

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

BUILDING INSPECTION

PERMIT

Permit Number: 061405

Please Read Application And Notes, If Any, Attached

This is to certify that MARDIGAN STEPHEN E

has permission to build a 1950 sq ft wood frame 1 story building with 15 ft eave thru

AT 1066 FOREST AVE

L 146 B014001

PERMIT ISSUED
NOV 29 2006
CITY OF PORTLAND

provided that the person or persons who accept this permit shall comply with all of the provisions of the Statutes of the State and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

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

Classification of inspection must be given and when permission is granted before this building or part thereof is occupied or otherwise closed-in. 4
OUR NOTES ARE REQUIRED.

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

OTHER REQUIRED APPROVALS

Fire Dept. Greg Cass 9-25-06

per SMB

Health Dept. _____

Appeal Board _____

Other _____

Department Name

Deanne Bonke 11/29/06
Director - Building & Inspection Services
per MJA

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: 06-1405	Issue Date: PERMIT ISSUED NOV 29 2006	CBL: 146 B014001
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Location of Construction: 1066 FOREST AVE	Owner Name: MARDIGAN STEPHEN E	Owner Address: 460 BAXTER BLVD	Phone:
Business Name:	Contractor Name:	Contractor Address:	Phone:
Lessee/Buyer's Name:	Phone:	Permit Type: Commercial	Zone: B-2 Prime

Past Use: vacant land associated w/ permit #061403 <i>↓ Demo</i>	Proposed Use: Commercial - Starbucks - build a 1700 1750 sq ft wood frame 1 story building w/ drive thru <i>1950 SF.</i>	Permit Fee: \$1,845.00	Cost of Work: \$175,000.00	CEO District: 4	<i>R-5 in REAT</i>
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Proposed Project Description: build a 1760 sq ft wood frame 1 story building w/ drive thru	FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied <i>See Conditions</i>	INSPECTION: Use Group: <i>A2</i> Type: <input checked="" type="checkbox"/>
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PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied	Signature: <i>Greg Carr</i>	Signature: <i>[Handwritten Signature]</i>
Signature:	Date:	

Permit Taken By: ldobson	Date Applied For: 09/22/2006	Zoning Approval
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<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 information may invalidate a building permit and stop all work..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland <i>NA</i></p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone <i>Panel 7 zone X</i></p> <p><input type="checkbox"/> Subdivision</p> <p><input checked="" type="checkbox"/> Site Plan <i>2006-0036</i></p> <p>Maj <input checked="" type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p><i>all with conditions</i></p> <p>Date: <i>9/25/06</i></p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input checked="" type="checkbox"/> Conditional Use - <i>for Drive-Thru to PB</i></p> <p><input type="checkbox"/> Interpretation</p> <p><input checked="" type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>7/11/06</i></p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in District 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>
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CERTIFICATION

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

SIGNATURE OF APPLICANT _____ ADDRESS _____ DATE _____ PHONE _____

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE _____ DATE _____ PHONE _____

City of Portland, Maine - Building or Use Permit

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

Permit No: 06-1405	Date Applied For: 09/22/2006	CBL: 146 B014001
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Location of Construction: 1066 FOREST AVE	Owner Name: MARDIGAN STEPHEN E	Owner Address: 460 BAXTER BLVD	Phone:
Business Name:	Contractor Name: Granite Construction Co.	Contractor Address: P.O. Box 8790 Portland	Phone (207) 632-1124
Lessee/Buyer's Name	Phone:	Permit Type: Commercial	

Proposed Use: Commercial - Starbucks - build a 1950 sq ft wood frame 1 story building w/ drive thru	Proposed Project Description: build a 1950 sq ft wood frame 1 story building w/ drive thru
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Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 09/25/2006
Note: **Ok to Issue:**

- 1) Separate permits shall be required for any new signage.
- 2) 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:** Mike Nugent **Approval Date:** 11/28/2006
Note: **Ok to Issue:**

- 1) Most recent plans need to be stamped prior to issuance.

