Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING INSPECTION

PERMIT

Please Read Application And Notes, If Any, Attached

PERMIT ISSUED
Permit Number: 100567
JUN - 1 2010
CITY OF PORTLAND

This is to certify that LANDRY TOM/Cornerstone Building & Restoration

has permission to Single Family Home - interior remodel

AT 18 HOWARD ST CBL: 014 F012001

provided that the person or persons, firm or corporation accepting this permit shall comply with of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulat the construction, maintenance and use of buildings and structures, and of the application on file this department.

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

Notification of inspection must be given and written permission procured before this building or part thereof is lathed or otherwise closed-in. 24 HOUR NOTICE IS REQUIRED.

A certificate of occupancy must b procured by owner before this buil ing or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____
Department Name

Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

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

Permit No:	Issue Date:	CBL:
10-0567		014 F012001

Location of Construction:	Owner Name:	Owner Address:	Phone:
18 HOWARD ST	LANDRY TOM	44 COYLE	207-939-0185
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Cornerstone Building & Restoration	44 Coyle Street Portland	2077759085
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Alterations - Dwellings	R-6

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Single Family Home	Single Family Home - interior remodel and add exterior side porch entry	$970.00	$95,000.00	1

3,239#

FIRE DEPT: ☐ Approved ☐ Denied

N/A

Signature:

INSPECTION: Use Group: R-3 Type: 5B

IRC 2003

Signature:

Proposed Project Description:
Single Family Home - interior remodel and add exterior side porch entry

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	05/25/2010

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

PERMIT ISSUED
JUN - 1 2010
CITY OF PORTLAND

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☐ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date:	Date:	Date:

Ok with conditions
5/26/10

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

1014-W
need island outlet
NLD

City of Portland, Maine - Building or Use Permit Application

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Permit No:	Issue Date:	CBL:
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Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Cornerstone Building & Restoration	44 Coyle Street Portland	2077759085
Lessee/Buyer's Name	**Phone:**	**Permit Type:** Alterations - Dwellings	**Zone:** R-6

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Single Family Home	Single Family Home - interior remodel and add exterior side porch entry	$970.00	$95,000.00	1

3,239 ft

FIRE DEPT: [ ] Approved [ ] Denied

N/A

Signature:

INSPECTION:
Use Group: R-3 Type: 5B

IRC 2003

Signature:

Proposed Project Description:
Single Family Home - interior remodel and add exterior side porch entry

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: [ ] Approved [ ] Approved w/Conditions [ ] Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	05/25/2010

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JUN 1 2010
CITY OF PORTLAND

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[ ] Shoreland	[ ] Variance	[x] Not in District or Landmark
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[ ] Subdivision	[ ] Interpretation	[ ] Approved
[ ] Site Plan	[ ] Approved	[ ] Approved w/Conditions
Maj [ ] Minor [ ] MM [ ]	[ ] Denied	[ ] Denied
OK with conditions Date: 5/26/10	Date:	Date:

CERTIFICATION

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SIGNATURE OF APPLICANT   ADDRESS   DATE   PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE   DATE   PHONE

7-19-10
2x10 16oc 14' ok

Just Hangers
LVL specs
Look into @ lumber hangers

Fire blocking
GFI in Bathrooms

Look for plans
Need new plans

7/21/10 JR & SMH OH service ok - 2 Bathroom 1 circuit ok
Spoke to GC re scheduling meet w/ Nick 9 AM 7/22/10
to review check list - WAIT to close in. Fire Blocking
specifications required. SMH

7-22-10
Need solid blocking for fire
need nailing plates on first flr bathroom
need plans approved for shed dormer
and LVL

7-26-10
OK to close in
2x4 Blocking with
fire caulk
LVL installed

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
10-0567	05/25/2010	014 F012001

Location of Construction:	Owner Name:	Owner Address:	Phone:
18 HOWARD ST	LANDRY TOM	44 COYLE	207-939-0185
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Cornerstone Building & Restoration	44 Coyle Street Portland	(207) 775-9085
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Alterations - Dwellings	

Proposed Use:	Proposed Project Description:
Single Family Home - interior remodel and add exterior side porch entry	Single Family Home - interior remodel and add exterior side porch entry

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 05/26/2010

Note: **Ok to Issue:** ✓

1) Separate permits shall be required for future decks, sheds, pools, and/or garages.
2) This is NOT an approval for an additional dwelling unit. You SHALL NOT add any additional kitchen equipment including, but not limited to items such as stoves, microwaves, refrigerators, or kitchen sinks, etc. Without special approvals.
3) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
4) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Tammy Munson **Approval Date:** 05/28/2010

Note: **Ok to Issue:** ✓

1) The basement is NOT approved as habitable space.
2) Hardwired interconnected battery backup smoke detectors shall be installed in all bedrooms, protecting the bedrooms, and on every level.
3) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm HVAC systems, heating appliances, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
4) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approrval prior to work.
5) A CO detector shall be installed in each area within or giving access to bedrooms. That detection must be powered by the electrical service in the building and battery.

Comments:

5/26/2010-mes: called contractor to just confirm that there is no change in the roof lines, only a beefing up of what is existing. Later in the day, the owner called back and stated that there is no change to the roof line - just beefing it up.

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 Inspection 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 with construction.**

__X__ **Framing/Rough Plumbing/Electrical: Prior to Any Insulating or drywalling**

__X__ **Final inspection required at completion of work.**

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

General Building Permit Application

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

Location/Address of Construction: 18 Howard St Portland Me		
Total Square Footage of Proposed Structure/Area 1202 sqft	Square Footage of Lot 3239 sqft	
Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Applicant (must be owner, Lessee or Buyer) Name Tom Landry Address 44 Coyle St City, State & Zip Portland Me 04101	Telephone: 939-0185
Lessee/DBA (If Applicable)	Owner (if different from Applicant) Name SAME Address City, State & Zip	Cost Of Work: $ 95,000 C of O Fee: $ Total Fee: $

Current legal use (i.e. single family) Yes Single Family
If vacant, what was the previous use? Single Family
Proposed Specific use: Single Family
Is property part of a subdivision? NO If yes, please name
Project description:
Interior Remodel & New Porch entry

Contractor's name: Cornerstone Building & Restoration
Address: 44 Coyle St
City, State & Zip Portland Me 04101 Telephone: 775-9085 ~~252-87~~
Who should we contact when the permit is ready: Alan Trask Telephone: 252-8552
Mailing address: SAME

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

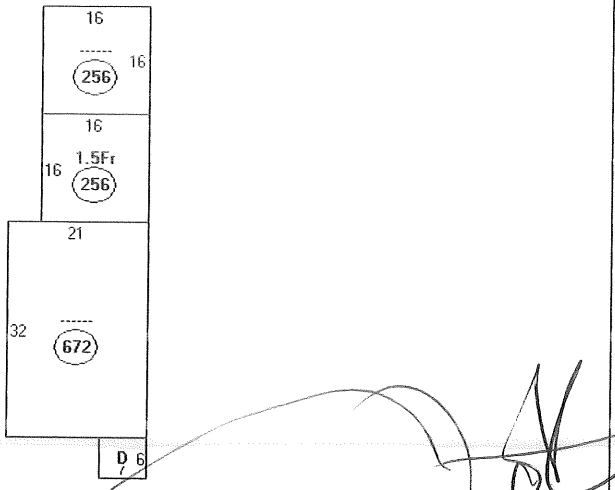
In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: Alan Trask Date: 5-25-2010

This is not a permit; you may not commence ANY work until the permit is issue

RECEIVED
MAY 25 2010
Dept. of Building Inspections
City of Portland Maine



Descriptor/Area

A: ..... 672 sqft
B: 1.5Fr 256 sqft
C: ..... 256 sqft
D: WD 42 sqft

672
256
256
42

40 = 5 x 8

1266 ft under

OK

3239 ft x 50% = 1619.5 ft max lot cov

WARRANTY DEED

Know All Men By These Presents That I **Constance M. Rutherford** of 880 Forest Avenue Unit 10-11, Portland, and State of Maine for consideration paid, grant to **Thomas J. Landry** of 44 Coyle Street, Portland and State of Maine, the following described premises: with **WARRANTY COVENANTS:**

A certain lot or parcel of land with the buildings thereon situated on the southwesterly side of Howard Street in said Portland, and bounded on the northeast by said Howard Street; on the southeast by land formerly owned or occupied by Mrs. Kennedy; on the southwest by land formerly owned or occupied by Robert Baize; and on the northwest by land formerly owned or occupied by Stephen Knights: said lot being the homestead lot formerly of Thomas H. Goody and of the corner lot in the Coffin Field, so-called, and being 41' in width on said Howard Street and about 80' in depth from said street.

Reference is hereby made to a certain Warranty deed from **Warren J. Rutherford and Constance M. Rutherford, co-trustees of the Rutherford Family Property Trust** to **Warren J. Rutherford and Constance M. Rutherford** dated **April 29, 1996** and recorded in the **Cumberland County** Registry of Deeds in **Book 12486, Page 221. Warren J. Rutherford died on March 15, 2005 leaving Constance M. Rutherford sole surviving joint tenant.**

In Witness Whereof, I have hereunto set my hand this 13th day of May, 2010.

Witness

Constance M. Rutherford

State of Maine
County of Cumberland ss.

On this 13th day of May, 2010 before me personally appeared the above-named Constance M. Rutherford acknowledged the foregoing to be her free act and deed.

Notary Public, Attorney at Law

10567

CORNERSTONE BUILDING & RESTORATION — Fax

Number of sheets including cover: 2

To: Lannie Dobson

Company: Portland

Fax: 874-8716

From: Alan Tinker - C: 252-8552

Subject: 18 Howard St. Portland

Notes:

Lannie,

Thanks for your help yesterday! Here is the Doc. Tom thought you were looking for. We'd love to stay right off so keep me ported.

Al

CELL 207-939-0185 OFFICE 207-775-9085 FAX 207-775-9095 • tmlandry@maine.rr.com • 44 Coyle St., Portland ME 04101

STATE OF MAINE
Department of Public Safety
Office of State Fire Marshal
52 State House Station
Augusta, ME 04333-0052

JOHN ELIAS BALDACCI
GOVERNOR

ANNE H. JORDAN
COMMISSIONER

JOHN C.DEAN
STATE FIRE MARSHAL

November 20, 2009

Memo

To: All Public Safety Inspectors

From: John Dean

Re: Thermal barriers over spray foam

This memo is to clarify the position of this office regarding the 15 minute thermal barrier required to be installed over spray foam insulation to separate the foam from habitable spaces. Title 25 section 2447-B allows for ½" gypsum wallboard or equivalent to be installed to obtain this thermal barrier. At this time this office will recognize the following products as having achieved equivalency.

1. International Fireproof Technology Inc. DC333
2. TPR2 Fireshell F10E
3. Cafco TB-415

These products can be used if installed as per the manufactures instructions . This list can be amended as more products are tested and evaluated . Installers shall provide property owners a certification of correct installation of these products . A copy of a cut sheet and the certification shall be kept by the owner for verification of compliance

International Fireproof Technology Inc.

