that the user must meet on his own licensed professional advice for any particular project. Viega LLC DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Copyright 2012, Viega LLC. All Rights Reserved. In particular, rights concerning translation, reproduction, copying, photocopying, electronic transmission, reproduction in photographs or by similar means and the writing of the document in a database are not granted.

VIEGA 13D Fire Protection Design
 TECHNICAL SERVICE DEPARTMENT
 ONE DANIEL WEBSTER HIGHWAY, MERRIMACK, NH 03054
 PH: 603 682-7171, FX: 603-675-1612

Project:
THE WALLACE RESIDENCE
280 PERSUMPCOT ST.
PORTLAND MAINE 04103

Dwg no.:
FP2

Title:
FIRST & SECOND FLOORS

Quotation no.: FPTK1204-004 ME REV-2

Drawn by: TK

Approv. by:

Date Submitted: JUNE 8, 2012

Scale: 1/2" = 1'

Revisions No: Revision Date:

REV-1 JUNE 6, 2012