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Cptn Greg Cass **Approval Date:** 09/25/2006
Note: 1924 sq. Feet = 128 seats **Ok to Issue:**

- 1) All construction shall comply with NFPA 101

Dept: Engineering **Status:** Approved with Conditions **Reviewer:** Woodard and Curran **Approval Date:** 06/27/2006
Note: Condition has been met. **Ok to Issue:**

- 1) The survey for the project does not coincide with approved city standards. The survey needs to be tied to the vertical datum of NGVD 1929. Also, the project needs to be tied to the Maine State Plane coordinate system (2-zone projection), West Zone using the NAD1983(HARN) Datum and the US Survey foot as the unit of measure.

Dept: Fire **Status:** Approved **Reviewer:** Cptn Greg Cass **Approval Date:** 02/23/2006
Note: **Ok to Issue:**

Dept: Planning **Status:** Approved with Conditions **Reviewer:** Jean Fraser **Approval Date:** 07/11/2006
Note: Note; some of the conditions were included twice in the approval letter ie under both conditional use and site plan but listed only once here- see approval letter for detail. **Ok to Issue:**

Note: All planning approval conditions have been met.

- 1) That the applicant shall install crosswalk markings across Poland Street, as there is not a crosswalk there currently.
- 2) That the applicant will submit for review and approval by the Planning Authority further information regarding the illumination characteristics of the uplighters and further photometric plans which show adjustments to the locations of the other luminaires that achieve the City standards for light trespass at the property line.
- 3) The hours for operational activities eg deliveries and trash collection will be limited as follows: 6AM to 10PM weekdays and 9AM to 6PM weekends.
- 4) That the applicant shall provide a wheelchair/handicap accessible tin down within the sidewalk at the Poland Street crossing

Location of Construction: 1066 FOREST AVE	Owner Name: MARDIGAN STEPHEN E	Owner Address: 460 BAXTER BLVD	Phone:
Business Name:	Contractor Name: Granite Construction Co.	Contractor Address: P.O. Box 8790 Portland	Phone (207) 632-1124
Lessee/Buyer's Name	Phone:	Permit Type: Commercial	

- 5) That this approval relates only to the use of the site for a Starbucks Coffee Drive Thru. If any other drive-thru business proposes to use the site, the proposal must return to the Portland Planning Board for consideration and approval because of the potentially substantial impact in traffic generation.
- 6) The hours of use by the public will be limited to between 6AM and 10PM.
- 7) That the use of any speaker is limited to order-taking only and there shall not be any prerecorded messages, music or other ongoing sounds from any speaker or intercom system.
- 8) The applicant should amend the survey, for review and approval by the City Engineer, so that it is tied to the vertical datum of NGVD 1929 and into the Maine State Plane Coordinate System (2-zone projection), West Zone using the NAD1983(HARN) Datum and the US Survey Foot as the unit of measure.

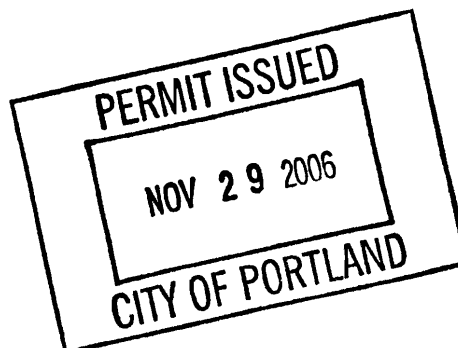
Comments:

9/25/2006-mes: permit #-6-1403 is the demo permit for the existing building

11/15/2006-MJN: "I left the following message with Bruce Macleod, their engineer:

- 1) Structurals lack detail, particularly the masonry walls.
- 2) No Geotechnical report.
- 3) The statement of special inspections erroneously states that a seismic quality assurance plan is not required. The Seismic Design category (subject to verification from the geotechnical report) is a "C". Thus Section 1705 requires this.
- 4) The energy certification deals only with limited parts of the envelope, incomplete, I referred him to ComCheck/U.S. Dept. of Energy.