Material Safety Data Sheet – DC333

1. Product and Company Identification

Product: Water based fireproof paint
Product Code: DC333

Representative in USA : International Fireproof Technology Inc.
Address : 17528 Von Karman Ave Irvine, Ca. 92614
Phone : 949-975-8588
Fax : 949-724-8898
Emergency :

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Ammonium Polyphosphate	68333799	35 ~ 50 %
Melamine	108781	10 ~ 25 %
Pentaery thritol	115775	10 ~ 25 %
Acrylic Resin		5 ~ 30 %
Water		25 ~ 50 %

3. Hazards Identification

Hmis Hazard Classification

Toxicity:	0
Flammable:	0
Reactivity:	0
Personal protection	B
Scale Low	1
Moderate:	2
High:	3
Extreme:	4

Emergency Overview: None

Potential Health Effects:

General:	No danger.
Inhalation:	It may result in irritation of throat and lungs if inhaling.
Ingestion:	None
Skin Contact:	Direct skin contact doesn't cause skin irritation or dermatitis.
Eye Contact:	May cause irritation upon direct contact.

4. First Aid Measures

Inhalation:	None
Ingestion:	Seek medical attention or drinking amounts of water immediately.
Skin Contact:	Wash with soap and water.
Eye Contact:	Flush with water. Consult a physician if necessary.
Note to Physician:	None

5. Fire Fighting Measures

Fire:	None-Flaming.
Explosion:	Not considered to be an explosion hazard.
Fire Extinguishing Media:	None-Flaming.
Special Information:	None

6. Accidental Release Measures

Steps to be taken in case of spill or leak.
Maintain adequate ventilation. Prevent runoff to sewers. Use sand or other material to dam or contain spill. Soak up with an inert absorbent. Store in a closed container until disposal.

7. Handling and Storage

Handling:	Keep containers tightly closed.
Storage:	Period≦24months
Special comments:	Store between 5℃~35℃ in a closed container in a protected area. Wash hands thoroughly with soap and water after handling as a standard hygienic practice.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:	None
Ventilation System:	A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
Personal Respirators:	Wear dust mask during work.
Skin Protection:	It is good to use protective gloves.
Eye Protection:	Wear goggles to avoid splash.

9. Physical and Chemical Properties

Appearance:	White liquid	
Odor:	Odorless	
Data relevant to safety:	Changes in physical state:	Temperature＞60℃; after the pail be opened.
	Flash point:	Not applicable
	Ignition temperature:	Not applicable
	Self-ignition temperature:	Not applicable
Color:	White; also available in standard color range	
Particle size:	＜45 μm	
Solid content:	Above 65%	
Density:	1.20±0.05	
Viscosity:	＞80 KU (at 25℃)	
pH:	7.0±1.0	
Thinner:	Water	
Storage Temperature:	5℃~35℃	

10. Stability and Reactivity

Stability:	Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:	Ammonium gas. Vinyl/Acrylic monomers if the temperature is higher than 45℃.
Hazardous Polymerization:	Should not occur.
Incompatibilities:	Evolution of ammonia under high temperature.
Conditions to Avoid:	High temperature condition (＞45℃)

11. Toxicological Information

Acute oral toxicity (LD_{50}):	None
Irritant effect on skin:	None
Irritant effect on eyes:	Slightly irritant Duration of exposure 24 hours

12. Ecological Information

Ecological effect:	Fish toxicity (LC_{50}); None
Environmental Fate:	When released into the soil, this material is not expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material is not expected to evaporate significantly.

13. Disposal Considerations

Dispose waste by sanitary landfill or incineration in accordance with appropriate regulations.

14. Transport Information

Shipping Name:	Product name:	Fireproof Paint
	Product code:	DC333
Size:	1 Gallon (net weight 10Lbs) or 5 Gallon (net weight 50Lbs) by plastic bucket.	
Road transport:	ADR	Non-hazardous goods
	RI	Non-hazardous goods
Inland waterways transport:	ADNR	Non-hazardous goods
Marine transport:	IMDG/UN1263	Non-hazardous goods
Air transport:	ICAO/IATA-DGR	Non-hazardous goods
Dispatch by post:	Permitted	

15. Regulatory Information

Health hazardous goods:	NO
Environmental hazardous goods:	NO
Fire hazardous goods:	NO

16. Other Information

Hazard Warning:	None
Cautions:	Avoid contact with eyes. Use with adequate ventilation. Wash thoroughly after handling.
Label First Aid:	Assist person to understand and exactly avail the materials
Product Use:	Fireproof paint.
Remark:	This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

DEMILEC (USA) LLC

HEATLOK SOY

Technical Data Sheet

Rigid, Spray-applied Polyurethane Foam Insulation
Zero Ozone Depletion Substance, Class I ASTM

HEATLOK SOY® is two component spray applied rigid polyurethane foam, green in color, having a nominal density 2lbs/ft³. This spray foam has been specially formulated to meet the intent of the International Code Council (ICC) building codes and is used primarily as a vapor barrier, air barrier and thermal insulation on above and below grade interior and exterior applications. Complies with FEMA requirements as a Class 4 insulation.

HEATLOK SOY® is environmentally-friendly foam developed from recycled plastic materials and renewable soy oils, while the blowing agent is the HFC 245fa. Certified Insulation Material approved by California Department of Consumer Affairs. *GREENGUARD* and *GREENGUARD Children and Schools* certified.

Physical Properties			
Method	**Description**	**Imperial units**	**Metric units**
ASTM D 1622	Density (core)	**2.1-2.3 lb/ft³**	**34-37 Kg/m³**
ASTM C 518	Initial Thermal Resistance, 1"	**7.2 ft²hºF/BTU**	**1.26 m²ºC/W**
(R-Value)	Aged Thermal Resistance, 180 days @ 23ºC, 1"	**6.6 ft²hºF/BTU**	**1.17 m²ºC/W**
ASTM D 1621	Compressive Strength (10%)	**28.3 psi**	**195 kPa**
ASTM D 1623	Tensile Strength	**51.5 psi**	**355 kPa**
ASTM D 2126	Dimensional Stability (28 days)	**% Volume Change**	
	(sample without any substrate)		
	-4ºF (-20ºC), ambient RH	**-0.03**	
	176ºF (80ºC), ambient R.H.	**+ 2.9**	
	158ºF (70ºC), 97% R.H.	**+ 9.8**	
ASTM D 2842	Water Absorption (Serves as moisture barrier)	**0.8% Volume**	
ASTM E 96	Water Vapor Permeance, 1" (Note: Is a vapor barrier of 1 perm or less at thicknesses greater than 1.2" per IBC Section 202, Definitions)	**1.2 perms, 69ng/Pasm² @ 1"**	
ASTM E 283-04	Air Permeance @ 75Pa, 1" (Note: Air Barrier Association of America approved air barrier)	**0.001L/sm² @ 1"**	
ASTM E2178-03		**0.000L/sm² @ 1.5"**	
ASTM E 84-05	Surface Burning Characteristics, 3"thick		
	• Flame spread index	**20**	
	• Smoke development	**450**	
CAN/ULC S774	VOC Emissions from Polyurethane Foam	**Pass (1 day)**	
ASTM C 1338	Fungi Resistance	**No fungal growth**	
ASTM D 2856	Closed Cell Content	**> 92%**	
ASTM D 6866	Bio-based Content	**5%**	

Liquid Components Properties		
Property	Isocyanate A 100	Resin B 217-0
Color	Brown	Greenish
Specific gravity	1.20 – 1.24	1.20 – 1.24
Shelf life*	6 months	6 months
Mixing ratio (volume)	100	100
Vapor pressure @ 25°C	10^{-7} psi	7 – 9 psi

* See MSDS for more information.

Note: Store the resin at temperatures 59 - 77ºF (15 – 25ºC). Keep away from direct sunlight.

Processing Parameters		
	Imperial units	**Metric units**
Type of machine	Graco® Reactor E-30 with Fusion gun and 02 Mixing Chamber	
Components A & B temperature	100°F	38°C
Components A & B pressure	850 – 1000 psi	5860 – 6900 kPa
Ambient temperature	73°F	23°C
Thickness per pass	1 ¼ inches	30 mm
Number of passes	2	
Substrate	Polyethylene Board	

Reactivity Profile			
Cream time (s)	Gel time (s)	Tack free time (s)	End of rise (s)
0-1	2	4-5	4

Recommended Processing Conditions		
	Imperial units	Metric units
Mixing ration A:B	1:1	
Mixing temperature	100 – 120°F	38 – 49°C
Mixing pressure	800 psi	5516 kPa
Substrate & Ambient temperature	>14°F	>(-10)°C
Curing temperature	>14°F	>(-10)°C
Maximum thickness per pass	2 in.	50 mm

General Information: It is recommended that the foam is covered with an approved thermal barrier in accordance to the local and national building codes when used in buildings and a protective coating when used outside. This product should not be used when the continuous service temperature of the substrate is outside the range of -76ºF (-60ºC) to 176ºF (80ºC). Spraying too thick sections too fast may result in charring of the foam, or in extreme conditions a fire may result.

DEMILEC (USA) LLC.
POLYURETHANE SYSTEMS MANUFACTURER

February 18, 2010

RE: Specific Approvals and Large Scale Testing for HEATLOK SOY® 200

DEMILEC (USA) LLC® has completed several large scale fire tests, in accordance with the 2006 IRC 314.6 Specific Approval, 2006 IBC 2603.9 Specific Approval and ICC ES's AC 377 for Spray Applied Foam Plastic Insulation. Most recently, DEMILEC (USA) LLC® successfully completed an NFPA 286 assembly using HEATLOK SOY® 200 in accordance ICC-ES AC377 Appendix X, to meet performance based code requirements.

Based on this large scale fire testing, HEATLOK SOY® 200 can be installed exposed in attic and crawl space applications, without the code prescribed ignition barrier or an intumescent coating, at thicknesses up to 10" in walls and 11 ½" on the underside of floors or roof decks.

If you have any questions do not hesitate to contact us.

Sincerely,

Robert Naini
Director of Engineering
DEMILEC (USA) LLC®

Engineering Department
(817) 640-4900 • Fax (817) 633-2100 • engineering@demilecusa.com
2925 Galleria, Arlington, Texas 76011

DEMILEC (USA) LLC.
POLYURETHANE SYSTEMS MANUFACTURER

April 14, 2010

To whom it may concern:

RE: Foam in Attics and Crawlspaces

We have completed testing on our open and closed cell spray foams to allow them to be left exposed without the use of a prescriptive thermal or ignition barrier in specific applications including attics and crawl spaces in accordance with the ICC ESR-1172, ICC ESR-2600, the ICC-ES AC 377 and several NFPA 286 tests, as described below:

*SEAL*ECTION® ICC ESR-1172, Dated Oct 1, 2009 has the following options:

- Section 4.3.2 allows the foam to be used as an interior finish without a thermal barrier or ignition barrier. The maximum thickness is 5-1/2" on walls and 10" on floors and ceilings. The entire surface of the foam must be coated with 14 dry mills (22 wet mills) of Blazelok® TB. This application can be used in various situations including exposed ceilings in restaurants or convention centers, above drop ceilings in strip malls or offices and in open return plenum areas, all of which would typically require thermal barrier protection over foam plastic
- Section 4.4.2.2 allows the foam may be applied to a depth of 11-1/2" to the underside of the roof sheathing and/or rafters and in the top of the crawl spaces and to a depth of 10" on vertical surfaces in those areas. The foam on the vertical surfaces must be coated with 10 dry mills (16 wet mils) of Blazelok® IB.
- Section 4.4.2.3 allows the foam may be applied to a depth of 10" to the underside of the roof sheathing and/or rafters and in the top of the crawl spaces and to a depth of 5-1/2" on vertical surfaces in those areas. The foam on the vertical surfaces must be coated with 10 dry mills (16 wet mils) of Andek Firegard®.
- Section 4.4.2.4 allows the foam may be applied to a depth of 10" to the floor of the attic. The foam must be coated with 10 dry mills (16 wet mils) of Blazelok® IB.

