Form # P-04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING INSPECTION

Please Read Application And Notes, If Any, Attached

PERMIT ISSUED

Permit Number: 041451

MAY 2 6 2006

CITY OF PORTLAND

PERMIT

This is to certify that Maine Medical Center/Willi Berry & Sons, Inc.

has permission to Demolition &construct new king gar or bridge elipad

AT 2 Bramhall St CBL 053 D007001

provided that the person or persons rm or tion a epting this permit shall comply with all of the provisions of the Statutes of ine and of the ances of the City of Portland regulating the construction, maintenance and u e of buildings and ctures, 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.	Notification of inspection must be given and written permission procured before this building or part thereof is lathed or closed-in. 24 HOUR NOTICE IS REQUIRED.	A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. PER CAPT CASS 5/8/06

Health Dept. _____

Appeal Board _____

Other _____

Department Name

5/22/06

Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

EXPIRED

CITY OF PORTLAND, MAINE
Department of Building Inspection

Certificate of Occupancy

LOCATION 13 Charles St **CBL** 053 G001001

Issued to Maine Medical Center/William Berry & Sons, Inc. **Date of Issue** 07/21/2008

This is to certify that the building, premises, or part thereof, at the above location, built – altered – changed as to use under Building Permit No. 04-1455 has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES	APPROVED OCCUPANCY
Entire	Hospital- Women's and Infants' Center Use Group: I2 Type: IB BOCA 1999/ IBC 2003

Limiting Conditions:

This CO is temporary until August 31, 2008 for all site work: completion of the Cafe, and all security access-control systems tested.

This certificate supersedes certificate issued

Approved:

07/21/08 (Date) *Inspector*

Inspector of Buildings 7/21/08

Bjanky 202

Notice: This certificate identifies lawful use of building or premises, and ought to be transferred from owner to owner when property changes hands. Copy will be furnished to owner or lessee for one dollar.

CITY OF PORTLAND, MAINE

Department of Building Inspection

Certificate of Occupancy

LOCATION 2 Bramhall St **CBL** 053 D007001

Issued to Maine Medical Center/William Berry & Sons, Inc. **Date of Issue** 11/30/2007

This is to certify that the building, premises, or part thereof, at the above location, built – altered – changed as to use under Building Permit No. 04-1451 , has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES	APPROVED OCCUPANCY
Helipad, Lower Level Connector, West Elevator Tower	Helipad, Garage Tower, Connector Use Group I-2, S-2 Type 2B BOCA 1999

Limiting Conditions: Temporary until July 2008 for completion of all other phases and Site Plan Approval Conditions

SCANNED

This certificate supersedes certificate issued

Approved:

11/30/07 [signature] 12/3/07

(Date) Inspector Inspector of Buildings

11-30-07 Greg Cass PFD

Notice: This certificate identifies lawful use of building or premises, and ought to be transferred from owner to owner when property changes hands. Copy will be furnished to owner or lessee for one dollar.

CITY OF PORTLAND, MAINE

Department of Building Inspection

Certificate of Occupancy

LOCATION 2 Bramhall St **CBL** 053 D007001

Issued to Maine Medical Center/William Berry & Sons, Inc. Date of Issue 04/29/2008

This is to certify that the building, premises, or part thereof, at the above location, built – altered – changed as to use under Building Permit No. 04-1451 , has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES	APPROVED OCCUPANCY
Helipad, Garage Tower, Connector Bridge & Parking Garage	Helipad, Garage Tower, Connector Bridge & Parking Garage Use Group I-2, S-2 Type 2B IBC 2003

Limiting Conditions:

This is a Temporary Certificate of Occupancy; all site work must be complete by June 30, 2008.

This certificate supersedes certificate issued

Approved:

(Date) *Inspector* *Inspector of Buildings* 6/4/08

6/02/08

Notice: This certificate identifies lawful use of building or premises, and ought to be transferred from owner to owner when property changes hands. Copy will be furnished to owner or lessee for one dollar.

CITY OF PORTLAND, MAINE

Department of Building Inspection

Certificate of Occupancy

LOCATION 2 Bramhall St CBL 053 D007001

Issued to Maine Medical Center/William Berry & Sons, Inc. **Date of Issue** 09/04/2008

This is to certify that the building, premises, or part thereof, at the above location, built – altered – changed as to use under Building Permit No. 04-1451, has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES	APPROVED OCCUPANCY
Helipad, Garage Tower, Connector Bridge & Parking Garage	Helipad, Garage Tower, Connector Bridge & Parking Garage Use Group I-2, S-2 Type 2B

Limiting Conditions:

None

This certificate supersedes certificate issued 04/24/08

Approved:

09/04/08 (Date) *Inspector*

4/9/08 *Inspector of Buildings*

Notice: This certificate identifies lawful use of building or premises, and ought to be transferred from owner to owner when property changes hands. Copy will be furnished to owner or lessee for one dollar.

City of Portland, Maine - Building or Use Permit Application

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

PERMIT ISSUED
MAY 26 2006
CITY OF PORTLAND

Permit No:	Issue Date:	CBL:
04-1451		053 D007001

Location of Construction:	Owner Name:	Owner Address:	Phone:
2 Bramhall St	Maine Medical Center	22 Bramhall St	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	William Berry & Sons, Inc.	99 Conifer Hill Drive Danvers	2052236026
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Additions - Commercial	Contract Zone

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Commercial	Commercial/ Demo New England Rehab & House/ Build new parking garage, connector bridge & helipad.	$143,880.00	$15,976,000.00	2

C-4

FIRE DEPT: ☑ Approved ☐ Denied

SEE U/I

Signature: 5/13/06

INSPECTION:

Use Group: S2 (I2 CONNECTOR) Type: 2B

Signature: 5/22/06

Proposed Project Description:

Demolition &construct new parking garage / connector bridge/ helipad

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	09/28/2004

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..

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland N/A	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone Panel 13 Zone C	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☒ Site Plan 2004-0003	☐ Approved	☐ Approved w/Conditions
Maj ☒ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: OK with conditions 5/10/06 11/30/05	Date:	Date:

CERTIFICATION

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

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

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

03/06/09 Expired permit. No one comes for a
finishings.

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:
04-1451	09/28/2004	053 D007001

Location of Construction:	Owner Name:	Owner Address:	Phone:
2 Bramhall St	Maine Medical Center	22 Bramhall St	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	William Berry & Sons, Inc.	99 Conifer Hill Drive Danvers	(203) 223-6026
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Additions - Commercial	

Proposed Use:	Proposed Project Description:
Commercial/ Demo New England Rehab & House/ Build new parking garage, connector bridge & helipad.	Demolition &construct new parking garage / connector bridge/ helipad

Note: reviewed on 11/30/05 - Mike put on hold - is up front in hold area **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:** Pending **Reviewer:** Mike Nugent **Approval Date:** 05/22/2006

Note: 5/10/06 back to Mike **Ok to Issue:** ☑

1) Stand Pipe connections at the Crescent St. Level must be installed in accordance with the PFD.

2) Must comply with the 48" between handrails @ the eastern stairway as required by Section 1007.2 of the 1999 BOCA Code.

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Cptn Greg Cass **Approval Date:** 05/03/2006

Note: **Ok to Issue:** ☑

1) Additional information is required for Fire dept access to the site

2) Additional information is required for all superssion systems

Comments:

12/1/2005-mes: Mike Nugent put this permit on hold -(up front in hold file) - see foundation permits #05-1740 for garage foundation & construction of helipad - #05-1739 foundation only for 13 Charles Street building

CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM: The Ritchie Organization, Inc.

RE: Certificate of Design

DATE: 9/24/04

These plans and / or specifications covering construction work on:

~~Garage/Connector/Heliport, Maine Medical Center, Portland, ME~~

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the ***BOCA National Building Code / 1999 (Fourteenth Edition)*** and local amendments.

WILLIAM K. SEAL No. 3026 STATE OF MAINE

Signature: W. Keith D

W. Keith Davis, AIA

Title: PRINCIPAL/VP

Firm: The Ritchie Organization

Address: 80 Bridge St., Newton, MA 02458

As per Maine State Law:

$50,000.00 or more in new construction, repair expansion, addition or modification for Building or Structures, shall be prepared by a registered design Professional.

CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

ACCESSIBILITY CERTIFICATE

Designer: The Ritchie Organization, Inc.

Address of Project: Maine Medical Center, portland, ME

Nature of Project: Charles Street

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act.

LICENSED ARCHITECT
W. KEITH DAVIS
No. 3026
STATE OF MAINE

Signature: W. Keith D
W. Keith Davis, AIA

Title: PRINCIPAL/VP

Firm: The Ritchie Organization, Inc.

Address: 80 Bridge St., Newton, MA 02458

Phone: (617) 969-9400

CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM DESIGNER: The Ritchie Organization, Inc.

DATE: 2 Sept 2004

Job Name: MAINE MEDICAL CENTER - GARAGE/HELIPAD/LOBBY CONNECTORS

Address of Construction: CONGRESS ST - GARAGE, HELIPAD
BRAMHALL / CRESCENT ST - LOBBY CONN.

THE BC NATIONAL BUILDING CODE / 1999 (FOURTEENTH EDITION)
Construction project was designed according to the building code criteria listed below:
IBC 2003 - GARAGE/HELIPAD

Building Code and Year: BOCA 1999 - LOBBY Use Group Classification(s)

Type of Construction:

GARAGE / LOBBY
IBC / BOCA

Structural Systems

Roof Snow Load

60 / 60 / 60 Ground Snow Load (Pg)
55 / 51 / 51 If Pg >10 psf, Flat Roof snow load, Pf
0.9 / 1.0 / 1.0 If Pg >10 psf, snow exposure factor, Ce
1.2 / 1.2 / 1.0 If Pg >10 psf, roof thermal factor
1.2 / 1.0 / 1.2 If Pg >10 psf, snow load importance factor, I
— / — / — Sloped Roof Snow Load, Ps

Earthquake Loads

0.4 / 0.4 / 0.11 Peak velocity-related acceleration, Av (S1)
0.1 / 0.1 / 0.11 Peak acceleration, Aa (S1)
— / — / — Seismic hazard exposure group
C / C / C Seismic performance category
D / D / S2 Soil profile type
OMF / RCSW/OMF Basic structural system / seismic-resisting system
3.5 / 5 / 4.5 Response modification factor, R, and deflection
3 / 4.5 / 4 amplification factor, Cd

The documents must account for Drift snow load, unbalanced snow load and Sliding snow loads as required.

Wind Loads

100 / 100 / 85 Basic Wind Speed
C / C / C Wind Exposure Category
— / — / 105 Wind Design Pressure
— / 1.25 / 1.25 Internal Pressure Coefficient
1.15 / 1.15 / 1.15 Wind Importance Factor

STATEMENT OF SPECIAL INSPECTIONS

PROJECT: **Maine Medical Center - Parking Garage, Helipad and Lobby Connectors**

LOCATION: **Portland, Maine**

PERMIT APPLICANT: **Henry Dunn (Project Manager), Maine Medical Center**

APPLICANT'S ADDRESS: **22 Bramhall Street**

Portland, Maine 04102

PROJECT ARCHITECT: **The Ritchie Organization (TRO)**

PROJECT STRUCTURAL ENGINEER: **Simpson Gumpertz & Heger Inc. (SGH)**

REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE: **Joseph J. Zona (SGH)**

This statement of special inspections is submitted as a condition for permit issuance in accordance with Section 1704 of the 2003 International Building Code. It includes a ***Schedule of Special Inspection Services*** applicable to the above referenced project as well as the identity of the individuals, agencies, or firms intended to be retained for conducting these inspections.

The Special Inspector(s) shall keep records of all inspections and shall furnish interim inspection reports to the building official and to the registered design professional in responsible charge at a frequency agreed upon by the permit applicant and building official prior to the start of work. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the building official and the registered design professional in responsible charge prior to completion of that phase of work. A ***Final Report of Special Inspections*** documenting required special inspections and correction of any discrepancies noted in the inspections shall be submitted at the conclusion of the project.

Frequency of interim report submittals to Registered Design Professional in Responsible Charge:

☐ Monthly ☒ Bi-Monthly ☐ Upon Completion ☐ Per attached schedule

The Special Inspection program does not relieve the Contractor of the responsibility to comply with the Contract Documents. Jobsite safety and means and methods of construction are solely the responsibility of the Contractor.

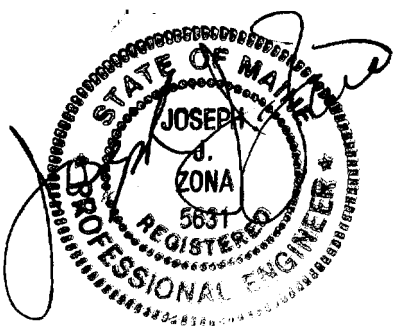
Prepared By:

Joseph J. Zona

Type or print name

Signature 9-22-04 Date

Preparer's Seal



To be filled out by Building Department and returned to applicant:

Building Official's Acceptance:

Signature Date Permit No.