11/15/2006-MJN: I have left a long specific message with the engineer telling him essentially that the plans need to have sufficient detail so that the contractor is not making design decisions in the field. These plans have absolutely no details. Further there are no mechanical, plumbing or electrical plans, and none of the info requested in September has been submitted.





Fax Cover Sheet

To: Chris Hanson, Code Enforcement

From: Bruce M.

Company: City of Portland

Date: 11/15/06

Fax No: 874-8716

Pages: 2 (Including Cover Sheet)

Re: Starbucks – Forest Ave. Portland

Urgent **For Review** **Please Comment** **Please Reply** **For Your Use**

● **Comments:**

With regard to the foundation for the above referenced project, the foundation is adequate to span the fill soils approximately 12-13 feet in width that pass through the building foot print. No additional reinforcing of the foundation is required.

I have inspected the footings prior to placement of concrete.

Sincerely,

Bruce W. MacLeod, PE

President



Title :
 Dsgnr:
 Description :
 Date:
 Job #
 Scope :

Rev: 510303
 User: KW-0602406, Ver 5.1.3, 22-Jun-1999, Wm32
 (c) 1983-99 ENERCALC

Concrete Rectangular & Tee Beam Design

Page 1
 c:\enercalc\starbucks.ecw.Calculations

Description Foundation Wall To Span Fill Soils

General Information

Calculations are designed to ACI 318-95 and 1997 UBC Requirements

Span	14.00 ft	f _c	3,000 psi
Depth	44.000 in	F _y	40,000 psi
Width	12.000 in	Concrete Wt.	145.0 pcf
		Seismic Zone	0
		End Fixity	Pinned-Pinned
		Live Load acts with	Short Term

Beam Weight Added Internally

Reinforcing

Rebar @ Center of Beam...				Rebar @ Left End of Beam...				Rebar @ Right End of Beam...				
	Count	Size	'd' from Top		Count	Size	'd' from Top		Count	Size	'd' from Top	
#1	2	5	42.00in	#1				in	#1			in

Uniform Loads

	Dead Load	Live Load	Short Term	Start	End
#1	0.720 k	0.550 k	k	0.000 ft	14.000 ft

Summary

Beam Design OK

Span = 14.00ft, Width= 12.00in Depth = 44.00in							
Maximum Moment : Mu	65.84 k-ft			Maximum Deflection	-0.0059 in		
Allowable Moment : Mn*phi	77.22 k-ft			Max Reaction @ Left	12.61 k		
Maximum Shear : Vu	9.48 k			Max Reaction @ Right	12.61 k		
Allowable Shear : Vn*phi	46.97 k						
Shear Stirrups...							
Stirrup Area @ Section	0.440 in ²						
Region	0.000	2.333	4.667	7.000	9.333	11.667	14.000 ft
Max. Spacing	Not Req'd	Not Req'd	Not Req'd	Not Req'd	Not Req'd	Not Req'd	Not Req'd in
Max Vu	9.481	9.481	6.321	6.170	6.170	9.330	9.330 k

Bending & Shear Force Summary

Bending...	Mn*Phi	Mu, Eq. 9-1	Mu, Eq. 9-2	Mu, Eq. 9-3
@ Center	77.22 k-ft	65.84 k-ft	49.38 k-ft	27.60 k-ft
@ Left End	0.00 k-ft	0.00 k-ft	0.00 k-ft	0.00 k-ft
@ Right End	0.00 k-ft	0.00 k-ft	0.00 k-ft	0.00 k-ft
Shear...	Vn*Phi	Vu, Eq. 9-1	Vu, Eq. 9-2	Vu, Eq. 9-3
@ Left End	46.97 k	9.48 k	7.11 k	3.97 k
@ Right End	46.97 k	9.33 k	7.00 k	3.91 k

Deflection

Deflections...	Upward		Downward	
DL + [Bm Wt]	0.0000 in	at 14.0000 ft	-0.0041 in	at 7.0000 ft
DL + LL + [Bm Wt]	0.0000 in	at 14.0000 ft	-0.0059 in	at 7.0000 ft
DL + LL + ST + [Bm Wt]	0.0000 in	at 14.0000 ft	-0.0059 in	at 7.0000 ft
Reactions...	@ Left		@ Right	
DL + [Bm Wt]	8.762 k		8.762 k	
DL + LL + [Bm Wt]	12.612 k		12.612 k	
DL + LL + ST + [Bm Wt]	12.612 k		12.612 k	



MacLeod Structural Engineers, P.A.