*SEAL*ECTION Agribalance® ICC ESR-2600, Dated Dec 1, 2009 has the following options:

- Sections 4.4.2.2 allows the foam may be applied to a depth of 11-1/4" to the underside of the roof sheathing and/or rafters and on the underside of the floor and/or floor joist in crawl spaces and to a depth of 10" on vertical surfaces in those areas.
- Section 4.4.3 allows the foam may be applied to a depth of 10" to the floor of the attic. The foam does not require an ignition barrier to be applied over it.

Heatlok Soy® has passed the NFPA 286 test in accordance with the ICC-ES AC 377, Appendix A allowing it to be applied to a depth of 11-1/2" to the underside of the roof sheathing and/or rafters and in the top of the crawl spaces and to a depth of 10" on vertical surfaces in those areas. The foam on the vertical surfaces must be coated with 10 dry mills (16 wet mils) of Blazelok® IB.

Heatlok Soy 200® Heatlok Soy® has passed the NFPA 286 test in accordance with the ICC-ES AC 377, Appendix X allowing it to be applied to a depth of 11-1/2" to the underside of the roof sheathing and/or rafters and in the top of the crawl spaces and to a depth of 7-1/2" on vertical surfaces in those areas. The foam does not require an ignition barrier to be applied over it.

The various test reports are available to show compliance with the IRC Section 314.6 and the IBC Section 2603.9 as well as the ICC-ES AC 377. Please note the codes do not require an ESR to prove compliance. The code commentary states specific test reports as well as an ESR may be used to show compliance.

If you have further questions regarding these or any other topics associated with DEMILEC (USA) or spray foam insulation in general, do not hesitate to contact anyone in the Engineering Division.

Charles Waggoner
Product Engineer
(817) 879-8659
charles@demilecusa.com

R314.6 Specific approval. Foam plastic not meeting the requirements of Sections R314.3 through R314.5 shall be specifically approved on the basis of one of the following approved tests: NFPA 286with the acceptance criteria of Section *R315A,* FM4880, UL 1040 or UL 1715, or fire tests related to actual end-use configurations. The specific approval shall be based on the actual end use configuration and shall be performed on the finished foam plastic assembly in the maximum thickness intended for use. Assemblies tested shall include seams, joints and other typical details used in the installation of the assembly and shall be tested in the manner intended for use.

- Foam plastic does not have to comply with the installation and use requirements of Sections R314.3 through R314.5 when specific approval is obtained in accordance with this section. This section lists examples of specific large scale tests, such as: FM 4880, UL 1040, NFPA 286 or UL 1715. Also, other large scale fire tests related to actual end-use configuration can be used. The intent is to require testing based on the proposed end-use configuration of the foam-plastic assembly with a fire exposure that is appropriate in size and location for the proposed application. These tests must be performed on full-scale assemblies. The tested assemblies must include typical seams, joints and other details that will occur in the finished installation. The foam plastic must be tested in the maximum thickness and density intended for use. Thorough testing provides an accurate depiction of the in-place fire performance of assemblies and systems using foam plastics.

- There are two ways to show code compliance under Section R314.6. One method is to provide the actual test report that contains a description of the assembly and test results showing that the foam plastic, in the end use application, has passed the test. The second method is to obtain, from the ICC-ES, an Evaluation Report that covers the end use application.

TEST REPORT

Intertek

REPORT NUMBER:3172663SAT-001
ORIGINAL ISSUE DATE: March 18, 2009
REVISED DATE: N/A

EVALUATION CENTER
Intertek Testing Services NA Inc.
16015 Shady Falls Rd.
Elmendorf, TX 78112

RENDERED TO

Demilec USA, LLC
2925 Galleria Drive
Arlington, TX 76011
USA

PRODUCT EVALUATED: Heatlok Soy 2 pound closed cell foam and 10ml Blazelok IB
EVALUATION PROPERTY: Heat Release, Flame Spread

Report of testing Heatlok Soy 2 pound Closed Cell with 10 ml of Blazelok IB® for compliance with the applicable requirements of the following criteria: NFPA 286, IBC 803.2.1, and ICC-ES AC377 Appendix A

1 Table of Contents

2 Introduction

Intertek Testing Services NA (Intertek) has conducted testing for Demilec USA, LLC, on Heat loc soy 2 pound Closed Cell spray foam covered with 10ml of Blazelok IB on the walls only to evaluate heat release and flame spread properties when subjected to specific ignition conditions. Testing was conducted in accordance with NFPA 286. and (AC 377) Apendix A Comparing to PN (3161466-007) tested on October 30, 2008. This was Agribalance™ and ¼"BC plywood that had fire out the door at 4:29 (min-sec) this evaluation was performed on March 10, 2009.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were randomly selected on 2-6-09 by Intertek representative Davis Bawer, at the DEMILEC USA LLC manufacturing facility, located at 2925 Galleria Drive Arlington, TX 76011. Samples were received at the Evaluation center on 2-12-09.

The subject test specimen is a traceable sample selected from the manufacturer's facility. Intertek selected the specimen and has verified the composition, manufacturing techniques and quality assurance procedures.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

The test specimen consisted of three walls with 2x12 studs, 48 inches o.c. and 2x12 joists, 24 inches o.c. with a 15/32 inch plywood backing. The final interior dimensions were 8 feet high, 8 feet wide and 12 feet deep. Ceiling joists ran parallel to the short dimension of the room. The corner was constructed such that two studs met at their edges, forming a 90° angle.

On top of this substrate, the spray foam was applied to a thickness of 10 inches on the walls and 11 1/2 inches on the ceiling. There was no significant over spray outside of the cavities. The wall foam and studs were covered with 10 mils of Blazlok IB.

See Photos in Appendix B for a visual depiction of the description.

4 Testing and Evaluation Methods

This standard describes a method for determining the contribution of textile wall and ceiling coverings to room fire growth during specified fire exposure conditions. This method is not intended to evaluate the fire endurance of assemblies, nor is it able to evaluate the effect of fires originating within the wall assembly. The method is not intended for the evaluation of floor finishes.

This method is to be used to evaluate the flammability characteristics of finish wall and ceiling coverings when such materials constitute the exposed interior surfaces of buildings. This test method does not apply to fabric covered less than ceiling height, freestanding, prefabricated panel furniture systems or demountable, relocatable, full-height partitions used in open building interiors. Freestanding panel furniture systems include all freestanding panels that provide visual and/or acoustical separation and are intended to be used to divide space and may support components to form complete work stations.

This fire test measures certain fire performance characteristics of finish wall and ceiling covering materials in an enclosure under specified fire exposure conditions. It determines the extent to which the finish covering materials may contribute to fire growth in a room and the potential for fire spread beyond the room under the particular conditions simulated. The test indicates the maximum extent of fire growth in a room, the rate of heat release, and if they occur, the time to flashover and the time to flame extension beyond the doorway following flashover. It does not measure the fire growth in, or the contribution of, the room contents. Time to flashover is defined herein as either the time when the radiant flux onto the floor reaches 20 kW/m^2 or the temperature of the upper air reaches 600°C. A pair of crumpled single sheets of newspaper are placed on the floor 2 feet out from the center of the rear wall and front walls to determine flashover. The spontaneous ignition of this newspaper provides the visual indication of flashover.

The potential for spread of fire to other objects in the room, remote from the ignition source, is evaluated by measurements of:

1. The total heat flux incident on the center of the floor.
2. A characteristic upper-level gas temperature in the room.
3. Instantaneous net peak rate of heat release.

The potential for the spread of fire to objects outside the room of origin is evaluated by the measurement of the total heat release of the fire.

TEST EQUIPMENT AND INSTRUMENTATION

IGNITION SOURCE

The ignition source for the test is a gas burner with a nominal 12- by 12-inch porous top surface of a refractory material. The burner used at this laboratory is filled with a minimum 4-inch layer of Ottawa sand.

The top surface of the burner through which the gas is applied is positioned 12 inches above the floor, and the burner enclosure is located such that the edge of the diffusion surface is located 1 inch from both walls in the left corner of the room opposite from the door.

The gas supply to the burner is C.P. grade propane (99 percent purity). The burner is capable of producing a gross heat output of 40±1 for five minutes followed by a 160±5 kW for ten minutes. The flow rate is metered throughout the test. The design of the burner controls is such that when one quarter-turn ball valve is opened, the flow of gas to the burner produces 40 kW and when a second quarter-turn valve is opened the combined flow produces 160 kW.

COMPARTMENT GEOMETRY AND CONSTRUCTION

The interior dimensions of the floor of the fire room, when the specimens are in place, measures 8 feet, by 12 feet. The finished ceiling is 8 feet ± 0.5 inches above the floor. The four walls are at right angles defining the compartment. The compartment contains a 30 ± 0.25 by 80 ± 0.25 inch doorway in the center of one of the 8' by 6' 11" walls. No other openings are present to allow ventilation. The test room is lined with 5/8" type X gypsum wallboard.

PROCEDURE

SUMMARY OF METHOD

A calibration test is run within 30 days of testing any material as specified in the standard. All instrumentation is zeroed, spanned and calibrated prior to testing. The specimen is installed and the diffusion burner is placed. The collection hood exhaust duct blower is turned on and an initial flow is established. The gas sampling pump is turned on and the flow rate is adjusted. When all instruments are reading steady state conditions, the computer data acquisition system and video equipment is started. Ambient data is taken then the burner is ignited at a fuel flow rate that is known to produce 40 kW of heat output. This level is maintained for five minutes at which time the fuel flow is increased to the 160 kW level for a 10-minute period. During the burn period, all temperature, heat release and heat flux data is being recorded every 6 seconds. At the end of the fifteen minute burn period, the burner is shut off and all instrument readings are stopped. Post test observations are made and this concludes the test.

All damage is documented after the test is over, using descriptions, photographs and drawings, as is appropriate.

4.1. TEST STANDARD

NFPA 286.

5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

FIRE TESTS
The test was started at 10:50 am on March 10, 2009. The ambient temperature was 73°F with a relative humidity of 70%. The data acquisition system was started and the burner was ignited. Events during the test are described below:

TIME (min:sec)	OBSERVATION
0:00	Ignition of burner. Heat output set to 40 kW.
0:25	The walls began to discolor.
0:37	There is light smoke.
1:00	Increase in smoke.
2:20	Ignition
4:18	Flames at 4ft in corner over burner.
5:00	Burner increased to 160KW
5:07	Flame spread horizontally 6ft from corner on ceiling
5:16	Heavy smoke
5:37	Flames out the door.
5:40	Test terminated

Post Test Observations:
The intumescent and foam were heavily charred. There was less than a ¼" of char 4 foot above burner.

For additional details, see the post-test photographs later in this report.

6 Conclusion

The sample submitted, installed, and tested as described in this report displayed high levels of heat release, high upper level temperatures, and had flames exiting the test chamber. The heat flux on the floor did reach flashover levels. The sample did not spread flames to the ceiling during the 40 kW exposure.

NFPA 286 does not publish pass/fail criteria. One must consult the codes to determine pass fail.

This specimen **DID NOT MEET** the criteria set forth in the 2006 IBC Section 803.2.1. It **met** the criteria for ICC-ES AC377 Appendix A in comparison with PN (3161466-007) Agribalsnce™ foam covered with ¼" BC plywood on October 30, 2009 with test being terminated with fire out the door 4:29 (min-sec) .