Frequency of interim report submittals to building official:

☐ Monthly ☐ Bi-Monthly ☐ Upon Completion ☐ Per attached schedule

TRO Project #: 4678
SGH Project #: 20684.07

Maine Medical Center - Parking Garage and Lobby Connectors

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1704.2 Inspection of Fabricators					
Verify fabrication/quality control procedures.	In-plant review	Y		SWC	
1704.3 Steel Construction					
High-strength bolts, nuts, and washers.	Review material markings and certificates of compliance	Y		SWC or SGH	
Inspection of high-strength bolting.	Field inspection	Y		SWC or SGH	
Structural steel	Review certified test reports	Y		SGH	
Weld filler materials.	Review certificate of compliance and field verification	Y		SWC or SGH	
Structural steel welding.	Shop and field inspection	Y		SWC	
Reinforcing steel welding.	Shop and field inspection	N			
Inspection of steel frame joint details for compliance with approved construction documents.	Field inspection	Y		SGH OR SWC	
1707.2 Structural Steel					
Continuous inspection of structural welding in accordance with AISC Seismic Provisions	Shop and field inspection	Y		SWC or SGH	
1708.4 Structural Steel					
Ultrasonically test for discontinuities behind and adjacent to welds with base metal thicker than 1.5 inches where subject to through-thickness weld shrinkage strains.	Shop and field testing	Y		SWC or SGH	
1704.4 Concrete Construction					
Inspection of reinforcing steel installation.	Field inspection	Y		SWC or SGH	
Inspection of prestressing steel installation.	In-plant or field inspection	Y		SWC or SGH	
Prestressed concrete force application.	In-plant or field review	Y		SWC or SGH	
Inspection of cast-in-place bolts.	Field inspection	Y		SWC or SGH	
Verification of required design mix.	Review submittals	Y		SGH	

TRO Project #: 4678
SGH Project #: 20684.07

Maine Medical Center - Parking Garage and Lobby Connectors

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
Fresh concrete sampling.	Field testing	Y		SWC	
Concrete placement.	Field review	Y		SWC or SGH	
Concrete curing operations.	Field review	Y		SWC or SGH	
Erection of precast concrete members.	Field review	Y		SWC or SGH	
Evaluation of concrete strength.	Field testing and review laboratory reports	Y		SWC or SGH	
Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.	Review field testing and laboratory reports	Y		SWC	
1708.3 Reinforcing and Prestressing Steel					
Review certified mill test reports	Field review	N			
Verify reinforcing steel weldability	Review testing reports	N			
1704.5 Masonry Construction					
Verify proportions of site prepared mortar and grout.	Review submittals	Y		TRO	
Verify construction of mortar joints.	Field inspection	Y		SWC or TRO	
Verify location of reinforcement and connectors.	Field inspection	Y		SWC or TRO	
Verify size and location of structural masonry elements.	Field and submittal review	N			
Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.	Field inspection	Y		SWC or TRO	
Verify size, grade, and type of reinforcement.	Field inspection	Y		SWC or TRO	
Verify welding of reinforcing bars.	Field inspection	N			
Verify protection of masonry during hot/cold weather.	Field inspection	Y		SWC or TRO	
Verify grout space is clean prior to grouting.	Field inspection	Y		SWC or TRO	
Verify grout placement complies with code and construction document provisions.	Review submittals	Y		TRO	
Observe preparation of grout specimens, mortar specimens, and/or prisms.	Field review	Y		SWC or TRO	

TRO Project #: 4678
SGH Project #: 20684.07

Maine Medical Center - Parking Garage and Lobby Connectors

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1708.1 Masonry					
Certificates of compliance used in masonry construction	Review submittals	N			
Verification of *f'm* prior to construction	Review submittals and field testing	N			
Verification of *f'm* every 5000 SF during construction	Review submittals and field testing	N			
Verification of proportions of materials in mortar and grout as delivered to the site	Field review	N			
1704.7 Soils					
Verify site preparation complies with approved soils report.	Field inspection	Y		SWC	
Verify placement and compaction of fill materials complies with approved soils report.	Field inspection	Y		SWC	
Verify dry-density of compacted fill complies with approved soils report.	Review field testing	Y		SWC	
1704.8 Pile Foundations					
Observe installation of pile foundations.	Field inspection	N			
Observe pile foundation load tests.	Review field testing	N			
1704.9 Pier Foundations					
Observe installation of pier foundations.	Field inspection	Y		SWC or SGH	
1707.3 Structural Wood					
Continuous inspection of field gluing operations of elements of the seismic-force resisting system.	Field inspection	N			
Periodic inspection of nailing, bolting, anchoring and other fastening of components with the seismic-force-resisting system.	Shop and field inspection	N			

SCHEDULE OF SPECIAL INSPECTION SERVICES					
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1707.4 Cold-formed Steel Framing					
Periodic inspection during welding operations of elements of the seismic-force-resisting system.	Shop and field inspection	Y		SWC or TRO	
Periodic inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system.	Shop and field inspection	Y		SWC or TRO	
1704.10 Wall Panels/Veneers					
Observe installation of exterior and interior architectural wall panels.	Field inspection	N			
Observe anchoring of veneers to the building structure.	Field inspection	N			
1704.11 Sprayed Fire-resistant Materials					
Verify surface condition preparation of structural members.	Field inspection	Y		SWC or TRO	
Verify application of sprayed fire-resistant materials.	Field inspection	Y		SWC or TRO	
Verify average thickness of sprayed fire-resistan materials applied to structural members.	Field inspection	Y		SWC or TRO	
Verify density of the sprayed fire-resistant material complies with approved fire-resistant design.	Field inspection and submittal review	Y		SWC or TRO	
Verify the cohesive/adhesive bond strength of the cured sprayed fire-resistant material.	Field inspection and submittal review	Y		SWC or TRO	
1704.12 Exterior Insulation and Finish Systems (EIFS)					
Inspect EIFS applications.	Field inspection	N			

[redacted]

53 D 607

SEP 24 08

004

Maine Medical Center - Parking Garage and Lobby Connectors

SCHEDULE OF SPECIAL INSPECTION SERVICES					
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1704.14 Smoke Control Systems					
Test smoke control systems.	Field testing	Y		SWC or TRO	
1704.13 Special Cases (work unusual in nature, including but not limited to alternative construction materials, unusual design applications, systems or materials with special manufacturer requirements. Attach 8 1/2x11 if needed).		N			
1707.5 Storage Racks and Access Floors					
Periodic Inspection during the anchorage of access floors and storage racks 8 feet or greater in height.	Field inspection	N			
1707.6 Architectural Components					
Periodic inspection during the erection and fastening of exterior cladding	Field inspection	Y		TRO	
Periodic inspection during the erection and fastening of nonload bearing walls.	Field inspection	Y		TRO	
1707.7 Mechanical and Electrical Components					
Periodic inspection during the anchorage of electrical equipment for emergency or standby power systems	Field inspection	Y		TRO	
Periodic inspection during the anchorage of other electrical equipment	Field inspection	N		TRO	
Periodic inspection during installation of piping systems intended to carry flammable, combustible, or highly toxic contents and their associated mechanical units.	Field inspection	Y		TRO	
Periodic inspection during the installation of HVAC ductwork that will contain hazardous materials	Field inspection	Y		TRO	

53 D 007

TRO Project #: 4678
SGH Project #: 20684.07

Maine Medical Center - Parking Garage and Lobby Connectors

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1708.5 Mechanical and Electrical Equipment					
Submit certificate of compliance for designated seismic system components	Submittal review	Y		TRO	
1707.8 Seismic Isolation System					
Periodic inspection during the fabrication and installation of isolator units and energy dissipation devices used as part of the seismic isolation system.	Shop and field inspection	N			

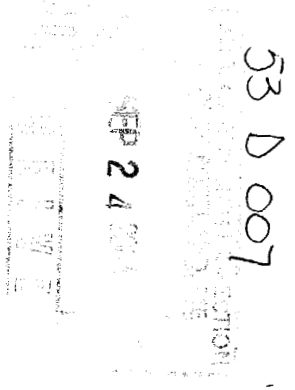
*** INSPECTION AGENTS**

FIRM	ADDRESS	TELEPHONE NO.
1. S.W. Cole, (SWC)		
2. Simpson, Gumpertz & Heger, Structural Engineer (SGH)		
3. The Ritchie Organization, Mechanical Engineer (TRO)		
4. The Ritchie Organization, Electrical Engineer (TRO)		
5. The Ritchie Organization, Architect (TRO)		
6.		

Note: The inspection and testing agent(s) 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. The qualifications of the Inspection Agent(s) may be subject to the approval of the Building Official.

Is the Schedule of Special Inspection Services part of a Quality Assurance Plan as defined in Sections 1705 or 1706 of the Building Code? Yes No

DATE:



State of Maine
Department of Public Safety
Construction Permit

Reviewed for Barrier Free

Sprinkled

15060

Sprinkler Supervised

MAINE MEDICAL CENTER ASU INTAKE, BRAMHALL CAMPUS

Located at: **22** BRAMHALL STREET

PORTLAND

Occupancy/Use: HOSPITAL

Permission is hereby given to:

MAINE MEDICAL CENTER

22 BRAMHALL STREET
PORTLAND, ME 04102

to construct or alter the afore referenced building according to the plans hitherto filed with the Commisioner and now approved.

No departure from application form/plans shall be made without prior approval in writing. This permit is issued under the provision of Title 25, Chapter **317,** Section **2448** and the provisions of Title 5, Section 4594 - F.

Nothing herein shall excuse the holder of this permit for failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions. Each permit issued shall be displayed/available at the site of construction.

*Thispermit **will** expire at midnight on the 11th of February 2006*

Dated the 12th **day of August** **A.D.** 2005

Michael P. Cantara

Commissioner

Copy-3 Code Enforcement Officer

Comments:

Code Enforcement Officer
PORTLAND, ME

BERRY

Transmittal **Cover Sheet**

Detailed, Grouped by Each Transmittal Number

Garage, Bridge/Conn.& Heli. - 21845
900 Congres Street
Lower Level - Parking Garage
Portland, **ME 04102**

Project# 04306-021844
Tel: Fax: **207-662-5248**

William A. Berry & **Son, Inc.**

Date: 8/16/2005 Reference Number: 10016

Transmitted To

Nugent, Michael
City Of Portland
389 Congress Street
Portland, ME 04101
Tel: **(207)874-8700**
Fax: **(207)874-8716**

Transmitted By

Lansberry, Jason
William A. Berry & Son, Inc.
99 Conifer Hill Drive
Danvers, MA **01923**
Tel: **(978)774-1057**
Fax: **(978)777-8217**

☐ **Acknowledgement Required**

Package Transmitted For	Delivered Via	Tracking Number
Information, As Requested	Hand	

Item #	Qty	Item	Reference	Description	Notes	Status
001	1.00	Drawings	PKG F	Garage Redesign Elevation & Plans		
002	1.00		PKG D	TRO Letter regarding PKG D		
003	2.00	Drawings	PKG E	PKG E Addendum #1		

Cc: Company Name	Contact Name	Copies	Notes
Maine Medical Center	Dunn, Hank	1	
William A. Berry & Son, Inc.	Dickson, Dennis	1	
William A. Berry & Son, Inc.	Carrier, Ernie	1	

Remarks

Attached please find the Schematic plans for the garage and Foundation plans for the garage.

if you have any questions please give me a call @ **207.662.5641**

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
[illegible] 17 2005
RECEIVED

Signature

8/15/05
Signed Date

TRO

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

August 11,2005
Comm. No. 4678

The Ritchie Organization
80 Bridge Street
Newton, MA
02458
T 617.969.9400
F 617.332 4669
www.troarch.com

Housing & Neighborhood Services Division
Planning & Development Department
City Hall Rom 315
389 Congress Street
Portland, Maine 0410 1
Attn: Mike Nugent

RE: Maine Medical Center
Parking Garage

Dear Mr. Nugent,

Please accept this letter as our formal request that the documents titled "Maine Medical Center, Package 'D' - Garage Earth Retention," dated April 15, 2004 prepared by The Ritchie Organization, Newton, MA be withdrawn from the application for building permit made on or about 08/12/2005.

The design for the earth retention system for the proposed parking garage will be performed by Schnabel Foundation Company, who will be submitting the appropriate documents to your office.

Please contact me if you have any questions or concerns regarding this request.

Very truly yours,

TRO/ THE RITCHIE ORGANIZATION

W. Keith Davis, AIA
Principal/Vice President of Architecture

WKD/JJV

P:\Maine Medical\4678 Garage\2.00_Correspondence\2.20_Consultant Correspondence\2.23 TRO generated\4678LT_050811_Earth Retention.doc

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

Zoning Copy

2004-0003
Application I. D. Number

Rick Seeley is The Reviewer 1/7/04

Maine Medical Center
Applicant

1/7/2004
Application Date

22 Bramhall **St,** Portland, **ME 04102**
Applicant's Mailing Address

Maine Med. Phase **I** Projects
Project Name/Description

22 - 22 Brarnhall Street, Portland, Maine
Address of Proposed Site

Consultant/Agent

Applicant **Ph: (207) 871-6799** Agent Fax:
Applicant or Agent Daytime Telephone, Fax

053 D013
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☑ New Building ☐ Building Addition ☐ Change Of Use ☐ Residential ☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☐ Other (specify) _____

432,000 s.f.		**R6**
Proposed Building square Feet or # of Units	Acreage of Site	Zoning

Check Review Required:

☑ Site Plan (major/minor)	☐ Subdivision # of lots _____	☐ PAD Review	☐ **14-403** Streets Review
☐ Flood Hazard	☐ Shoreland	☐ HistoricPreservation	☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)	☐ Zoning Variance		☐ Other _____

Fees Paid: Site Pla **$5,000.00** Subdivision _____ Engineer Review _____ Date **1/7/2004**

Zoning Approval Status:

Reviewer Marge Schmuckal

☐ Approved ☐ Approved **w/Conditions** See Attached ☐ **Denied**

Approval Date _____ Approval Expiration _____ Extension to _____ ☐ Additional Sheets Attached

☐ Condition Compliance _____ signature _____ date

Performance Guarantee ☐ Required* ☐ **Not** Required

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☐ Performance Guarantee Accepted	date	amount	expiration date
☐ Inspection Fee Paid	date	amount	
7 Building Permit Issue	date		
3 Performance Guarantee Reduced	date	remaining balance	signature
☐ Temporary Certificate of Occupancy	date	☐ Conditions (See Attached)	expiration date
7 Final Inspection	date	signature	
☐ Certificate Of Occupancy	date		
1 performance Guarantee Released	date	signature	
1 Defect Guarantee Submitted	submitted date	amount	expiration date
1 Defect Guarantee Released	date	signature	

PORTLAND MAINE
Strengthening a Remarkable City, Building a Community for Life ▪ *www.portlandmaine.gov*

Lee Urban- Director of Planning ***and*** *Development*
Michael J. Nugent- Inspections Division Director

DEPARTMENT OF PLANNING AND DEVELOPMENT

December 15,2005

W.Keith Davis, AIA
The Ritchie Organization
80 Bridge St.
Newton, MA 02458-1134

RE: Maine Medical Center/053 D007 Waiver request

Dear Mr. Davis,

Thank you for your request for a waiver, received December 15th, 2005. The following are the facts:

1) The proposed Parking Garage Structure includes two required stairways, one of which connects to the existing open parking structure as well as the proposed helipad. This tower includes an elevator.
2) The type of construction is type 2B, as defined by the 1999 BOCA Code.
3) The proposed height of the Tower is 123 feet, to service the Helipad and house mechanical equipment associated with operations.
4) The Helipad elevation and location are fixed and approved under FAA guidelines.
5) The proposed tower, although classified as type 2b, because of it's attachment to the garage, has construction materials that comply with type 1B construction as defines by the 1999 BOCA code. This is intended to facilitate unlimited height, as allowed in Table 406.4 of the Code.