November 16, 2006

STATEMENT OF ENERGY CODE COMPLIANCE

Re: Starbucks
1080 Forest Ave.
Portland, Maine

The following elements of the building envelop shall meet the State and Federal Energy Code as follows:

Code: 2003 IECC (See attached comcheck printout.)

Climate Zone: 15
Building type: Commercial

Building Frame
Walls: Wood Frame Minimum Cavity Wall Insulation, R=13
Roof: Wood Trusses and Wood Sheathing, R= 30

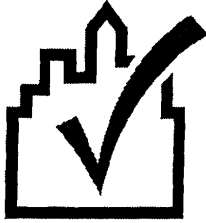
Windows/Doors:
Maximum Solar Heat Gain Coefficient = 0.78
Maximum U-Factor = 1.13

Slab Edge Insulation, R= 10

NOTE: This only covers the building shell. The interior fit up including electrical, plumbing, HVAC is by the tenant under separate permit.

Design Professional of Record:
Bruce W. MacLeod, PE





COMcheck Software Version 3.3.1
Envelope Compliance Certificate

2003 IECC

Report Date: 11/16/06

Data filename: C:\Program Files\Check\COMcheck\Starbucks1.cck

Section 1: Project Information

Project Title: Starbucks

Construction Site:
 1080 Forest Ave.
 Portland, ME

Owner/Agent:
 Steve Mardigan

Designer/Contractor:
 Bruce MacLeod
 MacLeod Structural Engineers, PA
 404 Main Street
 Gorham, ME 04038
 839-0980
 bruce@macleodengrs.com

Section 2: General Information

Building Location (for weather data): **Portland, Maine**
 Climate Zone: **15**
 Heating Degree Days (base 65 degrees F): **7378**
 Cooling Degree Days (base 65 degrees F): **268**
 Project Type: **New Construction**
 Vertical Glazing / Wall Area Pct.: **14%**

Building Type	Floor Area
Restaurant	1948

Section 3: Requirements Checklist

Envelope TBD: Invalid Area(s)

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
RooF 1: All-Wood Joist/Rafter/Truss	1948	0.0	30.0	0.032	0.053
Exterior Wall 1: Wood Frame, Any Spacing	2488	19.0	0.0	0.068	0.075
<i>Window 1: Metal Frame:Single Pane, Clear, SHGC 0.78</i>	360	—	—	1.130	0.526
Door 1: Solid	25	—	—	0.700	0.122
<i>Interior Wall 1: Metal Frame, 16" o.c.</i>	0	0.0	0.0	0.389	0.122
Basement Wall 1: Solid Concrete or Masonry > 8", Furring: None, Wall Ht 0.0, Depth B.G. 0.0	0	—	10.0	0.000	0.100
Floor 1: Slab-On-Grade:Unheated, Vertical 4 ft.	207	—	10.0	—	—

- (a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
- (b) This component fails a mandatory U-factor/R-value requirement (components that fail are printed in italics).

Air Leakage, Component Certification, and Vapor Retarder Requirements:

- 1. All joints and penetrations are caulked, gasketed or covered with a moisture vapor-permeable wrapping material installed in accordance with the manufacturer's installation instructions.
- 2. Windows, doors, and skylights certified as meeting leakage requirements.
- 3. Component R-values & U-factors labeled as certified.
- 4. Insulation installed according to manufacturer's instructions, in substantial contact with the surface being insulated, and in a manner that achieves the rated R-value without compressing the insulation.