INTERTEK TESTING SERVICES NA

Report

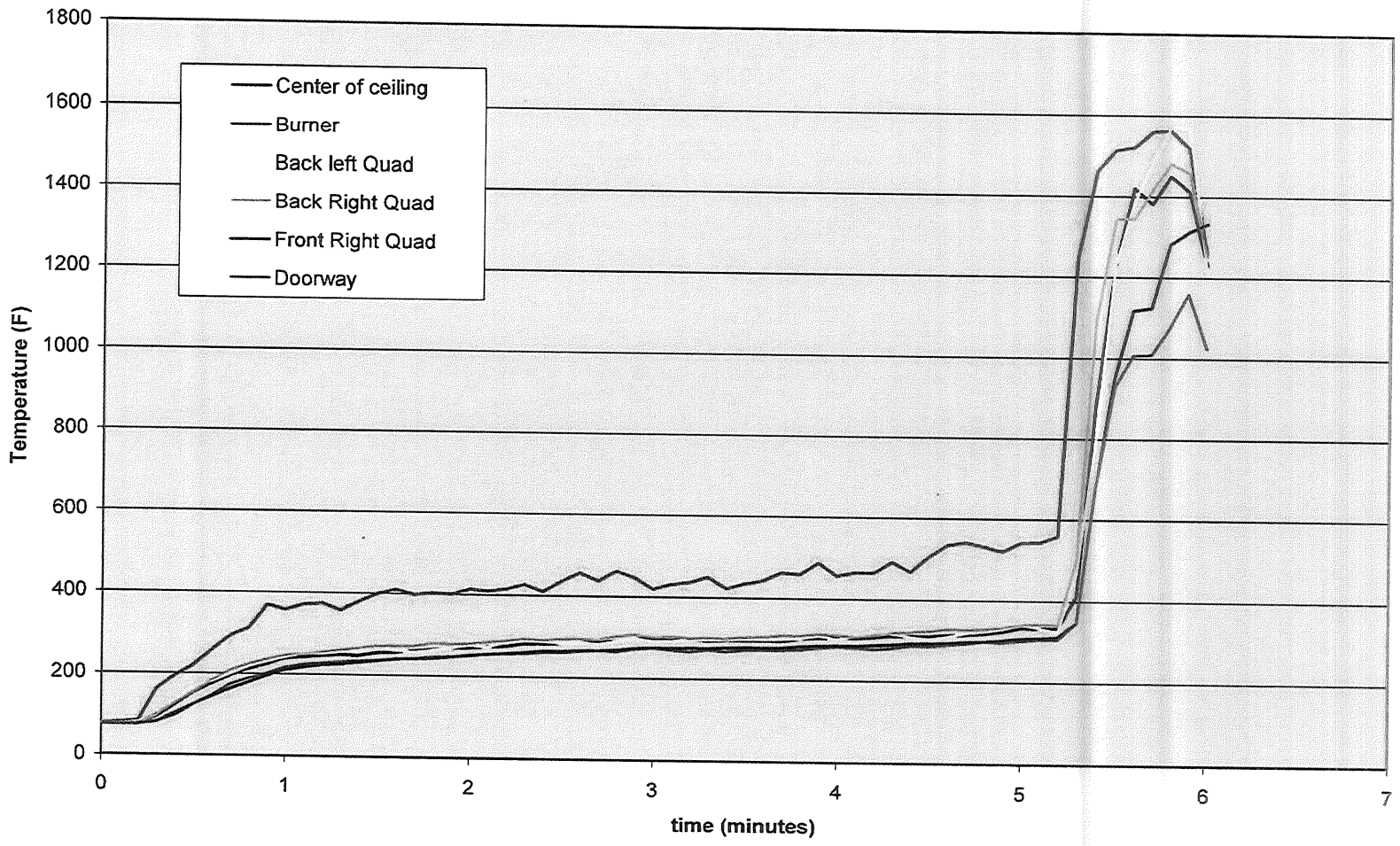
Troy Bronstad
Team Leader

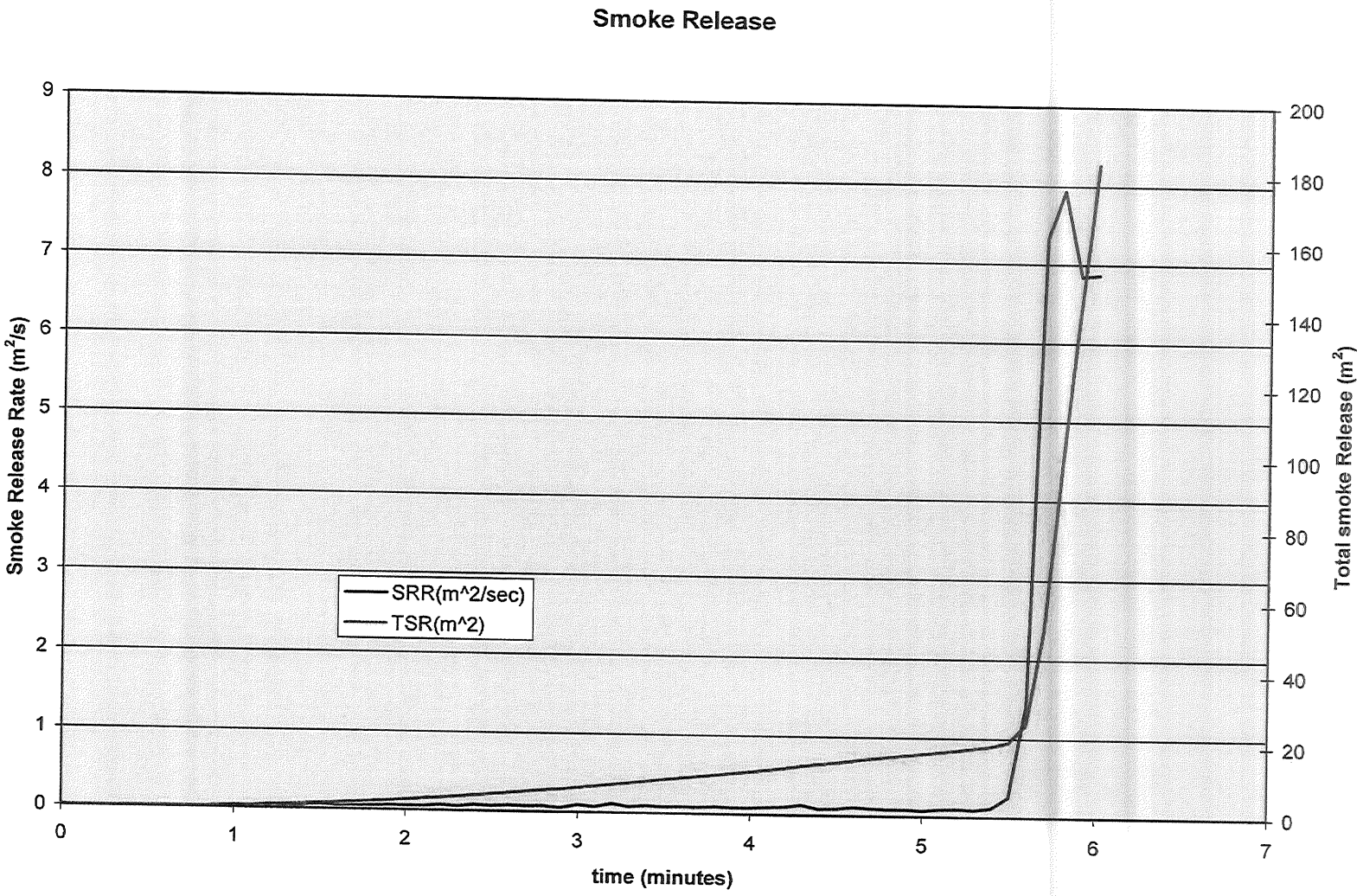
Reviewed by:

C. Anthony Peñaloza
Flammability Testing Team Leader

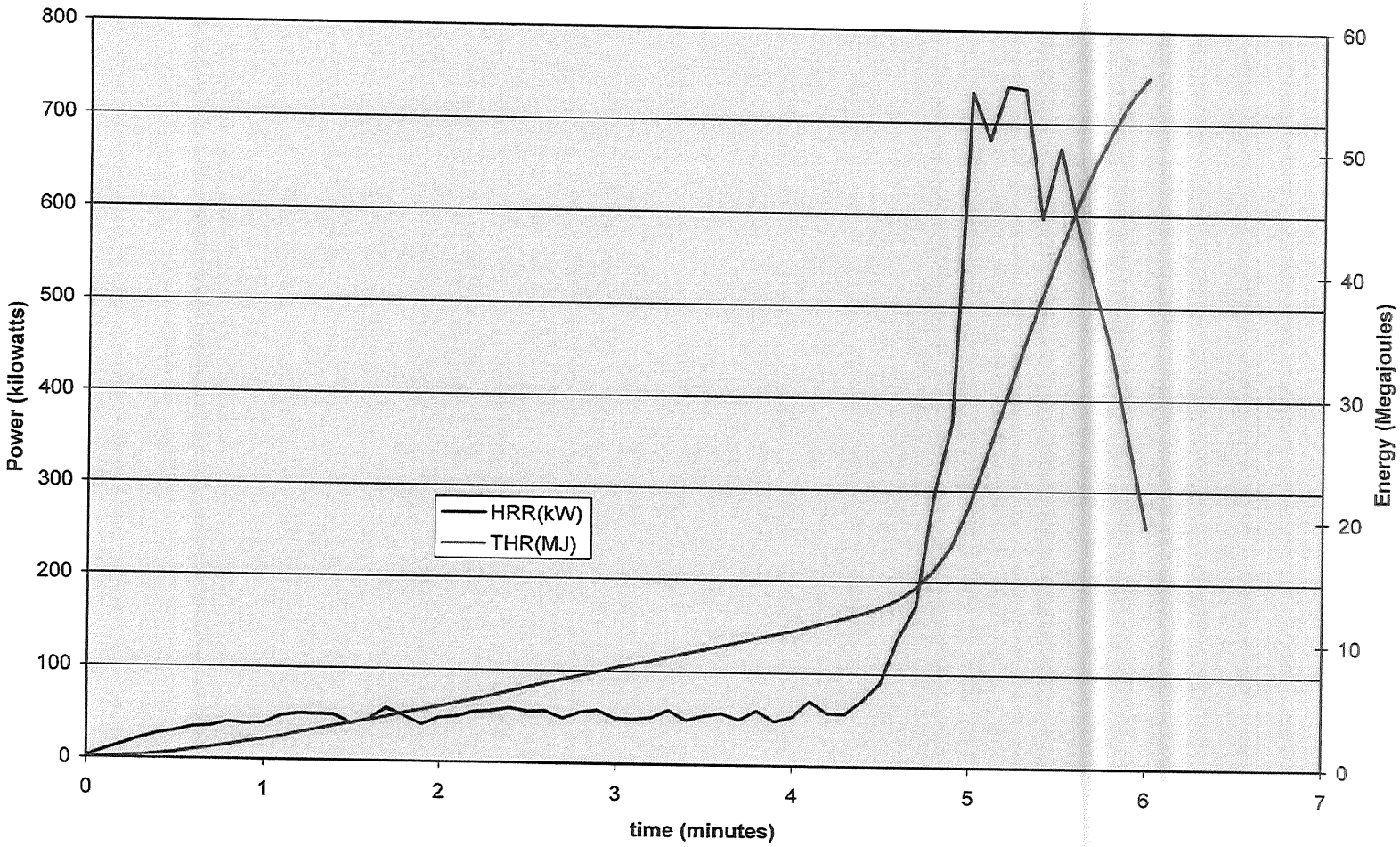
APPENDIX A
Test Data

Thermocouple Data

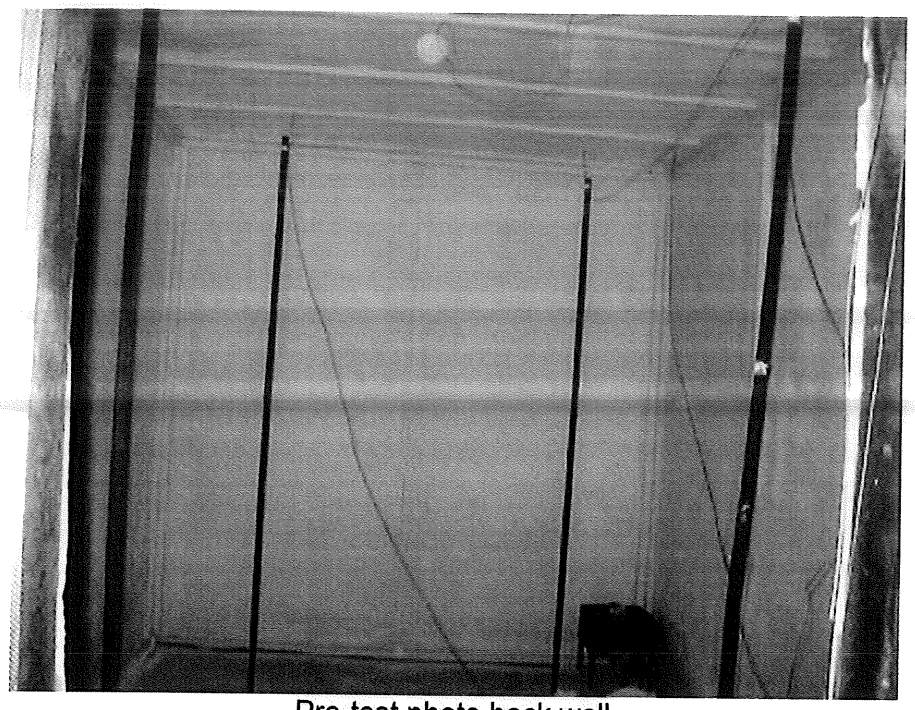



Smoke Release
Smoke Release Rate (m²/s)
Total smoke Release (m²)
time (minutes)
SRR(m^2/sec)
TSR(m^2)
0
1
2
3
4
5
6
7
8
9
20
40
60
80
100
120
140
160
180
200