The waiver requested is to allow the Tower to be constructed as approved in the Planning process. The allowable height in table 406.4 is 100 ft. The proposal is 123 feet above the averaged grade plane. Based on the fact that the proposed Stair/Elevator tower is the required height to service the helipad and house required equipment , and is entirely accessible from the Crescent St. side of the project, this office grants the waiver pursuant to Section 121 of the City Building Code as amended. It is understood that the remaining proposed garage and stairway comply with the height requirements of Section 406.4 of the 1999 BOCA Code.

Yours truly,

Mike Nugent
Inspections Division Director

TRO

FAX COVER SHEET

To	MIKE NUGENT, MANAGER	Date	18 MAY 2006
Company	CITY OF PORTLAND, ME INSPECTIONAL SERVICES	Comm. No.	044678
From	BAILEY SILBERT	Fax Number	1 207 874 8716
Subject	MMC GARAGE ADDITION CODES COMPLIANCE	Telephone	

This is page 1 of 4 pages

Comments:

MIKE,

ATTACHED PLEASE FIND pp 1-3 OF TRO CONFERENCE REPORT DATED SEPT. 28, 2005 WHICH WILL ANSWER QUESTION 2) FOR THE WESTERN GARAGE STAIR TO WHICH TODAY'S email TO YOU REFERRED.

Bailey

Document1

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

TRO / The Ritchie Organization

80 Bridge Street, Newton, MA 02458-1134 T 617.969.9400 F 617.332.4669

PLATE
POLYVINYL CHLORIDE
POUNDS/SQUARE FOOT
POUNDS/SQUARE INCH
PRECAST
REFERENCE
REINFORCE OR REINFORCEMENT
REMAINDER
RIGHT END
ROOF DRAIN
ROUGH OPENING
SEE ARCHITECTURAL DRAWINGS
SECTION
STRUCTURAL ENGINEER OF RECORD
SHEAR CONNECTOR OR SLIP CRITICAL BOLT
SHEET
SHORT LEG VERTICAL
SIMILAR
SPACES
SLAB-ON-GRADE
SOUTH
SQUARE
STAINLESS STEEL
STANDARD
STEEL
STEEL DECK INSTITUTE
STIFFENER
STRUCTURAL
SUMP PIT
SUPPORT
SYMMETRICAL
SCHEDULE
TOP
TOP & BOTTOM
TEMPERATURE OR TEMPORARY
TOP OF CONCRETE
TOP OF STEEL
TOP OF WALL
TYPICAL
UNLESS OTHERWISE NOTED
VERTICAL
VERTICAL EACH FACE
VERTICAL INSIDE FACE
VERIFY IN FIELD
VERTICAL OUTSIDE FACE
WELDED WIRE FABRIC
WEST
WITH
WORKING POINT

Fy-60000 PSI

IGTH SCHEDULE

NCS)

	#5	#6	#7	#8	#9	#10	#11
	40"	48"	70"	80"	90"	102"	113"
	31"	37"	54"	62"	70"	78"	87"
	31"	37"	54"	62"	70"	78"	87"
	24"	26"	42"	47"	54"	60"	67"
	#5	#6	#7	#8	#9	#10	#11
	36"	43"	63"	72"	81"	91"	101"
	28"	33"	48"	55"	62"	70"	78"
	28"	33"	48"	55"	62"	70"	78"
	21"	25"	37"	42"	48"	54"	60"

SIBLE STAGGER SPLICES SO THAT
PLICE LENGTH OTHERWISE INCREASE

CONCRETE CAST IN THE MEMBER
ER BARS

RETE

OPENING

UNDISTURBED SOIL

SGH

Simpson Gumpertz & Heger Inc.

Consulting Engineers

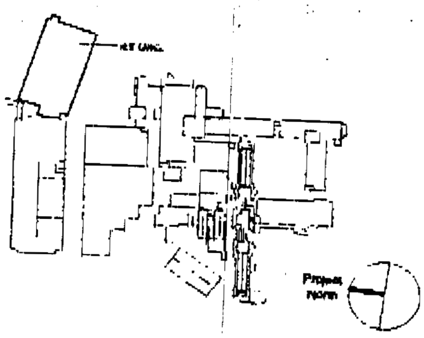
Boston, MA — 41 Seyon Street, Building 1, Suite 500, Waltham, MA 02453 — Telephone (781) 907 9000, Facsimile (781) 907 9009

San Francisco, CA — The Landmark at One Market, Suite 600, San Francisco, CA 94105 — Telephone (415) 495 3700, Facsimile (415) 495 3550

Washington, DC — 1355 Piccard Drive, Suite 320, Rockville, MD 20850 — Telephone (301) 417 0099, Facsimile (301) 417 9824

MARK	ISSUE DATE	DESCRIPTION
ADD 02	11/15/05	ADDENDUM NUMBER 02 - PKG E
ADD 01	07/12/05	ADDENDUM NUMBER 01 - PKG E
PERMIT	05/10/05	PERMIT SET

Issue Log



Key Plan

TRO

ARCHITECTURE
PLANNING
ENGINEERING
INTERIOR DESIGN

The Ritchie Organization
80 Bridge Street
Newton, MA 02458-1134
617-969-9400

Maine Medical Center

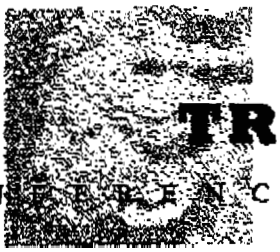
Pkg E - Garage Foundation and Precast
Portland, ME MMC Project No. 21845

Drawing Title

GENERAL NOTES

0 4 8 16 32

Commission No	4676	Date Issued	05/17/05
Scale	1/8" = 1'-0"	Sheet Number	PKG E S001
Drawn By	SMW		
Approved By	JMT/JJZ		
Filename	S001		



CONFERENCE REPORT

This Conference Report is submitted for the purpose of summarizing the important details of the conference noted below and to confirm TRO's understanding of your instructions. Please read carefully and notify us promptly if there are any changes or corrections to be made

Project	Maine Medical Center - Garage	Conference Date	September 28, 2005
Comm. No.	4678	Location	TRO
Subject	Garage - Internal Code Review	Prepared by	Brad Swallom
Participants	TRO Bailey Silbert Ralph Niemi Brad Swallom Nick Brooks John viapiano Giuseppe Colosimo Keith Garratt *George* White Rashid Ashraf	copies	Participants Maine Medical Project Team Steve Jennette Steve Ostapower Bob Higgins Dave Pires Terri Stull

Tne purpose of this meeting was to review code issues regarding tne Garage Project.

No.	Rem	Action Required
	Bailey's analysis of the code as it relates *to* the Garage Addition *is* as follows.	
1.1	Barley's analysis of the code as it relates to the Garage Addition is as follows. The garage addition including the existing MMC Garage satisfies the requirements of me BOCA 1999 section 503.1.2 buildings on the same lot, and the whole can be considered as one structure on me same lot. As type 28 construction in accordance with Tabla *406.4* (Height and *Area* Limitations *for* Open Parking Structures) a tabular height *of* 10 stories (100 feet) and a tabular area of 50,00 *GSF* (per Floor Level) plus area modifications are allowed as follows: • Allowed by code – 50,000 GSF + *28,800* Gsf (Section 506.2 Street Frontage Increase) = *78,800* GSF Total • Proposed – 41,945 GSF (existing) + *27,285* GSF (new including towers) = 69, 230 GSF Total • 78,800 GSF allowed > 69,239 GSF Proposed – Condition Met	
7.2	The Elevator Tower (at west end of addition) provides *the* connection between the Helipad above the top level *of* the existing garage with the Ground and Basement Level Bridge Connections to the Emergency and Acute Clinical Services at MMC. It also provides one of the two exits, from the Helipad and all the garage addition levels. BOCA 1999 Section 1014.11, Exception #4 states that "Stairways in Open Parking Structures which serve only the Parking Structure are not required to be enclosed." At the Helipad Level the stairway no longer serves only the Parking Structure. Therefore it must be enclosed with the fire separation assemblies having a fire resistance rating of not less than 2 hours (connecting 4 of more stories) for its full	

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

TRO / The Ritchie Organization
80 Bridge Street, Newton, MA 02458-1134 T 617.969.9400 F 617.527.6753

Project
Comm. No.
Subject
Conference Date

height to maintain stairwell integrity per section 1014.11, Interior Stairway Enclosures. This will require the addition of 90 minute rated doors at the stairwell at each connecting level.

Evaluation of this stairwell in terms of Smoke Proof Enclosures requirements cited in section 1015.2 *is* as follows:
"All exit stairway serving occupants of a floor level located more than 75 feet above the level of the Exit Discnarge. or located more man 30 feet below the level of Exit Discharge sewing such floor levels shall be protected by a Smoke Proof Enclosure."

- The level of Exit Discnarge to the exterior bridge connection to tne access road has been set at El. 108'-11 ¼"
- Tne Helipad as the highest floor level serving occupants is set at El. 173'-11 ¼" merefore 173'-11 ¼" – 108'-11 ¼" = 65'-0" which is less than 75'-0"
- Sub Level 5, the lowest level of the garage sewed by this stairwell is ser at El. 83'-11 ¼" therefore 108'-11 ¼" – 83'-11 ¼" = 25'-0" which is less tnan 30'-0" required by code.

BOCA 1999 Section 1202.7 states that utility spaces are not Habitable Spaces. It also stales that an Occupiable Space is "A room or enclosed space designed tor human occupancy in which individuals congregate *for* amusement, education ar similar purposes or in which occupants are engaged in labor". In the BOCA commentary "Additionally some spaces are neither habitable nor occupiable such as closets, toilet rooms ana mechanical equipment rooms."

- The mechanical floor level (647gsf) is NOT counted as an occupied space, and occurs at El. 190'-5 ¼". Therefore 190'-5 ¼" – 108-11 ¼" = 81'-6" which is greater man the 75'-0" allowed by code. However m e maintenance personnel could egress this level via the stairwell to the Helipad through the elevator lobby *at* El. 173'-11 ¼" one level below. Therefore 16'-6" is less than 75' and the conditions are met.

Based upon the foregoing, a determination was maae that a smoke proof enclosure is not required at this stairwell. Therefore the need for stair pressurization, an outside balcony or a ventilated vestibule at each level is not required. Far the same reason a stair pressurization alternative is not required.

Project
Comm. No.
Subject
Conference Date

1.3 As required by code, ventilation of the elevator hoistway shall be provided. The mechanical level will be ventilated within the temperature limits specified by the manufactures of any equipment placed there.

The Elevator Lobbies in the elevator tower far future garage levels 1 & 2 at El. 153'-11 ¼" & El. 163'-11 ¼", respectively, will be enclosed as unoccupied spaces until the future garage level are built. Smoke detectors and/or dry sprinklers will be installed as/if required by code.

Meeting Notes

2.1 With the information above Bailey stated that there would be some savings in the removal of the fire walls that are parallel to the elevator tower on all levels of the existing garage and the vestibules connecting the elevator tower with the existing garage on the ground and basement levels. The stair in this tower would require fire doors at all levels. Bailey reiterated that the fire walls related to the pedestrian walkway will need to remain because there needs to be 10' fire wall around any different type of construction.

2.2 Rashid pointed out that a future horizontal expansion would be considered a new building.

2.3 Ralph noted that the alternative, which allowed us to disregard the exit of discharge distances, only applied to sprinklered buildings, which the garage is not. Therefore we would be forced to have the stair open Onto either an open balcony or an enclosed ventilated vestibule. Neither of these configurations occur on the current plan.

2.4 The unoccupied elevator lobbies do not need to De ventilated. The elevator lobby on the heliport level and the machine room do need to be ventilated.

2.5 Every fourth level in a stair must have a door that is accessible in an emergency

Solutions

3.1 The most minimal solution involves lowering the exit of discharge at the access road so that it is within 30 of the lowest level. This will mean lowering The stair exit 10'. therefore making it 10'-0" further from the highest occupied space. This solution *will* only work if the machine room is nor considered an occupied space making the Heliport elevator lobby the highest occupied space.

3.2 A similar solution would move the exit of discharge elevation from 118' to 113'. This would lower the exit of discharge by only five feet. The stair would have to be reworked and the height of the machine room would still exceed 75'.
Post Meeting note: This option does not work due to the reconfiguration of the stairs.

SHEET S001 PKG E

SPECIFICATIONS	REFER TO PROJECT SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR MATERIAL AND WORKMANSHIP
SHOP DRAWINGS	THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND COORDINATION DRAWINGS FOR THE ENGINEER'S APPROVAL AS STATED IN THE SPECIFICATIONS
SIMILAR CONDITIONS	IN THE EVENT THAT CERTAIN DETAILS OF THE CONSTRUCTION ARE NOT FULLY SHOWN OR NOTED ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME TYPE AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED, SUBJECT TO THE STRUCTURAL ENGINEER'S APPROVAL
DRAWINGS BY OTHERS	SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING A. SIZE AND LOCATION OF ALL NON-LOAD BEARING PARTITIONS, AND ROOF TOP PARAPETS B. SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, INSERTS, ETC., EXCEPT AS SHOWN C SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS, EXCEPT AS SHOWN D. FLOOR AND ROOF FINISHES E DETAILS OF ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SEE MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, & TELECOMMUNICATION DRAWINGS FOR THE FOLLOWING A. PIPE AND DUCT RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED. B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS. C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES. D SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS, EXCEPT AS SHOWN OR NOTED
ELEVATIONS & DIMENSIONS	ALL ELEVATIONS AND DIMENSIONS SHOWN FOR NEW CONSTRUCTION ARE BASED ON THE DESIGN DRAWINGS FOR THE EXISTING BUILDINGS. FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION
BUILDING CODE	2003 INTERNATIONAL BUILDING CODE (2003 IBC)
PROJECT DESCRIPTION	PARKING GARAGE SHALL BE DESIGNED AS A 10-STORY TALL STRUCTURE. ONLY 7-STORIES SHALL BE CONSTRUCTED AS PART OF THIS CONTRACT. PARKING GARAGE SHALL HAVE ADEQUATE CAPACITY, BOTH VERTICAL AND LATERAL, TO ACCOMMODATE 3-STORY FUTURE VERTICAL ADDITION.