- 5. Stair, elevator shaft vents, and other dampers integral to the building envelope are equipped with motorized dampers.
- 6. Cargo doors and loading dock doors are weather sealed.
- 7. Recessed lighting fixtures are: (i) Type IC rated and sealed or gasketed; or (ii) installed inside an appropriate air-tight assembly with a 0.5 inch clearance from combustible materials and with 3 inches clearance from insulation material.
- 8. Building entrance doors have a vestibule and equipped with closing devices.
Exceptions:
 - Building entrances with revolving doors.
 - Doors that open directly from a space less than 3000 sq. ft. in area.
- 9. Vapor retarder installed.



COMcheck Software Version 3.3.1 Lighting Compliance Certificate

2003 IECC

Report Date: 11/16/06

Data filename: C:\Program Files\Check\COMcheck\Starbucks1.cck

Section 1: Project Information

Project Title: Starbucks

Construction Site:
1080 Forest Ave.
Portland, ME

Owner/Agent:
Steve Mardigan

Designer/Contractor:
Bruce MacLeod
MacLeod Structural Engineers, PA
404 Main Street
Gorham, ME 04038
839-0980
bruce@macleodengrs.com

Section 2: General Information

Building Use Description by:
Project Type: **New Construction**

<u>Building Type</u>	<u>Floor Area</u>
Restaurant	1948

Section 3: Requirements Checklist

Interior Lighting:

1. Total actual watts must be less than or equal to total allowed watts.

Allowed Watts	Actual Watts	Complies
3117	0	YES

2. Exit signs 5 Watts or less per side.

Exterior Lighting:

3. Efficacy greater than 45 lumens/W.

Exceptions:

Specialized lighting highlighting features of historic buildings; signage; safety or security lighting; low-voltage landscape lighting.

Controls, Switching, and Wiring:

4. Independent controls for each space (switch/occupancy sensor).

Exceptions:

Areas designated as security or emergency areas that must be continuously illuminated.

Lighting in stairways or corridors that are elements of the means of egress.

5. Master switch at entry to hotel/motel guest room.
 6. Individual dwelling units separately metered.
 7. Each space provided with a manual control to provide uniform light reduction by at least 50%.

Exceptions:

Only one luminaire in space;

An occupant-sensing device controls the area;

The area is a corridor, storeroom, restroom, public lobby or guest room;

Areas that use less than 0.6 Watts/sq.ft.

- 8. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.
- 9. Photocell/astronomical time switch on exterior lights.

Exceptions:

Lighting intended for 24 hour use.

- 10. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:

Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.



Lighting Application Worksheet

2003 IECC

Report Date:

Data filename: C:\Program Files\Check\COMcheck\Starbucks1.cck

Section 1: Allowed Lighting Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
Restaurant	1948	1.6	3117
Total Allowed Watts =			3117

Section 2: Actual Lighting Power Calculation

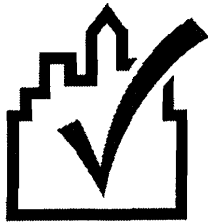
A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Total Actual Watts =				0

Section 3: Compliance Calculation

If the Total Allowed Watts minus the Total Actual Watts is greater than or equal to zero, the building complies.

Total Allowed Watts = 3117
Total Actual Watts = 0
Project Compliance = 3117

Lighting FAILS: Design 100% worse than code.



COMcheck Software Version 3.3.1

Mechanical Compliance Certificate

2003 IECC

Report Date: 11/16/06

Data filename: C:\Program Files\Check\COMcheck\Starbucks1.cck

Section 1: Project Information

Project Title: Starbucks

Construction Site:
1080 Forest Ave.
Portland, ME

Owner/Agent:
Steve Mardigan

Designer/Contractor:
Bruce MacLeod
MacLeod Structural Engineers, PA
404 Main Street
Gorham, ME 04038
839-0980
bruce@macleodengrs.com

Section 2: General Information

Building Location (for weather data):	Portland, Maine
Climate Zone:	15
Heating Degree Days (base 65 degrees F):	7378
Cooling Degree Days (base 65 degrees F):	268
Project Type:	New Construction