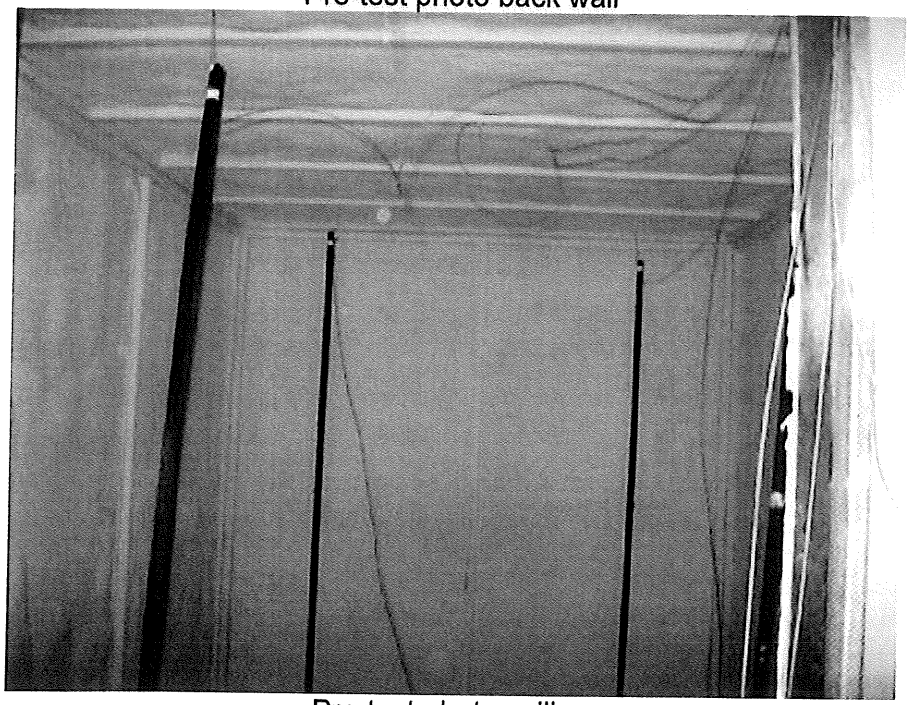
Heat Release



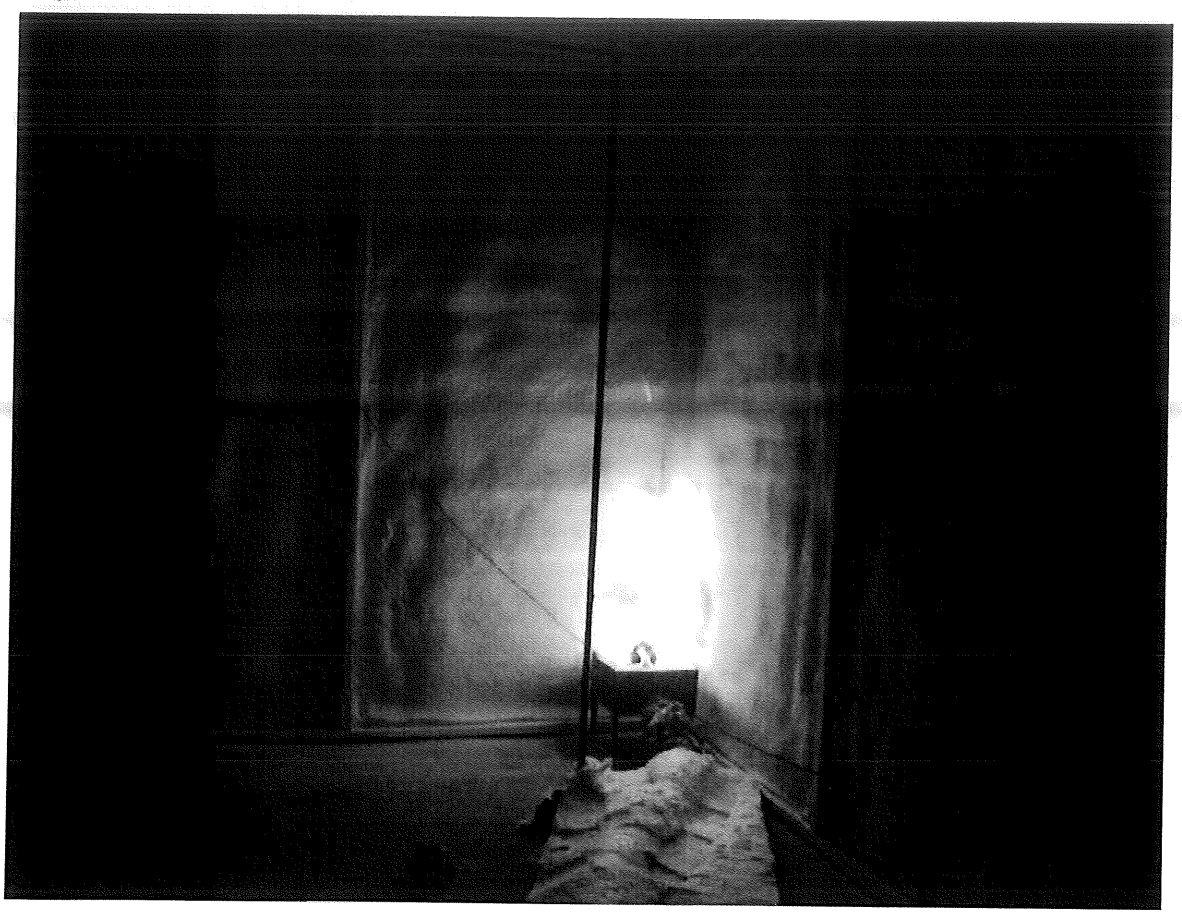
APPENDIX B
Photographs



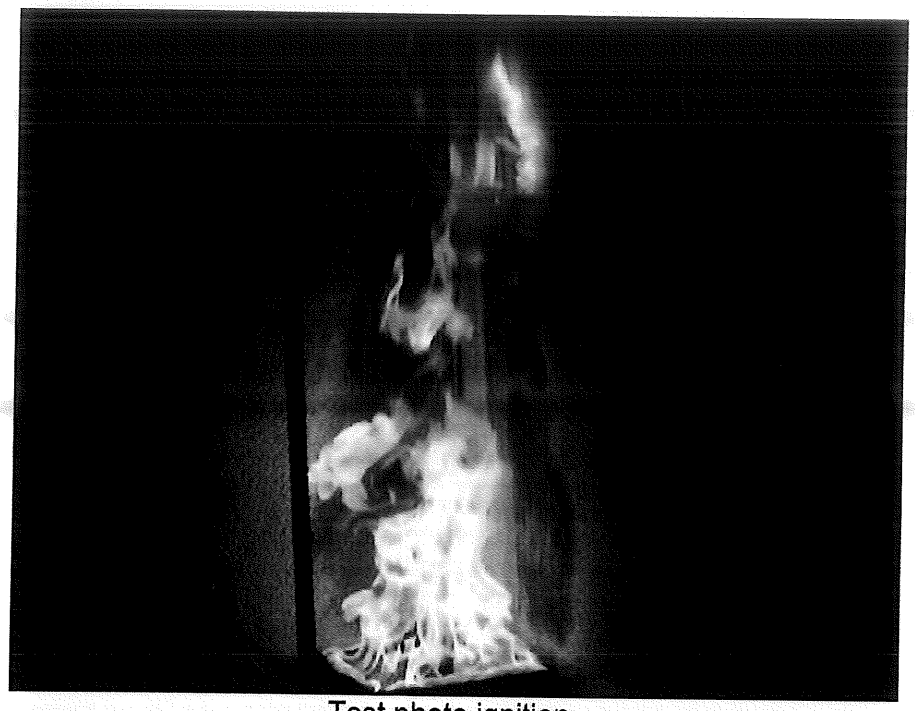
Pre-test photo back wall



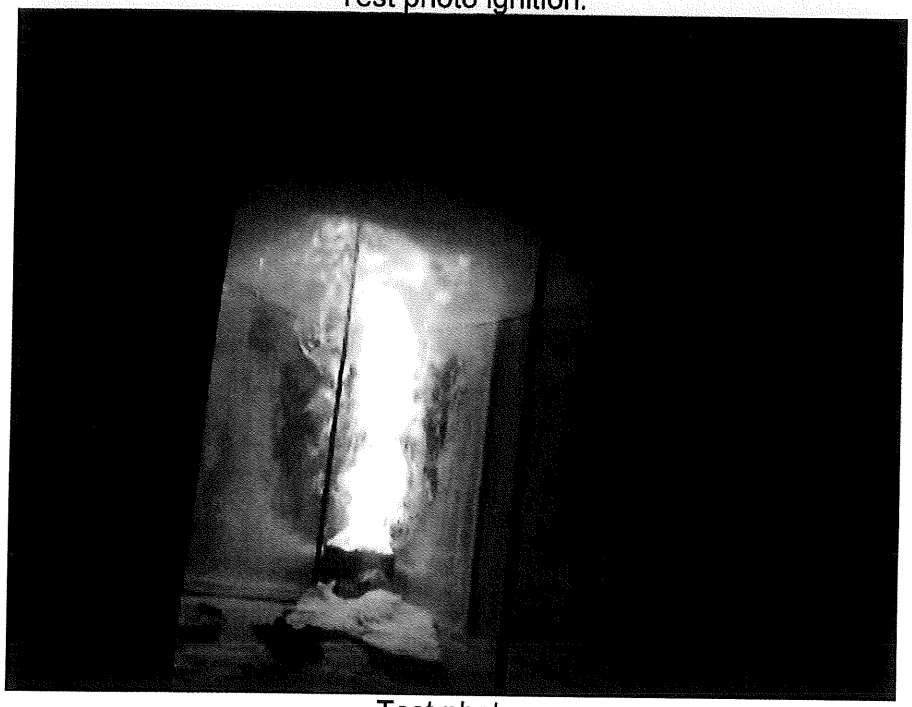
Pre-test photo ceiling



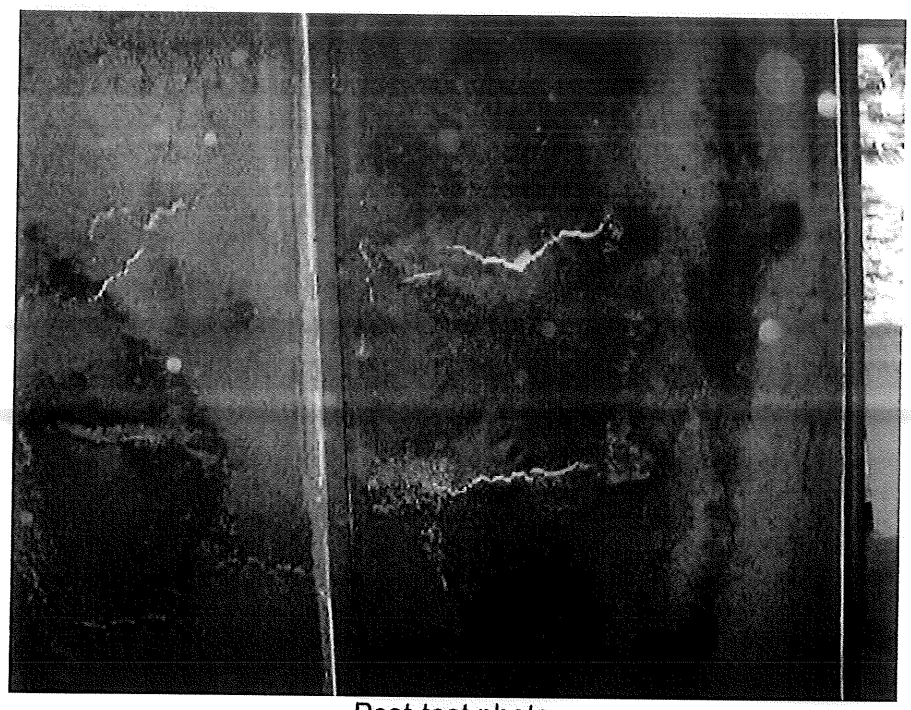
Start of test. 40kW



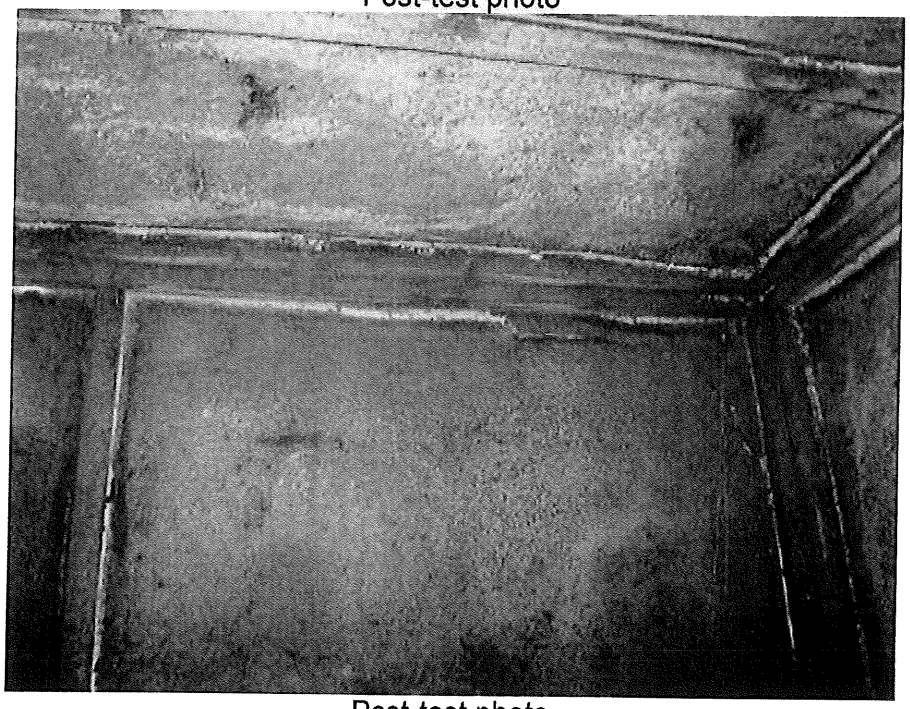
Test photo ignition.



Test photo.



Post-test photo



Post-test photo

LAST PAGE OF TEST REPORT

REVISION SUMMARY

DATE	SUMMARY
January 28,2009	First issue. No revisions.

Side

79'

Rear

41'

20'-7"

5'-0"

8'-0"

NEW PORCH AT ENTRY

20'-7"

79'

LOT 3239 SQ.FT.
CURRENT FOOTPRINT 1162 SQ. FT.
NEW FOOTPRINT 1202 SQ.FT.

BOUNDRY LINE

Side

41'

Front

18 HOWARD STREET

RECEIVED
MAY 25 2010
Dept. of Building Inspections
City of Portland Maine

R-6

Front: 10' min - 10'+ Shown
Rear: 20' min - 20'+ Shown
Side: 10' min - 20'7" Shown

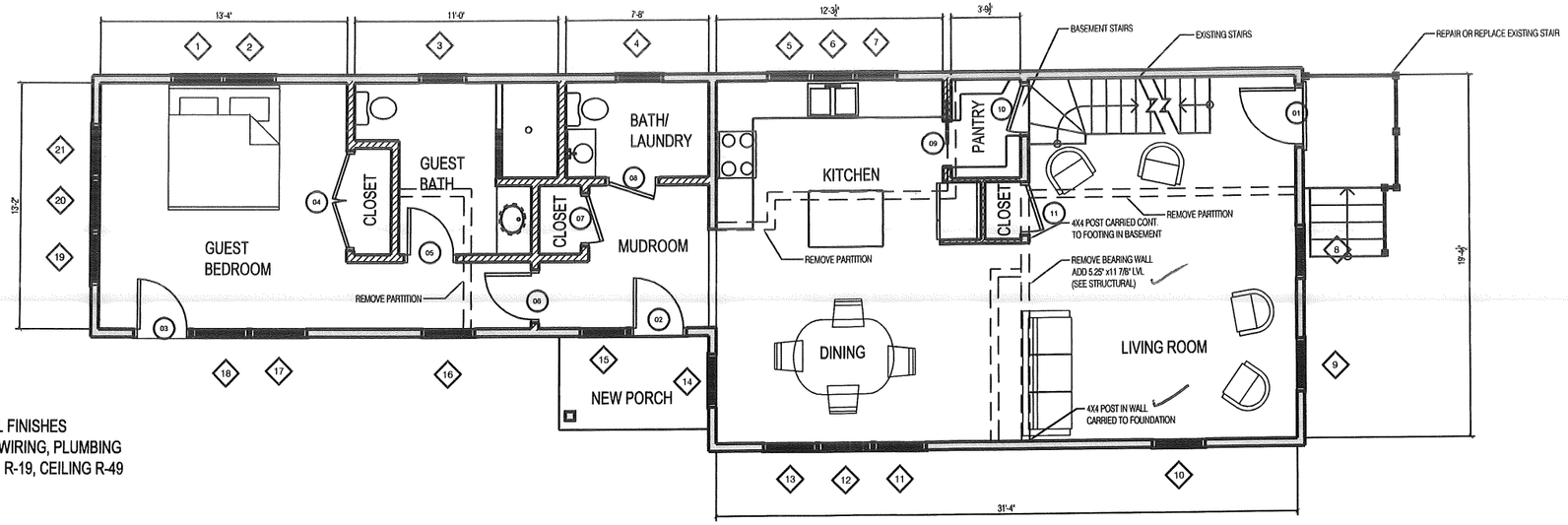
SHEET TITLE
SITE PLAN

PROJECT
18 HOWARD STREET

DATE: 05.08.010
DRAWN BY: BB

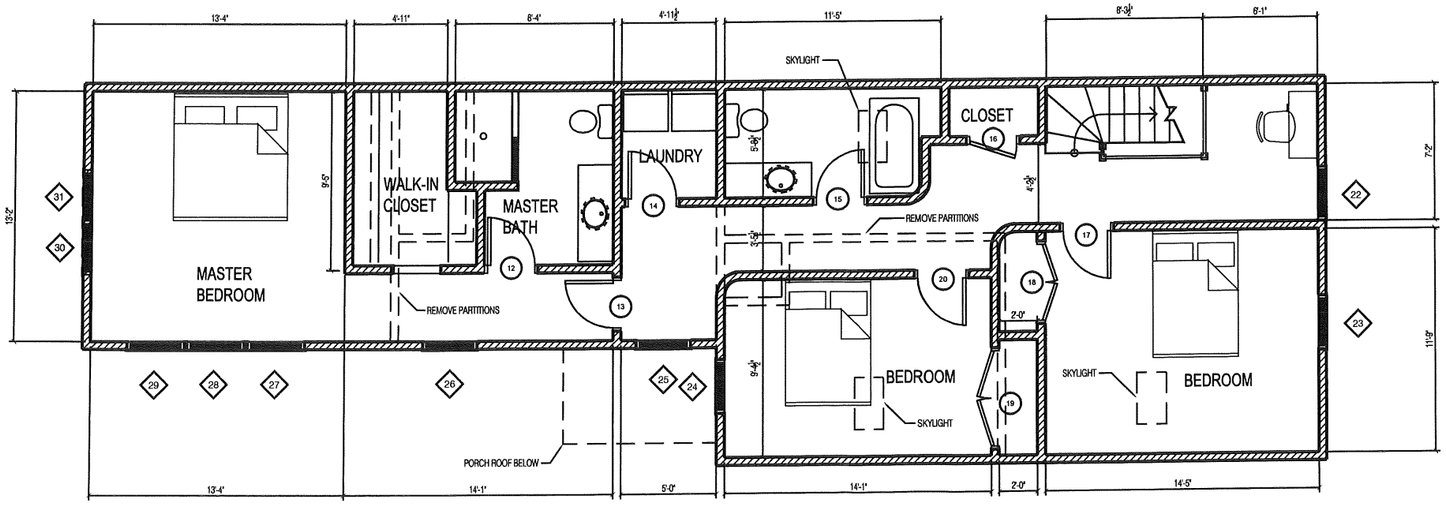
Prospect Design
424 FORE STREET
PORTLAND, ME 04103
P 207.749.7400