A – DESIGN LOADS

A1)	LIVE	PARKING GARAGE FLOORS (PASSENGER CARS ONLY)	50 PSF
		PUBLIC AREAS (LOBBYS, ATRIUMS, ETC.)	100 PSF
		STAIRWAYS (EGRESS)	100 PSF
		CORRIDORS	100 PSF
		MINIMUM ROOF LIVE LOAD (SNOW GOVERNS, SEE BELOW)	20 PSF
A2)	DEAD	ALL PERMANENT STATIONARY CONSTRUCTION SUPERIMPOSED ON ALL DRIVING SURFACES	10 PSF
A3)	SEISMIC	SEISMIC USE GROUP I OCCUPANCY IMPORTANCE FACTOR, I = 1.0 SITE CLASS D 0.2 SEC SPECTRAL ACCELERATION, S_S = 0.40 1.0 SEC SPECTRAL ACCELERATION, S_1 = 0.10 SITE COEFFICIENT, F_a = 1.48 SITE COEFFICIENT, F_v = 2.40 SEISMIC DESIGN CATEGORY C STRUCTURAL SYSTEMS: PRECAST PARKING GARAGE N/S DIRECTION REINF. CONC. SHEAR WALLS (NON-LOAD BEARING) R = 5.0, C_d = 4.5 E/W DIRECTION REINF. CONC. SHEAR WALLS (LOAD BEARING) R = 4.5, C_d = 4.0 STAIR AND METAL SPACE NORTH EAST CORNER ORDINARY STEEL CONCENTRIC BRACED FRAMES R = 5 C_d = 4.5 ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE (PER CODE)	
A4)	WIND	BASIC WIND SPEED = 100 MPH (3-SEC GUST SPEED) EXPOSURE CATEGORY B IMPORTANCE FACTOR, I = 1.0 MEAN ROOF HEIGHT, H = 105 FT (FOR 10-STORY TALL GARAGE)	
A5)	SNOW	GROUND SNOW = 60 PSF THERMAL FACTOR, C_T = 1.2 IMPORTANCE FACTOR, I = 1.0 FLAT ROOF SNOW = 51 PSF DRIFT LOADING = (PER ASCE 7-02)	
A6)	LIVE LOAD REDUCTION	PERMITTED UP TO 20% MAX FOR MEMBERS SUPPORTING 2 OR MORE FLOORS	

B – FOUNDATIONS

B1)	GEOTECHNICAL REPORTS	THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING, UNDERSTANDING & IMPLEMENTING THE RECOMMENDATIONS OUTLINED IN THE FOLLOWING GEOTECHNICAL REPORTS BY S.W. COLE, INC.: i) "GEOTECHNICAL ENGINEERING AND GEOLOGICAL SERVICES PROPOSED PARKING GARAGE, CRESCENT AND CONGRESS STREETS, PORTLAND, MAINE", DATED 31 MARCH 2004 ii) "GEOTECHNICAL ENGINEERING SERVICES PRELIMINARY INVESTIGATION PROPOSED PARKING GARAGE, MAINE MEDICAL CENTER FACILITY CRESCENT AND CONGRESS STREETS, PORTLAND, MAINE", DATED 2 APRIL 2002 iii) "GEOTECHNICAL ENGINEERING INVESTIGATION PROPOSED MEDICAL OFFICE BUILDING AND PARKING GARAGE WOMEN AND INFANTS FACILITY CHARLES STREET, PORTLAND, MAINE", DATED 28 MARCH 2002. COPIES OF THE GEOTECHNICAL REPORT ARE AVAILABLE FROM THE PROJECT ARCHITECT. WHERE RECOMMENDATIONS IN THESE REPORTS VARY FROM INFORMATION CONTAINED IN THESE DRAWINGS & THE PROJECT SPECIFICATIONS, THE DRAWINGS AND SPECIFICATIONS SHALL GOVERN
B2)	SOIL BEARING	CONCRETE SPREAD & STRIP FOOTINGS ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 5,000 PSF AT A DEPTH OF 4.5 FEET BELOW THE EXISTING GRADE. BEAR ALL FOOTINGS ON CONCRETE MUD MAT OR UNDISTURBED SOIL. U.O.N.
B3)	EXCAVATION	ALL FOUNDATION EXCAVATION TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER. EXCAVATE TO LINES AND GRADES TO PROPERLY INSTALL FOUNDATIONS ON UNDISTURBED SOIL APPROVED BY THE GEOTECHNICAL ENGINEER FOR THE REQUIRED BEARING CAPACITY. THE ELEVATIONS SHOWN ON THE DRAWINGS ARE ANTICIPATED AND ACTUAL ELEVATIONS ARE TO BE ESTABLISHED IN THE FIELD BY THE GEOTECHNICAL ENGINEER, BUT IN NO CASE SHALL THE BOTTOM OF FOOTING BE LOCATED LESS THAN 4.5 FEET BELOW THE LOWEST ADJACENT SURFACE EXPOSED TO FREEZING. THE DIFFERENCE IN ELEVATION BETWEEN THE BOTTOMS OF ADJACENT FOOTINGS SHALL BE EQUAL TO OR LESS THAN THE HORIZONTAL DISTANCE BETWEEN THEM. ANY ADJUSTMENT OF FOOTING ELEVATIONS DUE TO FIELD CONDITIONS MUST HAVE THE PRIOR APPROVAL OF THE ENGINEER
B4)	UTILITIES AND OTHER UNDERGROUND STRUCT.	FOOTINGS TO BEAR BELOW AN IMAGINARY REFERENCE LINE DRAWN UPWARD AND OUTWARD ON A 1V:1H SLOPE FROM THE BOTTOM OF ANY ADJACENT UTILITIES OR OTHER UNDERGROUND STRUCTURES
B5)	DEWATERING SYSTEM	A DEWATERING PROGRAM SHALL BE USED TO REMOVE EXCESS WATER FROM THE EXCAVATION ON A CONTINUOUS BASIS UNTIL THE PERMANENT DRAINAGE SYSTEM HAS BEEN INSTALLED AND IS OPERATIONAL.
B6)	FOOTING SUBGRADE PREPARATION AND FILL	FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT INCLUDED IN PROJECT MANUAL. PLACE ALL SPREAD AND STRIP FOOTINGS ON 4" LEAN CONCRETE (1,000 PSI) "MUD" MAT. ALL FOOTINGS SHALL EXTEND AT LEAST 4'-6" BELOW GRADE FOR FROST PROTECTION
B7)	SLAB SUBGRADE PREPARATION AND FILL	FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT INCLUDED IN PROJECT MANUAL. PLACE SLAB ON GRADE ON A BED OF GRANULAR FILL.
B8)	BACKFILL UNDER	PROOF-ROLL EXISTING SOILS PER SPECIFICATION #02200 "EARTHWORK". BACKFILL WHERE REQUIRED BELOW

TRO

FAX COVER SHEET

To	MIKE NUGENT, MANAGER	Date	19 MAY 2006
Company	CITY OF PORTLAND ME INSPECTION SERVICES	Comm. No.	04678
From	BAILEY SILBERT	Fax Number	1 207 874 8716
Subject	GARAGE - DESIGN LOADS	Telephone	

This is page 1 of 4 pages

Comments:

MIKE,

ATTACHED PLEASE FIND ABSTRACT OF SHEET S 001, PKG E STRUCTURAL DRWGS FOR GARAGE TO ANSWER YOUR LAST QUESTION YESTERDAY.

Bailey

cc: KEITH DAUS
RICH COE
JOHN VIAFIANO
BRAD SWALLOW
HANK DUNN (1 207 662 6516)

Document1

TRO / The Ritchie Organization
80 Bridge Street, Newton, MA 02458-1134 T 617 969.9400 F 617.332.4669

Silbert, Bailey

From: Mike Nugent [MJN@portlandmaine.gov]
Sent: Thursday, May 18, 2006 1:01 PM
To: Silbert, Bailey
Cc: Swallom, Brad; Davis, Keith
Subject: Couple of final questions/Garage segment

TEXT.htm (1 KB)

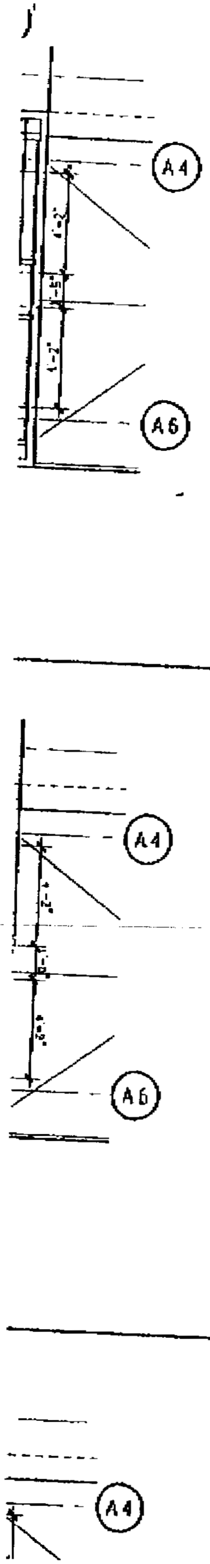
Please provide a statement of compliance with rational far Section 1007. Accessible Means of Egress.

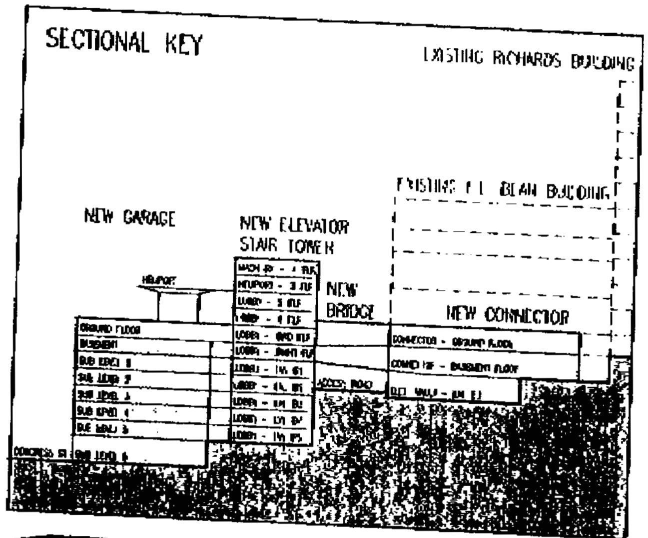
Are the Exit stairways "Smoke proof Enclosures" in compliance with Section 1015?

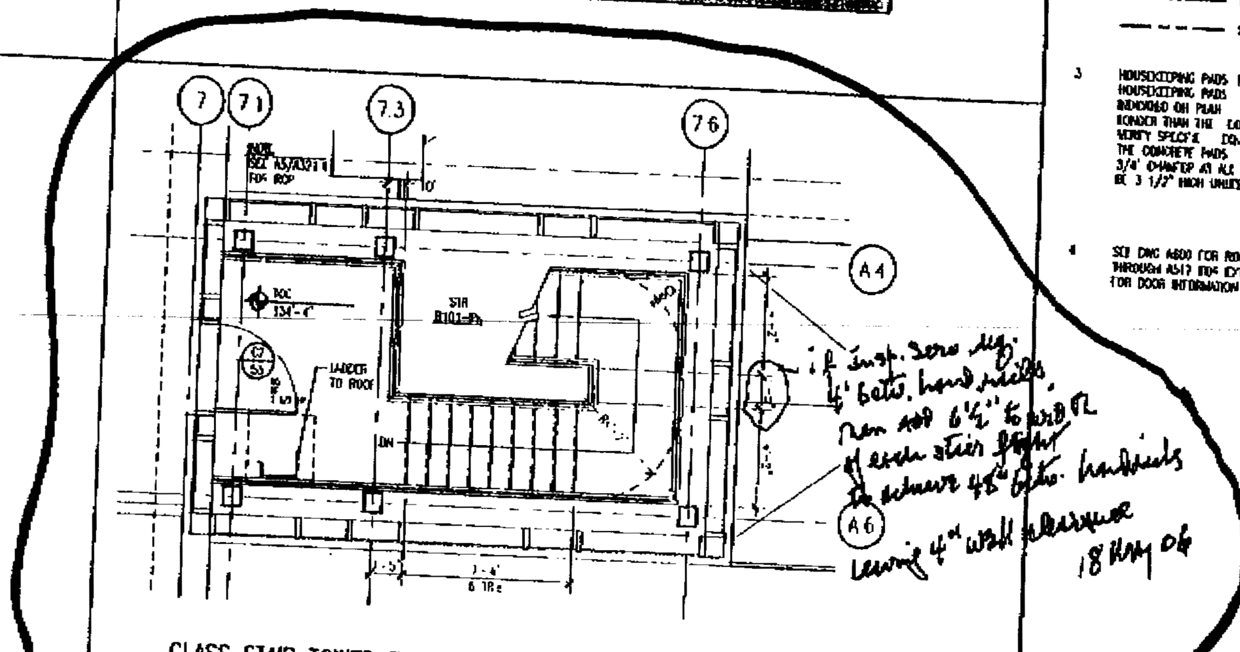
The exterior stairway from the helipad, is there a ward on the helepad level so people can't fall into the stairway?

What is the load capability of the parking areas and ramps?