Section 3: Mechanical Systems List

Quantity System Type & Description

Section 4: Requirements Checklist



COMcheck Software Version 3.3.1

Mechanical Requirements Description

2003 IECC

Report Date:

Data filename: C:\Program Files\Check\COMcheck\Starbucks1.cck



S.W. COLE
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

FACSIMILE MESSAGE

COMPANY

Granite Construction // City of Portland

ATTENTION

Jim Messer // Chris Hanson

SWC JOB NUMBER

06-1350

FAX NUMBER

854-0419

874-8716

DATE

11-16-06

SENDER

Peggy Brown for Matt Lilley + Paul Kohler

SUBJECT:

JOS 1080 Forest Ave, Portland.

NO. OF PAGES INCLUDING COVER

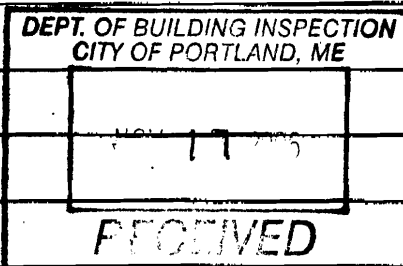
7

HARD COPY TO FOLLOW IN MAIL

Yes

Attached is the Bearing Capacity Assessment
for 1080 Forest Avenue in Portland.

Thank you.



The information contained in this facsimile transmission is privileged and confidential and intended for the use of the addressee named above. If the receiver of the following pages is not (one of) the above named recipient(s), you are hereby notified that any retention, dissemination, distribution or copying of this facsimile is prohibited. If you received this facsimile in error, please notify us immediately by telephone. Thank you.

GRAY, ME OFFICE

Portland Road, Gray, ME 04039, Tel (207) 657-2866, Fax (207) 657-2840, (E-MAIL) info@swccole.com. (I) www.swccole.com

in Augusta, Bangor and Caribou, Maine & in Somersworth, New Hampshire

**LIMITED GEOTECHNICAL ENGINEERING SERVICES
BEARING CAPACITY ASSESSMENT
PROPOSED RETAIL BUILDING
PROPOSED STARBUCKS
1080 FOREST AVENUE
PORTLAND, MAINE**

06-1350

November 16, 2006

Prepared for:

Granite Construction
Attention: Jim Messer
P.O. Box 8790
Portland, ME 04104

Prepared by:



286 Portland Road
Gray, ME 04039



S.W. COLE
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

06-1350

November 16, 2006

Granite Construction
Attention: Jim Messer
P.O. Box 8790
Portland, ME 04104

Subject: Limited Geotechnical Engineering Services
Bearing Capacity Assessment
Proposed Retail Building - Starbucks
1080 Forest Avenue
Portland, Maine

Dear Mr. Messer:

In accordance with our Agreement dated November 13, 2006, we have observed test pit explorations and made a bearing capacity assessment of the subsurface soils for foundation support of the proposed building at the above referenced site. Our scope of work was limited by the client to observations of test pits explorations and a bearing capacity assessment of the subsurface findings relative to the proposed construction and preparation of this report. This report summarizes our findings and recommendations and its contents are subject to the limitations set forth in Attachment A.

1.0 PROPOSED CONSTRUCTION

The site of the proposed building is located at 1080 Forest Avenue in Portland, Maine. Based on information you provided and the plans provided by MacLeod Structural Engineers, PA, we understand the building will be a single story, wood framed structure with brick veneer. We understand the plan area of the building is about 1,900 square feet. It is our understanding that spread footings, frost walls, and slab-on-grade floors are planned for the building. We understand that the footings have been designed considering a maximum allowable soil bearing pressure of 2,500 psf. At the time of our site visit, the footing forms and footing reinforcing steel has been installed.



06-1350
November 16, 2006

2.0 EXPLORATION

Three test pit explorations (TP-1 through TP-3) were made at the site on November 14, 2006. The test pits were made by Chase Excavating, using an excavator and smooth-edged bucket. The test pit locations were selected and established in the field based on the staked building corners. Potential exploration locations were somewhat limited due to site features. The approximate test pit locations are shown on the "Exploration Location Plan" attached as Sheet 1.