DRAWING
A-1.0



NOTES:
REMOVE ALL EXISTING WALL FINISHES
PROVIDE NEW INSULATION, WIRING, PLUMBING
INSULATION VALUES; WALLS R-19, CEILING R-49

PROPOSED FIRST FLOOR PLAN
1/8" = 1'-0"



PROPOSED SECOND FLOOR PLAN
1/8" = 1'-0"

SHEET TITLE
PROPOSED FIRST FLOOR

PROJECT
HOWARD STREET

DATE: 05.08.010
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PORTLAND, ME 04103
P 207.749.7400

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A-1.1

DOOR AND FRAME SCHEDULE

MARK	DOOR SIZE WD	DOOR SIZE HGT	DOOR MATL	DOOR GLAZING	FRAME MATL	FRAME SILL	NOTES
1	3'-0"	6'-8"	WOOD	BEVELED GLASS	WOOD	METAL	Rehang existing
2	2'-8"	6'-8"	FIBERGLASS	HALF LIGHT INSULATED	WOOD	METAL	--
3	2'-8"	7'-0"	FIBERGLASS	3/4 LIGHT INSULATED	WOOD	METAL	--
4	5'-0"	6'-8"	WOOD	N/A	WOOD	N/A	--
5	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
6	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
7	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
8	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
9	2'-4"	6'-8"	WOOD	N/A	POCKET	N/A	Pocket door
10	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
11	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
12	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
13	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
14	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
15	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
16	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
17	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--
18	4'-0"	6'-8"	WOOD	N/A	WOOD	N/A	--
19	5'-0"	6'-8"	WOOD	N/A	WOOD	N/A	--
20	2'-6"	6'-8"	SOLID WOOD	N/A	WOOD	N/A	--

WINDOW SCHEDULE

MARK	SIZE WIDTH	SIZE HEIGHT	TYPE	MATERIAL	NOTES
1	2'-6"	2'-6"	AWNING	--	--
2	2'-6"	2'-6"	AWNING	--	--
3	2'-2"	4'-4"	DOUBLE-HUNG	--	--
4	2'-2"	4'-4"	DOUBLE-HUNG	--	--
5	2'-0"	3'-8"	CASEMENT	--	--
6	2'-0"	3'-8"	CASEMENT	--	--
7	2'-0"	3'-8"	CASEMENT	--	--
8	2'-6"	5'-1"	DOUBLE-HUNG	--	EXISTING OPENING
9	2'-6"	5'-1"	DOUBLE-HUNG	--	EXISTING OPENING
10	2'-6"	5'-1"	DOUBLE-HUNG	--	EXISTING OPENING
11	2'-6"	5'-1"	DOUBLE-HUNG	--	EXISTING OPENING
12	2'-6"	5'-1"	DOUBLE-HUNG	--	--
13	2'-6"	5'-1"	DOUBLE-HUNG	--	EXISTING OPENING
14	2'-6"	5'-1"	DOUBLE-HUNG	--	--
15	2'-2"	5'-1"	DOUBLE-HUNG	--	--
16	2'-6"	5'-1"	DOUBLE-HUNG	--	--
17	2'-8"	5'-1"	DOUBLE-HUNG	--	--
18	2'-8"	5'-1"	DOUBLE-HUNG	--	--
19	2'-6"	2'-6"	AWNING	--	--
20	2'-6"	2'-6"	AWNING	--	--
21	2'-6"	2'-6"	AWNING	--	--
22	2'-6"	4'-5"	DOUBLE-HUNG	--	EXISTING OPENING
23	2'-6"	4'-5"	DOUBLE-HUNG	--	EXISTING OPENING
24	2'-6"	4'-5"	DOUBLE-HUNG	--	EXISTING OPENING
25	2'-6"	4'-5"	DOUBLE-HUNG	--	EXISTING OPENING
26	2'-6"	4'-5"	DOUBLE-HUNG	--	EXISTING OPENING
27	2'-8"	4'-5"	DOUBLE-HUNG	--	--
28	2'-8"	4'-5"	DOUBLE-HUNG	--	--
29	2'-8"	4'-5"	DOUBLE-HUNG	--	--
30	2'-6"	2'-6"	AWNING	--	--
31	2'-6"	2'-6"	AWNING	--	--

SHEET TITLE
SCHEDULES

PROJECT
18 HOWARD STREET

DATE: 05.08.010

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PORTLAND, ME 04103
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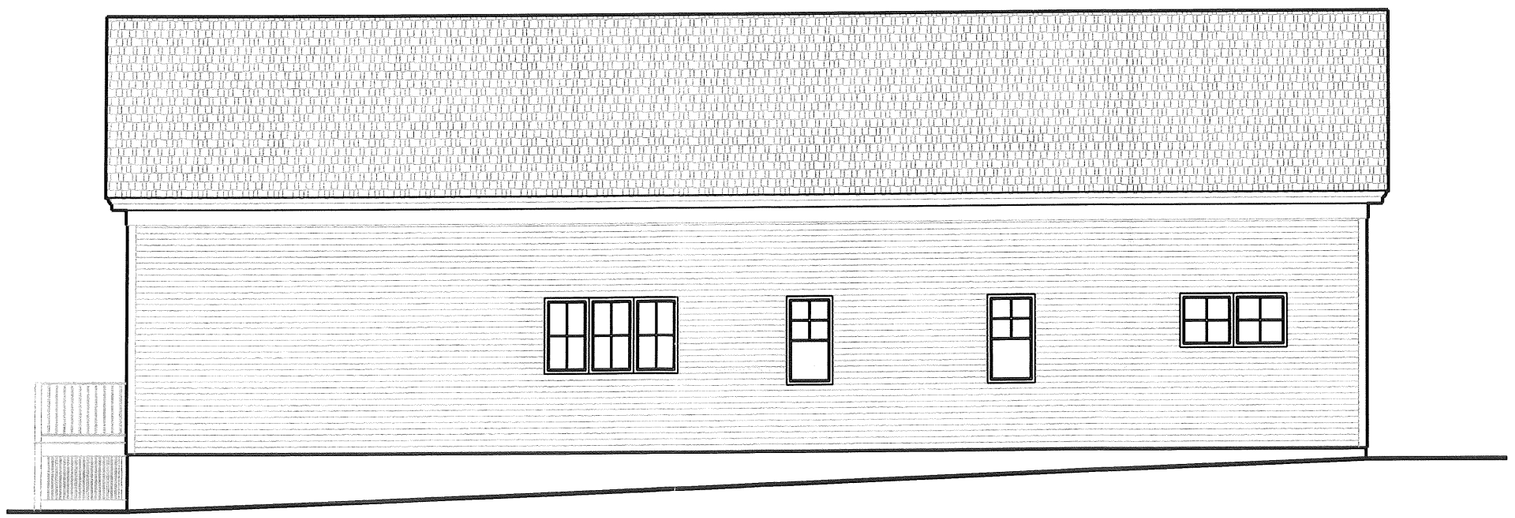
DRAWING
A-1.2



SHEET TITLE
ELEVATIONS

PROJECT
18 HOWARD STREET

DATE: 05.08.010

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424 FORE STREET
PORTLAND, ME 04103
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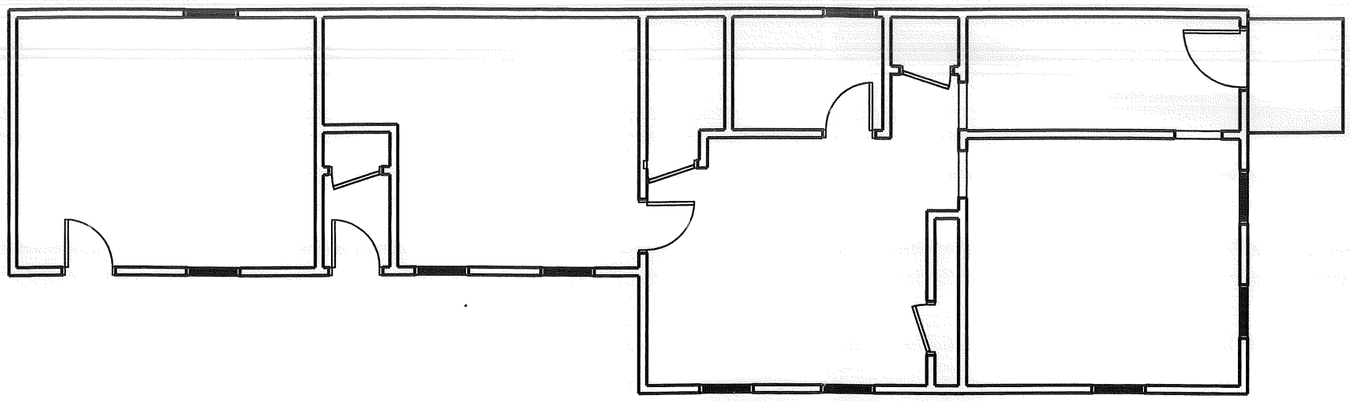
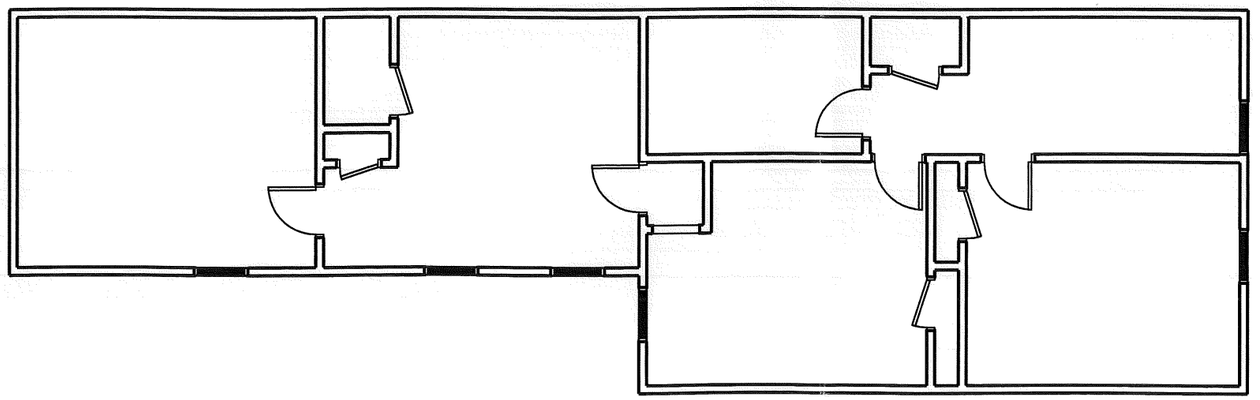


01 EXISTING PLAN

1/8" = 1'-0"



02 EXISTING PLAN

1/8" = 1'-0"