SEE ATTACHED ABSTRACT FROM STRUCTURAL DRWGS SHEET S001 PKG. E

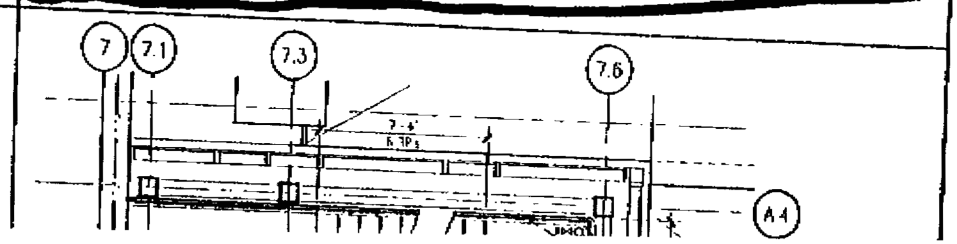






GLASS STAIR TOWER ENLARGED PLAN – GARAGE BASEMENT LEVEL

E2 SCALE 1/4" = 1'-0"



General Notes

1. REFERENCE SYMBOLS AS FOLLOWS

- DOOR AND HARDWARE REFERENCE SYMBOL. SEE SHEET A530
- PARTITION TYPE REFERENCE SYMBOL SEE SHEET A031
- NEW WINDOW TYPE REFERENCE SYMBOL. SEE SHEET A530
- GLAZING TYPE REFERENCE SYMBOL
- INTERIOR ELEVATION TAG

2. RATED PARTITIONS ARE INDICATED AS FOLLOWS

- 1HR RATED FIRE PARTITION
- 2HR RATED FIRE PARTITION
- 1HR SMOKE BARRIER
- 2HR RATED FIRE AND SMOKE BARRIER

3. HOUSEKEEPING PADS. PROVIDE REINFORCED CONCRETE HOUSEKEEPING PADS UNDER ALL EQUIPMENT WHERE INDICATED ON PLAN. PADS SHALL BE 6" WIDER AND LONGER THAN THE EQUIPMENT WHICH THEY SUPPORT. VERIFY SPECIFIC EQUIPMENT SIZE PRIOR TO POURING THE CONCRETE PADS. PADS SHALL HAVE A CONTINUOUS 3/4" CHAMFER AT ALL EXPOSED CORNERS AND SHALL BE 3 1/2" HIGH UNLESS OTHERWISE INDICATED ON PLAN

4. SEE DWG A800 FOR ROOF DETAILS. SEE DWG A510 THROUGH A517 FOR EXTERIOR DETAILS. SEE DWG A530 FOR DOOR INFORMATION

TRO

FAX COVER SHEET

To	MIKE NUGENT, MANAGER	Date	19 MAY 2006
Company	CITY OF PORTLAND, ME INSPECTIONAL SERVICES	Comm. No.	4678
From	BAILEY SILBERT	Fax Number	1 207 874 8716
Subject	MMC GARAGE DRWG A222.1 PKG F	Telephone	

ABSTRACT

This is page 1 of 3 pages

Comments:

MIKE,

PER VOICE MAIL LEFT A FEW MOMENTS AGO FIND ATTACHED ABSTRACT FROM DRWG A 222.1 PKG F DETAIL PLAN E2 DEPICTING POINTS DISCUSSED IN YESTERDAY'S FAX.

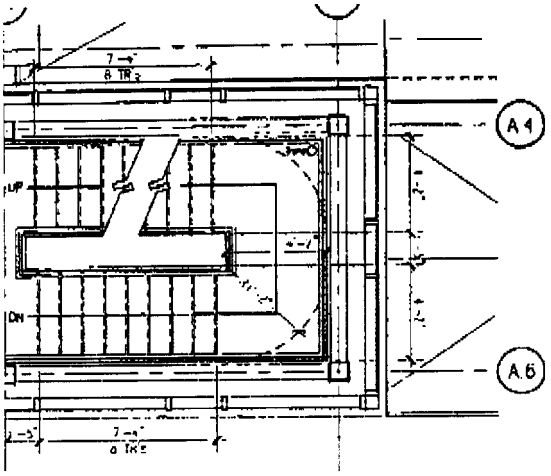
Bailey

cc: KEITH DAVIS
RICH COE
JOHN VIAPIANO
BRAD SWALLOW
HANK DOWN

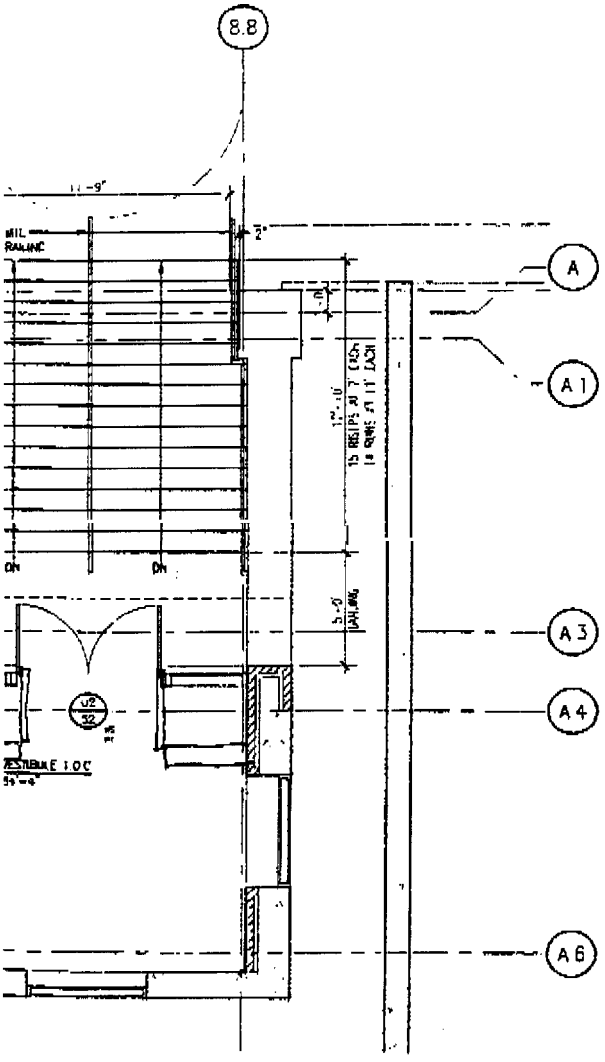
(1 207 662 6516)

Document

TRO / The Ritchie Organization
80 Bridge Street, Newton, MA 02458-1134 T 617.969.9400 F 617.332.4669

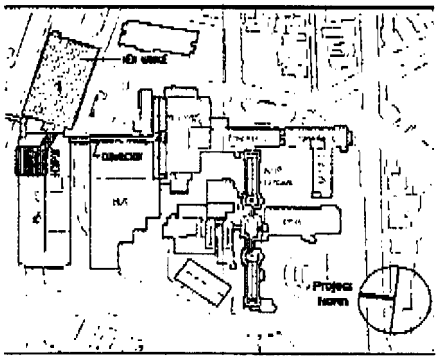


7 ENLARGED PLAN -



MARK	ISSUE DATE	DESCRIPTION
ADD 02	1/13/06	ADDENDUM NUMBER 02 – PACKAGE F
ADD 01	12/19/05	ADDENDUM NUMBER 01 – PACKAGE F
PERMIT	09/19/04	PERMIT SET
BID	08/26/04	BID SET

Issue Log



Key Plan

TRO

ARCHITECTURE
PLANNING
ENGINEERING
INTERIOR DESIGN

The Ritchie Organization
80 Orange Street
Newton, MA 02466-1134
617-969-0400

Maine Medical Center
Pkg F - Garage / Vault / Conn / Heliport
Portland, ME MMC Project No. 21845

Drawing Title
GARAGE PARTIAL PLANS

Certificate No.	4678
Scale	AS NOTED
Drawn By	JJH
Approved By	JJH
Filename	4678A222.1.dwg
Date Issued	08/26/04
Sheet Number	PKG-F
	A222.1

From: "Silbert, Bailey" <BSilbert@TROarch.com>
To: "Mike Nugent" <MJN@portlandmaine.gov>
Date: 5/18/2006 11:59:45 **AM**
Subject: RE: Almost done! (with the garage final permit)

05/18/06

Mike,

The west stair width measured from flange tip to flange tip of stringers = 45".
The east stair width measured from flange tip to flange tip of stringers = 50".

There is a clear "well" opening (tips of stringer flanges between flights) of 6" @ the west stair which we could reduce if you do not count stringer widths.

A typical Garage floor = 27,500 GSF counting stairs and elevators. 27,500/200 gsf per person divided by 2 stairs = 137/2 = 68.5 or 69 persons per stair. A 36" door is called for @ west stair and a **44**" door @ east stair. The smaller door still provides better than 32" CLEAR space between door face and opposite stop. 32" divided by 0.2"/person = 160 persons > 69 persons.

I thought these calcs were on the drawings as they should be have been, as they were done many times. Clearly the floor occupancy has more than adequate egress width.

Please let me know if you have a problem with us counting stair width to flange tips of stringers.

Rashid has left TRO.

Best,

Bailey

-----Original Message-----
From: Mike Nugent [mailto:MJN@portlandmaine.gov]
Sent: Thursday, May 18,2006 11:16 AM
To: RAshrafQTROarch.com
Cc: Silbert, Bailey
Subject: Almost done! (with the garage final permit)

I'm having a hard time determining the exit stairway door widths, can you help???

Are the stair pans 44" or are they narrower?

CC: "Davis, Keith" <KDavis@TROarch.com>, "Swallom, Brad" <BSwallom@TROarch.com>

From: "Silbert, Bailey" <BSilbert@TROarch.com>
To: "Mike Nugent" <MJN@portlandmaine.gov>
Date: 5/18/2006 11:59:45 **AM**
Subject: RE: Almost done! (with the garage final permit)

05/18/06

Mike,

The west stair width measured from flange tip to flange tip of stringers = 45".
The east stair width measured from flange tip to flange tip of stringers = 50".

There is a clear "well" opening (tips of stringer flanges between flights) of 6" @ the west stair which we could reduce if you do not count stringer widths.

A typical Garage floor = 27,500 GSF counting stairs and elevators. 27,500/200 gsf per person divided by 2 stairs = 137/2 = 68.5 or 69 persons per stair. A 36" door is called for @ west stair and a 44" door @ east stair. The smaller door still provides better than 32" CLEAR space between door face and opposite stop. 32" divided by 0.2"/person = 160 persons > 69 persons.

I thought these calcs were on the drawings as they should be have been, as they were done many times. Clearly the floor occupancy has more than adequate egress width.

Please let me know if you have a problem with us counting stair width to flange tips of stringers.

Rashid has left TRO.

Best,

Bailey

-----Original Message-----
From: Mike Nugent [mailto:MJN@portlandmaine.gov]
Sent: Thursday, May 18, 2006 11:16 AM
To: RAshraf@TROarch.com
Cc: Silbert, Bailey
Subject: Almost done! (with the garage final permit)

I'm having a hard time determining the exit stairway door widths, can you help???

Are the stair pans 44" or are they narrower?

CC: "Davis, Keith" <KDavis@TROarch.com>, "Swallom, Brad" <BSwallom@TROarch.com>

TRO

MEMORANDUM

To	Keith Davis, Rashid Ashraf	Date	04/24/02 Revision B 06/22/04 Revision C 12/13/05
From	Bailey Silbert	Comm. No.	04678 000
Subject	MMC Parking Garage Code Analysis	Project Name	MMC Parking *Garage* Addition

New Garage is an S – 2 Use Group (Low Hazard, Storage Occupancy) Open Parking Structure.

BOCA 1999, applicable code references:

Section 406.0 Open Parking Structures

Section 406.1 General, 406.1.1 Openings

Section 406.1.2 Separation

Table 406.4 Height and Area Limitations (Table 503 does not apply here, see S – 2, note g)

Section 408.0 Public Garages does not apply *here*

Section 504.0 Height Modifications (Heights are subject to increases indicated in Section 504.0)

Section 506.0 Area Modifications (Areas are subject to increases indicated in Section 506.0)

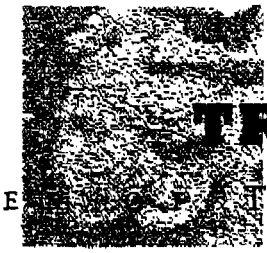
Table 602 Fire Resistance Ratings of Structural Elements. Construction Type 2B

Analysis: Precast concrete *construction* of Path existing and new garage probably will *not* qualify as Type 2A Construction. Also, neither the existing nor the new Garage Addition can satisfy Section 406.4.1 far Unlimited Area because all sides are not open and "the area of openings along the side shall not be less than 50 percent of the exterior area of the side at each parking level." Therefore, per Table 406.4 it shall De designated as Type 2B Construction with a tabular maximum of 10 stories – 100' in height (which ever is less) and 50,000 SF in area. The topography @ the Crescent Street side is approximately 50' above thar @ the Congress Street side. This grade differential necessitates earth retention wall construction on the south and east sides of the site prior *to* construction of the garage. Ventilation on these sides is discussed in a separate analysis. Section 406.4 states rhat heights and areas are subject to potential *increases* indicated in Sections 504.0 and 506.0. Thg latter allows area modifications based upon street frontage increase (506.2). Also, in evaluating these increases "the areas provided *are* areas per floor and

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

TRO / The Ritchie Organization

80 Bridge Street, Newton, MA 02458-1134 T 617.969.9400 F 617.332.4669



LETTER OF TRANSMITTAL

We are transmitting the following:		RE:	Date:
☒ Prints	☐ For your use	Maine Medical Center	March 04, 2004
☐ Specifications	☐ As requested	Garage Addition	
☐ Proposal	☐ For review & comment	Open Parking Structure	Comm. #:
☒ Other (Code Analysis)	☒ Other (Record)	Ventilation Analysis	04678.000

To	Attention	Address	No.	Sent VIA
Department of Public Safety, Office of State Fire Marshal	Stephen Dodge Public Safety Inspector	397 Water Street Gardiner, Maine 04345	1	Fed-Ex Priority
City of Portland	Michael J. Nugent Inspection Services Manager	City Hall Rm. 315 389 Congress Street Ponland, Maine 04101	1	FEd-Ex Priority

Comments: Mr. Dodge, Per the meeting for the above referenced project Mike Nugent held with MMC & TRO, yesterday, Wednesday, 03/03/04 @ City Hall please find enclosed the following material :

- *Hardcopy of email cover and Analysis for Open Parking Structure Ventilation dated 03/02/04*
- *Reference Garage Elevations upon which Analysis calculations ware based (Potential refinements to these elevations that will not affect the accuracy of the calculations nor the analysis findings are in process. Overall plan dimensions [212' x 123'] will De maintained, but the number of structural bays will probably he reduced from 7 to 6 bays)*

Bailey

copy to:

Dan Doughty(Trans. Only) Hank Dunn (Trans.Only)
John Thomsen (Tr. Only) Keith Davis (Trans. Only)
Rashid Ashraf (Tr. Only) Eileen Leplanc (Tr. Only)

Signed:

Bailey Silbert, Senior Associate/Chief Coordinator

04678 TR_040304_GARCALC

TRO / The Ritchie Organization
80 Bridge Street, Newton, MA 02458-1134 T 617.969.9400 F 617.332.4669

Date 04/24/02, revised 06/22/04, revised 12/13/05
Comm. No. 04678.000
Subject YMC Parking Garage Addition

tnere are no modifications for multistory buildings as provided for in Table 506.4." The area modifications permitted by Section 508.2 for street frontage are also applicable to the *area* restrictions in Table 406.4." (BOCA 1999 Commentary page 4-28).

The new garage construction can be considered as an extension of the existing garage and, therefore, *the* whole evaluated as one structure on the fame lot.