3.0 SUBSURFACE CONDITIONS

Test pit TP-1 encountered about 4.5 feet of fill consisting of dark brown silty sand with some gravel and bricks. The fill was underlain by native tan sand with some gravel. Test pit TP-2 encountered about 6 inches of disturbed native sand and the granular fill overlying the native tan sand. Test pit TP-3 encountered the native tan sand. The test pits were excavated to about 6 feet below the existing ground surface.

In addition, the exposed subgrades in the footing trench were observed. The exposed subgrades generally consisted of native tan sand except for two areas, noted on Sheet 1, where granular fill was observed at the footing subgrade. We were not able to explore these areas. Thus, the thickness of the fill is not known.

No free groundwater was observed in the test pits. In general, groundwater should be expected to fluctuate seasonally and during periods of heavy precipitation or snow melt.

4.0 EVALUATION AND RECOMMENDATIONS

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The assumed bearing capacity of 2,500 psf appears reasonable for the native sand subsoil. Based on conversations with Bruce MacLeod, project engineer, the actual contact pressure of the footings is on the order of 400 to 500 psf.

We have discussed the footing subgrade conditions with you and Bruce MacLeod of MacLeod Engineering (project structural engineer). During our



06-1350
November 16, 2006

telephone conversations, we recommended that consideration should be given to removing the reinforcing steel and formwork in the two areas where fill was observed to allow for either: 1) densification of the granular fill or 2) removing the fill and replacing it with compacted sand and gravel meeting the requirements of MDOT 703.19 Granular Borrow.

Based on a recent telephone conversation with you, we understand that MacLeod Engineering has redesigned the foundation in the two areas where the granular fill was observed. We understand that additional reinforcing steel is being added to help support these areas. Further, we understand that this option was discussed with and approved by the City of Portland inspector.

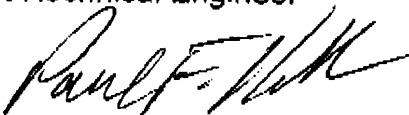
CLOSURE

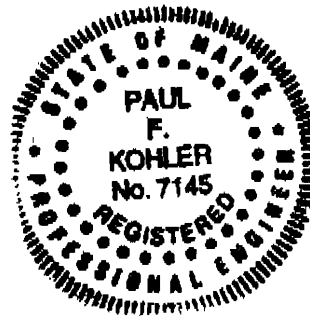
We trust this letter meets your current needs. If you have any questions or require additional assistance, please do not hesitate to contact us.

Sincerely,

S. W. COLE ENGINEERING, INC.

Matthew P. Lilley, P. E.
Geotechnical Engineer


Paul F. Kohler, P.E.
Vice President



MPL:mpl/pfb

c: MacLeod Engineering

Attachment A Limitations

This report has been prepared for the exclusive use of Granite Construction for specific application to the proposed Starbucks retail building at 1080 Forest Avenue in Portland, Maine. S. W. COLE ENGINEERING, INC. has endeavored to conduct the work in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The bearing capacity analyses performed during this investigation and recommendations presented in this limited services report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions will occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S. W. COLE ENGINEERING, INC. should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S. W. COLE ENGINEERING, INC.

Statement of Special Inspections

Project: Starbucks
Location: 1080 Forest Ave Portland, Me.
Owner: Stephen Mordigan
Design Professional in Responsible Charge: Bruce W. MacLeod, PE

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This *Statement of Special Inspections* encompass the following disciplines:

- Structural Mechanical/Electrical/Plumbing
 Architectural Other: _____

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

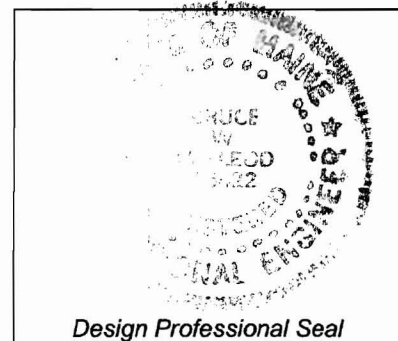
Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: Monthly or per attached schedule.