SHEET TITLE
EXISTING FLOOR PLANS

PROJECT
HOWARD STREET

DATE: 05.08.010

DRAWN BY: BB

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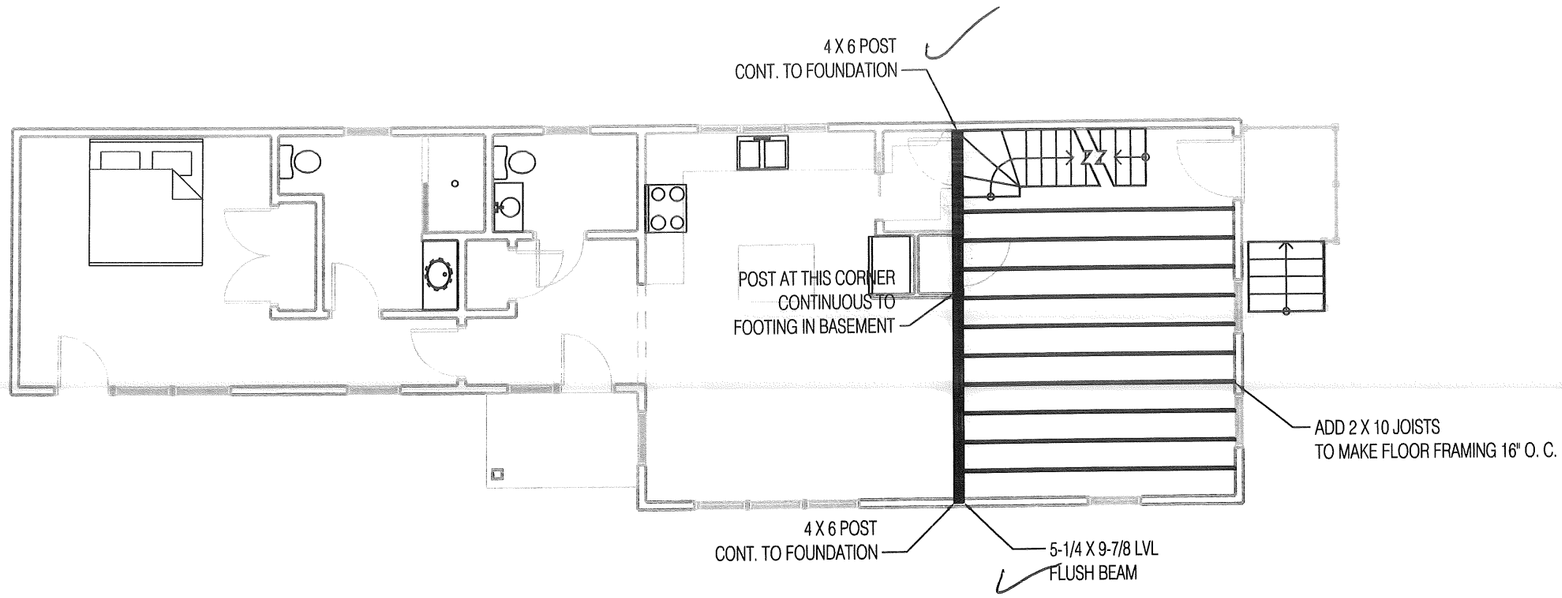
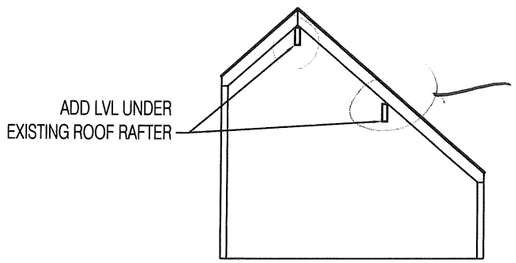
DRAWING

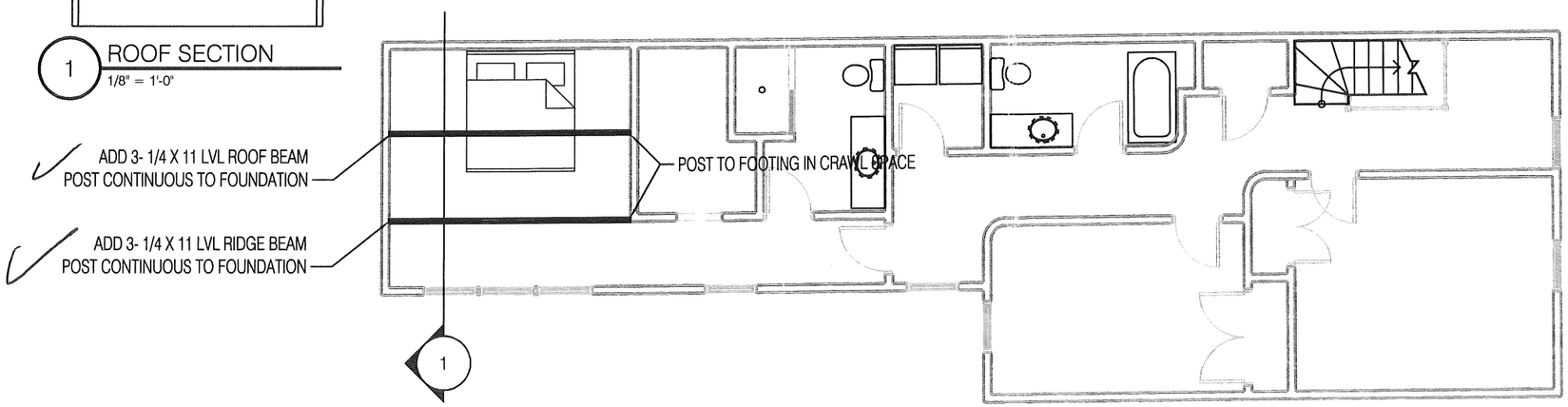
E-1.1





Doesn't look like A roof change only reinforcing - existing

1 ROOF SECTION
1/8" = 1'-0"



SECOND FLOOR STRUCTURAL
1/8" = 1'-0"

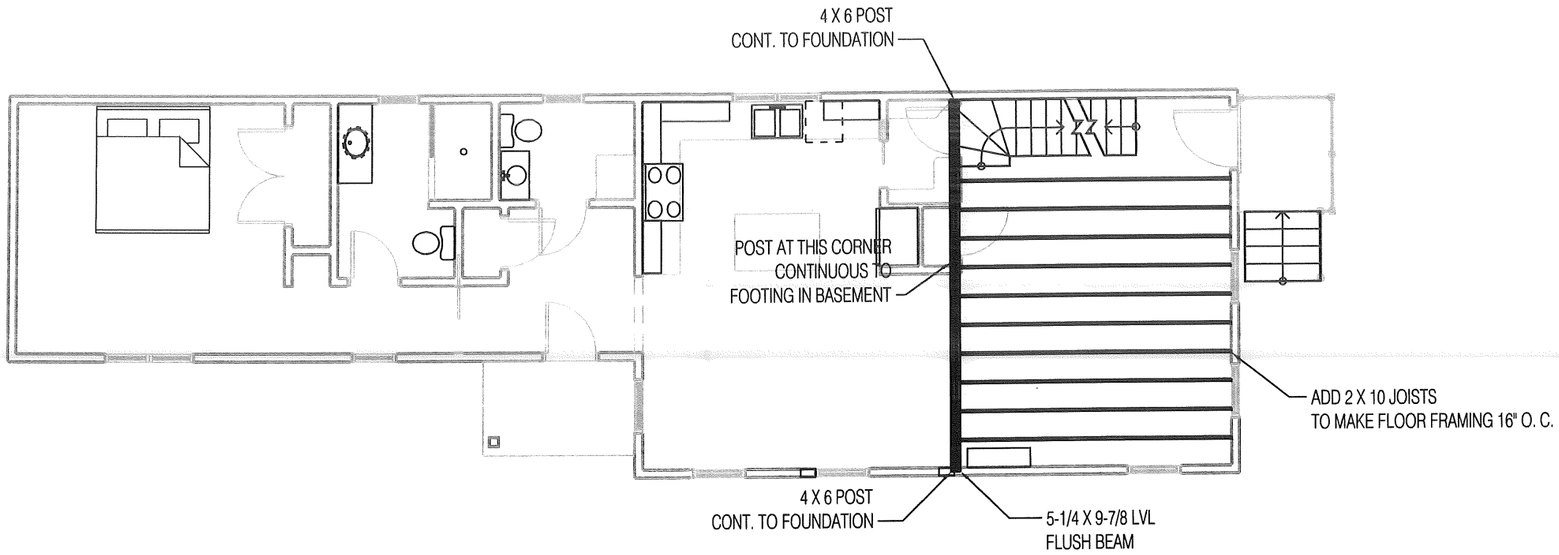
SHEET TITLE
STRUCTURAL

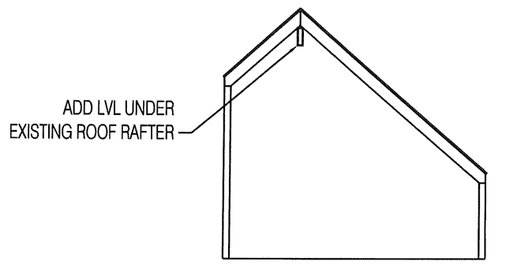
PROJECT
18 HOWARD STREET

DATE: 05.08.010
DRAWN BY: -

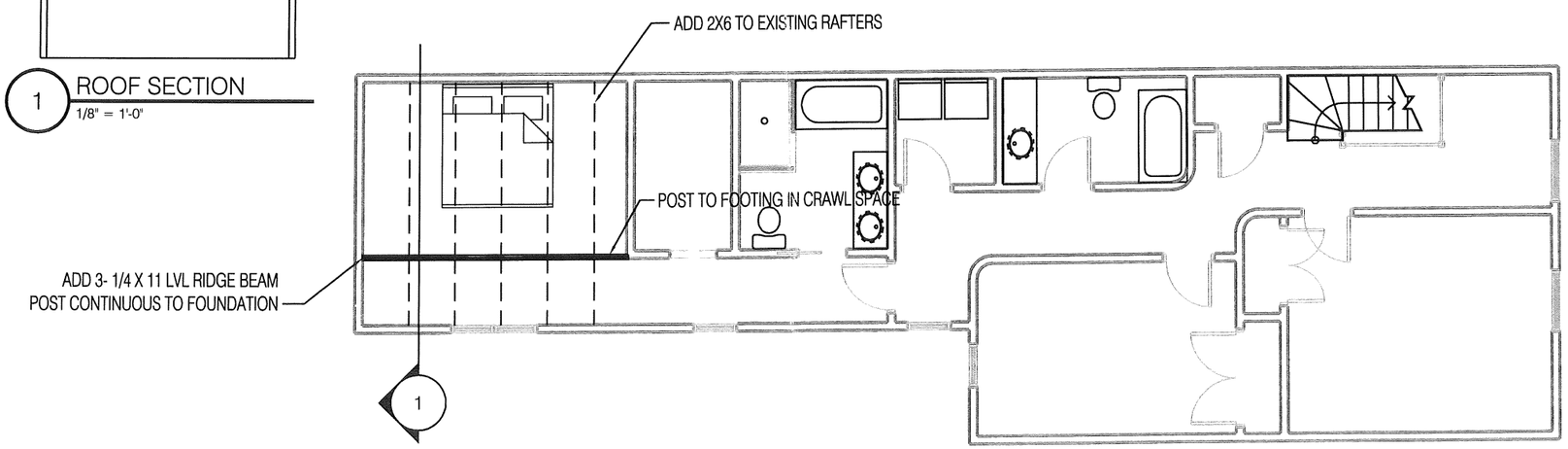
Prospect Design
424 FORE STREET
PORTLAND, ME 04103
P 207.749.7400

DRAWING
S-1.1





1 ROOF SECTION
1/8" = 1'-0"



SECOND FLOOR STRUCTURAL
1/8" = 1'-0"

SHEET TITLE
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P 207.749.7400

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