Accordingly, the total perimeter of the existing garage plus me new extension equals 1,579LF. The accessible perimeter @ Crescent Street is 503 LF ana that @ *Congress* Street is 347 LF, equal to a total ot 850 LF

85011579 = 53.8%. Deducting 25% per Section 506.2 leaves an excess frontage of 28.8%. Multiplying this by 2 percent equals 57.6%. 0.576 X 50,000 SF tabular area equals a *28,800* SF allowable increase

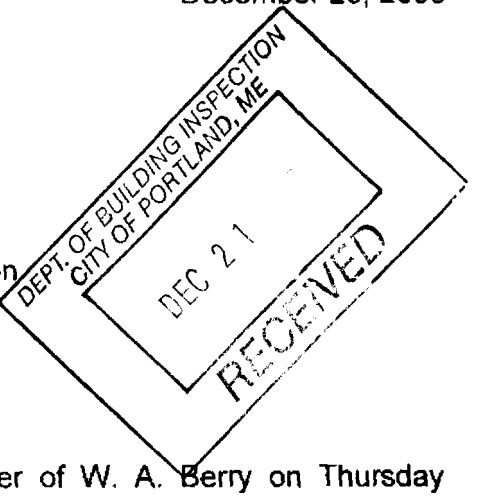
Therefore, adding me basic tabular area to me allowable street frontage increase (50,000 t *28,800)* equals a *78,800* SF total built area per floor level. Checking this result against the actual projected built areas (41,945 SF for the ex. Garage plus *25,758* SF of garage extension and +/- 1.500 SF of link) equals 69,203SF, some 9,597 SF tess than what is allowed.

TRO

S.W.COLE ENGINEERING, INC. • Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

02-0067.3

December 20, 2005



Maine Medical Center
Attention: Mr Henry Dunn, P.E.
22 Bramhall Street
Portland, Maine 04102-3175

Subject: Geotechnical Engineering Services
Proposed Foundation Subgrade Protection
Proposed Parking Garage
Portland, Maine

Dear Henry:

Based on our brief conference call with Ernie Carrier of W. A. Berry on Thursday December 15, 2005, we understand that W. A. Berry & Sons, Inc. would rather use a geotextile fabric and compacted crushed stone layer below the proposed parking garage footings than the concrete mud slab discussed in our soils report. Later that day, we received an e-mail memorandum from W. A Berry which provided some information relative to their proposed subgrade preparation and protection procedures (see attached).

As we discussed, it is our opinion that use of a compacted crushed stone layer overlying geotextile fabric below footings is acceptable from a bearing standpoint. We recommend that excavation to subgrade be done with care to minimize disturbance to the subgrade soils. As mentioned in our soils report, a smooth-edged bucket may be needed to help reduce soil disturbance at subgrade. Soft, yielding, disturbed soil will need to be removed and replaced with additional crushed stone. A S. W. COLE ENGINEERING, INC. representative will need to observe all subgrades prior to placement of geotextile fabric, new fill or concrete. If the contractor elects to use the geotextile fabric and stone layer instead of the mud slab, we recommend that a woven geotextile fabric such as Mirafi 500X (or similar) be utilized on all subgrades receiving stone. All fabric should have an overlap of at least 18 inches. We recommend at least 10 inches of well-graded, compacted 1 1/2 inch minus crushed stone be utilized. The crushed stone should be compacted to at least 100 percent of its maximum dry rodded unit weight as determined by ASTM C-29.

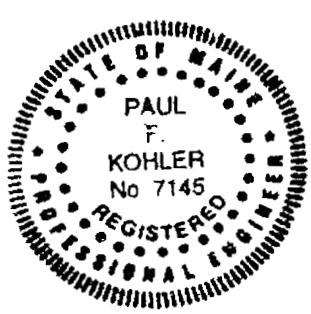
Once the geotextile fabric and crushed stone have been placed, the contractor is responsible for protection of the subgrade soils from disturbance due to construction activity, inclement weather (including freezing), and is responsible for repair of disturbed subgrades. Groundwater and surface water should be diverted such that water does not pond within the crushed stone nor on the native subgrade soils.

We trust this letter meets your current needs. Please do not hesitate *to* contact us if you have any questions or need additional information.

Sincerely,

S. W. COLE ENGINERING, INC.

Paul F. Kohler, P.E.
Senior Geotechnical Engineer



c: John Thomsen – SGH, Inc.
Karl Gimpel – SWCE
Ernie Carrier – W.A. Berry
Jason Lansberry – W. A. Berry

P:\2002\02-0067 3 Me Med Water Data\02-0067 3 Subgrade Protection Letter.doc

TRO MEMORANDUM

To	Hank Dunn, P.E., Project Manager	**Date**	March 02, 2004
From	Bailey Silbert	**Comm. No.**	04678.000
Subject	BOCA Section 406.1 1– Openings: Open Parking Structure Ventilation	**Project Name**	MMC Parking Garage Addition

Summary

The following analysis provides a positive manner in which to view the above referenced project's compliance with the *cited* ventilation standards of *the* BOCA 1999 Building Code. Less than half of the parking levels require borrowing additional de minimus quantities of the linear and/or the square footage available at the east and south sides of the garage structure facing the hillside cuts. The *six* quantities identified in the calculations range from 28 2% to 1.93%, with an average value of only 15.5% *of* that which is available.

The above referenced BOCA Section reads "The exterior walls of the open parking structure shall have uniformly distributed openings on not less than two *sides* totaling not less than 40 percent of the building perimeter. The aggregate area of such openings in exterior walls in each level shall not be less than 20 percent of the total perimeter wad area of each level. Interior wall lines and column lines shall be at least 20 percent open with openings distributed to provide *ventilation."*

"Exception: Openings are not required to be distributed aver 40 percent of the building perimeter where the required Openings are uniformly distributed over two apposing sides of the building.'

Thus, *the* basic threshold requirements are:

1. Uniform openings an two (adjacent) sides = 40 percent minimum of building perimeter LF.
2. Aggregate opening area @ each level = 20 percent minimum of total perimeter wall area @ eacn level.

In this case the interior wall line @ each level has been designed to be 66.6 percent open.

The siting of this garage addition into the hillside between *the* lower (north) frontage @ Congress Street and the upper *(south)* frontage @ Crescent Street has necessitated construction of earth retention system on the south and east sides. Those sides of the garage have openings that face onto a 12"+ gap formed between the exterior building face and the retention wall up to the level of *the* abutting *grade.*

Analyzing compliance with the basic requirements cited above with LF *8* SF calculations on a level by level basis will help to determine the minimum "K" factor (opening %) necessary to allot to those openings occurring *on Re* south and east *sides* below abutting grade levels.

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

TRO / The Ritchie Organization

80 Bridge Street, Newton, MA 02458-1134 T 617.969.9400 F 617.332.4669

TRO

CONFERENCE REPORT

This Conference Report is submitted for the purpose of summarizing the important details of the conference noted below and to confirm TRO's understanding of your instructions. Please read carefully and notify us promptly if there are any changes or corrections to be made.

Project	Maine Medical Center	Conference Date	1 October 2003
Comm. No.	4673, 4677, 4678, 4682	Location	Portland City Hall
Subject	Lobby/Garage/Heliport/C.U.P.	Prepared by	Bailey Silbert/Tom Lam
Participants	City of Portland Mike Nugent Lt. Gaylen McDougall MMC Hank Dunn TRO Bailey Silbert Tom Lam	Copies	Participants MMC Paul Gray, Dan Doughty TRO Dennis Kaiser Jamie Newton Steven Jennette

Materials Referenced:

- Charles *Street* Project Design Development *Set* dated November *2002*
- Central Utility Plant Progress *Set* dated September 26, 2003
- Garage/Connector/Heliport Progress Set dated September 26, 2003
- Lobby/Site Extension Progress Set dated September *26,2003*
- Memo *on* area calculations dated August 14,2003

The following items were discussed and directions received:

1) Lobby/Site Extension:
   a) Design team noted new work in the Lobby and renovations in the Pavilion building would be protected by fire suppression system.
   b) Lt. McDougall noted the roof of the Pavilion tunnel was made of wood, design team responded that the tunnel was beyond the area of renovation of this project.
   c) It was confirmed that one set of fire doors per Steve Dodge's NFPA interpretation would be adequate to separate the new Lobby from the Charles Street (Women and Infants) Building.
   d) Bailey noted the new Lobby was designed as a part of the Pavilion and Richards wing.

2) Garage:
   a) The garage was designed as an open structure.
   b) Due to the proximity, 1'-0" between the face of the building and face of the earth retention system. Mike indicated he would contact BOCA officials for an interpretation if portions or all of the open area could be counted as *tree* area. Hank noted that the narrow space created a chimney effect that would assist smoke evacuation.
   c) Bailey noted the new garage was designed as an extension of the existing garage since the existing garage (+/-41,945 SF) + the new addition (26,076 SF) totals 68,021 SF < 78,800 SF allowed under increases by Section 506.2, *Street* Frontage Increase.

TRO / The Ritchie Organization
80 Bridge Street, Newton, MA 02458-1134 T 617 969 9400 F 617.527.6753

Project	Department of *Public* Safety, Office of State Fire Marshal
Comm. Nos.	04673, 04677, 04678, 04679, 04682
Subject	MMC Projects Plan Review
Conference Pare	October 26, 2005/ 1 to 3 pm

Stephen Doage inquired about the construction schedule and was informed that the goal is to complete the ***earth retention and foundation work*** for the Mew Garage Addition, the CUP, the Heliport and the Electrical Vault before frost. The only construction underway at this time is @ tne New Garage Addition together with site excavation @ the Power Plant site.

Meeting **Ended at 2:40 PM**

Follow up Items:

No	Item	Action
1	New Charles Street Building Final Review (incl. MEP Drwgs.) @ 100% completion	TRO to schedule for 02/2006

TRO

Project	Department of Public Safety. Office of State Fire Marshal
Comm. Noe.	04673, 04677, 04678, 04679, 04682
subject	MMC Projects Plan Review
Conference Date	October 26,20051 1 to 3 pm

1. Garage (New *Addition* only) & Helipad Framing (located amp the Existing Garage) structures are designed Io conform to tne *IBC 2003* Code. The Connector (including Bridge) and Main Lobby Entrance *are* designed to conform to the *BOCA 7999 Code.*
2. CUP (Central Utility Plant) structure is designed to conform to the *IBC* 2003 Code.
3. Charles Street Building structure is designed *to* conform to the *IBC* 2003 Code.

Stephen Dodge *mentioned as a* reminder thar the Applications for Barrier-Free Permit and Construction Permit for the Charles Street Project only have been submitted and are on file @ the Department of Public Safety, State Fire Marshal's Office. Similar Applications for the New Garage Addition (including Heliport, Bridge, Connector, Rear Lobby) ana me Central Utility Plant are also required. TRO will provide the aforementioned shortly, including the New Main Entrance Lobby @ the Ground Floor Level of m e Ricnaras Building if it has not already been submitted as pan of the Cnarles *Street* Building Applications.

The following observations were made during the discussion on a project by project basis:

- *Garage* ***Addition***

1. Portable Fire Extinguishers in conformance with NFPA 10 were located at each level as required by Lt. Gaylen McDougall, City of Portland Fire Prevention Officer on 07/06/04. As an Open Parking Structure an *automatic fire* suppression *system* was not required. Stephen Dodge indicated tnat Lt. McDougall has since retired, and that *there* is a new Captain @ the PFD.

→ 2. In accordance with the NFPA 101 - 2003 Life/Safety Code, enclosure of the eastern egress stairwell is required. Tne exterior glass wall enclosing the 3 exterior sides of the egress stair can remain. The srair is oriented ai 90 degrees to the garage exterior wall. Tne "180 degree rule" requires a 2-Hour fire separation assembly, including stairwell entrance door and frame, between tne Garage proper and the stairwell. This wall must extend 10 either side and above and below the stairwell at eacn level. The separation wall can *De formed with the p.c. concrete* panel elements already utilized tor the garage exterior spandrel system. The sum of the horizontal travel *at* the garage level and the vertical travel distance traversed within tne exit stair (measured in *the* plane of the treac nosing *[Section* 7.6.4]) cannot exceed the 300' maximum travel distance allowed for an Open Parking Structure without an automatic lire suppression system.

3. The western exit stairwell already complies with the enclosure requirements cited above. The stairwell window occurs in the exterior wall in 180 degree relationship (coplanar) with the exterior walls either side.
4. The western Elevator/Stair Tower functions do not extend down to the Congress Street Level, but stop @ Sub Level 5 (el.83'-11 ¼"). There are 2 Entrance/Exit locations *for* me Garage Addition, *one @ Congress* Street, the other @ the Access Road. (an internal gate controlled drive through has been provided @ the Congress Street Level between the New Addition and the Existing Garage).
5. Tne openings provided for natural ventilation at the Qarage Addition conform (at *a* minimum) to NFPA 101-2003 Section 3.3.217.7 *Open Parking Structure.* ".....has wall openings open to the atmosphere, tor an area ofnot less man 0.13 [squaremeters] (1.4 sq. ft.) for eacn linear 305 mm (12") af its exterior perimeter. Such openings are distributed aver at least 40 percent of the building perimeter....".
6. As an accessory use to a pnvate facility me Garage Addition nas been designed for *the* use of staff and nospital visitors.

- ***Heliport***

Project	Department of Public Safety, Office of State Fire Marshal
Comm. Nos.	04673, 04677, 04678, 04679, 04682
Subject	MMC Projects Plan Review
Conference Date	October 26, 2005/ 1 to 3 pm

meeting with Stepnen Dodge took place on June 25, 2002 with the Schematic Design and Design Development phases of work by TROQ MMC and primarily concerned the design of the Charles Street Project (Women & Infants Building).

Subsequent communication was mainrained over the 3-year interim in me form of Coae Analyses and various updates, as regular MMC meetings and presentations to the City of Portland Building, Fire a m Planning Officials occurred and the design and planning pnases for the Increasing number 01 projects developed.