Prepared by:

Bruce W. MacLeod
(type or print name)

Bruce W Mac L 8/30/06
Signature Date



Owner's Authorization:

Building Official's Acceptance:

Signature Date Signature Date

Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Soils and Foundations | <input type="checkbox"/> Spray Fire Resistant Material |
| <input checked="" type="checkbox"/> Cast-in-Place Concrete | <input checked="" type="checkbox"/> Wood Construction |
| <input checked="" type="checkbox"/> Precast Concrete | <input type="checkbox"/> Exterior Insulation and Finish System |
| <input checked="" type="checkbox"/> Masonry | <input type="checkbox"/> Mechanical & Electrical Systems |
| <input type="checkbox"/> Structural Steel | <input checked="" type="checkbox"/> Architectural Systems |
| <input type="checkbox"/> Cold-Formed Steel Framing | <input type="checkbox"/> Special Cases |

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Special Inspection Coordinator Bruce W. MacLeod	MacLeod Structural Engineers, PA	404 Main St. Gorham, Me 04038
2. Inspector		
3. Inspector		
4. Testing Agency to be determined		
5. Testing Agency		
6. Other		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Quality Assurance Plan

Quality Assurance for Seismic Resistance

Seismic Design Category **C**

Quality Assurance Plan Required (Y/N) **No**

Description of seismic force resisting system and designated seismic systems:
Load bearing Light Framed Shear Walls - wood

Quality Assurance for Wind Requirements

Basic Wind Speed (3 second gust) **100**

Wind Exposure Category **B**

Quality Assurance Plan Required (Y/N) **N**

Description of wind force resisting system and designated wind resisting components:

Statement of Responsibility **N/A**

Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

PE/SE	Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1&2
ACI-STT	Strength Testing Technician

American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III.
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International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

Exterior Design Institute (EDI) Certification

EDI-EIFS	EIFS Third Party Inspector
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Other

Item	Agency # (Qualif.)	Scope
1. Shallow Foundations MSE	PE/GE	<i>Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.</i> <i>Inspect removal of unsuitable material and preparation of subgrade prior to placement of controlled fill</i>
2. Controlled Structural Fill MSE/GE	PE/GE	<i>Perform sieve tests (ASTM D422 & D1140) and modified Proctor tests (ASTM D1557) of each source of fill material.</i> <i>Inspect placement, lift thickness and compaction of controlled fill.</i> <i>Test density of each lift of fill by nuclear methods (ASTM D2922)</i> <i>Verify extent and slope of fill placement.</i>
3. Deep Foundations N/A	PE/GE	<i>Inspect and log pile driving operations. Record pile driving resistance and verify compliance with driving criteria.</i> <i>Inspect piles for damage from driving and plumbness.</i> <i>Verify pile size, length and accessories.</i> <i>Inspect installation of drilled pier foundations. Verify pier diameter, bell diameter, lengths, embedment into bedrock and suitability of end bearing strata.</i>
4. Load Testing —		
4. Other: —		

Item	Agency # (Qualif.)	Scope
1. Mix Design TEST. AGENCY	ACI-CCI ICC-RCSI	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at the site does not exceed that allowed by the mix design.
2. Material Certification		
3. Reinforcement Installation MSE	ACI-CCI ICC-RCSI	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters
4. Post-Tensioning Operations —	ICC-PCSI	Inspect placement, stressing, grouting and protection of post-tensioning tendons. Verify that tendons are correctly positioned, supported, tied and wrapped. Record tendon elongations.
5. Welding of Reinforcing —	AWS-CWI	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.
6. Anchor Rods MSE		Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.
7. Concrete Placement MSE	ACI-CCI ICC-RCSI	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.
8. Sampling and Testing of Concrete TEST. AGENCY	ACI-CFTT ACI-STT	Test concrete compressive strength (ASTM C31 & C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064).
9. Curing and Protection MSE	ACI-CCI ICC-RCSI	Inspect curing, cold weather protection and hot weather protection procedures.
10. Other:		