Rashid Ashraf opened the meeting with a MMC Campus overview of all the projects now encompassed within the current *Scope of Work:* (subsequent discussion of pertinent regulatory issues to follow Scape description)

- New Garage Addition (04678) can be considered as an extension of the Existing 10 story Open Parking Structure eastwards with a 7½ story, 497 car expansion. Existing and New constitute one structure on the same lot fronting on Congress Street @ tne northern boundary at tne hospital campus. The Occupancy classification will be Ordinary Hazard, Storage (Sect. 42.8.1.5, NFPA 101-2003) or Low Hazard, Storage, Use Group S-2 (Table 3: 1.3, BOCA 1999). The Construction Type will be classified as Type II 111 [NFPA] and Type 2B [BOCA 1999] respoctively. A future 2½-story vertical expansion of tne New Garage Addition is possible and the structure has been designed accordingly. A drive through connection [gate controlled] between tne New Addition and the Existing Garage occurs only @ the Congress Street level A Retail Occupancy, incidental to the predominant vehicular Storage occupancy. was incorporated into the design @ tne Congress Street sidewalk level as a result of me City of Portland Planning Board Design Review.
- A Heliport (04682) has been designed for location @ the top level ot the Existing Garage at its east side. The Heliport Pad connects to an Elevator and Egress stair tower located between the Existing Garage ana the New Garage Addition. The elevators will double (with authorized key control) as the direct Trauma *service* connection between Helipad and Basement/Ground Level Bridge access to the MMC acute clinical services *or* as normal passenger service for users of the New Garage Addition only. The Existing Garage has its own independent passenger elevator service and exit stairways.
- A Pedestrian Walkway Two Level Elevated Bridge and Connector Corridor System (04679) connects the entire Qarage structure to the MMC Hospital on both *the* Basement and Ground Floor Levels, the Basement Level dedicated to *clinical* and the Ground Level to *public* functions. The Pedestrian Walkway Bridge spans the Access Road (formerly called Crescent Street) and is fully enclosed and equipped with an automatic sprinkler system. Per Section 3106.0, Pedestrian Walkways, BOCA 1999.2- Hour fire separation assemblies at eacn end occur at tne interfaces with tne *Garage* and rhe L.L. Bean Building & Connector. The Bean Connector links directly to the existing L.L. Bean and Richards Buildings as well as Io the New Charles Street Building, thus tying together tne northern ana southern halves of the MMC Campus with integral circulation routes. Parallel with the north façade of the Richards Building *the* T-shaped "head" [in plan] ot me Connector corridor extends to *the* Charles Street Building *on* the east and me Bean Elevators on the wesr. The Main Electric Vault will be located underneath the current ambulance courtyard at the north side of the Richards Budding, and will be accessed from the new tunnel connecting the Charles Street Building Sub Basement and L.L. Bean Building Sub Basement Levels. A second Entrance/Exit from the Vault a1me opposite wall that opens directly to the Access Road is also provided.
- New Charles Street Building (04673) is dedicated to Women's and Infant's Services. It is a 5-story structure with a Basement into which the future expansion of The existing ER and Ambulance Bays are anticipated. Above the Basement there are 4 Clinical Floors and a full Mechanical Floor. A future addition of 2 Clinical Floors is projected. The Charles Street Budding abuts the existing 12-story Richards Building

TRO

Project Department of Public Safety, Office of State Fire Marshal
Comm. Nos. 04673, 04677, 04678, 04679, 04682
Subject MMC Projects Plan Review
Conference Date October 26, 2005/ 1 to 3pm

@ its east facade with a 24" seismic separation. Both the west and east exterior walls of the Charles Street and Richards Buildings, respectively, will be constructed as continuous 2- Hour fire separation assemblies. The existing Richards Building windows occurring at the Interface will be lined with 2- Hour fire separation closures. The only passage openings between these two structures will occur at the Basement, Ground and 3rd Floor levels. with each opening closed by double 2- Hour Fire separation assemblies. A Main Entrance Lobby (conforming to the BOCA 1999 Code for both Architectural and Structural elements) will be provided at the Ground Floor Level of the Richards Building on the Bramhall Street (southern) side of the Campus. The Charles *Street* Building will have an Occupancy classification as a New HealthCare Hospital Occupancy (NFPA 101-2903. Chapter 18) and use Group I-2 Institutional, Hospital (BOCA 1999). Construction Type I (332) (NFPA 101) & Type 1B (BOCA 1999) classification will apply respectively.

- CUP Central Utility Plant (04677) will De built into the western hillside site of the hospital Campus behind the L.L. Bean Building with frontage *on* Gilman Street. The Power plant is classified for Occupancy under NFPA 101- 2003 as a Special Purpose Industrial Occupancy, Ordinary Hazard, and as Use Group F-1, Factory and Industrial Use Group, Moderate Hazard under BOCA 1999. It is designed for Type 1 (332) Construction classification under NFPA 101 and Type 1B under BOCA 1999, respectively. The *choice* of Construction Typo was based upon the fact that as an accessory building providing critical support *to* a hospital campus with acute care facilities it must continue in service at all times, befitting the level *of* HealthCare services it maintains. The main utility lines will run eastward under the Access Road and turn into the L.L.Bean Building for distribution here or through the sub Basement tunnel to the Charles Street Building. Utility connections will also be made at the Electrical Vault and the Garage Audition.

The overall Life/Safety Plans @ the Basement and Ground Levels were reviewed in order to describe the location of fire separation assemblies between the various new and existing structures.

Detailed Code Analyses underpinning the design for each of the projects comprising the overall Scope of Work at Maine Medical Center have been submitted as part of the documentation record to both DPS, Augusta and City of Portland Inspection Services Officials (Stephen B. Dodge and Michael J. Nugent, respectively). Maine Medical Center (c/o Hank Dunn, P.E.) also has been furnished with copies. These Analyses have been periodically updated *as/if required,* and *will continue to be* kept current with all parties.

Michael Nugent, Manager of Inspection Services forwarded a letter dated October 20, 2004 to Hank Dunn @ Maine Medical Center Re: Building Permits 041455, 041451 & 041450. Therein, he confirmed that applications and partial documents were received for the MMC projects (which he specifically enumerated) on 9/24/04 and inputted for review on 9/28/04. Building Code compliance review commenced on 10/4/04. "Because the submissions and review commenced prior to 10/7/04, the project will be reviewed under the 1999 BOCA Code, as a pending application. I will keep you advised of questions, comments *or* issues that *arise as* the documents are reviewed.

Please be advised that the *permits cannot* be issued until all applicable fees are paid, State and Local reviews and approvals are in place and all pre-permitting conditions are completed."

A copy of the above referenced communication is attached for record purposes including the Building Code Certificate, Certificate of Design and Accessibility Certificate for each MMC project comprising the current MMC Scope of Work. Attached, as listed, are .separate Budding Code Certificates for *Structural Systems:*

TRO

Project	Department of Public Safety. Office of State Fire Marshal
Comm. Nos.	04673, 04677, 04678, 04679, 04682
Subject	MMC Projects Plan Review
Conference Date	October 26, 2005/ 1 to 3 pm

1. NFPA 418 – 2001 Section 3.4 Means of Egress states "At least two approved means of egress from *the rooftop landing pad edge* shall be provided and shall be remotely located from each other to the extent practical". The two means provided are remote, one to the Elevator/Stair Tower between the Existing and New Garage Addition, the other an exterior steel egress stair to the Existing Garage Roof deck from which at least two existing exit stairs *are* located well within the maximum travel distances required. The Helipad area is 3600 SF (60'x60'); the maximum potential number of occupants on the Helipad is so low that existing Life/Safety means in place @ the Existing Garage roof will not be adversely effected.

• ***Main Electric Vault and Sub Basement Tunnel between Charles Street and L.L. Bean Buildings***

1. A temporary exit stair @ the east (Charles Street Building) end of the Tunnel will not be required if the Tunnel is closed off during construction until the Charles Building is completed. As long as the Electric Vault exit directly onto the Access Road is maintained and there is a second means of egress through the L.L. Bean Building Life/Safety measures would be deemed adequate.

• ***New Charles Street Building***

1. Stephen Dodge requested another meeting to review the Charles Street Project at the 100% completion level of the Contract Documents, which review should encompass the Mechanical, Electrical and Plumbing documentation as well.
2. Since the initial review meeting on June 25, 2002 there have been few substantive changes to the plans. It is anticipated that a decision will be made by MMC to expand the existing Emergency Department into the Basement level of the Charles Street Building with Ambulance Bay access to the ED underneath this First Floor Ante Partum Unit.
3. The double 2 Hour fire rated exterior wall separation (west exterior wall @ the Charles Street and east exterior wall @ *the* Existing Richards Buildings) with *24"* seismic joint remains as previously presented. MMC will provide permission to remove part of the Richards exterior wall *from the inside* to enable verification that the existing wall provides *the* equivalent of 2 Hour rated construction.

• ***CUP Central Utility Plant***

1. MMC has verified that the Existing L.L. Bean Building is Type 1 A Construction (per applicable BOCA Code) and Type I 443 (per NFPA 101 Life/Safety designation).
2. Stephen Dodge confirmed that the Occupancy Classification of the Central Utility Plant as a ***Special Purpose Industrial Occupancy, Ordinary Hazard*** *(Section 3.3.152.8.3, NFPA 101-2003)* is appropriate. (BOCA 1999 equivalent is use Group F-1, Factory and Industrial use Group, Moderate Hazard). (Construction Type I (332) by NFPA 101-2003 & Type 1B by BOCA 1999).
3. The CUP was designed for classification as Construction Type I (332), (NFPA 101-2003) and Type 1B, (BOCA 1999).
4. Technically the fire separation distance deficiencies between the new CUP (F-1) and the existing L.L. Bean Building (1-2) would require that the east wall of the Power Plant be designed as a 3 Hour fire *rated* wall by the BOCA 1999 Code. At the time that the Bean Building was designed Type 1A construction only allowed Unlimited Floor areas (Table 503). Since that time Type 1B allows unlimited floor area. use of BOCA 1999 Section 503.1.2, Buildings on the lot, would obviate the need for fire rated provisions at the east exterior wall of the Power Plant. The CUP will be protected with an automatic fire suppression system. Stepnen Dodge indicated that the Department of Public Safety would not require the construction *of* a fire rated exterior east wall due *to the* proximity between the SP Industrial Occupancy and the HealthCare Occupancy in this circumstance.

TRO

TRO

CONFERENCE REPORT

This Conference Report is submitted for the purpose of summarizing the important details of the conference noted below and to confirm TRO's understanding of your instructions. Please read carefully and notify us promptly if there are any changes or corrections to be made

Client	Maine Medical Center	**Date/Time**	October 26, 2005/1 to 3 pm
Project Nos.	04673,04677,04678,04679 & 04682	**Location**	DPS Augusta, Maine
Meeting Title	Department of Public Safety Office of State Fire Marshal fire Prevention Division 164 State House Station Augusta, Maine 04333-0164	**Facilitated by**	Stepnen 8. Doage, Public Safety Inspector Plans Review Supervisor
Meeting Type	Maine Medical Center Projects Plan Review	**Prepared by**	Bailey Silbert
Participants	**State of Maine** Stephen B. Dodge **TRO** Rashia Ashraf Brad Swallom Bailey Silbert	**Copies**	Keith Davis Dan Doughty Hank Dunn Steve Ostapower Dana Cooper Richard Coe Jamie Newton Paul Konz Mark Gagnan Mike Carr Dan McDonald George White Keith Garratt Bob Higgins Frank Cnang John Viapiano Nick Brooks Brad Swallom Giuseppi Colosimo Paula Paolini

The current meeting was scheduled with Stephen Dodge upon achieving the 90% completion level of Construction Documentation for the above referenced Maine Medical Center Projects. Tne prior face to face

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

TRO / The Ritchie Organization

80 Bridge Street Newton, MA 02458-1134 T 617.9699400 F 617.332.4669

Silbert, Bailey

Stephen.B.Dodge@maine.gov

From: Silbert, Bailey

Sent: Monday, October 31, 2005 3:06 PM

To: ~~stephen.b.dodge@state.me.us~~ Stephen.B.Dodge@maine.gov; Ashraf, Rashid; Swallom, Brad

Cc: Davis, Keith; DoughD@mmc.org; DunnH@mmc.org; Ostapower, Steve; Cooper, Dana; Coe, Richard; Newton, Jamie; Konz, Paul; Gagnan, Mark; Carr, Michael; McDonald, Dan; White, George; Garratt, Keith; Higgins, Robert; Chang, Frank; Viapiano, John; Brooks, Nick; Swallom, Brad; Colosimo, Giuseppe; Paolini, Paula

Subject: Mains Medical Center; TRO Comm. #'s04673, 04677, 04678, 04679 & 04682; Minutes of Meeting with Stephen B. Dodge @ DPS/State Fire Marshal's Office, Augusta, ME,, 10/26/05

10/31/05

Stephen B. Dodge,

Please find the electronic file of the minutes of the meeting held at your office on 10/26/05 with Rashid Ashraf, Brad Swallom and myself, all representing TRO, to review the MMC Projects.

Contact me if you have difficulty in receipt of this file.

Hardcopies of the Minutes, the Building Permits (City of Portland Building Code Certificates referenced in the minutes) and updated ventilation calculations to match the Garage Addition Elevation design revisions resulting from the City Planning Design Review Process will be forwarded under separate cover

Bailey

TRO

LETTER OF TRANSMITTAL

We are transmitting the following:		RE:	Date:
☐ Prints	☐ For your use	Maine Medical Center	October 21, 2005
☐ Specifications	☐ As requested	Multiple Projects @ MMC	
☐ Proposal	☐ For review & comment	Code Analysis for Each Above	Comm. #:
☒ Other (Code Analyses)	☒ Other Meeting(10/26/05)	Additional information Line 3	04673 000

Maine Medical Center	Hank Dunn, P.E.	22 Bramhall Street	1	Fed-Ex Monday am 10/24/05

Comments: Hank, Attached please find your copies of various Code Analyses of the various projects comprising MMC work. Also attached is a copy of the Transmittal sent to Stephen Dodge listing out, item by item, what is included in this package. The lining describes what you, and any others to whom copies ware furnished, received.

It should prave to be a good reminder prior to the meeting. Rashidwill be bringing ½ size copies of drawings to assist wfth Stephen Dodge's review on Wednesday.

Bailey

copy *lo:*

Keith Davis (Tr Only)

Rashid Ashraf

Paula Paolini

Signed:

Bailey Silbert, Senior Associate/Chief Coordinator

If enclosures are not as noted, please noufy us at once.

MMC 04673 TR_051021_CODE a.doc

TRO / The Ritchie Organization
80 Bridge Street, Newton, MA 02458-1134 T 617 969 9400 F 617'3324669

Bailey

Copy to:

Hank Dunn, P.E.

Rasnid Ashraf

Keith Davis (Tr. Only)

Signed:

Bailey Silbert, Senior Associate/Chief Coordinator

If enclosures are not as noted, please notify us at once

Project Maine Medical Center
Comm. No, 4673, 4677, 4678, 4682
Subject Lobby/Garage/Heliport/C.U P
Conference **Date** 1 October 2003

d) Height of the new garage was within the 75' limit and would not be an issue for a high rise interpretation. But should the two floors be added, it might be an issue.

3) Heliport:
   a) TRO to confirm if the structure were protected by foam suppression system.
   b) TRO to send FAA analysis to Mike Nugent.
   c) Platform (roof) greater than 40 x 40 require 2 means of egress. That is not a ladder.

4) Central Utility Plant:
   a) Lt. McDougall was concerned about noise impact. Tam noted the hospital had hired a consultant to ensure the project was designed to the current published zoning ordnance. Hank added a substantial part of the building was located directly opposite an open parking lot and street to minimize the noise Impact.
   b) Mike to check the 15' distance of the transformers from the north face of the building was adequate.

5) Code update:
   a) Mike noted the State of Maine might change the BOCA code to International Building Code beginning 2004, he added that the state had not decided on the extent of the implementation. Tom suggested design team to meet with him sometime in November for update.

<u>Post Meeting Note:</u>
TRO forwarded outline specifications at the Heliport Pricing set dated August 1, 2003 and FAA Analysis dated June 26,2003 to Mike Nugent on October 7, 2003.

389 Congress St.rm 315
Portland, ME 04101
Phone: (207)874-8700
Fax: (207)874-8716

facsimile transmittal

To: Rashia Asraf **From:** Mike Nugent

Fax: 617-332-4669 **Date:** October 7, 2004

Phone 617-969-9400 **Pages:** 4

Re: 2 Bramhall St.,13 Charles St (053 D007 and G001)

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☑ **Please Reply** ☐ **Please Recycle**

On 10/4/05 I commenced the review of Permits 041451, 041450 & 041455, for the above location and need the following documents:

1) Attached are Local Certification that need to be completed and returned for each permit.
2) Please forward the Geo-technical report for the project.

TRO

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

December 14,2005
Comm. No. 4678

The Ritchie Organization
80 **Bridge Street**
Newton. MA
02458
T 617.969.9400
F 617.332 4669
www.troarch.com

Mr. Michael Nugent
Inspectional Services Manager
Housing & Neighborhood Services Division
Planning & Development Department
City Hall Rom 315
389 Congress Street
Portland, Maine 04101

RE: WAIVER REQUEST FOR MAINE MEDICAL CENTER PROPOSED GARAGE ELEVATOR HEIGHT

Dear Mr. Nugent,

This letter is a request on behalf of Maine Medical Center for a waiver on Table 406.4 of the 1999 BOCA code related to restriction of building height of a 2B structure to 100 feet as it pertains to the proposed elevator tower servicing the garage and heliport.

The proposed garage elevator tower exceeds the 100-foot limit on height by approximately 23 feet when calculating the mean grade around both the proposed garage and the existing garage when calculated as a single structure.

If the proposed garage is separated from the existing garage and viewed as an independent structure then the discrepancy is reduced by only four feet, still exceeding the height limitation by 19 feet. In either case the elevator tower is in excess of the allowed height by Table 406.4.

The proposed seven story garage and its future proposed three additional floors do not exceed 100 feet nor, would the portion of the elevator tower that services the garage if taken by itself. However to service the heliport on the adjacent existing garage it is necessary to extend the elevator tower, which then causes it to exceed the limitation. This additional height includes an elevator landing to service the heliport pad and ramp, the elevator override and mechanical room. All heights related to these functions have been kept to a functional minimum and are necessary in order to have a functional heliport.

While the garage structure is a type 2B construction of precast concrete elements the elevator tower is the equivalent of a type 1B construction with 12 inch thick wall panels and 8 inch thick concrete planks. While the building must be rated by its lowest rated element the elevator tower does meet the intent of safety for an unlimited height designation. In addition the egress stairs in the tower are in a two hour enclosure further adding to the safety of the occupants of the tower.

The height of the elevator tower as well as the design of the proposed heliport has been reviewed and approved by the **FAA** as meeting all their criteria.

As the heliport is a function of improving the public's welfare it is being asked that this height limitation be waived for the elevator tower based on this function. This site was selected after considerable study as it offered the safest helicopter flight path, landing site and direct connection the hospital's Emergency Department. Relocating to another site would not be in the interest of the public as one or more of the criteria would be compromised.

We believe that the elevator tower meets the intent of the code related to life/safety and the building code for an unlimited height designation of a 1B construction and that the safety of the public would not be compromised by this waiver. It is only due to the critical need for the heliport we would consider or request this waiver.

We thank you for your consideration of this request. Please let me know if you require further information.

Very truly yours,

TRO/THE RITCHE ORGANIZATION

W. Keith Davis, AIA
Vice President/Principal

WKD/ra

Maine Medical Center - Central Utility Plant

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1704.2 Inspection of Fabricators					
Verify fabrication/quality control procedures.	In-plant review	Y		SWC	
1704.3 Steel Construction					
High-strength bolts, nuts, and washers.	Review material markings and certificates of compliance	Y		SWC or SGH	
Inspection of high-strength bolting.	Field inspection	Y		SWC or SGH	
Structural steel	Review certified test reports	Y		SGH	
Weld filler materials.	Review certificate of compliance and field verification	Y		SWC or SGH	
Structural steel welding.	Shop and field inspection	Y		SWC	
Reinforcing steel welding.	Shop and field inspection	N			
Inspection of steel frame joint details for compliance with approved construction documents.	Field inspection	Y		SWC or SGH	
1707.2 Structural Steel					
Continuous inspection of structural welding in accordance with AISC Seismic Provisions	Shop and field inspection	Y		SWC or SGH	
1708.4 Structural Steel					
Ultrasonically test for discontinuities behind and adjacent to welds with base metal thicker than 1.5 inches where subject to through-thickness weld shrinkage strains.	Shop and field testing	Y		SWC or SGH	
1704.4 Concrete Construction					
Inspection of reinforcing steel installation.	Field inspection	Y		SGH or SWC	
Inspection of prestressing steel installation.	In-plant or field inspection	N			
Prestressed concrete force application.	In-plant or field review	N			
Inspection of cast-in-place bolts.	Field inspection	Y		SWC or SGH	
Verification of required design mix.	Review submittals	Y		SGH	

Maine Medical Center - Central Utility Plant

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
Fresh concrete sampling.	Field testing	Y		SWC	
Concrete placement.	Field review	Y		SWC or SGH	
Concrete curing operations.	Field review	Y		SWC or SGH	
Erection of precast concrete members.	Field review	N			
Evaluation of concrete strength.	Field testing and review laboratory reports	Y		SWC or SGH	
Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.	Review field testing and laboratory reports	Y		SWC	
1708.3 Reinforcing and Prestressing Steel					
Review certified mill test reports	Field review	N			
Verify reinforcing steel weldability	Review testing reports	N			
1704.5 Masonry Construction					
Verify proportions of site prepared mortar and grout.	Review submittals	Y		TRO	
Verify construction of mortar joints.	Field inspection	Y		SWC or TRO	
Verify location of reinforcement and connectors.	Field inspection	Y		SWC or TRO	
Verify size and location of structural masonry elements.	Field and submittal review	N			
Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.	Field inspection	Y		SWC or TRO	
Verify size, grade, and type of reinforcement.	Field inspection	Y		SWC or TRO	
Verify welding of reinforcing bars.	Field inspection	N			
Verify protection of masonry during hot/cold weather.	Field inspection	Y		SWC or TRO	
Verify grout space is clean prior to grouting.	Field inspection	Y		SWC or TRO	
Verify grout placement complies with code and construction document provisions.	Review submittals	Y		TRO	
Observe preparation of grout specimens, mortar specimens, and/or prisms.	Field review	Y		SWC or TRO	

TRO Project #: 4677
SGH Project #: 20684.06

Maine Medical Center - Central Utility Plant

SCHEDULE OF SPECIAL INSPECTION SERVICES					
		APPLICABLE TO THIS PROJECT			
MATERIAL / ACTIVITY	SERVICE	Y/N	EXTENT	AGENT*	COMPLETED
1708.1 Masonry					
Certificates of compliance used in masonry construction	Review submittals	N			
Verification of *f'm* prior to construction	Review submittals and field testing	N			
Verification of *f'm* every 5000 SF during construction	Review submittals and field testing	N			
Verification of proportions of materials in mortar and grout as delivered to the site	Field review	N			
1704.7 Soils					
Verify site preparation complies with approved soils report.	Field inspection	Y		SWC	
Verify placement and compaction of fill materials complies with approved soils report.	Field inspection	Y		SWC	
Verify dry-density of compacted fill complies with approved soils report.	Review field testing	Y		SWC	
1704.8 Pile Foundations					
Observe installation of pile foundations.	Field inspection	Y		SWC	
Observe pile foundation load tests.	Review field testing	Y		SWC	
1704.9 Pier Foundations					
Observe installation of pier foundations.	Field inspection	Y		SWC or SGH	
1707.3 Structural Wood					
Continuous inspection of field gluing operations of elements of the seismic-force resisting system.	Field inspection	N			
Periodic inspection of nailing, bolting, anchoring and other fastening of components with the seismic-force-resisting system.	Shop and field inspection	N			

Maine Medical Center - Central Utility Plant

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1707.4 Cold-formed Steel Framing					
Periodic inspection during welding operations of elements of the seismic-force-resisting system.	Shop and field inspection	Y		SWC or TRO	
Periodic inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system.	Shop and field inspection	Y		SWC or TRO	
1704.10 Wall Panels/Veneers					
Observe installation of exterior and interior architectural wall panels.	Field inspection	N			
Observe anchoring of veneers to the building structure.	Field inspection	N			
1704.11 Sprayed Fire-resistant Materials					
Verify surface condition preparation of structural members.	Field inspection	Y		SWC or TRO	
Verify application of sprayed fire-resistant materials.	Field inspection	Y		SWC or TRO	
Verify average thickness of sprayed fire-resistant materials applied to structural members.	Field inspection	Y		SWC or TRO	
Verify density of the sprayed fire-resistant material complies with approved fire-resistant design.	Field inspection and submittal review	Y		SWC or TRO	
Verify the cohesive/adhesive bond strength of the cured sprayed fire-resistant material.	Field inspection and submittal review	Y		SWC or TRO	
1704.12 Exterior Insulation and Finish Systems (EIFS)					
Inspect EIFS applications.	Field inspection	N			

Maine Medical Center - Central Utility Plant

SCHEDULE OF SPECIAL INSPECTION SERVICES

MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	COMPLETED
1704.14 Smoke Control Systems					
Test smoke control systems.	Field testing	Y		SWC or TRO	
1704.13 Special Cases (work unusual in nature, including but not limited to alternative construction materials, unusual design applications, systems or materials with special manufacturer requirements. Attach 8 1/2x11 if needed).		N			
1707.5 Storage Racks and Access Floors					
Periodic Inspection during the anchorage of access floors and storage racks 8 feet or greater in height.	Field inspection	N			
1707.6 Architectural Components					
Periodic inspection during the erection and fastening of exterior cladding	Field inspection	Y		TRO	
Periodic inspection during the erection and fastening of nonload bearing walls.	Field inspection	Y		TRO	
1707.7 Mechanical and Electrical Components					
Periodic inspection during the anchorage of electrical equipment for emergency or standby power systems	Field inspection	Y		TRO	
Periodic inspection during the anchorage of other electrical equipment	Field inspection	N		TRO	
Periodic inspection during installation of piping systems intended to carry flammable, combustible, or highly toxic contents and their associated mechanical units.	Field inspection	Y		TRO	
Periodic inspection during the installation of HVAC ductwork that will contain hazardous materials	Field inspection	Y		TRO	

CITY OF PORTLAND, MAINE

Department of Building Inspections

9-24 2004

Received from ME Med.

Location of Work ME Med

Cost of Construction $_____

Permit Fee $ 34 242 00/00

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

Other _____

CBL: 53D 7

Check #: 51-44-119 **Total Collected** $ 34 242 00

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less $10.00 or 10% whichever is greater.

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

CITY OF PORTLAND, MAINE

Department of Building Inspections

9-24 20 04

Received from Maine Med Ctr.

Location of Work 22 Bramhall St.

Cost of Construction $

Permit Fee $ 14 381 00/00

Building (II) ___ Plumbing (15) ___ Electrical (I2) ___ Site Plan (U2) ___

Other

CBL: 53 D 7

Check #: 51-44-119 Total Collected $ 14381 00

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less $10.00 or 10% whichever is greater.

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

CUP

CITY OF PORTLAND, MAINE

Department of Building Inspections

9-24 2004

Received from 22 Bramhall St

Location of Work ME Med -

Cost of Construction $

Permit Fee $ 12305 00

Building (12) ___ Plumbing (15) ___ Electrical (12) ___ Site Plan (U2) ___

Other

4

CBL: 53 D 7

Check #: 51-44-119 **Total Collected** $ 12305 00

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less $10.00 or 10% whichever is greater.

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

CITY OF PORTLAND, MAINE

Department of Building Inspections

June 29 20 05

Received from MMC

Location of Work 2 Bramhall

Cost of Construction $____________

Permit Fee $136,968.00

Building (IL) X Plumbing (I5) ___ Electrical (I2) ___ Site Plan (U2) ___

Other ________________

CBL: 53 D 007

Check # 1578780 **Total Collected** $136,968.00

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less $10.00 or 10% whichever is greater.

Donna

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

CITY OF PORTLAND, MAINE

Department of Building Inspections

June 29 2005

Received from [illegible]

Location of Work [illegible]

Cost of Construction $

Permit Fee $ 410.00

Building (IL) X Plumbing (I5) ____ Electrical (I2) ____ Site Plan (U2) ____

Other

CBL: 53 D 007

Check # 15763718 Total Collected $ 410.00

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less $10.00 or 10% whichever is greater.

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

CITY OF PORTLAND, MAINE

Department of Building Inspections

June 29 20 05

Received from Julie

Location of Work 32 Brown Hall

Cost of Construction $ ____

Permit Fee $ 573.24

Building (IL) X Plumbing (I5) ___ Electrical (I2) ___ Site Plan (U2) ___

Other ____

CBL: 53 A 007

Check #: 1578779 **Total Collected $** 573.24

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less $10.00 or 10% whichever is greater.

Donna

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